

System Impact Study
for the
Interconnection of 180 MW
Wind Generation Facility

Xcel Energy Services, Inc
Transmission Planning
(#GEN-2001-033)

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1 Executive Summary

Catamount Energy Corporation, requested a System Impact Study under the Southwest Power Pool (SPP) Open Access Transmission Tariff (OATT) to interconnect a 180 MW wind farm to the transmission system of Southwestern Public Services (SPS). The wind farm will be developed in two phases with the first phase having a generation capacity of 90 MW. The entire project will connect to the SPS/Xcel Energy transmission system through a single 230 kV facility.

The original request for interconnection proposed a 230 kV interconnection facility located at the Pinnell Site in Curry County, New Mexico approximately 12 miles west of the SPS Oasis Interchange. This facility would have been within 1,000 feet of the existing transmission right-of-way for the 230 kV transmission line, which ties Oasis Interchange to Chaves County Interchange. However, subsequent to the impact study request, the requester has requested an alternate location, know as the Boone Site, be considered. This site is located approximately 46.3 miles from the Oasis Interchange, and the interconnection would be to the same 230 kV transmission line. Figures 1 & 2 in Appendix A of this report illustrate the interconnection location.

This study identifies the adversely impacted SPS transmission facilities, determines the facility improvements necessary to maintain transmission reliability and stability. Potential impacts due to transmission service requests are dealt with through separate studies. These studies have not been done because Catamount has not made any request for firm transmission service.

There were no adverse impacts to the SPS/Xcel Energy transmission system identified through the power flow and single contingency studies, provided the proposed switched capacitor banks are used to compensate for the reactive power requirements of the wind farm. The wind farm will have to strictly adhere to the reactive power requirements for full generation capacity with the contingency loss of the 230 kV line toward the Oasis Interchange.

Using the machine data provided by the requester, the stability studies indicate an undesirable tripping of the wind farm for faults on the transmission system. However, if the undervoltage protection of the wind turbines were defeated, the wind farm would become unstable causing nearby generation to become unstable as well. Further investigation of the over/under voltage protection levels and timing on the wind turbines is warranted.

The results of the short-circuit portion of this study indicate that there is adequate interrupting capability of the existing SPS/Xcel Energy breakers.

This study proposes to interconnect the requester's wind farm to the SPS/Xcel transmission with a 230 kV facility located at the existing 230 kV transmission right-of-way, construct approximately 0.3 miles of 230 kV transmission line to the requester's interconnection substation. Figure A.3 of Appendix A is a simple one-line diagram illustrating the proposed interconnection of the requester's wind farm.

The total estimated cost of construction on the SPS/Xcel Energy system for this interconnection is **\$2,556,837**. This estimated cost does not include the requester's interconnection substation.

2 Introduction

The requester is proposing to develop a wind farm in Chaves County, New Mexico. As proposed, this wind farm would consist of a number of Vesta V-80, 1.8 MW wind turbines with a total net capability of generating 180 MW. The project expected to be developed in two phases with the first phase commissioning 90 MW of wind-powered generation to be in service by the summer of 2003. Under phase 2 the second 90 MW of wind powered generation will be commissioned at a yet to be determined date. The tariff issues related to this decomposition of the original 180 MW request have not been resolved.

The objectives of this study were to identify the adversely impacted SPS/Xcel Energy transmission facilities due to the interconnection of the proposed wind farm, determine the facility improvements necessary to interconnect the proposed wind farm and maintain transmission reliability and stability, and estimate the costs associated with the necessary system improvements. Included in this report are the results of the comparative contingency analysis, the results of the transient stability analysis, and the results of the short circuit analysis.

The Steady-State analyses, or power flow studies were used to determine the thermal loading and voltage level impacts due to the interconnection of the new generation.

Stability analysis was used to determine what effects the new generation had on the SPS/Xcel Energy and SPP generation. This analysis examined the capability of the surrounding generation to recover from critical faults on the transmission system with and without the added generation of the wind farm.

A Short Circuit analysis was performed to determine if any equipment upgrades were required due to the interconnection of the new generation. The transmission reliability and coordination group at Xcel Energy performed the short circuit analysis.

This study does not include power transfers on or across the SPS/Xcel Energy transmission system above the current firm (contracted) transactions. These transfers are normally considered through transmission requests.

3 Steady State Analysis

3.1 Study Methodology

Power flow and contingency studies were performed using the Power System Analysis Program (PSS/E) developed by Power Technologies, Inc. This program has the capability of doing power flow simulations, short circuit studies, stability studies, and contingency studies.

SPP supplied models reflecting the 2003 spring and summer peaks, 2004 summer and winter peaks, and 2003 April minimum loading conditions. These models included the expected generation and transfer requests covered by firm contracts. Since the interconnection location would be at a new facility, the data for this facility without the wind farm was added to each model to create base case models. Since the completion of the Frio Draw - Potter improvement project is not probable by the expected in-service date of the wind farm, the 2004 models were further modified to reflect the current transmission system without the Frio Draw - Potter improvements. Then each model was modified to include the data of the wind farm to create new case models to determine the system intact power flow changes to the SPS transmission system.

Power flow studies were performed with and without the 180 MW wind farm. System intact conditions of these power flow studies were compared to determine if the loading of any element exceeded 100% of the element's normal rating (Rate-A), or if voltage levels were outside their normal operating limits of 0.95 to 1.05 per unit due to the interconnection of the 180 MW wind farm. New overloads, or voltage problems due to the interconnection of the wind farm were noted for this report.

Next, single contingency studies were performed with and without the added generation from the 180 MW wind farm. With each contingency outage, transmission elements 69 kV and above were monitored for loading, which exceeds 100% of the elements emergency rating (Rate-B), or voltage levels outside their emergency limits of 0.90 to 1.05 per unit. If a transmission element overload or voltage problem is caused by the interconnection, the requester is responsible for the costs to mitigate the overload.

3.2 Results of Power Flow Analysis

The results of the power flow studies indicate that no new overloads were created due to the interconnection of the 180 MW wind farm. However with a system intact transmission system, the interconnection of the wind farm would potentially cause voltages at nearby buses to fall below acceptable levels. Depending on the reactive power compensation at the wind farm, voltage levels to surrounding facilities would fall to unacceptable levels. Figure 1 illustrates the voltage levels at the wind farm and adjacent buses for Phase 1, 90 MW of uncompensated wind generation.

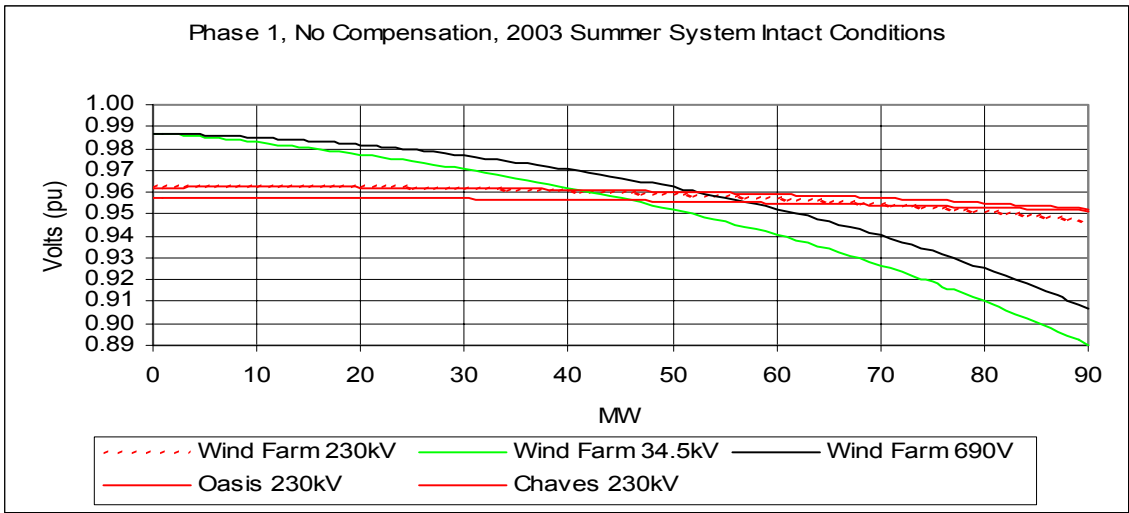


Figure 1: Phase 1, 0-90 MW Without Reactive Power Compensation

The uncompensated power output of the wind farm would be limited to approximately 70 MW when the voltage level of the wind generators falls below 0.94 per unit, 94% of nominal voltage. Figure 2 illustrates how the voltage levels fall even lower with the uncompensated power output of Phase 2.

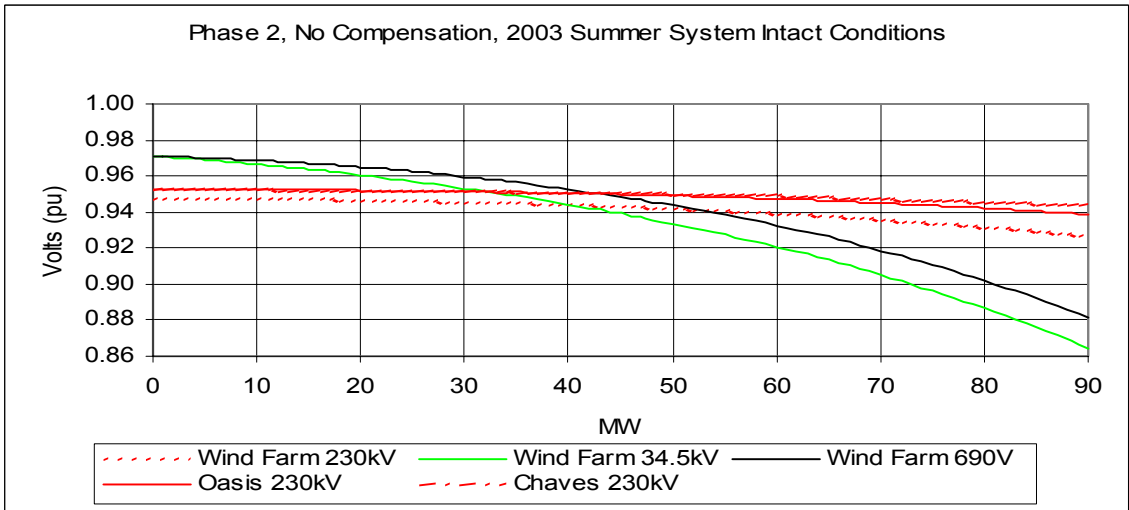


Figure 2: Phase 2, 0-90 MW Without Reactive Power Compensation

The requester has proposed two (2) 15 MVAR switched capacitor banks for Phase 1, and two (2) 17.5 MVAR switched capacitor banks for Phase 2 to compensate for the reactive power consumption of the wind farm. The switched capacitor banks of Phase 1 will be installed on the first 34.5 kV bus of the interconnecting substation. The phase 2 switched capacitor banks will be installed on the second 34.5 kV bus. These switched capacitors were modeled in a similar study to evaluate the voltage levels adjacent to the wind farm over the entire range of Phase 1 and then Phase 2 generation. Figure 3 illustrates the voltage levels observed from the generation and capacitor switching of Phase 1.

The control bus for this voltage study was the 34.5 kV bus with a high switching limit of 1.05 per unit and a low switching limit set of 0.96 per unit.

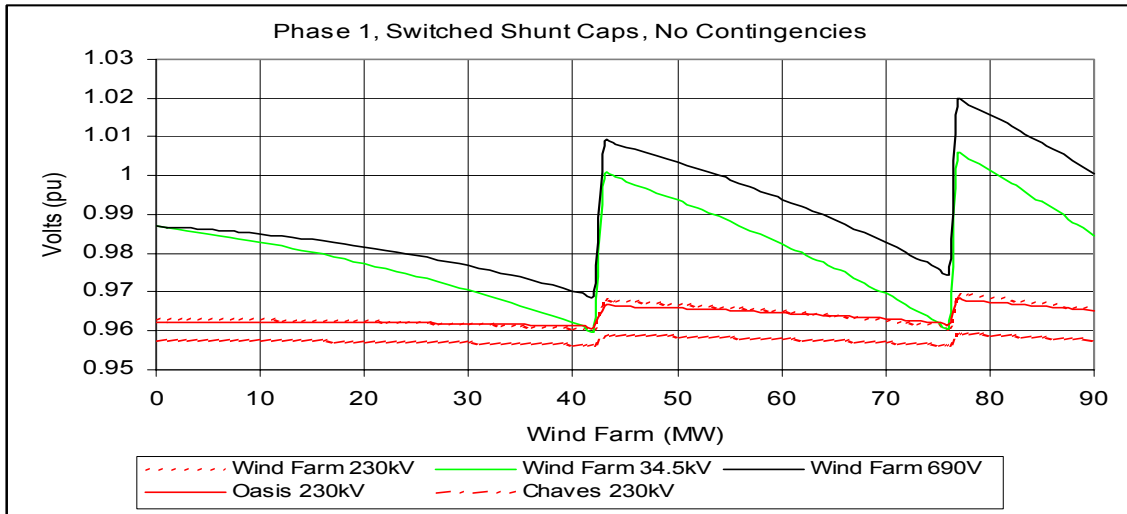


Figure 3: Phase 1 Voltages Levels with (2) 15 MVAR Switched Capacitors

Figure 4 illustrates the voltage levels of Phase 2 generation with Phase 1 generation at its full 90 MW capacity.

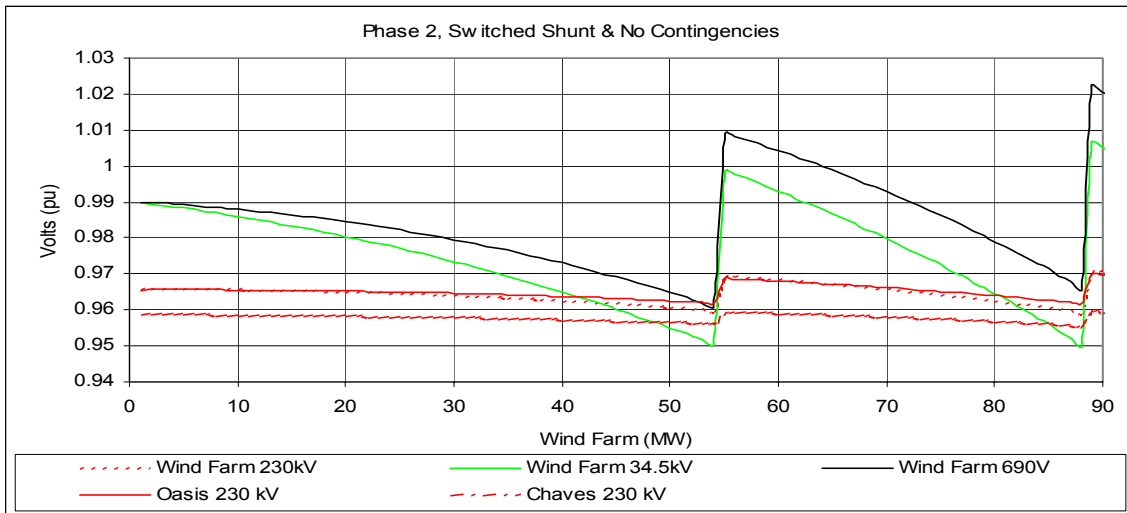


Figure 4: Phase 2 Voltages Levels with (2) 17.5 MVAR Switched Capacitors

The control bus for the Phase 2 voltage study was the second 34.5 kV bus with high switching limit of 1.07 per unit and a low switching limit set of 0.95 per unit to prevent simultaneous switching of capacitors of Phase 1.

The proposed switched capacitors of both project development phases will prevent low voltage conditions on the SPS/Xcel Energy transmission system, and will not cause voltage levels beyond the Vesta wind turbines operating parameters. Therefore, the proposed switched capacitors provide adequate reactive power compensation to prevent system intact adverse impacts.

3.3 Results of Single Contingency Analysis

The results of the single contingency studies of each case with the wind farm generating 180 MW required the proposed 65 MVAR switched capacitor banks to prevent low voltage conditions with the loss of the 230 kV line between the wind farm and Oasis Interchange. Figure 5 illustrates the voltage levels observed through the generation range of Phase 2, at the wind farm and adjacent buses with the loss of the 230 kV line from the wind farm to Oasis Interchange.

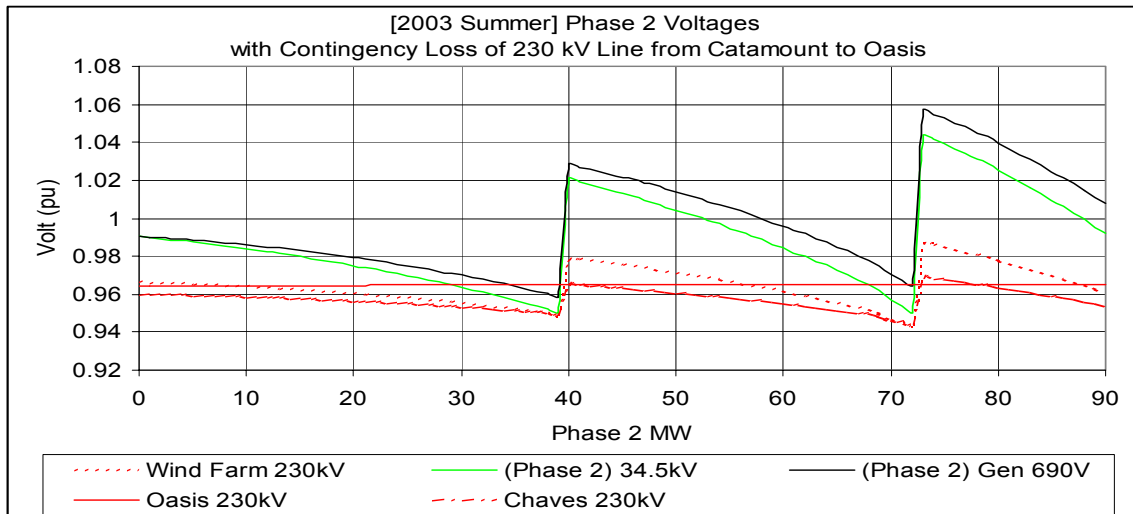


Figure 5: Phase 2 Voltages Levels with Loss of 230 kV Line From Wind Farm to Oasis Interchange.

4 Short Circuit Analysis

The Short Circuit Analysis was performed internally by Xcel Energy Services to determine if the interrupting capability of the existing circuit breakers would be exceeded due to the addition of the 180 MW wind farm. The results of this study indicate the addition of the wind farm will not cause the available bus fault currents to increase past the interrupting capability of existing breakers. For a single-phase fault to ground with no contribution from the wind farm, the fault current would be 3854.84 amps. For the corresponding three-phase fault, the fault current would be 4454.38 amps.

5 Transient Stability Analysis

Power Technologies, Inc. (PTI) of Schenectady, New York performed the transient stability analysis to verify dynamic system responses to selected three-phase and single-phase faults on the SPS/Xcel Energy transmission. The stability studies were performed using the stability data from the 2002 summer peak model modified to include the 180 MW wind farm, and the dynamic setup of the HVDC units at Blackwater and Eddy County. The SPP 2002 summer model was used because of its availability. The necessary transmission improvements were added to this case as a substitute for a 2004 stability case. The requester provided the machine data for the wind generators.

Selected 3 ϕ and 1 ϕ faults were simulated in the area surrounding the wind farm and across the SPS/Xcel Energy system with normal breaker clearing and re-closing times applied. All simulations were run for a minimum of 10 seconds to confirm proper machine damping.

The system remained stable for the faults simulated using the machine data supplied by the requester for the operation of the voltage protection scheme. However, an undesirable tripping of the wind turbines occurred for these faults. The levels and timing of the over/under voltage protection scheme as presented on the wind turbines, will cause some or all of the wind turbines to trip too soon for the faults simulated. The opposite of the early tripping is that if the under-voltage protections of the wind turbines are defeated, the entire wind farm becomes unstable causing nearby system generation to become unstable as well. Further investigation of the over/under voltage protection levels and timing on the wind turbines is warranted

Concerns were raised over the adequacy of coordination of the proposed switched capacitor banks with the subsequent tripping of the wind farm turbines. If the switched capacitor banks remain in service after a disturbance causes the wind turbines to trip on the under-voltage protective scheme, the resultant bus voltages at the wind farm rise above 1.10 per unit. Please see Appendix D of this report for the simulation plots for the selected disturbances.

6 Interconnection Facility

6.1 Interconnection Facilities.

To interconnect the requester's 180 MW wind farm, a three-breaker / three-terminal 230 kV facility would be built adjacent to the existing right-of-way of the 230 kV line between Oasis Interchange and Chaves Interchange located near as possible to the Boone Site. As depicted in Figure A.2 of appendix A, this facility will be located approximately 46.25 line miles from Oasis Interchange toward Chaves Interchange. This facility will provide the necessary coordinated protection between the wind farm and the SPS/Xcel Energy transmission system. This facility will not provide protection to the requester's equipment.

A 230 kV line approximately 0.3 miles long would be constructed to tie the interconnection facility to the requester's interconnection substation located in the extreme northwest corner of the property identified as the Pat Boone Jr. property. It is expected that a Certificate of Convenience and Necessity (CCN) filing with the New Mexico Public Utility Commission for this project will be required. Figure A.3 of Appendix A illustrates the interconnection facility with the requester's interconnection substation.

7 Interconnection Cost

Listed below are the directly assigned costs associated with interconnecting the 180 MW wind farm to the SPS/Xcel Energy transmission system. The following cost summary is associated with the SPS/Xcel Energy interconnection facility and the 230 kV line to tie in the wind farm, and does not include the costs of the requester's interconnection substation.

Estimated Costs of Interconnecting the 180 MW Wind Farm	COST
230 kV Interconnection Facility	2,367,601
230 kV Line Construction. (0.3 mi.)	159,765
230 kV line & Facility Right of Way	29,472
TOTAL	\$ 2,556,838

8 Conclusions

The original study request was for a single 180 MW wind farm project at the Pinnell site, near Clovis, New Mexico. Subsequent to a majority of the study work, the requester changed the location of the wind farm from the Pinnell site to the Boone site, the size of the wind turbines from 660 kW units to 1.8 MW units, the project development from a single 180 MW project to a two phased project with 90 MW in Phase 1 and another 90 MW in Phase 2, and proposed switched capacitor banks for each phase of the project.

Therefore, the results of the single contingency studies of this report are for the Pinnell site. Since the new interconnection location would tie the wind farm to the same SPS/Xcel Energy 230 kV line, it was deemed unnecessary to re-run the contingency studies except for the worst contingencies.

The contingency analysis results of this study indicate that the interconnection of the 180 MW wind farm will not adversely impact the SPS/Xcel Energy transmission system provided the proposed 65 MVAR switched capacitor banks are in service and properly controlled with the output of the wind farm. The interconnection of the wind farm did not create any new overloads with system intact or single contingency conditions. Therefore, there are no costs incurred to mitigate impacts. All estimated costs are for interconnection only.

The results of the transient stability study indicate that the system would remain stable for the selected 3 ϕ and 1 ϕ faults across the transmission system provided there was proper operation of the voltage protection scheme of the wind turbines. However, if the under-voltage protections of the wind turbines are defeated, the entire wind farm becomes unstable causing nearby system generation to become unstable as well.

The short circuit analysis evaluated the available fault currents of selected faults placed on the SPS system in the area surrounding the interconnection of the wind farm. The results of this analysis indicate the interrupting capability of existing breakers will be adequate and no SPS/Xcel Energy breakers will need to be replaced.

The permitting and construction schedule for this project is estimated to take approximately 14 months after an interconnection agreement is signed. Appendix E illustrates the estimated permitting and construction schedule.

9 APPENDIX A *Interconnection Location and Facility One-line Diagram*

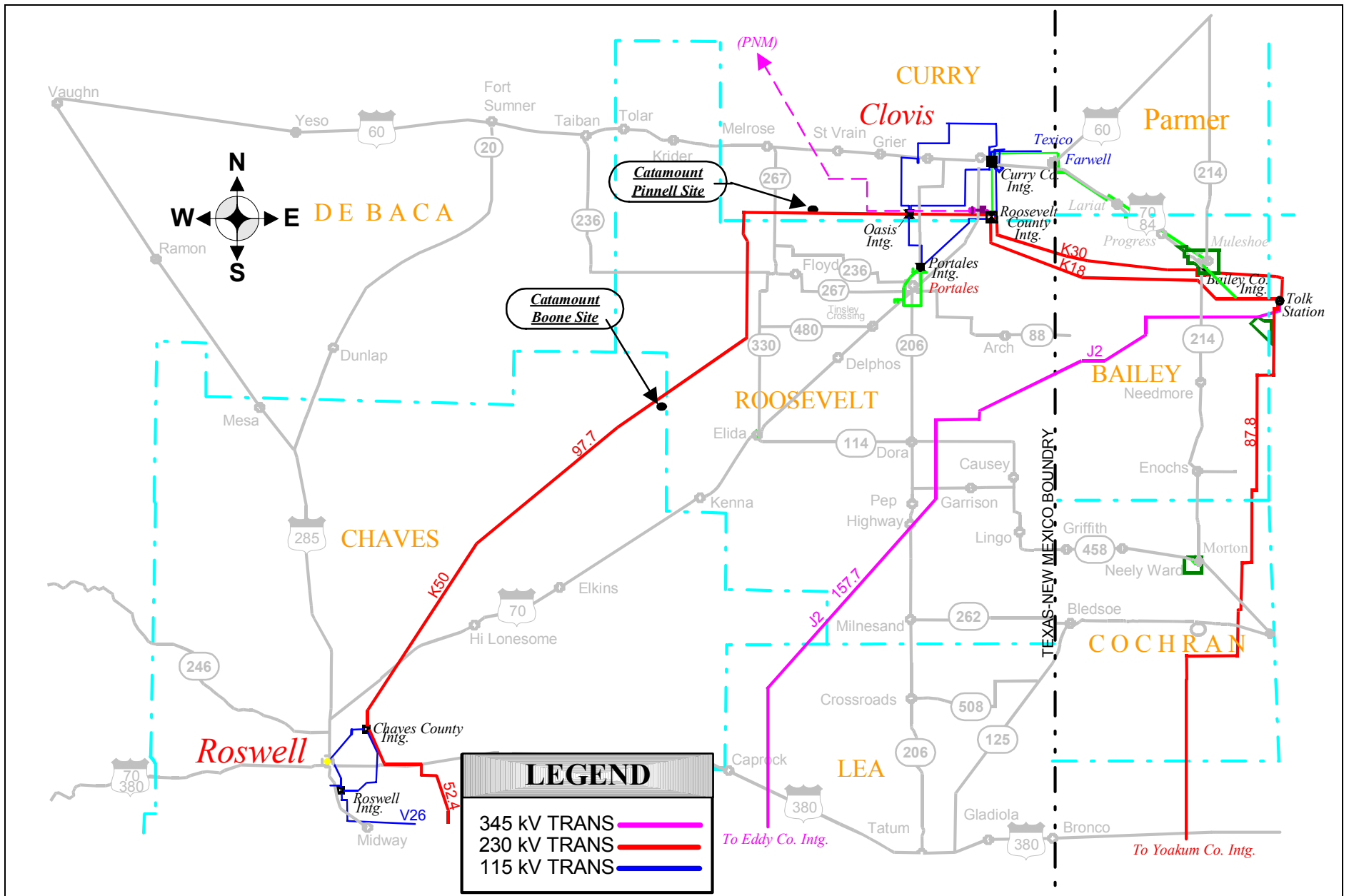


Figure A. 1: Location of Pinnell & Boone Sites

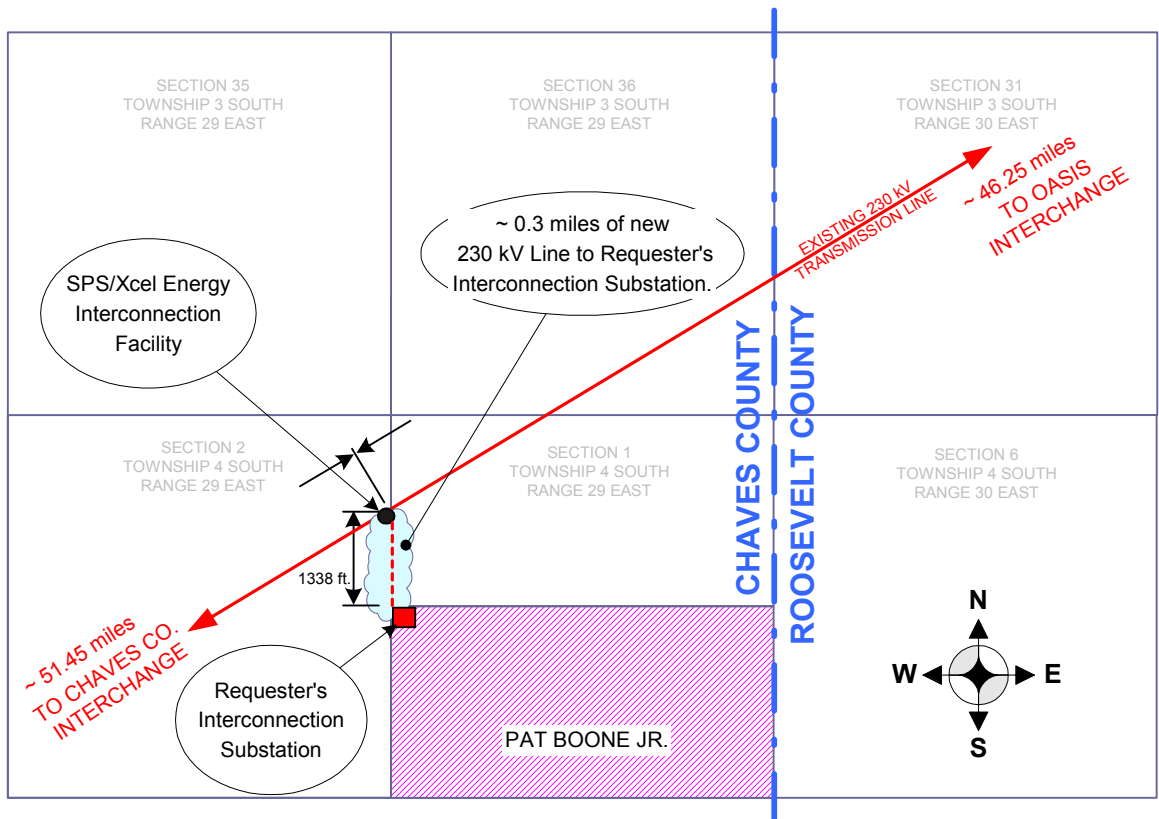


Figure A. 2: Location of Interconnection Facility & Requester's Interconnection Substation

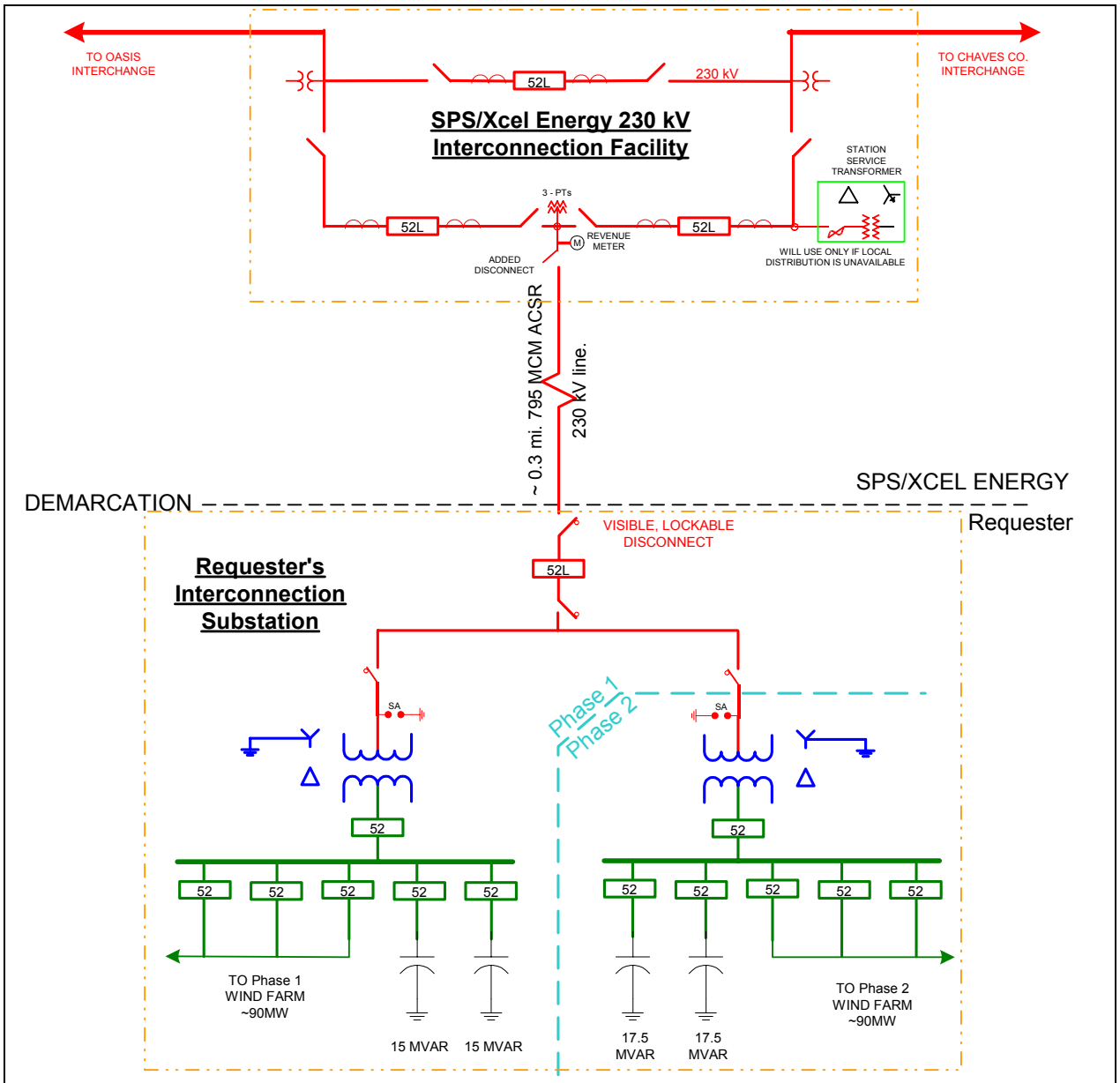
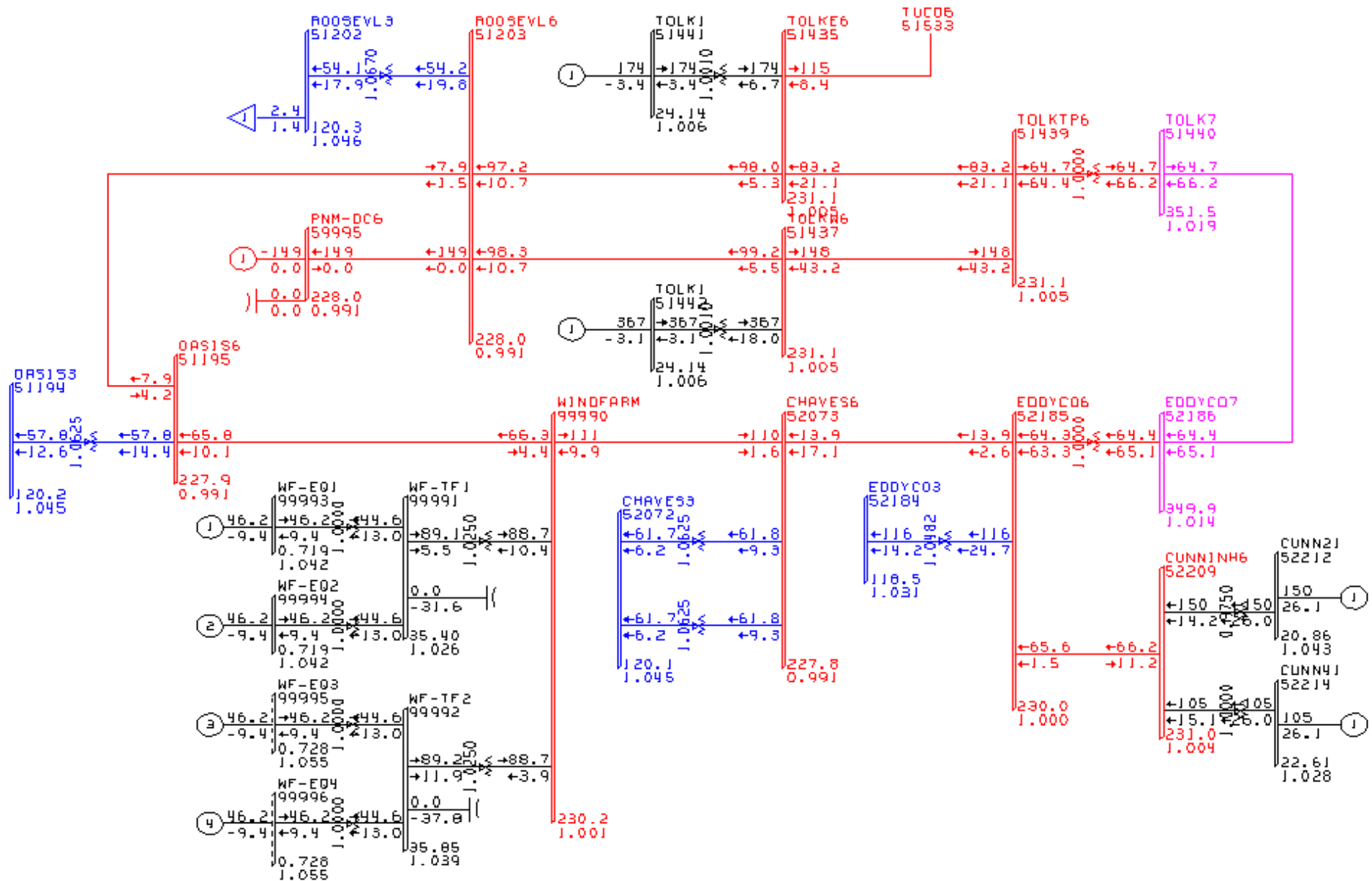


Figure A. 3: New Interconnection Facility, and 230 kV Line Construction with Requester's Interconnection Substation

10 APPENDIX B *One-line Diagrams with Power Flow reports*

2003 Spring Minimum Case



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

BUS DATA									LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
51070	TUCUMCA3	115 526	1.025	-17.4	0.0	6.0	0.0	51073	TUCUM1	13.2	1 526	0.0	0.0	1.000UN		0	18
		264	117.8		0.0	2.3	0.0	51076	FE-TUCU3	115	1 526	-6.0	-2.3			4	146
51073	TUCUM1	13.2 526	1.025	-17.4	0.0	0.0	0.0	51070	TUCUMCA3	115	1 526	0.0	0.0	1.000RG		0	18
		264	13.53		0.0	0.0	0.0										
51076	FE-TUCU3	115 526	1.026	-17.3	0.0	4.8	0.0	51070	TUCUMCA3	115	1 526	6.0	1.9			4	146
		264	118.0		0.0	0.2	0.0	51176	CURRY3	115	1 526	-10.8	-2.1			7	146
51078	CANYNW3	115 526	1.029	-13.8	0.0	11.0	0.0	51080	CANYNE3	115	1 526	-9.1	-3.8			11	90
		264	118.4		0.0	3.8	0.0	51088	ROCKWEL3	115	1 526	2.4	0.5			2	95
								51102	DAWN	115	1 526	-4.2	-0.6			5	90
51080	CANYNE3	115 526	1.031	-13.7	0.0	6.4	0.0	51014	OSAGE--3	115	1 526	-15.5	-2.3			17	90
		264	118.6		0.0	-1.3	0.0	51078	CANYNW3	115	1 526	9.1	3.6			11	90
51082	PALODU 3	115 526	1.045	-12.9	0.0	2.2	0.0	51020	RANDALL3	115	1 526	-2.2	-0.5			2	90
		264	120.2		0.0	0.5	0.0										
51083	DS-5&11269.0	526 526	1.007	-15.2	0.0	7.6	0.0	51097	DS-#92	69.0	1 526	-7.6	-2.3			16	50
		264	69.45		0.0	2.3	0.0										
51088	ROCKWEL3	115 526	1.029	-13.9	0.0	2.4	0.0	51078	CANYNW3	115	1 526	-2.4	-0.8			3	95
		264	118.3		0.0	0.8	0.0										
51091	CENTRS2	69.0 526	1.028	-15.4	0.0	8.1	0.0	51095	DS-MTR2	69.0	1 526	-8.1	-1.3			15	54
		264	70.95		0.0	1.3	0.0										
51094	NEHFD3	115 526	1.028	-13.2	0.0	0.0	0.0	51095	DS-MTR2	69.0	1 526	21.3	23.9	1.044UN		37	84
		264	118.2		0.0	0.0	0.0	51110	DFSMTH3	115	1 526	-21.3	-23.9			21	146
51095	DS-MTR2	69.0 526	1.033	-15.0	0.0	10.1	0.0	51091	CENTRS2	69.0	1 526	8.1	1.3			15	54
		264	71.28		0.0	3.4	0.0	51094	NEHFD3	115	1 526	-21.3	-22.3	1.044RG		36	84
								51105	HEREFD2	69.0	1 526	3.0	17.7			42	41
51097	DS-#92	69.0 526	1.010	-15.1	0.0	3.0	0.0	51083	DS-5&11269.0	69.0	1 526	7.6	2.2			16	50
		264	69.70		0.0	1.4	0.0	51105	HEREFD2	69.0	1 526	-10.6	-3.6			22	50
51102	DAWN	115 526	1.031	-13.7	0.0	1.5	0.0	51078	CANYNW3	115	1 526	4.2	-0.4			5	90
		264	118.6		0.0	0.6	0.0	51106	HEREFD3	115	1 526	-5.7	-0.2			6	90
51105	HEREFD2	69.0 526	1.017	-14.8	0.0	6.8	0.0	51095	DS-MTR2	69.0	1 526	-2.9	-17.5			43	41
		264	70.17		0.0	1.0	0.0	51097	DS-#92	69.0	1 526	10.6	3.6			22	50
								51106	HEREFD3	115	1 526	-9.3	5.4	0.971RG		26	40
								51106	HEREFD3	115	2 526	-9.4	6.5	0.968RG		28	40
								51115	DS-#42	69.0	1 526	4.1	1.0			5	88

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
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 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51106	HEREFD3	115 526 264	1.034 118.9	-13.3	0.0 0.0	0.0 0.0	0.0 0.0	51102	DAWN	115 1	526	5.8	-1.0			6	90
								51105	HEREFD2	69.0 1	526	9.3	-5.1	0.971UN		26	40
								51105	HEREFD2	69.0 2	526	9.4	-6.2	0.968UN		27	40
								51110	DFSMTH3	115 1	526	-37.0	15.9			27	146
								51122	FRIONA3	115 1	526	12.6	-3.6			14	90
51110	DFSMTH3	115 526 264	1.033 118.8	-13.0	0.0 0.0	0.0 0.0	0.0 0.0	51094	NEHFD3	115 1	526	21.4	23.8			21	146
								51106	HEREFD3	115 1	526	37.1	-15.8			27	146
								51111	DFSMTH6	230 1	526	-37.2	-9.9	1.050RG		25	150
								51111	DFSMTH6	230 2	526	-37.2	-9.9	1.050RG		25	150
								51146	DS-213	115 1	526	16.0	11.8			13	146
51111	DFSMTH6	230 526 264	0.993 228.3	-11.4	0.0 0.0	0.0 0.0	0.0 0.0	50993	BUSHLND6	230 1	526	-21.2	-12.9			6	452
								51110	DFSMTH3	115 1	526	37.3	11.1	1.050UN		26	150
								51110	DFSMTH3	115 2	526	37.3	11.1	1.050UN		26	150
								51419	PLANTX6	230 1	526	-53.3	-9.3			12	452
51115	DS-#42	69.0 526 264	1.015 70.05	-14.9	0.0 0.0	2.3 0.8	0.0 0.0	51105	HEREFD2	69.0 1	526	-4.1	-1.1			5	88
								51117	DS-#82	69.0 1	526	1.8	0.3			2	88
51117	DS-#82	69.0 526 264	1.013 69.92	-15.1	0.0 0.0	1.8 0.6	0.0 0.0	51115	DS-#42	69.0 1	526	-1.8	-0.6			2	88
51120	CARGIL3	115 526 264	1.028 118.2	-14.6	0.0 0.0	3.8 0.6	0.0 0.0	51122	FRIONA3	115 1	526	-5.5	4.1			7	90
								51124	PARMRC3	115 1	526	1.6	-4.7			5	90
51122	FRIONA3	115 526 264	1.028 118.2	-14.6	0.0 0.0	7.0 2.3	0.0 0.0	51106	HEREFD3	115 1	526	-12.4	2.0			14	90
								51120	CARGIL3	115 1	526	5.5	-4.2			7	90
51124	PARMRC3	115 526 264	1.030 118.4	-14.7	0.0 0.0	1.6 0.2	0.0 0.0	51120	CARGIL3	115 1	526	-1.6	4.1			5	90
								51126	DS-#203	115 1	526	0.1	-4.3			5	90
51126	DS-#203	115 526 264	1.032 118.7	-14.8	0.0 0.0	5.7 2.9	0.0 0.0	51124	PARMRC3	115 1	526	-0.1	3.8			4	90
								51176	CURRY3	115 1	526	-5.6	-6.7			9	90
51133	DIM-C,S269.0	526 526 264	0.997 68.81	-16.4	0.0 0.0	10.4 1.6	0.0 0.0	51135	DS-#32	69.0 1	526	-10.4	-1.6			20	54
51135	DS-#32	69.0 526 264	0.998 68.88	-16.4	0.0 0.0	2.4 0.9	0.0 0.0	51133	DIM-C,S269.0	1 526	526	10.4	1.6			20	54
								51137	GOODPAS269.0	1 526	526	-12.8	-2.5			24	54
51137	GOODPAS269.0	526 526 264	1.000 69.03	-16.2	0.0 0.0	0.0 0.0	0.0 0.0	51135	DS-#32	69.0 1	526	12.8	2.5			24	54
								51139	GOODPST269.0	1 526	526	0.0	0.0			0	54
								51141	CASTR2	69.0 1	526	-12.8	-2.5			24	54
51139	GOODPST269.0	526 526 264	1.000 69.03	-16.2	0.0 0.0	0.0 0.0	0.0 0.0	51137	GOODPAS269.0	1 526	526	0.0	0.0			0	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51141	CASTRT2	69.0 526	1.002	-16.1	0.0	0.0	0.0	51137	GOODPAS2	69.0 1 526	12.8	2.5			24	54
		264 69.14			0.0	0.0	0.0	51149	CASTRC2	69.0 1 526	-12.8	-2.5			24	54
51143	DS-15&12	69.0 526	1.006	-15.7	0.0	7.3	0.0	51149	CASTRC2	69.0 1 526	-7.3	-2.7			14	54
		264 69.38			0.0	2.7	0.0									
51145	DS-CAST	269.0 526	1.005	-15.7	0.0	10.4	0.0	51149	CASTRC2	69.0 1 526	-10.4	-3.6			20	54
		264 69.38			0.0	3.6	0.0									
51146	DS-213	115 526	1.012	-13.9	0.0	4.2	0.0	51110	DFSMTH3	115 1 526	-15.9	-12.9			14	146
		264 116.4			0.0	1.8	0.0	51150	CASTRC3	115 1 526	11.7	11.1			11	146
51149	CASTRC2	69.0 526	1.014	-15.2	0.0	0.0	0.0	51141	CASTRT2	69.0 1 526	13.0	2.5			24	54
		264 69.95			0.0	0.0	0.0	51143	DS-15&12	69.0 1 526	7.3	2.6			14	54
								51145	DS-CAST	269.0 1 526	10.4	3.6			20	54
								51150	CASTRC3	115 1 526	-15.4	-4.4	1.010RG		19	84
								51150	CASTRC3	115 2 526	-15.4	-4.4	1.010RG		19	84
51150	CASTRC3	115 526	1.011	-13.9	0.0	0.0	0.0	51146	DS-213	115 1 526	-11.7	-11.1			11	146
		264 116.3			0.0	0.0	0.0	51149	CASTRC2	69.0 1 526	15.4	4.8	1.010UN		19	84
								51149	CASTRC2	69.0 2 526	15.4	4.8	1.010UN		19	84
								51250	BC-EART3	115 1 526	-19.1	1.5			13	146
51155	NCLOVI2	69.0 526	1.025	-16.9	0.0	6.6	0.0	51163	WCLOVI2	69.0 1 526	-2.5	-0.1			5	54
		264 70.71			0.0	0.3	0.0	51175	CURRY2	69.0 1 526	-4.1	-0.3			10	41
51156	NORRST3	115 526	1.038	-14.7	0.0	0.0	0.0	51168	NORRIS3	115 1 526	7.7	2.1			9	90
		264 119.4			0.0	0.0	0.0	51176	CURRY3	115 1 526	9.6	0.5			6	146
								51194	OASIS3	115 1 526	-17.3	-2.6			12	146
51159	ECLOVI2	69.0 526	1.026	-16.7	0.0	7.3	0.0	51175	CURRY2	69.0 1 526	-7.3	-1.9			14	54
		264 70.79			0.0	1.9	0.0									
51162	WCLOVI3	115 526	1.037	-14.7	0.0	5.5	0.0	51166	CANNOA3	115 1 526	-12.5	-1.5			8	146
		264 119.2			0.0	1.4	0.0	51172	FE-SWS3	115 1 526	7.0	0.1			5	146
51163	WCLOVI2	69.0 526	1.026	-16.8	0.0	2.5	0.0	51155	NCLOVI2	69.0 1 526	2.5	-0.1			5	54
		264 70.76			0.0	0.5	0.0	51175	CURRY2	69.0 1 526	-5.0	-0.4			9	54
51166	CANNOA3	115 526	1.039	-14.4	0.0	7.2	0.0	51162	WCLOVI3	115 1 526	12.5	1.1			8	146
		264 119.4			0.0	3.9	0.0	51194	OASIS3	115 1 526	-19.7	-5.0			13	146
51168	NORRIS3	115 526	1.038	-14.7	0.0	7.7	0.0	51156	NORRST3	115 1 526	-7.7	-2.2			9	90
		264 119.4			0.0	2.2	0.0									
51170	FE-CLVS3	115 526	1.037	-14.7	0.0	0.0	0.0	51172	FE-SWS3	115 1 526	0.4	1.0			1	146
		264 119.3			0.0	0.0	0.0	51180	FE-CLVS3	115 1 526	-0.4	-1.0			1	146

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51172	FE-SWS3	115 526 264	1.037 119.2	-14.7	0.0 0.0	7.4 2.0	0.0 0.0	51162	WCLOVI3	115 1	526	-7.0	-0.3			5	146
								51170	FE-CLVS3	115 1	526	-0.4	-1.7			1	146
51175	CURRY2	69.0 526 264	1.030 71.04	-16.4	0.0 0.0	4.8 0.8	0.0 0.0	51155	NCLOVI2	69.0 1	526	4.1	0.0			10	41
								51159	ECLOVI2	69.0 1	526	7.3	0.9			13	54
								51163	WCLOVI2	69.0 1	526	5.0	0.3			9	54
								51176	CURRY3	115 1	526	-11.3	-1.3	0.997RG		28	40
								51176	CURRY3	115 2	526	-11.2	-1.1	0.997RG		27	40
								51183	FARWELL2	69.0 1	526	1.3	0.3			2	54
51176	CURRY3	115 526 264	1.038 119.4	-14.7	0.0 0.0	0.0 0.0	0.0 0.0	51076	FE-TUCU3	115 1	526	11.0	-3.1			8	146
								51126	DS-#203	115 1	526	5.7	6.0			9	90
								51156	NORRST3	115 1	526	-9.6	-0.5			6	146
								51175	CURRY2	69.0 1	526	11.3	1.6	0.997UN		27	40
								51175	CURRY2	69.0 2	526	11.2	1.5	0.997UN		27	40
								51180	FE-CLVS3	115 1	526	11.7	4.4			8	146
								51202	ROOSEVL3	115 2	526	-41.3	-9.9			28	146
51180	FE-CLVS3	115 526 264	1.038 119.3	-14.7	0.0 0.0	11.3 4.4	0.0 0.0	51170	FE-CLVS3	115 1	526	0.4	0.1			0	146
								51176	CURRY3	115 1	526	-11.7	-4.5			8	146
51183	FARWELL2	69.0 526 264	1.027 70.89	-16.5	0.0 0.0	1.3 0.6	0.0 0.0	51175	CURRY2	69.0 1	526	-1.3	-0.6			3	54
51185	DS-#102	69.0 526 264	1.018 70.22	-17.1	0.0 0.0	4.0 1.8	0.0 0.0	51229	LARIAT2	69.0 1	526	-4.0	-1.8			5	88
51194	OASIS3	115 526 264	1.045 120.2	-13.8	0.0 0.0	0.0 0.0	0.0 0.0	51156	NORRST3	115 1	526	17.4	1.6			11	146
								51166	CANNOA3	115 1	526	19.8	4.3			13	146
								51195	OASIS6	230 1	526	-57.8	-12.6	1.062RG		22	252
								51208	PORTALE3	115 1	526	20.7	6.7			14	146
51195	OASIS6	230 526 264	0.991 227.9	-12.1	0.0 0.0	0.0 0.0	0.0 0.0	51194	OASIS3	115 1	526	57.8	14.4	1.062UN		24	252
								51203	ROOSEVL6	230 1	526	7.9	-4.2			2	452
								99990	WINDFARM	230 1	526	-65.8	-10.1			15	452
51202	ROOSEVL3	115 526 264	1.046 120.3	-14.0	0.0 0.0	2.4 1.4	0.0 0.0	51176	CURRY3	115 2	526	41.5	10.1			28	146
								51203	ROOSEVL6	230 1	526	-54.1	-17.9	1.067RG		22	252
								51208	PORTALE3	115 1	526	10.3	6.5			8	146
51203	ROOSEVL6	230 526 264	0.991 228.0	-12.2	0.0 0.0	0.0 0.0	0.0 0.0	51195	OASIS6	230 1	526	-7.9	1.5			2	452
								51202	ROOSEVL3	115 1	526	54.2	19.8	1.067UN		23	252
								51435	TOLKE6	230 2	526	-97.2	-10.7			20	492
								51437	TOLKW6	230 1	526	-98.3	-10.7			20	492
								59995	PNM-DC6	230 1	999	149.2	0.0			8	2000

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>								<===== LINE DATA =====>										
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING	A									
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	
51207	RO-PORT	269.0	526	1.031	-15.5	0.0	16.7	0.0	-----									
		264	71.13			0.0	7.7	0.0	51208	PORTALE3	115	1	526	-15.4	-6.7	1.002RG	19	84
									51208	PORTALE3	115	2	526	-15.4	-6.7	1.002RG	19	84
									51211	ZODIAC2	69.0	1	526	5.5	1.6		10	54
									51213	PORTAL12	69.0	1	526	8.6	4.2		17	54
51208	PORTALE3	115	526	1.040	-14.2	0.0	0.0	0.0	-----									
		264	119.6			0.0	0.0	0.0	51194	OASIS3	115	1	526	-20.6	-7.0		14	146
									51202	ROOSEVL3	115	1	526	-10.2	-7.2		8	146
									51207	RO-PORT	269.0	1	526	15.4	7.1	1.002UN	19	84
									51207	RO-PORT	269.0	2	526	15.4	7.1	1.002UN	19	84
51211	ZODIAC2	69.0	526	1.029	-15.6	0.0	3.1	0.0	-----									
		264	71.02			0.0	1.0	0.0	51207	RO-PORT	269.0	1	526	-5.5	-1.6		10	54
									51219	PORTAS2	69.0	1	526	2.4	0.6		5	54
51213	PORTAL12	69.0	526	1.028	-15.6	0.0	2.5	0.0	-----									
		264	70.94			0.0	0.9	0.0	51207	RO-PORT	269.0	1	526	-8.6	-4.2		17	54
									51215	PORTAL22	69.0	1	526	6.1	3.3		19	36
51215	PORTAL22	69.0	526	1.026	-15.6	0.0	3.0	0.0	-----									
		264	70.80			0.0	1.1	0.0	51213	PORTAL12	69.0	1	526	-6.1	-3.3		19	36
									51217	PORTAI2	69.0	1	526	3.1	2.3		7	54
51217	PORTAI2	69.0	526	1.025	-15.6	0.0	0.2	0.0	-----									
		264	70.72			0.0	0.1	0.0	51215	PORTAL22	69.0	1	526	-3.1	-2.3		7	54
									51221	POREFD2	69.0	1	526	1.7	1.4		4	54
									51223	MARKST2	69.0	1	526	1.2	0.8		3	54
51219	PORTAS2	69.0	526	1.029	-15.6	0.0	2.4	0.0	-----									
		264	70.97			0.0	0.7	0.0	51211	ZODIAC2	69.0	1	526	-2.4	-0.7		5	54
51221	POREFD2	69.0	526	1.025	-15.6	0.0	1.7	0.0	-----									
		264	70.72			0.0	1.4	0.0	51217	PORTAI2	69.0	1	526	-1.7	-1.4		4	54
51223	MARKST2	69.0	526	1.025	-15.6	0.0	1.2	0.0	-----									
		264	70.72			0.0	0.8	0.0	51217	PORTAI2	69.0	1	526	-1.2	-0.8		3	54
51229	LARIAT2	69.0	526	1.021	-16.8	0.0	0.3	0.0	-----									
		264	70.45			0.0	-0.6	0.0	51185	DS-#102	69.0	1	526	4.1	1.7		5	88
									51231	BC-LARI2	69.0	1	526	-4.4	-1.1		5	88
51231	BC-LARI2	69.0	526	1.022	-16.8	0.0	2.0	0.0	-----									
		264	70.49			0.0	0.8	0.0	51229	LARIAT2	69.0	1	526	4.4	1.1		5	88
									51233	WMULES2	69.0	1	526	-6.4	-1.8		7	88
51233	WMULES2	69.0	526	1.026	-16.4	0.0	1.5	0.0	-----									
		264	70.80			0.0	0.1	0.0	51231	BC-LARI2	69.0	1	526	6.4	1.7		7	88
									51235	MULECY2	69.0	1	526	-7.9	-1.7		9	88
51235	MULECY2	69.0	526	1.026	-16.4	0.0	1.8	0.0	-----									
		264	70.81			0.0	0.1	0.0	51233	WMULES2	69.0	1	526	7.9	1.7		9	88
									51241	BC-BAIL2	69.0	1	526	-9.7	-1.9		11	88
51239	MULE-V2	69.0	526	1.027	-16.3	0.0	2.0	0.0	-----									
		264	70.85			0.0	0.0	0.0	51241	BC-BAIL2	69.0	1	526	-4.1	-0.6		7	54
									51245	BAILY2	69.0	1	526	2.0	0.7		2	88

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING	A								
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
51241	BC-BAIL269.0	526	1.028	-16.2	0.0	17.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	70.91			0.0	4.3	0.0	51235	MULECY2	69.0	1	526	9.7	1.8		11	88
								51239	MULE-V2	69.0	1	526	4.1	0.6		7	54
								51242	BAILYC3	115	1	526	-15.7	-3.4	1.038RG	39	40
								51242	BAILYC3	115	2	526	-15.9	-3.4	1.038RG	39	40
51242	BAILYC3	115	526	1.003	-13.7	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	115.4			0.0	0.0	0.0	51241	BC-BAIL269.0	1	526	15.7	4.1	1.038UN		40	40
								51241	BC-BAIL269.0	2	526	15.9	4.1	1.038UN		41	40
								51418	PLANTX3	115	1	526	-31.6	-8.3		22	146
51245	BAILYP2	69.0	526	1.025	-16.4	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	70.76			0.0	0.0	0.0	51239	MULE-V2	69.0	1	526	-2.0	-0.9		2	88
								51247	LC-BECK269.0	1	526	2.0	0.9			2	88
51247	LC-BECK269.0	526	1.024	-16.5	0.0	2.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	70.63			0.0	1.1	0.0	51245	BAILYP2	69.0	1	526	-2.0	-1.1		3	88
51249	BC-EART269.0	526	1.026	-13.9	0.0	14.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	70.82			0.0	5.7	0.0	51250	BC-EART3	115	1	526	-7.6	-2.9	1.019RG	16	50
								51250	BC-EART3	115	2	526	-7.2	-2.8	1.019RG	13	56
51250	BC-EART3	115	526	1.014	-13.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	116.6			0.0	0.0	0.0	51150	CASTR3	115	1	526	19.2	-2.3		13	146
								51249	BC-EART269.0	1	526	7.6	3.1	1.019UN		16	50
								51249	BC-EART269.0	2	526	7.2	2.9	1.019UN		14	56
								51418	PLANTX3	115	1	526	-34.0	-3.7		23	146
99990	WINDFARM	230	526	1.001	-10.2	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	230.2			0.0	0.0	0.0	51195	OASIS6	230	1	526	66.3	-4.4		15	452
								52073	CHAVES6	230	1	526	111.1	-9.9		25	452
								99991	WF-TF1	34.5	1	526	-88.7	10.4	1.025UN	89	100
								99992	WF-TF2	34.5	1	526	-88.7	3.9	1.025UN	89	100
99991	WF-TF1	34.5	526	1.026	0.1	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	35.40			0.0	0.0	-31.6	99990	WINDFARM	230	1	526	89.1	5.5	1.025LK	87	100
								99993	WF-EQ1	.690	1	526	-44.6	13.0	1.000UN	91	50
								99994	WF-EQ2	.690	1	526	-44.6	13.0	1.000UN	91	50
99992	WF-TF2	34.5	526	1.039	-0.1	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	35.85			0.0	0.0	-37.8	99990	WINDFARM	230	1	526	89.2	11.9	1.025LK	87	100
								99995	WF-EQ3	.690	1	526	-44.6	13.0	1.000UN	89	50
								99996	WF-EQ4	.690	1	526	-44.6	13.0	1.000UN	89	50
99993	WF-EQ1	.690	526	1.042	4.9	46.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	0.719			-9.4L	0.0	0.0	99991	WF-TF1	34.5	1	526	46.2	-9.4	1.000LK	91	50
99994	WF-EQ2	.690	526	1.042	4.9	46.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	0.719			-9.4L	0.0	0.0	99991	WF-TF1	34.5	1	526	46.2	-9.4	1.000LK	91	50
99995	WF-EQ3	.690	526	1.055	4.6	46.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	0.728			-9.4L	0.0	0.0	99992	WF-TF2	34.5	1	526	46.2	-9.4	1.000LK	89	50
99996	WF-EQ4	.690	526	1.055	4.6	46.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	264	0.728			-9.4L	0.0	0.0	99992	WF-TF2	34.5	1	526	46.2	-9.4	1.000LK	89	50

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA									LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51320	SWISHER3	115 526	1.020	-16.5	0.0	0.0	0.0	51316	KRESS3	115 1	526	58.5	31.0			29	226
		265	117.3		0.0	0.0	0.0	51321	SWISHER6	230 1	526	-58.5	-31.0	1.062RG		43	150
51321	SWISHER6	230 526	0.986	-13.8	0.0	0.0	0.0	50915	NICHOL6	230 1	526	-68.9	-11.9			16	452
		265	226.9		0.0	0.0	0.0	51320	SWISHER3	115 1	526	58.5	34.6	1.062UN		46	150
								51533	TUCO6	230 1	526	10.4	-22.7			6	452
51325	KRESRU2	69.0 526	1.020	-20.6	0.0	1.6	0.0	51315	KRESS2	69.0 1	526	-16.5	-4.9			31	54
		265	70.40		0.0	0.1	0.0	51335	LH-PL&M2	69.0 1	526	14.8	4.8			28	54
51329	BRISCOE2	69.0 526	0.989	-22.9	0.0	1.0	0.0	51331	LH-SLVR2	69.0 1	526	-1.0	0.1			2	54
		265	68.24		0.0	-0.1	0.0										
51331	LH-SLVR2	69.0 526	0.989	-22.9	0.0	0.7	0.0	51329	BRISCOE2	69.0 1	526	1.0	-0.2			2	54
		265	68.26		0.0	0.5	0.0	51375	LH-SPL2	69.0 1	526	-1.7	-0.4			3	54
51335	LH-PL&M2	69.0 526	0.995	-21.9	0.0	9.5	0.0	51325	KRESRU2	69.0 1	526	-14.6	-4.6			28	54
		265	68.66		0.0	4.0	0.0	51337	NPLNV2	69.0 1	526	5.1	0.6			10	54
51337	NPLNV2	69.0 526	0.994	-22.0	0.0	5.1	0.0	51335	LH-PL&M2	69.0 1	526	-5.1	-0.7			10	54
		265	68.59		0.0	0.7	0.0										
51339	WPLNV2	69.0 526	0.999	-22.4	0.0	10.1	0.0	51343	PLNVCO2	69.0 1	526	-10.1	-2.5			19	54
		265	68.90		0.0	2.5	0.0										
51341	PLAINVW2	69.0 526	1.005	-22.3	0.0	6.4	0.0	51353	EPLNV2	69.0 1	526	-6.4	0.2			12	54
		265	69.33		0.0	-0.2	0.0										
51343	PLNVCO2	69.0 526	1.006	-22.0	0.0	0.0	0.0	51339	WPLNV2	69.0 1	526	10.1	2.5			19	54
		265	69.39		0.0	0.0	0.0	51345	WESTRID2	69.0 1	526	-10.1	-2.5			12	88
51345	WESTRID2	69.0 526	1.007	-21.8	0.0	8.9	0.0	51343	PLNVCO2	69.0 1	526	10.1	2.4			12	88
		265	69.51		0.0	0.6	0.0	51347	PLNVWT2	69.0 1	526	-19.0	-3.1			22	88
51347	PLNVWT2	69.0 526	1.013	-21.1	0.0	0.0	0.0	51345	WESTRID2	69.0 1	526	19.1	3.2			22	88
		265	69.90		0.0	0.0	0.0	51401	HALECO2	69.0 1	526	-19.1	-3.2			22	88
51349	SPLNV2	69.0 526	1.005	-21.7	0.0	7.1	0.0	51401	HALECO2	69.0 1	526	-7.1	-1.2			13	54
		265	69.35		0.0	1.2	0.0										
51353	EPLNV2	69.0 526	1.007	-22.0	0.0	2.9	0.0	51341	PLAINVW2	69.0 1	526	6.4	-0.3			12	54
		265	69.50		0.0	0.7	0.0	51359	COX2	69.0 1	526	-9.3	-0.3			17	54
51359	COX2	69.0 526	1.012	-21.5	0.0	0.0	0.0	51353	EPLNV2	69.0 1	526	9.4	0.3			17	54
		265	69.82		0.0	0.0	0.0	51360	COX3	115 1	526	-20.4	-0.6	1.028RG		50	40
								51365	AIKENT2	69.0 1	526	11.1	0.3			20	54
51360	COX3	115 526	0.991	-18.1	0.0	0.0	0.0	51359	COX2	69.0 1	526	20.5	1.9	1.028UN		52	40
		265	113.9		0.0	0.0	0.0	51366	LH-COX3	115 1	526	-20.5	-1.9			23	90

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51365	AIKENT2	69.0 526	1.006	-22.1	0.0	0.8	0.0	51359	COX2	69.0 1	526	-11.0	-0.4			20	54
		265 69.44			0.0	0.0	0.0	51369	LOCKNEY2	69.0 1	526	10.3	0.3			19	54
51366	LH-COX3	115 526	0.991	-18.1	0.0	0.0	0.0	51360	COX3	115 1	526	20.5	1.9			23	90
		265 113.9			0.0	0.0	0.0	51402	HALECO3	115 1	526	-20.5	-1.9			23	90
51367	LH-AIKN2	69.0 526	1.010	-24.2	0.0	2.6	0.0	51513	IRICK2	69.0 1	526	-2.6	-2.0			6	54
		265 69.68			0.0	2.0	0.0										
51369	LOCKNEY2	69.0 526	1.003	-22.4	0.0	4.0	0.0	51365	AIKENT2	69.0 1	526	-10.2	-0.4			19	54
		265 69.20			0.0	-1.9	0.0	51371	LH-CDRH2	69.0 1	526	6.2	2.3			18	36
51371	LH-CDRH2	69.0 526	1.003	-22.4	0.0	0.7	0.0	51369	LOCKNEY2	69.0 1	526	-6.2	-2.3			18	36
		265 69.19			0.0	0.0	0.0	51373	LH-LST2	69.0 1	526	5.5	2.3			16	36
51373	LH-LST2	69.0 526	0.997	-22.6	0.0	2.1	0.0	51371	LH-CDRH2	69.0 1	526	-5.4	-2.4			17	36
		265 68.77			0.0	1.4	0.0	51375	LH-SPL2	69.0 1	526	3.3	1.0			10	36
51375	LH-SPL2	69.0 526	0.992	-22.7	0.0	1.6	0.0	51331	LH-SLVR2	69.0 1	526	1.7	0.1			3	54
		265 68.43			0.0	1.0	0.0	51373	LH-LST2	69.0 1	526	-3.3	-1.1			10	36
51381	SPRINGL2	69.0 526	1.041	-17.4	0.0	1.4	0.0	51383	OLTON2	69.0 1	526	-1.4	-0.6			3	54
		265 71.83			0.0	0.6	0.0										
51383	OLTON2	69.0 526	1.043	-17.3	0.0	3.9	0.0	51381	SPRINGL2	69.0 1	526	1.4	0.3			3	54
		265 71.98			0.0	0.6	0.0	51385	LC-OLTN2	69.0 1	526	-5.3	-0.9			10	54
51385	LC-OLTN2	69.0 526	1.044	-17.2	0.0	5.4	0.0	51383	OLTON2	69.0 1	526	5.3	0.8			10	54
		265 72.04			0.0	3.9	0.0	51387	LAMTON2	69.0 1	526	-10.7	-4.7			21	54
51387	LAMTON2	69.0 526	1.044	-17.2	0.0	0.0	0.0	51295	LC-HART2	69.0 1	526	13.2	4.2			25	54
		265 72.05			0.0	0.0	0.0	51385	LC-OLTN2	69.0 1	526	10.7	4.7			21	54
51388	LAMTON3	115 526	1.002	-15.2	0.0	0.0	0.0	51388	LAMTON3	115 1	526	-23.9	-8.4	1.058RG		29	84
		265 115.2			0.0	0.0	0.0	51391	CORNER2	69.0 1	526	0.0	-0.5			1	54
51387	LAMTON2	69.0 526	1.044	-17.2	0.0	0.0	0.0	51387	LAMTON2	69.0 1	526	23.9	9.4	1.058UN		31	84
		265 72.09			0.0	0.0	0.0	51396	LC-SOL3	115 1	526	-42.2	0.4			29	146
51391	CORNER2	69.0 526	1.045	-17.3	0.0	0.0	0.0	51402	HALECO3	115 1	526	18.3	-9.8			14	146
		265 72.09			0.0	0.0	0.0	51387	LAMTON2	69.0 1	526	0.0	0.0			0	54
51393	SP-HALF2	69.0 526	1.013	-21.1	0.0	4.8	0.0	51401	HALECO2	69.0 1	526	-4.8	-2.1			10	54
		265 69.89			0.0	2.1	0.0										
51396	LC-SOL3	115 526	1.006	-14.3	0.0	6.7	0.0	51388	LAMTON3	115 1	526	42.4	-0.2			29	146
		265 115.7			0.0	3.2	0.0	51418	PLANTX3	115 1	526	-49.1	-3.1			33	146

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51401	HALECO2	69.0 265	526 69.95	1.014 -21.1	0.0 0.0	0.0 0.0	0.0 0.0	51347	PLNVWT2	69.0	1	526	19.1	3.2		22	88
								51349	SPLNV2	69.0	1	526	7.1	1.0		13	54
								51393	SP-HALF2	69.0	1	526	4.8	2.1		10	54
								51402	HALECO3	115	1	526	-15.7	-3.2	1.030RG	39	40
								51402	HALECO3	115	2	526	-15.3	-3.2	1.030RG	39	40
51402	HALECO3	115 265	526 115.7	1.006 -16.7	0.0 0.0	0.0 0.0	0.0 0.0	51316	KRESS3	115	1	526	2.3	-8.2		6	146
								51366	LH-COX3	115	1	526	20.8	1.1		23	90
								51388	LAMTON3	115	1	526	-18.1	8.8		14	146
								51401	HALECO2	69.0	1	526	15.7	4.5	1.030UN	41	40
								51401	HALECO2	69.0	2	526	15.4	4.4	1.030UN	40	40
								51418	PLANTX3	115	1	526	-35.4	3.6		24	146
								51532	TUCO3	115	1	526	-0.7	-14.2		16	90
51418	PLANTX3	115 265	526 117.6	1.023 -11.8	0.0 0.0	3.4 0.4	0.0 0.0	51242	BAILYC3	115	1	526	32.0	8.1		22	146
								51250	BC-EART3	115	1	526	34.2	3.7		23	146
								51396	LC-SOL3	115	1	526	49.7	4.1		33	146
								51402	HALECO3	115	1	526	36.3	-3.6		24	146
								51419	PLANTX6	230	1	526	-89.2	0.1	1.025LK	35	252
								51421	PLANTX1	13.8	1	526	0.0	0.0	1.025LK	0	65
								51422	PLANTX1	13.8	1	526	0.0	0.0	1.025LK	0	125
								51423	PLANTX1	13.8	1	526	-69.9	0.6	1.025LK	55	125
								51466	LAMBCO3	115	1	526	3.4	-13.2		9	146
51419	PLANTX6	230 265	526 230.2	1.001 -9.3	0.0 0.0	0.0 0.0	0.0 0.0	50887	POTTRC6	230	1	526	9.0	-15.8		4	452
								51111	DFSMTH6	230	1	526	53.6	-1.5		12	452
								51418	PLANTX3	115	1	526	89.3	4.0	1.025UN	35	252
								51424	PLANTX1	20.0	1	526	-139.7	70.6	1.000LK	73	215
								51435	TOLKE6	230	2	526	-43.9	-20.0		11	452
								51437	TOLKW6	230	1	526	-45.7	-20.7		11	452
								51733	SUNDOWN6	230	1	526	77.5	-16.6		18	452
51421	PLANTX1	13.8 265	526 13.77	0.998 -11.8	0.0 0.0	0.0 0.0	0.0 0.0	51418	PLANTX3	115	1	526	0.0	0.0	1.025UN	0	65
51422	PLANTX1	13.8 265	526 13.77	0.998 -11.8	0.0 0.0	0.0 0.0	0.0 0.0	51418	PLANTX3	115	1	526	0.0	0.0	1.025UN	0	125
51423	PLANTX1	13.8 265	526 13.83	1.002 -7.9	70.0 4.3R	0.0 0.0	0.0 0.0	51418	PLANTX3	115	1	526	70.0	4.3	1.025UN	56	125
51424	PLANTX1	20.0 265	526 19.29	0.965 -4.3	140.0 -56.2R	0.0 0.0	0.0 0.0	51419	PLANTX6	230	1	526	140.0	-56.2	1.000UN	73	215
51435	TOLKE6	230 265	526 231.1	1.005 -8.9	0.0 0.0	0.0 0.0	0.0 0.0	51203	ROOSEVL6	230	2	526	98.0	5.3		20	492
								51419	PLANTX6	230	2	526	43.9	17.5		10	452
								51439	TOLKTP6	230	1	526	-83.2	-21.1		4	2000
								51441	TOLK1	24.0	1	526	-173.5	6.7	1.001UN	24	728
								51533	TUCO6	230	1	526	114.8	-8.4		25	452

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 WIND FARM (BOONE SITE) IMPACT STUDY
 WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING A									
BUS	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA		
51437	TOLKW6	230	526	1.005	-8.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	231.1	0.0	0.0	0.0	0.0	0.0	51203	ROOSEVL6	230	1	526	99.2	5.5		20 492
				0.0	0.0	0.0	0.0	0.0	51419	PLANTX6	230	1	526	45.8	18.3		11 452
									51439	TOLKTP6	230	1	526	147.9	-43.2		8 2000
									51442	TOLK1	24.0	1	526	-366.6	18.0	1.001UN	50 728
									51467	LAMBCO6	230	1	526	60.1	27.9		15 452
									51891	YOAKUM6	230	1	526	13.6	-26.6		7 452
51439	TOLKTP6	230	526	1.005	-8.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	231.1	0.0	0.0	0.0	0.0	0.0	51435	TOLKE6	230	1	526	83.2	21.1		4 2000
									51437	TOLKW6	230	1	526	-147.9	43.2		8 2000
									51440	TOLK7	345	1	526	64.7	-64.4	1.000LK	16 560
51440	TOLK7	345	526	1.019	-9.7	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	351.5	0.0	0.0	0.0	0.0	0.0	51439	TOLKTP6	230	1	526	-64.7	66.2	1.000UN	16 560
									52186	EDDYCO7	345	1	526	64.7	-66.2		7 1355
51441	TOLK1	24.0	526	1.006	-7.8	173.6	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	24.14			-3.4R	0.0	0.0	51435	TOLKE6	230	1	526	173.6	-3.4	1.001LK	24 728
51442	TOLK1	24.0	526	1.006	-6.6	367.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	24.14			-3.1R	0.0	0.0	51437	TOLKW6	230	1	526	367.0	-3.1	1.001LK	50 728
51451	SUDAN2	69.0	526	1.014	-14.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.00	0.0	0.0	0.0	0.0	0.0	51453	SUDNRU2	69.0	1	526	0.0	0.0		0 88
51453	SUDNRU2	69.0	526	1.014	-14.4	0.0	1.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.00	0.0	0.0	0.0	0.3	0.0	51451	SUDAN2	69.0	1	526	0.0	0.0		0 88
									51455	LC-SNDH2	69.0	1	526	-1.3	-0.3		1 88
51455	LC-SNDH2	69.0	526	1.015	-14.4	0.0	4.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.03	0.0	0.0	0.0	2.1	0.0	51453	SUDNRU2	69.0	1	526	1.3	0.2		1 88
									51457	AMHERST	269.0	1	526	-5.6	-2.2		7 88
51457	AMHERST	269.0	526	1.016	-14.3	0.0	0.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.13	0.0	0.0	0.0	0.3	0.0	51455	LC-SNDH2	69.0	1	526	5.6	2.2		7 88
									51459	WLTTLF2	69.0	1	526	-6.4	-2.4		8 88
51459	WLTTLF2	69.0	526	1.020	-14.0	0.0	0.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.35	0.0	0.0	0.0	0.0	0.0	51457	AMHERST	269.0	1	526	6.4	2.3		8 88
									51465	LAMBCO2	69.0	1	526	-6.8	-2.3		13 54
51461	LFLS&C2	69.0	526	1.023	-13.8	0.0	7.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.57	0.0	0.0	0.0	1.2	0.0	51465	LAMBCO2	69.0	1	526	-7.3	-1.2		20 36
51465	LAMBCO2	69.0	526	1.027	-13.6	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.85	0.0	0.0	0.0	0.0	0.0	51459	WLTTLF2	69.0	1	526	6.8	2.2		13 54
									51461	LFLS&C2	69.0	1	526	7.3	1.1		20 36
									51466	LAMBCO3	115	1	526	-16.2	-4.4	0.996RG	19 84
									51466	LAMBCO3	115	2	526	-16.2	-4.4	0.996RG	19 84
									51471	LC-LTTL2	269.0	1	526	13.9	4.4		26 54
									51483	LC-LUMS2	269.0	1	526	4.3	1.1		8 54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51466	LAMBCO3	115 526	1.038	-12.4	0.0	0.0	0.0	51418	PLANTX3	115 1	526	-3.3	11.7			8	146
		265 119.4			0.0	0.0	0.0	51465	LAMBCO2	69.0 1	526	16.2	4.8	0.996UN		19	84
								51465	LAMBCO2	69.0 2	526	16.2	4.8	0.996UN		19	84
								51467	LAMBCO6	230 1	526	-59.7	-32.8	1.075RG		26	252
								51598	HOCKLEY3	115 1	526	30.6	11.4			22	146
51467	LAMBCO6	230 526	0.983	-10.6	0.0	0.0	0.0	51437	TOLKW6	230 1	526	-59.8	-35.3			16	452
		265 226.2			0.0	0.0	0.0	51466	LAMBCO3	115 1	526	59.8	35.3	1.075UN		28	252
51471	LC-LTTTL269.0	526	1.023	-13.8	0.0	4.9	0.0	51465	LAMBCO2	69.0 1	526	-13.9	-4.4			26	54
		265 70.62			0.0	2.2	0.0	51473	WANTON2	69.0 1	526	9.0	2.1			17	54
51473	WANTON2	69.0 526	1.021	-14.0	0.0	0.0	0.0	51471	LC-LTTTL269.0	1 526		-8.9	-2.2			17	54
		265 70.45			0.0	0.0	0.0	51475	LC-SP&H269.0	1 526		7.4	2.0			14	54
								51477	BAINER2	69.0 1	526	1.5	0.2			3	54
51475	LC-SP&H269.0	526	1.013	-14.5	0.0	7.4	0.0	51473	WANTON2	69.0 1	526	-7.4	-2.1			14	54
		265 69.91			0.0	2.1	0.0										
51477	BAINER2	69.0 526	1.021	-14.0	0.0	0.0	0.0	51473	WANTON2	69.0 1	526	-1.5	-0.2			3	54
		265 70.43			0.0	0.0	0.0	51479	WANTON2	69.0 1	526	1.5	0.2			3	54
51479	WANTON2	69.0 526	1.020	-14.1	0.0	1.5	0.0	51477	BAINER2	69.0 1	526	-1.5	-0.4			3	54
		265 70.35			0.0	0.4	0.0										
51483	LC-LUMS269.0	526	1.026	-13.7	0.0	1.3	0.0	51465	LAMBCO2	69.0 1	526	-4.3	-1.2			8	54
		265 70.77			0.0	0.7	0.0	51485	HOBGOOD269.0	1 526		3.0	0.5			5	54
51485	HOBGOOD269.0	526	1.024	-13.8	0.0	0.1	0.0	51483	LC-LUMS269.0	1 526		-3.0	-0.5			6	54
		265 70.69			0.0	0.0	0.0	51487	PUMP/YH269.0	1 526		2.9	0.5			5	54
51487	PUMP/YH269.0	526	1.024	-13.8	0.0	2.0	0.0	51485	HOBGOOD269.0	1 526		-2.9	-0.6			5	54
		265 70.66			0.0	0.4	0.0	51489	MIDAMR2	69.0 1	526	0.9	0.1			2	54
51489	MIDAMR2	69.0 526	1.024	-13.9	0.0	0.8	0.0	51487	PUMP/YH269.0	1 526		-0.9	-0.2			2	54
		265 70.63			0.0	0.3	0.0	51493	WHITHAR269.0	1 526		0.1	-0.1			0	54
51493	WHITHAR269.0	526	1.024	-13.9	0.0	0.1	0.0	51489	MIDAMR2	69.0 1	526	-0.1	0.1			0	54
		265 70.63			0.0	-0.1	0.0										
51495	COUNTL2	69.0 526	0.995	-20.3	0.0	7.5	0.0	51497	SP-ABRN269.0	1 526		-7.5	-0.5			18	41
		265 68.67			0.0	0.5	0.0										
51497	SP-ABRN269.0	526	1.000	-19.9	0.0	10.6	0.0	51495	COUNTL2	69.0 1	526	7.6	0.4			18	41
		265 69.00			0.0	7.6	0.0	51531	TUCO2	69.0 1	526	-18.2	-8.0			37	54
51499	HALECN2	69.0 526	1.013	-19.5	0.0	2.5	0.0	51501	LH-HALC269.0	1 526		2.0	0.6			4	54
		265 69.88			0.0	-0.3	0.0	51531	TUCO2	69.0 1	526	-4.5	-0.3			8	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51501	LH-HALC2	69.0 526 265	1.013 69.88	-19.5	0.0 0.0	2.0 0.6	0.0 0.0	51499	HALECN2	69.0 1	526	-2.0	-0.6			4	54
51513	IRICK2	69.0 526 265	1.013 69.87	-24.2	0.0 0.0	1.0 0.1	0.0 0.0	51367	LH-AIKN2	69.0 1	526	2.6	1.9			6	54
								51515	BARWISE2	69.0 1	526	-3.6	-1.9			7	54
51515	BARWISE2	69.0 526 265	1.015 70.03	-24.1	0.0 0.0	1.4 0.9	0.0 0.0	51513	IRICK2	69.0 1	526	3.6	1.9			7	54
								51517	FLOYD2	69.0 1	526	-4.9	-2.7			10	54
51517	FLOYD2	69.0 526 265	1.018 70.25	-24.0	0.0 0.0	0.0 0.0	0.0 0.0	51515	BARWISE2	69.0 1	526	5.0	2.7			10	54
								51518	FLOYD3	115 1	526	-23.0	-10.1	1.075HI		62	40
								51521	FLYDAT2	69.0 1	526	15.2	6.3			30	54
								51527	LH-HARM2	69.0 1	526	2.8	1.1			6	54
51518	FLOYD3	115 526 265	0.982 112.9	-20.1	0.0 0.0	0.0 0.0	0.0 0.0	51517	FLOYD2	69.0 1	526	23.0	12.1	1.075UN		66	40
								51559	FLOYDT3	115 1	526	-23.0	-12.1			18	146
51521	FLYDAT2	69.0 526 265	1.018 70.24	-24.0	0.0 0.0	0.0 0.0	0.0 0.0	50501	MU-FLDY2	69.0 1	526	1.6	0.9			4	41
								51517	FLOYD2	69.0 1	526	-15.2	-6.3			30	54
								51523	SFLOYD2	69.0 1	526	13.6	5.5			27	54
51523	SFLOYD2	69.0 526 265	0.998 68.86	-24.9	0.0 0.0	2.6 0.6	0.0 0.0	51521	FLYDAT2	69.0 1	526	-13.4	-5.3			27	54
								51525	LH-FLYD2	69.0 1	526	10.8	4.8			22	54
51525	LH-FLYD2	69.0 526 265	0.998 68.85	-25.0	0.0 0.0	10.8 4.8	0.0 0.0	51523	SFLOYD2	69.0 1	526	-10.8	-4.8			22	54
51527	LH-HARM2	69.0 526 265	1.017 70.19	-24.0	0.0 0.0	2.8 1.2	0.0 0.0	51517	FLOYD2	69.0 1	526	-2.8	-1.2			6	54
51531	TUCO2	69.0 526 265	1.018 70.27	-19.0	0.0 0.0	4.0 0.4	0.0 0.0	51497	SP-ABRN2	69.0 1	526	18.4	8.3			37	54
								51499	HALECN2	69.0 1	526	4.5	0.0			8	54
								51532	TUCO3	115 1	526	-23.4	-6.9	1.005RG		29	84
								51532	TUCO3	115 2	526	-23.5	-6.9	1.005RG		29	84
								51539	LH-WI&E2	69.0 1	526	9.6	2.0			18	54
								51551	SP-NDE2	69.0 1	526	10.5	3.1			20	54
51532	TUCO3	115 526 265	1.025 117.8	-17.1	0.0 0.0	0.0 0.0	0.0 0.0	51402	HALECO3	115 1	526	0.8	13.0			14	90
								51531	TUCO2	69.0 1	526	23.5	7.7	1.005UN		29	84
								51531	TUCO2	69.0 2	526	23.5	7.8	1.005UN		29	84
								51533	TUCO6	230 1	526	-97.7	-46.4	1.056RG		42	252
								51559	FLOYDT3	115 1	526	45.7	18.5			33	146
								51616	STANTN3	115 1	526	13.8	3.2			8	179
								51688	LUBE3	115 1	526	-9.5	-3.9			6	179

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51533	TUCO6	230	526	0.996	-14.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	229.1		0.0	0.0	0.0	51321	SWISHER6	230	1	526	-10.4	12.0		4	452
					0.0	0.0	0.0	51435	TOLKE6	230	1	526	-113.2	3.7		25	452
								51532	TUCO3	115	1	526	97.8	52.5	1.056UN	44	252
								51534	TUCO7	345	1	526	-22.3	-68.5	1.000LK	13	560
								51647	CARLISL6	230	1	526	51.2	13.0		12	452
								51699	JONES6	230	1	526	-3.1	-12.7		3	452
51534	TUCO7	345	526	1.008	-14.1	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	347.7		0.0	0.0	0.0	51533	TUCO6	230	1	526	22.3	69.4	1.000UN	13	560
								54119	O.K.U.-7	345	1	520	-22.3	-69.4		7	1051
51539	LH-WI&E269.0	526	1.007	-19.8	0.0	2.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.49		0.0	0.4	0.0	51531	TUCO2	69.0	1	526	-9.5	-2.0		18	54
								51541	SP-BECT269.0	1	526	7.6	1.6		14	54	
51541	SP-BECT269.0	526	1.005	-19.9	0.0	4.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.35		0.0	1.0	0.0	51539	LH-WI&E269.0	1	526	-7.5	-1.6		14	54	
								51543	ALLMON2	69.0	1	526	3.4	0.7		6	54
51543	ALLMON2	69.0	526	1.003	-20.1	0.0	1.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.18		0.0	0.2	0.0	51541	SP-BECT269.0	1	526	-3.4	-0.8		6	54	
								51545	LH-PTRS269.0	1	526	1.9	0.5		4	54	
51545	LH-PTRS269.0	526	1.003	-20.1	0.0	1.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.18		0.0	0.5	0.0	51543	ALLMON2	69.0	1	526	-1.9	-0.5		4	54
51551	SP-NDE2	69.0	526	1.007	-19.7	0.0	2.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.52		0.0	0.7	0.0	51531	TUCO2	69.0	1	526	-10.4	-3.1		20	54
								51553	WHTE&MN269.0	1	526	7.8	2.4		15	54	
51553	WHTE&MN269.0	526	1.003	-19.9	0.0	1.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.20		0.0	0.4	0.0	51551	SP-NDE2	69.0	1	526	-7.8	-2.4		15	54
								51555	SP-SHLW269.0	1	526	6.1	2.0		12	54	
51555	SP-SHLW269.0	526	1.000	-20.1	0.0	5.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.00		0.0	2.1	0.0	51553	WHTE&MN269.0	1	526	-6.0	-2.1		12	54	
								51611	SW67872	69.0	1	526	0.6	0.0		1	54
51557	SP-ACUF269.0	526	1.040	-23.4	0.0	4.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	71.74		0.0	1.4	0.0	51563	CROSBY2	69.0	1	526	-4.7	-1.4		9	54
51559	FLOYDT3	115	526	0.989	-19.7	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	113.7		0.0	0.0	0.0	51518	FLOYD3	115	1	526	23.1	11.9		18	146
								51532	TUCO3	115	1	526	-44.9	-17.2		33	146
								51564	CROSBY3	115	1	526	21.8	5.3		33	69
51563	CROSBY2	69.0	526	1.047	-23.0	0.0	2.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	72.21		0.0	0.7	0.0	51557	SP-ACUF269.0	1	526	4.7	1.2		9	54	
								51564	CROSBY3	115	1	526	-10.7	-2.6	1.094RG	26	40
								51564	CROSBY3	115	2	526	-10.7	-2.6	1.094RG	26	40
								51567	SP-CROS269.0	1	526	14.5	3.2		26	54	
51564	CROSBY3	115	526	0.966	-21.2	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	111.1		0.0	0.0	0.0	51559	FLOYDT3	115	1	526	-21.4	-5.9		33	69
								51563	CROSBY2	69.0	1	526	10.7	2.9	1.094UN	29	40
								51563	CROSBY2	69.0	2	526	10.7	2.9	1.094UN	29	40
51567	SP-CROS269.0	526	1.039	-23.5	0.0	9.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	71.68		0.0	2.9	0.0	51563	CROSBY2	69.0	1	526	-14.4	-3.1		26	54
								51569	HENDRIC269.0	1	526	4.5	0.2		8	54	

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA										
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA	
51569	HENDRIC	269.0	526	1.039	-23.5	0.0	4.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	71.68		0.0	0.2	0.0	51567	SP-CROS	269.0	1	526	-4.5	-0.2		8	54	
51579	MORTNC2	69.0	526	1.007	-17.7	0.0	2.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.50		0.0	1.0	0.0	51581	LC-WHTF	269.0	1	526	-2.6	-1.0		8	36	
51581	LC-WHTF	269.0	526	1.010	-17.5	0.0	2.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.71		0.0	1.1	0.0	51579	MORTNC2	69.0	1	526	2.6	0.8		7	36	
								51583	WHITEFA	269.0	1	526	-4.8	-1.9		14	36	
51583	WHITEFA	269.0	526	1.014	-17.3	0.0	5.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.00		0.0	1.6	0.0	51581	LC-WHTF	269.0	1	526	4.8	1.8		14	36	
								51709	COCHRAN	269.0	1	526	-10.5	-3.4		30	36	
51585	LC-HODG	269.0	526	0.988	-17.5	0.0	2.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.17		0.0	1.5	0.0	51587	ELWOOD2	69.0	1	526	1.1	0.2		2	54	
								51591	LC-HDT	269.0	1	526	-3.3	-1.8		11	36	
51587	ELWOOD2	69.0	526	0.987	-17.5	0.0	1.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.12		0.0	0.4	0.0	51585	LC-HODG	269.0	1	526	-1.1	-0.4		2	54	
51591	LC-HDT	269.0	526	0.997	-17.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.79		0.0	0.0	0.0	51585	LC-HODG	269.0	1	526	3.3	1.6		10	36	
								51593	LC-WHIT	269.0	1	526	-3.3	-1.6		7	54	
51593	LC-WHIT	269.0	526	0.998	-17.3	0.0	2.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.85		0.0	1.7	0.0	51591	LC-HDT	269.0	1	526	3.3	1.5		7	54	
								51595	LC-LEVL	269.0	1	526	-5.9	-3.2		13	54	
51595	LC-LEVL	269.0	526	1.003	-17.1	0.0	4.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.23		0.0	2.3	0.0	51593	LC-WHIT	269.0	1	526	6.0	3.1		12	54	
								51597	HOCKLEY	269.0	1	526	-10.2	-5.5		21	54	
51597	HOCKLEY	269.0	526	1.007	-17.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.46		0.0	0.0	0.0	51595	LC-LEVL	269.0	1	526	10.3	5.5		21	54	
								51598	HOCKLEY	3	115	1	526	-16.2	-3.8	1.009RG	41	40
								51598	HOCKLEY	3	115	2	526	-16.3	-8.8	1.025RG	46	40
								51603	COBLE	2	69.0	1	526	5.3	1.7		10	54
								51605	LEVELLN	269.0	1	526	17.0	5.4		33	54	
51598	HOCKLEY	3	115	526	1.011	-14.3	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	116.3		0.0	0.0	0.0	51466	LAMBCO	3	115	1	526	-30.2	-11.8		22	146
								51597	HOCKLEY	269.0	1	526	16.2	4.6	1.009UN	42	40	
								51597	HOCKLEY	269.0	2	526	16.4	9.8	1.025UN	47	40	
								51732	SUNDOWN	3	115	1	526	-2.4	-2.6		2	146
51601	LC-PETT	269.0	526	0.996	-17.5	0.0	2.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.73		0.0	1.8	0.0	51603	COBLE	2	69.0	1	526	-2.8	-1.8		6	54
51603	COBLE	2	69.0	526	0.998	-17.4	0.0	2.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.87		0.0	0.2	0.0	51597	HOCKLEY	269.0	1	526	-5.2	-1.9		10	54	
								51601	LC-PETT	269.0	1	526	2.8	1.7		6	54	
51605	LEVELLN	269.0	526	1.002	-17.2	0.0	8.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.16		0.0	3.2	0.0	51597	HOCKLEY	269.0	1	526	-16.9	-5.3		33	54	
								51607	ELEVEL	2	69.0	1	526	8.2	2.1		16	54
51607	ELEVEL	2	69.0	526	1.001	-17.3	0.0	8.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.06		0.0	2.1	0.0	51605	LEVELLN	269.0	1	526	-8.2	-2.1		16	54	

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51611	SW67872	69.0 265	526 68.98	1.000 -20.1	0.0 0.0	0.0 0.0	0.0 0.0	51555	SP-SHLW269.0	1	526	-0.6	-0.1			1	54
								51621	SW67462	69.0	1	526	0.6	0.1		1	54
51613	STANTN2	69.0 265	526 69.24	1.003 -19.9	0.0 0.0	2.7 -0.2	0.0 0.0	51617	SW67862	69.0	1	526	-2.7	0.2		5	54
51616	STANTN3	115 265	526 116.9	1.017 -17.7	0.0 0.0	14.1 2.2	0.0 0.0	51532	TUCO3	115	1	526	-13.7	-4.8		8	179
								51642	INDIANA3	115	1	526	-0.4	2.6		1	179
51617	SW67862	69.0 265	526 69.30	1.004 -19.8	0.0 0.0	0.0 0.0	0.0 0.0	51613	STANTN2	69.0	1	526	2.7	-0.3		5	54
								51621	SW67462	69.0	1	526	14.2	3.5		27	54
								51685	PLANTRS269.0	1	526	-16.9	-3.2		32	54	
51621	SW67462	69.0 265	526 68.98	1.000 -20.1	0.0 0.0	0.0 0.0	0.0 0.0	51611	SW67872	69.0	1	526	-0.6	-0.1		1	54
								51617	SW67862	69.0	1	526	-14.1	-3.4		27	54
								51623	SP-HETL269.0	1	526	14.7	3.6		28	54	
51623	SP-HETL269.0	526 265	0.998 68.84	-20.2	0.0 0.0	5.9 0.8	0.0 0.0	51621	SW67462	69.0	1	526	-14.7	-3.5		28	54
								51627	SP-IDAL269.0	1	526	8.8	2.7		17	54	
51625	SP-ERSK3	115 265	526 117.2	1.019 -17.4	0.0 0.0	3.2 1.2	0.0 0.0	51642	INDIANA3	115	1	526	28.0	0.2		15	179
								51646	CARLISL3	115	1	526	-31.1	-1.4		17	179
51627	SP-IDAL269.0	526 265	0.990 68.33	-20.7	0.0 0.0	4.7 2.0	0.0 0.0	51623	SP-HETL269.0	1	526	-8.8	-2.7		17	54	
								51629	VICKER2	69.0	1	526	4.0	0.7		8	54
51629	VICKER2	69.0 265	526 68.28	0.990 -20.7	0.0 0.0	4.0 0.8	0.0 0.0	51627	SP-IDAL269.0	1	526	-4.0	-0.8		8	54	
51631	SP-CRLS269.0	526 265	1.013 69.90	-18.5	0.0 0.0	0.0 0.0	0.0 0.0	51645	CARLISL269.0	1	526	0.0	0.0		0	54	
51642	INDIANA3	115 265	526 116.9	1.016 -17.7	0.0 0.0	27.5 3.2	0.0 0.0	51616	STANTN3	115	1	526	0.4	-2.7		2	179
								51625	SP-ERSK3	115	1	526	-27.9	-0.5		15	179
51645	CARLISL269.0	526 265	1.013 69.90	-18.5	0.0 0.0	0.0 0.0	0.0 -14.8	51631	SP-CRLS269.0	1	526	0.0	-0.1		0	54	
								51646	CARLISL3	115	1	526	-7.2	14.2	0.958RG	36	44
								51655	SW68782	69.0	1	526	7.2	0.7		13	54
51646	CARLISL3	115 265	526 117.2	1.019 -17.3	0.0 0.0	12.5 1.8	0.0 0.0	51625	SP-ERSK3	115	1	526	31.2	1.3		17	179
								51645	CARLISL269.0	1	526	7.2	-13.5	0.958UN	34	44	
								51647	CARLISL6	230	1	526	-41.7	5.0	1.031RG	25	168
								51652	DOUD3	115	1	526	-27.3	13.0		20	146
								51658	MURPHY3	115	1	526	18.1	-7.5		13	146
51647	CARLISL6	230 265	526 226.8	-15.4	0.0 0.0	0.0 0.0	0.0 0.0	50507	LP-MLWK6	230	1	526	9.2	22.9		6	452
								51533	TUCO6	230	1	526	-51.0	-19.2		12	452
								51646	CARLISL3	115	1	526	41.8	-3.6	1.031UN	25	168

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51652	DOUD3	115 526 265	1.019 117.2	-17.0	0.0 0.0	23.5 1.6	0.0 0.0	51646	CARLISL3	115 1	526	27.4	-13.0			20	146
								51746	SP-YUMA3	115 1	526	-50.8	11.4			35	146
51655	SW68782	69.0 526 265	1.010 69.72	-18.7	0.0 0.0	0.0 0.0	0.0 0.0	51645	CARLISL2	69.0 1	526	-7.2	-0.7			13	54
								51667	BATTNN2	69.0 1	526	7.2	0.7			13	54
51658	MURPHY3	115 526 265	1.020 117.3	-17.5	0.0 0.0	13.1 -0.1	0.0 0.0	51646	CARLISL3	115 1	526	-18.1	7.2			13	146
								51674	SP-QUAK3	115 1	526	5.0	-7.2			6	146
51661	IVORYT2	69.0 526 265	1.036 71.50	-18.6	0.0 0.0	0.0 0.0	0.0 0.0	51669	BATTNS2	69.0 1	526	8.8	0.7			16	54
								51679	LUBS2	69.0 1	526	-8.8	-0.7			16	54
51664	ALLEN3	115 526 265	1.024 117.8	-17.6	0.0 0.0	25.7 2.9	0.0 0.0	51672	WHEELLOC3	115 1	526	10.9	1.5			7	146
								51674	SP-QUAK3	115 1	526	9.2	12.1			10	146
								51680	LUBS3	115 1	526	-45.8	-16.5			33	146
51667	BATTNN2	69.0 526 265	1.007 69.48	-19.0	0.0 0.0	7.2 0.8	0.0 0.0	51655	SW68782	69.0 1	526	-7.2	-0.8			13	54
51669	BATTNS2	69.0 526 265	1.032 71.19	-19.0	0.0 0.0	8.7 0.7	0.0 0.0	51661	IVORYT2	69.0 1	526	-8.7	-0.7			16	54
51672	WHEELLOC3	115 526 265	1.024 117.7	-17.7	0.0 0.0	10.9 1.6	0.0 0.0	51664	ALLEN3	115 1	526	-10.9	-1.6			7	146
51674	SP-QUAK3	115 526 265	1.022 117.5	-17.7	0.0 0.0	14.2 5.6	0.0 0.0	51658	MURPHY3	115 1	526	-5.0	6.7			6	146
								51664	ALLEN3	115 1	526	-9.2	-12.3			10	146
51675	ACCO2	69.0 526 265	1.034 71.38	-18.8	0.0 0.0	5.1 0.2	0.0 0.0	51677	IVORY2	69.0 1	526	-5.1	-0.2			9	54
51677	IVORY2	69.0 526 265	1.036 71.46	-18.7	0.0 0.0	7.5 1.3	0.0 0.0	51675	ACCO2	69.0 1	526	5.1	0.1			9	54
								51679	LUBS2	69.0 1	526	-12.6	-1.5			23	54
51679	LUBS2	69.0 526 265	1.037 71.57	-18.5	0.0 0.0	0.0 0.0	0.0 0.0	51661	IVORYT2	69.0 1	526	8.8	0.6			16	54
								51677	IVORY2	69.0 1	526	12.7	1.5			23	54
								51680	LUBS3	115 1	526	-21.4	-2.1	1.007RG		25	84
51680	LUBS3	115 526 265	1.035 119.0	-16.8	0.0 0.0	0.0 0.0	0.0 0.0	51664	ALLEN3	115 1	526	46.0	16.8			32	146
								51679	LUBS2	69.0 1	526	21.5	2.8	1.007UN		25	84
								51681	LUBS6	230 1	526	-85.7	-36.5	1.059RG		36	252
								51688	LUBE3	115 1	526	-7.3	11.0			9	146
								51786	SP-WDRW3	115 1	526	25.5	5.9			17	146
51681	LUBS6	230 526 265	0.998 229.5	-14.3	0.0 0.0	0.0 0.0	0.0 0.0	51680	LUBS3	115 1	526	85.8	41.0	1.059UN		38	252
								51699	JONES6	230 1	526	-29.6	-23.4			8	452
								51699	JONES6	230 2	526	-29.6	-23.4			8	452
								51763	WOLFRTH6	230 1	526	-26.7	5.8			6	452

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
51685	PLANTRS	269.0 526	1.008	-19.5	0.0	2.2	0.0	51617	SW67862	69.0 1	526	16.9	3.2			32	54
		265 69.55			0.0	-0.4	0.0	51687	LUBE2	69.0 1	526	-19.1	-2.9			35	54
51687	LUBE2	69.0 526	1.011	-19.3	0.0	0.0	0.0	51685	PLANTRS	269.0 1	526	19.2	2.9			35	54
		265 69.79			0.0	0.0	0.0	51688	LUBE3	115 1	526	-16.8	-2.0	0.989RG		38	44
								51688	LUBE3	115 2	526	-17.2	-1.9	0.989RG		43	40
								51691	CLUTTER	269.0 1	526	6.3	0.9			12	54
								51769	LEWTER2	69.0 1	526	8.5	0.1			16	54
51688	LUBE3	115 526	1.031	-16.6	0.0	0.0	0.0	51532	TUCO3	115 1	526	9.6	1.8			5	179
		265 118.6			0.0	0.0	0.0	51680	LUBS3	115 1	526	7.3	-11.4			9	146
								51687	LUBE2	69.0 1	526	16.9	2.8	0.989UN		38	44
								51687	LUBE2	69.0 2	526	17.2	2.8	0.989UN		42	40
								51689	LUBE6	230 1	526	-51.0	4.1	1.033RG		33	150
51689	LUBE6	230 526	0.997	-14.5	0.0	0.0	0.0	50527	LP-ETAP2	230 1	526	7.0	26.4			6	452
		265 229.3			0.0	0.0	0.0	51688	LUBE3	115 1	526	51.0	-2.2	1.033UN		34	150
								51699	JONES6	230 1	526	-58.0	-24.2			14	452
51691	CLUTTER	269.0 526	1.009	-19.4	0.0	6.3	0.0	51687	LUBE2	69.0 1	526	-6.3	-0.9			12	54
		265 69.65			0.0	0.9	0.0										
51699	JONES6	230 526	1.000	-14.2	0.0	0.0	0.0	50521	LP-HOLL6	230 1	526	12.6	-45.5			10	452
		265 230.0			0.0	0.0	0.0	51533	TUCO6	230 1	526	3.1	4.5			1	452
								51681	LUBS6	230 1	526	29.6	22.0			8	452
								51681	LUBS6	230 2	526	29.6	22.0			8	452
								51689	LUBE6	230 1	526	58.1	22.8			14	452
								51701	JONES11	22.0 1	526	0.0	0.0	1.000LK		0	275
								51702	JONES21	21.0 1	526	-202.6	-4.4	1.050LK		66	308
								51811	GRASSLN6	230 1	526	69.7	-21.3			8	904
51701	JONES11	22.0 526	1.000	-14.2	0.0	0.0	0.0	51699	JONES6	230 1	526	0.0	0.0	1.000UN		0	275
		265 22.00			0.0	0.0	0.0										
51702	JONES21	21.0 526	0.959	-9.5	203.0	0.0	0.0	51699	JONES6	230 1	526	203.0	21.3	1.050UN		69	308
		265 20.15			21.3R	0.0	0.0										
51708	LEHMAN3	115 526	1.012	-14.1	0.0	4.1	0.0	51710	COCHRAN3	115 1	526	13.7	0.8			9	146
		265 116.3			0.0	-0.4	0.0	51894	LG-PLAN3	115 1	526	-17.7	-0.4			12	146
51709	COCHRAN	269.0 526	1.026	-17.0	0.0	0.0	0.0	51583	WHITEFA	269.0 1	526	10.6	3.4			30	36
		265 70.78			0.0	0.0	0.0	51710	COCHRAN3	115 1	526	-14.4	-3.5	1.031RG		33	44
								51710	COCHRAN3	115 2	526	-14.3	-3.4	1.031RG		33	44
								51713	LG-SUND	269.0 1	526	3.6	0.6			10	36
								51715	MIDDLET	269.0 1	526	14.5	2.9			16	88

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>										
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING A										
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA	
51710	COCHRAN3	115	526	1.008	-14.7	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	115.9			0.0	0.0	0.0	51708	LEHMAN3	115	1	526	-13.6	-1.6		9	146
									51709	COCHRAN2	69.0	1	526	14.4	4.1	1.031UN	34	44
									51709	COCHRAN2	69.0	2	526	14.4	4.0	1.031UN	34	44
									51730	PACIFIC3	115	1	526	-15.2	-6.6		11	146
51713	LG-SUND2	69.0	526	1.019	-17.3	0.0	3.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.34			0.0	0.8	0.0	51709	COCHRAN2	69.0	1	526	-3.6	-0.8		10	36
51715	MIDDLET2	69.0	526	1.019	-17.7	0.0	3.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.34			0.0	-0.3	0.0	51709	COCHRAN2	69.0	1	526	-14.5	-2.9		16	88
									51717	MALLET2	69.0	1	526	10.9	3.1		13	88
51717	MALLET2	69.0	526	1.017	-17.9	0.0	1.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.15			0.0	-0.4	0.0	51715	MIDDLET2	69.0	1	526	-10.8	-3.2		13	88
									51721	TEXACO2	69.0	1	526	9.8	3.5		19	54
51721	TEXACO2	69.0	526	1.014	-18.1	0.0	6.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.98			0.0	2.8	0.0	51717	MALLET2	69.0	1	526	-9.8	-3.5		19	54
									51723	ZAVALLA2	69.0	1	526	3.5	0.7		4	88
51723	ZAVALLA2	69.0	526	1.012	-18.3	0.0	3.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.85			0.0	0.9	0.0	51721	TEXACO2	69.0	1	526	-3.5	-0.9		4	88
51725	SLAUGHT2	69.0	526	1.023	-17.0	0.0	0.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.60			0.0	0.0	0.0	51727	SLAUGT2	69.0	1	526	-0.1	0.0		0	54
51727	SLAUGT2	69.0	526	1.023	-17.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.61			0.0	0.0	0.0	51725	SLAUGHT2	69.0	1	526	0.1	-0.1		0	54
									51755	LG-MEAD2	69.0	1	526	-0.1	0.1		0	54
51730	PACIFIC3	115	526	1.012	-14.3	0.0	5.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	116.4			0.0	0.2	0.0	51710	COCHRAN3	115	1	526	15.2	6.2		11	146
									51732	SUNDOWN3	115	1	526	-21.0	-6.4		15	146
51732	SUNDOWN3	115	526	1.014	-14.2	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	116.6			0.0	0.0	0.0	51598	HOCKLEY3	115	1	526	2.4	1.4		2	146
									51730	PACIFIC3	115	1	526	21.0	6.3		15	146
									51733	SUNDOWN6	230	1	526	-40.3	-12.5	1.024RG	28	150
									51736	AMOCOT3	115	1	526	16.9	4.8		12	146
51733	SUNDOWN6	230	526	1.001	-12.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	230.2			0.0	0.0	0.0	51419	PLANTX6	230	1	526	-76.8	6.3		17	452
									51732	SUNDOWN3	115	1	526	40.3	13.8	1.024UN	28	150
									51741	AMOCSL6	230	1	526	-33.3	-18.3		8	452
									51763	WOLFRTH6	230	1	526	69.8	-1.8		15	452
51736	AMOCOT3	115	526	1.013	-14.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	116.5			0.0	0.0	0.0	51732	SUNDOWN3	115	1	526	-16.9	-4.8		12	146
									51738	AMOCCR3	115	1	526	11.3	5.6		9	146
									51750	LG-LEVI3	115	1	526	5.6	-0.8		4	146
51738	AMOCCR3	115	526	1.011	-14.4	0.0	11.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	116.2			0.0	5.9	0.0	51736	AMOCOT3	115	1	526	-11.3	-5.9		9	146
51741	AMOCSL6	230	526	1.003	-12.4	0.0	43.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	230.6			0.0	6.8	0.0	51733	SUNDOWN6	230	1	526	33.3	17.0		8	452
									51891	YOAKUM6	230	1	526	-77.2	-23.8		18	452

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51745	SP-YUMA269.0	526	1.007	-18.4	0.0	13.3	0.0	51746	SP-YUMA3	115	1	526	-13.3	-5.1	1.000RG	28	50
		265	69.50		0.0	5.1	0.0										
51746	SP-YUMA3	115	526	1.020	-16.7	0.0	0.0	51652	DOUD3	115	1	526	50.9	-11.3		35	146
		265	117.2		0.0	0.0	0.0	51745	SP-YUMA269.0	1	526	13.3	5.6	1.000UN	28	50	
								51762	WOLFRTH3	115	1	526	-64.2	5.7		35	179
51750	LG-LEVI3	115	526	1.013	-14.3	0.0	1.7	51736	AMOCOT3	115	1	526	-5.6	0.6		4	146
		265	116.5		0.0	0.2	0.0	51752	LG-CLAU3	115	1	526	3.9	-0.8		3	146
51752	LG-CLAU3	115	526	1.013	-14.4	0.0	5.5	51750	LG-LEVI3	115	1	526	-3.9	0.3		3	146
		265	116.5		0.0	1.6	0.0	51830	TERRYC3	115	1	526	-1.7	-1.9		2	146
51755	LG-MEAD269.0	526	1.023	-17.0	0.0	3.7	0.0	51727	SLAUGT2	69.0	1	526	0.1	-0.1		0	54
		265	70.60		0.0	0.8	0.0	51757	LG-DCW2	69.0	1	526	-3.8	-0.7		7	54
51757	LG-DCW2	69.0	526	1.025	-16.9	0.0	3.5	51755	LG-MEAD269.0	1	526	3.8	0.6		7	54	
		265	70.69		0.0	0.4	0.0	51829	TERRYC2	69.0	1	526	-7.3	-1.0		13	54
51759	LG-TWD2	69.0	526	1.025	-21.1	0.0	0.6	51783	DIEKEMP269.0	1	526	-0.6	-0.1		1	54	
		265	70.74		0.0	0.1	0.0										
51762	WOLFRTH3	115	526	1.023	-15.8	0.0	0.0	51746	SP-YUMA3	115	1	526	64.6	-5.3		35	179
		265	117.7		0.0	0.0	0.0	51763	WOLFRTH6	230	1	526	-42.9	-11.4	1.037RG	26	168
								51830	TERRYC3	115	1	526	-21.7	16.7		15	179
51763	WOLFRTH6	230	526	0.997	-14.0	0.0	0.0	51681	LUBS6	230	1	526	26.7	-9.7		6	452
		265	229.3		0.0	0.0	0.0	51733	SUNDOWN6	230	1	526	-69.6	-3.2		15	452
								51762	WOLFRTH3	115	1	526	42.9	12.9	1.037UN	27	168
51767	POSEYT2	69.0	526	1.006	-19.8	0.0	0.0	51769	LEWTER2	69.0	1	526	-8.1	0.3		15	54
		265	69.43		0.0	0.0	0.0	51773	SLATON2	69.0	1	526	8.1	-0.3		15	54
51769	LEWTER2	69.0	526	1.008	-19.6	0.0	0.4	51687	LUBE2	69.0	1	526	-8.5	-0.2		16	54
		265	69.54		0.0	0.6	0.0	51767	POSEYT2	69.0	1	526	8.1	-0.4		15	54
51771	SP-POSY269.0	526	1.043	-17.2	0.0	0.0	0.0	51785	SP-WDRW269.0	1	526	0.0	0.0		0	54	
		265	71.97		0.0	0.0	0.0										
51773	SLATON2	69.0	526	1.002	-20.3	0.0	8.1	51767	POSEYT2	69.0	1	526	-8.1	0.3		15	54
		265	69.16		0.0	-0.3	0.0										
51775	SP-SLAT269.0	526	1.014	-21.6	0.0	1.8	0.0	51777	SOUTHLN269.0	1	526	-1.8	-1.0		4	54	
		265	69.97		0.0	1.0	0.0										
51777	SOUTHLN269.0	526	1.016	-21.6	0.0	0.3	0.0	51775	SP-SLAT269.0	1	526	1.9	0.9		4	54	
		265	70.07		0.0	0.1	0.0	51779	LG-HCKB269.0	1	526	-2.2	-1.0		4	54	

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51779	LG-HCKB269.0	526 265	1.017 70.19	-21.5	0.0 0.0	2.2 1.2	0.0 0.0	51777	SOUTHLN269.0	1	526	2.2	0.9			4	54
								51783	DIEKEMP269.0	1	526	-4.4	-2.1			9	54
51783	DIEKEMP269.0	526 265	1.025 70.74	-21.1	0.0 0.0	0.6 0.3	0.0 0.0	51759	LG-TWD2 69.0	1	526	0.6	0.1			1	54
								51779	LG-HCKB269.0	1	526	4.4	1.8			9	54
								51815	GRAHAM2 69.0	1	526	-5.6	-2.2			11	54
51785	SP-WDRW269.0	526 265	1.043 71.97	-17.2	0.0 0.0	0.0 0.0	0.0 0.0	51771	SP-POSY269.0	1	526	0.0	-0.1			0	54
								51786	SP-WDRW3 115	1	526	0.0	0.1	1.012RG		0	50
51786	SP-WDRW3 115	526 265	1.030 118.5	-17.2	0.0 0.0	17.0 7.0	0.0 0.0	51680	LUBS3 115	1	526	-25.4	-6.1			17	146
								51785	SP-WDRW269.0	1	526	0.0	-0.1	1.012UN		0	50
								51804	LYNNCO3 115	1	526	8.4	-0.8			6	146
51791	YANCYT2 69.0	526 265	1.023 70.60	-22.4	0.0 0.0	0.0 0.0	0.0 0.0	51807	LG-CNTR269.0	1	526	-3.9	0.2			7	54
								51825	BG-YNT2 69.0	1	526	3.9	-0.2			7	54
51793	GARZA2 69.0	526 265	1.026 70.80	-21.1	0.0 0.0	8.3 3.0	0.0 0.0	51815	GRAHAM2 69.0	1	526	-8.3	-3.0			16	54
51797	LG-LKVW269.0	526 265	0.990 68.31	-18.5	0.0 0.0	4.1 1.3	0.0 0.0	51841	OZMAH2 69.0	1	526	-4.1	-1.3			8	54
51799	LG-NWM2 69.0	526 265	1.020 70.39	-22.0	0.0 0.0	5.5 2.2	0.0 0.0	51801	LG-NH&W269.0	1	526	-5.5	-2.2			11	54
51801	LG-NH&W269.0	526 265	1.029 70.98	-21.5	0.0 0.0	5.3 2.0	0.0 0.0	51799	LG-NWM2 69.0	1	526	5.5	2.0			11	54
								51803	LYNNCO2 69.0	1	526	-10.8	-4.0			21	54
51803	LYNNCO2 69.0	526 265	1.035 71.44	-21.2	0.0 0.0	3.6 -0.4	0.0 0.0	51801	LG-NH&W269.0	1	526	10.8	4.0			21	54
								51804	LYNNCO3 115	1	526	-22.3	-4.4	1.024RG		55	40
								51827	LG-DRAW269.0	1	526	7.8	0.8			14	54
51804	LYNNCO3 115	526 265	1.028 118.2	-17.7	0.0 0.0	0.0 0.0	0.0 0.0	51786	SP-WDRW3 115	1	526	-8.4	-0.5			6	146
								51803	LYNNCO2 69.0	1	526	22.3	5.8	1.024UN		56	40
								51810	GRASSLN3 115	1	526	-14.0	-5.3			10	146
51807	LG-CNTR269.0	526 265	1.027 70.84	-22.0	0.0 0.0	2.0 0.7	0.0 0.0	51791	YANCYT2 69.0	1	526	4.0	-0.5			7	54
								51827	LG-DRAW269.0	1	526	-6.0	-0.1			11	54
51810	GRASSLN3 115	526 265	1.032 118.7	-17.4	0.0 0.0	0.0 0.0	0.0 0.0	51804	LYNNCO3 115	1	526	14.0	4.8			10	146
								51811	GRASSLN6 230	1	526	-31.1	-8.8	1.040RG		28	112
								51816	GRAHAM3 115	1	526	17.1	4.0			12	146
51811	GRASSLN6 230	526 265	1.003 230.7	-15.5	0.0 0.0	0.0 0.0	0.0 0.0	51699	JONES6 230	1	526	-69.6	13.0			8	904
								51810	GRASSLN3 115	1	526	31.1	9.9	1.040UN		29	112
								51861	BORDEN6 230	1	526	38.5	-23.0			5	904

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51815	GRAHAM2	69.0 265	526 70.90	-21.0	0.0 0.0	0.0 0.0	0.0 0.0	51783	DIEKEMP2	69.0	1	526	5.6	2.1		11	54
								51793	GARZA2	69.0	1	526	8.3	3.0		16	54
								51816	GRAHAM3	115	1	526	-17.0	-4.1	1.020RG	42	40
								51857	BG-JST2	69.0	1	526	3.0	-1.0		4	79
51816	GRAHAM3	115 265	526 117.6	-18.3	0.0 0.0	0.0 0.0	0.0 0.0	51810	GRASSLN3	115	1	526	-17.0	-5.0		12	146
								51815	GRAHAM2	69.0	1	526	17.0	5.0	1.020UN	43	40
51819	YANCY2	69.0 265	526 70.55	-22.5	0.0 0.0	0.6 0.6	0.0 0.0	51825	BG-YNT2	69.0	1	526	-0.6	-0.6		2	54
51822	LG-DIXN2	69.0 265	526 68.77	-18.1	0.0 0.0	1.8 0.8	0.0 0.0	51835	BROWNFI2	69.0	1	526	-5.9	-1.9		12	54
								51841	OZMAH2	69.0	1	526	4.1	1.1		8	54
51825	BG-YNT2	69.0 265	526 70.57	-22.5	0.0 0.0	0.0 0.0	0.0 0.0	51791	YANCYT2	69.0	1	526	-3.9	0.2		7	54
								51819	YANCY2	69.0	1	526	0.6	0.6		2	54
								51851	BG-GARZ2	69.0	1	526	3.3	-0.8		4	79
51827	LG-DRAW2	69.0 265	526 71.00	-21.7	0.0 0.0	1.8 0.9	0.0 0.0	51803	LYNNCO2	69.0	1	526	-7.8	-0.9		14	54
								51807	LG-CNTR2	69.0	1	526	6.0	0.0		11	54
51829	TERRYC2	69.0 265	526 70.84	-16.7	0.0 0.0	0.0 0.0	0.0 0.0	51757	LG-DCW2	69.0	1	526	7.4	1.0		13	54
								51830	TERRYC3	115	1	526	-14.7	-5.3	1.030RG	38	40
								51830	TERRYC3	115	2	526	-14.8	-5.2	1.030RG	38	40
								51833	LG-BRWN2	69.0	1	526	22.2	9.5		44	54
51830	TERRYC3	115 265	526 116.7	-14.3	0.0 0.0	0.0 0.0	0.0 0.0	51752	LG-CLAU3	115	1	526	1.7	1.2		1	146
								51762	WOLFRTH3	115	1	526	22.0	-17.9		16	179
								51829	TERRYC2	69.0	1	526	14.7	6.0	1.030UN	39	40
								51829	TERRYC2	69.0	2	526	14.9	5.9	1.030UN	39	40
								51848	PRENTIC3	115	1	526	-12.0	1.7		8	146
								51960	DNVRN3	115	1	526	-35.5	2.1		20	179
								52002	SULPHUR3	115	1	526	-5.7	1.0		4	146
51833	LG-BRWN2	69.0 265	526 69.34	-17.7	0.0 0.0	4.9 2.0	0.0 0.0	51829	TERRYC2	69.0	1	526	-21.9	-9.1		44	54
								51835	BROWNFI2	69.0	1	526	17.0	7.1		34	54
51835	BROWNFI2	69.0 265	526 68.95	-18.0	0.0 0.0	0.6 0.1	0.0 0.0	51822	LG-DIXN2	69.0	1	526	5.9	1.9		11	54
								51833	LG-BRWN2	69.0	1	526	-16.9	-7.0		34	54
								51837	BRNFIT2	69.0	1	526	10.4	5.0		21	54
51837	BRNFIT2	69.0 265	526 68.81	-18.1	0.0 0.0	0.0 0.0	0.0 0.0	50528	MU-BRNF2	69.0	1	526	5.5	4.0		17	41
								51835	BROWNFI2	69.0	1	526	-10.4	-5.0		21	54
								51843	GDPASTR2	69.0	1	526	4.8	1.0		9	54
51841	OZMAH2	69.0 265	526 68.49	-18.4	0.0 0.0	0.0 0.0	0.0 0.0	51797	LG-LKVW2	69.0	1	526	4.1	1.3		8	54
								51822	LG-DIXN2	69.0	1	526	-4.1	-1.3		8	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING A									
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA
51843	GDPASTR	269.0	526	0.996	-18.2	0.0	0.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
			265	68.70		0.0	0.0	0.0	51837 BRNFIT2	69.0	1	526	-4.8	-1.1		9	54
									51909 LG-JSM2	69.0	1	526	4.7	1.1		12	41
51845	AMOCWA6	230	526	1.022	-9.8	0.0	6.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
			265	235.1		0.0	0.0	0.0	51891 YOAKUM6	230	1	526	22.3	-0.5		5	452
									51969 MUSTANG6	230	1	526	-28.6	0.5		6	452
51848	PRENTIC3	115	526	1.016	-13.6	0.0	8.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
			265	116.8		0.0	2.4	0.0	51830 TERRY3	115	1	526	12.0	-2.8		8	146
									51890 YOAKUM3	115	1	526	-20.9	0.4		14	146
51851	BG-GARZ2	269.0	526	1.021	-22.9	0.0	1.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
			265	70.46		0.0	0.0	0.0	51825 BG-YNT2	69.0	1	526	-3.3	0.4		4	79
									51853 BG-JUST2	269.0	1	526	1.7	-0.4		2	79
51853	BG-JUST2	269.0	526	1.020	-23.1	0.0	1.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
			265	70.40		0.0	0.0	0.0	51851 BG-GARZ2	269.0	1	526	-1.7	0.0		2	79
51855	BG-FLUV2	269.0	526	1.024	-22.0	0.0	3.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
			265	70.69		0.0	0.0	0.0	51857 BG-JST2	69.0	1	526	-3.0	0.0		4	79
51857	BG-JST2	69.0	526	1.026	-21.7	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
			265	70.81		0.0	0.0	0.0	51815 GRAHAM2	69.0	1	526	-3.0	0.3		4	79
									51855 BG-FLUV2	269.0	1	526	3.0	-0.3		4	79
51861	BORDEN6	230	526	1.009	-16.6	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
			265	232.1		0.0	0.0	0.0	50534 CR-VEAL4	138	1	526	38.4	-7.5	1.019UN	26	150
									51811 GRASSLN6	230	1	526	-38.4	7.5		4	904

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52071	CHAVES2	69.0 267	526 71.28	1.033 -20.2	0.0 0.0	0.0 0.0	0.0 0.0	52072	CHAVES3	115	1	526	-23.0	-5.8	1.009RG	52	44
								52079	PRICE2	69.0	1	526	22.9	5.8		42	54
52072	CHAVES3	115 267	526 120.1	1.045 -16.7	0.0 0.0	0.0 0.0	0.0 0.0	52071	CHAVES2	69.0	1	526	23.0	7.3	1.009UN	53	44
								52073	CHAVES6	230	1	526	-61.7	-6.2	1.062RG	40	150
								52073	CHAVES6	230	2	526	-61.7	-6.2	1.062RG	40	150
								52078	URTON3	115	1	526	61.3	5.5		40	146
								52088	SAMSON3	115	1	526	39.1	-0.4		26	146
52073	CHAVES6	230 267	526 227.8	0.991 -13.9	0.0 0.0	0.0 0.0	0.0 0.0	52072	CHAVES3	115	1	526	61.8	9.3	1.062UN	42	150
								52072	CHAVES3	115	2	526	61.8	9.3	1.062UN	42	150
								52185	EDDYCO6	230	1	526	-13.9	-17.1		5	452
								99990	WINDFARM	230	1	526	-109.7	-1.6		25	452
52078	URTON3	115 267	526 119.6	1.040 -17.4	0.0 0.0	15.6 5.1	0.0 0.0	52072	CHAVES3	115	1	526	-61.1	-5.0		40	146
								52084	ROSWLC3	115	1	526	45.5	-0.1		30	146
52079	PRICE2	69.0 267	526 70.35	1.020 -21.1	0.0 0.0	7.3 1.2	0.0 0.0	52071	CHAVES2	69.0	1	526	-22.7	-5.5		42	54
								52081	CV-PINE2	69.0	1	526	15.4	4.4		38	41
52081	CV-PINE2	69.0 267	526 69.92	1.013 -21.5	0.0 0.0	3.8 1.3	0.0 0.0	52079	PRICE2	69.0	1	526	-15.4	-4.3		38	41
								52087	CAPITAN2	69.0	1	526	11.6	3.0		22	54
52084	ROSWLC3	115 267	526 119.3	1.038 -17.8	0.0 0.0	28.4 7.4	0.0 0.0	52078	URTON3	115	1	526	-45.4	0.2		30	146
								52094	ROSWIN3	115	1	526	16.9	-7.7		12	146
52085	CAPITAN2	69.0 267	526 69.93	1.014 -21.3	0.0 0.0	0.0 0.0	0.0 0.0	52089	RIAC2	69.0	1	526	6.5	2.9		13	54
								52093	ROSWIN2	69.0	1	526	-6.5	-2.9		13	54
52087	CAPITAN2	69.0 267	526 69.44	1.006 -21.9	0.0 0.0	11.6 3.0	0.0 0.0	52081	CV-PINE2	69.0	1	526	-11.6	-3.0		22	54
52088	SAMSON3	115 267	526 119.6	1.040 -17.7	0.0 0.0	8.1 0.4	0.0 0.0	52072	CHAVES3	115	1	526	-38.9	0.4		26	146
								52094	ROSWIN3	115	1	526	30.8	-0.9		20	146
52089	RIAC2	69.0 267	526 69.55	1.008 -21.4	0.0 0.0	6.4 3.0	0.0 0.0	52085	CAPITAN2	69.0	1	526	-6.4	-3.0		13	54
52093	ROSWIN2	69.0 267	526 69.98	1.014 -21.2	0.0 0.0	0.0 0.0	0.0 -23.1	52085	CAPITAN2	69.0	1	526	6.5	2.9		13	54
								52094	ROSWIN3	115	1	526	-21.5	17.4	0.938RG	68	40
								52097	RIACLN2	69.0	1	526	15.1	2.9		17	88
52094	ROSWIN3	115 267	526 119.4	1.038 -18.0	0.0 0.0	0.0 0.0	0.0 0.0	52084	ROSWLC3	115	1	526	-16.9	7.5		12	146
								52088	SAMSON3	115	1	526	-30.7	0.8		20	146
								52093	ROSWIN2	69.0	1	526	21.6	-15.5	0.938UN	64	40
								52098	BRASHER3	115	1	526	12.7	2.8		14	90
								52104	TWEEDY3	115	1	526	13.3	4.4		8	179

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
52097	RIACLN2	69.0 526	1.008	-21.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.59			0.0	0.0	0.0	52093	ROSWIN2	69.0 1	526	-15.0	-2.8			17	88
					0.0	0.0	0.0	52101	CV-ORH2	69.0 1	526	15.0	2.8			17	88
52098	BRASHER3	115 526	1.037	-18.1	0.0	12.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 119.3			0.0	2.9	0.0	52094	ROSWIN3	115 1	526	-12.7	-2.9			14	90
52101	CV-ORH2	69.0 526	1.001	-22.6	0.0	3.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.08			0.0	1.5	0.0	52097	RIACLN2	69.0 1	526	-14.9	-2.8			17	88
					0.0		0.0	52121	DEXTRT2	69.0 1	526	11.1	1.3			13	88
52104	TWEEDY3	115 526	1.037	-18.1	0.0	10.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 119.3			0.0	5.0	0.0	52094	ROSWIN3	115 1	526	-13.3	-4.7			8	179
					0.0		0.0	52184	EDDYCO3	115 1	526	3.2	-0.3			2	146
52121	DEXTRT2	69.0 526	0.998	-23.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 68.86			0.0	0.0	0.0	52101	CV-ORH2	69.0 1	526	-11.1	-1.3			13	88
					0.0		0.0	52123	CV-DEXT2	69.0 1	526	10.4	4.3			31	36
					0.0		0.0	52137	CV-HGRM2	69.0 1	526	0.7	-3.0			3	88
52123	CV-DEXT2	69.0 526	0.992	-23.1	0.0	4.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 68.42			0.0	2.1	0.0	52121	DEXTRT2	69.0 1	526	-10.3	-4.3			31	36
					0.0		0.0	52125	DEXTER2	69.0 1	526	5.7	2.2			17	36
52125	DEXTER2	69.0 526	0.988	-23.2	0.0	5.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 68.19			0.0	2.2	0.0	52123	CV-DEXT2	69.0 1	526	-5.7	-2.2			17	36
52137	CV-HGRM2	69.0 526	1.000	-23.1	0.0	3.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 68.98			0.0	0.5	0.0	52121	DEXTRT2	69.0 1	526	-0.7	2.9			3	88
					0.0		0.0	52147	CV-YOT2	69.0 1	526	-2.8	-3.4			5	88
52139	CV-LKAR2	69.0 526	1.007	-22.8	0.0	1.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.46			0.0	0.3	0.0	52141	CV-CTNW2	69.0 1	526	-5.7	-3.7			8	88
					0.0		0.0	52147	CV-YOT2	69.0 1	526	3.9	3.5			6	88
52141	CV-CTNW2	69.0 526	1.011	-22.6	0.0	2.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.75			0.0	0.7	0.0	52139	CV-LKAR2	69.0 1	526	5.7	3.6			8	88
					0.0		0.0	52143	COTTON2	69.0 1	526	1.4	0.2			3	54
					0.0		0.0	52145	SMITH2	69.0 1	526	-9.8	-4.6			12	88
52143	COTTON2	69.0 526	1.010	-22.7	0.0	1.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.72			0.0	0.3	0.0	52141	CV-CTNW2	69.0 1	526	-1.4	-0.3			3	54
52145	SMITH2	69.0 526	1.018	-22.2	0.0	3.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 70.26			0.0	1.6	0.0	52141	CV-CTNW2	69.0 1	526	9.8	4.6			12	88
					0.0		0.0	52153	ARTESIA2	69.0 1	526	-13.1	-6.1			16	88
52147	CV-YOT2	69.0 526	1.000	-23.1	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.02			0.0	0.0	0.0	52137	CV-HGRM2	69.0 1	526	2.8	3.4			5	88
					0.0		0.0	52139	CV-LKAR2	69.0 1	526	-3.9	-3.6			6	88
					0.0		0.0	52149	CV-YO2	69.0 1	526	1.2	0.2			2	54
52149	CV-YO2	69.0 526	0.999	-23.1	0.0	1.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 68.95			0.0	0.4	0.0	52147	CV-YOT2	69.0 1	526	-1.2	-0.4			2	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
52153	ARTESIA	269.0 526	1.019	-22.1	0.0	0.0	0.0	52145	SMITH2	69.0 1	526	13.1	6.1			16	88
		267 70.31			0.0	0.0	-10.9	52154	ARTESIA3	115 1	526	-17.0	-2.1	1.011RG		42	40
								52154	ARTESIA3	115 2	526	-17.2	-2.3	1.011RG		43	40
								52163	NAVAJ22	69.0 1	526	10.6	4.3			21	54
								52171	CV-ARTE269.0	1 526		10.5	4.8			21	54
52154	ARTESIA3	115 526	1.017	-19.4	0.0	0.0	0.0	52153	ARTESIA269.0	1 526		17.1	2.9	1.011UN		43	40
		267 117.0			0.0	0.0	0.0	52153	ARTESIA269.0	2 526		17.2	3.1	1.011UN		43	40
								52162	NAVAJ33	115 1	526	-34.3	-6.0			19	179
52162	NAVAJ33	115 526	1.018	-19.4	0.0	9.4	0.0	52154	ARTESIA3	115 1	526	34.3	6.0			19	179
		267 117.1			0.0	6.2	0.0	52166	NAVAJ43	115 1	526	-43.7	-12.2			25	179
52163	NAVAJ22	69.0 526	1.018	-22.2	0.0	4.3	0.0	52153	ARTESIA269.0	1 526		-10.6	-4.3			21	54
		267 70.25			0.0	2.5	0.0	52165	NAVAJR2	69.0 1	526	6.3	1.8			12	54
52165	NAVAJR2	69.0 526	1.017	-22.2	0.0	3.5	0.0	52163	NAVAJ22	69.0 1	526	-6.3	-1.8			12	54
		267 70.19			0.0	2.3	0.0	52169	ARTTOW2	69.0 1	526	2.7	-0.6			5	54
52166	NAVAJ43	115 526	1.019	-19.3	0.0	0.7	0.0	52162	NAVAJ33	115 1	526	43.7	12.2			25	179
		267 117.1			0.0	0.4	0.0	52184	EDDYCO3	115 1	526	-44.5	-12.6			31	146
52169	ARTTOW2	69.0 526	1.017	-22.2	0.0	2.8	0.0	52165	NAVAJR2	69.0 1	526	-2.7	0.5			5	54
		267 70.18			0.0	-0.5	0.0										
52171	CV-ARTE269.0	526 526	1.018	-22.2	0.0	7.1	0.0	52153	ARTESIA269.0	1 526		-10.5	-4.8			21	54
		267 70.25			0.0	2.9	0.0	52173	ARTW2	69.0 1	526	3.4	2.0			7	54
52173	ARTW2	69.0 526	1.017	-22.2	0.0	3.3	0.0	52171	CV-ARTE269.0	1 526		-3.4	-2.0			7	54
		267 70.20			0.0	0.1	0.0	52175	ARTCC2	69.0 1	526	0.1	1.9			4	54
52175	ARTCC2	69.0 526	1.017	-22.2	0.0	6.4	0.0	52173	ARTW2	69.0 1	526	-0.1	-2.0			4	54
		267 70.16			0.0	1.7	0.0	52177	ARTSR2	69.0 1	526	-6.3	0.3			12	54
52177	ARTSR2	69.0 526	1.017	-22.1	0.0	4.1	0.0	52175	ARTCC2	69.0 1	526	6.3	-0.3			12	54
		267 70.19			0.0	1.6	0.0	52179	ATOKA2	69.0 1	526	-10.4	-1.3			12	88
52179	ATOKA2	69.0 526	1.020	-21.8	0.0	0.0	0.0	52177	ARTSR2	69.0 1	526	10.5	1.2			12	88
		267 70.39			0.0	0.0	0.0	52180	ATOKA3	115 1	526	-10.5	-1.2	0.997RG		26	40
52180	ATOKA3	115 526	1.029	-20.2	0.0	0.0	0.0	52179	ATOKA2	69.0 1	526	10.5	1.5	0.997UN		26	40
		267 118.3			0.0	0.0	0.0	52188	CV-DAYT3	115 1	526	-41.2	0.1			27	146
								52298	CV-IRIS3	115 1	526	30.7	-1.6			20	146
52184	EDDYCO3	115 526	1.031	-18.4	0.0	11.1	0.0	52104	TWEEDY3	115 1	526	-3.1	-4.1			3	146
		267 118.5			0.0	1.0	0.0	52166	NAVAJ43	115 1	526	44.8	12.6			31	146
								52185	EDDYCO6	230 1	526	-115.8	-14.2	1.048RG		67	168
								52188	CV-DAYT3	115 1	526	44.0	1.3			29	146
								52304	NCANALT3	115 1	526	19.0	3.5			10	179

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>										
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING A											
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA		
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====		
52185	EDDYCO6	230	526	1.000	-13.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		267	230.0			-37.5R	0.0	0.0	52073	CHAVES6	230	1	526	13.9	2.6		3	452	
									52184	EDDYCO3	115	1	526	116.0	24.7	1.048UN		71	168
									52186	EDDYCO7	345	1	526	-64.3	-63.3	1.000LK		16	560
									52209	CUNNINH6	230	1	526	-65.6	-1.5			15	452
									59996	EPTNP-D6	230	1	999	0.0	0.0			0	2000
52186	EDDYCO7	345	526	1.014	-12.6	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		267	349.9			0.0	0.0	0.0	51440	TOLK7	345	1	526	-64.4	-65.1			7	1355
									52185	EDDYCO6	230	1	526	64.4	65.1	1.000UN		16	560
52188	CV-DAYT3	115	526	1.029	-20.0	0.0	2.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		267	118.4			0.0	0.1	0.0	52180	ATOKA3	115	1	526	41.2	-0.1			27	146
									52184	EDDYCO3	115	1	526	-44.0	0.0			29	146
52204	LEACO3	115	526	1.039	-12.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		267	119.5			0.0	0.0	0.0	52205	LEACO6	230	1	526	-31.3	-15.9	1.031RG		20	168
									52354	LE-LVTN3	115	1	526	35.9	9.0			16	226
									52360	MADDOX3	115	1	526	-4.6	6.9			4	226
52205	LEACO6	230	526	1.020	-11.2	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		267	234.7			0.0	0.0	0.0	51891	YOAKUM6	230	1	526	-28.1	-3.5			6	452
									52204	LEACO3	115	1	526	31.3	16.7	1.031UN		21	168
									52209	CUNNINH6	230	1	526	-43.4	35.1			12	452
									52231	MIDLND-6	230	1	526	40.2	-48.3			7	904
52208	CUNNINH3	115	526	1.040	-12.4	0.0	0.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		267	119.6			0.0	0.0	0.0	52014	RUSSEL-3	115	1	526	-7.4	4.9			6	146
									52209	CUNNINH6	230	1	526	-55.0	-38.3	1.069LK		38	168
									52211	CUNN11	13.8	1	526	-66.9	7.5	1.025LK		72	90
									52215	CUNN31	22.0	1	526	0.0	0.0	1.025LK		0	150
									52240	PCA3	115	1	526	37.5	-6.2			25	146
									52358	SNANT3	115	1	526	42.4	15.0			33	132
									52360	MADDOX3	115	1	526	-4.2	12.3			6	226
									52390	MILLIN3	115	1	526	26.7	8.8			20	132
									52428	MOMUMT3	115	1	526	26.4	-3.8			18	146
52209	CUNNINH6	230	526	1.004	-10.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		267	231.0			0.0	0.0	0.0	52185	EDDYCO6	230	1	526	66.2	-11.2			15	452
									52205	LEACO6	230	1	526	43.5	-34.5			12	452
									52208	CUNNINH3	115	1	526	55.0	41.9	1.069UN		41	168
									52212	CUNN21	20.0	1	526	-149.8	-14.2	0.975LK		62	241
									52214	CUNN41	22.0	1	526	-104.7	-15.1	1.000LK		70	150
									52253	POTJCT6	230	1	526	89.7	33.3			21	452
52211	CUNN11	13.8	526	1.012	-7.6	67.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		267	13.96			-1.8R	0.0	0.0	52208	CUNNINH3	115	1	526	67.1	-1.9	1.025UN		74	90
52212	CUNN21	20.0	526	1.043	-5.6	150.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		267	20.86			26.1R	0.0	0.0	52209	CUNNINH6	230	1	526	150.1	26.0	0.975UN		61	241
52214	CUNN41	22.0	526	1.028	-4.3	105.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		267	22.61			26.1R	0.0	0.0	52209	CUNNINH6	230	1	526	105.1	26.0	1.000UN		70	150
52215	CUNN31	22.0	526	1.015	-12.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		267	22.32			0.0	0.0	0.0	52208	CUNNINH3	115	1	526	0.0	0.0	1.025UN		0	150

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING A									
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA
52231	MIDLND-6	230	526	1.048	-13.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	241.2			0.0	0.0	0.0	50558 CR-TATE4	138	1	526	40.0	-15.8	0.956UN	27	150
									52205 LEACO6	230	1	526	-40.0	15.8		5	904
52239	PCA2	69.0	526	1.034	-18.7	0.0	1.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	71.36			0.0	0.2	0.0	52240 PCA3	115	1	526	-10.2	7.5	0.987RG	28	44
									52243 AMAX#12	69.0	1	526	5.0	0.6		9	54
									52307 NPOTT2	69.0	1	526	3.9	-8.3		10	88
52240	PCA3	115	526	1.029	-17.1	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	118.4			0.0	0.0	0.0	52208 CUNNINH3	115	1	526	-36.6	6.3		25	146
									52239 PCA2	69.0	1	526	10.2	-7.0	0.987UN	27	44
									52252 POTJCT3	115	1	526	-11.7	0.9		8	146
									52310 CARLSBD3	115	1	526	38.1	-0.2		25	146
52243	AMAX#12	69.0	526	1.028	-19.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.96			0.0	0.0	0.0	52239 PCA2	69.0	1	526	-5.0	-0.8		9	54
									52245 CV-LUSK2	69.0	1	526	5.0	0.8		9	54
52245	CV-LUSK2	69.0	526	1.026	-19.2	0.0	5.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.79			0.0	0.8	0.0	52243 AMAX#12	69.0	1	526	-5.0	-0.8		9	54
									52247 DUVAL22	69.0	1	526	0.0	0.0		0	54
52247	DUVAL22	69.0	526	1.026	-19.2	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.79			0.0	0.0	0.0	52245 CV-LUSK2	69.0	1	526	0.0	0.0		0	54
52249	LIVSTR2	69.0	526	1.016	-19.6	0.0	1.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.09			0.0	-0.6	0.0	52261 NMPOTA2	69.0	1	526	-1.3	0.6		3	54
52251	POTJCT2	69.0	526	1.040	-18.9	0.0	2.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	71.74			0.0	0.0	0.0	52252 POTJCT3	115	1	526	-13.3	-16.7	1.062RG	51	40
									52252 POTJCT3	115	2	526	-13.2	-16.6	1.062RG	51	40
									52257 DUVAL12	69.0	1	526	0.6	-0.8		2	54
									52263 KERMAC2	69.0	1	526	10.1	8.1		23	54
									52269 MISCH22	69.0	1	526	17.1	18.0		27	88
									52307 NPOTT2	69.0	1	526	-3.9	8.1		10	88
52252	POTJCT3	115	526	1.030	-16.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	118.4			0.0	0.0	0.0	52240 PCA3	115	1	526	11.7	-1.3		8	146
									52251 POTJCT2	69.0	1	526	13.3	18.0	1.062UN	54	40
									52251 POTJCT2	69.0	2	526	13.3	18.0	1.062UN	54	40
									52253 POTJCT6	230	1	526	-88.6	-31.2	1.087RG	61	150
									52274 IMC#13	115	1	526	8.0	1.9		5	146
									52310 CARLSBD3	115	1	526	42.4	-5.6		60	69
52253	POTJCT6	230	526	0.976	-12.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	224.4			0.0	0.0	0.0	52209 CUNNINH6	230	1	526	-88.9	-38.5		22	452
									52252 POTJCT3	115	1	526	88.8	38.5	1.087UN	66	150
52255	NATPOT2	69.0	526	1.040	-18.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	71.74			0.0	0.0	0.0	52307 NPOTT2	69.0	1	526	0.0	0.0		0	54
52257	DUVAL12	69.0	526	1.040	-19.0	0.0	0.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	71.75			0.0	-0.7	0.0	52251 POTJCT2	69.0	1	526	-0.6	0.8		2	54
									52259 MISCH2	69.0	1	526	0.0	-0.1		0	54
52259	MISCH2	69.0	526	1.040	-19.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	71.75			0.0	0.0	0.0	52257 DUVAL12	69.0	1	526	0.0	0.0		0	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
 03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52261	NMPOTA2	69.0 267	526 70.10	1.016 -19.6	0.0 0.0	2.9 2.7	0.0 0.0	52249	LIVSTR2	69.0	1	526	1.3	-0.7		3	54
								52263	KERMAC2	69.0	1	526	-4.2	-2.0		8	54
52263	KERMAC2	69.0 267	526 70.21	1.018 -19.5	0.0 0.0	5.7 6.1	0.0 0.0	52251	POTJCT2	69.0	1	526	-9.9	-8.0		23	54
								52261	NMPOTA2	69.0	1	526	4.2	1.9		8	54
52265	CV-DG&I269	69.0 267	526 69.41	1.006 -25.2	0.0 0.0	17.1 2.9	0.0 0.0	52295	7RIVER2	69.0	1	526	-17.1	-2.9		32	54
52266	WIPP3	115 267	526 118.8	1.033 -16.9	0.0 0.0	2.1 1.5	0.0 -15.4	52268	SNDDUN3	115	1	526	-9.5	7.9		8	146
								52274	IMC#13	115	1	526	7.4	5.9		6	146
52268	SNDDUN3	115 267	526 118.5	1.030 -16.6	0.0 0.0	3.5 3.9	0.0 0.0	52266	WIPP3	115	1	526	9.5	-8.5		8	146
								52329	OCHOA3	115	1	526	-13.0	4.6		9	146
52269	MISCH22	69.0 267	526 71.30	1.033 -19.1	0.0 0.0	2.2 2.1	0.0 0.0	52251	POTJCT2	69.0	1	526	-17.1	-17.8		27	88
								52271	IMC#22	69.0	1	526	14.8	15.8		24	88
52271	IMC#22	69.0 267	526 71.19	1.032 -19.2	0.0 0.0	9.3 9.3	0.0 0.0	52269	MISCH22	69.0	1	526	-14.8	-15.7		24	88
								52275	UNITSA2	69.0	1	526	5.6	6.5		9	88
52274	IMC#13	115 267	526 118.1	1.027 -17.1	0.0 0.0	15.3 9.5	0.0 0.0	52252	POTJCT3	115	1	526	-8.0	-2.7		6	146
								52266	WIPP3	115	1	526	-7.3	-6.7		7	146
52275	UNITSA2	69.0 267	526 71.15	1.031 -19.2	0.0 0.0	0.4 0.4	0.0 0.0	52271	IMC#22	69.0	1	526	-5.6	-6.5		9	88
								52279	IMC#32	69.0	1	526	5.2	6.1		14	54
52277	DUVAL32	69.0 267	526 70.53	1.022 -19.3	0.0 0.0	1.9 1.1	0.0 0.0	52278	IMC#42	69.0	1	526	1.6	1.5		2	88
								52279	IMC#32	69.0	1	526	-3.4	-2.6		12	36
52278	IMC#42	69.0 267	526 70.45	1.021 -19.3	0.0 0.0	1.6 1.6	0.0 0.0	52277	DUVAL32	69.0	1	526	-1.6	-1.6		2	88
52279	IMC#32	69.0 267	526 70.68	1.024 -19.3	0.0 0.0	1.7 3.6	0.0 0.0	52275	UNITSA2	69.0	1	526	-5.2	-6.1		15	54
								52277	DUVAL32	69.0	1	526	3.4	2.5		12	36
52282	CV-INDH3	115 267	526 116.6	1.014 -21.2	0.0 0.0	47.6 16.7	0.0 0.0	52294	7RIVER3	115	1	526	-6.4	-25.0		17	146
								52314	PECOS3	115	1	526	-41.2	8.4		28	146
52294	7RIVER3	115 267	526 117.8	1.024 -21.2	0.0 0.0	0.0 0.0	0.0 -30.2	52282	CV-INDH3	115	1	526	6.5	24.8		17	146
								52295	7RIVER2	69.0	1	526	17.4	4.0	1.012UN	44	40
								52296	CV-LAKW3	115	1	526	-23.9	1.5		16	146
52295	7RIVER2	69.0 267	526 70.71	1.025 -23.9	0.0 0.0	0.0 0.0	0.0 0.0	52265	CV-DG&I269	69.0	1	526	17.3	3.1		32	54
								52294	7RIVER3	115	1	526	-17.3	-3.1	1.012RG	43	40
52296	CV-LAKW3	115 267	526 117.9	1.025 -20.9	0.0 0.0	3.5 0.1	0.0 0.0	52294	7RIVER3	115	1	526	23.9	-1.6		16	146
								52298	CV-IRIS3	115	1	526	-27.4	1.5		18	146

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52298	CV-IRIS3	115 526	1.026	-20.6	0.0	3.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 118.0			0.0	0.1	0.0	52180	ATOKA3	115 1	526	-30.6	1.5			20	146
					0.0	0.1	0.0	52296	CV-LAKW3	115 1	526	27.4	-1.6			18	146
52301	DELHI2	69.0 526	1.017	-22.9	0.0	0.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 70.17			0.0	0.0	0.0	52303	OCOTILL2	69.0 1	526	-0.1	0.0			0	54
52303	OCOTILL2	69.0 526	1.017	-22.9	0.0	13.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 70.17			0.0	2.5	0.0	52301	DELHI2	69.0 1	526	0.1	-0.2			0	54
					0.0	6.0	0.0	52309	CARLSBD2	69.0 1	526	-13.3	-2.3			25	54
52304	NCANALT3	115 526	1.016	-19.6	0.0	15.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 116.9			0.0	6.0	0.0	52184	EDDYCO3	115 1	526	-18.9	-5.6			11	179
					0.0	0.0	0.0	52314	PECOS3	115 1	526	3.7	-0.4			2	179
52307	NPOTT2	69.0 526	1.040	-18.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 71.73			0.0	0.0	0.0	52239	PCA2	69.0 1	526	-3.9	8.2			10	88
					0.0	0.0	0.0	52251	POTJCT2	69.0 1	526	3.9	-8.1			10	88
					0.0	0.0	0.0	52255	NATPOT2	69.0 1	526	0.0	-0.1			0	54
52308	FIESTA3	115 526	1.016	-19.4	0.0	12.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 116.9			0.0	6.2	0.0	52310	CARLSBD3	115 1	526	-12.4	-6.2			9	146
52309	CARLSBD2	69.0 526	1.022	-22.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 70.52			0.0	0.0	0.0	52303	OCOTILL2	69.0 1	526	13.3	2.4			25	54
					0.0	0.0	0.0	52310	CARLSBD3	115 1	526	-19.7	-5.6	1.025RG		50	40
					0.0	0.0	0.0	52310	CARLSBD3	115 2	526	-9.1	-2.7	1.025RG		37	25
					0.0	0.0	0.0	52311	CARLSBD1	113.8 1	526	0.0	0.0	0.978UN		0	22
					0.0	0.0	0.0	52327	HOPISB2	69.0 1	526	15.5	6.0			45	36
52310	CARLSBD3	115 526	1.017	-19.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 117.0			0.0	0.0	-14.9	52240	PCA3	115 1	526	-37.6	0.3			25	146
					0.0	0.0	0.0	52252	POTJCT3	115 1	526	-41.6	6.1			60	69
					0.0	0.0	0.0	52308	FIESTA3	115 1	526	12.4	6.1			9	146
					0.0	0.0	0.0	52309	CARLSBD2	69.0 1	526	19.8	6.8	1.025UN		51	40
					0.0	0.0	0.0	52309	CARLSBD2	69.0 2	526	9.1	3.3	1.025UN		38	25
					0.0	0.0	0.0	52314	PECOS3	115 1	526	37.8	-7.8			21	179
52311	CARLSBD1	113.8 526	0.999	-22.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 13.79			0.0	0.0	0.0	52309	CARLSBD2	69.0 1	526	0.0	0.0	0.978LK		0	22
52313	PECOS6	230 526	1.010	-19.6	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 232.3			0.0	0.0	0.0	52314	PECOS3	115 1	526	0.0	0.0	0.994LK		0	150
52314	PECOS3	115 526	1.016	-19.6	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 116.9			0.0	0.0	0.0	52282	CV-INDH3	115 1	526	41.5	-8.0			28	146
					0.0	0.0	0.0	52304	NCANALT3	115 1	526	-3.7	0.3			2	179
					0.0	0.0	0.0	52310	CARLSBD3	115 1	526	-37.8	7.7			21	179
					0.0	0.0	0.0	52313	PECOS6	230 1	526	0.0	0.0	0.994UN		0	150
52317	LOVNGT2	69.0 526	1.002	-23.1	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.11			0.0	0.0	0.0	52319	CBWFLD2	69.0 1	526	2.2	0.1			6	36
					0.0	0.0	0.0	52325	LVNG&NA2	69.0 1	526	5.1	2.1			10	54
					0.0	0.0	0.0	52327	HOPISB2	69.0 1	526	-7.3	-2.2			21	36

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:19
03AP-20412-501 **WIND FARM** (BOONE SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>									
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING A										
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA	
52319	CBWFLD2	69.0	526	1.001	-23.2	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	69.06			0.0	0.0	0.0	52317	LOVNGT2	69.0	1	526	-2.2	-0.1		6	36
									52321	CBWTRF2	69.0	1	526	1.1	0.1		2	54
									52323	WHITEC2	69.0	1	526	1.1	0.0		3	36
52321	CBWTRF2	69.0	526	1.000	-23.2	0.0	1.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	69.00			0.0	0.2	0.0	52319	CBWFLD2	69.0	1	526	-1.1	-0.2		2	54
52323	WHITEC2	69.0	526	0.998	-23.3	0.0	1.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	68.84			0.0	0.4	0.0	52319	CBWFLD2	69.0	1	526	-1.1	-0.4		3	36
52325	LVNG&NA2	69.0	526	0.994	-23.5	0.0	5.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	68.58			0.0	2.3	0.0	52317	LOVNGT2	69.0	1	526	-5.1	-2.3		10	54
52327	HOPISB2	69.0	526	1.004	-23.0	0.0	7.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	69.29			0.0	3.8	0.0	52309	CARLSBD2	69.0	1	526	-15.3	-5.9		45	36
									52317	LOVNGT2	69.0	1	526	7.4	2.1		21	36
52329	OCHOA3	115	526	1.030	-16.0	0.0	1.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	118.5			0.0	1.4	0.0	52268	SNDDUN3	115	1	526	13.0	-5.5		9	146
									52420	WHITTEN3	115	1	526	-14.9	4.0		11	132

2003 Spring Peak Case

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
51070	TUCUMCA3	115 526	1.013	-21.8	0.0	7.9	0.0	51073	TUCUM1	13.2	1	526	0.0	0.0	1.000UN	0	18
		264	116.5		0.0	3.0	0.0	51076	FE-TUCU3	115	1	526	-7.9	-3.0		6	146
51073	TUCUM1	13.2 526	1.013	-21.8	0.0	0.0	0.0	51070	TUCUMCA3	115	1	526	0.0	0.0	1.000RG	0	18
		264	13.37		0.0	0.0	0.0										
51076	FE-TUCU3	115 526	1.014	-21.7	0.0	6.3	0.0	51070	TUCUMCA3	115	1	526	7.9	2.7		6	146
		264	116.6		0.0	0.3	0.0	51176	CURRY3	115	1	526	-14.2	-2.9		10	146
51078	CANYNW3	115 526	1.026	-17.7	0.0	14.5	0.0	51080	CANYNE3	115	1	526	-7.4	-6.3		11	90
		264	118.0		0.0	5.0	0.0	51088	ROCKWEL3	115	1	526	3.1	0.8		3	95
								51102	DAWN	115	1	526	-10.2	0.5		11	90
51080	CANYNE3	115 526	1.029	-17.6	0.0	8.4	0.0	51014	OSAGE--3	115	1	526	-15.8	-4.3		18	90
		264	118.3		0.0	-1.7	0.0	51078	CANYNW3	115	1	526	7.4	6.0		10	90
51082	PALODU 3	115 526	1.047	-16.7	0.0	2.0	0.0	51020	RANDALL3	115	1	526	-2.0	-0.5		2	90
		264	120.4		0.0	0.5	0.0										
51083	DS-5&11269.0	526 526	1.002	-19.0	0.0	10.0	0.0	51097	DS-#92	69.0	1	526	-10.0	-3.0		21	50
		264	69.10		0.0	3.0	0.0										
51088	ROCKWEL3	115 526	1.026	-17.7	0.0	3.1	0.0	51078	CANYNW3	115	1	526	-3.1	-1.0		3	95
		264	118.0		0.0	1.0	0.0										
51091	CENTRS2	69.0 526	1.025	-19.1	0.0	10.6	0.0	51095	DS-MTR2	69.0	1	526	-10.6	-1.8		19	54
		264	70.74		0.0	1.8	0.0										
51094	NEHFD3	115 526	1.030	-16.2	0.0	0.0	0.0	51095	DS-MTR2	69.0	1	526	27.4	26.1	1.044UN	44	84
		264	118.4		0.0	0.0	0.0	51110	DFSMT3	115	1	526	-27.4	-26.1		25	146
51095	DS-MTR2	69.0 526	1.031	-18.7	0.0	13.3	0.0	51091	CENTRS2	69.0	1	526	10.7	1.7		19	54
		264	71.17		0.0	4.5	0.0	51094	NEHFD3	115	1	526	-27.3	-23.9	1.044RG	42	84
								51105	HEREFD2	69.0	1	526	3.3	17.7		43	41
51097	DS-#92	69.0 526	1.006	-18.8	0.0	3.9	0.0	51083	DS-5&11269.0	69.0	1	526	10.0	3.0		21	50
		264	69.43		0.0	1.9	0.0	51105	HEREFD2	69.0	1	526	-13.9	-4.8		29	50
51102	DAWN	115 526	1.030	-17.2	0.0	2.0	0.0	51078	CANYNW3	115	1	526	10.2	-1.3		11	90
		264	118.5		0.0	0.8	0.0	51106	HEREFD3	115	1	526	-12.2	0.6		13	90
51105	HEREFD2	69.0 526	1.015	-18.4	0.0	9.0	0.0	51095	DS-MTR2	69.0	1	526	-3.2	-17.5		43	41
		264	70.05		0.0	1.3	0.0	51097	DS-#92	69.0	1	526	14.0	4.9		29	50
								51106	HEREFD3	115	1	526	-12.6	4.5	0.971RG	33	40
								51106	HEREFD3	115	2	526	-12.7	5.5	0.968RG	34	40
								51115	DS-#42	69.0	1	526	5.4	1.4		6	88

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51106	HEREFD3	115 526 264	1.035 119.1	-16.4	0.0 0.0	0.0 0.0	0.0 0.0	51102	DAWN	115 1	526	12.3	-1.6			13	90
								51105	HEREFD2	69.0 1	526	12.6	-4.0	0.971UN		32	40
								51105	HEREFD2	69.0 2	526	12.7	-5.0	0.968UN		33	40
								51110	DFSMTH3	115 1	526	-54.6	13.3			37	146
								51122	FRIONA3	115 1	526	17.0	-2.6			18	90
51110	DFSMTH3	115 526 264	1.036 119.1	-16.0	0.0 0.0	0.0 0.0	0.0 0.0	51094	NEHFD3	115 1	526	27.5	26.1			25	146
								51106	HEREFD3	115 1	526	54.7	-13.1			37	146
								51111	DFSMTH6	230 1	526	-48.8	-15.6	0.938UN		33	150
								51111	DFSMTH6	230 2	526	-48.8	-15.6	0.938UN		33	150
								51146	DS-213	115 1	526	15.4	18.3			16	146
51111	DFSMTH6	230 526 264	0.983 226.1	-14.1	0.0 0.0	0.0 0.0	0.0 0.0	50993	BUSHLND6	230 1	526	-19.9	-16.9			6	452
								51110	DFSMTH3	115 1	526	48.8	17.5	0.938RG		35	150
								51110	DFSMTH3	115 2	526	48.8	17.5	0.938RG		35	150
								51419	PLANTX6	230 1	526	-77.8	-18.1			18	452
51115	DS-#42	69.0 526 264	1.013 69.89	-18.6	0.0 0.0	3.1 1.0	0.0 0.0	51105	HEREFD2	69.0 1	526	-5.4	-1.5			6	88
								51117	DS-#82	69.0 1	526	2.4	0.5			3	88
51117	DS-#82	69.0 526 264	1.010 69.71	-18.8	0.0 0.0	2.4 0.8	0.0 0.0	51115	DS-#42	69.0 1	526	-2.4	-0.8			3	88
51120	CARGIL3	115 526 264	1.024 117.8	-18.1	0.0 0.0	5.0 0.8	0.0 0.0	51122	FRIONA3	115 1	526	-7.6	4.1			9	90
								51124	PARMRC3	115 1	526	2.6	-4.9			6	90
51122	FRIONA3	115 526 264	1.024 117.8	-18.1	0.0 0.0	9.2 3.0	0.0 0.0	51106	HEREFD3	115 1	526	-16.8	1.2			18	90
								51120	CARGIL3	115 1	526	7.6	-4.2			9	90
51124	PARMRC3	115 526 264	1.026 118.0	-18.3	0.0 0.0	2.0 0.3	0.0 0.0	51120	CARGIL3	115 1	526	-2.6	4.3			5	90
								51126	DS-#203	115 1	526	0.5	-4.6			5	90
51126	DS-#203	115 526 264	1.028 118.2	-18.3	0.0 0.0	7.5 3.8	0.0 0.0	51124	PARMRC3	115 1	526	-0.5	4.0			4	90
								51176	CURRY3	115 1	526	-7.0	-7.9			11	90
51133	DIM-C,S269.0	526 526 264	0.989 68.26	-20.1	0.0 0.0	13.7 2.1	0.0 0.0	51135	DS-#32	69.0 1	526	-13.7	-2.1			26	54
51135	DS-#32	69.0 526 264	0.991 68.36	-20.0	0.0 0.0	3.1 1.2	0.0 0.0	51133	DIM-C,S269.0	1 526	526	13.7	2.1			26	54
								51137	GOODPAS269.0	1 526	526	-16.9	-3.3			32	54
51137	GOODPAS269.0	526 526 264	0.993 68.55	-19.8	0.0 0.0	0.0 0.0	0.0 0.0	51135	DS-#32	69.0 1	526	16.9	3.3			32	54
								51139	GOODPST269.0	1 526	526	0.0	0.0			0	54
								51141	CASTR2	69.0 1	526	-16.9	-3.3			32	54
51139	GOODPST269.0	526 526 264	0.994 68.55	-19.8	0.0 0.0	0.0 0.0	0.0 0.0	51137	GOODPAS269.0	1 526	526	0.0	0.0			0	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51141	CASTRT2	69.0 526	0.996	-19.6	0.0	0.0	0.0	51137	GOODPAS2	69.0 1	526	16.9	3.3			32	54
		264	68.70		0.0	0.0	0.0	51149	CASTRC2	69.0 1	526	-16.9	-3.3			32	54
51143	DS-15&12	69.0 526	1.000	-19.1	0.0	9.6	0.0	51149	CASTRC2	69.0 1	526	-9.6	-3.6			19	54
		264	69.03		0.0	3.6	0.0										
51145	DS-CAST2	69.0 526	1.000	-19.1	0.0	13.7	0.0	51149	CASTRC2	69.0 1	526	-13.7	-4.8			27	54
		264	69.03		0.0	4.8	0.0										
51146	DS-213	115 526	1.007	-16.7	0.0	5.6	0.0	51110	DFSMTH3	115 1	526	-15.2	-19.2			17	146
		264	115.8		0.0	2.4	0.0	51150	CASTRC3	115 1	526	9.7	16.7			13	146
51149	CASTRC2	69.0 526	1.011	-18.5	0.0	0.0	0.0	51141	CASTRT2	69.0 1	526	17.1	3.5			32	54
		264	69.78		0.0	0.0	0.0	51143	DS-15&12	69.0 1	526	9.7	3.6			19	54
								51145	DS-CAST2	69.0 1	526	13.8	4.9			27	54
								51150	CASTRC3	115 1	526	-20.3	-6.0	1.017RG		25	84
								51150	CASTRC3	115 2	526	-20.3	-6.0	1.017RG		25	84
51150	CASTRC3	115 526	1.006	-16.7	0.0	0.0	0.0	51146	DS-213	115 1	526	-9.7	-16.8			13	146
		264	115.6		0.0	0.0	0.0	51149	CASTRC2	69.0 1	526	20.3	6.7	1.017UN		25	84
								51149	CASTRC2	69.0 2	526	20.3	6.7	1.017UN		25	84
								51250	BC-EART3	115 1	526	-30.9	3.4			21	146
51155	NCLOVI2	69.0 526	1.018	-21.1	0.0	8.7	0.0	51163	WCLOVI2	69.0 1	526	-3.3	-0.1			6	54
		264	70.22		0.0	0.5	0.0	51175	CURRY2	69.0 1	526	-5.4	-0.4			13	41
51156	NORRST3	115 526	1.036	-18.2	0.0	0.0	0.0	51168	NORRIS3	115 1	526	10.1	2.8			11	90
		264	119.1		0.0	0.0	0.0	51176	CURRY3	115 1	526	11.5	2.4			8	146
								51194	OASIS3	115 1	526	-21.6	-5.3			15	146
51159	ECLOVI2	69.0 526	1.019	-20.8	0.0	9.6	0.0	51175	CURRY2	69.0 1	526	-9.6	-2.5			18	54
		264	70.33		0.0	2.5	0.0										
51162	WCLOVI3	115 526	1.035	-18.2	0.0	7.2	0.0	51166	CANNOA3	115 1	526	-16.0	-2.9			11	146
		264	119.0		0.0	1.9	0.0	51172	FE-SWS3	115 1	526	8.8	1.0			6	146
51163	WCLOVI2	69.0 526	1.019	-21.0	0.0	3.3	0.0	51155	NCLOVI2	69.0 1	526	3.3	0.0			6	54
		264	70.30		0.0	0.6	0.0	51175	CURRY2	69.0 1	526	-6.6	-0.6			12	54
51166	CANNOA3	115 526	1.037	-18.0	0.0	9.4	0.0	51162	WCLOVI3	115 1	526	16.0	2.5			11	146
		264	119.3		0.0	5.1	0.0	51194	OASIS3	115 1	526	-25.4	-7.6			18	146
51168	NORRIS3	115 526	1.035	-18.2	0.0	10.1	0.0	51156	NORRST3	115 1	526	-10.1	-2.9			11	90
		264	119.1		0.0	2.9	0.0										
51170	FE-CLVS3	115 526	1.035	-18.3	0.0	0.0	0.0	51172	FE-SWS3	115 1	526	1.0	0.7			1	146
		264	119.0		0.0	0.0	0.0	51180	FE-CLVS3	115 1	526	-1.0	-0.7			1	146

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51172	FE-SWS3	115 526 264	1.034 118.9	-18.3	0.0 0.0	9.8 2.7	0.0 0.0	51162	WCLOVI3	115 1	526	-8.8	-1.2			6	146
								51170	FE-CLVS3	115 1	526	-1.0	-1.5			1	146
51175	CURRY2	69.0 526 264	1.024 70.67	-20.5	0.0 0.0	6.3 1.1	0.0 0.0	51155	NCLOVI2	69.0 1	526	5.4	0.1			13	41
								51159	ECLOVI2	69.0 1	526	9.6	1.6			18	54
								51163	WCLOVI2	69.0 1	526	6.7	0.5			12	54
								51176	CURRY3	115 1	526	-14.8	-2.0	0.997RG		37	40
								51176	CURRY3	115 2	526	-14.8	-1.8	0.997RG		36	40
								51183	FARWELL2	69.0 1	526	1.7	0.5			3	54
51176	CURRY3	115 526 264	1.036 119.1	-18.2	0.0 0.0	0.0 0.0	0.0 0.0	51076	FE-TUCU3	115 1	526	14.5	-1.8			10	146
								51126	DS-#203	115 1	526	7.0	7.2			11	90
								51156	NORRST3	115 1	526	-11.5	-2.4			8	146
								51175	CURRY2	69.0 1	526	14.9	2.6	0.997UN		36	40
								51175	CURRY2	69.0 2	526	14.8	2.4	0.997UN		36	40
								51180	FE-CLVS3	115 1	526	15.9	5.6			11	146
								51202	ROOSEVL3	115 2	526	-55.6	-13.5			38	146
51180	FE-CLVS3	115 526 264	1.035 119.0	-18.3	0.0 0.0	14.9 5.8	0.0 0.0	51170	FE-CLVS3	115 1	526	1.0	-0.2			1	146
								51176	CURRY3	115 1	526	-15.9	-5.6			11	146
51183	FARWELL2	69.0 526 264	1.021 70.47	-20.6	0.0 0.0	1.7 0.8	0.0 0.0	51175	CURRY2	69.0 1	526	-1.7	-0.8			3	54
51185	DS-#102	69.0 526 264	1.000 68.99	-20.5	0.0 0.0	5.3 2.4	0.0 0.0	51229	LARIAT2	69.0 1	526	-5.3	-2.4			7	88
51194	OASIS3	115 526 264	1.047 120.4	-17.2	0.0 0.0	0.0 0.0	0.0 0.0	51156	NORRST3	115 1	526	21.7	4.4			15	146
								51166	CANNOA3	115 1	526	25.6	7.2			17	146
								51195	OASIS6	230 1	526	-73.0	-22.6	1.075RG		29	252
								51208	PORTALE3	115 1	526	25.7	11.1			18	146
51195	OASIS6	230 526 264	0.987 226.9	-15.0	0.0 0.0	0.0 0.0	0.0 0.0	51194	OASIS3	115 1	526	73.1	25.7	1.075UN		31	252
								51203	ROOSEVL6	230 1	526	-25.9	-18.2			7	452
								99990	WINDFARM	230 1	526	-47.2	-7.5			11	452
51202	ROOSEVL3	115 526 264	1.046 120.3	-17.2	0.0 0.0	3.2 1.9	0.0 0.0	51176	CURRY3	115 2	526	56.0	14.1			38	146
								51203	ROOSEVL6	230 1	526	-74.2	-23.2	1.073RG		29	252
								51208	PORTALE3	115 1	526	15.0	7.2			11	146
51203	ROOSEVL6	230 526 264	0.990 227.6	-14.8	0.0 0.0	0.0 0.0	0.0 0.0	51195	OASIS6	230 1	526	25.9	15.6			7	452
								51202	ROOSEVL3	115 1	526	74.3	26.8	1.073UN		32	252
								51435	TOLKE6	230 2	526	-124.3	-6.5			26	492
								51437	TOLKW6	230 1	526	-125.8	-6.5			26	492
								59995	PNM-DC6	230 1	999	149.9	-29.4			8	2000

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>								<===== LINE DATA =====>								
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING								
BUS	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA
51207	RO-PORT	269.0	526	1.033	-19.3	0.0	22.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	71.25		0.0	0.0	10.1	0.0	51208	PORTALE3	115	1	526	-20.3	-8.9	1.008RG	26 84
								51208	PORTALE3	115	2	526	-20.3	-8.9	1.008RG	26 84
								51211	ZODIAC2	69.0	1	526	7.2	2.1		13 54
								51213	PORTAL12	69.0	1	526	11.4	5.6		23 54
51208	PORTALE3	115	526	1.039	-17.7	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	119.5		0.0	0.0	0.0	0.0	51194	OASIS3	115	1	526	-25.6	-11.3		18 146
								51202	ROOSEVL3	115	1	526	-15.0	-7.9		11 146
								51207	RO-PORT	269.0	1	526	20.3	9.6	1.008UN	26 84
								51207	RO-PORT	269.0	2	526	20.3	9.6	1.008UN	26 84
51211	ZODIAC2	69.0	526	1.031	-19.4	0.0	4.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	71.10		0.0	0.0	1.3	0.0	51207	RO-PORT	269.0	1	526	-7.2	-2.2		14 54
								51219	PORTAS2	69.0	1	526	3.2	0.8		6 54
51213	PORTAL12	69.0	526	1.029	-19.4	0.0	3.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	71.00		0.0	0.0	1.2	0.0	51207	RO-PORT	269.0	1	526	-11.3	-5.6		23 54
								51215	PORTAL22	69.0	1	526	8.0	4.4		25 36
51215	PORTAL22	69.0	526	1.026	-19.5	0.0	4.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	70.82		0.0	0.0	1.4	0.0	51213	PORTAL12	69.0	1	526	-8.0	-4.4		25 36
								51217	PORTAI2	69.0	1	526	4.1	3.0		9 54
51217	PORTAI2	69.0	526	1.025	-19.5	0.0	0.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	70.72		0.0	0.0	0.2	0.0	51215	PORTAL22	69.0	1	526	-4.0	-3.0		9 54
								51221	POREFD2	69.0	1	526	2.2	1.8		5 54
								51223	MARKST2	69.0	1	526	1.6	1.0		3 54
51219	PORTAS2	69.0	526	1.030	-19.5	0.0	3.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	71.04		0.0	0.0	0.9	0.0	51211	ZODIAC2	69.0	1	526	-3.2	-0.9		6 54
51221	POREFD2	69.0	526	1.025	-19.5	0.0	2.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	70.71		0.0	0.0	1.8	0.0	51217	PORTAI2	69.0	1	526	-2.2	-1.8		5 54
51223	MARKST2	69.0	526	1.025	-19.5	0.0	1.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	70.72		0.0	0.0	1.1	0.0	51217	PORTAI2	69.0	1	526	-1.6	-1.1		3 54
51229	LARIAT2	69.0	526	1.004	-20.2	0.0	0.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	69.30		0.0	0.0	-0.7	0.0	51185	DS-#102	69.0	1	526	5.3	2.3		7 88
								51231	BC-LARI2	69.0	1	526	-5.8	-1.5		7 88
51231	BC-LARI2	69.0	526	1.005	-20.1	0.0	2.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	69.36		0.0	0.0	1.0	0.0	51229	LARIAT2	69.0	1	526	5.8	1.5		7 88
								51233	WMULES2	69.0	1	526	-8.4	-2.5		10 88
51233	WMULES2	69.0	526	1.011	-19.6	0.0	2.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	69.79		0.0	0.0	0.1	0.0	51231	BC-LARI2	69.0	1	526	8.4	2.4		10 88
								51235	MULECY2	69.0	1	526	-10.4	-2.5		12 88
51235	MULECY2	69.0	526	1.012	-19.6	0.0	2.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	69.80		0.0	0.0	0.2	0.0	51233	WMULES2	69.0	1	526	10.4	2.5		12 88
								51241	BC-BAIL2	69.0	1	526	-12.8	-2.7		15 88
51239	MULE-V2	69.0	526	1.012	-19.5	0.0	2.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----
	264	69.86		0.0	0.0	0.0	0.0	51241	BC-BAIL2	69.0	1	526	-5.3	-1.0		10 54
								51245	BAILY2	69.0	1	526	2.7	1.0		3 88

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>								<===== LINE DATA =====>										
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING	A									
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	
51241	BC-BAIL269.0	526	1.014	-19.4	0.0	23.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	69.95			0.0	5.7	0.0	51235	MULECY2	69.0	1	526	12.8	2.7			15	88
								51239	MULE-V2	69.0	1	526	5.4	1.0			10	54
								51242	BAILYC3	115	1	526	-20.6	-4.6	1.038RG		52	40
								51242	BAILYC3	115	2	526	-20.9	-4.7	1.038RG		53	40
51242	BAILYC3	115	526	0.995	-15.9	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	114.4			0.0	0.0	0.0	51241	BC-BAIL269.0	1	526	20.7	6.0	1.038UN			54	40
								51241	BC-BAIL269.0	2	526	21.0	6.0	1.038UN			55	40
								51418	PLANTX3	115	1	526	-41.6	-12.0			30	146
51245	BAILYP2	69.0	526	1.011	-19.6	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	69.73			0.0	0.0	0.0	51239	MULE-V2	69.0	1	526	-2.7	-1.2			3	88
								51247	LC-BECK269.0	1	526	2.7	1.2				3	88
51247	LC-BECK269.0	526	1.008	-19.7	0.0	2.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	69.56			0.0	1.4	0.0	51245	BAILYP2	69.0	1	526	-2.7	-1.4			3	88
51249	BC-EART269.0	526	1.026	-16.4	0.0	19.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	70.81			0.0	7.5	0.0	51250	BC-EART3	115	1	526	-10.1	-3.9	1.025RG		21	50
								51250	BC-EART3	115	2	526	-9.5	-3.7	1.025RG		18	56
51250	BC-EART3	115	526	1.010	-15.2	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	116.2			0.0	0.0	0.0	51150	CASTR3	115	1	526	31.2	-3.6			21	146
								51249	BC-EART269.0	1	526	10.1	4.1	1.025UN			22	50
								51249	BC-EART269.0	2	526	9.5	3.9	1.025UN			18	56
								51418	PLANTX3	115	1	526	-50.7	-4.4			34	146
99990	WINDFARM	230	526	0.992	-13.6	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	228.2			0.0	0.0	0.0	51195	OASIS6	230	1	526	47.5	-7.9			11	452
								52073	CHAVES6	230	1	526	129.8	-8.6			29	452
								99991	WF-TF1	34.5	1	526	-88.6	11.5	1.025UN		90	100
								99992	WF-TF2	34.5	1	526	-88.7	5.0	1.025UN		90	100
99991	WF-TF1	34.5	526	1.015	-3.1	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	35.03			0.0	0.0	-30.9	99990	WINDFARM	230	1	526	89.1	4.7	1.025LK		88	100
								99993	WF-EQ1	.690	1	526	-44.5	13.1	1.000UN		91	50
								99994	WF-EQ2	.690	1	526	-44.5	13.1	1.000UN		91	50
99992	WF-TF2	34.5	526	1.029	-3.3	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	35.48			0.0	0.0	-37.0	99990	WINDFARM	230	1	526	89.1	11.0	1.025LK		87	100
								99995	WF-EQ3	.690	1	526	-44.6	13.0	1.000UN		90	50
								99996	WF-EQ4	.690	1	526	-44.6	13.0	1.000UN		90	50
99993	WF-EQ1	.690	526	1.031	1.8	46.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	0.712			-9.4L	0.0	0.0	99991	WF-TF1	34.5	1	526	46.2	-9.4	1.000LK		91	50
99994	WF-EQ2	.690	526	1.031	1.8	46.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	0.712			-9.4L	0.0	0.0	99991	WF-TF1	34.5	1	526	46.2	-9.4	1.000LK		91	50
99995	WF-EQ3	.690	526	1.044	1.5	46.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	0.721			-9.4L	0.0	0.0	99992	WF-TF2	34.5	1	526	46.2	-9.4	1.000LK		90	50
99996	WF-EQ4	.690	526	1.044	1.5	46.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
	264	0.721			-9.4L	0.0	0.0	99992	WF-TF2	34.5	1	526	46.2	-9.4	1.000LK		90	50

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>									
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING	FROM	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA		
BUS	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	BUS	NAME	CTK	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA			
51291	DS-#122	69.0	526	1.002	-22.6	0.0	4.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	69.12		0.0		0.0	2.4	0.0	51293	HART2	69.0	1	526	-4.9	-2.4	10	54	
51293	HART2	69.0	526	1.014	-22.0	0.0	4.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	69.98		0.0		0.0	1.1	0.0	51291	DS-#122	69.0	1	526	4.9	2.1	10	54	
									51295	LC-HART2	69.0	1	526	-9.4	-3.2	18	54	
51295	LC-HART2	69.0	526	1.021	-21.6	0.0	7.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	70.47		0.0		0.0	2.4	0.0	51293	HART2	69.0	1	526	9.4	3.1	18	54	
									51387	LAMTON2	69.0	1	526	-16.7	-5.6	32	54	
51297	HAPPYC2	69.0	526	1.010	-22.5	0.0	2.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	69.68		0.0		0.0	0.9	0.0	51299	HAPPYT2	69.0	1	526	-2.0	-0.9	4	54	
51299	HAPPYT2	69.0	526	1.012	-22.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	69.84		0.0		0.0	0.0	0.0	51297	HAPPYC2	69.0	1	526	2.0	0.7	4	54	
									51301	HAPPY2	69.0	1	526	-2.5	-0.9	5	54	
									51305	SHAMRP2	69.0	1	526	0.5	0.2	1	54	
51301	HAPPY2	69.0	526	1.013	-22.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	69.87		0.0		0.0	0.0	0.0	51299	HAPPYT2	69.0	1	526	2.5	0.8	5	54	
									51302	HAPPY3	115	1	526	-6.9	-1.4	1.036RG	17	40
									51302	HAPPY3	115	2	526	-6.9	-1.4	1.036RG	17	40
									51307	SW-HAPP2	69.0	1	526	11.2	2.0	0	9999	
51302	HAPPY3	115	526	0.983	-21.2	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	113.0		0.0		0.0	0.0	0.0	51301	HAPPY2	69.0	1	526	6.9	1.6	1.036UN	18	40
									51301	HAPPY2	69.0	2	526	6.9	1.6	1.036UN	18	40
									51310	TULIAT3	115	1	526	-13.8	-3.1	16	90	
51305	SHAMRP2	69.0	526	1.012	-22.4	0.0	0.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	69.81		0.0		0.0	0.2	0.0	51299	HAPPYT2	69.0	1	526	-0.5	-0.2	1	54	
51307	SW-HAPP2	69.0	526	1.013	-22.4	0.0	11.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	69.86		0.0		0.0	2.0	0.0	51301	HAPPY2	69.0	1	526	-11.2	-2.0	0	9999	
51310	TULIAT3	115	526	0.987	-20.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	113.5		0.0		0.0	0.0	0.0	50500	MU-TULI3	115	1	526	3.0	0.9	4	90	
									51302	HAPPY3	115	1	526	13.8	2.8	16	90	
									51316	KRESS3	115	1	526	-16.8	-3.7	19	90	
51315	KRESS2	69.0	526	1.015	-24.7	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	70.02		0.0		0.0	0.0	0.0	51316	KRESS3	115	1	526	-26.1	-10.2	1.058RG	63	44
									51316	KRESS3	115	2	526	-33.6	-13.4	1.058RG	64	56
									51319	SW-KRES2	69.0	1	526	38.6	17.4	0	9999	
									51325	KRESRU2	69.0	1	526	21.0	6.2	40	54	
51316	KRESS3	115	526	0.995	-20.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	114.5		0.0		0.0	0.0	0.0	51310	TULIAT3	115	1	526	16.9	3.2	19	90	
									51315	KRESS2	69.0	1	526	26.2	12.6	1.058UN	66	44
									51315	KRESS2	69.0	2	526	33.7	16.5	1.058UN	67	56
									51320	SWISHER3	115	1	526	-69.6	-40.3	36	226	
									51402	HALECO3	115	1	526	-7.2	7.9	7	146	
51319	SW-KRES2	69.0	526	1.015	-24.7	0.0	38.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----		
	265	70.01		0.0		0.0	17.4	0.0	51315	KRESS2	69.0	1	526	-38.6	-17.4	0	9999	

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
51320	SWISHER3	115 526	1.003	-19.8	0.0	0.0	0.0	51316	KRESS3	115 1	526	69.7	41.0			36	226
		265 115.4			0.0	0.0	0.0	51321	SWISHER6	230 1	526	-69.7	-41.0	1.069RG		54	150
51321	SWISHER6	230 526	0.975	-16.5	0.0	0.0	0.0	50915	NICHOL6	230 1	526	-68.5	-23.3			21	347
		265 224.2			0.0	0.0	0.0	51320	SWISHER3	115 1	526	69.8	46.7	1.069UN		57	150
								51533	TUCO6	230 1	526	-1.4	-23.4			5	452
51325	KRESRU2	69.0 526	1.007	-25.1	0.0	2.1	0.0	51315	KRESS2	69.0 1	526	-20.9	-6.4			40	54
		265 69.52			0.0	0.1	0.0	51335	LH-PL&M2	69.0 1	526	18.8	6.3			36	54
51329	BRISCOE2	69.0 526	0.983	-27.9	0.0	1.3	0.0	51331	LH-SLVR2	69.0 1	526	-1.3	0.1			2	54
		265 67.83			0.0	-0.1	0.0										
51331	LH-SLVR2	69.0 526	0.983	-27.8	0.0	0.8	0.0	51329	BRISCOE2	69.0 1	526	1.3	-0.2			3	54
		265 67.86			0.0	0.7	0.0	51375	LH-SPL2	69.0 1	526	-2.2	-0.5			4	54
51335	LH-PL&M2	69.0 526	0.975	-26.9	0.0	12.0	0.0	51325	KRESRU2	69.0 1	526	-18.4	-5.8			37	54
		265 67.27			0.0	5.0	0.0	51337	NPLNV2	69.0 1	526	6.4	0.8			12	54
51337	NPLNV2	69.0 526	0.974	-27.0	0.0	6.4	0.0	51335	LH-PL&M2	69.0 1	526	-6.4	-0.9			12	54
		265 67.17			0.0	0.9	0.0										
51339	WPLNV2	69.0 526	0.991	-27.2	0.0	12.7	0.0	51343	PLNVCO2	69.0 1	526	-12.7	-3.1			24	54
		265 68.36			0.0	3.1	0.0										
51341	PLAINVW2	69.0 526	1.004	-27.1	0.0	8.1	0.0	51353	EPLNV2	69.0 1	526	-8.1	0.3			15	54
		265 69.25			0.0	-0.3	0.0										
51343	PLNVCO2	69.0 526	1.000	-26.7	0.0	0.0	0.0	51339	WPLNV2	69.0 1	526	12.8	3.2			24	54
		265 68.98			0.0	0.0	0.0	51345	WESTRID2	69.0 1	526	-12.8	-3.2			15	88
51345	WESTRID2	69.0 526	1.002	-26.4	0.0	11.2	0.0	51343	PLNVCO2	69.0 1	526	12.8	3.2			15	88
		265 69.14			0.0	0.8	0.0	51347	PLNVWT2	69.0 1	526	-24.0	-4.0			28	88
51347	PLNVWT2	69.0 526	1.009	-25.6	0.0	0.0	0.0	51345	WESTRID2	69.0 1	526	24.1	4.3			28	88
		265 69.64			0.0	0.0	0.0	51401	HALECO2	69.0 1	526	-24.1	-4.3			28	88
51349	SPLNV2	69.0 526	0.999	-26.4	0.0	8.9	0.0	51401	HALECO2	69.0 1	526	-8.9	-1.5			17	54
		265 68.94			0.0	1.5	0.0										
51353	EPLNV2	69.0 526	1.007	-26.7	0.0	3.7	0.0	51341	PLAINVW2	69.0 1	526	8.1	-0.4			15	54
		265 69.48			0.0	0.9	0.0	51359	COX2	69.0 1	526	-11.8	-0.5			22	54
51359	COX2	69.0 526	1.013	-26.2	0.0	0.0	0.0	51353	EPLNV2	69.0 1	526	11.8	0.5			22	54
		265 69.88			0.0	0.0	0.0	51360	COX3	115 1	526	-25.8	-1.2	1.059RG		64	40
								51365	AIKENT2	69.0 1	526	14.0	0.7			26	54
51360	COX3	115 526	0.966	-21.6	0.0	0.0	0.0	51359	COX2	69.0 1	526	25.9	3.3	1.059UN		68	40
		265 111.1			0.0	0.0	0.0	51366	LH-COX3	115 1	526	-25.9	-3.3			30	90

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51365	AIKENT2	69.0 526	1.006	-26.8	0.0	1.0	0.0	51359	COX2	69.0 1	526	-13.9	-0.7			26	54
		265 69.39			0.0	0.0	0.0	51369	LOCKNEY2	69.0 1	526	13.0	0.7			24	54
51366	LH-COX3	115 526	0.966	-21.6	0.0	0.0	0.0	51360	COX3	115 1	526	25.9	3.3			30	90
		265 111.1			0.0	0.0	0.0	51402	HALECO3	115 1	526	-25.9	-3.3			30	90
51367	LH-AIKN2	69.0 526	0.953	-29.6	0.0	3.3	0.0	51513	IRICK2	69.0 1	526	-3.3	-2.5			8	54
		265 65.78			0.0	2.5	0.0										
51369	LOCKNEY2	69.0 526	1.001	-27.2	0.0	5.1	0.0	51365	AIKENT2	69.0 1	526	-12.9	-0.7			24	54
		265 69.07			0.0	-2.4	0.0	51371	LH-CDRH2	69.0 1	526	7.8	3.1			23	36
51371	LH-CDRH2	69.0 526	1.001	-27.2	0.0	0.9	0.0	51369	LOCKNEY2	69.0 1	526	-7.8	-3.1			23	36
		265 69.06			0.0	0.0	0.0	51373	LH-LST2	69.0 1	526	6.9	3.1			21	36
51373	LH-LST2	69.0 526	0.993	-27.4	0.0	2.7	0.0	51371	LH-CDRH2	69.0 1	526	-6.9	-3.1			21	36
		265 68.51			0.0	1.7	0.0	51375	LH-SPL2	69.0 1	526	4.2	1.4			12	36
51375	LH-SPL2	69.0 526	0.987	-27.6	0.0	2.0	0.0	51331	LH-SLVR2	69.0 1	526	2.2	0.2			4	54
		265 68.08			0.0	1.3	0.0	51373	LH-LST2	69.0 1	526	-4.2	-1.5			12	36
51381	SPRINGL2	69.0 526	1.037	-20.7	0.0	1.8	0.0	51383	OLTON2	69.0 1	526	-1.8	-0.7			3	54
		265 71.58			0.0	0.7	0.0										
51383	OLTON2	69.0 526	1.040	-20.6	0.0	4.9	0.0	51381	SPRINGL2	69.0 1	526	1.8	0.4			3	54
		265 71.78			0.0	0.8	0.0	51385	LC-OLTN2	69.0 1	526	-6.7	-1.2			12	54
51385	LC-OLTN2	69.0 526	1.041	-20.5	0.0	6.8	0.0	51383	OLTON2	69.0 1	526	6.7	1.1			12	54
		265 71.86			0.0	4.9	0.0	51387	LAMTON2	69.0 1	526	-13.5	-6.0			26	54
51387	LAMTON2	69.0 526	1.042	-20.5	0.0	0.0	0.0	51295	LC-HART2	69.0 1	526	16.9	5.8			32	54
		265 71.87			0.0	0.0	0.0	51385	LC-OLTN2	69.0 1	526	13.5	6.0			26	54
51388	LAMTON3	115 526	0.987	-17.8	0.0	0.0	0.0	51388	LAMTON3	115 1	526	-30.4	-11.3	1.077RG		37	84
		265 113.6			0.0	0.0	0.0	51391	CORNER2	69.0 1	526	0.0	-0.5			1	54
51387	LAMTON2	69.0 526	1.042	-20.5	0.0	0.0	0.0	51387	LAMTON2	69.0 1	526	30.5	13.0	1.077UN		40	84
		265 71.91			0.0	0.0	0.0	51396	LC-SOL3	115 1	526	-54.8	-4.7			38	146
51393	SP-HALF2	69.0 526	1.009	-25.6	0.0	6.1	0.0	51402	HALECO3	115 1	526	24.3	-8.3			18	146
		265 69.62			0.0	2.7	0.0	51387	LAMTON2	69.0 1	526	0.0	0.0			0	54
51396	LC-SOL3	115 526	0.995	-16.7	0.0	8.4	0.0	51401	HALECO2	69.0 1	526	-6.1	-2.7			12	54
		265 114.4			0.0	4.1	0.0	51388	LAMTON3	115 1	526	55.1	5.4			38	146
					0.0		0.0	51418	PLANTX3	115 1	526	-63.5	-9.5			44	146

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING A									
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA
51401	HALECO2	69.0	526	1.010	-25.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.70			0.0	0.0	0.0	51347	PLNVWT2	69.0	1	526	24.1	4.3		28 88
									51349	SPLNV2	69.0	1	526	9.0	1.4		17 54
									51393	SP-HALF2	69.0	1	526	6.1	2.7		12 54
									51402	HALECO3	115	1	526	-19.8	-4.2	1.055RG	50 40
									51402	HALECO3	115	2	526	-19.4	-4.2	1.055RG	49 40
51402	HALECO3	115	526	0.988	-19.7	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	113.7			0.0	0.0	0.0	51316	KRESS3	115	1	526	7.3	-9.1		8 146
									51366	LH-COX3	115	1	526	26.4	3.0		30 90
									51388	LAMTON3	115	1	526	-24.0	7.7		17 146
									51401	HALECO2	69.0	1	526	19.9	6.4	1.055UN	53 40
									51401	HALECO2	69.0	2	526	19.5	6.3	1.055UN	52 40
									51418	PLANTX3	115	1	526	-46.1	0.4		32 146
									51532	TUCO3	115	1	526	-2.9	-14.6		17 90
51418	PLANTX3	115	526	1.023	-13.5	0.0	4.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	117.6			0.0	0.5	0.0	51242	BAILYC3	115	1	526	42.3	12.7		30 146
									51250	BC-EART3	115	1	526	51.2	5.2		34 146
									51396	LC-SOL3	115	1	526	64.7	12.2		44 146
									51402	HALECO3	115	1	526	47.7	1.8		32 146
									51419	PLANTX6	230	1	526	-85.0	-0.3	1.025LK	33 252
									51421	PLANTX1	13.8	1	526	-38.3	-1.6	1.025LK	58 65
									51422	PLANTX1	13.8	1	526	0.0	0.0	1.025LK	0 125
									51423	PLANTX1	13.8	1	526	-97.6	-19.1	1.025LK	78 125
									51466	LAMBCO3	115	1	526	10.7	-11.5		11 146
51419	PLANTX6	230	526	1.001	-11.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	230.2			0.0	0.0	0.0	50887	POTTRC6	230	1	526	18.1	-14.4		5 452
									51111	DFSMTH6	230	1	526	78.4	9.9		17 452
									51418	PLANTX3	115	1	526	85.2	4.0	1.025UN	34 252
									51424	PLANTX1	20.0	1	526	-164.8	38.5	1.000LK	79 215
									51435	TOLKE6	230	2	526	-59.0	-13.4		13 452
									51437	TOLKW6	230	1	526	-61.5	-13.8		14 452
									51733	SUNDOWN6	230	1	526	103.6	-10.8		23 452
51421	PLANTX1	13.8	526	1.005	-9.9	38.4	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	13.87			4.0L	0.0	0.0	51418	PLANTX3	115	1	526	38.4	4.0	1.025UN	59 65
51422	PLANTX1	13.8	526	0.998	-13.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	13.77			0.0	0.0	0.0	51418	PLANTX3	115	1	526	0.0	0.0	1.025UN	0 125
51423	PLANTX1	13.8	526	1.025	-8.1	97.9	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	14.14			28.9R	0.0	0.0	51418	PLANTX3	115	1	526	97.9	28.9	1.025UN	80 125
51424	PLANTX1	20.0	526	0.985	-5.4	165.1	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	19.70			-21.7R	0.0	0.0	51419	PLANTX6	230	1	526	165.1	-21.7	1.000UN	79 215
51435	TOLKE6	230	526	1.004	-10.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	231.0			0.0	0.0	0.0	51203	ROOSEVL6	230	2	526	125.7	4.9		25 492
									51419	PLANTX6	230	2	526	59.1	11.1		13 452
									51439	TOLKTP6	230	1	526	-41.7	-24.5		2 2000
									51441	TOLK1	24.0	1	526	-271.5	6.1	1.001UN	37 728
									51533	TUCO6	230	1	526	128.4	2.4		28 452

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>										
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING	A									
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	
51437	TOLKW6	230	526	1.004	-10.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	231.0			0.0	0.0	0.0	51203	ROOSEVL6	230	1	526	127.2	5.1		26	492
									51419	PLANTX6	230	1	526	61.6	11.7		14	452
									51439	TOLKTP6	230	1	526	147.0	-38.8		8	2000
									51442	TOLK1	24.0	1	526	-443.4	17.9	1.001UN	61	728
									51467	LAMBCO6	230	1	526	68.8	31.8		17	452
									51891	YOAKUM6	230	1	526	38.9	-27.6		11	452
51439	TOLKTP6	230	526	1.004	-10.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	231.0			0.0	0.0	0.0	51435	TOLKE6	230	1	526	41.7	24.5		2	2000
									51437	TOLKW6	230	1	526	-147.0	38.8		8	2000
									51440	TOLK7	345	1	526	105.3	-63.3	1.000LK	22	560
51440	TOLK7	345	526	1.018	-11.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	351.3			0.0	0.0	0.0	51439	TOLKTP6	230	1	526	-105.3	66.6	1.000UN	22	560
									52186	EDDYCO7	345	1	526	105.3	-66.6		9	1355
51441	TOLK1	24.0	526	1.006	-8.8	271.8	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	24.14			2.0R	0.0	0.0	51435	TOLKE6	230	1	526	271.8	2.0	1.001LK	37	728
51442	TOLK1	24.0	526	1.006	-7.7	444.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	24.14			3.9R	0.0	0.0	51437	TOLKW6	230	1	526	444.0	3.9	1.001LK	61	728
51451	SUDAN2	69.0	526	1.003	-17.1	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.22			0.0	0.0	0.0	51453	SUDNRU2	69.0	1	526	0.0	0.0		0	88
51453	SUDNRU2	69.0	526	1.003	-17.1	0.0	1.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.22			0.0	0.4	0.0	51451	SUDAN2	69.0	1	526	0.0	0.0		0	88
									51455	LC-SNDH2	69.0	1	526	-1.6	-0.4		2	88
51455	LC-SNDH2	69.0	526	1.004	-17.1	0.0	5.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.25			0.0	2.6	0.0	51453	SUDNRU2	69.0	1	526	1.6	0.2		2	88
									51457	AMHERST	269.0	1	526	-7.1	-2.8		9	88
51457	AMHERST	269.0	526	1.006	-16.9	0.0	1.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.39			0.0	0.3	0.0	51455	LC-SNDH2	69.0	1	526	7.1	2.8		9	88
									51459	WLTTLF2	69.0	1	526	-8.1	-3.1		10	88
51459	WLTTLF2	69.0	526	1.010	-16.7	0.0	0.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.68			0.0	0.0	0.0	51457	AMHERST	269.0	1	526	8.1	3.0		10	88
									51465	LAMBCO2	69.0	1	526	-8.6	-3.1		17	54
51461	LFLS&C2	69.0	526	1.014	-16.4	0.0	9.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.96			0.0	1.5	0.0	51465	LAMBCO2	69.0	1	526	-9.2	-1.5		26	36
51465	LAMBCO2	69.0	526	1.019	-16.1	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.33			0.0	0.0	0.0	51459	WLTTLF2	69.0	1	526	8.6	3.0		17	54
									51461	LFLS&C2	69.0	1	526	9.3	1.4		26	36
									51466	LAMBCO3	115	1	526	-20.5	-5.8	0.996RG	25	84
									51466	LAMBCO3	115	2	526	-20.5	-5.8	0.996RG	25	84
									51471	LC-LTTL2	269.0	1	526	17.6	5.7		34	54
									51483	LC-LUMS2	269.0	1	526	5.4	1.5		10	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51466	LAMBCO3	115 526	1.033	-14.5	0.0	0.0	0.0	-----									
		265	118.8		0.0	0.0	0.0	51418	PLANTX3	115	1 526	-10.6	10.1			10	146
								51465	LAMBCO2	69.0	1 526	20.5	6.5	0.996UN		25	84
								51465	LAMBCO2	69.0	2 526	20.5	6.5	0.996UN		25	84
								51467	LAMBCO6	230	1 526	-68.3	-35.2	1.075RG		30	252
								51598	HOCKLEY3	115	1 526	38.0	12.2			26	146
51467	LAMBCO6	230 526	0.980	-12.5	0.0	0.0	0.0	-----									
		265	225.4		0.0	0.0	0.0	51437	TOLKW6	230	1 526	-68.4	-38.4			18	452
								51466	LAMBCO3	115	1 526	68.4	38.4	1.075UN		32	252
51471	LC-LTTTL269.0	526	1.015	-16.4	0.0	6.2	0.0	-----									
		265	70.03		0.0	2.8	0.0	51465	LAMBCO2	69.0	1 526	-17.5	-5.7			34	54
								51473	WANTON2	69.0	1 526	11.3	2.9			21	54
51473	WANTON2	69.0 526	1.012	-16.6	0.0	0.0	0.0	-----									
		265	69.81		0.0	0.0	0.0	51471	LC-LTTTL269.0	1	526	-11.3	-2.9			21	54
								51475	LC-SP&H269.0	1	526	9.4	2.6			18	54
								51477	BAINER2	69.0	1 526	1.9	0.3			4	54
51475	LC-SP&H269.0	526	1.002	-17.2	0.0	9.3	0.0	-----									
		265	69.12		0.0	2.6	0.0	51473	WANTON2	69.0	1 526	-9.3	-2.6			18	54
51477	BAINER2	69.0 526	1.011	-16.6	0.0	0.0	0.0	-----									
		265	69.78		0.0	0.0	0.0	51473	WANTON2	69.0	1 526	-1.9	-0.3			4	54
								51479	WANTON2	69.0	1 526	1.9	0.3			4	54
51479	WANTON2	69.0 526	1.010	-16.7	0.0	1.9	0.0	-----									
		265	69.68		0.0	0.5	0.0	51477	BAINER2	69.0	1 526	-1.9	-0.5			4	54
51483	LC-LUMS269.0	526	1.018	-16.2	0.0	1.6	0.0	-----									
		265	70.22		0.0	0.9	0.0	51465	LAMBCO2	69.0	1 526	-5.4	-1.6			10	54
								51485	HOBGOOD269.0	1	526	3.8	0.6			7	54
51485	HOBGOOD269.0	526	1.016	-16.4	0.0	0.1	0.0	-----									
		265	70.12		0.0	0.0	0.0	51483	LC-LUMS269.0	1	526	-3.8	-0.7			7	54
								51487	PUMP/YH269.0	1	526	3.7	0.7			7	54
51487	PUMP/YH269.0	526	1.016	-16.4	0.0	2.5	0.0	-----									
		265	70.08		0.0	0.5	0.0	51485	HOBGOOD269.0	1	526	-3.7	-0.7			7	54
								51489	MIDAMR2	69.0	1 526	1.2	0.2			2	54
51489	MIDAMR2	69.0 526	1.015	-16.4	0.0	1.0	0.0	-----									
		265	70.04		0.0	0.4	0.0	51487	PUMP/YH269.0	1	526	-1.2	-0.3			2	54
								51493	WHITHAR269.0	1	526	0.2	-0.1			0	54
51493	WHITHAR269.0	526	1.015	-16.4	0.0	0.2	0.0	-----									
		265	70.04		0.0	-0.1	0.0	51489	MIDAMR2	69.0	1 526	-0.2	0.1			0	54
51495	COUNTL2	69.0 526	0.988	-24.1	0.0	9.5	0.0	-----									
		265	68.14		0.0	0.6	0.0	51497	SP-ABRN269.0	1	526	-9.5	-0.6			24	41
51497	SP-ABRN269.0	526	0.994	-23.5	0.0	13.4	0.0	-----									
		265	68.56		0.0	9.6	0.0	51495	COUNTL2	69.0	1 526	9.6	0.6			23	41
								51531	TUCO2	69.0	1 526	-23.0	-10.1			47	54
51499	HALECN2	69.0 526	1.010	-23.1	0.0	3.1	0.0	-----									
		265	69.68		0.0	-0.4	0.0	51501	LH-HALC269.0	1	526	2.5	0.8			5	54
								51531	TUCO2	69.0	1 526	-5.6	-0.4			10	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51501	LH-HALC2	69.0 526	1.010	-23.1	0.0	2.5	0.0	51499	HALECN2	69.0 1	526	-2.5	-0.8			5	54
51513	IRICK2	69.0 526	0.957	-29.5	0.0	1.2	0.0	51367	LH-AIKN2	69.0 1	526	3.3	2.4			8	54
51515	BARWISE2	69.0 526	0.960	-29.4	0.0	1.7	0.0	51515	BARWISE2	69.0 1	526	-4.5	-2.5			10	54
51517	FLOYD2	69.0 526	0.965	-29.3	0.0	0.0	0.0	51513	IRICK2	69.0 1	526	4.5	2.4			10	54
51518	FLOYD3	115 526	0.946	-23.9	0.0	0.0	0.0	51517	FLOYD2	69.0 1	526	-6.2	-3.6			14	54
51521	FLYDAT2	69.0 526	0.964	-29.3	0.0	0.0	0.0	51515	BARWISE2	69.0 1	526	6.3	3.5	1.075HI		83	40
51523	SFLOYD2	69.0 526	0.937	-30.7	0.0	3.3	0.0	51518	FLOYD3	115 1	526	-29.1	-13.2			40	54
51525	LH-FLYD2	69.0 526	0.937	-30.7	0.0	13.7	0.0	51521	FLYDAT2	69.0 1	526	19.3	8.3			7	54
51527	LH-HARM2	69.0 526	0.963	-29.3	0.0	3.5	0.0	51527	LH-HARM2	69.0 1	526	3.5	1.4				
51531	TUCO2	69.0 526	1.017	-22.4	0.0	5.0	0.0	51517	FLOYD2	69.0 1	526	29.3	16.8	1.075UN		89	40
51532	TUCO3	115 526	1.009	-20.0	0.0	0.0	0.0	51559	FLOYDT3	115 1	526	-29.3	-16.8			24	146
51533	TUCO6	230 526	1.009	-20.0	0.0	0.0	0.0	50501	MU-FLDY2	69.0 1	526	2.0	1.1			6	41
51539	LH-WI&E2	69.0 526	1.009	-20.0	0.0	0.0	0.0	51517	FLOYD2	69.0 1	526	-19.3	-8.3			40	54
51551	SP-NDE2	69.0 526	1.009	-20.0	0.0	0.0	0.0	51523	SFLOYD2	69.0 1	526	17.3	7.2			36	54
51559	FLOYDT3	115 526	1.009	-20.0	0.0	0.0	0.0	51521	FLYDAT2	69.0 1	526	-17.0	-6.7			36	54
51616	STANTN3	115 526	1.009	-20.0	0.0	0.0	0.0	51525	LH-FLYD2	69.0 1	526	13.7	6.0			29	54
51688	LUBE3	115 526	1.009	-20.0	0.0	0.0	0.0	51523	SFLOYD2	69.0 1	526	-13.7	-6.0			30	54
51497	SP-ABRN2	69.0 526	1.017	-22.4	0.0	5.0	0.0	51517	FLOYD2	69.0 1	526	-3.5	-1.5			7	54
51499	HALECN2	69.0 526	1.017	-22.4	0.0	0.5	0.0	51497	SP-ABRN2	69.0 1	526	23.3	10.7			47	54
51532	TUCO3	115 526	1.009	-20.0	0.0	0.0	0.0	51499	HALECN2	69.0 1	526	5.7	0.1			10	54
51532	TUCO3	115 526	1.009	-20.0	0.0	0.0	0.0	51532	TUCO3	115 1	526	-29.1	-9.2	1.024RG		36	84
51532	TUCO3	115 526	1.009	-20.0	0.0	0.0	0.0	51532	TUCO3	115 2	526	-29.1	-9.2	1.024RG		36	84
51539	LH-WI&E2	69.0 526	1.009	-20.0	0.0	0.0	0.0	51539	LH-WI&E2	69.0 1	526	12.2	2.7			23	54
51551	SP-NDE2	69.0 526	1.009	-20.0	0.0	0.0	0.0	51551	SP-NDE2	69.0 1	526	12.1	4.3			23	54
51402	HALECO3	115 526	1.009	-20.0	0.0	0.0	0.0	51402	HALECO3	115 1	526	3.1	13.5			15	90
51531	TUCO2	69.0 526	1.009	-20.0	0.0	0.0	0.0	51531	TUCO2	69.0 1	526	29.1	10.6	1.024UN		37	84
51531	TUCO2	69.0 526	1.009	-20.0	0.0	0.0	0.0	51531	TUCO2	69.0 2	526	29.2	10.6	1.024UN		37	84
51533	TUCO6	230 526	1.009	-20.0	0.0	0.0	0.0	51533	TUCO6	230 1	526	-116.4	-53.2	1.056RG		50	252
51559	FLOYDT3	115 526	1.009	-20.0	0.0	0.0	0.0	51559	FLOYDT3	115 1	526	58.7	30.0			45	146
51616	STANTN3	115 526	1.009	-20.0	0.0	0.0	0.0	51616	STANTN3	115 1	526	17.2	-2.1			10	179
51688	LUBE3	115 526	1.009	-20.0	0.0	0.0	0.0	51688	LUBE3	115 1	526	-20.8	-9.5			13	179

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51533	TUCO6	230 526	0.986	-16.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 226.8			0.0	0.0	0.0	51321	SWISHER6	230 1	526	1.4	12.8			3	452
								51435	TOLKE6	230 1	526	-126.4	-4.2			28	452
								51532	TUCO3	115 1	526	116.6	62.1	1.056UN		53	252
								51534	TUCO7	345 1	526	-9.7	-62.8	1.000LK		12	560
								51647	CARLISL6	230 1	526	64.4	20.0			15	452
								51699	JONES6	230 1	526	-46.2	-28.0			12	452
51534	TUCO7	345 526	0.997	-16.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 343.9			0.0	0.0	0.0	51533	TUCO6	230 1	526	9.7	63.5	1.000UN		12	560
								54119	O.K.U.-7	345 1	520	-9.7	-63.5			6	1051
51539	LH-WI&E269.0	526 526	1.003	-23.4	0.0	2.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 69.18			0.0	0.6	0.0	51531	TUCO2	69.0 1	526	-12.0	-2.6			23	54
								51541	SP-BECT269.0	1 526		9.5	2.1			18	54
51541	SP-BECT269.0	526 526	1.000	-23.6	0.0	5.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 69.00			0.0	1.2	0.0	51539	LH-WI&E269.0	1 526		-9.5	-2.1			18	54
								51543	ALLMON2	69.0 1	526	4.3	0.9			8	54
51543	ALLMON2	69.0 526	0.997	-23.8	0.0	1.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 68.79			0.0	0.3	0.0	51541	SP-BECT269.0	1 526		-4.3	-1.0			8	54
								51545	LH-PTRS269.0	1 526		2.4	0.7			5	54
51545	LH-PTRS269.0	526 526	0.997	-23.8	0.0	2.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 68.79			0.0	0.7	0.0	51543	ALLMON2	69.0 1	526	-2.4	-0.7			5	54
51551	SP-NDE2	69.0 526	1.004	-23.2	0.0	3.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 69.25			0.0	0.9	0.0	51531	TUCO2	69.0 1	526	-11.9	-4.3			23	54
								51553	WHTE&MN269.0	1 526		8.6	3.4			17	54
51553	WHTE&MN269.0	526 526	0.998	-23.4	0.0	2.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 68.86			0.0	0.5	0.0	51551	SP-NDE2	69.0 1	526	-8.6	-3.4			17	54
								51555	SP-SHLW269.0	1 526		6.4	2.9			13	54
51555	SP-SHLW269.0	526 526	0.995	-23.6	0.0	6.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 68.63			0.0	2.6	0.0	51553	WHTE&MN269.0	1 526		-6.4	-2.9			13	54
								51611	SW67872	69.0 1	526	-0.4	0.3			1	54
51557	SP-ACUF269.0	526 526	0.974	-31.2	0.0	6.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 67.18			0.0	1.8	0.0	51563	CROSBY2	69.0 1	526	-6.0	-1.8			12	54
51559	FLOYDT3	115 526	0.956	-23.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 109.9			0.0	0.0	0.0	51518	FLOYD3	115 1	526	29.4	16.8			24	146
								51532	TUCO3	115 1	526	-57.2	-26.4			45	146
								51564	CROSBY3	115 1	526	27.8	9.5			45	69
51563	CROSBY2	69.0 526	0.983	-30.6	0.0	2.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 67.83			0.0	0.9	0.0	51557	SP-ACUF269.0	1 526		6.0	1.7			12	54
								51564	CROSBY3	115 1	526	-27.0	-6.7	1.100HI		71	40
								51567	SP-CROS269.0	1 526		18.3	4.1			35	54
51564	CROSBY3	115 526	0.923	-25.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 106.1			0.0	0.0	0.0	51559	FLOYDT3	115 1	526	-27.2	-9.5			45	69
								51563	CROSBY2	69.0 1	526	27.2	9.5	1.100UN		78	40
51567	SP-CROS269.0	526 526	0.973	-31.3	0.0	12.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 67.10			0.0	3.7	0.0	51563	CROSBY2	69.0 1	526	-18.2	-3.9			35	54
								51569	HENDRIC269.0	1 526		5.7	0.2			11	54
51569	HENDRIC269.0	526 526	0.972	-31.3	0.0	5.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265 67.10			0.0	0.2	0.0	51567	SP-CROS269.0	1 526		-5.7	-0.2			11	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>										
FROM	AREA	VOLT	GEN		LOAD		SHUNT	TO	TRANSFORMER			RATING A						
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA	
51579	MORTNC2	69.0	526	0.997	-21.7	0.0	3.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.79			0.0	1.2	0.0	51581	LC-WHTF269.0	1	526	-3.3	-1.2		10	36	
51581	LC-WHTF269.0	526	1.001	-21.5	0.0	2.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.06			0.0	1.4	0.0	51579	MORTNC2	69.0	1	526	3.3	1.0		10	36
									51583	WHITEFA269.0	1	526	-6.1	-2.4		18	36	
51583	WHITEFA269.0	526	1.006	-21.2	0.0	7.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.43			0.0	2.1	0.0	51581	LC-WHTF269.0	1	526	6.1	2.3		18	36	
									51709	COCHRAN269.0	1	526	-13.2	-4.4		39	36	
51585	LC-HODG269.0	526	0.979	-21.1	0.0	2.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	67.53			0.0	1.9	0.0	51587	ELWOOD2	69.0	1	526	1.4	0.3		3	54
									51591	LC-HDT2	69.0	1	526	-4.2	-2.3		14	36
51587	ELWOOD2	69.0	0.978	-21.2	0.0	1.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	67.47			0.0	0.4	0.0	51585	LC-HODG269.0	1	526	-1.4	-0.4		3	54	
51591	LC-HDT2	69.0	0.990	-20.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.33			0.0	0.0	0.0	51585	LC-HODG269.0	1	526	4.2	2.1		13	36	
									51593	LC-WHIT269.0	1	526	-4.2	-2.1		9	54	
51593	LC-WHIT269.0	526	0.991	-20.9	0.0	3.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.41			0.0	2.1	0.0	51591	LC-HDT2	69.0	1	526	4.2	2.0		9	54
									51595	LC-LEVL269.0	1	526	-7.5	-4.2		16	54	
51595	LC-LEVL269.0	526	0.998	-20.6	0.0	5.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.90			0.0	2.9	0.0	51593	LC-WHIT269.0	1	526	7.5	4.1		16	54	
									51597	HOCKLEY269.0	1	526	-12.9	-7.1		27	54	
51597	HOCKLEY269.0	526	1.003	-20.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.19			0.0	0.0	0.0	51595	LC-LEVL269.0	1	526	13.0	7.1		27	54	
									51598	HOCKLEY3	115	1	526	-20.5	-5.7	1.022RG	53	40
									51598	HOCKLEY3	115	2	526	-20.6	-10.5	1.037RG	58	40
									51603	COBLE2	69.0	1	526	6.7	2.2		13	54
									51605	LEVELLN269.0	1	526	21.5	6.8		42	54	
51598	HOCKLEY3	115	526	1.002	-17.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	115.3			0.0	0.0	0.0	51466	LAMBCO3	115	1	526	-37.4	-11.8		27	146
									51597	HOCKLEY269.0	1	526	20.6	7.1	1.022UN	54	40	
									51597	HOCKLEY269.0	2	526	20.7	12.1	1.037UN	60	40	
									51732	SUNDOWN3	115	1	526	-3.9	-7.3		6	146
51601	LC-PETT269.0	526	0.989	-21.1	0.0	3.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.25			0.0	2.2	0.0	51603	COBLE2	69.0	1	526	-3.5	-2.2		8	54
51603	COBLE2	69.0	526	0.992	-21.0	0.0	3.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.44			0.0	0.2	0.0	51597	HOCKLEY269.0	1	526	-6.6	-2.4		13	54	
									51601	LC-PETT269.0	1	526	3.5	2.2		8	54	
51605	LEVELLN269.0	526	0.997	-20.7	0.0	11.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.81			0.0	4.0	0.0	51597	HOCKLEY269.0	1	526	-21.4	-6.7		42	54	
									51607	ELEVEL2	69.0	1	526	10.3	2.7		20	54
51607	ELEVEL2	69.0	526	0.995	-20.9	0.0	10.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.68			0.0	2.7	0.0	51605	LEVELLN269.0	1	526	-10.3	-2.7		20	54	
51611	SW67872	69.0	526	0.994	-23.6	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.62			0.0	0.0	0.0	51555	SP-SHLW269.0	1	526	0.4	-0.4		1	54	
									51621	SW67462	69.0	1	526	-0.4	0.4		1	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>										
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING	A	FROM	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA		
BUS	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA				
51613	STANTN2	69.0	526	0.999	-23.3	0.0	3.4	0.0	-----	51617	SW67862	69.0	1	526	-3.4	0.2	6	54	
		265	68.95	0.0	0.0	0.0	-0.2	0.0	-----										
51616	STANTN3	115	526	1.005	-20.9	0.0	17.8	0.0	-----	51532	TUCO3	115	1	526	-17.1	0.6	10	179	
		265	115.6	0.0	0.0	0.0	2.8	0.0	-----	51642	INDIANA3	115	1	526	-0.7	-3.4	2	179	
51617	SW67862	69.0	526	1.000	-23.2	0.0	0.0	0.0	-----	51613	STANTN2	69.0	1	526	3.4	-0.3	6	54	
		265	69.03	0.0	0.0	0.0	0.0	0.0	-----	51621	SW67462	69.0	1	526	19.1	4.3	36	54	
									-----	51685	PLANTRS2	69.0	1	526	-22.5	-3.9	42	54	
51621	SW67462	69.0	526	0.994	-23.6	0.0	0.0	0.0	-----	51611	SW67872	69.0	1	526	0.4	-0.4	1	54	
		265	68.62	0.0	0.0	0.0	0.0	0.0	-----	51617	SW67862	69.0	1	526	-19.1	-4.2	36	54	
									-----	51623	SP-HETL2	69.0	1	526	18.6	4.6	36	54	
51623	SP-HETL2	69.0	526	0.992	-23.7	0.0	7.5	0.0	-----	51621	SW67462	69.0	1	526	-18.6	-4.5	36	54	
		265	68.44	0.0	0.0	0.0	1.1	0.0	-----	51627	SP-IDAL2	69.0	1	526	11.1	3.5	22	54	
51625	SP-ERSK3	115	526	1.010	-20.5	0.0	4.0	0.0	-----	51642	INDIANA3	115	1	526	35.5	7.2	20	179	
		265	116.2	0.0	0.0	0.0	1.5	0.0	-----	51646	CARLISL3	115	1	526	-39.5	-8.7	22	179	
51627	SP-IDAL2	69.0	526	0.982	-24.3	0.0	6.0	0.0	-----	51623	SP-HETL2	69.0	1	526	-11.1	-3.5	22	54	
		265	67.78	0.0	0.0	0.0	2.5	0.0	-----	51629	VICKER2	69.0	1	526	5.1	0.9	10	54	
51629	VICKER2	69.0	526	0.981	-24.4	0.0	5.1	0.0	-----	51627	SP-IDAL2	69.0	1	526	-5.1	-1.0	10	54	
		265	67.72	0.0	0.0	0.0	1.0	0.0	-----										
51631	SP-CRLS2	69.0	526	1.018	-21.9	0.0	0.0	0.0	-----	51645	CARLISL2	69.0	1	526	0.0	0.0	0	54	
		265	70.23	0.0	0.0	0.0	0.0	0.0	-----										
51642	INDIANA3	115	526	1.005	-20.9	0.0	34.7	0.0	-----	51616	STANTN3	115	1	526	0.7	3.3	2	179	
		265	115.6	0.0	0.0	0.0	4.0	0.0	-----	51625	SP-ERSK3	115	1	526	-35.4	-7.3	20	179	
51645	CARLISL2	69.0	526	1.018	-21.9	0.0	0.0	0.0	-----	51631	SP-CRLS2	69.0	1	526	0.0	-0.1	0	54	
		265	70.22	0.0	0.0	0.0	0.0	-14.9	-----	51646	CARLISL3	115	1	526	-9.1	14.1	0.971RG	37	44
									-----	51655	SW68782	69.0	1	526	9.1	0.9	17	54	
51646	CARLISL3	115	526	1.011	-20.4	0.0	15.8	0.0	-----	51625	SP-ERSK3	115	1	526	39.5	8.6	22	179	
		265	116.3	0.0	0.0	0.0	2.3	0.0	-----	51645	CARLISL2	69.0	1	526	9.1	-13.3	0.971UN	36	44
									-----	51647	CARLISL6	230	1	526	-51.8	-2.4	1.044RG	31	168
									-----	51652	DOUD3	115	1	526	-26.8	7.5	19	146	
									-----	51658	MURPHY3	115	1	526	14.1	-2.6	10	146	
51647	CARLISL6	230	526	0.973	-18.0	0.0	0.0	0.0	-----	50507	LP-MLWK6	230	1	526	12.2	20.7	5	452	
		265	223.7	0.0	0.0	0.0	0.0	0.0	-----	51533	TUCO6	230	1	526	-64.1	-25.2	16	452	
									-----	51646	CARLISL3	115	1	526	51.8	4.6	1.044UN	32	168
51652	DOUD3	115	526	1.011	-20.1	0.0	29.6	0.0	-----	51646	CARLISL3	115	1	526	26.8	-7.6	19	146	
		265	116.3	0.0	0.0	0.0	2.0	0.0	-----	51746	SP-YUMA3	115	1	526	-56.5	5.5	38	146	

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51655	SW68782	69.0 265	526 70.01	-22.1	0.0 0.0	0.0 0.0	0.0 0.0	51645	CARLISL2	69.0	1 526	-9.1	-1.0			17	54
								51667	BATTNN2	69.0	1 526	9.1	1.0			17	54
51658	MURPHY3	115 265	526 116.2	-20.5	0.0 0.0	16.6 -0.1	0.0 0.0	51646	CARLISL3	115	1 526	-14.1	2.3			10	146
								51674	SP-QUAK3	115	1 526	-2.5	-2.3			2	146
51661	IVORYT2	69.0 265	526 70.97	-21.5	0.0 0.0	0.0 0.0	0.0 0.0	51669	BATTNS2	69.0	1 526	11.1	0.9			20	54
								51679	LUBS2	69.0	1 526	-11.1	-0.9			20	54
51664	ALLEN3	115 265	526 116.7	-20.3	0.0 0.0	32.4 3.6	0.0 0.0	51672	WHEELLOC3	115	1 526	13.8	1.9			9	146
								51674	SP-QUAK3	115	1 526	20.4	14.0			17	146
								51680	LUBS3	115	1 526	-66.6	-19.5			47	146
51667	BATTNN2	69.0 265	526 69.70	-22.5	0.0 0.0	9.0 1.0	0.0 0.0	51655	SW68782	69.0	1 526	-9.0	-1.0			17	54
51669	BATTNS2	69.0 265	526 70.56	-22.0	0.0 0.0	11.0 0.9	0.0 0.0	51661	IVORYT2	69.0	1 526	-11.0	-0.9			20	54
51672	WHEELLOC3	115 265	526 116.6	-20.4	0.0 0.0	13.8 2.0	0.0 0.0	51664	ALLEN3	115	1 526	-13.8	-2.0			9	146
51674	SP-QUAK3	115 265	526 116.4	-20.5	0.0 0.0	17.9 12.3	0.0 0.0	51658	MURPHY3	115	1 526	2.5	1.8			2	146
								51664	ALLEN3	115	1 526	-20.4	-14.1			17	146
51675	ACCO2	69.0 265	526 70.81	-21.7	0.0 0.0	6.5 0.2	0.0 0.0	51677	IVORY2	69.0	1 526	-6.5	-0.2			12	54
51677	IVORY2	69.0 265	526 70.92	-21.5	0.0 0.0	9.5 1.7	0.0 0.0	51675	ACCO2	69.0	1 526	6.5	0.2			12	54
								51679	LUBS2	69.0	1 526	-16.0	-1.9			29	54
51679	LUBS2	69.0 265	526 71.06	-21.3	0.0 0.0	0.0 0.0	0.0 0.0	51661	IVORYT2	69.0	1 526	11.1	0.9			20	54
								51677	IVORY2	69.0	1 526	16.0	1.9			29	54
								51680	LUBS3	115	1 526	-27.1	-2.8	1.007RG		31	84
51680	LUBS3	115 265	526 118.3	-19.1	0.0 0.0	0.0 0.0	0.0 0.0	51664	ALLEN3	115	1 526	67.0	20.7			47	146
								51679	LUBS2	69.0	1 526	27.1	3.8	1.007UN		32	84
								51681	LUBS6	230	1 526	-116.8	-42.6	1.059RG		48	252
								51688	LUBE3	115	1 526	-8.6	8.5			8	146
								51786	SP-WDRW3	115	1 526	31.2	9.5			22	146
51681	LUBS6	230 265	526 229.2	-15.7	0.0 0.0	0.0 0.0	0.0 0.0	51680	LUBS3	115	1 526	116.9	50.7	1.059UN		51	252
								51699	JONES6	230	1 526	-72.9	-31.2			18	452
								51699	JONES6	230	2 526	-72.9	-31.2			18	452
								51763	WOLFRTH6	230	1 526	28.8	11.7			7	452
51685	PLANTRS2	69.0 265	526 69.36	-22.8	0.0 0.0	2.8 -0.5	0.0 0.0	51617	SW67862	69.0	1 526	22.6	4.0			42	54
								51687	LUBE2	69.0	1 526	-25.4	-3.6			47	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. WIND FARM (BOONE-SITE) IMPACT STUDY
 WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51687	LUBE2	69.0 265	526 69.68	1.010 -22.4	0.0 0.0	0.0 0.0	0.0 0.0	51685	PLANTRS269.0	1	526	25.5	3.7			47	54
								51688	LUBE3	115	1	526	-21.9	-2.6	0.995RG	50	44
								51688	LUBE3	115	2	526	-22.3	-2.5	0.995RG	56	40
								51691	CLUTTER269.0	1	526	8.0	1.1			15	54
								51769	LEWTER2	69.0	1	526	10.8	0.3		20	54
51688	LUBE3	115 265	526 118.0	1.026 -18.9	0.0 0.0	0.0 0.0	0.0 0.0	51532	TUCO3	115	1	526	21.0	7.9		12	179
								51680	LUBS3	115	1	526	8.6	-9.0		8	146
								51687	LUBE2	69.0	1	526	21.9	4.0	0.995UN	49	44
								51687	LUBE2	69.0	2	526	22.4	3.9	0.995UN	55	40
								51689	LUBE6	230	1	526	-73.9	-6.8	1.039RG	48	150
51689	LUBE6	230 265	526 228.9	0.995 -15.9	0.0 0.0	0.0 0.0	0.0 0.0	50527	LP-ETAP2	230	1	526	12.6	26.3		6	452
								51688	LUBE3	115	1	526	74.0	10.8	1.039UN	50	150
								51699	JONES6	230	1	526	-86.7	-37.2		21	452
51691	CLUTTER269.0	526 265	1.007 69.50	-22.6	0.0 0.0	8.0 1.1	0.0 0.0	51687	LUBE2	69.0	1	526	-8.0	-1.1		15	54
51699	JONES6	230 265	526 230.0	1.000 -15.4	0.0 0.0	0.0 0.0	0.0 0.0	50521	LP-HOLL6	230	1	526	25.2	-45.6		12	452
								51533	TUCO6	230	1	526	46.4	21.0		11	452
								51681	LUBS6	230	1	526	73.0	30.2		17	452
								51681	LUBS6	230	2	526	73.0	30.2		17	452
								51689	LUBE6	230	1	526	86.8	36.2		21	452
								51701	JONES11	22.0	1	526	-202.6	-31.3	1.000LK	75	275
								51702	JONES21	21.0	1	526	-202.6	-28.2	1.050LK	66	308
								51811	GRASSLN6	230	1	526	100.9	-12.4		11	904
51701	JONES11	22.0 265	526 22.33	-11.6	203.0 45.4R	0.0 0.0	0.0 0.0	51699	JONES6	230	1	526	203.0	45.4	1.000UN	75	275
51702	JONES21	21.0 265	526 20.34	0.969 -10.7	203.0 45.4R	0.0 0.0	0.0 0.0	51699	JONES6	230	1	526	203.0	45.4	1.050UN	70	308
51708	LEHMAN3	115 265	526 115.6	1.006 -17.5	0.0 0.0	5.1 -0.5	0.0 0.0	51710	COCHRAN3	115	1	526	7.8	3.1		6	146
								51894	LG-PLAN3	115	1	526	-12.9	-2.6		9	146
51709	COCHRAN269.0	526 265	1.021 70.43	-20.8	0.0 0.0	0.0 0.0	0.0 0.0	51583	WHITEFA269.0	1	526	13.4	4.5			38	36
								51710	COCHRAN3	115	1	526	-18.2	-4.6	1.037RG	42	44
								51710	COCHRAN3	115	2	526	-18.1	-4.5	1.037RG	42	44
								51713	LG-SUND269.0	1	526	4.6	0.8			13	36
								51715	MIDDLET269.0	1	526	18.3	3.9			21	88
51710	COCHRAN3	115 265	526 115.2	1.001 -17.8	0.0 0.0	0.0 0.0	0.0 0.0	51708	LEHMAN3	115	1	526	-7.7	-3.9		6	146
								51709	COCHRAN269.0	1	526	18.3	5.7	1.037UN	43	44	
								51709	COCHRAN269.0	2	526	18.2	5.6	1.037UN	43	44	
								51730	PACIFIC3	115	1	526	-28.7	-7.3		20	146
51713	LG-SUND269.0	526 265	1.013 69.86	-21.2	0.0 0.0	4.6 1.0	0.0 0.0	51709	COCHRAN269.0	1	526	-4.6	-1.0			13	36

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>										
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING										
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA	
51715	MIDDLET2	269.0	526	1.013	-21.7	0.0	4.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.86			0.0	-0.4	0.0	51709	COCHRAN2	69.0	1	526	-18.3	-3.7	21	88	
									51717	MALLET2	69.0	1	526	13.7	4.1	16	88	
51717	MALLET2	69.0	526	1.009	-22.0	0.0	1.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.62			0.0	-0.4	0.0	51715	MIDDLET2	69.0	1	526	-13.7	-4.1	16	88	
									51721	TEXACO2	69.0	1	526	12.4	4.5	24	54	
51721	TEXACO2	69.0	526	1.006	-22.2	0.0	8.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.40			0.0	3.6	0.0	51717	MALLET2	69.0	1	526	-12.4	-4.5	24	54	
									51723	ZAVALLA2	69.0	1	526	4.4	1.0	5	88	
51723	ZAVALLA2	69.0	526	1.003	-22.5	0.0	4.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.23			0.0	1.1	0.0	51721	TEXACO2	69.0	1	526	-4.4	-1.1	5	88	
51725	SLAUGHT2	269.0	526	1.022	-21.3	0.0	0.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.50			0.0	0.1	0.0	51727	SLAUGT2	69.0	1	526	-0.1	-0.1	0	54	
51727	SLAUGT2	69.0	526	1.022	-21.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.50			0.0	0.0	0.0	51725	SLAUGHT2	69.0	1	526	0.1	-0.1	0	54	
									51755	LG-MEAD2	69.0	1	526	-0.1	0.1	0	54	
51730	PACIFIC3	115	526	1.008	-17.1	0.0	7.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	116.0			0.0	0.3	0.0	51710	COCHRAN3	115	1	526	28.8	7.2	20	146	
									51732	SUNDOWN3	115	1	526	-36.1	-7.5	25	146	
51732	SUNDOWN3	115	526	1.010	-16.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	116.2			0.0	0.0	0.0	51598	HOCKLEY3	115	1	526	3.9	6.2	5	146	
									51730	PACIFIC3	115	1	526	36.1	7.5	25	146	
									51733	SUNDOWN6	230	1	526	-36.7	-9.5	1.024RG	25	150
									51733	SUNDOWN6	230	2	526	-36.7	-9.5	1.024RG	25	150
									51736	AMOCOT3	115	1	526	33.3	5.4	23	146	
51733	SUNDOWN6	230	526	0.995	-15.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	228.9			0.0	0.0	0.0	51419	PLANTX6	230	1	526	-102.5	4.1	23	452	
									51732	SUNDOWN3	115	1	526	36.7	10.6	1.024UN	26	150
									51732	SUNDOWN3	115	2	526	36.7	10.6	1.024UN	26	150
									51741	AMOCSL6	230	1	526	-5.1	-24.2	5	452	
									51763	WOLFRTH6	230	1	526	34.2	-1.1	8	452	
51736	AMOCOT3	115	526	1.010	-17.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	116.1			0.0	0.0	0.0	51732	SUNDOWN3	115	1	526	-33.3	-5.4	23	146	
									51738	AMOCOR3	115	1	526	14.3	7.2	11	146	
									51750	LG-LEVI3	115	1	526	19.0	-1.8	13	146	
51738	AMOCOR3	115	526	1.006	-17.2	0.0	14.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	115.7			0.0	7.5	0.0	51736	AMOCOT3	115	1	526	-14.3	-7.5	11	146	
51741	AMOCSL6	230	526	0.997	-15.3	0.0	55.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	229.3			0.0	8.6	0.0	51733	SUNDOWN6	230	1	526	5.1	22.8	5	452	
									51891	YOAKUM6	230	1	526	-60.5	-31.4	15	452	
51745	SP-YUMA2	269.0	526	1.009	-22.0	0.0	16.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.64			0.0	6.5	0.0	51746	SP-YUMA3	115	1	526	-16.8	-6.5	1.013RG	36	50
51746	SP-YUMA3	115	526	1.013	-19.7	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	116.5			0.0	0.0	0.0	51652	DOUD3	115	1	526	56.6	-5.3	38	146	
									51745	SP-YUMA2	269.0	1	526	16.8	7.3	1.013UN	36	50
									51762	WOLFRTH3	115	1	526	-73.4	-1.9	40	179	

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51750	LG-LEVI3	115 526	1.009	-17.1	0.0	2.1	0.0	51736	AMOCOT3	115 1	526	-19.0	1.7			13	146
		265	116.1		0.0	0.2	0.0	51752	LG-CLAU3	115 1	526	16.9	-1.9			12	146
51752	LG-CLAU3	115 526	1.008	-17.5	0.0	7.0	0.0	51750	LG-LEVI3	115 1	526	-16.9	1.6			12	146
		265	115.9		0.0	2.0	0.0	51830	TERRYC3	115 1	526	9.9	-3.6			7	146
51755	LG-MEAD269.0	526	1.022	-21.3	0.0	4.7	0.0	51727	SLAUGT2	69.0 1	526	0.1	-0.1			0	54
		265	70.50		0.0	1.0	0.0	51757	LG-DCW2	69.0 1	526	-4.8	-0.9			9	54
51757	LG-DCW2	69.0 526	1.023	-21.2	0.0	4.5	0.0	51755	LG-MEAD269.0	1 526		4.8	0.9			9	54
		265	70.61		0.0	0.5	0.0	51829	TERRYC2	69.0 1	526	-9.3	-1.3			17	54
51759	LG-TWD2	69.0 526	1.024	-24.6	0.0	0.7	0.0	51783	DIEKEMP269.0	1 526		-0.7	-0.1			1	54
		265	70.67		0.0	0.1	0.0										
51762	WOLFRTH3	115 526	1.019	-18.8	0.0	0.0	0.0	51746	SP-YUMA3	115 1	526	73.8	2.7			40	179
		265	117.2		0.0	0.0	0.0	51763	WOLFRTH6	230 1	526	-62.8	-17.5	1.043RG		38	168
								51830	TERRYC3	115 1	526	-11.0	14.8			10	179
51763	WOLFRTH6	230 526	0.993	-16.1	0.0	0.0	0.0	51681	LUBS6	230 1	526	-28.8	-15.5			7	452
		265	228.3		0.0	0.0	0.0	51733	SUNDOWN6	230 1	526	-34.1	-5.3			8	452
								51762	WOLFRTH3	115 1	526	62.9	20.8	1.043UN		40	168
51767	POSEYT2	69.0 526	1.003	-23.1	0.0	0.0	0.0	51769	LEWTER2	69.0 1	526	-10.2	0.4			19	54
		265	69.21		0.0	0.0	0.0	51773	SLATON2	69.0 1	526	10.2	-0.4			19	54
51769	LEWTER2	69.0 526	1.005	-22.9	0.0	0.5	0.0	51687	LUBE2	69.0 1	526	-10.7	-0.3			20	54
		265	69.35		0.0	0.7	0.0	51767	POSEYT2	69.0 1	526	10.2	-0.4			19	54
51771	SP-POSY269.0	526	1.036	-19.7	0.0	0.0	0.0	51785	SP-WDRW269.0	1 526		0.0	0.0			0	54
		265	71.48		0.0	0.0	0.0										
51773	SLATON2	69.0 526	0.998	-23.7	0.0	10.2	0.0	51767	POSEYT2	69.0 1	526	-10.2	0.3			19	54
		265	68.87		0.0	-0.3	0.0										
51775	SP-SLAT269.0	526	1.010	-25.2	0.0	2.3	0.0	51777	SOUTHLN269.0	1 526		-2.3	-1.3			5	54
		265	69.67		0.0	1.3	0.0										
51777	SOUTHLN269.0	526	1.012	-25.1	0.0	0.4	0.0	51775	SP-SLAT269.0	1 526		2.3	1.2			5	54
		265	69.81		0.0	0.1	0.0	51779	LG-HCKB269.0	1 526		-2.7	-1.3			6	54
51779	LG-HCKB269.0	526	1.014	-25.0	0.0	2.8	0.0	51777	SOUTHLN269.0	1 526		2.7	1.2			5	54
		265	69.96		0.0	1.5	0.0	51783	DIEKEMP269.0	1 526		-5.5	-2.7			11	54
51783	DIEKEMP269.0	526	1.024	-24.6	0.0	0.8	0.0	51759	LG-TWD2	69.0 1	526	0.7	0.1			1	54
		265	70.68		0.0	0.3	0.0	51779	LG-HCKB269.0	1 526		5.6	2.5			11	54
								51815	GRAHAM2	69.0 1	526	-7.1	-2.9			14	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>											
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING	A										
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA		
51785	SP-WDRW269.0	526	1.036	-19.7	0.0	0.0	0.0	51771	SP-POSY269.0	1	526	0.0	-0.1			0	54		
		265	71.48		0.0	0.0	0.0	51786	SP-WDRW3	115	1	526	0.0	0.1	1.013RG		0	50	
51786	SP-WDRW3	115	526	1.023	-19.7	0.0	21.5	0.0	51680	LUBS3	115	1	526	-31.1	-9.6		22	146	
		265	117.6		0.0	8.9	0.0	0.0	51785	SP-WDRW269.0	1	526	0.0	-0.1	1.013UN		0	50	
									51804	LYNNCO3	115	1	526	9.6	0.8		6	146	
51791	YANCYT2	69.0	526	1.020	-26.2	0.0	0.0	0.0	51807	LG-CNTR269.0	1	526	-5.0	0.1		9	54		
		265	70.35		0.0	0.0	0.0	0.0	51825	BG-YNT2	69.0	1	526	5.0	-0.1		9	54	
51793	GARZA2	69.0	526	1.025	-24.5	0.0	10.4	0.0	51815	GRAHAM2	69.0	1	526	-10.4	-3.8		20	54	
		265	70.76		0.0	3.8	0.0												
51797	LG-LKVW269.0	526	0.979	-23.3	0.0	5.1	0.0												
		265	67.54		0.0	1.7	0.0	51841	OZMAH2	69.0	1	526	-5.1	-1.7		10	54		
51799	LG-NWM2	69.0	526	1.017	-25.7	0.0	6.9	0.0	51801	LG-NH&W269.0	1	526	-6.9	-2.8		14	54		
		265	70.17		0.0	2.8	0.0												
51801	LG-NH&W269.0	526	1.028	-25.1	0.0	6.6	0.0												
		265	70.93		0.0	2.6	0.0	51799	LG-NWM2	69.0	1	526	7.0	2.6		13	54		
								51803	LYNNCO2	69.0	1	526	-13.6	-5.1		26	54		
51803	LYNNCO2	69.0	526	1.037	-24.7	0.0	4.6	0.0	51801	LG-NH&W269.0	1	526	13.7	5.2		26	54		
		265	71.52		0.0	-0.5	0.0	51804	LYNNCO3	115	1	526	-28.1	-6.2	1.043RG		69	40	
								51827	LG-DRAW269.0	1	526	9.9	1.5		18	54			
51804	LYNNCO3	115	526	1.018	-20.2	0.0	0.0	0.0	51786	SP-WDRW3	115	1	526	-9.6	-2.1		7	146	
		265	117.1		0.0	0.0	0.0	0.0	51803	LYNNCO2	69.0	1	526	28.2	8.6	1.043UN		72	40
									51810	GRASSLN3	115	1	526	-18.7	-6.5		13	146	
51807	LG-CNTR269.0	526	1.025	-25.7	0.0	2.6	0.0												
		265	70.70		0.0	0.8	0.0	51791	YANCYT2	69.0	1	526	5.0	-0.3		9	54		
								51827	LG-DRAW269.0	1	526	-7.6	-0.5		14	54			
51810	GRASSLN3	115	526	1.024	-19.8	0.0	0.0	0.0	51804	LYNNCO3	115	1	526	18.7	6.0		13	146	
		265	117.7		0.0	0.0	0.0	0.0	51811	GRASSLN6	230	1	526	-40.4	-12.4	1.040RG		37	112
									51816	GRAHAM3	115	1	526	21.6	6.4		15	146	
51811	GRASSLN6	230	526	1.000	-17.2	0.0	0.0	0.0	51699	JONES6	230	1	526	-100.6	5.8		11	904	
		265	230.0		0.0	0.0	0.0	0.0	51810	GRASSLN3	115	1	526	40.4	14.4	1.040UN		38	112
									51861	BORDEN6	230	1	526	60.2	-20.2		7	904	
51815	GRAHAM2	69.0	526	1.027	-24.4	0.0	0.0	0.0	51783	DIEKEMP269.0	1	526	7.1	2.8		14	54		
		265	70.87		0.0	0.0	0.0	0.0	51793	GARZA2	69.0	1	526	10.5	3.8		20	54	
									51816	GRAHAM3	115	1	526	-21.4	-5.7	1.039RG		54	40
									51857	BG-JST2	69.0	1	526	3.8	-1.0		5	79	
51816	GRAHAM3	115	526	1.010	-20.9	0.0	0.0	0.0	51810	GRASSLN3	115	1	526	-21.5	-7.1		15	146	
		265	116.2		0.0	0.0	0.0	0.0	51815	GRAHAM2	69.0	1	526	21.5	7.1	1.039UN		56	40

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51819	YANCY2	69.0 265	526 70.29	1.019 -26.3	0.0 0.0	0.8 0.8	0.0 0.0	51825	BG-YNT2	69.0 1	526	-0.8	-0.8			2	54
51822	LG-DIXN2	69.0 265	526 68.13	0.987 -22.8	0.0 0.0	2.3 1.0	0.0 0.0	51835	BROWNFI2	69.0 1	526	-7.4	-2.5			15	54
								51841	OZMAH2	69.0 1	526	5.2	1.5			10	54
51825	BG-YNT2	69.0 265	526 70.31	1.019 -26.3	0.0 0.0	0.0 0.0	0.0 0.0	51791	YANCYT2	69.0 1	526	-5.0	0.0			9	54
								51819	YANCY2	69.0 1	526	0.8	0.7			2	54
								51851	BG-GARZ2	69.0 1	526	4.2	-0.8			5	79
51827	LG-DRAW2	69.0 265	526 70.92	1.028 -25.4	0.0 0.0	2.2 1.1	0.0 0.0	51803	LYNNCO2	69.0 1	526	-9.8	-1.5			18	54
								51807	LG-CNTR2	69.0 1	526	7.6	0.4			14	54
51829	TERRYC2	69.0 265	526 70.80	1.026 -21.0	0.0 0.0	0.0 0.0	0.0 0.0	51757	LG-DCW2	69.0 1	526	9.3	1.3			17	54
								51830	TERRYC3	115 1	526	-18.6	-6.9	1.043RG		48	40
								51830	TERRYC3	115 2	526	-18.8	-6.9	1.043RG		49	40
								51833	LG-BRWN2	69.0 1	526	28.2	12.5			56	54
51830	TERRYC3	115 265	526 115.9	1.008 -17.9	0.0 0.0	0.0 0.0	0.0 0.0	51752	LG-CLAU3	115 1	526	-9.8	2.9			7	146
								51762	WOLFRTH3	115 1	526	11.1	-16.5			11	179
								51829	TERRYC2	69.0 1	526	18.7	8.1	1.043UN		50	40
								51829	TERRYC2	69.0 2	526	18.9	8.1	1.043UN		51	40
								51848	PRENTIC3	115 1	526	-8.6	0.5			6	146
								51960	DNVRN3	115 1	526	-30.2	-2.7			17	179
								52002	SULPHUR3	115 1	526	-0.1	-0.3			0	146
51833	LG-BRWN2	69.0 265	526 68.87	0.998 -22.2	0.0 0.0	6.2 2.5	0.0 0.0	51829	TERRYC2	69.0 1	526	-27.7	-11.7			56	54
								51835	BROWNFI2	69.0 1	526	21.5	9.2			43	54
51835	BROWNFI2	69.0 265	526 68.37	0.991 -22.6	0.0 0.0	0.8 0.1	0.0 0.0	51822	LG-DIXN2	69.0 1	526	7.4	2.5			15	54
								51833	LG-BRWN2	69.0 1	526	-21.4	-9.1			43	54
								51837	BRNFIT2	69.0 1	526	13.1	6.4			27	54
51837	BRNFIT2	69.0 265	526 68.19	0.988 -22.7	0.0 0.0	0.0 0.0	0.0 0.0	50528	MU-BRNF2	69.0 1	526	7.0	5.1			21	41
								51835	BROWNFI2	69.0 1	526	-13.1	-6.4			27	54
								51843	GDPASTR2	69.0 1	526	6.1	1.3			12	54
51841	OZMAH2	69.0 265	526 67.78	0.982 -23.1	0.0 0.0	0.0 0.0	0.0 0.0	51797	LG-LKVW2	69.0 1	526	5.1	1.6			10	54
								51822	LG-DIXN2	69.0 1	526	-5.2	-1.6			10	54
51843	GDPASTR2	69.0 265	526 68.04	0.986 -22.8	0.0 0.0	0.2 0.0	0.0 0.0	51837	BRNFIT2	69.0 1	526	-6.1	-1.4			12	54
								51909	LG-JSM2	69.0 1	526	5.9	1.4			15	41
51845	AMOCWA6	230 265	526 234.4	1.019 -13.4	0.0 0.0	7.8 0.0	0.0 0.0	51891	YOAKUM6	230 1	526	18.3	0.9			4	452
								51969	MUSTANG6	230 1	526	-26.2	-0.9			6	452
51848	PRENTIC3	115 265	526 116.1	1.010 -17.4	0.0 0.0	11.2 3.1	0.0 0.0	51830	TERRYC3	115 1	526	8.6	-1.6			6	146
								51890	YOAKUM3	115 1	526	-19.8	-1.5			13	146

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>											
FROM	AREA	VOLT	GEN		LOAD		SHUNT	TO	TRANSFORMER			RATING A							
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA		
51851	BG-GARZ269.0	526	1.017	-26.8	0.0	2.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	70.15		0.0	0.0	0.0	51825	BG-YNT2	69.0	1	526	-4.2	0.4			5	79	
								51853	BG-JUST269.0	1	526	2.1	-0.4					3	79
51853	BG-JUST269.0	526	1.015	-27.1	0.0	2.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	70.07		0.0	0.0	0.0	51851	BG-GARZ269.0	1	526	-2.1	0.0					3	79
51855	BG-FLUV269.0	526	1.023	-25.7	0.0	3.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	70.55		0.0	0.0	0.0	51857	BG-JST2	69.0	1	526	-3.8	0.0				5	79
51857	BG-JST2 69.0	526	1.025	-25.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	70.71		0.0	0.0	0.0	51815	GRAHAM2	69.0	1	526	-3.8	0.3				5	79
								51855	BG-FLUV269.0	1	526	3.8	-0.3					5	79
51861	BORDEN6 230	526	1.003	-18.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	230.8		0.0	0.0	0.0	50534	CR-VEAL4	138	1	526	60.0	-5.9	1.025UN			40	150
								51811	GRASSLN6	230	1	526	-60.0	5.9				7	904

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52071	CHAVES2	69.0 267	526 71.06	-25.4	0.0 0.0	0.0 0.0	0.0 0.0	52072	CHAVES3	115	1	526	-27.6	-7.2	1.009RG	63	44
								52079	PRICE2	69.0	1	526	27.6	7.2		51	54
52072	CHAVES3	115 267	526 120.4	-21.2	0.0 0.0	0.0 0.0	0.0 0.0	52071	CHAVES2	69.0	1	526	27.7	9.4	1.009UN	63	44
								52073	CHAVES6	230	1	526	-68.0	-11.2	1.081RG	44	150
								52073	CHAVES6	230	2	526	-68.0	-11.2	1.081RG	44	150
								52078	URTON3	115	1	526	67.0	10.2		44	146
								52088	SAMSON3	115	1	526	41.2	2.8		27	146
52073	CHAVES6	230 267	526 225.4	-18.0	0.0 0.0	0.0 0.0	0.0 0.0	52072	CHAVES3	115	1	526	68.1	15.2	1.081UN	47	150
								52072	CHAVES3	115	2	526	68.1	15.2	1.081UN	47	150
								52185	EDDYCO6	230	1	526	-8.3	-30.7		7	452
								99990	WINDFARM	230	1	526	-127.8	0.3		29	452
52078	URTON3	115 267	526 119.7	-21.9	0.0 0.0	18.7 6.2	0.0 0.0	52072	CHAVES3	115	1	526	-66.8	-9.6		44	146
								52084	ROSWLC3	115	1	526	48.1	3.5		32	146
52079	PRICE2	69.0 267	526 69.92	-26.4	0.0 0.0	8.7 1.4	0.0 0.0	52071	CHAVES2	69.0	1	526	-27.3	-6.7		51	54
								52081	CV-PINE2	69.0	1	526	18.5	5.3		46	41
52081	CV-PINE2	69.0 267	526 69.40	-26.9	0.0 0.0	4.5 1.6	0.0 0.0	52079	PRICE2	69.0	1	526	-18.4	-5.2		46	41
								52087	CAPITAN2	69.0	1	526	13.9	3.7		27	54
52084	ROSWLC3	115 267	526 119.4	-22.3	0.0 0.0	34.1 8.9	0.0 0.0	52078	URTON3	115	1	526	-48.0	-3.3		32	146
								52094	ROSWIN3	115	1	526	13.9	-5.6		10	146
52085	CAPITAN2	69.0 267	526 70.08	-26.0	0.0 0.0	0.0 0.0	0.0 0.0	52089	RIAC2	69.0	1	526	7.7	3.5		16	54
								52093	ROSWIN2	69.0	1	526	-7.7	-3.5		16	54
52087	CAPITAN2	69.0 267	526 68.82	-27.4	0.0 0.0	13.8 3.6	0.0 0.0	52081	CV-PINE2	69.0	1	526	-13.8	-3.6		27	54
52088	SAMSON3	115 267	526 119.6	-22.2	0.0 0.0	9.8 0.5	0.0 0.0	52072	CHAVES3	115	1	526	-41.0	-2.7		27	146
								52094	ROSWIN3	115	1	526	31.3	2.1		21	146
52089	RIAC2	69.0 267	526 69.62	-26.1	0.0 0.0	7.7 3.6	0.0 0.0	52085	CAPITAN2	69.0	1	526	-7.7	-3.6		16	54
52093	ROSWIN2	69.0 267	526 70.13	-25.9	0.0 0.0	0.0 0.0	0.0 -23.2	52085	CAPITAN2	69.0	1	526	7.7	3.5		15	54
								52094	ROSWIN3	115	1	526	-22.9	15.6	0.945RG	68	40
								52097	RIACLN2	69.0	1	526	15.2	4.1		18	88
52094	ROSWIN3	115 267	526 119.4	-22.5	0.0 0.0	0.0 0.0	0.0 0.0	52084	ROSWLC3	115	1	526	-13.9	5.4		10	146
								52088	SAMSON3	115	1	526	-31.2	-2.2		21	146
								52093	ROSWIN2	69.0	1	526	23.0	-13.7	0.945UN	64	40
								52098	BRASHER3	115	1	526	15.2	3.4		17	90
								52104	TWEEDY3	115	1	526	6.9	7.2		5	179

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52097	RIACLN2	69.0 526	1.010	-26.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.68			0.0	0.0	0.0	52093	ROSWIN2	69.0 1	526	-15.1	-4.1			18	88
					0.0	0.0	0.0	52101	CV-ORH2	69.0 1	526	15.1	4.1			18	88
52098	BRASHER3	115 526	1.037	-22.6	0.0	15.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 119.3			0.0	3.5	0.0	52094	ROSWIN3	115 1	526	-15.2	-3.5			17	90
52101	CV-ORH2	69.0 526	1.001	-27.3	0.0	4.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.08			0.0	1.8	0.0	52097	RIACLN2	69.0 1	526	-15.1	-4.0			18	88
					0.0		0.0	52121	DEXTRT2	69.0 1	526	10.4	2.2			12	88
52104	TWEEDY3	115 526	1.037	-22.5	0.0	12.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 119.3			0.0	5.9	0.0	52094	ROSWIN3	115 1	526	-6.9	-7.4			5	179
					0.0		0.0	52184	EDDYCO3	115 1	526	-5.2	1.5			4	146
52121	DEXTRT2	69.0 526	0.998	-27.6	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 68.83			0.0	0.0	0.0	52101	CV-ORH2	69.0 1	526	-10.4	-2.2			12	88
					0.0		0.0	52123	CV-DEXT2	69.0 1	526	12.4	5.2			38	36
					0.0		0.0	52137	CV-HGRM2	69.0 1	526	-2.0	-2.9			4	88
52123	CV-DEXT2	69.0 526	0.990	-27.8	0.0	5.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 68.31			0.0	2.6	0.0	52121	DEXTRT2	69.0 1	526	-12.4	-5.2			38	36
					0.0		0.0	52125	DEXTER2	69.0 1	526	6.8	2.6			20	36
52125	DEXTER2	69.0 526	0.986	-27.8	0.0	6.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 68.02			0.0	2.6	0.0	52123	CV-DEXT2	69.0 1	526	-6.8	-2.6			21	36
52137	CV-HGRM2	69.0 526	1.000	-27.6	0.0	4.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 68.98			0.0	0.7	0.0	52121	DEXTRT2	69.0 1	526	2.0	2.8			4	88
					0.0		0.0	52147	CV-YOT2	69.0 1	526	-6.2	-3.5			8	88
52139	CV-LKAR2	69.0 526	1.009	-27.1	0.0	2.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.60			0.0	0.3	0.0	52141	CV-CTNW2	69.0 1	526	-9.7	-4.0			12	88
					0.0		0.0	52147	CV-YOT2	69.0 1	526	7.6	3.7			9	88
52141	CV-CTNW2	69.0 526	1.014	-26.7	0.0	3.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.97			0.0	0.9	0.0	52139	CV-LKAR2	69.0 1	526	9.7	3.9			12	88
					0.0		0.0	52143	COTTON2	69.0 1	526	1.7	0.3			3	54
					0.0		0.0	52145	SMITH2	69.0 1	526	-14.6	-5.1			17	88
52143	COTTON2	69.0 526	1.014	-26.7	0.0	1.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.93			0.0	0.3	0.0	52141	CV-CTNW2	69.0 1	526	-1.7	-0.3			3	54
52145	SMITH2	69.0 526	1.023	-26.0	0.0	4.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 70.61			0.0	1.9	0.0	52141	CV-CTNW2	69.0 1	526	14.7	5.2			17	88
					0.0		0.0	52153	ARTESIA2	69.0 1	526	-18.7	-7.0			22	88
52147	CV-YOT2	69.0 526	1.001	-27.6	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 69.04			0.0	0.0	0.0	52137	CV-HGRM2	69.0 1	526	6.2	3.5			8	88
					0.0		0.0	52139	CV-LKAR2	69.0 1	526	-7.6	-3.8			10	88
					0.0		0.0	52149	CV-YO2	69.0 1	526	1.4	0.3			3	54
52149	CV-YO2	69.0 526	0.999	-27.6	0.0	1.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267 68.96			0.0	0.5	0.0	52147	CV-YOT2	69.0 1	526	-1.4	-0.5			3	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
52153	ARTESIA	269.0	526	1.024	-25.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.68		0.0	0.0	-11.0	52145	SMITH2	69.0	1	526	18.7	7.1		22	88
					0.0	0.0		52154	ARTESIA3	115	1	526	-18.9	-3.9	1.023RG	47	40
								52154	ARTESIA3	115	2	526	-19.0	-4.2	1.023RG	48	40
								52163	NAVAJ22	69.0	1	526	12.7	5.2		25	54
								52171	CV-ARTE269.0	1	526	6.6	6.9		17	54	
52154	ARTESIA3	115	526	1.016	-22.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	116.9		0.0	0.0	0.0	52153	ARTESIA269.0	1	526	18.9	5.0	1.023UN	48	40	
								52153	ARTESIA269.0	2	526	19.1	5.2	1.023UN	49	40	
								52162	NAVAJ33	115	1	526	-38.0	-10.2		22	179
52162	NAVAJ33	115	526	1.017	-22.9	0.0	11.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	116.9		0.0	7.5	0.0	52154	ARTESIA3	115	1	526	38.1	10.2		22	179
								52166	NAVAJ43	115	1	526	-49.3	-17.7		29	179
52163	NAVAJ22	69.0	526	1.023	-26.0	0.0	5.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.60		0.0	3.1	0.0	52153	ARTESIA269.0	1	526	-12.7	-5.2		25	54	
								52165	NAVAJR2	69.0	1	526	7.5	2.1		14	54
52165	NAVAJR2	69.0	526	1.022	-26.0	0.0	4.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.53		0.0	2.8	0.0	52163	NAVAJ22	69.0	1	526	-7.5	-2.1		14	54
								52169	ARTTOW2	69.0	1	526	3.3	-0.7		6	54
52166	NAVAJ43	115	526	1.018	-22.8	0.0	0.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	117.0		0.0	0.4	0.0	52162	NAVAJ33	115	1	526	49.3	17.7		29	179
								52184	EDDYCO3	115	1	526	-50.2	-18.1		36	146
52169	ARTTOW2	69.0	526	1.022	-26.1	0.0	3.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.52		0.0	-0.7	0.0	52165	NAVAJR2	69.0	1	526	-3.3	0.7		6	54
52171	CV-ARTE269.0	526	526	1.023	-25.9	0.0	8.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.62		0.0	3.4	0.0	52153	ARTESIA269.0	1	526	-6.6	-6.9		17	54	
								52173	ARTW2	69.0	1	526	-1.9	3.4		7	54
52173	ARTW2	69.0	526	1.023	-25.9	0.0	4.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.58		0.0	0.1	0.0	52171	CV-ARTE269.0	1	526	1.9	-3.5		7	54	
								52175	ARTCC2	69.0	1	526	-5.8	3.4		12	54
52175	ARTCC2	69.0	526	1.023	-25.8	0.0	7.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.58		0.0	2.0	0.0	52173	ARTW2	69.0	1	526	5.9	-3.4		12	54
								52177	ARTSR2	69.0	1	526	-13.6	1.4		25	54
52177	ARTSR2	69.0	526	1.024	-25.7	0.0	4.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.63		0.0	1.9	0.0	52175	ARTCC2	69.0	1	526	13.6	-1.4		25	54
								52179	ATOKA2	69.0	1	526	-18.5	-0.5		21	88
52179	ATOKA2	69.0	526	1.028	-25.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.91		0.0	0.0	0.0	52177	ARTSR2	69.0	1	526	18.6	0.6		21	88
								52180	ATOKA3	115	1	526	-18.6	-0.6	0.997RG	45	40
52180	ATOKA3	115	526	1.036	-22.2	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	119.2		0.0	0.0	0.0	52179	ATOKA2	69.0	1	526	18.6	1.5	0.997UN	45	40
								52188	CV-DAYT3	115	1	526	-7.9	4.8		6	146
								52298	CV-IRIS3	115	1	526	-10.7	-6.3		8	146
52184	EDDYCO3	115	526	1.033	-21.8	0.0	13.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	118.8		0.0	1.1	0.0	52104	TWEEDY3	115	1	526	5.3	-5.9		5	146
								52166	NAVAJ43	115	1	526	50.6	18.5		36	146
								52185	EDDYCO6	230	1	526	-91.6	-13.8	1.048RG	53	168
								52188	CV-DAYT3	115	1	526	11.2	-4.6		8	146
								52304	NCANALT3	115	1	526	11.2	4.7		7	179

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
52185	EDDYCO6	230	526	1.000	-17.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	230.0			-43.9R	0.0	0.0	52073	CHAVES6	230	1	526	8.4	16.7		4 452
									52184	EDDYCO3	115	1	526	91.7	20.4	1.048UN	56 168
									52186	EDDYCO7	345	1	526	-104.4	-56.0	1.000LK	21 560
									52209	CUNNINH6	230	1	526	-76.5	0.9		17 452
									52293	7RIVER6	230	1	526	80.8	4.1		16 492
									59996	EPTNP-D6	230	1	999	0.0	-30.0		2 2000
52186	EDDYCO7	345	526	1.013	-16.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	349.4			0.0	0.0	0.0	51440	TOLK7	345	1	526	-104.5	-59.1		9 1355
									52185	EDDYCO6	230	1	526	104.5	59.1	1.000UN	21 560
52188	CV-DAYT3	115	526	1.036	-22.2	0.0	3.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	119.1			0.0	0.1	0.0	52180	ATOKA3	115	1	526	7.9	-4.8		6 146
									52184	EDDYCO3	115	1	526	-11.2	4.7		8 146
52204	LEACO3	115	526	1.038	-16.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	119.4			0.0	0.0	0.0	52205	LEACO6	230	1	526	-42.9	-13.6	1.031RG	26 168
									52354	LE-LVTN3	115	1	526	43.6	13.4		19 226
									52360	MADDOX3	115	1	526	-0.7	0.2		0 226
52205	LEACO6	230	526	1.018	-15.1	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	234.2			0.0	0.0	0.0	51891	YOAKUM6	230	1	526	-38.9	-0.2		8 452
									52204	LEACO3	115	1	526	43.0	15.0	1.031UN	27 168
									52209	CUNNINH6	230	1	526	-46.1	31.0		12 452
									52231	MIDLND-6	230	1	526	42.0	-45.8		7 904
52208	CUNNINH3	115	526	1.040	-16.8	0.0	0.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	119.6			0.0	0.0	0.0	52014	RUSSEL-3	115	1	526	-8.4	6.1		7 146
									52209	CUNNINH6	230	1	526	-67.4	-37.4	1.069LK	44 168
									52211	CUNN11	13.8	1	526	-66.8	-6.8	1.025LK	72 90
									52215	CUNN31	22.0	1	526	0.0	0.0	1.025LK	0 150
									52240	PCA3	115	1	526	31.3	-3.9		21 146
									52358	SNANT3	115	1	526	51.3	19.7		40 132
									52360	MADDOX3	115	1	526	-1.7	11.9		5 226
									52390	MILLIN3	115	1	526	32.6	11.8		25 132
									52428	MOMUMT3	115	1	526	28.8	-1.4		19 146
52209	CUNNINH6	230	526	1.004	-13.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	231.0			0.0	0.0	0.0	52185	EDDYCO6	230	1	526	77.3	-12.1		17 452
									52205	LEACO6	230	1	526	46.1	-30.5		12 452
									52208	CUNNINH3	115	1	526	67.5	42.2	1.069UN	47 168
									52212	CUNN21	20.0	1	526	-172.8	-15.2	0.975LK	72 241
									52214	CUNN41	22.0	1	526	-104.6	-19.9	1.000LK	71 150
									52253	POTJCT6	230	1	526	86.5	35.5		21 452
52211	CUNN11	13.8	526	1.030	-12.2	67.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	14.21			12.4R	0.0	0.0	52208	CUNNINH3	115	1	526	67.0	12.4	1.025UN	74 90
52212	CUNN21	20.0	526	1.045	-8.8	173.2	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	20.90			31.0R	0.0	0.0	52209	CUNNINH6	230	1	526	173.2	31.0	0.975UN	70 241
52214	CUNN41	22.0	526	1.032	-8.2	105.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	22.71			31.0R	0.0	0.0	52209	CUNNINH6	230	1	526	105.0	31.0	1.000UN	71 150
52215	CUNN31	22.0	526	1.015	-16.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	22.32			0.0	0.0	0.0	52208	CUNNINH3	115	1	526	0.0	0.0	1.025UN	0 150

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
52261	NMPOTA2	69.0 267	526 69.76	1.011 -23.7	0.0 0.0	3.4 3.2	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52249	LIVSTR2	69.0	1	526	1.6	-0.8		3	54
								52263	KERMAC2	69.0	1	526	-5.0	-2.4		10	54
52263	KERMAC2	69.0 267	526 69.90	1.013 -23.6	0.0 0.0	6.8 7.3	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52251	POTJCT2	69.0	1	526	-11.9	-9.7		28	54
								52261	NMPOTA2	69.0	1	526	5.0	2.4		10	54
52265	CV-DG&I269.0	267	526 69.34	1.005 -26.5	0.0 0.0	20.5 3.5	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52295	7RIVER2	69.0	1	526	-20.5	-3.5		38	54
52266	WIPP3	115 267	526 118.0	1.026 -21.0	0.0 0.0	2.5 1.8	0.0 -15.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52268	SNDDUN3	115	1	526	-5.2	7.0		6	146
								52274	IMC#13	115	1	526	2.7	6.4		5	146
52268	SNDDUN3	115 267	526 117.7	1.024 -20.8	0.0 0.0	4.2 4.6	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52266	WIPP3	115	1	526	5.2	-7.6		6	146
								52329	OCHOA3	115	1	526	-9.4	2.9		7	146
52269	MISCH22	69.0 267	526 71.22	1.032 -23.2	0.0 0.0	2.6 2.5	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52251	POTJCT2	69.0	1	526	-20.4	-21.5		33	88
								52271	IMC#22	69.0	1	526	17.8	19.0		29	88
52271	IMC#22	69.0 267	526 71.09	1.030 -23.3	0.0 0.0	11.1 11.1	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52269	MISCH22	69.0	1	526	-17.8	-18.9		29	88
								52275	UNITSA2	69.0	1	526	6.7	7.8		11	88
52274	IMC#13	115 267	526 117.4	1.021 -21.0	0.0 0.0	18.4 11.4	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52252	POTJCT3	115	1	526	-15.7	-4.1		11	146
								52266	WIPP3	115	1	526	-2.7	-7.2		5	146
52275	UNITSA2	69.0 267	526 71.04	1.030 -23.3	0.0 0.0	0.5 0.5	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52271	IMC#22	69.0	1	526	-6.7	-7.9		11	88
								52279	IMC#32	69.0	1	526	6.2	7.4		17	54
52277	DUVAL32	69.0 267	526 70.29	1.019 -23.4	0.0 0.0	2.2 1.4	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52278	IMC#42	69.0	1	526	1.9	1.8		3	88
								52279	IMC#32	69.0	1	526	-4.1	-3.1		14	36
52278	IMC#42	69.0 267	526 70.20	1.017 -23.5	0.0 0.0	1.9 1.9	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52277	DUVAL32	69.0	1	526	-1.9	-1.9		3	88
52279	IMC#32	69.0 267	526 70.47	1.021 -23.4	0.0 0.0	2.1 4.3	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52275	UNITSA2	69.0	1	526	-6.2	-7.4		17	54
								52277	DUVAL32	69.0	1	526	4.1	3.1		14	36
52282	CV-INDH3	115 267	526 118.2	1.028 -22.5	0.0 0.0	39.5 13.8	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52294	7RIVER3	115	1	526	-40.4	-25.3		32	146
								52314	PECOS3	115	1	526	0.9	11.4		8	146
52293	7RIVER6	230 267	526 228.5	0.993 -19.5	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52185	EDDYCO6	230	1	526	-80.4	-8.5		17	492
								52294	7RIVER3	115	1	526	80.4	8.5	1.054UN	36	225
52294	7RIVER3	115 267	526 119.9	1.043 -21.8	0.0 0.0	0.0 0.0	0.0 -31.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52282	CV-INDH3	115	1	526	40.7	25.6		32	146
								52293	7RIVER6	230	1	526	-80.4	-5.2	1.054RG	34	225
								52295	7RIVER2	69.0	1	526	20.9	5.1	1.000UN	52	40
								52296	CV-LAKW3	115	1	526	18.8	5.8		13	146
52295	7RIVER2	69.0 267	526 70.90	1.028 -25.0	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52265	CV-DG&I269.0	1	526	20.8	3.9		38	54	
								52294	7RIVER3	115	1	526	-20.8	-3.9	1.000RG	52	40

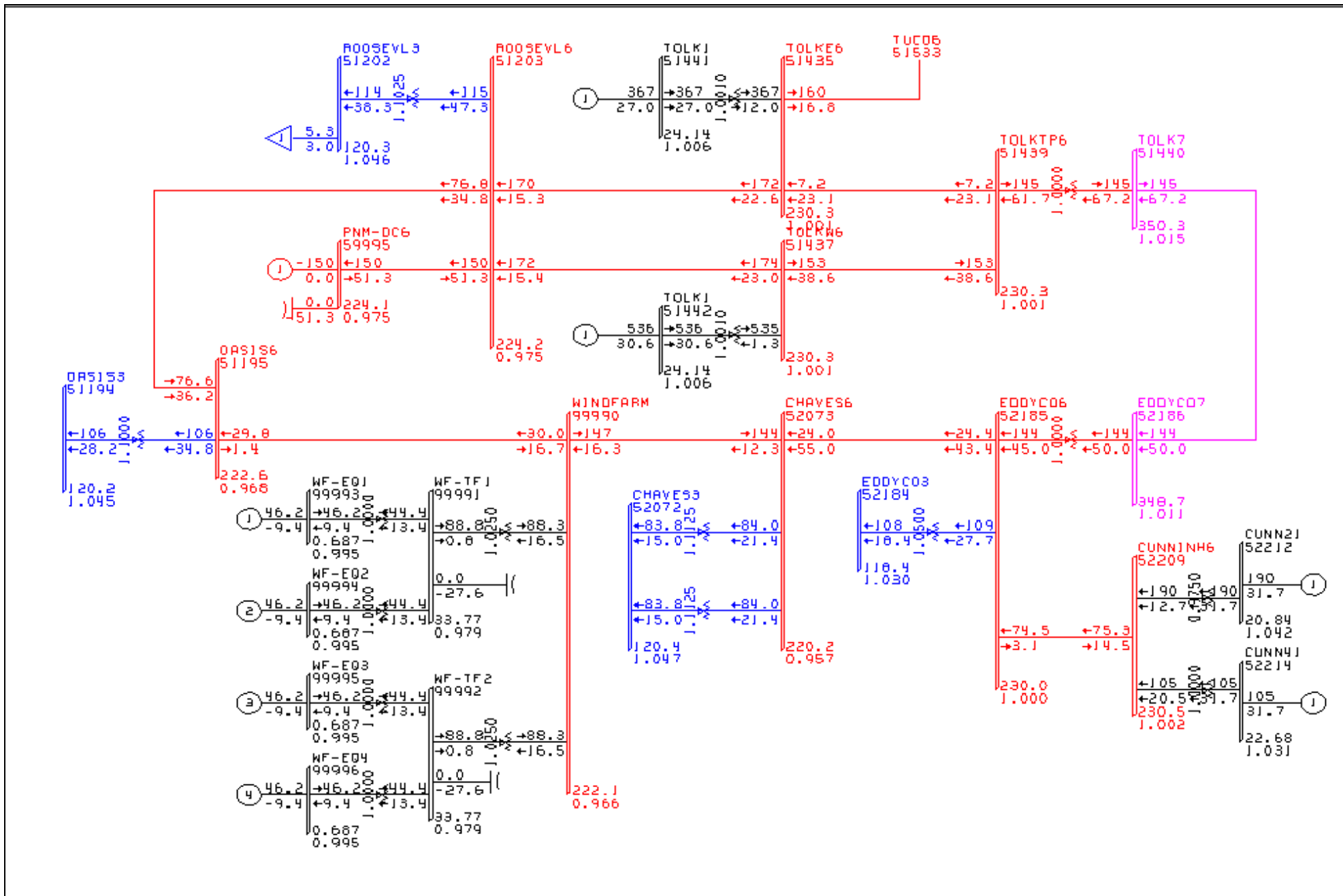
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
52296	CV-LAKW3	115 526	1.041	-22.0	0.0	4.2	0.0	52294	7RIVER3	115 1	526	-18.8	-6.0			13	146
		267	119.7		0.0	0.2	0.0	52298	CV-IRIS3	115 1	526	14.6	5.9			10	146
52298	CV-IRIS3	115 526	1.039	-22.1	0.0	3.8	0.0	52180	ATOKA3	115 1	526	10.7	5.9			8	146
		267	119.4		0.0	0.1	0.0	52296	CV-LAKW3	115 1	526	-14.6	-6.1			10	146
52301	DELHI2	69.0 526	1.020	-26.5	0.0	0.1	0.0	52303	OCOTILL269.0	1 526		-0.1	0.0			0	54
		267	70.36		0.0	0.0	0.0										
52303	OCOTILL269.0	526	1.020	-26.5	0.0	15.8	0.0	52301	DELHI2	69.0 1	526	0.1	-0.2			0	54
		267	70.35		0.0	3.0	0.0	52309	CARLSBD269.0	1 526		-15.9	-2.8			29	54
52304	NCANALT3	115 526	1.021	-22.4	0.0	18.2	0.0	52184	EDDYCO3	115 1	526	-11.1	-7.1			7	179
		267	117.4		0.0	7.2	0.0	52314	PECOS3	115 1	526	-7.0	0.0			4	179
52307	NPOTT2	69.0 526	1.040	-23.0	0.0	0.0	0.0	52239	PCA2	69.0 1	526	-5.2	7.4			10	88
		267	71.74		0.0	0.0	0.0	52251	POTJCT2	69.0 1	526	5.2	-7.3			10	88
								52255	NATPOT2	69.0 1	526	0.0	-0.1			0	54
52308	FIESTA3	115 526	1.019	-22.4	0.0	14.9	0.0	52310	CARLSBD3	115 1	526	-14.9	-7.4			15	112
		267	117.2		0.0	7.4	0.0										
52309	CARLSBD269.0	526	1.026	-26.1	0.0	0.0	0.0	52303	OCOTILL269.0	1 526		16.0	2.9			29	54
		267	70.78		0.0	0.0	0.0	52310	CARLSBD3	115 1	526	-23.7	-6.9	1.031RG		60	40
								52310	CARLSBD3	115 2	526	-10.9	-3.4	1.031RG		45	25
								52311	CARLSBD113.8	1 526		0.0	0.0	0.978UN		0	22
								52327	HOPISB2	69.0 1	526	18.6	7.4			54	36
52310	CARLSBD3	115 526	1.020	-22.3	0.0	0.0	0.0	52240	PCA3	115 1	526	-26.5	1.0			18	146
		267	117.3		0.0	0.0	-15.0	52252	POTJCT3	115 1	526	-29.2	6.1			42	69
								52308	FIESTA3	115 1	526	14.9	7.4			15	112
								52309	CARLSBD269.0	1 526		23.8	8.7	1.031UN		62	40
								52309	CARLSBD269.0	2 526		11.0	4.2	1.031UN		46	25
								52314	PECOS3	115 1	526	6.1	-12.3			8	179
52311	CARLSBD113.8	526	1.003	-26.1	0.0	0.0	0.0	52309	CARLSBD269.0	1 526		0.0	0.0	0.978LK		0	22
		267	13.84		0.0	0.0	0.0										
52313	PECOS6	230 526	1.014	-22.4	0.0	0.0	0.0	52314	PECOS3	115 1	526	0.0	0.0	0.994LK		0	150
		267	233.3		0.0	0.0	0.0										
52314	PECOS3	115 526	1.021	-22.4	0.0	0.0	0.0	52282	CV-INDH3	115 1	526	-0.9	-12.1			8	146
		267	117.4		0.0	0.0	0.0	52304	NCANALT3	115 1	526	7.0	0.0			4	179
								52310	CARLSBD3	115 1	526	-6.1	12.2			7	179
								52313	PECOS6	230 1	526	0.0	0.0	0.994UN		0	150
52317	LOVNGT2	69.0 526	1.001	-26.8	0.0	0.0	0.0	52319	CBWFLD2	69.0 1	526	2.7	0.2			7	36
		267	69.07		0.0	0.0	0.0	52325	LVNG&NA269.0	1 526		6.1	2.6			12	54
								52327	HOPISB2	69.0 1	526	-8.8	-2.8			26	36

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 9:44
 03G-20412-501. **WIND FARM** (BOONE-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 9/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING A									
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA
52319	CBWFLD2	69.0	526	1.000	-26.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	69.01			0.0	0.0	0.0	52317	LOVNGT2	69.0	1	526	-2.7	-0.2		7 36
									52321	CBWTRF2	69.0	1	526	1.3	0.1		2 54
									52323	WHITEC2	69.0	1	526	1.3	0.1		4 36
52321	CBWTRF2	69.0	526	0.999	-26.9	0.0	1.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	68.94			0.0	0.3	0.0	52319	CBWFLD2	69.0	1	526	-1.3	-0.3		3 54
52323	WHITEC2	69.0	526	0.996	-27.0	0.0	1.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	68.73			0.0	0.4	0.0	52319	CBWFLD2	69.0	1	526	-1.3	-0.4		4 36
52325	LVNG&NA2	69.0	526	0.992	-27.2	0.0	6.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	68.44			0.0	2.7	0.0	52317	LOVNGT2	69.0	1	526	-6.1	-2.7		12 54
52327	HOPISB2	69.0	526	1.004	-26.7	0.0	9.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	69.29			0.0	4.6	0.0	52309	CARLSBD2	69.0	1	526	-18.3	-7.3		55 36
									52317	LOVNGT2	69.0	1	526	8.8	2.7		26 36
52329	OCHOA3	115	526	1.024	-20.4	0.0	2.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	117.8			0.0	1.7	0.0	52268	SNDDUN3	115	1	526	9.5	-3.8		7 146
									52420	WHITTEN3	115	1	526	-11.7	2.1		9 132

2003 Summer Peak Case



	<p>03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY WIND GENERATION-184.8 MW @ .98PF 5-30-02 SUN. OCT 06 2002 10:29</p>	<p>LQA, RABER 0.9000V 1.0500V KV: 69, 115, 230</p>	<p>BUS - VOLTAGE (KV/PV) BRANCH - MW/MVAR EQUIPMENT - MW/MVAR</p>
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PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

BUS DATA									LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
51070	TUCUMCA3	115 526	1.020	-28.7	0.0	13.2	0.0	51073	TUCUM1	13.2	1 526	-15.0	-1.7	1.000UN		82	18
		264	117.3		0.0	4.7	0.0	51076	FE-TUCU3	115	1 526	1.8	-3.0			2	146
51073	TUCUM1	13.2 526	1.035	-24.1	15.0	0.0	0.0	51070	TUCUMCA3	115	1 526	15.0	3.0	1.000RG		82	18
		264	13.66		3.0R	0.0	0.0										
51076	FE-TUCU3	115 526	1.021	-28.7	0.0	10.5	0.0	51070	TUCUMCA3	115	1 526	-1.8	2.7			2	146
		264	117.4		0.0	0.5	0.0	51176	CURRY3	115	1 526	-8.7	-3.1			6	146
51078	CANYNW3	115 526	1.025	-20.6	0.0	24.1	0.0	51080	CANYNE3	115	1 526	-34.8	-0.3			38	90
		264	117.9		0.0	8.0	0.0	51088	ROCKWEL3	115	1 526	5.2	1.4			6	95
								51102	DOWNFL3	115	1 526	5.5	-9.1			12	90
51080	CANYNE3	115 526	1.029	-20.2	0.0	13.9	0.0	51014	OSAGE--3	115	1 526	-48.9	2.4			53	90
		264	118.4		0.0	-2.7	0.0	51078	CANYNW3	115	1 526	34.9	0.3			38	90
51083	DS-5&11269.0	526 526	0.994	-25.9	0.0	16.6	0.0	51097	DS-#92	69.0	1 526	-16.6	-4.7			35	50
		264	68.62		0.0	4.7	0.0										
51088	ROCKWEL3	115 526	1.024	-20.7	0.0	5.2	0.0	51078	CANYNW3	115	1 526	-5.2	-1.6			6	95
		264	117.8		0.0	1.6	0.0										
51091	CENTRS2	69.0 526	1.020	-25.8	0.0	17.6	0.0	51095	DS-MTR2	69.0	1 526	-17.6	-2.8			32	54
		264	70.39		0.0	2.8	0.0										
51094	NEHFD3	115 526	1.032	-21.2	0.0	0.0	0.0	51095	DS-MTR2	69.0	1 526	43.0	28.5	1.044UN		59	84
		264	118.7		0.0	0.0	0.0	51110	DFSMTH3	115	1 526	-43.0	-28.5			34	146
51095	DS-MTR2	69.0 526	1.030	-25.1	0.0	22.2	0.0	51091	CENTRS2	69.0	1 526	17.8	2.9			32	54
		264	71.10		0.0	7.1	0.0	51094	NEHFD3	115	1 526	-42.8	-24.4	1.044RG		57	84
								51105	HEREFD2	69.0	1 526	2.9	14.4			35	41
51097	DS-#92	69.0 526	1.002	-25.5	0.0	6.5	0.0	51083	DS-5&11269.0	69.0	1 526	16.7	4.8			35	50
		264	69.17		0.0	3.0	0.0	51105	HEREFD2	69.0	1 526	-23.2	-7.8			49	50
51102	DOWNFL3	115 526	1.030	-21.1	0.0	3.3	0.0	51078	CANYNW3	115	1 526	-5.5	8.2			11	90
		264	118.4		0.0	1.2	0.0	51106	HEREFD3	115	1 526	2.2	-9.5			10	90
51105	HEREFD2	69.0 526	1.017	-24.8	0.0	14.9	0.0	51095	DS-MTR2	69.0	1 526	-2.8	-14.3			35	41
		264	70.19		0.0	2.0	-14.9	51097	DS-#92	69.0	1 526	23.4	8.1			49	50
								51106	HEREFD3	115	1 526	-22.2	7.8	0.965RG		58	40
								51106	HEREFD3	115	2 526	-22.4	8.7	0.962RG		59	40
								51115	DS-#42	69.0	1 526	9.0	2.5			10	88
51106	HEREFD3	115 526	1.038	-21.5	0.0	0.0	0.0	51102	DOWNFL3	115	1 526	-2.2	8.3			9	90
		264	119.3		0.0	0.0	0.0	51105	HEREFD2	69.0	1 526	22.3	-6.4	0.965UN		56	40
								51105	HEREFD2	69.0	2 526	22.4	-7.2	0.962UN		57	40
								51110	DFSMTH3	115	1 526	-80.8	10.9			54	146
								51122	FRIONA3	115	1 526	38.2	-5.6			41	90

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51146	DS-213	115 526	1.008	-23.0	0.0	9.2	0.0	51110	DFSMTH3	115 1	526	-34.1	-15.2			25	146
		264 115.9			0.0	3.9	0.0	51150	CASTRC3	115 1	526	24.9	11.3			19	146
51149	CASTRC2	69.0 526	1.008	-26.0	0.0	0.0	0.0	51141	CASTR2	69.0 1	526	28.8	6.5			54	54
		264 69.57			0.0	0.0	-29.3	51143	DS-15&12	69.0 1	526	16.2	5.9			32	54
								51145	DS-CAST2	69.0 1	526	23.0	8.1			45	54
								51150	CASTRC3	115 1	526	-34.0	4.4	0.998RG		40	84
								51150	CASTRC3	115 2	526	-34.0	4.4	0.998RG		40	84
51150	CASTRC3	115 526	1.006	-23.0	0.0	0.0	0.0	51146	DS-213	115 1	526	-24.9	-11.3			19	146
		264 115.7			0.0	0.0	0.0	51149	CASTRC2	69.0 1	526	34.0	-2.6	0.998UN		40	84
								51149	CASTRC2	69.0 2	526	34.0	-2.6	0.998UN		40	84
								51250	BC-EART3	115 1	526	-43.1	16.5			31	146
51155	NCLOVI2	69.0 526	1.018	-31.5	0.0	14.5	0.0	51163	WCLOVI2	69.0 1	526	-5.5	-0.1			10	54
		264 70.27			0.0	0.7	0.0	51175	CURRY2	69.0 1	526	-8.9	-0.6			21	41
51156	NORRST3	115 526	1.034	-26.6	0.0	0.0	0.0	51168	NORRIS3	115 1	526	16.9	4.6			19	90
		264 118.9			0.0	0.0	0.0	51176	CURRY3	115 1	526	10.0	-0.9			7	146
								51194	OASIS3	115 1	526	-26.8	-3.7			18	146
51159	ECLOVI2	69.0 526	1.021	-31.0	0.0	15.9	0.0	51175	CURRY2	69.0 1	526	-15.9	-4.1			30	54
		264 70.45			0.0	4.1	0.0										
51162	WCLOVI3	115 526	1.028	-26.9	0.0	11.9	0.0	51166	CANNOA3	115 1	526	-22.9	-3.0			15	146
		264 118.2			0.0	3.0	0.0	51172	FE-SWS3	115 1	526	11.0	0.0			7	146
51163	WCLOVI2	69.0 526	1.020	-31.2	0.0	5.5	0.0	51155	NCLOVI2	69.0 1	526	5.5	0.0			10	54
		264 70.40			0.0	1.0	0.0	51175	CURRY2	69.0 1	526	-11.0	-1.0			20	54
51166	CANNOA3	115 526	1.031	-26.5	0.0	15.7	0.0	51162	WCLOVI3	115 1	526	23.0	2.7			15	146
		264 118.6			0.0	8.1	0.0	51194	OASIS3	115 1	526	-38.6	-10.9			27	146
51168	NORRIS3	115 526	1.034	-26.6	0.0	16.9	0.0	51156	NORRST3	115 1	526	-16.8	-4.6			19	90
		264 118.9			0.0	4.6	0.0										
51170	FE-CLVS3	115 526	1.030	-26.8	0.0	0.0	0.0	51172	FE-SWS3	115 1	526	5.3	3.3			4	146
		264 118.5			0.0	0.0	0.0	51180	FE-CLVS3	115 1	526	-5.3	-3.3			4	146
51172	FE-SWS3	115 526	1.027	-27.0	0.0	16.3	0.0	51162	WCLOVI3	115 1	526	-11.0	-0.2			7	146
		264 118.1			0.0	4.2	0.0	51170	FE-CLVS3	115 1	526	-5.3	-4.0			4	146
51175	CURRY2	69.0 526	1.029	-30.4	0.0	10.4	0.0	51155	NCLOVI2	69.0 1	526	9.0	0.4			21	41
		264 71.03			0.0	1.8	-15.3	51159	ECLOVI2	69.0 1	526	16.0	3.2			29	54
								51163	WCLOVI2	69.0 1	526	11.1	1.0			20	54
								51176	CURRY3	115 1	526	-24.8	3.8	0.990RG		61	40
								51176	CURRY3	115 2	526	-24.6	4.0	0.990RG		61	40
								51183	FARWELL2	69.0 1	526	2.8	1.0			5	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51176	CURRY3	115 526 264	1.034 118.9	-26.6	0.0 0.0	0.0 0.0	0.0 0.0	51076	FE-TUCU3	115 1	526	8.8	-2.2			6	146
								51126	DS-#203	115 1	526	2.8	17.2			19	90
								51156	NORRST3	115 1	526	-10.0	0.9			7	146
								51175	CURRY2	69.0 1	526	24.8	-2.1	0.990UN		60	40
								51175	CURRY2	69.0 2	526	24.7	-2.4	0.990UN		60	40
								51180	FE-CLVS3	115 1	526	30.1	11.7			21	146
								51202	ROOSEVL3	115 2	526	-81.2	-23.1			56	146
51180	FE-CLVS3	115 526 264	1.033 118.8	-26.7	0.0 0.0	24.7 9.3	0.0 0.0	51170	FE-CLVS3	115 1	526	5.3	2.4			4	146
								51176	CURRY3	115 1	526	-30.1	-11.7			21	146
51183	FARWELL	269.0 526 264	1.024 70.69	-30.6	0.0 0.0	2.8 1.3	0.0 0.0	51175	CURRY2	69.0 1	526	-2.8	-1.3			6	54
51185	DS-#102	69.0 526 264	1.002 69.13	-27.1	0.0 0.0	8.8 3.9	0.0 0.0	51229	LARIAT2	69.0 1	526	-8.8	-3.9			11	88
51194	OASIS3	115 526 264	1.045 120.2	-25.2	0.0 0.0	0.0 0.0	0.0 0.0	51156	NORRST3	115 1	526	27.0	3.0			18	146
								51166	CANNOA3	115 1	526	38.9	11.0			27	146
								51195	OASIS6	230 1	526	-106.3	-28.2	1.100HI		42	252
								51208	PORTALE3	115 1	526	40.4	14.1			28	146
51195	OASIS6	230 526 264	0.968 222.6	-22.0	0.0 0.0	0.0 0.0	0.0 0.0	51194	OASIS3	115 1	526	106.5	34.8	1.100UN		46	252
								51203	ROOSEVL6	230 1	526	-76.6	-36.2			19	452
								99990	WINDFARM	230 1	526	-29.8	1.4			7	452
51202	ROOSEVL3	115 526 264	1.046 120.3	-25.2	0.0 0.0	5.3 3.0	0.0 0.0	51176	CURRY3	115 2	526	81.5	24.8			56	146
								51203	ROOSEVL6	230 1	526	-114.4	-38.3	1.103RG		46	252
								51208	PORTALE3	115 1	526	27.6	10.5			19	146
51203	ROOSEVL6	230 526 264	0.975 224.2	-21.3	0.0 0.0	0.0 0.0	0.0 0.0	51195	OASIS6	230 1	526	76.8	34.8			19	452
								51202	ROOSEVL3	115 1	526	114.6	47.3	1.103UN		50	252
								51435	TOLKE6	230 2	526	-169.7	-15.3			36	492
								51437	TOLKW6	230 1	526	-171.6	-15.4			36	492
								59995	PNM-DC6	230 1	999	149.9	-51.3			8	2000
51207	RO-PORT	269.0 526 264	1.024 70.67	-28.8	0.0 0.0	36.5 16.2	0.0 -7.6	51208	PORTALE3	115 1	526	-33.7	-10.6	1.008RG		41	84
								51208	PORTALE3	115 2	526	-33.7	-10.6	1.008RG		41	84
								51211	ZODIAC2	69.0 1	526	12.0	3.5			23	54
								51213	PORTAL1	269.0 1	526	18.9	9.1			38	54
51208	PORTALE3	115 526 264	1.034 118.9	-26.1	0.0 0.0	0.0 0.0	0.0 0.0	51194	OASIS3	115 1	526	-40.1	-14.0			28	146
								51202	ROOSEVL3	115 1	526	-27.4	-10.8			20	146
								51207	RO-PORT	269.0 1	526	33.8	12.4	1.008UN		41	84
								51207	RO-PORT	269.0 2	526	33.8	12.4	1.008UN		41	84
51211	ZODIAC2	69.0 526 264	1.021 70.42	-29.0	0.0 0.0	6.7 2.1	0.0 0.0	51207	RO-PORT	269.0 1	526	-12.0	-3.5			23	54
								51219	PORTAS2	69.0 1	526	5.3	1.4			10	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

BUS DATA								LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51249	BC-EART269.0	526 264	1.026 70.76	-22.8	0.0 0.0	32.4 12.0	0.0 0.0	51250	BC-EART3 115	1 526	-16.7	-6.2	1.038RG		35	50
								51250	BC-EART3 115	2 526	-15.7	-5.9	1.038RG		29	56
51250	BC-EART3 115	526 264	1.004 115.5	-20.7	0.0 0.0	0.0 0.0	0.0 0.0	51150	CASTR3 115	1 526	43.7	-15.7			32	146
								51249	BC-EART269.0	1 526	16.7	6.9	1.038UN		36	50
								51249	BC-EART269.0	2 526	15.7	6.5	1.038UN		30	56
								51418	PLANTX3 115	1 526	-76.2	2.3			52	146
99990	WINDFARM 230	526 264	0.966 222.1	-21.0	0.0 0.0	0.0 0.0	0.0 0.0	51195	OASIS6 230	1 526	30.0	-16.7			8	452
								52073	CHAVES6 230	1 526	146.6	-16.3			34	452
								99991	WF-TF1 34.5	1 526	-88.3	16.5	1.025UN		93	100
								99992	WF-TF2 34.5	1 526	-88.3	16.5	1.025UN		93	100
99991	WF-TF1 34.5	526 264	0.979 33.77	-9.9	0.0 0.0	0.0 0.0	0.0 -27.6	99990	WINDFARM 230	1 526	88.8	0.8	1.025LK		91	100
								99993	WF-EQ1 .690	1 526	-44.4	13.4	1.000UN		95	50
								99994	WF-EQ2 .690	1 526	-44.4	13.4	1.000UN		95	50
99992	WF-TF2 34.5	526 264	0.979 33.77	-9.9	0.0 0.0	0.0 0.0	0.0 -27.6	99990	WINDFARM 230	1 526	88.8	0.8	1.025LK		91	100
								99995	WF-EQ3 .690	1 526	-44.4	13.4	1.000UN		95	50
								99996	WF-EQ4 .690	1 526	-44.4	13.4	1.000UN		95	50
99993	WF-EQ1 .690	526 264	0.995 0.687	-4.5	46.2 -9.4L	0.0 0.0	0.0 0.0	99991	WF-TF1 34.5	1 526	46.2	-9.4	1.000LK		95	50
99994	WF-EQ2 .690	526 264	0.995 0.687	-4.5	46.2 -9.4L	0.0 0.0	0.0 0.0	99991	WF-TF1 34.5	1 526	46.2	-9.4	1.000LK		95	50
99995	WF-EQ3 .690	526 264	0.995 0.687	-4.5	46.2 -9.4L	0.0 0.0	0.0 0.0	99992	WF-TF2 34.5	1 526	46.2	-9.4	1.000LK		95	50
99996	WF-EQ4 .690	526 264	0.995 0.687	-4.5	46.2 -9.4L	0.0 0.0	0.0 0.0	99992	WF-TF2 34.5	1 526	46.2	-9.4	1.000LK		95	50

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
51320	SWISHER3	115 526	1.024	-24.6	0.0	0.0	0.0	51316	KRESS3	115 1	526	61.5	26.8			29	226
		265 117.8			0.0	0.0	0.0	51321	SWISHER6	230 1	526	-61.4	-26.8	1.100RG		44	150
51321	SWISHER6	230 526	0.955	-21.6	0.0	0.0	0.0	51041	AMARLS6	230 1	526	-126.2	-16.5			29	452
		265 219.8			0.0	0.0	0.0	51320	SWISHER3	115 1	526	61.5	30.7	1.100UN		48	150
								51403	HALECO6	230 1	526	64.7	-14.2			15	452
51325	KRESRU2	69.0 526	1.010	-31.5	0.0	2.9	0.0	51315	KRESS2	69.0 1	526	-29.6	-9.3			57	54
		265 69.71			0.0	0.2	0.0	51335	LH-PL&M269.0	1 526		26.7	9.1			52	54
51329	BRISCOE269.0	526	0.964	-34.9	0.0	1.9	0.0	51331	LH-SLVR269.0	1 526		-1.9	0.1			4	54
		265 66.49			0.0	-0.1	0.0										
51331	LH-SLVR269.0	526	0.964	-34.8	0.0	1.2	0.0	51329	BRISCOE269.0	1 526		1.9	-0.2			4	54
		265 66.54			0.0	0.9	0.0	51375	LH-SPL2 69.0	1 526		-3.0	-0.7			6	54
51335	LH-PL&M269.0	526	0.964	-34.0	0.0	16.8	0.0	51325	KRESRU2 69.0	1 526		-25.8	-7.9			52	54
		265 66.53			0.0	6.8	0.0	51337	NPLNV2 69.0	1 526		9.0	1.1			17	54
51337	NPLNV2 69.0	526	0.962	-34.1	0.0	9.0	0.0	51335	LH-PL&M269.0	1 526		-9.0	-1.2			17	54
		265 66.39			0.0	1.2	0.0										
51339	WPLNV2 69.0	526	0.988	-33.8	0.0	17.8	0.0	51343	PLNVCO2 69.0	1 526		-17.8	-4.2			34	54
		265 68.14			0.0	4.2	0.0										
51341	PLAINVW269.0	526	0.994	-33.7	0.0	11.3	0.0	51353	EPLNV2 69.0	1 526		-11.3	0.4			21	54
		265 68.59			0.0	-0.4	0.0										
51343	PLNVCO2 69.0	526	1.000	-33.0	0.0	0.0	0.0	51339	WPLNV2 69.0	1 526		18.0	4.4			34	54
		265 69.00			0.0	0.0	0.0	51345	WESTRID269.0	1 526		-18.0	-4.4			21	88
51345	WESTRID269.0	526	1.003	-32.7	0.0	15.7	0.0	51343	PLNVCO2 69.0	1 526		18.0	4.5			21	88
		265 69.22			0.0	1.1	0.0	51347	PLNVWT2 69.0	1 526		-33.8	-5.6			39	88
51347	PLNVWT2 69.0	526	1.014	-31.5	0.0	0.0	0.0	51345	WESTRID269.0	1 526		34.0	6.2			39	88
		265 69.94			0.0	0.0	0.0	51401	HALECO2 69.0	1 526		-34.0	-6.2			39	88
51349	SPLNV2 69.0	526	0.999	-32.6	0.0	12.5	0.0	51401	HALECO2 69.0	1 526		-12.5	-2.0			23	54
		265 68.95			0.0	2.0	0.0										
51353	EPLNV2 69.0	526	0.999	-33.2	0.0	5.1	0.0	51341	PLAINVW269.0	1 526		11.4	-0.4			21	54
		265 68.90			0.0	1.1	0.0	51359	COX2 69.0	1 526		-16.5	-0.7			31	54
51359	COX2 69.0	526	1.007	-32.4	0.0	5.6	0.0	51353	EPLNV2 69.0	1 526		16.6	0.8			31	54
		265 69.48			0.0	3.8	-8.5	51360	COX3 115 1	526		-20.3	9.7	0.995RG		56	40
								51360	COX3 115 2	526		-21.8	-7.4	0.958UN		57	40
								51365	AIKENT2 69.0	1 526		19.8	1.6			37	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51435	TOLKE6	230 526	1.001	-15.4	0.0	0.0	0.0	51203	ROOSEVL6	230 2	526	172.3	22.6			35	492
		265 230.3			0.0	0.0	0.0	51419	PLANTX6	230 2	526	41.4	-4.4			9	452
								51439	TOLKTP6	230 1	526	-7.2	-23.1			1	2000
								51441	TOLK1	24.0 1	526	-366.7	-12.0	1.001UN		50	728
								51533	TUCO6	230 1	526	160.1	16.8			36	452
51437	TOLKW6	230 526	1.001	-15.4	0.0	0.0	0.0	51203	ROOSEVL6	230 1	526	174.3	23.0			36	492
		265 230.3			0.0	0.0	0.0	51419	PLANTX6	230 1	526	43.2	-4.4			10	452
								51439	TOLKTP6	230 1	526	152.7	-38.6			8	2000
								51442	TOLK1	24.0 1	526	-535.1	1.3	1.001UN		73	728
								51467	LAMBCO6	230 1	526	87.5	36.5			21	452
								51891	YOAKUM6	230 1	526	77.4	-17.8			18	452
51439	TOLKTP6	230 526	1.001	-15.4	0.0	0.0	0.0	51435	TOLKE6	230 1	526	7.2	23.1			1	2000
		265 230.3			0.0	0.0	0.0	51437	TOLKW6	230 1	526	-152.7	38.6			8	2000
								51440	TOLK7	345 1	526	145.5	-61.7	1.000LK		28	560
51440	TOLK7	345 526	1.015	-17.3	0.0	0.0	0.0	51439	TOLKTP6	230 1	526	-145.4	67.2	1.000UN		28	560
		265 350.3			0.0	0.0	0.0	51443	TOLK31	24.0 1	526	0.0	0.0	1.001UN		0	728
								51444	TOLK41	24.0 1	526	0.0	0.0	1.001UN		0	728
								52186	EDDYCO7	345 1	526	145.4	-67.2			12	1355
51441	TOLK1	24.0 526	1.006	-13.1	367.1	0.0	0.0	51435	TOLKE6	230 1	526	367.1	27.0	1.001LK		50	728
		265 24.14			27.0R	0.0	0.0										
51442	TOLK1	24.0 526	1.006	-12.0	536.0	0.0	0.0	51437	TOLKW6	230 1	526	536.0	30.6	1.001LK		73	728
		265 24.14			30.6R	0.0	0.0										
51443	TOLK31	24.0 526	1.016	-17.3	0.0	0.0	0.0	51440	TOLK7	345 1	526	0.0	0.0	1.001LK		0	728
		265 24.39			0.0	0.0	0.0										
51444	TOLK41	24.0 526	1.016	-17.3	0.0	0.0	0.0	51440	TOLK7	345 1	526	0.0	0.0	1.001LK		0	728
		265 24.39			0.0	0.0	0.0										
51451	SUDAN2	69.0 526	1.003	-24.3	0.0	0.0	0.0	51453	SUDNRU2	69.0 1	526	0.0	0.0			0	88
		265 69.18			0.0	0.0	0.0										
51453	SUDNRU2	69.0 526	1.003	-24.3	0.0	2.3	0.0	51451	SUDAN2	69.0 1	526	0.0	0.0			0	88
		265 69.18			0.0	0.5	0.0	51455	LC-SNDH2	69.0 1	526	-2.3	-0.5			3	88
51455	LC-SNDH2	69.0 526	1.003	-24.2	0.0	7.6	0.0	51453	SUDNRU2	69.0 1	526	2.3	0.4			3	88
		265 69.23			0.0	3.5	0.0	51457	AMHERST2	69.0 1	526	-9.9	-3.9			12	88
51457	AMHERST2	69.0 526	1.006	-24.0	0.0	1.5	0.0	51455	LC-SNDH2	69.0 1	526	9.9	3.9			12	88
		265 69.42			0.0	0.5	0.0	51459	WLTTLF2	69.0 1	526	-11.4	-4.3			14	88
51459	WLTTLF2	69.0 526	1.012	-23.6	0.0	0.6	0.0	51457	AMHERST2	69.0 1	526	11.4	4.3			14	88
		265 69.82			0.0	0.0	0.0	51465	LAMBCO2	69.0 1	526	-12.1	-4.3			23	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51461	LFLS&C2	69.0	526	1.018	-23.2	0.0	13.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.23		0.0	2.0	0.0	51465	LAMBCO2	69.0	1	526	-13.0	-2.0		36	36
51465	LAMBCO2	69.0	526	1.025	-22.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.74		0.0	0.0	0.0	51459	WLTLF2	69.0	1	526	12.2	4.3		23	54
								51461	LFLS&C2	69.0	1	526	13.1	2.0		36	36
								51466	LAMBCO3	115	1	526	-28.8	-8.3	1.005RG	35	84
								51466	LAMBCO3	115	2	526	-28.8	-8.3	1.005RG	35	84
								51471	LC-LTTL269.0	1	526	24.8	8.1		47	54	
								51483	LC-LUMS269.0	1	526	7.6	2.2		14	54	
51466	LAMBCO3	115	526	1.034	-20.6	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	118.9		0.0	0.0	0.0	51418	PLANTX3	115	1	526	-31.5	16.2		23	146
								51465	LAMBCO2	69.0	1	526	28.8	9.6	1.005UN	35	84
								51465	LAMBCO2	69.0	2	526	28.8	9.6	1.005UN	35	84
								51467	LAMBCO6	230	1	526	-86.7	-36.4	1.085RG	36	252
								51598	HOCKLEY3	115	1	526	60.5	1.0		40	146
51467	LAMBCO6	230	526	0.974	-18.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	224.0		0.0	0.0	0.0	51437	TOLKW6	230	1	526	-86.8	-41.2		22	452
								51466	LAMBCO3	115	1	526	86.8	41.2	1.085UN	39	252
51471	LC-LTTL269.0	526	526	1.019	-23.2	0.0	8.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.32		0.0	3.8	0.0	51465	LAMBCO2	69.0	1	526	-24.7	-7.9		47	54
								51473	WANTON2	69.0	1	526	16.0	4.1		30	54
51473	WANTON2	69.0	526	1.015	-23.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.01		0.0	0.0	0.0	51471	LC-LTTL269.0	1	526	-15.9	-4.1		30	54	
								51475	LC-SP&H269.0	1	526	13.2	3.6		25	54	
								51477	BAINER2	69.0	1	526	2.7	0.5		5	54
51475	LC-SP&H269.0	526	526	1.001	-24.4	0.0	13.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.04		0.0	3.5	0.0	51473	WANTON2	69.0	1	526	-13.1	-3.5		25	54
51477	BAINER2	69.0	526	1.014	-23.6	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.97		0.0	0.0	0.0	51473	WANTON2	69.0	1	526	-2.7	-0.5		5	54
								51479	WANTON2	69.0	1	526	2.7	0.5		5	54
51479	WANTON2	69.0	526	1.012	-23.7	0.0	2.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.82		0.0	0.7	0.0	51477	BAINER2	69.0	1	526	-2.7	-0.7		5	54
51483	LC-LUMS269.0	526	526	1.023	-23.0	0.0	2.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.58		0.0	1.3	0.0	51465	LAMBCO2	69.0	1	526	-7.6	-2.2		14	54
								51485	HOBGOOD269.0	1	526	5.3	1.0		10	54	
51485	HOBGOOD269.0	526	526	1.021	-23.2	0.0	0.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.44		0.0	0.0	0.0	51483	LC-LUMS269.0	1	526	-5.3	-1.0		10	54	
								51487	PUMP/YH269.0	1	526	5.1	1.0		9	54	
51487	PUMP/YH269.0	526	526	1.020	-23.2	0.0	3.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.39		0.0	0.7	0.0	51485	HOBGOOD269.0	1	526	-5.1	-1.0		9	54	
								51489	MIDAMR2	69.0	1	526	1.6	0.3		3	54
51489	MIDAMR2	69.0	526	1.019	-23.3	0.0	1.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.33		0.0	0.5	0.0	51487	PUMP/YH269.0	1	526	-1.6	-0.4		3	54	
								51493	WHITHAR269.0	1	526	0.2	-0.1		0	54	
51493	WHITHAR269.0	526	526	1.019	-23.3	0.0	0.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.33		0.0	-0.1	0.0	51489	MIDAMR2	69.0	1	526	-0.2	0.1		0	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51495	COUNTL2	69.0 526	0.981	-33.3	0.0	13.3	0.0	51497	SP-ABRN269.0	1	526	-13.3	-0.8			33	41
		265 67.68			0.0	0.8	0.0										
51497	SP-ABRN269.0	526 265	0.990	-32.5	0.0	18.8	0.0	51495	COUNTL2	69.0 1	526	13.4	0.9			33	41
		265 68.28			0.0	12.9	0.0	51531	TUCO2	69.0 1	526	-32.3	-13.8			66	54
51499	HALECN2	69.0 526	1.012	-31.9	0.0	4.4	0.0	51501	LH-HALC269.0	1	526	3.5	1.1			7	54
		265 69.84			0.0	-0.5	0.0	51531	TUCO2	69.0 1	526	-7.9	-0.6			14	54
51501	LH-HALC269.0	526 265	1.012	-31.9	0.0	3.5	0.0	51499	HALECN2	69.0 1	526	-3.5	-1.1			7	54
		265 69.83			0.0	1.1	0.0										
51513	IRICK2	69.0 526	1.029	-33.2	0.0	1.7	0.0	51367	LH-AIKN269.0	1	526	4.6	3.3			10	54
		265 71.03			0.0	0.1	0.0	51515	BARWISE269.0	1	526	-6.3	-3.4			13	54
51515	BARWISE269.0	526 265	1.033	-33.0	0.0	2.4	0.0	51513	IRICK2	69.0 1	526	6.3	3.3			13	54
		265 71.31			0.0	1.5	0.0	51517	FLOYD2	69.0 1	526	-8.8	-4.8			18	54
51517	FLOYD2	69.0 526	1.039	-32.8	0.0	0.0	0.0	51515	BARWISE269.0	1	526	8.8	4.8			18	54
		265 71.69			0.0	0.0	-9.1	51518	FLOYD3	115 1	526	-18.0	-4.0	1.062RG		44	40
								51518	FLOYD3	115 2	526	-22.0	-4.7	1.062RG		54	40
								51521	FLYDAT2	69.0 1	526	26.3	11.0			51	54
								51527	LH-HARM269.0	1	526	5.0	2.0			10	54
51518	FLOYD3	115 526	0.993	-29.9	0.0	0.0	0.0	51360	COX3	115 1	526	-10.2	5.7			10	112
		265 114.2			0.0	0.0	0.0	51517	FLOYD2	69.0 1	526	18.1	5.0	1.062UN		47	40
								51517	FLOYD2	69.0 2	526	22.1	5.9	1.062UN		58	40
								51559	FLOYDT3	115 1	526	-30.0	-16.5			24	146
51521	FLYDAT2	69.0 526	1.039	-32.8	0.0	0.0	0.0	50501	MU-FLDY269.0	1	526	1.9	1.1			5	41
		265 71.68			0.0	0.0	0.0	51517	FLOYD2	69.0 1	526	-26.3	-11.0			51	54
								51523	SFLOYD2	69.0 1	526	24.4	9.9			47	54
51523	SFLOYD2	69.0 526	1.004	-34.5	0.0	4.6	0.0	51521	FLYDAT2	69.0 1	526	-23.8	-9.1			47	54
		265 69.26			0.0	1.0	0.0	51525	LH-FLYD269.0	1	526	19.2	8.1			38	54
51525	LH-FLYD269.0	526 265	1.003	-34.6	0.0	19.2	0.0	51523	SFLOYD2	69.0 1	526	-19.2	-8.1			38	54
		265 69.24			0.0	8.1	0.0										
51527	LH-HARM269.0	526 265	1.038	-32.9	0.0	5.0	0.0	51517	FLOYD2	69.0 1	526	-5.0	-2.0			10	54
		265 71.59			0.0	2.0	0.0										
51531	TUCO2	69.0 526	1.023	-31.0	0.0	7.1	0.0	51497	SP-ABRN269.0	1	526	32.9	15.0			66	54
		265 70.56			0.0	0.7	0.0	51499	HALECN2	69.0 1	526	8.0	0.3			14	54
								51532	TUCO3	115 1	526	-43.6	-12.5	1.015RG		53	84
								51532	TUCO3	115 2	526	-43.7	-12.5	1.015RG		53	84
								51539	LH-WI&E269.0	1	526	17.1	3.9			32	54
								51551	SP-NDE2	69.0 1	526	22.1	5.0			41	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51532	TUCO3	115 526	1.030	-27.4	0.0	0.0	0.0	51402	HALECO3	115	1 526	-24.3	21.7			35	90
		265 118.4			0.0	0.0	0.0	51531	TUCO2	69.0	1 526	43.6	15.5	1.015UN		54	84
								51531	TUCO2	69.0	2 526	43.8	15.5	1.015UN		54	84
								51533	TUCO6	230	1 526	-143.7	-61.5	1.103RG		60	252
								51559	FLOYDT3	115	1 526	35.1	14.4			25	146
								51616	STANTN3	115	1 526	42.1	-3.1			23	179
								51688	LUBE3	115	1 526	3.4	-2.6			2	179
51533	TUCO6	230 526	0.971	-23.0	0.0	0.0	0.0	51403	HALECO6	230	1 526	6.1	38.8			9	452
		265 223.3			0.0	0.0	0.0	51435	TOLKE6	230	1 526	-157.0	-10.4			36	452
								51532	TUCO3	115	1 526	144.0	75.4	1.103UN		66	252
								51534	TUCO7	345	1 526	-78.9	-76.2	1.000LK		20	560
								51647	CARLISL6	230	1 526	96.6	19.1			22	452
								51699	JONES6	230	1 526	-10.9	-46.7			11	452
51534	TUCO7	345 526	0.984	-22.2	0.0	0.0	0.0	51533	TUCO6	230	1 526	78.9	78.4	1.000UN		20	560
		265 339.6			0.0	0.0	0.0	54119	O.K.U.-7	345	1 520	-78.9	-78.4			11	1051
51539	LH-WI&E269.0	526 526	1.002	-32.4	0.0	3.5	0.0	51531	TUCO2	69.0	1 526	-16.9	-3.6			32	54
		265 69.13			0.0	0.8	0.0	51541	SP-BECT269.0	1 526	13.4	2.9			25	54	
51541	SP-BECT269.0	526 526	0.998	-32.6	0.0	7.3	0.0	51539	LH-WI&E269.0	1 526	-13.4	-2.9			25	54	
		265 68.88			0.0	1.7	0.0	51543	ALLMON2	69.0	1 526	6.1	1.2			12	54
51543	ALLMON2	69.0 526	0.994	-32.9	0.0	2.7	0.0	51541	SP-BECT269.0	1 526	-6.1	-1.3			12	54	
		265 68.60			0.0	0.4	0.0	51545	LH-PTRS269.0	1 526	3.4	0.9			6	54	
51545	LH-PTRS269.0	526 526	0.994	-32.9	0.0	3.4	0.0	51543	ALLMON2	69.0	1 526	-3.4	-0.9			6	54
		265 68.60			0.0	0.9	0.0										
51551	SP-NDE2	69.0 526	1.002	-32.4	0.0	4.7	0.0	51531	TUCO2	69.0	1 526	-21.8	-4.5			41	54
		265 69.12			0.0	1.3	0.0	51553	WHTE&MN269.0	1 526	17.1	3.3			32	54	
51553	WHTE&MN269.0	526 526	0.993	-33.0	0.0	3.0	0.0	51551	SP-NDE2	69.0	1 526	-17.0	-3.2			32	54
		265 68.52			0.0	0.7	0.0	51555	SP-SHLW269.0	1 526	14.0	2.4			26	54	
51555	SP-SHLW269.0	526 526	0.988	-33.4	0.0	9.6	0.0	51553	WHTE&MN269.0	1 526	-13.9	-2.4			26	54	
		265 68.16			0.0	3.5	0.0	51611	SW67872	69.0	1 526	4.3	-1.1			8	54
51557	SP-ACUF269.0	526 526	0.964	-35.0	0.0	8.4	0.0	51629	VICKER2	69.0	1 526	-8.4	-2.5			17	54
		265 66.55			0.0	2.5	0.0										
51559	FLOYDT3	115 526	1.002	-29.4	0.0	0.0	0.0	51518	FLOYD3	115	1 526	30.2	16.6			24	146
		265 115.2			0.0	0.0	0.0	51532	TUCO3	115	1 526	-34.6	-14.3			26	146
								51564	CROSBY3	115	1 526	4.5	-2.3			7	69
51563	CROSBY2	69.0 526	1.040	-34.7	0.0	3.8	0.0	51564	CROSBY3	115	1 526	-29.6	-7.0	1.069RG		73	40
		265 71.74			0.0	1.3	0.0	51567	SP-CROS269.0	1 526	25.8	5.7			47	54	

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA									LINE DATA								
FROM BUS	NAME	AREA	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
51603	COBLE2	69.0	526	1.008	-30.5	0.0	4.3	0.0	-----								
		265	69.53		0.0	0.3	0.0	51597	HOCKLEY2	69.0	1	526	-9.3	-3.3		18	54
								51601	LC-PETT2	69.0	1	526	5.0	3.0		11	54
51605	LEVELLN2	69.0	526	1.015	-30.1	0.0	15.5	0.0	-----								
		265	70.05		0.0	5.5	0.0	51597	HOCKLEY2	69.0	1	526	-30.0	-9.1		57	54
								51607	ELEVEL2	69.0	1	526	14.5	3.6		27	54
51607	ELEVEL2	69.0	526	1.013	-30.3	0.0	14.5	0.0	-----								
		265	69.87		0.0	3.6	0.0	51605	LEVELLN2	69.0	1	526	-14.5	-3.6		27	54
51611	SW67872	69.0	526	0.987	-33.7	0.0	0.0	0.0	-----								
		265	68.09		0.0	0.0	0.0	51555	SP-SHLW2	69.0	1	526	-4.3	1.0		8	54
								51621	SW67462	69.0	1	526	4.3	-1.0		8	54
51613	STANTN2	69.0	526	0.994	-33.4	0.0	4.7	0.0	-----								
		265	68.59		0.0	-0.3	0.0	51617	SW67862	69.0	1	526	-4.7	0.3		9	54
51616	STANTN3	115	526	1.020	-29.6	0.0	25.0	0.0	-----								
		265	117.3		0.0	3.8	0.0	51532	TUCO3	115	1	526	-41.6	2.9		23	179
								51642	INDIANA3	115	1	526	16.6	-6.7		10	179
51617	SW67862	69.0	526	0.996	-33.2	0.0	0.0	0.0	-----								
		265	68.71		0.0	0.0	0.0	51613	STANTN2	69.0	1	526	4.8	-0.4		9	54
								51621	SW67462	69.0	1	526	23.3	8.9		46	54
								51685	PLANTRS2	69.0	1	526	-28.1	-8.5		55	54
51621	SW67462	69.0	526	0.987	-33.7	0.0	0.0	0.0	-----								
		265	68.09		0.0	0.0	0.0	51611	SW67872	69.0	1	526	-4.3	1.0		8	54
								51617	SW67862	69.0	1	526	-23.2	-8.7		46	54
								51623	SP-HETL2	69.0	1	526	27.5	7.6		54	54
51623	SP-HETL2	69.0	526	0.983	-33.9	0.0	10.5	0.0	-----								
		265	67.82		0.0	1.4	0.0	51621	SW67462	69.0	1	526	-27.4	-7.5		54	54
								51627	SP-IDAL2	69.0	1	526	16.9	6.1		34	54
51625	SP-ERSK3	115	526	1.025	-29.3	0.0	5.6	0.0	-----								
		265	117.9		0.0	2.0	0.0	51642	INDIANA3	115	1	526	32.2	11.8		19	179
								51646	CARLISL3	115	1	526	-37.8	-13.8		22	179
51627	SP-IDAL2	69.0	526	0.968	-34.8	0.0	8.4	0.0	-----								
		265	66.76		0.0	3.4	0.0	51623	SP-HETL2	69.0	1	526	-16.8	-5.9		34	54
								51629	VICKER2	69.0	1	526	8.4	2.4		17	54
51629	VICKER2	69.0	526	0.966	-34.9	0.0	0.0	0.0	-----								
		265	66.65		0.0	0.0	0.0	51557	SP-ACUF2	69.0	1	526	8.4	2.5		17	54
								51627	SP-IDAL2	69.0	1	526	-8.4	-2.5		17	54
51630	VICKER3	115	526	1.017	-28.6	0.0	7.2	0.0	-----								
		265	117.0		0.0	1.3	0.0	51564	CROSBY3	115	1	526	25.4	10.3		24	112
								51688	LUBE3	115	1	526	-32.7	-11.6		30	112
51631	SP-CRLS2	69.0	526	1.003	-33.3	0.0	11.0	0.0	-----								
		265	69.22		0.0	4.0	0.0	51645	CARLISL2	69.0	1	526	-11.0	-4.0		22	54
51642	INDIANA3	115	526	1.020	-29.7	0.0	48.7	0.0	-----								
		265	117.3		0.0	5.4	0.0	51616	STANTN3	115	1	526	-16.6	6.5		10	179
								51625	SP-ERSK3	115	1	526	-32.1	-12.0		19	179

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51645	CARLISL269.0	526 265	1.010	-33.0	0.0	0.0	0.0	51631	SP-CRLS269.0	1	526	11.1	4.0			22	54
			69.69		0.0	0.0	-14.7	51646	CARLISL3	115	1	526	-23.9	9.3	0.965RG	58	44
								51655	SW68782	69.0	1	526	12.8	1.4		24	54
51646	CARLISL3	115 265	1.027	-29.2	0.0	22.2	0.0	51625	SP-ERSK3	115	1	526	37.8	13.8		22	179
			118.1		0.0	3.1	-30.4	51645	CARLISL269.0	1	526	23.9	-7.6	0.965UN	56	44	
								51647	CARLISL6	230	1	526	-82.9	4.1	1.075RG	48	168
								51652	DOUD3	115	1	526	-38.2	8.5		26	146
								51658	MURPHY3	115	1	526	37.1	8.5		25	146
51647	CARLISL6	230 265	0.956	-25.3	0.0	0.0	0.0	50507	LP-MLWK6	230	1	526	12.9	20.2		6	452
			219.9		0.0	0.0	0.0	51533	TUCO6	230	1	526	-96.0	-21.9		23	452
								51646	CARLISL3	115	1	526	83.1	1.6	1.075UN	52	168
51652	DOUD3	115 265	1.027	-28.9	0.0	41.6	0.0	51646	CARLISL3	115	1	526	38.2	-8.5		26	146
			118.1		0.0	2.7	0.0	51762	WOLFRTH3	115	1	526	-79.8	5.7		70	112
51655	SW68782	69.0 265	1.005	-33.3	0.0	0.0	0.0	51645	CARLISL269.0	1	526	-12.7	-1.4		24	54	
			69.38		0.0	0.0	0.0	51667	BATTNN2	69.0	1	526	12.7	1.4		24	54
51658	MURPHY3	115 265	1.023	-29.6	0.0	23.3	0.0	51646	CARLISL3	115	1	526	-37.0	-8.6		25	146
			117.6		0.0	-0.1	0.0	51674	SP-QUAK3	115	1	526	13.8	8.7		11	146
51661	IVORYT2	69.0 265	1.036	-31.2	0.0	0.0	0.0	51669	BATTNS2	69.0	1	526	15.6	1.3		28	54
			71.46		0.0	0.0	0.0	51679	LUBS2	69.0	1	526	-15.6	-1.3		28	54
51664	ALLEN3	115 265	1.019	-29.7	0.0	45.5	0.0	51672	WHEELLOC3	115	1	526	19.3	2.6		13	146
			117.2		0.0	4.9	0.0	51674	SP-QUAK3	115	1	526	24.0	5.0		16	146
								51680	LUBS3	115	1	526	-88.8	-12.5		60	146
51667	BATTNN2	69.0 265	0.999	-33.9	0.0	12.7	0.0	51655	SW68782	69.0	1	526	-12.7	-1.4		24	54
			68.94		0.0	1.4	0.0										
51669	BATTNS2	69.0 265	1.027	-32.0	0.0	15.5	0.0	51661	IVORYT2	69.0	1	526	-15.5	-1.2		28	54
			70.90		0.0	1.2	0.0										
51672	WHEELLOC3	115 265	1.018	-29.8	0.0	19.3	0.0	51664	ALLEN3	115	1	526	-19.3	-2.7		13	146
			117.1		0.0	2.7	0.0										
51674	SP-QUAK3	115 265	1.017	-29.9	0.0	37.7	0.0	51658	MURPHY3	115	1	526	-13.7	-9.1		11	146
			117.0		0.0	14.1	0.0	51664	ALLEN3	115	1	526	-24.0	-5.0		17	146
51675	ACCO2	69.0 265	1.032	-31.5	0.0	9.1	0.0	51677	IVORY2	69.0	1	526	-9.1	-0.3		16	54
			71.24		0.0	0.3	0.0										
51677	IVORY2	69.0 265	1.035	-31.3	0.0	13.3	0.0	51675	ACCO2	69.0	1	526	9.1	0.3		16	54
			71.39		0.0	2.3	0.0	51679	LUBS2	69.0	1	526	-22.4	-2.6		40	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51679	LUBS2	69.0 526 265	1.037 71.58	-31.1	0.0 0.0	0.0 0.0	0.0 0.0	51661	IVORYT2	69.0 1	526	15.6	1.3			28	54
								51677	IVORY2	69.0 1	526	22.5	2.6			40	54
								51680	LUBS3	115 1	526	-38.1	-3.9	1.013RG		44	84
51680	LUBS3	115 526 265	1.033 118.8	-28.0	0.0 0.0	0.0 0.0	0.0 0.0	51664	ALLEN3	115 1	526	89.7	14.8			60	146
								51679	LUBS2	69.0 1	526	38.1	6.0	1.013UN		44	84
								51681	LUBS6	230 1	526	-157.2	-43.2	1.077RG		63	252
								51688	LUBE3	115 1	526	-12.0	10.5			11	146
								51786	SP-WDRW3	115 1	526	41.5	11.8			29	146
51681	LUBS6	230 526 265	0.986 226.8	-23.3	0.0 0.0	0.0 0.0	0.0 0.0	51680	LUBS3	115 1	526	157.5	57.5	1.077UN		67	252
								51699	JONES6	230 1	526	-100.1	-44.6			25	452
								51699	JONES6	230 2	526	-100.1	-44.6			25	452
								51763	WOLFRTH6	230 1	526	42.6	31.7			12	452
51685	PLANTRS2	269.0 526 265	1.003 69.20	-32.8	0.0 0.0	3.9 -0.6	0.0 0.0	51617	SW67862	69.0 1	526	28.2	8.7			55	54
								51687	LUBE2	69.0 1	526	-32.1	-8.1			61	54
51687	LUBE2	69.0 526 265	1.010 69.66	-32.4	0.0 0.0	0.0 0.0	0.0 0.0	51685	PLANTRS2	269.0 1	526	32.3	8.3			61	54
								51688	LUBE3	115 1	526	-29.0	-5.3	1.002RG		66	44
								51688	LUBE3	115 2	526	-29.7	-5.2	1.002RG		75	40
								51691	CLUTTER2	69.0 1	526	11.2	1.5			21	54
								51769	LEWTER2	69.0 1	526	15.2	0.7			28	54
51688	LUBE3	115 526 265	1.030 118.5	-27.7	0.0 0.0	0.0 0.0	0.0 0.0	51532	TUCO3	115 1	526	-3.4	0.4			2	179
								51630	VICKER3	115 1	526	32.9	11.6			30	112
								51680	LUBS3	115 1	526	12.1	-11.0			11	146
								51687	LUBE2	69.0 1	526	29.1	7.8	1.002UN		67	44
								51687	LUBE2	69.0 2	526	29.8	7.8	1.002UN		75	40
								51689	LUBE6	230 1	526	-100.4	-16.6	1.064RG		39	252
51689	LUBE6	230 526 265	0.985 226.5	-23.4	0.0 0.0	0.0 0.0	0.0 0.0	50527	LP-ETAP2	230 1	526	9.6	25.4			6	452
								51688	LUBE3	115 1	526	100.6	24.4	1.064UN		42	252
								51699	JONES6	230 1	526	-110.2	-49.8			27	452
51691	CLUTTER2	269.0 526 265	1.006 69.42	-32.6	0.0 0.0	11.2 1.5	0.0 0.0	51687	LUBE2	69.0 1	526	-11.2	-1.5			21	54
51699	JONES6	230 526 265	0.991 227.9	-22.8	0.0 0.0	0.0 0.0	0.0 0.0	50521	LP-HOLL6	230 1	526	19.1	10.5			5	452
								51533	TUCO6	230 1	526	11.0	39.6			9	452
								51681	LUBS6	230 1	526	100.2	44.1			24	452
								51681	LUBS6	230 2	526	100.2	44.1			24	452
								51689	LUBE6	230 1	526	110.4	49.5			27	452
								51701	JONES11	22.0 1	526	-239.3	-94.3	1.000LK		94	275
								51702	JONES21	21.0 1	526	-239.3	-89.6	1.050LK		84	308
								51703	JONES31	21.0 1	526	0.0	0.0	1.050LK		0	308
								51811	GRASSLN6	230 1	526	137.7	-4.0			15	904
51701	JONES11	22.0 526 265	1.028 22.63	-18.4	240.0 116.9R	0.0 0.0	0.0 0.0	51699	JONES6	230 1	526	240.0	116.9	1.000UN		94	275

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
51702	JONES21	21.0 526	0.986	-17.4	240.0	0.0	0.0	51699	JONES6	230 1	526	240.0	116.9	1.050UN		88	308
		265 20.70			116.9R	0.0	0.0										
51703	JONES31	21.0 526	0.944	-22.8	0.0	0.0	0.0	51699	JONES6	230 1	526	0.0	0.0	1.050UN		0	308
		265 19.82			0.0	0.0	0.0										
51708	LEHMAN3	115 526	1.017	-26.5	0.0	7.2	0.0	51710	COCHRAN3	115 1	526	5.0	-3.0			4	146
		265 117.0			0.0	-0.7	0.0	51894	LG-PLAN3	115 1	526	-12.2	3.7			9	146
51709	COCHRAN2	69.0 526	1.034	-30.9	0.0	0.0	0.0	51583	WHITEFA2	69.0 1	526	18.9	6.3			54	36
		265 71.35			0.0	0.0	-15.4	51710	COCHRAN3	115 1	526	-25.7	1.0	1.018RG		57	44
								51710	COCHRAN3	115 2	526	-25.5	1.2	1.018RG		56	44
								51713	LG-SUND2	69.0 1	526	6.5	1.2			18	36
								51715	MIDDLET2	69.0 1	526	25.8	5.7			29	88
51710	COCHRAN3	115 526	1.018	-26.8	0.0	0.0	0.0	51708	LEHMAN3	115 1	526	-5.0	2.1			4	146
		265 117.1			0.0	0.0	0.0	51709	COCHRAN2	69.0 1	526	25.8	0.8	1.018UN		58	44
								51709	COCHRAN2	69.0 2	526	25.6	0.7	1.018UN		57	44
								51730	PACIFIC3	115 1	526	-46.4	-3.5			31	146
51713	LG-SUND2	69.0 526	1.023	-31.4	0.0	6.4	0.0	51709	COCHRAN2	69.0 1	526	-6.4	-1.4			18	36
		265 70.57			0.0	1.4	0.0										
51715	MIDDLET2	69.0 526	1.023	-32.1	0.0	6.4	0.0	51709	COCHRAN2	69.0 1	526	-25.7	-5.2			29	88
		265 70.56			0.0	-0.5	0.0	51717	MALLET2	69.0 1	526	19.3	5.7			22	88
51717	MALLET2	69.0 526	1.018	-32.5	0.0	1.8	0.0	51715	MIDDLET2	69.0 1	526	-19.2	-5.6			22	88
		265 70.23			0.0	-0.6	0.0	51721	TEXACO2	69.0 1	526	17.4	6.2			34	54
51721	TEXACO2	69.0 526	1.013	-32.8	0.0	11.2	0.0	51717	MALLET2	69.0 1	526	-17.4	-6.2			34	54
		265 69.92			0.0	4.8	0.0	51723	ZAVALLA2	69.0 1	526	6.2	1.4			7	88
51723	ZAVALLA2	69.0 526	1.010	-33.2	0.0	6.2	0.0	51721	TEXACO2	69.0 1	526	-6.2	-1.5			7	88
		265 69.68			0.0	1.5	0.0										
51725	SLAUGHT2	69.0 526	1.028	-31.4	0.0	0.1	0.0	51727	SLAUGT2	69.0 1	526	-0.1	-0.1			0	54
		265 70.94			0.0	0.1	0.0										
51727	SLAUGT2	69.0 526	1.028	-31.4	0.0	0.0	0.0	51725	SLAUGHT2	69.0 1	526	0.1	-0.1			0	54
		265 70.95			0.0	0.0	0.0	51755	LG-MEAD2	69.0 1	526	-0.1	0.1			0	54
51730	PACIFIC3	115 526	1.026	-25.7	0.0	10.2	0.0	51710	COCHRAN3	115 1	526	46.7	3.9			31	146
		265 118.0			0.0	0.4	0.0	51732	SUNDOWN3	115 1	526	-56.9	-4.3			38	146
51732	SUNDOWN3	115 526	1.028	-25.3	0.0	0.0	0.0	51598	HOCKLEY3	115 1	526	-1.0	17.2			11	146
		265 118.2			0.0	0.0	0.0	51730	PACIFIC3	115 1	526	57.0	4.5			38	146
								51733	SUNDOWN6	230 1	526	-54.0	-20.0	1.074RG		37	150
								51733	SUNDOWN6	230 2	526	-54.0	-20.0	1.074RG		37	150
								51736	AMOCOT3	115 1	526	51.9	18.2			37	146

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>											
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA		
51775	SP-SLAT269.0	526	0.999	-36.8	0.0	3.3	0.0	51777	SOUTHLN269.0	1	526	-3.3	-1.7			7	54		
		265	68.95		0.0	1.7	0.0												
51777	SOUTHLN269.0	526	1.002	-36.7	0.0	0.6	0.0	51775	SP-SLAT269.0	1	526	3.3	1.6			7	54		
		265	69.13		0.0	0.2	0.0	51779	LG-HCKB269.0	1	526	-3.8	-1.8			8	54		
51779	LG-HCKB269.0	526	1.005	-36.6	0.0	3.9	0.0	51777	SOUTHLN269.0	1	526	3.8	1.7			8	54		
		265	69.35		0.0	2.0	0.0	51783	DIEKEMP269.0	1	526	-7.8	-3.7			16	54		
51783	DIEKEMP269.0	526	1.020	-36.0	0.0	1.1	0.0	51759	LG-TWD2	69.0	1	526	1.0	0.1		2	54		
		265	70.37		0.0	0.5	0.0	51779	LG-HCKB269.0	1	526	7.8	3.6			16	54		
								51815	GRAHAM2	69.0	1	526	-10.0	-4.1		20	54		
51785	SP-WDRW269.0	526	1.037	-28.7	0.0	0.0	0.0	51771	SP-POSY269.0	1	526	0.0	-0.1			0	54		
		265	71.56		0.0	0.0	0.0	51786	SP-WDRW3	115	1	526	0.0	0.1	1.011RG		0	50	
51786	SP-WDRW3	115	526	1.025	-28.7	0.0	30.2	0.0	51680	LUBS3	115	1	526	-41.3	-11.6		29	146	
		265	117.9		0.0	12.0	0.0	51785	SP-WDRW269.0	1	526	0.0	-0.1	1.011UN		0	50		
								51804	LYNNCO3	115	1	526	11.1	-0.2		7	146		
51791	YANCYT2	69.0	526	1.015	-32.9	0.0	0.0	0.0	51807	LG-CNTR269.0	1	526	-7.0	-0.3		13	54		
		265	70.02		0.0	0.0	0.0	0.0	51825	BG-YNT2	69.0	1	526	7.0	0.3		13	54	
51793	GARZA2	69.0	526	1.022	-35.9	0.0	14.7	0.0	51815	GRAHAM2	69.0	1	526	-14.7	-5.1		28	54	
		265	70.49		0.0	5.1	0.0	0.0											
51797	LG-LKVW269.0	526	0.990	-33.1	0.0	7.2	0.0	51841	OZMAH2	69.0	1	526	-7.2	-2.3		14	54		
		265	68.30		0.0	2.3	0.0												
51799	LG-NWM2	69.0	526	1.004	-34.2	0.0	9.7	0.0	51801	LG-NH&W269.0	1	526	-9.7	-3.8		19	54		
		265	69.27		0.0	3.8	0.0												
51801	LG-NH&W269.0	526	1.019	-33.4	0.0	9.3	0.0	51799	LG-NWM2	69.0	1	526	9.8	3.7		19	54		
		265	70.35		0.0	3.5	0.0	51803	LYNNCO2	69.0	1	526	-19.1	-7.1		37	54		
51803	LYNNCO2	69.0	526	1.032	-32.8	0.0	6.5	0.0	51801	LG-NH&W269.0	1	526	19.3	7.3		37	54		
		265	71.18		0.0	-0.7	0.0	51804	LYNNCO3	115	1	526	-21.7	-15.3	1.062RG		64	40	
								51827	LG-DRAW269.0	1	526	-4.0	8.7			17	54		
51804	LYNNCO3	115	526	1.021	-29.3	0.0	0.0	0.0	51786	SP-WDRW3	115	1	526	-11.1	-1.1		7	146	
		265	117.4		0.0	0.0	0.0	0.0	51803	LYNNCO2	69.0	1	526	21.8	17.5	1.062UN		68	40
								0.0	51810	GRASSLN3	115	1	526	-10.8	-16.4		13	146	
51807	LG-CNTR269.0	526	1.023	-32.2	0.0	3.6	0.0	51791	YANCYT2	69.0	1	526	7.1	0.1		13	54		
		265	70.56		0.0	1.1	0.0	51809	GRASSLN269.0	1	526	-2.5	1.2			6	41		
								0.0	51827	LG-DRAW269.0	1	526	-8.2	-2.3		15	54		

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>											
FROM	AREA	VOLT	GEN		LOAD		SHUNT	TO	TRANSFORMER		RATING A								
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA		
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====		
51809	GRASSLN269.0	526	1.023	-32.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	70.56		0.0	0.0	0.0	51807	LG-CNTR269.0	1	526	2.5	-1.3			7	41		
								51810	GRASSLN3	115	1	526	-17.8	6.2	0.979RG		46	40	
								51827	LG-DRAW269.0	1	526	15.4	-4.9			24	67		
51810	GRASSLN3	115	526	1.030	-29.2	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	118.5		0.0	0.0	0.0	51804	LYNNCO3	115	1	526	10.8	16.0			13	146	
								51809	GRASSLN269.0	1	526	17.9	-5.3	0.979UN			45	40	
								51811	GRASSLN6	230	1	526	-59.2	-9.9	1.059RG			52	112
								51816	GRAHAM3	115	1	526	30.5	-0.8			20	146	
51811	GRASSLN6	230	526	0.988	-25.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	227.1		0.0	0.0	0.0	51699	JONES6	230	1	526	-137.1	0.2			15	904	
								51810	GRASSLN3	115	1	526	59.3	14.1	1.059UN			55	112
								51861	BORDEN6	230	1	526	77.8	-14.4			9	904	
51815	GRAHAM2	69.0	526	1.024	-35.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	70.65		0.0	0.0	0.0	51783	DIEKEMP269.0	1	526	10.0	4.1				20	54	
								51793	GARZA2	69.0	1	526	14.7	5.1				28	54
								51816	GRAHAM3	115	1	526	-30.1	2.9	1.001RG			74	40
								51857	BG-JST2	69.0	1	526	5.4	-0.9			7	79	
51816	GRAHAM3	115	526	1.022	-30.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	117.5		0.0	0.0	0.0	51810	GRASSLN3	115	1	526	-30.2	0.4				20	146
								51815	GRAHAM2	69.0	1	526	30.2	-0.4	1.001UN			74	40
51819	YANCY2	69.0	526	1.013	-33.0	0.0	1.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	69.92		0.0	1.1	0.0	51825	BG-YNT2	69.0	1	526	-1.1	-1.1				3	54
51822	LG-UNIO269.0	526	0.995	-32.8	0.0	3.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	68.63		0.0	1.4	0.0	51833	LG-BRWN269.0	1	526	-10.7	-4.1				28	41	
								51835	BROWNFI269.0	1	526	0.3	0.6				1	54	
								51841	OZMAH2	69.0	1	526	7.2	2.1				14	54
51825	BG-YNT2	69.0	526	1.014	-33.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	69.95		0.0	0.0	0.0	51791	YANCYT2	69.0	1	526	-7.0	-0.3				13	54
								51819	YANCY2	69.0	1	526	1.1	1.0				3	54
								51851	BG-GARZ269.0	1	526	5.9	-0.7				7	79	
51827	LG-DRAW269.0	526	1.023	-32.2	0.0	3.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	70.56		0.0	1.5	0.0	51803	LYNNCO2	69.0	1	526	4.0	-8.8				17	54
								51807	LG-CNTR269.0	1	526	8.2	2.3				15	54	
								51809	GRASSLN269.0	1	526	-15.4	4.9				24	67	
51829	TERRYC2	69.0	526	1.034	-30.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	71.37		0.0	0.0	0.0	51757	LG-DCW2	69.0	1	526	13.1	1.9				24	54
								51830	TERRYC3	115	1	526	-24.6	-8.5	1.055RG			63	40
								51830	TERRYC3	115	2	526	-24.9	-8.5	1.055RG			64	40
								51833	LG-BRWN269.0	1	526	36.5	15.1				71	54	
51830	TERRYC3	115	526	1.011	-26.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----		
		265	116.2		0.0	0.0	0.0	51752	LG-CLAU3	115	1	526	-18.8	-6.0				13	146
								51762	WOLFRTH3	115	1	526	1.1	-26.6				15	179
								51829	TERRYC2	69.0	1	526	24.7	10.5	1.055UN			66	40
								51829	TERRYC2	69.0	2	526	25.0	10.5	1.055UN			67	40
								51848	PRENTIC3	115	1	526	-6.6	1.6				5	146
								51960	DNVRN3	115	1	526	-28.6	9.0				17	179
								52002	SULPHUR3	115	1	526	3.2	1.0				2	146

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51833	LG-BRWN	269.0 526	1.000	-32.5	0.0	8.6	0.0	51822	LG-UNIO	269.0 1	526	10.7	4.1			28	41
		265 68.99			0.0	3.4	0.0	51829	TERRYC2	69.0 1	526	-35.7	-13.7			71	54
								51835	BROWNFI	269.0 1	526	16.3	6.2			32	54
51835	BROWNFI	269.0 526	0.995	-32.8	0.0	1.2	0.0	51822	LG-UNIO	269.0 1	526	-0.3	-0.6			1	54
		265 68.63			0.0	0.2	0.0	51833	LG-BRWN	269.0 1	526	-16.3	-6.1			32	54
								51837	BRNFIT2	69.0 1	526	15.4	6.6			31	54
								51841	OZMAH2	69.0 1	526	0.0	-0.1			0	41
51837	BRNFIT2	69.0 526	0.992	-32.9	0.0	0.0	0.0	50528	MU-BRNF	269.0 1	526	6.8	4.7			20	41
		265 68.43			0.0	0.0	0.0	51835	BROWNFI	269.0 1	526	-15.4	-6.6			31	54
								51843	GDPASTR	269.0 1	526	8.6	1.9			16	54
51841	OZMAH2	69.0 526	0.995	-32.8	0.0	0.0	0.0	51797	LG-LKVV	269.0 1	526	7.2	2.2			14	54
		265 68.63			0.0	0.0	0.0	51822	LG-UNIO	269.0 1	526	-7.2	-2.1			14	54
								51835	BROWNFI	269.0 1	526	0.0	-0.1			0	41
51843	GDPASTR	269.0 526	0.989	-33.2	0.0	0.2	0.0	51837	BRNFIT2	69.0 1	526	-8.6	-1.9			16	54
		265 68.22			0.0	0.0	0.0	51909	LG-JSM2	69.0 1	526	8.3	1.9			21	41
51845	AMOCWA6	230 526	1.001	-21.2	0.0	11.0	0.0	51891	YOAKUM6	230 1	526	13.6	3.6			3	452
		265 230.1			0.0	0.0	0.0	51969	MUSTANG6	230 1	526	-24.6	-3.6			5	452
51848	PRENTIC3	115 526	1.011	-26.4	0.0	15.7	0.0	51830	TERRYC3	115 1	526	6.6	-2.7			5	146
		265 116.2			0.0	4.1	0.0	51890	YOAKUM3	115 1	526	-22.4	-1.4			15	146
51851	BG-GARZ	269.0 526	1.010	-33.8	0.0	2.9	0.0	51825	BG-YNT2	69.0 1	526	-5.9	0.3			7	79
		265 69.68			0.0	0.0	0.0	51853	BG-JUST	269.0 1	526	2.9	-0.3			4	79
51853	BG-JUST	269.0 526	1.008	-34.1	0.0	2.9	0.0	51851	BG-GARZ	269.0 1	526	-2.9	0.0			4	79
		265 69.56			0.0	0.0	0.0										
51855	BG-FLUV	269.0 526	1.016	-37.5	0.0	5.4	0.0	51857	BG-JST2	69.0 1	526	-5.4	0.0			7	79
		265 70.10			0.0	0.0	0.0										
51857	BG-JST2	69.0 526	1.019	-36.9	0.0	0.0	0.0	51815	GRAHAM2	69.0 1	526	-5.4	0.3			7	79
		265 70.33			0.0	0.0	0.0	51855	BG-FLUV	269.0 1	526	5.4	-0.3			7	79
51861	BORDEN6	230 526	0.988	-27.6	0.0	0.0	0.0	50534	CR-VEAL	4 138	1 526	77.5	-1.8	1.050UN		52	150
		265 227.2			0.0	0.0	0.0	51811	GRASSLN6	230 1	526	-77.5	1.8			9	904

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52071	CHAVES2	69.0 267	526 71.22	1.032 -35.8	0.0 0.0	0.0 0.0	0.0 -8.6	52072	CHAVES3	115	1	526	-35.6	-0.7	0.997RG	78	44
								52079	PRICE2	69.0	1	526	35.6	9.4		66	54
52072	CHAVES3	115 267	526 120.4	1.047 -30.5	0.0 0.0	0.0 0.0	0.0	52071	CHAVES2	69.0	1	526	35.7	4.1	0.997UN	78	44
								52073	CHAVES6	230	1	526	-83.8	-15.0	1.112RG	54	150
								52073	CHAVES6	230	2	526	-83.8	-15.0	1.112RG	54	150
								52078	URTON3	115	1	526	82.3	17.9		55	146
								52088	SAMSON3	115	1	526	49.7	8.0		33	146
52073	CHAVES6	230 267	526 220.2	0.957 -26.3	0.0 0.0	0.0 0.0	0.0	52072	CHAVES3	115	1	526	84.0	21.4	1.112UN	60	150
								52072	CHAVES3	115	2	526	84.0	21.4	1.112UN	60	150
								52185	EDDYCO6	230	1	526	-24.0	-55.0		14	452
								99990	WINDFARM	230	1	526	-144.0	12.3		33	452
52078	URTON3	115 267	526 119.4	1.038 -31.3	0.0 0.0	23.9 7.6	0.0	52072	CHAVES3	115	1	526	-81.9	-16.8		55	146
								52084	ROSWLC3	115	1	526	58.0	9.2		39	146
52079	PRICE2	69.0 267	526 69.76	1.011 -37.2	0.0 0.0	11.2 1.7	0.0	52071	CHAVES2	69.0	1	526	-35.0	-8.5		66	54
								52081	CV-PINE2	69.0	1	526	23.8	6.8		60	41
52081	CV-PINE2	69.0 267	526 69.10	1.001 -37.8	0.0 0.0	5.8 1.9	0.0	52079	PRICE2	69.0	1	526	-23.7	-6.5		60	41
								52087	CAPITAN2	69.0	1	526	17.9	4.6		34	54
52084	ROSWLC3	115 267	526 118.9	1.034 -31.8	0.0 0.0	43.7 11.0	0.0	52078	URTON3	115	1	526	-57.8	-8.9		39	146
								52094	ROSWIN3	115	1	526	14.1	-2.1		9	146
52085	CAPITAN2	69.0 267	526 70.02	1.015 -36.3	0.0 0.0	0.0 0.0	0.0	52089	RIAC2	69.0	1	526	9.9	4.4		20	54
								52093	ROSWIN2	69.0	1	526	-9.9	-4.4		20	54
52087	CAPITAN2	69.0 267	526 68.35	0.991 -38.5	0.0 0.0	17.8 4.4	0.0	52081	CV-PINE2	69.0	1	526	-17.8	-4.4		34	54
52088	SAMSON3	115 267	526 119.2	1.037 -31.6	0.0 0.0	12.5 0.7	0.0	52072	CHAVES3	115	1	526	-49.3	-7.5		33	146
								52094	ROSWIN3	115	1	526	36.8	6.8		25	146
52089	RIAC2	69.0 267	526 69.44	1.006 -36.5	0.0 0.0	9.9 4.4	0.0	52085	CAPITAN2	69.0	1	526	-9.9	-4.4		20	54
52093	ROSWIN2	69.0 267	526 70.09	1.016 -36.2	0.0 0.0	0.0 0.0	0.0	52085	CAPITAN2	69.0	1	526	9.9	4.4		20	54
								52094	ROSWIN3	115	1	526	-28.3	12.2	0.957RG	76	40
								52097	RIACLN2	69.0	1	526	18.4	6.6		22	88
52094	ROSWIN3	115 267	526 118.8	1.033 -32.0	0.0 0.0	0.0 0.0	0.0	52084	ROSWLC3	115	1	526	-14.1	1.9		9	146
								52088	SAMSON3	115	1	526	-36.7	-6.8		25	146
								52093	ROSWIN2	69.0	1	526	28.4	-9.8	0.957UN	73	40
								52098	BRASHER3	115	1	526	19.6	4.2		22	90
								52104	TWEEDY3	115	1	526	2.9	10.5		6	179

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52097	RIACLN2	69.0 526	1.006	-36.9	0.0	0.0	0.0	52093	ROSWIN2	69.0 1	526	-18.3	-6.5			22	88
		267 69.45			0.0	0.0	0.0	52101	CV-ORH2	69.0 1	526	18.3	6.5			22	88
52098	BRASHER3	115 526	1.032	-32.1	0.0	19.5	0.0	52094	ROSWIN3	115 1	526	-19.5	-4.3			22	90
		267 118.7			0.0	4.3	0.0										
52101	CV-ORH2	69.0 526	0.995	-37.8	0.0	5.9	0.0	52097	RIACLN2	69.0 1	526	-18.2	-6.3			22	88
		267 68.63			0.0	2.2	0.0	52121	DEXTRT2	69.0 1	526	12.3	4.1			15	88
52104	TWEEDY3	115 526	1.032	-32.0	0.0	15.6	0.0	52094	ROSWIN3	115 1	526	-2.9	-10.8			6	179
		267 118.7			0.0	7.3	0.0	52184	EDDYCO3	115 1	526	-12.7	3.4			9	146
52121	DEXTRT2	69.0 526	0.989	-38.3	0.0	0.0	0.0	52101	CV-ORH2	69.0 1	526	-12.2	-4.1			15	88
		267 68.26			0.0	0.0	0.0	52123	CV-DEXT2	69.0 1	526	16.0	6.5			48	36
52123	CV-DEXT2	69.0 526	0.979	-38.4	0.0	7.1	0.0	52137	CV-HGRM2	69.0 1	526	-3.8	-2.4			5	88
		267 67.58			0.0	3.2	0.0	52121	DEXTRT2	69.0 1	526	-15.9	-6.4			49	36
52125	DEXTER2	69.0 526	0.974	-38.5	0.0	8.7	0.0	52125	DEXTER2	69.0 1	526	8.8	3.2			26	36
		267 67.22			0.0	3.2	0.0	52123	CV-DEXT2	69.0 1	526	-8.7	-3.2			27	36
52137	CV-HGRM2	69.0 526	0.991	-38.2	0.0	5.3	0.0	52121	DEXTRT2	69.0 1	526	3.8	2.3			5	88
		267 68.41			0.0	0.8	0.0	52147	CV-YOT2	69.0 1	526	-9.1	-3.1			11	88
52139	CV-LKAR2	69.0 526	1.002	-37.3	0.0	2.7	0.0	52141	CV-CTNW2	69.0 1	526	-13.6	-3.9			16	88
		267 69.11			0.0	0.4	0.0	52147	CV-YOT2	69.0 1	526	10.9	3.5			13	88
52141	CV-CTNW2	69.0 526	1.008	-36.8	0.0	4.0	0.0	52139	CV-LKAR2	69.0 1	526	13.7	3.9			16	88
		267 69.55			0.0	1.1	0.0	52143	COTTON2	69.0 1	526	2.2	0.4			4	54
52143	COTTON2	69.0 526	1.007	-36.8	0.0	2.2	0.0	52145	SMITH2	69.0 1	526	-19.9	-5.4			23	88
		267 69.50			0.0	0.4	0.0	52141	CV-CTNW2	69.0 1	526	-2.2	-0.4			4	54
52145	SMITH2	69.0 526	1.019	-35.8	0.0	5.1	0.0	52141	CV-CTNW2	69.0 1	526	20.0	5.6			23	88
		267 70.33			0.0	2.3	0.0	52153	ARTESIA2	69.0 1	526	-25.2	-7.9			29	88
52147	CV-YOT2	69.0 526	0.992	-38.1	0.0	0.0	0.0	52137	CV-HGRM2	69.0 1	526	9.1	3.1			11	88
		267 68.47			0.0	0.0	0.0	52139	CV-LKAR2	69.0 1	526	-10.8	-3.5			13	88
52149	CV-YO2	69.0 526	0.991	-38.2	0.0	1.8	0.0	52149	CV-YO2	69.0 1	526	1.8	0.4			3	54
		267 68.37			0.0	0.6	0.0	52147	CV-YOT2	69.0 1	526	-1.8	-0.6			3	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

BUS DATA								LINE DATA										
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA	
52153	ARTESIA	269.0 526	1.020	-35.7	0.0	0.0	0.0	52145	SMITH2	69.0	1	526	25.2	7.9		29	88	
		267 70.41			0.0	0.0	-10.9	52154	ARTESIA3	115	1	526	-24.2	-4.5	1.031RG	60	40	
								52154	ARTESIA3	115	2	526	-24.5	-4.9	1.031RG	61	40	
								52163	NAVAJ22	69.0	1	526	16.3	6.4		32	54	
								52171	CV-ARTE269.0	1	526	7.3	6.0		17	54		
52154	ARTESIA3	115 526	1.008	-31.8	0.0	0.0	0.0	52153	ARTESIA269.0	1	526	24.3	6.3	1.031UN	62	40		
		267 115.9			0.0	0.0	0.0	52153	ARTESIA269.0	2	526	24.5	6.7	1.031UN	63	40		
								52162	NAVAJ33	115	1	526	-48.9	-13.0		28	179	
52162	NAVAJ33	115 526	1.009	-31.7	0.0	14.4	0.0	52154	ARTESIA3	115	1	526	48.9	13.0		28	179	
		267 116.0			0.0	9.2	0.0	52166	NAVAJ43	115	1	526	-63.3	-22.2		37	179	
52163	NAVAJ22	69.0 526	1.019	-35.8	0.0	6.6	0.0	52153	ARTESIA269.0	1	526	-16.2	-6.4		32	54		
		267 70.31			0.0	3.8	0.0	52165	NAVAJR2	69.0	1	526	9.6	2.6		18	54	
52165	NAVAJR2	69.0 526	1.018	-35.8	0.0	5.4	0.0	52163	NAVAJ22	69.0	1	526	-9.6	-2.6		18	54	
		267 70.22			0.0	3.5	0.0	52169	ARTTOW2	69.0	1	526	4.2	-0.8		8	54	
52166	NAVAJ43	115 526	1.010	-31.6	0.0	1.1	0.0	52162	NAVAJ33	115	1	526	63.3	22.3		37	179	
		267 116.1			0.0	0.5	0.0	52184	EDDYCO3	115	1	526	-64.5	-22.8		46	146	
52169	ARTTOW2	69.0 526	1.018	-35.9	0.0	4.2	0.0	52165	NAVAJR2	69.0	1	526	-4.2	0.8		8	54	
		267 70.21			0.0	-0.8	0.0											
52171	CV-ARTE269.0	526	1.020	-35.7	0.0	10.9	0.0	52153	ARTESIA269.0	1	526	-7.3	-6.0		17	54		
		267 70.35			0.0	4.2	0.0	52173	ARTW2	69.0	1	526	-3.6	1.8		7	54	
52173	ARTW2	69.0 526	1.020	-35.7	0.0	5.1	0.0	52171	CV-ARTE269.0	1	526	3.6	-1.8		7	54		
		267 70.35			0.0	0.1	0.0	52175	ARTCC2	69.0	1	526	-8.7	1.7		16	54	
52175	ARTCC2	69.0 526	1.020	-35.5	0.0	9.9	0.0	52173	ARTW2	69.0	1	526	8.7	-1.7		16	54	
		267 70.41			0.0	2.5	0.0	52177	ARTSR2	69.0	1	526	-18.6	-0.7		34	54	
52177	ARTSR2	69.0 526	1.022	-35.4	0.0	6.3	0.0	52175	ARTCC2	69.0	1	526	18.6	0.8		34	54	
		267 70.51			0.0	2.4	0.0	52179	ATOKA2	69.0	1	526	-24.9	-3.1		28	88	
52179	ATOKA2	69.0 526	1.029	-34.5	0.0	0.0	0.0	52177	ARTSR2	69.0	1	526	25.0	3.4		28	88	
		267 70.98			0.0	0.0	0.0	52180	ATOKA3	115	1	526	-25.0	-3.4	1.016RG	61	40	
52180	ATOKA3	115 526	1.028	-30.7	0.0	0.0	0.0	52179	ATOKA2	69.0	1	526	25.1	5.2	1.016UN	62	40	
		267 118.2			0.0	0.0	0.0	52188	CV-DAYT3	115	1	526	-6.3	-1.7		4	146	
								52298	CV-IRIS3	115	1	526	-18.8	-3.4		13	146	
52184	EDDYCO3	115 526	1.030	-30.2	0.0	17.1	0.0	52104	TWEEDY3	115	1	526	12.8	-7.5		10	146	
		267 118.4			0.0	1.4	-15.3	52166	NAVAJ43	115	1	526	65.2	23.9		46	146	
								52185	EDDYCO6	230	1	526	-108.3	-18.4	1.050RG	64	168	
								52188	CV-DAYT3	115	1	526	10.6	1.9		7	146	
								52304	NCANALT3	115	1	526	2.7	13.9		8	179	

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>								<===== LINE DATA =====>										
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA	
52185	EDDYCO6	230	526	1.000	-25.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	230.0			15.8R	0.0	0.0	52073	CHAVES6	230	1	526	24.4	43.4		11	452
									52184	EDDYCO3	115	1	526	108.6	27.7	1.050UN	67	168
									52186	EDDYCO7	345	1	526	-143.8	-45.0	1.000LK	27	560
									52209	CUNNINH6	230	1	526	-74.5	3.1		17	452
									52293	7RIVER6	230	1	526	85.4	16.6		18	492
									59996	EPTNP-D6	230	1	999	0.0	-30.0		2	2000
52186	EDDYCO7	345	526	1.011	-23.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	348.7			0.0	0.0	0.0	51440	TOLK7	345	1	526	-143.8	-50.0		11	1355
									52185	EDDYCO6	230	1	526	143.8	50.0	1.000UN	27	560
52188	CV-DAYT3	115	526	1.028	-30.6	0.0	4.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	118.3			0.0	0.1	0.0	52180	ATOKA3	115	1	526	6.3	1.7		4	146
									52184	EDDYCO3	115	1	526	-10.6	-1.8		7	146
52204	LEACO3	115	526	1.027	-23.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	118.2			0.0	0.0	0.0	52205	LEACO6	230	1	526	-24.5	-15.0	1.031RG	17	168
									52354	LE-LVTN3	115	1	526	66.7	25.8		31	226
									52360	MADDOX3	115	1	526	-42.2	-10.8		19	226
52205	LEACO6	230	526	1.008	-22.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	231.9			0.0	0.0	0.0	51891	YOAKUM6	230	1	526	-35.0	12.3		8	452
									52204	LEACO3	115	1	526	24.5	15.6	1.031UN	17	168
									52209	CUNNINH6	230	1	526	-43.2	14.3		10	452
									52231	MIDLND-6	230	1	526	53.7	-42.3		7	904
52208	CUNNINH3	115	526	1.035	-23.5	0.0	0.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	119.0			0.0	0.0	0.0	52014	RUSSEL-3	115	1	526	6.0	6.8		6	146
									52209	CUNNINH6	230	1	526	-41.8	-42.0	1.069LK	34	168
									52211	CUNN11	13.8	1	526	-66.8	-15.8	1.025LK	74	90
									52215	CUNN31	22.0	1	526	-104.6	-11.0	1.025LK	68	150
									52240	PCA3	115	1	526	41.8	-10.6		29	146
									52358	SNANT3	115	1	526	73.8	29.8		58	132
									52360	MADDOX3	115	1	526	3.2	28.6		12	226
									52390	MILLIN3	115	1	526	48.0	16.1		37	132
									52428	MOMUMT3	115	1	526	40.1	-1.8		27	146
52209	CUNNINH6	230	526	1.002	-21.7	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	230.5			0.0	0.0	0.0	52185	EDDYCO6	230	1	526	75.3	-14.5		17	452
									52205	LEACO6	230	1	526	43.2	-14.2		10	452
									52208	CUNNINH3	115	1	526	41.9	44.8	1.069UN	36	168
									52212	CUNN21	20.0	1	526	-189.5	-12.7	0.975LK	79	241
									52214	CUNN41	22.0	1	526	-104.6	-20.5	1.000LK	71	150
									52253	POTJCT6	230	1	526	133.7	17.2		30	452
52211	CUNN11	13.8	526	1.036	-18.9	67.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	14.30			21.7R	0.0	0.0	52208	CUNNINH3	115	1	526	67.0	21.7	1.025UN	76	90
52212	CUNN21	20.0	526	1.042	-16.1	190.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	20.84			31.7R	0.0	0.0	52209	CUNNINH6	230	1	526	190.0	31.7	0.975UN	77	241
52214	CUNN41	22.0	526	1.031	-16.0	105.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	22.68			31.7R	0.0	0.0	52209	CUNNINH6	230	1	526	105.0	31.7	1.000UN	71	150
52215	CUNN31	22.0	526	1.029	-17.8	105.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		267	22.64			21.7R	0.0	0.0	52208	CUNNINH3	115	1	526	105.0	21.7	1.025UN	69	150

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
WIND GENERATION-184.8 MW @ .98PF 5-30-02
OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

BUS DATA									LINE DATA								
FROM BUS	NAME	AREA	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52261	NMPOTA2	69.0	526	0.992	-33.0	0.0	4.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	68.47		0.0	3.9	0.0	52249	LIVSTR2	69.0	1	526	2.1	-0.9		4	54
					0.0			52263	KERMAC2	69.0	1	526	-6.5	-3.0		13	54
52263	KERMAC2	69.0	526	0.995	-32.8	0.0	8.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	68.65		0.0	9.0	0.0	52251	POTJCT2	69.0	1	526	-15.2	-12.0		36	54
					0.0			52261	NMPOTA2	69.0	1	526	6.5	3.0		13	54
52265	CV-DG&I269.0	526	0.998	-36.1	0.0	26.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	68.83		0.0	4.3	0.0	52295	7RIVER2	69.0	1	526	-26.3	-4.3		49	54
52266	WIPP3	115	526	1.030	-29.5	0.0	3.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	118.5		0.0	2.2	-22.9	52268	SNDDUN3	115	1	526	-6.2	15.1		11	146
					0.0			52274	IMC#13	115	1	526	3.0	5.5		4	146
52268	SNDDUN3	115	526	1.024	-29.2	0.0	5.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	117.7		0.0	5.7	0.0	52266	WIPP3	115	1	526	6.3	-15.6		11	146
					0.0			52329	OCHOA3	115	1	526	-11.6	9.9		10	146
52269	MISCH22	69.0	526	1.020	-32.3	0.0	3.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.35		0.0	3.1	0.0	52251	POTJCT2	69.0	1	526	-26.2	-26.6		42	88
					0.0			52271	IMC#22	69.0	1	526	22.8	23.5		37	88
52271	IMC#22	69.0	526	1.017	-32.3	0.0	14.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.18		0.0	13.7	0.0	52269	MISCH22	69.0	1	526	-22.8	-23.5		37	88
					0.0			52275	UNITSA2	69.0	1	526	8.6	9.8		15	88
52274	IMC#13	115	526	1.025	-29.5	0.0	23.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	117.9		0.0	14.0	0.0	52252	POTJCT3	115	1	526	-20.6	-7.6		15	146
					0.0			52266	WIPP3	115	1	526	-3.0	-6.4		5	146
52275	UNITSA2	69.0	526	1.016	-32.4	0.0	0.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.11		0.0	0.6	0.0	52271	IMC#22	69.0	1	526	-8.6	-9.8		15	88
					0.0			52279	IMC#32	69.0	1	526	8.0	9.2		22	54
52277	DUVAL32	69.0	526	1.002	-32.6	0.0	2.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	69.16		0.0	1.7	0.0	52278	IMC#42	69.0	1	526	2.4	2.2		4	88
					0.0			52279	IMC#32	69.0	1	526	-5.2	-3.9		18	36
52278	IMC#42	69.0	526	1.001	-32.6	0.0	2.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	69.04		0.0	2.3	0.0	52277	DUVAL32	69.0	1	526	-2.4	-2.3		4	88
52279	IMC#32	69.0	526	1.006	-32.5	0.0	2.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	69.39		0.0	5.3	0.0	52275	UNITSA2	69.0	1	526	-7.9	-9.2		22	54
					0.0			52277	DUVAL32	69.0	1	526	5.3	3.8		18	36
52282	CV-INDH3	115	526	1.019	-30.4	0.0	38.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	117.2		0.0	13.5	0.0	52294	7RIVER3	115	1	526	-33.0	-30.3		30	146
					0.0			52314	PECOS3	115	1	526	-5.4	16.8		12	146
52293	7RIVER6	230	526	0.989	-27.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	227.4		0.0	0.0	0.0	52185	EDDYCO6	230	1	526	-84.9	-20.5		18	492
					0.0			52294	7RIVER3	115	1	526	89.5	14.4	1.054UN	41	225
					0.0			52313	PECOS6	230	1	526	-4.5	6.2		2	347
52294	7RIVER3	115	526	1.035	-29.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	119.0		0.0	0.0	-30.8	52282	CV-INDH3	115	1	526	33.3	30.6		30	146
					0.0			52293	7RIVER6	230	1	526	-89.4	-10.2	1.054RG	39	225
					0.0			52295	7RIVER2	69.0	1	526	27.0	7.2	1.012UN	67	40
					0.0			52296	CV-LAKW3	115	1	526	29.2	3.3		19	146

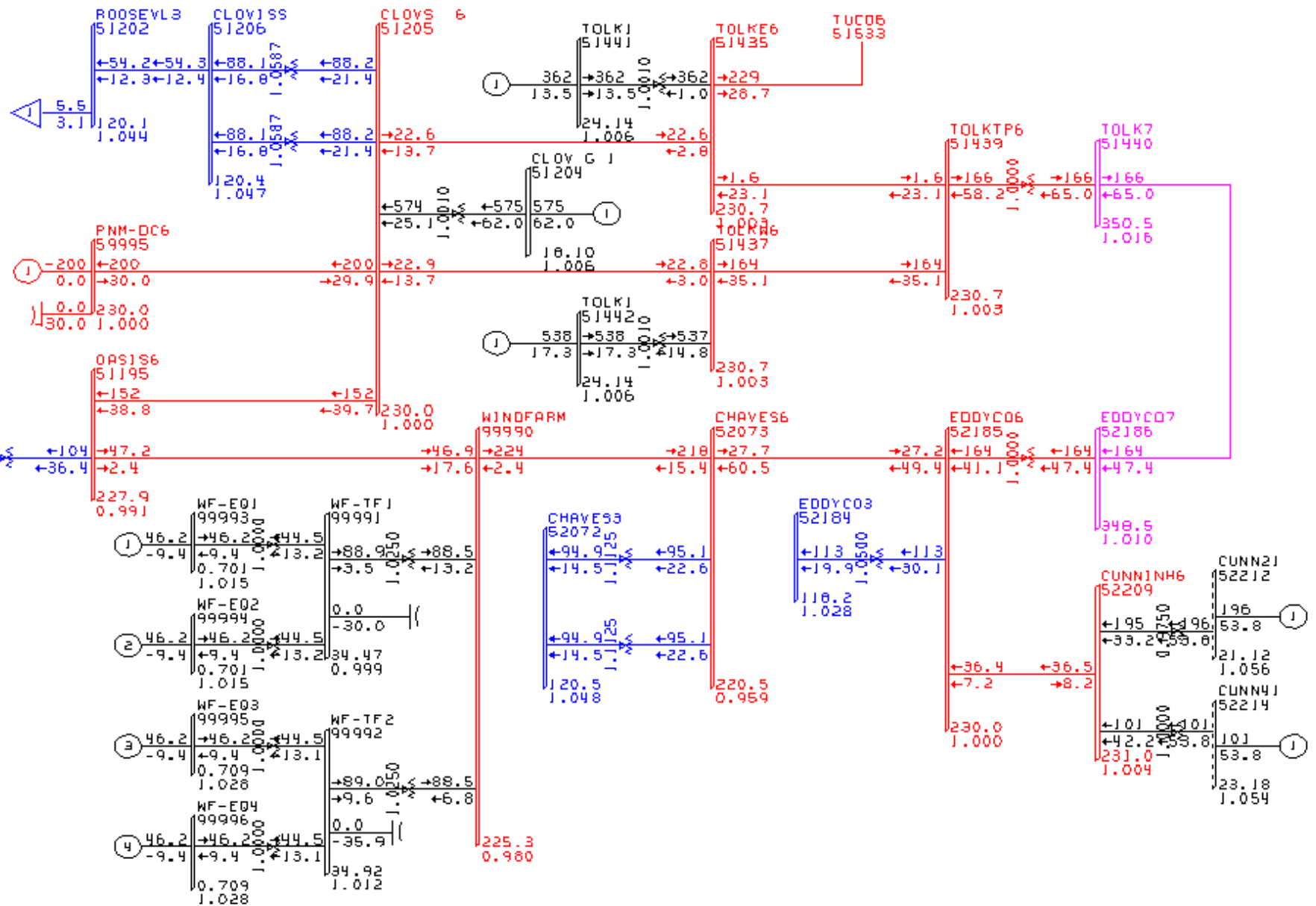
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
52295	7RIVER2	69.0 526 267	1.027 70.84	-34.1	0.0 0.0	0.0 0.0	0.0 0.0	52265	CV-DG&I269.0	1	526	26.9	5.1			49	54
								52294	7RIVER3	115	1 526	-26.9	-5.1	1.012RG		67	40
52296	CV-LAKW3	115 526 267	1.032 118.7	-30.2	0.0 0.0	5.4 0.2	0.0 0.0	52294	7RIVER3	115	1 526	-29.1	-3.4			19	146
								52298	CV-IRIS3	115	1 526	23.7	3.2			16	146
52298	CV-IRIS3	115 526 267	1.030 118.5	-30.4	0.0 0.0	4.9 0.2	0.0 0.0	52180	ATOKA3	115	1 526	18.8	3.2			13	146
								52296	CV-LAKW3	115	1 526	-23.7	-3.3			16	146
52301	DELHI2	69.0 526 267	1.017 70.16	-35.7	0.0 0.0	0.1 0.0	0.0 0.0	52303	OCOTILL269.0	1	526	-0.1	0.0			0	54
52303	OCOTILL269.0	526 526 267	1.017 70.15	-35.7	0.0 0.0	20.3 3.8	0.0 0.0	52301	DELHI2	69.0	1 526	0.1	-0.2			0	54
								52309	CARLSBD269.0	1	526	-20.4	-3.6			38	54
52304	NCANALT3	115 526 267	1.009 116.1	-30.1	0.0 0.0	23.3 8.8	0.0 0.0	52184	EDDYCO3	115	1 526	-2.6	-16.2			9	179
								52314	PECOS3	115	1 526	-20.7	7.4			12	179
52307	NPOTT2	69.0 526 267	1.029 71.01	-32.0	0.0 0.0	0.0 0.0	0.0 0.0	52239	PCA2	69.0	1 526	-7.5	8.5			13	88
								52251	POTJCT2	69.0	1 526	7.5	-8.4			12	88
								52255	NATPOT2	69.0	1 526	0.0	-0.1			0	54
52308	FIESTA3	115 526 267	1.007 115.8	-30.2	0.0 0.0	19.1 9.2	0.0 0.0	52314	PECOS3	115	1 526	-19.1	-9.2			19	112
52309	CARLSBD269.0	526 526 267	1.025 70.70	-35.1	0.0 0.0	0.0 0.0	0.0 0.0	52303	OCOTILL269.0	1	526	20.5	3.7			38	54
								52310	CARLSBD3	115	1 526	-30.5	-8.9	1.050RG		77	40
								52310	CARLSBD3	115	2 526	-14.1	-4.4	1.050RG		58	25
								52311	CARLSBD113.8	1	526	0.0	0.0	0.978UN		0	22
								52327	HOPISB2	69.0	1 526	24.0	9.6			70	36
52310	CARLSBD3	115 526 267	1.010 116.1	-30.2	0.0 0.0	0.0 0.0	0.0 -14.7	52240	PCA3	115	1 526	-24.6	-13.1			19	146
								52309	CARLSBD269.0	1	526	30.6	11.9	1.050UN		81	40
								52309	CARLSBD269.0	2	526	14.1	5.8	1.050UN		60	25
								52314	PECOS3	115	1 526	-20.2	10.1			12	179
52311	CARLSBD113.8	526 526 267	1.002 13.82	-35.1	0.0 0.0	0.0 0.0	0.0 0.0	52309	CARLSBD269.0	1	526	0.0	0.0	0.978LK		0	22
52313	PECOS6	230 526 267	0.987 226.9	-27.2	0.0 0.0	0.0 0.0	0.0 0.0	52253	POTJCT6	230	1 526	-70.1	33.3			23	347
								52293	7RIVER6	230	1 526	4.5	-10.9			3	347
								52314	PECOS3	115	1 526	65.6	-22.4	0.994LK		47	150
52314	PECOS3	115 526 267	1.009 116.1	-30.0	0.0 0.0	0.0 0.0	0.0 0.0	52282	CV-INDH3	115	1 526	5.5	-17.4			12	146
								52304	NCANALT3	115	1 526	20.7	-7.4			12	179
								52308	FIESTA3	115	1 526	19.1	9.0			19	112
								52310	CARLSBD3	115	1 526	20.2	-10.2			13	179
								52313	PECOS6	230	1 526	-65.5	26.0	0.994UN		47	150

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 10:32
 03SP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8 MW @ .98PF 5-30-02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52317	LOVNGT2	69.0	526	0.993	-36.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	68.49		0.0	0.0	0.0	52319	CBWFLD2	69.0	1	526	3.4	0.3		10	36
					0.0	0.0	0.0	52325	LVNG&NA2	69.0	1	526	7.9	3.3		16	54
					0.0	0.0	0.0	52327	HOPISB2	69.0	1	526	-11.3	-3.6		33	36
52319	CBWFLD2	69.0	526	0.991	-36.1	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	68.41		0.0	0.0	0.0	52317	LOVNGT2	69.0	1	526	-3.4	-0.4		10	36
					0.0	0.0	0.0	52321	CBWTRF2	69.0	1	526	1.7	0.2		3	54
					0.0	1.7	0.0	52323	WHITEC2	69.0	1	526	1.7	0.2		5	36
52321	CBWTRF2	69.0	526	0.990	-36.2	0.0	1.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	68.32		0.0	0.3	0.0	52319	CBWFLD2	69.0	1	526	-1.7	-0.3		3	54
52323	WHITEC2	69.0	526	0.986	-36.3	0.0	1.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	68.05		0.0	0.5	0.0	52319	CBWFLD2	69.0	1	526	-1.7	-0.5		5	36
52325	LVNG&NA2	69.0	526	0.981	-36.6	0.0	7.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	67.68		0.0	3.4	0.0	52317	LOVNGT2	69.0	1	526	-7.8	-3.4		16	54
52327	HOPISB2	69.0	526	0.997	-35.9	0.0	12.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	68.78		0.0	5.6	0.0	52309	CARLSBD2	69.0	1	526	-23.5	-9.2		70	36
					0.0	0.0	0.0	52317	LOVNGT2	69.0	1	526	11.4	3.6		33	36
52329	OCHOA3	115	526	1.020	-28.5	0.0	2.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	117.3		0.0	2.1	0.0	52268	SNDDUN3	115	1	526	11.7	-10.7		11	146
					0.0	0.0	0.0	52420	WHITTEN3	115	1	526	-14.5	8.6		13	132

2004 Summer Peak Case



04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8. CLOVIS-575. BLKWTR-200X 5/30/02
 SUN. OCT 06 2002 11:35

LQQZ RBIEB
 0.900KV 1.050KV
 KV: <69 .<115 .<230

BUS - VOLTAGE (KV/PU)
 BRANCH - MW/MVAR
 EQUIPMENT - MW/MVAR

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51070	TUCUMCA3	115 526	0.973	-22.3	0.0	13.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	111.9		0.0	4.9	0.0	51073	TUCUM1	13.2	1	526	0.0	0.0	1.000UN	0	18
								51076	FE-TUCU3	115	1	526	-13.6	-4.9		10	146
51073	TUCUM1	13.2 526	0.973	-22.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	12.84		0.0	0.0	0.0	51070	TUCUMCA3	115	1	526	0.0	0.0	1.000RG	0	18
51076	FE-TUCU3	115 526	0.976	-22.1	0.0	10.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	112.2		0.0	0.5	0.0	51070	TUCUMCA3	115	1	526	13.6	4.6		10	146
								51176	CURRY3	115	1	526	-24.4	-5.1		18	146
51078	CANYNW3	115 526	1.021	-20.9	0.0	24.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	117.5		0.0	8.3	0.0	51080	CANYNE3	115	1	526	-18.6	-10.4		23	90
								51088	ROCKWEL3	115	1	526	5.4	1.4		6	95
								51102	DOWNFL3	115	1	526	-11.6	0.7		13	90
51080	CANYNE3	115 526	1.026	-20.7	0.0	14.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	118.0		0.0	-2.8	0.0	51014	OSAGE--3	115	1	526	-33.0	-7.4		37	90
								51078	CANYNW3	115	1	526	18.6	10.2		23	90
51083	DS-5&11269.0	526 526	0.987	-24.1	0.0	17.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	68.08		0.0	4.9	0.0	51097	DS-#92	69.0	1	526	-17.1	-4.9		36	50
51088	ROCKWEL3	115 526	1.021	-21.0	0.0	5.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	117.4		0.0	1.6	0.0	51078	CANYNW3	115	1	526	-5.3	-1.6		6	95
51091	CENTRS2	69.0 526	1.016	-24.1	0.0	18.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.13		0.0	2.9	0.0	51095	DS-MTR2	69.0	1	526	-18.2	-2.9		34	54
51094	NEHFD3	115 526	1.026	-19.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	118.0		0.0	0.0	0.0	51095	DS-MTR2	69.0	1	526	44.1	33.9	1.056UN	65	84
								51110	DFSMTH3	115	1	526	-44.1	-33.9		37	146
51095	DS-MTR2	69.0 526	1.027	-23.3	0.0	22.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.87		0.0	7.3	0.0	51091	CENTRS2	69.0	1	526	18.3	3.1		34	54
								51094	NEHFD3	115	1	526	-43.9	-29.1	1.056RG	61	84
								51105	HEREFD2	69.0	1	526	2.7	18.7		45	41
51097	DS-#92	69.0 526	0.995	-23.7	0.0	6.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	68.65		0.0	3.1	0.0	51083	DS-5&11269.0	69.0	1	526	17.2	5.0		36	50
								51105	HEREFD2	69.0	1	526	-23.9	-8.1		51	50
51102	DOWNFL3	115 526	1.025	-20.4	0.0	3.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	117.9		0.0	1.3	0.0	51078	CANYNW3	115	1	526	11.6	-1.5		13	90
								51106	HEREFD3	115	1	526	-15.0	0.3		16	90
51105	HEREFD2	69.0 526	1.010	-23.0	0.0	15.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	69.71		0.0	2.1	-14.7	51095	DS-MTR2	69.0	1	526	-2.5	-18.6		45	41
								51097	DS-#92	69.0	1	526	24.2	8.4		51	50
								51106	HEREFD3	115	1	526	-23.0	9.6	0.959RG	62	40
								51106	HEREFD3	115	2	526	-23.3	10.5	0.955RG	63	40
								51115	DS-#42	69.0	1	526	9.3	2.7		11	88
51106	HEREFD3	115 526	1.033	-19.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	118.8		0.0	0.0	0.0	51102	DOWNFL3	115	1	526	15.1	-1.2		16	90
								51105	HEREFD2	69.0	1	526	23.1	-8.0	0.959UN	59	40
								51105	HEREFD2	69.0	2	526	23.3	-8.8	0.955UN	60	40
								51110	DFSMTH3	115	1	526	-65.4	6.5		44	146
								51122	FRIONA3	115	1	526	3.9	11.6		13	90

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51146	DS-213	115 526	1.003	-21.4	0.0	9.5	0.0	51110	DFSMTH3	115	1 526	-37.7	-13.2			27	146
		264 115.4			0.0	4.0	0.0	51150	CASTRC3	115	1 526	28.2	9.2			20	146
51149	CASTRC2	69.0 526	1.010	-24.6	0.0	0.0	0.0	51141	CASTR2	69.0	1 526	29.7	6.8			56	54
		264 69.67			0.0	0.0	-29.4	51143	DS-15&12	69.0	1 526	16.7	6.1			33	54
								51145	DS-CAST2	69.0	1 526	23.7	8.3			46	54
								51150	CASTRC3	115	1 526	-35.0	4.1	1.004RG		42	84
								51150	CASTRC3	115	2 526	-35.0	4.1	1.004RG		42	84
51150	CASTRC3	115 526	1.002	-21.5	0.0	0.0	0.0	51146	DS-213	115	1 526	-28.2	-9.2			20	146
		264 115.3			0.0	0.0	0.0	51149	CASTRC2	69.0	1 526	35.1	-2.1	1.004UN		42	84
								51149	CASTRC2	69.0	2 526	35.1	-2.1	1.004UN		42	84
								51250	BC-EART3	115	1 526	-42.0	13.5			30	146
51155	NCLOVI2	69.0 526	1.009	-22.1	0.0	14.9	0.0	51159	ECLOVI2	69.0	1 526	-14.9	-0.7			27	54
		264 69.64			0.0	0.7	0.0										
51156	NORRST3	115 526	1.027	-16.1	0.0	0.0	0.0	51168	NORRIS3	115	1 526	17.4	4.7			19	90
		264 118.1			0.0	0.0	0.0	51176	CURRY3	115	1 526	20.6	-2.8			14	146
								51194	OASIS3	115	1 526	-38.0	-1.9			25	146
51159	ECLOVI2	69.0 526	1.018	-21.2	0.0	16.4	0.0	51155	NCLOVI2	69.0	1 526	15.0	0.8			27	54
		264 70.27			0.0	4.2	0.0	51175	CURRY2	69.0	1 526	-31.4	-5.0			58	54
51162	WCLOVI3	115 526	1.021	-16.0	0.0	12.3	0.0	51166	CANNOA3	115	1 526	-27.7	-2.5			19	146
		264 117.4			0.0	3.1	0.0	51172	FE-SWS3	115	1 526	15.4	-0.6			10	146
51163	WCLOVI2	69.0 526	1.028	-20.5	0.0	5.7	0.0	51175	CURRY2	69.0	1 526	-5.7	-1.0			10	54
		264 70.94			0.0	1.0	0.0										
51166	CANNOA3	115 526	1.025	-15.5	0.0	16.2	0.0	51162	WCLOVI3	115	1 526	27.8	2.3			19	146
		264 117.8			0.0	8.4	0.0	51194	OASIS3	115	1 526	-44.0	-10.7			30	146
51168	NORRIS3	115 526	1.026	-16.1	0.0	17.4	0.0	51156	NORRST3	115	1 526	-17.4	-4.7			19	90
		264 118.0			0.0	4.7	0.0										
51170	FE-CLVS3	115 526	1.023	-16.1	0.0	0.0	0.0	51172	FE-SWS3	115	1 526	1.4	4.1			3	146
		264 117.6			0.0	0.0	0.0	51180	FE-CLVS3	115	1 526	-1.4	-4.1			3	146
51172	FE-SWS3	115 526	1.020	-16.1	0.0	16.8	0.0	51162	WCLOVI3	115	1 526	-15.4	0.5			10	146
		264 117.3			0.0	4.4	0.0	51170	FE-CLVS3	115	1 526	-1.4	-4.8			3	146
51175	CURRY2	69.0 526	1.033	-20.1	0.0	10.8	0.0	51159	ECLOVI2	69.0	1 526	31.8	4.7			58	54
		264 71.30			0.0	1.8	-15.4	51163	WCLOVI2	69.0	1 526	5.7	0.9			10	54
								51176	CURRY3	115	1 526	-25.6	3.3	1.003RG		63	40
								51176	CURRY3	115	2 526	-25.5	3.6	1.003RG		62	40
								51183	FARWELL2	69.0	1 526	2.9	1.1			6	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51176	CURRY3	115 526 264	1.027 118.1	-16.1	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51076	FE-TUCU3	115 1	526	25.3	2.6			17	146
								51126	DS-#203	115 1	526	37.8	-0.6			41	90
								51156	NORRST3	115 1	526	-20.6	2.8			14	146
								51175	CURRY2	69.0 1	526	25.7	-1.5	1.003UN		63	40
								51175	CURRY2	69.0 2	526	25.6	-1.8	1.003UN		62	40
								51180	FE-CLVS3	115 1	526	26.9	12.8			20	146
								51206	CLOVISS	115 2	526	-120.6	-14.2			81	146
51180	FE-CLVS3	115 526 264	1.026 117.9	-16.1	0.0 0.0	25.5 9.6	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51170	FE-CLVS3	115 1	526	1.4	3.2			2	146
								51176	CURRY3	115 1	526	-26.9	-12.8			20	146
51183	FARWELL	269.0 526 264	1.028 70.95	-20.3	0.0 0.0	2.9 1.3	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51175	CURRY2	69.0 1	526	-2.9	-1.3			6	54
51185	DS-#102	69.0 526 264	0.998 68.88	-26.0	0.0 0.0	9.1 4.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51229	LARIAT2	69.0 1	526	-9.1	-4.0			11	88
51194	OASIS3	115 526 264	1.040 119.6	-14.1	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51156	NORRST3	115 1	526	38.4	2.0			25	146
								51166	CANNOA3	115 1	526	44.3	11.1			30	146
								51195	OASIS6	230 1	526	-104.2	-30.3	1.069RG		41	252
								51208	PORTALE3	115 1	526	21.5	17.2			18	146
51195	OASIS6	230 526 264	0.991 227.9	-11.0	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51194	OASIS3	115 1	526	104.3	36.4	1.069UN		44	252
								51205	CLOVS	6 230 1	526	-151.5	-38.8			35	452
								99990	WINDFARM	230 1	526	47.2	2.4			11	452
51202	ROOSEVL3	115 526 264	1.044 120.1	-12.9	0.0 0.0	5.5 3.1	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51206	CLOVISS	115 2	526	-54.2	-12.3			36	146
								51208	PORTALE3	115 1	526	48.8	9.1			33	146
51204	CLOV G	118.0 526 264	1.006 18.10	-6.1	575.0 62.0R	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51205	CLOVS	6 230 1	526	575.0	62.0	1.001UN		79	728
51205	CLOVS	6 230 526 264	1.000 230.0	-9.7	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51195	OASIS6	230 1	526	152.1	39.7			35	452
								51204	CLOV G	118.0 1	526	-573.9	-25.1	1.001LK		79	728
								51206	CLOVISS	115 1	526	88.2	21.4	1.059UN		36	252
								51206	CLOVISS	115 2	526	88.2	21.4	1.059UN		36	252
								51435	TOLKE6	230 2	526	22.6	-13.7			5	492
								51437	TOLKW6	230 1	526	22.9	-13.7			5	492
								59995	PNM-DC6	230 1	999	200.0	-29.9			10	2000
51206	CLOVISS	115 526 264	1.047 120.4	-12.6	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51176	CURRY3	115 2	526	121.9	21.2			81	146
								51202	ROOSEVL3	115 2	526	54.3	12.4			36	146
								51205	CLOVS	6 230 1	526	-88.1	-16.8	1.059RG		34	252
								51205	CLOVS	6 230 2	526	-88.1	-16.8	1.059RG		34	252
51207	RO-PORT	269.0 526 264	1.025 70.73	-17.3	0.0 0.0	37.7 16.7	0.0 -7.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51208	PORTALE3	115 1	526	-34.8	-11.0	1.014RG		42	84
								51208	PORTALE3	115 2	526	-34.8	-11.0	1.014RG		42	84
								51211	ZODIAC2	69.0 1	526	12.4	3.6			23	54
								51213	PORTAL12	69.0 1	526	19.5	9.3			39	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51208	PORTALE3	115 526	1.030	-14.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	118.4		0.0	0.0	0.0	51194	OASIS3	115 1	526	-21.4	-17.5			18	146
								51202	ROOSEVL3	115 1	526	-48.3	-8.5			33	146
								51207	RO-PORT269.0	1 526		34.8	13.0	1.014UN		43	84
								51207	RO-PORT269.0	2 526		34.8	13.0	1.014UN		43	84
51211	ZODIAC2	69.0 526	1.021	-17.5	0.0	6.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.47		0.0	2.2	0.0	51207	RO-PORT269.0	1 526		-12.4	-3.6			23	54
								51219	PORTAS2	69.0 1	526	5.5	1.4			10	54
51213	PORTAL1269.0	526	1.019	-17.5	0.0	5.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.30		0.0	1.9	0.0	51207	RO-PORT269.0	1 526		-19.4	-9.3			39	54
								51215	PORTAL2269.0	1 526		13.8	7.4			43	36
51215	PORTAL2269.0	526	1.014	-17.6	0.0	6.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	69.98		0.0	2.3	0.0	51213	PORTAL1269.0	1 526		-13.8	-7.3			43	36
								51217	PORTAI2	69.0 1	526	6.9	5.0			16	54
51217	PORTAI2	69.0 526	1.012	-17.7	0.0	0.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	69.81		0.0	0.3	0.0	51215	PORTAL2269.0	1 526		-6.9	-5.0			16	54
								51221	POREFD2	69.0 1	526	3.8	3.0			9	54
								51223	MARKST2	69.0 1	526	2.7	1.7			6	54
51219	PORTAS2	69.0 526	1.020	-17.6	0.0	5.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.36		0.0	1.5	0.0	51211	ZODIAC2	69.0 1	526	-5.5	-1.5			10	54
51221	POREFD2	69.0 526	1.012	-17.7	0.0	3.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	69.80		0.0	3.0	0.0	51217	PORTAI2	69.0 1	526	-3.8	-3.0			9	54
51223	MARKST2	69.0 526	1.012	-17.7	0.0	2.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	69.81		0.0	1.8	0.0	51217	PORTAI2	69.0 1	526	-2.7	-1.8			6	54
51229	LARIAT2	69.0 526	1.006	-25.5	0.0	0.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	69.41		0.0	-1.2	0.0	51185	DS-#102	69.0 1	526	9.2	3.9			11	88
								51231	BC-LARI269.0	1 526		-9.9	-2.7			12	88
51231	BC-LARI269.0	526	1.007	-25.4	0.0	4.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	69.50		0.0	1.7	0.0	51229	LARIAT2	69.0 1	526	9.9	2.7			12	88
								51233	WMULES2	69.0 1	526	-14.4	-4.4			17	88
51233	WMULES2	69.0 526	1.018	-24.5	0.0	3.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.25		0.0	0.1	0.0	51231	BC-LARI269.0	1 526		14.5	4.4			17	88
								51235	MULECY2	69.0 1	526	-17.9	-4.5			21	88
51235	MULECY2	69.0 526	1.018	-24.5	0.0	4.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.27		0.0	0.3	0.0	51233	WMULES2	69.0 1	526	17.9	4.6			21	88
								51241	BC-BAIL269.0	1 526		-22.0	-4.9			25	88
51239	MULE-V2	69.0 526	1.020	-24.3	0.0	4.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.38		0.0	0.0	0.0	51241	BC-BAIL269.0	1 526		-9.2	-1.9			17	54
								51245	BAILYC3	69.0 1	526	4.6	2.0			6	88
51241	BC-BAIL269.0	526	1.022	-24.1	0.0	40.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.53		0.0	9.3	0.0	51235	MULECY2	69.0 1	526	22.1	5.0			25	88
								51239	MULE-V2	69.0 1	526	9.2	1.9			17	54
								51242	BAILYC3	115 1	526	-35.6	-8.1	1.075HI		43	84
								51242	BAILYC3	115 2	526	-35.6	-8.1	1.075HI		43	84

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51242	BAILYC3	115 526 264	0.967 111.2	-20.8	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51241	BC-BAIL269.0	1	526	35.7	10.3	1.075UN		46	84
								51241	BC-BAIL269.0	2	526	35.7	10.3	1.075UN		46	84
								51418	PLANTX3	115	1 526	-71.4	-20.7			53	146
51245	BAILYP2	69.0 526 264	1.017 70.15	-24.5	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51239	MULE-V2	69.0	1 526	-4.6	-2.1			6	88
								51247	LC-BECK269.0	1	526	4.6	2.1			6	88
51247	LC-BECK269.0	526 264	1.012 69.85	-24.7	0.0 0.0	4.6 2.3	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51245	BAILYP2	69.0	1 526	-4.6	-2.3			6	88
51249	BC-EART269.0	526 264	1.023 70.57	-21.4	0.0 0.0	33.4 12.4	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51250	BC-EART3	115	1 526	-17.2	-6.4	1.038RG		36	50
								51250	BC-EART3	115	2 526	-16.2	-6.0	1.038RG		30	56
51250	BC-EART3	115 526 264	1.002 115.2	-19.2	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51150	CASTR3	115	1 526	42.5	-12.8			30	146
								51249	BC-EART269.0	1	526	17.3	7.1	1.038UN		37	50
								51249	BC-EART269.0	2	526	16.2	6.8	1.038UN		31	56
								51418	PLANTX3	115	1 526	-76.0	-1.1			52	146
99990	WINDFARM	230 526 264	0.980 225.3	-12.4	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51195	OASIS6	230	1 526	-46.9	-17.6			11	452
								52073	CHAVES6	230	1 526	223.9	-2.4			51	452
								99991	WF-TF1	34.5	1 526	-88.5	13.2	1.025UN		91	100
								99992	WF-TF2	34.5	1 526	-88.5	6.8	1.025UN		91	100
99991	WF-TF1	34.5 526 264	0.999 34.47	-1.7	0.0 0.0	0.0 0.0	0.0 -30.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								99990	WINDFARM	230	1 526	88.9	3.5	1.025LK		89	100
								99993	WF-EQ1	.690	1 526	-44.5	13.2	1.000UN		93	50
								99994	WF-EQ2	.690	1 526	-44.5	13.2	1.000UN		93	50
99992	WF-TF2	34.5 526 264	1.012 34.92	-1.8	0.0 0.0	0.0 0.0	0.0 -35.9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								99990	WINDFARM	230	1 526	89.0	9.6	1.025LK		88	100
								99995	WF-EQ3	.690	1 526	-44.5	13.1	1.000UN		92	50
								99996	WF-EQ4	.690	1 526	-44.5	13.1	1.000UN		92	50
99993	WF-EQ1	.690 526 264	1.015 0.701	3.4	46.2 -9.4L	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								99991	WF-TF1	34.5	1 526	46.2	-9.4	1.000LK		93	50
99994	WF-EQ2	.690 526 264	1.015 0.701	3.4	46.2 -9.4L	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								99991	WF-TF1	34.5	1 526	46.2	-9.4	1.000LK		93	50
99995	WF-EQ3	.690 526 264	1.028 0.709	3.1	46.2 -9.4L	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								99992	WF-TF2	34.5	1 526	46.2	-9.4	1.000LK		92	50
99996	WF-EQ4	.690 526 264	1.028 0.709	3.1	46.2 -9.4L	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								99992	WF-TF2	34.5	1 526	46.2	-9.4	1.000LK		92	50

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
51320	SWISHER3	115 526	1.028	-24.3	0.0	0.0	0.0	51316	KRESS3	115 1	526	62.3	29.3			30	226
		265 118.2			0.0	0.0	0.0	51321	SWISHER6	230 1	526	-62.3	-29.3	1.113RG		45	150
51321	SWISHER6	230 526	0.950	-21.3	0.0	0.0	0.0	51041	AMARLS6	230 1	526	-98.2	-28.8			24	452
		265 218.6			0.0	0.0	0.0	51320	SWISHER3	115 1	526	62.4	33.6	1.113UN		50	150
								51403	HALECO6	230 1	526	35.8	-4.8			8	452
51325	KRESRU2	69.0 526	1.011	-31.4	0.0	3.0	0.0	51315	KRESS2	69.0 1	526	-30.6	-9.7			59	54
		265 69.76			0.0	0.2	0.0	51335	LH-PL&M269.0	1 526		27.5	9.5			53	54
51329	BRISCOE269.0	526	0.960	-34.1	0.0	1.9	0.0	51331	LH-SLVR269.0	1 526		-1.9	0.1			4	54
		265 66.23			0.0	-0.1	0.0										
51331	LH-SLVR269.0	526	0.960	-34.0	0.0	1.2	0.0	51329	BRISCOE269.0	1 526		1.9	-0.2			4	54
		265 66.27			0.0	0.9	0.0	51375	LH-SPL2 69.0	1 526		-3.1	-0.7			6	54
51335	LH-PL&M269.0	526	0.963	-34.0	0.0	17.3	0.0	51325	KRESRU2 69.0	1 526		-26.6	-8.1			54	54
		265 66.47			0.0	7.0	0.0	51337	NPLNV2 69.0	1 526		9.3	1.2			18	54
51337	NPLNV2	69.0 526	0.961	-34.2	0.0	9.3	0.0	51335	LH-PL&M269.0	1 526		-9.3	-1.2			18	54
		265 66.33			0.0	1.2	0.0										
51339	WPLNV2	69.0 526	0.986	-33.2	0.0	18.4	0.0	51343	PLNVCO2 69.0	1 526		-18.4	-4.4			36	54
		265 68.02			0.0	4.4	0.0										
51341	PLAINVW269.0	526	0.991	-33.0	0.0	11.7	0.0	51353	EPLNV2 69.0	1 526		-11.7	0.4			22	54
		265 68.40			0.0	-0.4	0.0										
51343	PLNVCO2	69.0 526	0.999	-32.4	0.0	0.0	0.0	51339	WPLNV2 69.0	1 526		18.6	4.6			35	54
		265 68.90			0.0	0.0	0.0	51345	WESTRID269.0	1 526		-18.6	-4.6			22	88
51345	WESTRID269.0	526	1.002	-32.1	0.0	16.2	0.0	51343	PLNVCO2 69.0	1 526		18.6	4.6			22	88
		265 69.13			0.0	1.1	0.0	51347	PLNVWT2 69.0	1 526		-34.8	-5.8			40	88
51347	PLNVWT2	69.0 526	1.013	-30.8	0.0	0.0	0.0	51345	WESTRID269.0	1 526		35.1	6.5			40	88
		265 69.87			0.0	0.0	0.0	51401	HALECO2 69.0	1 526		-35.1	-6.5			40	88
51349	SPLNV2	69.0 526	0.998	-31.9	0.0	12.9	0.0	51401	HALECO2 69.0	1 526		-12.9	-2.1			24	54
		265 68.85			0.0	2.1	0.0										
51353	EPLNV2	69.0 526	0.996	-32.4	0.0	5.3	0.0	51341	PLAINVW269.0	1 526		11.7	-0.4			22	54
		265 68.73			0.0	1.2	0.0	51359	COX2 69.0	1 526		-17.0	-0.8			32	54
51359	COX2	69.0 526	1.005	-31.6	0.0	5.8	0.0	51353	EPLNV2 69.0	1 526		17.2	0.9			32	54
		265 69.33			0.0	3.9	-8.5	51360	COX3 115 1	526		-20.9	9.5	0.995RG		57	40
								51360	COX3 115 2	526		-22.5	-7.6	0.958UN		59	40
								51365	AIKENT2 69.0	1 526		20.5	1.7			38	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51435	TOLKE6	230 265	526 230.7	1.003 -10.6	0.0 0.0	0.0 0.0	0.0 0.0	51205	CLOVS	6	230	2	526	-22.6	2.8	5	492
								51419	PLANTX6	230	2	526	154.3	-9.5		34	452
								51439	TOLKTP6	230	1	526	1.6	-23.1		1	2000
								51441	TOLK1	24.0	1	526	-361.9	1.0	1.001UN	50	728
								51533	TUCO6	230	1	526	228.6	28.7		51	452
51437	TOLKW6	230 265	526 230.7	1.003 -10.6	0.0 0.0	0.0 0.0	0.0 0.0	51205	CLOVS	6	230	1	526	-22.8	3.0	5	492
								51419	PLANTX6	230	1	526	160.8	-9.7		36	452
								51439	TOLKTP6	230	1	526	164.1	-35.1		8	2000
								51442	TOLK1	24.0	1	526	-537.1	14.8	1.001UN	74	728
								51467	LAMBCO6	230	1	526	118.2	39.0		27	452
								51891	YOAKUM6	230	1	526	116.9	-12.0		26	452
51439	TOLKTP6	230 265	526 230.7	1.003 -10.6	0.0 0.0	0.0 0.0	0.0 0.0	51435	TOLKE6	230	1	526	-1.6	23.1		1	2000
								51437	TOLKW6	230	1	526	-164.1	35.1		8	2000
								51440	TOLK7	345	1	526	165.7	-58.2	1.000LK	31	560
51440	TOLK7	345 265	526 350.5	1.016 -12.6	0.0 0.0	0.0 0.0	0.0 0.0	51439	TOLKTP6	230	1	526	-165.6	65.0	1.000UN	31	560
								51443	TOLK31	24.0	1	526	0.0	0.0	1.001UN	0	728
								51444	TOLK41	24.0	1	526	0.0	0.0	1.001UN	0	728
								52186	EDDYCO7	345	1	526	165.6	-65.0		13	1355
51441	TOLK1	24.0 265	526 24.14	1.006 -8.3	362.3 13.5R	0.0 0.0	0.0 0.0	51435	TOLKE6	230	1	526	362.3	13.5	1.001LK	50	728
51442	TOLK1	24.0 265	526 24.14	1.006 -7.1	538.0 17.3R	0.0 0.0	0.0 0.0	51437	TOLKW6	230	1	526	538.0	17.3	1.001LK	74	728
51443	TOLK31	24.0 265	526 24.41	1.017 -12.6	0.0 0.0	0.0 0.0	0.0 0.0	51440	TOLK7	345	1	526	0.0	0.0	1.001LK	0	728
51444	TOLK41	24.0 265	526 24.41	1.017 -12.6	0.0 0.0	0.0 0.0	0.0 0.0	51440	TOLK7	345	1	526	0.0	0.0	1.001LK	0	728
51451	SUDAN2	69.0 265	526 69.06	1.001 -21.4	0.0 0.0	0.0 0.0	0.0 0.0	51453	SUDNRU2	69.0	1	526	0.0	0.0		0	88
51453	SUDNRU2	69.0 265	526 69.06	1.001 -21.4	0.0 0.0	2.4 0.5	0.0 0.0	51451	SUDAN2	69.0	1	526	0.0	0.0		0	88
								51455	LC-SNDH2	69.0	1	526	-2.4	-0.5		3	88
51455	LC-SNDH2	69.0 265	526 69.11	1.002 -21.3	0.0 0.0	7.8 3.6	0.0 0.0	51453	SUDNRU2	69.0	1	526	2.4	0.4		3	88
								51457	AMHERST	269.0	1	526	-10.2	-4.0		12	88
51457	AMHERST	269.0 265	526 69.31	1.004 -21.1	0.0 0.0	1.5 0.5	0.0 0.0	51455	LC-SNDH2	69.0	1	526	10.2	4.0		12	88
								51459	WLTTLF2	69.0	1	526	-11.8	-4.5		14	88
51459	WLTTLF2	69.0 265	526 69.72	1.010 -20.7	0.0 0.0	0.7 0.0	0.0 0.0	51457	AMHERST	269.0	1	526	11.8	4.4		14	88
								51465	LAMBCO2	69.0	1	526	-12.4	-4.5		24	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51495	COUNTL2	69.0 526	0.977	-32.1	0.0	13.8	0.0	51497	SP-ABRN269.0	1	526	-13.8	-0.9			34	41
		265 67.44			0.0	0.9	0.0										
51497	SP-ABRN269.0	526 265	0.986	-31.2	0.0	19.4	0.0	51495	COUNTL2	69.0 1	526	13.9	0.9			34	41
		265 68.06			0.0	13.3	0.0	51531	TUCO2	69.0 1	526	-33.3	-14.2			68	54
51499	HALECN2	69.0 526	1.010	-30.6	0.0	4.5	0.0	51501	LH-HALC269.0	1	526	3.6	1.1			7	54
		265 69.67			0.0	-0.5	0.0	51531	TUCO2	69.0 1	526	-8.1	-0.6			15	54
51501	LH-HALC269.0	526 265	1.010	-30.6	0.0	3.6	0.0	51499	HALECN2	69.0 1	526	-3.6	-1.1			7	54
		265 69.66			0.0	1.1	0.0										
51513	IRICK2	69.0 526	1.025	-32.3	0.0	1.8	0.0	51367	LH-AIKN269.0	1	526	4.8	3.4			11	54
		265 70.75			0.0	0.1	0.0	51515	BARWISE269.0	1	526	-6.5	-3.5			13	54
51515	BARWISE269.0	526 265	1.030	-32.1	0.0	2.5	0.0	51513	IRICK2	69.0 1	526	6.5	3.4			13	54
		265 71.04			0.0	1.6	0.0	51517	FLOYD2	69.0 1	526	-9.0	-5.0			19	54
51517	FLOYD2	69.0 526	1.035	-31.9	0.0	0.0	0.0	51515	BARWISE269.0	1	526	9.1	5.0			19	54
		265 71.43			0.0	0.0	-9.0	51518	FLOYD3	115 1	526	-18.6	-4.3	1.063RG		46	40
								51518	FLOYD3	115 2	526	-22.7	-5.0	1.063RG		56	40
								51521	FLYDAT2	69.0 1	526	27.1	11.4			53	54
								51527	LH-HARM269.0	1	526	5.1	2.0			10	54
51518	FLOYD3	115 526	0.990	-28.9	0.0	0.0	0.0	51360	COX3	115 1	526	-9.1	4.6			9	112
		265 113.9			0.0	0.0	0.0	51517	FLOYD2	69.0 1	526	18.7	5.4	1.063UN		49	40
								51517	FLOYD2	69.0 2	526	22.8	6.3	1.063UN		60	40
								51559	FLOYDT3	115 1	526	-32.4	-16.4			25	146
51521	FLYDAT2	69.0 526	1.035	-31.9	0.0	0.0	0.0	50501	MU-FLDY269.0	1	526	2.0	1.1			5	41
		265 71.42			0.0	0.0	0.0	51517	FLOYD2	69.0 1	526	-27.1	-11.4			53	54
								51523	SFLOYD2	69.0 1	526	25.1	10.3			49	54
51523	SFLOYD2	69.0 526	0.999	-33.7	0.0	4.8	0.0	51521	FLYDAT2	69.0 1	526	-24.6	-9.4			49	54
		265 68.92			0.0	1.0	0.0	51525	LH-FLYD269.0	1	526	19.8	8.4			40	54
51525	LH-FLYD269.0	526 265	0.998	-33.7	0.0	19.8	0.0	51523	SFLOYD2	69.0 1	526	-19.8	-8.4			40	54
		265 68.89			0.0	8.4	0.0										
51527	LH-HARM269.0	526 265	1.034	-32.0	0.0	5.1	0.0	51517	FLOYD2	69.0 1	526	-5.1	-2.1			10	54
		265 71.33			0.0	2.1	0.0										
51531	TUCO2	69.0 526	1.020	-29.7	0.0	7.3	0.0	51497	SP-ABRN269.0	1	526	34.0	15.5			68	54
		265 70.41			0.0	0.8	0.0	51499	HALECN2	69.0 1	526	8.2	0.4			15	54
								51532	TUCO3	115 1	526	-42.6	-13.3	1.015RG		52	84
								51532	TUCO3	115 2	526	-42.8	-13.3	1.015RG		52	84
								51539	LH-WI&E269.0	1	526	17.7	4.1			33	54
								51551	SP-NDE2	69.0 1	526	18.2	5.9			35	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51532	TUCO3	115 526 265	1.029 118.3	-26.2	0.0 0.0	0.0 0.0	0.0 0.0	51402	HALECO3	115 1	526	-20.9	18.7			30	90
								51531	TUCO2	69.0 1	526	42.7	16.2	1.015UN		53	84
								51531	TUCO2	69.0 2	526	42.8	16.2	1.015UN		53	84
								51533	TUCO6	230 1	526	-151.1	-62.3	1.113RG		63	252
								51559	FLOYDT3	115 1	526	37.9	14.8			27	146
								51616	STANTN3	115 1	526	43.1	-1.4			23	179
								51688	LUBE3	115 1	526	5.5	-2.3			3	179
51533	TUCO6	230 526 265	0.963 221.5	-21.4	0.0 0.0	0.0 0.0	0.0 0.0	51403	HALECO6	230 1	526	36.4	33.4			11	452
								51435	TOLKE6	230 1	526	-222.2	-0.2			51	452
								51532	TUCO3	115 1	526	151.4	77.8	1.113UN		70	252
								51534	TUCO7	345 1	526	-61.7	-82.7	1.000LK		19	560
								51647	CARLISL6	230 1	526	100.8	19.1			24	452
								51699	JONES6	230 1	526	-4.7	-47.4			11	452
51534	TUCO7	345 526 265	0.978 337.4	-20.8	0.0 0.0	0.0 0.0	0.0 0.0	51533	TUCO6	230 1	526	61.8	84.7	1.000UN		19	560
								54119	O.K.U.-7	345 1	520	-61.8	-84.7			10	1051
51539	LH-WI&E269.0	526 526 265	0.999 68.94	-31.1	0.0 0.0	3.6 0.8	0.0 0.0	51531	TUCO2	69.0 1	526	-17.4	-3.8			33	54
								51541	SP-BECT269.0	1 526		13.8	3.0			26	54
51541	SP-BECT269.0	526 526 265	0.995 68.68	-31.4	0.0 0.0	7.5 1.7	0.0 0.0	51539	LH-WI&E269.0	1 526		-13.8	-3.0			26	54
								51543	ALLMON2	69.0 1	526	6.3	1.3			12	54
51543	ALLMON2	69.0 526 265	0.991 68.38	-31.7	0.0 0.0	2.8 0.4	0.0 0.0	51541	SP-BECT269.0	1 526		-6.3	-1.3			12	54
								51545	LH-PTRS269.0	1 526		3.5	0.9			7	54
51545	LH-PTRS269.0	526 526 265	0.991 68.38	-31.7	0.0 0.0	3.5 0.9	0.0 0.0	51543	ALLMON2	69.0 1	526	-3.5	-0.9			7	54
51551	SP-NDE2	69.0 526 265	1.001 69.07	-30.8	0.0 0.0	4.8 1.3	0.0 0.0	51531	TUCO2	69.0 1	526	-17.9	-5.6			35	54
								51553	WHTE&MN269.0	1 526		13.1	4.3			26	54
51553	WHTE&MN269.0	526 526 265	0.993 68.52	-31.2	0.0 0.0	3.1 0.7	0.0 0.0	51551	SP-NDE2	69.0 1	526	-13.1	-4.2			26	54
								51555	SP-SHLW269.0	1 526		10.0	3.5			20	54
51555	SP-SHLW269.0	526 526 265	0.988 68.19	-31.5	0.0 0.0	9.9 3.6	0.0 0.0	51553	WHTE&MN269.0	1 526		-9.9	-3.5			20	54
								51611	SW67872	69.0 1	526	0.0	-0.1			0	54
51557	SP-ACUF269.0	526 526 265	0.965 66.61	-34.7	0.0 0.0	8.6 2.5	0.0 0.0	51629	VICKER2	69.0 1	526	-8.6	-2.5			17	54
51559	FLOYDT3	115 526 265	0.999 114.9	-28.3	0.0 0.0	0.0 0.0	0.0 0.0	51518	FLOYD3	115 1	526	32.5	16.4			25	146
								51532	TUCO3	115 1	526	-37.3	-14.4			27	146
								51564	CROSBY3	115 1	526	4.8	-2.0			8	69
51563	CROSBY2	69.0 526 265	1.035 71.44	-33.8	0.0 0.0	3.9 1.3	0.0 0.0	51564	CROSBY3	115 1	526	-30.5	-7.2	1.069RG		76	40
								51567	SP-CROS269.0	1 526		26.6	5.9			49	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA									LINE DATA								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA	
51603	COBLE2	69.0 526	0.997	-28.4	0.0	4.5	0.0	51597	HOCKLEY2	69.0 1 526	-9.6	-3.4			19	54	
		265 68.81			0.0	0.3	0.0	51601	LC-PETT2	69.0 1 526	5.1	3.1			11	54	
51605	LEVELLN2	69.0 526	1.005	-28.0	0.0	16.0	0.0	51597	HOCKLEY2	69.0 1 526	-31.0	-9.4			60	54	
		265 69.36			0.0	5.6	0.0	51607	ELEVEL2	69.0 1 526	15.0	3.7			28	54	
51607	ELEVEL2	69.0 526	1.003	-28.1	0.0	14.9	0.0	51605	LEVELLN2	69.0 1 526	-14.9	-3.7			28	54	
		265 69.17			0.0	3.7	0.0										
51611	SW67872	69.0 526	0.988	-31.5	0.0	0.0	0.0	51555	SP-SHLW2	69.0 1 526	0.0	0.0			0	54	
		265 68.19			0.0	0.0	0.0										
51613	STANTN2	69.0 526	0.996	-33.0	0.0	4.9	0.0	51617	SW67862	69.0 1 526	-4.9	0.3			9	54	
		265 68.75			0.0	-0.3	0.0										
51616	STANTN3	115 526	1.017	-28.4	0.0	25.8	0.0	51532	TUCO3	115 1 526	-42.6	1.3			23	179	
		265 116.9			0.0	3.9	0.0	51642	INDIANA3	115 1 526	16.8	-5.2			10	179	
51617	SW67862	69.0 526	0.998	-32.8	0.0	0.0	0.0	51613	STANTN2	69.0 1 526	4.9	-0.4			9	54	
		265 68.87			0.0	0.0	0.0	51621	SW67462	69.0 1 526	28.5	8.2			55	54	
								51685	PLANTRS2	69.0 1 526	-33.4	-7.8			64	54	
51621	SW67462	69.0 526	0.988	-33.4	0.0	0.0	0.0	51617	SW67862	69.0 1 526	-28.3	-7.9			55	54	
		265 68.20			0.0	0.0	0.0	51623	SP-HETL2	69.0 1 526	28.3	7.9			55	54	
51623	SP-HETL2	69.0 526	0.984	-33.7	0.0	10.8	0.0	51621	SW67462	69.0 1 526	-28.3	-7.8			55	54	
		265 67.91			0.0	1.5	0.0	51627	SP-IDAL2	69.0 1 526	17.5	6.3			35	54	
51625	SP-ERSK3	115 526	1.022	-28.1	0.0	5.8	0.0	51642	INDIANA3	115 1 526	33.5	10.5			19	179	
		265 117.6			0.0	2.1	0.0	51646	CARLISL3	115 1 526	-39.3	-12.6			23	179	
51627	SP-IDAL2	69.0 526	0.968	-34.5	0.0	8.6	0.0	51623	SP-HETL2	69.0 1 526	-17.3	-6.0			35	54	
		265 66.83			0.0	3.5	0.0	51629	VICKER2	69.0 1 526	8.6	2.5			17	54	
51629	VICKER2	69.0 526	0.967	-34.6	0.0	0.0	0.0	51557	SP-ACUF2	69.0 1 526	8.6	2.5			17	54	
		265 66.70			0.0	0.0	0.0	51627	SP-IDAL2	69.0 1 526	-8.6	-2.5			17	54	
51630	VICKER3	115 526	1.015	-27.5	0.0	7.4	0.0	51564	CROSBY3	115 1 526	26.1	10.5			25	112	
		265 116.7			0.0	1.4	0.0	51688	LUBE3	115 1 526	-33.5	-11.9			31	112	
51631	SP-CRLS2	69.0 526	0.999	-32.2	0.0	11.4	0.0	51645	CARLISL2	69.0 1 526	-11.4	-4.1			22	54	
		265 68.93			0.0	4.1	0.0										
51642	INDIANA3	115 526	1.017	-28.5	0.0	50.2	0.0	51616	STANTN3	115 1 526	-16.8	5.1			10	179	
		265 116.9			0.0	5.6	0.0	51625	SP-ERSK3	115 1 526	-33.4	-10.7			19	179	
51645	CARLISL2	69.0 526	1.006	-31.8	0.0	0.0	0.0	51631	SP-CRLS2	69.0 1 526	11.4	4.1	0.965RG		22	54	
		265 69.41			0.0	0.0	-14.6	51646	CARLISL3	115 1 526	-24.6	9.0			59	44	
								51655	SW68782	69.0 1 526	13.2	1.5			24	54	

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51646	CARLISL3	115 526	1.024	-28.0	0.0	22.9	0.0	51625	SP-ERSK3	115 1	526	39.3	12.6			23	179
		265 117.7			0.0	3.2	-30.2	51645	CARLISL2	69.0 1	526	24.7	-7.2	0.965UN		57	44
								51647	CARLISL6	230 1	526	-85.0	3.6	1.081RG		49	168
								51652	DOUD3	115 1	526	-42.0	9.4			29	146
								51658	MURPHY3	115 1	526	40.0	8.7			27	146
51647	CARLISL6	230 526	0.948	-23.9	0.0	0.0	0.0	50507	LP-MLWK6	230 1	526	15.0	18.8			6	452
		265 218.1			0.0	0.0	0.0	51533	TUCO6	230 1	526	-100.1	-21.3			24	452
								51646	CARLISL3	115 1	526	85.2	2.5	1.081UN		53	168
51652	DOUD3	115 526	1.024	-27.6	0.0	42.9	0.0	51646	CARLISL3	115 1	526	42.0	-9.3			29	146
		265 117.8			0.0	2.8	0.0	51762	WOLFRTH3	115 1	526	-84.9	6.5			74	112
51655	SW68782	69.0 526	1.001	-32.2	0.0	0.0	0.0	51645	CARLISL2	69.0 1	526	-13.1	-1.4			24	54
		265 69.09			0.0	0.0	0.0	51667	BATTNN2	69.0 1	526	13.1	1.4			24	54
51658	MURPHY3	115 526	1.019	-28.4	0.0	24.0	0.0	51646	CARLISL3	115 1	526	-39.9	-8.7			27	146
		265 117.2			0.0	-0.1	0.0	51674	SP-QUAK3	115 1	526	15.9	8.8			12	146
51661	IVORYT2	69.0 526	1.038	-30.2	0.0	0.0	0.0	51669	BATTNS2	69.0 1	526	16.1	1.3			29	54
		265 71.64			0.0	0.0	0.0	51679	LUBS2	69.0 1	526	-16.1	-1.3			29	54
51664	ALLEN3	115 526	1.015	-28.5	0.0	46.9	0.0	51672	WHEELLOC3	115 1	526	19.9	2.7			14	146
		265 116.8			0.0	5.0	0.0	51674	SP-QUAK3	115 1	526	23.0	5.3			16	146
								51680	LUBS3	115 1	526	-89.8	-13.1			61	146
51667	BATTNN2	69.0 526	0.995	-32.8	0.0	13.1	0.0	51655	SW68782	69.0 1	526	-13.1	-1.4			24	54
		265 68.65			0.0	1.4	0.0	51661	IVORYT2	69.0 1	526	-16.0	-1.3			29	54
51669	BATTNS2	69.0 526	1.030	-30.9	0.0	16.0	0.0	51664	ALLEN3	115 1	526	-19.9	-2.8			14	146
		265 71.06			0.0	1.3	0.0	51672	WHEELLOC3	115 526	1.014	-28.6					
					0.0	19.9	0.0	51674	SP-QUAK3	115 526	1.014	-28.7					
					0.0	14.6	0.0	51658	MURPHY3	115 1	526	-15.9	-9.2			12	146
								51664	ALLEN3	115 1	526	-23.0	-5.4			16	146
51675	ACCO2	69.0 526	1.035	-30.5	0.0	9.4	0.0	51677	IVORY2	69.0 1	526	-9.4	-0.3			17	54
		265 71.41			0.0	0.3	0.0	51677	IVORY2	69.0 526	1.037	-30.2					
					0.0	13.7	0.0	51675	ACCO2	69.0 1	526	9.4	0.3			17	54
					0.0	2.3	0.0	51679	LUBS2	69.0 1	526	-23.1	-2.6			42	54
51679	LUBS2	69.0 526	1.040	-30.0	0.0	0.0	0.0	51661	IVORYT2	69.0 1	526	16.1	1.4			29	54
		265 71.77			0.0	0.0	0.0	51677	IVORY2	69.0 1	526	23.2	2.7			42	54
								51680	LUBS3	115 1	526	-39.3	-4.1	1.019RG		45	84

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
WIND GENERATION-184.8, CLOVIS-575, BLKWR-200X 5/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING A									
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
51680	LUBS3	115	526	1.030	-26.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	118.4			0.0	0.0	0.0	51664 ALLEN3	115	1	526	90.7	15.5			61 146
									51679 LUBS2	69.0	1	526	39.3	6.3	1.019UN		46 84
									51681 LUBS6	230	1	526	-162.6	-40.0	1.081RG		65 252
									51688 LUBE3	115	1	526	-10.3	7.0			8 146
									51786 SP-WDRW3	115	1	526	42.9	11.2			30 146
51681	LUBS6	230	526	0.979	-21.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	225.1			0.0	0.0	0.0	51680 LUBS3	115	1	526	162.9	55.3	1.081UN		70 252
									51699 JONES6	230	1	526	-94.1	-45.7			24 452
									51699 JONES6	230	2	526	-94.1	-45.7			24 452
									51763 WOLFRTH6	230	1	526	25.3	36.2			10 452
51685	PLANTRS269.0	526	1.006	-32.3	0.0	4.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.41			0.0	-0.6	0.0	51617 SW67862	69.0	1	526	33.6	8.1			64 54
									51687 LUBE2	69.0	1	526	-37.6	-7.5			71 54
51687	LUBE2	69.0	526	1.013	-31.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.91			0.0	0.0	0.0	51685 PLANTRS269.0	1	526	37.8	7.8				71 54
									51688 LUBE3	115	1	526	-32.2	-5.1	1.008RG		73 44
									51688 LUBE3	115	2	526	-32.9	-5.0	1.008RG		82 40
									51691 CLUTTER269.0	1	526	11.6	1.6				21 54
									51769 LEWTER2	69.0	1	526	15.7	0.7			29 54
51688	LUBE3	115	526	1.028	-26.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	118.2			0.0	0.0	0.0	51532 TUCO3	115	1	526	-5.5	0.1			3 179
									51630 VICKER3	115	1	526	33.8	11.9			31 112
									51680 LUBS3	115	1	526	10.3	-7.4			8 146
									51687 LUBE2	69.0	1	526	32.3	8.2	1.008UN		74 44
									51687 LUBE2	69.0	2	526	33.0	8.2	1.008UN		83 40
									51689 LUBE6	230	1	526	-103.9	-20.9	1.075RG		41 252
51689	LUBE6	230	526	0.977	-22.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	224.7			0.0	0.0	0.0	50527 LP-ETAP2	230	1	526	11.5	23.5			6 452
									51688 LUBE3	115	1	526	104.1	29.6	1.075UN		44 252
									51699 JONES6	230	1	526	-115.7	-53.1			29 452
51691	CLUTTER269.0	526	1.010	-32.0	0.0	11.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.66			0.0	1.6	0.0	51687 LUBE2	69.0	1	526	-11.5	-1.6			21 54
51699	JONES6	230	526	0.984	-21.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	226.2			0.0	0.0	0.0	50521 LP-HOLL6	230	1	526	23.2	7.2			5 452
									51533 TUCO6	230	1	526	4.9	40.4			9 452
									51681 LUBS6	230	1	526	94.3	45.2			24 452
									51681 LUBS6	230	2	526	94.3	45.2			24 452
									51689 LUBE6	230	1	526	115.9	53.0			29 452
									51701 JONES11	22.0	1	526	-237.3	-97.2	1.000LK		95 275
									51702 JONES21	21.0	1	526	-237.3	-92.4	1.050LK		84 308
									51703 JONES31	21.0	1	526	0.0	0.0	1.050LK		0 308
									51811 GRASSLN6	230	1	526	142.2	-1.3			16 904
51701	JONES11	22.0	526	1.022	-17.0	238.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	22.49			120.0H	0.0	0.0	51699 JONES6	230	1	526	238.0	120.0	1.000UN		95 275
51702	JONES21	21.0	526	0.980	-16.0	238.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	20.59			120.0H	0.0	0.0	51699 JONES6	230	1	526	238.0	120.0	1.050UN		88 308

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51703	JONES31	21.0 526	0.937	-21.4	0.0	0.0	0.0	51699	JONES6	230	1	526	0.0	0.0	1.050UN	0	308
51708	LEHMAN3	115 526	1.018	-24.8	0.0	7.4	0.0	51710	COCHRAN3	115	1	526	2.3	-1.6		2	146
		265 117.0			0.0	-0.7	0.0	51894	LG-PLAN3	115	1	526	-9.7	2.4		7	146
51709	COCHRAN269.0	526 265	1.026	-29.2	0.0	0.0	0.0	51583	WHITEFA269.0	1	526	19.5	6.5		56	36	
					0.0	0.0	-15.2	51710	COCHRAN3	115	1	526	-26.5	0.7	1.012RG	59	44
								51710	COCHRAN3	115	2	526	-26.3	0.8	1.012RG	58	44
								51713	LG-SUND269.0	1	526	6.7	1.3		18	36	
								51715	MIDDLET269.0	1	526	26.6	5.9		30	88	
51710	COCHRAN3	115 526	1.018	-25.0	0.0	0.0	0.0	51708	LEHMAN3	115	1	526	-2.3	0.7		2	146
		265 117.1			0.0	0.0	0.0	51709	COCHRAN269.0	1	526	26.6	1.3	1.012UN	59	44	
								51709	COCHRAN269.0	2	526	26.4	1.2	1.012UN	59	44	
								51730	PACIFIC3	115	1	526	-50.7	-3.2		34	146
51713	LG-SUND269.0	526 265	1.014	-29.7	0.0	6.6	0.0	51709	COCHRAN269.0	1	526	-6.6	-1.4		18	36	
					0.0	1.4	0.0										
51715	MIDDLET269.0	526 265	1.014	-30.4	0.0	6.6	0.0	51709	COCHRAN269.0	1	526	-26.5	-5.4		30	88	
					0.0	-0.5	0.0	51717	MALLET2	69.0	1	526	19.9	5.9		23	88
51717	MALLET2	69.0 526	1.009	-30.9	0.0	1.9	0.0	51715	MIDDLET269.0	1	526	-19.8	-5.8		23	88	
		265 69.64			0.0	-0.6	0.0	51721	TEXACO2	69.0	1	526	17.9	6.4		35	54
51721	TEXACO2	69.0 526	1.005	-31.2	0.0	11.5	0.0	51717	MALLET2	69.0	1	526	-17.9	-6.4		35	54
		265 69.32			0.0	4.9	0.0	51723	ZAVALLA269.0	1	526	6.4	1.4		7	88	
51723	ZAVALLA269.0	526 265	1.001	-31.6	0.0	6.4	0.0	51721	TEXACO2	69.0	1	526	-6.4	-1.5		7	88
					0.0	1.5	0.0										
51725	SLAUGHT269.0	526 265	1.024	-30.1	0.0	0.1	0.0	51727	SLAUGT2	69.0	1	526	-0.1	-0.1		0	54
					0.0	0.1	0.0										
51727	SLAUGT2	69.0 526	1.024	-30.1	0.0	0.0	0.0	51725	SLAUGHT269.0	1	526	0.1	-0.1		0	54	
		265 70.68			0.0	0.0	0.0	51755	LG-MEAD269.0	1	526	-0.1	0.1		0	54	
51730	PACIFIC3	115 526	1.026	-23.8	0.0	10.5	0.0	51710	COCHRAN3	115	1	526	51.0	3.7		34	146
		265 118.0			0.0	0.4	0.0	51732	SUNDOWN3	115	1	526	-61.6	-4.1		41	146
51732	SUNDOWN3	115 526	1.029	-23.4	0.0	0.0	0.0	51598	HOCKLEY3	115	1	526	-7.0	21.1		15	146
		265 118.3			0.0	0.0	0.0	51730	PACIFIC3	115	1	526	61.7	4.4		41	146
								51733	SUNDOWN6	230	1	526	-57.6	-22.2	1.086RG	40	150
								51733	SUNDOWN6	230	2	526	-57.6	-22.2	1.086RG	40	150
								51736	AMOCOT3	115	1	526	60.4	18.9		42	146

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51775	SP-SLAT269.0	526 265	1.001 69.05	-36.0	0.0 0.0	3.4 1.8	0.0 0.0	51777	SOUTHLN269.0	1	526	-3.4	-1.8			7	54
51777	SOUTHLN269.0	526 265	1.004 69.24	-35.9	0.0 0.0	0.6 0.2	0.0 0.0	51775	SP-SLAT269.0	1	526	3.4	1.7			7	54
								51779	LG-HCKB269.0	1	526	-4.0	-1.9			8	54
51779	LG-HCKB269.0	526 265	1.007 69.47	-35.8	0.0 0.0	4.1 2.1	0.0 0.0	51777	SOUTHLN269.0	1	526	4.0	1.8			8	54
								51783	DIEKEMP269.0	1	526	-8.0	-3.8			16	54
51783	DIEKEMP269.0	526 265	1.022 70.52	-35.1	0.0 0.0	1.1 0.5	0.0 0.0	51759	LG-TWD2 69.0	1	526	1.1	0.1			2	54
								51779	LG-HCKB269.0	1	526	8.1	3.7			16	54
								51815	GRAHAM2 69.0	1	526	-10.3	-4.3			20	54
51785	SP-WDRW269.0	526 265	1.017 70.16	-27.5	0.0 0.0	0.0 0.0	0.0 0.0	51771	SP-POSY269.0	1	526	0.0	-0.1			0	54
								51786	SP-WDRW3 115	1	526	0.0	0.1	0.995RG		0	50
51786	SP-WDRW3 115	526 265	1.022 117.5	-27.5	0.0 0.0	31.1 12.3	0.0 0.0	51680	LUBS3 115	1	526	-42.7	-11.0			30	146
								51785	SP-WDRW269.0	1	526	0.0	-0.1	0.995UN		0	50
								51804	LYNNCO3 115	1	526	11.6	-1.2			8	146
51791	YANCYT2 69.0	526 265	1.022 70.54	-32.0	0.0 0.0	0.0 0.0	0.0 0.0	51807	LG-CNTR269.0	1	526	-7.2	-0.3			13	54
								51825	BG-YNT2 69.0	1	526	7.2	0.3			13	54
51793	GARZA2 69.0	526 265	1.024 70.64	-35.0	0.0 0.0	15.1 5.3	0.0 0.0	51815	GRAHAM2 69.0	1	526	-15.1	-5.3			29	54
51797	LG-LKVW269.0	526 265	0.984 67.93	-31.9	0.0 0.0	7.4 2.4	0.0 0.0	51841	OZMAH2 69.0	1	526	-7.4	-2.4			15	54
51799	LG-NWM2 69.0	526 265	1.010 69.66	-33.2	0.0 0.0	10.0 3.9	0.0 0.0	51801	LG-NH&W269.0	1	526	-10.0	-3.9			20	54
51801	LG-NH&W269.0	526 265	1.026 70.76	-32.4	0.0 0.0	9.6 3.6	0.0 0.0	51799	LG-NWM2 69.0	1	526	10.1	3.8			19	54
								51803	LYNNCO2 69.0	1	526	-19.7	-7.3			38	54
51803	LYNNCO2 69.0	526 265	1.038 71.61	-31.8	0.0 0.0	6.7 -0.7	0.0 0.0	51801	LG-NH&W269.0	1	526	19.9	7.5			38	54
								51804	LYNNCO3 115	1	526	-22.3	-14.6	1.069RG		64	40
								51827	LG-DRAW269.0	1	526	-4.2	7.7			16	54
51804	LYNNCO3 115	526 265	1.019 117.2	-28.2	0.0 0.0	0.0 0.0	0.0 0.0	51786	SP-WDRW3 115	1	526	-11.6	0.0			8	146
								51803	LYNNCO2 69.0	1	526	22.4	16.8	1.069UN		69	40
								51810	GRASSLN3 115	1	526	-10.8	-16.7			13	146
51807	LG-CNTR269.0	526 265	1.030 71.10	-31.2	0.0 0.0	3.7 1.1	0.0 0.0	51791	YANCYT2 69.0	1	526	7.3	0.1			13	54
								51809	GRASSLN269.0	1	526	-2.6	1.0			7	41
								51827	LG-DRAW269.0	1	526	-8.4	-2.3			16	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>										
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA	
51809	GRASSLN	269.0	526	1.031	-31.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	71.11		0.0	0.0	0.0	51807	LG-CNTR	269.0	1	526	2.6	-1.2		7	41	
					0.0	0.0	0.0	51810	GRASSLN	3	115	1	526	-18.5	5.2	0.992RG	47	40
								51827	LG-DRAW	269.0	1	526	16.0	-4.0		24	67	
51810	GRASSLN	3	115	526	1.028	-28.1	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	118.2		0.0	0.0	0.0	51804	LYNNCO	3	115	1	526	10.8	16.3		13	146
					0.0	0.0	0.0	51809	GRASSLN	269.0	1	526	18.6	-4.2	0.992UN	46	40	
								51811	GRASSLN	6	230	1	526	-60.9	-11.9	1.069RG	54	112
								51816	GRAHAM	3	115	1	526	31.5	-0.3		21	146
51811	GRASSLN	6	230	526	0.979	-24.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	225.2		0.0	0.0	0.0	51699	JONES	6	230	1	526	-141.6	-1.7		16	904
					0.0	0.0	0.0	51810	GRASSLN	3	115	1	526	61.0	16.4	1.069UN	58	112
								51861	BORDEN	6	230	1	526	80.6	-14.7		9	904
51815	GRAHAM	2	69.0	526	1.026	-34.9	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.81		0.0	0.0	0.0	51783	DIEKEMP	269.0	1	526	10.3	4.3		20	54	
					0.0	0.0	-11.4	51793	GARZA	2	69.0	1	526	15.1	5.3		29	54
								51816	GRAHAM	3	115	1	526	-31.1	2.7	1.007RG	76	40
								51857	BG-JST	2	69.0	1	526	5.6	-0.9		7	79
51816	GRAHAM	3	115	526	1.019	-29.8	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	117.1		0.0	0.0	0.0	51810	GRASSLN	3	115	1	526	-31.2	-0.1		21	146
								51815	GRAHAM	2	69.0	1	526	31.2	0.1	1.007UN	77	40
51819	YANCY	2	69.0	526	1.021	-32.1	0.0	1.1	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.44		0.0	1.1	0.0	51825	BG-YNT	2	69.0	1	526	-1.1	-1.1		3	54
51822	LG-UNIO	269.0	526	0.989	-31.6	0.0	3.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.27		0.0	1.5	0.0	51833	LG-BRWN	269.0	1	526	-11.0	-4.3		29	41	
								51835	BROWNFI	269.0	1	526	0.3	0.6		1	54	
								51841	OZMAH	2	69.0	1	526	7.5	2.2		15	54
51825	BG-YNT	2	69.0	526	1.021	-32.1	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.48		0.0	0.0	0.0	51791	YANCYT	2	69.0	1	526	-7.2	-0.3		13	54
								51819	YANCY	2	69.0	1	526	1.1	1.0		3	54
								51851	BG-GAR	269.0	1	526	6.1	-0.7		8	79	
51827	LG-DRAW	269.0	526	1.030	-31.2	0.0	3.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	71.10		0.0	1.5	0.0	51803	LYNNCO	2	69.0	1	526	4.3	-7.8		16	54
								51807	LG-CNTR	269.0	1	526	8.4	2.3		16	54	
								51809	GRASSLN	269.0	1	526	-15.9	4.1		24	67	
51829	TERRYC	2	69.0	526	1.031	-29.6	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	71.12		0.0	0.0	0.0	51757	LG-DCW	2	69.0	1	526	13.5	2.0		24	54
								51830	TERRYC	3	115	1	526	-25.4	-8.8	1.055RG	65	40
								51830	TERRYC	3	115	2	526	-25.7	-8.8	1.055RG	66	40
								51833	LG-BRWN	269.0	1	526	37.7	15.6		73	54	
51830	TERRYC	3	115	526	1.009	-25.4	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	116.0		0.0	0.0	0.0	51752	LG-CLAU	3	115	1	526	-26.2	-5.7		18	146
								51762	WOLFRTH	3	115	1	526	2.1	-26.4		15	179
								51829	TERRYC	2	69.0	1	526	25.5	11.0	1.055UN	69	40
								51829	TERRYC	2	69.0	2	526	25.8	11.0	1.055UN	70	40
								51848	PRENTIC	3	115	1	526	-6.6	0.1		5	146
								51960	DNVRN	3	115	1	526	-25.5	8.8		15	179
								52002	SULPHUR	3	115	1	526	4.9	1.1		3	146

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA										
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA	
51833	LG-BRWN	269.0	526	0.995	-31.3	0.0	8.9	0.0	-----									
		265	68.64		0.0	3.5	0.0	51822	LG-UNIO	269.0	1	526	11.1	4.3		29	41	
								51829	TERRYC	269.0	1	526	-36.8	-14.1		73	54	
								51835	BROWNFI	269.0	1	526	16.8	6.4		34	54	
51835	BROWNFI	269.0	526	0.989	-31.6	0.0	1.2	0.0	-----									
		265	68.27		0.0	0.2	0.0	51822	LG-UNIO	269.0	1	526	-0.3	-0.6		1	54	
								51833	LG-BRWN	269.0	1	526	-16.8	-6.3		34	54	
								51837	BRNFIT	269.0	1	526	15.9	6.9		32	54	
								51841	OZMAH	269.0	1	526	0.0	-0.1		0	41	
51837	BRNFIT	269.0	526	0.986	-31.7	0.0	0.0	0.0	-----									
		265	68.06		0.0	0.0	0.0	50528	MU-BRNF	269.0	1	526	7.0	4.9		21	41	
								51835	BROWNFI	269.0	1	526	-15.9	-6.8		32	54	
								51843	GDPASTR	269.0	1	526	8.9	1.9		17	54	
51841	OZMAH	269.0	526	0.989	-31.6	0.0	0.0	0.0	-----									
		265	68.27		0.0	0.0	0.0	51797	LG-LKVV	269.0	1	526	7.5	2.3		15	54	
								51822	LG-UNIO	269.0	1	526	-7.5	-2.2		15	54	
								51835	BROWNFI	269.0	1	526	0.0	-0.1		0	41	
51843	GDPASTR	269.0	526	0.983	-31.9	0.0	0.2	0.0	-----									
		265	67.85		0.0	0.0	0.0	51837	BRNFIT	269.0	1	526	-8.8	-2.0		17	54	
								51909	LG-JSM	269.0	1	526	8.6	1.9		22	41	
51845	AMOCWA	230	526	0.994	-19.4	0.0	11.3	0.0	-----									
		265	228.5		0.0	0.0	0.0	51891	YOAKUM	6	230	1	526	10.2	5.7		3	452
								51969	MUSTANG	6	230	1	526	-21.6	-5.7		5	452
51848	PRENTIC	3	115	526	1.010	-25.0	0.0	16.2	-----									
		265	116.1		0.0	4.3	0.0	51830	TERRYC	3	115	1	526	6.6	-1.3		5	146
								51890	YOAKUM	3	115	1	526	-22.9	-2.9		16	146
51851	BG-GARZ	269.0	526	1.017	-32.8	0.0	3.0	0.0	-----									
		265	70.19		0.0	0.0	0.0	51825	BG-YNT	269.0	1	526	-6.1	0.3		8	79	
								51853	BG-JUST	269.0	1	526	3.0	-0.3		4	79	
51853	BG-JUST	269.0	526	1.015	-33.1	0.0	3.0	0.0	-----									
		265	70.07		0.0	0.0	0.0	51851	BG-GARZ	269.0	1	526	-3.0	0.0		4	79	
51855	BG-FLUV	269.0	526	1.018	-36.6	0.0	5.5	0.0	-----									
		265	70.24		0.0	0.0	0.0	51857	BG-JST	269.0	1	526	-5.5	0.0		7	79	
51857	BG-JST	269.0	526	1.021	-36.1	0.0	0.0	0.0	-----									
		265	70.48		0.0	0.0	0.0	51815	GRAHAM	269.0	1	526	-5.5	0.3		7	79	
								51855	BG-FLUV	269.0	1	526	5.5	-0.3		7	79	
51861	BORDEN	6	230	526	0.980	-26.4	0.0	0.0	-----									
		265	225.3		0.0	0.0	0.0	50534	CR-VEAL	4	138	1	526	80.3	-2.7	1.050UN	55	150
								51811	GRASSLN	6	230	1	526	-80.3	2.7		9	904

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52071	CHAVES2	69.0 267	526 71.21	1.032 -30.6	0.0 0.0	0.0 0.0	0.0 -8.6	52072	CHAVES3	115	1	526	-36.7	-1.1	0.997RG	81	44
								52079	PRICE2	69.0	1	526	36.7	9.7		68	54
52072	CHAVES3	115 267	526 120.5	1.048 -25.1	0.0 0.0	0.0 0.0	0.0	52071	CHAVES2	69.0	1	526	36.8	4.7	0.997UN	81	44
								52073	CHAVES6	230	1	526	-94.9	-14.5	1.112RG	61	150
								52073	CHAVES6	230	2	526	-94.9	-14.5	1.112RG	61	150
								52078	URTON3	115	1	526	93.9	17.2		62	146
								52088	SAMSON3	115	1	526	59.1	7.1		39	146
52073	CHAVES6	230 267	526 220.5	0.959 -20.4	0.0 0.0	0.0 0.0	0.0	52072	CHAVES3	115	1	526	95.1	22.6	1.112UN	68	150
								52072	CHAVES3	115	2	526	95.1	22.6	1.112UN	68	150
								52185	EDDYCO6	230	1	526	27.7	-60.5		15	452
								99990	WINDFARM	230	1	526	-217.9	15.4		50	452
52078	URTON3	115 267	526 119.4	1.038 -26.1	0.0 0.0	24.7 7.8	0.0	52072	CHAVES3	115	1	526	-93.3	-15.7		62	146
								52084	ROSWLC3	115	1	526	68.7	7.9		46	146
52079	PRICE2	69.0 267	526 69.70	1.010 -32.0	0.0 0.0	11.5 1.8	0.0	52071	CHAVES2	69.0	1	526	-36.1	-8.8		68	54
								52081	CV-PINE2	69.0	1	526	24.6	7.0		62	41
52081	CV-PINE2	69.0 267	526 69.01	1.000 -32.6	0.0 0.0	6.0 2.0	0.0	52079	PRICE2	69.0	1	526	-24.4	-6.7		62	41
								52087	CAPITAN2	69.0	1	526	18.5	4.8		35	54
52084	ROSWLC3	115 267	526 118.9	1.034 -26.6	0.0 0.0	45.0 11.3	0.0	52078	URTON3	115	1	526	-68.5	-7.4		46	146
								52094	ROSWIN3	115	1	526	23.4	-3.9		16	146
52085	CAPITAN2	69.0 267	526 70.03	1.015 -31.8	0.0 0.0	0.0 0.0	0.0	52089	RIAC2	69.0	1	526	10.2	4.5		20	54
								52093	ROSWIN2	69.0	1	526	-10.2	-4.5		20	54
52087	CAPITAN2	69.0 267	526 68.24	0.989 -33.3	0.0 0.0	18.3 4.6	0.0	52081	CV-PINE2	69.0	1	526	-18.3	-4.6		35	54
52088	SAMSON3	115 267	526 119.3	1.037 -26.4	0.0 0.0	12.9 0.7	0.0	52072	CHAVES3	115	1	526	-58.7	-6.2		39	146
								52094	ROSWIN3	115	1	526	45.8	5.5		30	146
52089	RIAC2	69.0 267	526 69.43	1.006 -32.0	0.0 0.0	10.2 4.5	0.0	52085	CAPITAN2	69.0	1	526	-10.2	-4.5		21	54
52093	ROSWIN2	69.0 267	526 70.10	1.016 -31.7	0.0 0.0	0.0 0.0	0.0	52085	CAPITAN2	69.0	1	526	10.2	4.5		20	54
								52094	ROSWIN3	115	1	526	-32.4	12.7	0.957RG	86	40
								52097	RIACLN2	69.0	1	526	22.1	6.0		26	88
52094	ROSWIN3	115 267	526 118.9	1.034 -26.9	0.0 0.0	0.0 0.0	0.0	52084	ROSWLC3	115	1	526	-23.4	3.8		16	146
								52088	SAMSON3	115	1	526	-45.7	-5.4		30	146
								52093	ROSWIN2	69.0	1	526	32.5	-9.6	0.957UN	82	40
								52098	BRASHER3	115	1	526	20.2	4.4		22	90
								52104	TWEEDY3	115	1	526	16.4	6.8		10	179

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52097	RIACLN2	69.0 526	1.006	-32.6	0.0	0.0	0.0	52093	ROSWIN2	69.0 1	526	-22.0	-5.8			26	88
		267 69.44			0.0	0.0	0.0	52101	CV-ORH2	69.0 1	526	22.0	5.8			26	88
52098	BRASHER3	115 526	1.032	-27.0	0.0	20.1	0.0	52094	ROSWIN3	115 1	526	-20.1	-4.4			22	90
		267 118.7			0.0	4.4	0.0										
52101	CV-ORH2	69.0 526	0.994	-33.7	0.0	6.1	0.0	52097	RIACLN2	69.0 1	526	-21.8	-5.4			26	88
		267 68.59			0.0	2.3	0.0	52121	DEXTRT2	69.0 1	526	15.7	3.2			18	88
52104	TWEEDY3	115 526	1.032	-27.0	0.0	16.1	0.0	52094	ROSWIN3	115 1	526	-16.4	-7.1			10	179
		267 118.7			0.0	7.6	0.0	52184	EDDYCO3	115 1	526	0.4	-0.5			0	146
52121	DEXTRT2	69.0 526	0.989	-34.3	0.0	0.0	0.0	52101	CV-ORH2	69.0 1	526	-15.7	-3.1			18	88
		267 68.21			0.0	0.0	0.0	52123	CV-DEXT2	69.0 1	526	16.5	6.7			50	36
52123	CV-DEXT2	69.0 526	0.979	-34.5	0.0	7.3	0.0	52137	CV-HGRM2	69.0 1	526	-0.8	-3.6			4	88
		267 67.52			0.0	3.3	0.0	52121	DEXTRT2	69.0 1	526	-16.4	-6.6			50	36
52125	DEXTER2	69.0 526	0.973	-34.6	0.0	9.0	0.0	52125	DEXTER2	69.0 1	526	9.0	3.3			27	36
		267 67.14			0.0	3.3	0.0	52123	CV-DEXT2	69.0 1	526	-9.0	-3.3			27	36
52137	CV-HGRM2	69.0 526	0.991	-34.3	0.0	5.5	0.0	52121	DEXTRT2	69.0 1	526	0.8	3.5			4	88
		267 68.38			0.0	0.8	0.0	52147	CV-YOT2	69.0 1	526	-6.3	-4.3			9	88
52139	CV-LKAR2	69.0 526	1.002	-33.8	0.0	2.8	0.0	52141	CV-CTNW2	69.0 1	526	-11.0	-5.0			14	88
		267 69.11			0.0	0.4	0.0	52147	CV-YOT2	69.0 1	526	8.2	4.6			11	88
52141	CV-CTNW2	69.0 526	1.008	-33.3	0.0	4.1	0.0	52139	CV-LKAR2	69.0 1	526	11.0	5.0			14	88
		267 69.57			0.0	1.1	0.0	52143	COTTON2	69.0 1	526	2.3	0.4			4	54
52143	COTTON2	69.0 526	1.008	-33.4	0.0	2.3	0.0	52145	SMITH2	69.0 1	526	-17.4	-6.5			21	88
		267 69.52			0.0	0.4	0.0	52141	CV-CTNW2	69.0 1	526	-2.3	-0.4			4	54
52145	SMITH2	69.0 526	1.020	-32.5	0.0	5.3	0.0	52141	CV-CTNW2	69.0 1	526	17.5	6.7			21	88
		267 70.37			0.0	2.4	0.0	52153	ARTESIA2	69.0 1	526	-22.8	-9.1			27	88
52147	CV-YOT2	69.0 526	0.992	-34.3	0.0	0.0	0.0	52137	CV-HGRM2	69.0 1	526	6.3	4.3			9	88
		267 68.44			0.0	0.0	0.0	52139	CV-LKAR2	69.0 1	526	-8.1	-4.7			11	88
52149	CV-YO2	69.0 526	0.990	-34.4	0.0	1.8	0.0	52149	CV-YO2	69.0 1	526	1.8	0.4			4	54
		267 68.33			0.0	0.6	0.0	52147	CV-YOT2	69.0 1	526	-1.8	-0.6			4	54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>								<===== LINE DATA =====>										
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING A										
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA	
52153	ARTESIA269.0	526	1.021	-32.4	0.0	0.0	0.0	-----										
		267	70.45		0.0	0.0	-10.9	52145	SMITH2	69.0	1	526	22.8	9.1		27	88	
								52154	ARTESIA3	115	1	526	-24.3	-5.4	1.038RG	61	40	
								52154	ARTESIA3	115	2	526	-24.5	-5.7	1.038RG	62	40	
								52163	NAVAJ22	69.0	1	526	16.8	6.6		33	54	
								52171	CV-ARTE269.0	1	526	9.1	6.4		20	54		
52154	ARTESIA3	115	526	1.005	-28.5	0.0	0.0	-----										
		267	115.6		0.0	0.0	0.0	52153	ARTESIA269.0	1	526	24.3	7.2	1.038UN		63	40	
								52153	ARTESIA269.0	2	526	24.5	7.6	1.038UN		64	40	
								52162	NAVAJ33	115	1	526	-48.9	-14.8		28	179	
52162	NAVAJ33	115	526	1.006	-28.4	0.0	14.8	-----										
		267	115.7		0.0	9.5	0.0	52154	ARTESIA3	115	1	526	48.9	14.8		28	179	
								52166	NAVAJ43	115	1	526	-63.8	-24.3		38	179	
52163	NAVAJ22	69.0	526	1.020	-32.5	0.0	6.8	-----										
		267	70.35		0.0	3.9	0.0	52153	ARTESIA269.0	1	526	-16.7	-6.6			33	54	
								52165	NAVAJR2	69.0	1	526	9.9	2.7			19	54
52165	NAVAJR2	69.0	526	1.018	-32.6	0.0	5.6	-----										
		267	70.25		0.0	3.6	0.0	52163	NAVAJ22	69.0	1	526	-9.9	-2.7			19	54
								52169	ARTTOW2	69.0	1	526	4.4	-0.8			8	54
52166	NAVAJ43	115	526	1.007	-28.3	0.0	1.2	-----										
		267	115.8		0.0	0.6	0.0	52162	NAVAJ33	115	1	526	63.8	24.3			38	179
								52184	EDDYCO3	115	1	526	-65.0	-24.9			47	146
52169	ARTTOW2	69.0	526	1.018	-32.6	0.0	4.4	-----										
		267	70.25		0.0	-0.8	0.0	52165	NAVAJR2	69.0	1	526	-4.4	0.8			8	54
52171	CV-ARTE269.0	526	1.020	-32.5	0.0	11.2	0.0	-----										
		267	70.39		0.0	4.4	0.0	52153	ARTESIA269.0	1	526	-9.1	-6.4			20	54	
								52173	ARTW2	69.0	1	526	-2.1	2.0			5	54
52173	ARTW2	69.0	526	1.020	-32.4	0.0	5.3	-----										
		267	70.37		0.0	0.1	0.0	52171	CV-ARTE269.0	1	526	2.1	-2.0			5	54	
								52175	ARTCC2	69.0	1	526	-7.3	1.9			14	54
52175	ARTCC2	69.0	526	1.020	-32.3	0.0	10.2	-----										
		267	70.41		0.0	2.5	0.0	52173	ARTW2	69.0	1	526	7.3	-2.0			14	54
								52177	ARTSR2	69.0	1	526	-17.5	-0.6			32	54
52177	ARTSR2	69.0	526	1.022	-32.2	0.0	6.5	-----										
		267	70.50		0.0	2.4	0.0	52175	ARTCC2	69.0	1	526	17.5	0.6			32	54
								52179	ATOKA2	69.0	1	526	-24.0	-3.0			27	88
52179	ATOKA2	69.0	526	1.028	-31.4	0.0	0.0	-----										
		267	70.96		0.0	0.0	0.0	52177	ARTSR2	69.0	1	526	24.2	3.3			27	88
								52180	ATOKA3	115	1	526	-24.2	-3.3	1.016RG		59	40
52180	ATOKA3	115	526	1.027	-27.6	0.0	0.0	-----										
		267	118.1		0.0	0.0	0.0	52179	ATOKA2	69.0	1	526	24.2	4.9	1.016UN		60	40
								52188	CV-DAYT3	115	1	526	-12.0	-0.4			8	146
								52298	CV-IRIS3	115	1	526	-12.3	-4.6			9	146
52184	EDDYCO3	115	526	1.028	-26.9	0.0	17.6	-----										
		267	118.2		0.0	1.5	-15.2	52104	TWEEDY3	115	1	526	-0.4	-3.9			3	146
								52166	NAVAJ43	115	1	526	65.7	26.1			47	146
								52185	EDDYCO6	230	1	526	-112.5	-19.9	1.050RG		66	168
								52188	CV-DAYT3	115	1	526	16.3	0.6			11	146
								52304	NCANALT3	115	1	526	13.2	10.9			9	179

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
52185	EDDYCO6	230	526	1.000	-22.1	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	230.0			17.0R	0.0	0.0	52073	CHAVES6	230	1	526	-27.2	49.4		12 452
									52184	EDDYCO3	115	1	526	112.8	30.1	1.050UN	69 168
									52186	EDDYCO7	345	1	526	-163.5	-41.1	1.000LK	30 560
									52209	CUNNINH6	230	1	526	-36.4	-7.2		8 452
									52293	7RIVER6	230	1	526	114.3	15.8		23 492
									59996	EPTNP-D6	230	1	999	0.0	-30.0		2 2000
52186	EDDYCO7	345	526	1.010	-20.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	348.5			0.0	0.0	0.0	51440	TOLK7	345	1	526	-163.6	-47.4		12 1355
									52185	EDDYCO6	230	1	526	163.6	47.4	1.000UN	30 560
52188	CV-DAYT3	115	526	1.027	-27.6	0.0	4.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	118.2			0.0	0.1	0.0	52180	ATOKA3	115	1	526	12.0	0.3		8 146
									52184	EDDYCO3	115	1	526	-16.3	-0.4		11 146
52204	LEACO3	115	526	1.018	-23.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	117.1			0.0	0.0	0.0	52205	LEACO6	230	1	526	-52.6	-18.7	1.031RG	33 168
									52354	LE-LVTN3	115	1	526	67.4	28.2		32 226
									52360	MADDOX3	115	1	526	-14.8	-9.5		8 226
52205	LEACO6	230	526	1.004	-21.7	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	230.8			0.0	0.0	0.0	51891	YOAKUM6	230	1	526	-51.9	18.9		12 452
									52204	LEACO3	115	1	526	52.6	20.9	1.031UN	34 168
									52209	CUNNINH6	230	1	526	-55.7	-0.4		12 452
									52231	MIDLND-6	230	1	526	55.0	-39.5		7 904
52208	CUNNINH3	115	526	1.027	-24.0	0.0	0.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	118.1			0.0	0.0	0.0	52014	RUSSEL-3	115	1	526	-4.9	8.5		7 146
									52209	CUNNINH6	230	1	526	-85.6	-51.2	1.069LK	58 168
									52211	CUNN11	13.8	1	526	-69.7	-38.0	1.025LK	86 90
									52215	CUNN31	22.0	1	526	0.0	0.0	1.025LK	0 150
									52240	PCA3	115	1	526	25.7	-9.3		18 146
									52358	SNANT3	115	1	526	74.9	30.0		60 132
									52360	MADDOX3	115	1	526	-20.7	42.1		20 226
									52390	MILLIN3	115	1	526	43.7	18.7		35 132
									52428	MOMUMT3	115	1	526	36.1	-0.7		24 146
52209	CUNNINH6	230	526	1.004	-20.2	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	231.0			0.0	0.0	0.0	52185	EDDYCO6	230	1	526	36.5	-8.2		8 452
									52205	LEACO6	230	1	526	55.8	0.9		12 452
									52208	CUNNINH3	115	1	526	85.8	59.4	1.069UN	62 168
									52212	CUNN21	20.0	1	526	-195.5	-33.2	0.975LK	82 241
									52214	CUNN41	22.0	1	526	-100.6	-42.2	1.000LK	72 150
									52253	POTJCT6	230	1	526	118.0	23.3		27 452
52211	CUNN11	13.8	526	1.057	-19.3	70.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	14.58			46.0H	0.0	0.0	52208	CUNNINH3	115	1	526	70.0	46.0	1.025UN	88 90
52212	CUNN21	20.0	526	1.056	-14.5	196.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	21.12			53.8R	0.0	0.0	52209	CUNNINH6	230	1	526	196.0	53.8	0.975UN	80 241
52214	CUNN41	22.0	526	1.054	-14.9	101.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	23.18			53.8R	0.0	0.0	52209	CUNNINH6	230	1	526	101.0	53.8	1.000UN	72 150
52215	CUNN31	22.0	526	1.002	-24.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	22.04			0.0	0.0	0.0	52208	CUNNINH3	115	1	526	0.0	0.0	1.025UN	0 150

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
52261	NMPOTA2	69.0 267	526 68.34	0.990 -31.6	0.0 0.0	4.5 4.1	0.0 0.0	52249	LIVSTR2	69.0	1	526	2.1	-1.0		4	54
								52263	KERMAC2	69.0	1	526	-6.7	-3.1		14	54
52263	KERMAC2	69.0 267	526 68.52	0.993 -31.5	0.0 0.0	9.0 9.3	0.0 0.0	52251	POTJCT2	69.0	1	526	-15.7	-12.4		37	54
								52261	NMPOTA2	69.0	1	526	6.7	3.1		14	54
52265	CV-DG&I269	69.0 267	526 68.59	0.994 -33.5	0.0 0.0	27.1 4.4	0.0 0.0	52295	7RIVER2	69.0	1	526	-27.1	-4.4		51	54
52266	WIPP3	115 267	526 117.8	1.025 -28.6	0.0 0.0	3.3 2.3	0.0 -22.7	52268	SNDDUN3	115	1	526	1.1	13.9		9	146
								52274	IMC#13	115	1	526	-4.4	6.4		5	146
52268	SNDDUN3	115 267	526 117.1	1.018 -28.5	0.0 0.0	5.5 5.9	0.0 0.0	52266	WIPP3	115	1	526	-1.1	-14.4		10	146
								52329	OCHOA3	115	1	526	-4.5	8.5		6	146
52269	MISCH22	69.0 267	526 70.28	1.018 -30.9	0.0 0.0	3.5 3.2	0.0 0.0	52251	POTJCT2	69.0	1	526	-27.0	-27.5		43	88
								52271	IMC#22	69.0	1	526	23.6	24.3		38	88
52271	IMC#22	69.0 267	526 70.10	1.016 -31.0	0.0 0.0	14.7 14.1	0.0 0.0	52269	MISCH22	69.0	1	526	-23.5	-24.2		38	88
								52275	UNITSA2	69.0	1	526	8.9	10.1		15	88
52274	IMC#13	115 267	526 117.4	1.021 -28.3	0.0 0.0	24.3 14.4	0.0 0.0	52252	POTJCT3	115	1	526	-28.8	-7.2		20	146
								52266	WIPP3	115	1	526	4.5	-7.3		6	146
52275	UNITSA2	69.0 267	526 70.03	1.015 -31.0	0.0 0.0	0.6 0.6	0.0 0.0	52271	IMC#22	69.0	1	526	-8.9	-10.1		15	88
								52279	IMC#32	69.0	1	526	8.3	9.5		23	54
52277	DUVAL32	69.0 267	526 69.05	1.001 -31.2	0.0 0.0	2.9 1.7	0.0 0.0	52278	IMC#42	69.0	1	526	2.5	2.3		4	88
								52279	IMC#32	69.0	1	526	-5.4	-4.0		19	36
52278	IMC#42	69.0 267	526 68.93	0.999 -31.3	0.0 0.0	2.5 2.4	0.0 0.0	52277	DUVAL32	69.0	1	526	-2.5	-2.4		4	88
52279	IMC#32	69.0 267	526 69.29	1.004 -31.1	0.0 0.0	2.8 5.5	0.0 0.0	52275	UNITSA2	69.0	1	526	-8.2	-9.5		23	54
								52277	DUVAL32	69.0	1	526	5.4	4.0		19	36
52282	CV-INDH3	115 267	526 116.9	1.017 -27.7	0.0 0.0	39.6 13.9	0.0 0.0	52294	7RIVER3	115	1	526	-40.0	-29.5		33	146
								52314	PECOS3	115	1	526	0.4	15.6		11	146
52293	7RIVER6	230 267	526 227.2	0.988 -24.4	0.0 0.0	0.0 0.0	0.0 0.0	52185	EDDYCO6	230	1	526	-113.6	-17.7		24	492
								52294	7RIVER3	115	1	526	91.1	15.3	1.054UN	42	225
								52313	PECOS6	230	1	526	22.4	2.3		7	347
52294	7RIVER3	115 267	526 118.8	1.033 -27.1	0.0 0.0	0.0 0.0	0.0 -30.7	52282	CV-INDH3	115	1	526	40.3	29.9		33	146
								52293	7RIVER6	230	1	526	-91.1	-11.0	1.054RG	39	225
								52295	7RIVER2	69.0	1	526	27.8	7.5	1.012UN	70	40
								52296	CV-LAKW3	115	1	526	22.9	4.3		15	146

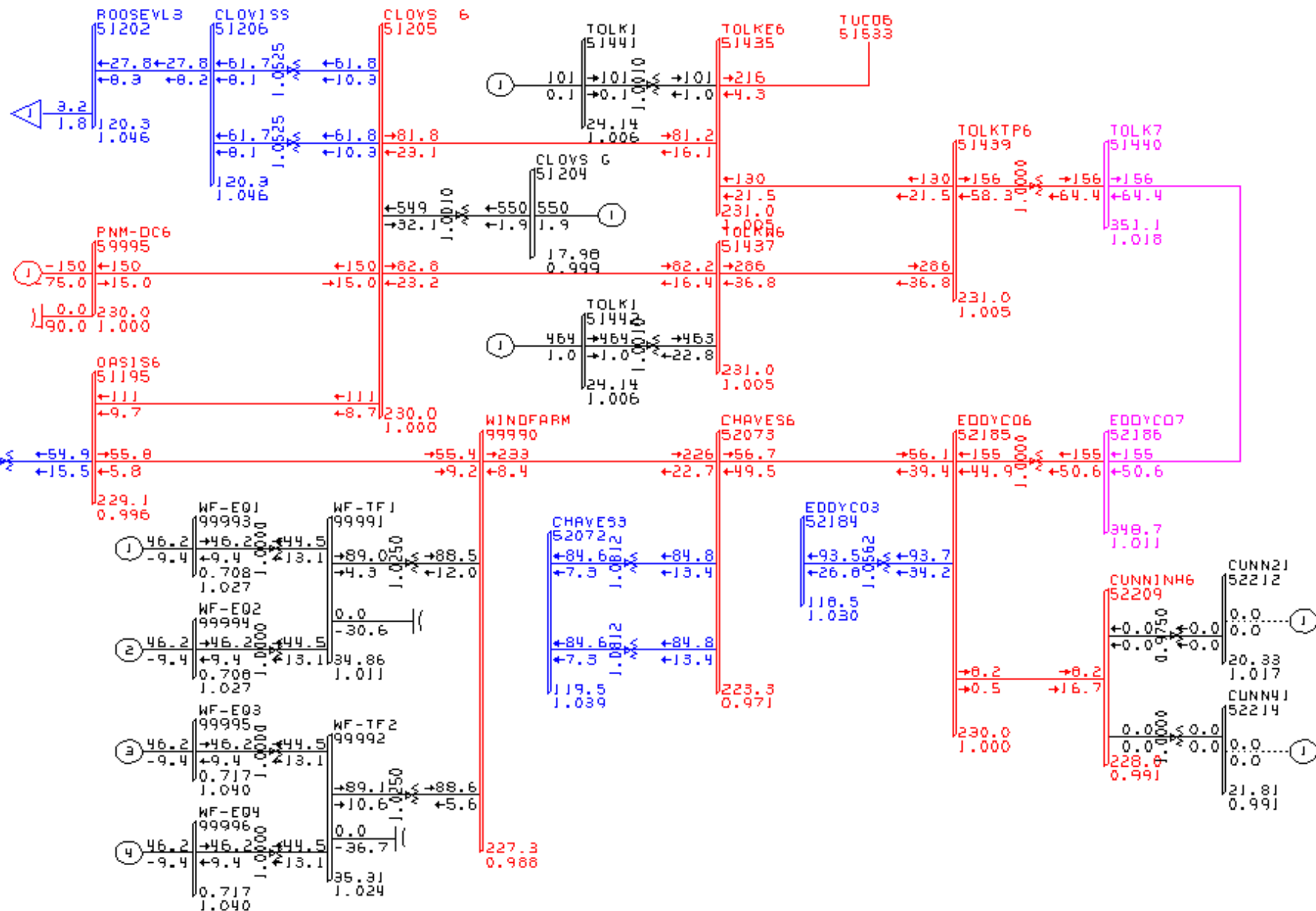
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
52295	7RIVER2	69.0 267	526 70.67	1.024 -31.4	0.0 0.0	0.0 0.0	0.0 0.0	52265	CV-DG&I269.0	1	526	27.7	5.3			51	54
								52294	7RIVER3	115	1	526	-27.7	-5.3	1.012RG	69	40
52296	CV-LAKW3	115 267	526 118.6	1.031 -27.3	0.0 0.0	5.6 0.2	0.0 0.0	52294	7RIVER3	115	1	526	-22.9	-4.4		15	146
								52298	CV-IRIS3	115	1	526	17.3	4.2		12	146
52298	CV-IRIS3	115 267	526 118.4	1.029 -27.4	0.0 0.0	5.0 0.2	0.0 0.0	52180	ATOKA3	115	1	526	12.3	4.2		9	146
								52296	CV-LAKW3	115	1	526	-17.3	-4.4		12	146
52301	DELHI2	69.0 267	526 70.27	1.018 -33.6	0.0 0.0	0.1 0.0	0.0 0.0	52303	OCOTILL269.0	1	526	-0.1	0.0		0	54	
52303	OCOTILL269.0	526 267	526 70.26	1.018 -33.5	0.0 0.0	20.9 3.9	0.0 0.0	52301	DELHI2	69.0	1	526	0.1	-0.2		0	54
								52309	CARLSBD269.0	1	526	-21.1	-3.7		39	54	
52304	NCANALT3	115 267	526 115.8	1.007 -27.6	0.0 0.0	24.0 9.1	0.0 0.0	52184	EDDYCO3	115	1	526	-13.1	-13.0		10	179
								52314	PECOS3	115	1	526	-10.9	3.9		6	179
52307	NPOTT2	69.0 267	526 70.96	1.028 -30.6	0.0 0.0	0.0 0.0	0.0 0.0	52239	PCA2	69.0	1	526	-7.6	9.3		13	88
								52251	POTJCT2	69.0	1	526	7.6	-9.1		13	88
								52255	NATPOT2	69.0	1	526	0.0	-0.1		0	54
52308	FIESTA3	115 267	526 115.5	1.004 -27.7	0.0 0.0	19.7 9.5	0.0 0.0	52314	PECOS3	115	1	526	-19.7	-9.5		15	146
52309	CARLSBD269.0	526 267	526 70.82	1.026 -33.0	0.0 0.0	0.0 0.0	0.0 0.0	52303	OCOTILL269.0	1	526	21.2	3.8		39	54	
								52310	CARLSBD3	115	1	526	-31.4	-9.3	1.056RG	80	40
								52310	CARLSBD3	115	2	526	-14.5	-4.5	1.056RG	59	25
								52311	CARLSBD113.8	1	526	0.0	0.0	0.978UN	0	22	
								52327	HOPISB2	69.0	1	526	24.8	9.9		72	36
52310	CARLSBD3	115 267	526 115.8	1.007 -27.8	0.0 0.0	0.0 0.0	0.0 -14.6	52240	PCA3	115	1	526	-11.1	-17.0		14	146
								52309	CARLSBD269.0	1	526	31.6	12.5	1.056UN	84	40	
								52309	CARLSBD269.0	2	526	14.6	6.0	1.056UN	63	25	
								52314	PECOS3	115	1	526	-35.1	13.1		21	179
52311	CARLSBD113.8	526 267	526 13.85	1.003 -33.0	0.0 0.0	0.0 0.0	0.0 0.0	52309	CARLSBD269.0	1	526	0.0	0.0	0.978LK	0	22	
52313	PECOS6	230 267	526 226.7	0.986 -24.7	0.0 0.0	0.0 0.0	0.0 0.0	52253	POTJCT6	230	1	526	-43.1	27.4		15	347
								52293	7RIVER6	230	1	526	-22.4	-7.0		7	347
								52314	PECOS3	115	1	526	65.5	-20.4	0.994LK	46	150
52314	PECOS3	115 267	526 115.8	1.007 -27.6	0.0 0.0	0.0 0.0	0.0 0.0	52282	CV-INDH3	115	1	526	-0.4	-16.2		11	146
								52304	NCANALT3	115	1	526	10.9	-4.0		6	179
								52308	FIESTA3	115	1	526	19.7	9.3		15	146
								52310	CARLSBD3	115	1	526	35.1	-13.1		21	179
								52313	PECOS6	230	1	526	-65.4	24.0	0.994UN	46	150

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:12
 04SP-20412-501. (BOONE SITE) SYSTEM IMPACT STUDY
 WIND GENERATION-184.8, CLOVIS-575, BLKWTR-200X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52317	LOVNGT2	69.0 267	526 68.55	0.993 -33.9	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52319	CBWFLD2	69.0	1	526	3.5	0.4		10	36
								52325	LVNG&NA2	69.0	1	526	8.1	3.4		16	54
								52327	HOPISB2	69.0	1	526	-11.7	-3.8		34	36
52319	CBWFLD2	69.0 267	526 68.46	0.992 -34.0	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52317	LOVNGT2	69.0	1	526	-3.5	-0.4		10	36
								52321	CBWTRF2	69.0	1	526	1.8	0.2		3	54
								52323	WHITEC2	69.0	1	526	1.8	0.2		5	36
52321	CBWTRF2	69.0 267	526 68.37	0.991 -34.1	0.0 0.0	1.8 0.3	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52319	CBWFLD2	69.0	1	526	-1.8	-0.3		3	54
52323	WHITEC2	69.0 267	526 68.09	0.987 -34.1	0.0 0.0	1.8 0.5	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52319	CBWFLD2	69.0	1	526	-1.8	-0.5		5	36
52325	LVNG&NA2	69.0 267	526 67.71	0.981 -34.5	0.0 0.0	8.1 3.5	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52317	LOVNGT2	69.0	1	526	-8.1	-3.5		17	54
52327	HOPISB2	69.0 267	526 68.85	0.998 -33.8	0.0 0.0	12.5 5.8	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52309	CARLSBD2	69.0	1	526	-24.2	-9.6		73	36
								52317	LOVNGT2	69.0	1	526	11.7	3.8		34	36
52329	OCHOA3	115 267	526 116.5	1.013 -28.1	0.0 0.0	2.9 2.2	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52268	SNDDUN3	115	1	526	4.5	-9.4		7	146
								52420	WHITTEN3	115	1	526	-7.4	7.3		8	132

2004 Winter Peak Case



04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER. WIND 184.8. CLOVIS-550. BLKWTR-150X 5/30/02
 SUN. OCT 06 2002 11:27

LQQZ RBIEB
 0.9001V 1.0500V
 Kv: <69 .<115 .<230

BUS - VOLTAGE (KV/PU)
 BRANCH - MW/MVAR
 EQUIPMENT - MW/MVAR

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
51070	TUCUMCA3	115 526	1.018	-1.7	0.0	7.9	0.0	51073	TUCUM1	13.2	1 526	0.0	0.0	1.000UN		0	18
		264	117.1		0.0	2.9	0.0	51076	FE-TUCU3	115	1 526	-7.9	-2.9			5	177
51073	TUCUM1	13.2 526	1.018	-1.7	0.0	0.0	0.0	51070	TUCUMCA3	115	1 526	0.0	0.0	1.000RG		0	18
		264	13.44		0.0	0.0	0.0										
51076	FE-TUCU3	115 526	1.020	-1.5	0.0	6.3	0.0	51070	TUCUMCA3	115	1 526	7.9	2.5			5	177
		264	117.3		0.0	0.3	0.0	51176	CURRY3	115	1 526	-14.3	-2.8			8	177
51078	CANYNW3	115 526	1.030	-5.6	0.0	14.5	0.0	51080	CANYNE3	115	1 526	-1.2	-7.4			7	107
		264	118.4		0.0	4.8	0.0	51088	ROCKWEL3	115	1 526	3.1	0.7			3	113
								51102	DAWN	115	1 526	-16.4	1.8			15	107
51080	CANYNE3	115 526	1.032	-5.6	0.0	8.4	0.0	51014	OSAGE--3	115	1 526	-9.6	-5.5			10	107
		264	118.6		0.0	-1.6	0.0	51078	CANYNW3	115	1 526	1.2	7.2			7	107
51082	PALODU 3	115 526	1.043	-5.1	0.0	2.0	0.0	51020	RANDALL3	115	1 526	-2.0	-0.5			2	107
		264	120.0		0.0	0.5	0.0										
51083	DS-5&11269.0	526 526	0.998	-6.3	0.0	10.0	0.0	51097	DS-#92	69.0	1 526	-10.0	-2.9			21	50
		264	68.87		0.0	2.9	0.0										
51088	ROCKWEL3	115 526	1.029	-5.6	0.0	3.1	0.0	51078	CANYNW3	115	1 526	-3.1	-1.0			3	113
		264	118.4		0.0	1.0	0.0										
51091	CENTRS2	69.0 526	1.025	-6.5	0.0	10.6	0.0	51095	DS-MTR2	69.0	1 526	-10.6	-1.7			16	64
		264	70.71		0.0	1.7	0.0										
51094	NEHFD3	115 526	1.035	-3.6	0.0	0.0	0.0	51095	DS-MTR2	69.0	1 526	27.2	29.8	1.044UN		46	84
		264	119.0		0.0	0.0	0.0	51110	DFSMTH3	115	1 526	-27.2	-29.8			22	177
51095	DS-MTR2	69.0 526	1.031	-6.0	0.0	13.4	0.0	51091	CENTRS2	69.0	1 526	10.7	1.7			16	64
		264	71.14		0.0	4.3	0.0	51094	NEHFD3	115	1 526	-27.1	-27.3	1.044RG		44	84
								51105	HEREFD2	69.0	1 526	3.1	21.4			43	49
51097	DS-#92	69.0 526	1.003	-6.0	0.0	3.9	0.0	51083	DS-5&11269.0	69.0	1 526	10.0	2.8			21	50
		264	69.20		0.0	1.8	0.0	51105	HEREFD2	69.0	1 526	-13.9	-4.7			29	50
51102	DAWN	115 526	1.035	-4.8	0.0	2.0	0.0	51078	CANYNW3	115	1 526	16.5	-2.6			15	107
		264	119.0		0.0	0.7	0.0	51106	HEREFD3	115	1 526	-18.5	1.8			17	107
51105	HEREFD2	69.0 526	1.012	-5.6	0.0	9.0	0.0	51095	DS-MTR2	69.0	1 526	-2.9	-21.1			43	49
		264	69.81		0.0	1.2	-14.7	51097	DS-#92	69.0	1 526	14.0	4.7			29	50
								51106	HEREFD3	115	1 526	-12.7	13.7	0.940RG		46	40
								51106	HEREFD3	115	2 526	-12.9	14.9	0.937RG		49	40
								51115	DS-#42	69.0	1 526	5.4	1.3			5	106

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51141	CASTRT2	69.0 264	526 68.79	0.997 -7.3	0.0 0.0	0.0 0.0	0.0 0.0	51137	GOODPAS2	69.0	1	526	16.9	3.2		27	64
								51149	CASTRC2	69.0	1	526	-16.9	-3.2		27	64
51143	DS-15&12	69.0 264	526 69.12	1.002 -6.7	0.0 0.0	9.6 3.5	0.0 0.0	51149	CASTRC2	69.0	1	526	-9.6	-3.5		16	64
51145	DS-CAST2	69.0 264	526 69.12	1.002 -6.8	0.0 0.0	13.7 4.6	0.0 0.0	51149	CASTRC2	69.0	1	526	-13.7	-4.6		23	64
51146	DS-213	115 264	526 118.3	1.029 -4.4	0.0 0.0	5.6 2.3	0.0 0.0	51110	DFSMT3	115	1	526	-16.2	-6.0		9	177
								51150	CASTRC3	115	1	526	10.7	3.7		6	177
51149	CASTRC2	69.0 264	526 69.86	1.012 -6.2	0.0 0.0	0.0 0.0	0.0 -29.5	51141	CASTRT2	69.0	1	526	17.1	3.4		27	64
								51143	DS-15&12	69.0	1	526	9.7	3.4		16	64
								51145	DS-CAST2	69.0	1	526	13.8	4.7		22	64
								51150	CASTRC3	115	1	526	-20.3	9.0	0.973RG	26	84
								51150	CASTRC3	115	2	526	-20.3	9.0	0.973RG	26	84
51150	CASTRC3	115 264	526 118.3	1.029 -4.5	0.0 0.0	0.0 0.0	0.0 0.0	51146	DS-213	115	1	526	-10.7	-3.7		6	177
								51149	CASTRC2	69.0	1	526	20.3	-8.3	0.973UN	25	84
								51149	CASTRC2	69.0	2	526	20.3	-8.3	0.973UN	25	84
								51250	BC-EART3	115	1	526	-30.0	20.3		20	177
51155	NCLOVI2	69.0 264	526 70.13	1.016 -1.0	0.0 0.0	8.7 0.4	0.0 0.0	51163	WCLOVI2	69.0	1	526	-3.3	-0.1		5	64
								51175	CURRY2	69.0	1	526	-5.4	-0.3		13	41
51156	NORRST3	115 264	526 119.7	1.041 1.9	0.0 0.0	0.0 0.0	0.0 0.0	51168	NORRIS3	115	1	526	10.2	2.7		9	107
								51176	CURRY3	115	1	526	5.3	-3.4		3	177
								51194	OASIS3	115	1	526	-15.4	0.7		8	177
51159	ECLOVI2	69.0 264	526 70.24	1.018 -0.7	0.0 0.0	9.6 2.4	0.0 0.0	51175	CURRY2	69.0	1	526	-9.6	-2.4		15	64
51162	WCLOVI3	115 264	526 119.0	1.035 1.7	0.0 0.0	7.2 1.8	0.0 0.0	51166	CANNOA3	115	1	526	-13.5	-0.4		7	177
								51172	FE-SWS3	115	1	526	6.3	-1.4		4	177
51163	WCLOVI2	69.0 264	526 70.21	1.018 -0.9	0.0 0.0	3.3 0.6	0.0 0.0	51155	NCLOVI2	69.0	1	526	3.3	0.0		5	64
								51175	CURRY2	69.0	1	526	-6.6	-0.6		10	64
51166	CANNOA3	115 264	526 119.2	1.037 2.0	0.0 0.0	9.4 4.9	0.0 0.0	51162	WCLOVI3	115	1	526	13.5	0.0		7	177
								51194	OASIS3	115	1	526	-23.0	-4.9		13	177
51168	NORRIS3	115 264	526 119.6	1.040 1.9	0.0 0.0	10.2 2.8	0.0 0.0	51156	NORRST3	115	1	526	-10.2	-2.8		9	107
51170	FE-CLVS3	115 264	526 119.3	1.038 1.7	0.0 0.0	0.0 0.0	0.0 0.0	51172	FE-SWS3	115	1	526	3.5	2.9		2	177
								51180	FE-CLVS3	115	1	526	-3.5	-2.9		2	177

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51172	FE-SWS3	115 526	1.035	1.7	0.0	9.8	0.0	51162	WCLOVI3	115 1	526	-6.3	1.2			4	177
		264	119.0		0.0	2.6	0.0	51170	FE-CLVS3	115 1	526	-3.5	-3.7			3	177
51175	CURRY2	69.0 526	1.023	-0.4	0.0	6.3	0.0	51155	NCLOVI2	69.0 1	526	5.4	0.1			13	41
		264	70.58		0.0	1.1	0.0	51159	ECLOVI2	69.0 1	526	9.6	1.5			15	64
								51163	WCLOVI2	69.0 1	526	6.7	0.4			10	64
								51176	CURRY3	115 1	526	-14.9	-1.9	0.991RG		37	40
								51176	CURRY3	115 2	526	-14.8	-1.7	0.991RG		36	40
								51183	FARWELL2	69.0 1	526	1.7	0.5			3	64
51176	CURRY3	115 526	1.041	1.9	0.0	0.0	0.0	51076	FE-TUCU3	115 1	526	14.5	-2.0			8	177
		264	119.7		0.0	0.0	0.0	51126	DS-#203	115 1	526	38.0	-7.8			35	107
								51156	NORRST3	115 1	526	-5.3	3.4			3	177
								51175	CURRY2	69.0 1	526	14.9	2.5	0.991UN		36	40
								51175	CURRY2	69.0 2	526	14.8	2.3	0.991UN		36	40
								51180	FE-CLVS3	115 1	526	18.4	7.6			11	177
								51206	CLOVISS	115 2	526	-95.3	-6.0			52	177
51180	FE-CLVS3	115 526	1.040	1.8	0.0	14.9	0.0	51170	FE-CLVS3	115 1	526	3.5	2.1			2	177
		264	119.6		0.0	5.6	0.0	51176	CURRY3	115 1	526	-18.4	-7.7			11	177
51183	FARWELL2	69.0 526	1.020	-0.5	0.0	1.7	0.0										
		264	70.38		0.0	0.8	0.0	51175	CURRY2	69.0 1	526	-1.7	-0.8			3	64
51185	DS-#102	69.0 526	1.015	-6.4	0.0	5.3	0.0	51229	LARIAT2	69.0 1	526	-5.3	-2.3			5	106
		264	70.05		0.0	2.3	0.0										
51194	OASIS3	115 526	1.044	2.7	0.0	0.0	0.0	51156	NORRST3	115 1	526	15.5	-1.8			8	177
		264	120.0		0.0	0.0	0.0	51166	CANNOA3	115 1	526	23.1	4.4			13	177
								51195	OASIS6	230 1	526	-54.8	-13.9	1.056RG		21	252
								51208	PORTALE3	115 1	526	16.2	11.2			11	177
51195	OASIS6	230 526	0.996	4.3	0.0	0.0	0.0	51194	OASIS3	115 1	526	54.9	15.5	1.056UN		23	252
		264	229.1		0.0	0.0	0.0	51205	CLOVS	6 230 1	526	-110.6	-9.7			20	551
								99990	WINDFARM	230 1	526	55.8	-5.8			10	551
51202	ROOSEVL3	115 526	1.046	3.2	0.0	3.2	0.0	51206	CLOVISS	115 2	526	-27.8	-8.3			16	177
		264	120.3		0.0	1.8	0.0	51208	PORTALE3	115 1	526	24.6	6.5			14	177
51204	CLOVS G	18.0 526	0.999	8.8	550.0	0.0	0.0	51205	CLOVS	6 230 1	526	550.0	1.9	1.001UN		76	728
		264	17.98		1.9R	0.0	0.0										
51205	CLOVS	6 230 526	1.000	5.2	0.0	0.0	0.0	51195	OASIS6	230 1	526	110.9	8.7			20	551
		264	230.0		0.0	0.0	0.0	51204	CLOVS G	18.0 1	526	-549.1	32.1	1.001LK		76	728
								51206	CLOVISS	115 1	526	61.8	10.3	1.053UN		25	252
								51206	CLOVISS	115 2	526	61.8	10.3	1.053UN		25	252
								51435	TOLKE6	230 2	526	81.8	-23.1			15	580
								51437	TOLKW6	230 1	526	82.8	-23.2			15	580
								59995	PNM-DC6	230 1	999	150.0	-15.0			8	2000

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 264 [SPS-CLHF]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER		RATING A	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	RATIO	ANGLE	%I	MVA
51206	CLOVISS	115 526	1.046	3.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	120.3		0.0	0.0	0.0	51176	CURRY3	115 2	526	95.7	7.9			52	177
								51202	ROOSEVL3	115 2	526	27.8	8.2			16	177
								51205	CLOVS	6 230 1	526	-61.7	-8.1	1.053RG		24	252
								51205	CLOVS	6 230 2	526	-61.7	-8.1	1.053RG		24	252
51207	RO-PORT269.0	526	1.038	0.8	0.0	22.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	71.61		0.0	9.7	0.0	51208	PORTALE3	115 1	526	-20.3	-8.6	1.014RG		25	84
								51208	PORTALE3	115 2	526	-20.3	-8.6	1.014RG		25	84
								51211	ZODIAC2	69.0 1	526	7.2	2.1			11	64
								51213	PORTAL1269.0	1 526		11.4	5.3			19	64
51208	PORTALE3	115 526	1.037	2.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	119.3		0.0	0.0	0.0	51194	OASIS3	115 1	526	-16.2	-11.6			11	177
								51202	ROOSEVL3	115 1	526	-24.5	-6.9			14	177
								51207	RO-PORT269.0	1 526		20.3	9.3	1.014UN		26	84
								51207	RO-PORT269.0	2 526		20.3	9.3	1.014UN		26	84
51211	ZODIAC2	69.0 526	1.036	0.7	0.0	4.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	71.47		0.0	1.3	0.0	51207	RO-PORT269.0	1 526		-7.2	-2.1			11	64
								51219	PORTAS2	69.0 1	526	3.2	0.8			5	64
51213	PORTAL1269.0	526	1.034	0.7	0.0	3.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	71.37		0.0	1.1	0.0	51207	RO-PORT269.0	1 526		-11.3	-5.3			19	64
								51215	PORTAL2269.0	1 526		8.0	4.2			20	43
51215	PORTAL2269.0	526	1.032	0.6	0.0	4.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	71.19		0.0	1.4	0.0	51213	PORTAL1269.0	1 526		-8.0	-4.3			20	43
								51217	PORTAI2	69.0 1	526	4.1	2.9			8	64
51217	PORTAI2	69.0 526	1.030	0.6	0.0	0.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	71.09		0.0	0.2	0.0	51215	PORTAL2269.0	1 526		-4.1	-2.9			8	64
								51221	POREFD2	69.0 1	526	2.2	1.8			4	64
								51223	MARKST2	69.0 1	526	1.6	1.0			3	64
51219	PORTAS2	69.0 526	1.035	0.6	0.0	3.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	71.40		0.0	0.9	0.0	51211	ZODIAC2	69.0 1	526	-3.2	-0.9			5	64
51221	POREFD2	69.0 526	1.030	0.6	0.0	2.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	71.08		0.0	1.8	0.0	51217	PORTAI2	69.0 1	526	-2.2	-1.8			4	64
51223	MARKST2	69.0 526	1.030	0.6	0.0	1.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	71.09		0.0	1.0	0.0	51217	PORTAI2	69.0 1	526	-1.6	-1.0			3	64
51229	LARIAT2	69.0 526	1.020	-6.2	0.0	0.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.35		0.0	-0.7	0.0	51185	DS-#102	69.0 1	526	5.3	2.2			5	106
								51231	BC-LARI269.0	1 526		-5.8	-1.5			5	106
51231	BC-LARI269.0	526	1.020	-6.1	0.0	2.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.40		0.0	1.0	0.0	51229	LARIAT2	69.0 1	526	5.8	1.4			5	106
								51233	WMULES2	69.0 1	526	-8.4	-2.4			8	106
51233	WMULES2	69.0 526	1.026	-5.6	0.0	2.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.81		0.0	0.1	0.0	51231	BC-LARI269.0	1 526		8.4	2.3			8	106
								51235	MULECY2	69.0 1	526	-10.4	-2.3			10	106
51235	MULECY2	69.0 526	1.026	-5.6	0.0	2.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		264	70.83		0.0	0.2	0.0	51233	WMULES2	69.0 1	526	10.4	2.3			10	106
								51241	BC-BAIL269.0	1 526		-12.8	-2.5			12	106

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04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51291	DS-#122	69.0 265	526 69.51	1.007 -10.3	0.0 0.0	4.9 2.3	0.0 0.0	51293	HART2	69.0	1	526	-4.9 -2.3			8	64
51293	HART2	69.0 265	526 70.34	1.019 -9.7	0.0 0.0	4.0 0.9	0.0 0.0	51291	DS-#122	69.0	1	526	4.9 2.0			8	64
								51295	LC-HART2	69.0	1	526	-9.0 -2.9			14	64
51295	LC-HART2	69.0 265	526 70.80	1.026 -9.3	0.0 0.0	6.6 2.1	0.0 0.0	51293	HART2	69.0	1	526	9.0 2.9			14	64
								51387	LAMTON2	69.0	1	526	-15.6 -5.0			25	64
51297	HAPPYC2	69.0 265	526 70.09	1.016 -11.8	0.0 0.0	1.8 0.8	0.0 0.0	51299	HAPPYT2	69.0	1	526	-1.8 -0.8			3	64
51299	HAPPYT2	69.0 265	526 70.23	1.018 -11.7	0.0 0.0	0.0 0.0	0.0 0.0	51297	HAPPYC2	69.0	1	526	1.8 0.6			3	64
								51301	HAPPY2	69.0	1	526	-2.3 -0.7			4	64
								51305	SHAMRP2	69.0	1	526	0.5 0.1			1	64
51301	HAPPY2	69.0 265	526 70.25	1.018 -11.7	0.0 0.0	0.0 0.0	0.0 0.0	51299	HAPPYT2	69.0	1	526	2.3 0.7			4	64
								51302	HAPPY3	115	1	526	-6.2 -1.2	1.011RG		16	40
								51302	HAPPY3	115	2	526	-6.2 -1.2	1.011RG		16	40
								51307	SW-HAPP2	69.0	1	526	10.1 1.7			0	9999
51302	HAPPY3	115 265	526 116.3	1.012 -10.7	0.0 0.0	0.0 0.0	0.0 0.0	51301	HAPPY2	69.0	1	526	6.2 1.3	1.011UN		16	40
								51301	HAPPY2	69.0	2	526	6.2 1.3	1.011UN		16	40
								51310	TULIAT3	115	1	526	-12.4 -2.7			12	107
51305	SHAMRP2	69.0 265	526 70.20	1.017 -11.7	0.0 0.0	0.5 0.2	0.0 0.0	51299	HAPPYT2	69.0	1	526	-0.5 -0.2			1	64
51307	SW-HAPP2	69.0 265	526 70.25	1.018 -11.7	0.0 0.0	10.1 1.7	0.0 0.0	51301	HAPPY2	69.0	1	526	-10.1 -1.7			0	9999
51310	TULIAT3	115 265	526 116.8	1.015 -10.4	0.0 0.0	0.0 0.0	0.0 0.0	50500	MU-TULI3	115	1	526	2.7 0.8			3	107
								51302	HAPPY3	115	1	526	12.5 2.3			12	107
								51316	KRESS3	115	1	526	-15.2 -3.1			14	107
51315	KRESS2	69.0 265	526 70.75	1.025 -13.6	0.0 0.0	0.0 0.0	0.0 -30.3	51316	KRESS3	115	1	526	-23.5 4.5	0.996RG		53	44
								51316	KRESS3	115	2	526	-30.3 5.6	0.996RG		54	56
								51319	SW-KRES2	69.0	1	526	34.9 15.1			0	9999
								51325	KRESRU2	69.0	1	526	18.9 5.1			30	64
51316	KRESS3	115 265	526 117.6	1.022 -9.9	0.0 0.0	0.0 0.0	0.0 0.0	51310	TULIAT3	115	1	526	15.2 2.5			14	107
								51315	KRESS2	69.0	1	526	23.5 -3.0	0.996UN		53	44
								51315	KRESS2	69.0	2	526	30.4 -3.6	0.996UN		53	56
								51320	SWISHER3	115	1	526	-49.2 -3.1			18	275
								51402	HALECO3	115	1	526	-20.0 7.1			12	177
51319	SW-KRES2	69.0 265	526 70.75	1.025 -13.6	0.0 0.0	34.9 15.1	0.0 0.0	51315	KRESS2	69.0	1	526	-34.9 -15.1			0	9999

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51320	SWISHER3	115 526	1.024	-9.5	0.0	0.0	0.0	51316	KRESS3	115 1	526	49.2	3.2			18	275
		265	117.8		0.0	0.0	0.0	51321	SWISHER6	230 1	526	-49.2	-3.2	1.038RG		32	150
51321	SWISHER6	230 526	0.991	-7.3	0.0	0.0	0.0	51041	AMARLS6	230 1	526	-75.7	-3.7			14	551
		265	227.9		0.0	0.0	0.0	51320	SWISHER3	115 1	526	49.3	5.1	1.038UN		33	150
								51403	HALECO6	230 1	526	26.4	-1.5			5	551
51325	KRESRU2	69.0 526	1.019	-14.0	0.0	1.9	0.0	51315	KRESS2	69.0 1	526	-18.8	-5.5			30	64
		265	70.31		0.0	0.1	0.0	51335	LH-PL&M269.0	1 526		17.0	5.4			27	64
51329	BRISCOE269.0	526	0.989	-15.3	0.0	1.2	0.0	51331	LH-SLVR269.0	1 526		-1.2	0.1			2	64
		265	68.26		0.0	-0.1	0.0										
51331	LH-SLVR269.0	526	0.990	-15.2	0.0	0.8	0.0	51329	BRISCOE269.0	1 526		1.2	-0.2			2	64
		265	68.29		0.0	0.6	0.0	51375	LH-SPL2	69.0 1	526	-2.0	-0.4			3	64
51335	LH-PL&M269.0	526	0.991	-15.5	0.0	10.8	0.0	51325	KRESRU2	69.0 1	526	-16.6	-5.1			27	64
		265	68.35		0.0	4.3	0.0	51337	NPLNV2	69.0 1	526	5.8	0.7			9	64
51337	NPLNV2	69.0 526	0.989	-15.6	0.0	5.8	0.0	51335	LH-PL&M269.0	1 526		-5.8	-0.7			9	64
		265	68.26		0.0	0.7	0.0										
51339	WPLNV2	69.0 526	1.002	-15.0	0.0	11.5	0.0	51343	PLNVCO2	69.0 1	526	-11.5	-2.7			18	64
		265	69.17		0.0	2.7	0.0										
51341	PLAINVW269.0	526	1.007	-14.6	0.0	7.3	0.0	51353	EPLNV2	69.0 1	526	-7.3	0.3			11	64
		265	69.50		0.0	-0.3	0.0										
51343	PLNVCO2	69.0 526	1.010	-14.5	0.0	0.0	0.0	51339	WPLNV2	69.0 1	526	11.6	2.7			18	64
		265	69.71		0.0	0.0	0.0	51345	WESTRID269.0	1 526		-11.6	-2.7			11	106
51345	WESTRID269.0	526	1.012	-14.3	0.0	10.1	0.0	51343	PLNVCO2	69.0 1	526	11.6	2.7			11	106
		265	69.84		0.0	0.7	0.0	51347	PLNVWT2	69.0 1	526	-21.7	-3.4			20	106
51347	PLNVWT2	69.0 526	1.019	-13.5	0.0	0.0	0.0	51345	WESTRID269.0	1 526		21.8	3.6			20	106
		265	70.29		0.0	0.0	0.0	51401	HALECO2	69.0 1	526	-21.8	-3.6			20	106
51349	SPLNV2	69.0 526	1.010	-14.2	0.0	8.0	0.0	51401	HALECO2	69.0 1	526	-8.0	-1.3			13	64
		265	69.67		0.0	1.3	0.0										
51353	EPLNV2	69.0 526	1.010	-14.2	0.0	3.3	0.0	51341	PLAINVW269.0	1 526		7.3	-0.3			11	64
		265	69.70		0.0	0.7	0.0	51359	COX2	69.0 1	526	-10.6	-0.4			16	64
51359	COX2	69.0 526	1.015	-13.7	0.0	3.6	0.0	51353	EPLNV2	69.0 1	526	10.7	0.4			16	64
		265	70.06		0.0	2.5	-8.7	51360	COX3	115 1	526	-13.4	4.4	0.995RG		35	40
								51360	COX3	115 2	526	-13.6	0.9	0.995UN		33	40
								51365	AIKENT2	69.0 1	526	12.6	0.5			19	64

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 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51424	PLANTX1	20.0 526 265	0.976 19.52	8.1	189.0 -33.7R	0.0 0.0	0.0 0.0	51419	PLANTX6	230 1	526	189.0	-33.7	1.000UN		91	215
51435	TOLKE6	230 526 265	1.005 231.0	2.4	0.0 0.0	0.0 0.0	0.0 0.0	51205	CLOVS 6	230 2	526	-81.2	16.1			14	580
								51419	PLANTX6	230 2	526	95.2	8.6			17	551
								51439	TOLKTP6	230 1	526	-129.9	-21.5			7	2000
								51441	TOLK1	24.0 1	526	-100.6	1.0	1.001UN		14	728
								51533	TUCO6	230 1	526	216.5	-4.3			39	551
51437	TOLKW6	230 526 265	1.005 231.0	2.4	0.0 0.0	0.0 0.0	0.0 0.0	51205	CLOVS 6	230 1	526	-82.2	16.4			14	580
								51419	PLANTX6	230 1	526	99.2	9.1			18	551
								51439	TOLKTP6	230 1	526	286.4	-36.8			14	2000
								51442	TOLK1	24.0 1	526	-463.3	22.8	1.001UN		63	728
								51467	LAMBCO6	230 1	526	76.7	20.0			14	551
								51891	YOAKUM6	230 1	526	83.2	-31.5			16	551
51439	TOLKTP6	230 526 265	1.005 231.0	2.4	0.0 0.0	0.0 0.0	0.0 0.0	51435	TOLKE6	230 1	526	129.9	21.5			7	2000
								51437	TOLKW6	230 1	526	-286.4	36.8			14	2000
								51440	TOLK7	345 1	526	156.5	-58.3	1.000LK		30	560
51440	TOLK7	345 526 265	1.018 351.1	0.4	0.0 0.0	0.0 0.0	0.0 0.0	51439	TOLKTP6	230 1	526	-156.4	64.4	1.000UN		30	560
								51443	TOLK31	24.0 1	526	0.0	0.0	1.001UN		0	728
								51444	TOLK41	24.0 1	526	0.0	0.0	1.001UN		0	728
								52186	EDDYCO7	345 1	526	156.4	-64.4			10	1653
51441	TOLK1	24.0 526 265	1.006 24.14	3.0	100.7 0.1R	0.0 0.0	0.0 0.0	51435	TOLKE6	230 1	526	100.7	0.1	1.001LK		14	728
51442	TOLK1	24.0 526 265	1.006 24.14	5.3	464.0 1.0R	0.0 0.0	0.0 0.0	51437	TOLKW6	230 1	526	464.0	1.0	1.001LK		63	728
51443	TOLK31	24.0 526 265	1.019 24.45	0.4	0.0 0.0	0.0 0.0	0.0 0.0	51440	TOLK7	345 1	526	0.0	0.0	1.001LK		0	728
51444	TOLK41	24.0 526 265	1.019 24.45	0.4	0.0 0.0	0.0 0.0	0.0 0.0	51440	TOLK7	345 1	526	0.0	0.0	1.001LK		0	728
51451	SUDAN2	69.0 526 265	1.011 69.74	-4.5	0.0 0.0	0.0 0.0	0.0 0.0	51453	SUDNRU2	69.0 1	526	0.0	0.0			0	106
51453	SUDNRU2	69.0 526 265	1.011 69.74	-4.5	0.0 0.0	1.5 0.3	0.0 0.0	51451	SUDAN2	69.0 1	526	0.0	0.0			0	106
								51455	LC-SNDH2	69.0 1	526	-1.5	-0.3			1	106
51455	LC-SNDH2	69.0 526 265	1.011 69.78	-4.4	0.0 0.0	4.9 2.3	0.0 0.0	51453	SUDNRU2	69.0 1	526	1.5	0.2			1	106
								51457	AMHERST	269.0 1	526	-6.4	-2.5			6	106
51457	AMHERST	269.0 526 265	1.013 69.90	-4.3	0.0 0.0	1.0 0.3	0.0 0.0	51455	LC-SNDH2	69.0 1	526	6.4	2.4			6	106
								51459	WLTTLF2	69.0 1	526	-7.3	-2.7			7	106

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 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	MVA
51459	WLTTLF2	69.0 526	1.017	-4.0	0.0	0.4	0.0	51457	AMHERST	269.0 1	526	7.3	2.6			7	106
		265 70.14			0.0	0.0	0.0	51465	LAMBCO2	69.0 1	526	-7.8	-2.6			13	64
51461	LFLS&C2	69.0 526	1.020	-3.8	0.0	8.3	0.0	51465	LAMBCO2	69.0 1	526	-8.3	-1.3			19	43
		265 70.39			0.0	1.3	0.0										
51465	LAMBCO2	69.0 526	1.025	-3.6	0.0	0.0	0.0	51459	WLTTLF2	69.0 1	526	7.8	2.5			12	64
		265 70.71			0.0	0.0	0.0	51461	LFLS&C2	69.0 1	526	8.4	1.2			19	43
								51466	LAMBCO3	115 1	526	-18.5	-5.0	0.996RG		22	84
								51466	LAMBCO3	115 2	526	-18.5	-5.0	0.996RG		22	84
								51471	LC-LTTL2	269.0 1	526	15.9	4.9			25	64
								51483	LC-LUMS2	269.0 1	526	4.9	1.3			8	64
51466	LAMBCO3	115 526	1.037	-2.1	0.0	0.0	0.0	51418	PLANTX3	115 1	526	-13.7	13.2			10	177
		265 119.3			0.0	0.0	0.0	51465	LAMBCO2	69.0 1	526	18.5	5.5	0.996UN		22	84
								51465	LAMBCO2	69.0 2	526	18.5	5.5	0.996UN		22	84
								51467	LAMBCO6	230 1	526	-76.1	-23.1	1.066RG		30	252
								51598	HOCKLEY3	115 1	526	52.8	-1.0			29	177
51467	LAMBCO6	230 526	0.986	0.1	0.0	0.0	0.0	51437	TOLKW6	230 1	526	-76.2	-26.5			15	551
		265 226.8			0.0	0.0	0.0	51466	LAMBCO3	115 1	526	76.2	26.5	1.066UN		32	252
51471	LC-LTTL2	269.0 526	1.021	-3.8	0.0	5.6	0.0	51465	LAMBCO2	69.0 1	526	-15.8	-4.8			25	64
		265 70.45			0.0	2.4	0.0	51473	WANTON2	69.0 1	526	10.2	2.4			16	64
51473	WANTON2	69.0 526	1.018	-4.0	0.0	0.0	0.0	51471	LC-LTTL2	269.0 1	526	-10.2	-2.4			16	64
		265 70.26			0.0	0.0	0.0	51475	LC-SP&H2	269.0 1	526	8.5	2.2			13	64
								51477	BAINER2	69.0 1	526	1.7	0.2			3	64
51475	LC-SP&H2	269.0 526	1.009	-4.5	0.0	8.4	0.0	51473	WANTON2	69.0 1	526	-8.4	-2.3			13	64
		265 69.65			0.0	2.3	0.0										
51477	BAINER2	69.0 526	1.018	-4.0	0.0	0.0	0.0	51473	WANTON2	69.0 1	526	-1.7	-0.3			3	64
		265 70.23			0.0	0.0	0.0	51479	WANTON2	69.0 1	526	1.7	0.3			3	64
51479	WANTON2	69.0 526	1.017	-4.1	0.0	1.7	0.0	51477	BAINER2	69.0 1	526	-1.7	-0.4			3	64
		265 70.14			0.0	0.4	0.0										
51483	LC-LUMS2	269.0 526	1.023	-3.7	0.0	1.4	0.0	51465	LAMBCO2	69.0 1	526	-4.9	-1.3			8	64
		265 70.62			0.0	0.8	0.0	51485	HOBGOOD2	269.0 1	526	3.4	0.5			5	64
51485	HOBGOOD2	269.0 526	1.022	-3.8	0.0	0.1	0.0	51483	LC-LUMS2	269.0 1	526	-3.4	-0.6			5	64
		265 70.53			0.0	0.0	0.0	51487	PUMP/YH2	269.0 1	526	3.3	0.6			5	64
51487	PUMP/YH2	269.0 526	1.022	-3.8	0.0	2.2	0.0	51485	HOBGOOD2	269.0 1	526	-3.3	-0.6			5	64
		265 70.50			0.0	0.5	0.0	51489	MIDAMR2	69.0 1	526	1.1	0.2			2	64
51489	MIDAMR2	69.0 526	1.021	-3.8	0.0	0.9	0.0	51487	PUMP/YH2	269.0 1	526	-1.1	-0.3			2	64
		265 70.46			0.0	0.3	0.0	51493	WHITHAR2	269.0 1	526	0.1	-0.1			0	64

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51493	WHITHAR	269.0 526 265	1.021 70.46	-3.8	0.0 0.0	0.1 -0.1	0.0 0.0	51489	MIDAMR2	69.0 1	526	-0.1	0.1			0	64
51495	COUNTL2	69.0 526 265	1.000 68.98	-14.2	0.0 0.0	8.6 0.5	0.0 0.0	51497	SP-ABRN2	69.0 1	526	-8.6	-0.5			18	49
51497	SP-ABRN2	69.0 526 265	1.005 69.35	-13.7	0.0 0.0	12.1 8.3	0.0 0.0	51495	COUNTL2	69.0 1	526	8.6	0.5			18	49
51499	HALECN2	69.0 526 265	1.019 70.33	-13.3	0.0 0.0	2.8 -0.3	0.0 0.0	51531	TUCO2	69.0 1	526	-20.7	-8.8			35	64
51501	LH-HALC2	69.0 526 265	1.019 70.32	-13.3	0.0 0.0	2.3 0.7	0.0 0.0	51501	LH-HALC2	69.0 1	526	2.3	0.7			4	64
51501	LH-HALC2	69.0 526 265	1.019 70.32	-13.3	0.0 0.0	2.3 0.7	0.0 0.0	51531	TUCO2	69.0 1	526	-5.1	-0.4			8	64
51501	LH-HALC2	69.0 526 265	1.019 70.32	-13.3	0.0 0.0	2.3 0.7	0.0 0.0	51499	HALECN2	69.0 1	526	-2.3	-0.7			4	64
51513	IRICK2	69.0 526 265	1.036 71.49	-14.4	0.0 0.0	1.1 0.1	0.0 0.0	51367	LH-AIKN2	69.0 1	526	3.0	2.1			5	64
51515	BARWISE2	69.0 526 265	1.039 71.67	-14.3	0.0 0.0	1.6 1.0	0.0 0.0	51515	BARWISE2	69.0 1	526	-4.1	-2.1			7	64
51517	FLOYD2	69.0 526 265	1.042 71.91	-14.1	0.0 0.0	0.0 0.0	0.0 -9.1	51513	IRICK2	69.0 1	526	4.1	2.0			7	64
51517	FLOYD2	69.0 526 265	1.042 71.91	-14.1	0.0 0.0	0.0 0.0	0.0 -9.1	51517	FLOYD2	69.0 1	526	-5.6	-3.0			10	64
51517	FLOYD2	69.0 526 265	1.042 71.91	-14.1	0.0 0.0	0.0 0.0	0.0 -9.1	51515	BARWISE2	69.0 1	526	5.6	2.9			10	64
51518	FLOYD3	115 526 265	1.014 116.6	-12.3	0.0 0.0	0.0 0.0	0.0 0.0	51518	FLOYD3	115 1	526	-11.7	6.3	1.013RG		32	40
51518	FLOYD3	115 526 265	1.014 116.6	-12.3	0.0 0.0	0.0 0.0	0.0 0.0	51518	FLOYD3	115 2	526	-14.5	-8.4	1.050RG		40	40
51518	FLOYD3	115 526 265	1.014 116.6	-12.3	0.0 0.0	0.0 0.0	0.0 0.0	51521	FLYDAT2	69.0 1	526	17.3	7.0			28	64
51518	FLOYD3	115 526 265	1.014 116.6	-12.3	0.0 0.0	0.0 0.0	0.0 0.0	51527	LH-HARM2	69.0 1	526	3.2	1.2			5	64
51518	FLOYD3	115 526 265	1.014 116.6	-12.3	0.0 0.0	0.0 0.0	0.0 0.0	51360	COX3	115 1	526	-8.9	5.1			9	112
51518	FLOYD3	115 526 265	1.014 116.6	-12.3	0.0 0.0	0.0 0.0	0.0 0.0	51517	FLOYD2	69.0 1	526	11.7	-5.9	1.013UN		32	40
51518	FLOYD3	115 526 265	1.014 116.6	-12.3	0.0 0.0	0.0 0.0	0.0 0.0	51517	FLOYD2	69.0 2	526	14.6	9.1	1.050UN		42	40
51518	FLOYD3	115 526 265	1.014 116.6	-12.3	0.0 0.0	0.0 0.0	0.0 0.0	51559	FLOYDT3	115 1	526	-17.4	-8.3			11	177
51521	FLYDAT2	69.0 526 265	1.042 71.90	-14.1	0.0 0.0	0.0 0.0	0.0 0.0	50501	MU-FLDY2	69.0 1	526	1.8	1.0			4	49
51521	FLYDAT2	69.0 526 265	1.042 71.90	-14.1	0.0 0.0	0.0 0.0	0.0 0.0	51517	FLOYD2	69.0 1	526	-17.3	-7.0			28	64
51521	FLYDAT2	69.0 526 265	1.042 71.90	-14.1	0.0 0.0	0.0 0.0	0.0 0.0	51523	SFLOYD2	69.0 1	526	15.5	6.0			25	64
51523	SFLOYD2	69.0 526 265	1.020 70.38	-15.2	0.0 0.0	3.0 0.6	0.0 0.0	51521	FLYDAT2	69.0 1	526	-15.3	-5.9			25	64
51523	SFLOYD2	69.0 526 265	1.020 70.38	-15.2	0.0 0.0	3.0 0.6	0.0 0.0	51525	LH-FLYD2	69.0 1	526	12.3	5.2			21	64
51525	LH-FLYD2	69.0 526 265	1.020 70.37	-15.2	0.0 0.0	12.3 5.2	0.0 0.0	51523	SFLOYD2	69.0 1	526	-12.3	-5.2			21	64
51527	LH-HARM2	69.0 526 265	1.041 71.84	-14.2	0.0 0.0	3.2 1.3	0.0 0.0	51517	FLOYD2	69.0 1	526	-3.2	-1.3			5	64

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA									LINE DATA									
FROM BUS	NAME	AREA	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA	
51531	TUCO2	69.0	526	1.026	-12.8	0.0	4.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.78		0.0	0.0	0.0	51497	SP-ABRN2	69.0	1	526	21.0	9.2		35	64	
								51499	HALECN2	69.0	1	526	5.1	0.1		8	64	
								51532	TUCO3	115	1	526	-26.4	-7.6	1.005RG	32	84	
								51532	TUCO3	115	2	526	-26.5	-7.6	1.005RG	32	84	
								51539	LH-WI&E2	69.0	1	526	11.0	2.2		17	64	
								51551	SP-NDE2	69.0	1	526	11.3	3.3		18	64	
51532	TUCO3	115	526	1.033	-10.6	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	118.8		0.0	0.0	0.0	51402	HALECO3	115	1	526	-19.1	19.0		24	107	
								51531	TUCO2	69.0	1	526	26.4	8.7	1.005UN	32	84	
								51531	TUCO2	69.0	2	526	26.5	8.7	1.005UN	32	84	
								51533	TUCO6	230	1	526	-96.3	-38.7	1.066RG	40	252	
								51559	FLOYDT3	115	1	526	23.9	5.3		13	177	
								51616	STANTN3	115	1	526	26.0	0.4		12	214	
								51688	LUBE3	115	1	526	12.5	-3.4		6	214	
51533	TUCO6	230	526	0.991	-7.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	228.0		0.0	0.0	0.0	51403	HALECO6	230	1	526	0.9	3.8		1	551	
								51435	TOLKE6	230	1	526	-210.9	26.8		39	551	
								51532	TUCO3	115	1	526	96.5	44.4	1.066UN	42	252	
								51534	TUCO7	345	1	526	4.1	-69.4	1.000LK	13	560	
								51647	CARLISL6	230	1	526	67.4	3.4		12	551	
								51699	JONES6	230	1	526	42.0	-9.0		8	551	
51534	TUCO7	345	526	1.003	-7.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	346.2		0.0	0.0	0.0	51533	TUCO6	230	1	526	-4.1	70.3	1.000UN	13	560	
								54119	O.K.U.-7	345	1	520	4.1	-70.3		7	1051	
51539	LH-WI&E2	69.0	526	1.013	-13.6	0.0	2.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.89		0.0	0.0	0.5	0.0	51531	TUCO2	69.0	1	526	-10.9	-2.3		17	64
								51541	SP-BECT2	69.0	1	526	8.6	1.8		14	64	
51541	SP-BECT2	69.0	526	1.011	-13.8	0.0	4.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.73		0.0	0.0	1.1	0.0	51539	LH-WI&E2	69.0	1	526	-8.6	-1.8		14	64
								51543	ALLMON2	69.0	1	526	3.9	0.7		6	64	
51543	ALLMON2	69.0	526	1.008	-14.0	0.0	1.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.55		0.0	0.0	0.3	0.0	51541	SP-BECT2	69.0	1	526	-3.9	-0.8		6	64
								51545	LH-PTRS2	69.0	1	526	2.2	0.6		3	64	
51545	LH-PTRS2	69.0	526	1.008	-14.0	0.0	2.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.55		0.0	0.0	0.6	0.0	51543	ALLMON2	69.0	1	526	-2.2	-0.6		3	64
51551	SP-NDE2	69.0	526	1.014	-13.4	0.0	3.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.97		0.0	0.0	0.8	0.0	51531	TUCO2	69.0	1	526	-11.2	-3.3		18	64
								51553	WHTE&MN2	69.0	1	526	8.2	2.5		13	64	
51553	WHTE&MN2	69.0	526	1.009	-13.7	0.0	1.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.64		0.0	0.0	0.5	0.0	51551	SP-NDE2	69.0	1	526	-8.1	-2.6		13	64
								51555	SP-SHLW2	69.0	1	526	6.2	2.1		10	64	
51555	SP-SHLW2	69.0	526	1.006	-13.9	0.0	6.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.44		0.0	0.0	2.3	0.0	51553	WHTE&MN2	69.0	1	526	-6.2	-2.2		10	64
								51611	SW67872	69.0	1	526	0.0	-0.1		0	64	
51557	SP-ACUF2	69.0	526	0.979	-16.5	0.0	5.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	67.55		0.0	0.0	1.6	0.0	51629	VICKER2	69.0	1	526	-5.4	-1.6		9	64

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51559	FLOYDT3	115 526	1.019	-12.0	0.0	0.0	0.0	51518	FLOYD3	115 1	526	17.4	8.0			11	177
		265	117.1		0.0	0.0	0.0	51532	TUCO3	115 1	526	-23.7	-6.1			14	177
								51564	CROSBY3	115 1	526	6.3	-1.9			9	69
51563	CROSBY2	69.0 526	1.044	-15.5	0.0	2.5	0.0	51564	CROSBY3	115 1	526	-19.0	-4.3	1.044RG		47	40
		265	72.02		0.0	0.8	0.0	51567	SP-CROS269.0	1 526		16.5	3.5			25	64
51564	CROSBY3	115 526	1.016	-12.5	0.0	0.0	0.0	51559	FLOYDT3	115 1	526	-6.2	0.6			9	69
		265	116.9		0.0	0.0	0.0	51563	CROSBY2	69.0 1	526	19.0	5.4	1.044UN		49	40
								51630	VICKER3	115 1	526	-12.8	-6.0			12	112
51567	SP-CROS269.0	526 265	1.035	-16.1	0.0	11.2	0.0	51563	CROSBY2	69.0 1	526	-16.4	-3.4			25	64
			71.41		0.0	3.2	0.0	51569	HENDRIC269.0	1 526		5.2	0.2			8	64
51569	HENDRIC269.0	526 265	1.035	-16.1	0.0	5.2	0.0	51567	SP-CROS269.0	1 526		-5.2	-0.2			8	64
			71.41		0.0	0.2	0.0										
51579	MORTNC2	69.0 526	1.005	-11.2	0.0	3.0	0.0	51581	LC-WHTF269.0	1 526		-3.0	-1.1			7	43
		265	69.38		0.0	1.1	0.0										
51581	LC-WHTF269.0	526 265	1.009	-11.0	0.0	2.6	0.0	51579	MORTNC2	69.0 1	526	3.0	0.9			7	43
			69.61		0.0	1.2	0.0	51583	WHITEFA269.0	1 526		-5.5	-2.1			14	43
51583	WHITEFA269.0	526 265	1.014	-10.8	0.0	6.4	0.0	51581	LC-WHTF269.0	1 526		5.5	2.0			13	43
			69.94		0.0	1.8	0.0	51709	COCHRAN269.0	1 526		-12.0	-3.8			29	43
51585	LC-HODG269.0	526 265	0.989	-9.5	0.0	2.6	0.0	51587	ELWOOD2	69.0 1	526	1.2	0.3			2	64
			68.21		0.0	1.7	0.0	51591	LC-HDT2	69.0 1	526	-3.8	-1.9			10	43
51587	ELWOOD2	69.0 526	0.988	-9.6	0.0	1.2	0.0	51585	LC-HODG269.0	1 526		-1.2	-0.4			2	64
		265	68.15		0.0	0.4	0.0										
51591	LC-HDT2	69.0 526	0.999	-9.3	0.0	0.0	0.0	51585	LC-HODG269.0	1 526		3.8	1.8			10	43
		265	68.91		0.0	0.0	0.0	51593	LC-WHIT269.0	1 526		-3.8	-1.8			7	64
51593	LC-WHIT269.0	526 265	1.000	-9.3	0.0	3.0	0.0	51591	LC-HDT2	69.0 1	526	3.8	1.7			7	64
			68.97		0.0	1.9	0.0	51595	LC-LEVL269.0	1 526		-6.8	-3.6			12	64
51595	LC-LEVL269.0	526 265	1.006	-9.0	0.0	4.9	0.0	51593	LC-WHIT269.0	1 526		6.8	3.5			12	64
			69.40		0.0	2.6	0.0	51597	HOCKLEY269.0	1 526		-11.7	-6.1			20	64
51597	HOCKLEY269.0	526 265	1.009	-8.9	0.0	0.0	0.0	51595	LC-LEVL269.0	1 526		11.7	6.1			20	64
			69.65		0.0	0.0	-11.0	51598	HOCKLEY3	115 1	526	-18.5	1.2	0.991RG		46	40
								51598	HOCKLEY3	115 2	526	-18.6	-4.1	1.006RG		47	40
								51603	COBLE2	69.0 1	526	6.0	1.9			10	64
								51605	LEVELLN269.0	1 526		19.4	5.9			31	64

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>										<===== LINE DATA =====>							
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51642	INDIANA3	115 526	1.024	-12.0	0.0	31.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	117.8		0.0	3.5	0.0	51616	STANTN3	115	1	526	-9.8	0.7		4	214
					0.0			51625	SP-ERSK3	115	1	526	-21.6	-4.2		10	214
51645	CARLISL269.0	526	1.013	-13.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.92		0.0	0.0	-14.8	51631	SP-CRLS269.0	1	526	0.0	-0.1			0	64
					0.0			51646	CARLISL3	115	1	526	-8.2	14.1	0.952RG	37	44
								51655	SW68782	69.0	1	526	8.2	0.8		13	64
51646	CARLISL3	115 526	1.027	-11.6	0.0	14.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	118.2		0.0	2.0	-30.4	51625	SP-ERSK3	115	1	526	25.2	5.1		12	214
								51645	CARLISL269.0	1	526	8.2	-13.4	0.952UN	35	44	
								51647	CARLISL6	230	1	526	-50.6	17.8	1.031RG	31	168
								51652	DOUD3	115	1	526	-28.6	17.6		18	177
								51658	MURPHY3	115	1	526	31.4	1.3		17	177
51647	CARLISL6	230 526	0.985	-9.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	226.5		0.0	0.0	0.0	50507	LP-MLWK6	230	1	526	16.5	24.5		5	551
								51533	TUCO6	230	1	526	-67.2	-8.9		12	551
								51646	CARLISL3	115	1	526	50.6	-15.6	1.031UN	32	168
51652	DOUD3	115 526	1.026	-11.4	0.0	26.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	118.0		0.0	1.7	0.0	51646	CARLISL3	115	1	526	28.7	-17.6		19	177
								51746	SP-YUMA3	115	1	526	-55.4	15.9		32	177
51655	SW68782	69.0 526	1.011	-13.2	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.73		0.0	0.0	0.0	51645	CARLISL269.0	1	526	-8.2	-0.8		13	64	
								51667	BATTNN2	69.0	1	526	8.2	0.8		13	64
51658	MURPHY3	115 526	1.025	-12.0	0.0	15.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	117.9		0.0	-0.1	0.0	51646	CARLISL3	115	1	526	-31.3	-1.5		17	177
								51674	SP-QUAK3	115	1	526	16.4	1.6		9	177
51661	IVORYT2	69.0 526	1.037	-13.7	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	71.58		0.0	0.0	0.0	51669	BATTNS2	69.0	1	526	10.0	0.7		15	64
								51679	LUBS2	69.0	1	526	-10.0	-0.7		15	64
51664	ALLEN3	115 526	1.023	-12.4	0.0	29.3	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	117.6		0.0	3.1	0.0	51672	WHEELLOC3	115	1	526	12.4	1.6		7	177
								51674	SP-QUAK3	115	1	526	-0.1	3.9		2	177
								51680	LUBS3	115	1	526	-41.6	-8.7		23	177
51667	BATTNN2	69.0 526	1.007	-13.6	0.0	8.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	69.45		0.0	0.9	0.0	51655	SW68782	69.0	1	526	-8.2	-0.9		13	64
51669	BATTNS2	69.0 526	1.032	-14.1	0.0	10.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	71.22		0.0	0.8	0.0	51661	IVORYT2	69.0	1	526	-10.0	-0.8		15	64
51672	WHEELLOC3	115 526	1.022	-12.4	0.0	12.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	117.6		0.0	1.8	0.0	51664	ALLEN3	115	1	526	-12.4	-1.8		7	177
51674	SP-QUAK3	115 526	1.022	-12.3	0.0	16.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	117.6		0.0	6.1	0.0	51658	MURPHY3	115	1	526	-16.3	-2.0		9	177
								51664	ALLEN3	115	1	526	0.1	-4.1		2	177
51675	ACCO2	69.0 526	1.035	-13.9	0.0	5.8	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	71.44		0.0	0.2	0.0	51677	IVORY2	69.0	1	526	-5.8	-0.2		9	64

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>										<===== LINE DATA =====>							
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
51677	IVORY2	69.0 526 265	1.037 71.54	-13.7	0.0 0.0	8.6 1.5	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51675	ACCO2	69.0 1	526	5.9	0.2			9	64
								51679	LUBS2	69.0 1	526	-14.4	-1.6			22	64
51679	LUBS2	69.0 526 265	1.039 71.66	-13.6	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51661	IVORYT2	69.0 1	526	10.0	0.7			15	64
								51677	IVORY2	69.0 1	526	14.4	1.6			22	64
								51680	LUBS3	115 1	526	-24.5	-2.4	1.013RG		28	84
51680	LUBS3	115 526 265	1.030 118.5	-11.6	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51664	ALLEN3	115 1	526	41.8	8.9			23	177
								51679	LUBS2	69.0 1	526	24.5	3.2	1.013UN		29	84
								51681	LUBS6	230 1	526	-89.9	-17.9	1.053RG		35	252
								51688	LUBE3	115 1	526	-6.9	0.1			4	177
								51786	SP-WDRW3	115 1	526	30.6	5.7			17	177
51681	LUBS6	230 526 265	0.990 227.7	-9.0	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51680	LUBS3	115 1	526	90.0	22.2	1.053UN		37	252
								51699	JONES6	230 1	526	-10.4	-10.6			3	551
								51699	JONES6	230 2	526	-10.4	-10.6			3	551
								51763	WOLFRTH6	230 1	526	-69.2	-1.0			13	551
51685	PLANTRS2	69.0 526 265	1.004 69.26	-14.9	0.0 0.0	2.5 -0.4	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51617	SW67862	69.0 1	526	20.8	4.6			33	64
								51687	LUBE2	69.0 1	526	-23.3	-4.2			37	64
51687	LUBE2	69.0 526 265	1.008 69.56	-14.6	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51685	PLANTRS2	69.0 1	526	23.4	4.3			37	64
								51688	LUBE3	115 1	526	-20.0	-2.8	0.989RG		45	44
								51688	LUBE3	115 2	526	-20.4	-2.7	0.989RG		51	40
								51691	CLUTTER2	69.0 1	526	7.2	0.9			11	64
								51769	LEWTER2	69.0 1	526	9.7	0.2			15	64
51688	LUBE3	115 526 265	1.031 118.6	-11.4	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51532	TUCO3	115 1	526	-12.5	1.4			6	214
								51630	VICKER3	115 1	526	17.5	5.3			16	112
								51680	LUBS3	115 1	526	6.9	-0.6			4	177
								51687	LUBE2	69.0 1	526	20.0	3.9	0.989UN		45	44
								51687	LUBE2	69.0 2	526	20.4	3.9	0.989UN		50	40
								51689	LUBE6	230 1	526	-52.4	-13.8	1.058RG		21	252
51689	LUBE6	230 526 265	0.986 226.9	-9.2	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								50527	LP-ETAP2	230 1	526	11.3	25.3			5	551
								51688	LUBE3	115 1	526	52.5	16.0	1.058UN		22	252
								51699	JONES6	230 1	526	-63.8	-41.3			14	551
51691	CLUTTER2	69.0 526 265	1.006 69.41	-14.8	0.0 0.0	7.2 1.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								51687	LUBE2	69.0 1	526	-7.2	-1.0			11	64

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA										
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA	
51699	JONES6	230	526	0.991	-8.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	227.9		0.0	0.0	0.0	50521	LP-HOLL6	230	1	526	23.1	10.5		5	551	
								51533	TUCO6	230	1	526	-41.9	1.6		8	551	
								51681	LUBS6	230	1	526	10.4	9.1		3	551	
								51681	LUBS6	230	2	526	10.4	9.1		3	551	
								51689	LUBE6	230	1	526	63.9	40.2		14	551	
								51701	JONES11	22.0	1	526	-159.7	-45.4	1.022LK	61	275	
								51702	JONES21	21.0	1	526	0.0	0.0	1.022LK	0	308	
								51703	JONES31	21.0	1	526	0.0	0.0	1.022LK	0	308	
								51811	GRASSLN6	230	1	526	93.8	-25.1		9	1102	
51701	JONES11	22.0	526	0.989	-5.7	160.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	21.75			55.2R	0.0	0.0	51699	JONES6	230	1	526	160.0	55.2	1.022UN	62	275
51702	JONES21	21.0	526	0.970	-8.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	20.36			0.0	0.0	0.0	51699	JONES6	230	1	526	0.0	0.0	1.022UN	0	308
51703	JONES31	21.0	526	0.970	-8.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	20.36			0.0	0.0	0.0	51699	JONES6	230	1	526	0.0	0.0	1.022UN	0	308
51708	LEHMAN3	115	526	1.019	-7.6	0.0	4.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	117.2			0.0	-0.5	0.0	51710	COCHRAN3	115	1	526	5.3	-2.7		3	177
									51894	LG-PLAN3	115	1	526	-9.9	3.2		6	177
51709	COCHRAN269.0	526	526	1.026	-10.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.82			0.0	0.0	-15.2	51583	WHITTEFA269.0	1	526	12.1	3.8		29	43	
									51710	COCHRAN3	115	1	526	-16.5	3.7	1.000RG	37	44
									51710	COCHRAN3	115	2	526	-16.3	3.7	1.000RG	37	44
									51713	LG-SUND269.0	1	526	4.1	0.7		10	43	
									51715	MIDDLET269.0	1	526	16.6	3.3		16	106	
51710	COCHRAN3	115	526	1.019	-7.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	117.2			0.0	0.0	0.0	51708	LEHMAN3	115	1	526	-5.3	1.8		3	177
									51709	COCHRAN269.0	1	526	16.5	-2.9	1.000UN	37	44	
									51709	COCHRAN269.0	2	526	16.4	-3.0	1.000UN	37	44	
									51730	PACIFIC3	115	1	526	-27.6	4.0		15	177
51713	LG-SUND269.0	526	526	1.019	-10.7	0.0	4.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.32			0.0	0.9	0.0	51709	COCHRAN269.0	1	526	-4.1	-0.9		10	43	
51715	MIDDLET269.0	526	526	1.019	-11.2	0.0	4.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.32			0.0	-0.3	0.0	51709	COCHRAN269.0	1	526	-16.5	-3.2		16	106	
									51717	MALLET2	69.0	1	526	12.4	3.5		12	106
51717	MALLET2	69.0	526	1.016	-11.5	0.0	1.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.11			0.0	-0.4	0.0	51715	MIDDLET269.0	1	526	-12.4	-3.5		12	106	
									51721	TEXACO2	69.0	1	526	11.2	3.9		18	64
51721	TEXACO2	69.0	526	1.013	-11.7	0.0	7.2	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.92			0.0	3.1	0.0	51717	MALLET2	69.0	1	526	-11.2	-3.9		18	64
									51723	ZAVALLA269.0	1	526	4.0	0.8		4	106	
51723	ZAVALLA269.0	526	526	1.011	-11.9	0.0	4.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.77			0.0	1.0	0.0	51721	TEXACO2	69.0	1	526	-4.0	-1.0		4	106
51725	SLAUGHT269.0	526	526	1.031	-11.3	0.0	0.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	71.13			0.0	0.1	0.0	51727	SLAUGT2	69.0	1	526	-0.1	-0.1		0	64

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51727	SLAUGT2	69.0 265	526 71.13	-11.3	0.0 0.0	0.0 0.0	0.0 0.0	51725	SLAUGHT2	69.0	1	526	0.1	-0.1		0	64
								51755	LG-MEAD2	69.0	1	526	-0.1	0.1		0	64
51730	PACIFIC3	115 265	526 117.4	-7.1	0.0 0.0	6.6 0.3	0.0 0.0	51710	COCHRAN3	115	1	526	27.7	-4.3		15	177
								51732	SUNDOWN3	115	1	526	-34.3	4.0		19	177
51732	SUNDOWN3	115 265	526 117.5	-6.9	0.0 0.0	0.0 0.0	0.0 -30.1	51598	HOCKLEY3	115	1	526	-14.5	6.6		9	177
								51730	PACIFIC3	115	1	526	34.3	-4.0		19	177
								51733	SUNDOWN6	230	1	526	-29.0	12.2	1.011RG	21	150
								51733	SUNDOWN6	230	2	526	-29.0	12.2	1.011RG	21	150
								51736	AMOCOT3	115	1	526	38.2	3.1		21	177
51733	SUNDOWN6	230 265	526 230.6	-5.7	0.0 0.0	0.0 0.0	0.0 0.0	51419	PLANTX6	230	1	526	-168.5	30.6		31	551
								51732	SUNDOWN3	115	1	526	29.0	-11.5	1.011UN	21	150
								51732	SUNDOWN3	115	2	526	29.0	-11.5	1.011UN	21	150
								51741	AMOCSL6	230	1	526	-5.4	-17.5		3	551
								51763	WOLFRTH6	230	1	526	115.9	9.9		21	551
51736	AMOCOT3	115 265	526 117.4	-7.0	0.0 0.0	0.0 0.0	0.0 0.0	51732	SUNDOWN3	115	1	526	-38.1	-3.1		21	177
								51738	AMOCCR3	115	1	526	12.9	6.2		8	177
								51750	LG-LEVI3	115	1	526	25.2	-3.1		14	177
51738	AMOCCR3	115 265	526 117.1	-7.2	0.0 0.0	12.9 6.5	0.0 0.0	51736	AMOCOT3	115	1	526	-12.9	-6.5		8	177
51741	AMOCSL6	230 265	526 230.9	-5.6	0.0 0.0	50.0 7.5	0.0 0.0	51733	SUNDOWN6	230	1	526	5.4	16.1		3	551
								51891	YOAKUM6	230	1	526	-55.5	-23.6		11	551
51745	SP-YUMA2	69.0 265	526 70.78	-12.9	0.0 0.0	15.2 5.6	0.0 0.0	51746	SP-YUMA3	115	1	526	-15.2	-5.6	1.013RG	32	50
51746	SP-YUMA3	115 265	526 118.1	-11.0	0.0 0.0	0.0 0.0	0.0 0.0	51652	DOUD3	115	1	526	55.6	-15.7		32	177
								51745	SP-YUMA2	69.0	1	526	15.2	6.2	1.013UN	32	50
								51762	WOLFRTH3	115	1	526	-70.8	9.5		32	214
51750	LG-LEVI3	115 265	526 117.4	-7.2	0.0 0.0	1.9 0.2	0.0 0.0	51736	AMOCOT3	115	1	526	-25.2	3.0		14	177
								51752	LG-CLAU3	115	1	526	23.3	-3.2		13	177
51752	LG-CLAU3	115 265	526 117.2	-7.7	0.0 0.0	6.3 1.8	0.0 0.0	51750	LG-LEVI3	115	1	526	-23.2	3.0		13	177
								51830	TERRYC3	115	1	526	16.9	-4.7		10	177
51755	LG-MEAD2	69.0 265	526 71.13	-11.3	0.0 0.0	4.3 0.9	0.0 0.0	51727	SLAUGT2	69.0	1	526	0.1	-0.1		0	64
								51757	LG-DCW2	69.0	1	526	-4.3	-0.8		7	64
51757	LG-DCW2	69.0 265	526 71.23	-11.2	0.0 0.0	4.0 0.4	0.0 0.0	51755	LG-MEAD2	69.0	1	526	4.4	0.7		7	64
								51829	TERRYC2	69.0	1	526	-8.4	-1.1		13	64
51759	LG-TWD2	69.0 265	526 70.51	-17.2	0.0 0.0	0.7 0.1	0.0 0.0	51783	DIEKEMP2	69.0	1	526	-0.7	-0.1		1	64

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
51799	LG-NWM2	69.0 265	526 70.24	1.018 -15.9	0.0 0.0	6.2 2.4	0.0 0.0	51801	LG-NH&W269.0	1	526	-6.2	-2.4			10	64
51801	LG-NH&W269.0	69.0 265	526 70.91	1.028 -15.4	0.0 0.0	6.0 2.2	0.0 0.0	51799	LG-NWM2	69.0	1	526	6.3	2.2		10	64
								51803	LYNNCO2	69.0	1	526	-12.3	-4.4		20	64
51803	LYNNCO2	69.0 265	526 71.43	1.035 -15.0	0.0 0.0	4.2 -0.4	0.0 0.0	51801	LG-NH&W269.0	1	526	12.3	4.4			20	64
								51804	LYNNCO3	115	1	526	-14.1	-7.8	1.037RG	39	40
								51827	LG-DRAW269.0	1	526	-2.4	3.7			7	64
51804	LYNNCO3	115 265	526 117.7	1.023 -12.8	0.0 0.0	0.0 0.0	0.0 0.0	51786	SP-WDRW3	115	1	526	-11.1	0.5		6	177
								51803	LYNNCO2	69.0	1	526	14.1	8.5	1.037UN	40	40
								51810	GRASSLN3	115	1	526	-3.1	-9.1		5	177
51807	LG-CNTR269.0	69.0 265	526 71.20	1.032 -14.7	0.0 0.0	2.3 0.7	0.0 0.0	51791	YANCYT2	69.0	1	526	4.5	-0.5		7	64
								51809	GRASSLN269.0	1	526	-1.6	0.5			4	41
								51827	LG-DRAW269.0	1	526	-5.3	-0.8			8	64
51809	GRASSLN269.0	69.0 265	526 71.20	1.032 -14.6	0.0 0.0	0.0 0.0	0.0 0.0	51807	LG-CNTR269.0	1	526	1.6	-0.7			4	41
								51810	GRASSLN3	115	1	526	-11.2	2.9	0.998RG	28	40
								51827	LG-DRAW269.0	1	526	9.7	-2.2			14	67
51810	GRASSLN3	115 265	526 118.2	1.028 -12.8	0.0 0.0	0.0 0.0	0.0 0.0	51804	LYNNCO3	115	1	526	3.1	8.5		5	177
								51809	GRASSLN269.0	1	526	11.3	-2.5	0.998UN	28	40	
								51811	GRASSLN6	230	1	526	-33.9	0.4	1.034RG	29	112
								51816	GRAHAM3	115	1	526	19.5	-6.4		11	177
51811	GRASSLN6	230 265	526 228.8	0.995 -10.6	0.0 0.0	0.0 0.0	0.0 0.0	51699	JONES6	230	1	526	-93.5	18.3		9	1102
								51810	GRASSLN3	115	1	526	33.9	0.8	1.034UN	30	112
								51861	BORDEN6	230	1	526	59.6	-19.1		6	1102
51815	GRAHAM2	69.0 265	526 70.69	1.024 -17.0	0.0 0.0	0.0 0.0	0.0 -11.3	51783	DIEKEMP269.0	1	526	6.4	2.4			10	64
								51793	GARZA2	69.0	1	526	9.4	3.3		15	64
								51816	GRAHAM3	115	1	526	-19.3	6.6	0.982RG	50	40
								51857	BG-JST2	69.0	1	526	3.5	-1.0		4	95
51816	GRAHAM3	115 265	526 118.2	1.028 -14.0	0.0 0.0	0.0 0.0	0.0 0.0	51810	GRASSLN3	115	1	526	-19.4	5.5		11	177
								51815	GRAHAM2	69.0	1	526	19.4	-5.5	0.982UN	49	40
51819	YANCYT2	69.0 265	526 70.85	1.027 -15.2	0.0 0.0	0.7 0.7	0.0 0.0	51825	BG-YNT2	69.0	1	526	-0.7	-0.7		1	64
51822	LG-DIXN269.0	69.0 265	526 69.06	1.001 -12.6	0.0 0.0	2.0 0.9	0.0 0.0	51835	BROWNF269.0	1	526	-6.7	-2.2			11	64
								51841	OZMAH2	69.0	1	526	4.7	1.3		8	64
51825	BG-YNT2	69.0 265	526 70.87	1.027 -15.2	0.0 0.0	0.0 0.0	0.0 0.0	51791	YANCYT2	69.0	1	526	-4.5	0.1		7	64
								51819	YANCYT2	69.0	1	526	0.7	0.6		1	64
								51851	BG-GARZ269.0	1	526	3.8	-0.8		4	95	

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

BUS DATA								LINE DATA										
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA	
51827	LG-DRAW	269.0	526	1.032	-14.7	0.0	2.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	71.20		0.0	0.9	0.0	51803	LYNNCO2	69.0	1	526	2.4	-3.9		7	64	
					0.0			51807	LG-CNTR	269.0	1	526	5.3	0.8		8	64	
								51809	GRASSLN	269.0	1	526	-9.7	2.2		14	67	
51829	TERRYC2	69.0	526	1.035	-11.0	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	71.40		0.0	0.0	0.0	51757	LG-DCW2	69.0	1	526	8.4	1.1		13	64	
								51830	TERRYC3	115	1	526	-16.7	-5.9	1.037RG	43	40	
								51830	TERRYC3	115	2	526	-16.9	-5.9	1.036RG	43	40	
								51833	LG-BRWN	269.0	1	526	25.3	10.8		42	64	
51830	TERRYC3	115	526	1.019	-8.3	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	117.1		0.0	0.0	0.0	51752	LG-CLAU	3	115	1	526	-16.9	4.1		10	177
								51762	WOLFRTH	3	115	1	526	25.8	-21.8		15	214
								51829	TERRYC2	69.0	1	526	16.8	6.9	1.037UN	45	40	
								51829	TERRYC2	69.0	2	526	17.0	6.8	1.036UN	45	40	
								51848	PRENTIC	3	115	1	526	-9.9	4.5		6	177
								51960	DNVRN3	115	1	526	-29.9	2.3		14	214	
								52002	SULPHUR	3	115	1	526	-2.9	-2.9		2	177
51833	LG-BRWN	269.0	526	1.010	-12.1	0.0	5.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.71		0.0	2.2	0.0	51829	TERRYC2	69.0	1	526	-24.9	-10.2		42	64	
								51835	BROWNFI	269.0	1	526	19.3	8.0		32	64	
51835	BROWNFI	269.0	526	1.004	-12.4	0.0	0.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.27		0.0	0.1	0.0	51822	LG-DIXN	269.0	1	526	6.7	2.1		11	64	
								51833	LG-BRWN	269.0	1	526	-19.3	-7.9		32	64	
								51837	BRNFIT	2	69.0	1	526	11.8	5.7		20	64
51837	BRNFIT	2	69.0	1.002	-12.5	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	69.11		0.0	0.0	0.0	50528	MU-BRNF	269.0	1	526	6.3	4.5		16	49	
								51835	BROWNFI	269.0	1	526	-11.8	-5.7		20	64	
								51843	GDPASTR	269.0	1	526	5.5	1.1		9	64	
51841	OZMAH2	69.0	526	0.996	-12.9	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.76		0.0	0.0	0.0	51797	LG-LKVW	269.0	1	526	4.6	1.4		8	64	
								51822	LG-DIXN	269.0	1	526	-4.7	-1.4		8	64	
51843	GDPASTR	269.0	526	1.000	-12.7	0.0	0.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	68.98		0.0	0.0	0.0	51837	BRNFIT	2	69.0	1	526	-5.5	-1.2		9	64
								51909	LG-JSM2	69.0	1	526	5.4	1.2		11	49	
51845	AMOCWA	6	230	1.021	-3.8	0.0	7.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	234.8		0.0	0.0	0.0	51891	YOAKUM	6	230	1	526	19.4	0.1		3	551
								51969	MUSTANG	6	230	1	526	-26.4	-0.1		5	551
51848	PRENTIC	3	115	1.017	-7.7	0.0	10.1	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	116.9		0.0	2.7	0.0	51830	TERRYC	3	115	1	526	9.9	-5.7		6	177
								51890	YOAKUM	3	115	1	526	-20.0	3.0		11	177
51851	BG-GARZ	2	69.0	1.025	-15.7	0.0	1.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.73		0.0	0.0	0.0	51825	BG-YNT	2	69.0	1	526	-3.8	0.4		4	95
								51853	BG-JUST	2	69.0	1	526	1.9	-0.4		2	95
51853	BG-JUST	2	69.0	1.024	-15.9	0.0	1.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.67		0.0	0.0	0.0	51851	BG-GARZ	2	69.0	1	526	-1.9	0.0		2	95
51855	BG-FLUV	2	69.0	1.021	-18.1	0.0	3.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	
		265	70.42		0.0	0.0	0.0	51857	BG-JST	2	69.0	1	526	-3.4	0.0		4	95

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 265 [SPS-CNPL]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM	AREA	VOLT	GEN	LOAD	SHUNT	TO	TRANSFORMER	RATING A									
BUS	NAME	ZONE	PU/KV	ANGLE	MW/MVAR	MW/MVAR	MW/MVAR	BUS	NAME	CKT	AREA	MW	MVAR	RATIO	ANGLE	%I	MVA
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
51857	BG-JST2	69.0	526	1.023	-17.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	70.56			0.0	0.0	0.0	51815	GRAHAM2	69.0	1	526	-3.5	0.3		4 95
									51855	BG-FLUV2	69.0	1	526	3.5	-0.3		4 95
51861	BORDEN6	230	526	0.998	-12.4	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		265	229.5			0.0	0.0	0.0	50534	CR-VEAL4	138	1	526	59.4	-5.0	1.031UN	40 150
									51811	GRASSLN6	230	1	526	-59.4	5.0		5 1102

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52071	CHAVES2	69.0 267	526 70.95	1.028 -14.3	0.0 0.0	0.0 0.0	0.0 0.0	52072	CHAVES3	115	1	526	-30.8	-6.7	1.015RG	70	44
								52079	PRICE2	69.0	1	526	30.8	6.7		48	64
52072	CHAVES3	115 267	526 119.5	1.039 -9.6	0.0 0.0	0.0 0.0	0.0 0.0	52071	CHAVES2	69.0	1	526	31.0	9.5	1.015UN	71	44
								52073	CHAVES6	230	1	526	-84.6	-7.3	1.081RG	55	150
								52073	CHAVES6	230	2	526	-84.6	-7.3	1.081RG	55	150
								52078	URTON3	115	1	526	84.1	5.8		46	177
								52088	SAMSON3	115	1	526	54.2	-0.6		29	177
52073	CHAVES6	230 267	526 223.3	0.971 -5.6	0.0 0.0	0.0 0.0	0.0 0.0	52072	CHAVES3	115	1	526	84.8	13.4	1.081UN	59	150
								52072	CHAVES3	115	2	526	84.8	13.4	1.081UN	59	150
								52185	EDDYCO6	230	1	526	56.7	-49.5		14	551
								99990	WINDFARM	230	1	526	-226.2	22.7		43	551
52078	URTON3	115 267	526 118.8	1.033 -10.5	0.0 0.0	20.8 5.5	0.0 0.0	52072	CHAVES3	115	1	526	-83.7	-4.6		46	177
								52084	ROSWLC3	115	1	526	62.8	-0.9		34	177
52079	PRICE2	69.0 267	526 69.75	1.011 -15.5	0.0 0.0	9.7 1.3	0.0 0.0	52071	CHAVES2	69.0	1	526	-30.5	-6.1		48	64
								52081	CV-PINE2	69.0	1	526	20.7	4.9		43	49
52081	CV-PINE2	69.0 267	526 69.20	1.003 -16.1	0.0 0.0	5.0 1.4	0.0 0.0	52079	PRICE2	69.0	1	526	-20.6	-4.7		43	49
								52087	CAPITAN2	69.0	1	526	15.6	3.3		25	64
52084	ROSWLC3	115 267	526 118.4	1.030 -11.1	0.0 0.0	38.0 8.0	0.0 0.0	52078	URTON3	115	1	526	-62.7	1.3		34	177
								52094	ROSWIN3	115	1	526	24.7	-9.2		14	177
52085	CAPITAN2	69.0 267	526 69.66	1.010 -15.8	0.0 0.0	0.0 0.0	0.0 0.0	52089	RIAC2	69.0	1	526	8.6	3.2		14	64
								52093	ROSWIN2	69.0	1	526	-8.6	-3.2		14	64
52087	CAPITAN2	69.0 267	526 68.59	0.994 -16.7	0.0 0.0	15.5 3.2	0.0 0.0	52081	CV-PINE2	69.0	1	526	-15.5	-3.2		25	64
52088	SAMSON3	115 267	526 118.7	1.032 -10.9	0.0 0.0	10.9 0.5	0.0 0.0	52072	CHAVES3	115	1	526	-53.8	1.3		29	177
								52094	ROSWIN3	115	1	526	42.9	-1.8		24	177
52089	RIAC2	69.0 267	526 69.19	1.003 -16.0	0.0 0.0	8.6 3.2	0.0 0.0	52085	CAPITAN2	69.0	1	526	-8.6	-3.2		14	64
52093	ROSWIN2	69.0 267	526 69.72	1.010 -15.7	0.0 0.0	0.0 0.0	0.0 -23.0	52085	CAPITAN2	69.0	1	526	8.6	3.2		14	64
								52094	ROSWIN3	115	1	526	-29.1	16.7	0.945RG	83	40
								52097	RIACLN2	69.0	1	526	20.4	3.1		19	106
52094	ROSWIN3	115 267	526 118.5	1.030 -11.4	0.0 0.0	0.0 0.0	0.0 0.0	52084	ROSWLC3	115	1	526	-24.6	9.1		14	177
								52088	SAMSON3	115	1	526	-42.8	1.8		24	177
								52093	ROSWIN2	69.0	1	526	29.1	-13.9	0.945UN	78	40
								52098	BRASHER3	115	1	526	17.0	3.0		16	107
								52104	TWEEDY3	115	1	526	21.3	-0.1		10	214

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>								<===== LINE DATA =====>									
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
52153	ARTESIA269.0	526	1.017	-17.1	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.14		0.0	0.0	-10.9	52145	SMITH2	69.0	1	526	17.4	7.2		18	106
								52154	ARTESIA3	115	1	526	-20.2	-3.8	1.019RG	51	40
								52154	ARTESIA3	115	2	526	-20.4	-4.1	1.019RG	51	40
								52163	NAVAJ22	69.0	1	526	14.1	4.6		23	64
								52171	CV-ARTE269.0	1	526	9.0	6.9		17	64	
52154	ARTESIA3	115	526	1.013	-13.8	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	116.5		0.0	0.0	0.0	52153	ARTESIA269.0	1	526	20.2	5.0	1.019UN	51	40	
								52153	ARTESIA269.0	2	526	20.4	5.3	1.019UN	52	40	
								52162	NAVAJ33	115	1	526	-40.7	-10.3		19	214
52162	NAVAJ33	115	526	1.014	-13.8	0.0	12.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	116.6		0.0	6.7	0.0	52154	ARTESIA3	115	1	526	40.7	10.3		19	214
								52166	NAVAJ43	115	1	526	-53.2	-17.0		26	214
52163	NAVAJ22	69.0	526	1.015	-17.1	0.0	5.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.06		0.0	2.7	0.0	52153	ARTESIA269.0	1	526	-14.1	-4.6		23	64	
								52165	NAVAJR2	69.0	1	526	8.4	1.9		13	64
52165	NAVAJR2	69.0	526	1.014	-17.2	0.0	4.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	69.99		0.0	2.5	0.0	52163	NAVAJ22	69.0	1	526	-8.4	-1.9		13	64
								52169	ARTTOW2	69.0	1	526	3.7	-0.6		6	64
52166	NAVAJ43	115	526	1.014	-13.7	0.0	1.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	116.7		0.0	0.4	0.0	52162	NAVAJ33	115	1	526	53.3	17.0		26	214
								52184	EDDYCO3	115	1	526	-54.2	-17.4		32	177
52169	ARTTOW2	69.0	526	1.014	-17.2	0.0	3.7	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	69.98		0.0	-0.6	0.0	52165	NAVAJR2	69.0	1	526	-3.7	0.6		6	64
52171	CV-ARTE269.0	526	1.016	-17.1	0.0	9.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.08		0.0	3.1	0.0	52153	ARTESIA269.0	1	526	-9.0	-6.9		17	64	
								52173	ARTW2	69.0	1	526	-0.5	3.8		6	64
52173	ARTW2	69.0	526	1.015	-17.1	0.0	4.4	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.03		0.0	0.1	0.0	52171	CV-ARTE269.0	1	526	0.5	-3.8		6	64	
								52175	ARTCC2	69.0	1	526	-4.9	3.8		10	64
52175	ARTCC2	69.0	526	1.015	-17.0	0.0	8.6	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.00		0.0	1.8	0.0	52173	ARTW2	69.0	1	526	4.9	-3.8		10	64
								52177	ARTSR2	69.0	1	526	-13.5	2.0		21	64
52177	ARTSR2	69.0	526	1.015	-16.8	0.0	5.5	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.05		0.0	1.7	0.0	52175	ARTCC2	69.0	1	526	13.5	-2.0		21	64
								52179	ATOKA2	69.0	1	526	-19.0	0.3		18	106
52179	ATOKA2	69.0	526	1.019	-16.2	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	70.30		0.0	0.0	0.0	52177	ARTSR2	69.0	1	526	19.1	-0.2		18	106
								52180	ATOKA3	115	1	526	-19.1	0.2	0.991RG	47	40
52180	ATOKA3	115	526	1.032	-13.2	0.0	0.0	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	118.7		0.0	0.0	0.0	52179	ATOKA2	69.0	1	526	19.2	0.8	0.991UN	46	40
								52188	CV-DAYT3	115	1	526	-13.2	3.1		7	177
								52298	CV-IRIS3	115	1	526	-5.9	-3.9		4	177
52184	EDDYCO3	115	526	1.030	-12.5	0.0	14.9	0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----
		267	118.5		0.0	1.0	0.0	52104	TWEEDY3	115	1	526	-7.7	0.9		4	177
								52166	NAVAJ43	115	1	526	54.7	17.9		32	177
								52185	EDDYCO6	230	1	526	-93.5	-26.8	1.056RG	56	168
								52188	CV-DAYT3	115	1	526	16.9	-2.9		9	177
								52304	NCANALT3	115	1	526	14.6	9.9		8	214

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

BUS DATA									LINE DATA								
FROM BUS	NAME	AREA	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52261	NMPOTA2	69.0	526	1.005	-16.4	0.0	3.8	0.0	-----								
		267	69.34		0.0	2.9	0.0	52249	LIVSTR2	69.0	1	526	1.8	-0.7		3	64
					0.0			52263	KERMAC2	69.0	1	526	-5.6	-2.1		9	64
52263	KERMAC2	69.0	526	1.007	-16.3	0.0	7.6	0.0	-----								
		267	69.48		0.0	6.6	0.0	52251	POTJCT2	69.0	1	526	-13.3	-8.7		25	64
					0.0			52261	NMPOTA2	69.0	1	526	5.6	2.1		9	64
52265	CV-DG&I2	69.0	526	0.996	-18.4	0.0	22.9	0.0	-----								
		267	68.74		0.0	3.1	0.0	52295	7RIVER2	69.0	1	526	-22.9	-3.1		36	64
52266	WIPP3	115	526	1.024	-13.2	0.0	2.8	0.0	-----								
		267	117.7		0.0	1.6	-15.1	52268	SNDDUN3	115	1	526	-8.0	10.0		7	177
					0.0			52274	IMC#13	115	1	526	5.2	3.5		3	177
52268	SNDDUN3	115	526	1.020	-12.9	0.0	4.7	0.0	-----								
		267	117.3		0.0	4.2	0.0	52266	WIPP3	115	1	526	8.0	-10.5		7	177
					0.0			52329	OCHOA3	115	1	526	-12.7	6.4		8	177
52269	MISCH22	69.0	526	1.026	-15.8	0.0	3.0	0.0	-----								
		267	70.80		0.0	2.2	0.0	52251	POTJCT2	69.0	1	526	-22.8	-19.2		27	106
					0.0			52271	IMC#22	69.0	1	526	19.9	17.0		24	106
52271	IMC#22	69.0	526	1.024	-15.8	0.0	12.4	0.0	-----								
		267	70.67		0.0	9.9	0.0	52269	MISCH22	69.0	1	526	-19.8	-17.0		24	106
					0.0			52275	UNITSA2	69.0	1	526	7.5	7.0		9	106
52274	IMC#13	115	526	1.020	-13.3	0.0	20.5	0.0	-----								
		267	117.3		0.0	10.2	0.0	52252	POTJCT3	115	1	526	-15.4	-5.8		9	177
					0.0			52266	WIPP3	115	1	526	-5.1	-4.3		4	177
52275	UNITSA2	69.0	526	1.024	-15.9	0.0	0.5	0.0	-----								
		267	70.62		0.0	0.4	0.0	52271	IMC#22	69.0	1	526	-7.4	-7.0		9	106
					0.0			52279	IMC#32	69.0	1	526	6.9	6.6		15	64
52277	DUVAL32	69.0	526	1.013	-16.1	0.0	2.5	0.0	-----								
		267	69.90		0.0	1.2	0.0	52278	IMC#42	69.0	1	526	2.1	1.6		2	106
					0.0			52279	IMC#32	69.0	1	526	-4.6	-2.8		12	43
52278	IMC#42	69.0	526	1.012	-16.1	0.0	2.1	0.0	-----								
		267	69.81		0.0	1.7	0.0	52277	DUVAL32	69.0	1	526	-2.1	-1.7		2	106
52279	IMC#32	69.0	526	1.016	-16.0	0.0	2.3	0.0	-----								
		267	70.08		0.0	3.9	0.0	52275	UNITSA2	69.0	1	526	-6.9	-6.6		15	64
					0.0			52277	DUVAL32	69.0	1	526	4.6	2.7		12	43
52282	CV-INDH3	115	526	1.020	-13.5	0.0	39.5	0.0	-----								
		267	117.3		0.0	13.8	0.0	52294	7RIVER3	115	1	526	-37.7	-30.3		27	177
					0.0			52314	PECOS3	115	1	526	-1.8	16.5		9	177
52293	7RIVER6	230	526	0.989	-10.7	0.0	0.0	0.0	-----								
		267	227.4		0.0	0.0	0.0	52185	EDDYCO6	230	1	526	-108.1	-16.5		19	580
					0.0			52294	7RIVER3	115	1	526	76.3	11.4	1.054UN	35	225
					0.0			52313	PECOS6	230	1	526	31.8	5.1		6	580
52294	7RIVER3	115	526	1.036	-12.9	0.0	0.0	0.0	-----								
		267	119.1		0.0	0.0	-30.9	52282	CV-INDH3	115	1	526	38.0	30.7		27	177
					0.0			52293	7RIVER6	230	1	526	-76.3	-8.4	1.054RG	33	225
					0.0			52295	7RIVER2	69.0	1	526	23.4	5.2	1.000UN	58	40
					0.0			52296	CV-LAKW3	115	1	526	14.9	3.4		8	177

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING A %I	MVA
52295	7RIVER2	69.0 526 267	1.021 70.42	-16.5	0.0 0.0	0.0 0.0	0.0 0.0	52265	CV-DG&I269.0	1	526	23.3	3.7			36	64
								52294	7RIVER3	115	1 526	-23.3	-3.7	1.000RG		58	40
52296	CV-LAKW3	115 526 267	1.034 119.0	-13.1	0.0 0.0	4.7 0.1	0.0 0.0	52294	7RIVER3	115	1 526	-14.9	-3.6			8	177
								52298	CV-IRIS3	115	1 526	10.2	3.4			6	177
52298	CV-IRIS3	115 526 267	1.033 118.8	-13.2	0.0 0.0	4.3 0.1	0.0 0.0	52180	ATOKA3	115	1 526	6.0	3.6			4	177
								52296	CV-LAKW3	115	1 526	-10.2	-3.7			6	177
52301	DELHI2	69.0 526 267	1.010 69.68	-18.3	0.0 0.0	0.1 0.0	0.0 0.0	52303	OCOTILL269.0	1	526	-0.1	0.0			0	64
52303	OCOTILL269.0	526 526 267	1.010 69.67	-18.3	0.0 0.0	17.7 2.7	0.0 0.0	52301	DELHI2	69.0	1 526	0.1	-0.2			0	64
								52309	CARLSBD269.0	1	526	-17.8	-2.5			28	64
52304	NCANALT3	115 526 267	1.010 116.1	-13.3	0.0 0.0	20.3 6.4	0.0 0.0	52184	EDDYCO3	115	1 526	-14.5	-12.0			9	214
								52314	PECOS3	115	1 526	-5.8	5.6			4	214
52307	NPOTT2	69.0 526 267	1.033 71.30	-15.5	0.0 0.0	0.0 0.0	0.0 0.0	52239	PCA2	69.0	1 526	-7.1	3.2			7	106
								52251	POTJCT2	69.0	1 526	7.1	-3.1			7	106
								52255	NATPOT2	69.0	1 526	0.0	-0.1			0	64
52308	FIESTA3	115 526 267	1.008 115.9	-13.4	0.0 0.0	16.6 6.7	0.0 0.0	52314	PECOS3	115	1 526	-16.6	-6.7			10	177
52309	CARLSBD269.0	526 526 267	1.016 70.13	-17.7	0.0 0.0	0.0 0.0	0.0 0.0	52303	OCOTILL269.0	1	526	17.9	2.6			28	64
								52310	CARLSBD3	115	1 526	-26.5	-6.2	1.031RG		67	40
								52310	CARLSBD3	115	2 526	-12.2	-3.1	1.031RG		50	25
								52311	CARLSBD113.8	1	526	0.0	0.0	0.978UN		0	22
								52327	HOPISB2	69.0	1 526	20.8	6.7			50	43
52310	CARLSBD3	115 526 267	1.010 116.1	-13.5	0.0 0.0	0.0 0.0	0.0 -14.7	52240	PCA3	115	1 526	-14.4	-8.2			9	177
								52309	CARLSBD269.0	1	526	26.5	8.4	1.031UN		69	40
								52309	CARLSBD269.0	2	526	12.3	4.1	1.031UN		51	25
								52314	PECOS3	115	1 526	-24.5	10.3			12	214
52311	CARLSBD113.8	526 526 267	0.993 13.71	-17.7	0.0 0.0	0.0 0.0	0.0 0.0	52309	CARLSBD269.0	1	526	0.0	0.0	0.978LK		0	22
52313	PECOS6	230 526 267	0.985 226.6	-11.2	0.0 0.0	0.0 0.0	0.0 0.0	52253	POTJCT6	230	1 526	-17.0	34.0			7	580
								52293	7RIVER6	230	1 526	-31.7	-9.6			6	580
								52314	PECOS3	115	1 526	48.8	-24.5	0.994LK		37	150
52314	PECOS3	115 526 267	1.010 116.1	-13.3	0.0 0.0	0.0 0.0	0.0 0.0	52282	CV-INDH3	115	1 526	1.8	-17.1			10	177
								52304	NCANALT3	115	1 526	5.8	-5.7			4	214
								52308	FIESTA3	115	1 526	16.6	6.5			10	177
								52310	CARLSBD3	115	1 526	24.5	-10.5			12	214
								52313	PECOS6	230	1 526	-48.7	26.7	0.994UN		37	150

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E SUN, OCT 06 2002 11:29
 04WP-20412-501. (BOONE-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/30/02
 OUTPUT FOR AREA 526 [SPS] ZONE 267 [SPS-PECO]

<===== BUS DATA =====>									<===== LINE DATA =====>								
FROM BUS	NAME	AREA ZONE	VOLT PU/KV	ANGLE	GEN MW/MVAR	LOAD MW/MVAR	SHUNT MW/MVAR	TO BUS	NAME	CKT	AREA	MW	MVAR	TRANSFORMER RATIO	ANGLE	RATING %I	A MVA
52317	LOVNGT2	69.0 267	526 68.32	0.990 -18.6	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52319	CBWFLD2	69.0	1	526	3.0	0.1		7	43
								52325	LVNG&NA2	69.0	1	526	6.8	2.3		11	64
								52327	HOPISB2	69.0	1	526	-9.8	-2.4		24	43
52319	CBWFLD2	69.0 267	526 68.25	0.989 -18.7	0.0 0.0	0.0 0.0	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52317	LOVNGT2	69.0	1	526	-3.0	-0.2		7	43
								52321	CBWTRF2	69.0	1	526	1.5	0.1		2	64
								52323	WHITEC2	69.0	1	526	1.5	0.1		4	43
52321	CBWTRF2	69.0 267	526 68.17	0.988 -18.8	0.0 0.0	1.5 0.2	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52319	CBWFLD2	69.0	1	526	-1.5	-0.2		2	64
52323	WHITEC2	69.0 267	526 67.95	0.985 -18.9	0.0 0.0	1.5 0.4	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52319	CBWFLD2	69.0	1	526	-1.5	-0.4		4	43
52325	LVNG&NA2	69.0 267	526 67.66	0.981 -19.1	0.0 0.0	6.8 2.4	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52317	LOVNGT2	69.0	1	526	-6.8	-2.4		12	64
52327	HOPISB2	69.0 267	526 68.55	0.994 -18.5	0.0 0.0	10.6 4.1	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52309	CARLSBD2	69.0	1	526	-20.4	-6.5		50	43
								52317	LOVNGT2	69.0	1	526	9.9	2.4		24	43
52329	OCHOA3	115 267	526 117.2	1.019 -12.2	0.0 0.0	2.4 1.5	0.0 0.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
								52268	SNDDUN3	115	1	526	12.7	-7.2		8	177
								52420	WHITTEN3	115	1	526	-15.2	5.6		10	159

11 APPENDIX C *Contingency Study Results*

2003 Spring Minimum Case

Comparing 2:03AP-20412-001.LST to 1:03AP-20412-000.LST

<----- FROM ----->		<----- TO ----->		RATING	No. 2 03AP_001	No. 1 03AP_000	No. 2 03AP_001	No. 1 03AP_000	No. 2 03AP_001	No. 1 03AP_000	2 to 1 Percent CHANGE
					CONT.MVA	CONT.MVA	% OL	% OL	AVAIL	AVAIL	
52184	[EDDYCO3 115]	52185	[EDDYCO6 230]	168.0	160.4	163.3	95.5	97.2	7.6	4.7	-2%
52252	[POTJCT3 115]	52310	[CARLSBD3 115]	90.0	80.1	83.4	89.0	92.7	9.9	6.6	-4%
52252	[POTJCT3 115]	52253	[POTJCT6 230]	172.5	139.2	141.8	80.7	82.2	33.3	30.7	-2%
50910	[ASARCO3 115]	50914	[NICHOL3 115]	60.0	16.9	16.9	28.2	28.2	43.1	43.1	0%
51014	[OSAGE--3 115]	51018	[MANHTP3 115]	161.0	89.4	89.7	55.5	55.7	71.6	71.3	0%
52208	[CUNNINH3 115]	52209	[CUNNINH6 230]	168.0	95.0	93.0	56.6	55.4	73.0	75.0	1%
51014	[OSAGE--3 115]	51080	[CANYNE3 115]	99.0	26.0	29.9	26.2	30.2	73.0	69.1	-4%
52072	[CHAVES3 115]	52078	[URTON3 115]	161.0	87.9	85.4	54.6	53.0	73.1	75.6	2%
51018	[MANHTP3 115]	51020	[RANDALL3 115]	161.0	86.8	87.0	53.9	54.0	74.2	74.0	0%
51014	[OSAGE--3 115]	51020	[RANDALL3 115]	161.0	86.4	82.9	53.6	51.5	74.6	78.1	2%
51008	[GEORGIA3 115]	51014	[OSAGE--3 115]	161.0	83.8	83.8	52.1	52.0	77.2	77.2	0%
51102	[DAWN 115]	51106	[HEREFD3 115]	99.0	21.2	21.2	21.4	21.4	77.8	77.8	0%
51106	[HEREFD3 115]	51122	[FRIONA3 115]	99.0	20.0	34.0	20.2	34.3	79.0	65.0	-14%
51078	[CANYNW3 115]	51102	[DAWN 115]	99.0	19.8	19.7	20.0	19.9	79.2	79.3	0%
52072	[CHAVES3 115]	52088	[SAMSON3 115]	161.0	81.6	75.6	50.7	46.9	79.4	85.4	4%
51078	[CANYNW3 115]	51080	[CANYNE3 115]	99.0	19.5	23.4	19.7	23.6	79.5	75.6	-4%
51126	[DS-#203 115]	51176	[CURRY3 115]	99.0	19.3	20.1	19.5	20.3	79.7	78.9	-1%
51014	[OSAGE--3 115]	51036	[ARRWHD3 115]	161.0	80.1	80.0	49.7	49.7	80.9	81.0	0%
52184	[EDDYCO3 115]	52188	[CV-DAYT3 115]	161.0	79.4	79.7	49.3	49.5	81.6	81.3	0%
50914	[NICHOL3 115]	50915	[NICHOL6 230]	150.0	67.4	67.5	44.9	45.0	82.6	82.5	0%
50914	[NICHOL3 115]	50915	[NICHOL6 230]	150.0	66.1	66.3	44.1	44.2	83.9	83.7	0%
52180	[ATOKA3 115]	52188	[CV-DAYT3 115]	161.0	76.7	77.1	47.7	47.9	84.3	83.9	0%
51124	[PARMRC3 115]	51126	[DS-#203 115]	99.0	14.1	23.1	14.2	23.3	84.9	75.9	-9%
51036	[ARRWHD3 115]	51038	[OWENSC3 115]	161.0	75.6	75.5	46.9	46.9	85.4	85.5	0%
51120	[CARGIL3 115]	51122	[FRIONA3 115]	99.0	13.1	27.8	13.2	28.1	85.9	71.2	-15%
50880	[HIGHT3 115]	50924	[HIGHLND3 115]	99.0	12.9	12.9	13.0	13.0	86.1	86.1	0%
52094	[ROSWIN3 115]	52098	[BRASHER3 115]	99.0	12.8	12.8	12.9	13.0	86.2	86.2	0%
51120	[CARGIL3 115]	51124	[PARMRC3 115]	99.0	12.6	24.6	12.7	24.9	86.4	74.4	-12%
52088	[SAMSON3 115]	52094	[ROSWIN3 115]	161.0	73.7	67.7	45.8	42.0	87.3	93.3	4%
52282	[CV-INDH3 115]	52314	[PECOS3 115]	161.0	73.0	73.9	45.3	45.9	88.0	87.1	-1%
52310	[CARLSBD3 115]	52314	[PECOS3 115]	197.0	108.6	114.7	55.1	58.2	88.4	82.3	-3%
52208	[CUNNINH3 115]	52240	[PCA3 115]	161.0	72.3	74.9	44.9	46.5	88.7	86.1	-2%
52078	[URTON3 115]	52084	[ROSWLC3 115]	161.0	72.2	69.6	44.8	43.3	88.8	91.4	2%
52240	[PCA3 115]	52310	[CARLSBD3 115]	161.0	71.9	74.9	44.7	46.5	89.1	86.1	-2%
52180	[ATOKA3 115]	52298	[CV-IRIS3 115]	161.0	71.1	71.1	44.2	44.2	89.9	89.9	0%
51156	[NORRST3 115]	51168	[NORRIS3 115]	99.0	7.9	7.9	8.0	8.0	91.1	91.1	0%
52296	[CV-LAKW3 115]	52298	[CV-IRIS3 115]	161.0	68.0	68.0	42.3	42.2	93.0	93.0	0%

1:
 03AP-20412-000 (PINNELL SITE) SYSTEM IMPACT STUDY
 WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

2:
 03AP-20412-001 (PINNELL SITE) SYSTEM IMPACT STUDY
 WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

Comparing 2:03AP-20412-001.LST to 1:03AP-20412-000.LST

<----- FROM ----->		<----- TO ----->		RATING	No. 2 03AP_001	No. 1 03AP_000	No. 2 03AP_001	No. 1 03AP_000	No. 2 03AP_001	No. 1 03AP_000	2 to 1 Percent CHANGE
					CONT.MVA	CONT.MVA	% OL	% OL	AVAIL	AVAIL	
51176	[CURRY3 115]	51202	[ROOSEVL3 115]	161.0	64.8	66.3	40.3	41.2	96.2	94.7	-1%
52294	[7RIVER3 115]	52296	[CV-LAKW3 115]	161.0	64.6	64.6	40.1	40.1	96.4	96.4	0%
51020	[RANDALL3 115]	51082	[PALODU 3 115]	99.0	2.2	2.2	2.2	2.2	96.8	96.8	0%
51026	[FARMERS3 115]	51038	[OWENSC3 115]	161.0	60.1	60.1	37.3	37.3	100.9	100.9	0%
50956	[EASTPL3 115]	50964	[PIERCT3 115]	161.0	59.4	59.8	36.9	37.1	101.6	101.2	0%
51078	[CANYNW3 115]	51088	[ROCKWEL3 115]	105.0	2.5	2.5	2.4	2.3	102.5	102.5	0%
52166	[NAVAJ43 115]	52184	[EDDYCO3 115]	161.0	58.1	58.5	36.1	36.3	102.9	102.5	0%
51110	[DFSMTH3 115]	51111	[DFSMTH6 230]	172.5	68.5	71.9	39.7	41.7	104.0	100.6	-2%
51110	[DFSMTH3 115]	51111	[DFSMTH6 230]	172.5	68.5	71.9	39.7	41.7	104.0	100.6	-2%
50956	[EASTPL3 115]	50978	[MANHATT3 115]	161.0	56.3	56.6	34.9	35.1	104.7	104.4	0%
51106	[HEREFD3 115]	51110	[DFSMTH3 115]	161.0	54.2	61.9	33.6	38.5	106.8	99.1	-5%
50956	[EASTPL3 115]	50957	[EASTPL6 230]	225.0	117.6	118.0	52.3	52.4	107.4	107.0	0%
51110	[DFSMTH3 115]	51146	[DS-213 115]	161.0	53.1	53.0	33.0	32.9	107.9	108.0	0%
52204	[LEACO3 115]	52205	[LEACO6 230]	168.0	59.3	59.1	35.3	35.2	108.7	108.9	0%
52282	[CV-INDH3 115]	52294	[7RIVER3 115]	161.0	50.0	50.0	31.1	31.1	111.0	111.0	0%
52104	[TWEEDY3 115]	52184	[EDDYCO3 115]	161.0	49.6	46.2	30.8	28.7	111.4	114.8	2%
50964	[PIERCT3 115]	51014	[OSAGE--3 115]	161.0	49.5	49.8	30.7	30.9	111.5	111.2	0%
51026	[FARMERS3 115]	51032	[CRO-HIN3 115]	161.0	49.2	49.2	30.6	30.6	111.8	111.8	0%
51146	[DS-213 115]	51150	[CASTRC3 115]	161.0	48.5	48.4	30.1	30.1	112.5	112.6	0%
50978	[MANHATT3 115]	51018	[MANHTP3 115]	161.0	47.1	47.4	29.3	29.5	113.9	113.6	0%
51176	[CURRY3 115]	51180	[FE-CLVS3 115]	146.0	32.0	32.1	21.9	22.0	114.0	113.9	0%
51194	[OASIS3 115]	51208	[PORTALE3 115]	161.0	46.6	44.1	28.9	27.4	114.4	116.9	2%
50908	[CHERRY3 115]	50914	[NICHOL3 115]	161.0	45.8	45.9	28.5	28.5	115.2	115.1	0%
51008	[GEORGIA3 115]	51032	[CRO-HIN3 115]	161.0	45.4	45.4	28.2	28.2	115.6	115.6	0%
52084	[ROSWLC3 115]	52094	[ROSWIN3 115]	161.0	44.8	44.8	27.8	27.8	116.2	116.2	0%
51156	[NORRST3 115]	51194	[OASIS3 115]	161.0	42.7	37.5	26.5	23.3	118.3	123.5	3%
52240	[PCA3 115]	52252	[POTJCT3 115]	161.0	42.0	44.0	26.1	27.3	119.0	117.0	-1%
50914	[NICHOL3 115]	50926	[YARNELL3 115]	180.0	60.8	60.7	33.8	33.7	119.2	119.3	0%
50926	[YARNELL3 115]	50928	[CONWAY3 115]	180.0	60.2	60.1	33.4	33.4	119.8	119.9	0%
50908	[CHERRY3 115]	50938	[NORTHW3 115]	161.0	40.9	41.0	25.4	25.5	120.1	120.0	0%
51094	[NEHFD3 115]	51110	[DFSMTH3 115]	161.0	40.6	42.9	25.2	26.7	120.4	118.1	-2%
51202	[ROOSEVL3 115]	51208	[PORTALE3 115]	161.0	39.2	43.8	24.3	27.2	121.8	117.2	-3%
50990	[PUCKETT3 115]	51002	[COULTER3 115]	161.0	38.7	38.7	24.0	24.0	122.3	122.3	0%
51150	[CASTRC3 115]	51250	[BC-EART3 115]	161.0	37.4	37.4	23.2	23.2	123.6	123.6	0%

1:
 03AP-20412-000 (PINNELL SITE) SYSTEM IMPACT STUDY
 WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

2:
 03AP-20412-001 (PINNELL SITE) SYSTEM IMPACT STUDY
 WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

03AP-20412-001 **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Wind Farm\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Wind Farm\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_CON.DAT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 50858 [FINNEY7 345.00] TO BUS 56449 [HOLCOMB7345.00] CKT 1 ----- CONTINGENCY SINGLE 4
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 50858 FINNEY7 345 1.0639 1.0231

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 51021 [RANDALL6230.00] CKT 1 ----- CONTINGENCY SINGLE 102
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 51021 RANDALL6 230 0.8916 0.9869

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 51094 [NEHFD3 115.00] TO BUS 51110 [DFSMTH3 115.00] CKT 1 ----- CONTINGENCY SINGLE 149
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 51094 NEHFD3 115 0.8982 1.0280

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 51195 [OASIS6 230.00] TO BUS 99990 [CATAMONT230.00] CKT 1 ----- CONTINGENCY SINGLE 176
 *** NOT CONVERGED ***

03AP-20412-001 **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 51439 [TOLKTP6 230.00] TO BUS 51440 [TOLK7 345.00] CKT 1 ----- CONTINGENCY SINGLE 206
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52186 EDDYCO7 345 1.0557 1.0136

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52154 [ARTESIA3115.00] TO BUS 52162 [NAVAJ33 115.00] CKT 1 ----- CONTINGENCY SINGLE 311
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 52154 ARTESIA3 115 0.8950 1.0206

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52162 [NAVAJ33 115.00] TO BUS 52166 [NAVAJ43 115.00] CKT 1 ----- CONTINGENCY SINGLE 312
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 52154 ARTESIA3 115 0.8747 1.0206 52162 NAVAJ33 115 0.8744 1.0211

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52166 [NAVAJ43 115.00] TO BUS 52184 [EDDYCO3 115.00] CKT 1 ----- CONTINGENCY SINGLE 313
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 52154 ARTESIA3 115 0.8711 1.0206 52162 NAVAJ33 115 0.8708 1.0211
 52166 NAVAJ43 115 0.8708 1.0218

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52185 [EDDYCO6 230.00] TO BUS 52186 [EDDYCO7 345.00] CKT 1 ----- CONTINGENCY SINGLE 319
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52186 EDDYCO7 345 1.0944 1.0136

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52205 [LEACO6 230.00] TO BUS 52209 [CUNNINH6230.00] CKT 1 ----- CONTINGENCY SINGLE 324
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52231 MIDLND-6 230 1.0611 1.0475

03AP-20412-001 **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52205 [LEACO6 230.00] TO BUS 52231 [MIDLND-6230.00] CKT 1 ----- CONTINGENCY SINGLE 325
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52231 MIDLND-6 230 1.1645 1.0475

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52209 [CUNNINH6230.00] TO BUS 52253 [POTJCT6 230.00] CKT 1 ----- CONTINGENCY SINGLE 332
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 52253 POTJCT6 230 0.8808 0.9742

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52266 [WIPP3 115.00] TO BUS 52274 [IMC#13 115.00] CKT 1 ----- CONTINGENCY SINGLE 339
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52266 WIPP3 115 1.0638 1.0327 52268 SNDDUN3 115 1.0574 1.0302
 52329 OCHOA3 115 1.0505 1.0304

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52282 [CV-INDH3115.00] TO BUS 52294 [7RIVER3 115.00] CKT 1 ----- CONTINGENCY SINGLE 341
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52294 7RIVER3 115 1.0619 1.0264 52296 CV-LAKW3 115 1.0579 1.0276
 52298 CV-IRIS3 115 1.0539 1.0290

03AP-20412-001 **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

*** ACCC AVAILABLE CAPACITY REPORT ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Wind Farm\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Wind Farm\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_CON.DAT

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
52184 [EDDYCO3 115]	52185 [EDDYCO6 230]	1	SINGLE 332	1	122.1	160.4		168.0	95.5	7.6
52252 [POTJCT3 115]	52310 [CARLSBD3 115]	1	SINGLE 316	0	45.2	76.9	80.1	90.0	89.0	9.9
52252 [POTJCT3 115]	52253 [POTJCT6 230]	1	SINGLE 316	0	97.5	139.2		172.5	80.7	33.3
50910 [ASARCO3 115]	50914 [NICHOL3 115]	1	SINGLE 128	377	17.5	17.5	16.9	60.0	28.2	43.1
51014 [OSAGE--3 115]	51018 [MANHTP3 115]	1	SINGLE 133	0	51.5	93.0	89.4	161.0	55.5	71.6
52208 [CUNNINH3 115]	52209 [CUNNINH6 230]	1	SINGLE 332	1	65.1	95.0		168.0	56.6	73.0
51014 [OSAGE--3 115]	51080 [CANYNE3 115]	1	SINGLE 151	0	15.4	27.1	26.0	99.0	26.2	73.0
52072 [CHAVES3 115]	52078 [URTON3 115]	1	SINGLE 316	0	57.4	90.6	87.9	161.0	54.6	73.1
51018 [MANHTP3 115]	51020 [RANDALL3 115]	1	SINGLE 133	0	47.3	90.4	86.8	161.0	53.9	74.2
51014 [OSAGE--3 115]	51020 [RANDALL3 115]	1	SINGLE 136	0	47.8	89.8	86.4	161.0	53.6	74.6
51008 [GEORGIA3 115]	51014 [OSAGE--3 115]	1	SINGLE 134	0	57.2	86.2	83.8	161.0	52.1	77.2
51102 [DAWN 115]	51106 [HEREFD3 115]	1	SINGLE 135	0	6.2	21.6	21.2	99.0	21.4	77.8
51106 [HEREFD3 115]	51122 [FRIONA3 115]	1	SINGLE 177	0	10.7	20.3	20.0	99.0	20.2	79.0
51078 [CANYNW3 115]	51102 [DAWN 115]	1	SINGLE 135	0	4.6	19.9	19.8	99.0	20.0	79.2
52072 [CHAVES3 115]	52088 [SAMSON3 115]	1	SINGLE 301	0	35.7	84.1	81.6	161.0	50.7	79.4
51078 [CANYNW3 115]	51080 [CANYNE3 115]	1	SINGLE 151	0	9.7	20.1	19.5	99.0	19.7	79.5
51126 [DS-#203 115]	51176 [CURRY3 115]	1	SINGLE 6	0	9.8	20.1	19.3	99.0	19.5	79.7
51014 [OSAGE--3 115]	51036 [ARRWHD3 115]	1	SINGLE 128	0	38.9	82.7	80.1	161.0	49.7	80.9
52184 [EDDYCO3 115]	52188 [CV-DAYT3 115]	1	SINGLE 342	0	42.9	81.8	79.4	161.0	49.3	81.6
50914 [NICHOL3 115]	50915 [NICHOL6 230]	1	SINGLE 107	0	52.1	67.4		150.0	44.9	82.6
50914 [NICHOL3 115]	50915 [NICHOL6 230]	2	SINGLE 106	0	50.7	66.1		150.0	44.1	83.9
52180 [ATOKA3 115]	52188 [CV-DAYT3 115]	1	SINGLE 342	0	40.0	79.0	76.7	161.0	47.7	84.3
51124 [PARMRC3 115]	51126 [DS-#203 115]	1	SINGLE 6	0	4.1	14.6	14.1	99.0	14.2	84.9
51036 [ARRWHD3 115]	51038 [OWENSC3 115]	1	SINGLE 128	0	34.1	77.2	75.6	161.0	46.9	85.4
51120 [CARGIL3 115]	51122 [FRIONA3 115]	1	SINGLE 177	0	4.7	13.3	13.1	99.0	13.2	85.9
50880 [HIGHLT3 115]	50924 [HIGHLND3 115]	1	SINGLE 91	0	12.9	12.9	12.9	99.0	13.0	86.1
52094 [ROSWIN3 115]	52098 [BRASHER3 115]	1	SINGLE 316	0	13.0	13.0	12.8	99.0	12.9	86.2
51120 [CARGIL3 115]	51124 [PARMRC3 115]	1	SINGLE 6	0	3.9	13.0	12.6	99.0	12.7	86.4
52088 [SAMSON3 115]	52094 [ROSWIN3 115]	1	SINGLE 301	0	27.4	75.6	73.7	161.0	45.8	87.3
52282 [CV-INDH3 115]	52314 [PECOS3 115]	1	SINGLE 317	0	44.3	73.5	73.0	161.0	45.3	88.0
52310 [CARLSBD3 115]	52314 [PECOS3 115]	1	SINGLE 316	0	43.8	103.8	108.6	197.0	55.1	88.4
52208 [CUNNINH3 115]	52240 [PCA3 115]	1	SINGLE 332	1	40.2	70.5	72.3	161.0	44.9	88.7
52078 [URTON3 115]	52084 [ROSWLC3 115]	1	SINGLE 316	0	41.6	74.0	72.2	161.0	44.8	88.8
52240 [PCA3 115]	52310 [CARLSBD3 115]	1	SINGLE 316	0	40.4	69.0	71.9	161.0	44.7	89.1
52180 [ATOKA3 115]	52298 [CV-IRIS3 115]	1	SINGLE 342	0	29.0	73.2	71.1	161.0	44.2	89.9
51156 [NORRST3 115]	51168 [NORRIS3 115]	1	SINGLE 177	1	8.0	8.0	7.9	99.0	8.0	91.1
52296 [CV-LAKW3 115]	52298 [CV-IRIS3 115]	1	SINGLE 342	0	25.7	69.7	68.0	161.0	42.3	93.0
51176 [CURRY3 115]	51202 [ROOSEVL3 115]	2	SINGLE 173	0	42.5	66.3	64.8	161.0	40.3	96.2

03AP-20412-001 **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
52294 [7RIVER3 115]	52296 [CV-LAKW3 115]	1	SINGLE 342	0	22.2	66.0	64.6	161.0	40.1	96.4
51020 [RANDALL3 115]	51082 [PALODU 3 115]	1	SINGLE 102	377	2.3	2.3	2.2	99.0	2.2	96.8
51026 [FARMERS3 115]	51038 [OWENSC3 115]	1	SINGLE 128	0	7.5	61.2	60.1	161.0	37.3	100.9
50956 [EASTPL3 115]	50964 [PIERCT3 115]	1	SINGLE 137	1	33.6	61.3	59.4	161.0	36.9	101.6
51078 [CANYNW3 115]	51088 [ROCKWEL3 115]	1	SINGLE 135	1	2.5	2.5	2.5	105.0	2.4	102.5
52166 [NAVAJ43 115]	52184 [EDDYCO3 115]	1	SINGLE 317	0	47.0	59.1	58.1	161.0	36.1	102.9
51110 [DFSMTH3 115]	51111 [DFSMTH6 230]	1	SINGLE 154	0	38.2	68.5		172.5	39.7	104.0
51110 [DFSMTH3 115]	51111 [DFSMTH6 230]	2	SINGLE 153	0	38.2	68.5		172.5	39.7	104.0
50956 [EASTPL3 115]	50978 [MANHATT3 115]	1	SINGLE 137	0	29.6	57.9	56.3	161.0	34.9	104.7
51106 [HEREFD3 115]	51110 [DFSMTH3 115]	1	SINGLE 149	0	38.4	55.8	54.2	161.0	33.6	106.8
50956 [EASTPL3 115]	50957 [EASTPL6 230]	1	SINGLE 102	1	76.1	117.6		225.0	52.3	107.4
51110 [DFSMTH3 115]	51146 [DS-213 115]	1	SINGLE 182	0	20.7	52.7	53.1	161.0	33.0	107.9
52204 [LEACO3 115]	52205 [LEACO6 230]	1	SINGLE 326	0	35.9	59.3		168.0	35.3	108.7
52282 [CV-INDH3 115]	52294 [7RIVER3 115]	1	SINGLE 342	0	26.8	50.4	50.0	161.0	31.1	111.0
52104 [TWEEDY3 115]	52184 [EDDYCO3 115]	1	SINGLE 316	0	5.4	47.0	49.6	161.0	30.8	111.4
50964 [PIERCT3 115]	51014 [OSAGE--3 115]	1	SINGLE 137	1	25.6	50.7	49.5	161.0	30.7	111.5
51026 [FARMERS3 115]	51032 [CRO-HIN3 115]	1	SINGLE 128	0	3.9	50.1	49.2	161.0	30.6	111.8
51146 [DS-213 115]	51150 [CASTRC3 115]	1	SINGLE 182	0	16.3	48.0	48.5	161.0	30.1	112.5
50978 [MANHATT3 115]	51018 [MANHTP3 115]	1	SINGLE 137	1	23.4	48.3	47.1	161.0	29.3	113.9
51176 [CURRY3 115]	51180 [FE-CLVS3 115]	1	SINGLE 168	0	12.1	33.1	32.0	146.0	21.9	114.0
51194 [OASIS3 115]	51208 [PORTALE3 115]	1	SINGLE 177	0	22.9	47.4	46.6	161.0	28.9	114.4
50908 [CHERRY3 115]	50914 [NICHOL3 115]	1	SINGLE 125	1	35.2	47.2	45.8	161.0	28.5	115.2
51008 [GEORGIA3 115]	51032 [CRO-HIN3 115]	1	SINGLE 128	0	7.7	46.1	45.4	161.0	28.2	115.6
52084 [ROSWLC3 115]	52094 [ROSWIN3 115]	1	SINGLE 301	0	15.1	45.7	44.8	161.0	27.8	116.2
51156 [NORRST3 115]	51194 [OASIS3 115]	1	SINGLE 172	0	19.0	43.5	42.7	161.0	26.5	118.3
52240 [PCA3 115]	52252 [POTJCT3 115]	1	SINGLE 337	0	12.1	43.3	42.0	161.0	26.1	119.0
50914 [NICHOL3 115]	50926 [YARNELL3 115]	1	SINGLE 85	0	30.8	63.0	60.8	180.0	33.8	119.2
50926 [YARNELL3 115]	50928 [CONWAY3 115]	1	SINGLE 85	0	30.1	62.0	60.2	180.0	33.4	119.8
50908 [CHERRY3 115]	50938 [NORTHW3 115]	1	SINGLE 125	1	30.0	41.9	40.9	161.0	25.4	120.1
51094 [NEHFD3 115]	51110 [DFSMTH3 115]	1	SINGLE 151	0	32.0	41.9	40.6	161.0	25.2	120.4
51202 [ROOSEVL3 115]	51208 [PORTALE3 115]	1	SINGLE 173	0	11.9	40.0	39.2	161.0	24.3	121.8
50990 [PUCKETT3 115]	51002 [COULTER3 115]	1	SINGLE 103	0	12.2	39.5	38.7	161.0	24.0	122.3
51150 [CASTRC3 115]	51250 [BC-EART3 115]	1	SINGLE 155	0	18.9	36.7	37.4	161.0	23.2	123.6
50992 [BUSHLND3 115]	50993 [BUSHLND6 230]	1	SINGLE 102	1	38.2	48.0		172.5	27.8	124.5
51170 [FE-CLVS3 115]	51172 [FE-SWS3 115]	1	SINGLE 168	0	2.1	21.2	20.8	146.0	14.2	125.2
50928 [CONWAY3 115]	50932 [KIRBY3 115]	1	SINGLE 85	0	24.7	56.1	54.8	180.0	30.4	125.2
51170 [FE-CLVS3 115]	51180 [FE-CLVS3 115]	1	SINGLE 168	0	1.3	21.1	20.6	146.0	14.1	125.4
51156 [NORRST3 115]	51176 [CURRY3 115]	1	SINGLE 172	0	11.2	35.6	34.9	161.0	21.7	126.1
51038 [OWENSC3 115]	51044 [ESTCDT3 115]	1	SINGLE 125	0	13.6	34.0	33.2	161.0	20.6	127.8
52268 [SNDDUN3 115]	52329 [OCHOA3 115]	1	SINGLE 332	1	15.2	32.4	32.8	161.0	20.4	128.2
51166 [CANNOA3 115]	51194 [OASIS3 115]	1	SINGLE 171	0	20.8	33.0	32.0	161.0	19.9	129.0
51020 [RANDALL3 115]	51021 [RANDALL6 230]	1	SINGLE 116	1	109.6	128.3		258.8	49.6	130.4

03AP-20412-001 **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
52308 [FIESTA3 115]	52310 [CARLSBD3 115]	1	SINGLE 316	0	13.9	13.9	14.5	146.0	9.9	131.5
52266 [WIPP3 115]	52268 [SNDDUN3 115]	1	SINGLE 332	1	13.7	29.0	29.4	161.0	18.2	131.6
52266 [WIPP3 115]	52274 [IMC#13 115]	1	SINGLE 332	1	10.5	28.4	29.2	161.0	18.1	131.8
50988 [SUNSET3 115]	50990 [PUCKETT3 115]	1	SINGLE 103	0	4.9	28.0	27.4	161.0	17.0	133.6
51076 [FE-TUCU3 115]	51176 [CURRY3 115]	1	SINGLE 177	0	11.4	11.3	11.2	146.0	7.6	134.8
51012 [SOUTHE3 115]	51020 [RANDALL3 115]	1	SINGLE 102	1	11.4	11.4	11.1	146.0	7.6	134.9
50938 [NORTHW3 115]	50943 [BUSH3 115]	1	SINGLE 103	2	11.3	11.3	11.1	146.0	7.6	134.9
51162 [WCLOVI3 115]	51166 [CANNOA3 115]	1	SINGLE 171	0	13.2	25.1	24.4	161.0	15.2	136.6
52094 [ROSWIN3 115]	52104 [TWEEDY3 115]	1	SINGLE 316	0	9.1	60.4	59.3	197.0	30.1	137.7
52252 [POTJCT3 115]	52274 [IMC#13 115]	1	SINGLE 349	0	7.7	23.0	22.3	161.0	13.9	138.7
51002 [COULTER3 115]	51044 [ESTCDT3 115]	1	SINGLE 125	1	2.7	22.9	22.3	161.0	13.8	138.7
50938 [NORTHW3 115]	50988 [SUNSET3 115]	1	SINGLE 103	0	7.6	22.3	21.9	161.0	13.6	139.1
51070 [TUCUMCA3 115]	51076 [FE-TUCU3 115]	1	SINGLE 177	5	6.4	6.4	6.4	146.0	4.4	139.6
52162 [NAVAJ33 115]	52166 [NAVAJ43 115]	1	SINGLE 317	0	46.2	58.3	57.3	197.0	29.1	139.7
50880 [HIGHLT3 115]	50914 [NICHOL3 115]	1	SINGLE 79	0	13.4	21.4	20.8	161.0	12.9	140.2
51162 [WCLOVI3 115]	51172 [FE-SWS3 115]	1	SINGLE 171	0	7.7	19.4	19.0	161.0	11.8	142.0
50878 [CARSNT3 115]	50882 [PANTXN3 115]	1	SINGLE 91	0	9.5	18.4	18.4	161.0	11.4	142.6
51010 [PULLMAN3 115]	51012 [SOUTHE3 115]	1	SINGLE 102	374	3.3	3.3	3.2	146.0	2.2	142.8
50882 [PANTXN3 115]	50884 [PANTXS3 115]	1	SINGLE 91	0	8.3	16.2	16.1	161.0	10.0	144.9
50880 [HIGHLT3 115]	50884 [PANTXS3 115]	1	SINGLE 91	0	7.6	12.8	12.8	161.0	8.0	148.2
51044 [ESTCDT3 115]	51046 [ESTACAD3 115]	1	SINGLE 102	10	11.4	11.4	11.2	161.0	7.0	149.8
52313 [PECOS6 230]	52314 [PECOS3 115]	1	SINGLE 288	377	0.0	0.0		150.0	0.0	150.0
52154 [ARTESIA3 115]	52162 [NAVAJ33 115]	1	SINGLE 317	0	35.7	47.7	46.9	197.0	23.8	150.1
50964 [PIERCT3 115]	50966 [PIERCE3 115]	1	SINGLE 102	375	10.4	10.4	10.0	161.0	6.2	151.0
52184 [EDDYCO3 115]	52304 [NCANALT3 115]	1	SINGLE 332	1	18.2	44.3	45.2	197.0	23.0	151.8
52072 [CHAVES3 115]	52073 [CHAVES6 230]	2	SINGLE 299	0	58.9	106.8		258.8	41.3	152.0
52072 [CHAVES3 115]	52073 [CHAVES6 230]	1	SINGLE 300	0	58.9	106.8		258.8	41.3	152.0
52304 [NCANALT3 115]	52314 [PECOS3 115]	1	SINGLE 316	0	2.4	38.4	40.1	197.0	20.4	156.9
51202 [ROOSEVL3 115]	51203 [ROOSEVL6 230]	1	SINGLE 173	0	56.6	112.3		289.8	38.8	177.5
51194 [OASIS3 115]	51195 [OASIS6 230]	1	SINGLE 177	0	62.9	110.6		289.8	38.2	179.2
50914 [NICHOL3 115]	50922 [WHITAKR3 115]	1	SINGLE 101	1	32.2	67.1	64.8	249.0	26.0	184.2
50922 [WHITAKR3 115]	50956 [EASTPL3 115]	1	SINGLE 101	1	27.4	59.7	57.7	249.0	23.2	191.3
50992 [BUSHLND3 115]	51002 [COULTER3 115]	1	SINGLE 102	1	38.2	47.5	46.5	249.0	18.7	202.5
51195 [OASIS6 230]	99990 [CATAMONT 230]	1	SINGLE 304	0	98.6	179.3	183.2	497.0	36.9	313.8
50907 [HARRNG6 230]	50915 [NICHOL6 230]	1	SINGLE 100	0	153.0	292.1	291.6	635.0	45.9	343.4
50907 [HARRNG6 230]	50915 [NICHOL6 230]	2	SINGLE 99	0	143.8	291.6	291.0	635.0	45.8	344.0
52209 [CUNNINH6 230]	52253 [POTJCT6 230]	1	SINGLE 316	0	97.5	139.2	146.0	497.0	29.4	351.0
50907 [HARRNG6 230]	51021 [RANDALL6 230]	1	SINGLE 116	1	109.6	128.3	130.2	497.0	26.2	366.8
52185 [EDDYCO6 230]	52209 [CUNNINH6 230]	1	SINGLE 206	0	76.5	123.5	123.2	497.0	24.8	373.8
52073 [CHAVES6 230]	99990 [CATAMONT 230]	1	SINGLE 206	0	80.9	117.6	119.0	497.0	24.0	378.0
50907 [HARRNG6 230]	50957 [EASTPL6 230]	1	SINGLE 137	1	76.1	117.6	118.3	497.0	23.8	378.7
51195 [OASIS6 230]	51203 [ROOSEVL6 230]	1	SINGLE 304	0	41.9	113.6	116.0	497.0	23.3	381.0

03AP-20412-001 **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
52073 [CHAVES6 230]	52185 [EDDYCO6 230]	1	SINGLE 316	0	43.8	100.1	104.5	497.0	21.0	392.5
50887 [POTTRC6 230]	50993 [BUSHLND6 230]	1	SINGLE 156	0	58.7	88.9	89.6	497.0	18.0	407.4
52185 [EDDYCO6 230]	52186 [EDDYCO7 345]	1	SINGLE 206	0	104.0	149.0		560.0	26.6	411.0
52205 [LEACO6 230]	52209 [CUNNINH6 230]	1	SINGLE 320	0	51.1	78.7	78.5	497.0	15.8	418.5
50887 [POTTRC6 230]	50907 [HARRNG6 230]	1	SINGLE 88	0	29.4	73.3	73.9	497.0	14.9	423.1
50887 [POTTRC6 230]	50907 [HARRNG6 230]	2	SINGLE 88	0	25.2	63.0	63.5	497.0	12.8	433.5
50993 [BUSHLND6 230]	51111 [DFSMTH6 230]	1	SINGLE 156	0	24.2	60.4	61.9	497.0	12.5	435.1
50887 [POTTRC6 230]	50888 [POTTRC7 345]	1	SINGLE 7	0	75.5	86.7		560.0	15.5	473.3

03AP-20412-001 **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Wind Farm\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Wind Farm\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_CON.DAT

<-CONTINGENCY-> <-----CONTINGENCY DESCRIPTION----->

SINGLE 6	OPEN LINE FROM BUS 51203 [ROOSEVL6230.00] TO BUS 59995 [PNM-DC6 230.00] CKT 1
SINGLE 7	OPEN LINE FROM BUS 51534 [TUCO7 345.00] TO BUS 54119 [O.K.U.-7345.00] CKT 1
SINGLE 79	OPEN LINE FROM BUS 50750 [HUTCHS3 115.00] TO BUS 50878 [CARSNT3 115.00] CKT 1
SINGLE 85	OPEN LINE FROM BUS 50827 [GRAPEVN6230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 88	OPEN LINE FROM BUS 50858 [FINNEY7 345.00] TO BUS 50888 [POTTRC7 345.00] CKT 1
SINGLE 91	OPEN LINE FROM BUS 50880 [HIGHLT3 115.00] TO BUS 50914 [NICHOL3 115.00] CKT 1
SINGLE 99	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 100	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 2
SINGLE 101	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50957 [EASTPL6 230.00] CKT 1
SINGLE 102	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 51021 [RANDALL6230.00] CKT 1
SINGLE 103	OPEN LINE FROM BUS 50908 [CHERRY3 115.00] TO BUS 50914 [NICHOL3 115.00] CKT 1
SINGLE 106	OPEN LINE FROM BUS 50914 [NICHOL3 115.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 107	OPEN LINE FROM BUS 50914 [NICHOL3 115.00] TO BUS 50915 [NICHOL6 230.00] CKT 2
SINGLE 116	OPEN LINE FROM BUS 50956 [EASTPL3 115.00] TO BUS 50957 [EASTPL6 230.00] CKT 1
SINGLE 125	OPEN LINE FROM BUS 50992 [BUSHLND3115.00] TO BUS 51002 [COULTER3115.00] CKT 1
SINGLE 128	OPEN LINE FROM BUS 51008 [GEORGIA3115.00] TO BUS 51014 [OSAGE--3115.00] CKT 1
SINGLE 133	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51020 [RANDALL3115.00] CKT 1
SINGLE 134	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51036 [ARRWHD3 115.00] CKT 1
SINGLE 135	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51080 [CANYNE3 115.00] CKT 1
SINGLE 136	OPEN LINE FROM BUS 51018 [MANHTP3 115.00] TO BUS 51020 [RANDALL3115.00] CKT 1
SINGLE 137	OPEN LINE FROM BUS 51020 [RANDALL3115.00] TO BUS 51021 [RANDALL6230.00] CKT 1
SINGLE 149	OPEN LINE FROM BUS 51094 [NEHFD3 115.00] TO BUS 51110 [DFSMTH3 115.00] CKT 1

03AP-20412-001 **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-OFF, NO CLOVIS, BLKWTR-150X 5/24/02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

<-CONTINGENCY-> <-----CONTINGENCY DESCRIPTION----->

SINGLE 151	OPEN LINE FROM BUS 51106 [HEREFD3 115.00] TO BUS 51110 [DFSMTH3 115.00] CKT 1
SINGLE 153	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51111 [DFSMTH6 230.00] CKT 1
SINGLE 154	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51111 [DFSMTH6 230.00] CKT 2
SINGLE 155	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51146 [DS-213 115.00] CKT 1
SINGLE 156	OPEN LINE FROM BUS 51111 [DFSMTH6 230.00] TO BUS 51419 [PLANTX6 230.00] CKT 1
SINGLE 168	OPEN LINE FROM BUS 51166 [CANNOA3 115.00] TO BUS 51194 [OASIS3 115.00] CKT 1
SINGLE 171	OPEN LINE FROM BUS 51176 [CURRY3 115.00] TO BUS 51180 [FE-CLVS3115.00] CKT 1
SINGLE 172	OPEN LINE FROM BUS 51176 [CURRY3 115.00] TO BUS 51202 [ROOSEVL3115.00] CKT 2
SINGLE 173	OPEN LINE FROM BUS 51194 [OASIS3 115.00] TO BUS 51195 [OASIS6 230.00] CKT 1
SINGLE 177	OPEN LINE FROM BUS 51202 [ROOSEVL3115.00] TO BUS 51203 [ROOSEVL6230.00] CKT 1
SINGLE 182	OPEN LINE FROM BUS 51250 [BC-EART3115.00] TO BUS 51418 [PLANTX3 115.00] CKT 1
SINGLE 206	OPEN LINE FROM BUS 51439 [TOLKTP6 230.00] TO BUS 51440 [TOLK7 345.00] CKT 1
SINGLE 288	OPEN LINE FROM BUS 51960 [DNVRN3 115.00] TO BUS 51966 [MUSTGN3 115.00] CKT 1
SINGLE 299	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52073 [CHAVES6 230.00] CKT 1
SINGLE 300	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52073 [CHAVES6 230.00] CKT 2
SINGLE 301	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52078 [URTON3 115.00] CKT 1
SINGLE 304	OPEN LINE FROM BUS 52073 [CHAVES6 230.00] TO BUS 99990 [CATAMONT230.00] CKT 1
SINGLE 316	OPEN LINE FROM BUS 52184 [EDDYCO3 115.00] TO BUS 52185 [EDDYCO6 230.00] CKT 1
SINGLE 317	OPEN LINE FROM BUS 52184 [EDDYCO3 115.00] TO BUS 52188 [CV-DAYT3115.00] CKT 1
SINGLE 320	OPEN LINE FROM BUS 52185 [EDDYCO6 230.00] TO BUS 52209 [CUNNINH6230.00] CKT 1
SINGLE 326	OPEN LINE FROM BUS 52208 [CUNNINH3115.00] TO BUS 52209 [CUNNINH6230.00] CKT 1
SINGLE 332	OPEN LINE FROM BUS 52209 [CUNNINH6230.00] TO BUS 52253 [POTJCT6 230.00] CKT 1
SINGLE 337	OPEN LINE FROM BUS 52252 [POTJCT3 115.00] TO BUS 52310 [CARLSBD3115.00] CKT 1
SINGLE 342	OPEN LINE FROM BUS 52282 [CV-INDH3115.00] TO BUS 52314 [PECOS3 115.00] CKT 1
SINGLE 349	OPEN LINE FROM BUS 52329 [OCHOA3 115.00] TO BUS 52420 [WHITTEN3115.00] CKT 1

2003 Spring Peak Case

Comparing 2:03G-20412-001.LST to 1:03G-20412-000.LST

<----- FROM ----->		<----- TO ----->		RATING	No. 2 03G_001	No. 1 03_000	No. 2 03G_001	No. 1 03_000	No. 2 03G_001	No. 1 03_000	2 to 1 Percent
				CONT.MVA	CONT.MVA	% OL	% OL	AVAIL	AVAIL	CHANGE	
52293	[7RIVER6 230]	52294	[7RIVER3 115]	150.0	127.9	129.0	85.3	86.0	22.1	21.0	-1%
52184	[EDDYCO3 115]	52185	[EDDYCO6 230]	168.0	145.0	146.9	86.3	87.5	23.0	21.1	-1%
50910	[ASARCO3 115]	50914	[NICHOL3 115]	60.0	23.5	23.5	39.2	39.2	36.5	36.5	0%
52252	[POTJCT3 115]	52310	[CARLSBD3 115]	90.0	52.9	57.5	58.8	63.9	37.1	32.5	-5%
51014	[OSAGE--3 115]	51018	[MANHTP3 115]	161.0	116.8	118.8	72.5	73.8	44.2	42.2	-1%
51008	[GEORGIA3 115]	51014	[OSAGE--3 115]	161.0	114.7	114.5	71.3	71.1	46.3	46.5	0%
51018	[MANHTP3 115]	51020	[RANDALL3 115]	161.0	109.9	113.4	68.2	70.4	51.1	47.6	-2%
51014	[OSAGE--3 115]	51036	[ARRWHD3 115]	161.0	109.9	109.2	68.2	67.8	51.1	51.8	0%
51014	[OSAGE--3 115]	51020	[RANDALL3 115]	161.0	109.3	109.5	67.9	68.0	51.7	51.5	0%
50914	[NICHOL3 115]	50915	[NICHOL6 230]	150.0	98.3	98.5	65.5	65.7	51.7	51.5	0%
52252	[POTJCT3 115]	52253	[POTJCT6 230]	172.5	119.9	124.0	69.5	71.9	52.6	48.5	-2%
50914	[NICHOL3 115]	50915	[NICHOL6 230]	150.0	96.5	96.7	64.3	64.5	53.5	53.3	0%
51036	[ARRWHD3 115]	51038	[OWENSC3 115]	161.0	103.5	102.8	64.3	63.9	57.5	58.2	0%
50956	[EASTPL3 115]	50957	[EASTPL6 230]	225.0	162.7	163.2	72.3	72.5	62.3	61.8	0%
52208	[CUNNINH3 115]	52209	[CUNNINH6 230]	168.0	103.3	101.2	61.5	60.3	64.7	66.8	1%
51014	[OSAGE--3 115]	51080	[CANYNE3 115]	99.0	31.8	35.6	32.1	35.9	67.2	63.4	-4%
52072	[CHAVES3 115]	52078	[URTON3 115]	161.0	92.7	86.8	57.6	53.9	68.3	74.2	4%
51106	[HEREFD3 115]	51122	[FRIONA3 115]	99.0	28.6	40.7	28.9	41.1	70.4	58.3	-12%
51102	[DAWN 115]	51106	[HEREFD3 115]	99.0	28.2	28.3	28.5	28.6	70.8	70.7	0%
52072	[CHAVES3 115]	52088	[SAMSON3 115]	161.0	88.9	83.2	55.2	51.7	72.1	77.8	4%
51078	[CANYNW3 115]	51102	[DAWN 115]	99.0	26.3	26.4	26.5	26.6	72.7	72.6	0%
51176	[CURRY3 115]	51202	[ROOSEVL3 115]	161.0	87.1	90.5	54.1	56.2	73.9	70.5	-2%
51126	[DS-#203 115]	51176	[CURRY3 115]	99.0	24.4	24.3	24.7	24.6	74.6	74.7	0%
51078	[CANYNW3 115]	51080	[CANYNE3 115]	99.0	23.4	27.2	23.7	27.5	75.6	71.8	-4%
51120	[CARGIL3 115]	51122	[FRIONA3 115]	99.0	19.3	32.5	19.5	32.8	79.7	66.5	-13%
51026	[FARMERS3 115]	51038	[OWENSC3 115]	161.0	81.3	80.2	50.5	49.8	79.7	80.8	1%
50880	[HIGHLT3 115]	50924	[HIGHLND3 115]	99.0	18.3	18.3	18.5	18.5	80.7	80.7	0%
51110	[DFSMTH3 115]	51111	[DFSMTH6 230]	172.5	91.7	96.4	53.2	55.9	80.8	76.1	-3%
51110	[DFSMTH3 115]	51111	[DFSMTH6 230]	172.5	91.7	96.4	53.2	55.9	80.8	76.1	-3%
50956	[EASTPL3 115]	50964	[PIERCT3 115]	161.0	79.6	80.1	49.4	49.8	81.4	80.9	0%
52088	[SAMSON3 115]	52094	[ROSWIN3 115]	161.0	79.5	73.9	49.4	45.9	81.5	87.1	4%
51124	[PARMRC3 115]	51126	[DS-#203 115]	99.0	16.5	26.3	16.7	26.6	82.5	72.7	-10%
52094	[ROSWIN3 115]	52098	[BRASHER3 115]	99.0	15.7	15.7	15.9	15.9	83.3	83.3	0%
51106	[HEREFD3 115]	51110	[DFSMTH3 115]	161.0	77.3	84.7	48.0	52.6	83.7	76.3	-5%
51120	[CARGIL3 115]	51124	[PARMRC3 115]	99.0	14.6	28.2	14.7	28.5	84.4	70.8	-14%
51020	[RANDALL3 115]	51021	[RANDALL6 230]	258.8	173.1	173.6	66.9	67.1	85.7	85.2	0%
50956	[EASTPL3 115]	50978	[MANHATT3 115]	161.0	75.1	75.7	46.7	47.0	85.9	85.3	0%

1:
03G-20412-000. (PINNELL-SITE) SYSTEM IMPACT STUDY
WIND FARM GENERATION-OFF 4/25/02

2:
03G-20412-001. (PINNELL-SITE) SYSTEM IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 5/8/02

<----- FROM ----->		<----- TO ----->		RATING	No. 2 03G_001	No. 1 03_000	No. 2 03G_001	No. 1 03_000	No. 2 03G_001	No. 1 03_000	2 to 1 Percent CHANGE
					CONT.MVA	CONT.MVA	% OL	% OL	AVAIL	AVAIL	
52078	[URTON3 115]	52084	[ROSWLC3 115]	161.0	74.1	68.1	46.0	42.3	86.9	92.9	4%
51156	[NORRST3 115]	51168	[NORRIS3 115]	99.0	10.6	10.6	10.7	10.7	88.4	88.4	0%
51110	[DFSMTH3 115]	51146	[DS-213 115]	161.0	71.8	71.7	44.6	44.5	89.2	89.3	0%
52282	[CV-INDH3 115]	52294	[7RIVER3 115]	161.0	70.9	69.9	44.0	43.4	90.1	91.1	1%
50914	[NICHOL3 115]	50926	[YARNELL3 115]	180.0	88.7	88.7	49.3	49.3	91.3	91.3	0%
52204	[LEACO3 115]	52205	[LEACO6 230]	168.0	76.2	76.0	45.4	45.2	91.8	92.0	0%
50926	[YARNELL3 115]	50928	[CONWAY3 115]	180.0	87.9	87.8	48.8	48.8	92.1	92.2	0%
50908	[CHERRY3 115]	50914	[NICHOL3 115]	161.0	66.4	66.5	41.2	41.3	94.6	94.5	0%
51026	[FARMERS3 115]	51032	[CRO-HIN3 115]	161.0	65.9	64.8	40.9	40.2	95.1	96.2	1%
50964	[PIERCT3 115]	51014	[OSAGE--3 115]	161.0	65.8	66.3	40.8	41.2	95.2	94.7	0%
51146	[DS-213 115]	51150	[CASTRC3 115]	161.0	65.7	65.5	40.8	40.7	95.3	95.5	0%
51020	[RANDALL3 115]	51082	[PALODU 3 115]	99.0	2.0	2.0	2.0	2.0	97.0	97.0	0%
52208	[CUNNINH3 115]	52240	[PCA3 115]	161.0	62.9	65.2	39.1	40.5	98.1	95.8	-1%
50978	[MANHATT3 115]	51018	[MANHTP3 115]	161.0	62.4	62.9	38.8	39.1	98.6	98.1	0%
51194	[OASIS3 115]	51208	[PORTALE3 115]	161.0	62.2	60.1	38.6	37.3	98.8	100.9	1%
50928	[CONWAY3 115]	50932	[KIRBY3 115]	180.0	80.0	79.9	44.4	44.4	100.0	100.1	0%
51008	[GEORGIA3 115]	51032	[CRO-HIN3 115]	161.0	60.6	59.5	37.6	36.9	100.4	101.5	1%
50992	[BUSHLND3 115]	50993	[BUSHLND6 230]	172.5	71.9	72.2	41.7	41.9	100.6	100.3	0%
50908	[CHERRY3 115]	50938	[NORTHW3 115]	161.0	59.6	59.7	37.0	37.1	101.4	101.3	0%
51078	[CANYNW3 115]	51088	[ROCKWEL3 115]	105.0	3.3	3.3	3.1	3.1	101.7	101.7	0%
52294	[7RIVER3 115]	52296	[CV-LAKW3 115]	161.0	58.2	60.7	36.2	37.7	102.8	100.3	-2%
51176	[CURRY3 115]	51180	[FE-CLVS3 115]	146.0	42.8	42.7	29.3	29.2	103.2	103.3	0%
50990	[PUCKETT3 115]	51002	[COULTER3 115]	161.0	57.7	57.6	35.8	35.8	103.3	103.4	0%
52166	[NAVAJ43 115]	52184	[EDDYCO3 115]	161.0	57.2	58.0	35.5	36.1	103.8	103.0	-1%
50988	[SUNSET3 115]	50990	[PUCKETT3 115]	146.0	41.9	41.9	28.7	28.7	104.1	104.1	0%
51156	[NORRST3 115]	51194	[OASIS3 115]	161.0	56.9	51.8	35.3	32.2	104.1	109.2	3%
51094	[NEHFD3 115]	51110	[DFSMTH3 115]	161.0	55.0	56.6	34.1	35.2	106.0	104.4	-1%
52296	[CV-LAKW3 115]	52298	[CV-IRIS3 115]	161.0	54.2	56.7	33.7	35.2	106.8	104.3	-2%
52084	[ROSWLC3 115]	52094	[ROSWIN3 115]	161.0	54.0	54.0	33.5	33.5	107.0	107.0	0%
51202	[ROOSEVL3 115]	51208	[PORTALE3 115]	161.0	52.5	59.2	32.6	36.8	108.5	101.8	-4%
52180	[ATOKA3 115]	52298	[CV-IRIS3 115]	161.0	50.7	53.1	31.5	33.0	110.3	107.9	-2%
51150	[CASTRC3 115]	51250	[BC-EART3 115]	161.0	50.4	50.5	31.3	31.4	110.6	110.5	0%
51038	[OWENSC3 115]	51044	[ESTCDT3 115]	161.0	49.6	49.5	30.8	30.7	111.4	111.5	0%
52240	[PCA3 115]	52310	[CARLSBD3 115]	161.0	49.3	53.1	30.6	33.0	111.7	107.9	-2%

1:
 03G-20412-000. (PINNELL-SITE) SYSTEM IMPACT STUDY
 WIND FARM GENERATION-OFF 4/25/02

2:
 03G-20412-001. (PINNELL-SITE) SYSTEM IMPACT STUDY
 WIND FARM-184.8, NO CLOVIS, BLKWTR-150 5/8/02

03G-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 5/8/02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Wind Farm\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Wind Farm\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_CON.DAT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 50858 [FINNEY7 345.00] TO BUS 56449 [HOLCOMB7345.00] CKT 1 ----- CONTINGENCY SINGLE 4
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 50858 FINNEY7 345 1.0598 1.0222

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 50887 [POTTRC6 230.00] TO BUS 50888 [POTTRC7 345.00] CKT 1 ----- CONTINGENCY SINGLE 94
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 50888 POTTRC7 345 1.0508 1.0015

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 51021 [RANDALL6230.00] CKT 1 ----- CONTINGENCY SINGLE 102
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 51021 RANDALL6 230 0.8877 0.9812

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 51094 [NEHFD3 115.00] TO BUS 51110 [DFSMTH3 115.00] CKT 1 ----- CONTINGENCY SINGLE 149
 *** NONE ***

03G-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 5/8/02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 51094 NEHFD3 115 0.8938 1.0293

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 51195 [OASIS6 230.00] TO BUS 99990 [CATAMONT230.00] CKT 1 ----- CONTINGENCY SINGLE 176
 *** NOT CONVERGED ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 51439 [TOLKTP6 230.00] TO BUS 51440 [TOLK7 345.00] CKT 1 ----- CONTINGENCY SINGLE 206
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52186 EDDYCO7 345 1.0543 1.0120

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52073 [CHAVES6 230.00] TO BUS 52185 [EDDYCO6 230.00] CKT 1 ----- CONTINGENCY SINGLE 304
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52073 CHAVES6 230 0.8984 0.9731

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52154 [ARTESIA3115.00] TO BUS 52162 [NAVAJ33 115.00] CKT 1 ----- CONTINGENCY SINGLE 312
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52154 ARTESIA3 115 0.8871 1.0154

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52162 [NAVAJ33 115.00] TO BUS 52166 [NAVAJ43 115.00] CKT 1 ----- CONTINGENCY SINGLE 313
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52154 ARTESIA3 115 0.8667 1.0154 52162 NAVAJ33 115 0.8663 1.0161

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52166 [NAVAJ43 115.00] TO BUS 52184 [EDDYCO3 115.00] CKT 1 ----- CONTINGENCY SINGLE 314
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52154 ARTESIA3 115 0.8613 1.0154 52162 NAVAJ33 115 0.8609 1.0161
 52166 NAVAJ43 115 0.8609 1.0169

03G-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 5/8/02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52185 [EDDYCO6 230.00] TO BUS 52186 [EDDYCO7 345.00] CKT 1 ----- CONTINGENCY SINGLE 320
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52186 EDDYCO7 345 1.0932 1.0120

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52205 [LEACO6 230.00] TO BUS 52209 [CUNNINH6230.00] CKT 1 ----- CONTINGENCY SINGLE 326
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52231 MIDLND-6 230 1.0549 1.0430

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52205 [LEACO6 230.00] TO BUS 52231 [MIDLND-6230.00] CKT 1 ----- CONTINGENCY SINGLE 327
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52231 MIDLND-6 230 1.1611 1.0430

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52208 [CUNNINH3115.00] TO BUS 52358 [SNANT3 115.00] CKT 1 ----- CONTINGENCY SINGLE 330
 *** NOT CONVERGED ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52209 [CUNNINH6230.00] TO BUS 52253 [POTJCT6 230.00] CKT 1 ----- CONTINGENCY SINGLE 334
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 52253 POTJCT6 230 0.8811 0.9726

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52266 [WIPP3 115.00] TO BUS 52274 [IMC#13 115.00] CKT 1 ----- CONTINGENCY SINGLE 341
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52266 WIPP3 115 1.0528 1.0254

03G-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Wind Farm\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Wind Farm\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_CON.DAT

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
52293 [7RIVER6 230]	52294 [7RIVER3 115]	1	SINGLE 317	0	80.9	127.9		150.0	85.3	22.1
52184 [EDDYCO3 115]	52185 [EDDYCO6 230]	1	SINGLE 345	1	96.8	145.0		168.0	86.3	23.0
50910 [ASARCO3 115]	50914 [NICHOL3 115]	1	SINGLE 121	379	24.3	24.3	23.5	60.0	39.2	36.5
52252 [POTJCT3 115]	52310 [CARLSBD3 115]	1	SINGLE 321	0	33.1	54.2	52.9	90.0	58.8	37.1
51014 [OSAGE--3 115]	51018 [MANHTP3 115]	1	SINGLE 133	0	68.5	121.1	116.8	161.0	72.5	44.2
51008 [GEORGIA3 115]	51014 [OSAGE--3 115]	1	SINGLE 134	0	77.6	117.6	114.7	161.0	71.3	46.3
51018 [MANHTP3 115]	51020 [RANDALL3 115]	1	SINGLE 133	0	63.2	114.2	109.9	161.0	68.2	51.1
51014 [OSAGE--3 115]	51036 [ARRWHD3 115]	1	SINGLE 128	0	53.4	113.1	109.9	161.0	68.2	51.1
51014 [OSAGE--3 115]	51020 [RANDALL3 115]	1	SINGLE 136	0	63.9	113.4	109.3	161.0	67.9	51.7
50914 [NICHOL3 115]	50915 [NICHOL6 230]	1	SINGLE 107	0	75.6	98.3		150.0	65.5	51.7
52252 [POTJCT3 115]	52253 [POTJCT6 230]	1	SINGLE 321	0	96.1	119.9		172.5	69.5	52.6
50914 [NICHOL3 115]	50915 [NICHOL6 230]	2	SINGLE 106	0	73.7	96.5		150.0	64.3	53.5
51036 [ARRWHD3 115]	51038 [OWENSC3 115]	1	SINGLE 128	0	46.6	105.1	103.5	161.0	64.3	57.5
50956 [EASTPL3 115]	50957 [EASTPL6 230]	1	SINGLE 102	1	104.1	162.7		225.0	72.3	62.3
52208 [CUNNINH3 115]	52209 [CUNNINH6 230]	1	SINGLE 337	1	75.5	103.3		168.0	61.5	64.7
51014 [OSAGE--3 115]	51080 [CANYNE3 115]	1	SINGLE 151	0	16.2	33.1	31.8	99.0	32.1	67.2
52072 [CHAVES3 115]	52078 [URTON3 115]	1	SINGLE 303	0	63.6	96.1	92.7	161.0	57.6	68.3
51106 [HEREFD3 115]	51122 [FRIONA3 115]	1	SINGLE 177	0	14.7	28.8	28.6	99.0	28.9	70.4
51102 [DAWN 115]	51106 [HEREFD3 115]	1	SINGLE 135	0	12.7	28.6	28.2	99.0	28.5	70.8
52072 [CHAVES3 115]	52088 [SAMSON3 115]	1	SINGLE 302	0	37.6	91.4	88.9	161.0	55.2	72.1
51078 [CANYNW3 115]	51102 [DAWN 115]	1	SINGLE 135	0	10.6	26.3	26.3	99.0	26.5	72.7
51176 [CURRY3 115]	51202 [ROOSEVL3 115]	2	SINGLE 173	0	57.3	88.6	87.1	161.0	54.1	73.9
51126 [DS-#203 115]	51176 [CURRY3 115]	1	SINGLE 152	0	11.5	24.9	24.4	99.0	24.7	74.6
51078 [CANYNW3 115]	51080 [CANYNE3 115]	1	SINGLE 151	0	9.6	24.1	23.4	99.0	23.7	75.6
51120 [CARGIL3 115]	51122 [FRIONA3 115]	1	SINGLE 177	0	6.1	19.4	19.3	99.0	19.5	79.7
51026 [FARMERS3 115]	51038 [OWENSC3 115]	1	SINGLE 128	0	9.6	82.1	81.3	161.0	50.5	79.7
50880 [HIGHLT3 115]	50924 [HIGHLND3 115]	1	SINGLE 91	0	17.9	17.9	18.3	99.0	18.5	80.7
51110 [DFSMTH3 115]	51111 [DFSMTH6 230]	1	SINGLE 154	0	51.2	91.7		172.5	53.2	80.8
51110 [DFSMTH3 115]	51111 [DFSMTH6 230]	2	SINGLE 153	0	51.2	91.7		172.5	53.2	80.8
50956 [EASTPL3 115]	50964 [PIERCT3 115]	1	SINGLE 102	1	43.6	82.0	79.6	161.0	49.4	81.4
52088 [SAMSON3 115]	52094 [ROSWIN3 115]	1	SINGLE 302	0	27.9	81.2	79.5	161.0	49.4	81.5
51124 [PARMRC3 115]	51126 [DS-#203 115]	1	SINGLE 152	0	3.9	16.7	16.5	99.0	16.7	82.5
52094 [ROSWIN3 115]	52098 [BRASHER3 115]	1	SINGLE 304	0	15.6	15.6	15.7	99.0	15.9	83.3
51106 [HEREFD3 115]	51110 [DFSMTH3 115]	1	SINGLE 149	0	54.3	79.6	77.3	161.0	48.0	83.7
51120 [CARGIL3 115]	51124 [PARMRC3 115]	1	SINGLE 152	0	3.9	14.7	14.6	99.0	14.7	84.4
51020 [RANDALL3 115]	51021 [RANDALL6 230]	1	SINGLE 101	1	147.9	173.1		258.8	66.9	85.7
50956 [EASTPL3 115]	50978 [MANHATT3 115]	1	SINGLE 102	1	37.9	77.2	75.1	161.0	46.7	85.9
52078 [URTON3 115]	52084 [ROSWLC3 115]	1	SINGLE 303	0	44.2	76.5	74.1	161.0	46.0	86.9

03G-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
51156 [NORRST3 115]	51168 [NORRIS3 115]	1	SINGLE 177	0	10.5	10.5	10.6	99.0	10.7	88.4
51110 [DFSMTH3 115]	51146 [DS-213 115]	1	SINGLE 182	0	24.5	70.0	71.8	161.0	44.6	89.2
52282 [CV-INDH3 115]	52294 [7RIVER3 115]	1	SINGLE 337	1	46.5	71.4	70.9	161.0	44.0	90.1
50914 [NICHOL3 115]	50926 [YARNELL3 115]	1	SINGLE 85	0	44.1	90.5	88.7	180.0	49.3	91.3
52204 [LEACO3 115]	52205 [LEACO6 230]	1	SINGLE 328	0	46.3	76.2		168.0	45.4	91.8
50926 [YARNELL3 115]	50928 [CONWAY3 115]	1	SINGLE 85	0	43.0	88.2	87.9	180.0	48.8	92.1
50908 [CHERRY3 115]	50914 [NICHOL3 115]	1	SINGLE 124	1	50.0	68.1	66.4	161.0	41.2	94.6
51026 [FARMERS3 115]	51032 [CRO-HIN3 115]	1	SINGLE 128	0	6.4	66.6	65.9	161.0	40.9	95.1
50964 [PIERCT3 115]	51014 [OSAGE--3 115]	1	SINGLE 102	0	32.3	67.1	65.8	161.0	40.8	95.2
51146 [DS-213 115]	51150 [CASTRC3 115]	1	SINGLE 182	0	19.4	63.8	65.7	161.0	40.8	95.3
51020 [RANDALL3 115]	51082 [PALODU 3 115]	1	SINGLE 102	379	2.1	2.1	2.0	99.0	2.0	97.0
52208 [CUNNINH3 115]	52240 [PCA3 115]	1	SINGLE 334	1	34.0	61.4	62.9	161.0	39.1	98.1
50978 [MANHATT3 115]	51018 [MANHTP3 115]	1	SINGLE 102	1	29.2	63.7	62.4	161.0	38.8	98.6
51194 [OASIS3 115]	51208 [PORTALE3 115]	1	SINGLE 177	0	29.1	62.5	62.2	161.0	38.6	98.8
50928 [CONWAY3 115]	50932 [KIRBY3 115]	1	SINGLE 85	0	35.0	80.2	80.0	180.0	44.4	100.0
51008 [GEORGIA3 115]	51032 [CRO-HIN3 115]	1	SINGLE 128	0	11.5	60.9	60.6	161.0	37.6	100.4
50992 [BUSHLND3 115]	50993 [BUSHLND6 230]	1	SINGLE 102	1	57.9	71.9		172.5	41.7	100.6
50908 [CHERRY3 115]	50938 [NORTHW3 115]	1	SINGLE 124	0	42.6	60.4	59.6	161.0	37.0	101.4
51078 [CANYNW3 115]	51088 [ROCKWEL3 115]	1	SINGLE 135	1	3.3	3.3	3.3	105.0	3.1	101.7
52294 [7RIVER3 115]	52296 [CV-LAKW3 115]	1	SINGLE 317	0	21.4	59.3	58.2	161.0	36.2	102.8
51176 [CURRY3 115]	51180 [FE-CLVS3 115]	1	SINGLE 168	0	16.3	44.0	42.8	146.0	29.3	103.2
50990 [PUCKETT3 115]	51002 [COULTER3 115]	1	SINGLE 103	0	21.8	58.4	57.7	161.0	35.8	103.3
52166 [NAVAJ43 115]	52184 [EDDYCO3 115]	1	SINGLE 345	1	54.2	57.4	57.2	161.0	35.5	103.8
50988 [SUNSET3 115]	50990 [PUCKETT3 115]	1	SINGLE 103	0	6.6	42.4	41.9	146.0	28.7	104.1
51156 [NORRST3 115]	51194 [OASIS3 115]	1	SINGLE 172	0	23.7	57.2	56.9	161.0	35.3	104.1
51094 [NEHFD3 115]	51110 [DFSMTH3 115]	1	SINGLE 151	0	39.0	56.5	55.0	161.0	34.1	106.0
52296 [CV-LAKW3 115]	52298 [CV-IRIS3 115]	1	SINGLE 317	0	17.4	55.0	54.2	161.0	33.7	106.8
52084 [ROSWLC3 115]	52094 [ROSWIN3 115]	1	SINGLE 302	0	10.9	54.8	54.0	161.0	33.5	107.0
51202 [ROOSEVL3 115]	51208 [PORTALE3 115]	1	SINGLE 173	0	16.1	53.2	52.5	161.0	32.6	108.5
52180 [ATOKA3 115]	52298 [CV-IRIS3 115]	1	SINGLE 317	0	13.9	51.0	50.7	161.0	31.5	110.3
51150 [CASTRC3 115]	51250 [BC-EART3 115]	1	SINGLE 155	0	30.9	48.8	50.4	161.0	31.3	110.6
51038 [OWENSC3 115]	51044 [ESTCDT3 115]	1	SINGLE 124	0	19.0	50.4	49.6	161.0	30.8	111.4
52240 [PCA3 115]	52310 [CARLSBD3 115]	1	SINGLE 339	0	29.4	50.5	49.3	161.0	30.6	111.7
52184 [EDDYCO3 115]	52188 [CV-DAYT3 115]	1	SINGLE 322	1	10.8	47.6	46.7	161.0	29.0	114.3
51156 [NORRST3 115]	51176 [CURRY3 115]	1	SINGLE 172	0	13.2	46.7	46.4	161.0	28.8	114.6
52180 [ATOKA3 115]	52188 [CV-DAYT3 115]	1	SINGLE 322	1	8.0	44.2	43.5	161.0	27.0	117.5
52282 [CV-INDH3 115]	52314 [PECOS3 115]	1	SINGLE 343	0	13.1	41.9	43.1	161.0	26.7	117.9
51170 [FE-CLVS3 115]	51172 [FE-SWS3 115]	1	SINGLE 168	0	1.9	28.0	27.7	146.0	19.0	118.3
51166 [CANNOA3 115]	51194 [OASIS3 115]	1	SINGLE 171	0	27.1	43.8	42.6	161.0	26.5	118.4
51170 [FE-CLVS3 115]	51180 [FE-CLVS3 115]	1	SINGLE 168	0	1.1	28.0	27.5	146.0	18.8	118.5
52240 [PCA3 115]	52252 [POTJCT3 115]	1	SINGLE 337	1	10.4	34.7	35.8	161.0	22.2	125.2
50938 [NORTHW3 115]	50988 [SUNSET3 115]	1	SINGLE 103	0	4.2	34.5	34.2	161.0	21.2	126.8

03G-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
51002 [COULTER3 115]	51044 [ESTCDT3 115]	1	SINGLE 124	0	3.1	34.7	34.2	161.0	21.2	126.8
51162 [WCLOVI3 115]	51166 [CANNOA3 115]	1	SINGLE 171	0	16.8	33.2	32.5	161.0	20.2	128.5
52308 [FIESTA3 115]	52310 [CARLSBD3 115]	1	SINGLE 337	1	16.6	16.6	16.9	146.0	11.6	129.1
50880 [HIGHTL3 115]	50914 [NICHOL3 115]	1	SINGLE 80	0	22.5	32.8	31.9	161.0	19.8	129.1
50938 [NORTHW3 115]	50943 [BUSH3 115]	1	SINGLE 103	0	15.7	15.7	15.6	146.0	10.7	130.4
51076 [FE-TUCU3 115]	51176 [CURRY3 115]	1	SINGLE 177	0	14.5	14.5	14.9	146.0	10.2	131.1
52104 [TWEEDY3 115]	52184 [EDDYCO3 115]	1	SINGLE 305	0	13.6	30.3	29.5	161.0	18.3	131.5
51012 [SOUTHE3 115]	51020 [RANDALL3 115]	1	SINGLE 137	1	14.3	14.3	14.0	146.0	9.6	132.0
52268 [SNDDUN3 115]	52329 [OCHOA3 115]	1	SINGLE 337	1	11.3	27.1	27.5	161.0	17.1	133.5
52252 [POTJCT3 115]	52274 [IMC#13 115]	1	SINGLE 352	0	15.2	27.4	26.9	161.0	16.7	134.1
50878 [CARSNT3 115]	50882 [PANTXN3 115]	1	SINGLE 91	0	7.4	25.8	26.2	161.0	16.2	134.8
51162 [WCLOVI3 115]	51172 [FE-SWS3 115]	1	SINGLE 171	0	9.5	25.8	25.3	161.0	15.7	135.7
51202 [ROOSEVL3 115]	51203 [ROOSEVL6 230]	1	SINGLE 173	0	77.8	152.8		289.8	52.7	137.0
51070 [TUCUMCA3 115]	51076 [FE-TUCU3 115]	1	SINGLE 177	0	8.5	8.5	8.7	146.0	6.0	137.3
52266 [WIPP3 115]	52274 [IMC#13 115]	1	SINGLE 337	1	8.0	22.9	23.6	161.0	14.6	137.4
52266 [WIPP3 115]	52268 [SNDDUN3 115]	1	SINGLE 334	1	10.0	22.8	23.1	161.0	14.4	137.9
50882 [PANTXN3 115]	50884 [PANTXS3 115]	1	SINGLE 91	0	6.6	22.6	23.0	161.0	14.3	138.0
52072 [CHAVES3 115]	52073 [CHAVES6 230]	2	SINGLE 300	0	66.1	120.3		258.8	46.5	138.5
52072 [CHAVES3 115]	52073 [CHAVES6 230]	1	SINGLE 301	0	66.1	120.3		258.8	46.5	138.5
52162 [NAVAJ33 115]	52166 [NAVAJ43 115]	1	SINGLE 345	1	53.2	56.4	56.2	197.0	28.5	140.8
51194 [OASIS3 115]	51195 [OASIS6 230]	1	SINGLE 177	0	80.6	147.8		289.8	51.0	142.0
52310 [CARLSBD3 115]	52314 [PECOS3 115]	1	SINGLE 321	0	18.4	55.1	54.3	197.0	27.6	142.7
50880 [HIGHTL3 115]	50884 [PANTXS3 115]	1	SINGLE 91	0	8.4	17.9	18.2	161.0	11.3	142.8
51010 [PULLMAN3 115]	51012 [SOUTHE3 115]	1	SINGLE 137	1	3.0	3.0	3.0	146.0	2.0	143.0
51044 [ESTCDT3 115]	51046 [ESTACAD3 115]	1	SINGLE 137	4	15.9	15.9	15.7	161.0	9.8	145.3
50964 [PIERCT3 115]	50966 [PIERCE3 115]	1	SINGLE 102	1	14.4	14.4	14.0	161.0	8.7	147.0
52313 [PECOS6 230]	52314 [PECOS3 115]	1	SINGLE 239	379	0.0	0.0		150.0	0.0	150.0
52154 [ARTESIA3 115]	52162 [NAVAJ33 115]	1	SINGLE 345	1	40.2	43.4	43.3	197.0	22.0	153.7
52304 [NCANALT3 115]	52314 [PECOS3 115]	1	SINGLE 317	0	10.1	41.1	41.1	197.0	20.9	155.9
50992 [BUSHLND3 115]	51002 [COULTER3 115]	1	SINGLE 102	1	57.1	70.2	69.1	226.0	30.6	156.9
52184 [EDDYCO3 115]	52304 [NCANALT3 115]	1	SINGLE 343	0	11.8	36.2	36.6	197.0	18.6	160.4
50914 [NICHOL3 115]	50922 [WHITAKR3 115]	1	SINGLE 116	1	33.6	84.6	81.7	249.0	32.8	167.3
52094 [ROSWIN3 115]	52104 [TWEEDY3 115]	1	SINGLE 317	0	9.1	27.2	26.6	197.0	13.5	170.4
50922 [WHITAKR3 115]	50956 [EASTPL3 115]	1	SINGLE 116	1	26.5	74.2	71.7	249.0	28.8	177.3
51195 [OASIS6 230]	99990 [CATAMONT 230]	1	SINGLE 305	0	82.9	179.3	183.5	497.0	36.9	313.5
50907 [HARRNG6 230]	51021 [RANDALL6 230]	1	SINGLE 101	1	147.9	173.1	176.7	497.0	35.6	320.3
50907 [HARRNG6 230]	50957 [EASTPL6 230]	1	SINGLE 102	1	104.1	162.7	164.2	497.0	33.0	332.8
52073 [CHAVES6 230]	99990 [CATAMONT 230]	1	SINGLE 206	0	96.4	149.3	152.7	497.0	30.7	344.3
52185 [EDDYCO6 230]	52209 [CUNNINH6 230]	1	SINGLE 206	0	88.1	150.1	149.8	497.0	30.1	347.2
52209 [CUNNINH6 230]	52253 [POTJCT6 230]	1	SINGLE 321	0	96.1	119.9	123.6	497.0	24.9	373.4
50887 [POTTRC6 230]	50993 [BUSHLND6 230]	1	SINGLE 156	0	78.3	121.1	123.2	497.0	24.8	373.8
52185 [EDDYCO6 230]	52186 [EDDYCO7 345]	1	SINGLE 305	0	136.4	185.4		560.0	33.1	374.6

03G-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
50907 [HARRNG6 230]	50915 [NICHOL6 230]	1	SINGLE 100	0	135.3	259.2	258.7	635.0	40.7	376.3
50907 [HARRNG6 230]	50915 [NICHOL6 230]	2	SINGLE 99	0	127.3	258.8	258.3	635.0	40.7	376.7
52073 [CHAVES6 230]	52185 [EDDYCO6 230]	1	SINGLE 305	0	49.3	111.8	116.1	497.0	23.4	380.9
51195 [OASIS6 230]	51203 [ROOSEVL6 230]	1	SINGLE 305	0	36.9	103.5	105.8	497.0	21.3	391.2
50887 [POTTRC6 230]	50907 [HARRNG6 230]	1	SINGLE 88	0	33.3	89.7	90.7	497.0	18.3	406.3
52185 [EDDYCO6 230]	52293 [7RIVER6 230]	1	SINGLE 317	0	80.9	127.9	129.9	541.0	24.0	411.1
52205 [LEACO6 230]	52209 [CUNNINH6 230]	1	SINGLE 328	0	49.7	82.2	82.0	497.0	16.5	415.0
50887 [POTTRC6 230]	50907 [HARRNG6 230]	2	SINGLE 88	0	29.0	77.1	78.0	497.0	15.7	419.0
50993 [BUSHLND6 230]	51111 [DFSMTH6 230]	1	SINGLE 156	0	25.7	73.1	76.1	497.0	15.3	420.9
50887 [POTTRC6 230]	50888 [POTTRC7 345]	1	SINGLE 7	0	132.1	138.0		560.0	24.7	422.0

03G-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Wind Farm\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Wind Farm\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_CON.DAT

<-CONTINGENCY-> <-----CONTINGENCY DESCRIPTION----->

SINGLE 7	OPEN LINE FROM BUS 51534 [TUCO7 345.00] TO BUS 54119 [O.K.U.-7345.00] CKT 1
SINGLE 80	OPEN LINE FROM BUS 50751 [HUTCH6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 85	OPEN LINE FROM BUS 50827 [GRAPEVN6230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 88	OPEN LINE FROM BUS 50858 [FINNEY7 345.00] TO BUS 50888 [POTTRC7 345.00] CKT 1
SINGLE 91	OPEN LINE FROM BUS 50880 [HIGHT3 115.00] TO BUS 50914 [NICHOL3 115.00] CKT 1
SINGLE 99	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 100	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 2
SINGLE 101	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50957 [EASTPL6 230.00] CKT 1
SINGLE 102	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 51021 [RANDALL6230.00] CKT 1
SINGLE 103	OPEN LINE FROM BUS 50908 [CHERRY3 115.00] TO BUS 50914 [NICHOL3 115.00] CKT 1
SINGLE 106	OPEN LINE FROM BUS 50914 [NICHOL3 115.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 107	OPEN LINE FROM BUS 50914 [NICHOL3 115.00] TO BUS 50915 [NICHOL6 230.00] CKT 2
SINGLE 116	OPEN LINE FROM BUS 50956 [EASTPL3 115.00] TO BUS 50957 [EASTPL6 230.00] CKT 1
SINGLE 121	OPEN LINE FROM BUS 50978 [MANHATT3115.00] TO BUS 51018 [MANHTP3 115.00] CKT 1
SINGLE 124	OPEN LINE FROM BUS 50992 [BUSHLND3115.00] TO BUS 50993 [BUSHLND6230.00] CKT 1
SINGLE 128	OPEN LINE FROM BUS 51008 [GEORGIA3115.00] TO BUS 51014 [OSAGE--3115.00] CKT 1
SINGLE 133	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51020 [RANDALL3115.00] CKT 1
SINGLE 134	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51036 [ARRWHD3 115.00] CKT 1
SINGLE 135	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51080 [CANYNE3 115.00] CKT 1
SINGLE 136	OPEN LINE FROM BUS 51018 [MANHTP3 115.00] TO BUS 51020 [RANDALL3115.00] CKT 1
SINGLE 137	OPEN LINE FROM BUS 51020 [RANDALL3115.00] TO BUS 51021 [RANDALL6230.00] CKT 1
SINGLE 149	OPEN LINE FROM BUS 51094 [NEHFD3 115.00] TO BUS 51110 [DFSMTH3 115.00] CKT 1

03G-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM-184.8, NO CLOVIS, BLKWTR-150 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

<-CONTINGENCY->	<-----CONTINGENCY DESCRIPTION----->
SINGLE 151	OPEN LINE FROM BUS 51106 [HEREFD3 115.00] TO BUS 51110 [DFSMTH3 115.00] CKT 1
SINGLE 152	OPEN LINE FROM BUS 51106 [HEREFD3 115.00] TO BUS 51122 [FRIONA3 115.00] CKT 1
SINGLE 153	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51111 [DFSMTH6 230.00] CKT 1
SINGLE 154	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51111 [DFSMTH6 230.00] CKT 2
SINGLE 155	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51146 [DS-213 115.00] CKT 1
SINGLE 156	OPEN LINE FROM BUS 51111 [DFSMTH6 230.00] TO BUS 51419 [PLANTX6 230.00] CKT 1
SINGLE 168	OPEN LINE FROM BUS 51166 [CANNOA3 115.00] TO BUS 51194 [OASIS3 115.00] CKT 1
SINGLE 171	OPEN LINE FROM BUS 51176 [CURRY3 115.00] TO BUS 51180 [FE-CLVS3115.00] CKT 1
SINGLE 172	OPEN LINE FROM BUS 51176 [CURRY3 115.00] TO BUS 51202 [ROOSEVL3115.00] CKT 2
SINGLE 173	OPEN LINE FROM BUS 51194 [OASIS3 115.00] TO BUS 51195 [OASIS6 230.00] CKT 1
SINGLE 177	OPEN LINE FROM BUS 51202 [ROOSEVL3115.00] TO BUS 51203 [ROOSEVL6230.00] CKT 1
SINGLE 182	OPEN LINE FROM BUS 51250 [BC-EART3115.00] TO BUS 51418 [PLANTX3 115.00] CKT 1
SINGLE 206	OPEN LINE FROM BUS 51439 [TOLKTP6 230.00] TO BUS 51440 [TOLK7 345.00] CKT 1
SINGLE 239	OPEN LINE FROM BUS 51699 [JONES6 230.00] TO BUS 51811 [GRASSLN6230.00] CKT 1
SINGLE 300	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52073 [CHAVES6 230.00] CKT 1
SINGLE 301	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52073 [CHAVES6 230.00] CKT 2
SINGLE 302	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52078 [URTON3 115.00] CKT 1
SINGLE 303	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52088 [SAMSON3 115.00] CKT 1
SINGLE 304	OPEN LINE FROM BUS 52073 [CHAVES6 230.00] TO BUS 52185 [EDDYCO6 230.00] CKT 1
SINGLE 305	OPEN LINE FROM BUS 52073 [CHAVES6 230.00] TO BUS 99990 [CATAMONT230.00] CKT 1
SINGLE 317	OPEN LINE FROM BUS 52184 [EDDYCO3 115.00] TO BUS 52185 [EDDYCO6 230.00] CKT 1
SINGLE 321	OPEN LINE FROM BUS 52185 [EDDYCO6 230.00] TO BUS 52209 [CUNNINH6230.00] CKT 1
SINGLE 322	OPEN LINE FROM BUS 52185 [EDDYCO6 230.00] TO BUS 52293 [7RIVER6 230.00] CKT 1
SINGLE 328	OPEN LINE FROM BUS 52208 [CUNNINH3115.00] TO BUS 52209 [CUNNINH6230.00] CKT 1
SINGLE 334	OPEN LINE FROM BUS 52209 [CUNNINH6230.00] TO BUS 52253 [POTJCT6 230.00] CKT 1

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WIND FARM-184.8, NO CLOVIS, BLKWTR-150 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

<-CONTINGENCY-> <-----CONTINGENCY DESCRIPTION----->

SINGLE 337	OPEN LINE FROM BUS 52252 [POTJCT3 115.00] TO BUS 52253 [POTJCT6 230.00] CKT 1
SINGLE 339	OPEN LINE FROM BUS 52252 [POTJCT3 115.00] TO BUS 52310 [CARLSBD3115.00] CKT 1
SINGLE 343	OPEN LINE FROM BUS 52282 [CV-INDH3115.00] TO BUS 52294 [7RIVER3 115.00] CKT 1
SINGLE 345	OPEN LINE FROM BUS 52293 [7RIVER6 230.00] TO BUS 52294 [7RIVER3 115.00] CKT 1
SINGLE 352	OPEN LINE FROM BUS 52329 [OCHOA3 115.00] TO BUS 52420 [WHITTEN3115.00] CKT 1

2003 Summer Peak

Comparing 2:03SP-20412-001.LST to 1:03SP-20412-000.LST

<----- FROM ----->		<----- TO ----->		RATING	No. 2 03SP_001 CONT.MVA	No. 1 03SP_000 CONT.MVA	No. 2 03SP_001 % OL	No. 1 03SP_000 % OL	No. 2 03SP_001 AVAIL	No. 1 03SP_000 AVAIL	2 to 1 Percent CHANGE
52293	[7RIVER6 230]	52294	[7RIVER3 115]	150.0	137.9	140.0	91.9	93.4	12.1	10.0	-2%
52184	[EDDYCO3 115]	52185	[EDDYCO6 230]	168.0	150.7	153.7	89.7	91.5	17.3	14.3	-2%
51014	[OSAGE--3 115]	51018	[MANHTP3 115]	161.0	140.8	141.2	87.4	87.7	20.2	19.8	0%
50956	[EASTPL3 115]	50957	[EASTPL6 230]	225.0	201.9	202.2	89.7	89.8	23.1	22.8	0%
50910	[ASARCO3 115]	50914	[NICHOL3 115]	60.0	36.7	36.7	61.1	61.1	23.3	23.3	0%
51014	[OSAGE--3 115]	51080	[CANYNE3 115]	99.0	74.6	78.8	75.4	79.6	24.4	20.2	-4%
51008	[GEORGIA3 115]	51014	[OSAGE--3 115]	161.0	136.4	136.2	84.7	84.6	24.6	24.8	0%
50914	[NICHOL3 115]	50915	[NICHOL6 230]	150.0	125.1	125.2	83.4	83.5	24.9	24.8	0%
50914	[NICHOL3 115]	50915	[NICHOL6 230]	150.0	122.7	122.8	81.8	81.9	27.3	27.2	0%
51176	[CURRY3 115]	51202	[ROOSEVL3 115]	161.0	128.3	131.8	79.7	81.9	32.7	29.2	-2%
51110	[DFSMTH3 115]	51111	[DFSMTH6 230]	172.5	139.7	145.3	81.0	84.3	32.8	27.2	-3%
51110	[DFSMTH3 115]	51111	[DFSMTH6 230]	172.5	139.7	145.3	81.0	84.3	32.8	27.2	-3%
51020	[RANDALL3 115]	51021	[RANDALL6 230]	258.8	223.0	223.2	86.2	86.3	35.8	35.6	0%
51078	[CANYNW3 115]	51080	[CANYNE3 115]	99.0	60.8	65.0	61.4	65.6	38.2	34.0	-4%
51106	[HEREFD3 115]	51122	[FRIONA3 115]	99.0	58.6	69.2	59.2	69.9	40.4	29.8	-11%
51014	[OSAGE--3 115]	51020	[RANDALL3 115]	161.0	118.7	119.1	73.7	74.0	42.3	41.9	0%
51106	[HEREFD3 115]	51110	[DFSMTH3 115]	161.0	118.5	127.9	73.6	79.5	42.5	33.1	-6%
51110	[DFSMTH3 115]	51146	[DS-213 115]	161.0	117.7	117.7	73.1	73.1	43.3	43.3	0%
50956	[EASTPL3 115]	50964	[PIERCT3 115]	161.0	117.2	117.6	72.8	73.1	43.8	43.4	0%
52313	[PECOS6 230]	52314	[PECOS3 115]	150.0	105.8	107.5	70.6	71.6	44.2	42.5	-1%
50908	[CHERRY3 115]	50914	[NICHOL3 115]	161.0	116.7	116.7	72.5	72.5	44.3	44.3	0%
51026	[FARMERS3 115]	51038	[OWENSC3 115]	161.0	116.4	116.4	72.3	72.3	44.6	44.6	0%
52072	[CHAVES3 115]	52078	[URTON3 115]	161.0	116.1	110.5	72.1	68.6	44.9	50.5	4%
50956	[EASTPL3 115]	50978	[MANHATT3 115]	161.0	114.0	114.4	70.8	71.1	47.0	46.6	0%
50990	[PUCKETT3 115]	51002	[COULTER3 115]	161.0	113.1	113.1	70.3	70.3	47.9	47.9	0%
52072	[CHAVES3 115]	52088	[SAMSON3 115]	161.0	111.8	106.4	69.5	66.1	49.2	54.6	3%
51102	[DOWNFL3 115]	51106	[HEREFD3 115]	99.0	48.6	48.6	49.1	49.1	50.4	50.4	0%
51018	[MANHTP3 115]	51020	[RANDALL3 115]	161.0	108.0	108.2	67.1	67.2	53.0	52.8	0%
51146	[DS-213 115]	51150	[CASTRC3 115]	161.0	107.5	107.5	66.8	66.8	53.5	53.5	0%
51078	[CANYNW3 115]	51102	[DOWNFL3 115]	99.0	45.3	45.3	45.7	45.7	53.7	53.7	0%
51202	[ROOSEVL3 115]	51203	[ROOSEVL6 230]	289.8	236.0	242.4	81.4	83.7	53.8	47.4	-2%
50908	[CHERRY3 115]	50938	[NORTHW3 115]	161.0	105.7	105.7	65.7	65.7	55.3	55.3	0%
51014	[OSAGE--3 115]	51036	[ARRWHD3 115]	161.0	105.1	104.9	65.3	65.1	55.9	56.1	0%
51120	[CARGIL3 115]	51122	[FRIONA3 115]	99.0	43.1	53.9	43.5	54.5	55.9	45.1	-11%
51126	[DS-#203 115]	51176	[CURRY3 115]	99.0	41.6	41.8	42.1	42.2	57.4	57.2	0%
52088	[SAMSON3 115]	52094	[ROSWIN3 115]	161.0	99.8	94.4	62.0	58.7	61.2	66.6	3%
51194	[OASIS3 115]	51208	[PORTALE3 115]	161.0	97.7	95.7	60.7	59.5	63.3	65.3	1%

1:

03SP-20412-000. (PINNELL-SITE) SYSTEM IMPACT STUDY
WIND FARM GENERATION-OFF 4-12-02

2:

03SP-20412-001. (PINNELL-SITE) SYSTEM IMPACT STUDY
WIND FARM-184.8, NO-CLVS, BLKWTR-150X 4-12-02

Comparing 2:03SP-20412-001.LST to 1:03SP-20412-000.LST

<----- FROM ----->		<----- TO ----->		RATING	No. 2 03SP_001 CONT.MVA	No. 1 03SP_000 CONT.MVA	No. 2 03SP_001 % OL	No. 1 03SP_000 % OL	No. 2 03SP_001 AVAIL	No. 1 03SP_000 AVAIL	2 to 1 Percent CHANGE
51120	[CARGIL3 115]	51124	[PARMRC3 115]	99.0	34.6	46.6	35.0	47.0	64.4	52.4	-12%
51194	[OASIS3 115]	51195	[OASIS6 230]	289.8	225.3	218.3	77.7	75.3	64.5	71.5	2%
50964	[PIERCT3 115]	51014	[OSAGE--3 115]	161.0	96.3	96.7	59.8	60.1	64.7	64.3	0%
50978	[MANHATT3 115]	51018	[MANHTP3 115]	161.0	94.8	95.2	58.9	59.2	66.2	65.8	0%
51036	[ARRWHD3 115]	51038	[OWENSC3 115]	161.0	94.4	94.2	58.7	58.5	66.6	66.8	0%
51124	[PARMRC3 115]	51126	[DS-#203 115]	99.0	31.1	43.5	31.4	43.9	67.9	55.5	-13%
50880	[HIGHT3 115]	50924	[HIGHLND3 115]	99.0	30.3	30.3	30.6	30.6	68.7	68.7	0%
52078	[URTON3 115]	52084	[ROSWLC3 115]	161.0	92.0	86.3	57.1	53.6	69.0	74.7	4%
51026	[FARMERS3 115]	51032	[CRO-HIN3 115]	161.0	91.4	91.5	56.8	56.8	69.6	69.5	0%
52252	[POTJCT3 115]	52253	[POTJCT6 230]	172.5	100.5	101.6	58.3	58.9	72.0	70.9	-1%
51176	[CURRY3 115]	51180	[FE-CLVS3 115]	146.0	72.6	73.0	49.7	50.0	73.4	73.0	0%
50970	[SONCY3 115]	50990	[PUCKETT3 115]	161.0	87.6	87.6	54.4	54.4	73.4	73.4	0%
51008	[GEORGIA3 115]	51032	[CRO-HIN3 115]	161.0	83.4	83.5	51.8	51.8	77.6	77.5	0%
52094	[ROSWIN3 115]	52098	[BRASHER3 115]	99.0	21.1	21.0	21.3	21.2	77.9	78.0	0%
50914	[NICHOL3 115]	50926	[YARNELL3 115]	180.0	100.1	100.0	55.6	55.6	79.9	80.0	0%
51150	[CASTRC3 115]	51250	[BC-EART3 115]	161.0	80.4	80.4	49.9	49.9	80.6	80.6	0%
51156	[NORRST3 115]	51168	[NORRIS3 115]	99.0	18.2	18.3	18.4	18.5	80.8	80.7	0%
51202	[ROOSEVL3 115]	51208	[PORTALE3 115]	161.0	80.1	86.4	49.8	53.7	80.9	74.6	-4%
50926	[YARNELL3 115]	50928	[CONWAY3 115]	180.0	98.8	98.7	54.9	54.8	81.2	81.3	0%
51094	[NEHFD3 115]	51110	[DFSMTH3 115]	161.0	79.5	82.9	49.4	51.5	81.5	78.1	-2%
52208	[CUNNINH3 115]	52209	[CUNNINH6 230]	168.0	86.3	84.6	51.4	50.4	81.7	83.4	1%
51156	[NORRST3 115]	51194	[OASIS3 115]	161.0	79.0	74.2	49.1	46.1	82.0	86.8	3%
51038	[OWENSC3 115]	51044	[ESTCDT3 115]	161.0	76.8	76.9	47.7	47.8	84.2	84.1	0%
52166	[NAVAJ43 115]	52184	[EDDYCO3 115]	161.0	74.8	76.6	46.4	47.6	86.2	84.4	-1%
52294	[7RIVER3 115]	52296	[CV-LAKW3 115]	161.0	73.9	76.7	45.9	47.6	87.1	84.3	-2%
51166	[CANNOA3 115]	51194	[OASIS3 115]	161.0	73.3	73.6	45.5	45.7	87.7	87.4	0%
50996	[34THST3 115]	51008	[GEORGIA3 115]	146.0	56.9	57.0	39.0	39.0	89.1	89.0	0%
52208	[CUNNINH3 115]	52240	[PCA3 115]	161.0	71.8	74.7	44.6	46.4	89.2	86.3	-2%
50992	[BUSHLND3 115]	50993	[BUSHLND6 230]	172.5	83.2	83.1	48.2	48.2	89.3	89.4	0%
50938	[NORTHW3 115]	50988	[SUNSET3 115]	161.0	71.4	71.4	44.4	44.4	89.6	89.6	0%
52084	[ROSWLC3 115]	52094	[ROSWIN3 115]	161.0	70.0	69.9	43.5	43.4	91.0	91.1	0%
52296	[CV-LAKW3 115]	52298	[CV-IRIS3 115]	161.0	68.7	71.4	42.6	44.4	92.3	89.6	-2%
50928	[CONWAY3 115]	50932	[KIRBY3 115]	180.0	86.1	86.0	47.8	47.8	93.9	94.0	0%
52180	[ATOKA3 115]	52298	[CV-IRIS3 115]	161.0	63.9	66.7	39.7	41.4	97.1	94.3	-2%

1:
03SP-20412-000. (PINNELL-SITE) SYSTEM IMPACT STUDY
WIND FARM GENERATION-OFF 4-12-02

2:
03SP-20412-001. (PINNELL-SITE) SYSTEM IMPACT STUDY
WIND FARM-184.8, NO-CLVS, BLKWTR-150X 4-12-02

03SP-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM WIND-184.8, NO-CLVS, BLKWTR-150X 4-12-02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Wind Farm\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Wind Farm\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_CON.DAT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 50858 [FINNEY7 345.00] TO BUS 56449 [HOLCOMB7345.00] CKT 1 ----- CONTINGENCY SINGLE 4
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 50858 FINNEY7 345 1.0630 1.0194

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 51021 [RANDALL6230.00] CKT 1 ----- CONTINGENCY SINGLE 102
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 51021 RANDALL6 230 0.8926 0.9839

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 51094 [NEHFD3 115.00] TO BUS 51110 [DFSMTH3 115.00] CKT 1 ----- CONTINGENCY SINGLE 156
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 51094 NEHFD3 115 0.8877 1.0319

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 51195 [OASIS6 230.00] TO BUS 99990 [CATAMONT230.00] CKT 1 ----- CONTINGENCY SINGLE 183
 *** NOT CONVERGED ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52073 [CHAVES6 230.00] TO BUS 52185 [EDDYCO6 230.00] CKT 1 ----- CONTINGENCY SINGLE 316
 *** NONE ***

03SP-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM WIND-184.8, NO-CLVS, BLKWTR-150X 4-12-02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52073 CHAVES6 230 0.8573 0.9560

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52154 [ARTESIA3115.00] TO BUS 52162 [NAVAJ33 115.00] CKT 1 ----- CONTINGENCY SINGLE 324
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52154 ARTESIA3 115 0.8831 1.0075

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52162 [NAVAJ33 115.00] TO BUS 52166 [NAVAJ43 115.00] CKT 1 ----- CONTINGENCY SINGLE 325
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52154 ARTESIA3 115 0.8313 1.0075 52162 NAVAJ33 115 0.8308 1.0083

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52166 [NAVAJ43 115.00] TO BUS 52184 [EDDYCO3 115.00] CKT 1 ----- CONTINGENCY SINGLE 326
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52154 ARTESIA3 115 0.8233 1.0075 52162 NAVAJ33 115 0.8228 1.0083
 52166 NAVAJ43 115 0.8228 1.0094

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52185 [EDDYCO6 230.00] TO BUS 52186 [EDDYCO7 345.00] CKT 1 ----- CONTINGENCY SINGLE 332
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52186 EDDYCO7 345 1.0901 1.0097

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52266 [WIPP3 115.00] TO BUS 52268 [SNDDUN3 115.00] CKT 1 ----- CONTINGENCY SINGLE 352
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52266 WIPP3 115 1.0561 1.0296

03SP-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM WIND-184.8, NO-CLVS, BLKWTR-150X 4-12-02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW)FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52266 [WIPP3 115.00] TO BUS 52274 [IMC#13 115.00] CKT 1 ----- CONTINGENCY SINGLE 353
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52266 WIPP3 115 1.0549 1.0296

03SP-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM WIND-184.8, NO-CLVS, BLKWTR-150X 4-12-02

*** ACCC AVAILABLE CAPACITY REPORT ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Wind Farm\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Wind Farm\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_CON.DAT

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
52293 [7RIVER6 230]	52294 [7RIVER3 115]	1	SINGLE 329	0	92.1	137.9		150.0	91.9	12.1
52184 [EDDYCO3 115]	52185 [EDDYCO6 230]	1	SINGLE 357	0	115.2	150.7		168.0	89.7	17.3
51014 [OSAGE--3 115]	51018 [MANHTP3 115]	1	SINGLE 137	0	92.7	146.1	140.8	161.0	87.4	20.2
50956 [EASTPL3 115]	50957 [EASTPL6 230]	1	SINGLE 141	1	156.5	201.9		225.0	89.7	23.1
50910 [ASARCO3 115]	50914 [NICHOL3 115]	1	SINGLE 184	391	38.3	38.3	36.7	60.0	61.1	23.3
51014 [OSAGE--3 115]	51080 [CANYNE3 115]	1	SINGLE 158	0	49.1	77.6	74.6	99.0	75.4	24.4
51008 [GEORGIA3 115]	51014 [OSAGE--3 115]	1	SINGLE 110	0	101.7	139.2	136.4	161.0	84.7	24.6
50914 [NICHOL3 115]	50915 [NICHOL6 230]	1	SINGLE 107	0	98.7	125.1		150.0	83.4	24.9
50914 [NICHOL3 115]	50915 [NICHOL6 230]	2	SINGLE 106	0	96.1	122.7		150.0	81.8	27.3
51176 [CURRY3 115]	51202 [ROOSEVL3 115]	2	SINGLE 180	0	84.1	130.7	128.3	161.0	79.7	32.7
51110 [DFSMTH3 115]	51111 [DFSMTH6 230]	2	SINGLE 160	0	81.6	139.7		172.5	81.0	32.8
51110 [DFSMTH3 115]	51111 [DFSMTH6 230]	1	SINGLE 161	0	81.6	139.7		172.5	81.0	32.8
51020 [RANDALL3 115]	51021 [RANDALL6 230]	1	SINGLE 110	0	183.9	223.0		258.8	86.2	35.8
51078 [CANYNW3 115]	51080 [CANYNE3 115]	1	SINGLE 158	0	34.4	62.1	60.8	99.0	61.4	38.2
51106 [HEREFD3 115]	51122 [FRIONA3 115]	1	SINGLE 184	0	36.0	56.9	58.6	99.0	59.2	40.4
51014 [OSAGE--3 115]	51020 [RANDALL3 115]	1	SINGLE 136	0	64.6	123.3	118.7	161.0	73.7	42.3
51106 [HEREFD3 115]	51110 [DFSMTH3 115]	1	SINGLE 139	0	79.6	122.1	118.5	161.0	73.6	42.5
51110 [DFSMTH3 115]	51146 [DS-213 115]	1	SINGLE 189	0	37.6	111.2	117.7	161.0	73.1	43.3
50956 [EASTPL3 115]	50964 [PIERCT3 115]	1	SINGLE 118	0	78.7	122.6	117.2	161.0	72.8	43.8
52313 [PECOS6 230]	52314 [PECOS3 115]	1	SINGLE 357	0	71.7	105.8		150.0	70.6	44.2
50908 [CHERRY3 115]	50914 [NICHOL3 115]	1	SINGLE 124	0	88.0	119.4	116.7	161.0	72.5	44.3
51026 [FARMERS3 115]	51038 [OWENSC3 115]	1	SINGLE 132	0	47.3	118.6	116.4	161.0	72.3	44.6
52072 [CHAVES3 115]	52078 [URTON3 115]	1	SINGLE 315	0	79.6	119.9	116.1	161.0	72.1	44.9
50956 [EASTPL3 115]	50978 [MANHATT3 115]	1	SINGLE 117	0	68.1	119.3	114.0	161.0	70.8	47.0
50990 [PUCKETT3 115]	51002 [COULTER3 115]	1	SINGLE 103	0	45.0	113.5	113.1	161.0	70.3	47.9
52072 [CHAVES3 115]	52088 [SAMSON3 115]	1	SINGLE 314	0	46.3	114.0	111.8	161.0	69.5	49.2
51102 [DOWNFL3 115]	51106 [HEREFD3 115]	1	SINGLE 139	0	9.3	48.1	48.6	99.0	49.1	50.4
51018 [MANHTP3 115]	51020 [RANDALL3 115]	1	SINGLE 137	0	58.4	112.4	108.0	161.0	67.1	53.0
51146 [DS-213 115]	51150 [CASTRC3 115]	1	SINGLE 189	0	27.6	101.3	107.5	161.0	66.8	53.5
51078 [CANYNW3 115]	51102 [DOWNFL3 115]	1	SINGLE 139	0	10.1	43.7	45.3	99.0	45.7	53.7
51202 [ROOSEVL3 115]	51203 [ROOSEVL6 230]	1	SINGLE 180	0	122.3	236.0		289.8	81.4	53.8
50908 [CHERRY3 115]	50938 [NORTHW3 115]	1	SINGLE 124	0	75.5	105.5	105.7	161.0	65.7	55.3
51014 [OSAGE--3 115]	51036 [ARRWHD3 115]	1	SINGLE 132	0	56.2	108.8	105.1	161.0	65.3	55.9
51120 [CARGIL3 115]	51122 [FRIONA3 115]	1	SINGLE 184	0	21.5	41.8	43.1	99.0	43.5	55.9
51126 [DS-#203 115]	51176 [CURRY3 115]	1	SINGLE 159	0	16.7	41.7	41.6	99.0	42.1	57.4
52088 [SAMSON3 115]	52094 [ROSWIN3 115]	1	SINGLE 314	0	33.9	100.7	99.8	161.0	62.0	61.2
51194 [OASIS3 115]	51208 [PORTALE3 115]	1	SINGLE 184	0	43.8	94.5	97.7	161.0	60.7	63.3
51120 [CARGIL3 115]	51124 [PARMRC3 115]	1	SINGLE 184	0	15.1	33.5	34.6	99.0	35.0	64.4

03SP-20412-001. **WIND FARM** (PINNELL-SITE) IMPACT STUDY
WIND FARM WIND-184.8, NO-CLVS, BLKWTR-150X 4-12-02

*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
51194 [OASIS3 115]	51195 [OASIS6 230]	1	SINGLE 184	0	115.3	225.3		289.8	77.7	64.5
50964 [PIERCT3 115]	51014 [OSAGE--3 115]	1	SINGLE 118	0	56.8	100.5	96.3	161.0	59.8	64.7
50978 [MANHATT3 115]	51018 [MANHTP3 115]	1	SINGLE 117	0	48.3	98.8	94.8	161.0	58.9	66.2
51036 [ARRWHD3 115]	51038 [OWENSC3 115]	1	SINGLE 132	0	46.0	96.7	94.4	161.0	58.7	66.6
51124 [PARMRC3 115]	51126 [DS-#203 115]	1	SINGLE 184	0	12.8	29.9	31.1	99.0	31.4	67.9
50880 [HIGHLT3 115]	50924 [HIGHLND3 115]	1	SINGLE 91	0	28.7	28.7	30.3	99.0	30.6	68.7
52078 [URTON3 115]	52084 [ROSWLC3 115]	1	SINGLE 315	0	54.4	94.3	92.0	161.0	57.1	69.0
51026 [FARMERS3 115]	51032 [CRO-HIN3 115]	1	SINGLE 132	0	22.6	93.1	91.4	161.0	56.8	69.6
52252 [POTJCT3 115]	52253 [POTJCT6 230]	1	SINGLE 351	0	81.2	100.5		172.5	58.3	72.0
51176 [CURRY3 115]	51180 [FE-CLVS3 115]	1	SINGLE 175	0	31.8	74.1	72.6	146.0	49.7	73.4
50970 [SONCY3 115]	50990 [PUCKETT3 115]	1	SINGLE 103	0	19.5	87.8	87.6	161.0	54.4	73.4
51008 [GEORGIA3 115]	51032 [CRO-HIN3 115]	1	SINGLE 132	0	17.7	84.5	83.4	161.0	51.8	77.6
52094 [ROSWIN3 115]	52098 [BRASHER3 115]	1	SINGLE 316	0	20.0	20.0	21.1	99.0	21.3	77.9
50914 [NICHOL3 115]	50926 [YARNELL3 115]	1	SINGLE 85	0	53.6	102.9	100.1	180.0	55.6	79.9
51150 [CASTRC3 115]	51250 [BC-EART3 115]	1	SINGLE 162	0	45.9	77.3	80.4	161.0	49.9	80.6
51156 [NORRST3 115]	51168 [NORRIS3 115]	1	SINGLE 184	0	17.5	17.5	18.2	99.0	18.4	80.8
51202 [ROOSEVL3 115]	51208 [PORTALE3 115]	1	SINGLE 180	0	28.3	80.9	80.1	161.0	49.8	80.9
50926 [YARNELL3 115]	50928 [CONWAY3 115]	1	SINGLE 85	0	51.9	99.5	98.8	180.0	54.9	81.2
51094 [NEHFD3 115]	51110 [DFSMTH3 115]	1	SINGLE 158	0	51.5	81.5	79.5	161.0	49.4	81.5
52208 [CUNNINH3 115]	52209 [CUNNINH6 230]	1	SINGLE 346	0	59.0	86.3		168.0	51.4	81.7
51156 [NORRST3 115]	51194 [OASIS3 115]	1	SINGLE 179	0	28.6	77.7	79.0	161.0	49.1	82.0
51038 [OWENSC3 115]	51044 [ESTCDT3 115]	1	SINGLE 103	0	47.1	77.8	76.8	161.0	47.7	84.2
52166 [NAVAJ43 115]	52184 [EDDYCO3 115]	1	SINGLE 316	0	69.2	74.5	74.8	161.0	46.4	86.2
52294 [7RIVER3 115]	52296 [CV-LAKW3 115]	1	SINGLE 329	0	31.7	74.4	73.9	161.0	45.9	87.1
51166 [CANNOA3 115]	51194 [OASIS3 115]	1	SINGLE 178	0	40.7	73.7	73.3	161.0	45.5	87.7
50996 [34THST3 115]	51008 [GEORGIA3 115]	1	SINGLE 147	0	31.7	57.9	56.9	146.0	39.0	89.1
52208 [CUNNINH3 115]	52240 [PCA3 115]	1	SINGLE 346	0	45.5	74.3	71.8	161.0	44.6	89.2
50992 [BUSHLND3 115]	50993 [BUSHLND6 230]	1	SINGLE 110	0	66.2	83.2		172.5	48.2	89.3
50938 [NORTHW3 115]	50988 [SUNSET3 115]	1	SINGLE 124	0	26.4	70.8	71.4	161.0	44.4	89.6
52084 [ROSWLC3 115]	52094 [ROSWIN3 115]	1	SINGLE 314	0	9.9	70.1	70.0	161.0	43.5	91.0
52296 [CV-LAKW3 115]	52298 [CV-IRIS3 115]	1	SINGLE 329	0	26.3	68.7	68.7	161.0	42.6	92.3
50928 [CONWAY3 115]	50932 [KIRBY3 115]	1	SINGLE 85	0	39.0	86.8	86.1	180.0	47.8	93.9
52180 [ATOKA3 115]	52298 [CV-IRIS3 115]	1	SINGLE 329	0	21.4	63.3	63.9	161.0	39.7	97.1
50914 [NICHOL3 115]	50922 [WHITAKR3 115]	1	SINGLE 116	1	88.7	157.2	150.9	249.0	60.6	98.1
51170 [FE-CLVS3 115]	51172 [FE-SWS3 115]	1	SINGLE 175	0	6.5	46.5	47.3	146.0	32.4	98.7
51170 [FE-CLVS3 115]	51180 [FE-CLVS3 115]	1	SINGLE 175	0	6.0	47.1	47.0	146.0	32.2	99.0
51078 [CANYNW3 115]	51088 [ROCKWEL3 115]	1	SINGLE 139	1	5.4	5.4	5.6	105.0	5.4	99.4
51156 [NORRST3 115]	51176 [CURRY3 115]	1	SINGLE 179	0	11.9	60.3	61.3	161.0	38.1	99.7
52282 [CV-INDH3 115]	52294 [7RIVER3 115]	1	SINGLE 364	0	44.3	62.2	61.0	161.0	37.9	100.0
50970 [SONCY3 115]	50988 [SUNSET3 115]	1	SINGLE 124	0	14.6	57.8	58.4	161.0	36.3	102.6
52282 [CV-INDH3 115]	52314 [PECOS3 115]	1	SINGLE 357	0	18.8	58.1	58.1	161.0	36.1	102.9
52204 [LEACO3 115]	52205 [LEACO6 230]	1	SINGLE 337	0	29.9	65.0		168.0	38.7	103.0

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WIND FARM WIND-184.8, NO-CLVS, BLKWTR-150X 4-12-02

*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE	
51162 [WCLOVI3 115]	51166 [CANNOA3 115]	1	SINGLE 178	0	23.7	55.7	56.1	161.0	34.8	104.9	
52240 [PCA3 115]	52252 [POTJCT3 115]	1	SINGLE 349	0	7.2	52.7	54.4	161.0	33.8	106.6	
50880 [HIGHLT3 115]	50914 [NICHOL3 115]	1	SINGLE 80	0	39.9	55.8	53.8	161.0	33.4	107.2	
52240 [PCA3 115]	52310 [CARLSBD3 115]	1	SINGLE 351	0	29.6	54.1	53.6	161.0	33.3	107.4	
52072 [CHAVES3 115]	52073 [CHAVES6 230]	2	SINGLE 312	0	82.8	151.2		258.8	58.4	107.5	
52072 [CHAVES3 115]	52073 [CHAVES6 230]	1	SINGLE 313	0	82.8	151.2		258.8	58.4	107.5	
51002 [COULTER3 115]	51044 [ESTCDT3 115]	1	SINGLE 103	0	22.2	52.5	51.9	161.0	32.2	109.1	
52104 [TWEEDY3 115]	52184 [EDDYCO3 115]	1	SINGLE 316	0	21.4	47.7	50.1	161.0	31.1	110.9	
52184 [EDDYCO3 115]	52188 [CV-DAYT3 115]	1	SINGLE 326	0	9.1	48.7	48.4	161.0	30.0	112.6	
50922 [WHITAKR3 115]	50956 [EASTPL3 115]	1	SINGLE 116	1	72.2	138.8	134.1	249.0	53.9	114.9	
50996 [34THST3 115]	51002 [COULTER3 115]	1	SINGLE 147	0	5.0	31.2	30.7	146.0	21.1	115.3	
52180 [ATOKA3 115]	52188 [CV-DAYT3 115]	1	SINGLE 326	0	5.1	45.1	44.9	161.0	27.9	116.1	
51162 [WCLOVI3 115]	51172 [FE-SWS3 115]	1	SINGLE 178	0	11.6	43.3	43.8	161.0	27.2	117.2	
50878 [CARSNT3 115]	50882 [PANTXN3 115]	1	SINGLE 91	0	7.1	41.8	43.4	161.0	26.9	117.6	
50938 [NORTHW3 115]	50943 [BUSH3 115]	1	SINGLE 103	1	25.2	25.2	25.3	146.0	17.3	120.7	
50882 [PANTXN3 115]	50884 [PANTXS3 115]	1	SINGLE 91	0	7.9	36.6	38.1	161.0	23.7	122.9	
52162 [NAVAJ33 115]	52166 [NAVAJ43 115]	1	SINGLE 316	0	67.9	73.2	73.5	197.0	37.3	123.5	
52308 [FIESTA3 115]	52314 [PECOS3 115]	1	SINGLE 329	0	21.2	21.2	21.5	146.0	14.7	124.5	
52252 [POTJCT3 115]	52274 [IMC#13 115]	1	SINGLE 398	0	21.1	36.8	36.2	161.0	22.5	124.8	
51012 [SOUTHE3 115]	51020 [RANDALL3 115]	1	SINGLE 141	1	21.0	21.0	20.5	146.0	14.1	125.5	
52268 [SNDDUN3 115]	52329 [OCHOA3 115]	1	SINGLE 350	0	16.9	32.5	33.8	161.0	21.0	127.2	
51040 [AMARLS3 115]	51041 [AMARLS6 230]	1	SINGLE 149	0	80.9	129.0		258.8	49.9	129.7	
50880 [HIGHLT3 115]	50884 [PANTXS3 115]	1	SINGLE 91	0	13.7	28.8	30.2	161.0	18.8	130.8	
52266 [WIPP3 115]	52274 [IMC#13 115]	1	SINGLE 350	0	7.3	27.4	29.1	161.0	18.1	131.9	
52304 [NCANALT3 115]	52314 [PECOS3 115]	1	SINGLE 329	0	24.9	64.0	64.8	197.0	32.9	132.2	
52266 [WIPP3 115]	52268 [SNDDUN3 115]	1	SINGLE 350	0	17.5	27.4	28.5	161.0	17.7	132.5	
51076 [FE-TUCU3 115]	51176 [CURRY3 115]	1	SINGLE 151	0	9.1	11.6	11.3	146.0	7.7	134.7	
51044 [ESTCDT3 115]	51046 [ESTACAD3 115]	1	SINGLE 147	7	25.5	25.5	25.2	161.0	15.7	135.8	
50964 [PIERCT3 115]	50966 [PIERCE3 115]	1	SINGLE 101	1	23.1	23.1	22.4	161.0	13.9	138.6	
52154 [ARTESIA3 115]	52162 [NAVAJ33 115]	1	SINGLE 316	0	51.4	56.4	56.7	197.0	28.8	140.3	
51070 [TUCUMCA3 115]	51076 [FE-TUCU3 115]	1	SINGLE 167	0	3.1	4.8	4.7	146.0	3.2	141.3	
52310 [CARLSBD3 115]	52314 [PECOS3 115]	1	SINGLE 349	0	20.1	54.5	54.6	197.0	27.7	142.4	
51010 [PULLMAN3 115]	51012 [SOUTHE3 115]	1	SINGLE 141	1	2.9	2.9	2.9	146.0	2.0	143.1	
51038 [OWENSC3 115]	51040 [AMARLS3 115]	1	SINGLE 149	0	80.7	128.0	124.3	271.0	45.9	146.7	
52184 [EDDYCO3 115]	52304 [NCANALT3 115]	1	SINGLE 329	0	17.1	41.6	42.1	197.0	21.4	154.9	
INTERFACE N-S LINES					SINGLE 7	0	362.0	442.4	600.0	73.7	157.6
52094 [ROSWIN3 115]	52104 [TWEEDY3 115]	1	SINGLE 316	0	13.1	30.8	32.4	197.0	16.4	164.6	
50992 [BUSHLND3 115]	50998 [HILLSID3 115]	1	SINGLE 110	0	64.4	80.6	79.1	249.0	31.8	169.9	
50998 [HILLSID3 115]	51002 [COULTER3 115]	1	SINGLE 110	0	59.2	75.4	74.2	249.0	29.8	174.8	
50907 [HARRNG6 230]	50915 [NICHOL6 230]	1	SINGLE 100	0	217.0	402.6	401.1	635.0	63.2	233.9	
50907 [HARRNG6 230]	50915 [NICHOL6 230]	2	SINGLE 99	0	204.0	401.4	399.9	635.0	63.0	235.1	
50915 [NICHOL6 230]	51041 [AMARLS6 230]	1	SINGLE 102	1	210.7	248.5	258.1	497.0	51.9	238.9	

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WIND FARM WIND-184.8, NO-CLVS, BLKWTR-150X 4-12-02

*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
50907 [HARRNG6 230]	51021 [RANDALL6 230]	1	SINGLE 110	0	183.9	223.0	227.1	497.0	45.7	269.9
50887 [POTTRC6 230]	50993 [BUSHLND6 230]	1	SINGLE 110	0	172.0	211.7	214.8	497.0	43.2	282.2
50887 [POTTRC6 230]	50907 [HARRNG6 230]	1	SINGLE 96	0	126.9	211.2	212.1	497.0	42.7	284.9
50887 [POTTRC6 230]	50907 [HARRNG6 230]	2	SINGLE 95	0	108.6	203.6	204.6	497.0	41.2	292.4
50907 [HARRNG6 230]	50957 [EASTPL6 230]	1	SINGLE 141	1	156.5	201.9	203.0	497.0	40.8	294.0
51195 [OASIS6 230]	99990 [CATAMONT 230]	1	SINGLE 317	0	69.3	179.7	186.6	497.0	37.5	310.4
52209 [CUNNINH6 230]	52253 [POTJCT6 230]	1	SINGLE 333	0	138.2	180.8	184.9	497.0	37.2	312.1
51195 [OASIS6 230]	51203 [ROOSEVL6 230]	1	SINGLE 184	0	67.2	174.2	183.7	497.0	37.0	313.3
52073 [CHAVES6 230]	99990 [CATAMONT 230]	1	SINGLE 216	0	111.0	173.5	182.9	497.0	36.8	314.1
52253 [POTJCT6 230]	52313 [PECOS6 230]	1	SINGLE 333	0	84.8	126.7	129.5	452.0	28.7	322.5
52185 [EDDYCO6 230]	52186 [EDDYCO7 345]	1	SINGLE 317	0	170.6	228.4		560.0	40.8	331.6
52185 [EDDYCO6 230]	52209 [CUNNINH6 230]	1	SINGLE 346	0	84.6	154.5	154.2	497.0	31.0	342.8
52073 [CHAVES6 230]	52185 [EDDYCO6 230]	1	SINGLE 317	0	73.5	142.4	150.5	497.0	30.3	346.5
50993 [BUSHLND6 230]	51111 [DFSMTH6 230]	1	SINGLE 149	0	106.9	141.5	145.1	497.0	29.2	351.9
52185 [EDDYCO6 230]	52293 [7RIVER6 230]	1	SINGLE 346	0	84.6	156.7	160.2	541.0	29.6	380.8
52293 [7RIVER6 230]	52313 [PECOS6 230]	1	SINGLE 346	0	15.0	68.8	70.9	452.0	15.7	381.1
52205 [LEACO6 230]	52209 [CUNNINH6 230]	1	SINGLE 346	0	36.3	68.8	68.7	497.0	13.8	428.3
50887 [POTTRC6 230]	50888 [POTTRC7 345]	1	SINGLE 7	0	66.3	105.2		560.0	18.8	454.8

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WIND FARM WIND-184.8, NO-CLVS, BLKWTR-150X 4-12-02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Wind Farm\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Wind Farm\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_CON.DAT

<-CONTINGENCY-> <-----CONTINGENCY DESCRIPTION----->

SINGLE 7	OPEN LINE FROM BUS 51534 [TUCO7 345.00] TO BUS 54119 [O.K.U.-7345.00] CKT 1
SINGLE 80	OPEN LINE FROM BUS 50751 [HUTCH6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 85	OPEN LINE FROM BUS 50827 [GRAPEVN6230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 91	OPEN LINE FROM BUS 50880 [HIGHLT3 115.00] TO BUS 50914 [NICHOL3 115.00] CKT 1
SINGLE 95	OPEN LINE FROM BUS 50887 [POTTRC6 230.00] TO BUS 50907 [HARRNG6 230.00] CKT 1
SINGLE 96	OPEN LINE FROM BUS 50887 [POTTRC6 230.00] TO BUS 50907 [HARRNG6 230.00] CKT 2
SINGLE 99	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 100	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 2
SINGLE 101	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50957 [EASTPL6 230.00] CKT 1
SINGLE 102	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 51021 [RANDALL6230.00] CKT 1
SINGLE 103	OPEN LINE FROM BUS 50908 [CHERRY3 115.00] TO BUS 50914 [NICHOL3 115.00] CKT 1
SINGLE 106	OPEN LINE FROM BUS 50914 [NICHOL3 115.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 107	OPEN LINE FROM BUS 50914 [NICHOL3 115.00] TO BUS 50915 [NICHOL6 230.00] CKT 2
SINGLE 110	OPEN LINE FROM BUS 50915 [NICHOL6 230.00] TO BUS 51041 [AMARLS6 230.00] CKT 1
SINGLE 116	OPEN LINE FROM BUS 50956 [EASTPL3 115.00] TO BUS 50957 [EASTPL6 230.00] CKT 1
SINGLE 117	OPEN LINE FROM BUS 50956 [EASTPL3 115.00] TO BUS 50964 [PIERCT3 115.00] CKT 1
SINGLE 118	OPEN LINE FROM BUS 50956 [EASTPL3 115.00] TO BUS 50978 [MANHATT3115.00] CKT 1
SINGLE 124	OPEN LINE FROM BUS 50990 [PUCKETT3115.00] TO BUS 51002 [COULTER3115.00] CKT 1
SINGLE 132	OPEN LINE FROM BUS 51008 [GEORGIA3115.00] TO BUS 51014 [OSAGE--3115.00] CKT 1
SINGLE 136	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51018 [MANHTP3 115.00] CKT 1
SINGLE 137	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51020 [RANDALL3115.00] CKT 1
SINGLE 139	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51080 [CANYNE3 115.00] CKT 1

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WIND FARM WIND-184.8, NO-CLVS, BLKWTR-150X 4-12-02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

<-CONTINGENCY->	<-----CONTINGENCY DESCRIPTION----->
SINGLE 141	OPEN LINE FROM BUS 51020 [RANDALL3115.00] TO BUS 51021 [RANDALL6230.00] CKT 1
SINGLE 147	OPEN LINE FROM BUS 51038 [OWENSC3 115.00] TO BUS 51044 [ESTCDT3 115.00] CKT 1
SINGLE 149	OPEN LINE FROM BUS 51041 [AMARLS6 230.00] TO BUS 51321 [SWISHER6230.00] CKT 1
SINGLE 151	OPEN LINE FROM BUS 51070 [TUCUMCA3115.00] TO BUS 51076 [FE-TUCU3115.00] CKT 1
SINGLE 158	OPEN LINE FROM BUS 51106 [HEREFD3 115.00] TO BUS 51110 [DFSMTH3 115.00] CKT 1
SINGLE 159	OPEN LINE FROM BUS 51106 [HEREFD3 115.00] TO BUS 51122 [FRIONA3 115.00] CKT 1
SINGLE 160	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51111 [DFSMTH6 230.00] CKT 1
SINGLE 161	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51111 [DFSMTH6 230.00] CKT 2
SINGLE 162	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51146 [DS-213 115.00] CKT 1
SINGLE 167	OPEN LINE FROM BUS 51126 [DS-#203 115.00] TO BUS 51176 [CURRY3 115.00] CKT 1
SINGLE 175	OPEN LINE FROM BUS 51166 [CANNOA3 115.00] TO BUS 51194 [OASIS3 115.00] CKT 1
SINGLE 178	OPEN LINE FROM BUS 51176 [CURRY3 115.00] TO BUS 51180 [FE-CLVS3115.00] CKT 1
SINGLE 179	OPEN LINE FROM BUS 51176 [CURRY3 115.00] TO BUS 51202 [ROOSEVL3115.00] CKT 2
SINGLE 180	OPEN LINE FROM BUS 51194 [OASIS3 115.00] TO BUS 51195 [OASIS6 230.00] CKT 1
SINGLE 184	OPEN LINE FROM BUS 51202 [ROOSEVL3115.00] TO BUS 51203 [ROOSEVL6230.00] CKT 1
SINGLE 189	OPEN LINE FROM BUS 51250 [BC-EART3115.00] TO BUS 51418 [PLANTX3 115.00] CKT 1
SINGLE 216	OPEN LINE FROM BUS 51439 [TOLKTP6 230.00] TO BUS 51440 [TOLK7 345.00] CKT 1
SINGLE 312	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52073 [CHAVES6 230.00] CKT 1
SINGLE 313	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52073 [CHAVES6 230.00] CKT 2
SINGLE 314	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52078 [URTON3 115.00] CKT 1
SINGLE 315	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52088 [SAMSON3 115.00] CKT 1
SINGLE 316	OPEN LINE FROM BUS 52073 [CHAVES6 230.00] TO BUS 52185 [EDDYCO6 230.00] CKT 1
SINGLE 317	OPEN LINE FROM BUS 52073 [CHAVES6 230.00] TO BUS 99990 [CATAMONT230.00] CKT 1
SINGLE 326	OPEN LINE FROM BUS 52166 [NAVAJ43 115.00] TO BUS 52184 [EDDYCO3 115.00] CKT 1
SINGLE 329	OPEN LINE FROM BUS 52184 [EDDYCO3 115.00] TO BUS 52185 [EDDYCO6 230.00] CKT 1

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WIND FARM WIND-184.8, NO-CLVS, BLKWTR-150X 4-12-02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

<-CONTINGENCY->	<-----CONTINGENCY DESCRIPTION----->
SINGLE 333	OPEN LINE FROM BUS 52185 [EDDYCO6 230.00] TO BUS 52209 [CUNNINH6230.00] CKT 1
SINGLE 337	OPEN LINE FROM BUS 52204 [LEACO3 115.00] TO BUS 52360 [MADDOX3 115.00] CKT 1
SINGLE 346	OPEN LINE FROM BUS 52209 [CUNNINH6230.00] TO BUS 52253 [POTJCT6 230.00] CKT 1
SINGLE 349	OPEN LINE FROM BUS 52252 [POTJCT3 115.00] TO BUS 52253 [POTJCT6 230.00] CKT 1
SINGLE 350	OPEN LINE FROM BUS 52252 [POTJCT3 115.00] TO BUS 52274 [IMC#13 115.00] CKT 1
SINGLE 351	OPEN LINE FROM BUS 52253 [POTJCT6 230.00] TO BUS 52313 [PECOS6 230.00] CKT 1
SINGLE 357	OPEN LINE FROM BUS 52293 [7RIVER6 230.00] TO BUS 52294 [7RIVER3 115.00] CKT 1
SINGLE 364	OPEN LINE FROM BUS 52313 [PECOS6 230.00] TO BUS 52314 [PECOS3 115.00] CKT 1
SINGLE 398	OPEN LINE FROM BUS 52424 [COOPRR3 115.00] TO BUS 52428 [MOMUMT3 115.00] CKT 1

2004 Summer Peak Case

Comparing 2:04SP-20412-001.LST to 1:04SP-20412-000.LST

<----- FROM ----->		<----- TO ----->		RATING	No. 2 04SP_001 CONT.MVA	No. 1 04SP_000 CONT.MVA	No. 2 04SP_001 % OL	No. 1 04SP_000 % OL	No. 2 04SP_001 AVAIL	No. 1 04SP_000 AVAIL	2 to 1 Percent CHANGE
51176	[CURRY3 115]	51206	[CLOVISS 115]	321.0	165.7	191.5	51.6	59.7	155.3	129.5	-8%
50914	[NICHOL3 115]	50915	[NICHOL6 230]	150.0	152.6	152.7	101.7	101.8	-2.6	-2.7	0%
50914	[NICHOL3 115]	50915	[NICHOL6 230]	150.0	149.7	149.8	99.8	99.9	0.3	0.2	0%
52184	[EDDYCO3 115]	52185	[EDDYCO6 230]	168.0	167.2	168.1	99.6	100.1	0.8	-0.1	-1%
52293	[7RIVER6 230]	52294	[7RIVER3 115]	150.0	142.0	143.7	94.7	95.8	8.0	6.3	-1%
50956	[EASTPL3 115]	50957	[EASTPL6 230]	225.0	216.0	216.2	96.0	96.1	9.0	8.8	0%
50910	[ASARCO3 115]	50914	[NICHOL3 115]	60.0	37.9	37.9	63.1	63.1	22.1	22.1	0%
51014	[OSAGE--3 115]	51018	[MANHTP3 115]	161.0	134.3	134.5	83.4	83.6	26.7	26.5	0%
51008	[GEORGIA3 115]	51014	[OSAGE--3 115]	161.0	132.8	132.7	82.5	82.4	28.2	28.3	0%
52072	[CHAVES3 115]	52078	[URTON3 115]	161.0	132.3	126.8	82.2	78.8	28.7	34.2	3%
52072	[CHAVES3 115]	52088	[SAMSON3 115]	161.0	127.7	122.4	79.3	76.0	33.3	38.6	3%
51020	[RANDALL3 115]	51021	[RANDALL6 230]	258.8	225.0	225.1	87.0	87.0	33.8	33.6	0%
51110	[DFSMTH3 115]	51146	[DS-213 115]	161.0	124.4	124.0	77.2	77.0	36.6	37.0	0%
51110	[DFSMTH3 115]	51111	[DFSMTH6 230]	172.5	133.0	137.2	77.1	79.6	39.5	35.3	-3%
51110	[DFSMTH3 115]	51111	[DFSMTH6 230]	172.5	133.0	137.2	77.1	79.6	39.5	35.3	-3%
51014	[OSAGE--3 115]	51020	[RANDALL3 115]	161.0	120.6	117.8	74.9	73.2	40.4	43.2	2%
51026	[FARMERS3 115]	51038	[OWENSC3 115]	161.0	120.2	120.2	74.7	74.7	40.8	40.8	0%
51126	[DS-#203 115]	51176	[CURRY3 115]	99.0	57.0	49.9	57.6	50.4	42.0	49.1	7%
50990	[PUCKETT3 115]	51002	[COULTER3 115]	161.0	118.5	118.5	73.6	73.6	42.5	42.5	0%
52313	[PECOS6 230]	52314	[PECOS3 115]	150.0	106.7	107.9	71.2	72.0	43.3	42.1	-1%
52208	[CUNNINH3 115]	52209	[CUNNINH6 230]	168.0	123.9	122.2	73.8	72.7	44.1	45.8	1%
51014	[OSAGE--3 115]	51080	[CANYNE3 115]	99.0	54.4	57.4	54.9	58.0	44.6	41.6	-3%
50908	[CHERRY3 115]	50914	[NICHOL3 115]	161.0	116.4	116.4	72.3	72.3	44.6	44.6	0%
52088	[SAMSON3 115]	52094	[ROSWIN3 115]	161.0	115.1	109.9	71.5	68.3	45.9	51.1	3%
51146	[DS-213 115]	51150	[CASTRC3 115]	161.0	113.6	113.3	70.6	70.3	47.4	47.7	0%
51102	[DOWNFL3 115]	51106	[HEREFD3 115]	99.0	50.7	50.7	51.3	51.2	48.3	48.3	0%
51156	[NORRST3 115]	51194	[OASIS3 115]	161.0	112.4	106.5	69.8	66.1	48.6	54.5	4%
51018	[MANHTP3 115]	51020	[RANDALL3 115]	161.0	109.5	109.6	68.0	68.1	51.5	51.4	0%
51078	[CANYNW3 115]	51102	[DOWNFL3 115]	99.0	47.3	47.2	47.7	47.6	51.7	51.8	0%
51124	[PARMRC3 115]	51126	[DS-#203 115]	99.0	45.9	37.7	46.4	38.1	53.1	61.3	8%
51202	[ROOSEVL3 115]	51206	[CLOVISS 115]	321.0	107.9	139.6	33.6	43.5	213.1	181.4	-10%
52078	[URTON3 115]	52084	[ROSWLC3 115]	161.0	107.5	102.0	66.8	63.3	53.5	59.0	4%
51106	[HEREFD3 115]	51110	[DFSMTH3 115]	161.0	107.2	113.2	66.6	70.3	53.8	47.8	-4%
51106	[HEREFD3 115]	51122	[FRIONA3 115]	99.0	44.3	44.3	44.7	44.7	54.7	54.7	0%
50908	[CHERRY3 115]	50938	[NORTHW3 115]	161.0	105.1	105.1	65.3	65.3	55.9	55.9	0%
51120	[CARGIL3 115]	51124	[PARMRC3 115]	99.0	42.7	34.3	43.1	34.7	56.3	64.7	8%
50956	[EASTPL3 115]	50964	[PIERCT3 115]	161.0	104.0	104.1	64.6	64.7	57.0	56.9	0%

1:

04SP-20412-000. (PINNELL SITE) SYSTEM IMPACT STUDY
WIND FARM GENERATION - OFF 4/16/02

2:

04SP-20412-001. (PINNELL SITE) SYSTEM IMPACT STUDY
WIND FARM-184.8, CLOVIS-575, BLKWTR-200X 5/8/02

Comparing 2:04SP-20412-001.LST to 1:04SP-20412-000.LST

<----- FROM ----->		<----- TO ----->		RATING	No. 2 04SP_001 CONT.MVA	No. 1 04SP_000 CONT.MVA	No. 2 04SP_001 % OL	No. 1 04SP_000 % OL	No. 2 04SP_001 AVAIL	No. 1 04SP_000 AVAIL	2 to 1 Percent CHANGE
51078	[CANYNW3 115]	51080	[CANYNE3 115]	99.0	40.9	43.7	41.4	44.2	58.1	55.3	-3%
51202	[ROOSEVL3 115]	51208	[PORTALE3 115]	161.0	102.2	134.0	63.5	83.3	58.8	27.0	-20%
51014	[OSAGE--3 115]	51036	[ARRWHD3 115]	161.0	101.9	101.7	63.3	63.2	59.1	59.3	0%
50956	[EASTPL3 115]	50978	[MANHATT3 115]	161.0	97.9	98.1	60.8	60.9	63.1	62.9	0%
51120	[CARGIL3 115]	51122	[FRIONA3 115]	99.0	35.3	27.2	35.7	27.5	63.7	71.8	8%
52252	[POTJCT3 115]	52253	[POTJCT6 230]	172.5	106.7	105.1	61.9	60.9	65.8	67.4	1%
51026	[FARMERS3 115]	51032	[CRO-HIN3 115]	161.0	94.4	94.4	58.6	58.6	66.6	66.6	0%
51156	[NORRST3 115]	51176	[CURRY3 115]	161.0	94.2	88.2	58.5	54.8	66.8	72.8	4%
50880	[HIGHT3 115]	50924	[HIGHLND3 115]	99.0	31.3	31.3	31.6	31.6	67.7	67.7	0%
50970	[SONCY3 115]	50990	[PUCKETT3 115]	161.0	92.2	92.2	57.3	57.3	68.8	68.8	0%
51036	[ARRWHD3 115]	51038	[OWENSC3 115]	161.0	91.0	90.8	56.5	56.4	70.0	70.2	0%
51176	[CURRY3 115]	51180	[FE-CLVS3 115]	146.0	75.6	75.6	51.8	51.8	70.4	70.4	0%
52204	[LEACO3 115]	52205	[LEACO6 230]	168.0	94.5	94.1	56.2	56.0	73.5	73.9	0%
51008	[GEORGIA3 115]	51032	[CRO-HIN3 115]	161.0	86.2	86.3	53.6	53.6	74.8	74.7	0%
50992	[BUSHLND3 115]	50993	[BUSHLND6 230]	172.5	96.8	96.7	56.1	56.1	75.7	75.8	0%
52094	[ROSWIN3 115]	52098	[BRASHER3 115]	99.0	21.3	21.2	21.5	21.4	77.7	77.8	0%
51150	[CASTRC3 115]	51250	[BC-EART3 115]	161.0	83.2	83.2	51.7	51.7	77.8	77.8	0%
50964	[PIERCT3 115]	51014	[OSAGE--3 115]	161.0	81.1	81.2	50.4	50.5	79.9	79.8	0%
51156	[NORRST3 115]	51168	[NORRIS3 115]	99.0	18.5	18.5	18.7	18.7	80.5	80.5	0%
51194	[OASIS3 115]	51208	[PORTALE3 115]	161.0	79.9	80.0	49.7	49.7	81.1	81.0	0%
51038	[OWENSC3 115]	51044	[ESTCDT3 115]	161.0	79.1	79.1	49.1	49.1	81.9	81.9	0%
51094	[NEHFD3 115]	51110	[DFSMTH3 115]	161.0	77.0	79.4	47.8	49.3	84.0	81.6	-2%
50914	[NICHOL3 115]	50926	[YARNELL3 115]	180.0	96.0	95.9	53.3	53.3	84.0	84.1	0%
50978	[MANHATT3 115]	51018	[MANHTP3 115]	161.0	76.9	77.1	47.8	47.9	84.1	83.9	0%
51166	[CANNOA3 115]	51194	[OASIS3 115]	161.0	75.9	76.0	47.2	47.2	85.1	85.0	0%
50926	[YARNELL3 115]	50928	[CONWAY3 115]	180.0	94.6	94.5	52.6	52.5	85.4	85.5	0%
52166	[NAVAJ43 115]	52184	[EDDYCO3 115]	161.0	74.6	75.6	46.3	47.0	86.4	85.4	-1%
50938	[NORTHW3 115]	50988	[SUNSET3 115]	161.0	73.7	73.7	45.8	45.8	87.3	87.3	0%
50996	[34THST3 115]	51008	[GEORGIA3 115]	146.0	58.1	58.1	39.8	39.8	87.9	87.9	0%
52084	[ROSWLC3 115]	52094	[ROSWIN3 115]	161.0	72.5	72.2	45.0	44.9	88.5	88.8	0%
52294	[7RIVER3 115]	52296	[CV-LAKW3 115]	161.0	71.1	73.2	44.2	45.5	89.9	87.8	-1%
52072	[CHAVES3 115]	52073	[CHAVES6 230]	258.8	168.6	163.8	65.2	63.3	90.2	94.9	2%
52072	[CHAVES3 115]	52073	[CHAVES6 230]	258.8	168.6	163.8	65.2	63.3	90.2	94.9	2%
52282	[CV-INDH3 115]	52294	[7RIVER3 115]	161.0	67.1	66.7	41.7	41.4	93.9	94.3	0%

1:
04SP-20412-000. (PINNELL SITE) SYSTEM IMPACT STUDY
WIND FARM GENERATION - OFF 4/16/02

2:
04SP-20412-001. (PINNELL SITE) SYSTEM IMPACT STUDY
WIND FARM-184.8, CLOVIS-575, BLKWTR-200X 5/8/02

04SP-20412-001. **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-184.8, CLOVIS-575, BLKWTR-200X 5/8/02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Wind Farm\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Wind Farm\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_CON.DAT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 50858 [FINNEY7 345.00] TO BUS 56449 [HOLCOMB7345.00] CKT 1 ----- CONTINGENCY SINGLE 4
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 50858 FINNEY7 345 1.0626 1.0196

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 51021 [RANDALL6230.00] CKT 1 ----- CONTINGENCY SINGLE 102
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 51021 RANDALL6 230 0.8925 0.9827

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 50914 [NICHOL3 115.00] TO BUS 50915 [NICHOL6 230.00] CKT 2 ----- CONTINGENCY SINGLE 107
 50914 NICHOL3 115 50915*NICHOL6 230 1 119.6 152.6 150.0 101.7

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 50915 [NICHOL6 230.00] TO BUS 51041 [AMARLS6 230.00] CKT 1 ----- CONTINGENCY SINGLE 110
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 51041 AMARLS6 230 0.8991 0.9822

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 51094 [NEHFD3 115.00] TO BUS 51110 [DFSMT3 115.00] CKT 1 ----- CONTINGENCY SINGLE 156
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 51094 NEHFD3 115 0.8856 1.0257

04SP-20412-001. **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-184.8, CLOVIS-575, BLKWTR-200X 5/8/02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 51194 [OASIS3 115.00] TO BUS 51195 [OASIS6 230.00] CKT 1 ----- CONTINGENCY SINGLE 180
 51176*CURRY3 115 51206 CLOVISS 115 2 121.3 166.2 161.0 102.9

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 51195 [OASIS6 230.00] TO BUS 51205 [CLOVS 6230.00] CKT 1 ----- CONTINGENCY SINGLE 182
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 51195 OASIS6 230 0.8907 0.9879 99990 CATAMONT 230 0.8884 0.9821

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 51195 [OASIS6 230.00] TO BUS 99990 [CATAMONT230.00] CKT 1 ----- CONTINGENCY SINGLE 183
 *** NOT CONVERGED ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52073 [CHAVES6 230.00] TO BUS 52185 [EDDYCO6 230.00] CKT 1 ----- CONTINGENCY SINGLE 318
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 52073 CHAVES6 230 0.8762 0.9550

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52154 [ARTESIA3115.00] TO BUS 52162 [NAVAJ33 115.00] CKT 1 ----- CONTINGENCY SINGLE 326
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 52154 ARTESIA3 115 0.8746 1.0045

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52162 [NAVAJ33 115.00] TO BUS 52166 [NAVAJ43 115.00] CKT 1 ----- CONTINGENCY SINGLE 327
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 52154 ARTESIA3 115 0.8161 1.0045 52162 NAVAJ33 115 0.8156 1.0054

04SP-20412-001. **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-184.8, CLOVIS-575, BLKWTR-200X 5/8/02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52166 [NAVAJ43 115.00] TO BUS 52184 [EDDYCO3 115.00] CKT 1 ----- CONTINGENCY SINGLE 328
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 52154 ARTESIA3 115 0.8111 1.0045 52162 NAVAJ33 115 0.8105 1.0054
 52166 NAVAJ43 115 0.8105 1.0066

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52185 [EDDYCO6 230.00] TO BUS 52186 [EDDYCO7 345.00] CKT 1 ----- CONTINGENCY SINGLE 334
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52186 EDDYCO7 345 1.0924 1.0087

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52266 [WIPP3 115.00] TO BUS 52268 [SNDDUN3 115.00] CKT 1 ----- CONTINGENCY SINGLE 354
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52266 WIPP3 115 1.0549 1.0283

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52266 [WIPP3 115.00] TO BUS 52274 [IMC#13 115.00] CKT 1 ----- CONTINGENCY SINGLE 355
 *** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: 52266 WIPP3 115 1.0516 1.0283

04SP-20412-001. **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-184.8, CLOVIS-575, BLKWTR-200X 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Wind Farm\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Wind Farm\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_CON.DAT

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
51176 [CURRY3 115]	51206 [CLOVISS 115]	2	SINGLE 180	0	121.3	166.2	165.7	161.0	102.9	-4.7
50914 [NICHOL3 115]	50915 [NICHOL6 230]	1	SINGLE 107	0	119.6	152.6		150.0	101.7	-2.6
50914 [NICHOL3 115]	50915 [NICHOL6 230]	2	SINGLE 106	0	116.5	149.7		150.0	99.8	0.3
52184 [EDDYCO3 115]	52185 [EDDYCO6 230]	1	SINGLE 336	0	120.5	167.2		168.0	99.6	0.8
52293 [7RIVER6 230]	52294 [7RIVER3 115]	1	SINGLE 331	0	94.1	142.0		150.0	94.7	8.0
50956 [EASTPL3 115]	50957 [EASTPL6 230]	1	SINGLE 141	1	166.2	216.0		225.0	96.0	9.0
50910 [ASARCO3 115]	50914 [NICHOL3 115]	1	SINGLE 82	0	39.5	39.5	37.9	60.0	63.1	22.1
51014 [OSAGE--3 115]	51018 [MANHTP3 115]	1	SINGLE 137	0	86.7	139.5	134.3	161.0	83.4	26.7
51008 [GEORGIA3 115]	51014 [OSAGE--3 115]	1	SINGLE 110	0	101.3	135.6	132.8	161.0	82.5	28.2
52072 [CHAVES3 115]	52078 [URTON3 115]	1	SINGLE 317	0	89.3	136.3	132.3	161.0	82.2	28.7
52072 [CHAVES3 115]	52088 [SAMSON3 115]	1	SINGLE 316	0	54.3	129.6	127.7	161.0	79.3	33.3
51020 [RANDALL3 115]	51021 [RANDALL6 230]	1	SINGLE 110	0	189.1	225.0		258.8	87.0	33.8
51110 [DFSMTH3 115]	51146 [DS-213 115]	1	SINGLE 191	0	40.3	115.1	124.4	161.0	77.2	36.6
51110 [DFSMTH3 115]	51111 [DFSMTH6 230]	1	SINGLE 161	0	77.5	133.0		172.5	77.1	39.5
51110 [DFSMTH3 115]	51111 [DFSMTH6 230]	2	SINGLE 160	0	77.5	133.0		172.5	77.1	39.5
51014 [OSAGE--3 115]	51020 [RANDALL3 115]	1	SINGLE 136	0	68.1	125.3	120.6	161.0	74.9	40.4
51026 [FARMERS3 115]	51038 [OWENSC3 115]	1	SINGLE 132	0	52.8	122.4	120.2	161.0	74.7	40.8
51126 [DS-#203 115]	51176 [CURRY3 115]	1	SINGLE 6	0	40.9	58.5	57.0	99.0	57.6	42.0
50990 [PUCKETT3 115]	51002 [COULTER3 115]	1	SINGLE 103	0	56.6	118.8	118.5	161.0	73.6	42.5
52313 [PECOS6 230]	52314 [PECOS3 115]	1	SINGLE 359	0	71.3	106.7		150.0	71.2	43.3
52208 [CUNNINH3 115]	52209 [CUNNINH6 230]	1	SINGLE 348	0	94.7	123.9		168.0	73.8	44.1
51014 [OSAGE--3 115]	51080 [CANYNE3 115]	1	SINGLE 158	0	33.4	55.5	54.4	99.0	54.9	44.6
50908 [CHERRY3 115]	50914 [NICHOL3 115]	1	SINGLE 124	0	78.7	119.2	116.4	161.0	72.3	44.6
52088 [SAMSON3 115]	52094 [ROSWIN3 115]	1	SINGLE 316	0	41.3	115.7	115.1	161.0	71.5	45.9
51146 [DS-213 115]	51150 [CASTR3 115]	1	SINGLE 191	0	30.0	104.9	113.6	161.0	70.6	47.4
51102 [DOWNFL3 115]	51106 [HEREFD3 115]	1	SINGLE 139	0	15.7	49.7	50.7	99.0	51.3	48.3
51156 [NORRST3 115]	51194 [OASIS3 115]	1	SINGLE 179	0	40.3	109.2	112.4	161.0	69.8	48.6
51018 [MANHTP3 115]	51020 [RANDALL3 115]	1	SINGLE 137	0	63.2	114.0	109.5	161.0	68.0	51.5
51078 [CANYNW3 115]	51102 [DOWNFL3 115]	1	SINGLE 139	0	12.3	45.1	47.3	99.0	47.7	51.7
51124 [PARMRC3 115]	51126 [DS-#203 115]	1	SINGLE 6	0	28.7	46.4	45.9	99.0	46.4	53.1
51202 [ROOSEVL3 115]	51206 [CLOVISS 115]	2	SINGLE 180	0	53.8	111.3	107.9	161.0	67.0	53.1
52078 [URTON3 115]	52084 [ROSWLC3 115]	1	SINGLE 317	0	63.5	110.0	107.5	161.0	66.8	53.5
51106 [HEREFD3 115]	51110 [DFSMTH3 115]	1	SINGLE 156	0	63.5	109.8	107.2	161.0	66.6	53.8
51106 [HEREFD3 115]	51122 [FRIONA3 115]	1	SINGLE 167	0	14.8	42.7	44.3	99.0	44.7	54.7
50908 [CHERRY3 115]	50938 [NORTHW3 115]	1	SINGLE 124	0	66.1	104.9	105.1	161.0	65.3	55.9
51120 [CARGIL3 115]	51124 [PARMRC3 115]	1	SINGLE 6	0	25.3	43.0	42.7	99.0	43.1	56.3
50956 [EASTPL3 115]	50964 [PIERCT3 115]	1	SINGLE 102	1	64.5	107.7	104.0	161.0	64.6	57.0
51078 [CANYNW3 115]	51080 [CANYNE3 115]	1	SINGLE 158	0	21.1	41.5	40.9	99.0	41.4	58.1

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WIND FARM-184.8, CLOVIS-575, BLKWTR-200X 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
51202 [ROOSEVL3 115]	51208 [PORTALE3 115]	1	SINGLE 180	0	47.3	101.8	102.2	161.0	63.5	58.8
51014 [OSAGE--3 115]	51036 [ARRWHD3 115]	1	SINGLE 132	0	54.5	105.4	101.9	161.0	63.3	59.1
50956 [EASTPL3 115]	50978 [MANHATT3 115]	1	SINGLE 102	1	52.9	101.1	97.9	161.0	60.8	63.1
51120 [CARGIL3 115]	51122 [FRIONA3 115]	1	SINGLE 6	0	17.9	35.4	35.3	99.0	35.7	63.7
52252 [POTJCT3 115]	52253 [POTJCT6 230]	1	SINGLE 365	0	90.2	106.7		172.5	61.9	65.8
51026 [FARMERS3 115]	51032 [CRO-HIN3 115]	1	SINGLE 132	0	27.6	96.1	94.4	161.0	58.6	66.6
51156 [NORRST3 115]	51176 [CURRY3 115]	1	SINGLE 179	0	23.4	91.5	94.2	161.0	58.5	66.8
50880 [HIGHLT3 115]	50924 [HIGHLND3 115]	1	SINGLE 91	0	29.6	29.6	31.3	99.0	31.6	67.7
50970 [SONCY3 115]	50990 [PUCKETT3 115]	1	SINGLE 103	0	30.1	92.2	92.2	161.0	57.3	68.8
51036 [ARRWHD3 115]	51038 [OWENSC3 115]	1	SINGLE 132	0	44.4	93.2	91.0	161.0	56.5	70.0
51176 [CURRY3 115]	51180 [FE-CLVS3 115]	1	SINGLE 175	0	29.2	76.5	75.6	146.0	51.8	70.4
52204 [LEACO3 115]	52205 [LEACO6 230]	1	SINGLE 342	0	56.1	94.5		168.0	56.2	73.5
51008 [GEORGIA3 115]	51032 [CRO-HIN3 115]	1	SINGLE 132	0	22.6	87.3	86.2	161.0	53.6	74.8
50992 [BUSHLND3 115]	50993 [BUSHLND6 230]	1	SINGLE 110	0	80.5	96.8		172.5	56.1	75.7
52094 [ROSWIN3 115]	52098 [BRASHER3 115]	1	SINGLE 318	0	20.6	20.6	21.3	99.0	21.5	77.7
51150 [CASTRC3 115]	51250 [BC-EART3 115]	1	SINGLE 162	0	43.8	79.7	83.2	161.0	51.7	77.8
50964 [PIERCT3 115]	51014 [OSAGE--3 115]	1	SINGLE 102	1	41.3	83.2	81.1	161.0	50.4	79.9
51156 [NORRST3 115]	51168 [NORRIS3 115]	1	SINGLE 179	0	18.0	18.0	18.5	99.0	18.7	80.5
51194 [OASIS3 115]	51208 [PORTALE3 115]	1	SINGLE 184	0	28.4	80.4	79.9	161.0	49.7	81.1
51038 [OWENSC3 115]	51044 [ESTCDT3 115]	1	SINGLE 126	0	49.2	80.1	79.1	161.0	49.1	81.9
51094 [NEHFD3 115]	51110 [DFSMT3 115]	1	SINGLE 158	0	55.6	78.7	77.0	161.0	47.8	84.0
50914 [NICHOL3 115]	50926 [YARNELL3 115]	1	SINGLE 85	0	50.0	98.8	96.0	180.0	53.3	84.0
50978 [MANHATT3 115]	51018 [MANHTP3 115]	1	SINGLE 102	1	32.2	79.0	76.9	161.0	47.8	84.1
51166 [CANNOA3 115]	51194 [OASIS3 115]	1	SINGLE 178	0	46.0	76.0	75.9	161.0	47.2	85.1
50926 [YARNELL3 115]	50928 [CONWAY3 115]	1	SINGLE 85	0	48.3	95.6	94.6	180.0	52.6	85.4
52166 [NAVAJ43 115]	52184 [EDDYCO3 115]	1	SINGLE 319	0	70.7	74.8	74.6	161.0	46.3	86.4
50938 [NORTHW3 115]	50988 [SUNSET3 115]	1	SINGLE 124	0	16.3	73.0	73.7	161.0	45.8	87.3
50996 [34THST3 115]	51008 [GEORGIA3 115]	1	SINGLE 147	0	31.7	59.0	58.1	146.0	39.8	87.9
52084 [ROSWLC3 115]	52094 [ROSWIN3 115]	1	SINGLE 316	0	18.2	72.3	72.5	161.0	45.0	88.5
52294 [7RIVER3 115]	52296 [CV-LAKW3 115]	1	SINGLE 331	0	26.3	71.4	71.1	161.0	44.2	89.9
52072 [CHAVES3 115]	52073 [CHAVES6 230]	2	SINGLE 314	0	92.6	168.6		258.8	65.2	90.2
52072 [CHAVES3 115]	52073 [CHAVES6 230]	1	SINGLE 315	0	92.6	168.6		258.8	65.2	90.2
52282 [CV-INDH3 115]	52294 [7RIVER3 115]	1	SINGLE 366	0	48.6	68.2	67.1	161.0	41.7	93.9
52296 [CV-LAKW3 115]	52298 [CV-IRIS3 115]	1	SINGLE 331	0	20.8	65.6	65.8	161.0	40.8	95.2
51170 [FE-CLVS3 115]	51172 [FE-SWS3 115]	1	SINGLE 175	0	5.4	47.9	49.2	146.0	33.7	96.8
51170 [FE-CLVS3 115]	51180 [FE-CLVS3 115]	1	SINGLE 175	0	4.6	48.6	49.0	146.0	33.5	97.0
50928 [CONWAY3 115]	50932 [KIRBY3 115]	1	SINGLE 85	0	35.1	82.4	81.6	180.0	45.3	98.4
51078 [CANYNW3 115]	51088 [ROCKWEL3 115]	1	SINGLE 139	0	5.6	5.6	5.9	105.0	5.6	99.1
52180 [ATOKA3 115]	52298 [CV-IRIS3 115]	1	SINGLE 331	0	15.9	60.2	60.9	161.0	37.8	100.1
50970 [SONCY3 115]	50988 [SUNSET3 115]	1	SINGLE 124	0	3.0	59.6	60.3	161.0	37.5	100.7
52240 [PCA3 115]	52252 [POTJCT3 115]	1	SINGLE 351	0	6.7	56.8	59.0	161.0	36.6	102.0
51162 [WCLOVI3 115]	51166 [CANNOA3 115]	1	SINGLE 178	0	28.7	57.5	58.1	161.0	36.1	102.9

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*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
50880 [HIGHTL3 115]	50914 [NICHOL3 115]	1	SINGLE 80	0	39.7	57.2	55.1	161.0	34.2	105.9
52208 [CUNNINH3 115]	52240 [PCA3 115]	1	SINGLE 348	0	30.1	56.0	54.2	161.0	33.7	106.8
52282 [CV-INDH3 115]	52314 [PECOS3 115]	1	SINGLE 359	0	16.3	53.8	53.8	161.0	33.4	107.2
52184 [EDDYCO3 115]	52188 [CV-DAYT3 115]	1	SINGLE 328	0	14.2	54.6	53.3	161.0	33.1	107.7
51002 [COULTER3 115]	51044 [ESTCDT3 115]	1	SINGLE 126	0	23.5	53.8	53.3	161.0	33.1	107.7
52180 [ATOKA3 115]	52188 [CV-DAYT3 115]	1	SINGLE 328	0	9.8	49.7	49.5	161.0	30.8	111.5
51194 [OASIS3 115]	51195 [OASIS6 230]	1	SINGLE 179	0	114.9	177.9		289.8	61.4	111.9
50996 [34THST3 115]	51002 [COULTER3 115]	1	SINGLE 147	0	4.1	31.5	31.0	146.0	21.3	115.0
52240 [PCA3 115]	52310 [CARLSBD3 115]	1	SINGLE 365	0	22.5	46.3	45.7	161.0	28.4	115.3
51162 [WCLOVI3 115]	51172 [FE-SWS3 115]	1	SINGLE 178	0	16.4	44.7	45.4	161.0	28.2	115.6
50878 [CARNT3 115]	50882 [PANTXN3 115]	1	SINGLE 91	0	10.0	43.2	44.9	161.0	27.9	116.1
51076 [FE-TUCU3 115]	51176 [CURRY3 115]	1	SINGLE 179	0	24.9	24.9	27.3	146.0	18.7	118.7
52252 [POTJCT3 115]	52274 [IMC#13 115]	1	SINGLE 400	0	27.7	42.6	41.9	161.0	26.0	119.1
50938 [NORTHW3 115]	50943 [BUSH3 115]	1	SINGLE 103	1	25.9	25.9	26.1	146.0	17.9	119.9
52104 [TWEEDY3 115]	52184 [EDDYCO3 115]	1	SINGLE 319	0	9.5	41.5	40.5	161.0	25.1	120.5
50882 [PANTXN3 115]	50884 [PANTXS3 115]	1	SINGLE 91	0	9.8	37.7	39.4	161.0	24.5	121.6
52162 [NAVAJ33 115]	52166 [NAVAJ43 115]	1	SINGLE 319	0	69.3	73.5	73.3	197.0	37.2	123.7
52310 [CARLSBD3 115]	52314 [PECOS3 115]	1	SINGLE 351	0	34.3	72.8	73.2	197.0	37.2	123.8
52308 [PIESTA3 115]	52314 [PECOS3 115]	1	SINGLE 331	0	21.8	21.8	22.2	146.0	15.2	123.8
51040 [AMARLS3 115]	51041 [AMARLS6 230]	1	SINGLE 141	1	93.1	134.9		258.8	52.2	123.8
51012 [SOUTHE3 115]	51020 [RANDALL3 115]	1	SINGLE 102	1	21.7	21.7	21.2	146.0	14.5	124.8
52268 [SNDDUN3 115]	52329 [OCHOA3 115]	1	SINGLE 352	0	10.7	33.6	35.3	161.0	21.9	125.7
50914 [NICHOL3 115]	50922 [WHITAKR3 115]	1	SINGLE 116	0	49.1	125.2	120.1	249.0	48.3	128.9
50880 [HIGHTL3 115]	50884 [PANTXS3 115]	1	SINGLE 91	0	14.3	29.7	31.2	161.0	19.4	129.8
51070 [TUCUMCA3 115]	51076 [FE-TUCU3 115]	1	SINGLE 179	0	14.4	14.4	15.8	146.0	10.9	130.2
52266 [WIPP3 115]	52274 [IMC#13 115]	1	SINGLE 352	0	8.7	28.3	30.3	161.0	18.8	130.7
52266 [WIPP3 115]	52268 [SNDDUN3 115]	1	SINGLE 352	0	13.7	28.1	29.5	161.0	18.3	131.5
51044 [ESTCDT3 115]	51046 [ESTACAD3 115]	1	SINGLE 103	5	26.3	26.3	26.0	161.0	16.2	135.0
50964 [PIERCT3 115]	50966 [PIERCE3 115]	1	SINGLE 116	4	23.8	23.8	23.0	161.0	14.3	138.0
52304 [NCANALT3 115]	52314 [PECOS3 115]	1	SINGLE 331	0	15.2	57.3	58.1	197.0	29.5	138.9
51205 [CLOVS 6 230]	51206 [CLOVISS 115]	2	SINGLE 186	0	89.8	149.6		289.8	51.6	140.2
51205 [CLOVS 6 230]	51206 [CLOVISS 115]	1	SINGLE 187	0	89.8	149.6		289.8	51.6	140.2
52154 [ARTESIA3 115]	52162 [NAVAJ33 115]	1	SINGLE 319	0	52.2	56.4	56.3	197.0	28.6	140.7
51038 [OWENSC3 115]	51040 [AMARLS3 115]	1	SINGLE 141	1	93.0	130.9	128.0	271.0	47.2	143.0
51010 [PULLMAN3 115]	51012 [SOUTHE3 115]	1	SINGLE 102	1	3.0	3.0	3.0	146.0	2.0	143.0
50922 [WHITAKR3 115]	50956 [EASTPL3 115]	1	SINGLE 116	0	31.4	106.4	102.8	249.0	41.3	146.2
50992 [BUSHLND3 115]	50998 [HILLSID3 115]	1	SINGLE 110	0	78.2	93.7	92.0	249.0	36.9	157.0
52094 [ROSWIN3 115]	52104 [TWEEDY3 115]	1	SINGLE 331	0	11.7	37.7	37.3	197.0	18.9	159.7
50998 [HILLSID3 115]	51002 [COULTER3 115]	1	SINGLE 110	0	72.9	88.4	87.0	249.0	34.9	162.0
52184 [EDDYCO3 115]	52304 [NCANALT3 115]	1	SINGLE 331	0	16.8	33.6	34.0	197.0	17.3	163.0
50907 [HARRNG6 230]	50915 [NICHOL6 230]	1	SINGLE 100	0	233.9	436.7	435.1	635.0	68.5	199.9
50907 [HARRNG6 230]	50915 [NICHOL6 230]	2	SINGLE 99	0	220.0	435.5	433.9	635.0	68.3	201.1

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*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
52073 [CHAVES6 230]	99990 [CATAMONT 230]	1	SINGLE 218	0	178.8	254.3	261.8	497.0	52.7	235.2
50915 [NICHOL6 230]	51041 [AMARLS6 230]	1	SINGLE 141	1	195.2	233.5	242.3	497.0	48.7	254.7
50907 [HARRNG6 230]	51021 [RANDALL6 230]	1	SINGLE 110	0	189.1	225.0	229.4	497.0	46.2	267.6
52185 [EDDYCO6 230]	52186 [EDDYCO7 345]	1	SINGLE 319	0	193.6	287.6		560.0	51.4	272.4
50907 [HARRNG6 230]	50957 [EASTPL6 230]	1	SINGLE 141	0	166.2	216.0	217.6	497.0	43.8	279.4
51195 [OASIS6 230]	51205 [CLOVS 6 230]	1	SINGLE 219	0	128.6	197.4	200.9	497.0	40.4	296.1
50887 [POTTRC6 230]	50993 [BUSHLND6 230]	1	SINGLE 163	0	126.6	180.1	184.1	497.0	37.0	312.9
51195 [OASIS6 230]	99990 [CATAMONT 230]	1	SINGLE 319	0	33.1	179.0	180.6	497.0	36.3	316.4
52209 [CUNNINH6 230]	52253 [POTJCT6 230]	1	SINGLE 336	0	124.1	169.0	175.0	497.0	35.2	322.0
52073 [CHAVES6 230]	52185 [EDDYCO6 230]	1	SINGLE 319	0	60.8	148.7	157.8	497.0	31.7	339.2
INTERFACE N-S LINES			SINGLE 7	0	195.5	257.7		600.0	42.9	342.3
52253 [POTJCT6 230]	52313 [PECOS6 230]	1	SINGLE 336	0	60.1	102.8	106.5	452.0	23.6	345.5
52185 [EDDYCO6 230]	52293 [7RIVER6 230]	1	SINGLE 331	0	111.2	176.0	180.4	541.0	33.3	360.6
52293 [7RIVER6 230]	52313 [PECOS6 230]	1	SINGLE 348	0	18.7	84.9	87.8	452.0	19.4	364.2
50887 [POTTRC6 230]	50907 [HARRNG6 230]	1	SINGLE 96	0	78.3	129.3	130.0	497.0	26.2	367.0
50887 [POTTRC6 230]	50907 [HARRNG6 230]	2	SINGLE 95	0	67.1	124.4	125.1	497.0	25.2	371.9
50993 [BUSHLND6 230]	51111 [DFSMTH6 230]	1	SINGLE 163	0	49.4	109.0	115.0	497.0	23.1	382.0
52185 [EDDYCO6 230]	52209 [CUNNINH6 230]	1	SINGLE 218	0	47.3	114.5	114.3	497.0	23.0	382.7
52205 [LEACO6 230]	52209 [CUNNINH6 230]	1	SINGLE 342	0	44.9	91.7	91.5	497.0	18.4	405.5
50887 [POTTRC6 230]	50888 [POTTRC7 345]	1	SINGLE 7	0	71.9	101.9		560.0	18.2	458.1

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*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Wind Farm\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Wind Farm\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Wind Farm\CASES\CONT_CON.DAT

<-CONTINGENCY-> <-----CONTINGENCY DESCRIPTION----->

SINGLE 6	OPEN LINE FROM BUS 51205 [CLOVS 6230.00] TO BUS 59995 [PNM-DC6 230.00] CKT 1
SINGLE 7	OPEN LINE FROM BUS 51534 [TUCO7 345.00] TO BUS 54119 [O.K.U.-7345.00] CKT 1
SINGLE 80	OPEN LINE FROM BUS 50751 [HUTCH6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 82	OPEN LINE FROM BUS 50820 [BOWERS3 115.00] TO BUS 50826 [GRAPEVN3115.00] CKT 1
SINGLE 85	OPEN LINE FROM BUS 50827 [GRAPEVN6230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 91	OPEN LINE FROM BUS 50880 [HIGHLT3 115.00] TO BUS 50914 [NICHOL3 115.00] CKT 1
SINGLE 95	OPEN LINE FROM BUS 50887 [POTTRC6 230.00] TO BUS 50907 [HARRNG6 230.00] CKT 1
SINGLE 96	OPEN LINE FROM BUS 50887 [POTTRC6 230.00] TO BUS 50907 [HARRNG6 230.00] CKT 2
SINGLE 99	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 100	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 2
SINGLE 102	OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 51021 [RANDALL6230.00] CKT 1
SINGLE 103	OPEN LINE FROM BUS 50908 [CHERRY3 115.00] TO BUS 50914 [NICHOL3 115.00] CKT 1
SINGLE 106	OPEN LINE FROM BUS 50914 [NICHOL3 115.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
SINGLE 107	OPEN LINE FROM BUS 50914 [NICHOL3 115.00] TO BUS 50915 [NICHOL6 230.00] CKT 2
SINGLE 110	OPEN LINE FROM BUS 50915 [NICHOL6 230.00] TO BUS 51041 [AMARLS6 230.00] CKT 1
SINGLE 116	OPEN LINE FROM BUS 50956 [EASTPL3 115.00] TO BUS 50957 [EASTPL6 230.00] CKT 1
SINGLE 124	OPEN LINE FROM BUS 50990 [PUCKETT3115.00] TO BUS 51002 [COULTER3115.00] CKT 1
SINGLE 126	OPEN LINE FROM BUS 50992 [BUSHLND3115.00] TO BUS 50998 [HILLSID3115.00] CKT 1
SINGLE 132	OPEN LINE FROM BUS 51008 [GEORGIA3115.00] TO BUS 51014 [OSAGE--3115.00] CKT 1
SINGLE 136	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51018 [MANHTP3 115.00] CKT 1
SINGLE 137	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51020 [RANDALL3115.00] CKT 1
SINGLE 139	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51080 [CANYNE3 115.00] CKT 1

04SP-20412-001. **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-184.8, CLOVIS-575, BLKWTR-200X 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

<-CONTINGENCY->	<-----CONTINGENCY DESCRIPTION----->
SINGLE 141	OPEN LINE FROM BUS 51020 [RANDALL3115.00] TO BUS 51021 [RANDALL6230.00] CKT 1
SINGLE 147	OPEN LINE FROM BUS 51038 [OWENSC3 115.00] TO BUS 51044 [ESTCDT3 115.00] CKT 1
SINGLE 156	OPEN LINE FROM BUS 51094 [NEHFD3 115.00] TO BUS 51110 [DFSMTH3 115.00] CKT 1
SINGLE 158	OPEN LINE FROM BUS 51106 [HEREFD3 115.00] TO BUS 51110 [DFSMTH3 115.00] CKT 1
SINGLE 160	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51111 [DFSMTH6 230.00] CKT 1
SINGLE 161	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51111 [DFSMTH6 230.00] CKT 2
SINGLE 162	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51146 [DS-213 115.00] CKT 1
SINGLE 163	OPEN LINE FROM BUS 51111 [DFSMTH6 230.00] TO BUS 51419 [PLANTX6 230.00] CKT 1
SINGLE 167	OPEN LINE FROM BUS 51126 [DS-#203 115.00] TO BUS 51176 [CURRY3 115.00] CKT 1
SINGLE 175	OPEN LINE FROM BUS 51166 [CANNOA3 115.00] TO BUS 51194 [OASIS3 115.00] CKT 1
SINGLE 178	OPEN LINE FROM BUS 51176 [CURRY3 115.00] TO BUS 51180 [FE-CLVS3115.00] CKT 1
SINGLE 179	OPEN LINE FROM BUS 51176 [CURRY3 115.00] TO BUS 51206 [CLOVISS 115.00] CKT 2
SINGLE 180	OPEN LINE FROM BUS 51194 [OASIS3 115.00] TO BUS 51195 [OASIS6 230.00] CKT 1
SINGLE 184	OPEN LINE FROM BUS 51202 [ROOSEVL3115.00] TO BUS 51206 [CLOVISS 115.00] CKT 2
SINGLE 186	OPEN LINE FROM BUS 51205 [CLOVS 6230.00] TO BUS 51206 [CLOVISS 115.00] CKT 1
SINGLE 187	OPEN LINE FROM BUS 51205 [CLOVS 6230.00] TO BUS 51206 [CLOVISS 115.00] CKT 2
SINGLE 191	OPEN LINE FROM BUS 51250 [BC-EART3115.00] TO BUS 51418 [PLANTX3 115.00] CKT 1
SINGLE 218	OPEN LINE FROM BUS 51439 [TOLKTP6 230.00] TO BUS 51440 [TOLK7 345.00] CKT 1
SINGLE 219	OPEN LINE FROM BUS 51440 [TOLK7 345.00] TO BUS 52186 [EDDYCO7 345.00] CKT 1
SINGLE 314	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52073 [CHAVES6 230.00] CKT 1
SINGLE 315	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52073 [CHAVES6 230.00] CKT 2
SINGLE 316	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52078 [URTON3 115.00] CKT 1
SINGLE 317	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52088 [SAMSON3 115.00] CKT 1
SINGLE 318	OPEN LINE FROM BUS 52073 [CHAVES6 230.00] TO BUS 52185 [EDDYCO6 230.00] CKT 1
SINGLE 319	OPEN LINE FROM BUS 52073 [CHAVES6 230.00] TO BUS 99990 [CATAMONT230.00] CKT 1

04SP-20412-001. **WIND FARM** (PINNELL SITE) IMPACT STUDY
WIND FARM-184.8, CLOVIS-575, BLKWTR-200X 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

<-CONTINGENCY->	<-----CONTINGENCY DESCRIPTION----->
SINGLE 328	OPEN LINE FROM BUS 52166 [NAVAJ43 115.00] TO BUS 52184 [EDDYCO3 115.00] CKT 1
SINGLE 331	OPEN LINE FROM BUS 52184 [EDDYCO3 115.00] TO BUS 52185 [EDDYCO6 230.00] CKT 1
SINGLE 336	OPEN LINE FROM BUS 52185 [EDDYCO6 230.00] TO BUS 52293 [7RIVER6 230.00] CKT 1
SINGLE 342	OPEN LINE FROM BUS 52208 [CUNNINH3115.00] TO BUS 52209 [CUNNINH6230.00] CKT 1
SINGLE 348	OPEN LINE FROM BUS 52209 [CUNNINH6230.00] TO BUS 52253 [POTJCT6 230.00] CKT 1
SINGLE 351	OPEN LINE FROM BUS 52252 [POTJCT3 115.00] TO BUS 52253 [POTJCT6 230.00] CKT 1
SINGLE 352	OPEN LINE FROM BUS 52252 [POTJCT3 115.00] TO BUS 52274 [IMC#13 115.00] CKT 1
SINGLE 359	OPEN LINE FROM BUS 52293 [7RIVER6 230.00] TO BUS 52294 [7RIVER3 115.00] CKT 1
SINGLE 365	OPEN LINE FROM BUS 52310 [CARLSBD3115.00] TO BUS 52314 [PECOS3 115.00] CKT 1
SINGLE 366	OPEN LINE FROM BUS 52313 [PECOS6 230.00] TO BUS 52314 [PECOS3 115.00] CKT 1
SINGLE 400	OPEN LINE FROM BUS 52424 [COOPRR3 115.00] TO BUS 52428 [MOMUMT3 115.00] CKT 1

2004 Winter Peak Case

<----- FROM ----->		<----- TO ----->		RATING	No. 2 04WP_001 CONT.MVA	No. 1 04WP_000 CONT.MVA	No. 2 04WP_001 % OL	No. 1 04WP_000 % OL	No. 2 04WP_001 AVAIL	No. 1 04WP_000 AVAIL	2 to 1 Percent CHANGE
52184	[EDDYCO3 115]	52185	[EDDYCO6 230]	168.0	146.5	147.2	87.2	87.6	21.5	20.8	0%
52293	[7RIVER6 230]	52294	[7RIVER3 115]	150.0	118.2	120.3	78.8	80.2	31.8	29.7	-1%
50914	[NICHOL3 115]	50915	[NICHOL6 230]	150.0	110.1	110.2	73.4	73.5	39.9	39.8	0%
50914	[NICHOL3 115]	50915	[NICHOL6 230]	150.0	108.0	108.0	72.0	72.0	42.0	42.0	0%
50910	[ASARCO3 115]	50914	[NICHOL3 115]	71.0	26.8	26.8	37.7	37.7	44.2	44.2	0%
51126	[DS-#203 115]	51176	[CURRY3 115]	118.0	54.2	44.9	45.9	38.1	63.8	73.1	8%
52313	[PECOS6 230]	52314	[PECOS3 115]	150.0	85.2	86.8	56.8	57.8	64.8	63.2	-1%
51124	[PARMRC3 115]	51126	[DS-#203 115]	118.0	48.2	38.7	40.8	32.8	69.8	79.3	8%
51120	[CARGIL3 115]	51124	[PARMRC3 115]	118.0	46.2	36.8	39.2	31.2	71.8	81.2	8%
51176	[CURRY3 115]	51206	[CLOVISS 115]	390.0	119.4	158.5	30.6	40.6	270.6	231.5	-10%
51120	[CARGIL3 115]	51122	[FRIONA3 115]	118.0	41.9	32.5	35.5	27.5	76.1	85.5	8%
52072	[CHAVES3 115]	52078	[URTON3 115]	195.0	117.0	111.0	60.0	56.9	78.0	84.0	3%
50956	[EASTPL3 115]	50957	[EASTPL6 230]	225.0	144.2	144.5	64.1	64.2	80.8	80.5	0%
51106	[HEREFD3 115]	51122	[FRIONA3 115]	118.0	35.8	26.7	30.3	22.6	82.2	91.3	8%
52072	[CHAVES3 115]	52088	[SAMSON3 115]	195.0	112.5	106.6	57.7	54.7	82.5	88.4	3%
51014	[OSAGE--3 115]	51018	[MANHTP3 115]	195.0	105.5	105.6	54.1	54.2	89.5	89.4	0%
51102	[DAWN 115]	51106	[HEREFD3 115]	118.0	28.1	28.0	23.8	23.8	89.9	90.0	0%
52252	[POTJCT3 115]	52253	[POTJCT6 230]	172.5	82.0	82.1	47.6	47.6	90.5	90.4	0%
51014	[OSAGE--3 115]	51080	[CANYNE3 115]	118.0	27.5	27.5	23.3	23.3	90.5	90.5	0%
51078	[CANYNW3 115]	51102	[DAWN 115]	118.0	26.2	26.2	22.2	22.2	91.8	91.8	0%
52088	[SAMSON3 115]	52094	[ROSWIN3 115]	195.0	101.8	96.0	52.2	49.2	93.2	99.0	3%
51008	[GEORGIA3 115]	51014	[OSAGE--3 115]	195.0	100.6	100.4	51.6	51.5	94.4	94.6	0%
51018	[MANHTP3 115]	51020	[RANDALL3 115]	195.0	100.2	100.2	51.4	51.4	94.8	94.8	0%
51014	[OSAGE--3 115]	51020	[RANDALL3 115]	195.0	99.8	99.9	51.2	51.2	95.2	95.1	0%
50880	[HIGHT3 115]	50924	[HIGHLND3 115]	118.0	21.5	21.5	18.2	18.2	96.5	96.5	0%
51078	[CANYNW3 115]	51080	[CANYNE3 115]	118.0	19.9	19.9	16.9	16.9	98.1	98.1	0%
52078	[URTON3 115]	52084	[ROSWLC3 115]	195.0	96.7	90.6	49.6	46.5	98.3	104.4	3%
52094	[ROSWIN3 115]	52098	[BRASHER3 115]	118.0	17.3	17.2	14.7	14.6	100.7	100.8	0%
50996	[34THST3 115]	51008	[GEORGIA3 115]	146.0	42.8	42.8	29.3	29.3	103.2	103.2	0%
51020	[RANDALL3 115]	51021	[RANDALL6 230]	258.8	154.9	155.0	59.9	59.9	103.9	103.7	0%
50992	[BUSHLND3 115]	50993	[BUSHLND6 230]	172.5	66.1	66.0	38.3	38.3	106.4	106.5	0%
51110	[DFSMT3 115]	51111	[DFSMT6 230]	172.5	65.4	69.8	37.9	40.5	107.1	102.7	-3%
51110	[DFSMT3 115]	51111	[DFSMT6 230]	172.5	65.4	69.8	37.9	40.5	107.1	102.7	-3%
51156	[NORRST3 115]	51168	[NORRIS3 115]	118.0	10.5	10.5	8.9	8.9	107.5	107.5	0%
51026	[FARMERS3 115]	51038	[OWENSC3 115]	195.0	85.5	85.6	43.9	43.9	109.5	109.4	0%
52208	[CUNNINH3 115]	52209	[CUNNINH6 230]	168.0	56.5	60.6	33.7	36.1	111.5	107.4	-2%
52072	[CHAVES3 115]	52073	[CHAVES6 230]	258.8	146.8	141.0	56.7	54.5	112.0	117.7	2%

1:
 04WP-20412-000. (PINNELL-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND OFF, CLOVIS-550, BLKWTR-150 5/8/02

2:
 04WP-20412-001. (PINNELL-SITE) SYSTEM IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/8/02

Comparing 2:04WP-20412-001.LST to 1:04WP-20412-000.LST

<----- FROM ----->		<----- TO ----->		RATING	No. 2 04WP_001	No. 1 04WP_000	No. 2 04WP_001	No. 1 04WP_000	No. 2 04WP_001	No. 1 04WP_000	2 to 1 Percent CHANGE
					CONT.MVA	CONT.MVA	% OL	% OL	AVAIL	AVAIL	
52072	[CHAVES3 115]	52073	[CHAVES6 230]	258.8	146.8	141.0	56.7	54.5	112.0	117.7	2%
50990	[PUCKETT3 115]	51002	[COULTER3 115]	195.0	82.1	82.1	42.1	42.1	112.9	112.9	0%
51014	[OSAGE--3 115]	51036	[ARRWHD3 115]	195.0	81.7	81.5	41.9	41.8	113.3	113.5	0%
52204	[LEACO3 115]	52205	[LEACO6 230]	168.0	52.9	57.2	31.5	34.0	115.1	110.8	-3%
50908	[CHERRY3 115]	50914	[NICHOL3 115]	195.0	79.0	79.1	40.5	40.5	116.0	115.9	0%
51020	[RANDALL3 115]	51082	[PALODU 3 115]	118.0	2.0	2.0	1.7	1.7	116.0	116.0	0%
51078	[CANYNW3 115]	51088	[ROCKWEL3 115]	124.0	3.3	3.3	2.6	2.6	120.7	120.7	0%
51036	[ARRWHD3 115]	51038	[OWENSC3 115]	195.0	74.2	74.0	38.0	37.9	120.8	121.0	0%
50996	[34THST3 115]	51002	[COULTER3 115]	146.0	23.9	23.9	16.4	16.4	122.1	122.1	0%
50914	[NICHOL3 115]	50926	[YARNELL3 115]	218.0	95.3	95.3	43.7	43.7	122.7	122.7	0%
51156	[NORRST3 115]	51194	[OASIS3 115]	195.0	71.8	65.6	36.8	33.6	123.2	129.4	3%
50926	[YARNELL3 115]	50928	[CONWAY3 115]	218.0	94.4	94.3	43.3	43.3	123.6	123.7	0%
50908	[CHERRY3 115]	50938	[NORTHW3 115]	195.0	71.1	71.1	36.5	36.5	123.9	123.9	0%
51026	[FARMERS3 115]	51032	[CRO-HIN3 115]	195.0	67.4	67.4	34.6	34.6	127.6	127.6	0%
51110	[DFSMTH3 115]	51146	[DS-213 115]	195.0	65.1	65.0	33.4	33.3	129.9	130.0	0%
51106	[HEREFD3 115]	51110	[DFSMTH3 115]	195.0	63.8	63.9	32.7	32.8	131.2	131.1	0%
50970	[SONCY3 115]	50990	[PUCKETT3 115]	195.0	63.8	63.8	32.7	32.7	131.2	131.2	0%
51202	[ROOSEVL3 115]	51206	[CLOVISS 115]	390.0	63.5	92.5	16.3	23.7	326.5	297.5	-7%
50956	[EASTPL3 115]	50964	[PIERCT3 115]	195.0	63.2	63.5	32.4	32.6	131.8	131.5	0%
50928	[CONWAY3 115]	50932	[KIRBY3 115]	218.0	85.1	85.1	39.1	39.0	132.9	132.9	0%
51156	[NORRST3 115]	51176	[CURRY3 115]	195.0	61.7	55.4	31.7	28.4	133.3	139.6	3%
51008	[GEORGIA3 115]	51032	[CRO-HIN3 115]	195.0	61.7	61.7	31.6	31.7	133.3	133.3	0%
52166	[NAVAJ43 115]	52184	[EDDYCO3 115]	195.0	61.2	61.1	31.4	31.4	133.8	133.9	0%
51176	[CURRY3 115]	51180	[FE-CLVS3 115]	177.0	42.3	42.3	23.9	23.9	134.7	134.7	0%
51202	[ROOSEVL3 115]	51208	[PORTALE3 115]	195.0	60.3	89.4	30.9	45.8	134.7	105.6	-15%
52084	[ROSWLC3 115]	52094	[ROSWIN3 115]	195.0	60.2	59.8	30.9	30.7	134.8	135.2	0%
51146	[DS-213 115]	51150	[CASTRC3 115]	195.0	59.9	59.8	30.7	30.6	135.1	135.2	0%
50956	[EASTPL3 115]	50978	[MANHATT3 115]	195.0	58.4	58.8	30.0	30.1	136.6	136.2	0%
52282	[CV-INDH3 115]	52294	[7RIVER3 115]	195.0	57.8	57.6	29.6	29.6	137.2	137.4	0%
51038	[OWENSC3 115]	51044	[ESTCDT3 115]	195.0	55.9	56.0	28.7	28.7	139.1	139.0	0%
52294	[7RIVER3 115]	52296	[CV-LAKW3 115]	195.0	55.3	57.9	28.4	29.7	139.7	137.1	-1%
52208	[CUNNINH3 115]	52240	[PCA3 115]	195.0	53.4	56.5	27.4	29.0	141.6	138.5	-2%
51150	[CASTRC3 115]	51250	[BC-EART3 115]	195.0	52.8	55.5	27.1	28.5	142.2	139.5	-1%
50938	[NORTHW3 115]	50988	[SUNSET3 115]	195.0	51.2	51.2	26.3	26.3	143.8	143.8	0%

1:

04WP-20412-000. (PINNELL-SITE) SYSTEM IMPACT STUDY
2004 WINTER, WIND OFF, CLOVIS-550, BLKWTR-150 5/8/02

2:

04WP-20412-001. (PINNELL-SITE) SYSTEM IMPACT STUDY
2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/8/02

04WP-20412-001. (CATAMOUNT) (PINNELL-SITE) IMPACT STUDY
2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/8/02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
*** ACCC VOLTAGE REPORT ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Catamount\CASES\DFSPS.sgf
SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Catamount\CASES\CONT_SUB.DAT
MONITORED ELEMENT FILE: D:\STUDIES\Catamount\CASES\CONT_MON.DAT
CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Catamount\CASES\CONT_CON.DAT

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 51021 [RANDALL6230.00] CKT 1 ----- CONTINGENCY SINGLE 104
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 51021 RANDALL6 230 0.8930 0.9886

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 51094 [NEHFD3 115.00] TO BUS 51110 [DFSMT3 115.00] CKT 1 ----- CONTINGENCY SINGLE 158
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 51094 NEHFD3 115 0.8968 1.0348

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 51195 [OASIS6 230.00] TO BUS 99990 [CATAMONT230.00] CKT 1 ----- CONTINGENCY SINGLE 185
*** NOT CONVERGED ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 52154 ARTESIA3 115 0.8879 1.0139

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 52154 [ARTESIA3115.00] TO BUS 52162 [NAVAJ33 115.00] CKT 1 ----- CONTINGENCY SINGLE 329
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 52154 ARTESIA3 115 0.8637 1.0139

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
OPEN LINE FROM BUS 52162 [NAVAJ33 115.00] TO BUS 52166 [NAVAJ43 115.00] CKT 1 ----- CONTINGENCY SINGLE 330
*** NONE ***

X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: 52154 ARTESIA3 115 0.8637 1.0139 52162 NAVAJ33 115 0.8634 1.0146

04WP-20412-001. (CATAMOUNT) (PINNELL-SITE) IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/8/02

*** ACCC OVERLOAD REPORT: MONITORED ELEMENTS LOADED ABOVE 100.0 % OF RATING SET B ***
 *** ACCC VOLTAGE REPORT ***

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52166 [NAVAJ43 115.00] TO BUS 52184 [EDDYCO3 115.00] CKT 1 ----- CONTINGENCY SINGLE 331
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE LESS THAN 0.9000: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52154 ARTESIA3 115 0.8617 1.0139 52162 NAVAJ33 115 0.8613 1.0146
 52166 NAVAJ43 115 0.8613 1.0154

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52185 [EDDYCO6 230.00] TO BUS 52186 [EDDYCO7 345.00] CKT 1 ----- CONTINGENCY SINGLE 337
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52186 EDDYCO7 345 1.0945 1.0095

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52205 [LEACO6 230.00] TO BUS 52209 [CUNNINH6230.00] CKT 1 ----- CONTINGENCY SINGLE 343
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52231 MIDLND-6 230 1.0548 1.0383

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52205 [LEACO6 230.00] TO BUS 52231 [MIDLND-6230.00] CKT 1 ----- CONTINGENCY SINGLE 344
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52231 MIDLND-6 230 1.1616 1.0383

X----- C O N T I N G E N C Y E V E N T S -----X X-- O V E R L O A D E D L I N E S --X X--MVA(MW) FLOW--X
 X---- MULTI-SECTION LINE GROUPINGS ----X FROM NAME TO NAME CKT PRE-CNT POST-CNT RATING PERCENT
 OPEN LINE FROM BUS 52266 [WIPP3 115.00] TO BUS 52274 [IMC#13 115.00] CKT 1 ----- CONTINGENCY SINGLE 358
 *** NONE ***

'SPS ' BUSES WITH VOLTAGE GREATER THAN 1.0500: X----- BUS -----X V-CONT V-INIT X----- BUS -----X V-CONT V-INIT
 52266 WIPP3 115 1.0563 1.0317 52268 SNDDUN3 115 1.0501 1.0286

04WP-20412-001. (CATAMOUNT) (PINNELL-SITE) IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Catamount\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Catamount\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Catamount\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Catamount\CASES\CONT_CON.DAT

<----- FROM ----->	<----- TO ----->	KCT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
52184 [EDDYCO3 115]	52185 [EDDYCO6 230]	1	SINGLE 339	0	102.6	146.5		168.0	87.2	21.5
52293 [7RIVER6 230]	52294 [7RIVER3 115]	1	SINGLE 334	0	78.7	118.2		150.0	78.8	31.8
50914 [NICHOL3 115]	50915 [NICHOL6 230]	1	SINGLE 109	0	88.0	110.1		150.0	73.4	39.9
50914 [NICHOL3 115]	50915 [NICHOL6 230]	2	SINGLE 108	0	85.7	108.0		150.0	72.0	42.0
50910 [ASARCO3 115]	50914 [NICHOL3 115]	1	SINGLE 49	399	27.8	27.8	26.8	71.0	37.7	44.2
51126 [DS-#203 115]	51176 [CURRY3 115]	1	SINGLE 7	0	42.1	56.4	54.2	118.0	45.9	63.8
52313 [PECOS6 230]	52314 [PECOS3 115]	1	SINGLE 362	0	57.1	85.2		150.0	56.8	64.8
51124 [PARMRC3 115]	51126 [DS-#203 115]	1	SINGLE 7	0	35.5	49.6	48.2	118.0	40.8	69.8
51120 [CARGIL3 115]	51124 [PARMRC3 115]	1	SINGLE 7	0	33.5	47.5	46.2	118.0	39.2	71.8
51176 [CURRY3 115]	51206 [CLOVISS 115]	2	SINGLE 182	0	95.3	123.2	119.4	195.0	61.2	75.6
51120 [CARGIL3 115]	51122 [FRIONA3 115]	1	SINGLE 7	0	29.0	42.9	41.9	118.0	35.5	76.1
52072 [CHAVES3 115]	52078 [URTON3 115]	1	SINGLE 320	0	78.2	120.1	117.0	195.0	60.0	78.0
50956 [EASTPL3 115]	50957 [EASTPL6 230]	1	SINGLE 143	1	111.5	144.2		225.0	64.1	80.8
51106 [HEREFD3 115]	51122 [FRIONA3 115]	1	SINGLE 7	0	23.4	36.7	35.8	118.0	30.3	82.2
52072 [CHAVES3 115]	52088 [SAMSON3 115]	1	SINGLE 319	0	49.2	114.4	112.5	195.0	57.7	82.5
51014 [OSAGE--3 115]	51018 [MANHTP3 115]	1	SINGLE 139	0	61.8	109.6	105.5	195.0	54.1	89.5
51102 [DAWN 115]	51106 [HEREFD3 115]	1	SINGLE 141	0	19.4	28.6	28.1	118.0	23.8	89.9
52252 [POTJCT3 115]	52253 [POTJCT6 230]	1	SINGLE 346	0	70.1	82.0		172.5	47.6	90.5
51014 [OSAGE--3 115]	51080 [CANYNE3 115]	1	SINGLE 159	0	10.7	28.3	27.5	118.0	23.3	90.5
51078 [CANYNW3 115]	51102 [DAWN 115]	1	SINGLE 141	0	17.3	26.3	26.2	118.0	22.2	91.8
52088 [SAMSON3 115]	52094 [ROSWIN3 115]	1	SINGLE 319	0	38.0	102.9	101.8	195.0	52.2	93.2
51008 [GEORGIA3 115]	51014 [OSAGE--3 115]	1	SINGLE 112	0	78.0	103.2	100.6	195.0	51.6	94.4
51018 [MANHTP3 115]	51020 [RANDALL3 115]	1	SINGLE 139	0	54.3	104.2	100.2	195.0	51.4	94.8
51014 [OSAGE--3 115]	51020 [RANDALL3 115]	1	SINGLE 142	0	56.3	103.7	99.8	195.0	51.2	95.2
50880 [HIGHLT3 115]	50924 [HIGHLND3 115]	1	SINGLE 93	0	20.8	20.8	21.5	118.0	18.2	96.5
51078 [CANYNW3 115]	51080 [CANYNE3 115]	1	SINGLE 159	0	7.7	20.4	19.9	118.0	16.9	98.1
52078 [URTON3 115]	52084 [ROSWLC3 115]	1	SINGLE 320	0	57.2	99.2	96.7	195.0	49.6	98.3
52094 [ROSWIN3 115]	52098 [BRASHER3 115]	1	SINGLE 321	0	17.3	17.3	17.3	118.0	14.7	100.7
50996 [34THST3 115]	51008 [GEORGIA3 115]	1	SINGLE 149	0	24.2	43.6	42.8	146.0	29.3	103.2
51020 [RANDALL3 115]	51021 [RANDALL6 230]	1	SINGLE 103	1	131.5	154.9		258.8	59.9	103.9
50992 [BUSHLND3 115]	50993 [BUSHLND6 230]	1	SINGLE 112	0	54.8	66.1		172.5	38.3	106.4
51110 [DFSMTH3 115]	51111 [DFSMTH6 230]	1	SINGLE 163	0	38.4	65.4		172.5	37.9	107.1
51110 [DFSMTH3 115]	51111 [DFSMTH6 230]	2	SINGLE 162	0	38.4	65.4		172.5	37.9	107.1
51156 [NORRST3 115]	51168 [NORRIS3 115]	1	SINGLE 181	0	10.5	10.5	10.5	118.0	8.9	107.5
51026 [FARMERS3 115]	51038 [OWENSC3 115]	1	SINGLE 134	0	34.0	87.4	85.5	195.0	43.9	109.5
52208 [CUNNINH3 115]	52209 [CUNNINH6 230]	1	SINGLE 220	0	38.1	56.5		168.0	33.7	111.5
52072 [CHAVES3 115]	52073 [CHAVES6 230]	2	SINGLE 317	0	80.5	146.8		258.8	56.7	112.0
52072 [CHAVES3 115]	52073 [CHAVES6 230]	1	SINGLE 318	0	80.5	146.8		258.8	56.7	112.0

04WP-20412-001. CATAMOUNT (PINNELL-SITE) IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
50990 [PUCKETT3 115]	51002 [COULTER3 115]	1	SINGLE 105	0	41.9	83.1	82.1	195.0	42.1	112.9
51014 [OSAGE--3 115]	51036 [ARRWHD3 115]	1	SINGLE 134	0	45.1	84.6	81.7	195.0	41.9	113.3
52204 [LEACO3 115]	52205 [LEACO6 230]	1	SINGLE 343	0	19.8	52.9		168.0	31.5	115.1
50908 [CHERRY3 115]	50914 [NICHOL3 115]	1	SINGLE 126	0	51.8	81.1	79.0	195.0	40.5	116.0
51020 [RANDALL3 115]	51082 [PALODU 3 115]	1	SINGLE 104	399	2.1	2.1	2.0	118.0	1.7	116.0
51078 [CANYNW3 115]	51088 [ROCKWEL3 115]	1	SINGLE 141	0	3.3	3.3	3.3	124.0	2.6	120.7
51036 [ARRWHD3 115]	51038 [OWENSC3 115]	1	SINGLE 134	0	38.1	76.1	74.2	195.0	38.0	120.8
50996 [34THST3 115]	51002 [COULTER3 115]	1	SINGLE 149	0	4.8	24.4	23.9	146.0	16.4	122.1
50914 [NICHOL3 115]	50926 [YARNELL3 115]	1	SINGLE 87	0	48.6	97.5	95.3	218.0	43.7	122.7
51156 [NORRST3 115]	51194 [OASIS3 115]	1	SINGLE 181	0	18.3	72.2	71.8	195.0	36.8	123.2
50926 [YARNELL3 115]	50928 [CONWAY3 115]	1	SINGLE 87	0	47.4	94.8	94.4	218.0	43.3	123.6
50908 [CHERRY3 115]	50938 [NORTHW3 115]	1	SINGLE 126	0	43.2	71.7	71.1	195.0	36.5	123.9
51026 [FARMERS3 115]	51032 [CRO-HIN3 115]	1	SINGLE 134	0	17.5	68.8	67.4	195.0	34.6	127.6
51110 [DFSMTH3 115]	51146 [DS-213 115]	1	SINGLE 193	0	17.6	67.6	65.1	195.0	33.4	129.9
51106 [HEREFD3 115]	51110 [DFSMTH3 115]	1	SINGLE 169	0	32.4	66.5	63.8	195.0	32.7	131.2
50970 [SONCY3 115]	50990 [PUCKETT3 115]	1	SINGLE 105	0	23.5	64.5	63.8	195.0	32.7	131.2
51202 [ROOSEVL3 115]	51206 [CLOVISS 115]	2	SINGLE 181	0	27.3	66.5	63.5	195.0	32.5	131.5
50956 [EASTPL3 115]	50964 [PIERCT3 115]	1	SINGLE 143	1	35.7	65.2	63.2	195.0	32.4	131.8
50928 [CONWAY3 115]	50932 [KIRBY3 115]	1	SINGLE 87	0	38.1	85.5	85.1	218.0	39.1	132.9
51156 [NORRST3 115]	51176 [CURRY3 115]	1	SINGLE 181	0	9.2	62.0	61.7	195.0	31.7	133.3
51008 [GEORGIA3 115]	51032 [CRO-HIN3 115]	1	SINGLE 134	0	15.7	62.8	61.7	195.0	31.6	133.3
52166 [NAVAJ43 115]	52184 [EDDYCO3 115]	1	SINGLE 362	0	58.0	61.5	61.2	195.0	31.4	133.8
51176 [CURRY3 115]	51180 [FE-CLVS3 115]	1	SINGLE 177	0	19.3	43.8	42.3	177.0	23.9	134.7
51202 [ROOSEVL3 115]	51208 [PORTALE3 115]	1	SINGLE 181	0	23.7	62.0	60.3	195.0	30.9	134.7
52084 [ROSWLC3 115]	52094 [ROSWIN3 115]	1	SINGLE 320	0	21.0	61.6	60.2	195.0	30.9	134.8
51146 [DS-213 115]	51150 [CASTRC3 115]	1	SINGLE 193	0	11.6	61.0	59.9	195.0	30.7	135.1
50956 [EASTPL3 115]	50978 [MANHATT3 115]	1	SINGLE 143	1	27.2	60.2	58.4	195.0	30.0	136.6
52282 [CV-INDH3 115]	52294 [7RIVER3 115]	1	SINGLE 369	0	46.8	59.4	57.8	195.0	29.6	137.2
51038 [OWENSC3 115]	51044 [ESTCDT3 115]	1	SINGLE 128	1	35.3	57.0	55.9	195.0	28.7	139.1
52294 [7RIVER3 115]	52296 [CV-LAKW3 115]	1	SINGLE 334	0	18.4	56.0	55.3	195.0	28.4	139.7
52208 [CUNNINH3 115]	52240 [PCA3 115]	1	SINGLE 337	2	40.0	55.6	53.4	195.0	27.4	141.6
51150 [CASTRC3 115]	51250 [BC-EART3 115]	1	SINGLE 165	0	35.9	53.7	52.8	195.0	27.1	142.2
50938 [NORTHW3 115]	50988 [SUNSET3 115]	1	SINGLE 126	0	10.2	51.4	51.2	195.0	26.3	143.8
52296 [CV-LAKW3 115]	52298 [CV-IRIS3 115]	1	SINGLE 334	0	13.9	51.3	50.9	195.0	26.1	144.1
52282 [CV-INDH3 115]	52314 [PECOS3 115]	1	SINGLE 362	0	16.8	48.2	47.9	195.0	24.6	147.1
52240 [PCA3 115]	52252 [POTJCT3 115]	1	SINGLE 354	0	14.7	46.3	47.7	195.0	24.5	147.3
50964 [PIERCT3 115]	51014 [OSAGE--3 115]	1	SINGLE 143	1	19.5	48.3	47.0	195.0	24.1	148.0
51194 [OASIS3 115]	51208 [PORTALE3 115]	1	SINGLE 186	0	21.1	48.0	46.9	195.0	24.1	148.1
52180 [ATOKA3 115]	52298 [CV-IRIS3 115]	1	SINGLE 334	0	9.9	46.9	46.9	195.0	24.1	148.1
51094 [NEHFD3 115]	51110 [DFSMTH3 115]	1	SINGLE 160	0	40.3	47.3	46.0	195.0	23.6	149.0
51166 [CANNOA3 115]	51194 [OASIS3 115]	1	SINGLE 181	0	24.4	46.6	45.8	195.0	23.5	149.2
51170 [FE-CLVS3 115]	51172 [FE-SWS3 115]	1	SINGLE 177	0	5.0	27.9	27.5	177.0	15.5	149.5

04WP-20412-001. CATAMOUNT (PINNELL-SITE) IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
51170 [FE-CLVS3 115]	51180 [FE-CLVS3 115]	1	SINGLE 177	0	4.3	27.9	27.2	177.0	15.4	149.8
50880 [HIGHLT3 115]	50914 [NICHOL3 115]	1	SINGLE 82	0	30.8	46.3	44.8	195.0	23.0	150.2
52184 [EDDYCO3 115]	52188 [CV-DAYT3 115]	1	SINGLE 362	0	15.1	45.2	44.1	195.0	22.6	150.9
50978 [MANHATT3 115]	51018 [MANHTP3 115]	1	SINGLE 104	1	13.2	44.8	43.6	195.0	22.4	151.4
50970 [SONCY3 115]	50988 [SUNSET3 115]	1	SINGLE 126	0	2.7	42.0	41.9	195.0	21.5	153.1
52180 [ATOKA3 115]	52188 [CV-DAYT3 115]	1	SINGLE 362	1	11.5	41.3	40.5	195.0	20.8	154.5
52240 [PCA3 115]	52310 [CARLSBD3 115]	1	SINGLE 368	0	20.5	39.4	38.1	195.0	19.5	156.9
51002 [COULTER3 115]	51044 [ESTCDT3 115]	1	SINGLE 128	0	17.6	38.6	38.0	195.0	19.5	157.0
50938 [NORTHW3 115]	50943 [BUSH3 115]	1	SINGLE 105	0	18.3	18.3	18.2	177.0	10.3	158.8
51162 [WCLOVI3 115]	51166 [CANNOA3 115]	1	SINGLE 181	0	14.5	36.5	36.0	195.0	18.5	159.0
52308 [FIESTA3 115]	52314 [PECOS3 115]	1	SINGLE 334	2	17.9	17.9	18.0	177.0	10.2	159.0
51012 [SOUTHE3 115]	51020 [RANDALL3 115]	1	SINGLE 104	1	16.1	16.1	15.7	177.0	8.9	161.3
52104 [TWEEDY3 115]	52184 [EDDYCO3 115]	1	SINGLE 322	0	4.0	34.6	33.5	195.0	17.2	161.5
51076 [FE-TUCU3 115]	51176 [CURRY3 115]	1	SINGLE 181	0	14.5	14.5	14.8	177.0	8.4	162.2
50878 [CARSNT3 115]	50882 [PANTXN3 115]	1	SINGLE 93	0	4.8	30.2	30.7	195.0	15.8	164.3
52252 [POTJCT3 115]	52274 [IMC#13 115]	1	SINGLE 370	0	14.7	30.7	29.7	195.0	15.2	165.3
51162 [WCLOVI3 115]	51172 [FE-SWS3 115]	1	SINGLE 181	0	7.6	29.2	28.9	195.0	14.8	166.1
52268 [SNDDUN3 115]	52329 [OCHOA3 115]	1	SINGLE 355	0	15.9	28.2	28.5	195.0	14.6	166.5
50882 [PANTXN3 115]	50884 [PANTXS3 115]	1	SINGLE 93	0	6.6	26.4	27.0	195.0	13.8	168.0
51070 [TUCUMCA3 115]	51076 [FE-TUCU3 115]	1	SINGLE 181	0	8.4	8.4	8.6	177.0	4.9	168.4
50880 [HIGHLT3 115]	50884 [PANTXS3 115]	1	SINGLE 82	0	11.5	25.4	24.7	195.0	12.7	170.3
52266 [WIPP3 115]	52268 [SNDDUN3 115]	1	SINGLE 355	0	13.9	23.7	24.0	195.0	12.3	171.0
51040 [AMARLS3 115]	51041 [AMARLS6 230]	1	SINGLE 104	1	58.9	87.4		258.8	33.8	171.4
52266 [WIPP3 115]	52274 [IMC#13 115]	1	SINGLE 355	0	8.5	22.9	23.5	195.0	12.0	171.5
51010 [PULLMAN3 115]	51012 [SOUTHE3 115]	1	SINGLE 143	1	3.0	3.0	3.0	177.0	1.7	174.0
52162 [NAVAJ33 115]	52166 [NAVAJ43 115]	1	SINGLE 362	1	56.9	60.4	60.1	235.0	25.6	174.9
51044 [ESTCDT3 115]	51046 [ESTACAD3 115]	1	SINGLE 149	346	18.5	18.5	18.2	195.0	9.4	176.8
50964 [PIERCT3 115]	50966 [PIERCE3 115]	1	SINGLE 143	1	16.8	16.8	16.3	195.0	8.3	178.7
51194 [OASIS3 115]	51195 [OASIS6 230]	1	SINGLE 181	0	61.9	103.6		289.8	35.8	186.2
52310 [CARLSBD3 115]	52314 [PECOS3 115]	1	SINGLE 354	0	24.0	47.7	47.5	235.0	20.2	187.5
52154 [ARTESIA3 115]	52162 [NAVAJ33 115]	1	SINGLE 322	0	43.0	47.1	46.5	235.0	19.8	188.5
51205 [CLOVS 6 230]	51206 [CLOVISS 115]	2	SINGLE 188	0	61.5	100.9		289.8	34.8	188.9
51205 [CLOVS 6 230]	51206 [CLOVISS 115]	1	SINGLE 189	0	61.5	100.9		289.8	34.8	188.9
52304 [NCANALT3 115]	52314 [PECOS3 115]	1	SINGLE 334	0	10.9	44.9	45.2	235.0	19.2	189.8
52094 [ROSWIN3 115]	52104 [TWEEDY3 115]	1	SINGLE 334	0	12.9	36.8	36.2	235.0	15.4	198.8
52184 [EDDYCO3 115]	52304 [NCANALT3 115]	1	SINGLE 339	0	16.0	32.7	32.8	235.0	14.0	202.2
51038 [OWENSC3 115]	51040 [AMARLS3 115]	1	SINGLE 104	1	58.9	85.8	83.8	303.0	27.7	219.2
50914 [NICHOL3 115]	50922 [WHITAKR3 115]	1	SINGLE 118	1	19.5	71.2	68.6	303.0	22.6	234.4
50992 [BUSHLND3 115]	50998 [HILLSID3 115]	1	SINGLE 112	0	54.0	65.1	63.6	303.0	21.0	239.4
50998 [HILLSID3 115]	51002 [COULTER3 115]	1	SINGLE 112	0	50.3	61.4	60.1	303.0	19.8	242.9
50922 [WHITAKR3 115]	50956 [EASTPL3 115]	1	SINGLE 103	1	7.9	58.2	56.3	303.0	18.6	246.7
52185 [EDDYCO6 230]	52186 [EDDYCO7 345]	1	SINGLE 322	0	185.4	281.1		560.0	50.2	278.9

04WP-20412-001. (CATAMONT) (PINNELL-SITE) IMPACT STUDY
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*** ACCC AVAILABLE CAPACITY REPORT ***

<----- FROM ----->	<----- TO ----->	CKT	CONTINGENCY	OTHERS	BASE	MAXIMUM	CURRENT	RATING	PERCENT	AVAILABLE
50907 [HARRNG6 230]	50915 [NICHOL6 230]	1	SINGLE 102	0	205.0	367.6	366.5	706.0	51.9	339.5
50887 [POTTRC6 230]	50888 [POTTRC7 345]	1	SINGLE 4	0	68.0	218.6		560.0	39.0	341.4
50907 [HARRNG6 230]	50915 [NICHOL6 230]	2	SINGLE 101	0	192.8	365.2	364.1	706.0	51.6	341.9
52073 [CHAVES6 230]	99990 [CATAMONT 230]	1	SINGLE 220	0	186.5	257.6	263.4	606.0	43.5	342.6
INTERFACE N-S LINES			SINGLE 5	0	35.2	181.5		600.0	30.3	418.5
51195 [OASIS6 230]	99990 [CATAMONT 230]	1	SINGLE 322	0	28.4	178.9	179.6	606.0	29.6	426.4
50915 [NICHOL6 230]	51041 [AMARLS6 230]	1	SINGLE 5	0	137.1	160.9	160.3	606.0	26.5	445.7
50907 [HARRNG6 230]	51021 [RANDALL6 230]	1	SINGLE 103	1	131.5	154.9	156.9	606.0	25.9	449.1
50887 [POTTRC6 230]	50907 [HARRNG6 230]	1	SINGLE 98	0	90.0	149.8	150.1	606.0	24.8	455.9
51195 [OASIS6 230]	51205 [CLOVS 6 230]	1	SINGLE 221	0	78.8	143.8	145.5	606.0	24.0	460.5
50887 [POTTRC6 230]	50907 [HARRNG6 230]	2	SINGLE 97	0	77.0	144.5	144.9	606.0	23.9	461.1
50907 [HARRNG6 230]	50957 [EASTPL6 230]	1	SINGLE 143	1	111.5	144.2	144.5	606.0	23.8	461.5
52185 [EDDYCO6 230]	52293 [7RIVER6 230]	1	SINGLE 334	0	104.5	158.1	161.3	638.0	25.3	476.7
52073 [CHAVES6 230]	52185 [EDDYCO6 230]	1	SINGLE 322	0	53.3	123.6	128.8	606.0	21.3	477.2
52205 [LEACO6 230]	52209 [CUNNINH6 230]	1	SINGLE 337	0	59.2	120.5	121.1	606.0	20.0	484.9
52209 [CUNNINH6 230]	52253 [POTJCT6 230]	1	SINGLE 339	0	70.5	111.6	115.3	606.0	19.0	490.7

04WP-20412-001. (CATAMOUNT) (PINNELL-SITE) IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

DISTRIBUTION FACTOR FILE: D:\STUDIES\Catamount\CASES\DFSPS.sgf
 SUBSYSTEM DESCRIPTION FILE: D:\STUDIES\Catamount\CASES\CONT_SUB.DAT
 MONITORED ELEMENT FILE: D:\STUDIES\Catamount\CASES\CONT_MON.DAT
 CONTINGENCY DESCRIPTION FILE: D:\STUDIES\Catamount\CASES\CONT_CON.DAT

<-CONTINGENCY-> <-----CONTINGENCY DESCRIPTION----->

- SINGLE 4 OPEN LINE FROM BUS 50858 [FINNEY7 345.00] TO BUS 56449 [HOLCOMB7345.00] CKT 1
- SINGLE 5 OPEN LINE FROM BUS 50858 [FINNEY7 345.00] TO BUS 59998 [LAMAR7 345.00] CKT 1
- SINGLE 7 OPEN LINE FROM BUS 51205 [CLOVS 6230.00] TO BUS 59995 [PNM-DC6 230.00] CKT 1
- SINGLE 49 OPEN LINE FROM BUS 50644 [DALLAM3 115.00] TO BUS 50648 [DALHRT3 115.00] CKT 1
- SINGLE 82 OPEN LINE FROM BUS 50751 [HUTCH6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
- SINGLE 87 OPEN LINE FROM BUS 50827 [GRAPEVN6230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
- SINGLE 93 OPEN LINE FROM BUS 50880 [HIGHT3 115.00] TO BUS 50914 [NICHOL3 115.00] CKT 1
- SINGLE 97 OPEN LINE FROM BUS 50887 [POTTRC6 230.00] TO BUS 50907 [HARRNG6 230.00] CKT 1
- SINGLE 98 OPEN LINE FROM BUS 50887 [POTTRC6 230.00] TO BUS 50907 [HARRNG6 230.00] CKT 2
- SINGLE 101 OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
- SINGLE 102 OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50915 [NICHOL6 230.00] CKT 2
- SINGLE 103 OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 50957 [EASTPL6 230.00] CKT 1
- SINGLE 104 OPEN LINE FROM BUS 50907 [HARRNG6 230.00] TO BUS 51021 [RANDALL6230.00] CKT 1
- SINGLE 105 OPEN LINE FROM BUS 50908 [CHERRY3 115.00] TO BUS 50914 [NICHOL3 115.00] CKT 1
- SINGLE 108 OPEN LINE FROM BUS 50914 [NICHOL3 115.00] TO BUS 50915 [NICHOL6 230.00] CKT 1
- SINGLE 109 OPEN LINE FROM BUS 50914 [NICHOL3 115.00] TO BUS 50915 [NICHOL6 230.00] CKT 2
- SINGLE 112 OPEN LINE FROM BUS 50915 [NICHOL6 230.00] TO BUS 51041 [AMARLS6 230.00] CKT 1
- SINGLE 118 OPEN LINE FROM BUS 50956 [EASTPL3 115.00] TO BUS 50957 [EASTPL6 230.00] CKT 1
- SINGLE 126 OPEN LINE FROM BUS 50990 [PUCKETT3115.00] TO BUS 51002 [COULTER3115.00] CKT 1
- SINGLE 128 OPEN LINE FROM BUS 50992 [BUSHLND3115.00] TO BUS 50998 [HILLSID3115.00] CKT 1
- SINGLE 134 OPEN LINE FROM BUS 51008 [GEORGIA3115.00] TO BUS 51014 [OSAGE--3115.00] CKT 1
- SINGLE 139 OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51020 [RANDALL3115.00] CKT 1

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 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

<-CONTINGENCY->	<-----CONTINGENCY DESCRIPTION----->
SINGLE 141	OPEN LINE FROM BUS 51014 [OSAGE--3115.00] TO BUS 51080 [CANYNE3 115.00] CKT 1
SINGLE 142	OPEN LINE FROM BUS 51018 [MANHTP3 115.00] TO BUS 51020 [RANDALL3115.00] CKT 1
SINGLE 143	OPEN LINE FROM BUS 51020 [RANDALL3115.00] TO BUS 51021 [RANDALL6230.00] CKT 1
SINGLE 149	OPEN LINE FROM BUS 51038 [OWENSC3 115.00] TO BUS 51044 [ESTCDT3 115.00] CKT 1
SINGLE 159	OPEN LINE FROM BUS 51102 [DAWN 115.00] TO BUS 51106 [HEREFD3 115.00] CKT 1
SINGLE 160	OPEN LINE FROM BUS 51106 [HEREFD3 115.00] TO BUS 51110 [DFSMTH3 115.00] CKT 1
SINGLE 162	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51111 [DFSMTH6 230.00] CKT 1
SINGLE 163	OPEN LINE FROM BUS 51110 [DFSMTH3 115.00] TO BUS 51111 [DFSMTH6 230.00] CKT 2
SINGLE 165	OPEN LINE FROM BUS 51111 [DFSMTH6 230.00] TO BUS 51419 [PLANTX6 230.00] CKT 1
SINGLE 169	OPEN LINE FROM BUS 51126 [DS-#203 115.00] TO BUS 51176 [CURRY3 115.00] CKT 1
SINGLE 177	OPEN LINE FROM BUS 51166 [CANNOA3 115.00] TO BUS 51194 [OASIS3 115.00] CKT 1
SINGLE 181	OPEN LINE FROM BUS 51176 [CURRY3 115.00] TO BUS 51206 [CLOVISS 115.00] CKT 2
SINGLE 182	OPEN LINE FROM BUS 51194 [OASIS3 115.00] TO BUS 51195 [OASIS6 230.00] CKT 1
SINGLE 186	OPEN LINE FROM BUS 51202 [ROOSEVL3115.00] TO BUS 51206 [CLOVISS 115.00] CKT 2
SINGLE 188	OPEN LINE FROM BUS 51205 [CLOVS 6230.00] TO BUS 51206 [CLOVISS 115.00] CKT 1
SINGLE 189	OPEN LINE FROM BUS 51205 [CLOVS 6230.00] TO BUS 51206 [CLOVISS 115.00] CKT 2
SINGLE 193	OPEN LINE FROM BUS 51250 [BC-EART3115.00] TO BUS 51418 [PLANTX3 115.00] CKT 1
SINGLE 220	OPEN LINE FROM BUS 51439 [TOLKTP6 230.00] TO BUS 51440 [TOLK7 345.00] CKT 1
SINGLE 221	OPEN LINE FROM BUS 51440 [TOLK7 345.00] TO BUS 52186 [EDDYCO7 345.00] CKT 1
SINGLE 317	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52073 [CHAVES6 230.00] CKT 1
SINGLE 318	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52073 [CHAVES6 230.00] CKT 2
SINGLE 319	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52078 [URTON3 115.00] CKT 1
SINGLE 320	OPEN LINE FROM BUS 52072 [CHAVES3 115.00] TO BUS 52088 [SAMSON3 115.00] CKT 1
SINGLE 321	OPEN LINE FROM BUS 52073 [CHAVES6 230.00] TO BUS 52185 [EDDYCO6 230.00] CKT 1
SINGLE 322	OPEN LINE FROM BUS 52073 [CHAVES6 230.00] TO BUS 99990 [CATAMONT230.00] CKT 1

04WP-20412-001. (CATAMOUNT) (PINNELL-SITE) IMPACT STUDY
 2004 WINTER, WIND 184.8, CLOVIS-550, BLKWTR-150X 5/8/02

*** ACCC AVAILABLE CAPACITY REPORT CONTINGENCY SUMMARY ***

<-CONTINGENCY->	<-----CONTINGENCY DESCRIPTION----->
SINGLE 334	OPEN LINE FROM BUS 52184 [EDDYCO3 115.00] TO BUS 52185 [EDDYCO6 230.00] CKT 1
SINGLE 337	OPEN LINE FROM BUS 52185 [EDDYCO6 230.00] TO BUS 52186 [EDDYCO7 345.00] CKT 1
SINGLE 339	OPEN LINE FROM BUS 52185 [EDDYCO6 230.00] TO BUS 52293 [7RIVER6 230.00] CKT 1
SINGLE 343	OPEN LINE FROM BUS 52205 [LEACO6 230.00] TO BUS 52209 [CUNNINH6230.00] CKT 1
SINGLE 346	OPEN LINE FROM BUS 52208 [CUNNINH3115.00] TO BUS 52240 [PCA3 115.00] CKT 1
SINGLE 354	OPEN LINE FROM BUS 52252 [POTJCT3 115.00] TO BUS 52253 [POTJCT6 230.00] CKT 1
SINGLE 355	OPEN LINE FROM BUS 52252 [POTJCT3 115.00] TO BUS 52274 [IMC#13 115.00] CKT 1
SINGLE 362	OPEN LINE FROM BUS 52293 [7RIVER6 230.00] TO BUS 52294 [7RIVER3 115.00] CKT 1
SINGLE 368	OPEN LINE FROM BUS 52310 [CARLSBD3115.00] TO BUS 52314 [PECOS3 115.00] CKT 1
SINGLE 369	OPEN LINE FROM BUS 52313 [PECOS6 230.00] TO BUS 52314 [PECOS3 115.00] CKT 1
SINGLE 370	OPEN LINE FROM BUS 52329 [OCHOA3 115.00] TO BUS 52420 [WHITTEN3115.00] CKT 1

12 APPENDIX D *Stability Study*

Final Report No. R43-02

***Stability Studies of the Proposed
Boone Energy Project***

Prepared for
Xcel Energy

Submitted by:
James Feltes
Assistant Vice President

Yachi Lin
Consultant

Consulting Services

September 27, 2002

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Section

1

Introduction

PTI was contracted by Xcel Energy to perform a specified set of stability studies in order to evaluate the impact of a proposed Boone Energy Project near Oasis and Chaves, New Mexico. This report summarizes results of the study.

The proposed plant is located between Oasis Interchange and Chaves Interchange in Xcel Energy's transmission system. This wind farm has a nominal output of 180 MW and is interconnected to Xcel Energy's 230 kV network. The wind farm is using Vestas 80 wind turbines rated 1.8 MW each.

The setup for load flow and dynamic simulation was based on two studies: the Duke Plant study, which was conducted for Xcel Energy in March 2002 and a previous wind farm study, which was conducted for Xcel Energy in August 2002. Two load flow base cases were prepared following Xcel Energy's instructions: with the Boone Energy Project and without. The load flow case OPT1 (without the Potter-Frio line) in the Duke Plant study was used. DC lines PNM and EPE are both modeled. The dynamic model for Vestas V80 wind turbines was developed for a prior wind farm study and is the same model is used in this study.

A set of stability studies was performed to evaluate the wind farm using PTI's power system simulation program PSS/E, revision 28.

Section

2

Data Preparation

The plant is located between Oasis and Chaves, 46 miles from Oasis Interchange. The total line length of the 230 kV branch from Oasis to Chaves County is 97.5 Miles.

2.1 Load Flow Data

Two load flow cases were created for the stability study of the Boone Energy Project: without Boone Energy Project (referred to as "WO_CAT case") and with Boone Energy Project (referred to as "WI_CAT case").

The OPT 1 load flow case from the Duke Energy Project was used to create the load flow cases for the study. This case is compatible with the stability model for year 2002. The case has the Duke plant on-line, the Potter-Frio line excluded, and the Eddy County and Blackwater HVDC lines both modeled.

In the case with Boone Energy Project off-line (WO_CAT case), the Duke Energy plant was modeled off-line as well. Following the guidelines provided by Xcel Energy, generators in the control area of SPP were re-dispatched to accommodate the decrease of 577 MW from the Duke plant. The generation dispatch was changed to match that modeled in the 2003 SPP load flow model, for a total increase of 690 MW. The excess of 120 MW was reduced from the swing bus. The differences in generation MW and scheduled voltages between the OPT 1 and WO_CAT load flows are listed in Table 2-1.

BUS#	NAME	BSKV	OPT 1 case		WO_CAT		P Diff	V diff
			Pgen	Vsched	Pgen	Vsched		
50520	LP-HOLL2	69	126.7	1.028	126.7	1.018	0	0.01
50523	LP-BRND2	69	22	1.023	22	1.005	0	0.018
50663	MRG31	12.5	48.6	1.035	48	1.035	0.6	0
50696	RVRV1	13.8	0	1.025	25	1.023	-25	0.002
50811	CZ11	13.8	9.4	1.017	13	1.017	-3.6	0
50812	CZ21	13.8	25	1.015	26	1.015	-1	0
50891	HARRNG1	24	329	1.005	340	1.005	-11	0
50892	HARRNG1	24	330	1.005	350	1.005	-20	0
50893	HARRNG1	24	338	1.005	350	1.005	-12	0
50911	NICHOL1	13.8	99	1.036	99	1.046	0	-0.01
50912	NICHOL2	13.8	102	1.036	102	1.048	0	-0.012
50913	NICHOL3	22	232	1.0045	232	1.0037	0	0.0008
51073	TUCUM1	13.2	0	1.02	15	1.02	-15	0
51421	PLANTX1	13.8	0	1.018	45	1.018	-45	0
51422	PLANTX2	13.8	0	1.018	97	1.018	-97	0
51424	PLANTX4	20	75	1.001	180	1.001	-105	0
51441	TOLK1	24	511.4	1.0058	552.7	1.0058	-41.3	0
51442	TOLK2	24	512	1.0058	536	1.0058	-24	0
51701	JONES11	22	230	0.991	240	0.991	-10	0
51702	JONES21	21	231	0.991	240	0.991	-9	0
51971	MUSTG#11	13.8	145	1.035	145	1.024	0	0.011
51972	MUSTG#21	13.8	145	1.035	145	1.025	0	0.01
52211	CUNN11	13.8	67	1.036	67	1.035	0	0.001
52212	CUNN21	20	140	1.002	190	1.002	-50	0
52214	CUNN41	22	0	1.0043	105	1.0043	-105	0
52215	CUNN31	22	0	1.026	105	1.026	-105	0
52311	CARLSBD1	13.8	0	1.02	0	1.02	0	0
52361	MADDX11	13.8	112	1.038	112	1.03	0	0.008
52362	MADDX21	13.8	66	1.023	66	1.02	0	0.003
52363	MADDX31	13.8	0	1.0382	15	1.03	-15	0.0082

Table 2-1: Differences in Generation MW and Scheduled Voltage Between OPT1 and WO_CAT Cases

In the case with the Boone Energy Project on-line (WI_CAT case), the Duke Energy plant was modeled on-line as well. The generators in SPP were dispatched to match the 2004 SPP load flow model, an increase of 145 MW. Including the increase of 183.6 MW from the Boone Energy Project, the excess of 325 MW was reduced from the swing bus. The differences in generation MW and scheduled voltages between the OPT 1 and WI_CAT load flows are listed in Table 2-2.

BUS#	NAME	BSKV	OPT1		WI_CAT		P diff	V diff
			PGEN	VSCHEDED	PGEN	VSCHEDED		
50504	LP-MACK2	69	70	1.026	70	1.005	0	0.021
50520	LP-HOLL2	69	126.7	1.028	126.7	1.018	0	0.01
50523	LP-BRND2	69	22	1.023	22	1.005	0	0.018
50663	MRG31	12.5	48.6	1.035	48	1.035	0.6	0
50696	RVRV1	13.8	0	1.025	25	1.023	-25	0.002
50811	CZ11	13.8	9.4	1.017	10	1.017	-0.6	0
50911	NICHOL1	13.8	99	1.036	0	1.046	99	-0.01
50912	NICHOL1	13.8	102	1.036	102	1.048	0	-0.012
50913	NICHOL1	22	232	1.0045	232	1.0037	0	0.0008
51421	PLANTX1	13.8	0	1.018	45	1.018	-45	0
51422	PLANTX1	13.8	0	1.018	100	1.018	-100	0
51423	PLANTX1	13.8	96	1.018	0	1.018	96	0
51424	PLANTX1	20	75	1.001	180	1.001	-105	0
51441	TOLK1	24	511.4	1.0058	365.1	1.0058	146.3	0
51442	TOLK1	24	512	1.0058	538	1.0058	-26	0
51701	JONES11	22	230	0.991	238	0.991	-8	0
51702	JONES21	21	231	0.991	238	0.991	-7	0
51971	MUSTG#11	13.8	145	1.035	145	1.024	0	0.011
51972	MUSTG#21	13.8	145	1.035	145	1.025	0	0.01
52211	CUNN11	13.8	67	1.036	70	1.035	-3	0.001
52212	CUNN21	20	140	1.002	196	1.002	-56	0
52214	CUNN41	22	0	1.0043	101	1.0043	-101	0
52361	MADDX11	13.8	112	1.038	112	1.03	0	0.008
52362	MADDX21	13.8	66	1.023	66	1.02	0	0.003
52363	MADDX31	13.8	0	1.0382	10	1.03	-10	0.0082

Table 2-2: Differences in Generation MW and Scheduled Voltage Between OPT1 and WI_CAT Cases

The output of the plant is 180 MW, comprised of one hundred and two (102) Vestas V80 units. The base voltage of wind turbine generators is 690 V. A generator-step-up (GSU) transformer of 1.85 MVA connects each unit to the high side of 34.5 kV. The maximum power output of a V80 is 1.8 MW, while the actual power output depends on the wind. In order to simplify the load flow representation, 17 units are aggregated to be one equivalent unit at one 690-Volt collector bus. An equivalent generator has the power output of 30.6 MW (1.8 MW per turbine * 17 turbines = 30.6 MW). In this study, we assume all the units are at their maximum output.

The Boone Energy Project is divided into two phases. Each phase features 91.8 MW of power generation. Both phases are modeled together in this study. Total power output from the Boone energy Project is 183.6 MW (30.6 MW per equivalent generator * 6 equivalent generators = 183.6 MW)

Each phase is connected to Xcel Energy's 230 kV network through a 34.5 /230 kV transformer. The rating of the transformer is 60/80/100 MVA, with impedance of 15% on the transformer OA base. The 230 kV interconnection point of the wind farm intercepts the original 230 kV line between Oasis and Chaves substations, 46 miles from the Oasis substation. A ring bus construction is proposed for the interconnection.

Phase I is comprised of three 34.5 kV collector circuits and two capacitor banks of 15 MVAR. Phase II is comprised of three 34.5 kV collector circuits and two capacitor banks of 17.5 MVAR. Each collector circuit then connects three groups of wind turbines. To simplify the load flow representation, these three groups of turbines are clustered together to form an equivalent generator.

The actual parameters (R, X and B) of the 34.5 kV collector circuits are not available. In the one line diagram designed by EIG, information was found to facilitate the estimation of the line parameters. Each 34.5 kV collector circuit has three segments:

- Segment 1: 34.5 kV overhead line (O/H)
- Segment 2: 34.5 kV underground cable with rating greater than 30 MVA (U/G 1)
- Segment 3: three 34.5 kV underground cables in parallel, each rating greater than 10 MVA (U/G 2)

The following four steps were taken to calculate approximate impedance and reactance of the collector circuit:

1. Calculation of the line parameters of Segment 1 - O/H (Note 4 on the one line diagram, sheet 2)
 - All overhead 3 phase, 4-wire, 795 MCM ACSR, rated > 30 MVA, circuit distance varies from 3 to 8 miles.
 - Assume typical 10-ft cross-arm construction with poletop pin on a 45-ft pole. Use Drake conductors with Azusa ground wire.
 - Resulting line parameters for segment 1: R = 0.117 ohm/mile, X=0.598 ohm/mile, B = 5.812 μ S/mile(negligible)
2. Calculation of the line parameters of Segment 2 - U/G 1 (Note 5 on the one line diagram, sheet 2)
 - All direct buried triplex with neutral, 1000 MCM AL conductor, rated > 30 MVA, circuit distance <1000 feet.
 - Assume the lengths of the lines are all 1000 feet (worst case scenario).
 - Resulting line parameters for segment 2: R = 0.0182 ohm/1000 ft, X=0.0333 ohm/1000 ft
3. Calculation of the line parameters of Segment 3 - U/G 2 (Note 6 on the one line diagram, sheet 2)
 - All direct buried triplex with neutral, 1/0 AWG AL conductor, rated > 10 MVA, circuit distance \leq 1 mile.
 - Assume the lengths of the lines are all 1 mile (worst case scenario). 3 lines in parallel to form one circuit.
 - Resulting line parameters for segment 3: R = 0.05477 ohm/1000 ft, X = 0.0158 ohm/1000 ft
4. Combining 34.5 kV O/H, 34.5 kV U/G 1 and 34.5 kV U/G 2 to estimate the equivalent line parameters in per unit, 100 MVA:
 - Circuit 1, 3 mile: Z = 0.05530 + j 0.16050 pu
 - Circuit 2, 4 mile: Z = 0.06510 + j 0.21080 pu
 - Circuit 3, 5 mile: Z = 0.07500 + j 0.26100 pu
 - Circuit 4, 6 mile: Z = 0.08480 + j 0.31130 pu
 - Circuit 5, 7 mile: Z = 0.09460 + j 0.36150 pu
 - Circuit 6, 8 mile: Z = 0.10450 + j 0.41170 pu

Three groups of wind turbines are equivalent to a collector generator. Groups one and two both have six units of Vestas V-80 turbines, and group three has 5 units. To simplify the load flow representation, these three groups of turbines are clustered together to form an equivalent generator.

- Base Voltage = 690 Volt
- Pgen = 1.8 MW * 17 = 30.6 MW
- Qmax = Qmin = 0
- Mbase = 2 MVA * 17 = 34 MVA
- Zsorce = 0.0 + j 0.303

17 transformers in parallel are equivalent to a collector transformer. Each Individual transformer has Z = 6.8% and rating = 1.85 MVA.

- Zeq on 100 MVA system base = 6.8% * 100 MVA / (1.85 MVA* 17) = 21.62%
- Rating = 1.85 MVA * 17 = 31.45 MVA

The following is the generator data of the Boone Energy Project from PSS/E:

```
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E      TUE, AUG 27 2002 15:13
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY      GENERATOR
(CATAMOUNT-)84.8, CLOVIS-575, BLKWTR-200X      5/8/02      UNIT DATA
BUS#  NAME  BSKV CD ID ST  PGEN  QGEN  QMAX  QMIN  PMAX  PMIN OWN FRACT MBASE  Z S O R C E
104 TF1-EQ1 .690 -2 1 1  30.6  0.0  0.0  0.0  30.6  0.0  1 1.000 34.0 0.0000 0.3030
105 TF1-EQ2 .690 -2 1 1  30.6  0.0  0.0  0.0  30.6  0.0  1 1.000 34.0 0.0000 0.3030
106 TF1-EQ3 .690 -2 1 1  30.6  0.0  0.0  0.0  30.6  0.0  1 1.000 34.0 0.0000 0.3030
107 TF2-EQ1 .690 -2 1 1  30.6  0.0  0.0  0.0  30.6  0.0  1 1.000 34.0 0.0000 0.3030
108 TF2-EQ2 .690 -2 1 1  30.6  0.0  0.0  0.0  30.6  0.0  1 1.000 34.0 0.0000 0.3030
109 TF2-EQ3 .690 -2 1 1  30.6  0.0  0.0  0.0  30.6  0.0  1 1.000 34.0 0.0000 0.3030
```

The following is the transformer data of the Boone Energy Project from PSS/E:

```
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E      TUE, AUG 27 2002 15:13
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY      2 WINDING XFRMER
(CATAMOUNT-)84.8, CLOVIS-575, BLKWTR-200X      5/8/02      IMPEDANCE DATA
X-----FROM-----X X-----TO-----X      C C
BUS#  NAME  BSKV  BUS# NAME  BSKV CKT Z M  R 1-2  X 1-2  W1BASE  MAG1  MAG2  RATA  RATB  RATC  TBL
104 TF1-EQ1 .690  114 CKT-1  34.5  1  1  1  0.00000  0.21620  100.0  0.0000  0.0000  31  31  31  0
105 TF1-EQ2 .690  115 CKT-2  34.5  1  1  1  0.00000  0.21620  100.0  0.0000  0.0000  31  31  31  0
106 TF1-EQ3 .690  116 CKT-3  34.5  1  1  1  0.00000  0.21620  100.0  0.0000  0.0000  31  31  31  0
107 TF2-EQ1 .690  117 CKT-4  34.5  1  1  1  0.00000  0.21620  100.0  0.0000  0.0000  31  31  31  0
108 TF2-EQ2 .690  118 CKT-5  34.5  1  1  1  0.00000  0.21620  100.0  0.0000  0.0000  31  31  31  0
109 TF2-EQ3 .690  119 CKT-6  34.5  1  1  1  0.00000  0.21620  100.0  0.0000  0.0000  31  31  31  0
99990 CATAMONT 230 99991 CAT-TF1 34.5  1  1  1  0.00000  0.25000  100.0  0.0000  0.0000  60  80  100  0
99990 CATAMONT 230 99992 CAT-TF2 34.5  1  1  1  0.00000  0.25000  100.0  0.0000  0.0000  60  80  100  0
```

The following is the branch data of the Boone Energy Project from PSS/E:

```
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E      WED, AUG 28 2002 14:50
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY      BRANCH DATA
(CATAMOUNT-)84.8, CLOVIS-575, BLKWTR-200X      5/8/02
X-----FROM-----X X-----TO-----X      Z S
BUS#  NAME  BSKV  BUS# NAME  BSKV CKT  LINE R  LINE X  CHRGING I T  RATEA  RATEB  RATEC  LENGTH
114 CKT-1  34.5* 99991 CAT-TF1 34.5  1  0.05530  0.16050  0.00000  1  34.0  34.0  34.0  0.0
115 CKT-2  34.5* 99991 CAT-TF1 34.5  1  0.06510  0.21080  0.00000  1  34.0  34.0  34.0  0.0
116 CKT-3  34.5* 99991 CAT-TF1 34.5  1  0.07500  0.26100  0.00000  1  34.0  34.0  34.0  0.0
117 CKT-4  34.5* 99992 CAT-TF2 34.5  1  0.08480  0.31130  0.00000  1  34.0  34.0  34.0  0.0
118 CKT-5  34.5* 99992 CAT-TF2 34.5  1  0.09460  0.36150  0.00000  1  34.0  34.0  34.0  0.0
119 CKT-6  34.5* 99992 CAT-TF2 34.5  1  0.10450  0.41170  0.00000  1  34.0  34.0  34.0  0.0
51195 OASIS6 230 99990 CATAMONT 230* 1  0.01022  0.05268  0.16964  1  452.0  497.0  0.0  0.0
52073 CHAVES6 230* 99990 CATAMONT 230 1  0.01137  0.05860  0.18872  1  452.0  497.0  0.0  0.0
```

Figure 2-1 is the one-line diagram of the equivalent Catamount wind farm, showing the impedance data. Figure 2-2 is the one-line diagram of the nearby Xcel Energy's network with the Boone Energy Project, showing the load flow data. Figure 2-3 is the one-line diagram without the Boone Energy Project. Figure 2-4 and Figure 2-5 are the one-line diagram of Boone Energy Project designed by EIG.

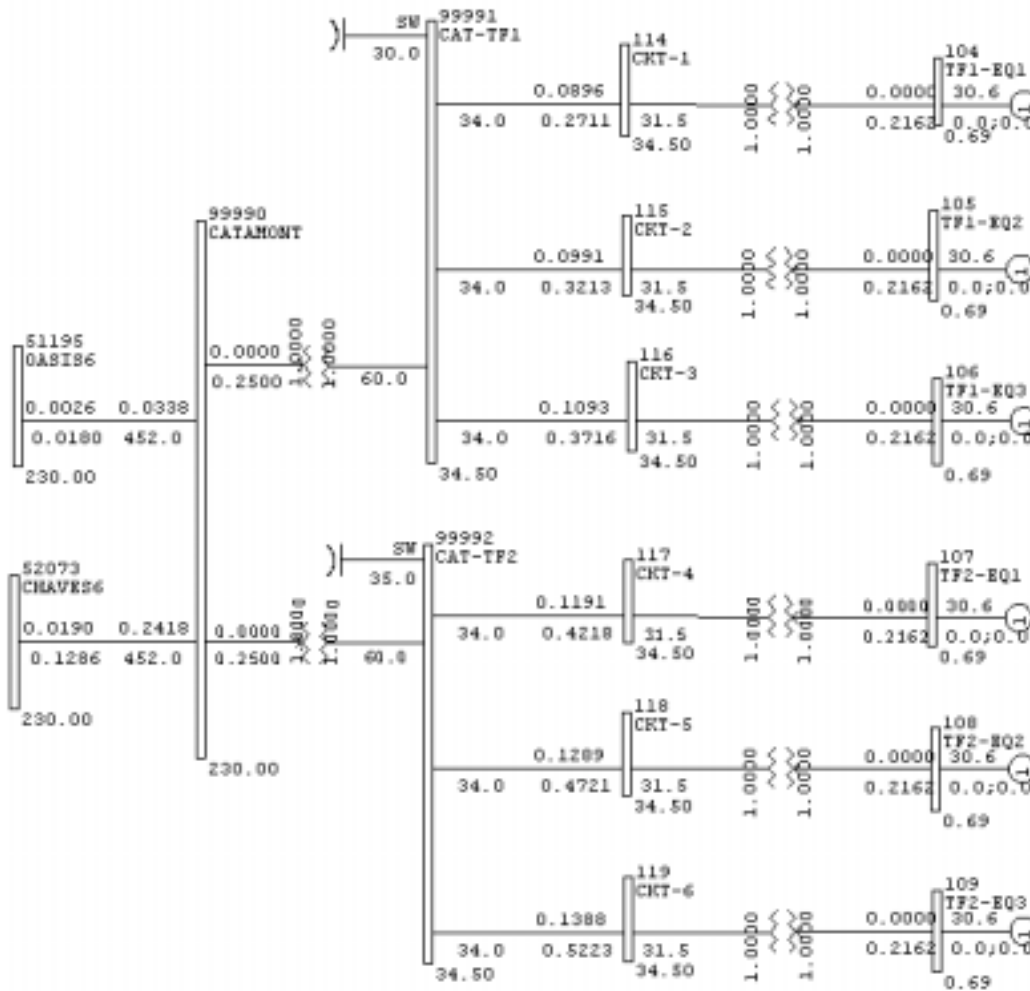


Figure 2-1: Load Flow Model of the Boone Wind Energy Project

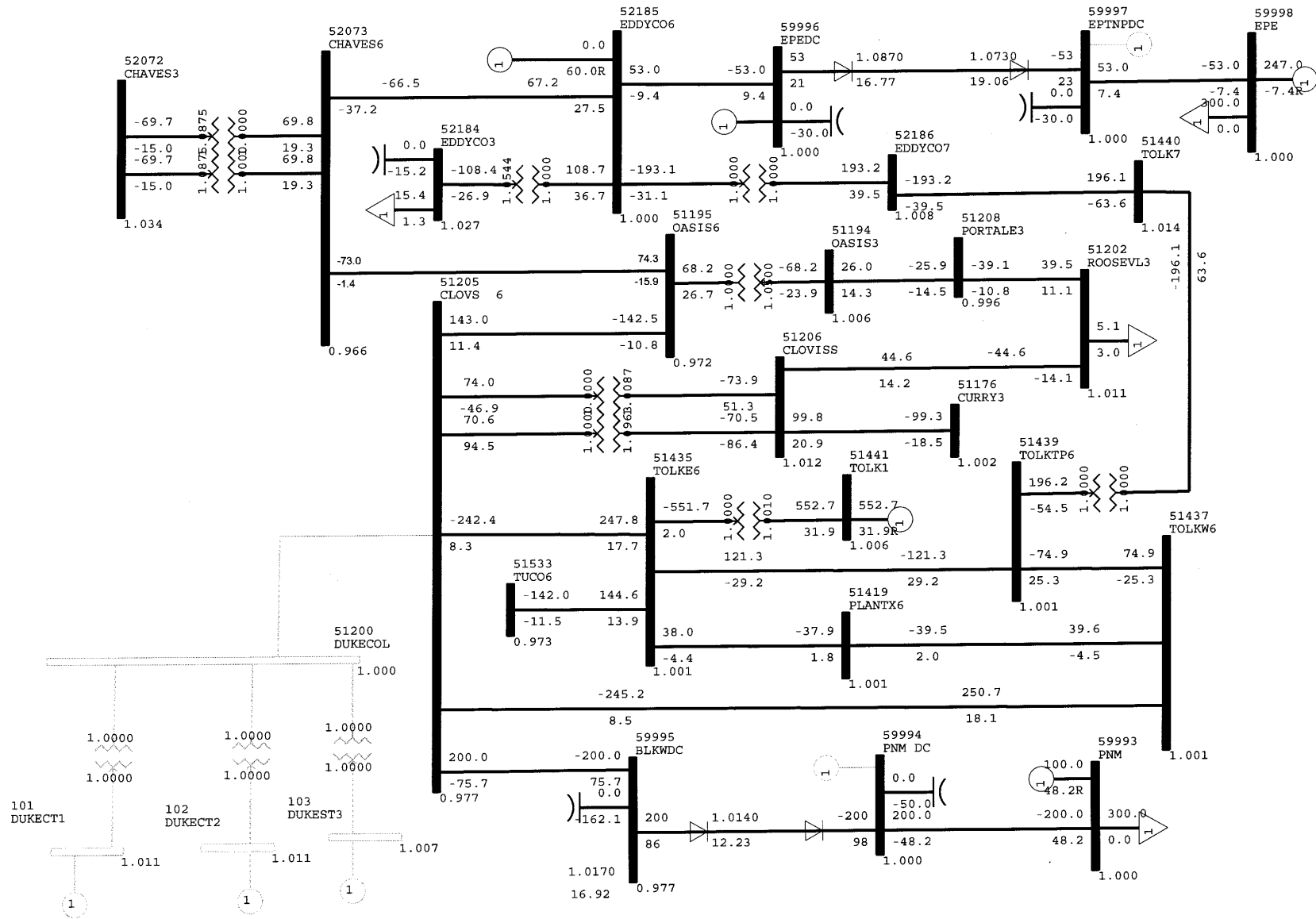


Figure 2-3: One-line Diagram of Xcel Energy's Network Near the Boone Energy Project of WO_CAT

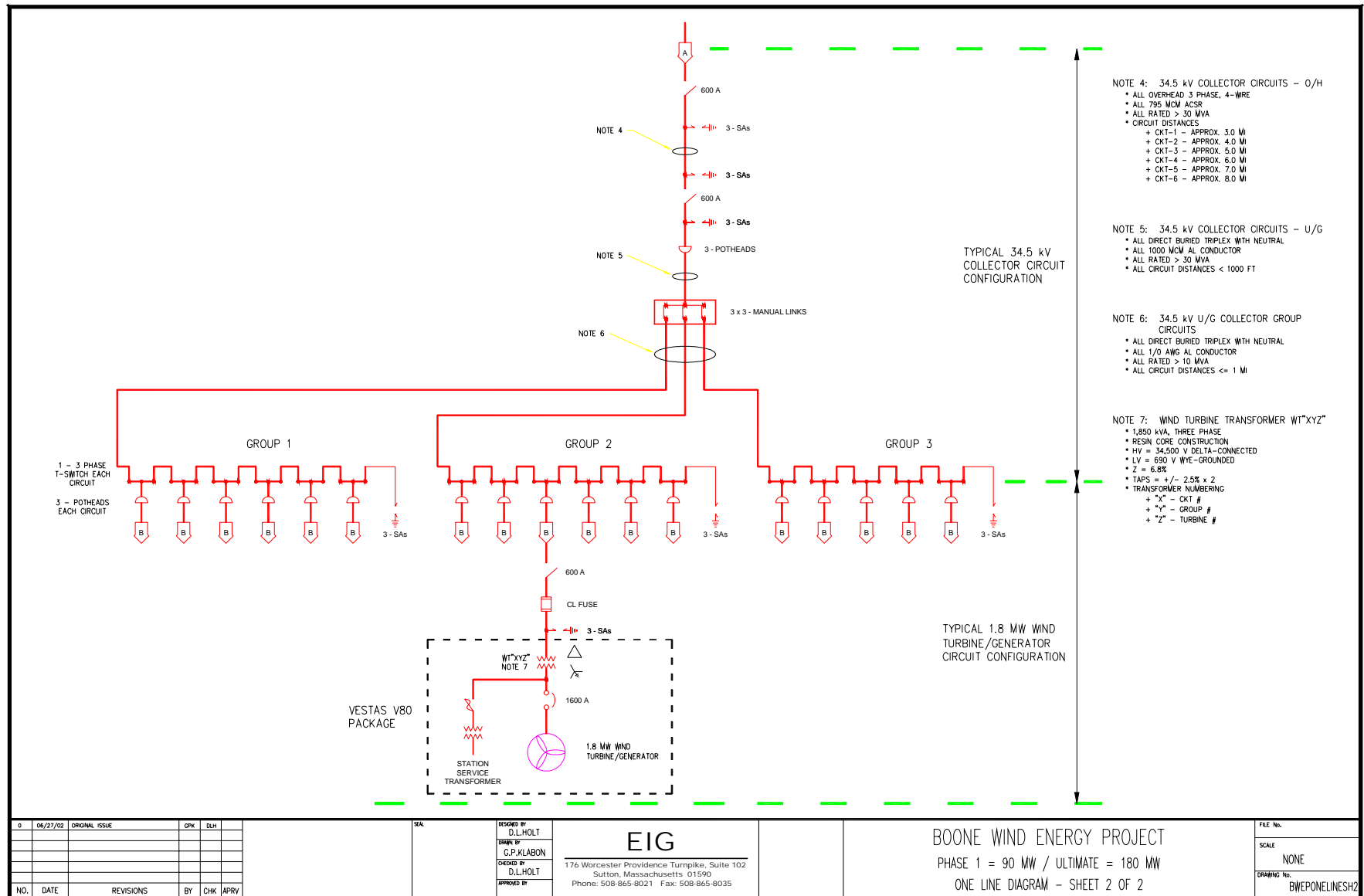


Figure 2-5: One-line Diagram of Boone Energy Project, Sheet 2 of 2

2.2 Dynamics Data

A dynamic model of the wind turbine generators was developed to represent the Vestas V80 turbines in a previous wind farm study. The same model is used in the Boone Energy Project. One should note that this is an approximate model and incorporates only those components that are known to influence system performance in the timeframe of interest. It is not meant for in-depth studies of wind turbine generator dynamics or to analyze the dynamics of the power factor correction scheme.

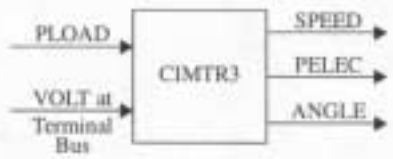
2.2.1 Generator model

Wound-rotor induction generators are used by the Vestas V80 wind turbines. The PSS/E model CIMTR3 is used to represent the generator. The following is the PSS/E model data sheet:

CIMTR3

Induction Generator Model

This model is located at system bus # _____ IBUS.
 machine # _____ I.
 This model uses CONs starting with # _____ J,
 and STATEs starting with # _____ K,
 and VARs starting with # _____ L,
 and ICON # _____ M.
 The machine MVA is _____ for each of
 _____ units = _____ MBASE.



CONs	#	Value	Description
J			T* (sec) (>0)
J+1			T* (sec) (≥0)*
J+2			Inertia, H
J+3			X
J+4			X'
J+5			X"*
J+6			X _l
J+7			E ₁ (≥0)
J+8			S(E ₁)
J+9			E ₂
J+10			S(E ₂)
J+11		0.	Switch
J+12			SYN-POW, mechanical power at synchronous speed (>0). Used only to start machine, otherwise ignored.

STATEs	#	Description
K		E'q
K+1		E'd
K+2		E'q
K+3		E'd
K+4		Δ speed (pu)
K+5		Angle deviation

VARs	#	Description
L		Admittance of initial condition Mvar difference
L+1		Motor, Q
L+2		T _{elec}

ICON	#	Description
M		Memory

If T = 0. or X"* = 0., machine is assumed to be single cage and ZSORCE should be set equal to X'.

X, X', X"*, X_l, and H are in pu, machine MVA base.

IBUS, 'CIMTR3', I, T*, T", H, X, X', X"*, X_l, E₁, S(E₁), E₂, S(E₂), 0., SYN-POW/

The following is the model data for the wind turbine generator at bus 104 from PSS/E. Buses 104, 105, 106, 107, 108 and 109 all have the same model representation and parameters.

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, SEP 10 2002 14:29
 04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 (CATAMOUNT)-184.8, CLOVIS-575, BLKWTR-200X 5/8/02

PLANT MODELS

REPORT FOR ALL MODELS BUS 104 [TF1-EQ1 0.6900] MODELS

```

** CIMTR3 ** BUS X-- NAME --X BASEKV MC C O N S S T A T E S V A R S ICON
104 TF1-EQ1 0.6900 1 115292-115304 43099-43104 5693-5695 929

M B A S E Z S O R C E X T R A N G E N T A P
34.0 0.00000+J 0.30300 0.00000+J 0.00000 1.00000

T' T'' H X X' X'' XL
0.484 0.000 0.93 6.9762 0.3030 0.0000 0.1262

E1 S(E1) E2 S(E2) D SYN-POW
1.0000 0.2632 1.2000 0.8640 0.00 0.0000

```

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, SEP 10 2002 14:29
 04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 (CATAMOUNT)-184.8, CLOVIS-575, BLKWTR-200X 5/8/02

CONET MODELS

REPORT FOR ALL MODELS BUS 104 [TF1-EQ1 0.6900] MODELS

*** CALL VTGTRP(951,115386, 0, 5715) ***

```

BUS NAME BSKV GENR BUS NAME BSKV
104 TF1-EQ1 .690 104 TF1-EQ1 .690

```

```

I C O N S C O N S V A R
951-955 115386-115389 5715

```

```

VLO VUP PICKUP TB
0.750 5.000 0.080 0.122

```

*** CALL VTGTRP(956,115390, 0, 5716) ***

```

BUS NAME BSKV GENR BUS NAME BSKV
104 TF1-EQ1 .690 104 TF1-EQ1 .690

```

```

I C O N S C O N S V A R
956-960 115390-115393 5716

```

```

VLO VUP PICKUP TB
0.850 5.000 0.400 0.122

```


2.2.2 Undervoltage/Overvoltage protection scheme: VTGTRP and VBDCN

Table 2-3 summarizes voltage parameters for V80 were retrieved from the Vestas data sheet:

Table 2-3: under/over voltage protection scheme of Vestas V80 model

	Parameter value (%)	Parameter value (S)	Action
High voltage	+ 10%	60	Disconnect turbine (pause)
High voltage	+ 11%	0.08	Disconnect power factor correction
Extreme high voltage	+ 13.5%	0.2	Disconnect turbine (emergency)
Extreme extreme high voltage	+ 20%	0.08	Disconnect turbine
Low voltage	- 6%	60	Disconnect turbine (pause)
Extreme low voltage	-15%	0.4	Disconnect turbine (emergency)
Extreme extreme low voltage	-25%	0.08	Disconnect turbine (emergency)

Two user-written models were developed in the previous wind farm study to perform the undervoltage/overvoltage protection scheme. VTGTRP is an undervoltage/overvoltage generator-tripping relay, and VBDCN is an undervoltage/overvoltage bus-tripping relay.

- VTGTRP Model :Undervoltage/Overvoltage generator tripping relay

Model VTGTRP is a special user-written relay model that represents the under- and over-voltage protection developed for wind turbine units. This model is assumed to be located at the generator bus to which the WTG equivalent is connected and continuously monitors the voltage on that bus or a remote bus specified by the user. It trips the WTG equivalent for under- and overvoltage conditions on the specific bus.

The relay timer is started during undervoltage conditions (i.e., when voltage is less than or equal to the undervoltage pickup threshold) or overvoltage conditions (i.e., when voltage is greater than or equal to the overvoltage pickup threshold). The relay resets instantaneously if the voltage is within the two pickup thresholds. A trip signal is sent to the circuit breaker if the timer reaches its setting; voltage must have remained in an undervoltage condition (or overvoltage condition) for the entire pickup time for generator tripping to occur. Generator tripping is delayed by the circuit breaker time. See Figure 2-6 and Figure 2-7.

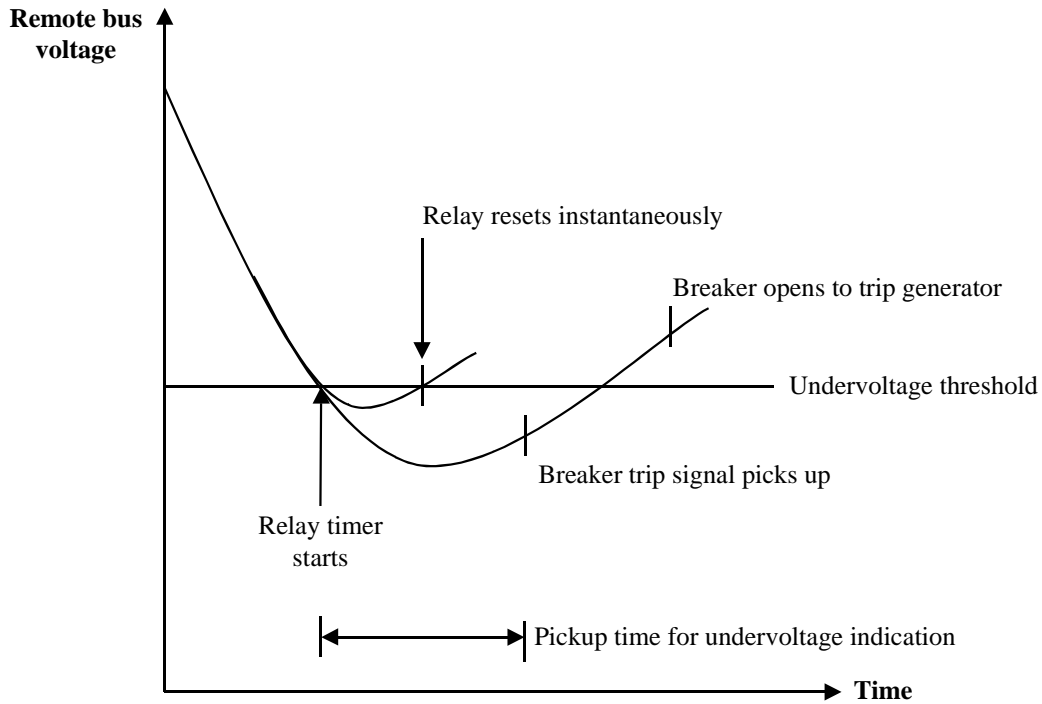


Figure 2-6: Undervoltage Detection and Generator Tripping by Model VTGTRP

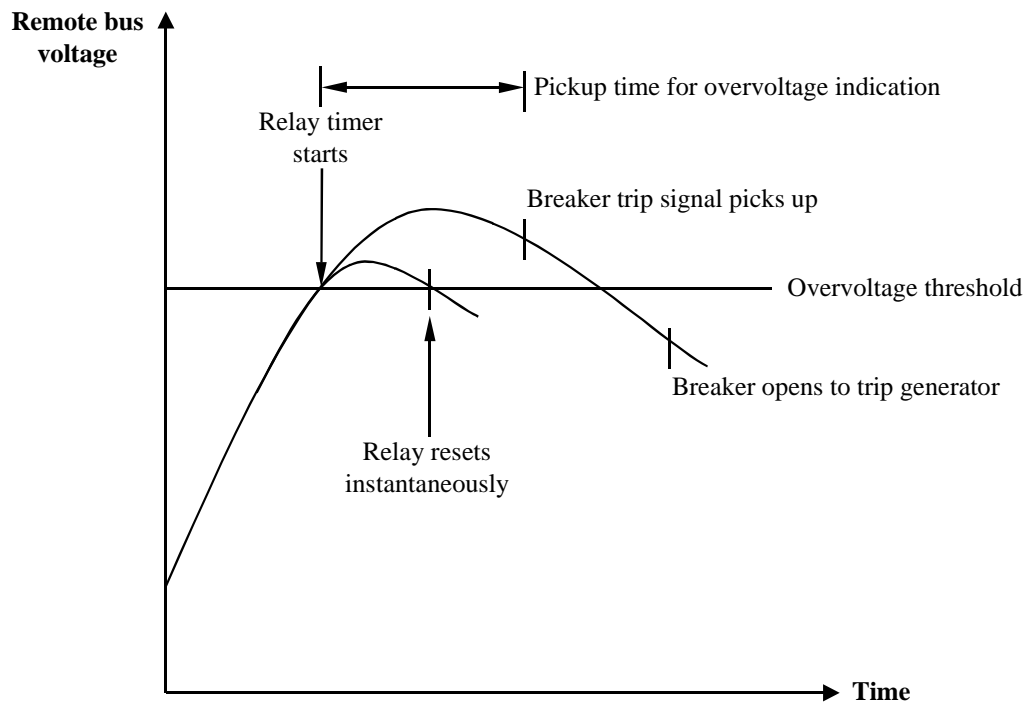


Figure 2-7: Overvoltage Detection and Generator Tripping by Model VTGTRP

The following parameters are developed to simulate the voltage protection scheme. Two relays are modeled for each WTG equivalent machine:

Table 2-4: relay setup

Variable	Description	Relay 1 Settings	Relay 2 Settings
VLOW	VL, lower voltage threshold (pu)	0.75	0.85
VUP	VU, upper voltage threshold (pu)	5.0	5.0
PICKUP_TIME	TP, relay pickup time (sec)	0.08	0.4
BREAKER_TIME	TB, breaker time (sec)	0.122	0.122

The sensing rate of the Microprocessor is 4 cycles combined with 4 calculation sequences or around 72 milliseconds (0.072 seconds). That combined with the mechanical reaction time of 50 milliseconds (0.050 seconds) for the breaker means that if the Microprocessor was to call for the breaker to trip due to an undercurrent or undervoltage situation it would take approximately 122 ms to occur but possibly sooner. The breaker_time is assumed to be 0.122 seconds. Overvoltage conditions were monitored, but not modeled explicitly.

The following is the relay for the wind turbine generator at bus 104. Buses 104, 105, 106, 107, 108 and 109 all have the same model representation and parameters.

```
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E      MON, SEP 09 2002 15:56
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
(CATAMOUNT-1)84.8, CLOVIS-575, BLKWTR-200X          5/8/02
```

CONET MODELS

REPORT FOR ALL MODELS

BUS 104 [TF1-EQ1 0.6900] MODELS

```
*** CALL VTGTRP( 951,115386, 0, 5715) ***
```

```
BUS  NAME  BSKV      GENR BUS  NAME  BSKV
104 TF1-EQ1 .690          104 TF1-EQ1 .690
```

```
  I C O N S      C O N S      V A R
    951-955      115386-115389  5715
```

```
      VLO      VUP      PICKUP      TB
      0.750    5.000    0.080    0.122
```

```
*** CALL VTGTRP( 956,115390, 0, 5716) ***
```

```
BUS  NAME  BSKV      GENR BUS  NAME  BSKV
104 TF1-EQ1 .690          104 TF1-EQ1 .690
```

```
  I C O N S      C O N S      V A R
    956-960      115390-115393  5716
```

```
      VLO      VUP      PICKUP      TB
      0.850    5.000    0.400    0.122
```

VTGTRP

Undervoltage/Overvoltage Generator Tripping Relay Model

This model incorporates code based on information provided by Enron Wind Corp (EWC) and was developed under the sponsorship of EWC.

CALL VTGTRP(I, J, 0, K) from CONET

This model uses ICONs starting with # _____ I,
and CONs starting with # _____ J,
and VAR # _____ K.

ICONs	#	Value	Description
I			IV, bus number where voltage is monitored
I+1			GB, bus number of generator bus where relay is located
I+2		0	Delay flag
I+3		0	Time-out flag
I+4		0	Timer status

Note: ICONs I+2 through I+4 are control flags that are not to be changed by the user

CONs	#	Value	Description
J			VL, lower voltage threshold (pu)
J+1			VU, upper voltage threshold (pu)
J+2			TP, relay pickup time (sec)
J+3			TB, breaker time (sec)

VAR	#	Description
K		Timer memory

The generator where the relay is placed is assumed to have a generator ID of '1'

0, 'USRMDL', 0, 'VTGTRP', 0, 2, 5, 4, 0, 1, IV, GB, 0, 0, 0, VL, VU, TP, TB/

- VBDCN Model :Undervoltage/Overvoltage bus tripping relay

Capacitor banks are assumed to be installed at the 34.5 kV buses of Boone Energy Project to maintain the voltage. If the generators are tripped due to disturbances, the capacitor should be taken off-line as well. The status (in-service/out-of-service) and the size of the capacitor should coordinate with plant output and generator status. A more sophisticated method to coordinate between the capacitor bank and the plant may need to be developed. At this point, the user-written model VBDCN is introduced to perform part of this task. This model is similar to VTGTRP, but instead of tripping the generator, the user-written model will trip the bus when experiencing overvoltage or undervoltage for a certain period of time. This model uses the same parameters as the model VTGTRP in Table 2-4, that is, the same high/low voltage threshold and same relay pickup time. If a fault outside the plant takes place, the collector buses experience a different voltage drop than the generators since the two buses might be a few miles apart.

The following is the relay for the wind turbine generator at bus 99991. Buses 99991 and 99992 have the same model representation and parameters

```
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E      MON, SEP 09 2002 17:26
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
(CATAMOUNT-)84.8, CLOVIS-575, BLKWTR-200X          5/8/02
```

CONET MODELS

REPORT FOR ALL MODELS

BUS 99991 [CAT-TF1 34.500] MODELS

```
*** CALL VBDCN( 935,115370, 0, 5711) ***
```

```
BUS  NAME  BSKV      GENR BUS  NAME  BSKV
99991 CAT-TF1 34.5      99991 CAT-TF1 34.5
```

```
 I C O N S      C O N S      V A R
 935-938      115370-115373  5711
```

```
 VLO      VUP      PICKUP      TB
 0.750    5.000    0.080      0.122
```

```
*** CALL VBDCN( 939,115374, 0, 5712) ***
```

```
BUS  NAME  BSKV      GENR BUS  NAME  BSKV
99991 CAT-TF1 34.5      99991 CAT-TF1 34.5
```

```
 I C O N S      C O N S      V A R
 939-942      115374-115377  5712
```

```
 VLO      VUP      PICKUP      TB
 0.850    5.000    0.400      0.122
```

VBDCN

Undervoltage/Overvoltage Bus Tripping Relay Model

CALL VBDCN(I, J, O, K) from CONET

This model uses ICONs starting with # _____ I,
 and CONs starting with # _____ J,
 and VAR # _____ K.

ICONs	#	Value	Description
I			IV, bus number where voltage is monitored
I+1		0	Delay flag
I+2		0	Time-out flag
I+3		0	Timer status

Note: ICONs I+1 through I+3 are control flags that are not to be changed by the user

CONs	#	Value	Description
J			VL, lower voltage threshold (pu)
J+1			VU, upper voltage threshold (pu)
J+2			TP, relay pickup time (sec)
J+3			TB, breaker time (sec)

VAR	#	Description
K		Timer memory

0, 'USRMDL', 0, 'VBDCN', 0, 2, 4, 4, 0, 1, IV, 0, 0, 0, VL, VU, TP, TB/

Section

3

Stability Analysis

3.1 Disturbances

For each powerflow case, the following faults were simulated (3 phase and single phase).

1. Faults on Tolk (51440). Eddy County (52186) 345 kV line (mid-length). A midpoint-bus in the electrical middle of the line was established.

FLT13PH - 3 Phase Fault

- a. Apply fault to mid-bus.
- b. Clear Fault after 5 cycles by removing the following elements.
 - Eddy County 345/230 kV auto (52186 to 52185)
 - From Eddy County 345 kV to mid-bus (52186 to mid-bus)
 - From mid-bus to Tolk 345 kV (mid-bus to 51440)
 - Tolk 345/230 kV auto (51440 to 51439)
 - From Tolk Tap to Tolk East 230 kV (51439 to 51435)
 - From Tolk Tap to Tolk West 230 kV (51439 to 51437)
- c. Wait 30 cycles, then reclose elements in (b) into the fault.
- d. Leave fault on for 5 cycles, then trip elements in (b) to remove fault.

FLT11PH - 1 phase Fault

Timing same as FLT13PH above.

2. Faults on Tolk (51435). Clovis Plant (51205) 230 kV line (mid-length). A midpoint-bus in the electrical middle of the line was established.

FLT23PH - 3 Phase Fault

- a. Apply fault to mid-bus.
- b. Clear Fault after 5 cycles by removing lines from 51435 to mid-bus and mid-bus to 51205.
- c. Wait 20 cycles, and then reclose both lines in (b) into the fault.
- d. Leave fault on for 5 cycles, then trip both lines in (b) to remove fault.

FLT21PH - 1 phase Fault

Timing same as FLT23PH above

3. Fault on Oasis (51195), Catamount (99990) 230 kV line (near Oasis)

FLT33PH - 3 Phase Fault

- a. Apply fault at Oasis bus 51195.
- b. Clear Fault after 5 cycles by removing line from 51195 - 99990. For the case without the Catamount plant, the line between Oasis (51195) and Chaves (52073) is removed.
- c. Wait 20 cycles, and then reclose line in (b) into the fault.
- d. Leave fault on for 5 cycles, then trip line in (b) and remove fault.

FLT31PH - 1 phase Fault

Timing same as FLT33PH above

-
4. Fault on (Catamount) (99990). Chaves County (52073) 230 kV line (near Chaves)
 FLT43PH - 3 Phase Fault
- Apply fault at Chaves bus 52073.
 - Clear Fault after 5 cycles by removing line from 99990 to 52073. For the case without the (Catamount) plant, the line between Oasis (51195) and Chaves (52073) is removed.
 - Wait 20 cycles, and then reclose line in (b) into the fault.
 - Leave fault on for 5 cycles, then trip line in (b) and remove fault.
- FLT41PH - 1 phase Fault
 Timing same as FLT43PH above
5. Fault on the Tolk (51435). Tuco (51533) 230 kV line (near Tuco)
 FLT53PH - 3 Phase Fault
- Apply fault at bus 51533.
 - Clear Fault after 5 cycles by removing line from 51435 to 51533.
 - Wait 20 cycles, and then reclose line in (b) into the fault.
 - Leave fault on for 5 cycles, then trip line in (b) and remove fault.
- FLT51PH - 1 phase Fault
 Timing same as FLT53PH above
6. Fault on the Oasis (51194) . Curry County (51176) 115 kV line (near Curry Co.)
 FLT63PH - 3 Phase Fault
- Apply fault at bus 51176.
 - Clear Fault after 5 cycles by removing lines from 51194 to 51156, and from 51156 to 51176.
 - Wait 20 cycles, and then reclose lines in (b) into the fault.
 - Leave fault on for 5 cycles, then trip lines in (b) and remove fault.
- FLT61PH - 1 phase Fault
 Timing same as FLT63PH above

The actual single-line-to-ground fault MVA's at the above substations were not available. Fault MVA's were calculated and applied so the bus voltage of the substation with the SLG fault applied dropped to between 0.6 and 0.7 pu. The PSAS files for simulating the faults with the plant on-line are included in Appendix A.

3.2 Results and discussion

Simulations were performed with a 0.1-second steady-state run followed by the appropriate disturbance as described in Section 3.1. Simulations were run for minimum 10-second duration to confirm proper machine damping. The system remained stable for all the faults simulated both without Boone Energy project and with Boone Energy project with proper operation of the voltage protection scheme. All oscillations were well damped. However, the proposed scheme for coordination of the capacitor banks and the generators, as modeled here using the available data, results in unacceptably high voltages for some disturbances. The stability plots of simulations with Boone Energy Project in-service are included in Appendix B.1, and the plots of simulations without Boone Energy Project in-service are included in Appendix B.2.

Table 3-1 summarizes the time for the wind farm to be tripped. If the generator is not tripped by the undervoltage protection, the maximum resulting voltage would be listed. Bus voltages exceeding 1.10 pu at the end of the simulation are grayed out in the table.

Table 3-1: comparison of the timing of tripping the plant in all disturbances

bus #	104	105	106	107	108	109	99991	99992
initial volt	1.03015	1.0313	1.0323	1.0377	1.0382	1.0385	1.020	1.025
FLT13PH	tripped @ 0.642	tripped @ 0.644	tripped @ 0.646	tripped @ 0.648	tripped @ 0.648	tripped @ 0.650	Not tripped, Vmax = 1.082	Not tripped, Vmax = 1.096
FLT11PH	tripped @ 1.500	tripped @ 1.480	tripped @ 1.460	tripped @ 1.258	tripped @ 1.256	tripped @ 1.254	Not tripped, Vmax = 1.084	Not tripped, Vmax = 1.099
FLT23PH	tripped @ 0.320	tripped @ 0.322	tripped @ 0.324	tripped @ 0.326	tripped @ 0.326	tripped @ 0.328	tripped @ 0.320	tripped @ 0.320
FLT21PH	Not tripped, Vmax = 1.070	Not tripped, Vmax = 1.072	Not tripped, Vmax = 1.073	Not tripped, Vmax = 1.132	tripped @ 1.436	tripped @ 1.300	Not tripped, Vmax = 1.04	Not tripped, Vmax = 1.108
FLT33PH	tripped @ 0.304	tripped @ 0.304	tripped @ 0.304	tripped @ 0.304	tripped @ 0.304	tripped @ 0.304	tripped @ 0.304	tripped @ 0.304
FLT31PH	tripped @ 0.606	tripped @ 0.600	tripped @ 0.594	tripped @ 0.586	tripped @ 0.580	tripped @ 0.574	tripped @ 0.648	tripped @ 0.640
FLT43PH	tripped @ 0.308	tripped @ 0.310	tripped @ 0.312	tripped @ 0.312	tripped @ 0.314	tripped @ 0.316	tripped @ 0.502	tripped @ 0.502
FLT41PH	Not tripped, Vmax = 1.141	Not tripped, Vmax = 1.143	Not tripped, Vmax = 1.145	tripped @ 1.308	tripped @ 1.286	tripped @ 1.272	Not tripped, Vmax = 1.123	Not tripped, Vmax = 1.165
FLT53PH	Not tripped, Vmax = 1.034	Not tripped, Vmax = 1.036	Not tripped, Vmax = 1.036	Not tripped, Vmax = 1.040	Not tripped, Vmax = 1.041	Not tripped, Vmax = 1.041	Not tripped, Vmax = 1.024	Not tripped, Vmax = 1.028
FLT51PH	Not tripped, Vmax = 1.030	Not tripped, Vmax = 1.031	Not tripped, Vmax = 1.032	Not tripped, Vmax = 1.038	Not tripped, Vmax = 1.038	Not tripped, Vmax = 1.039	Not tripped, Vmax = 1.021	Not tripped, Vmax = 1.025
FLT63PH	tripped @ 0.722	tripped @ 0.722	tripped @ 0.722	tripped @ 0.722	tripped @ 0.722	tripped @ 0.722	tripped @ 0.722	tripped @ 0.722
FLT61PH	Not tripped, Vmax = 1.030	Not tripped, Vmax = 1.031	Not tripped, Vmax = 1.032	Not tripped, Vmax = 1.038	Not tripped, Vmax = 1.038	Not tripped, Vmax = 1.039	Not tripped, Vmax = 1.020	Not tripped, Vmax = 1.025

Both DC lines PNM and EPE regained control after the fault was cleared in all faults simulated. No HVDC blocking resulted from the fault.

A few concerns were raised due to the electrical and mechanical nature of wind turbines:

- The significance of the over/under voltage protection relay
- The effect of various 34.5 kV line lengths on equivalent generators
- The adequacy of coordination between the status of capacitors at collector buses and generators

The concerns listed above are addressed in different fault simulations. The significance of over/under voltage protection relay was addressed by disabling the relays while the same fault sequence was applied. The details are given in Section 3.2.1.

The equivalent generators have 34.5 kV lines ranging from 3 miles to 8 miles connecting them to the collector buses. Differences in impedance results in different voltage fluctuations during disturbances. The details are given in Section 3.2.2.

Both Phase I and Phase II have capacitor banks to provide voltage support. The capacitor banks remain in-service when the plant has 100% output and maintain adequate voltages at the wind farm. Proper coordination is required between the status (in-service or out-of-service) of the capacitor banks and wind turbines. The details are given in Section 3.2.3.

3.2.1 Over/under voltage protection

The over/under voltage protection scheme was simulated by two user-written models: VBDCN for the Boone Energy Project 34.5 kV buses, and VTGTRP for the Boone Energy Project generators. Both models have two undervoltage set points, and the setup of the relays is listed in Table 2-4. Only the undervoltage protection scheme is implemented in the study. Overvoltages were observed, but not modeled explicitly.

Relay 1 monitors bus voltage below 0.75 pu. If the voltage remains lower than 0.75 pu for over 0.08 seconds, relay 1 would trip the bus/generator. Relay 2 monitors bus voltages lower than 0.85. If bus voltage remains in this range for over 0.4 seconds, relay 2 would trip the bus/generator. To test the system with the undervoltage protection scheme out-of-service or failed, faults were simulated with the over/under voltage protection relays disabled: FLT11PH, FLT21PH, and FLT41PH. Without the undervoltage protection scheme to trip only the units experiencing low voltages, the whole wind farm would become unstable, and cause other generators in the network nearby to go unstable as well.

- FLT11PH: Single-line-to-ground fault on Tolk (bus 51440) - Eddy County (bus 52186) 345 kV line

When the undervoltage protection scheme is in-service, the disturbance would cause all six units to be tripped due to low voltage. If the undervoltage protection scheme is disabled, all six units go unstable.

Figure 3-1 shows a comparison of generator speed at bus 104. Without the undervoltage protection scheme to trip the unit, the speed continues to increase indicating instability and the necessity to trip the generators.

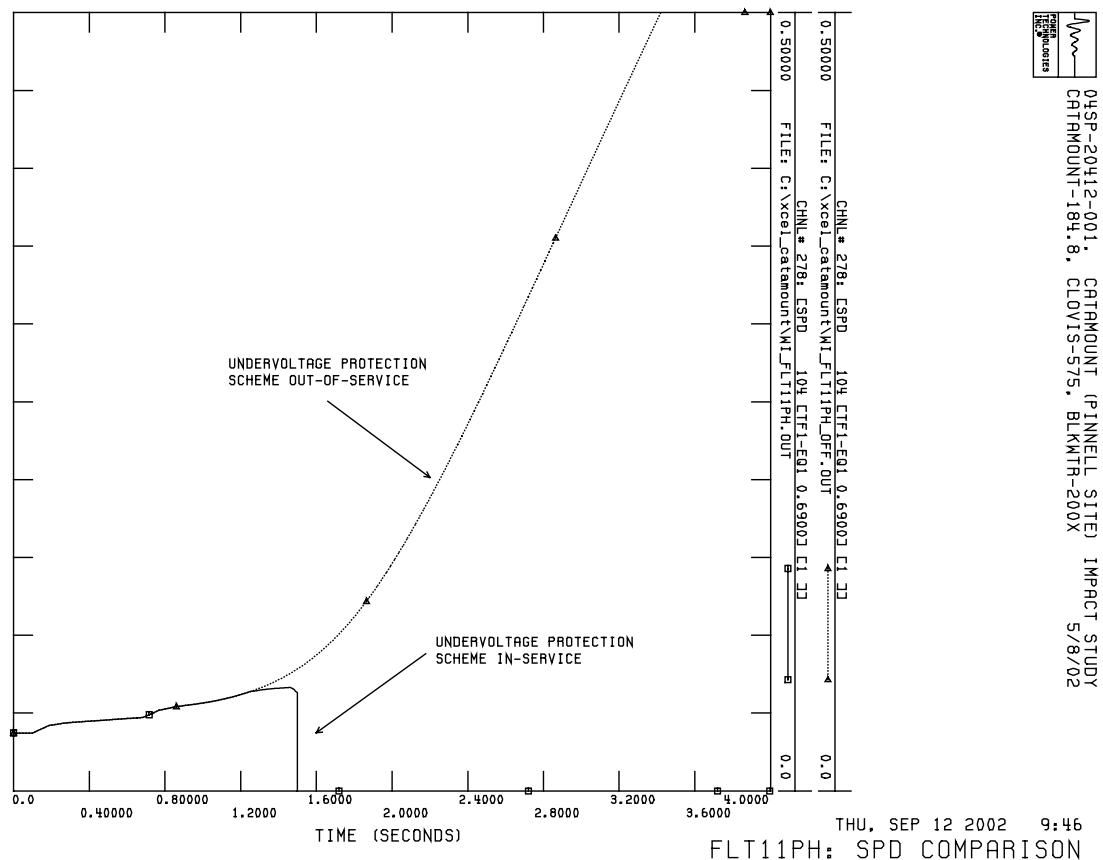


Figure 3-1: comparison of generator speed at bus 104

- FLT21PH: 3-phase fault on Tolk (bus 51435) - Clovis (bus 51205) 230 kV line

When the undervoltage protection scheme is in-service, the disturbance would cause generators at 108 and 109 to be tripped due to low voltage. Bus 107 would experience extremely high voltage because 35 MVAR at the collector bus of Phase II still remains in-service. If the undervoltage protection scheme is disabled, all six units go unstable.

- FLT41PH: Single-line-to-ground fault on Catamount (bus 99990) - Chaves (bus 52073) 230 kV line

When the undervoltage protection scheme is in-service, the disturbance would cause generators at bus 107, 108 and 109 to be tripped due to low voltage, and bus 104, 105 and 106 would experience extremely high voltage. If the undervoltage protection scheme is disabled, all six units went unstable.

3.2.2 The effect of 34.5 kV line lengths on generators

The six collector circuits connecting the equivalent generators to the collector buses have different lengths, ranging from 3 miles to 8 miles. The impedance and reactance of each line is thus different. When a fault occurs, each generator has slightly different response due to different network configurations. If the fault is close by or more severe, all six generators would be tripped due to undervoltage, and the effect of various line lengths would not be obvious. However, if the fault is farther away or less severe, the effect of different line lengths would be more pronounced.

Among the six circuits, bus 104 is connected through the shortest 34.5 kV line of 3 miles, and bus 109 is connected through the longest line of 8 miles. Longer lines have larger impedance and reactance, and have greater losses along the lines. When a fault outside of the plant takes place, a generator with a shorter line is closer to the fault, contributes more fault currents, and experiences a larger voltage drop. After the fault is cleared, a generator with a shorter line is more able to draw reactive power support from the neighboring network to regain a steady operating point and the voltage recovers faster when such recovery is possible. If the voltage during the fault drops beyond the 0.75 threshold for 0.08 seconds, a generator with a shorter line would be tripped slightly faster.

Figure 3-2 is the comparison of generator terminal voltage at bus 104 and bus 109 during the fault FLT21PH (single-phase-to-ground fault on Tolk - Clovis 230 kV line) in the first two seconds of simulation. The generator voltage at bus 104 was able to recover after the fault was cleared after reclosure while bus 109 failed to recover and the voltage continued to decrease, and eventually was tripped by undervoltage protection.

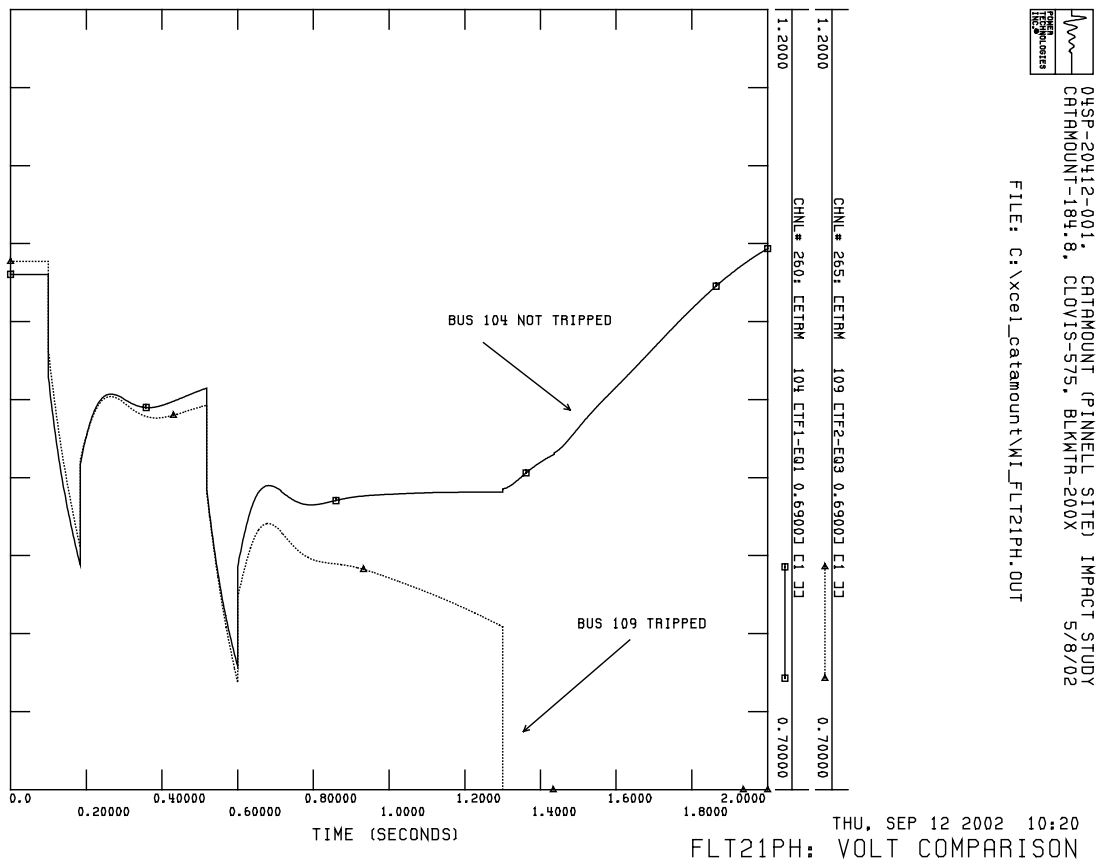


Figure 3-2: comparison of generator terminal voltage at bus 104 and 109

3.2.3 Coordination between the capacitors and wind turbines

The wind turbines are assumed to operate at a power factor of 1.0 (no reactive power generation output or absorption). If no additional reactive power support were provided, the losses along the lines and transformers from the generators to the 230 kV interconnection point would cause generator voltages to drop below 0.9 pu. Phase I has two capacitor banks of 15 MVAR each and Phase II has two of 17.5 MVAR each to provide voltage support. These four capacitor banks remain in-service when the plant has 100% output and maintain adequate voltages at the wind farm. However, if the plant output level is reduced, or generators are tripped by the voltage protection scheme, all four capacitor banks remaining in-service might result in high voltages at the collector buses and remaining wind turbines.

In fault FLT41PH (single-line-to-ground fault at Catamount-Chaves 230 kV line), the undervoltage relay VTGTRP tripped the generators at bus 107, 108, and 109. As a result, no generation of Phase II was available while the capacitor banks of 35 MVAR at bus 99992 still remained in-service. The generators and the collector bus of Phase I experienced high voltages due to excessive reactive power support.

Table 3-2 is the maximum resulting voltage of FLT41PH when the capacitors at bus 99992 are not tripped along with the generators. The overvoltage protection scheme of generators of Phase I (bus 104, 105, and 106) would have been activated and tripped these generators as well. However, if the capacitor banks at bus 99992 were properly coordinated with the generator outputs of Phase II, namely tripping either one or both banks when the plant output was reduced, the resulting voltages would be reduced to reasonable operating conditions. Table 3-3 lists the maximum resulting voltage with the capacitors at bus 99992 tripped.

Table 3-2: maximum resulting voltage of FLT41PH when the capacitors at bus 99992 are not tripped

bus #	104	105	106	99991	99992
Base kV	0.69	0.69	0.69	34.5	34.5
Vmax	1.141	1.143	1.145	1.123	1.165

Table 3-3: maximum resulting voltage of FLT41PH with capacitors at bus 99992 tripped

bus #	104	105	106	99991	99992
Base kV	0.69	0.69	0.69	34.5	34.5
Vmax	1.030	1.031	1.032	1.020	1.025

In fault FLT21PH (single-line-to-ground fault at Tolk - Clovis 230 kV line), the undervoltage relay VTGTRP tripped the generators at bus 108 and 109. Generators of Phase I (bus 104, 105 and 106) and bus 107 experienced high voltages.

Table 3-4 is the maximum resulting voltage of FLT21PH when the capacitors at bus 99992 are not tripped along with the generators at bus 108 and 109. The overvoltage protection scheme of generators at 104, 105, 106 and 107 would have been activated and tripped these generators as well. Note that the process would have been somewhat different than that of FLT41PH. Here only the generator voltage at 107 initially exceeds the overvoltage threshold. However, following trip of that unit, the voltages at the other units would increase, likely resulting in a cascading sequence of trips. However, if one of the two capacitor banks at bus 99992 was tripped to coordinate with the generator output, the resulting voltages would be reduced to reasonable operating conditions. Table 3-5 lists the maximum resulting voltage with one capacitor bank at bus 99992 tripped.

Table 3-4: maximum resulting voltage of FLT21PH when the capacitors at bus 99992 are not tripped

bus #	104	105	106	107	99991	99992
Base kV	0.69	0.69	0.69	0.69	34.5	34.5
Vmax	1.070	1.072	1.073	1.132	1.040	1.108

Table 3-5: maximum resulting voltage of FLT21PH with one capacitor at bus 99992 tripped

bus #	104	105	106	107	99991	99992
Base kV	0.69	0.69	0.69	0.69	34.5	34.5
Vmax	1.037	1.038	1.039	1.045	1.026	1.025

Appendix

A

PSAS files

- FLT13PH:

```
PSS
pdev
2 1 1
PDEV_WI_FLT13PH.txt
ODEV
2 1 1
PDEV_WI_FLT13PH.txt
FIN
RECOVER FROM (CATAMOUNT.SNP AND WI_CAT_f1_cnv.sav
INITIALIZE OUTPUT WI_FLT13PH.OUT
RUN TO .1 SECONDS PRINT 240 PLOT 1
APPLY FAULT AT BUS 9999
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 52186 TO BUS 52185 CIRCUIT 1
TRIP LINE FROM BUS 52186 TO BUS 9999 CIRCUIT 1
TRIP LINE FROM BUS 51440 TO BUS 9999 CIRCUIT 1
TRIP LINE FROM BUS 51440 TO BUS 51439 CIRCUIT 1
TRIP LINE FROM BUS 51439 TO BUS 51435 CIRCUIT 1
TRIP LINE FROM BUS 51439 TO BUS 51437 CIRCUIT 1
RUN FOR 30 CYCLES PRINT 240 PLOT 1
CHANGE BUS 9999 CODE TO 1
CHANGE BUS 52186 CODE TO 1
CHANGE BUS 51440 CODE TO 1
CHANGE BUS 51439 CODE TO 1
APPLY FAULT AT BUS 9999
CLOSE LINE FROM BUS 52186 TO BUS 52185 CIRCUIT 1
CLOSE LINE FROM BUS 52186 TO BUS 9999 CIRCUIT 1
CLOSE LINE FROM BUS 51440 TO BUS 9999 CIRCUIT 1
CLOSE LINE FROM BUS 51440 TO BUS 51439 CIRCUIT 1
CLOSE LINE FROM BUS 51439 TO BUS 51435 CIRCUIT 1
CLOSE LINE FROM BUS 51439 TO BUS 51437 CIRCUIT 1
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 52186 TO BUS 52185 CIRCUIT 1
TRIP LINE FROM BUS 52186 TO BUS 9999 CIRCUIT 1
TRIP LINE FROM BUS 51440 TO BUS 9999 CIRCUIT 1
TRIP LINE FROM BUS 51440 TO BUS 51439 CIRCUIT 1
```

TRIP LINE FROM BUS 51439 TO BUS 51435 CIRCUIT 1
TRIP LINE FROM BUS 51439 TO BUS 51437 CIRCUIT 1
RUN TO 5 SECONDS PRINT 240 PLOT 1
RUN TO 10 SECONDS PRINT 240 PLOT 7
PSS
pdev
1
ODEV
7
FIN

END

- FLT11PH:

```
PSS
pdev
2 1 1
PDEV_WI_FLT11PH.txt
ODEV
2 1 1
PDEV_WI_FLT11PH.txt
FIN
RECOVER FROM(CATAMOUNT.$NP AND WI_CAT_f1_cnv.sav
INITIALIZE OUTPUT WI_FLT11PH.OUT
RUN TO .1 SECONDS PRINT 240 PLOT 1
APPLY FAULT AT BUS 9999 ADMITTANCE 21.7 -1121.4 MVA
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 52186 TO BUS 52185 CIRCUIT 1
TRIP LINE FROM BUS 52186 TO BUS 9999 CIRCUIT 1
TRIP LINE FROM BUS 51440 TO BUS 9999 CIRCUIT 1
TRIP LINE FROM BUS 51440 TO BUS 51439 CIRCUIT 1
TRIP LINE FROM BUS 51439 TO BUS 51435 CIRCUIT 1
TRIP LINE FROM BUS 51439 TO BUS 51437 CIRCUIT 1
RUN FOR 30 CYCLES PRINT 240 PLOT 1
CHANGE BUS 9999 CODE TO 1
CHANGE BUS 52186 CODE TO 1
CHANGE BUS 51440 CODE TO 1
CHANGE BUS 51439 CODE TO 1
APPLY FAULT AT BUS 9999 ADMITTANCE 21.7 -1121.4 MVA
CLOSE LINE FROM BUS 52186 TO BUS 52185 CIRCUIT 1
CLOSE LINE FROM BUS 52186 TO BUS 9999 CIRCUIT 1
CLOSE LINE FROM BUS 51440 TO BUS 9999 CIRCUIT 1
CLOSE LINE FROM BUS 51440 TO BUS 51439 CIRCUIT 1
CLOSE LINE FROM BUS 51439 TO BUS 51435 CIRCUIT 1
CLOSE LINE FROM BUS 51439 TO BUS 51437 CIRCUIT 1
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 52186 TO BUS 52185 CIRCUIT 1
TRIP LINE FROM BUS 52186 TO BUS 9999 CIRCUIT 1
TRIP LINE FROM BUS 51440 TO BUS 9999 CIRCUIT 1
TRIP LINE FROM BUS 51440 TO BUS 51439 CIRCUIT 1
TRIP LINE FROM BUS 51439 TO BUS 51435 CIRCUIT 1
TRIP LINE FROM BUS 51439 TO BUS 51437 CIRCUIT 1
RUN TO 5 SECONDS PRINT 240 PLOT 1
RUN TO 10 SECONDS PRINT 240 PLOT 7
PSS
pdev
1
ODEV
7
FIN
END
```


- FLT2_3PH:

```
PSS
pdev
2 1 1
PDEV_WI_FLT23PH.txt
ODEV
2 1 1
PDEV_WI_FLT23PH.txt
FIN
RECOVER FROM(CATAMOUNT.$)NP AND WI_CAT_f2_cnv.sav
INITIALIZE OUTPUT WI_FLT23PH.OUT
RUN TO .1 SECONDS PRINT 240 PLOT 1
APPLY FAULT AT BUS 9999
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51435 TO BUS 9999 CIRCUIT 2
TRIP LINE FROM BUS 51205 TO BUS 9999 CIRCUIT 2
RUN FOR 20 CYCLES PRINT 240 PLOT 1
CHANGE BUS 9999 CODE TO 1
APPLY FAULT AT BUS 9999
CLOSE LINE FROM BUS 51435 TO BUS 9999 CIRCUIT 2
CLOSE LINE FROM BUS 51205 TO BUS 9999 CIRCUIT 2
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51435 TO BUS 9999 CIRCUIT 2
TRIP LINE FROM BUS 51205 TO BUS 9999 CIRCUIT 2
RUN TO 5 SECONDS PRINT 240 PLOT 1
RUN TO 10 SECONDS PRINT 240 PLOT 7
PSS
pdev
1
ODEV
7
FIN

END
```

- FLT21PH:
PSS
pdev
2 1 1
PDEV_WI_FLT21PH.txt
ODEV
2 1 1
PDEV_WI_FLT21PH.txt
FIN
RECOVER FROM (CATAMOUNT.SNP AND WI_CAT_f2_cnv.sav
INITIALIZE OUTPUT WI_FLT21PH.OUT
RUN TO .1 SECONDS PRINT 240 PLOT 1
APPLY FAULT AT BUS 9999 ADMITTANCE 275.7 -2056.3 MVA
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51435 TO BUS 9999 CIRCUIT 2
TRIP LINE FROM BUS 51205 TO BUS 9999 CIRCUIT 2
RUN FOR 20 CYCLES PRINT 240 PLOT 1
CHANGE BUS 9999 CODE TO 1
APPLY FAULT AT BUS 9999 ADMITTANCE 275.7 -2056.3 MVA
CLOSE LINE FROM BUS 51435 TO BUS 9999 CIRCUIT 2
CLOSE LINE FROM BUS 51205 TO BUS 9999 CIRCUIT 2
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51435 TO BUS 9999 CIRCUIT 2
TRIP LINE FROM BUS 51205 TO BUS 9999 CIRCUIT 2
RUN TO 5 SECONDS PRINT 240 PLOT 1
RUN TO 10 SECONDS PRINT 240 PLOT 7
PSS
pdev
1
ODEV
7
FIN

END

- FLT33PH:

```
PSS
pdev
2 1 1
PDEV_WI_FLT33PH.txt
ODEV
2 1 1
PDEV_WI_FLT33PH.txt
FIN
RECOVER FROM(CATAMOUNT.$)NP AND WI_CAT_cnv.sav
INITIALIZE OUTPUT WI_FLT33PH.OUT
RUN TO .1 SECONDS PRINT 240 PLOT 1
APPLY FAULT AT BUS 51195
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51195 TO BUS 99990 CIRCUIT 1
RUN FOR 20 CYCLES PRINT 240 PLOT 1
APPLY FAULT AT BUS 51195
CLOSE LINE FROM BUS 51195 TO BUS 99990 CIRCUIT 1
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51195 TO BUS 99990 CIRCUIT 1
RUN TO 5 SECONDS PRINT 240 PLOT 1
RUN TO 10 SECONDS PRINT 240 PLOT 7
PSS
pdev
1
ODEV
7
FIN
END
```

- FLT31PH:

```
PSS
pdev
2 1 1
PDEV_WI_FLT31PH.txt
ODEV
2 1 1
PDEV_WI_FLT31PH.txt
FIN
RECOVER FROM(CATAMOUNT.$)NP AND WI_CAT_cnv.sav
INITIALIZE OUTPUT WI_FLT31PH.OUT
RUN TO .1 SECONDS PRINT 240 PLOT 1
APPLY FAULT AT BUS 51195 ADMITTANCE 268.2 -1758.3 MVA
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51195 TO BUS 99990 CIRCUIT 1
RUN FOR 20 CYCLES PRINT 240 PLOT 1
APPLY FAULT AT BUS 51195 ADMITTANCE 268.2 -1758.3 MVA
CLOSE LINE FROM BUS 51195 TO BUS 99990 CIRCUIT 1
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51195 TO BUS 99990 CIRCUIT 1
RUN TO 5 SECONDS PRINT 240 PLOT 1
RUN TO 10 SECONDS PRINT 240 PLOT 7
PSS
pdev
1
ODEV
7
FIN

END
```

- FLT43PH:

```
PSS
pdev
2 1 1
PDEV_WI_FLT43PH.txt
ODEV
2 1 1
PDEV_WI_FLT43PH.txt
FIN
RECOVER FROM(CATAMOUNT.$)NP AND WI_CAT_cnv.sav
INITIALIZE OUTPUT WI_FLT43PH.OUT
RUN TO .1 SECONDS PRINT 240 PLOT 1
APPLY FAULT AT BUS 52073
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 52073 TO BUS 99990 CIRCUIT 1
RUN FOR 20 CYCLES PRINT 240 PLOT 1
APPLY FAULT AT BUS 52073
CLOSE LINE FROM BUS 52073 TO BUS 99990 CIRCUIT 1
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 52073 TO BUS 99990 CIRCUIT 1
RUN TO 5 SECONDS PRINT 240 PLOT 1
RUN TO 10 SECONDS PRINT 240 PLOT 7
PSS
pdev
1
ODEV
7
FIN

END
```

- FLT41PH:

```
PSS
pdev
2 1 1
PDEV_WI_FLT41PH.txt
ODEV
2 1 1
PDEV_WI_FLT41PH.txt
FIN
RECOVER FROM(CATAMOUNT.$)NP AND WI_CAT_cnv.sav
INITIALIZE OUTPUT WI_FLT41PH.OUT
RUN TO .1 SECONDS PRINT 240 PLOT 1
APPLY FAULT AT BUS 52073 ADMITTANCE 35.3 -827.7 MVA
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 52073 TO BUS 99990 CIRCUIT 1
RUN FOR 20 CYCLES PRINT 240 PLOT 1
APPLY FAULT AT BUS 52073 ADMITTANCE 35.3 -827.7 MVA
CLOSE LINE FROM BUS 52073 TO BUS 99990 CIRCUIT 1
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 52073 TO BUS 99990 CIRCUIT 1
RUN TO 5 SECONDS PRINT 240 PLOT 1
RUN TO 10 SECONDS PRINT 240 PLOT 7
PSS
pdev
1
ODEV
7
FIN

END
```

- FLT53PH:

```
PSS
pdev
2 1 1
PDEV_WI_FLT53PH.txt
ODEV
2 1 1
PDEV_WI_FLT53PH.txt
FIN
RECOVER FROM(CATAMOUNT.$)NP AND WI_CAT_cnv.sav
INITIALIZE OUTPUT WI_FLT53PH.OUT
RUN TO .1 SECONDS PRINT 240 PLOT 1
APPLY FAULT AT BUS 51533
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51435 TO BUS 51533 CIRCUIT 1
RUN FOR 20 CYCLES PRINT 240 PLOT 1
APPLY FAULT AT BUS 51533
CLOSE LINE FROM BUS 51435 TO BUS 51533 CIRCUIT 1
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51435 TO BUS 51533 CIRCUIT 1
RUN TO 5 SECONDS PRINT 240 PLOT 1
RUN TO 10 SECONDS PRINT 240 PLOT 7
PSS
pdev
1
ODEV
7
FIN

END
```

- FLT51PH:

```
PSS
pdev
2 1 1
PDEV_WI_FLT51PH.txt
ODEV
2 1 1
PDEV_WI_FLT51PH.txt
FIN
RECOVER FROM(CATAMOUNT.$)NP AND WI_CAT_cnv.sav
INITIALIZE OUTPUT WI_FLT51PH.OUT
RUN TO .1 SECONDS PRINT 240 PLOT 1
APPLY FAULT AT BUS 51533 ADMITTANCE 133.9 -2149.9 MVA
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51435 TO BUS 51533 CIRCUIT 1
RUN FOR 20 CYCLES PRINT 240 PLOT 1
APPLY FAULT AT BUS 51533 ADMITTANCE 133.9 -2149.9 MVA
CLOSE LINE FROM BUS 51435 TO BUS 51533 CIRCUIT 1
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51435 TO BUS 51533 CIRCUIT 1
RUN TO 5 SECONDS PRINT 240 PLOT 1
RUN TO 10 SECONDS PRINT 240 PLOT 7
PSS
pdev
1
ODEV
7
FIN

END
```


- FLT63PH:

```
PSS
pdev
2 1 1
PDEV_WI_FLT63PH.txt
ODEV
2 1 1
PDEV_WI_FLT63PH.txt
FIN
RECOVER FROM(CATAMOUNT.$)NP AND TEST_WI_cnv.sav
INITIALIZE OUTPUT WI_FLT63PH.OUT
RUN TO .1 SECONDS PRINT 240 PLOT 1
APPLY FAULT AT BUS 51176
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51194 TO BUS 51156 CIRCUIT 1
TRIP LINE FROM BUS 51156 TO BUS 51176 CIRCUIT 1
RUN FOR 20 CYCLES PRINT 240 PLOT 1
APPLY FAULT AT BUS 51176
CLOSE LINE FROM BUS 51194 TO BUS 51156 CIRCUIT 1
CLOSE LINE FROM BUS 51156 TO BUS 51176 CIRCUIT 1
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51194 TO BUS 51156 CIRCUIT 1
TRIP LINE FROM BUS 51156 TO BUS 51176 CIRCUIT 1
RUN TO 5 SECONDS PRINT 240 PLOT 1
RUN TO 10 SECONDS PRINT 240 PLOT 7
PSS
pdev
1
ODEV
7
FIN

END
```

- FLT61PH:

```
PSS
pdev
2 1 1
PDEV_WI_FLT61PH.txt
ODEV
2 1 1
PDEV_WI_FLT61PH.txt
FIN
RECOVER FROM (CATAMOUNT.$)NP AND TEST_WI_cnv.sav
INITIALIZE OUTPUT WI_FLT61PH.OUT
RUN TO .1 SECONDS PRINT 240 PLOT 1
APPLY FAULT AT BUS 51176 ADMITTANCE 115.8 -970.4 MVA
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51194 TO BUS 51156 CIRCUIT 1
TRIP LINE FROM BUS 51156 TO BUS 51176 CIRCUIT 1
RUN FOR 20 CYCLES PRINT 240 PLOT 1
APPLY FAULT AT BUS 51176 ADMITTANCE 115.8 -970.4 MVA
CLOSE LINE FROM BUS 51194 TO BUS 51156 CIRCUIT 1
CLOSE LINE FROM BUS 51156 TO BUS 51176 CIRCUIT 1
RUN FOR 5 CYCLES PRINT 240 PLOT 1
CLEAR FAULT
TRIP LINE FROM BUS 51194 TO BUS 51156 CIRCUIT 1
TRIP LINE FROM BUS 51156 TO BUS 51176 CIRCUIT 1
RUN TO 5 SECONDS PRINT 240 PLOT 1
RUN TO 10 SECONDS PRINT 240 PLOT 7
PSS
pdev
1
ODEV
7
FIN

END
```

Appendix

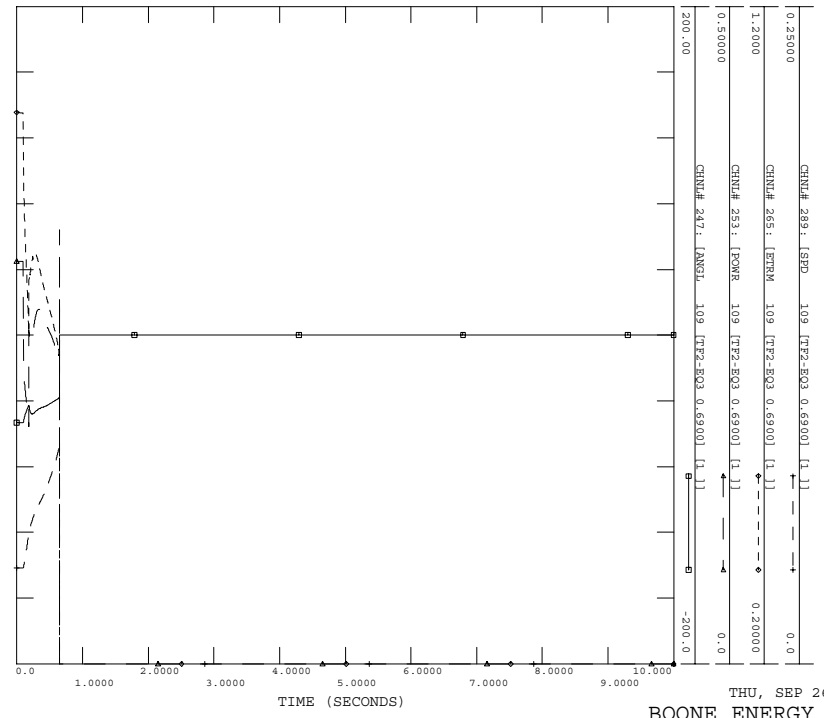
B

Plots of Simulation Outputs

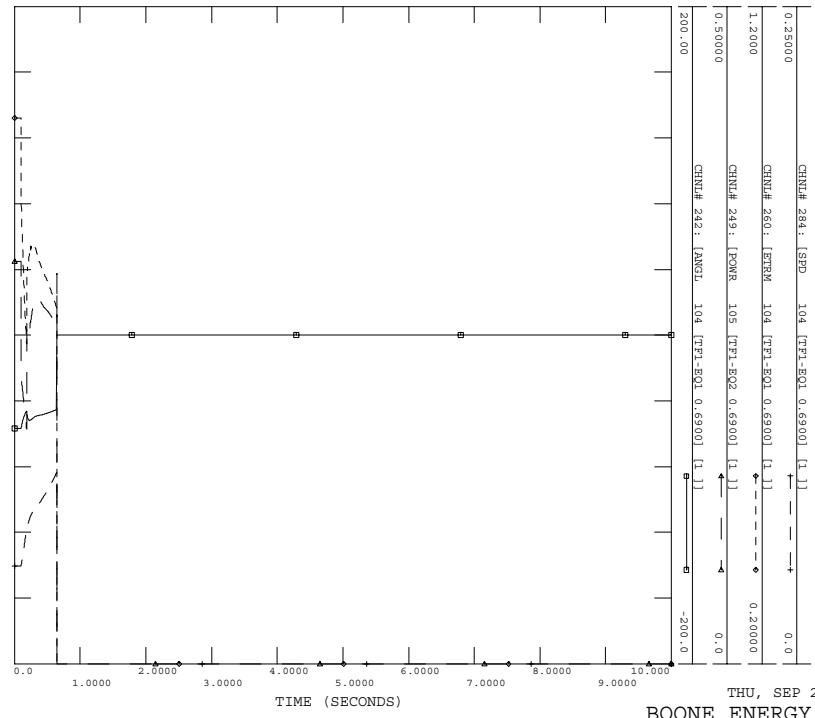
B.1 Specified Disturbances with Boone Energy Project in-service

- FLT13PH
- FLT11PH
- FLT23PH
- FLT21PH
- FLT33PH
- FLT31PH
- FLT43PH
- FLT41PH
- FLT53PH
- FLT51PH
- FLT63PH
- FLT61PH

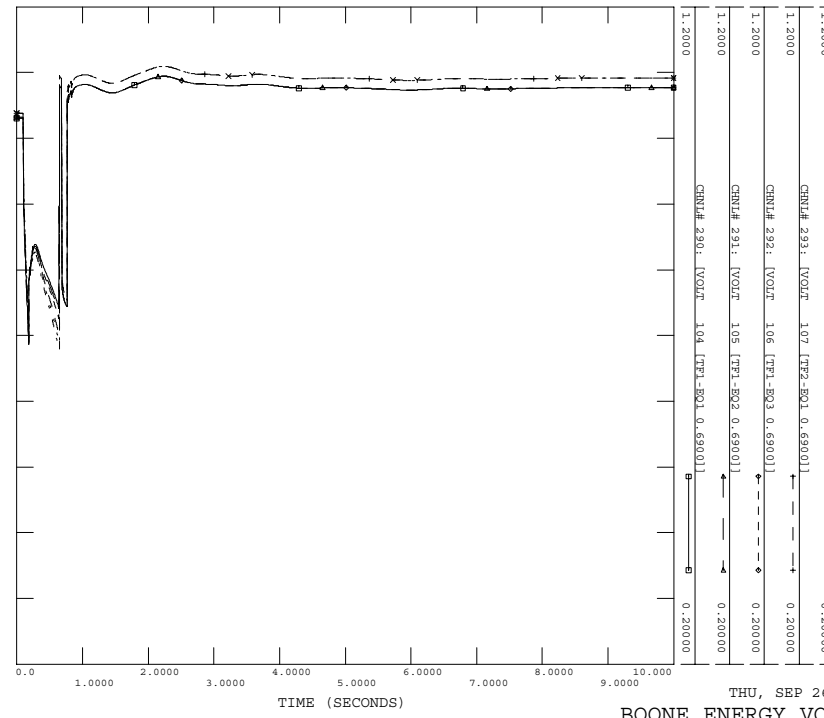
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT#84.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT13PH.OUT



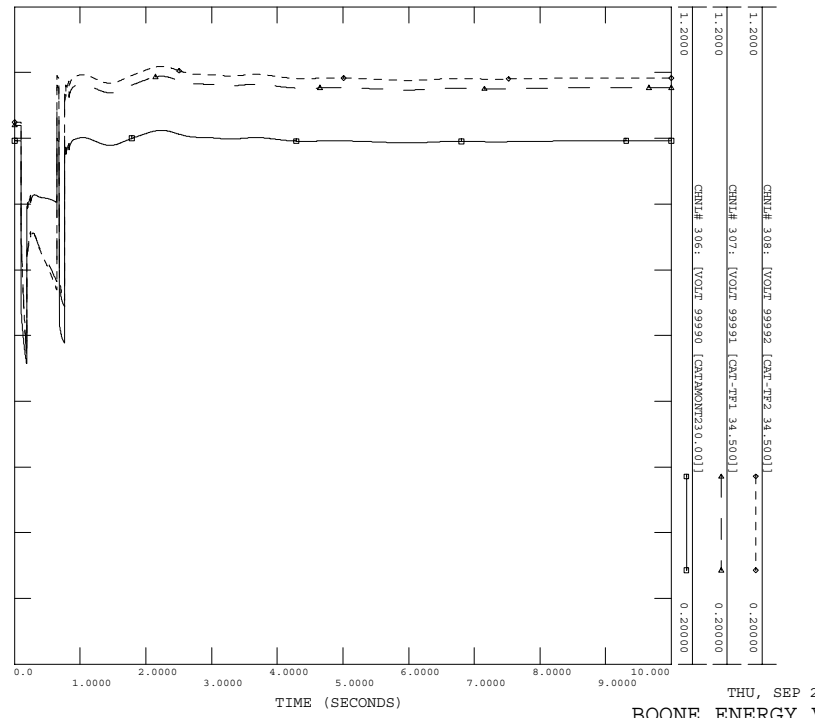
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT#84.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT13PH.OUT

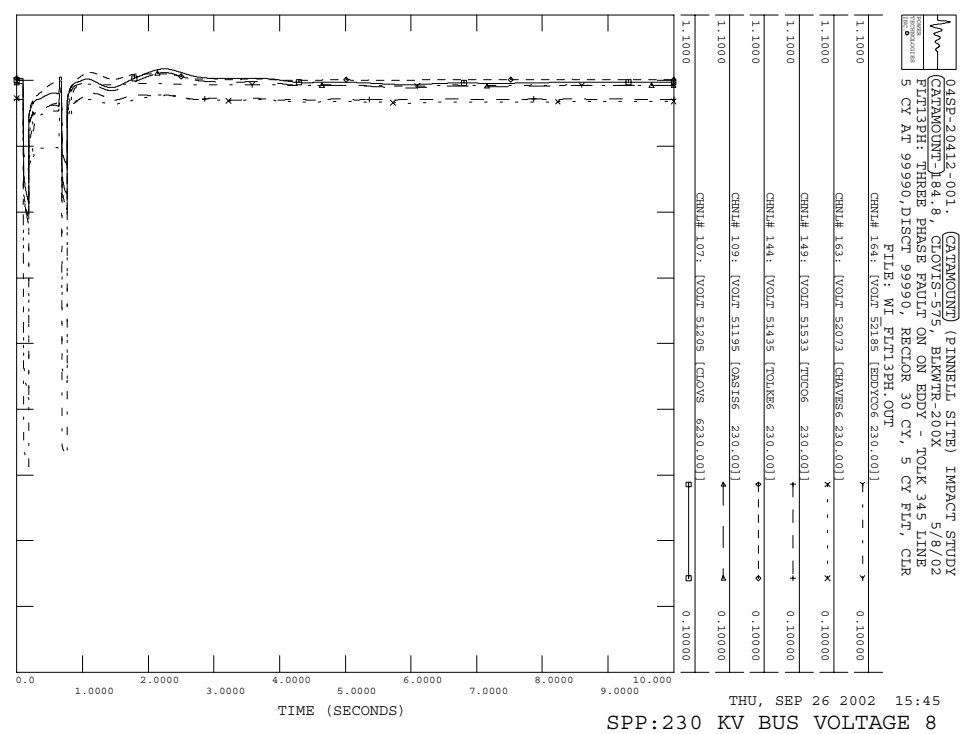
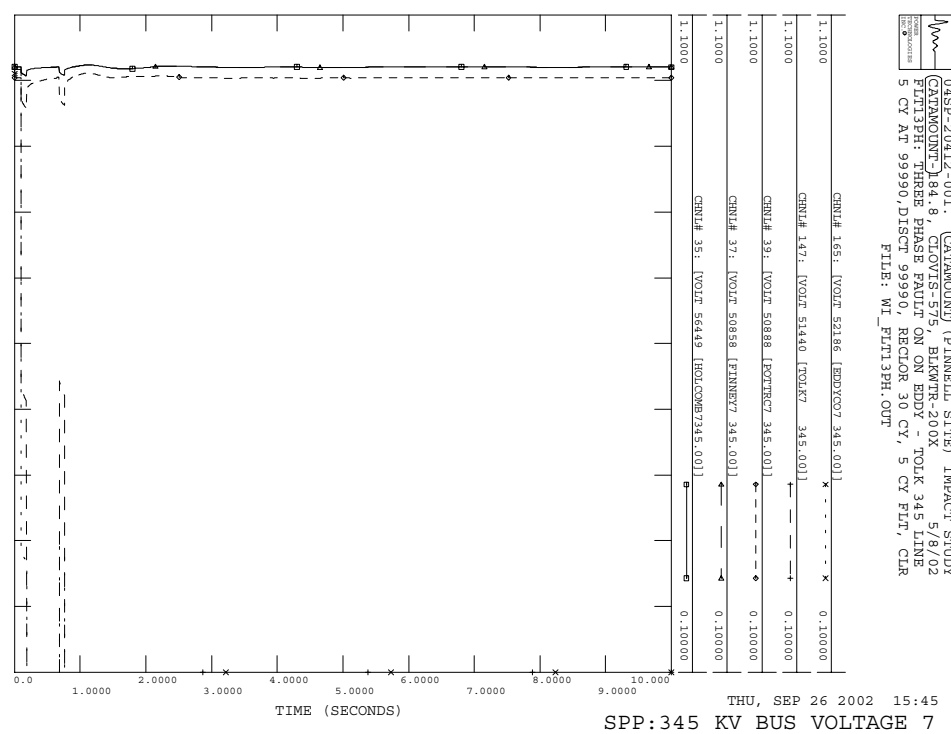
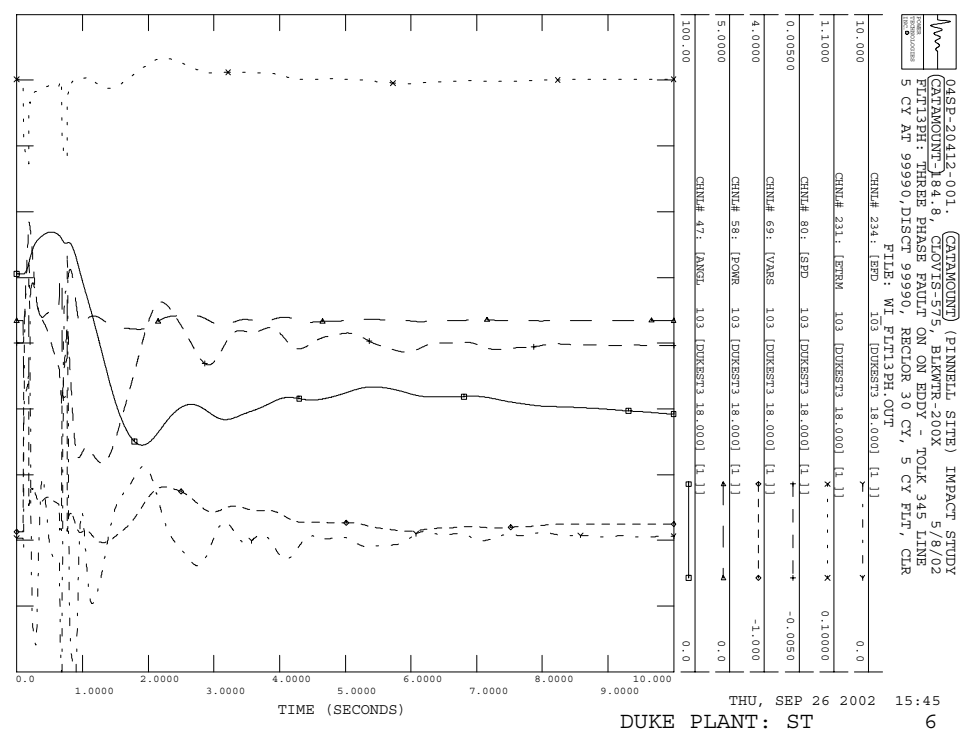
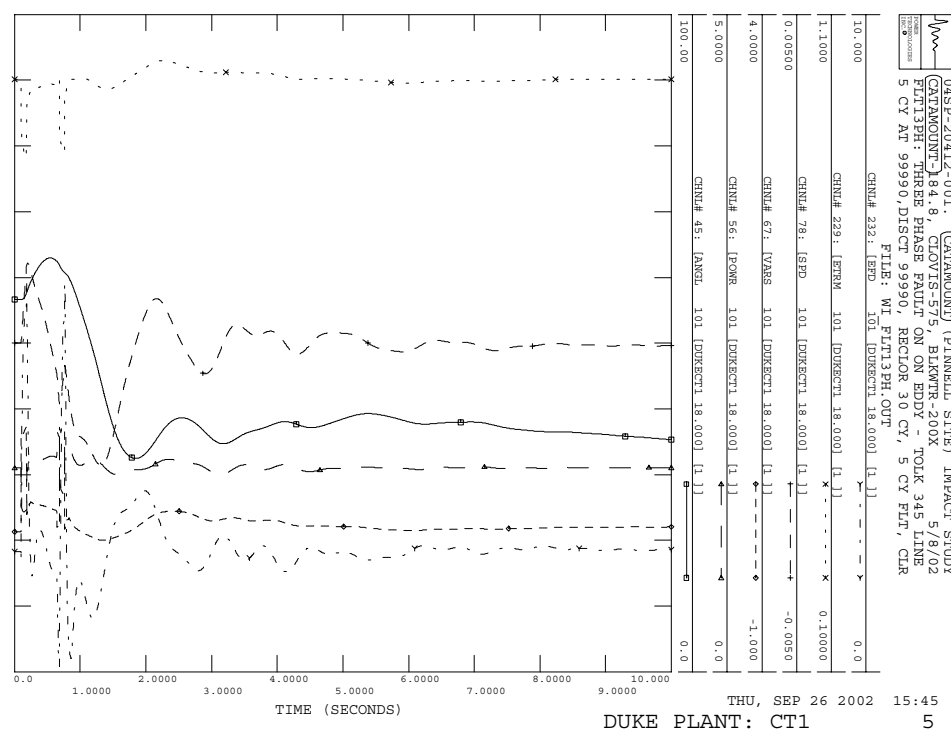


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT#84.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT13PH.OUT

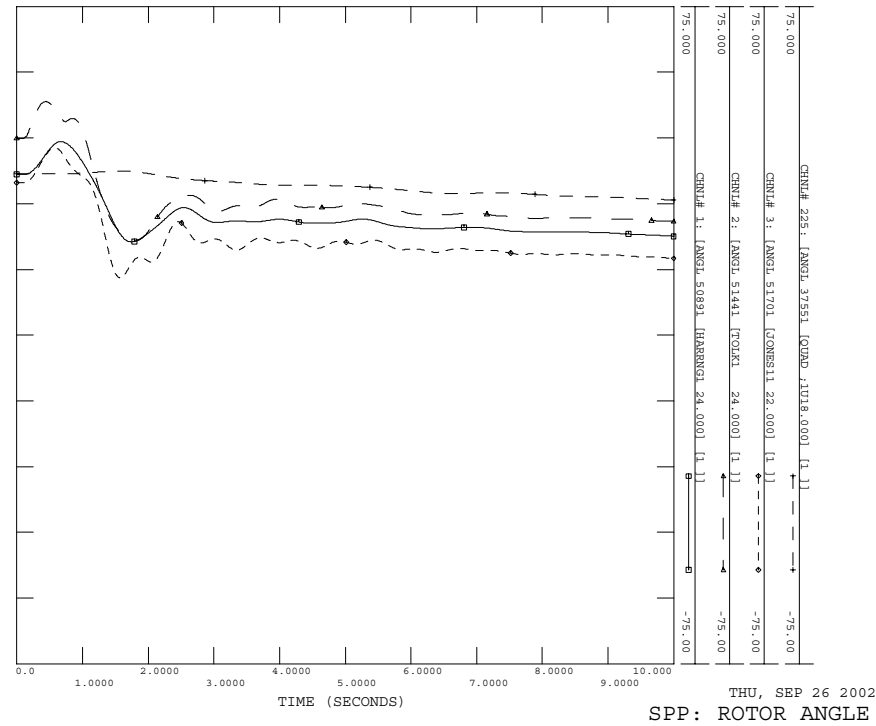


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT#84.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT13PH.OUT

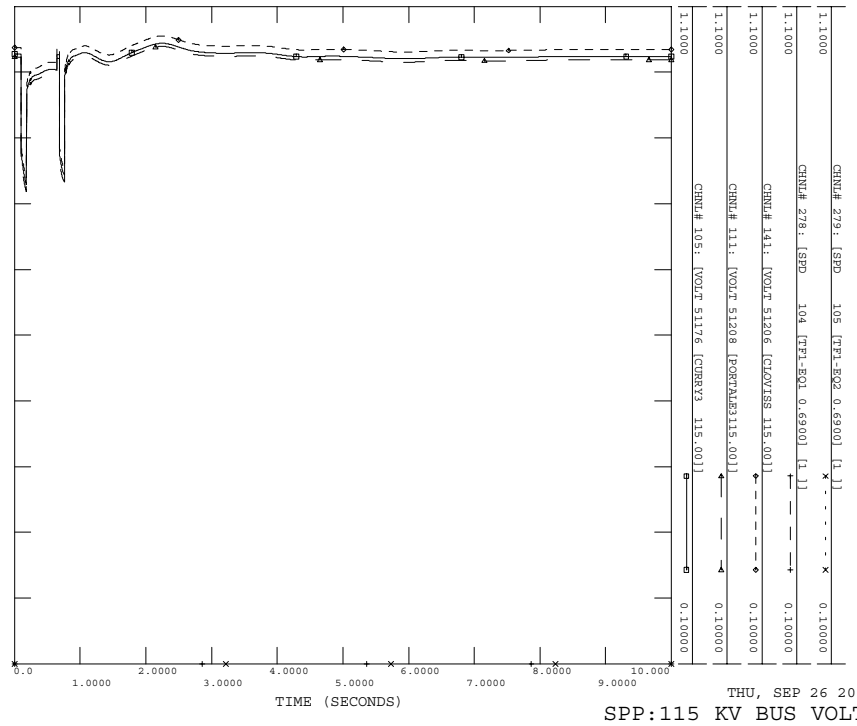




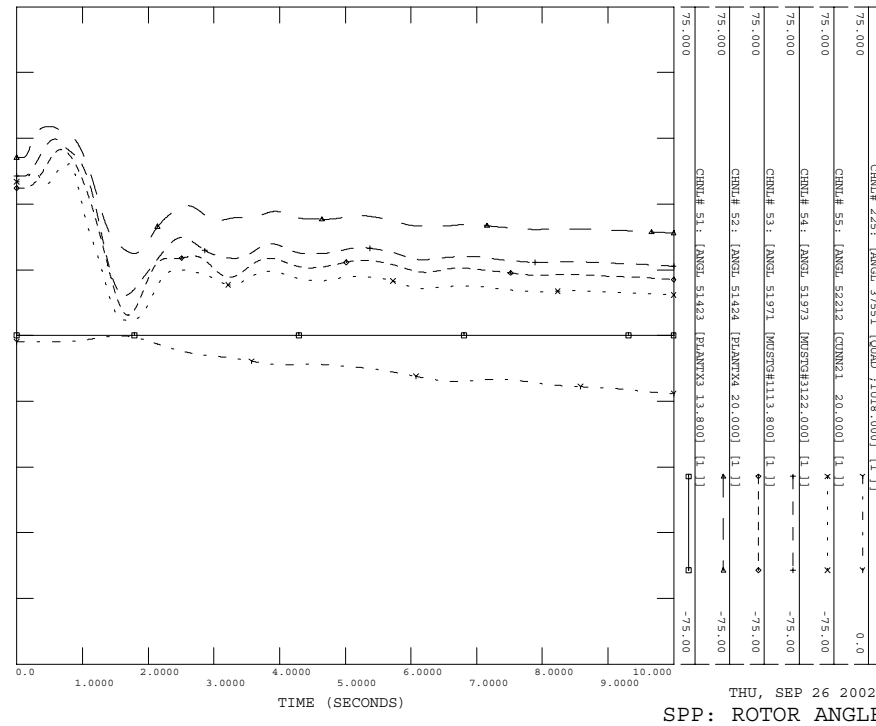
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
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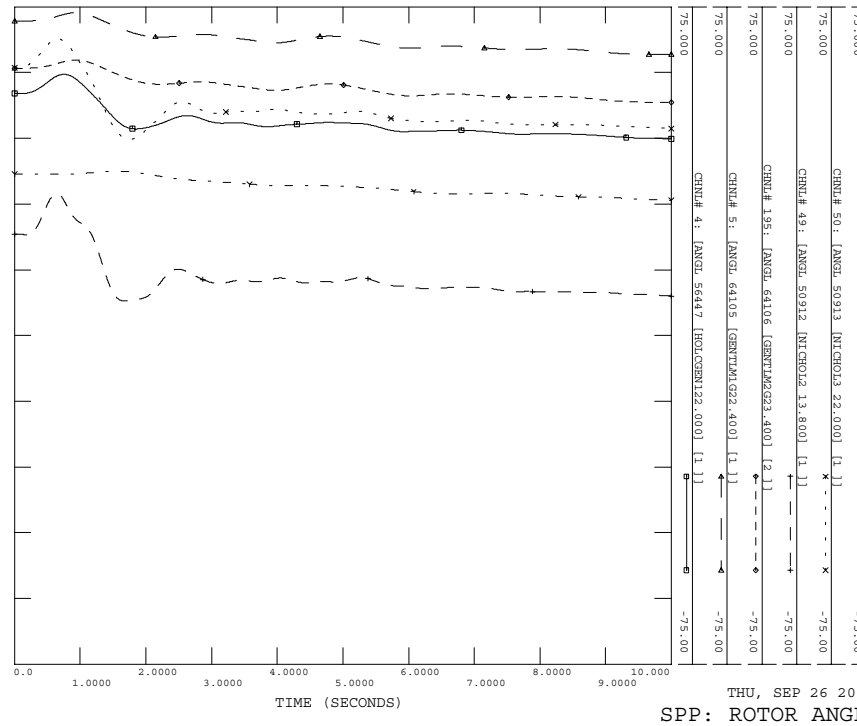
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
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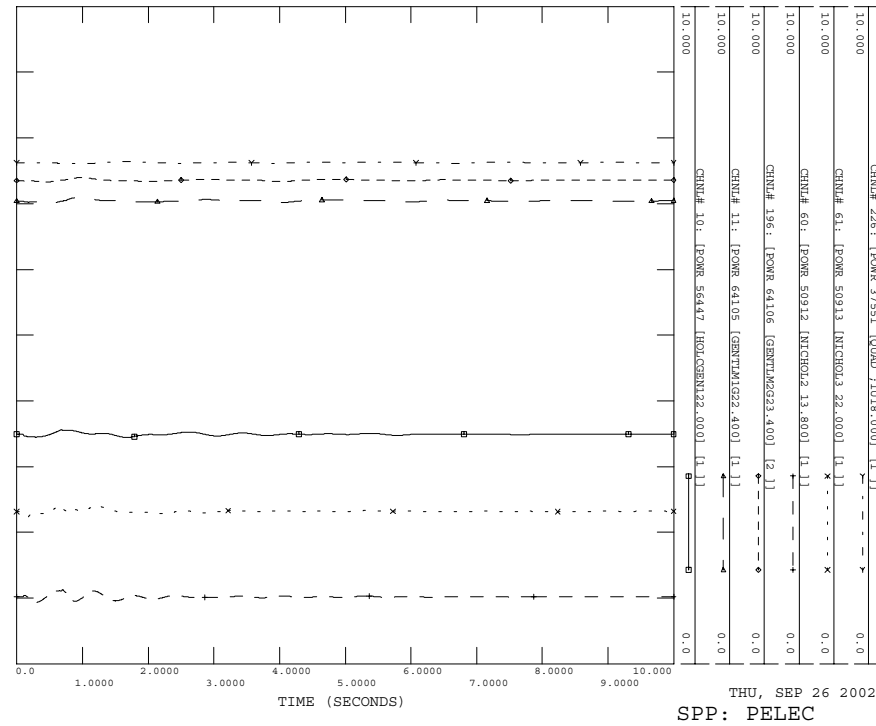
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWR-200X 5/8/02
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04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
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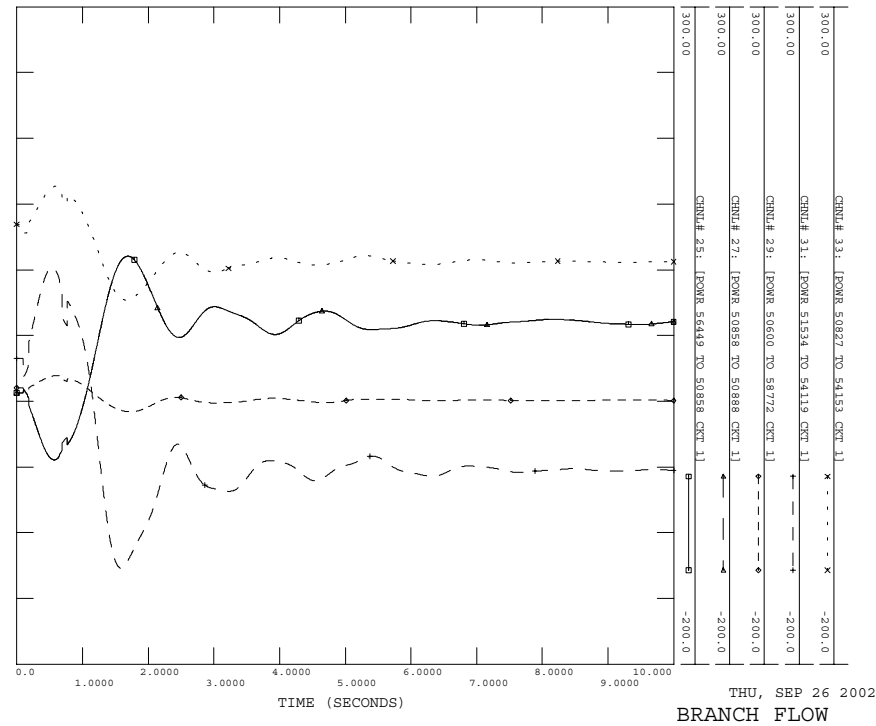


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 (CATAMOUNT) 94.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT13PH.OUT



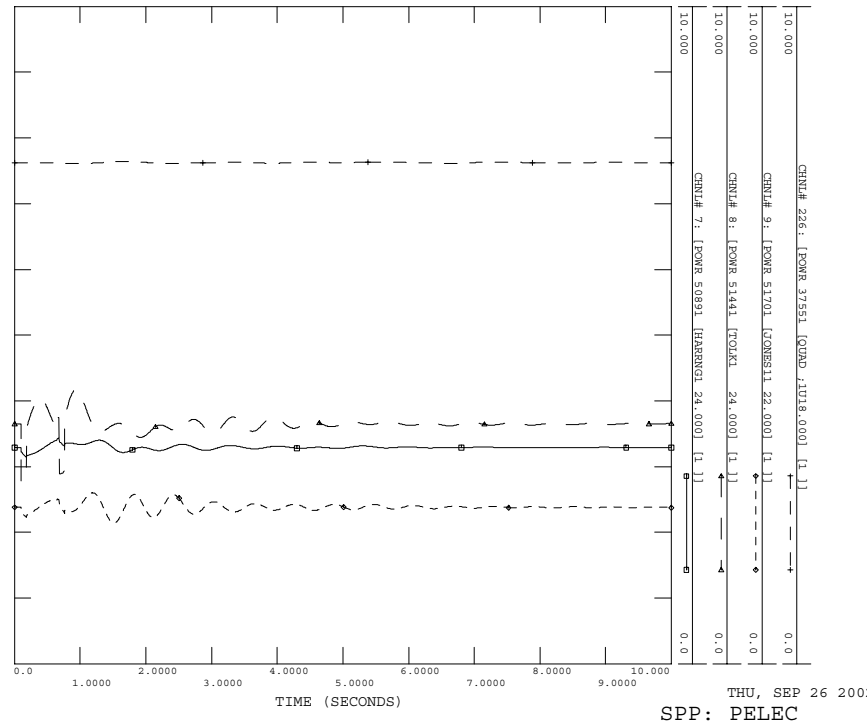
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 (CATAMOUNT) 94.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
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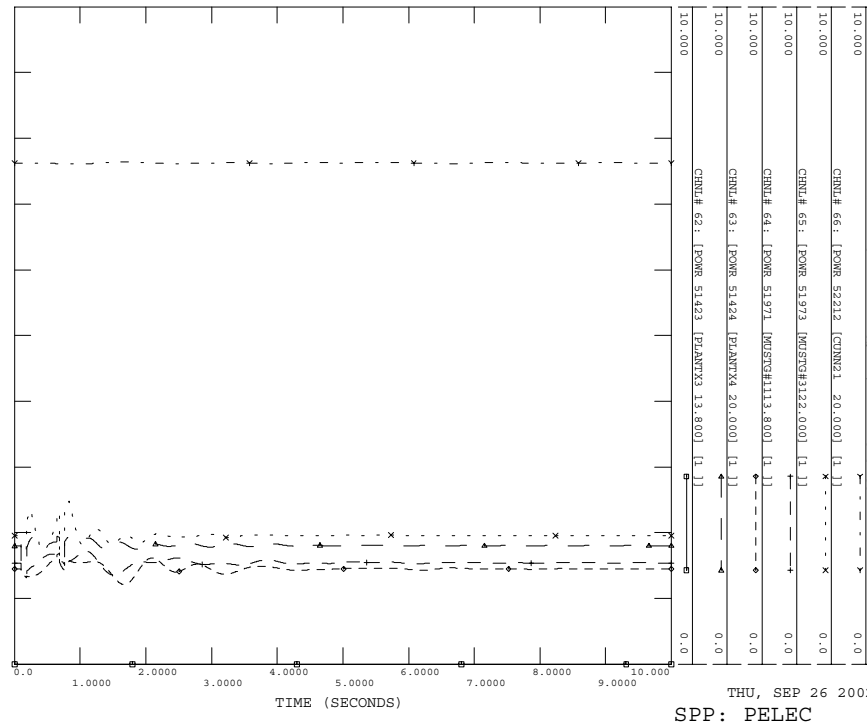
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 BRANCH FLOW 16

04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 (CATAMOUNT) 94.8, CLOVIS-575, BLKWR-200X TOLK 345 LINE
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
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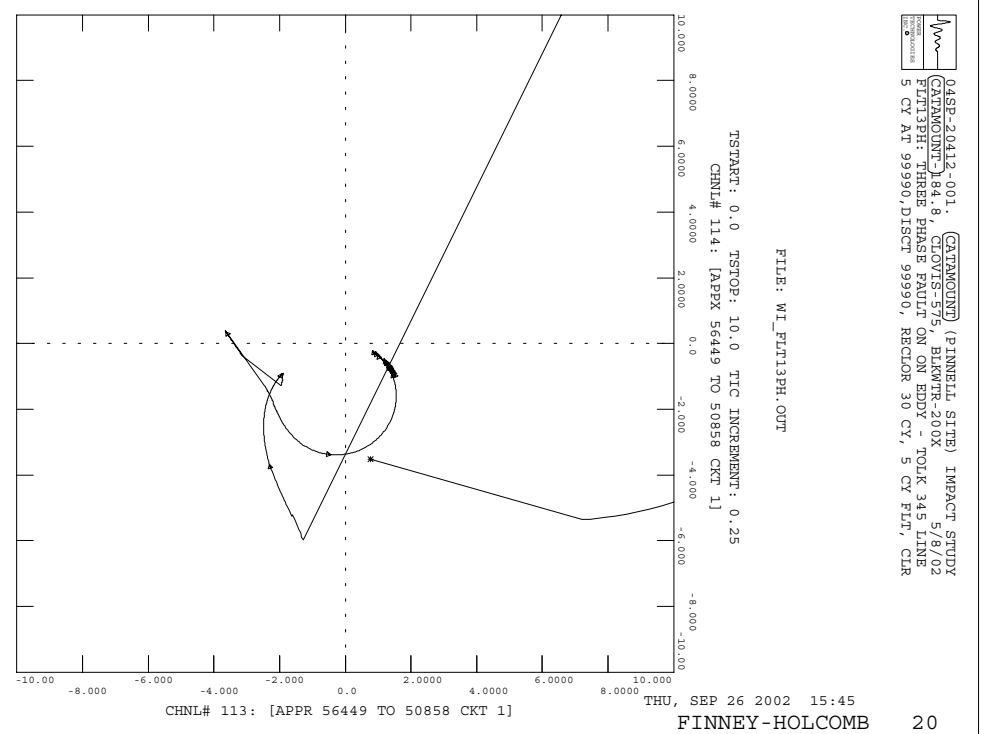
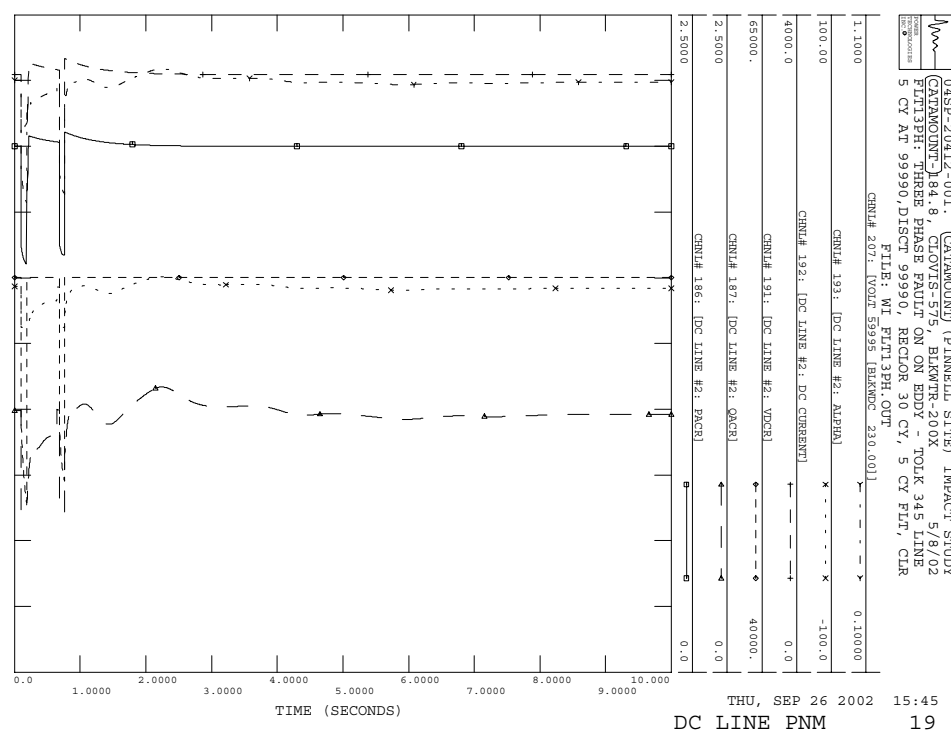
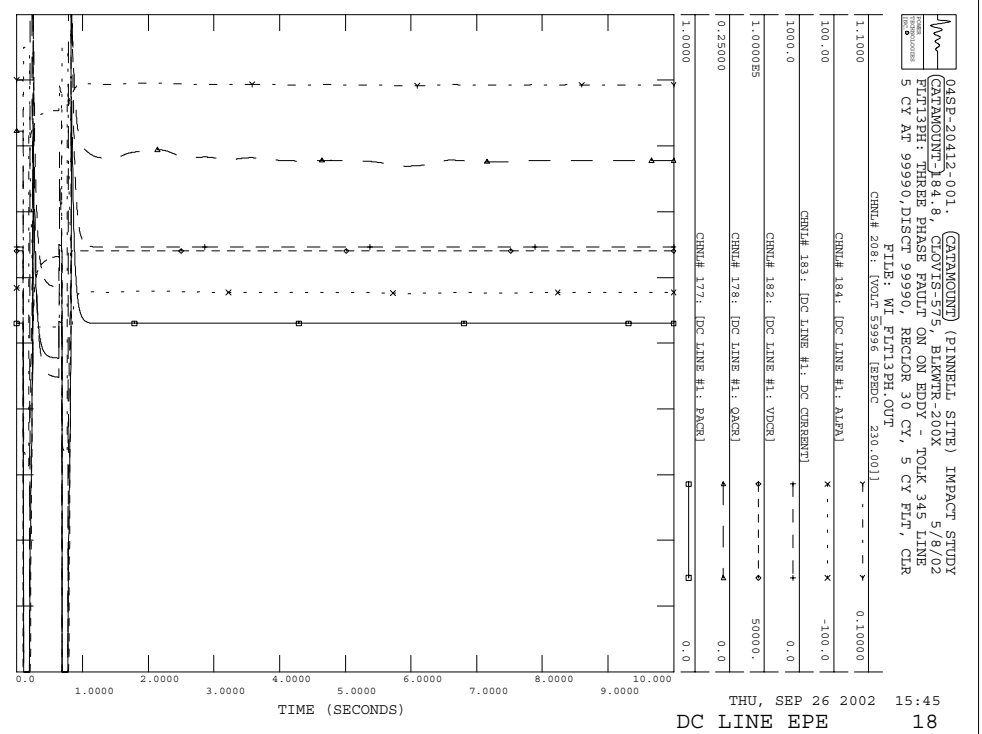
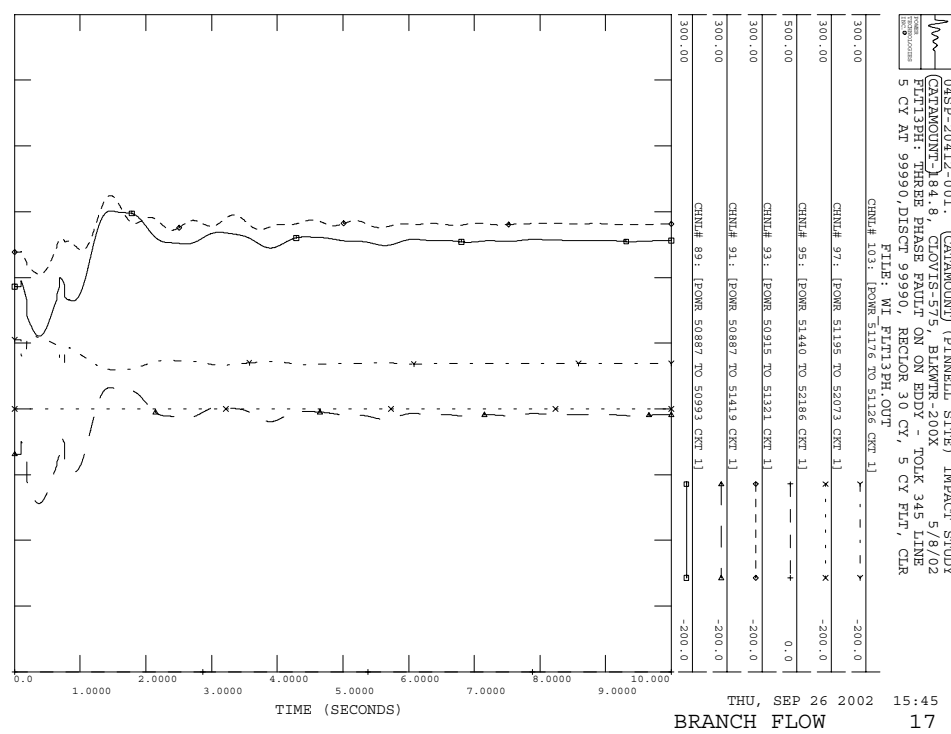


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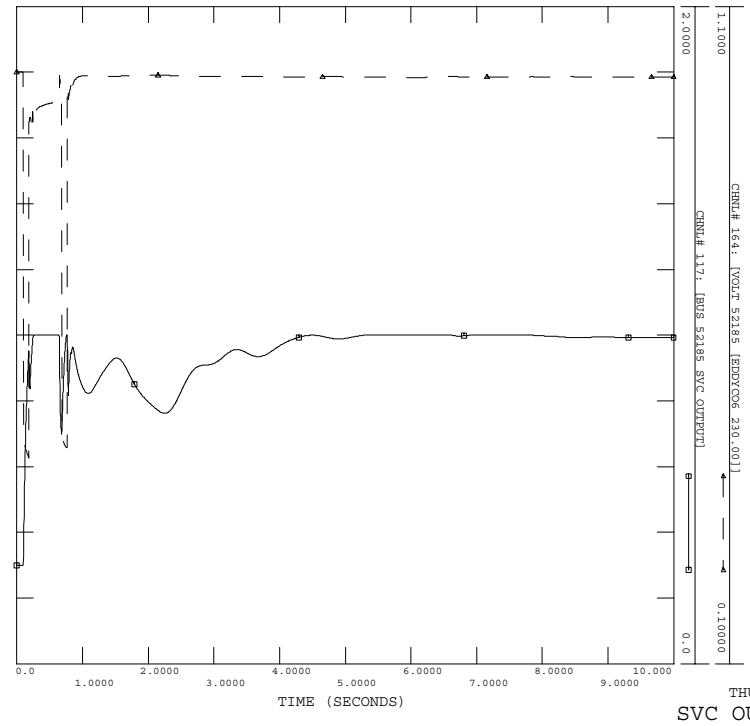
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 (CATAMOUNT) 94.8, CLOVIS-575, BLKWR-200X TOLK 345 LINE
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT13PH.OUT



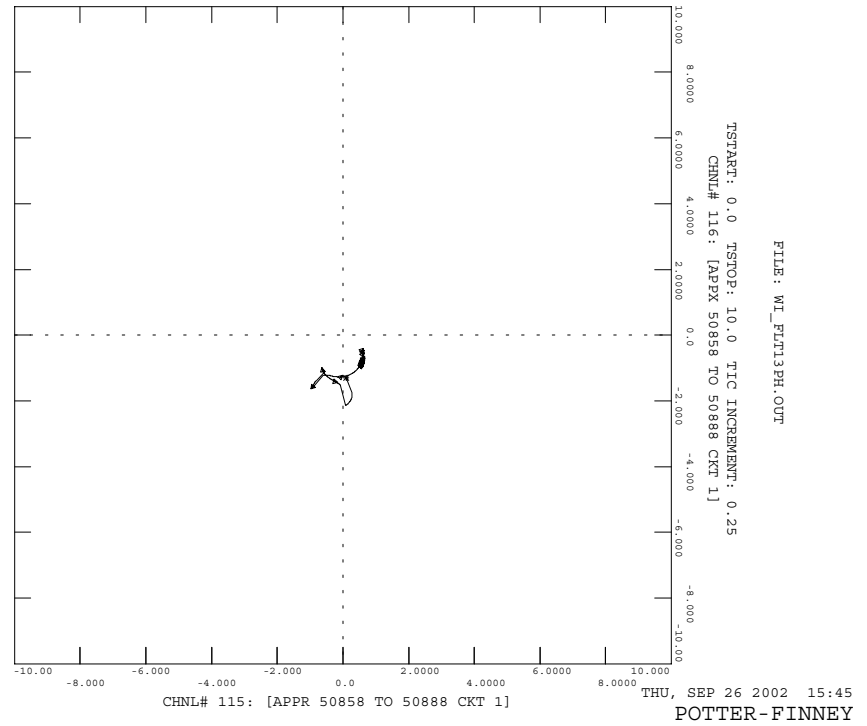
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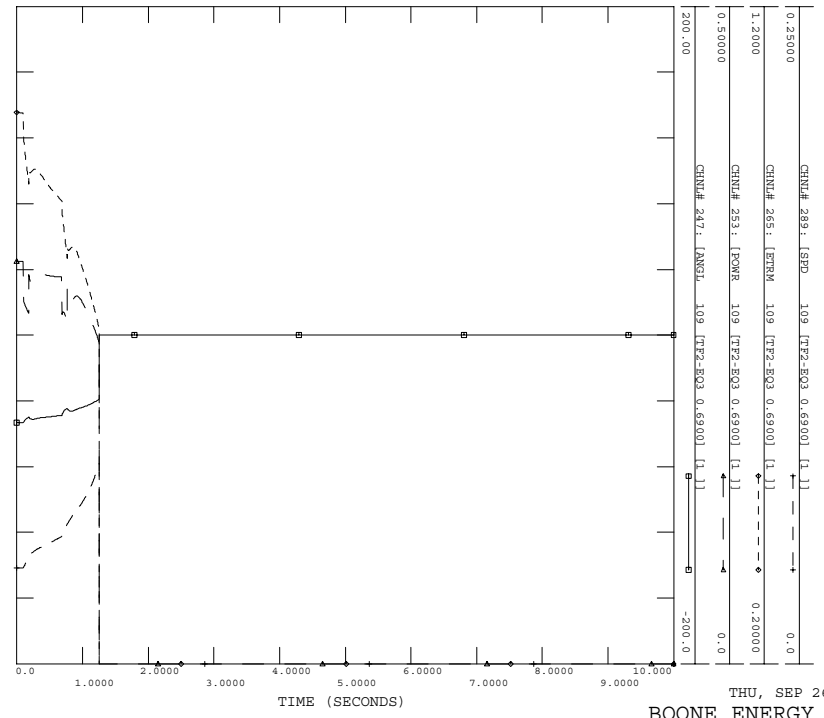
04SP-20412-001 (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT 84.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT13PH.OUT



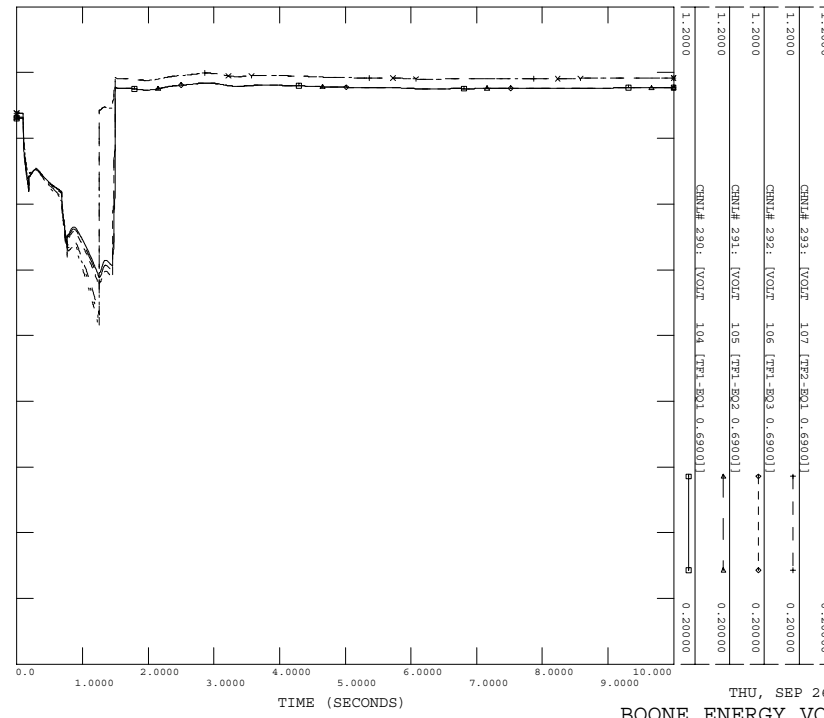
04SP-20412-001 (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT 84.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR



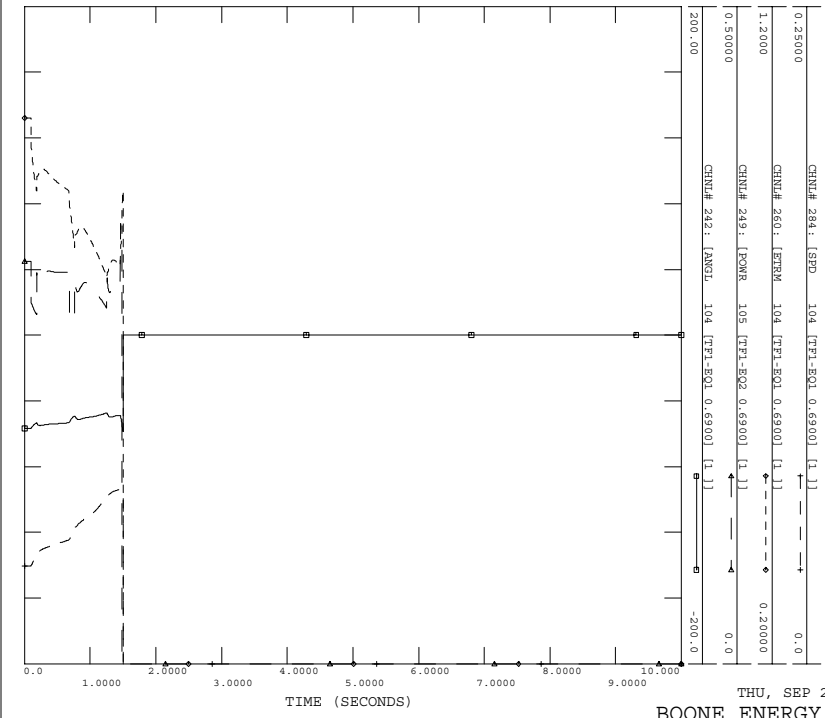
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT# 84.8, CLOVIS-575, BLMWR-200X 5/8/02
 FILTER# SLG PAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT11PH.OUT



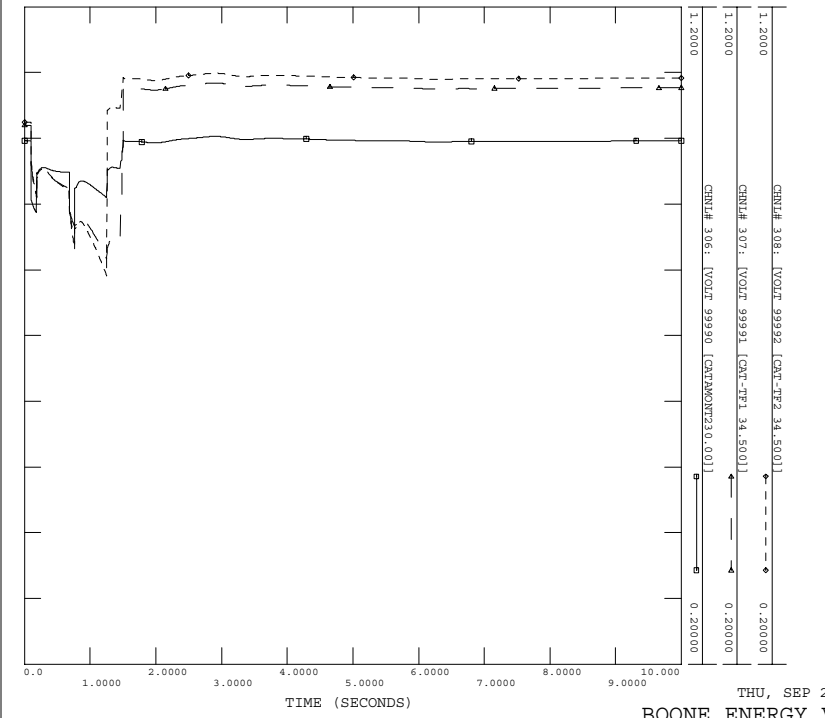
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 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT11PH.OUT

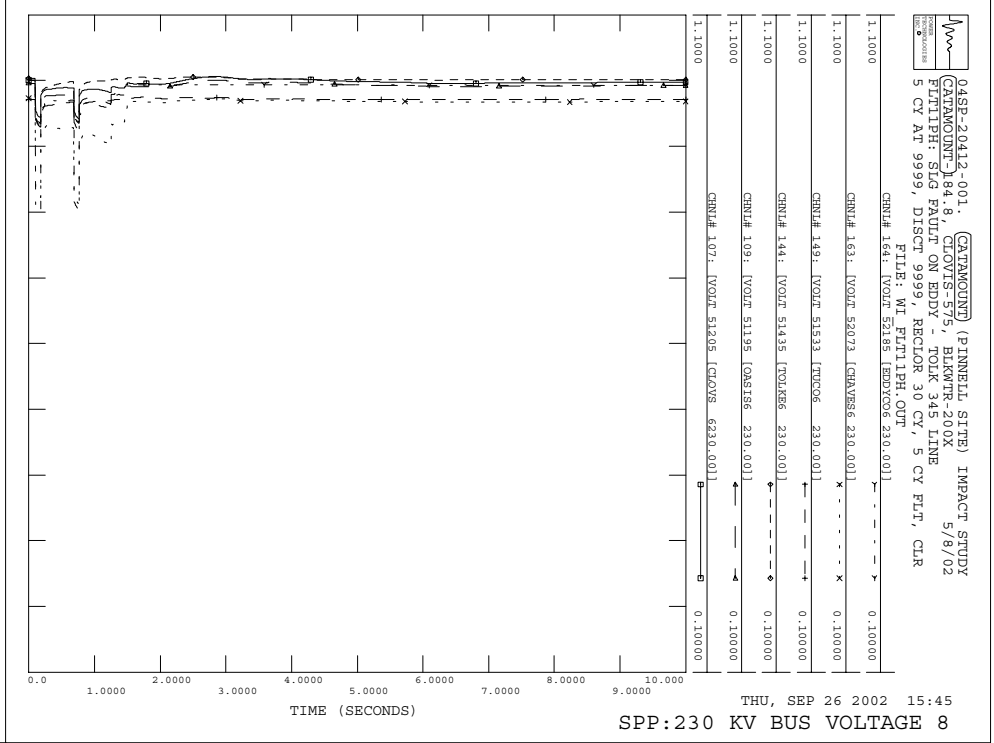
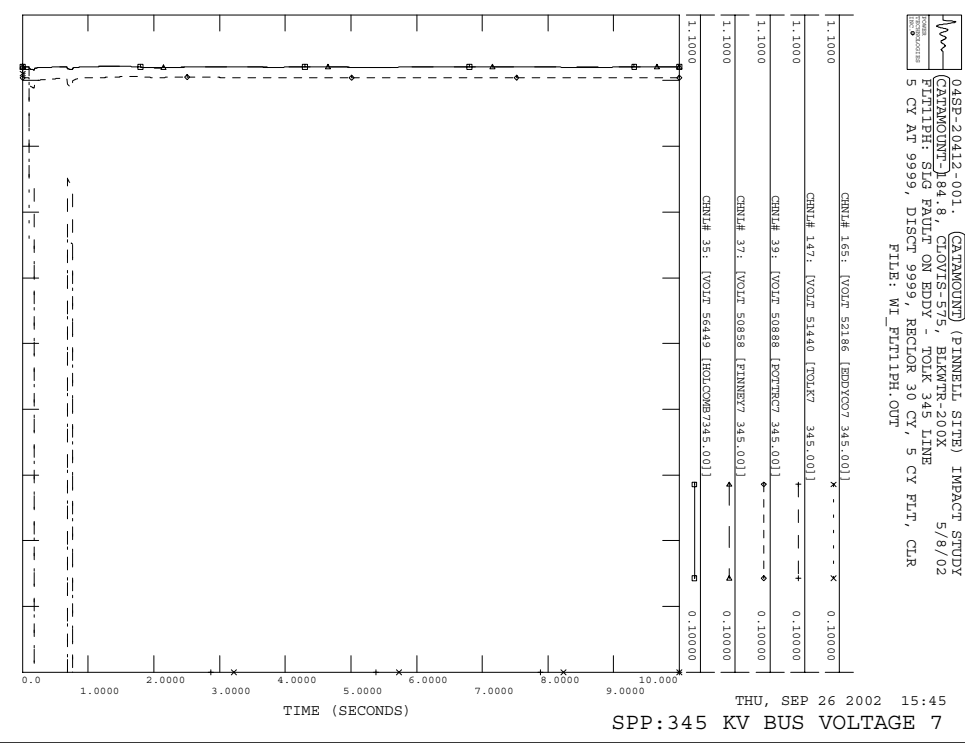
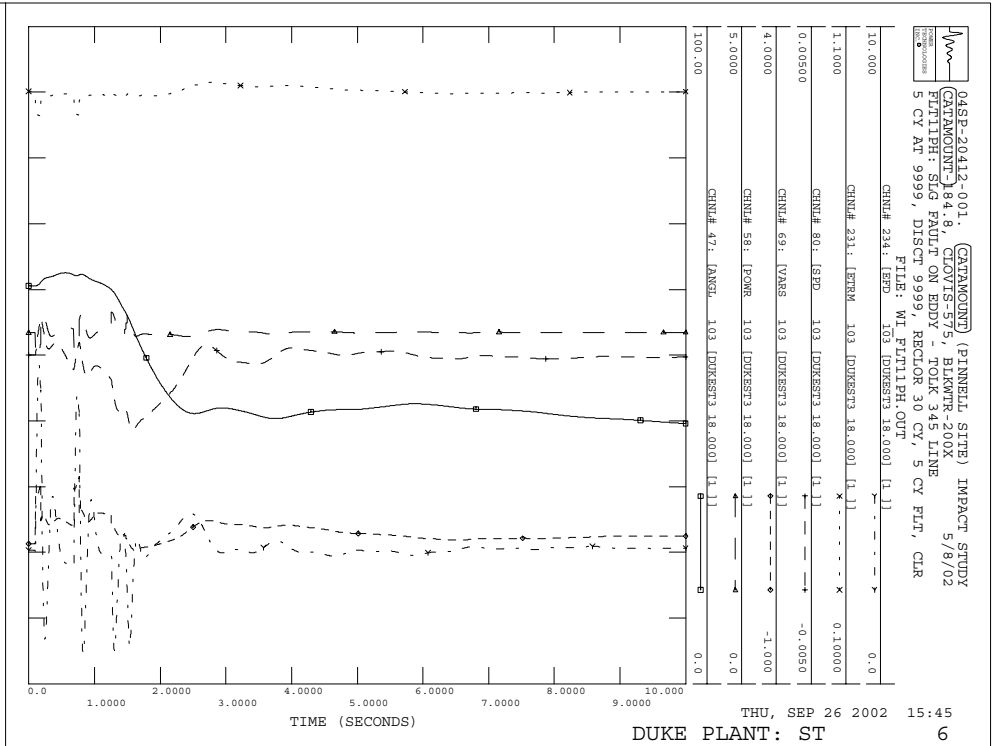
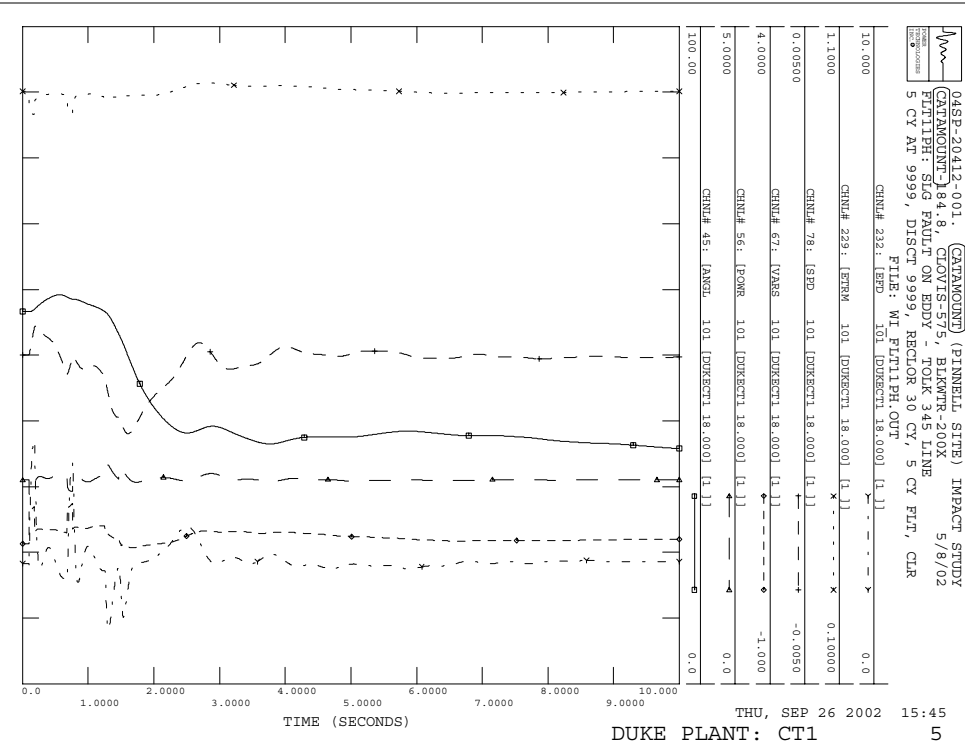


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT# 84.8, CLOVIS-575, BLMWR-200X 5/8/02
 FILTER# SLG PAULT ON EDDY - TOLK 345 LINE
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 FILE: WI_FLT11PH.OUT

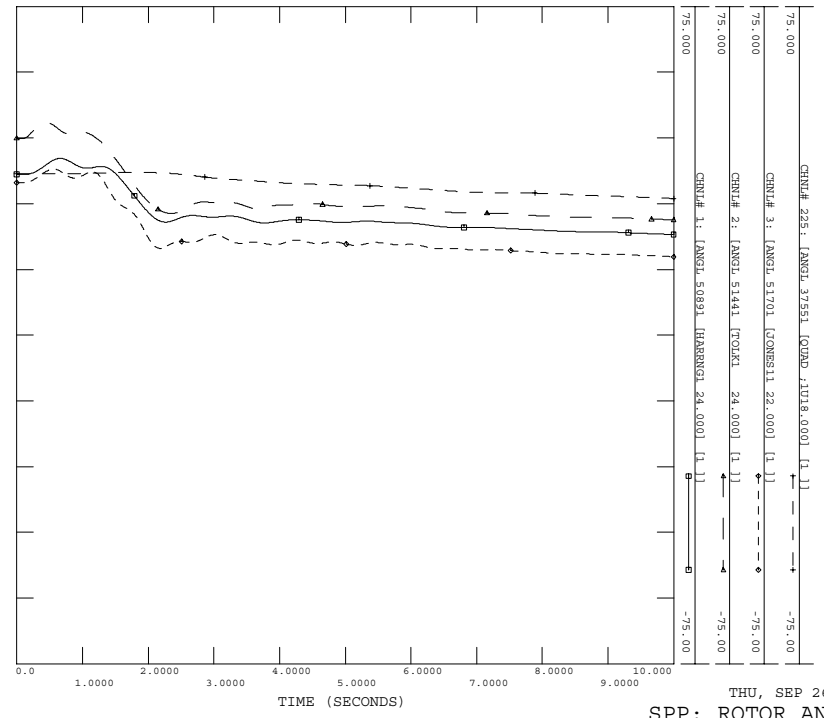


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT# 84.8, CLOVIS-575, BLMWR-200X 5/8/02
 FILTER# SLG PAULT ON EDDY - TOLK 345 LINE
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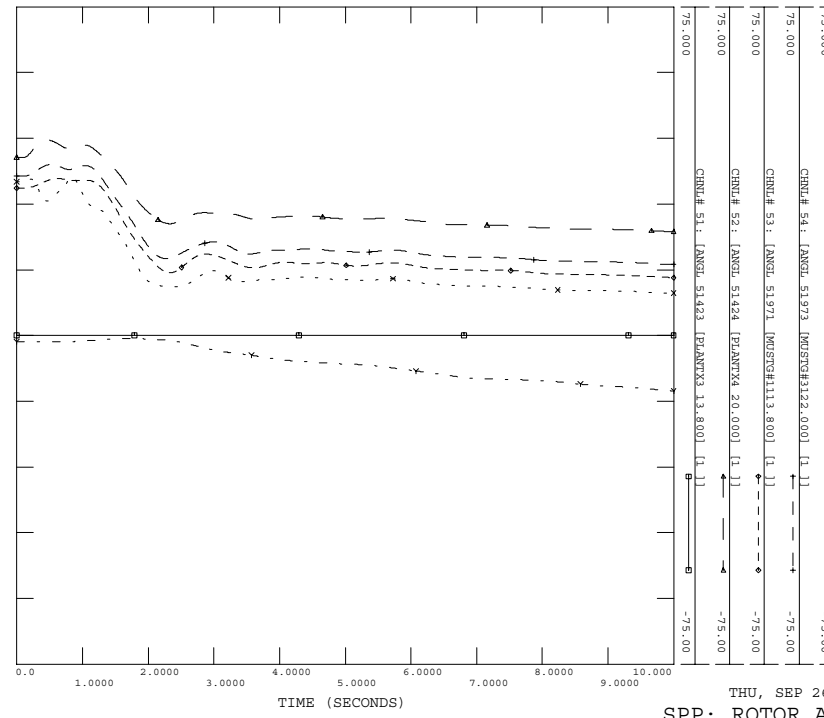




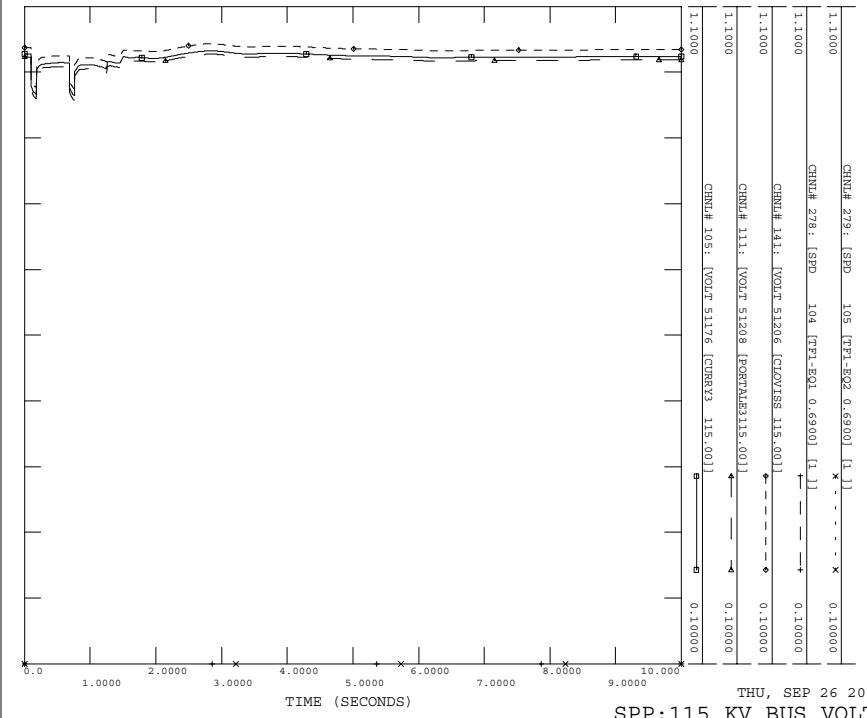
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
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 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT11PH.OUT



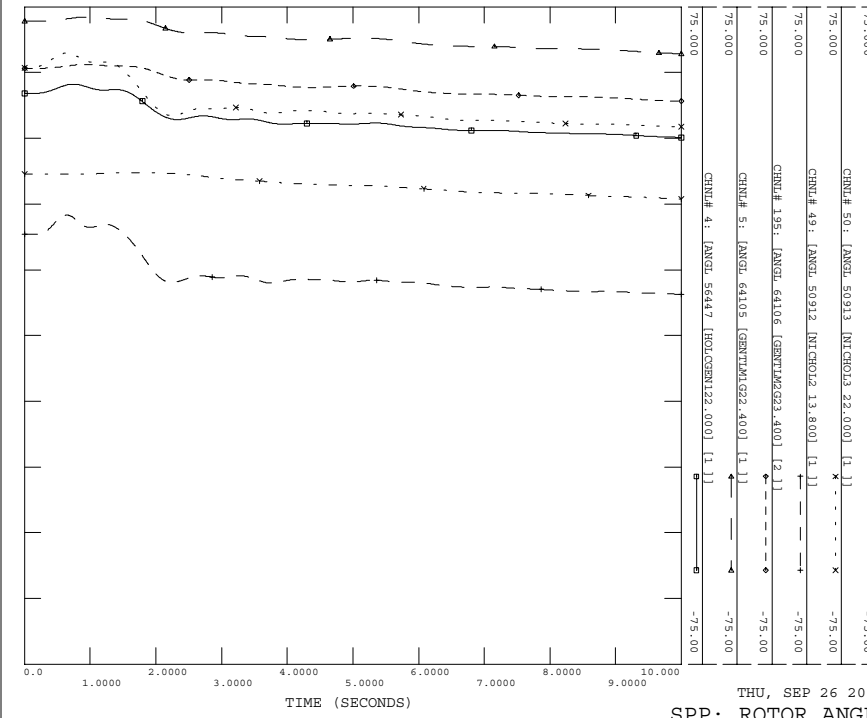
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 FILE: WI_FLT11PH.OUT



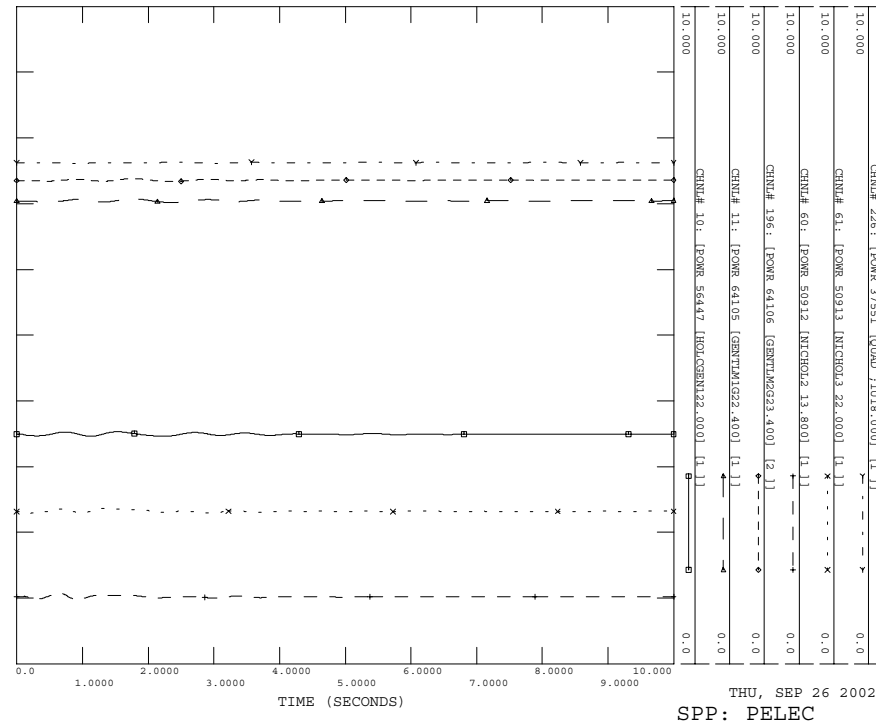
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 FILE: WI_FLT11PH.OUT



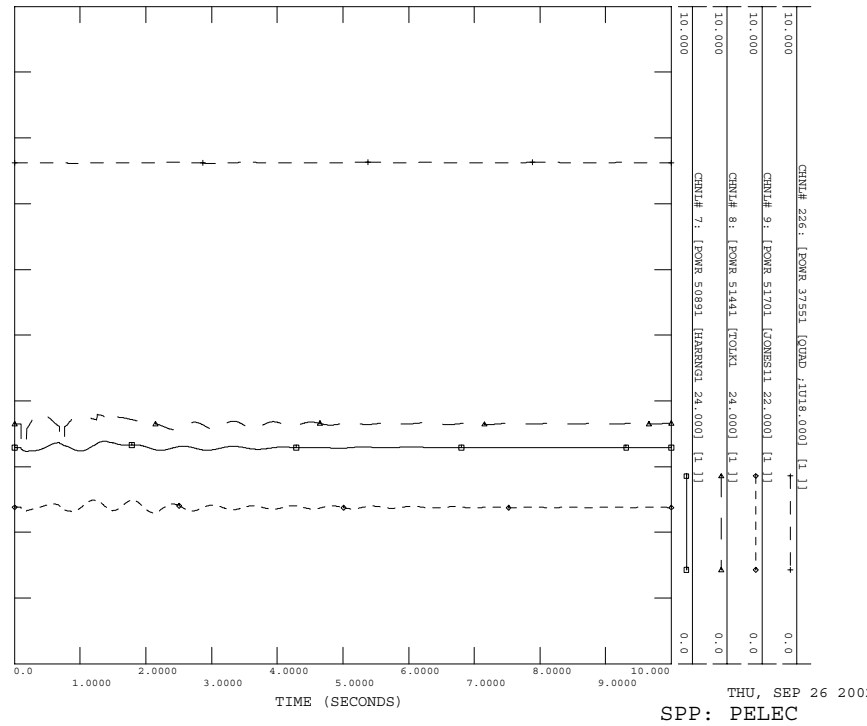
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
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 FILE: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT11PH.OUT



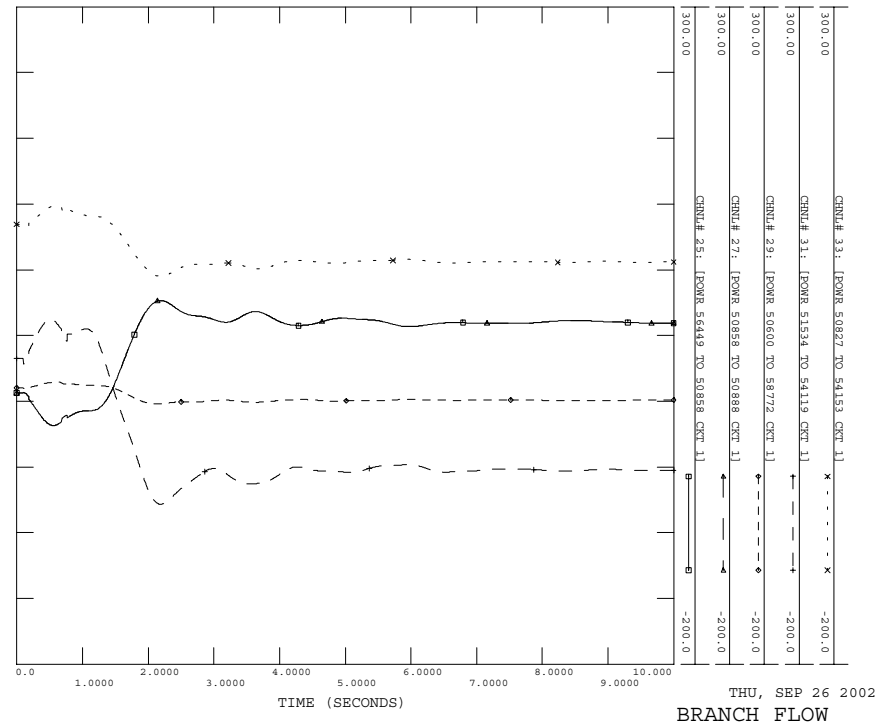
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT: 164.8, CLOVIS-575, BLKWR-200X 5/8/02
 FILTER: SLG PAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT1PH.OUT



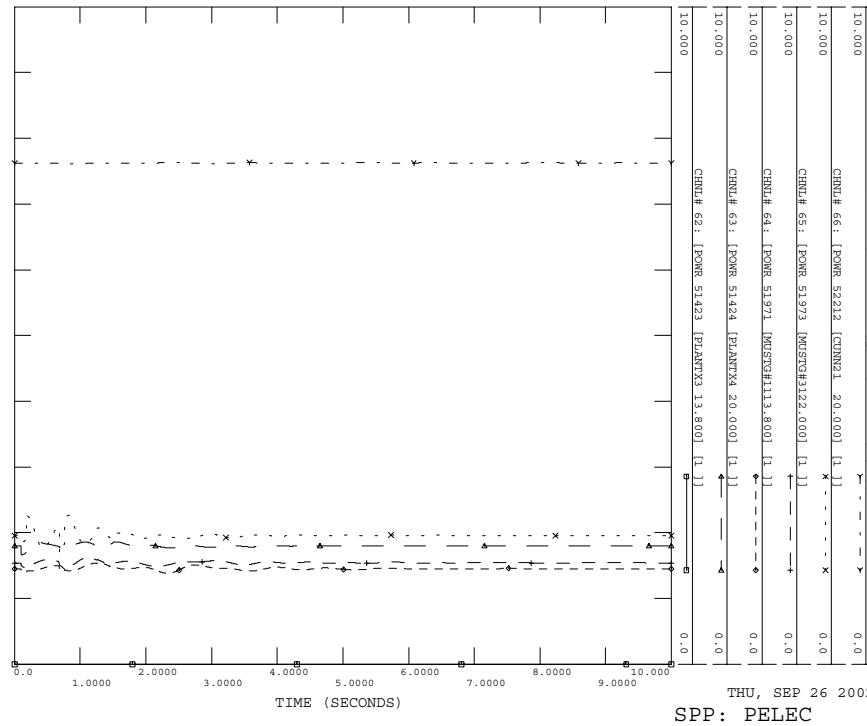
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT: 164.8, CLOVIS-575, BLKWR-200X 5/8/02
 FILTER: SLG PAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT1PH.OUT

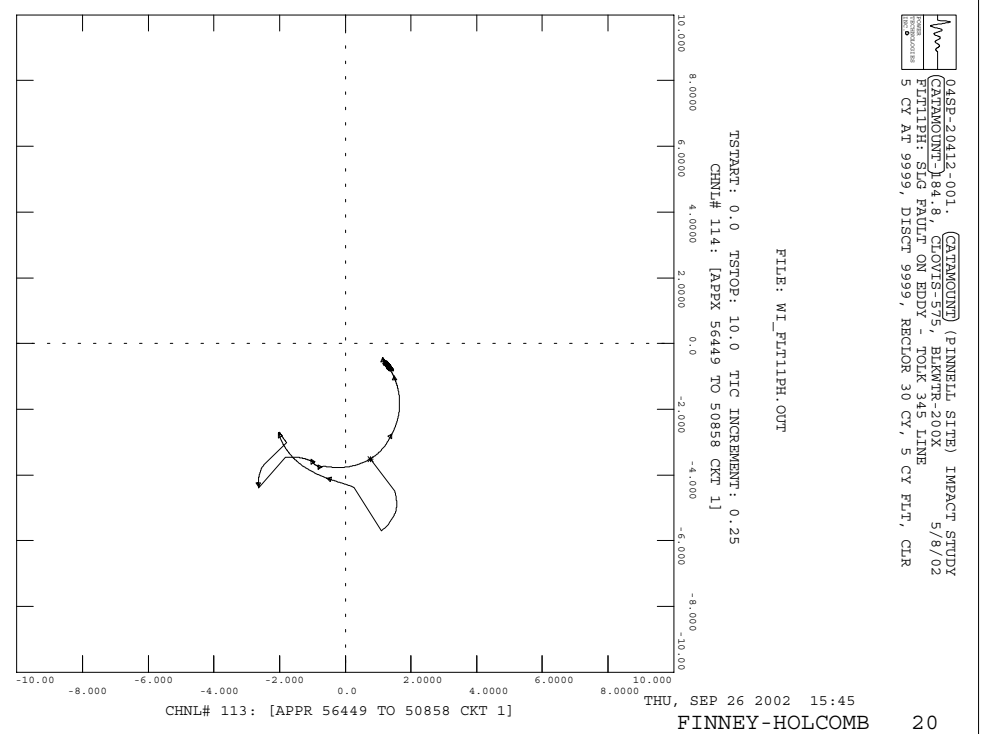
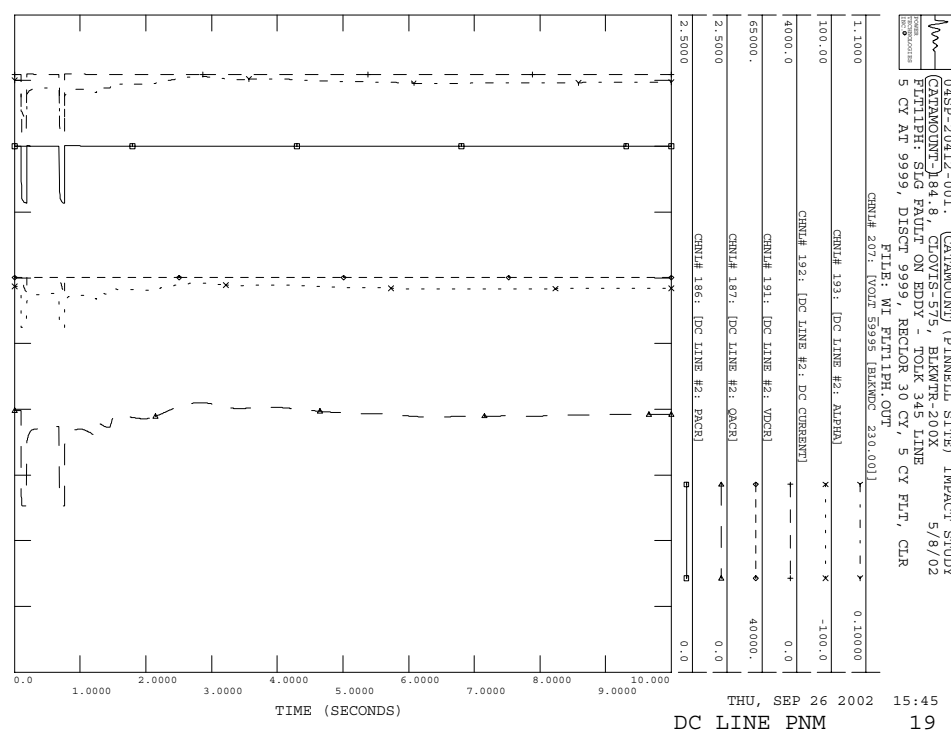
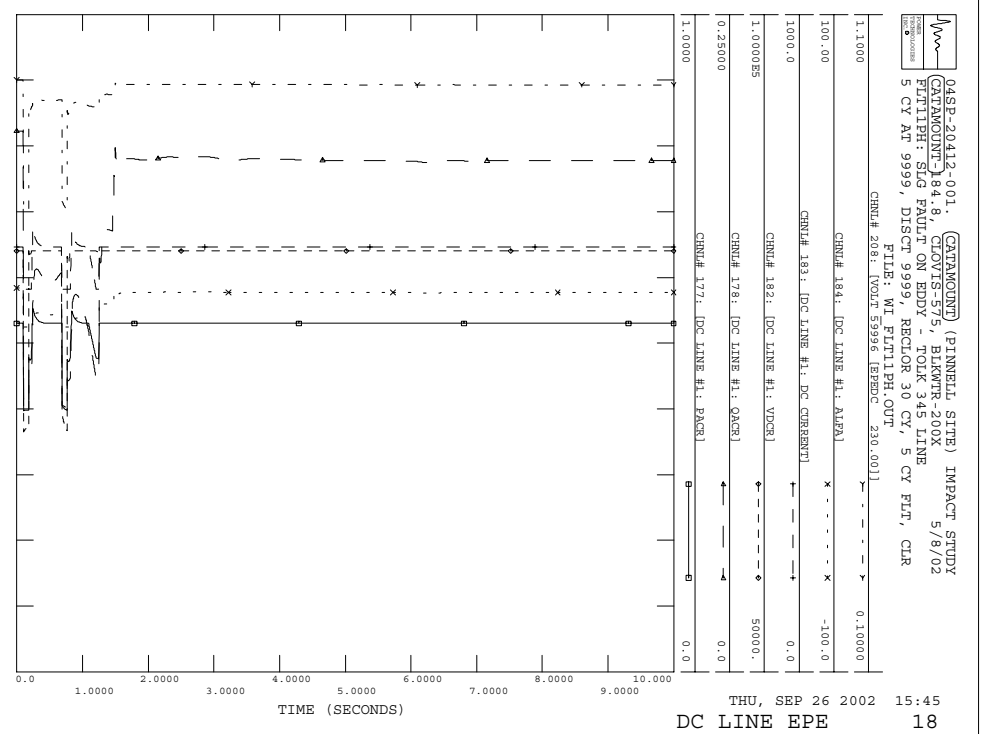
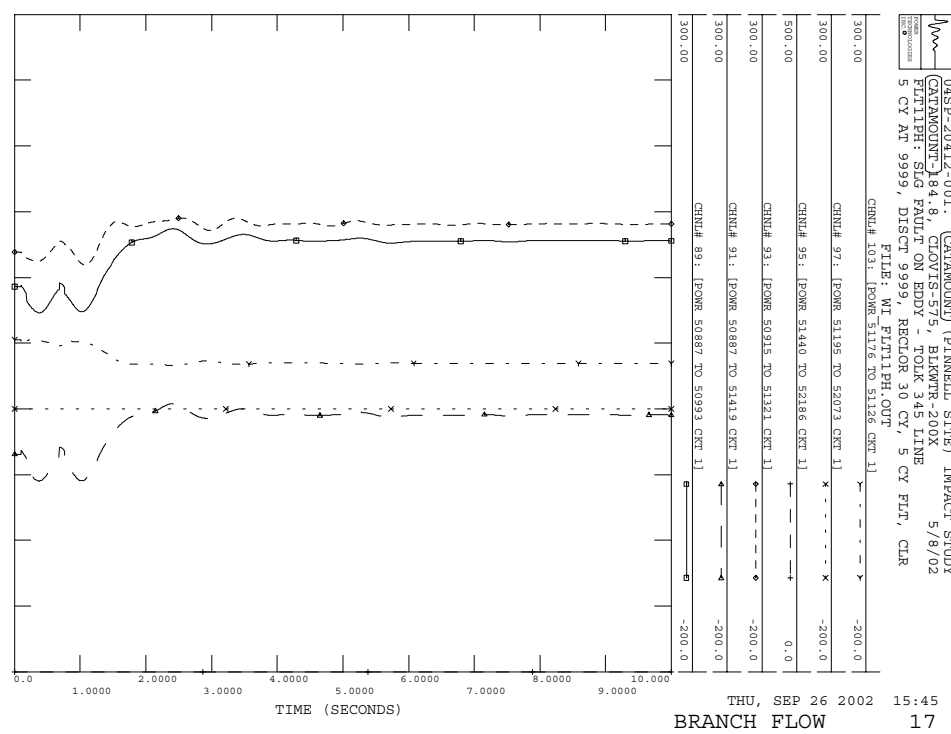


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT: 164.8, CLOVIS-575, BLKWR-200X 5/8/02
 FILTER: SLG PAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT1PH.OUT

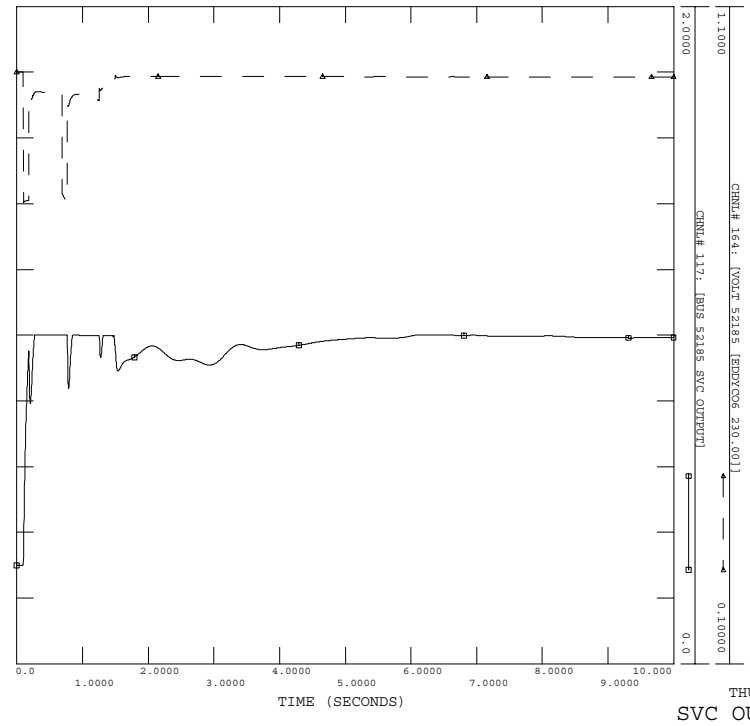


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
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 FILE: WI_FLT1PH.OUT



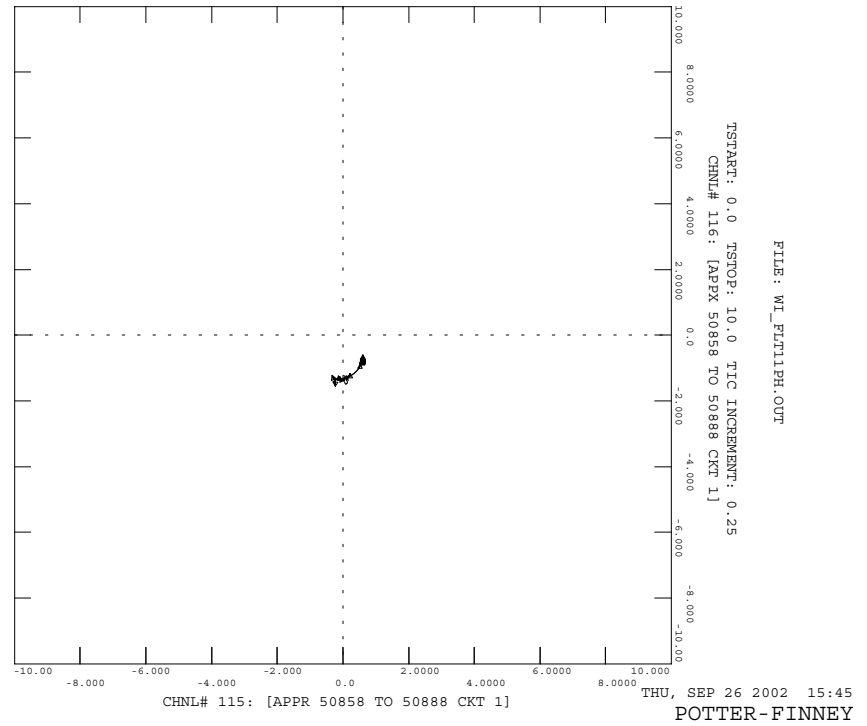


04SP-20412-001 (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT 184.8, CLOVIS-575, BLKWR-200X 5/8/02
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 FILE: WI_FLT11PH.OUT



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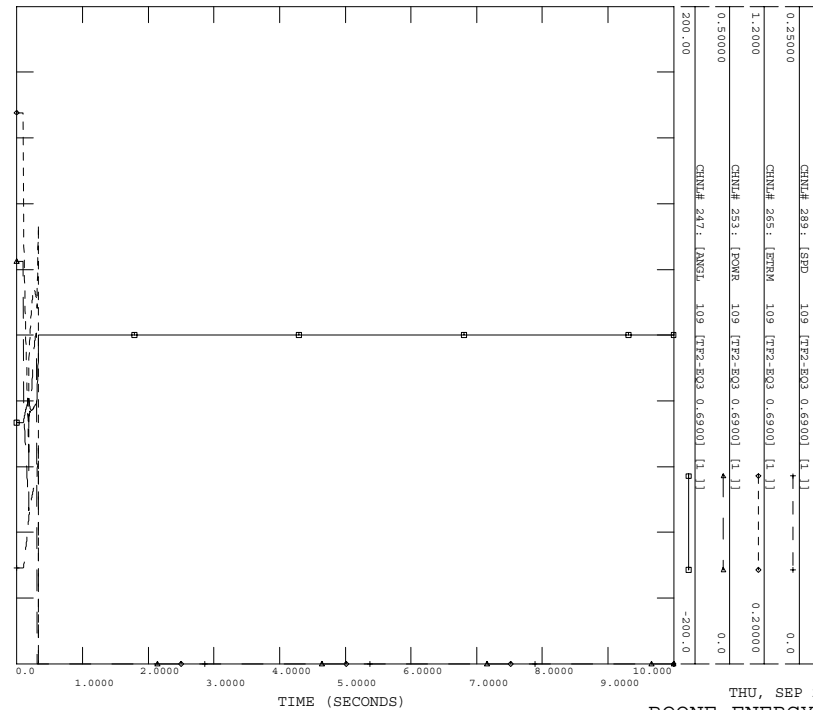
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 CATAMOUNT 184.8, CLOVIS-575, BLKWR-200X 5/8/02
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 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
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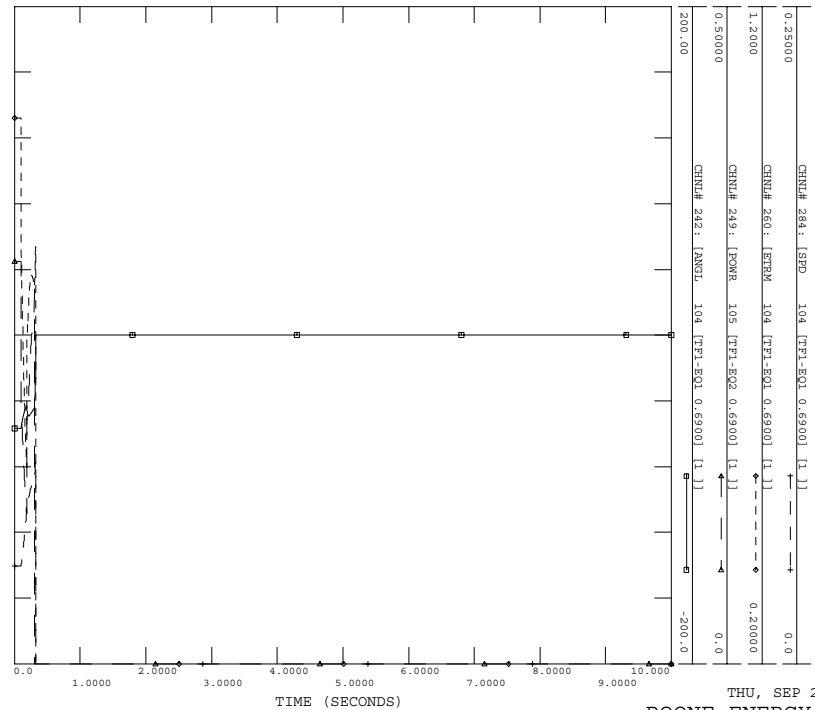
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21

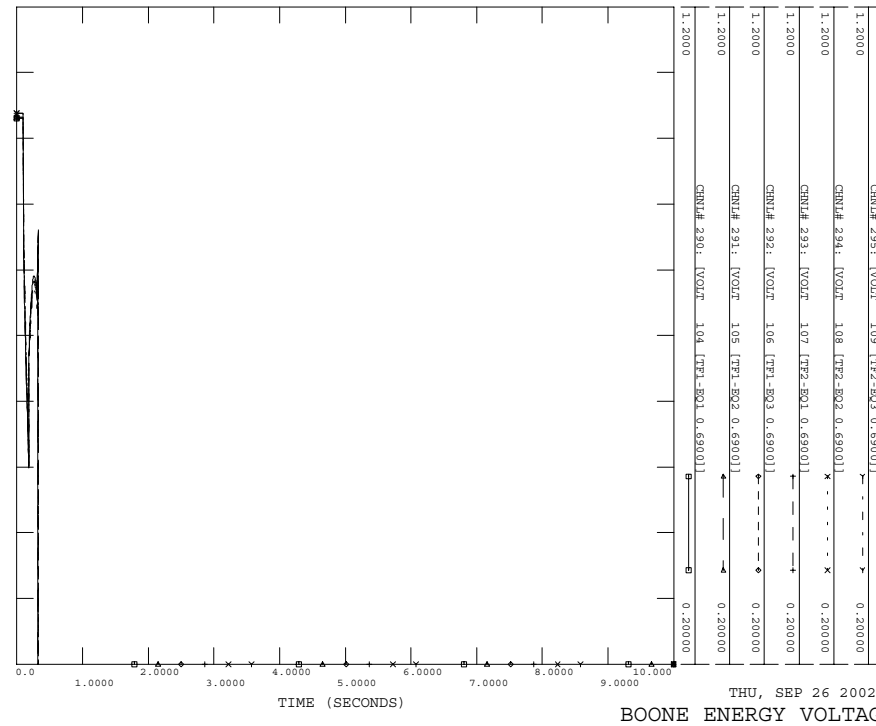
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 5/8/02
 CATAMOUNT#84.8, CLOVIS-575, BKWTR-200X
 FITZ3PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FITZ3PH.OUT



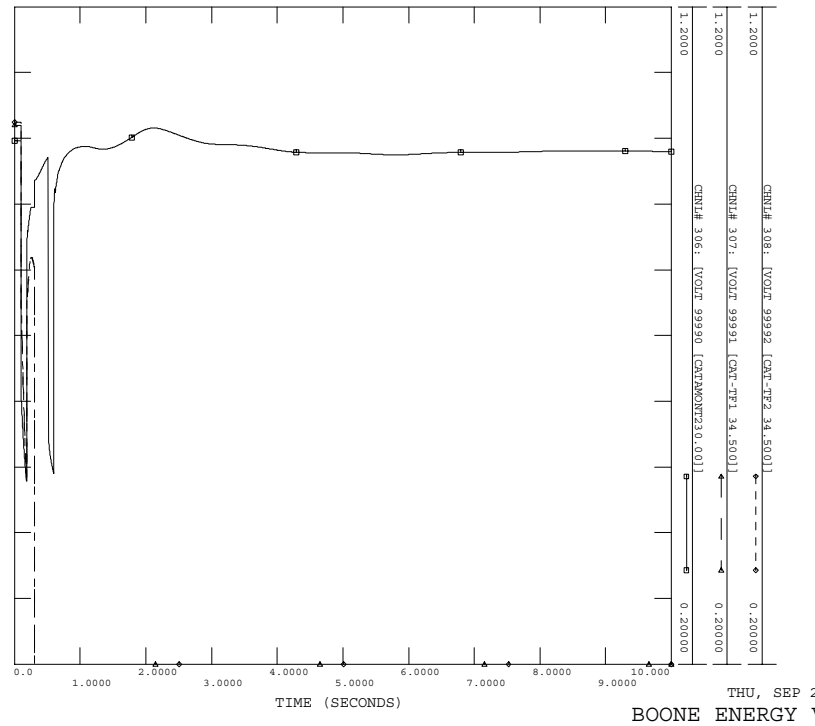
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 5/8/02
 CATAMOUNT#84.8, CLOVIS-575, BKWTR-200X
 FITZ3PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
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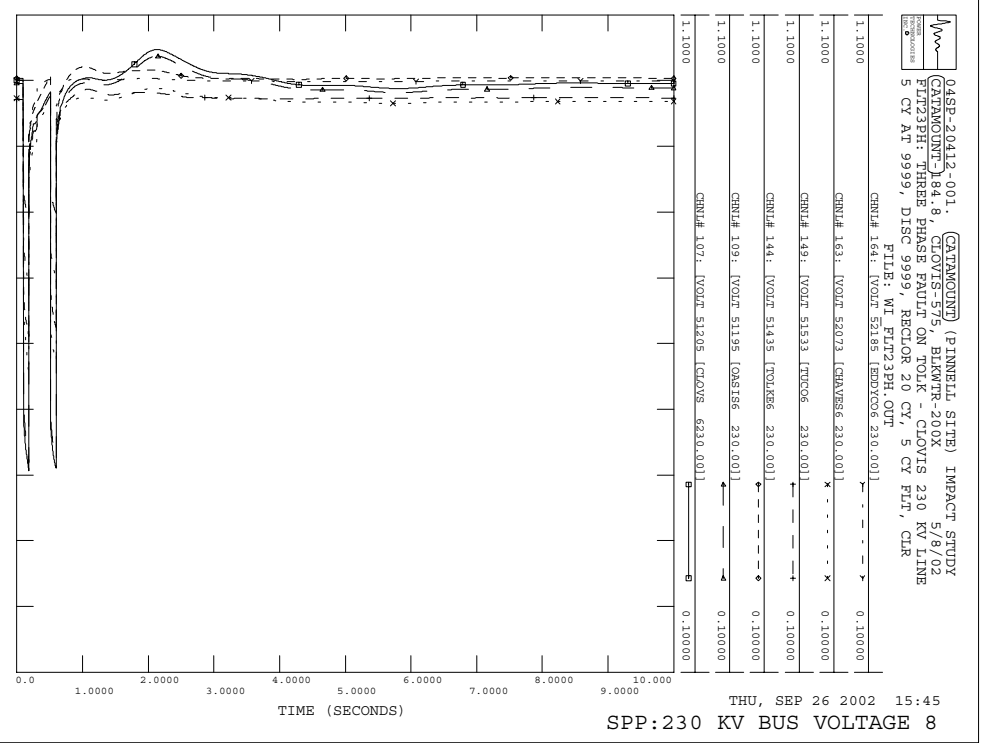
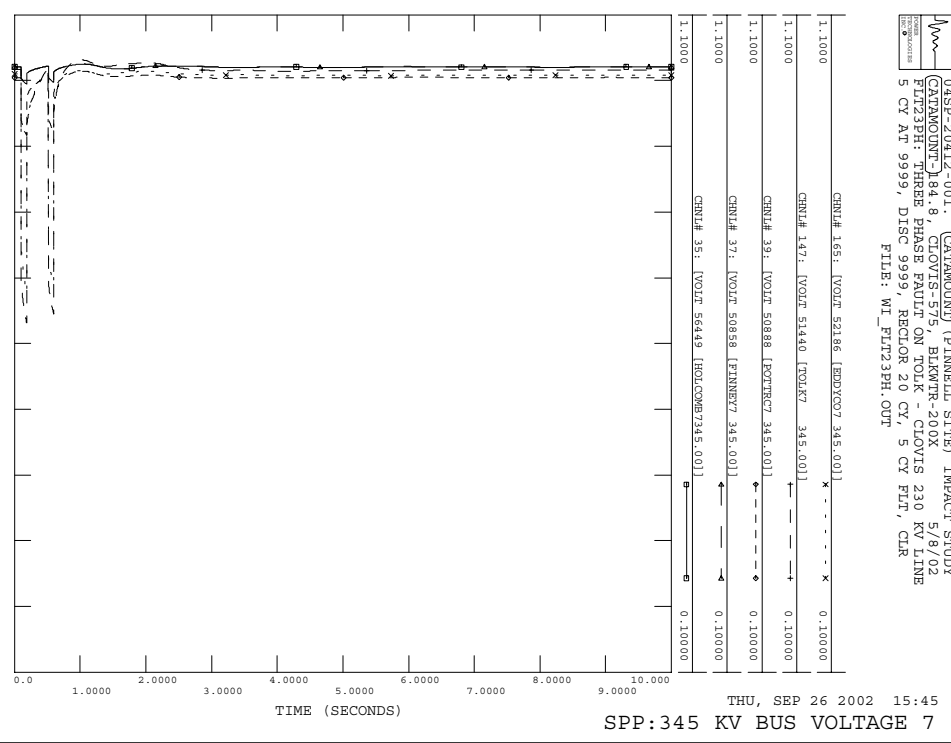
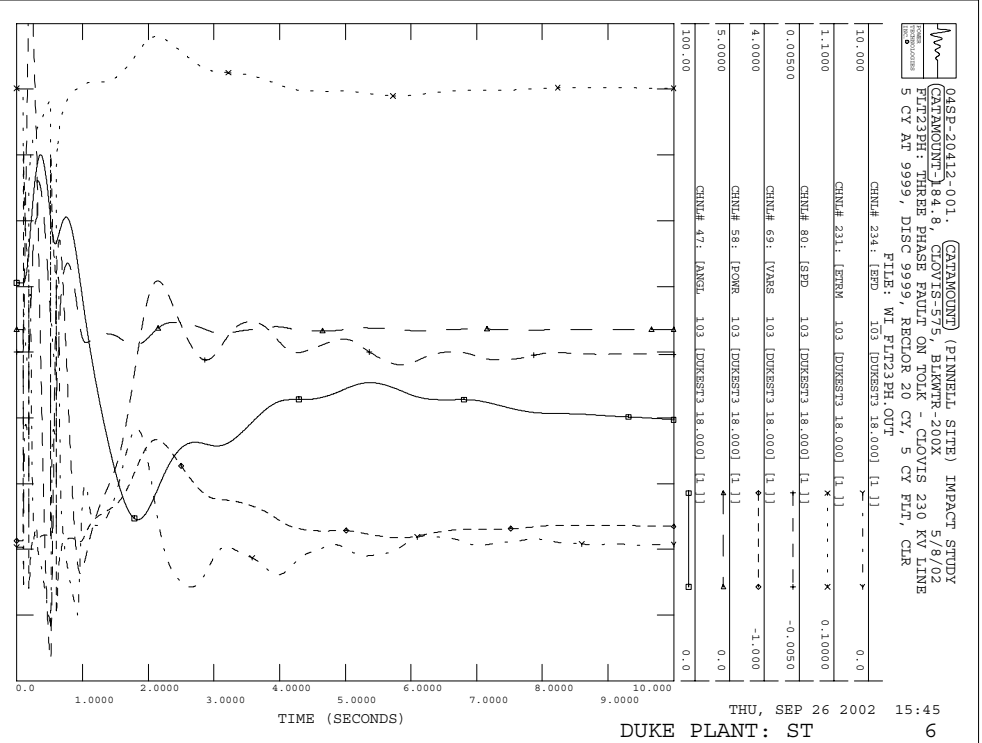
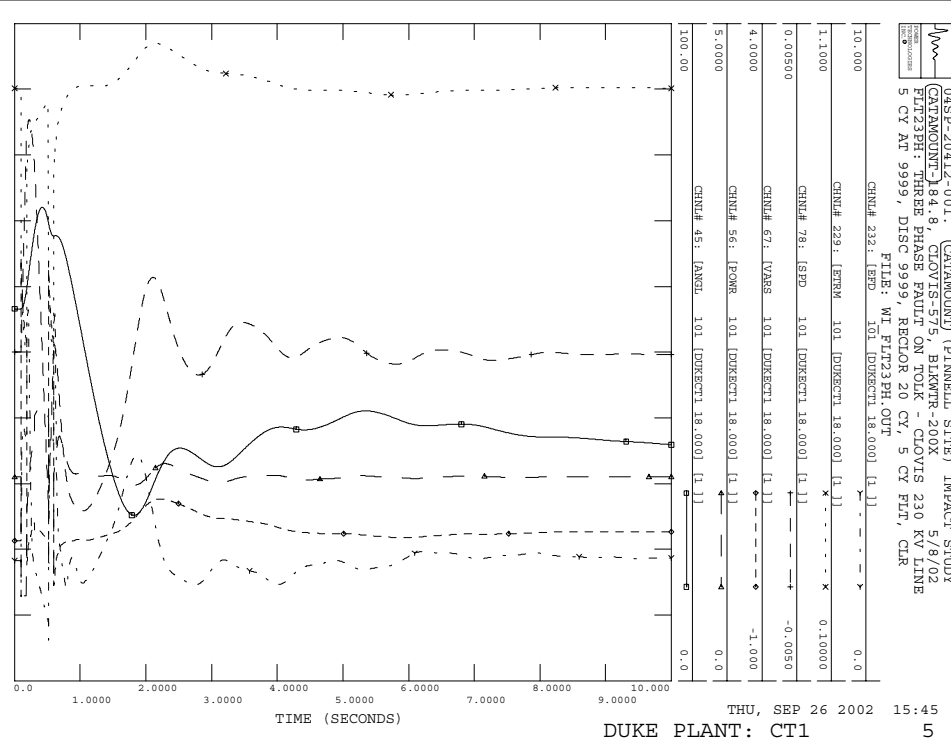


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 5/8/02
 CATAMOUNT#84.8, CLOVIS-575, BKWTR-200X
 FITZ3PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FITZ3PH.OUT

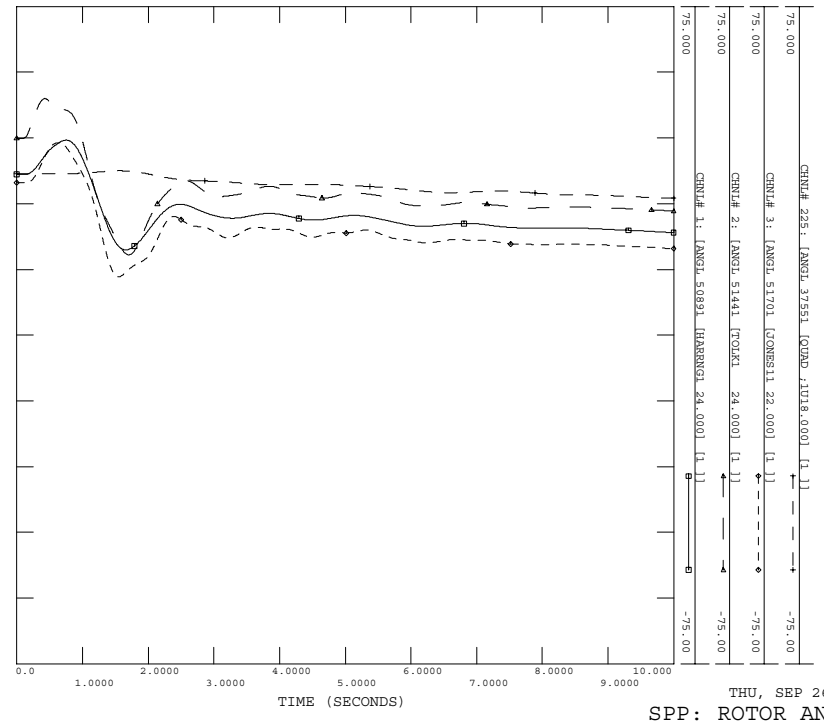


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 5/8/02
 CATAMOUNT#84.8, CLOVIS-575, BKWTR-200X
 FITZ3PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FITZ3PH.OUT

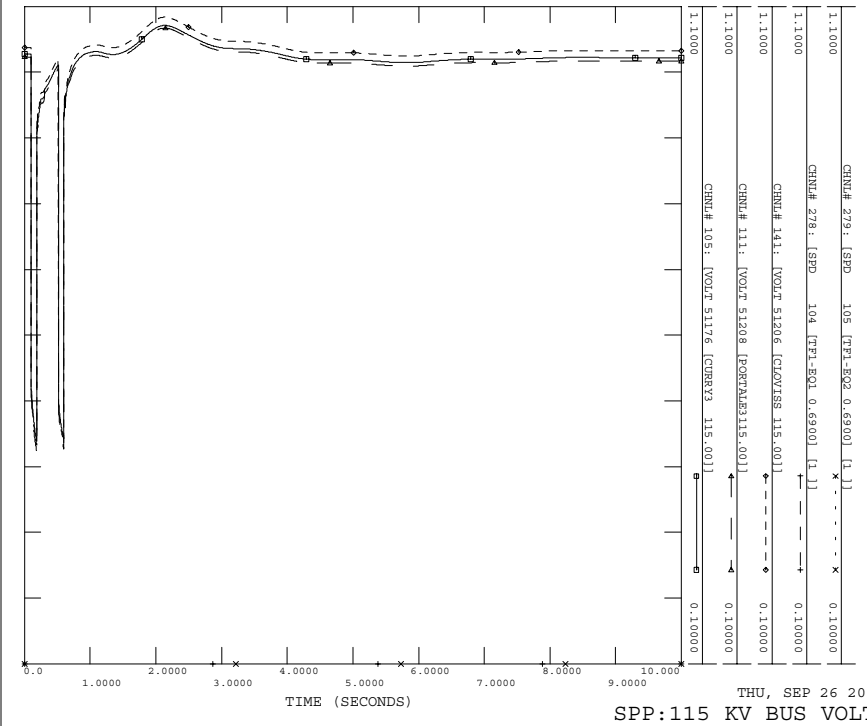




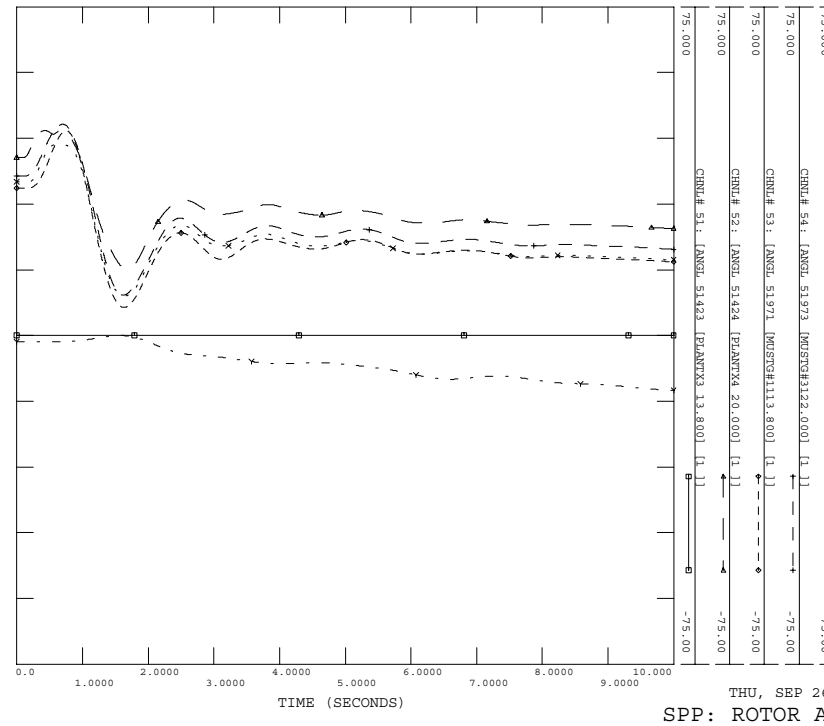
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 5/8/02
 CATAMOUNT_184.8, CLOVIS-575, BLKPTR-200X
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT23PH.OUT



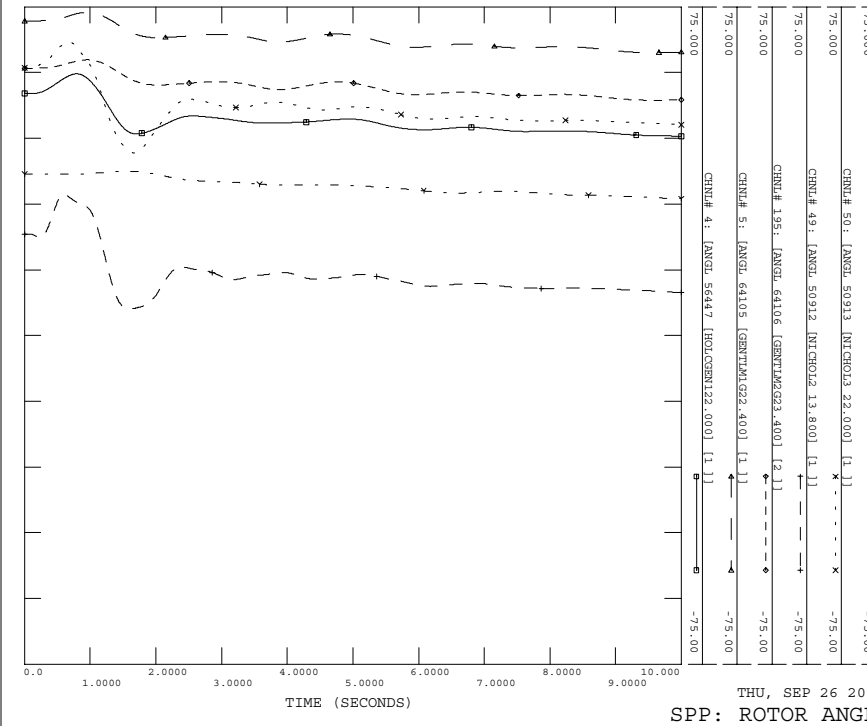
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 5/8/02
 CATAMOUNT_184.8, CLOVIS-575, BLKPTR-200X
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT23PH.OUT



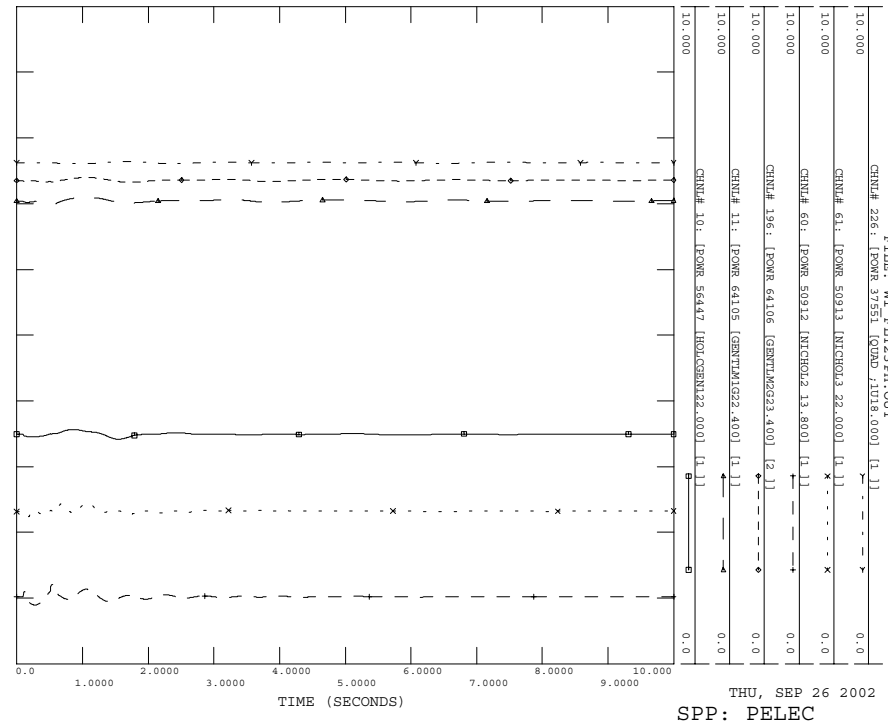
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 5/8/02
 CATAMOUNT_184.8, CLOVIS-575, BLKPTR-200X
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT23PH.OUT



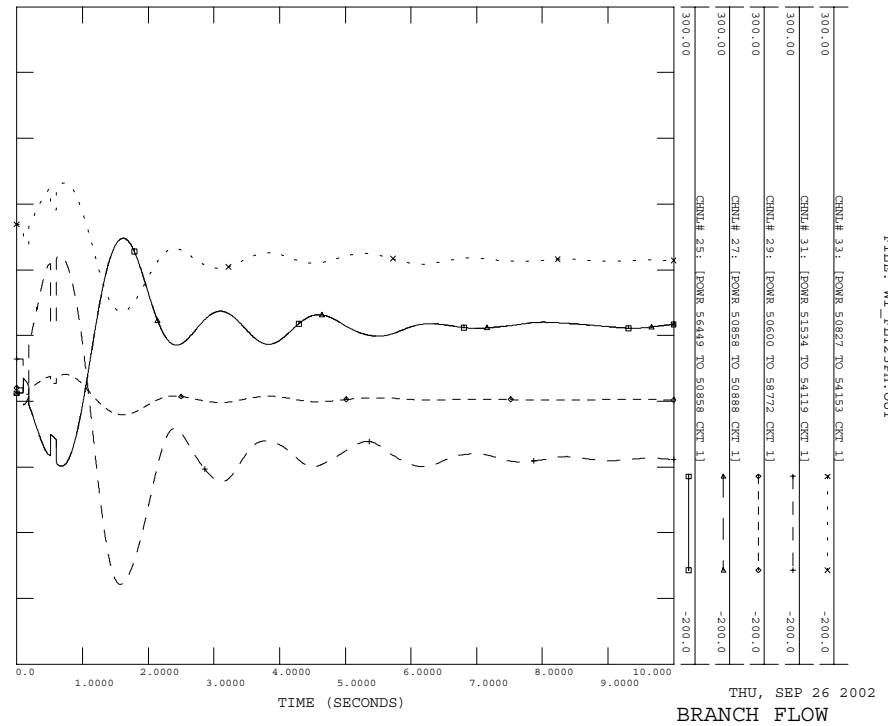
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 5/8/02
 CATAMOUNT_184.8, CLOVIS-575, BLKPTR-200X
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT23PH.OUT



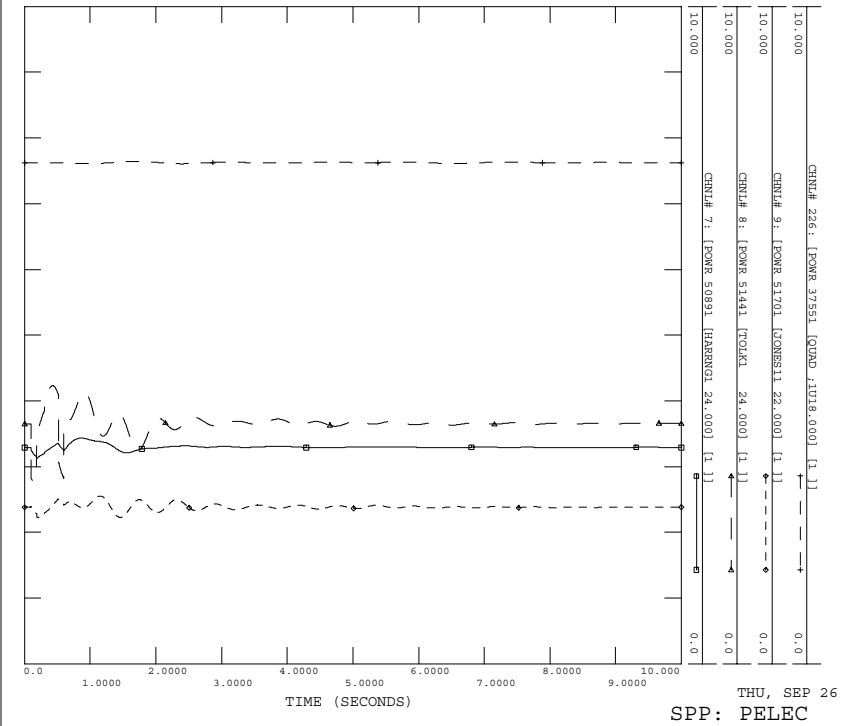
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 5/8/02
 CATAMOUNT#14.8, CLOVIS-575, BLKWR-200X
 FITZ3PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FITZ3PH.OUT



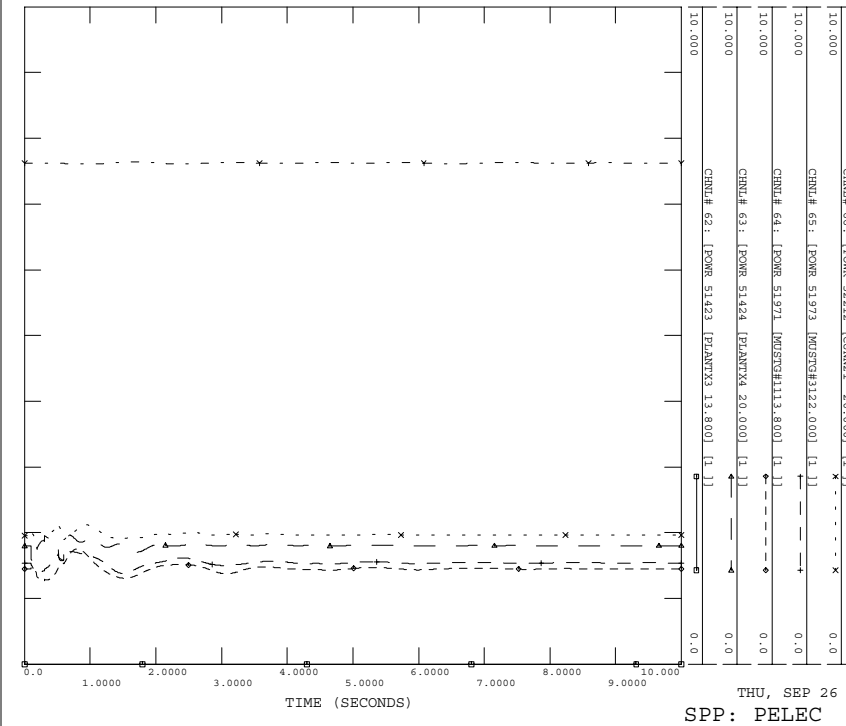
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 5/8/02
 CATAMOUNT#14.8, CLOVIS-575, BLKWR-200X
 FITZ3PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FITZ3PH.OUT

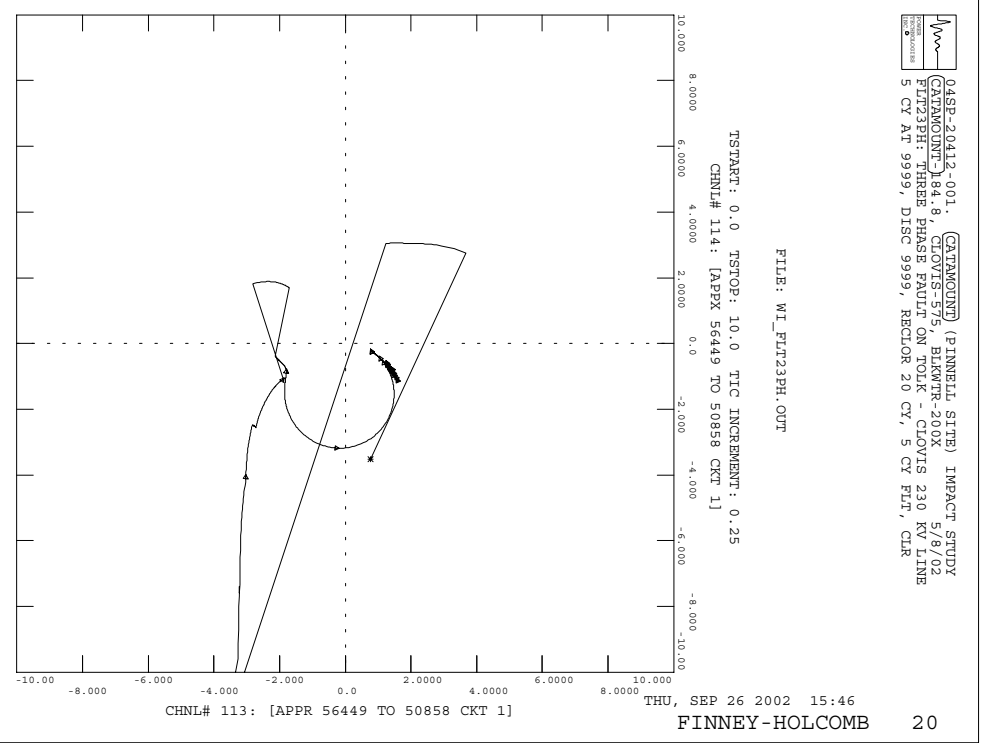
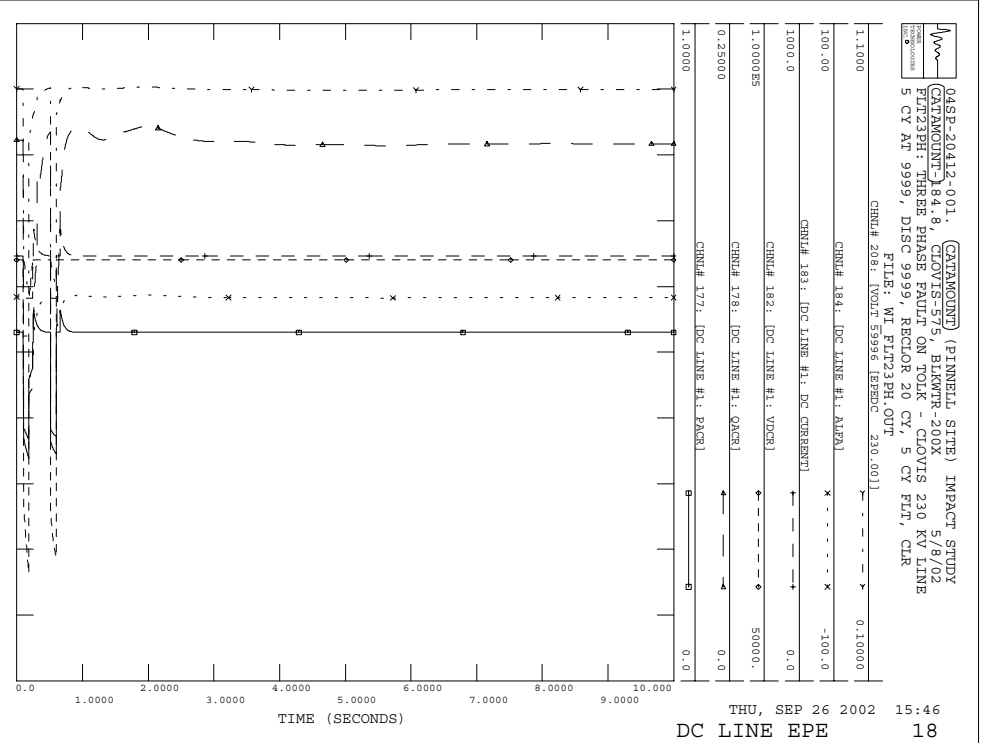
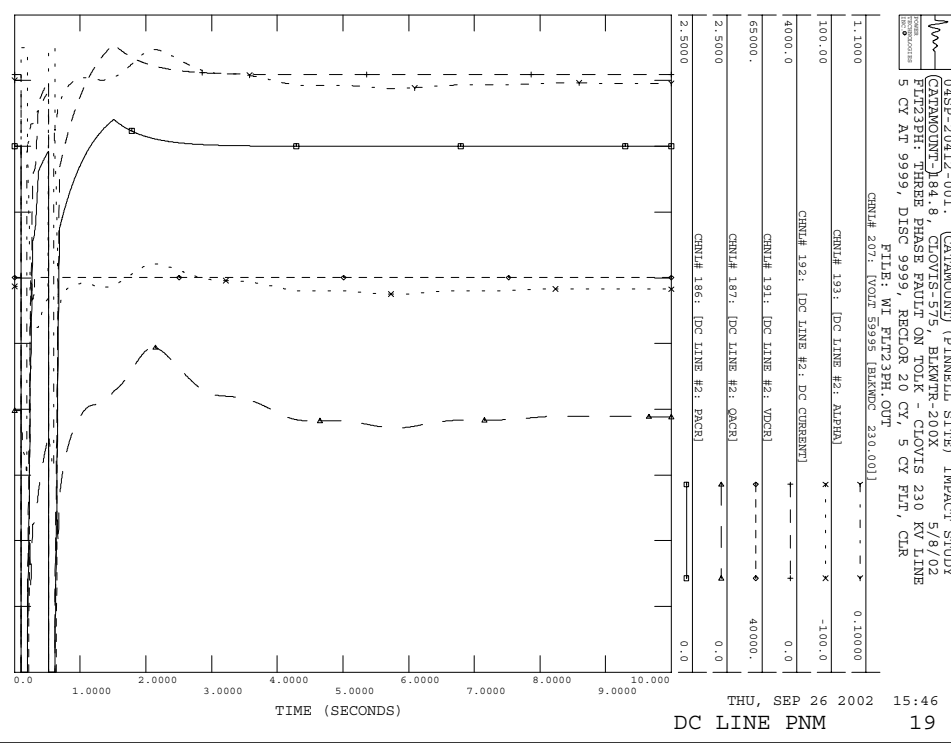
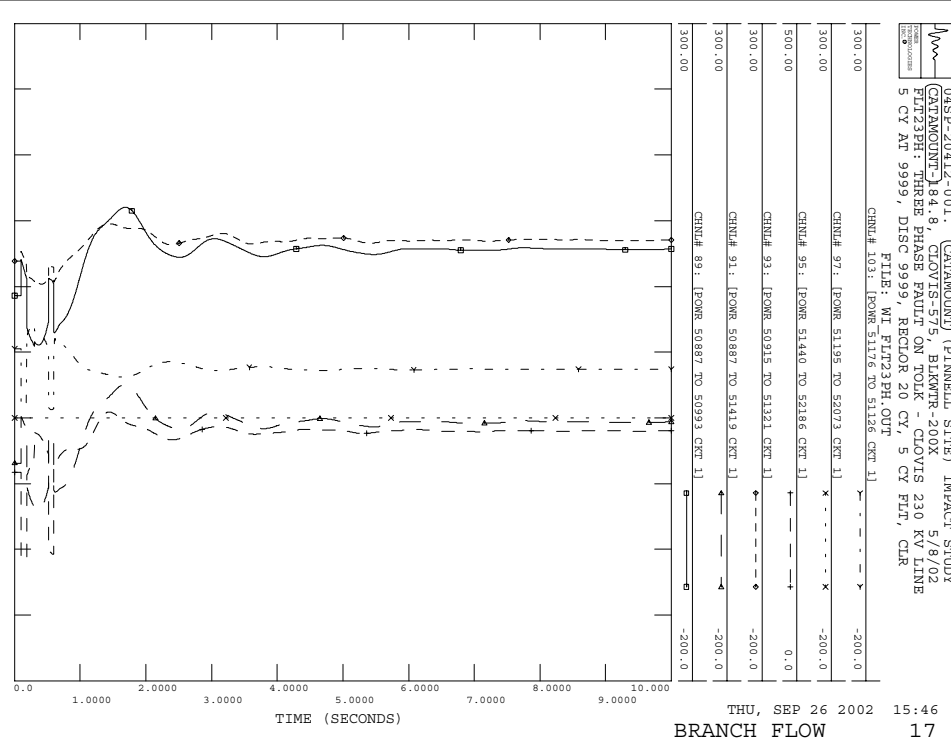


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 5/8/02
 CATAMOUNT#14.8, CLOVIS-575, BLKWR-200X
 FITZ3PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FITZ3PH.OUT

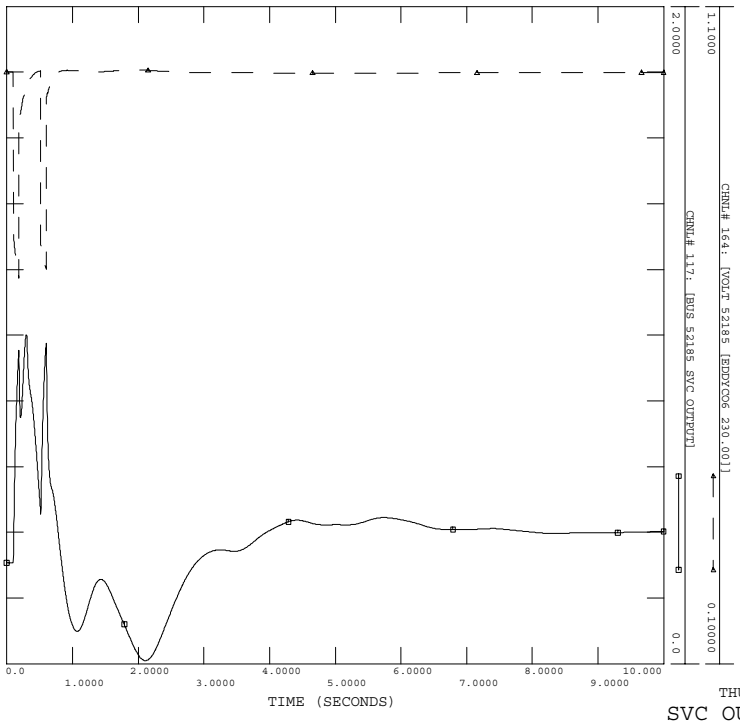


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 5/8/02
 CATAMOUNT#14.8, CLOVIS-575, BLKWR-200X
 FITZ3PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FITZ3PH.OUT



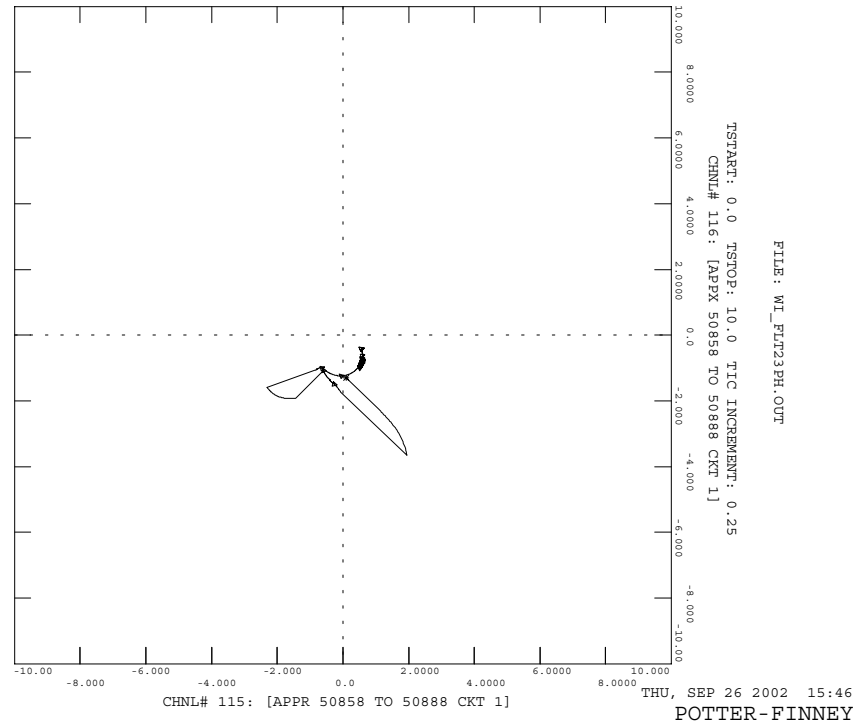


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT 84.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
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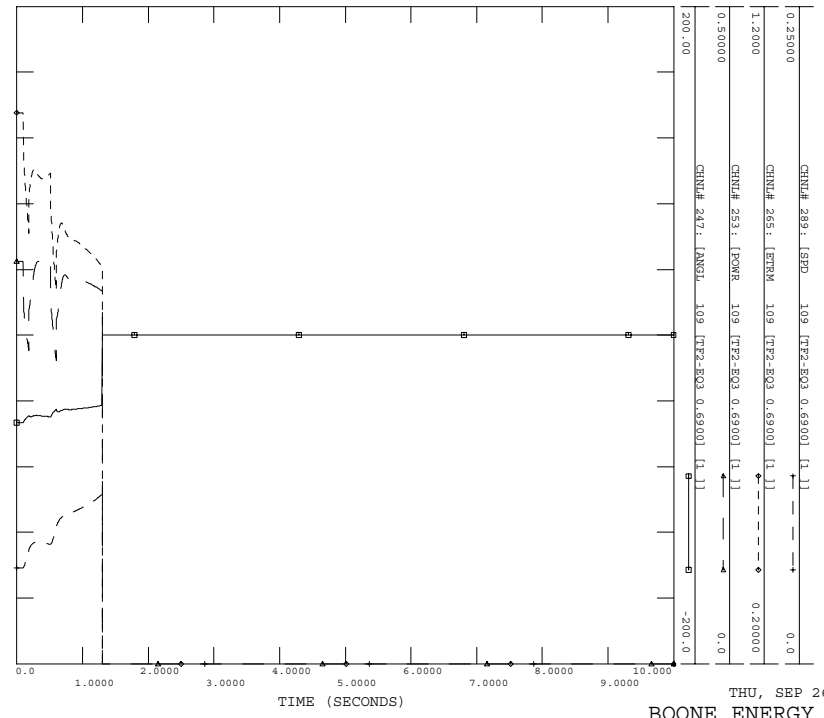
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04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT 84.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
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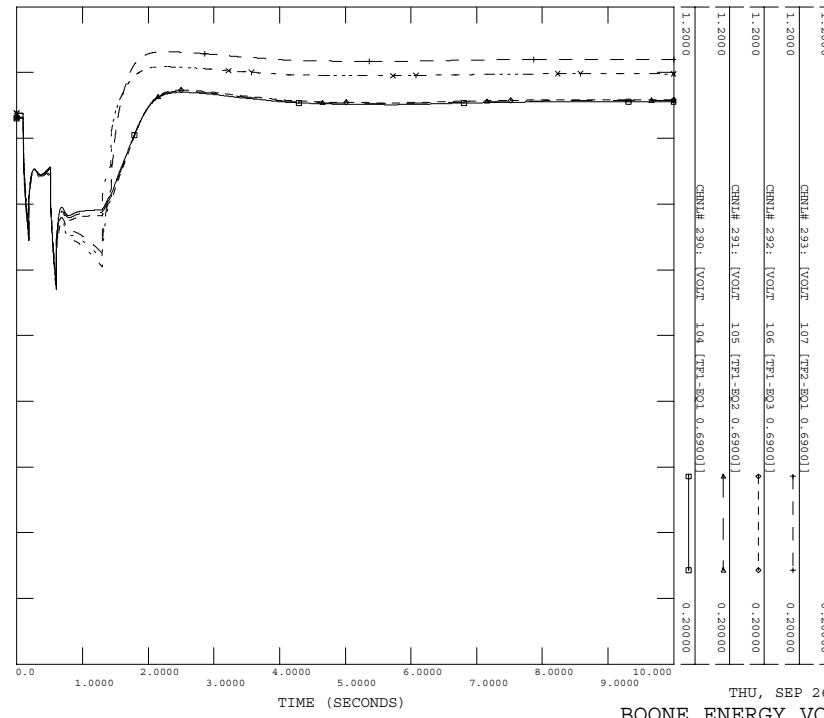


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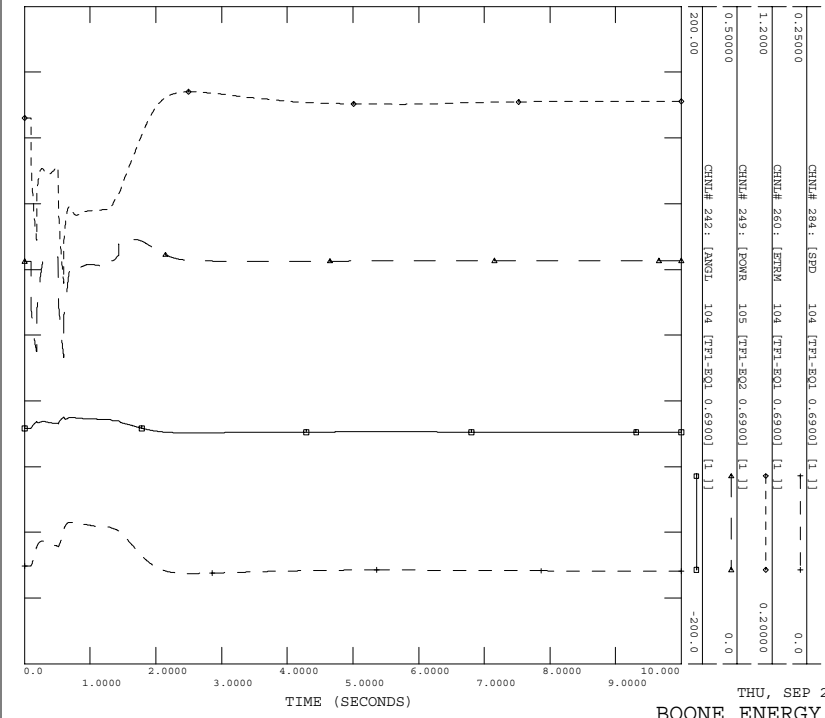
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT# 84.8, CLOVIS-575, BAKWR-200X 5/8/02
 FITZ1PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FIT21PH.OUT



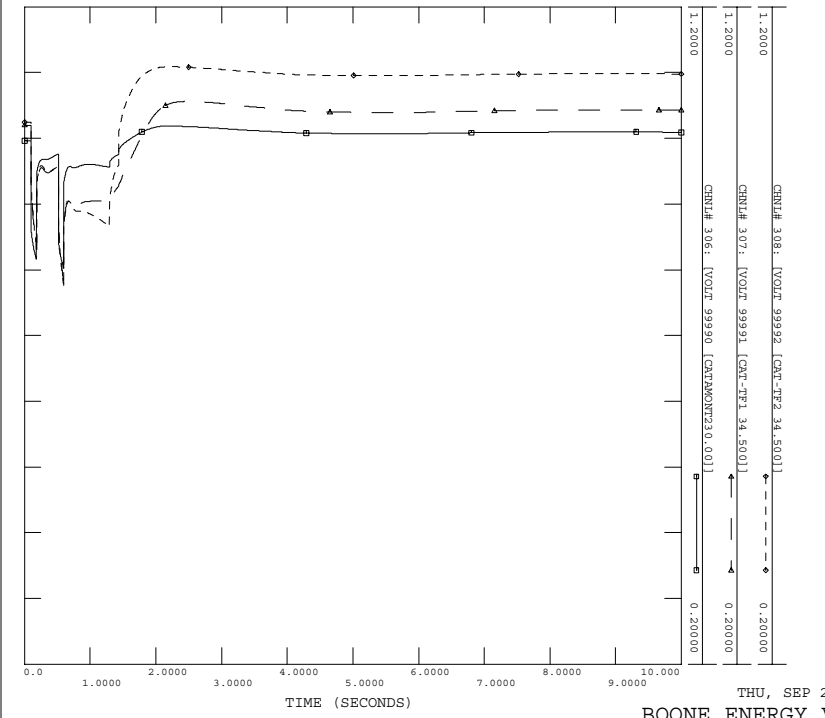
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 CATAMOUNT# 84.8, CLOVIS-575, BAKWR-200X 5/8/02
 FITZ1PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FIT21PH.OUT

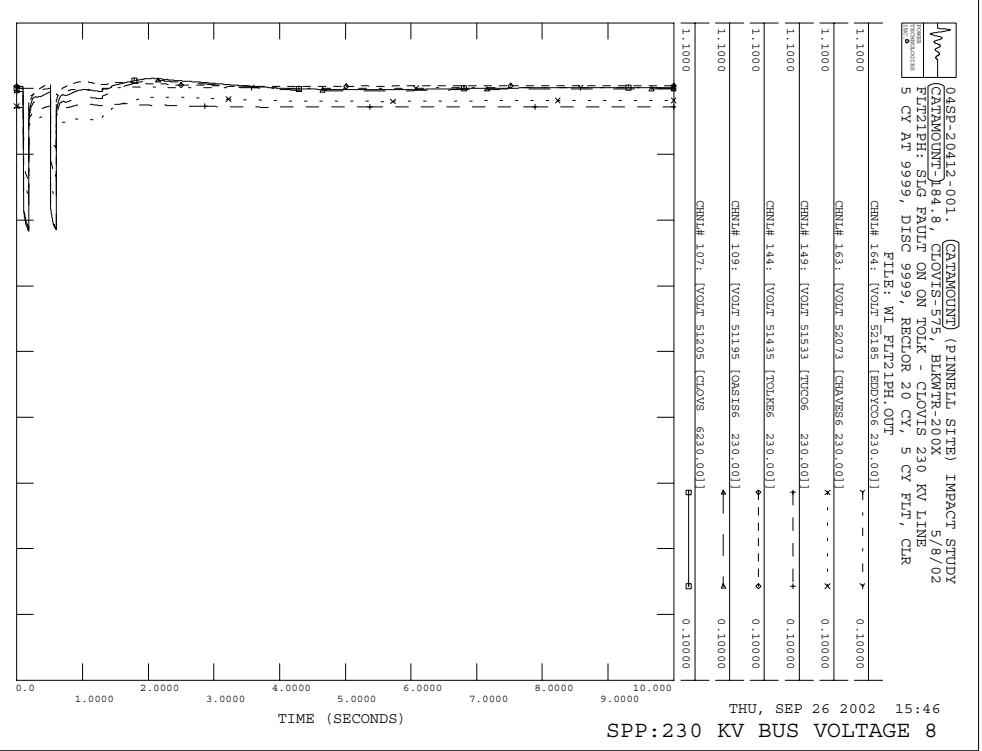
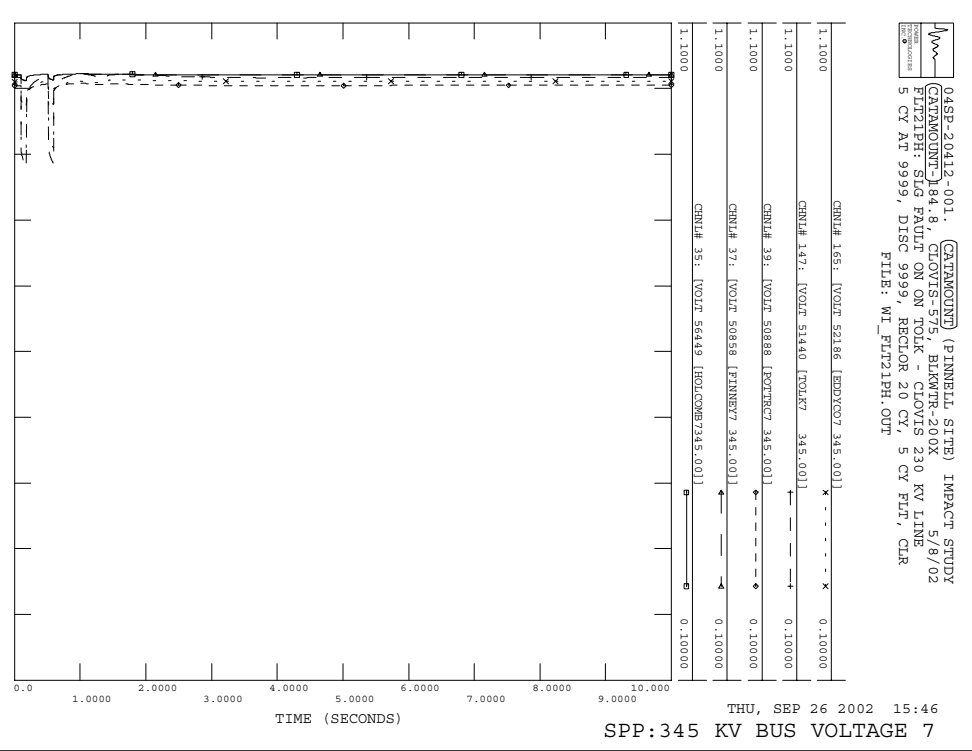
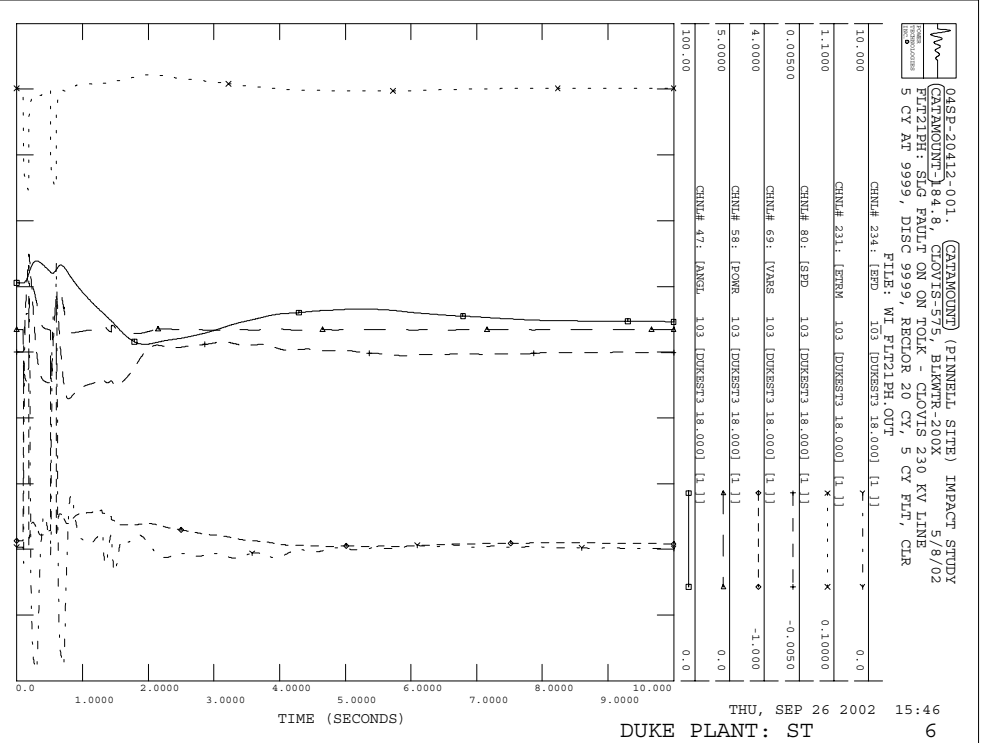
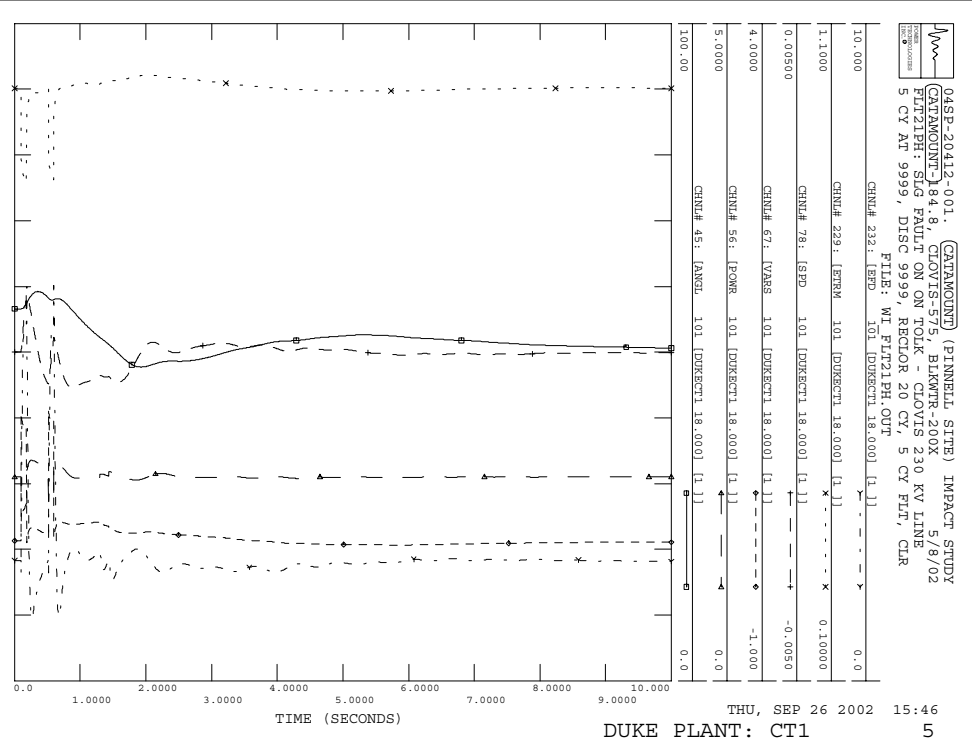


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT# 84.8, CLOVIS-575, BAKWR-200X 5/8/02
 FITZ1PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FIT21PH.OUT

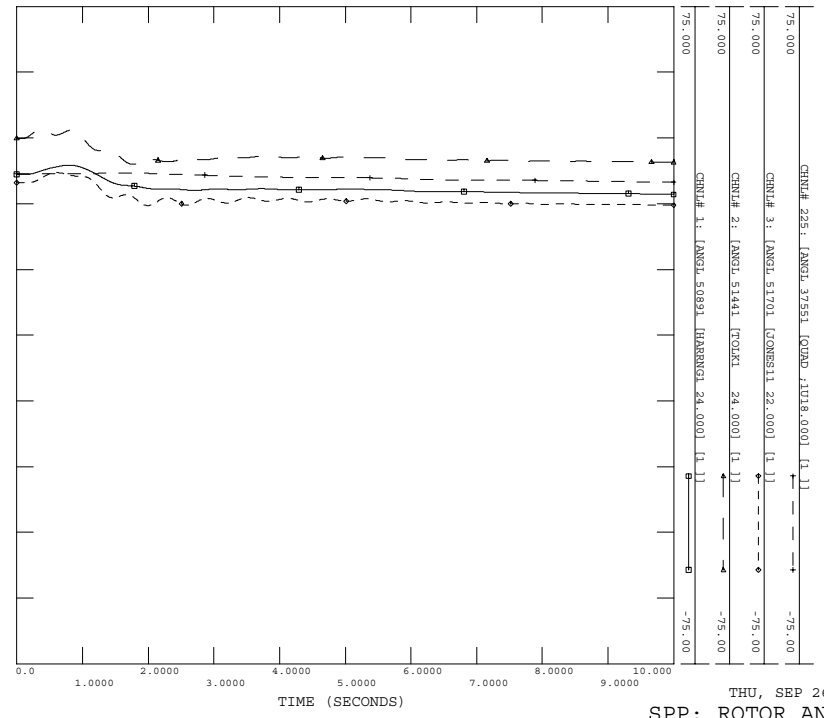


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT# 84.8, CLOVIS-575, BAKWR-200X 5/8/02
 FITZ1PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FIT21PH.OUT

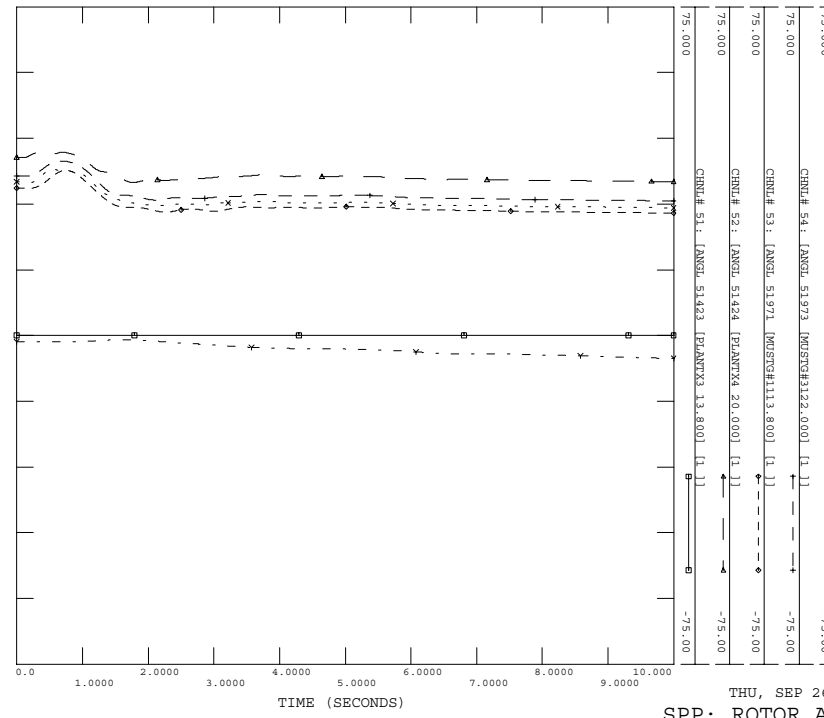




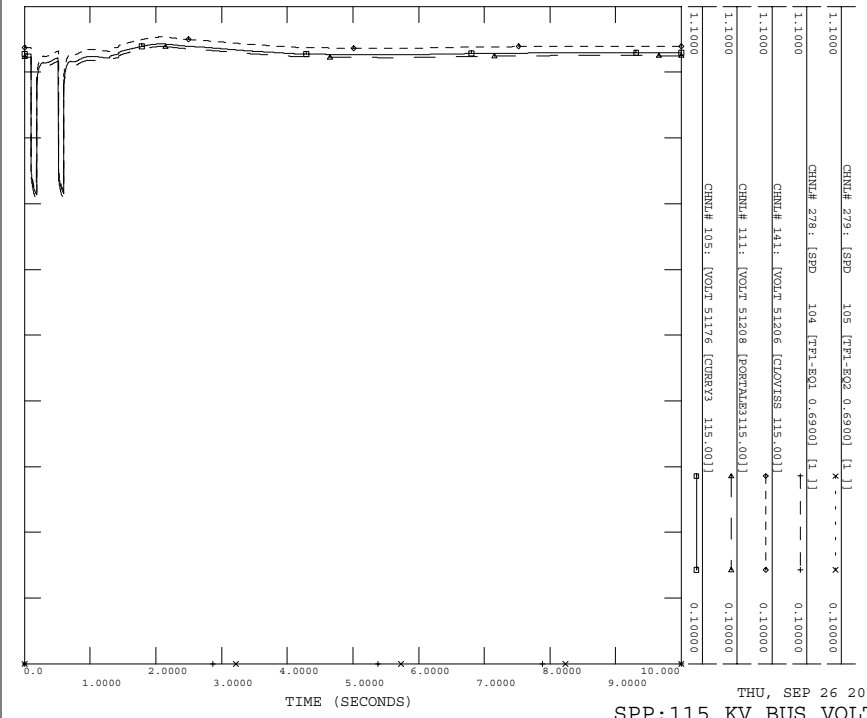
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-194.8, CLOVIS-575, BARKER-200X 5/8/02
 FITZ1PH-SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FITZ1PH.OUT



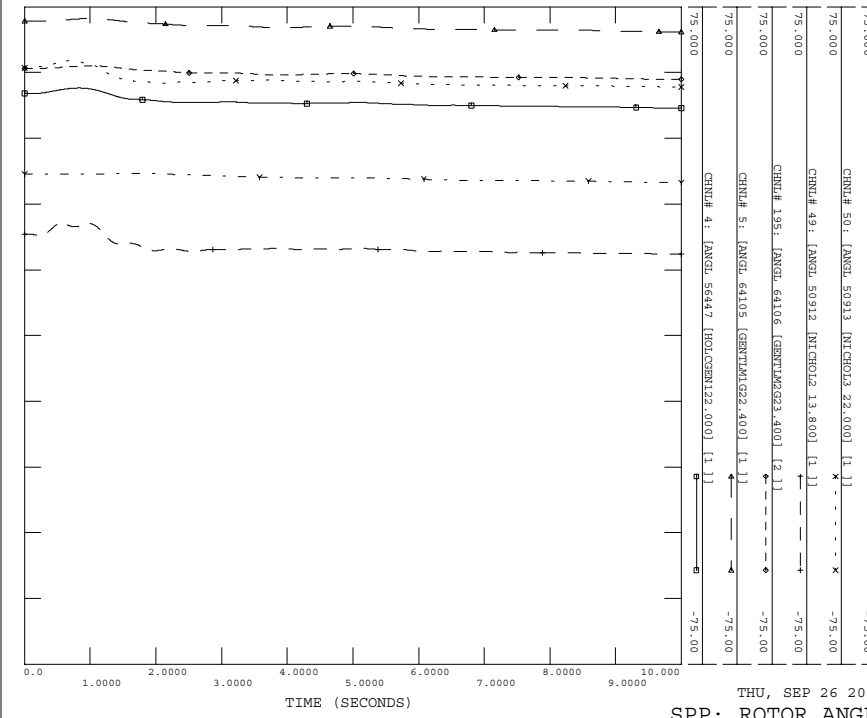
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-194.8, CLOVIS-575, BARKER-200X 5/8/02
 FITZ1PH-SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FITZ1PH.OUT



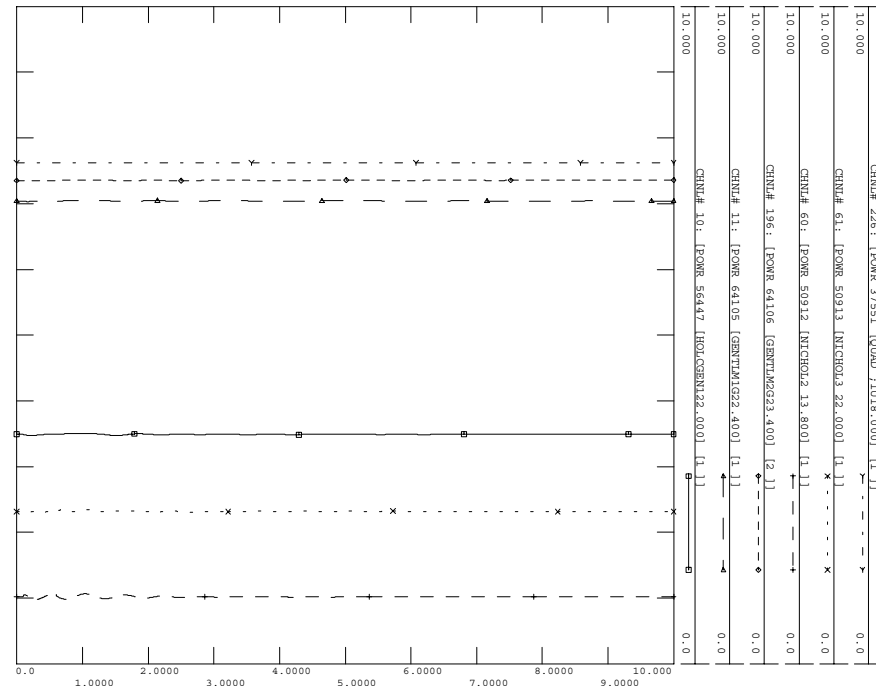
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 CATAMOUNT-194.8, CLOVIS-575, BARKER-200X 5/8/02
 FITZ1PH-SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FITZ1PH.OUT



04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-194.8, CLOVIS-575, BARKER-200X 5/8/02
 FITZ1PH-SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
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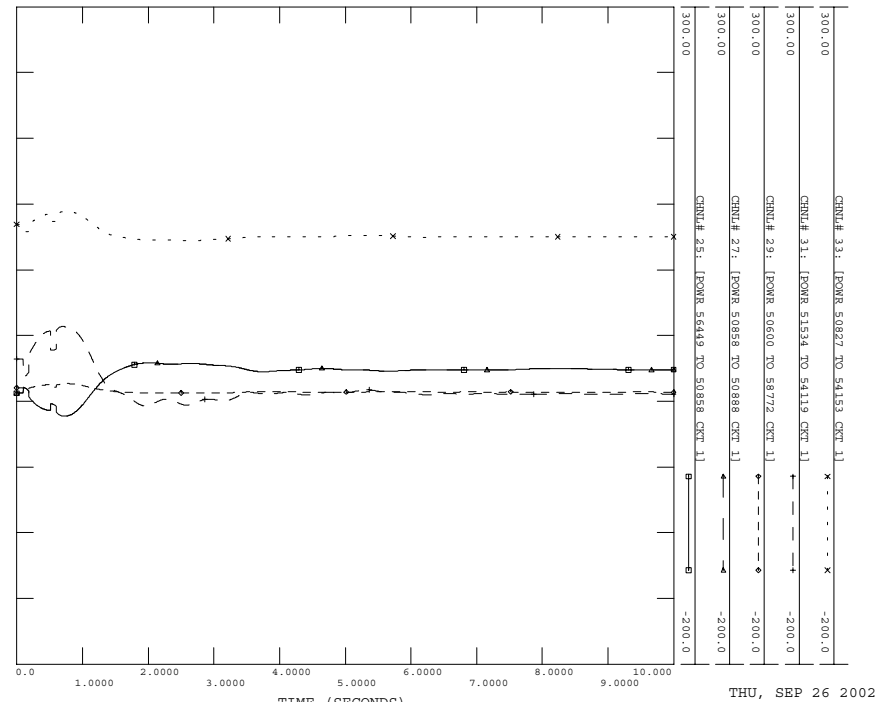


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 CATAMOUNT# 94.8, CLOVIS-575, BUKWTR-200X 5/8/02
 FITZ1PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FIT21PH.OUT



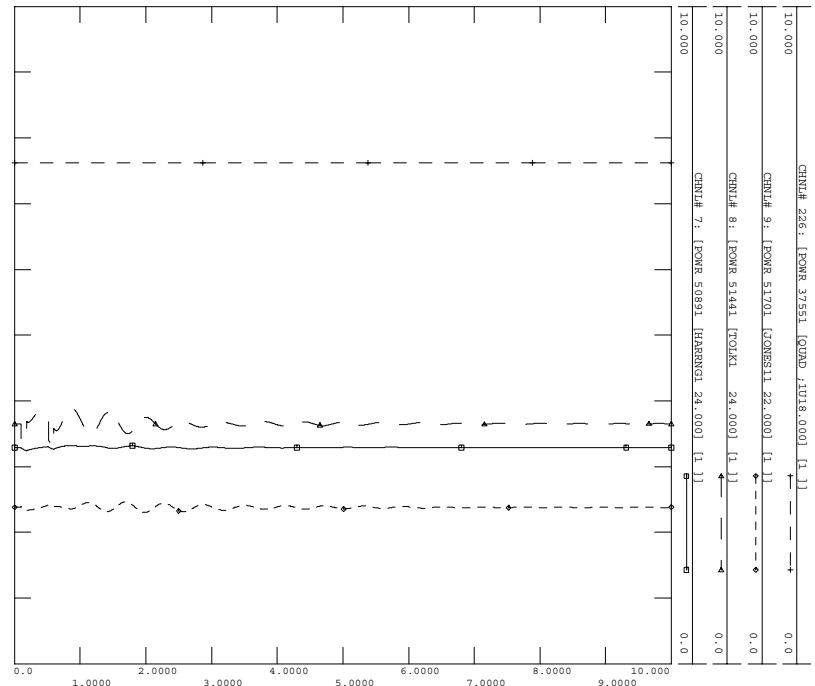
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 CATAMOUNT# 94.8, CLOVIS-575, BUKWTR-200X 5/8/02
 FITZ1PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FIT21PH.OUT



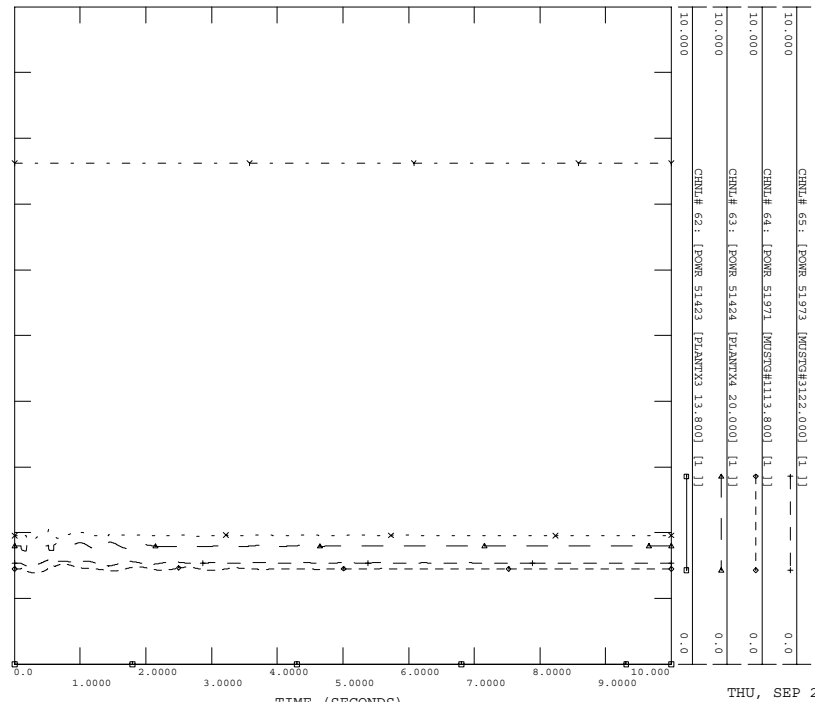
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 BRANCH FLOW 16

04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT# 94.8, CLOVIS-575, BUKWTR-200X 5/8/02
 FITZ1PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
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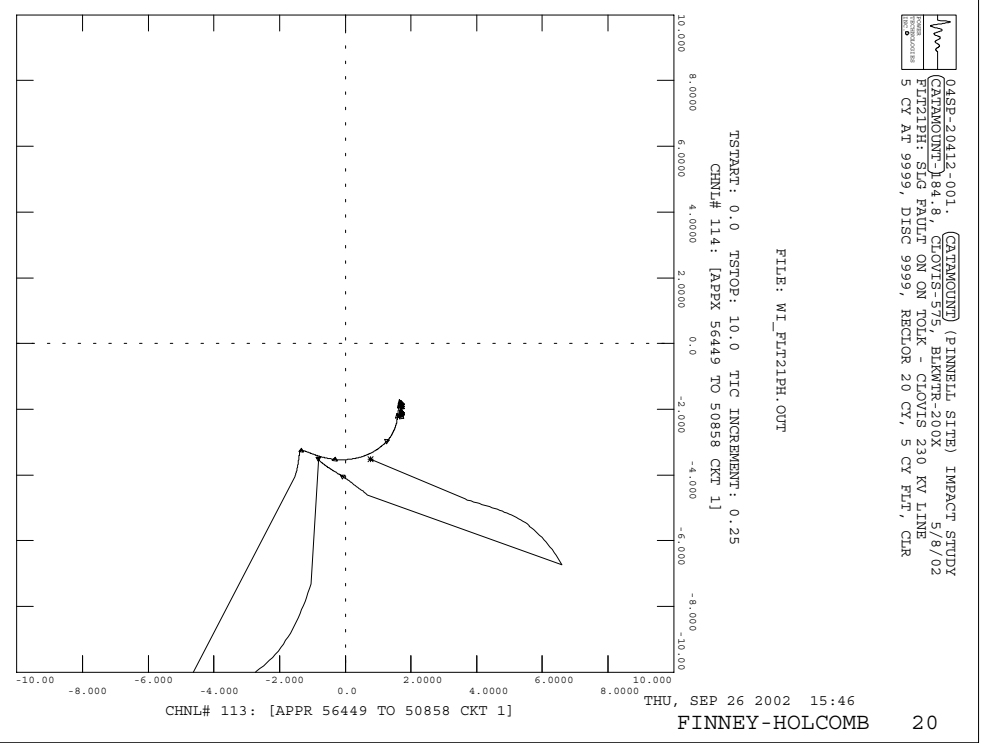
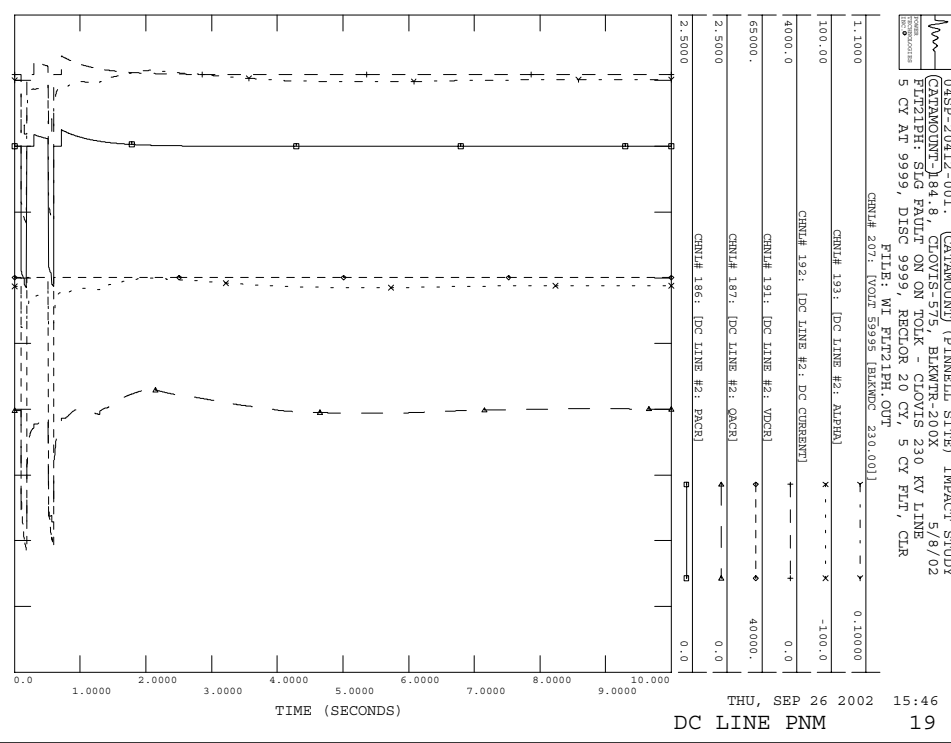
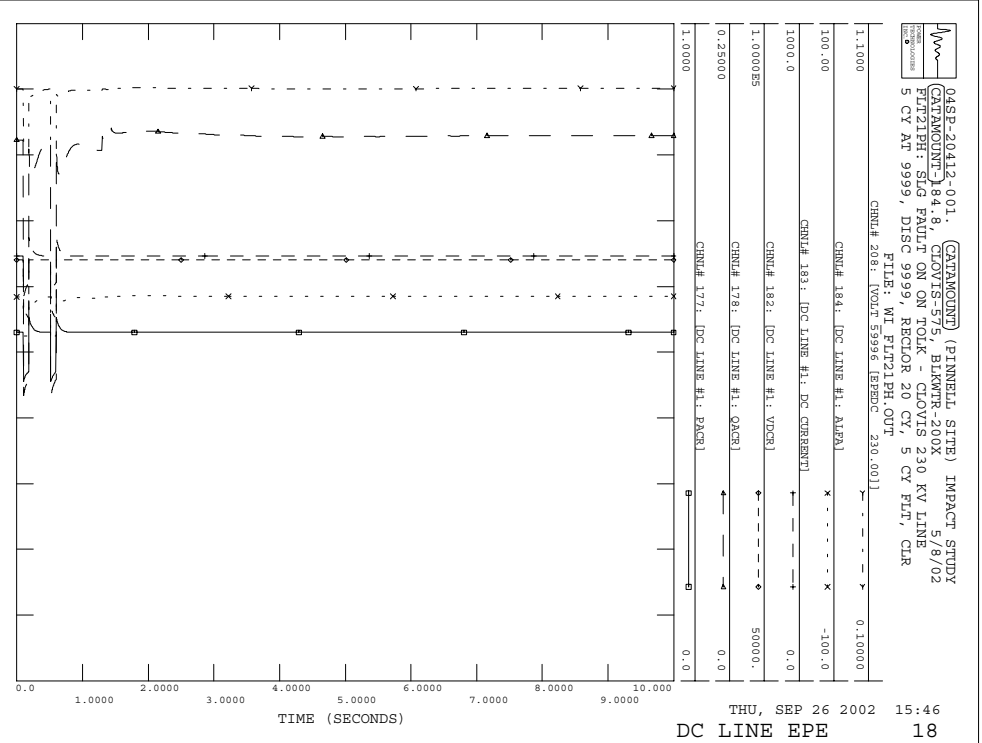
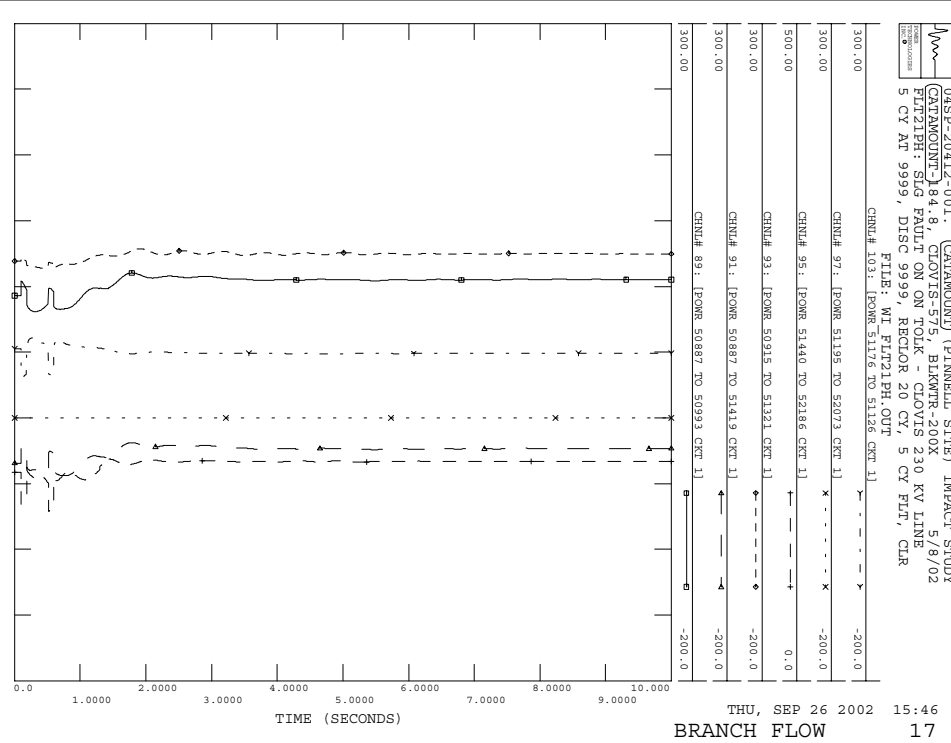


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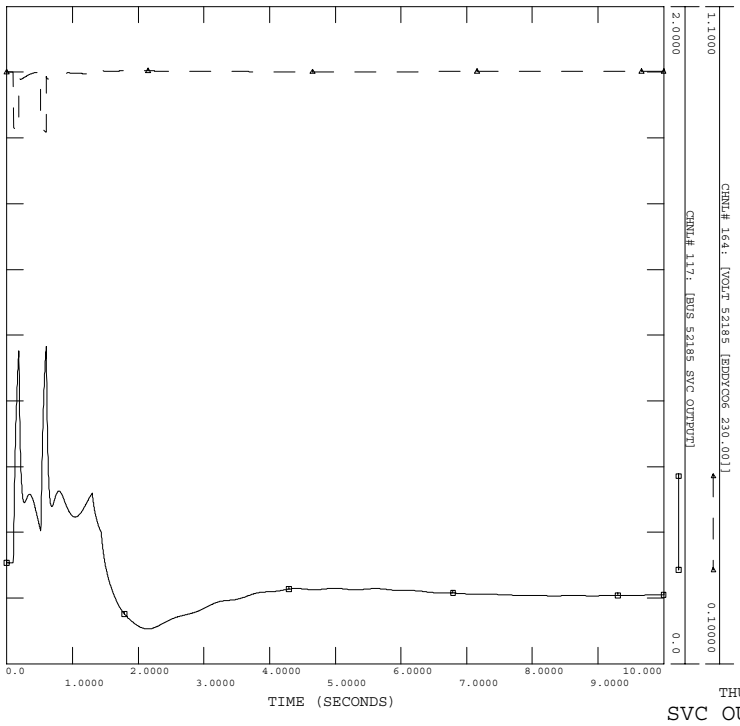
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 CATAMOUNT# 94.8, CLOVIS-575, BUKWTR-200X 5/8/02
 FITZ1PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
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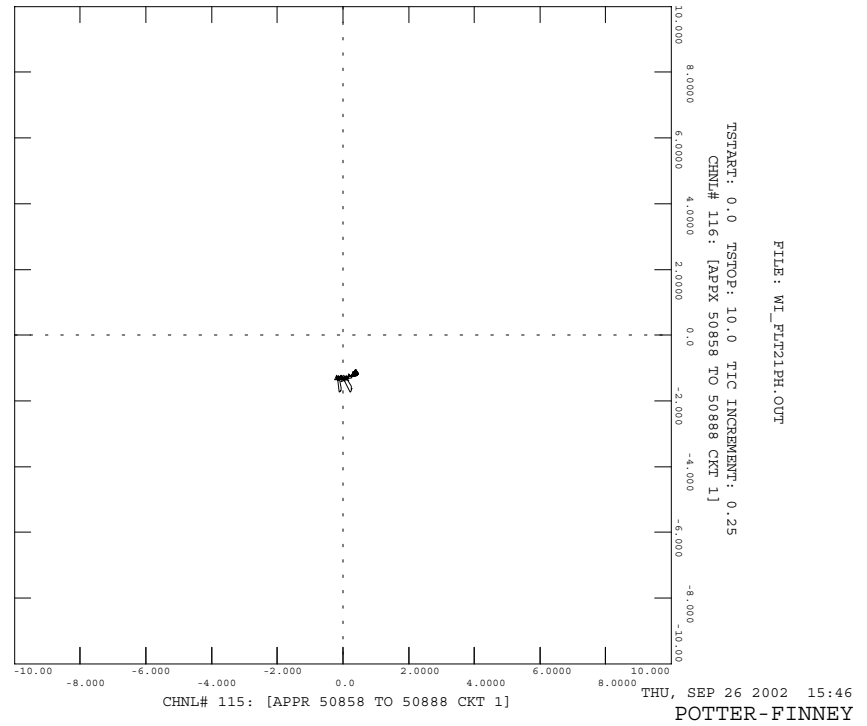


04SP-20412-001 (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT 184.8, CLOVIS-575, BLKWR-200X 5/8/02
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 FILE: WI_FLT21PH.OUT



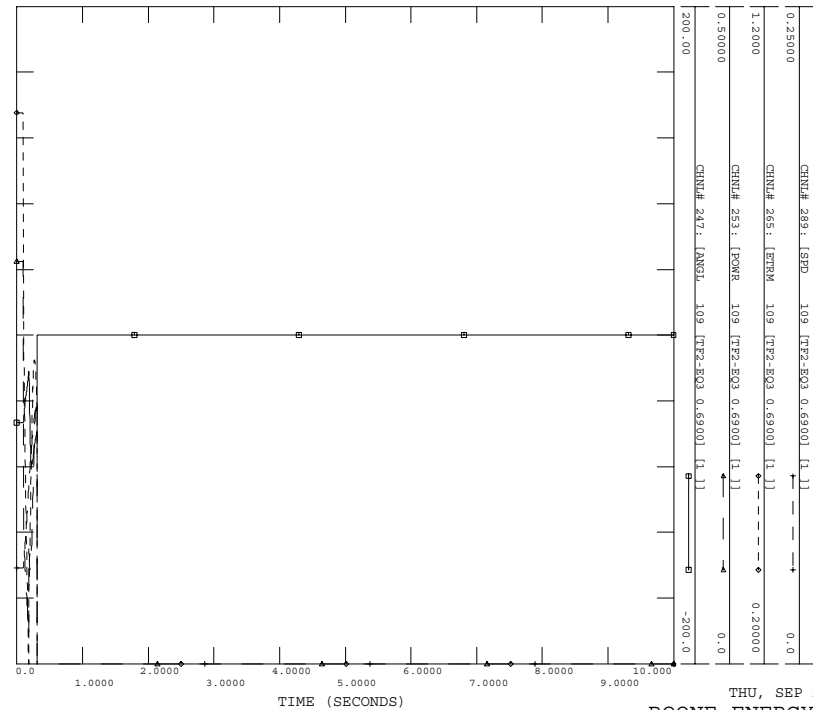
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 CATAMOUNT 184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT21PH: SLG PAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR

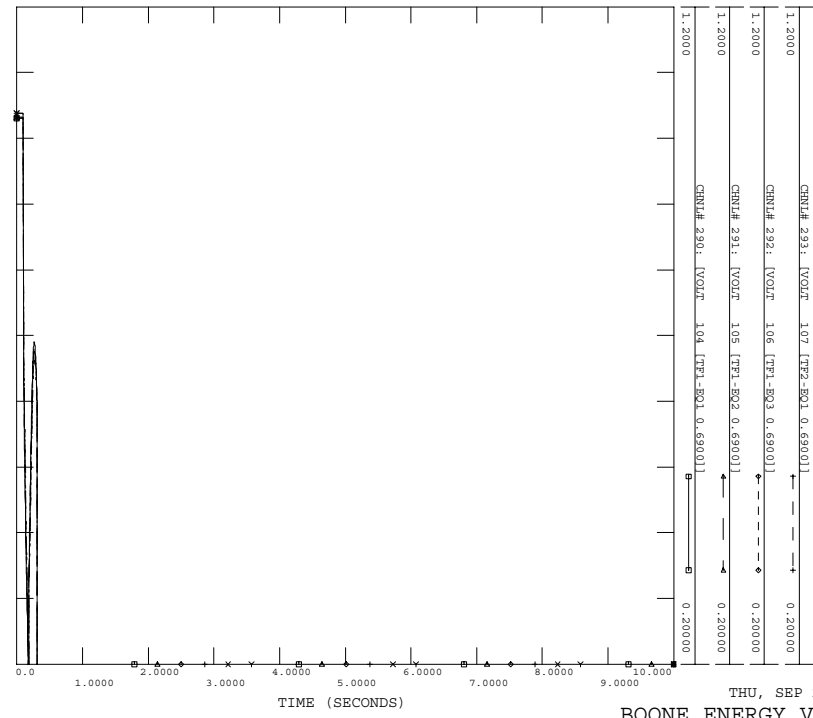


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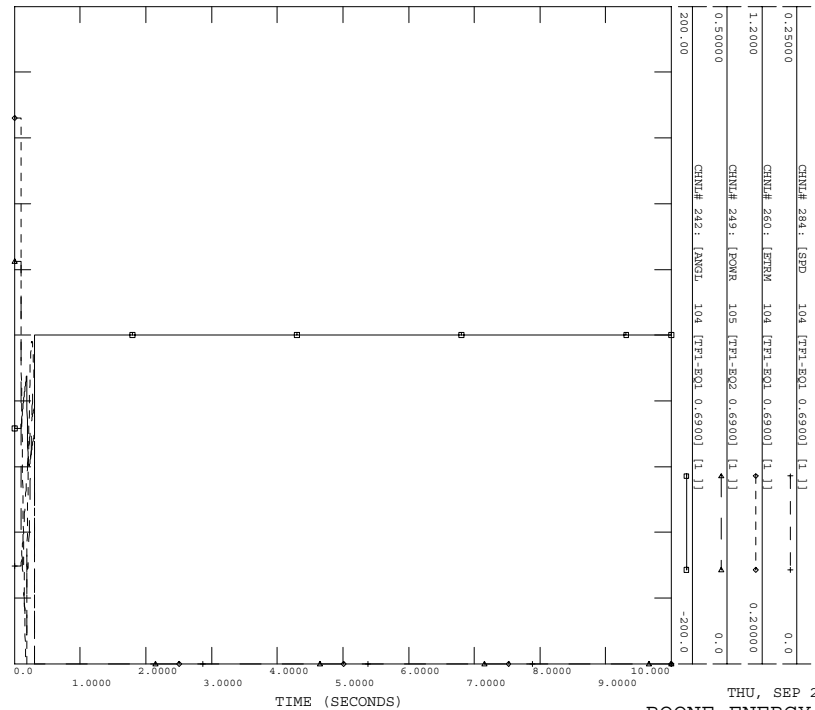
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 CATAMOUNT# 84.8, CVOVIS-575, BKWTR-200X 5/8/02
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 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT33PH.OUT



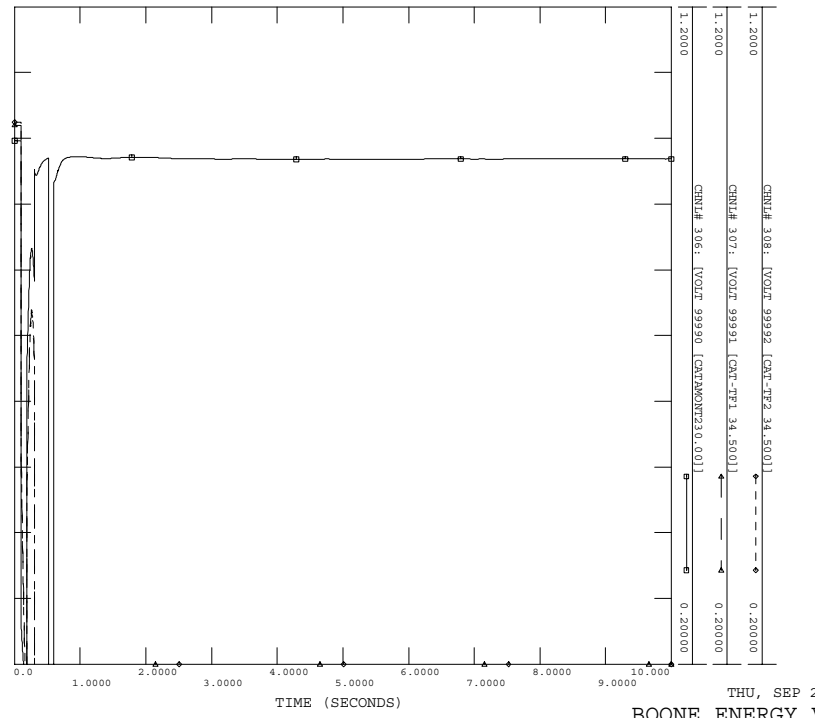
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 CATAMOUNT# 84.8, CVOVIS-575, BKWTR-200X 5/8/02
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 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT33PH.OUT

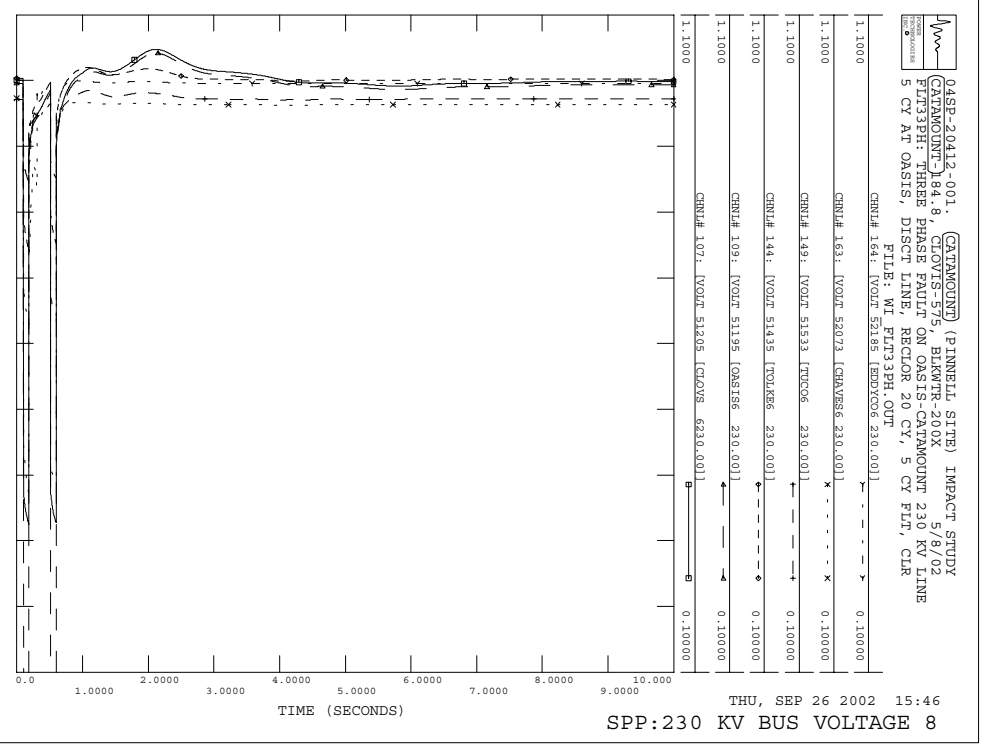
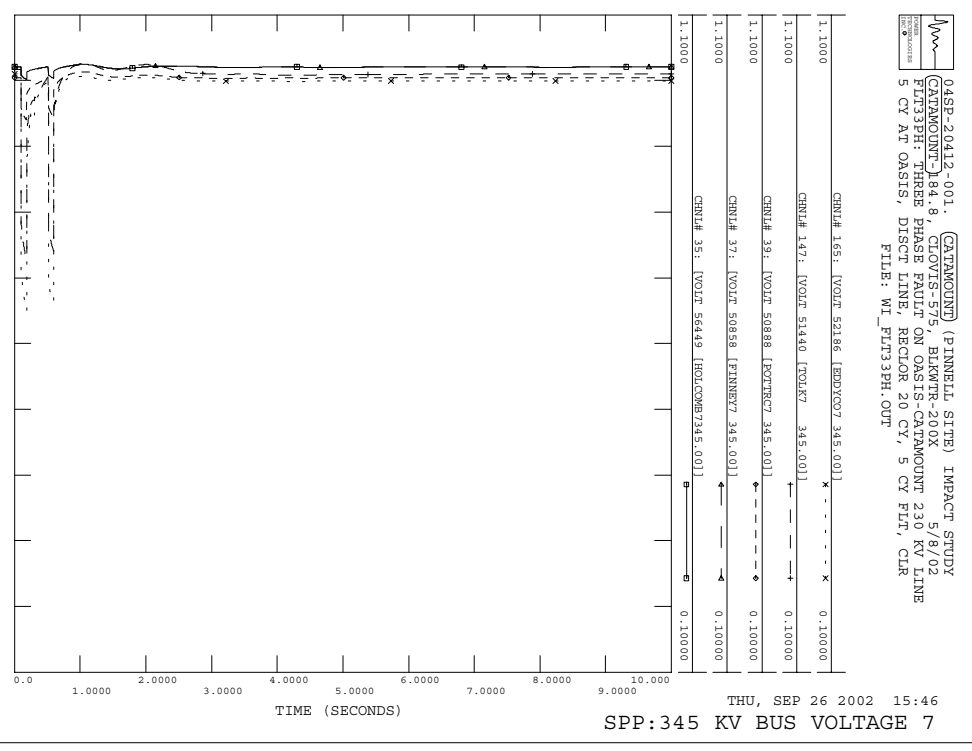
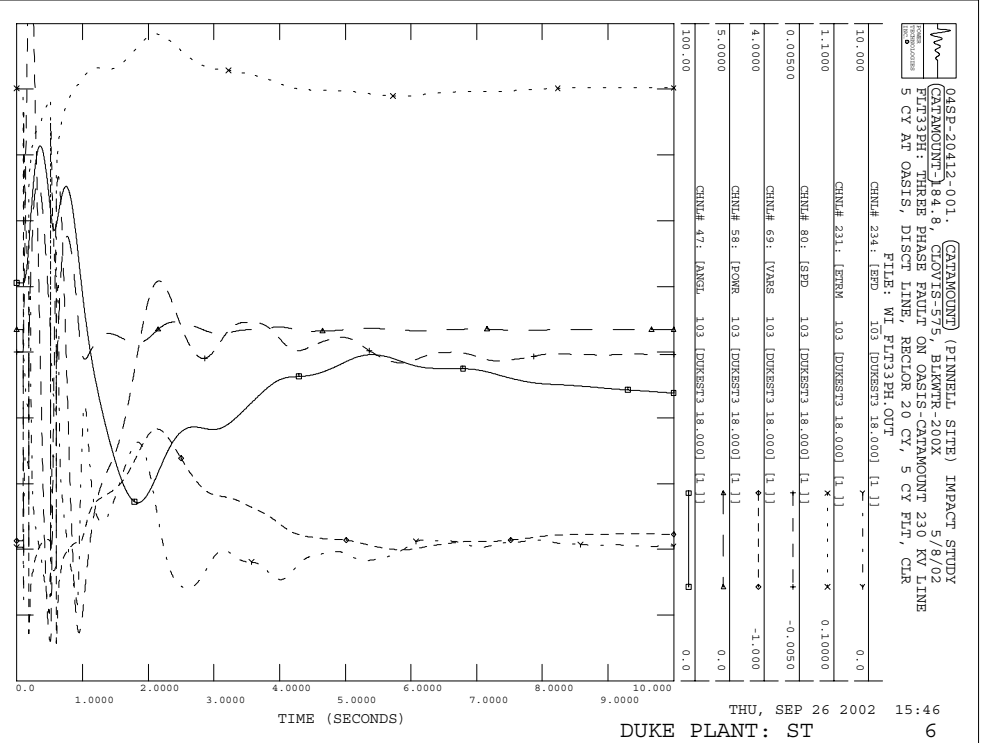
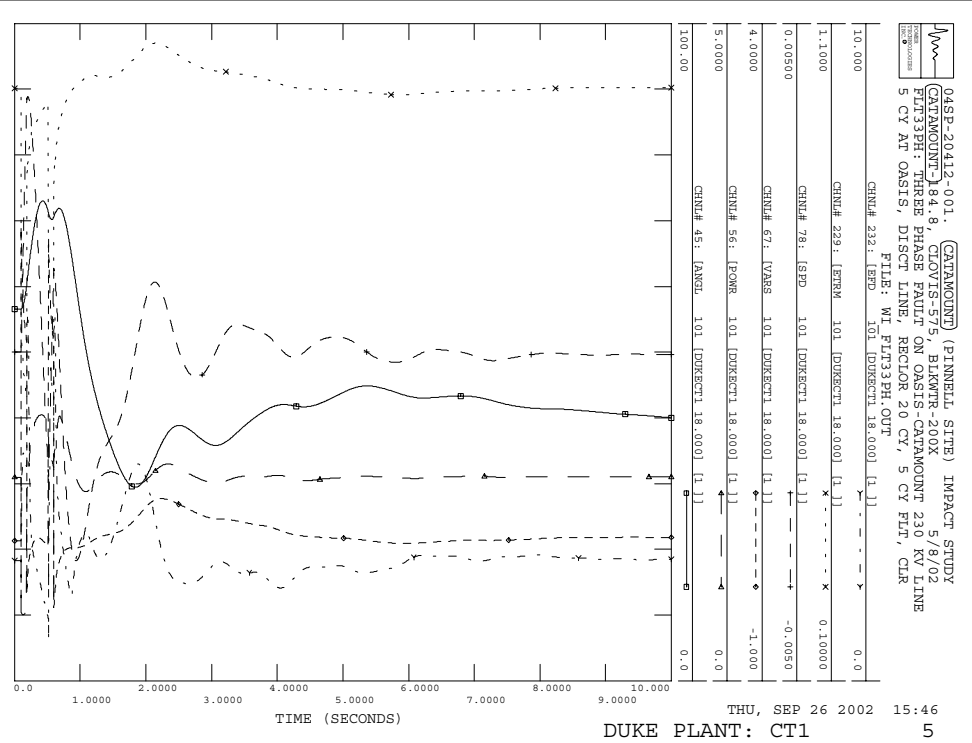


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT# 84.8, CVOVIS-575, BKWTR-200X 5/8/02
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT33PH.OUT

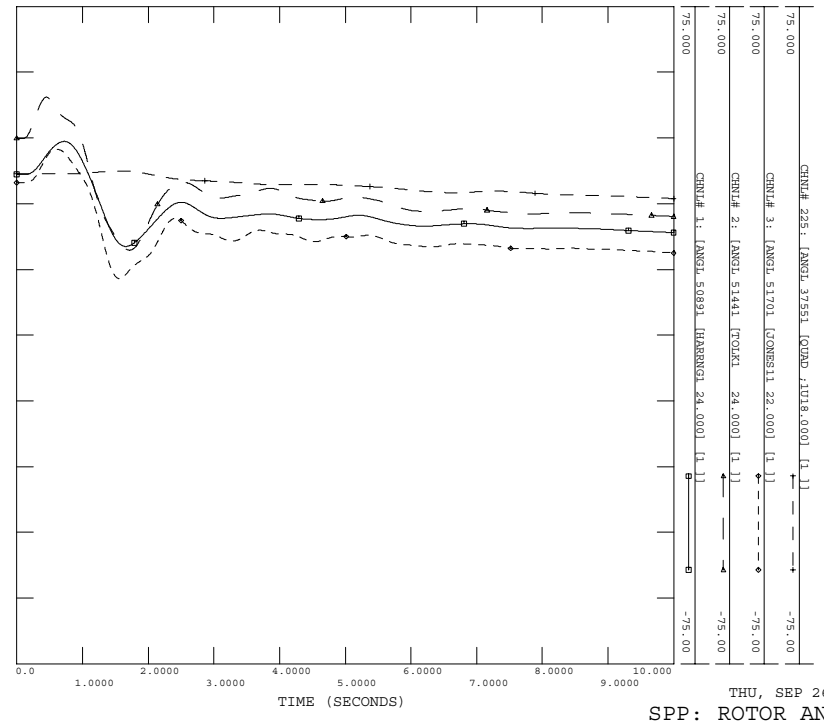


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT# 84.8, CVOVIS-575, BKWTR-200X 5/8/02
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
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 FILE: WI_FLT33PH.OUT

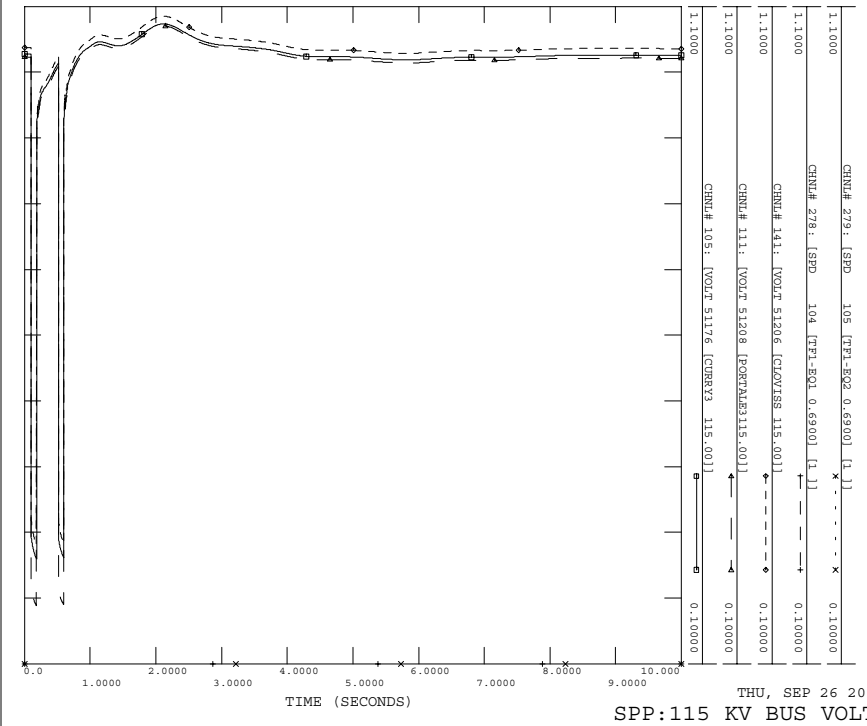




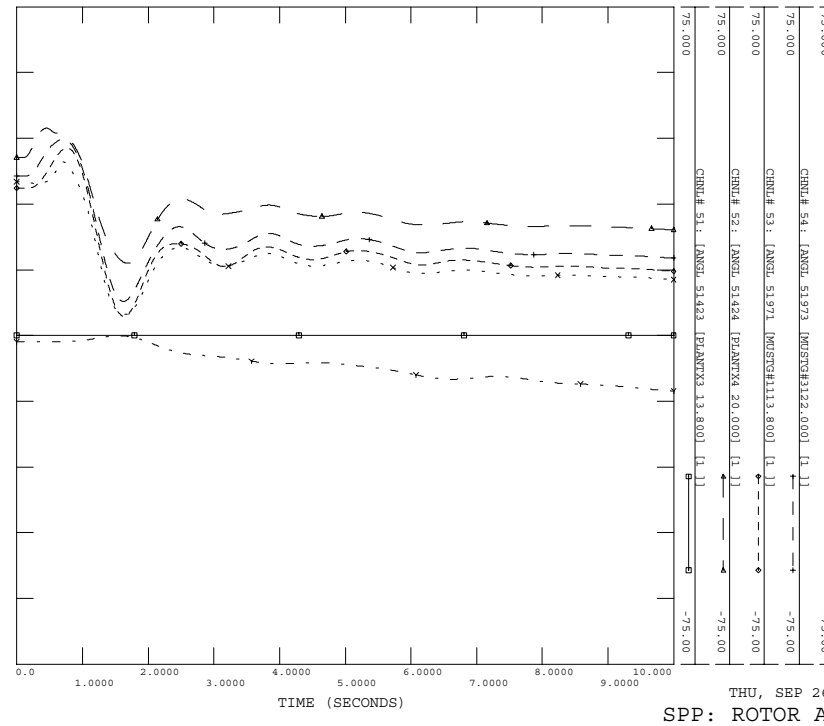
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 CATAMOUNT-194.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT33PH.OUT



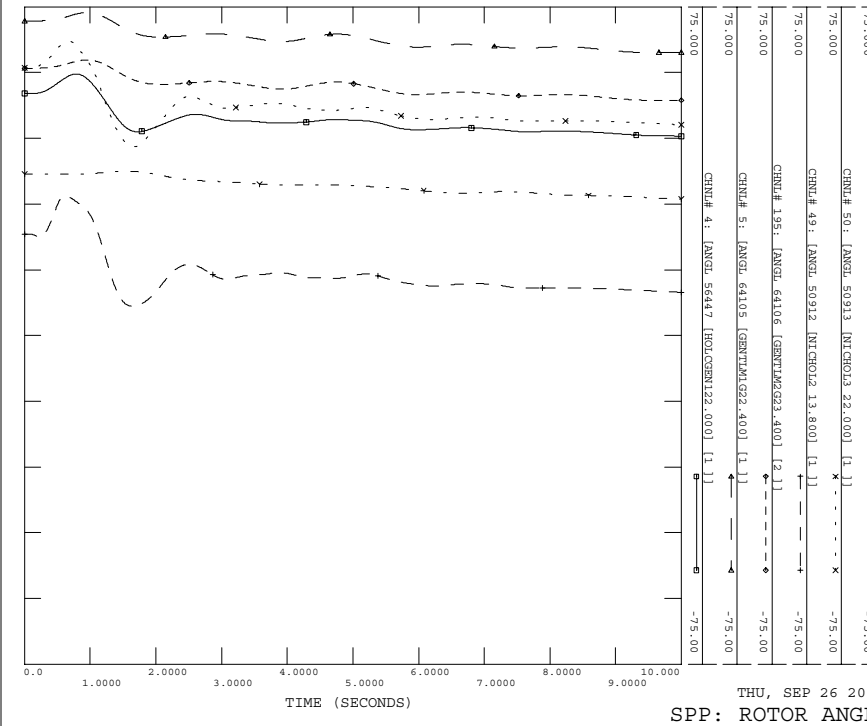
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 CATAMOUNT-194.8, CLOVIS-575, BAKWR-200X 5/8/02
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 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT33PH.OUT



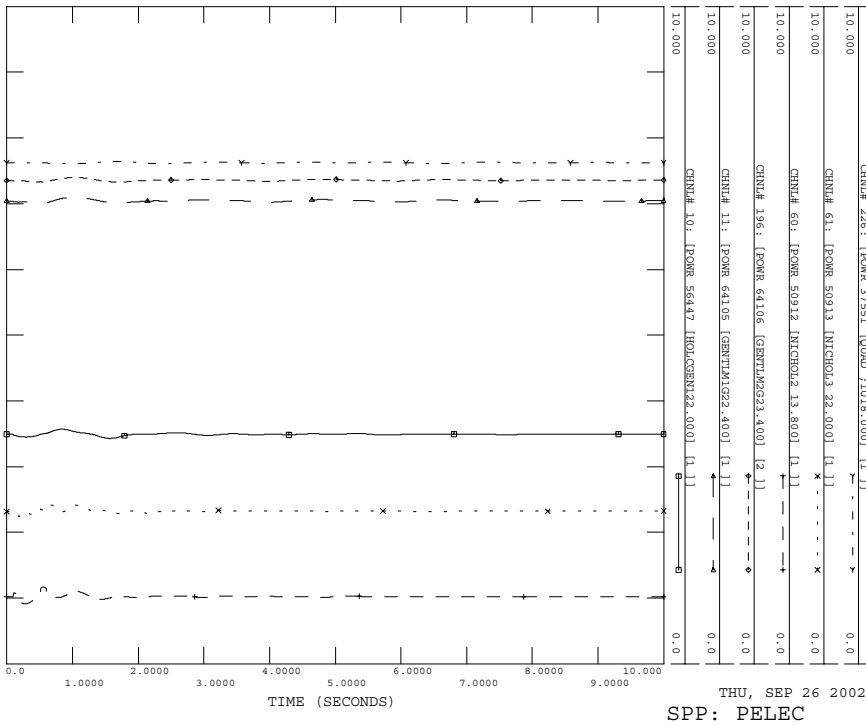
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-194.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT33PH.OUT



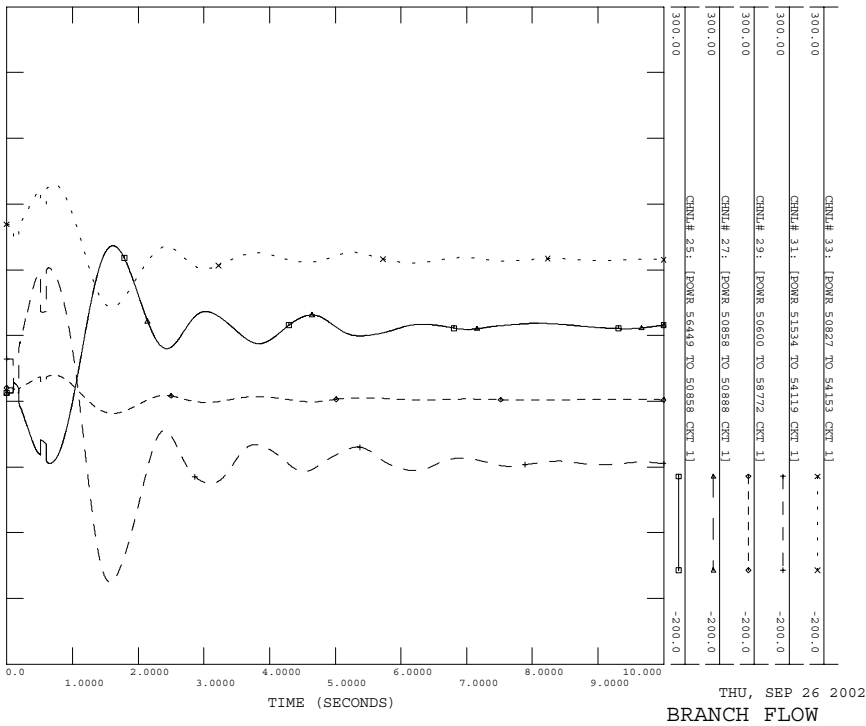
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 CATAMOUNT-194.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT33PH.OUT



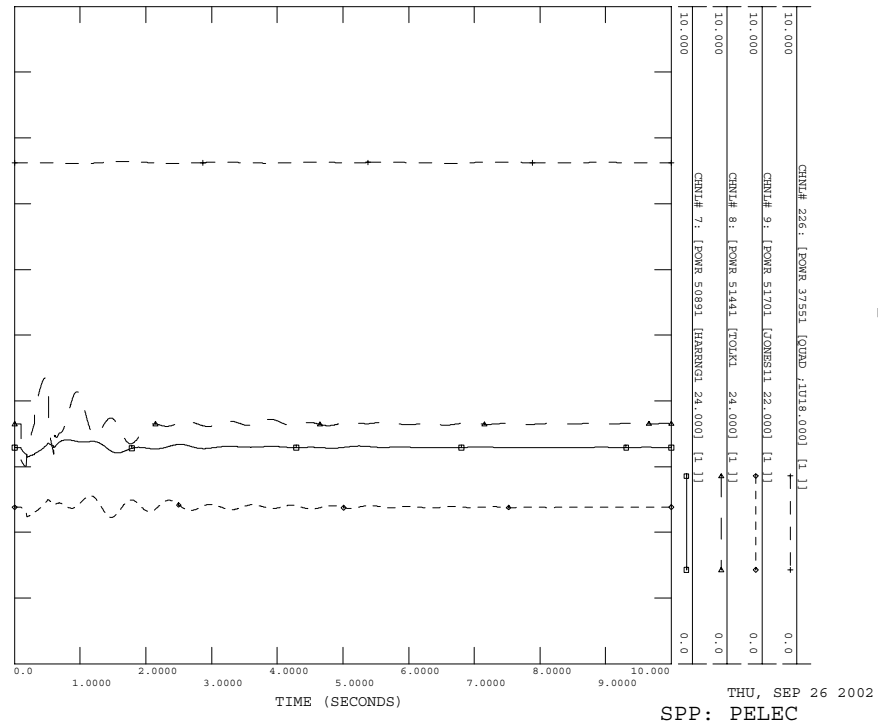
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 (CATAMOUNT) 94.8, CLOVIS-575, BAKWTR-200X 5/8/02
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT33PH.OUT



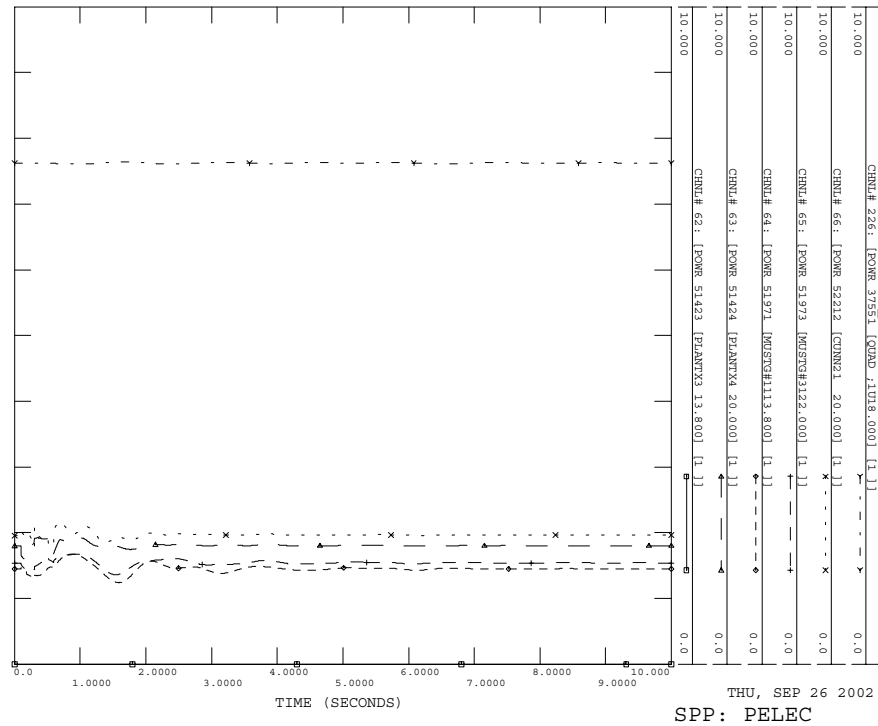
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 (CATAMOUNT) 94.8, CLOVIS-575, BAKWTR-200X 5/8/02
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT33PH.OUT



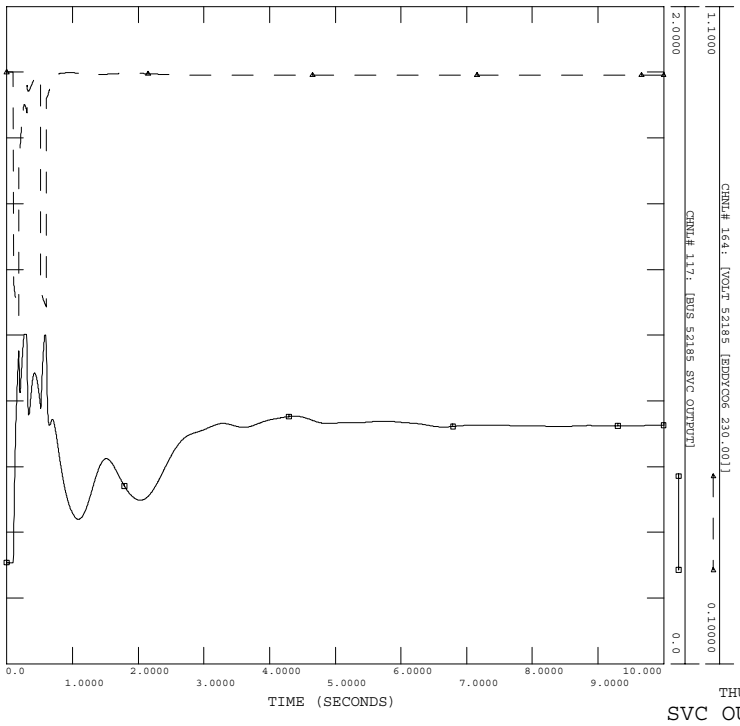
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 (CATAMOUNT) 94.8, CLOVIS-575, BAKWTR-200X 5/8/02
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT33PH.OUT



04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 (CATAMOUNT) 94.8, CLOVIS-575, BAKWTR-200X 5/8/02
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT33PH.OUT

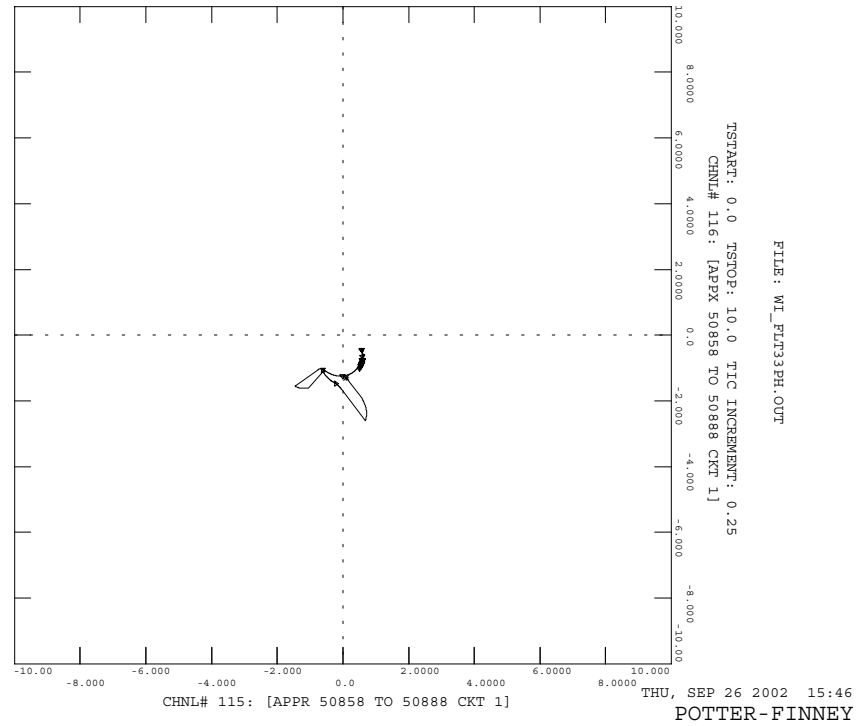


04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT 84.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT33PH.OUT



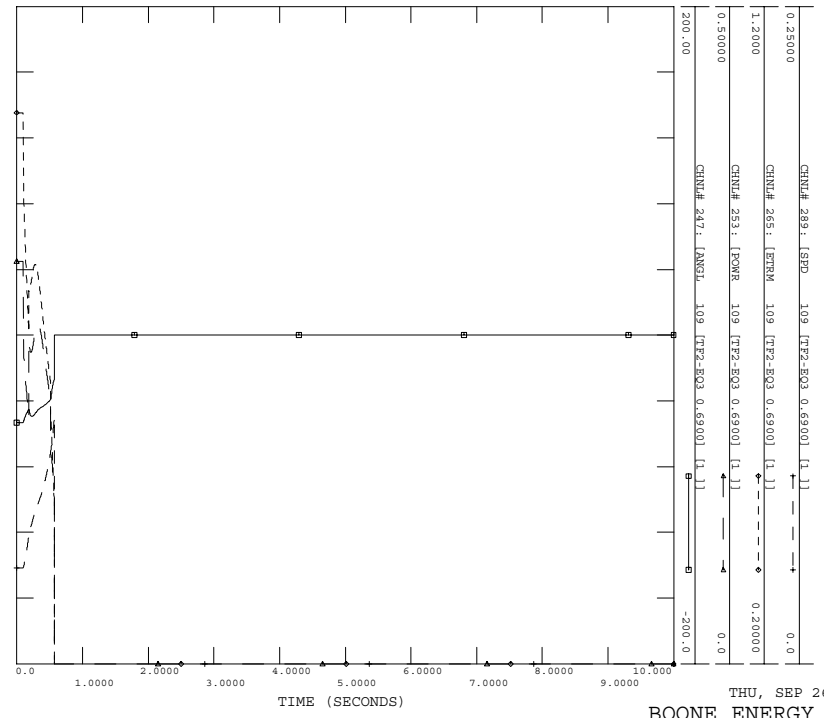
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04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT 84.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR

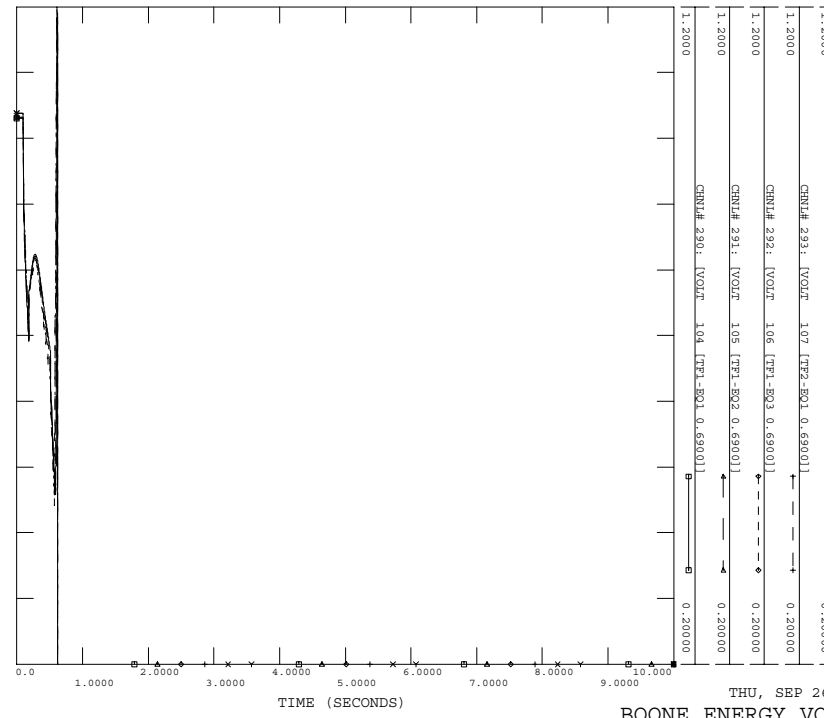


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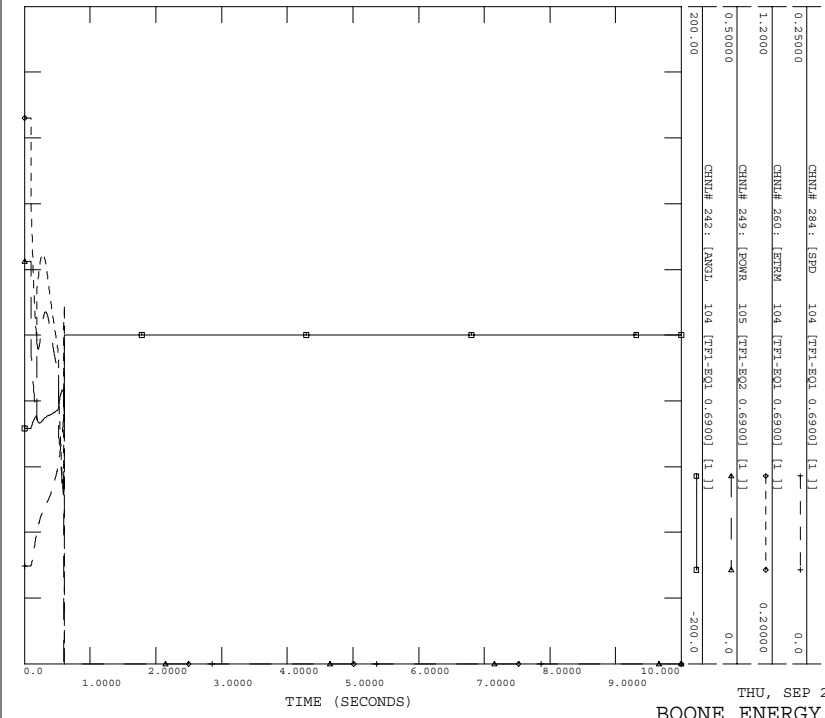
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT# 94.8, CLOVIS-575, BIKMTW-200X 5/8/02
 FLT31PH: SLG FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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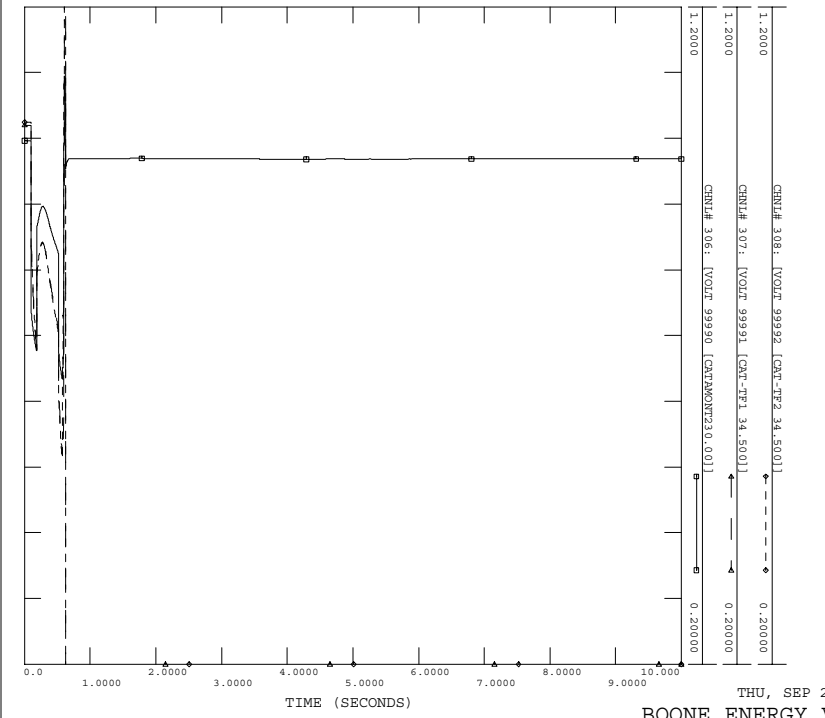
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 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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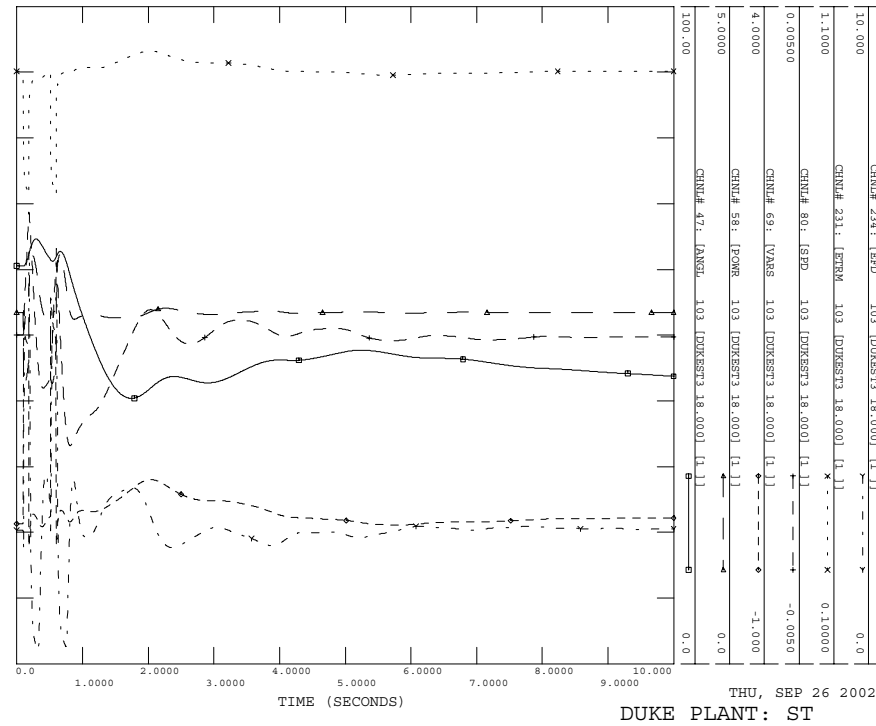
04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT# 94.8, CLOVIS-575, BIKMTW-200X 5/8/02
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 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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04SP-20412-001. (CATAMOUNT) (PINNELL SITE) IMPACT STUDY
 CATAMOUNT# 94.8, CLOVIS-575, BIKMTW-200X 5/8/02
 FLT31PH: SLG FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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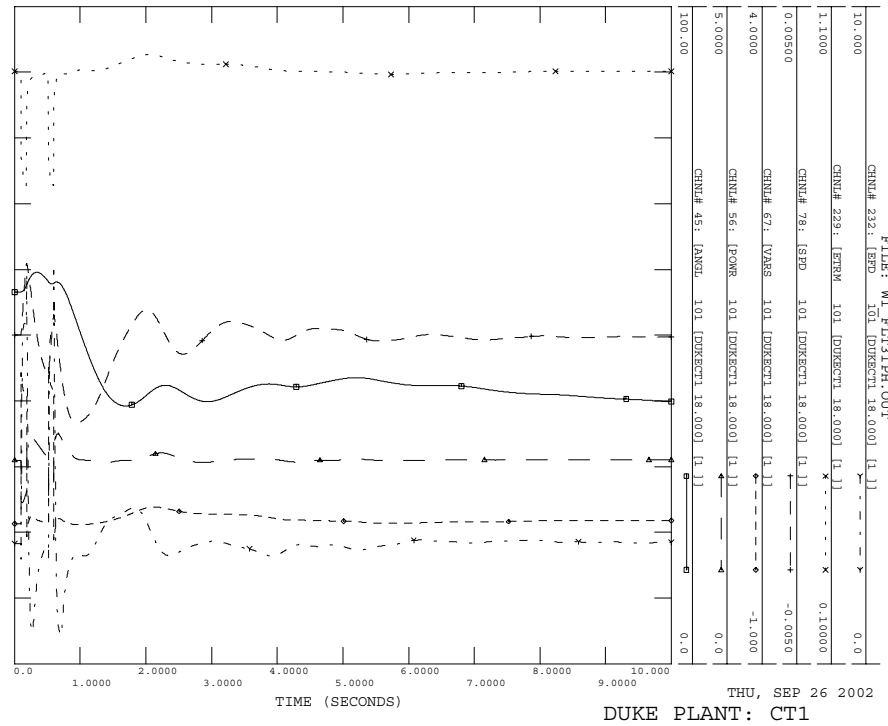


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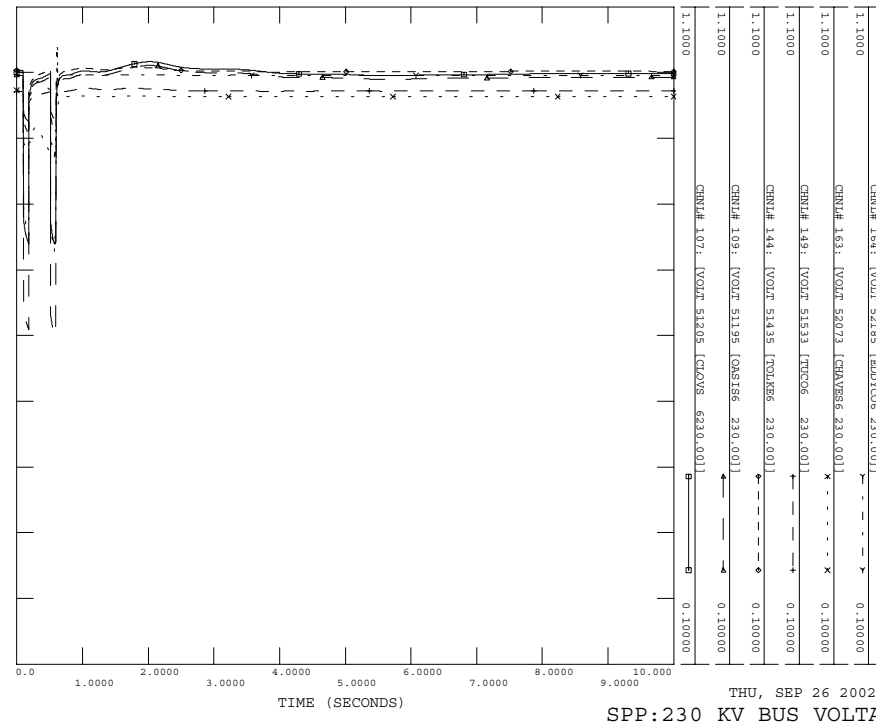
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 DUKE PLANT: ST 6

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 CATAMOUNT_94.8, CLOVIS-575, BARKWR-200X 5/8/02
 FLT31PH: SLG FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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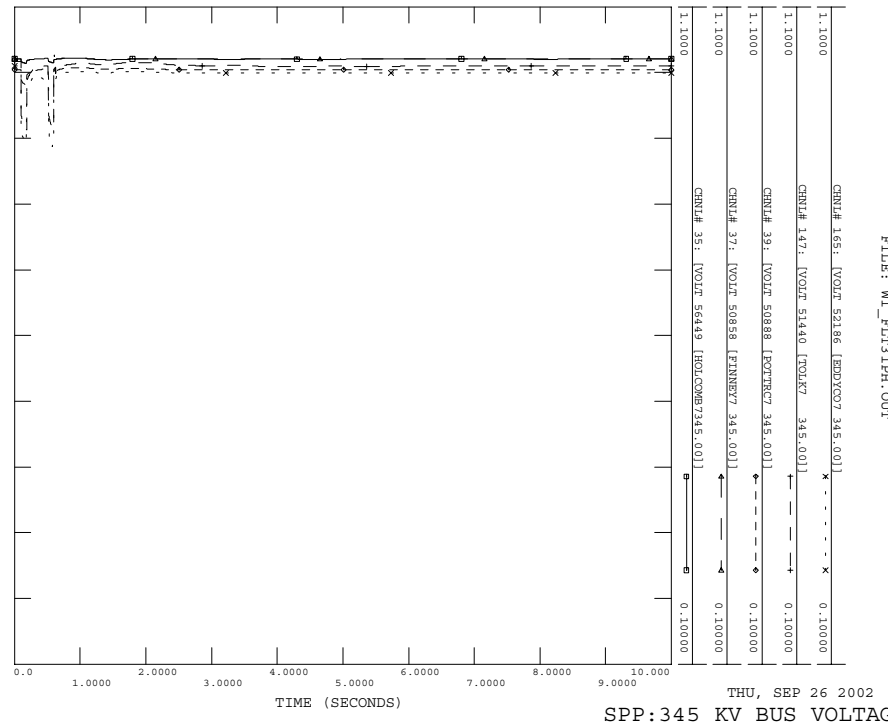
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 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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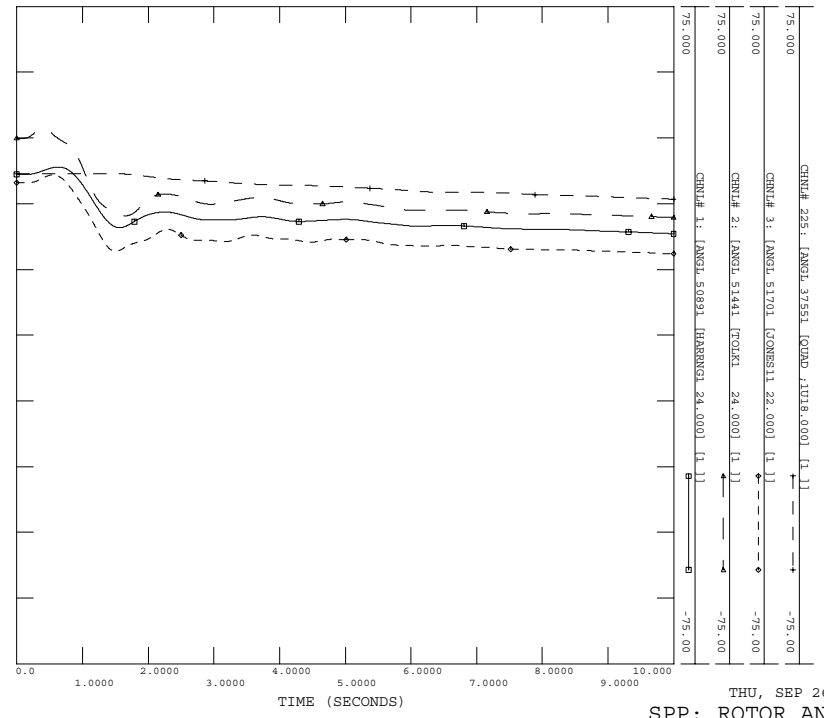
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 CATAMOUNT_94.8, CLOVIS-575, BARKWR-200X 5/8/02
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 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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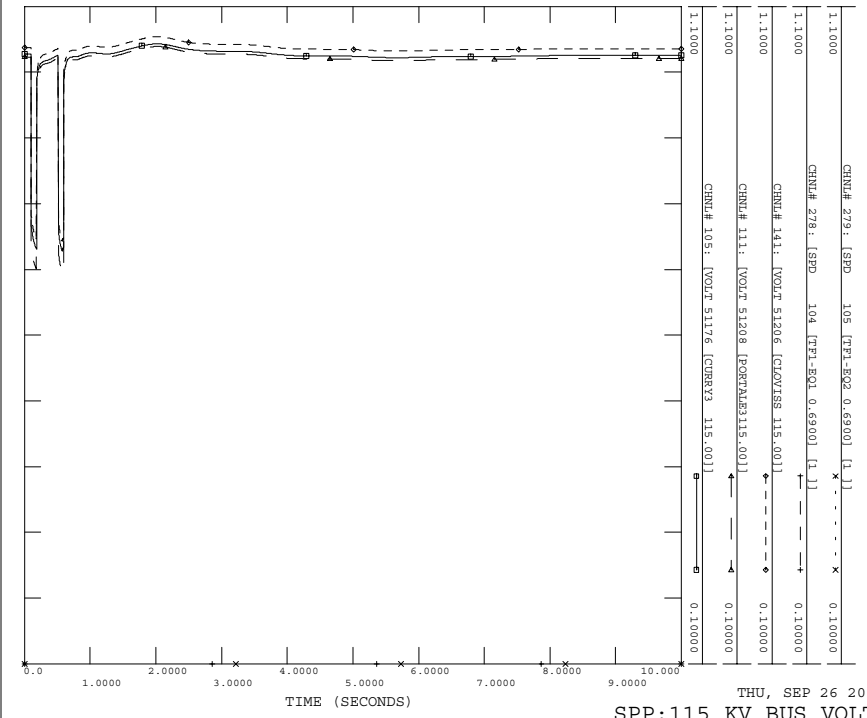


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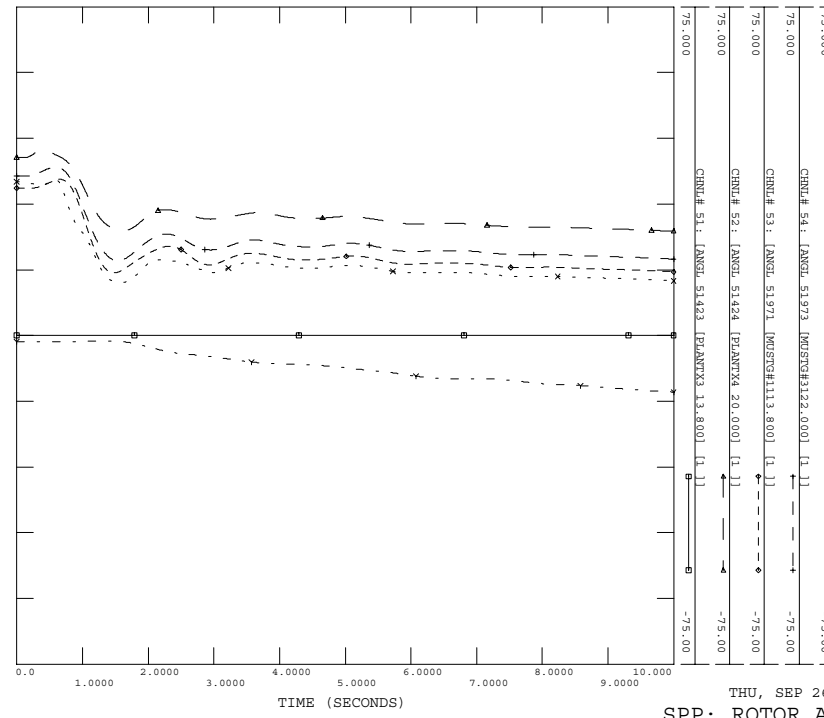
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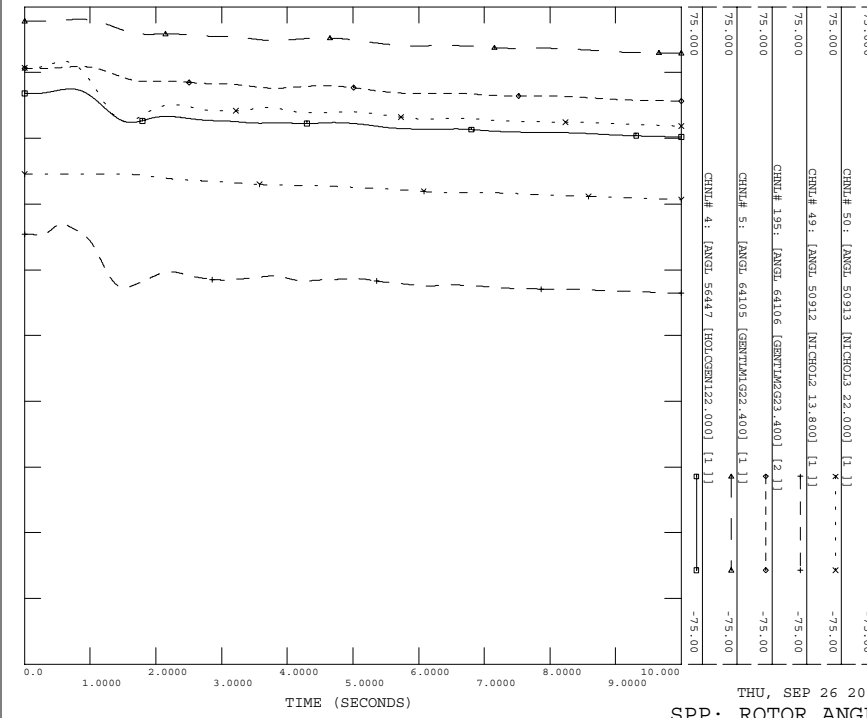
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 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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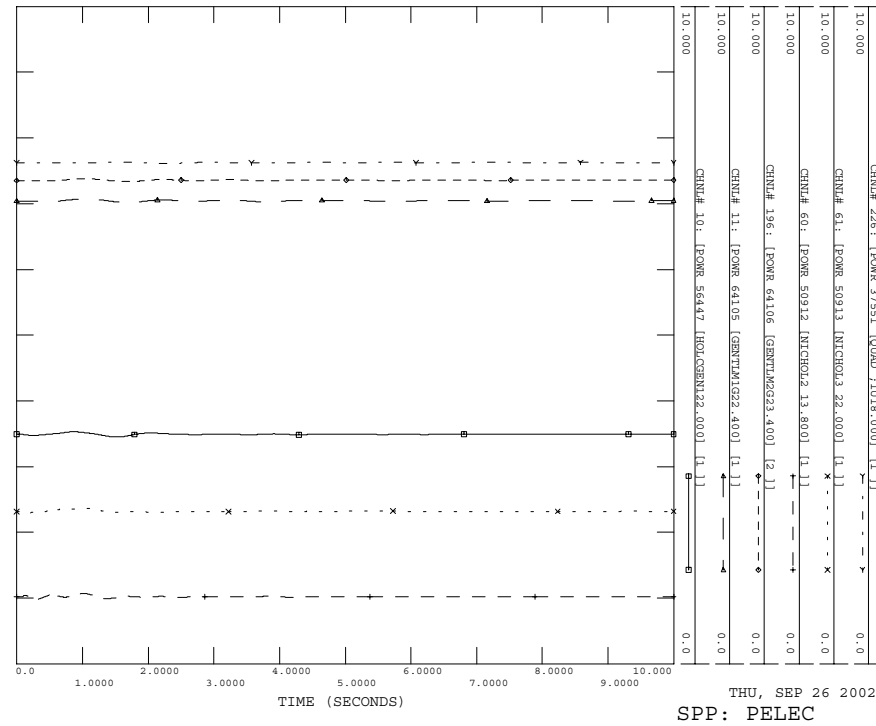
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 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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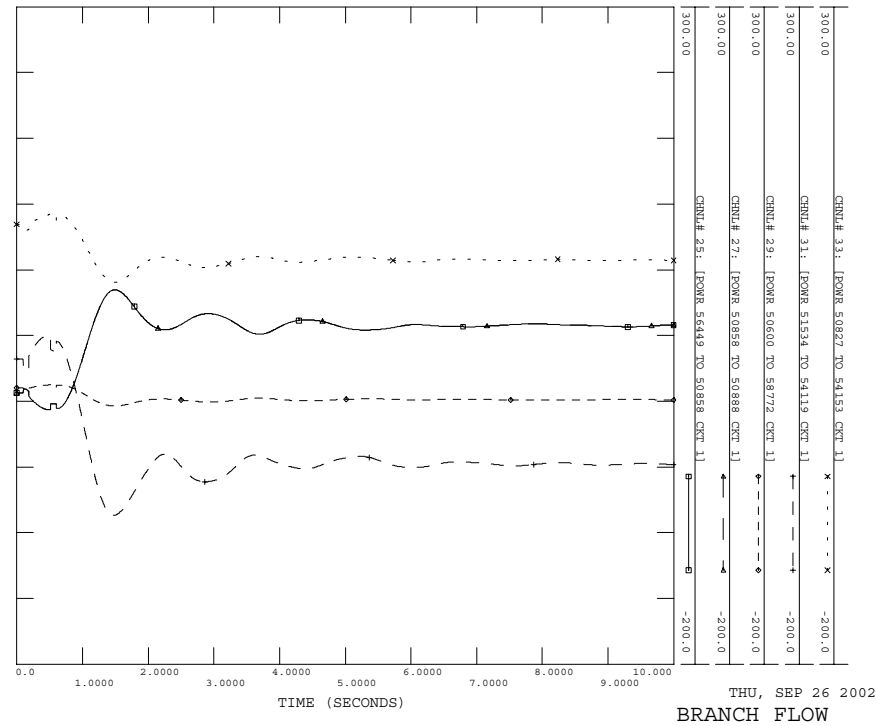
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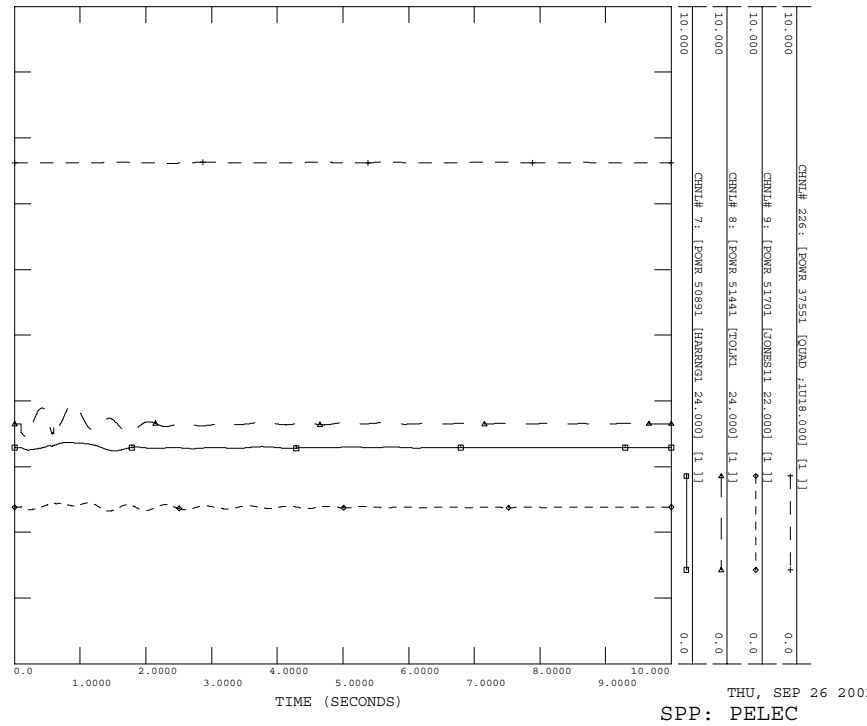
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 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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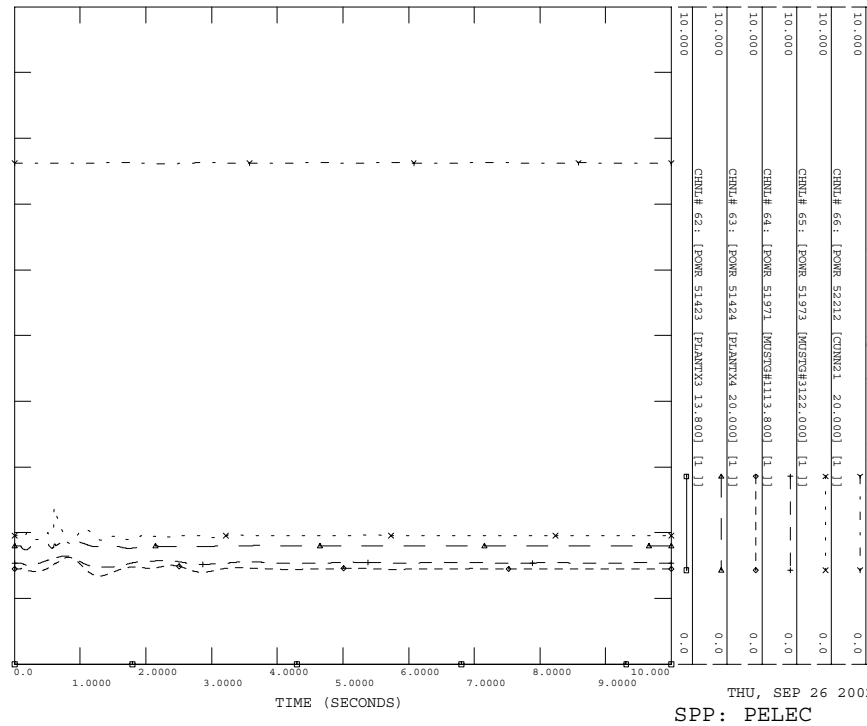
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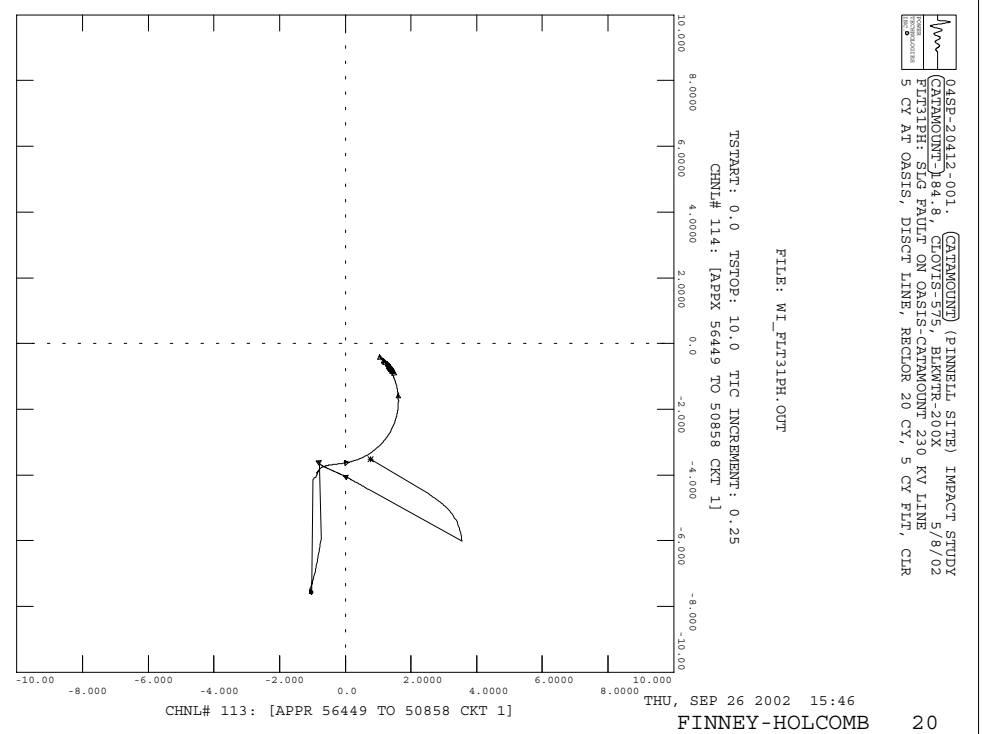
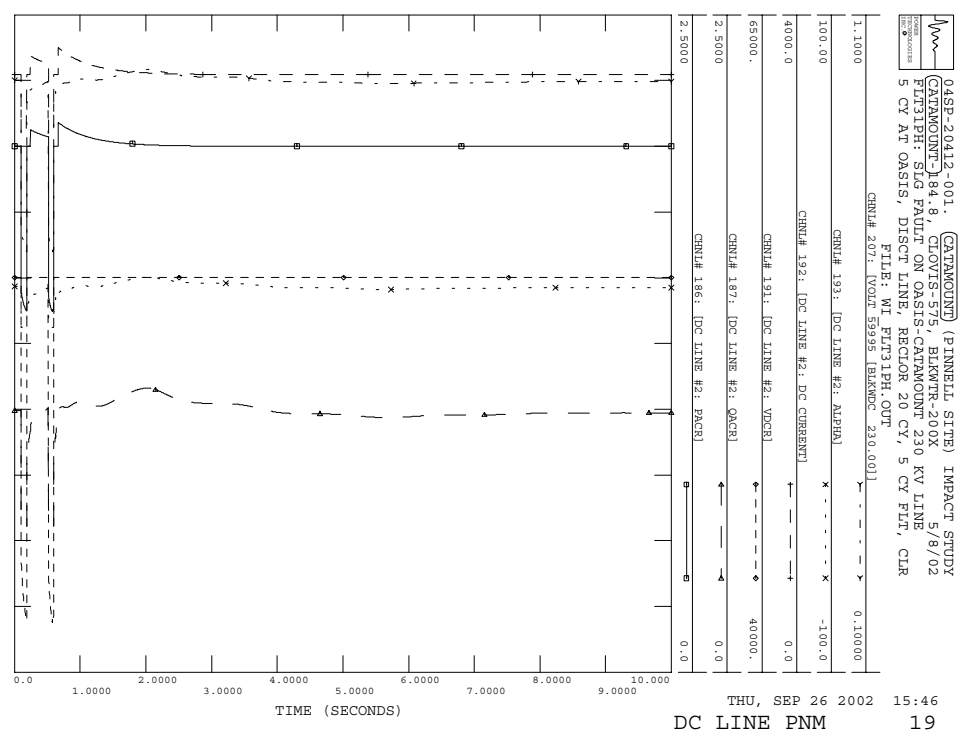
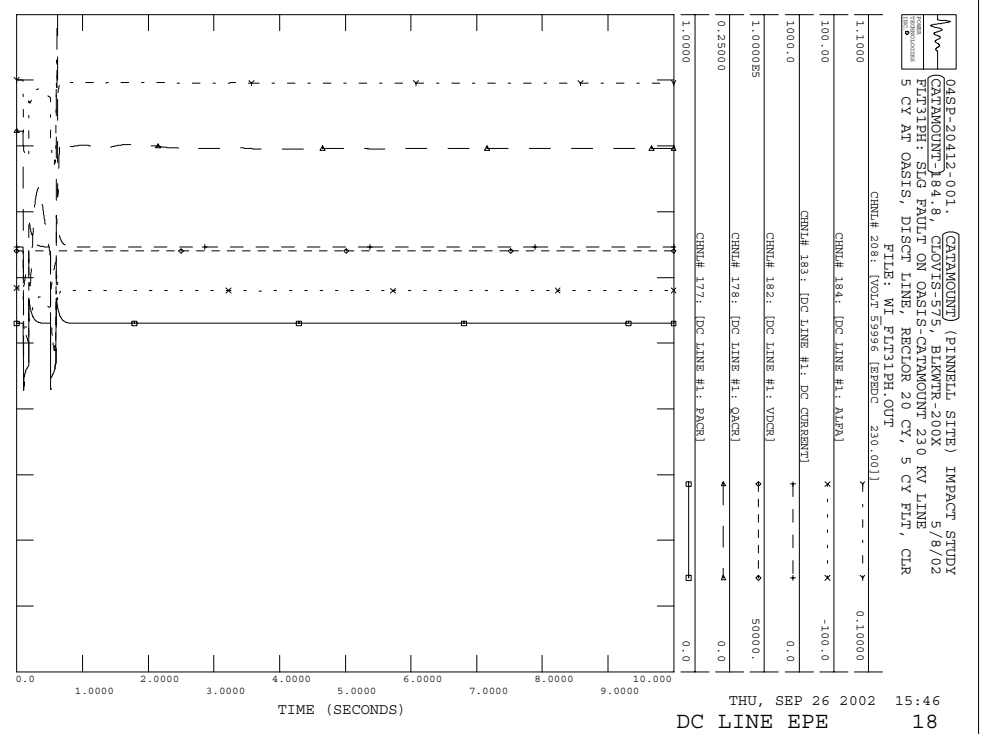
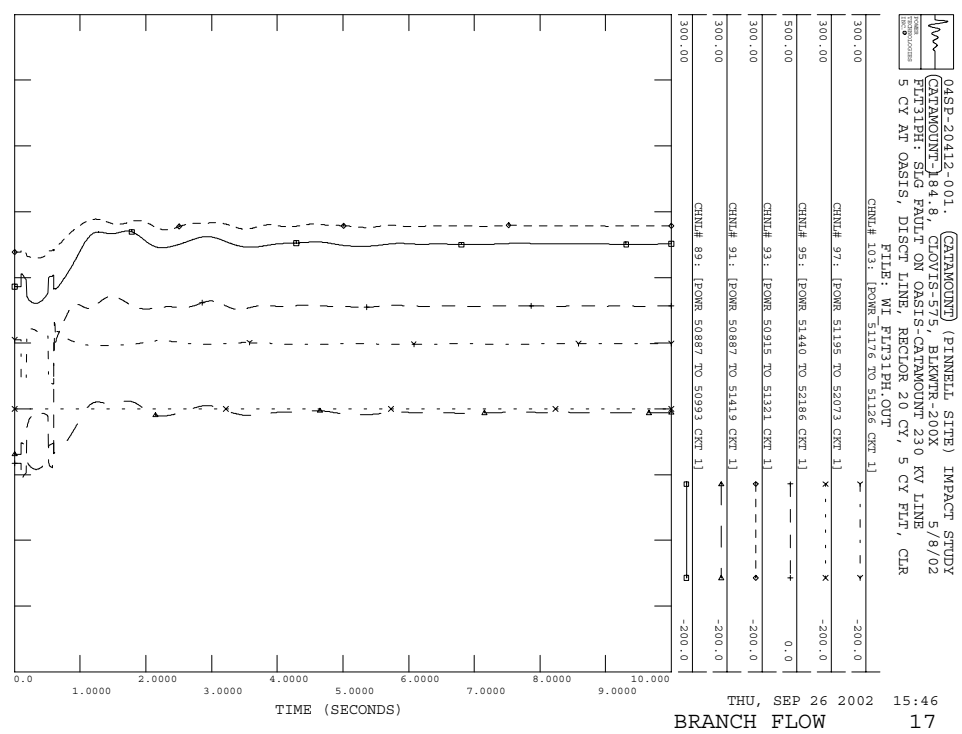


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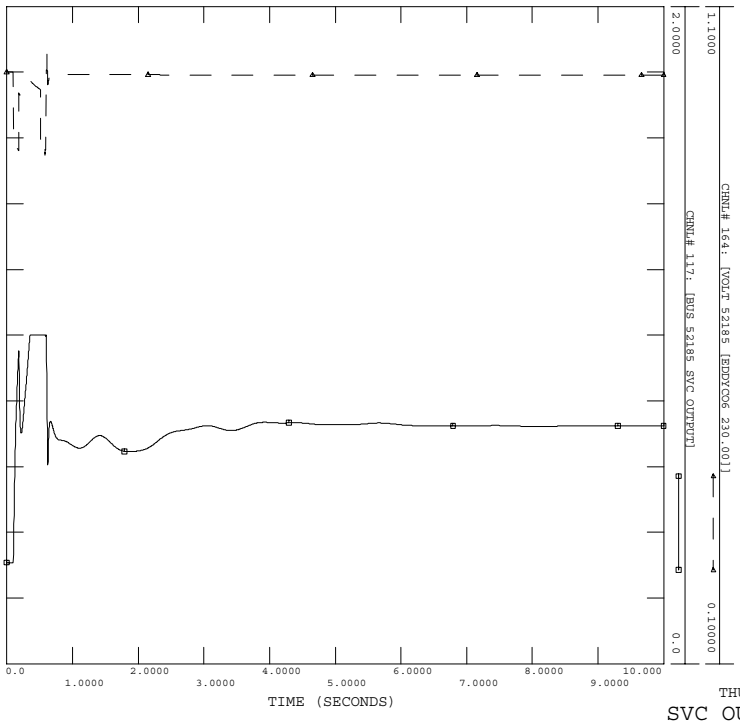


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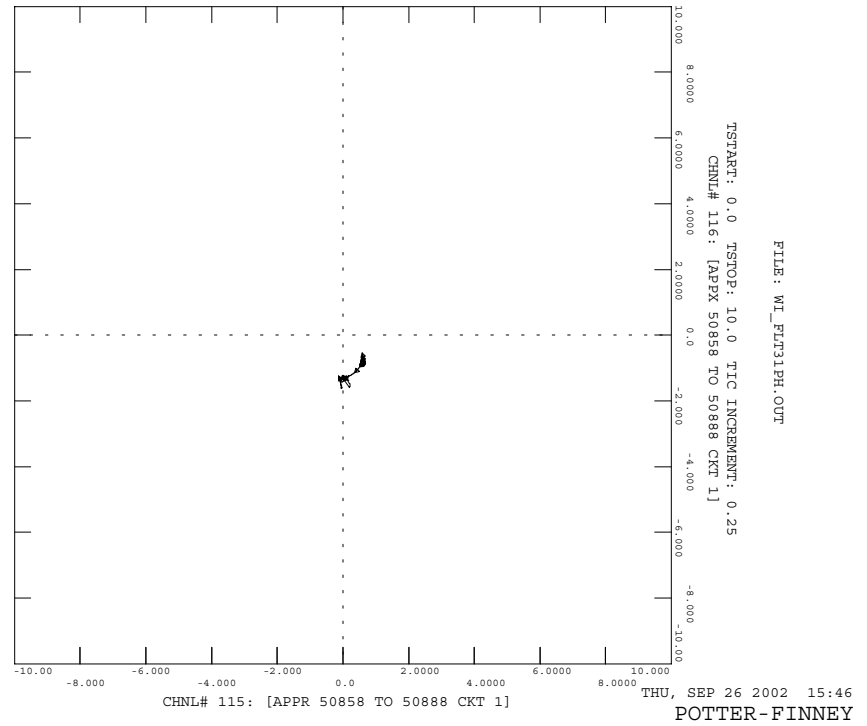


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 FLT31PH: SLG PAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
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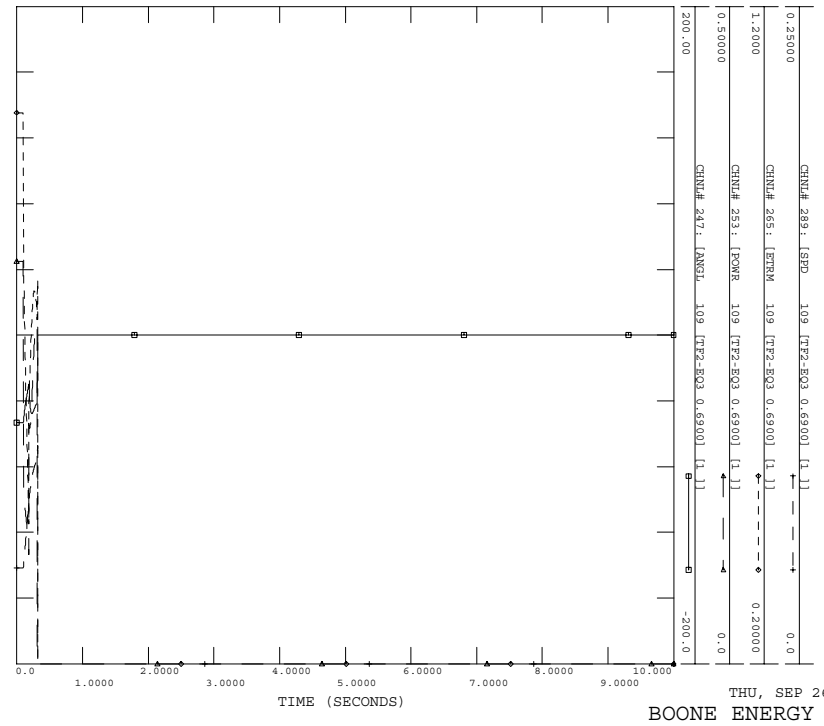
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 5 CY AT OASIS, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
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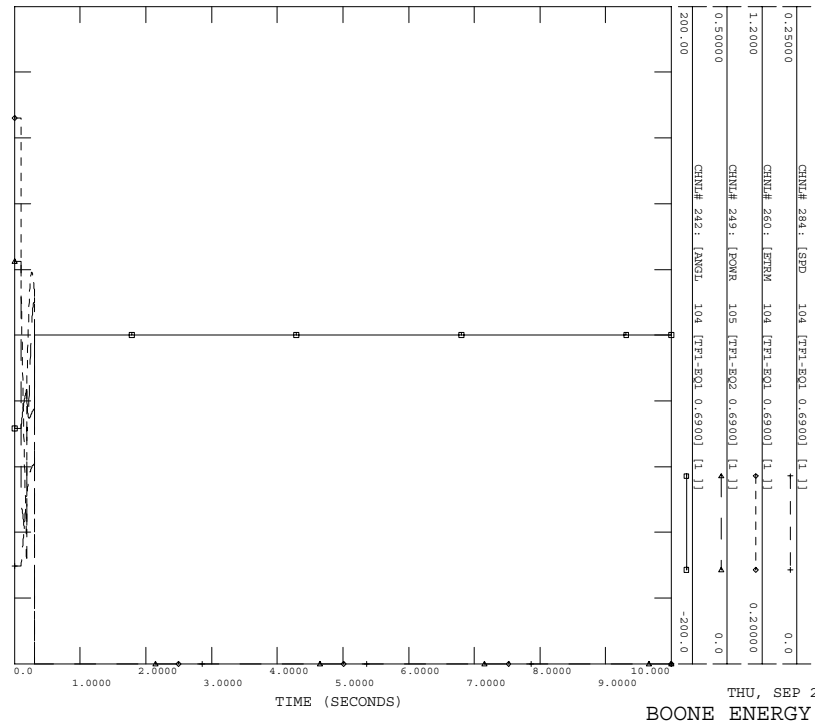
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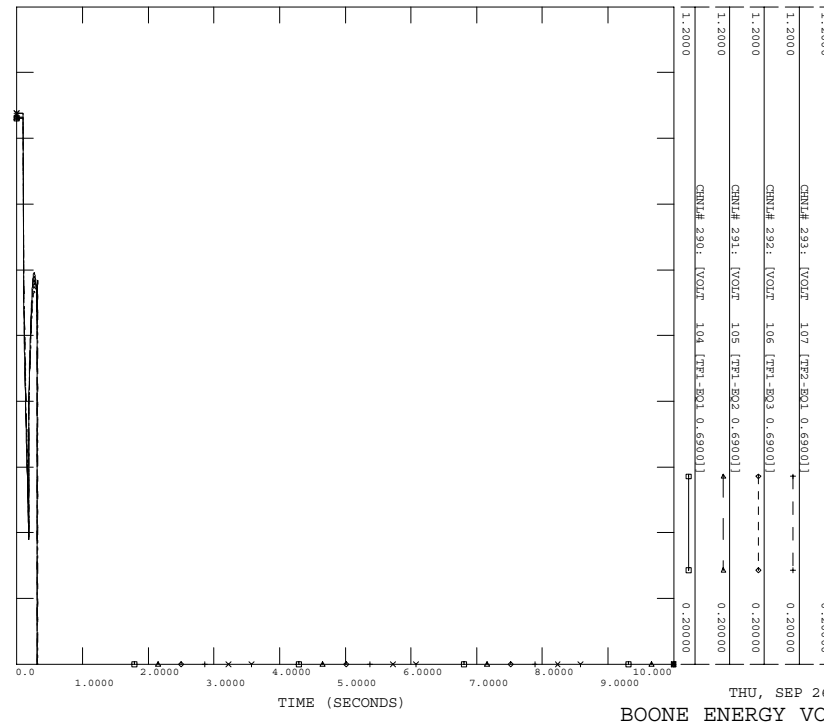
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 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT43PH.OUT



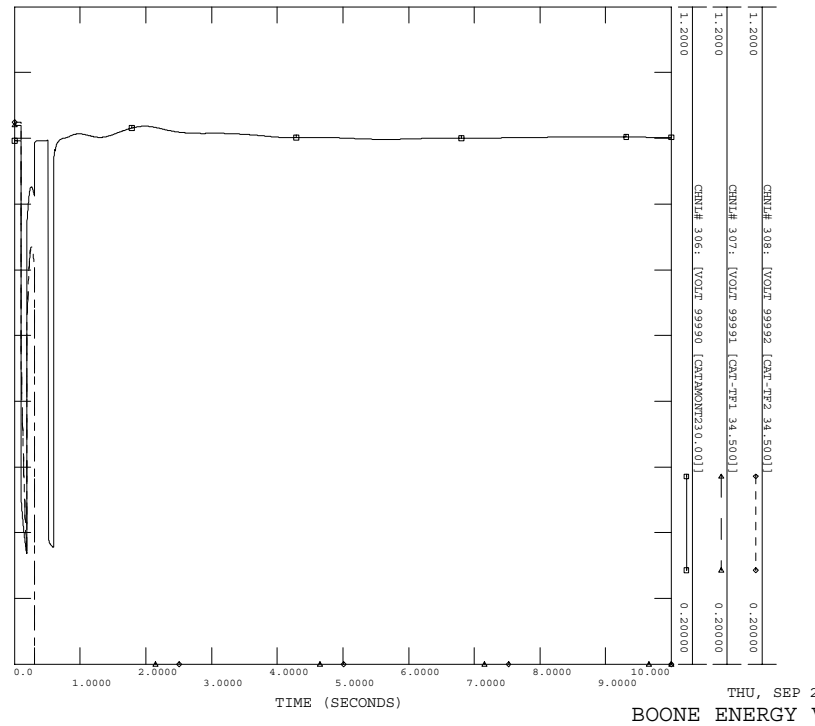
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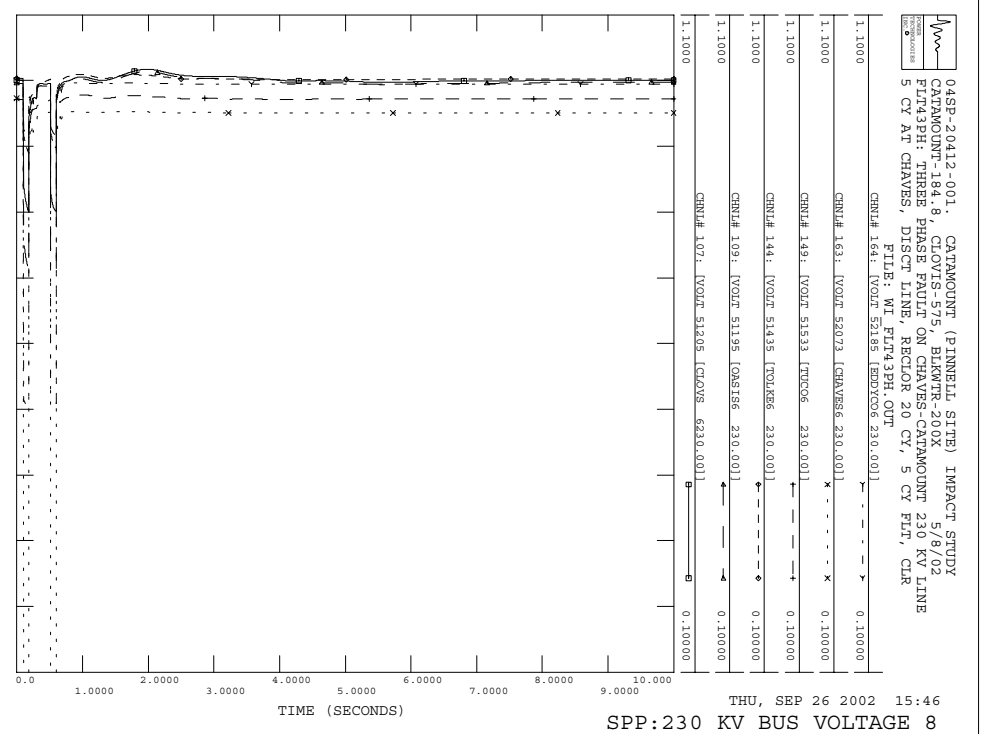
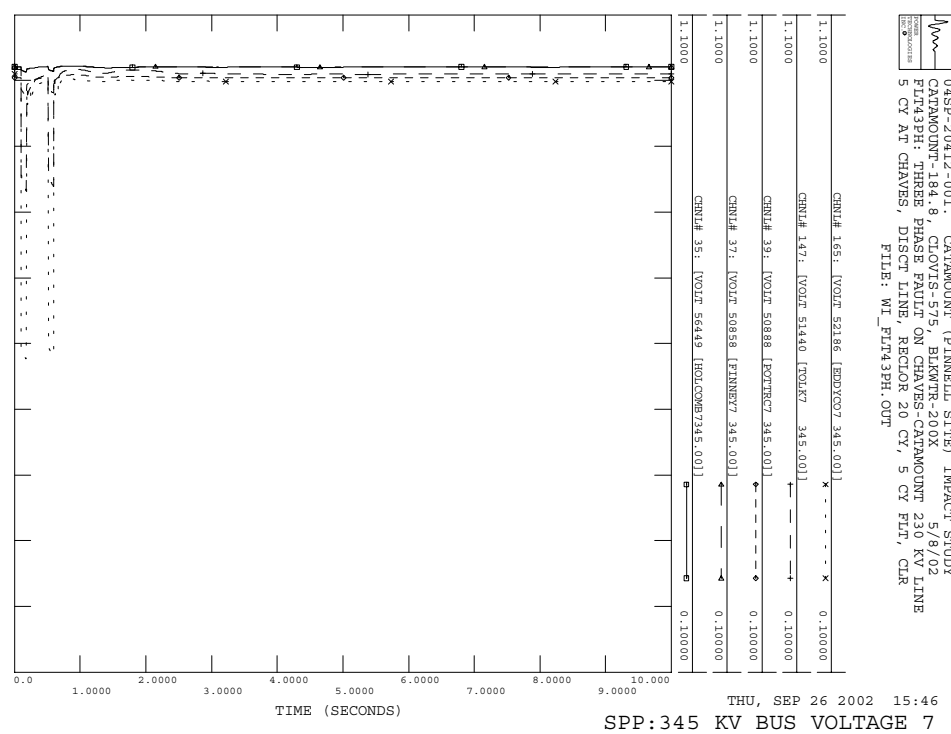
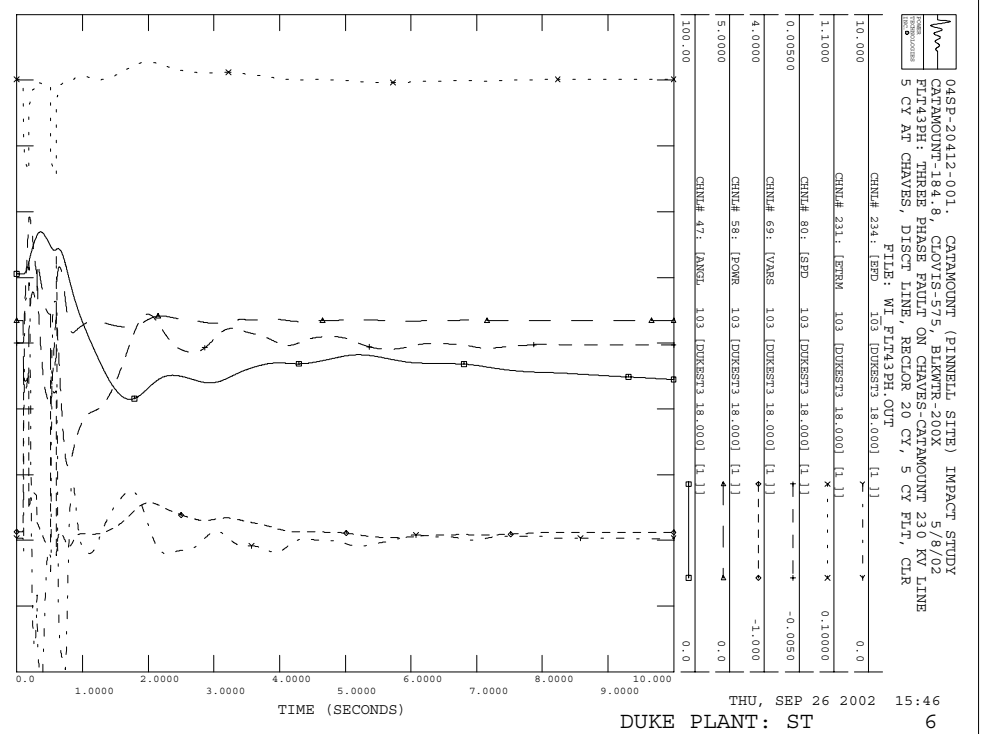
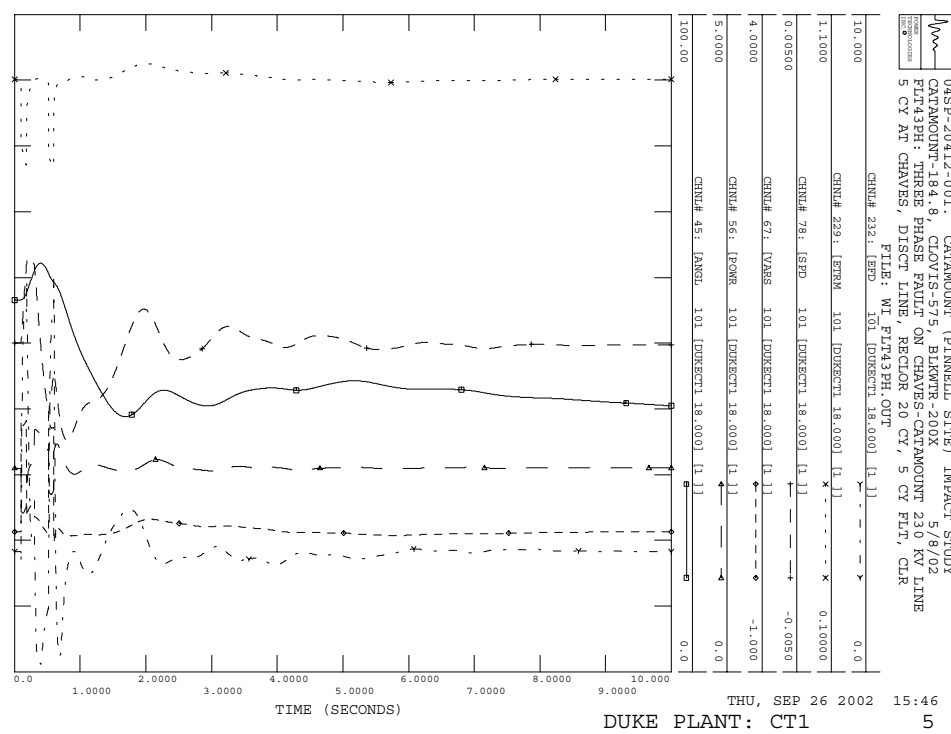


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 (CATAMOUNT) 84.8, CLOVIS-575, BAKWR-200X 5/8/02
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 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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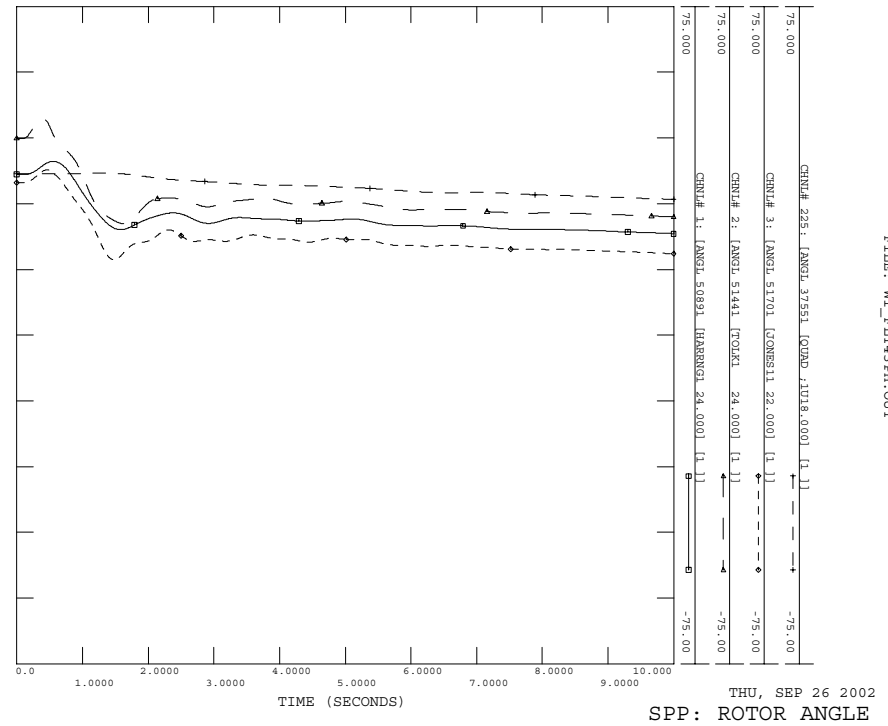


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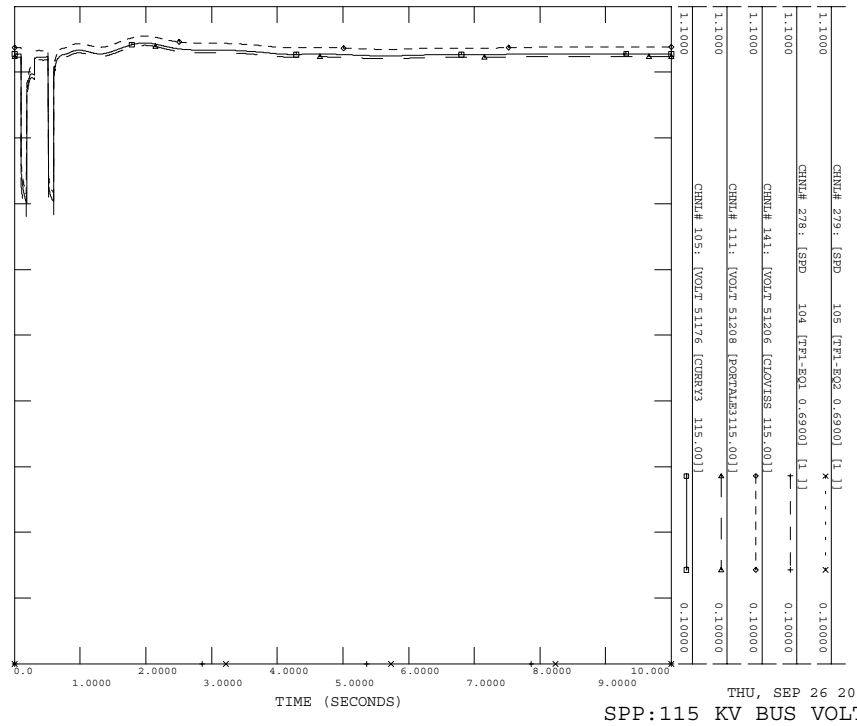




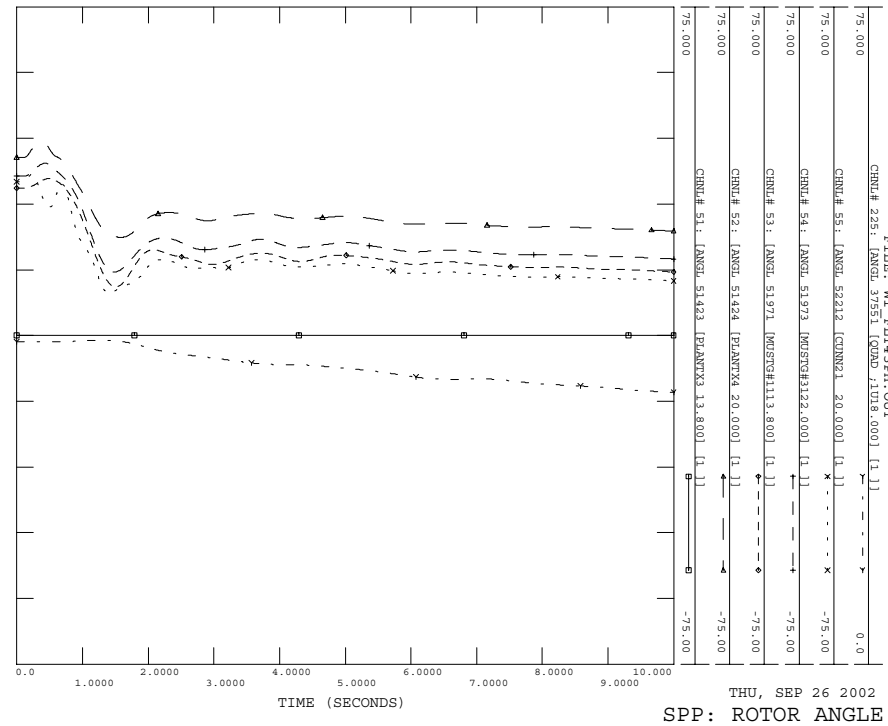
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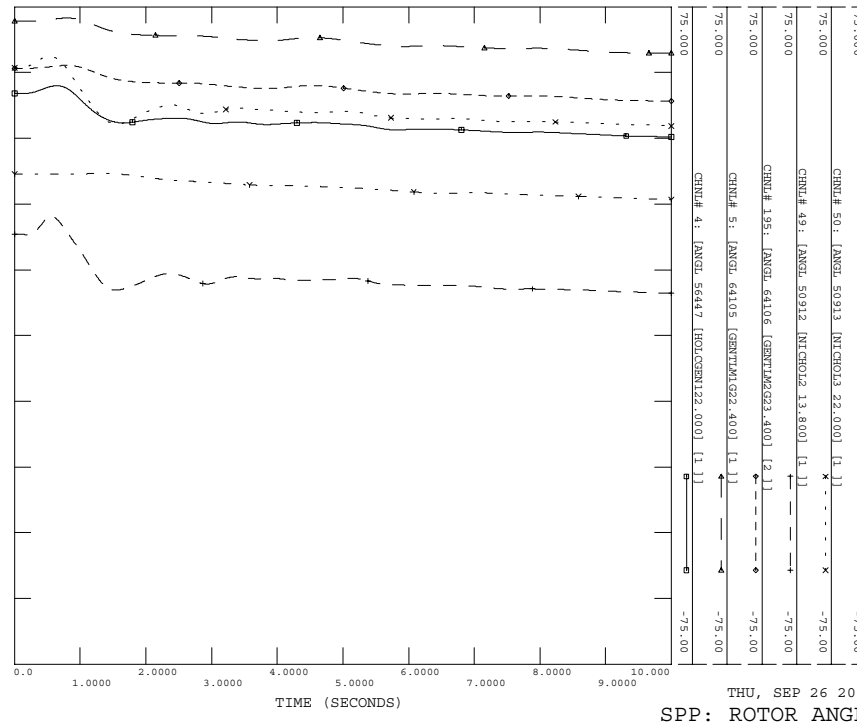
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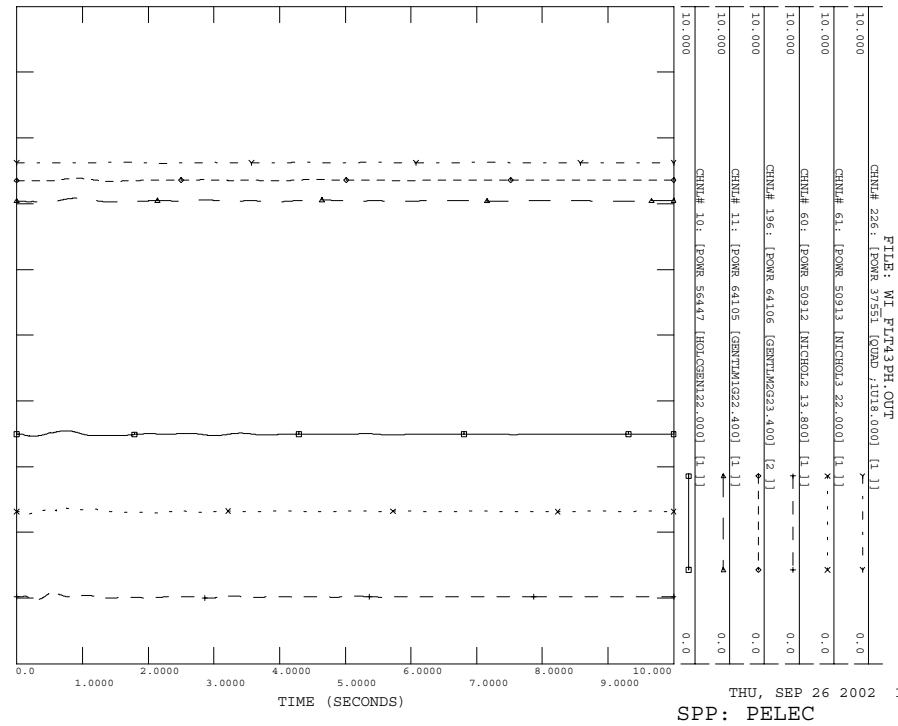
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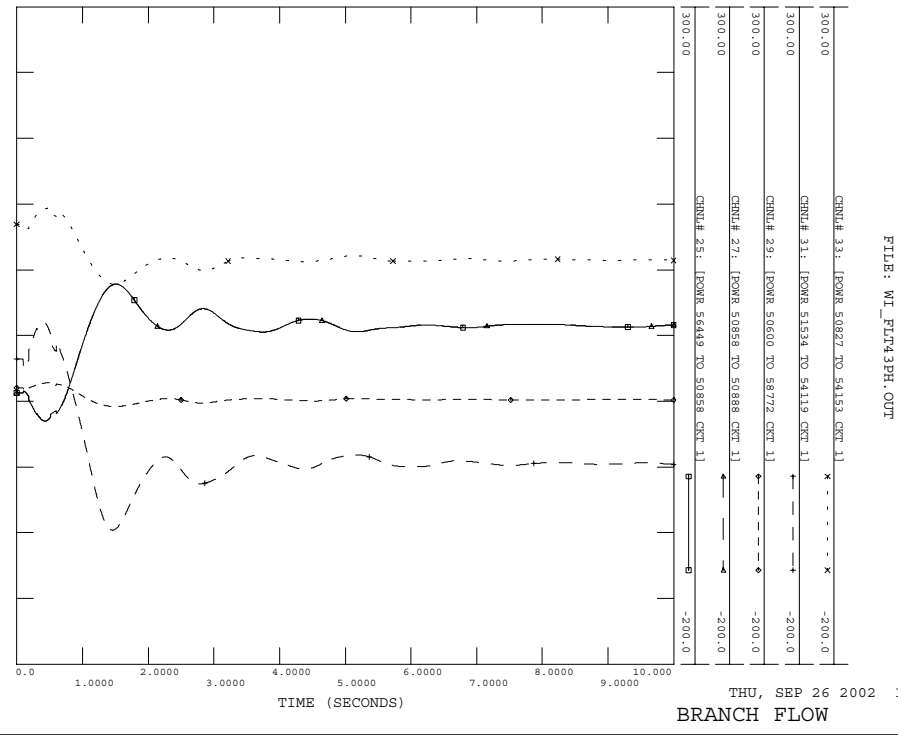
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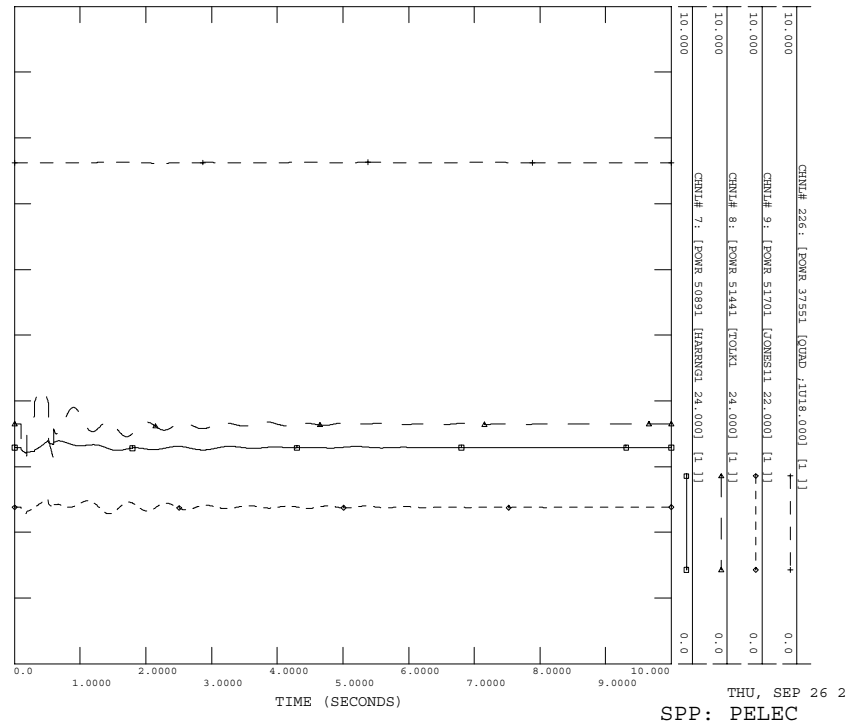
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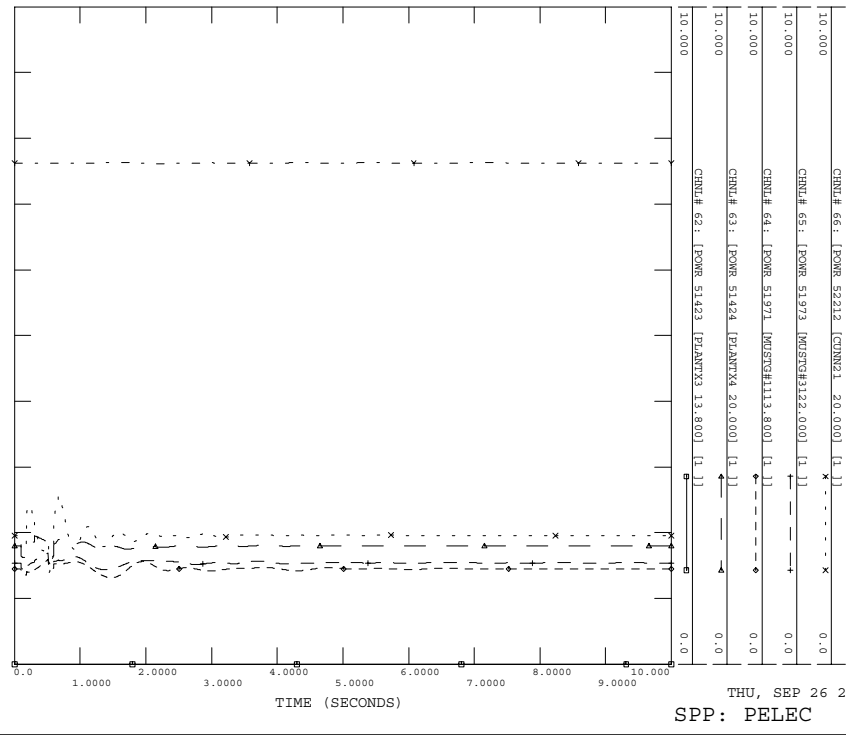
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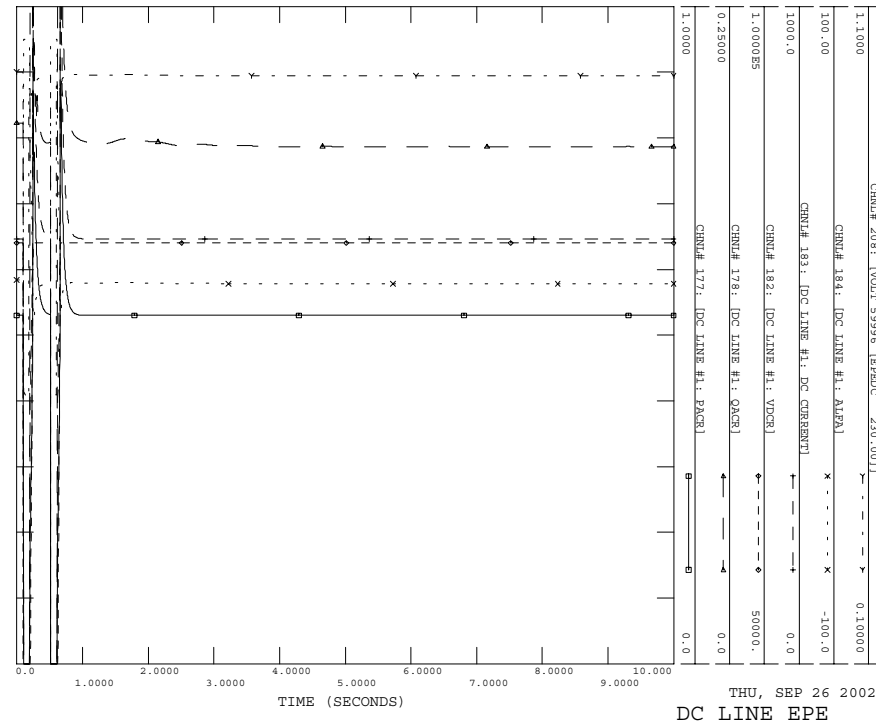
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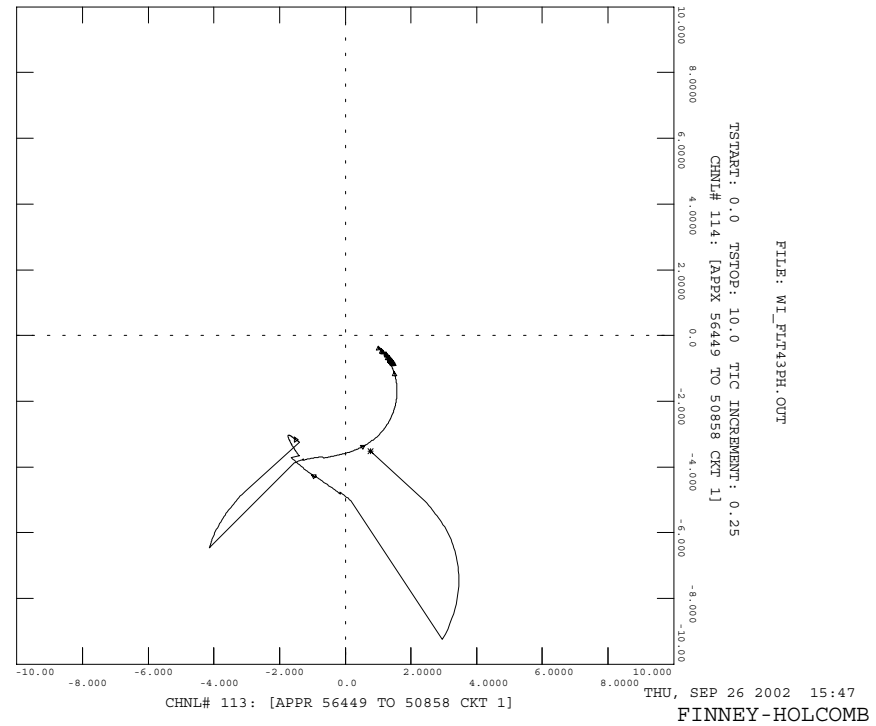
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 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
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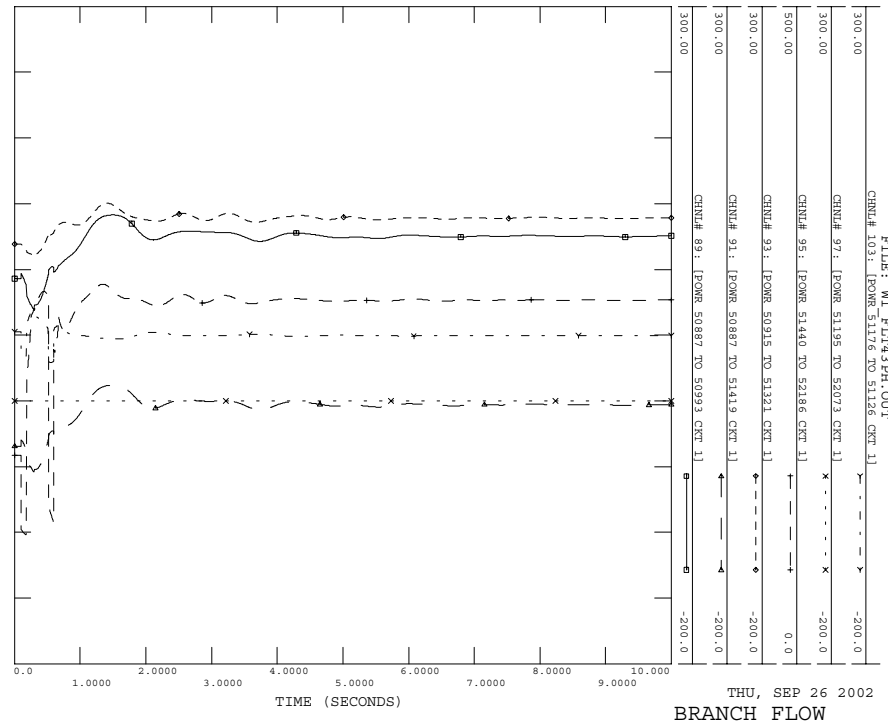
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 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
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 CHNL# 208: [VOLT 59996 [EPRDC 230.00]]



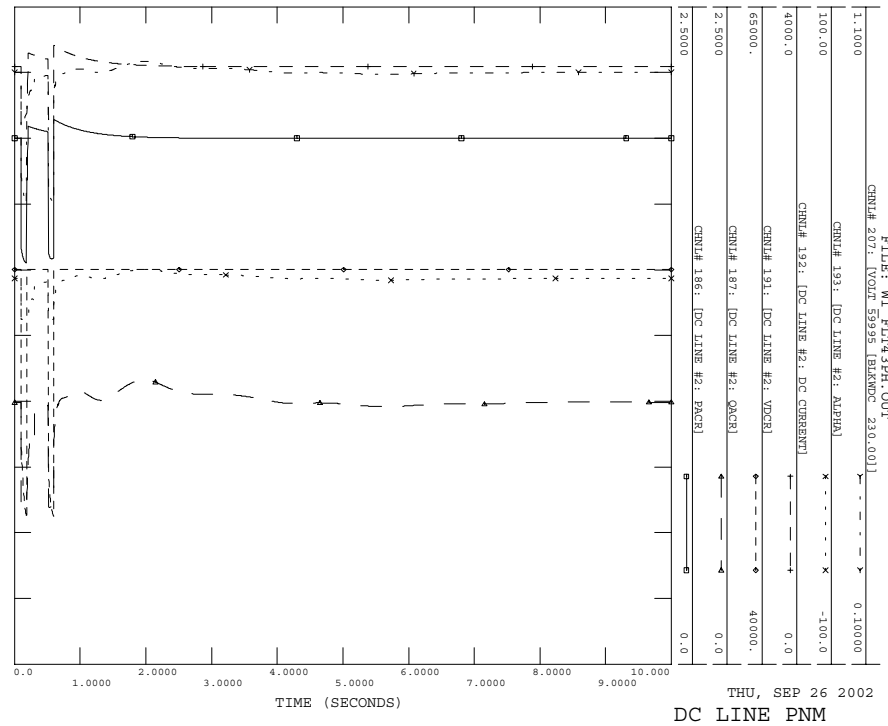
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 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATAMOUNT 230 KV LINE
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 CHNL# 114: [APPX 56449 TO 50858 CKT 1]



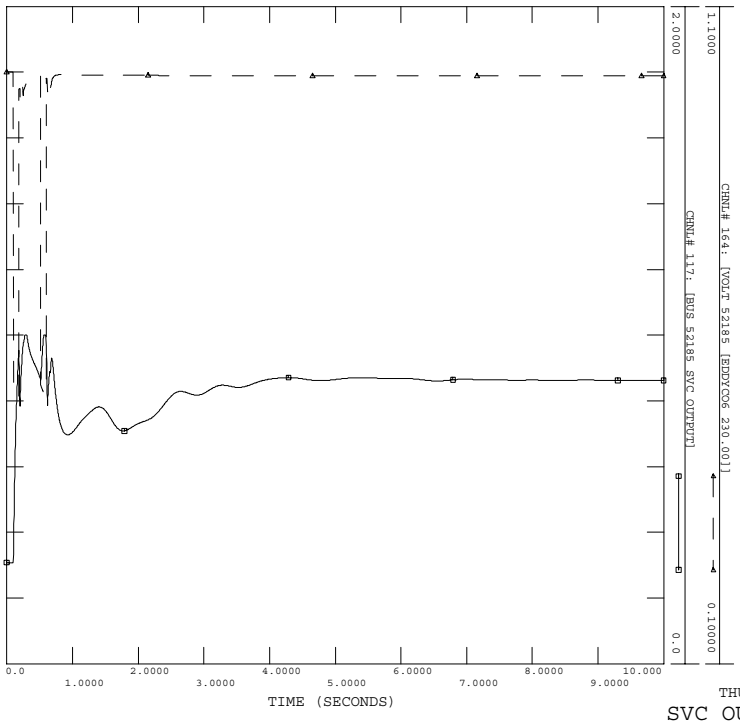
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 FLT43PH: THREE PHASE FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CT, 5 CY FLT, CLR
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 CHNL# 93: [PWR 5128 TO 5128 CKT 1]



04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
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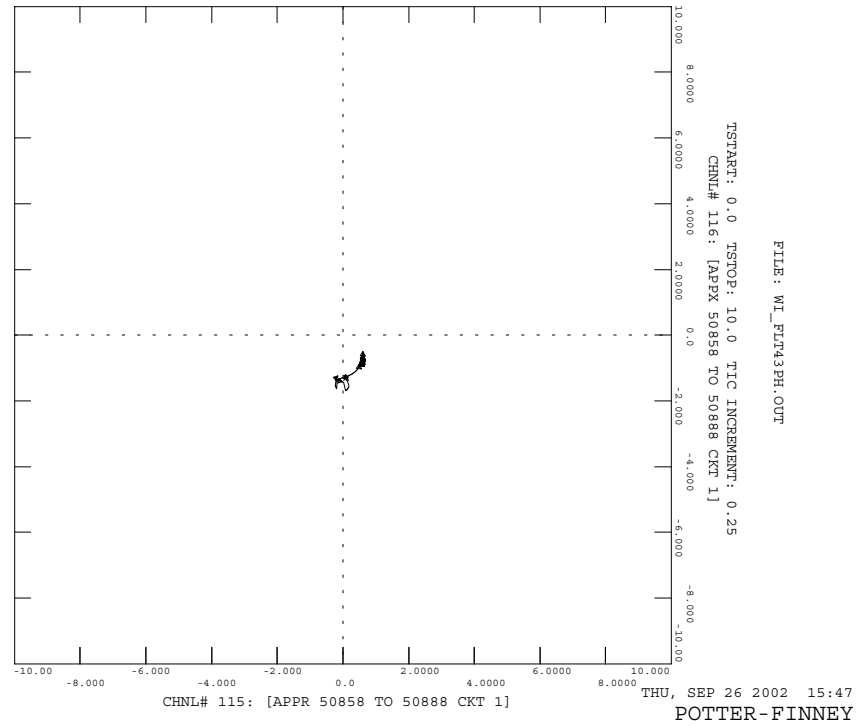


04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184, 8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATAMOUNT 230 KV LINE
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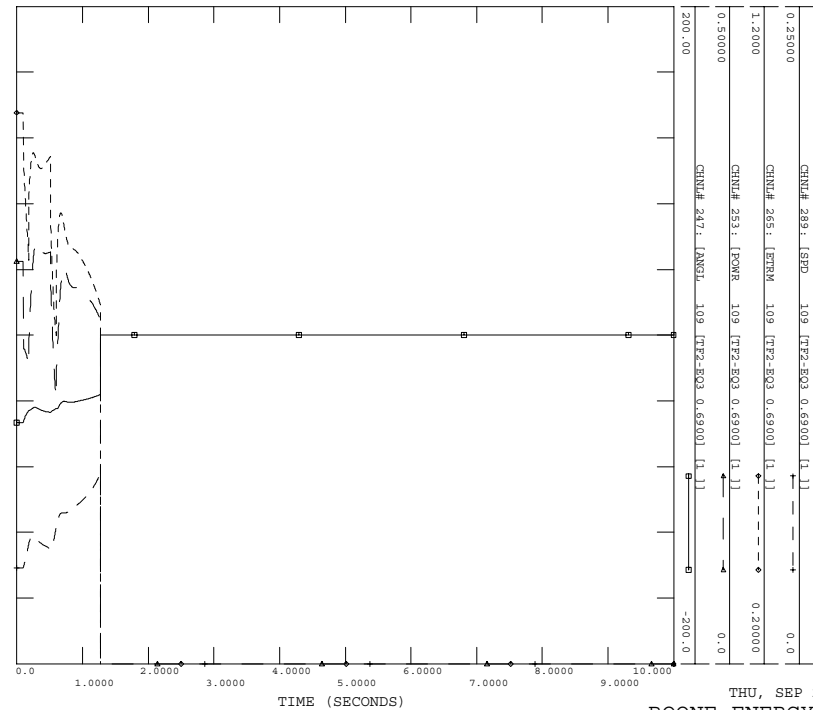
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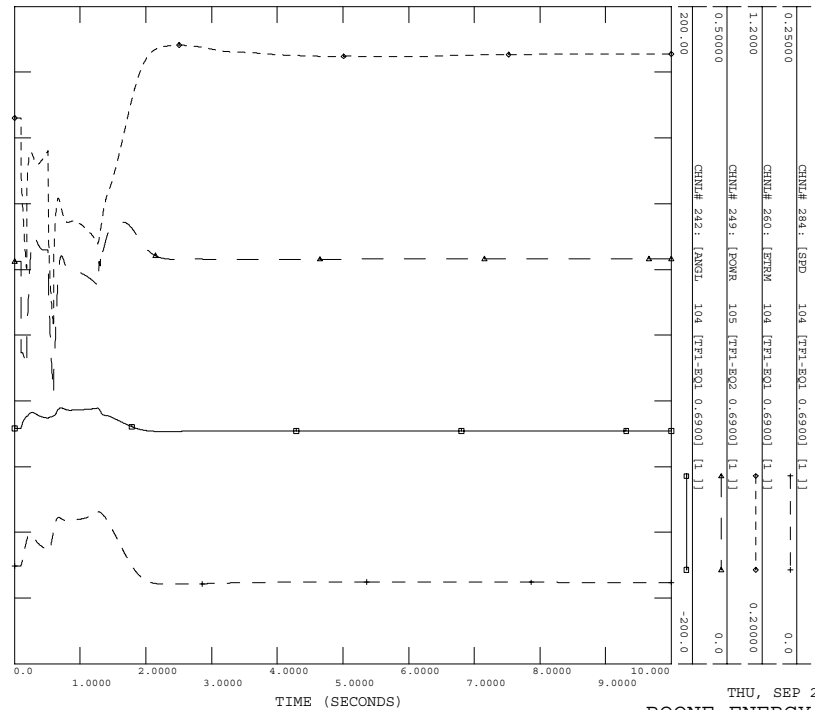
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POTTER-FINNEY

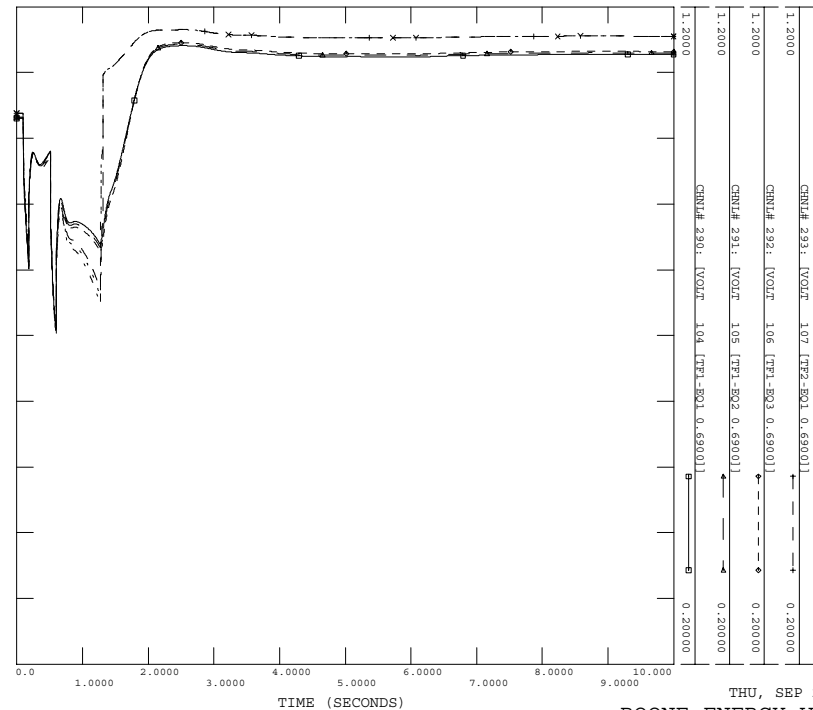
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWTR-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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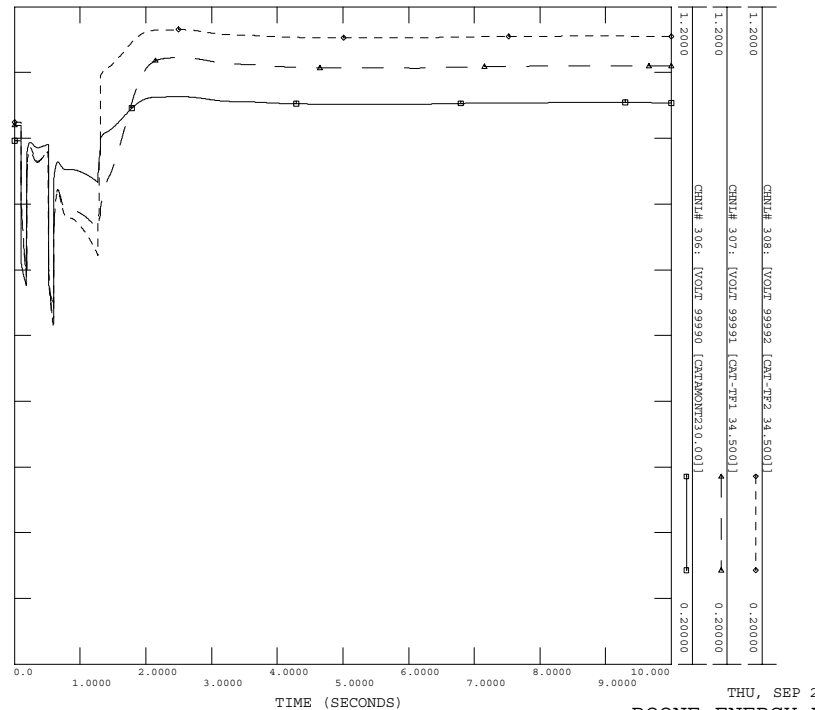
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
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 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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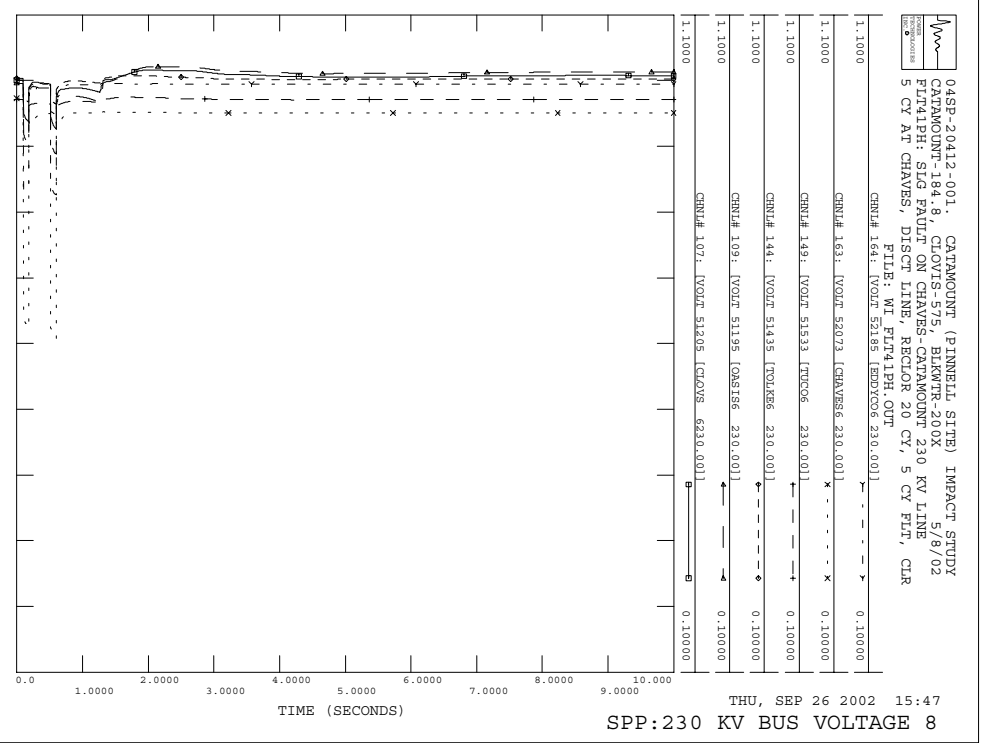
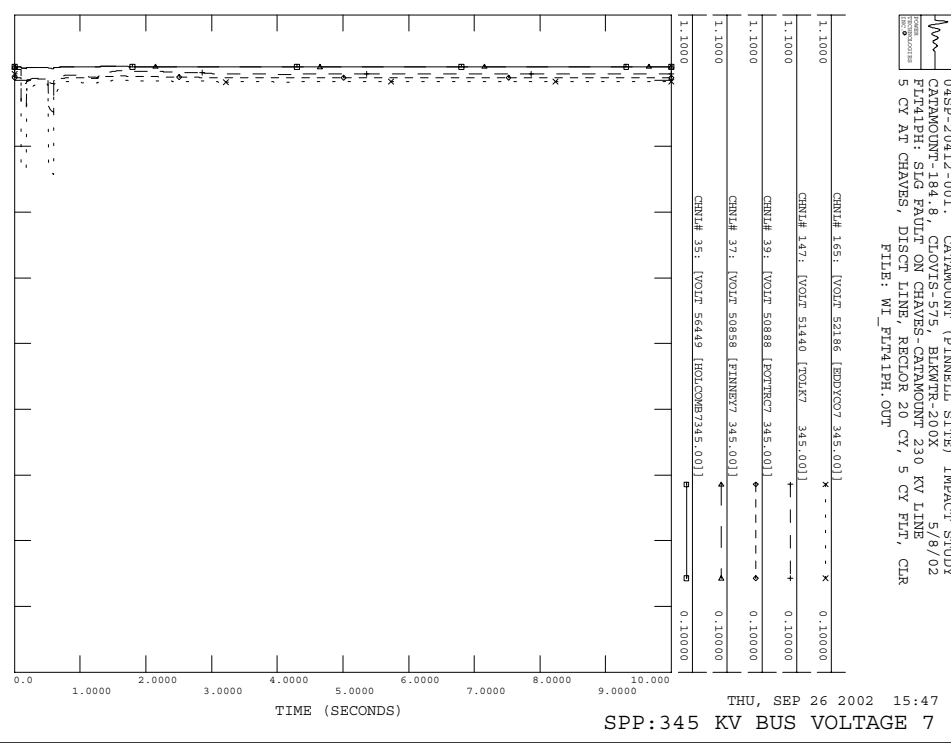
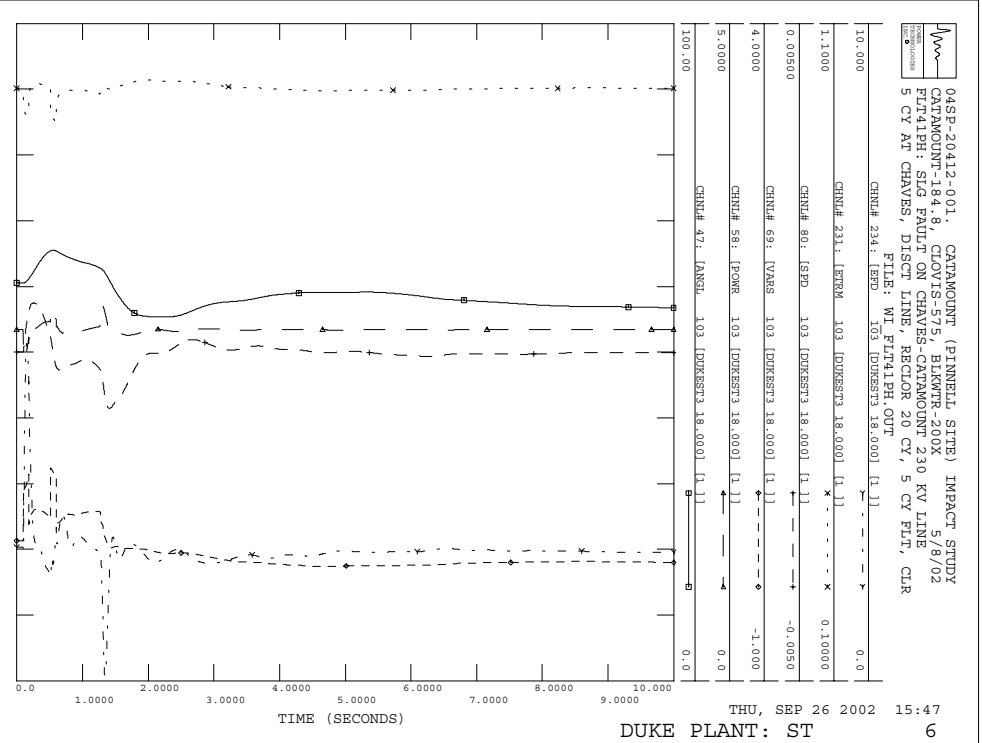
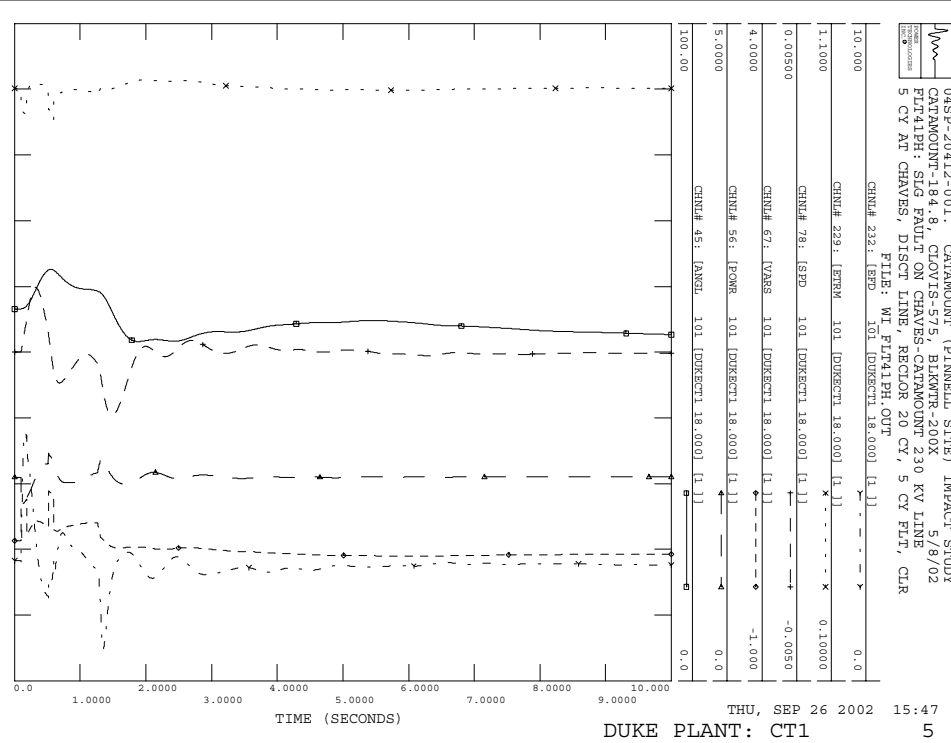


04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWTR-200X 5/8/02
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 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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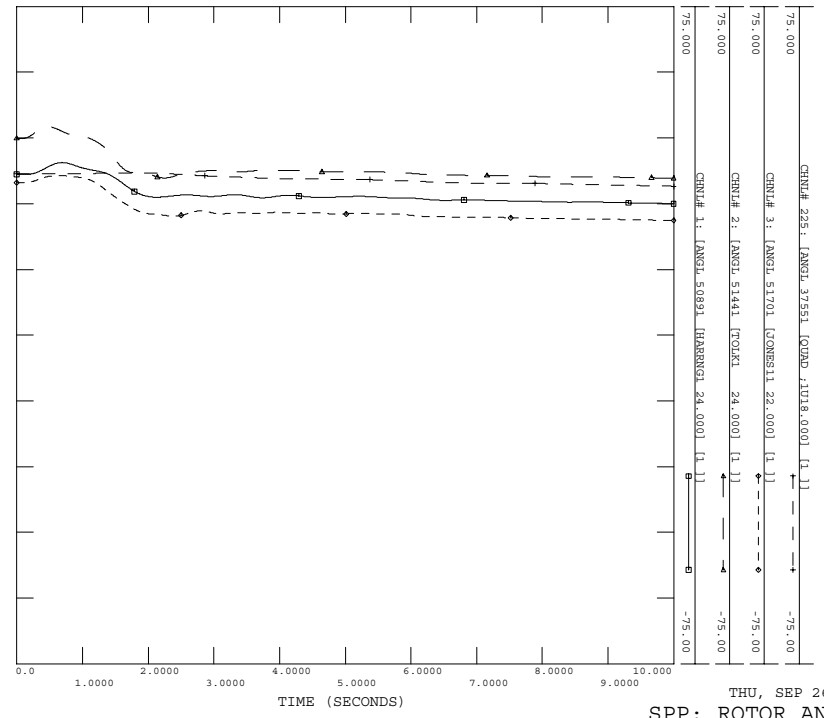


04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWTR-200X 5/8/02
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 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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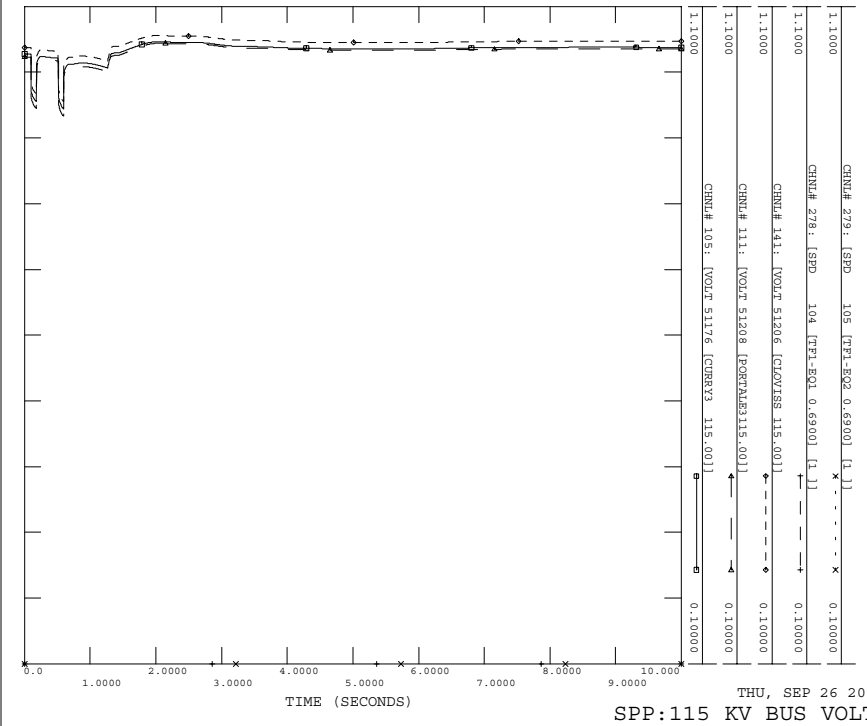




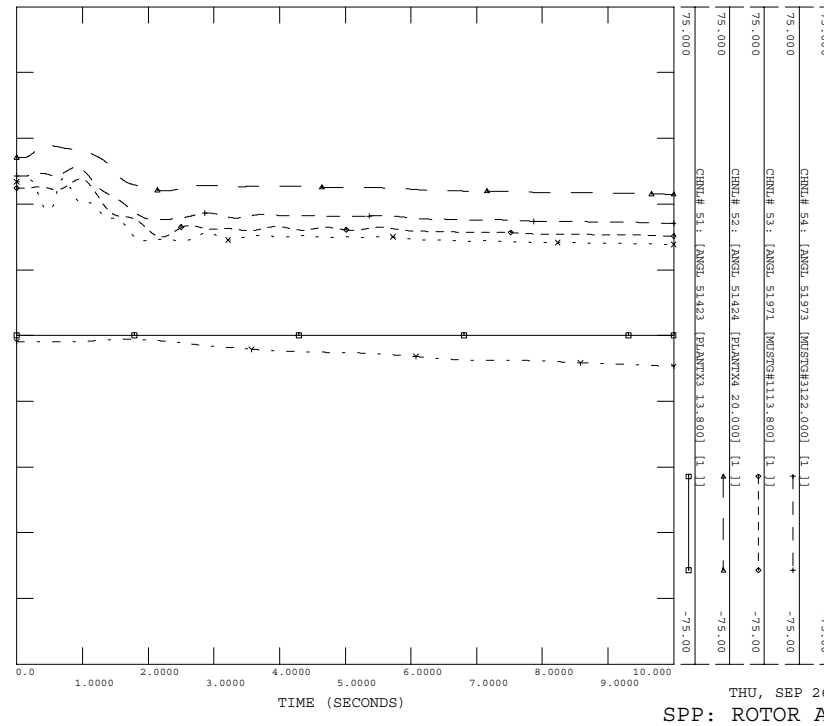
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 CATAMOUNT-184.8, CLOVIS-575, BAKWTR-200X 5/8/02
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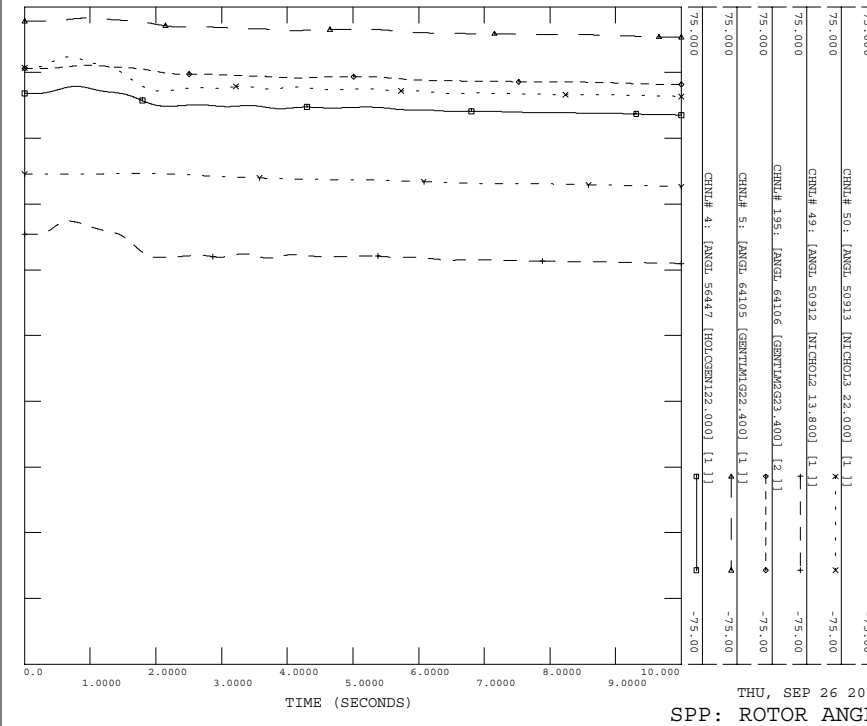
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 CATAMOUNT-184.8, CLOVIS-575, BAKWTR-200X 5/8/02
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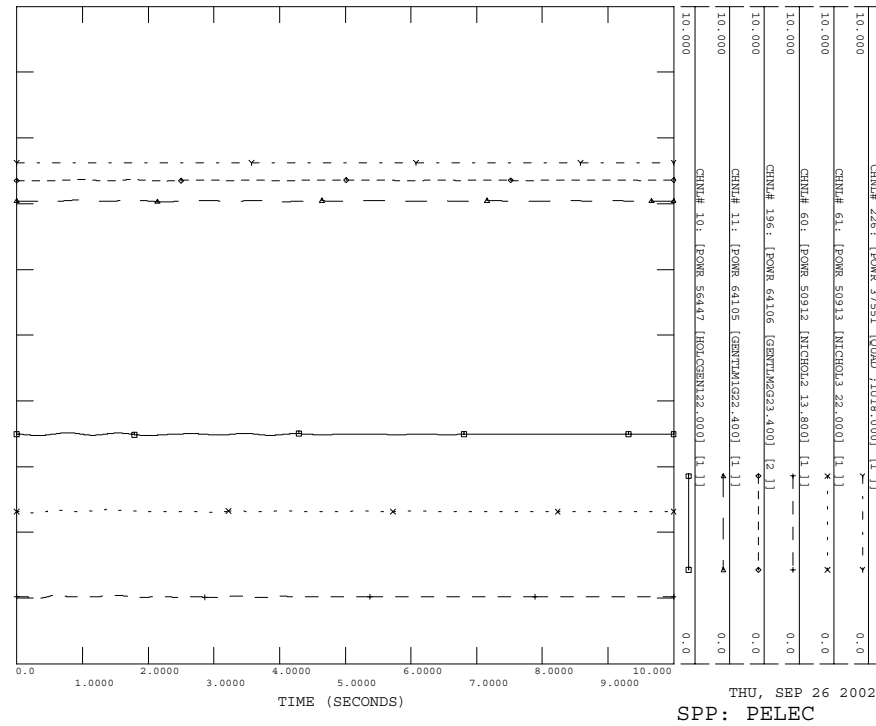
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 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH.OUT



04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWTR-200X 5/8/02
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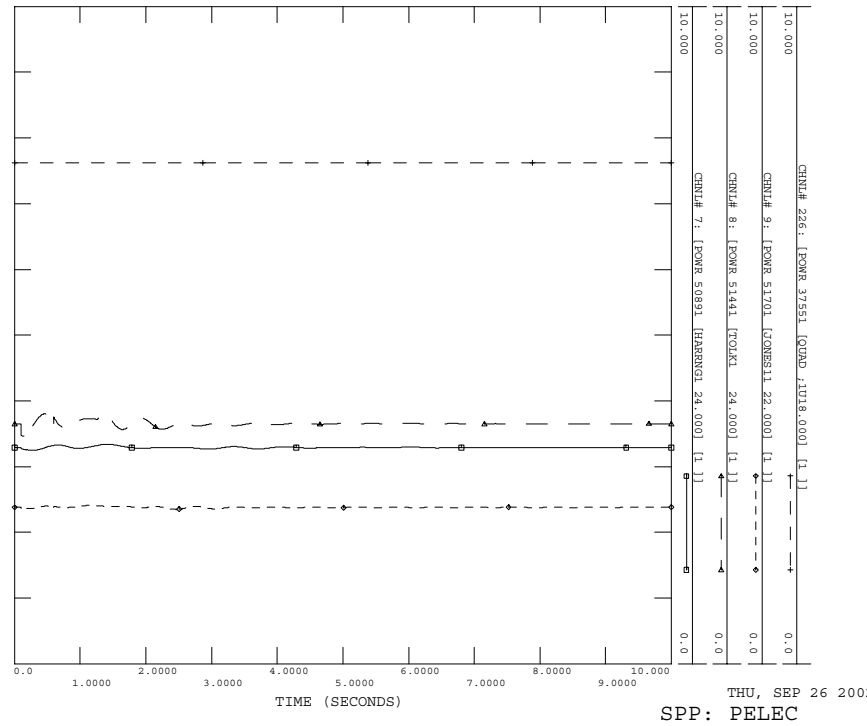


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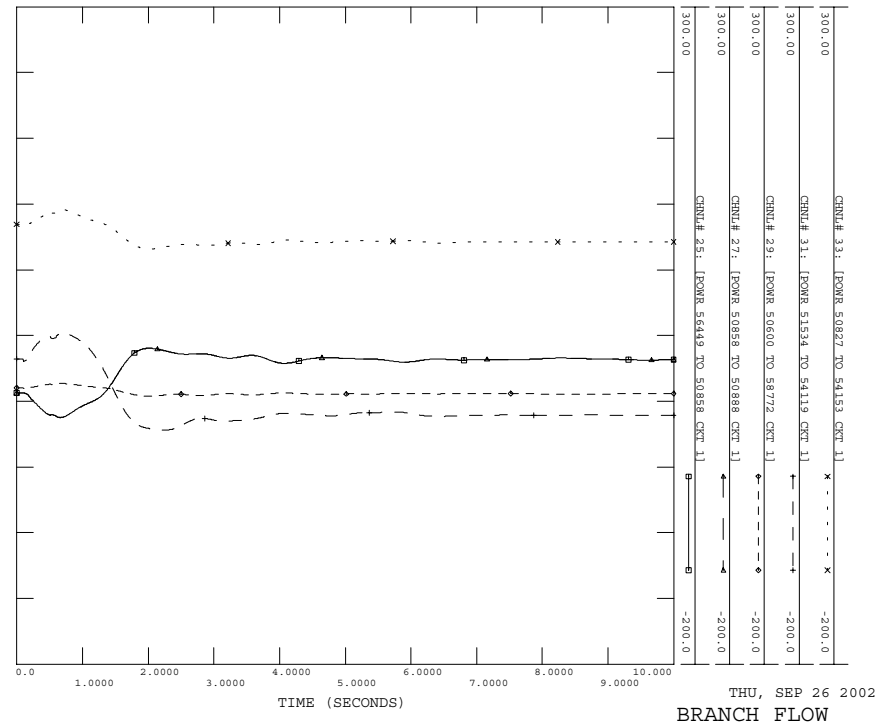
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04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
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 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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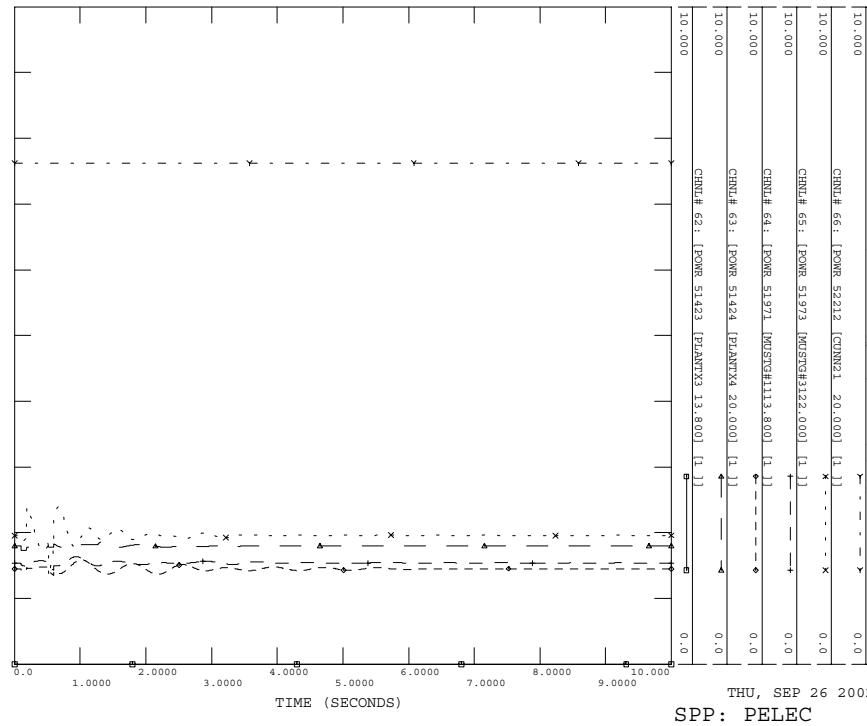
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04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
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 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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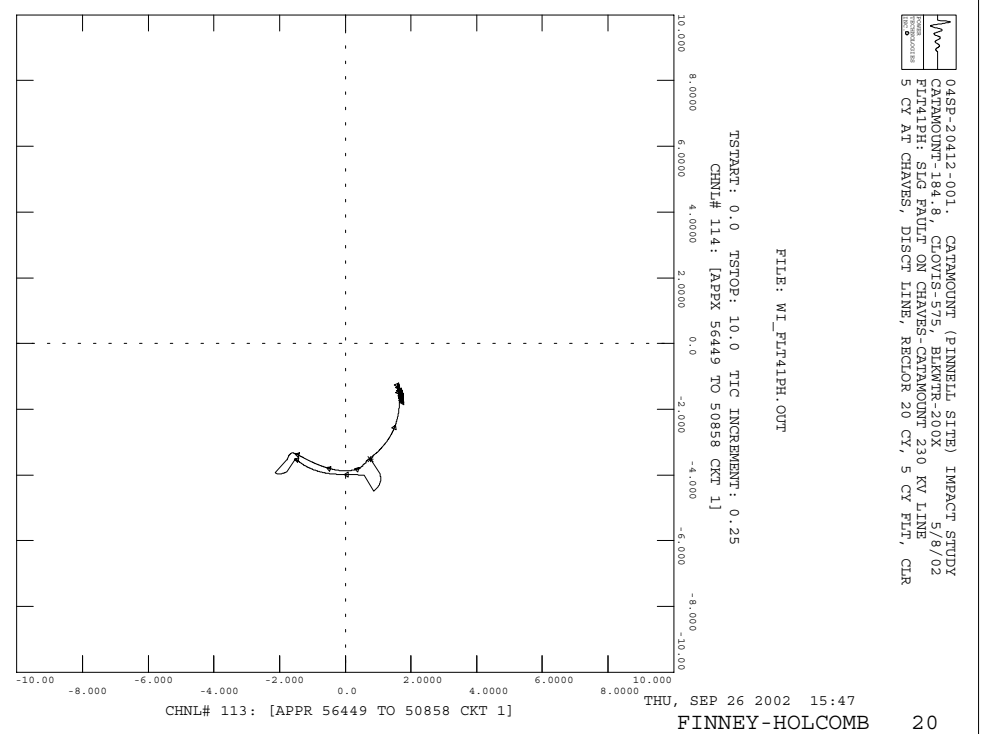
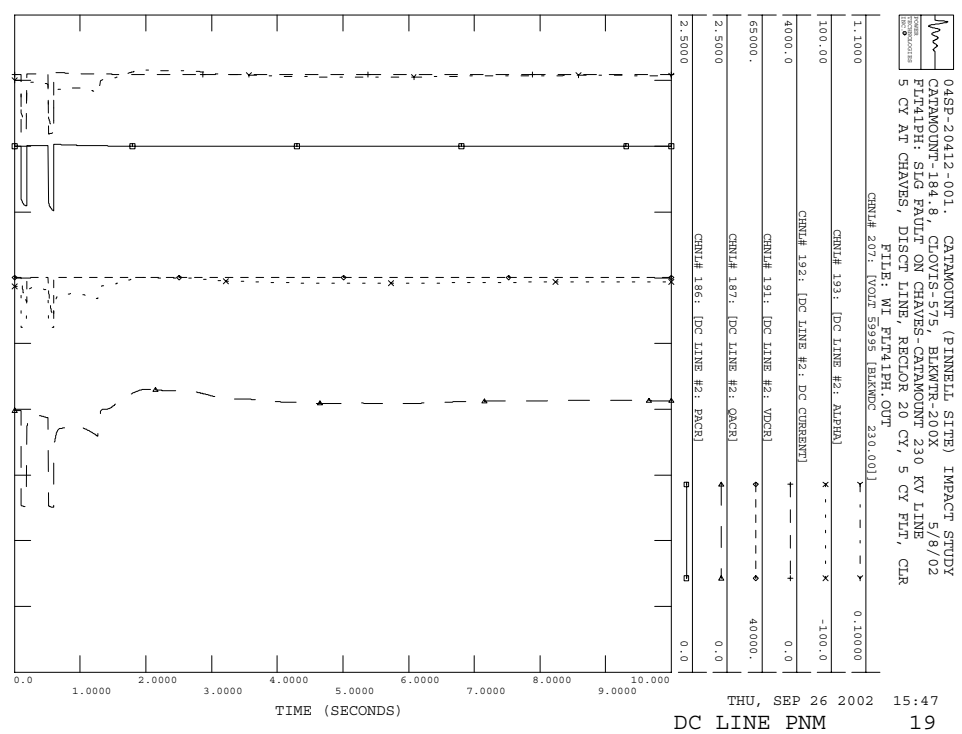
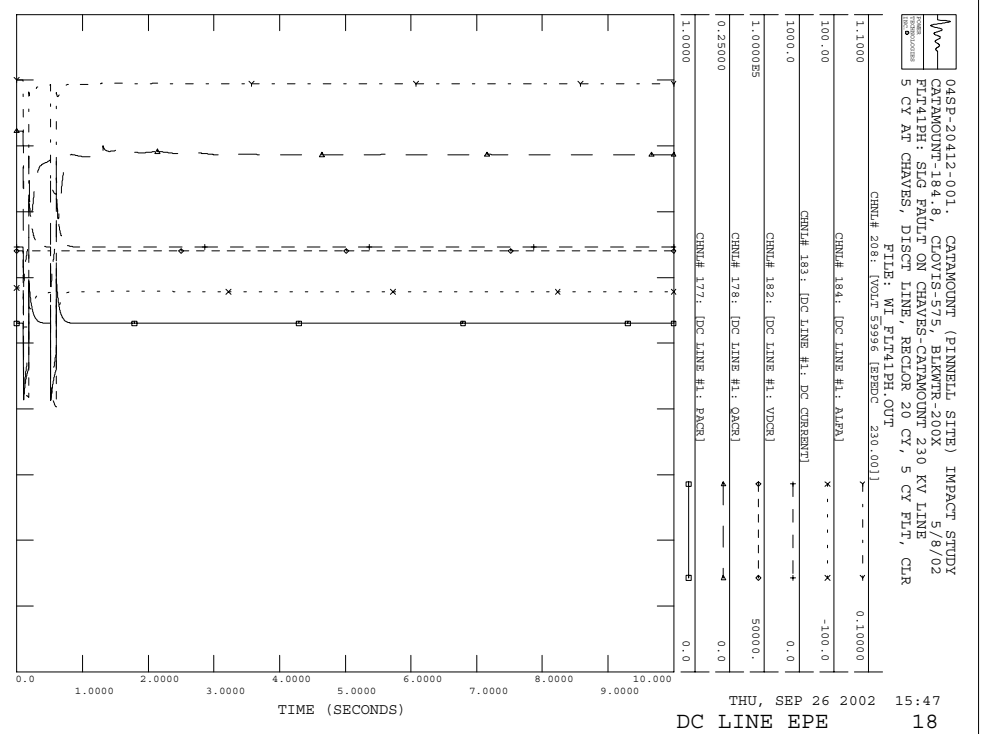
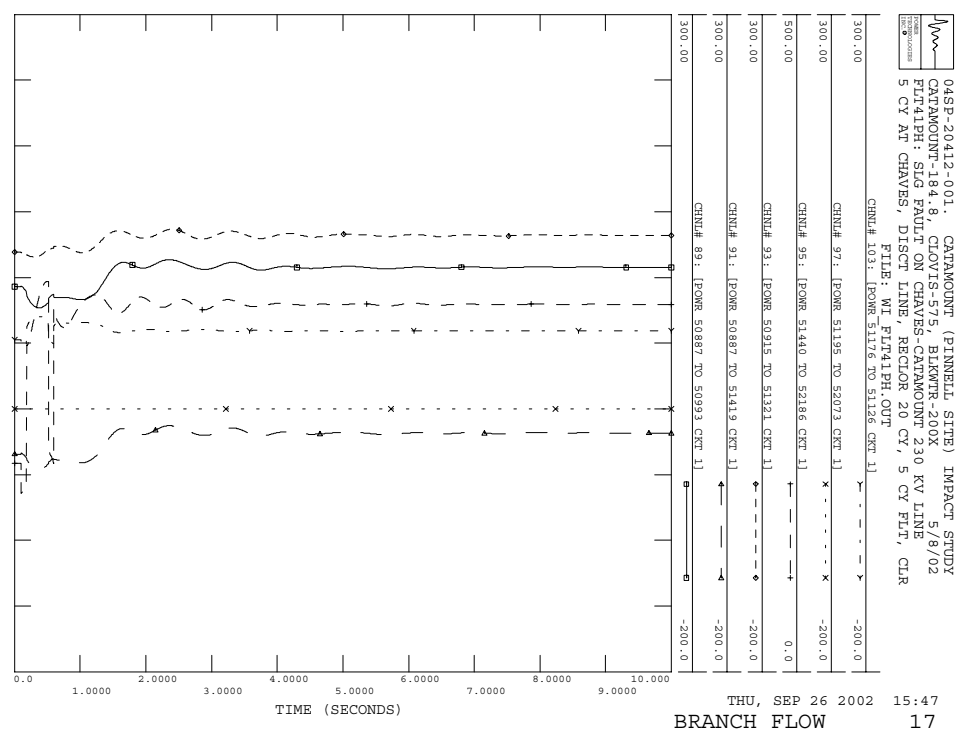


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 BRANCH FLOW 16

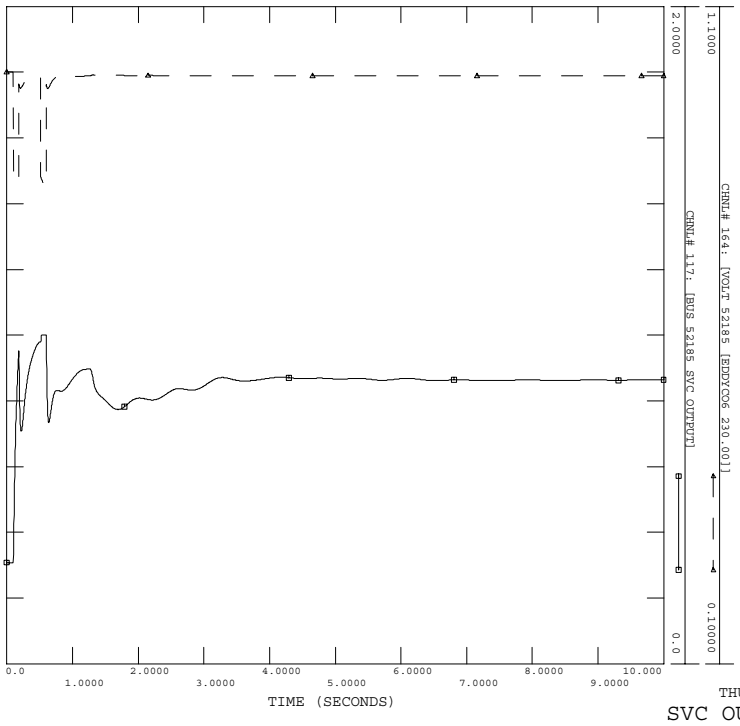
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 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
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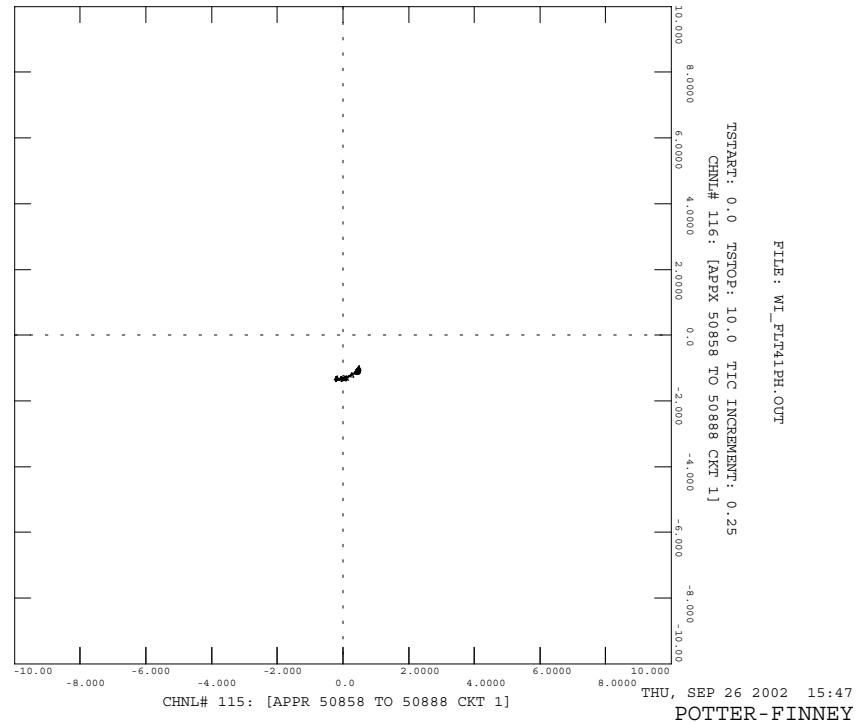


04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
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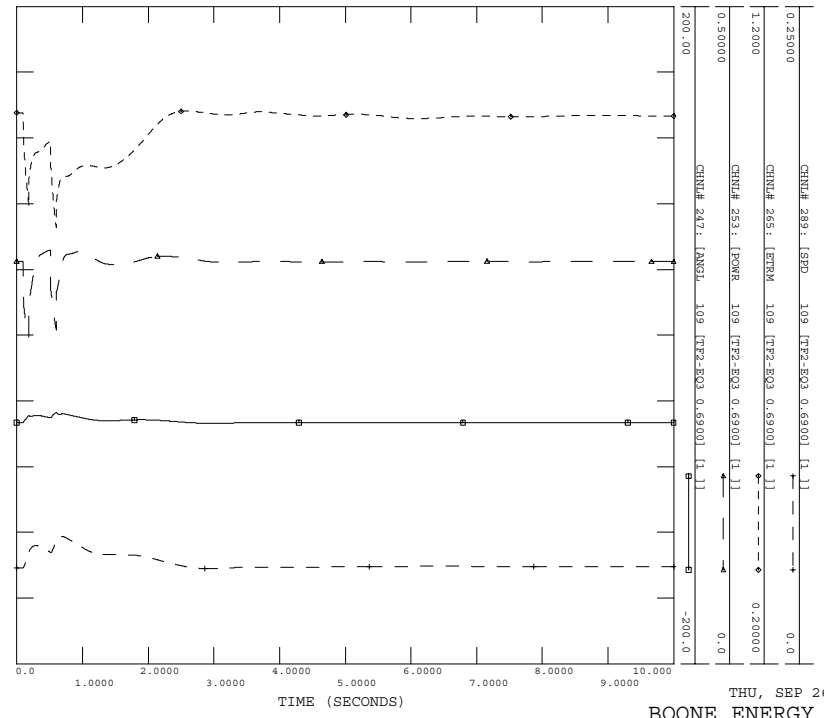
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04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
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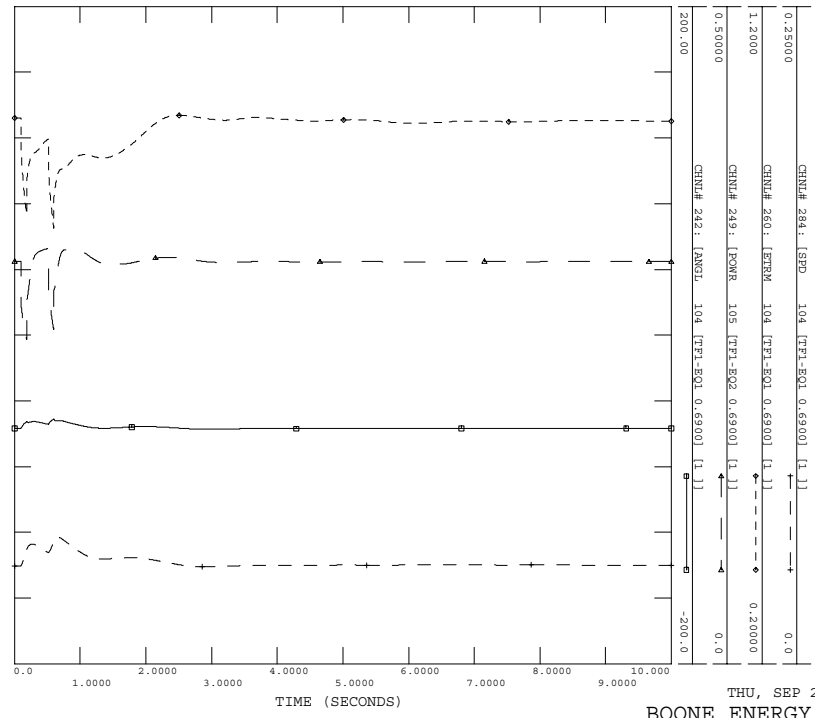
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04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWTR-200X 5/8/02
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT53PH.OUT



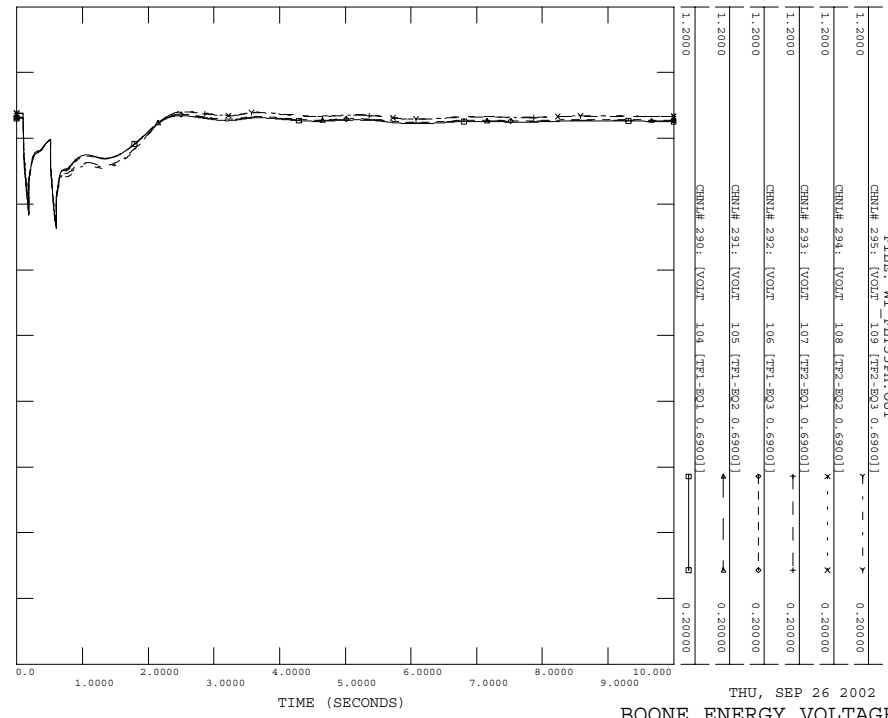
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04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
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 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
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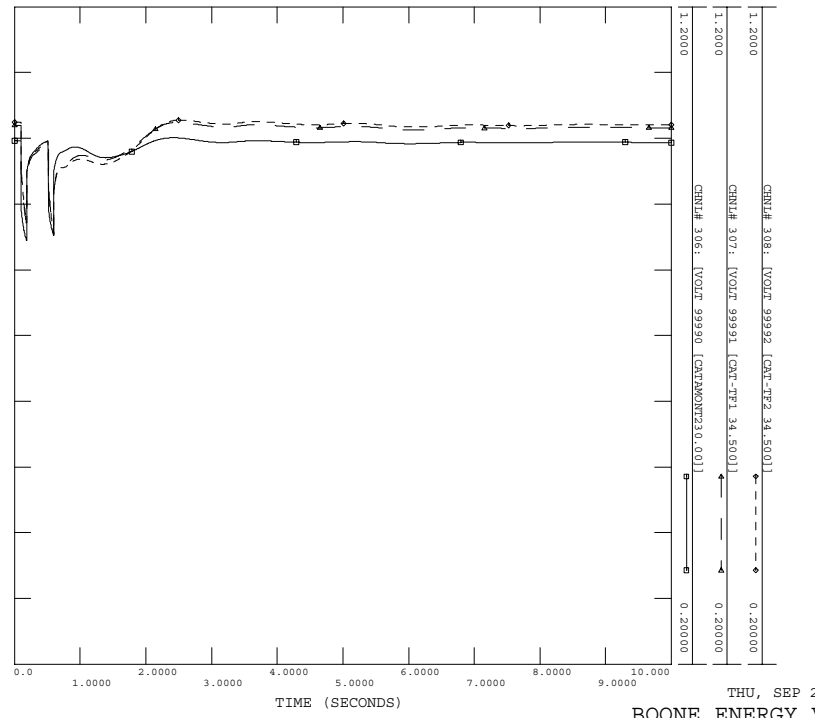
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04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWTR-200X 5/8/02
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
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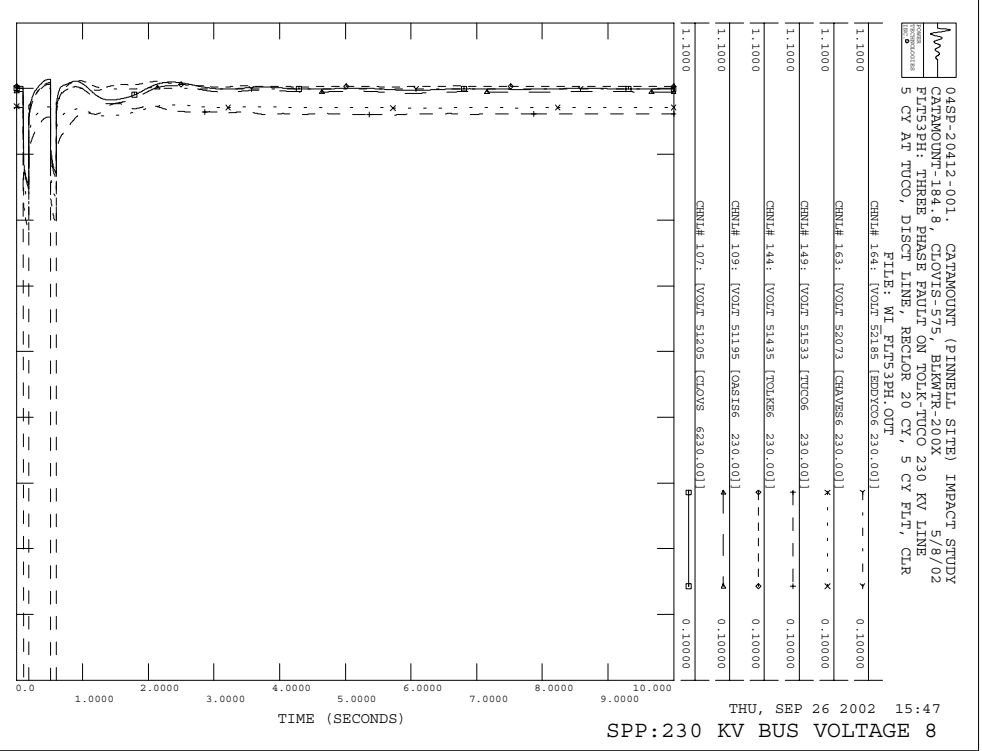
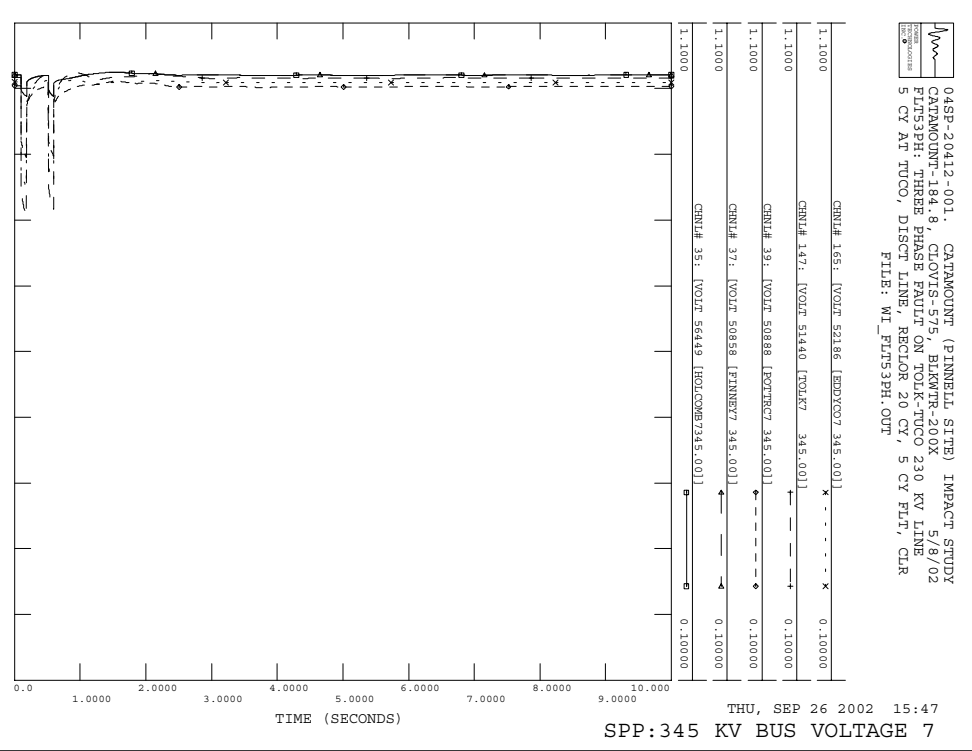
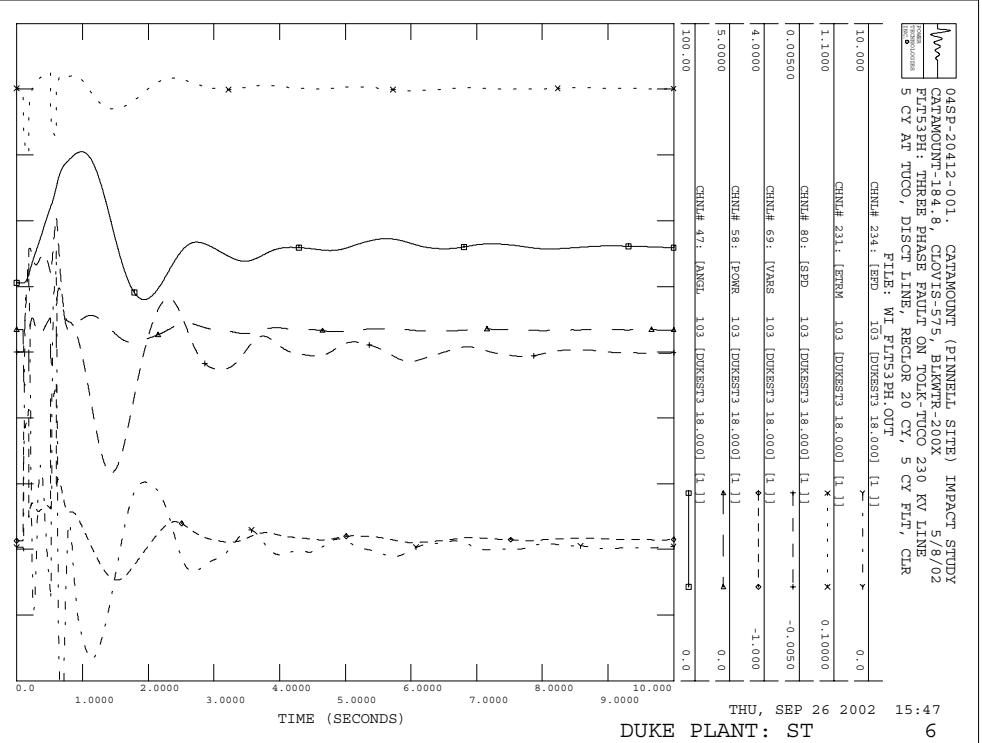
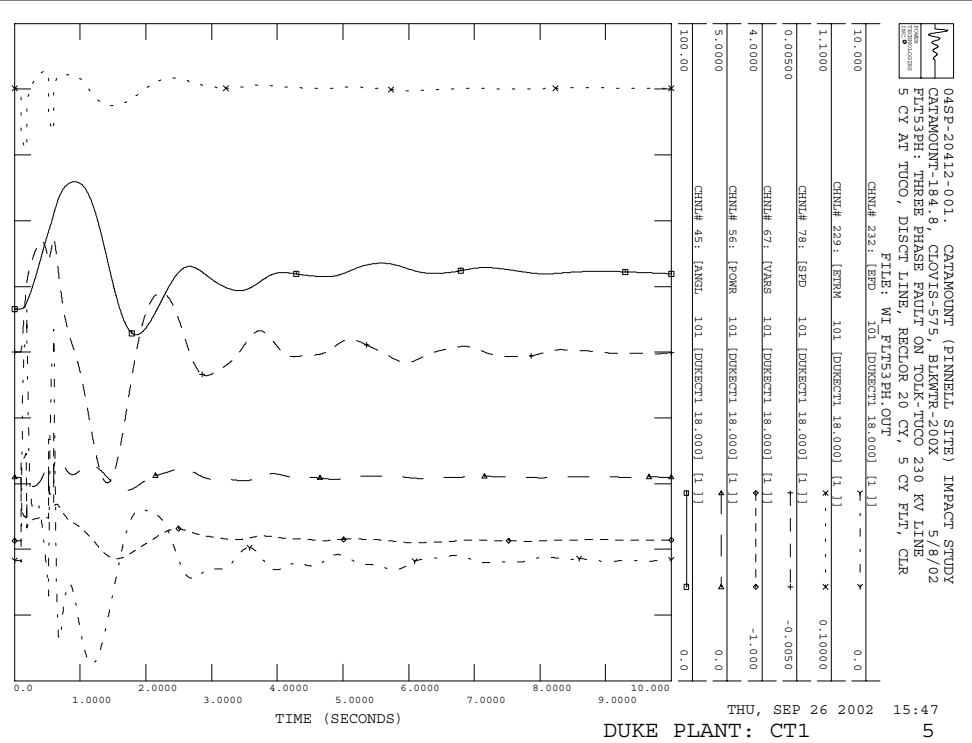


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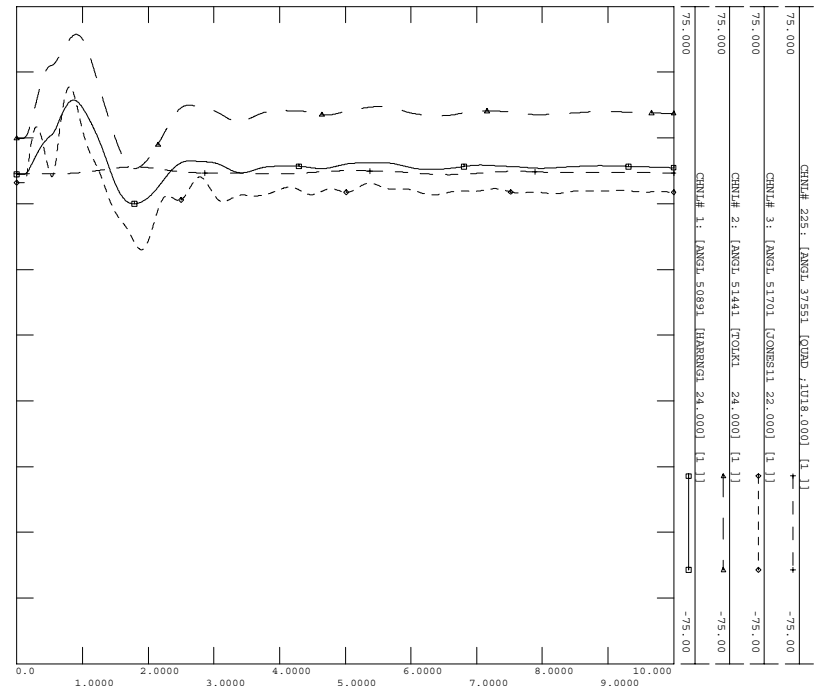
04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWTR-200X 5/8/02
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
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THU, SEP 26 2002 15:47
 BOONE ENERGY VOLTAGE 3

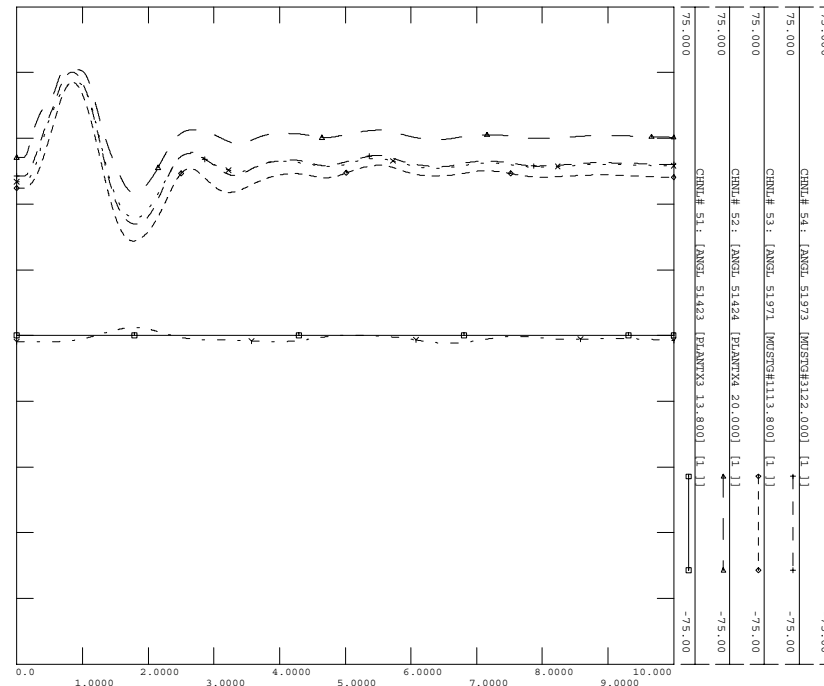


04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISC LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT53PH.OUT



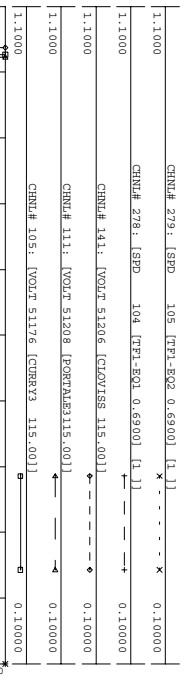
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04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISC LINE, RECLOR 20 CY, 5 CY FLT, CLR
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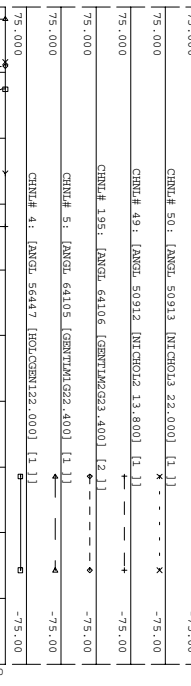
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04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISC LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT53PH.OUT



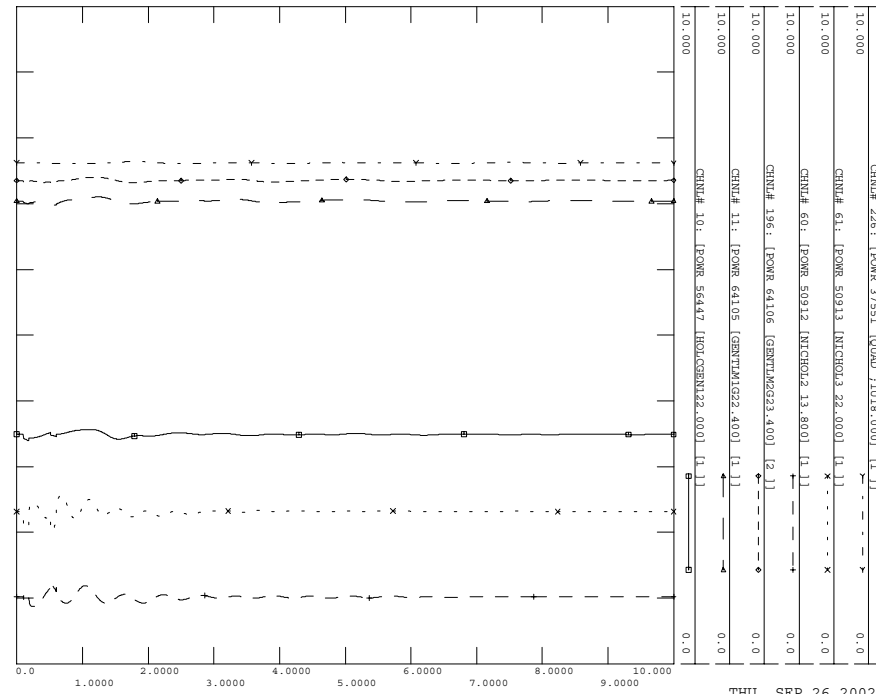
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04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISC LINE, RECLOR 20 CY, 5 CY FLT, CLR
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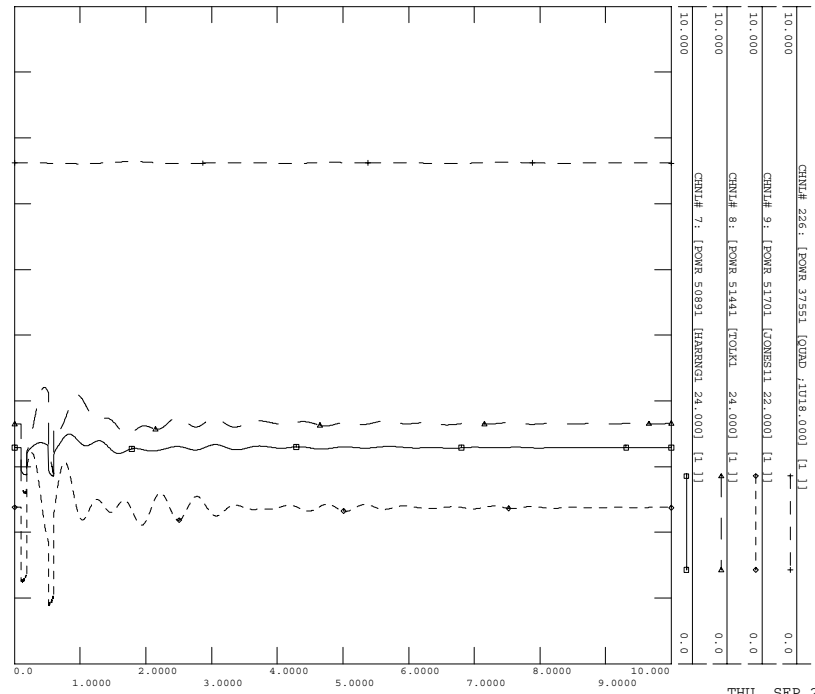
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04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWTR-200X 5/8/02
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: W1_FLT53PH.OUT



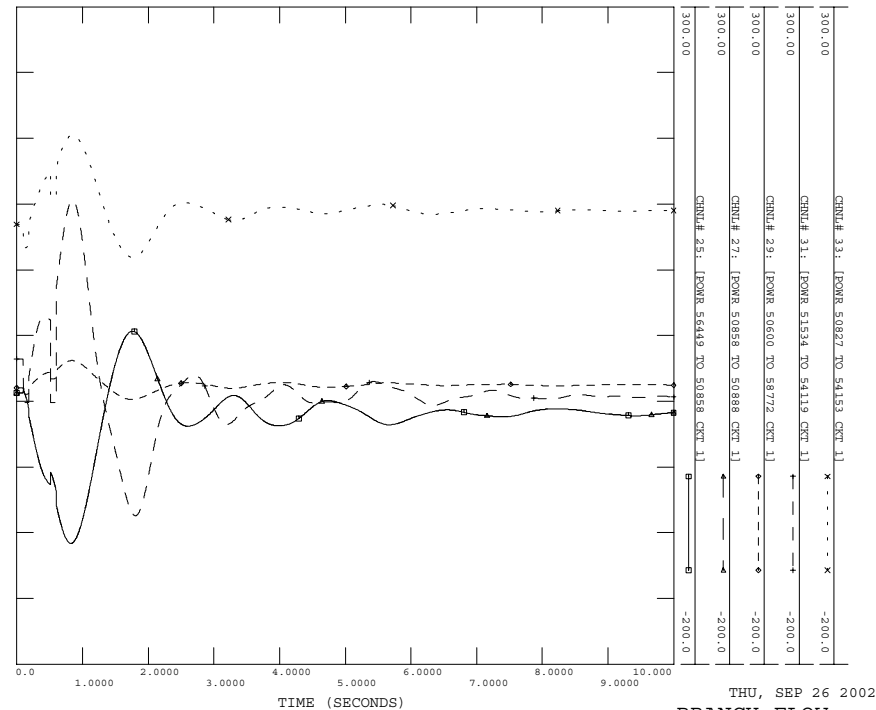
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04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
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 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: W1_FLT53PH.OUT



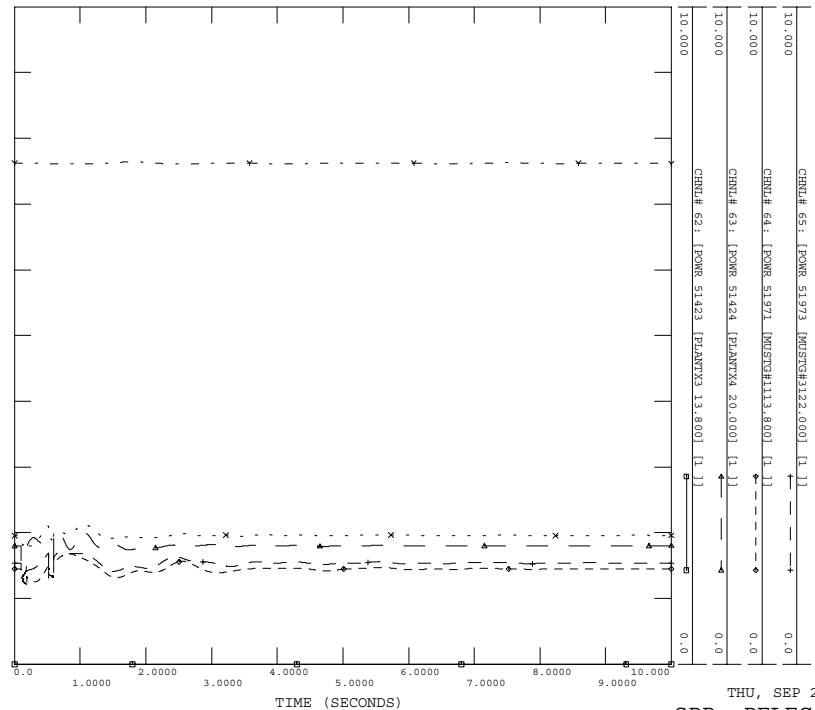
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04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
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 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: W1_FLT53PH.OUT

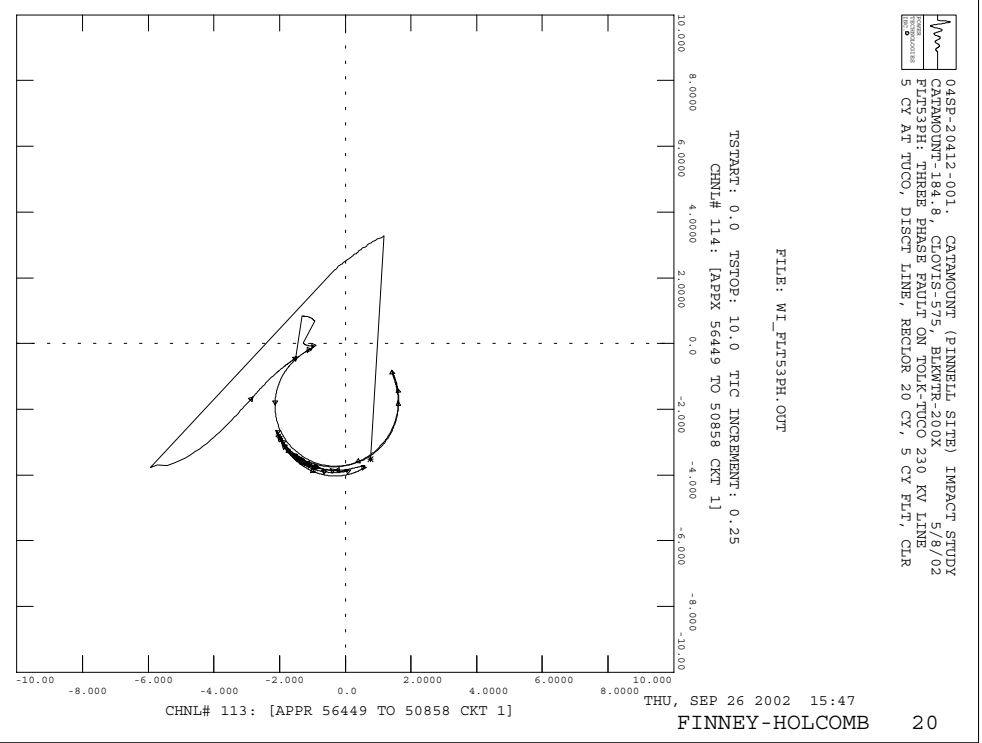
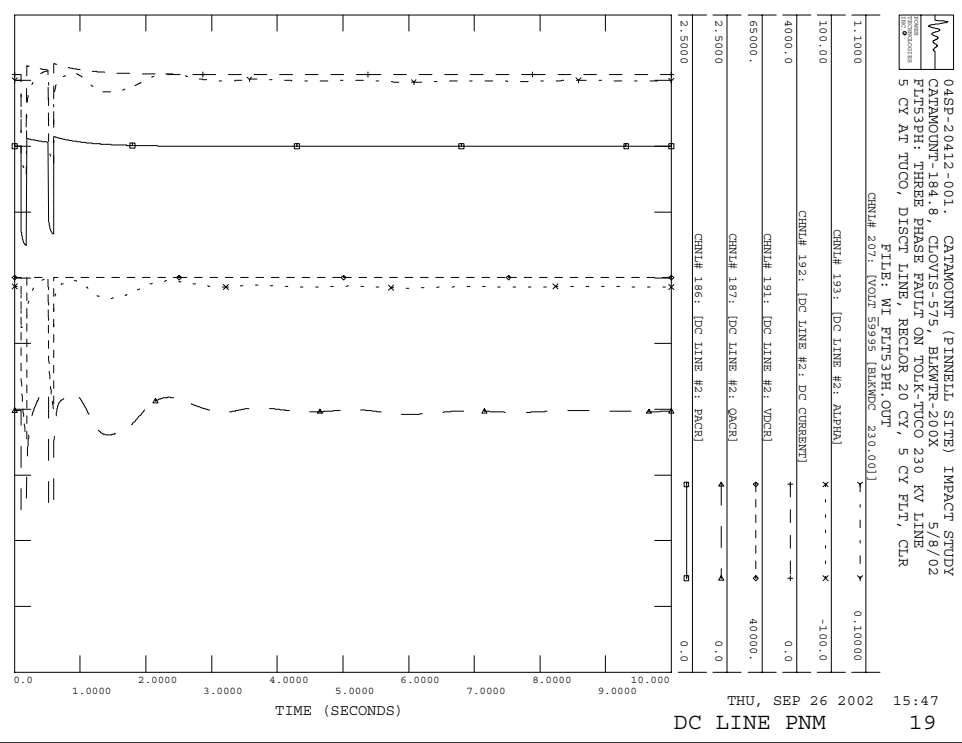
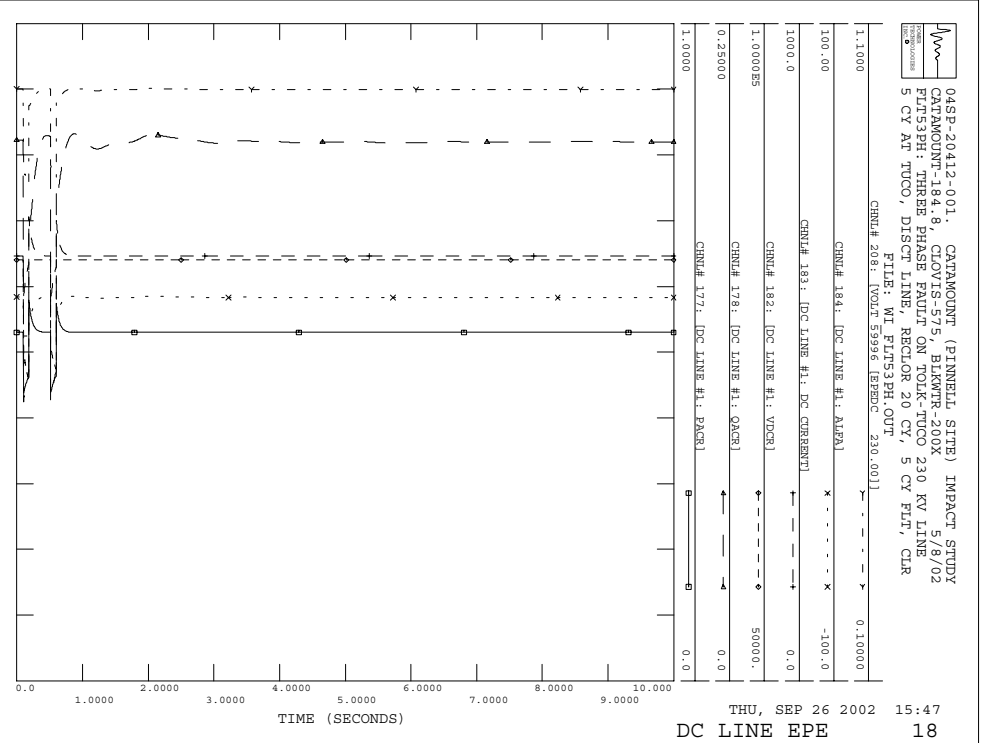
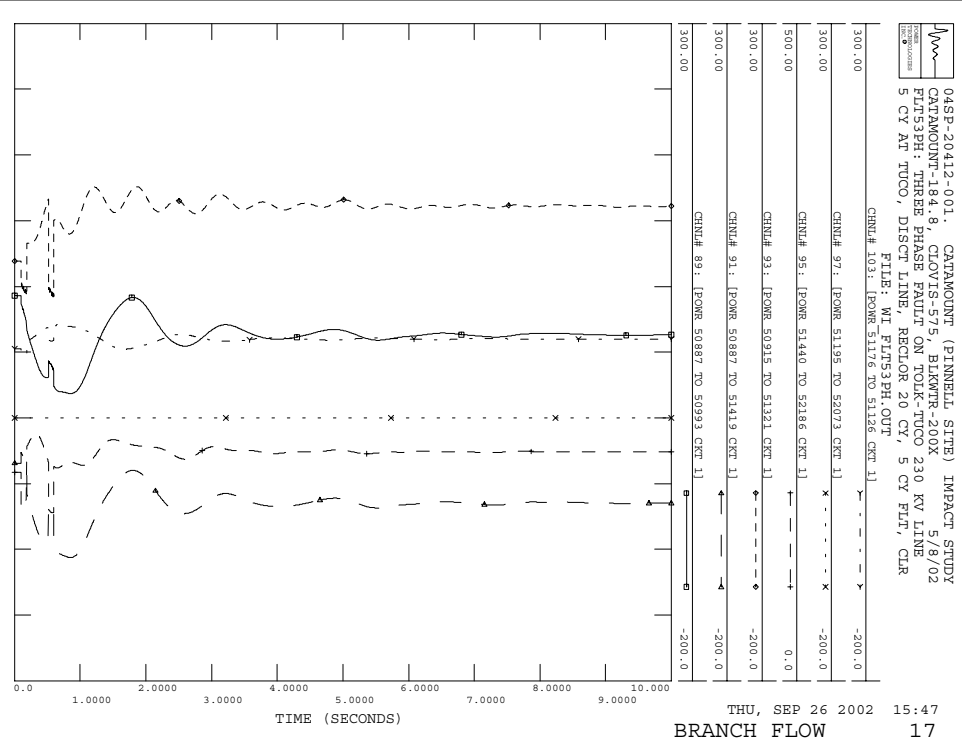


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 BRANCH FLOW 16

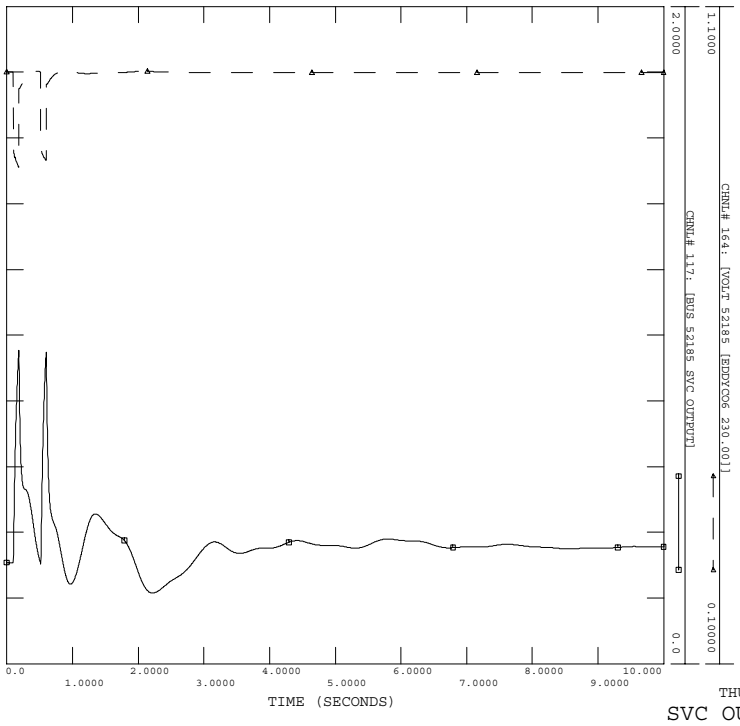
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWTR-200X 5/8/02
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: W1_FLT53PH.OUT



THU, SEP 26 2002 15:47
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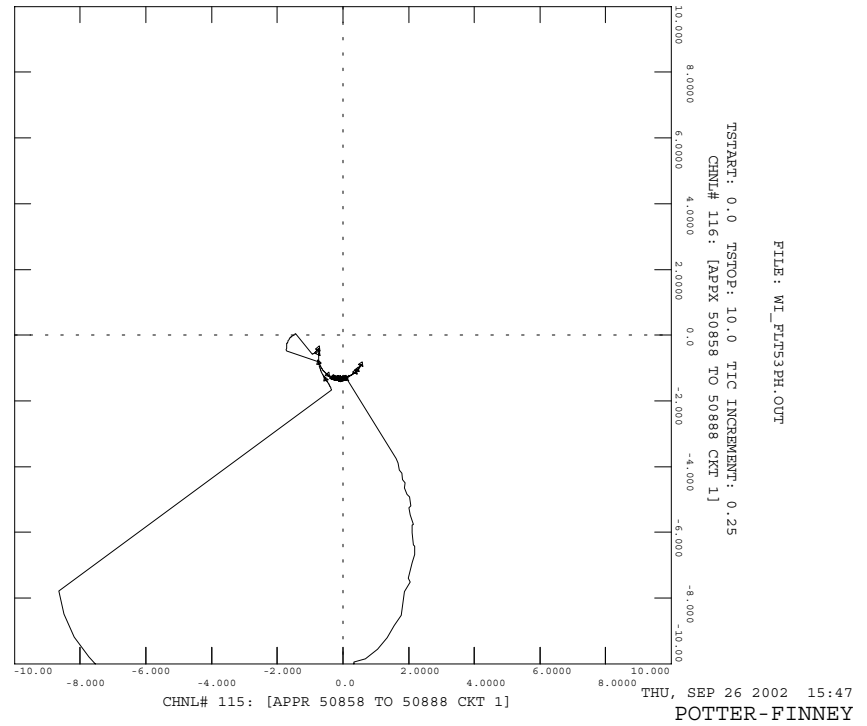


04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT53PH.OUT



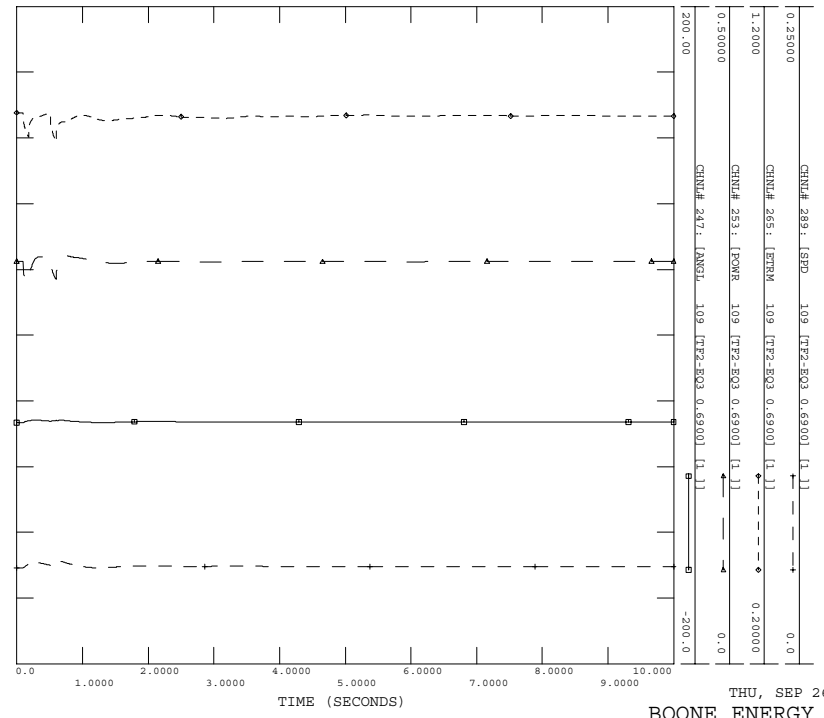
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04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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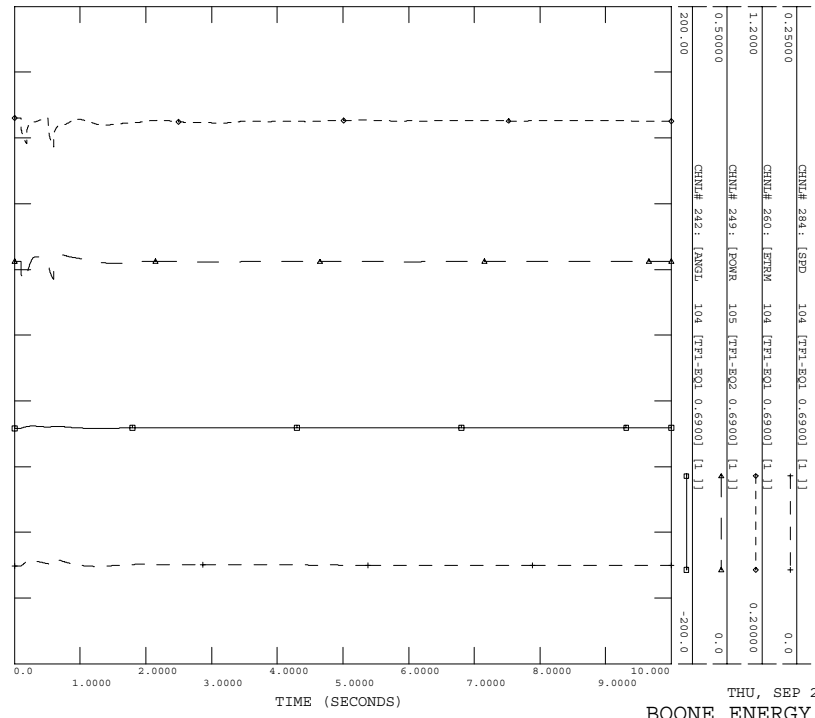


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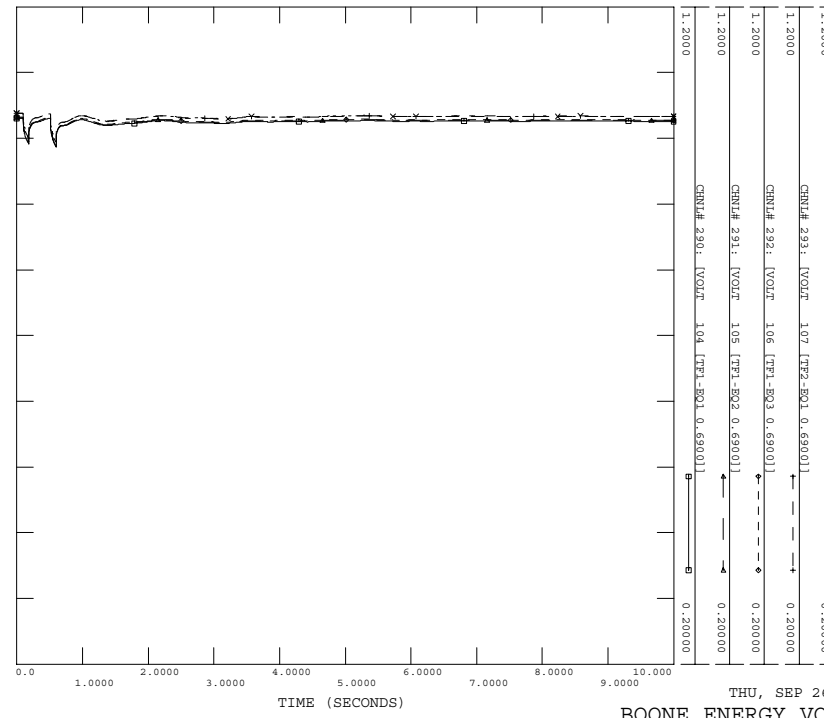
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 CATAMOUNT-184.8, CLOVIS-575, BIKWR-200X 5/8/02
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 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT51PH.OUT



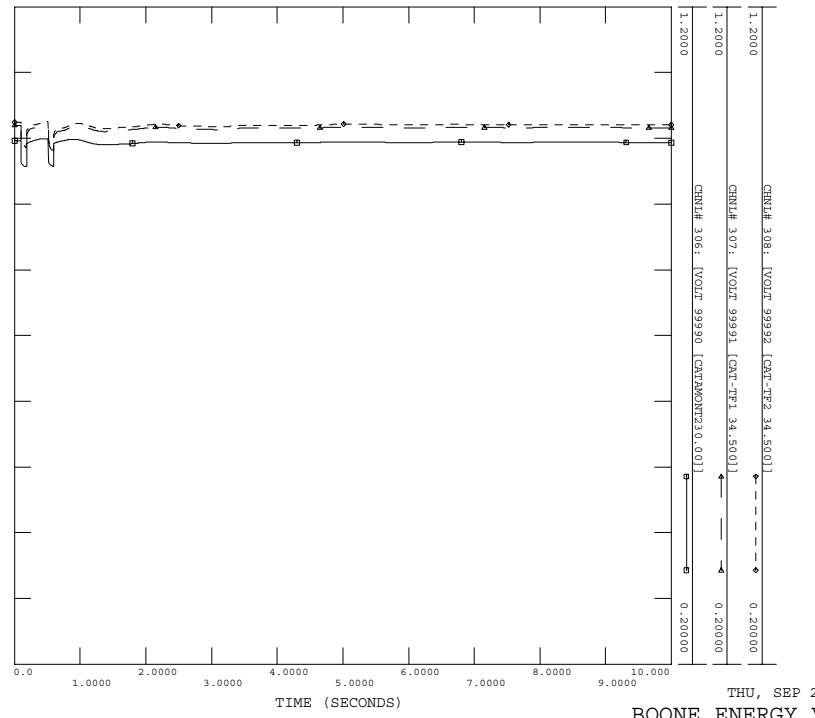
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 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT51PH.OUT

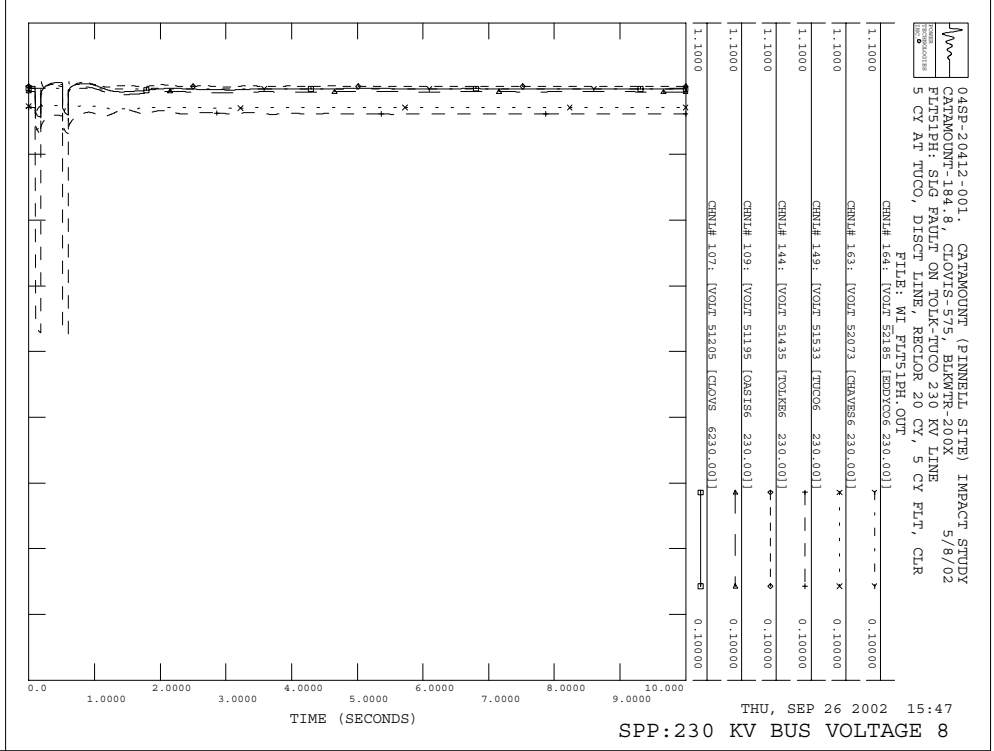
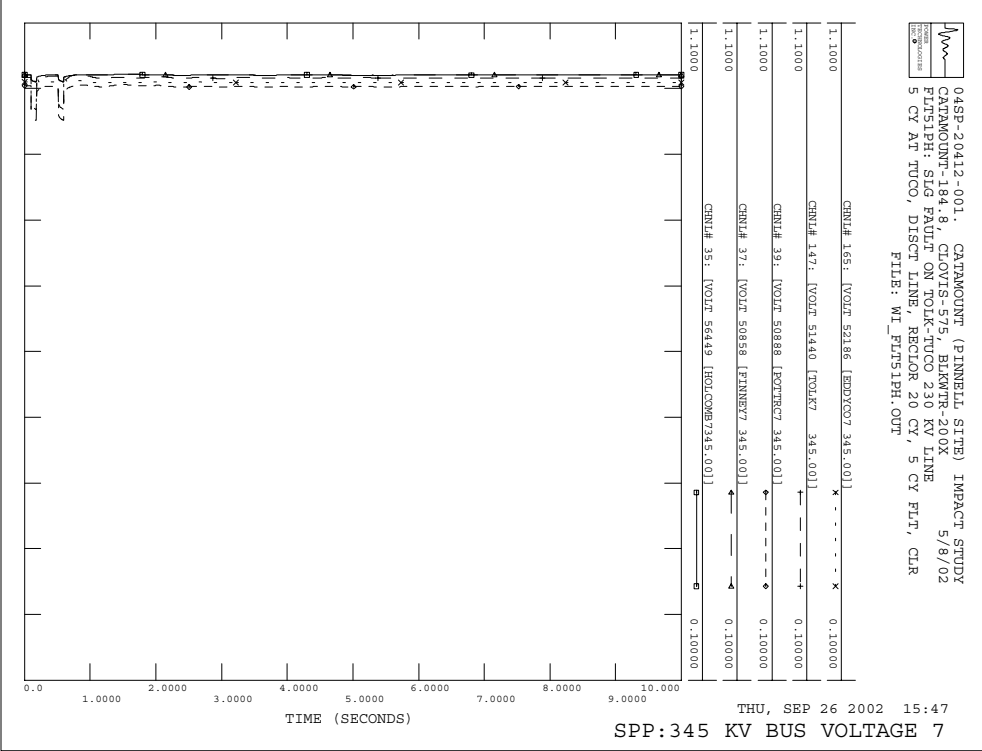
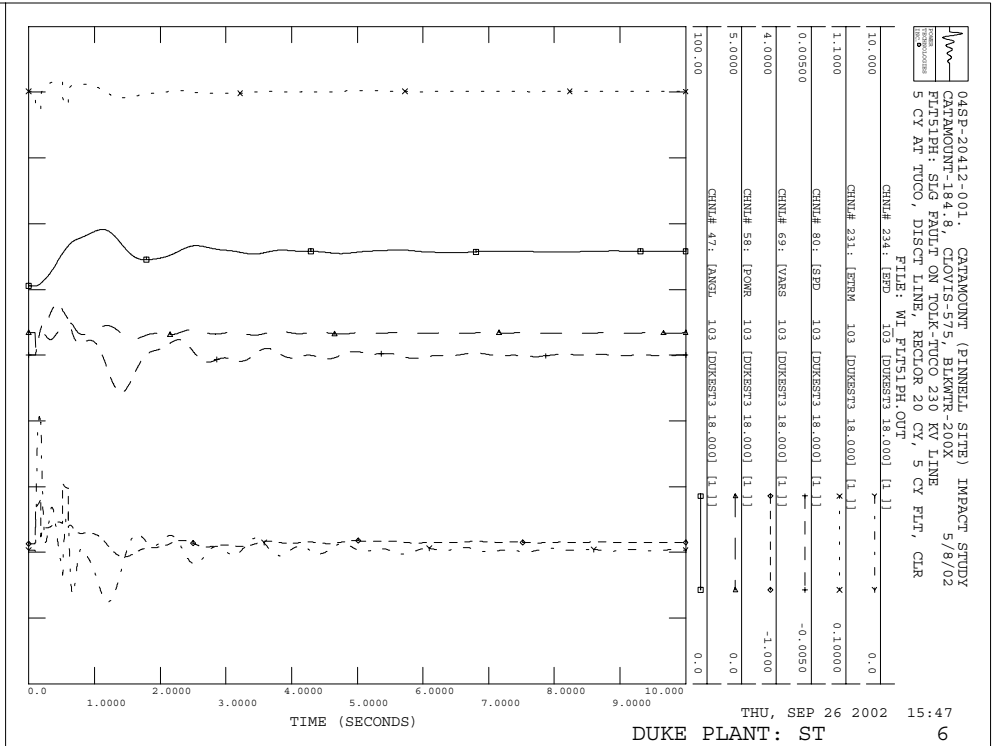
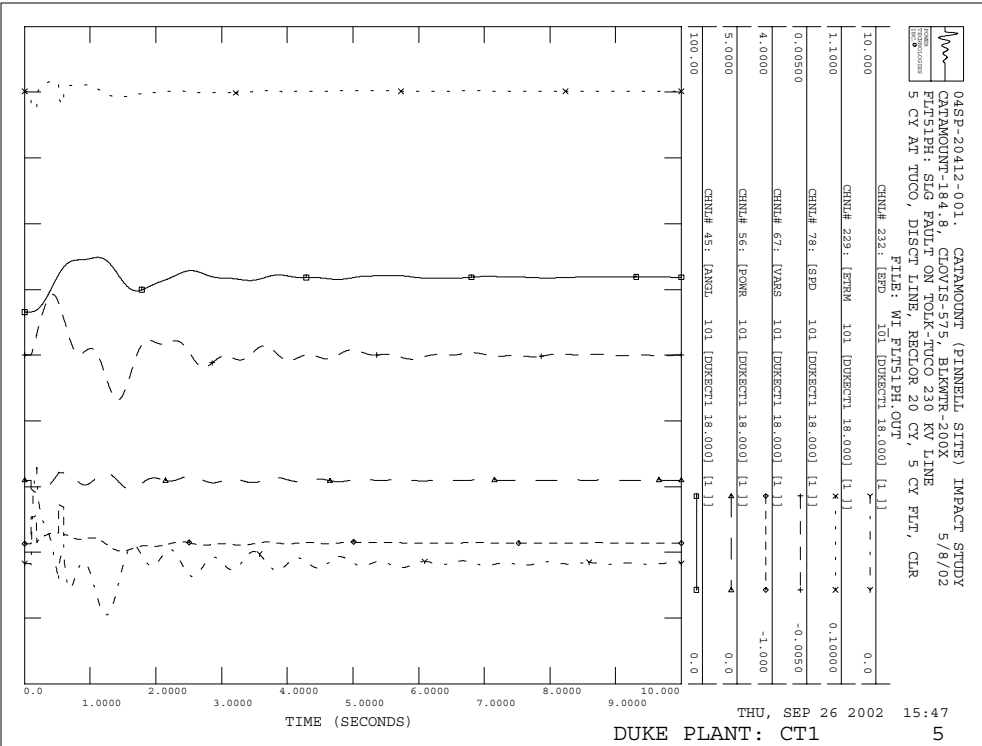


04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWR-200X 5/8/02
 FLT51PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT51PH.OUT

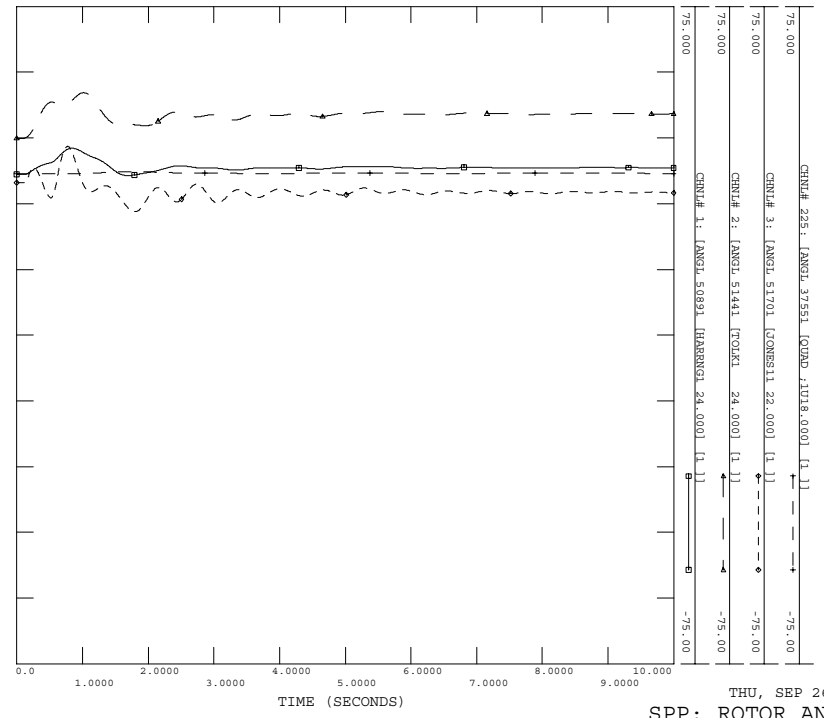


04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWR-200X 5/8/02
 FLT51PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT51PH.OUT

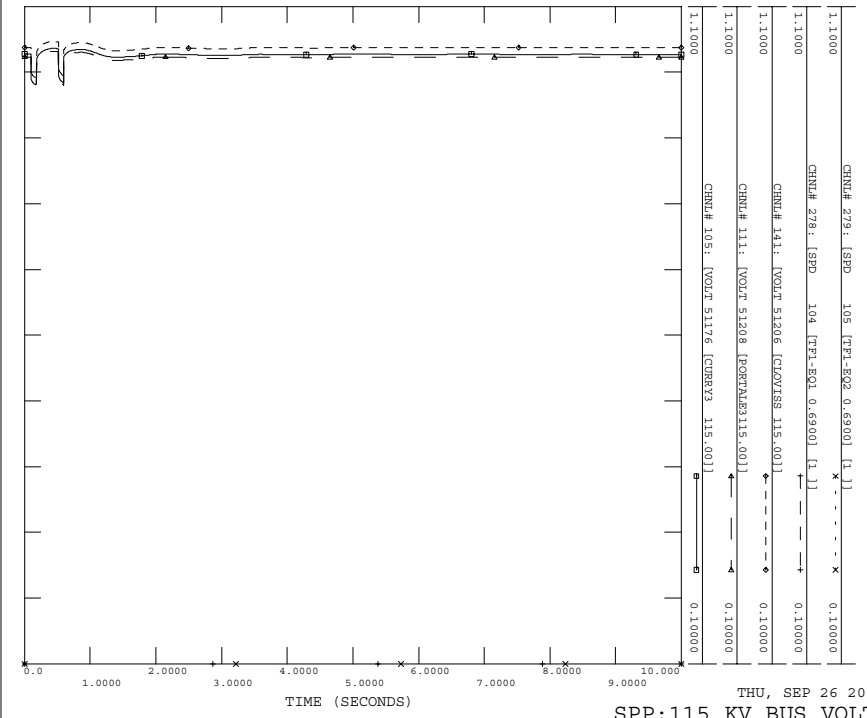




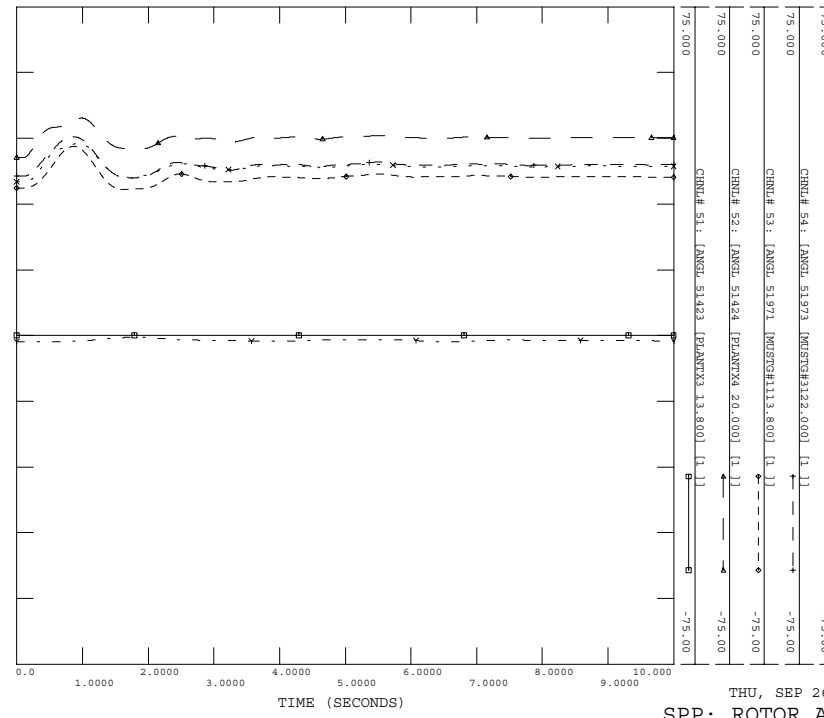
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT51PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISC LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT51PH.OUT



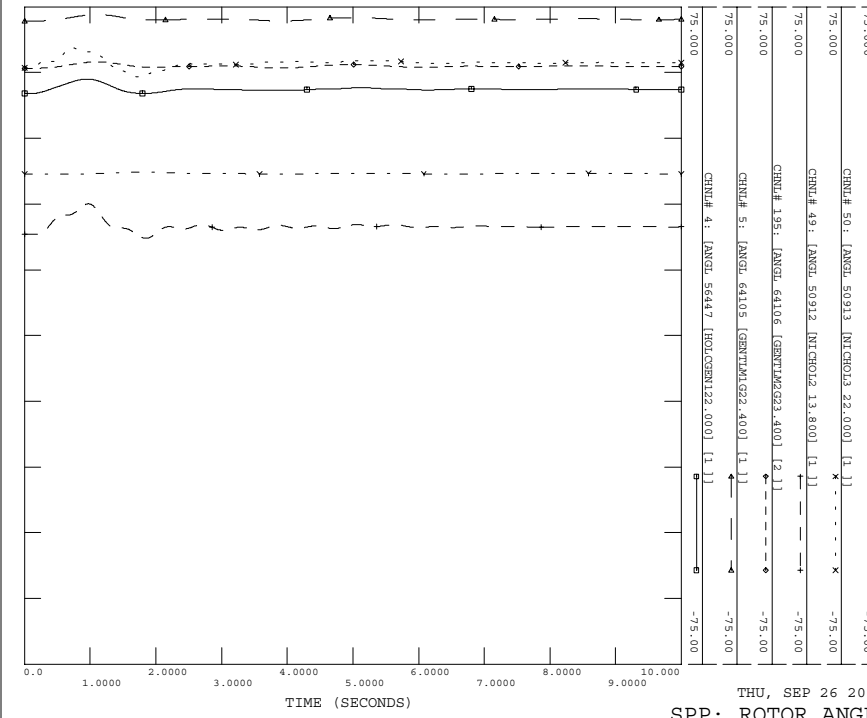
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT51PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISC LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT51PH.OUT



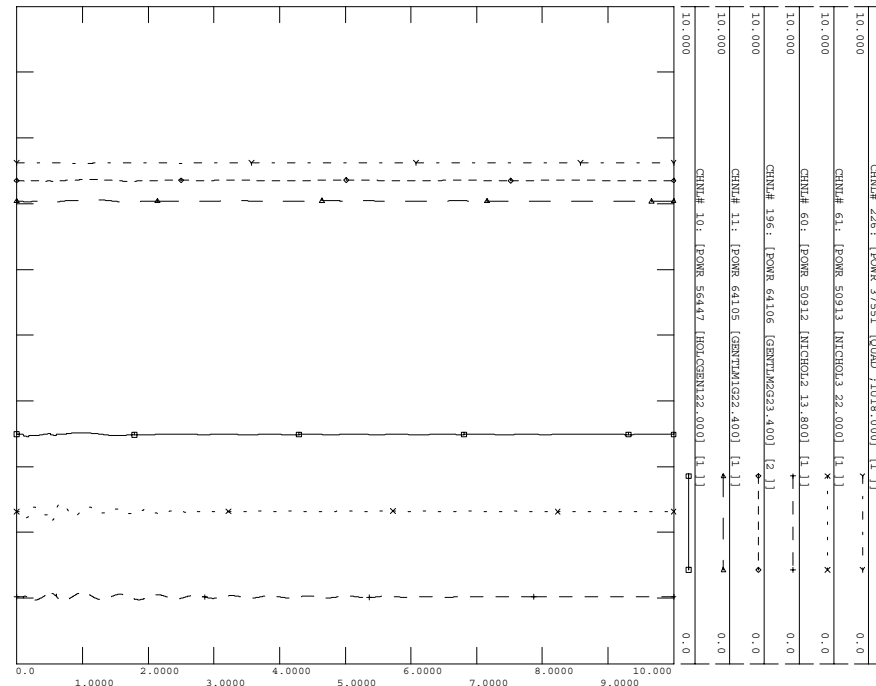
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT51PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISC LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT51PH.OUT



04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT51PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISC LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT51PH.OUT

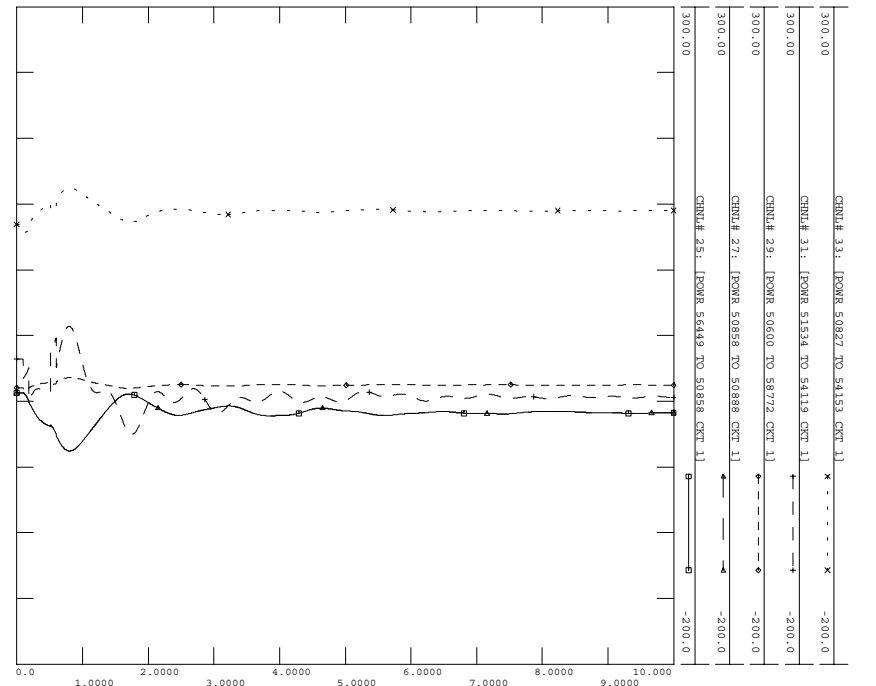


04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKPTR-200X 5/8/02
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 5 CY AT TUCO, DISCT LINE, RECTOR 20 CT, 5 CY FLT, CLR
 FILE: WI_FLT51PH.OUT



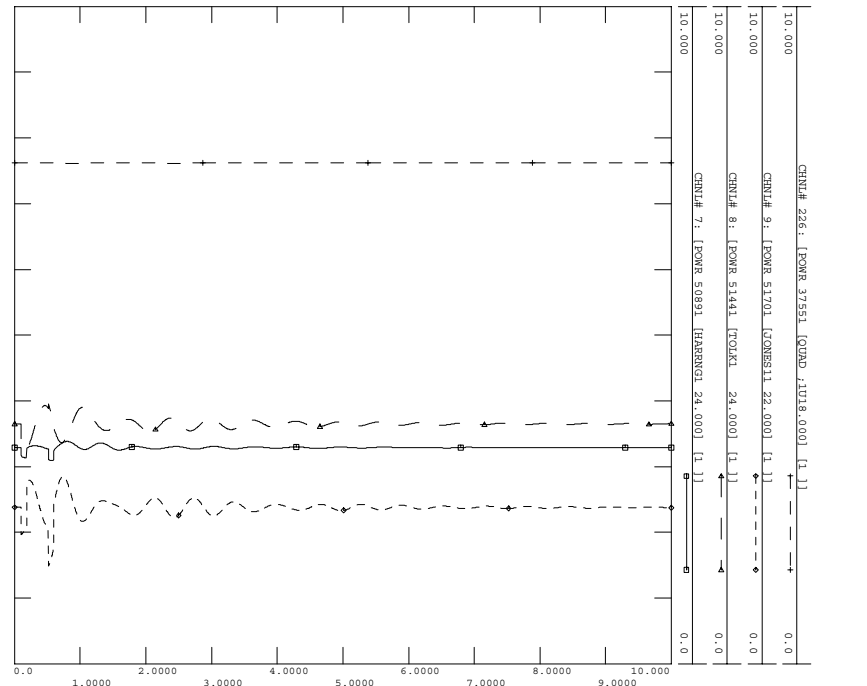
THU, SEP 26 2002 15:47
 SPP: PELEC 14

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKPTR-200X 5/8/02
 FLT51PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CT, 5 CY FLT, CLR
 FILE: WI_FLT51PH.OUT



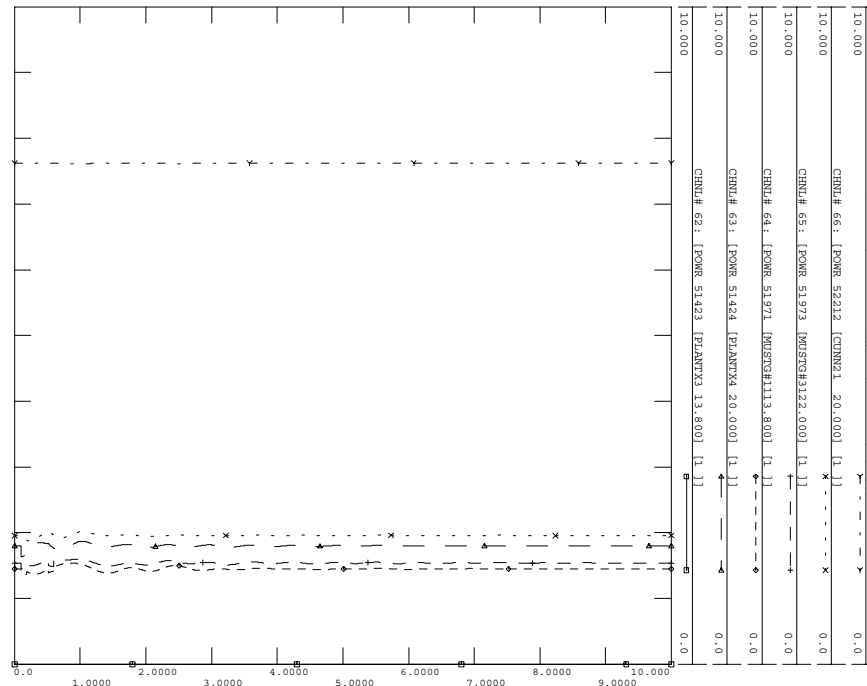
THU, SEP 26 2002 15:47
 BRANCH FLOW 16

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKPTR-200X 5/8/02
 FLT51PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CT, 5 CY FLT, CLR
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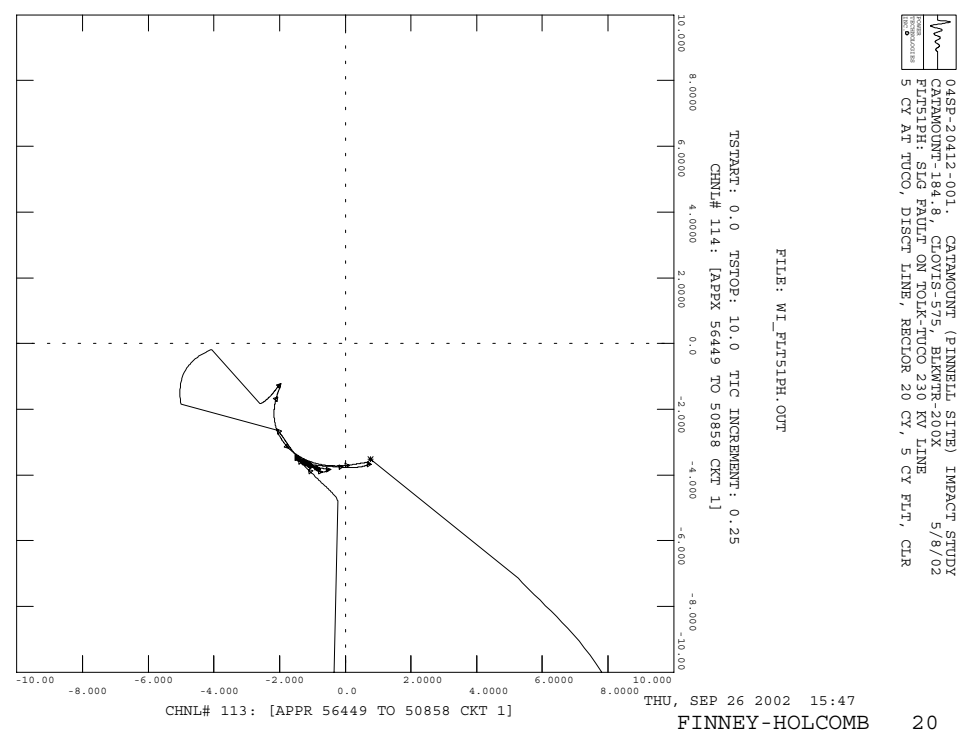
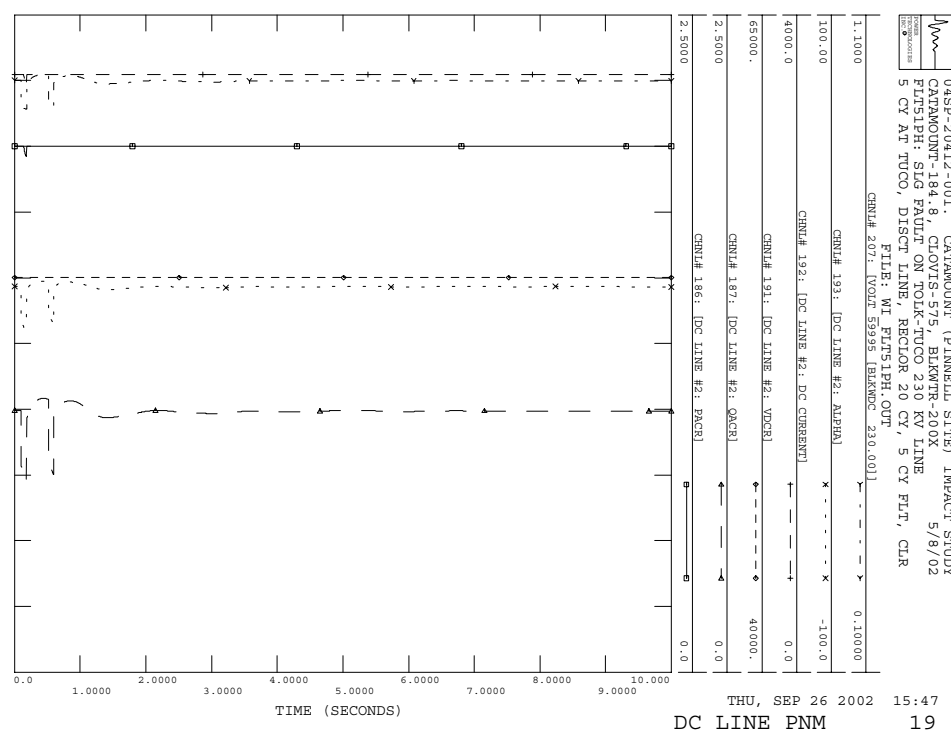
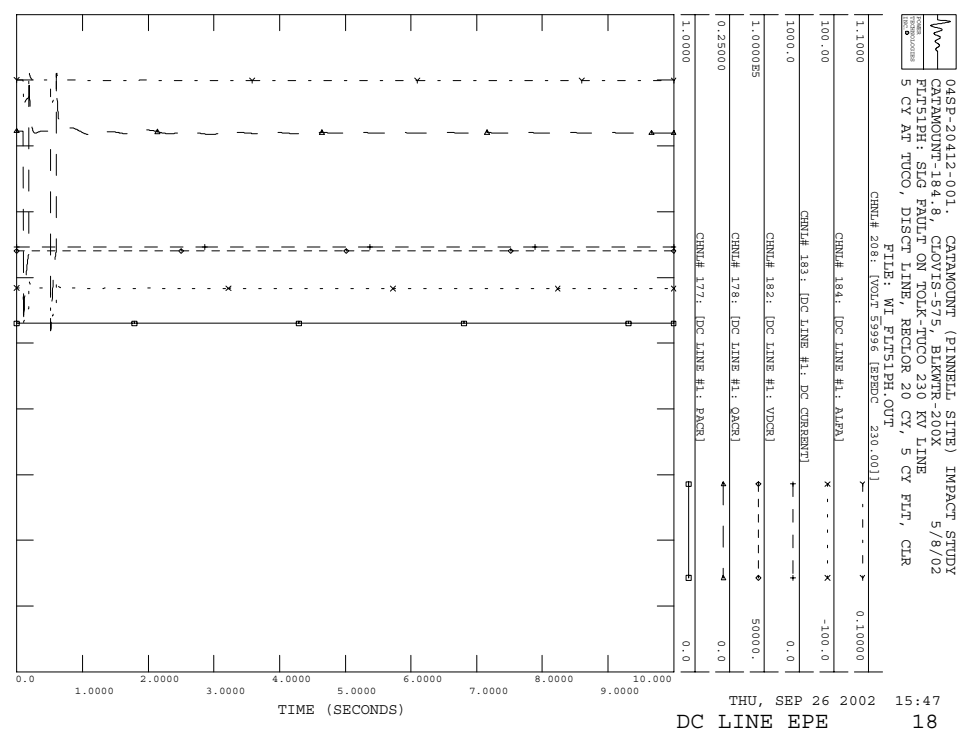
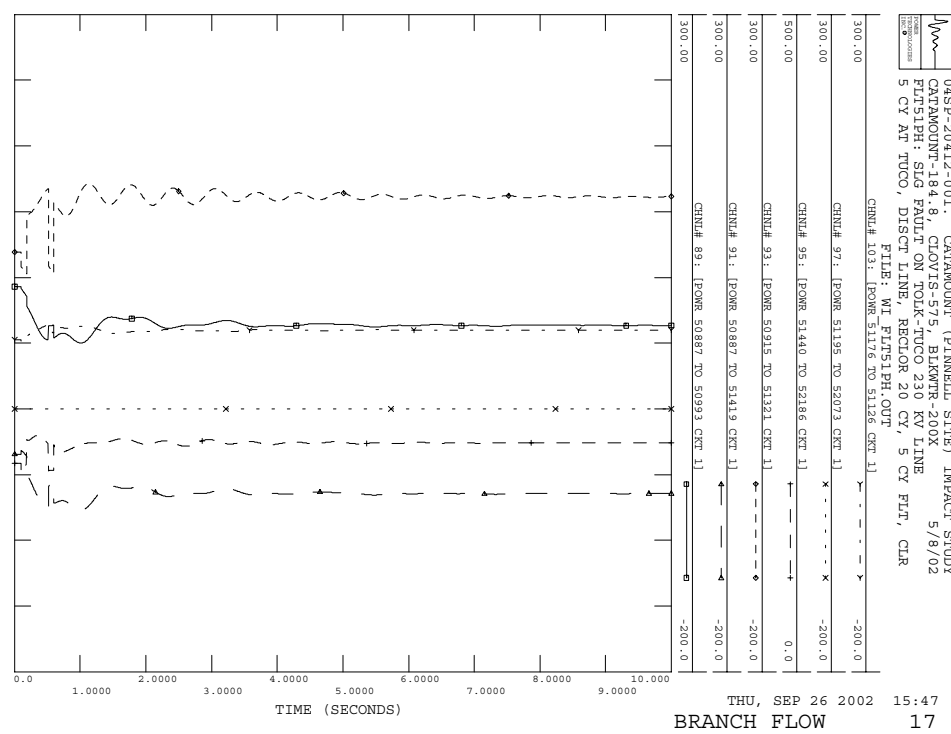


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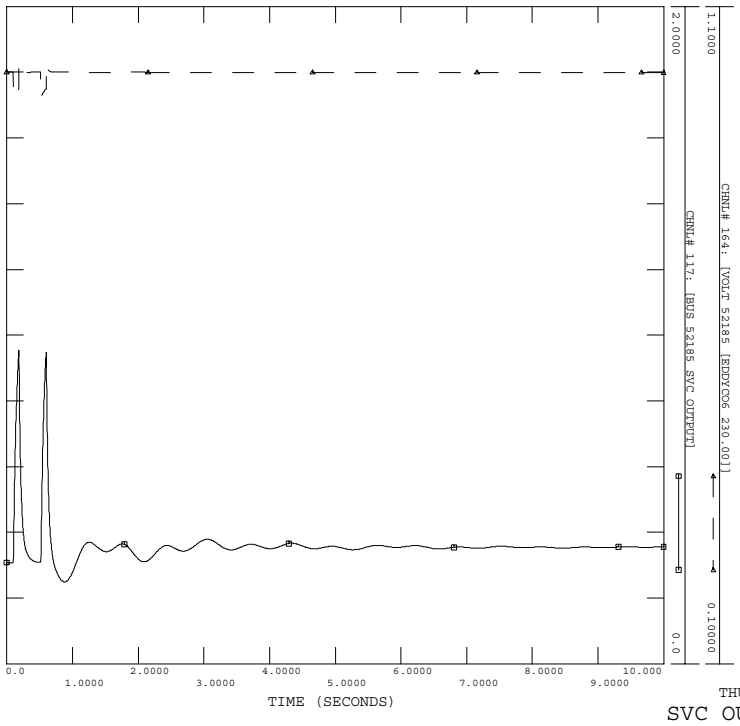
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKPTR-200X 5/8/02
 FLT51PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
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 FILE: WI_FLT51PH.OUT



THU, SEP 26 2002 15:47
 SPP: PELEC 15

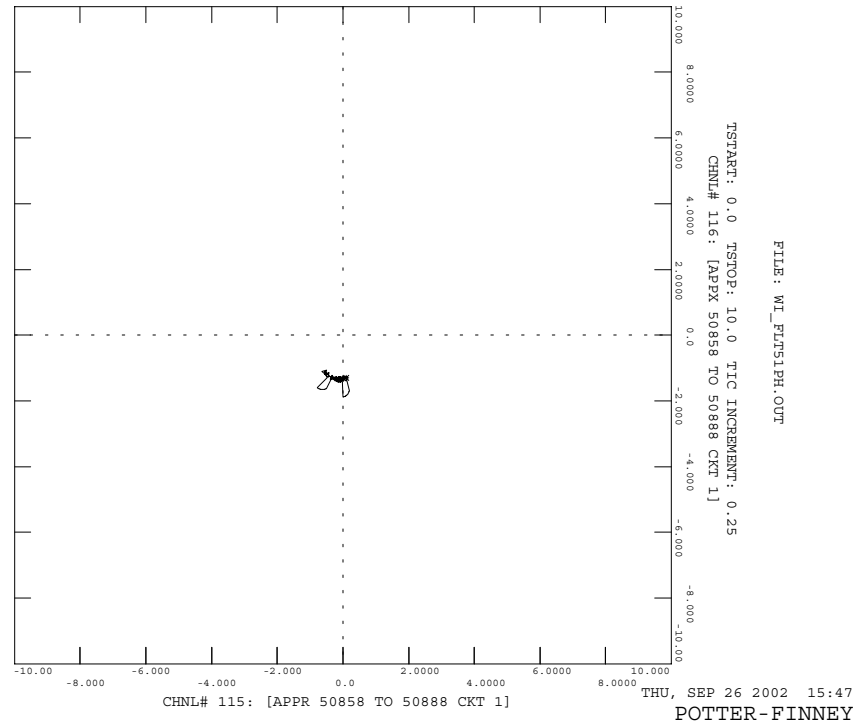


04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT51PH: SLG FAULT ON TOLK-TUCCO 230 KV LINE
 5 CY AT TUCCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT51PH.OUT



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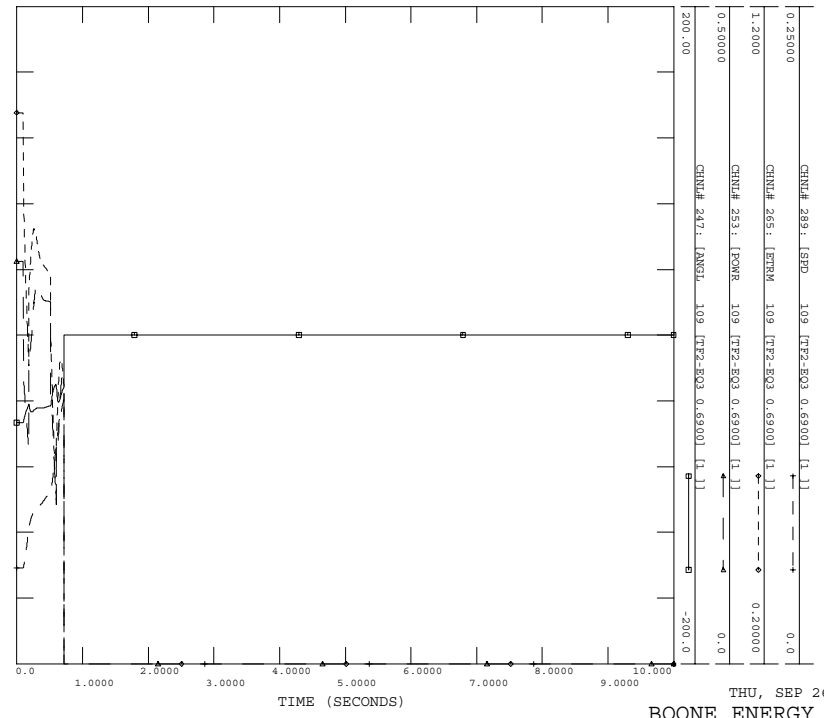
04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT51PH: SLG FAULT ON TOLK-TUCCO 230 KV LINE
 5 CY AT TUCCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT51PH.OUT



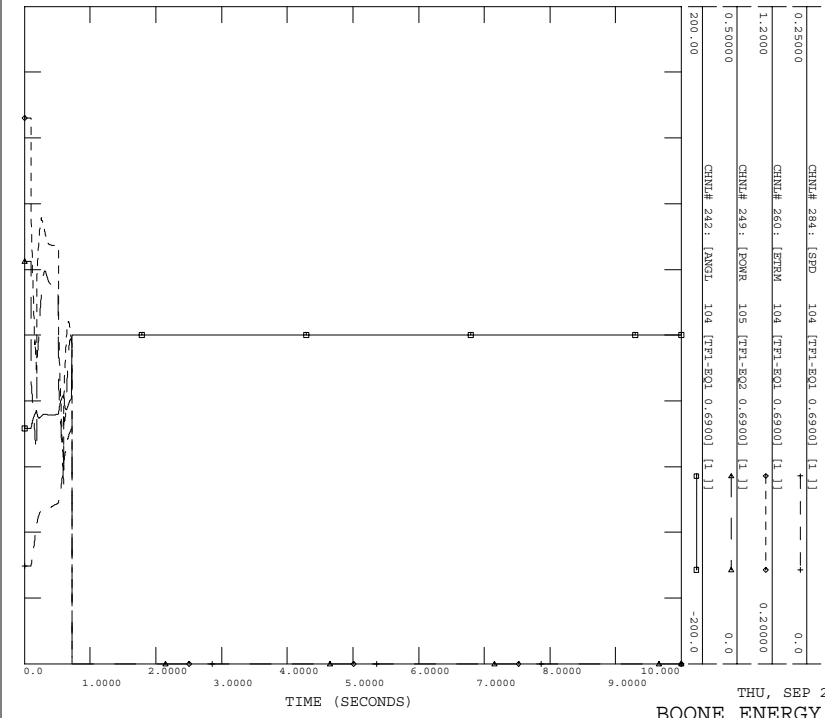
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POTTER-FINNEY

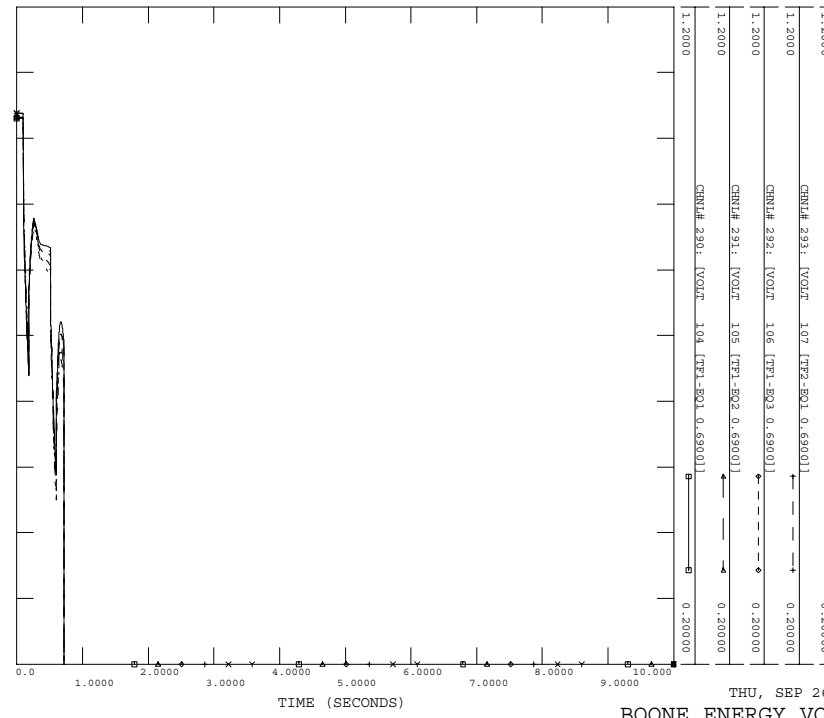
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT



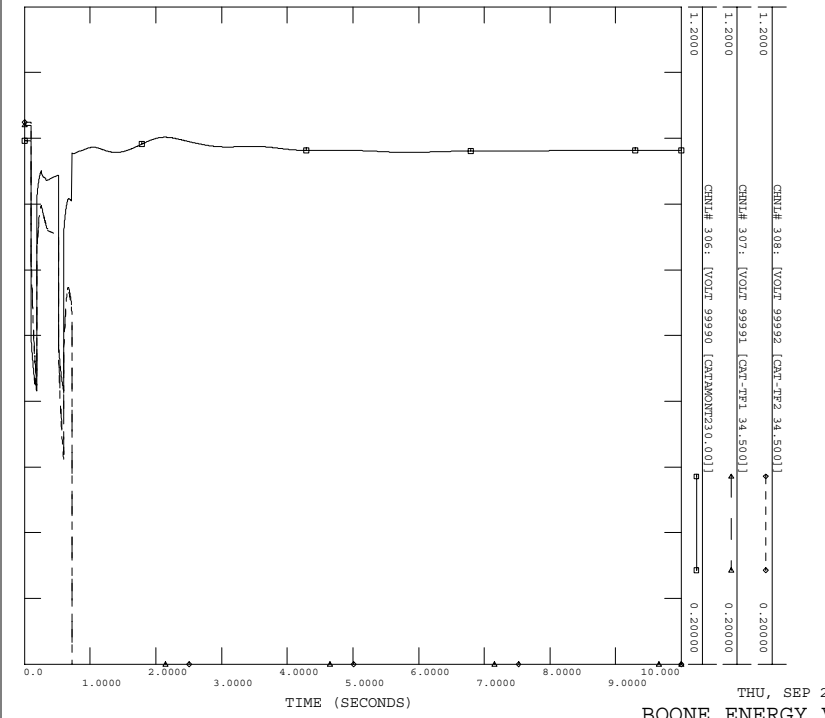
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 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT

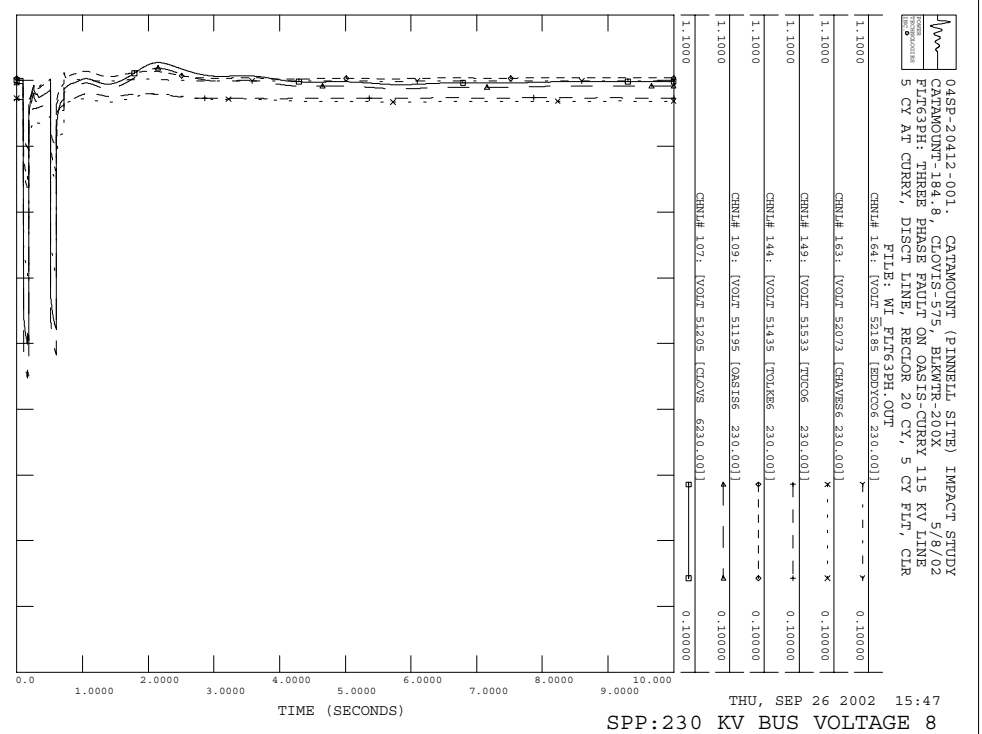
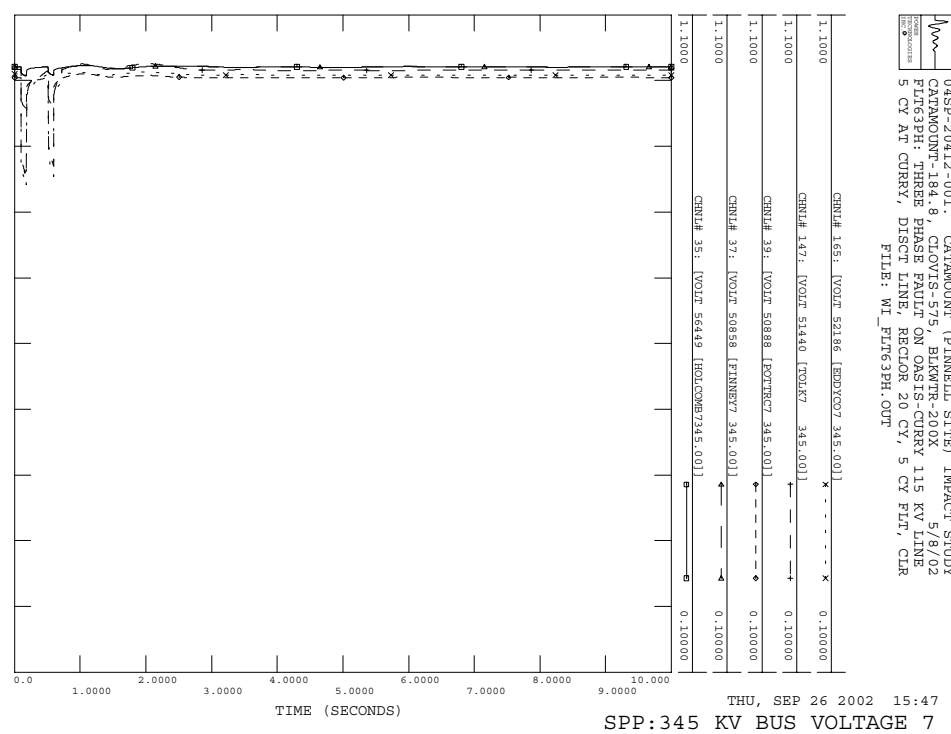
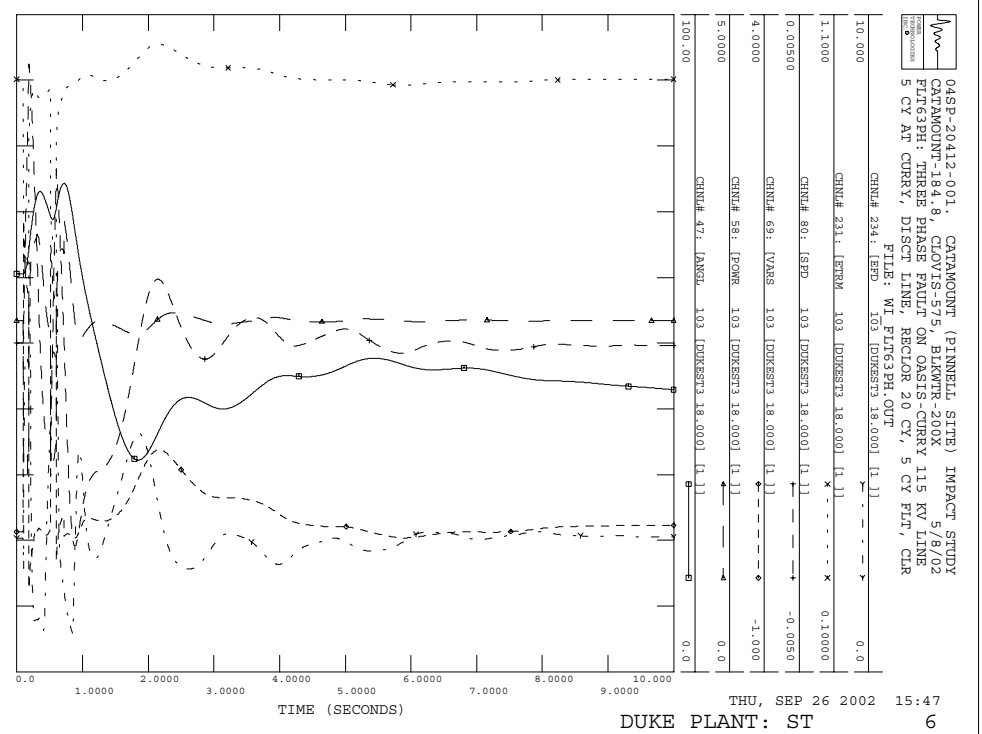
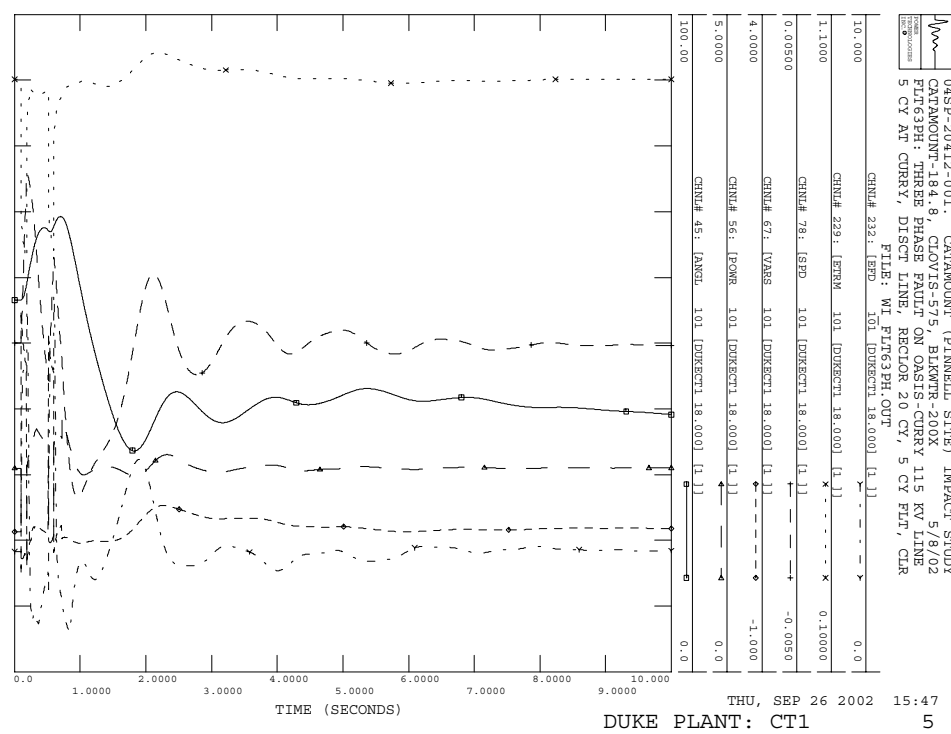


04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT

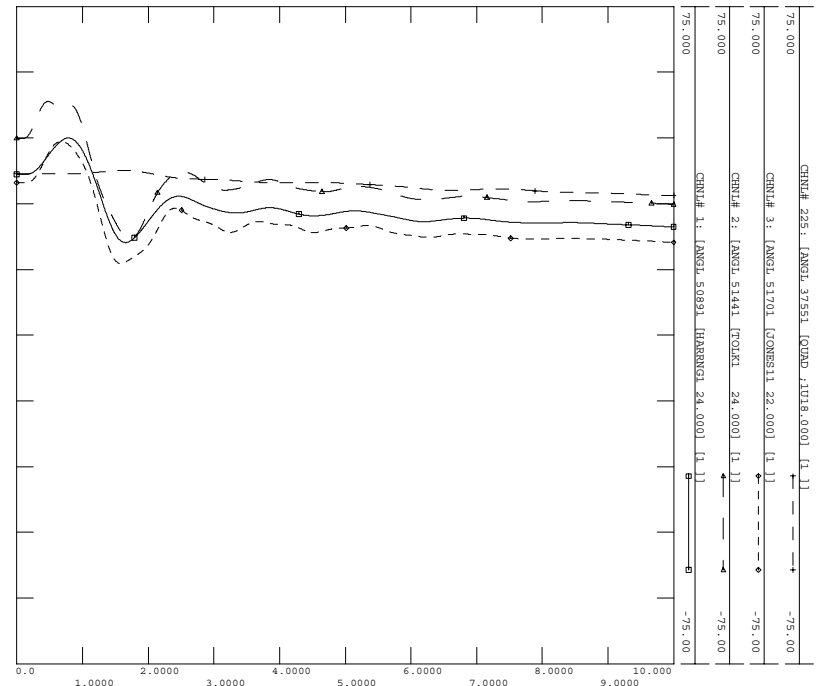


04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT



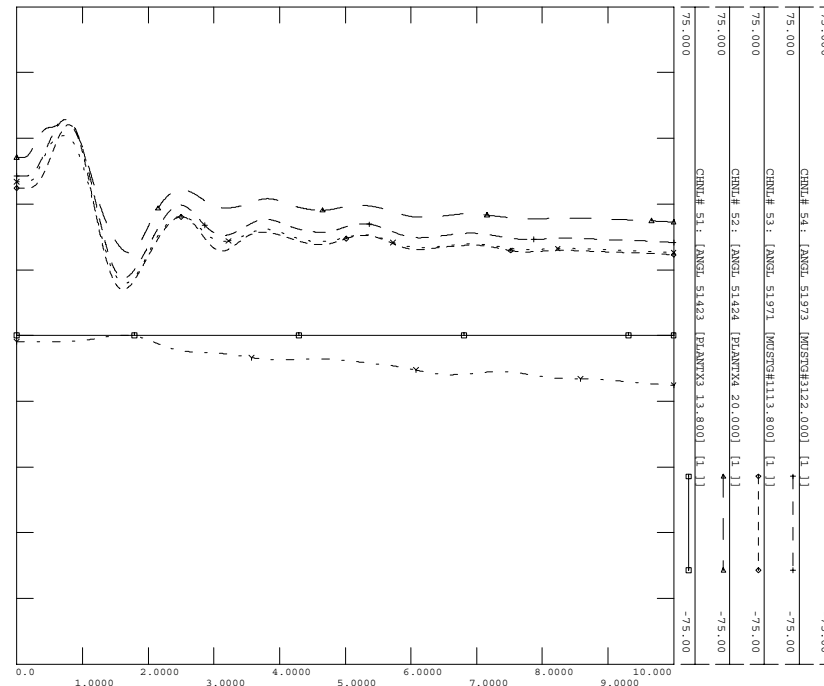


04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWTR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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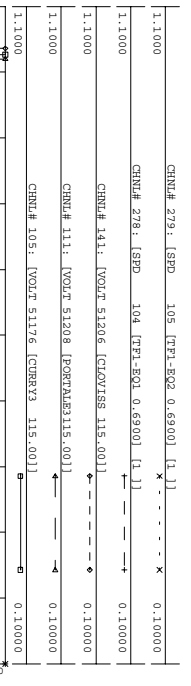
THU, SEP 26 2002 15:47
 SPP: ROTOR ANGLE 10

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWTR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT



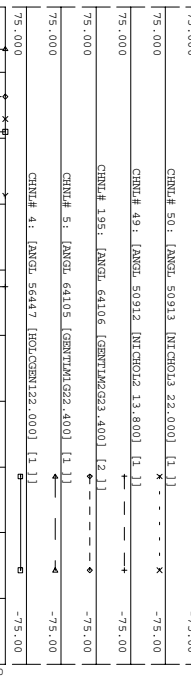
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 SPP: ROTOR ANGLE 12

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWTR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT



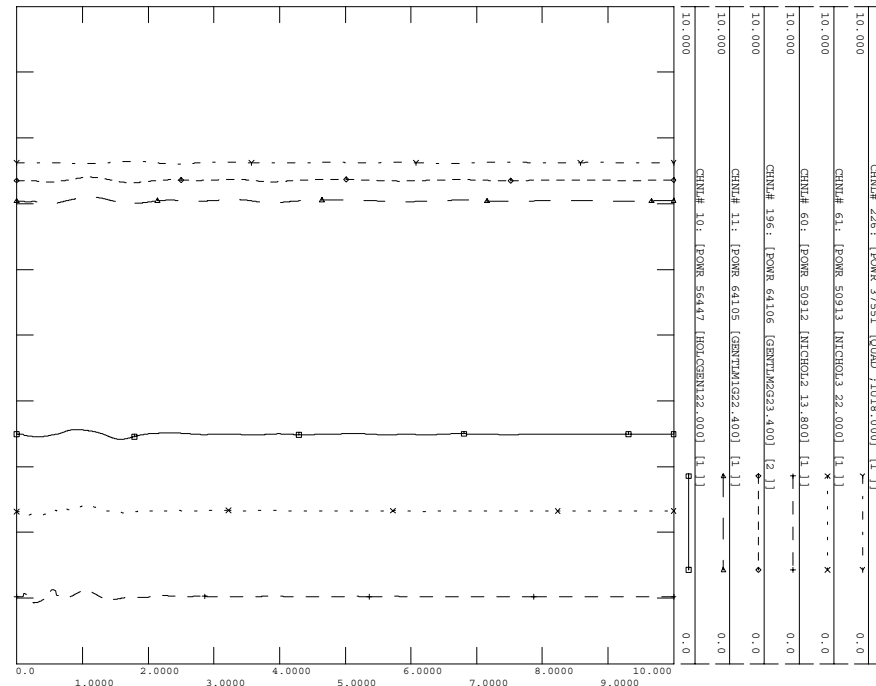
THU, SEP 26 2002 15:47
 SPP:115 KV BUS VOLTAGE 9

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWTR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT



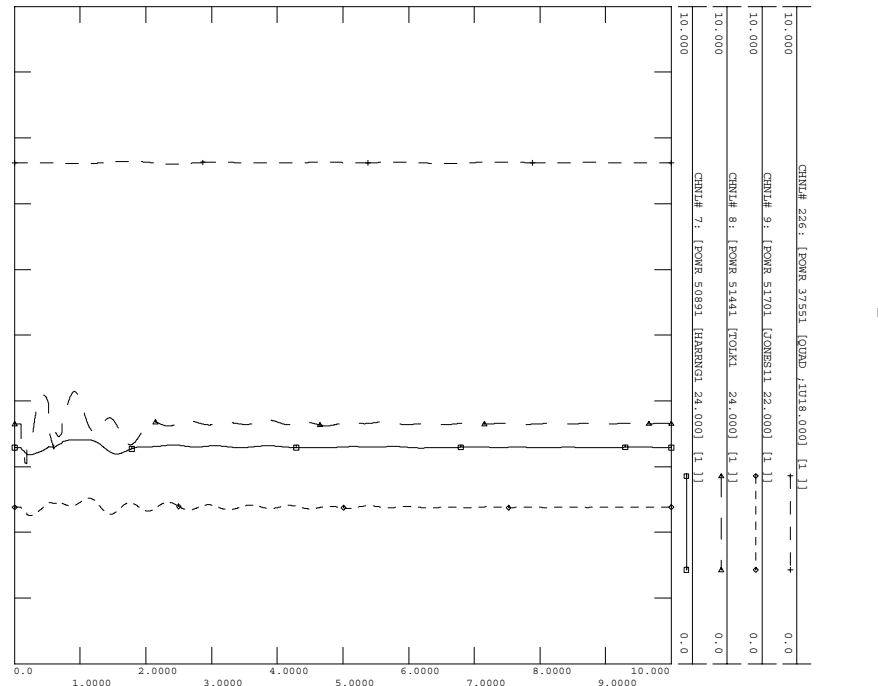
THU, SEP 26 2002 15:47
 SPP: ROTOR ANGLE 11

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWTR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT



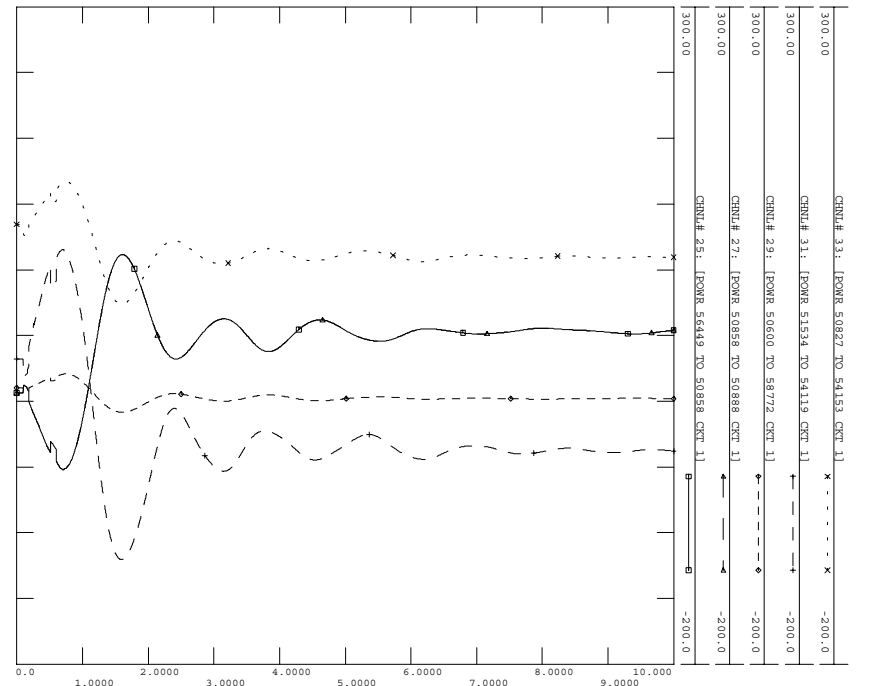
THU, SEP 26 2002 15:47
 SPP: PELEC 14

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWTR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT



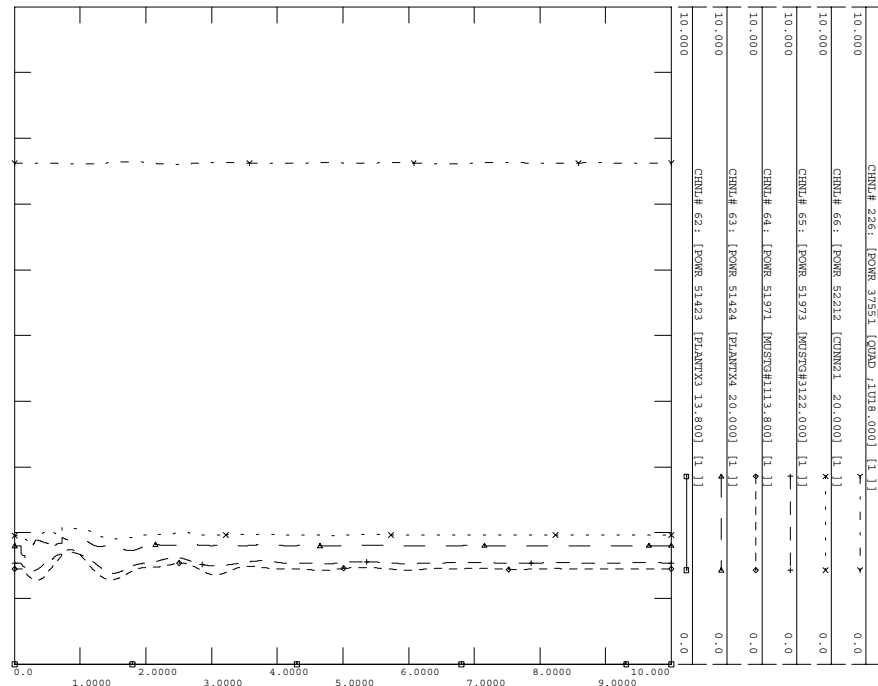
THU, SEP 26 2002 15:47
 SPP: PELEC 13

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWTR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT

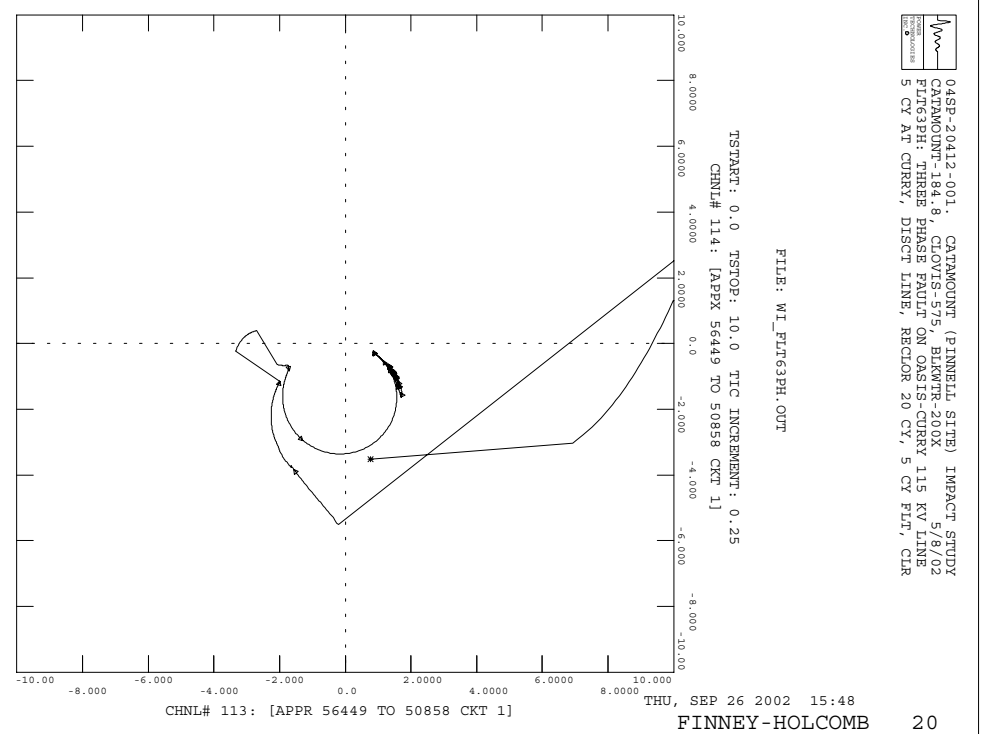
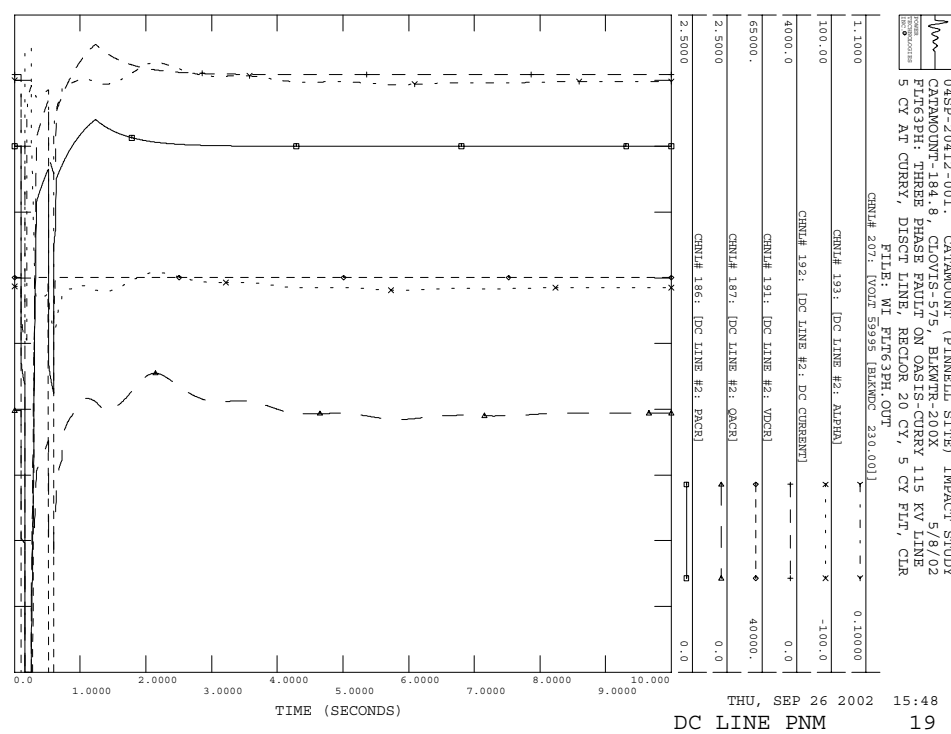
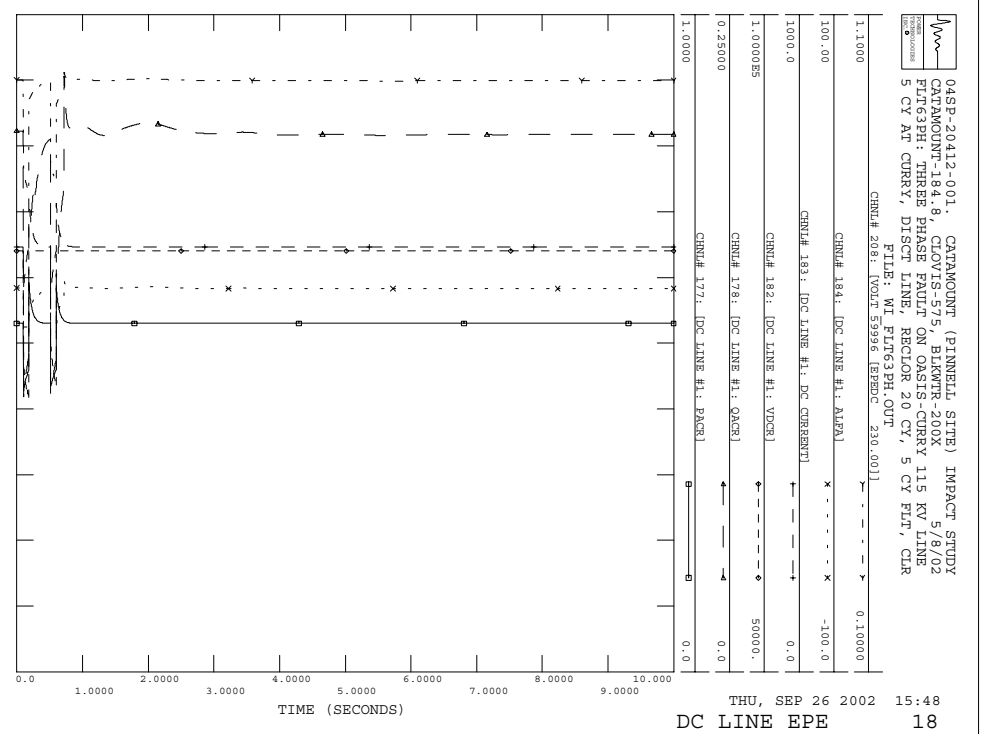
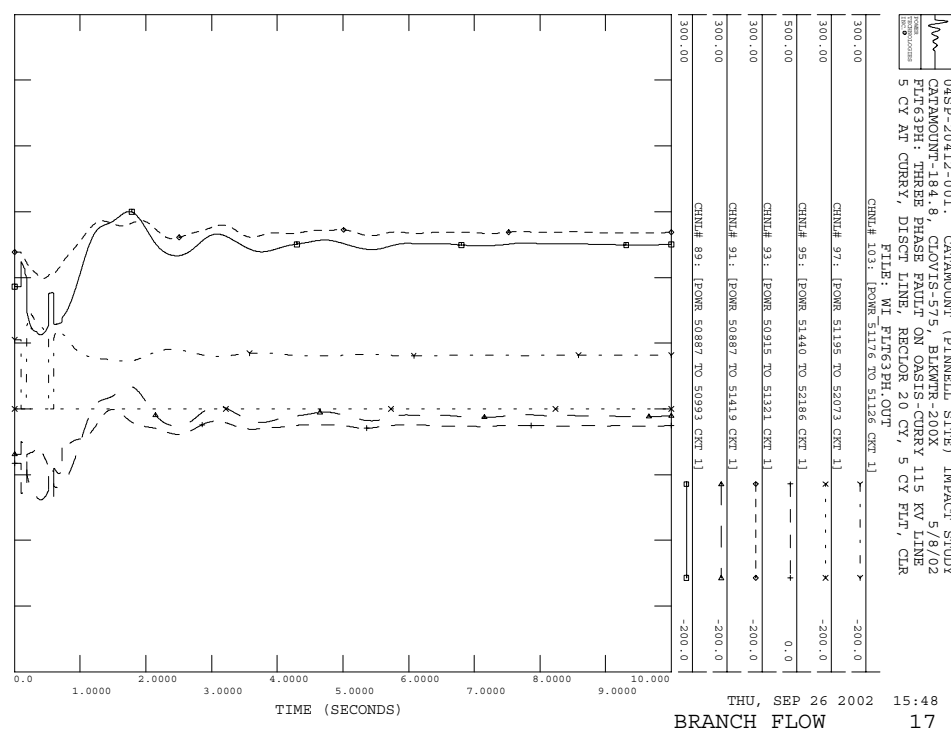


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 BRANCH FLOW 16

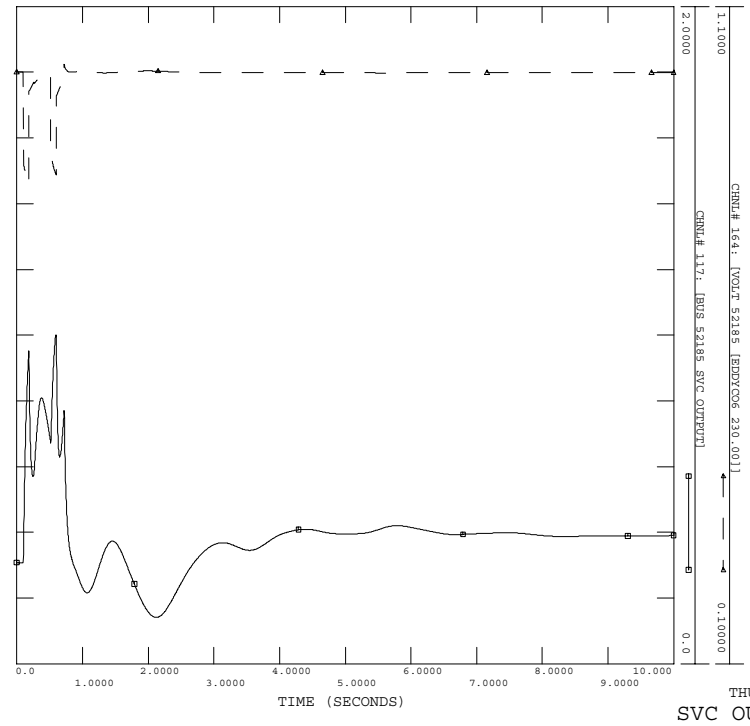
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 CATAMOUNT-184.8, CLOVIS-575, BAKWTR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT



THU, SEP 26 2002 15:48
 SPP: PELEC 15

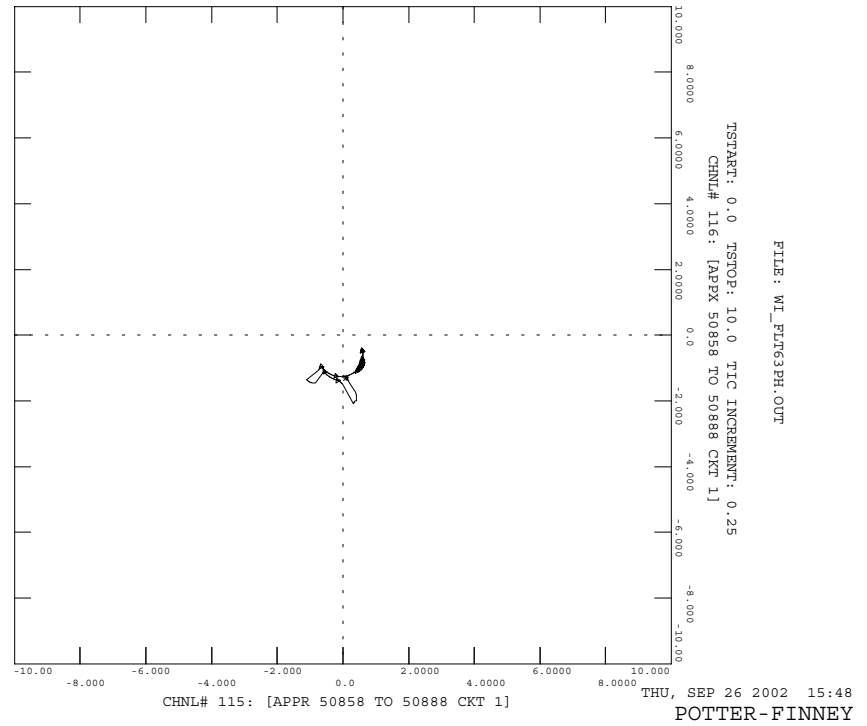


04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT



22

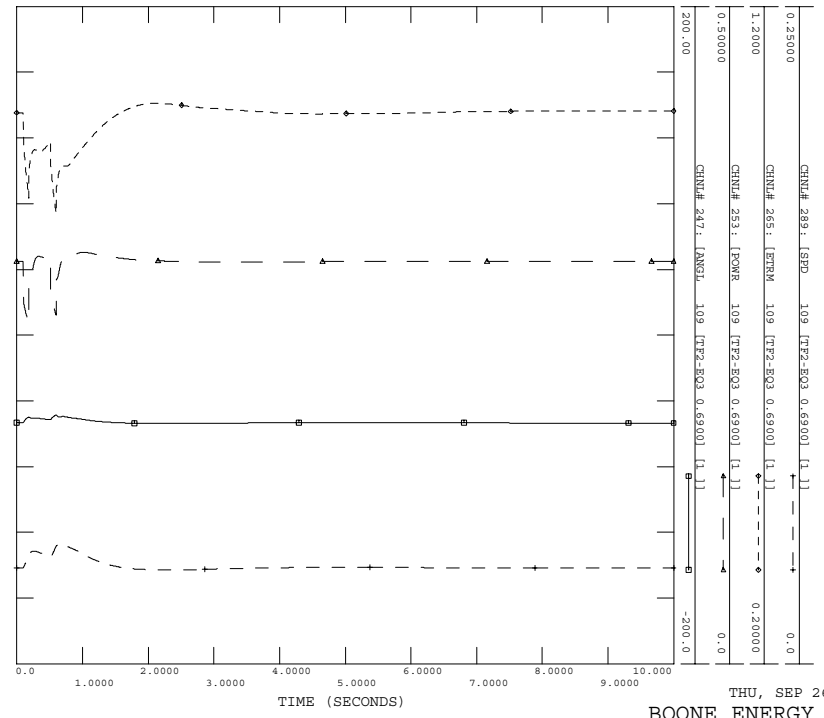
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 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT63PH.OUT



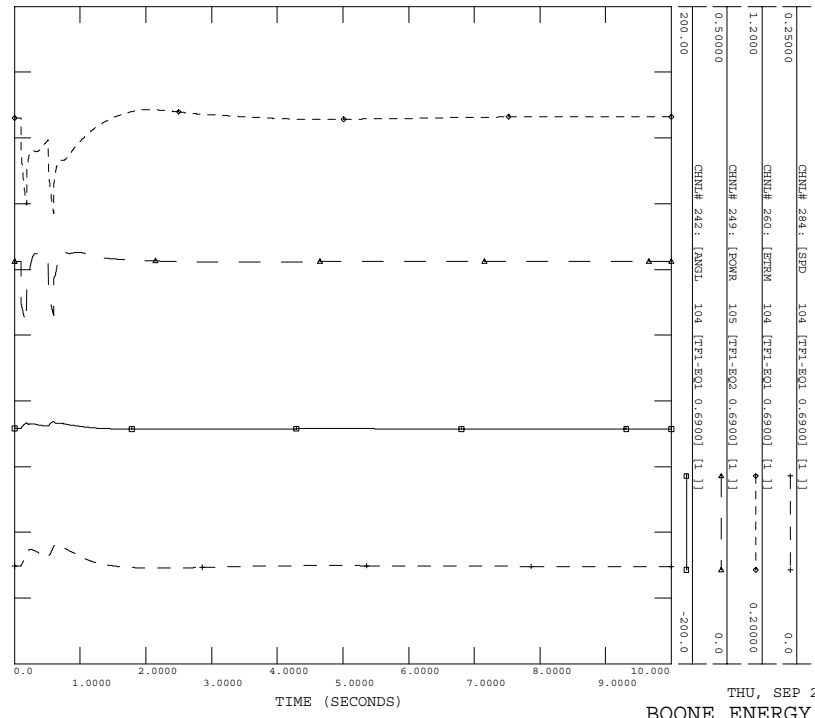
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POTTER-FINNEY

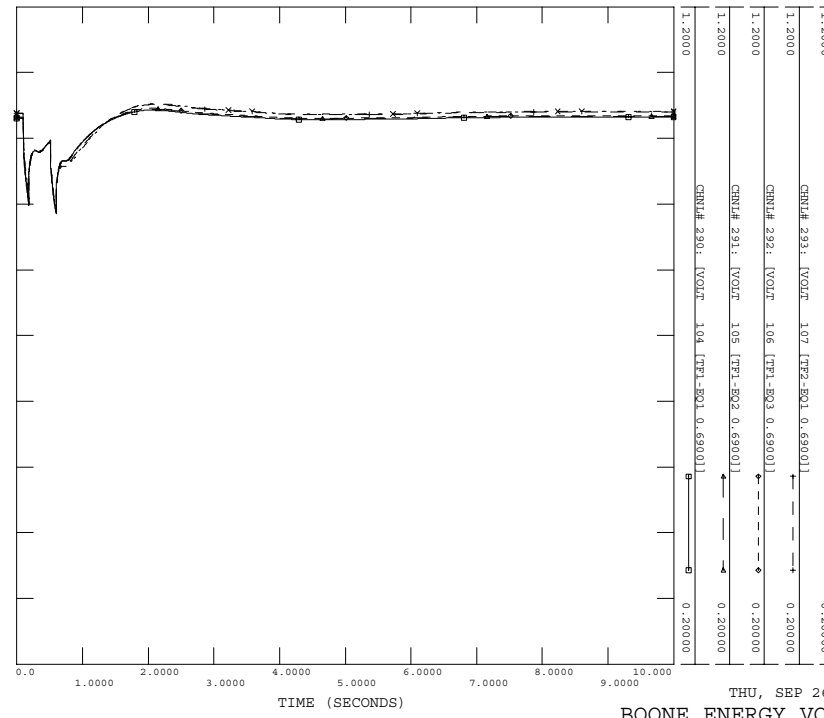
04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT



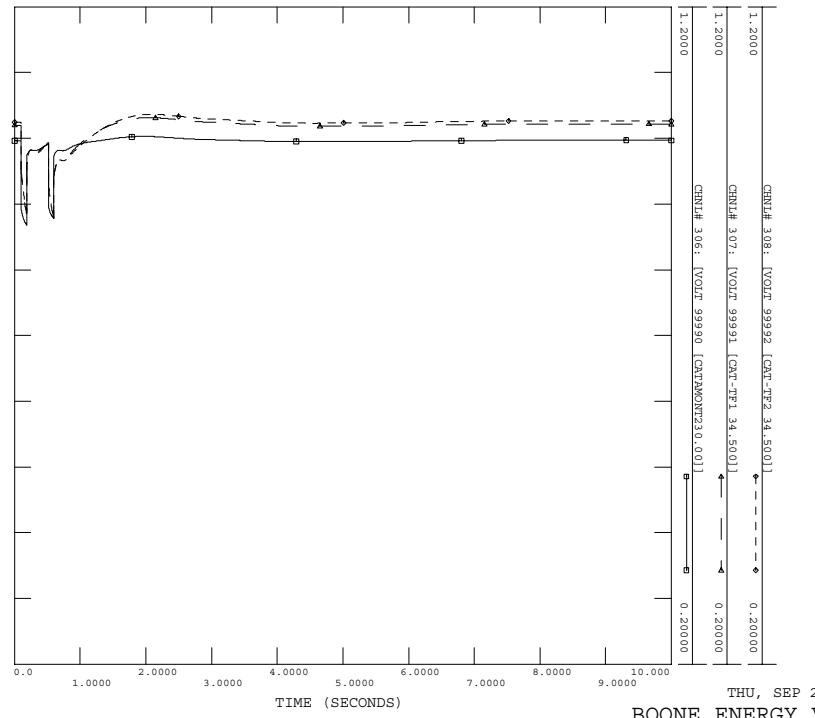
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 CATAMOUNT-184.8, CLOVIS-575, BAKWR-200X 5/8/02
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 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT

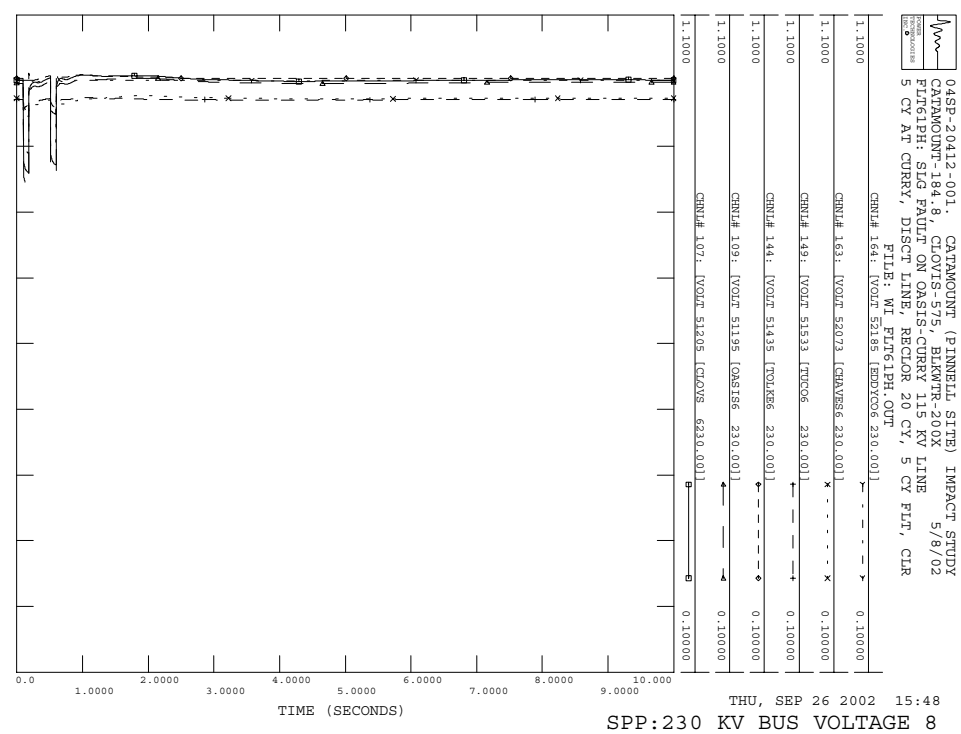
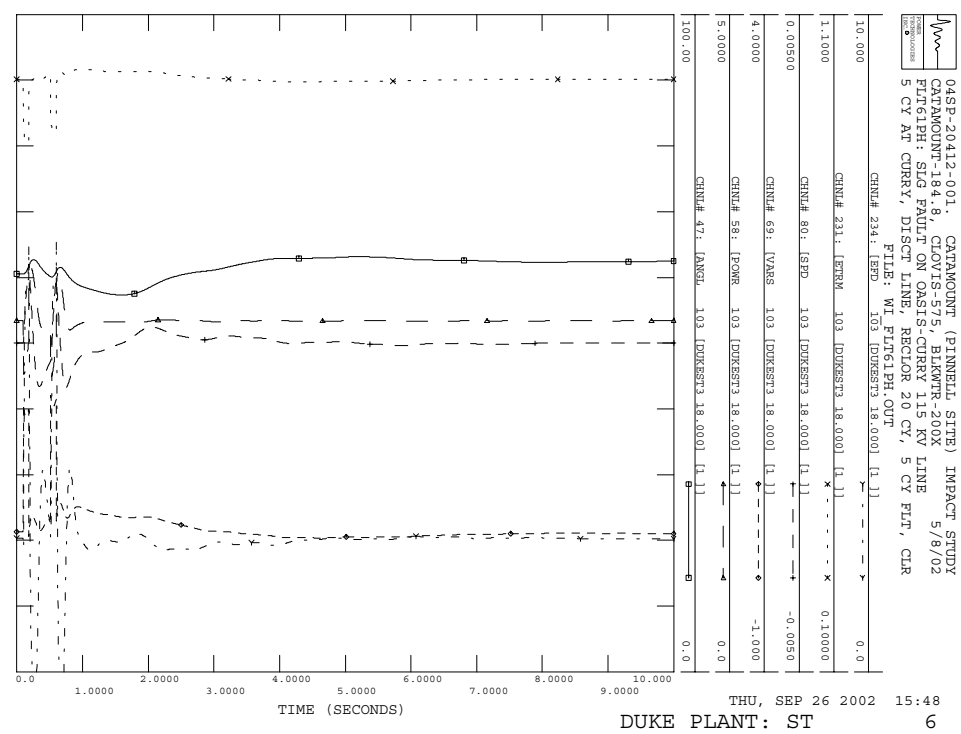
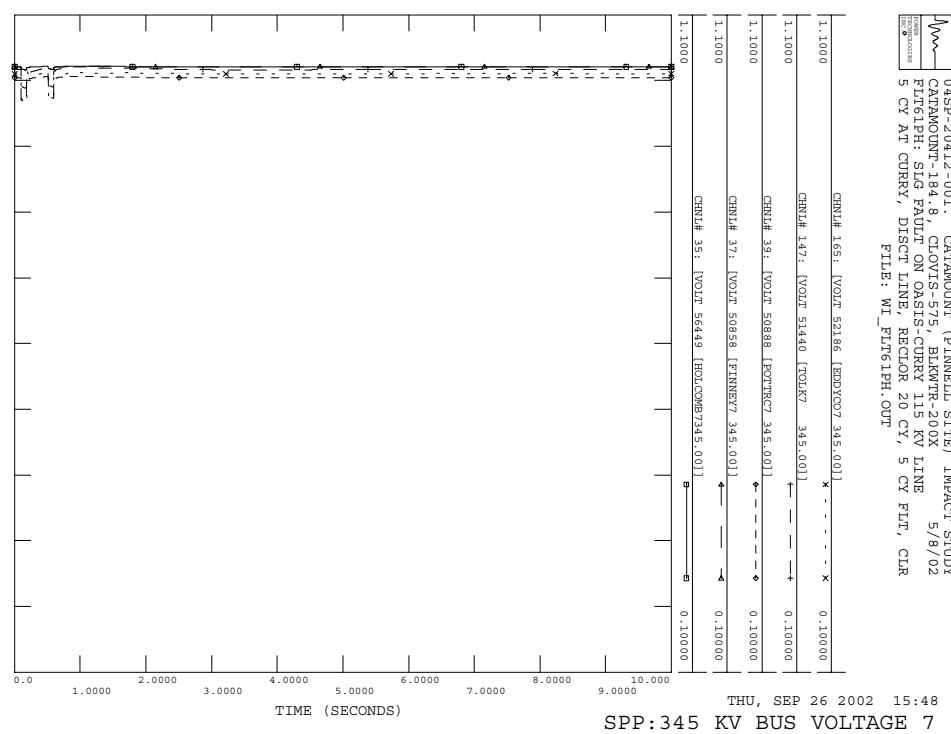
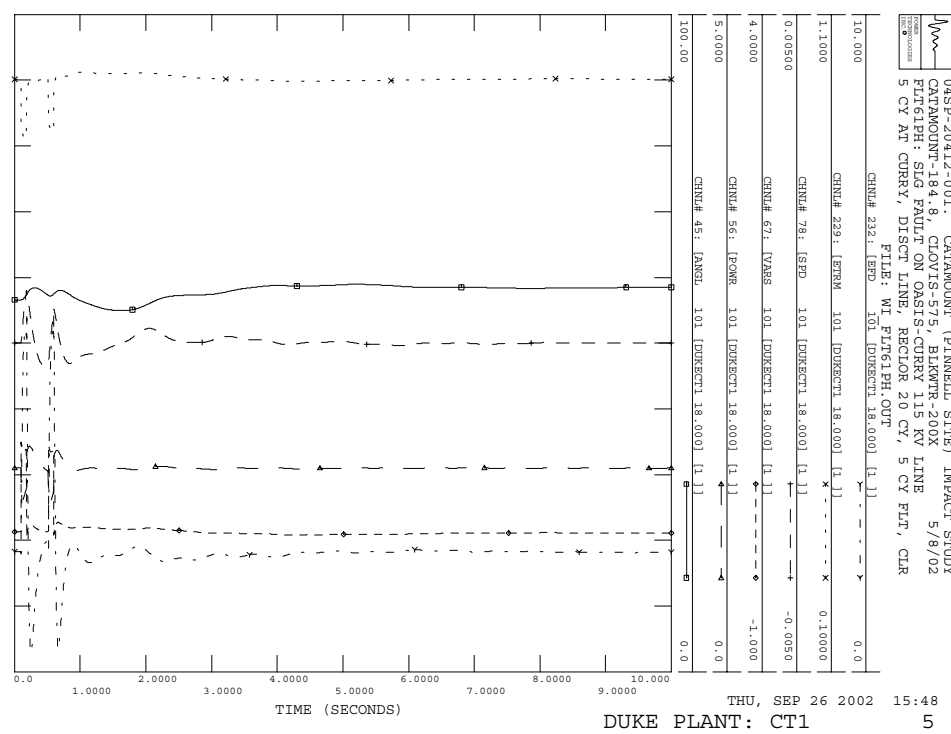


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 CATAMOUNT-184.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT

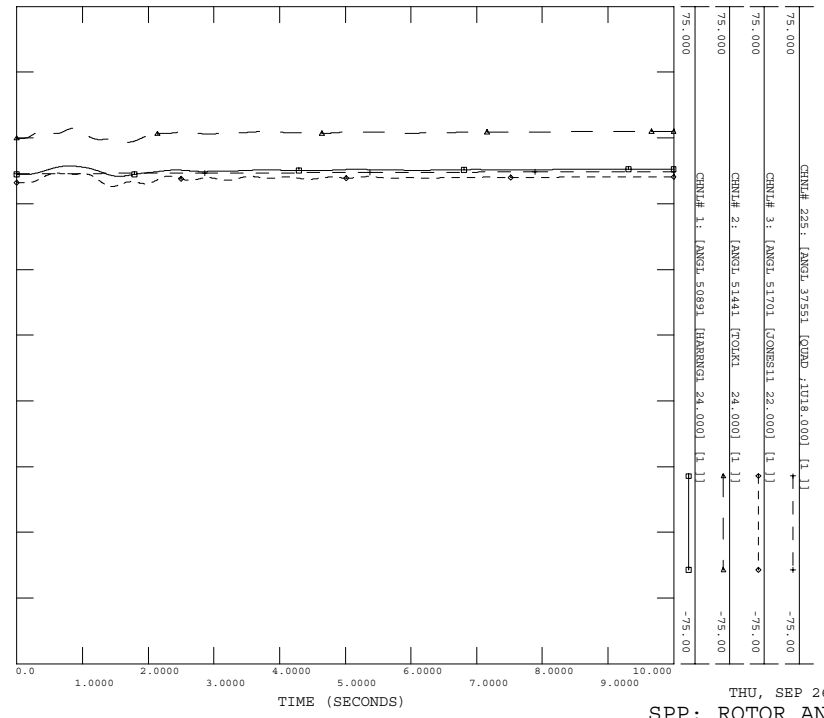


04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BAKWR-200X 5/8/02
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT

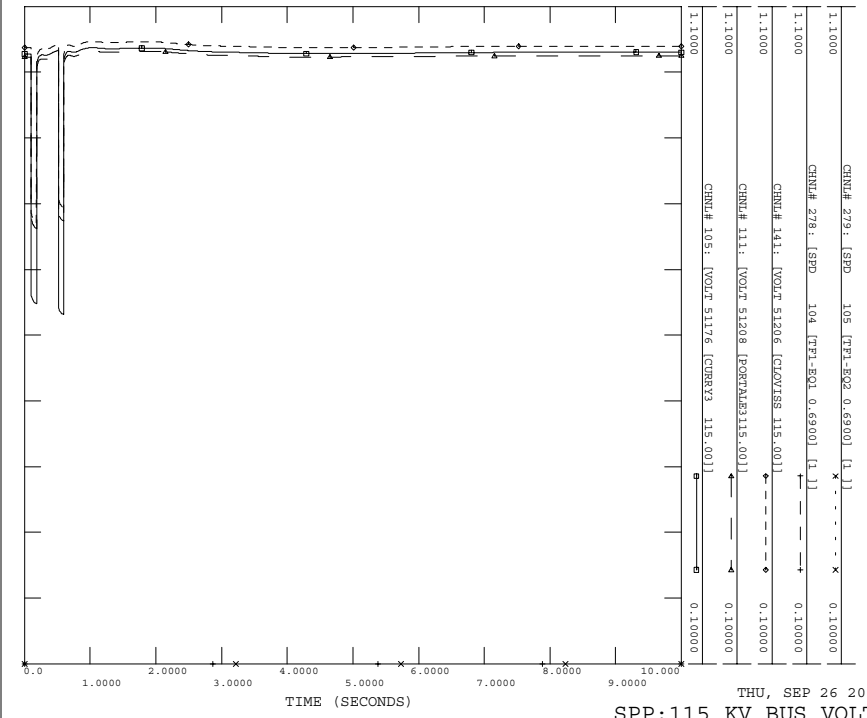




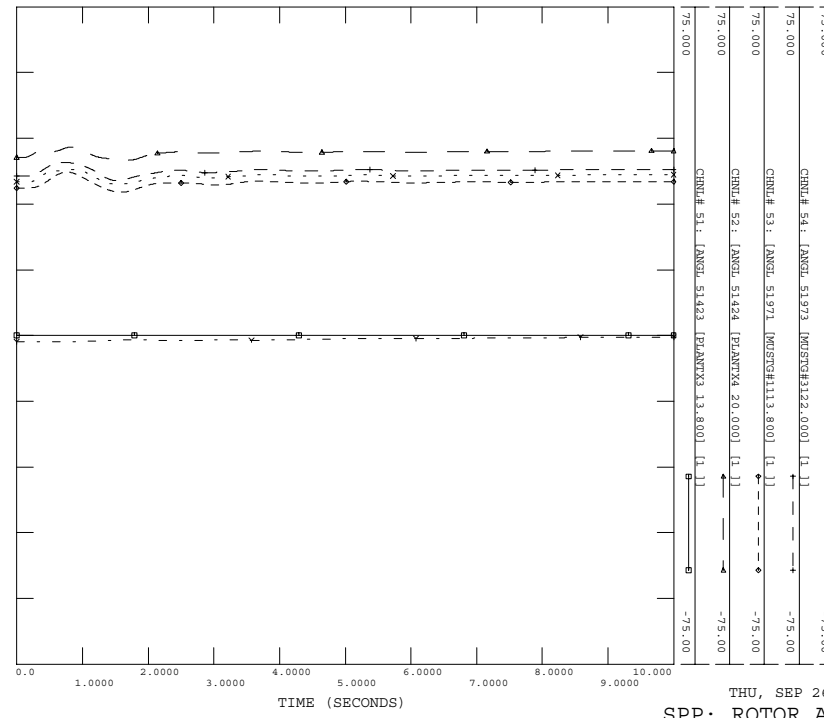
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 CATAMOUNT-184.8, CLOVIS-575, BARKER-200X 5/8/02
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 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT



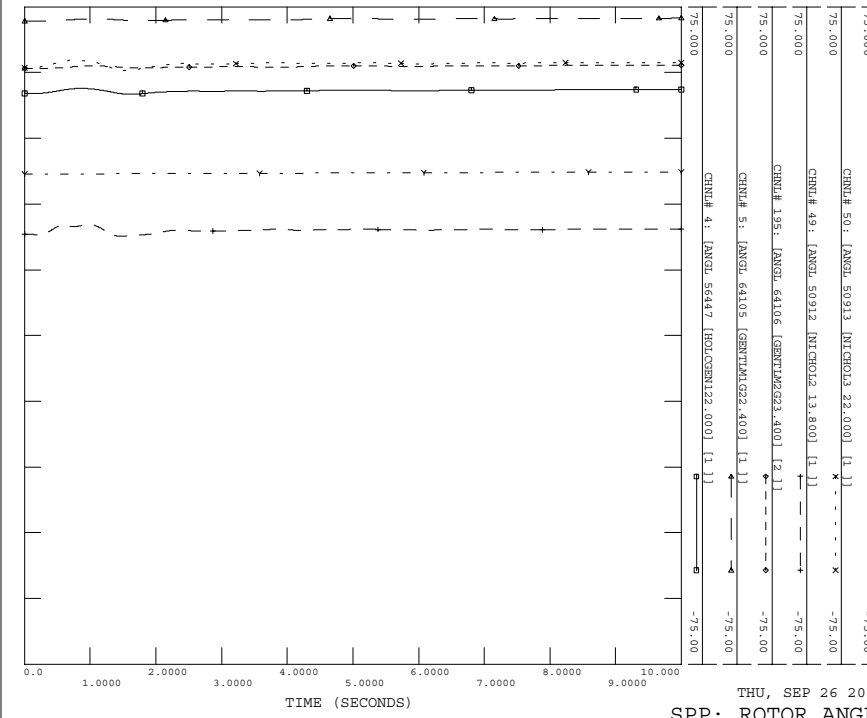
04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BARKER-200X 5/8/02
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT



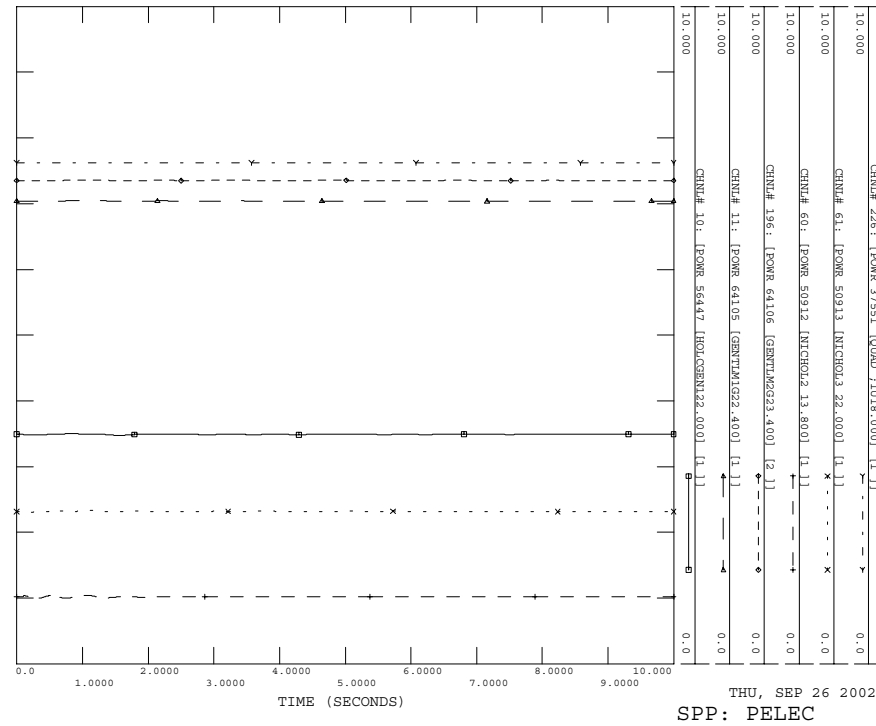
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 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT



04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BARKER-200X 5/8/02
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT

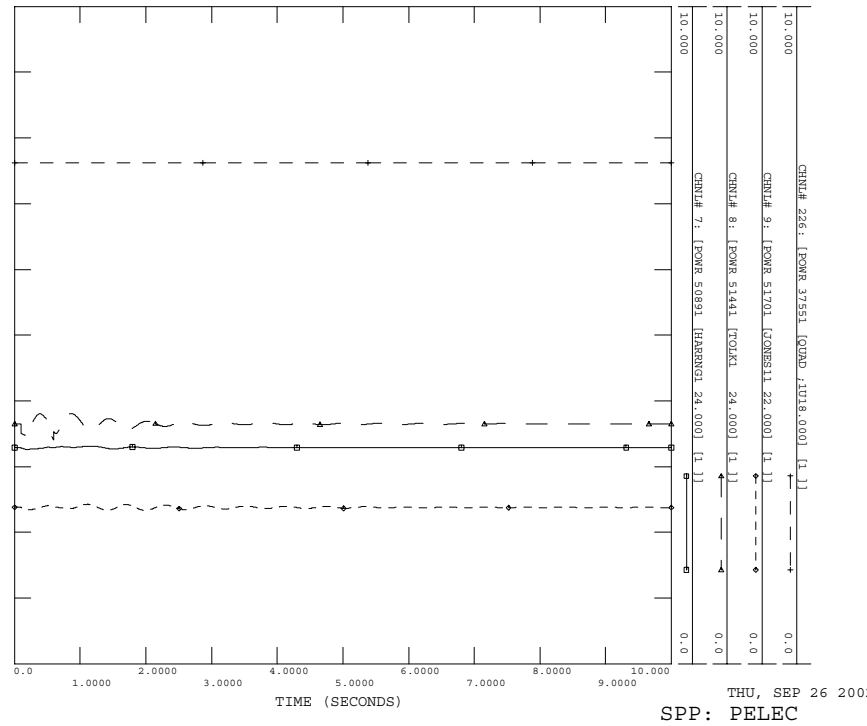


04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWTR-200X 5/8/02
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT



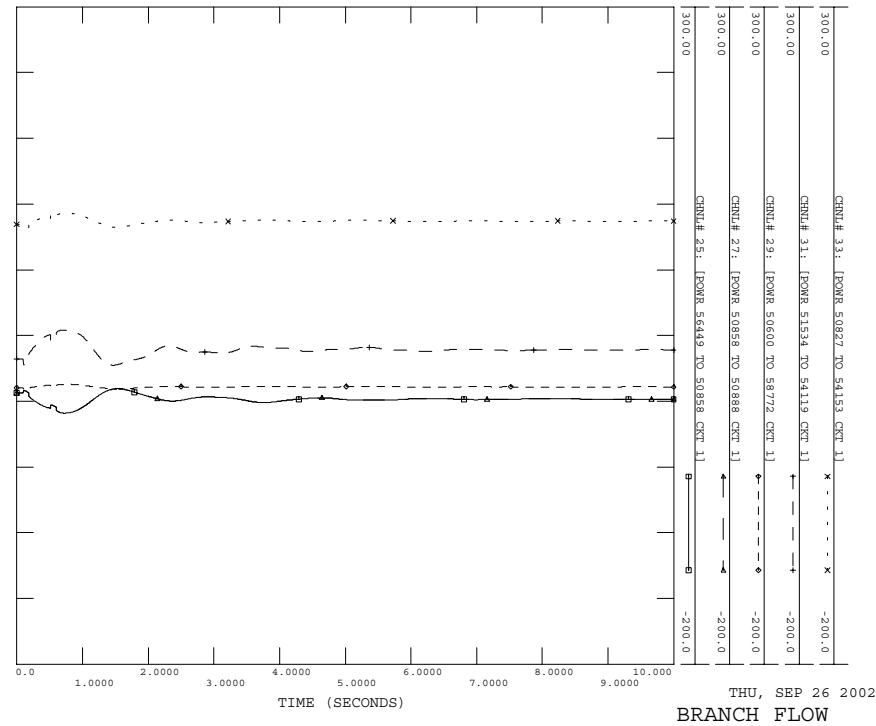
THU, SEP 26 2002 15:48
 SPP: PELEC 14

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWTR-200X 5/8/02
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT



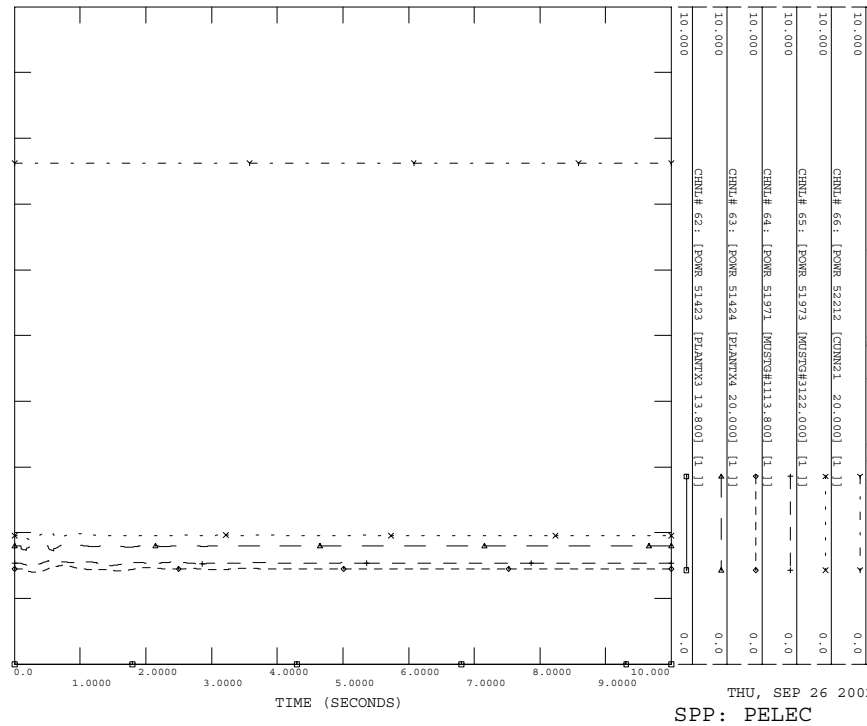
THU, SEP 26 2002 15:48
 SPP: PELEC 13

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWTR-200X 5/8/02
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT

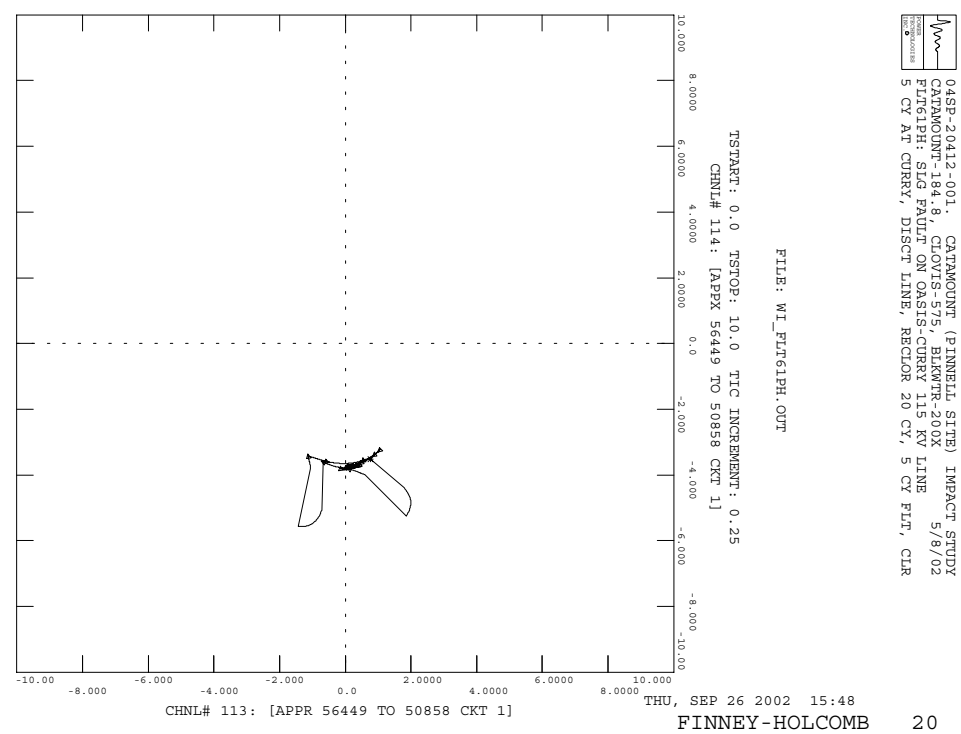
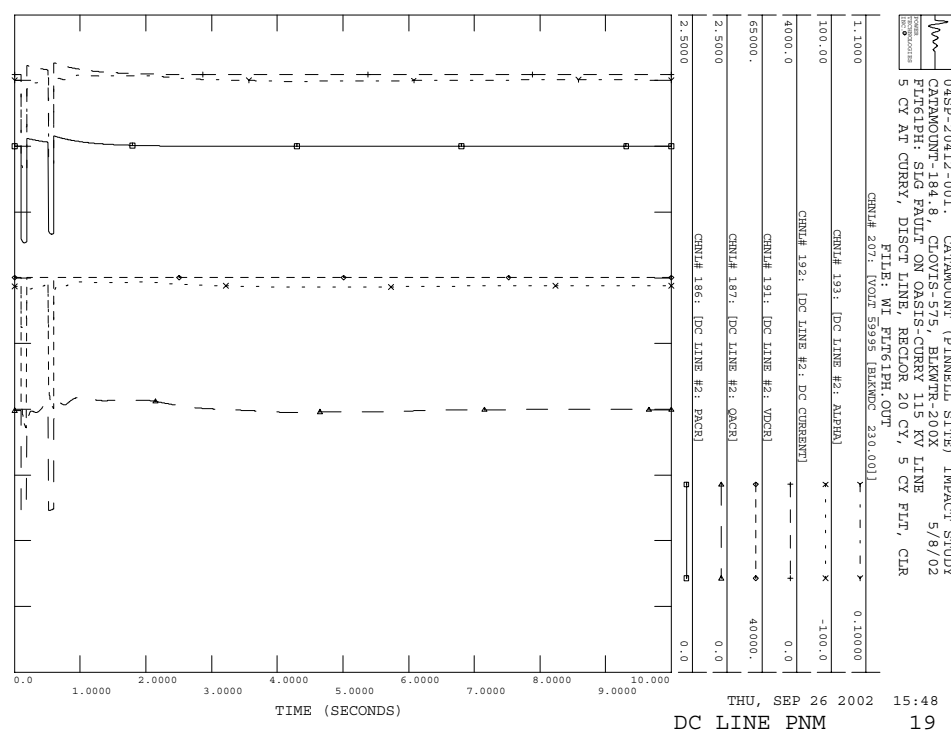
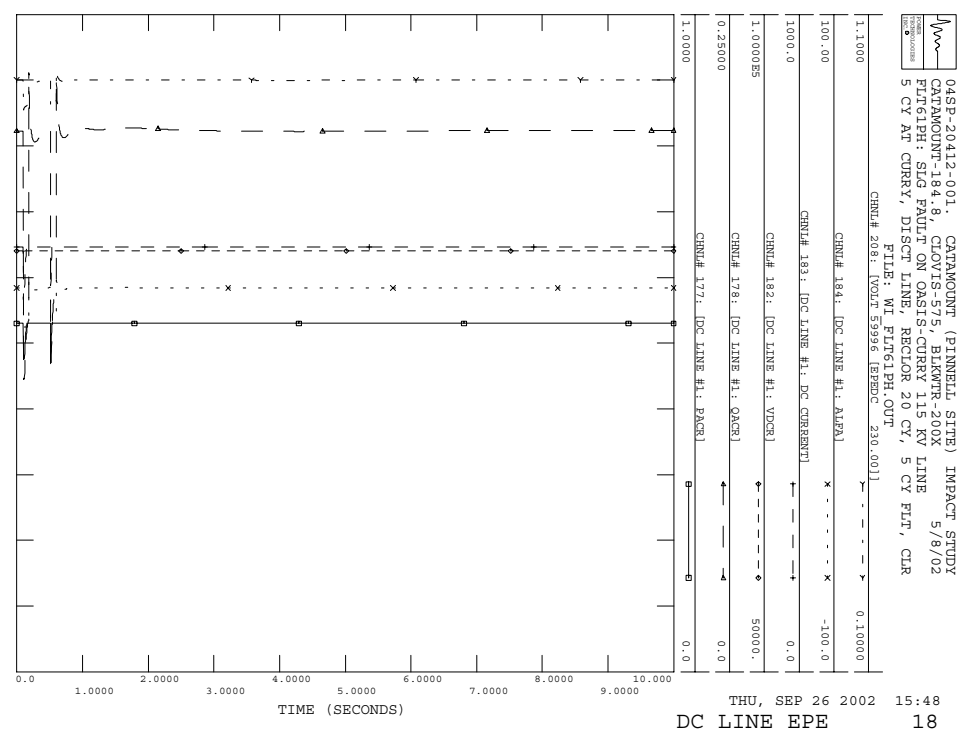
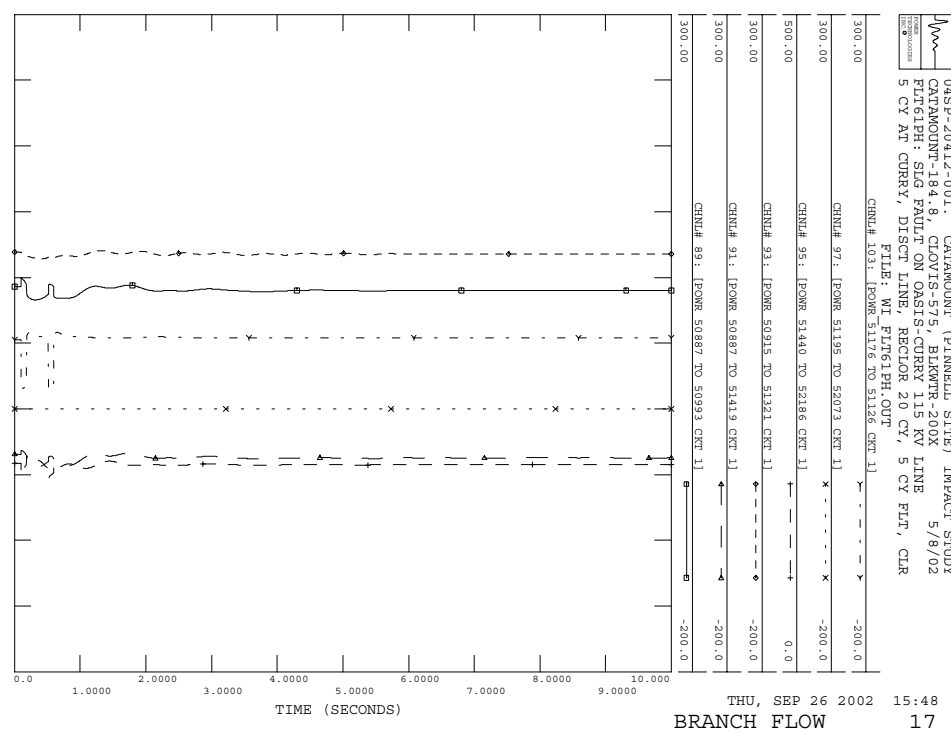


THU, SEP 26 2002 15:48
 BRANCH FLOW 16

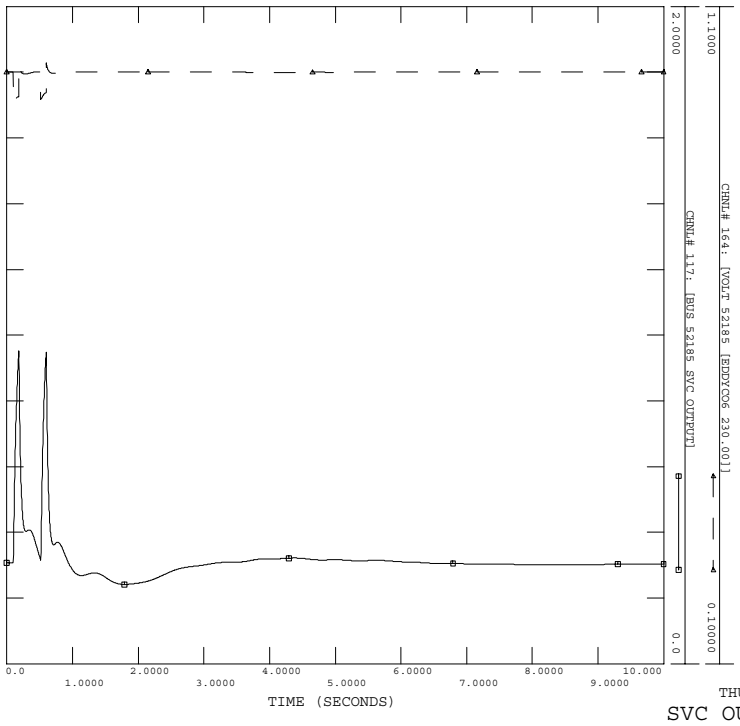
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKWTR-200X 5/8/02
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT



THU, SEP 26 2002 15:48
 SPP: PELEC 15

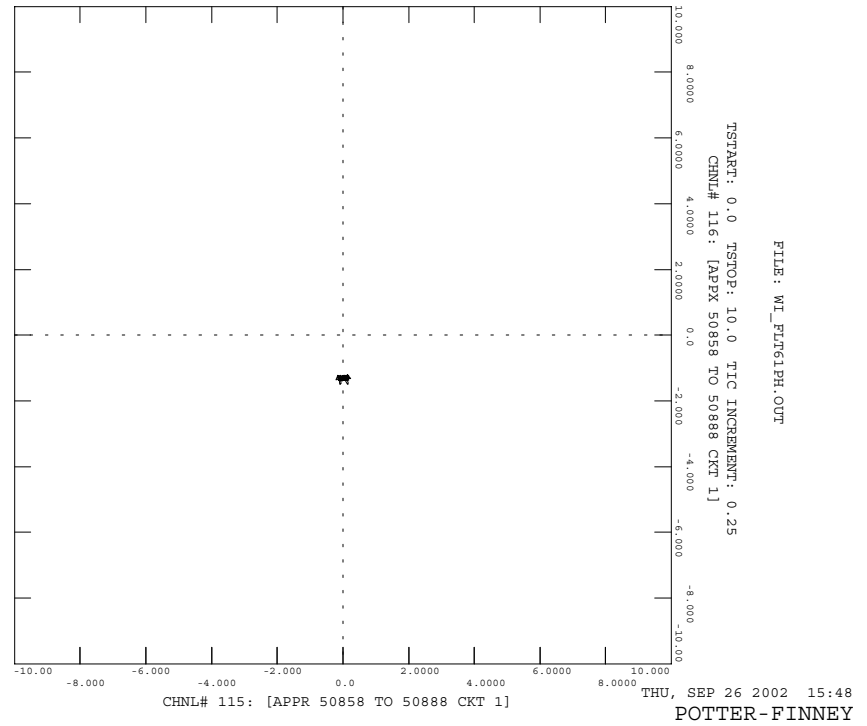


04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMTR-200X 5/8/02
 FLT61PH: SLG PAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT



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04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMTR-200X 5/8/02
 FLT61PH: SLG PAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT61PH.OUT

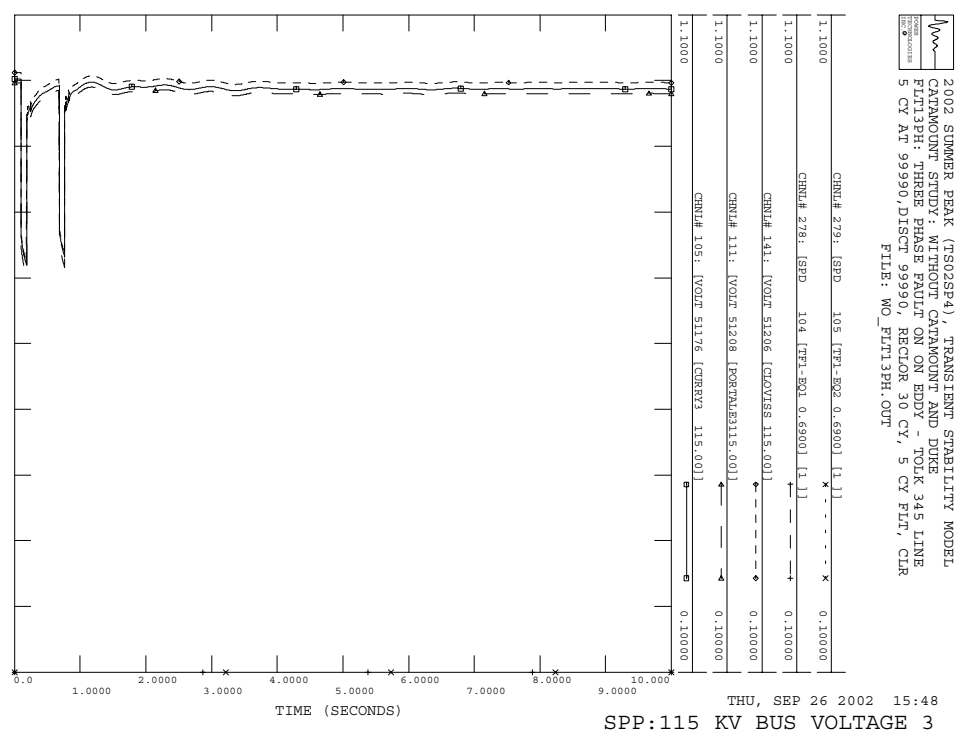
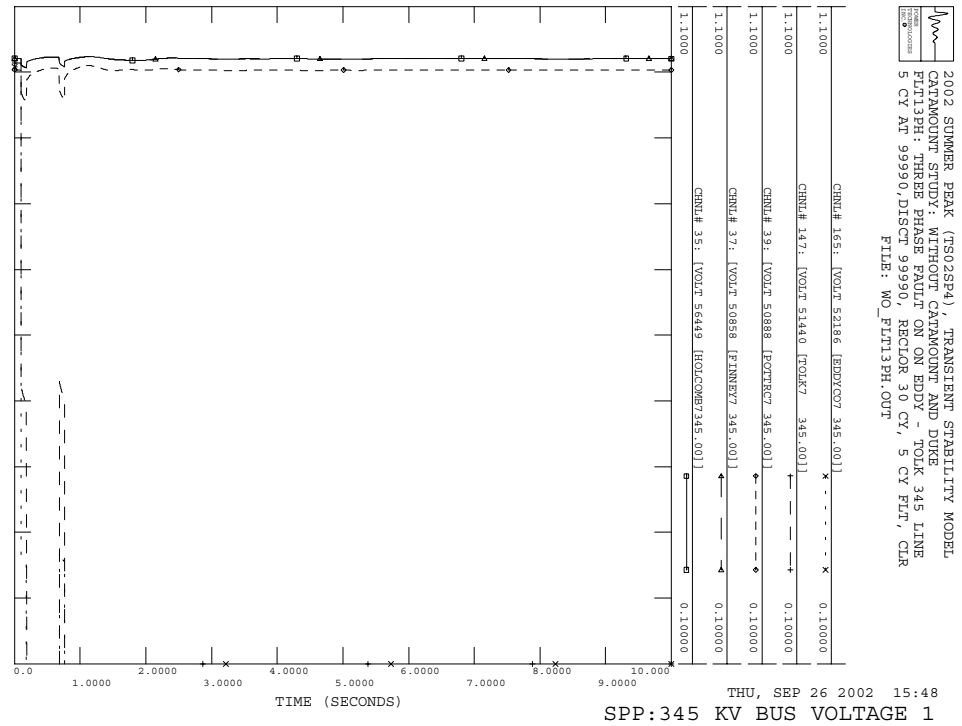
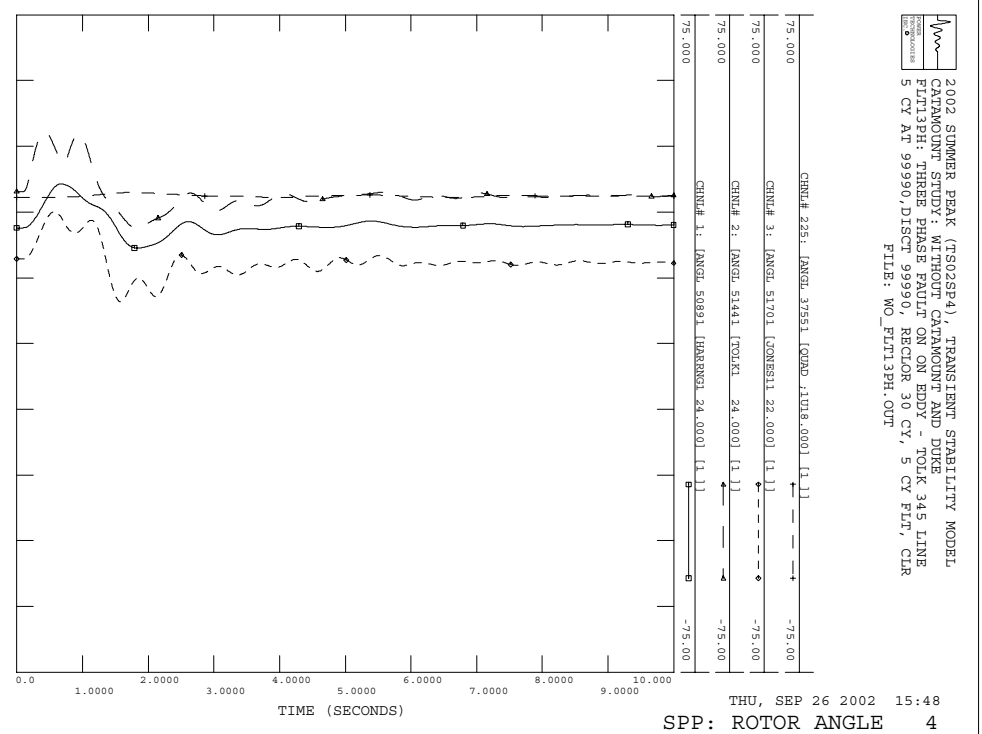
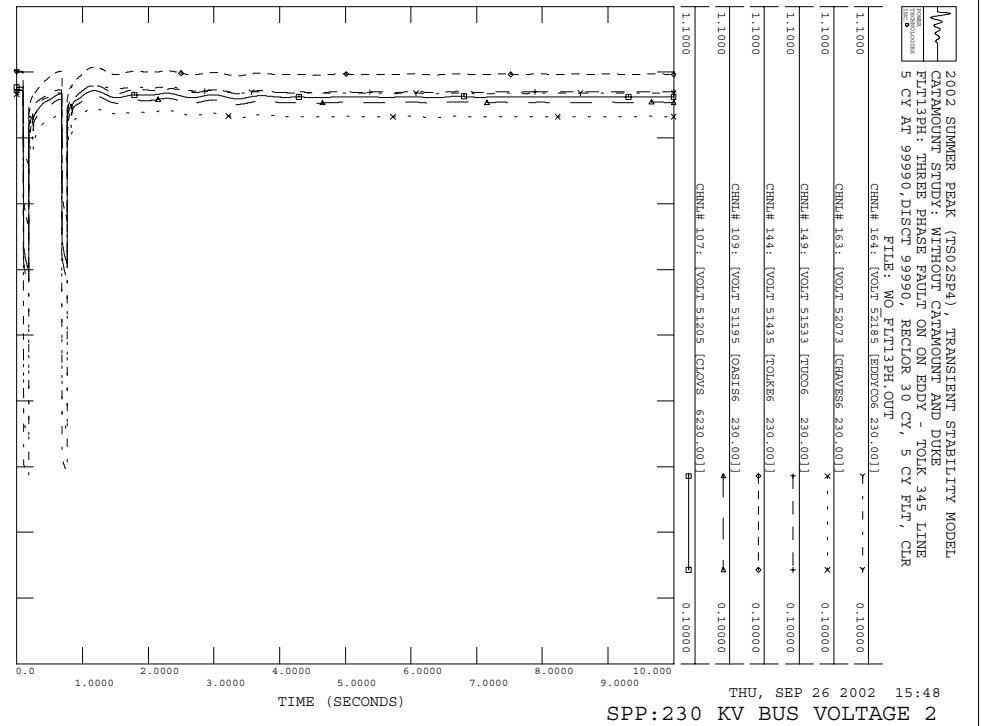


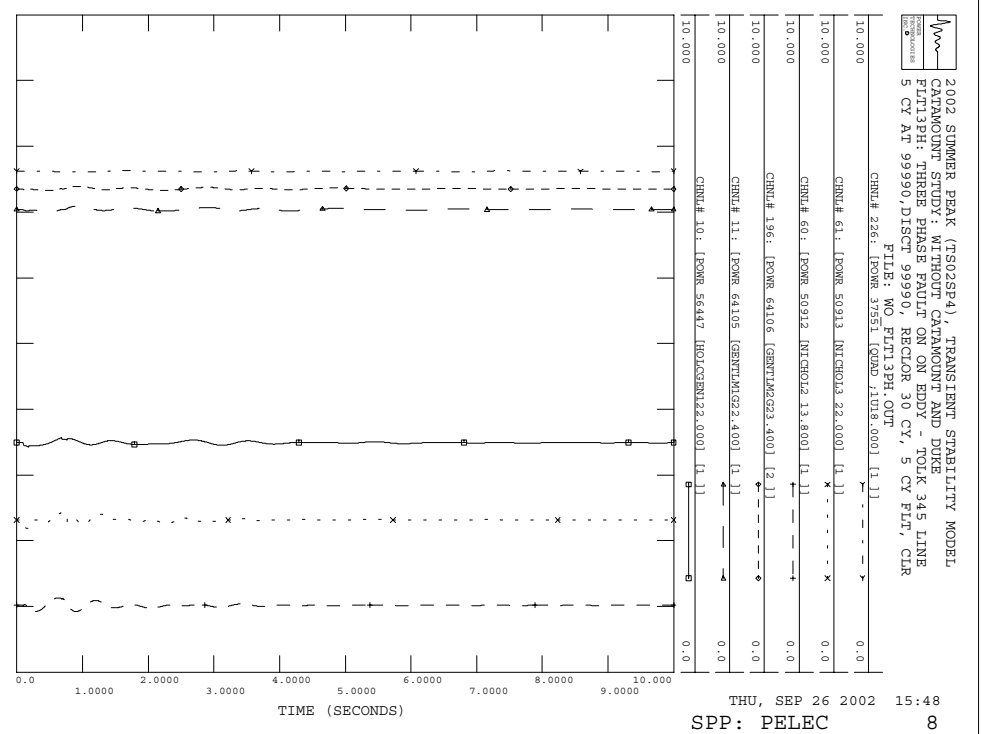
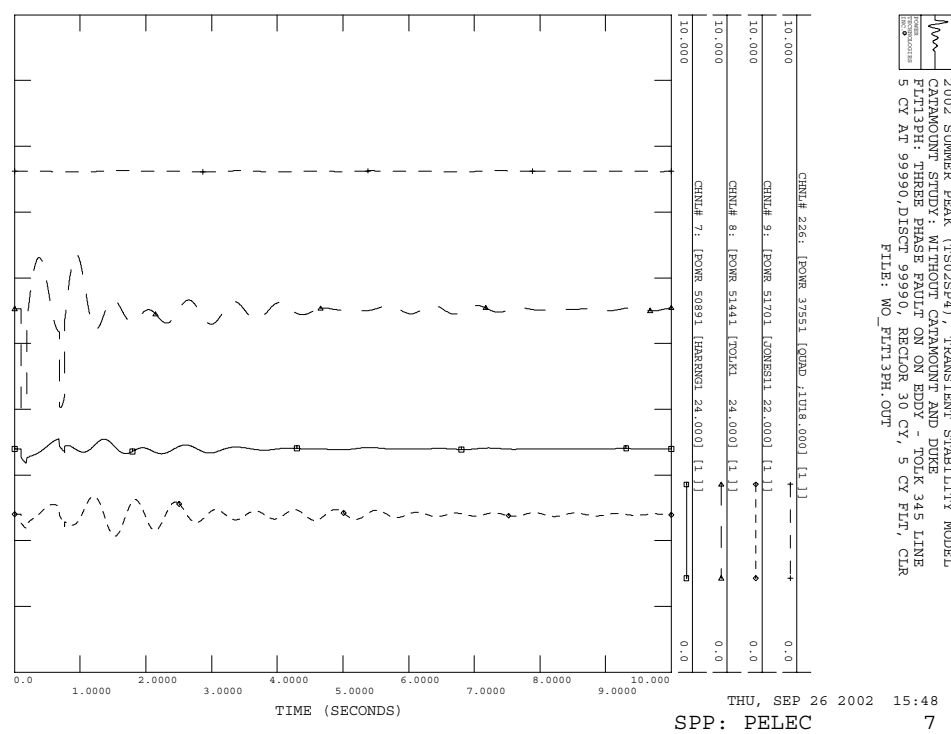
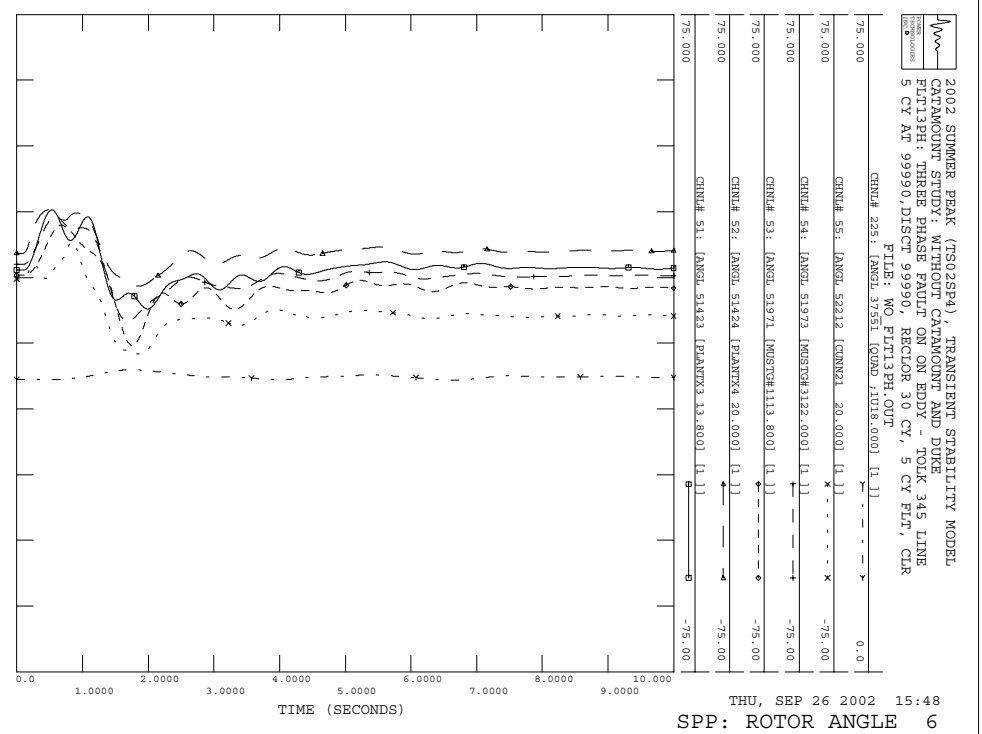
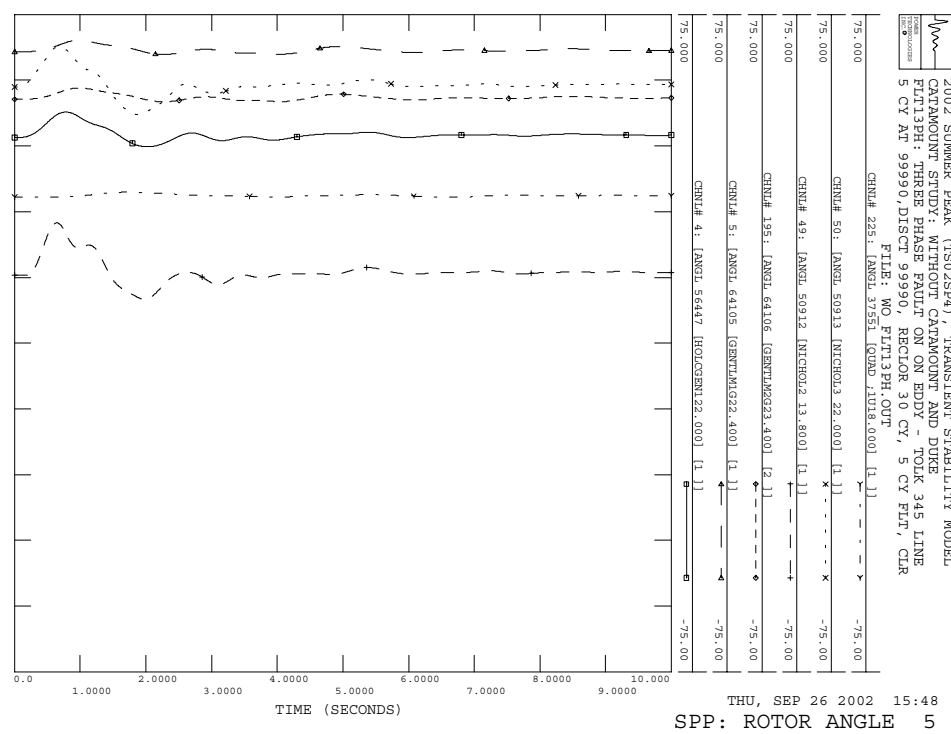
POTTER-FINNEY

21

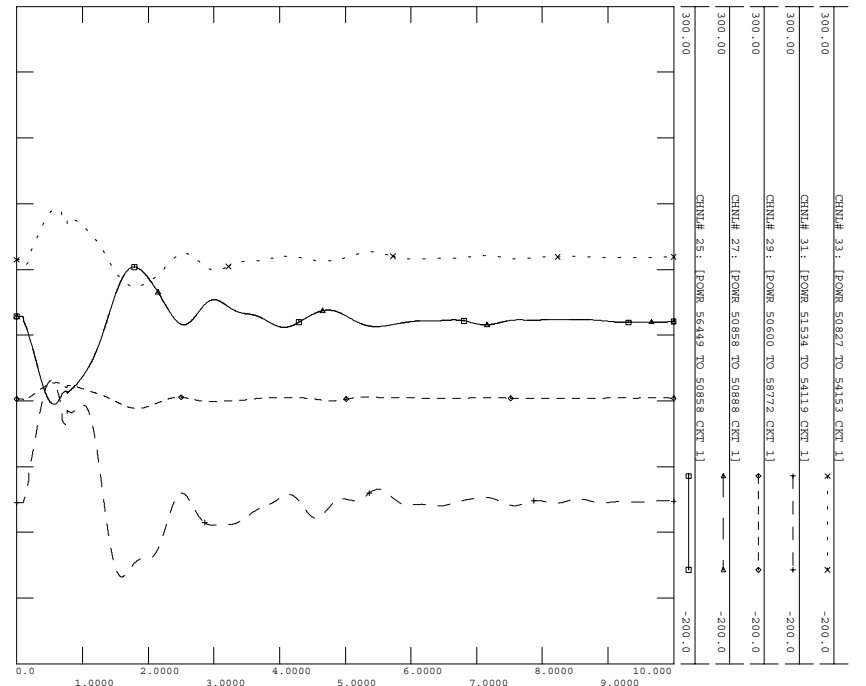
B.2 Specified Disturbances without Boone Energy Project in-service

- FLT13PH
- FLT11PH
- FLT23PH
- FLT21PH
- FLT33PH
- FLT31PH
- FLT43PH
- FLT41PH
- FLT53PH
- FLT51PH
- FLT63PH
- FLT61PH



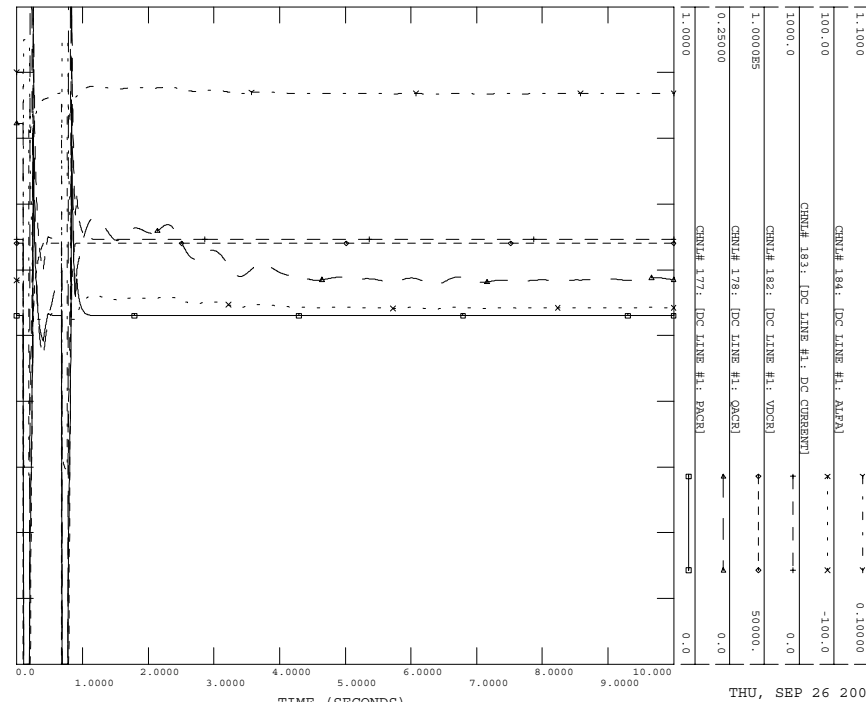


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLT13PH.OUT



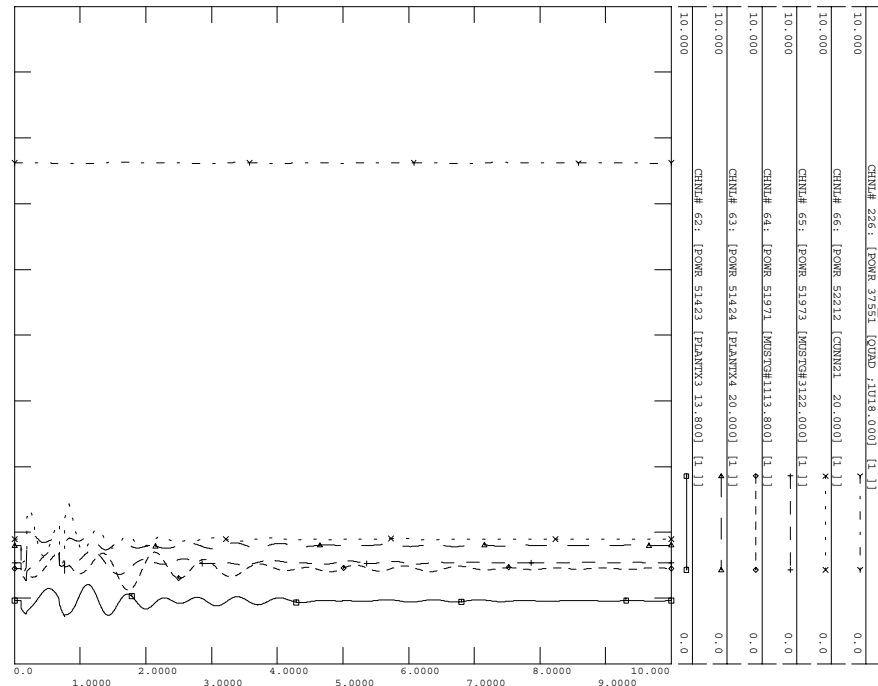
THU, SEP 26 2002 15:48
 SPP: PELEC 9
 BRANCH FLOW 10

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLT13PH.OUT



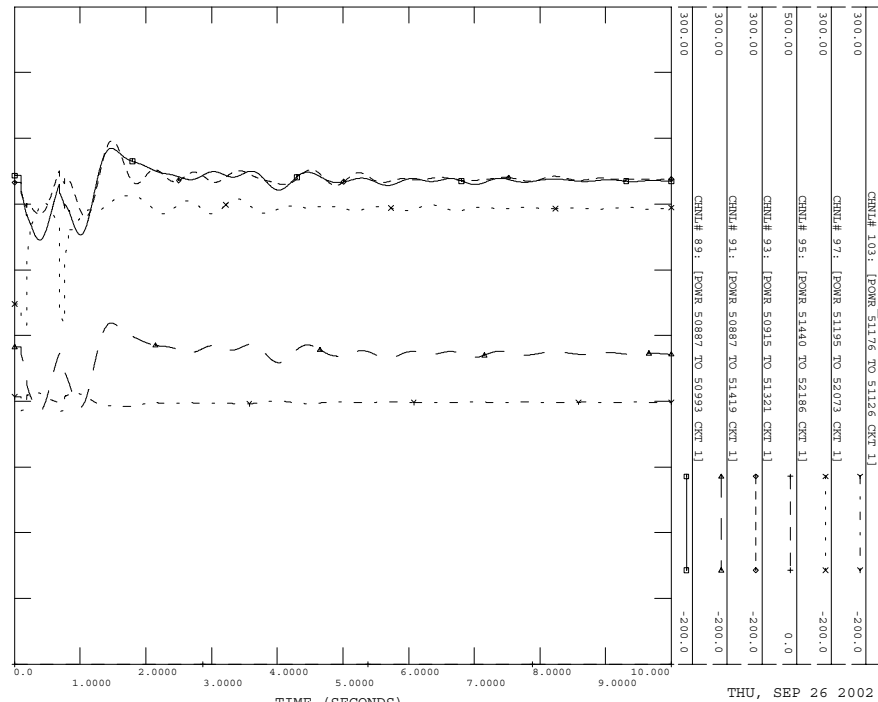
THU, SEP 26 2002 15:48
 DC LINE EPE 12

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLT13PH.OUT



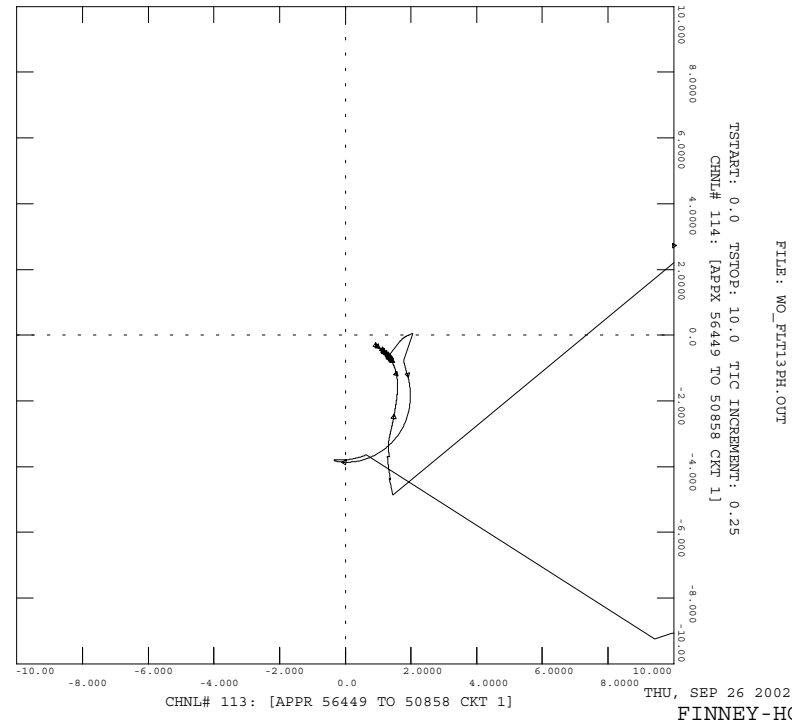
THU, SEP 26 2002 15:48
 SPP: PELEC 9

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLT13PH.OUT

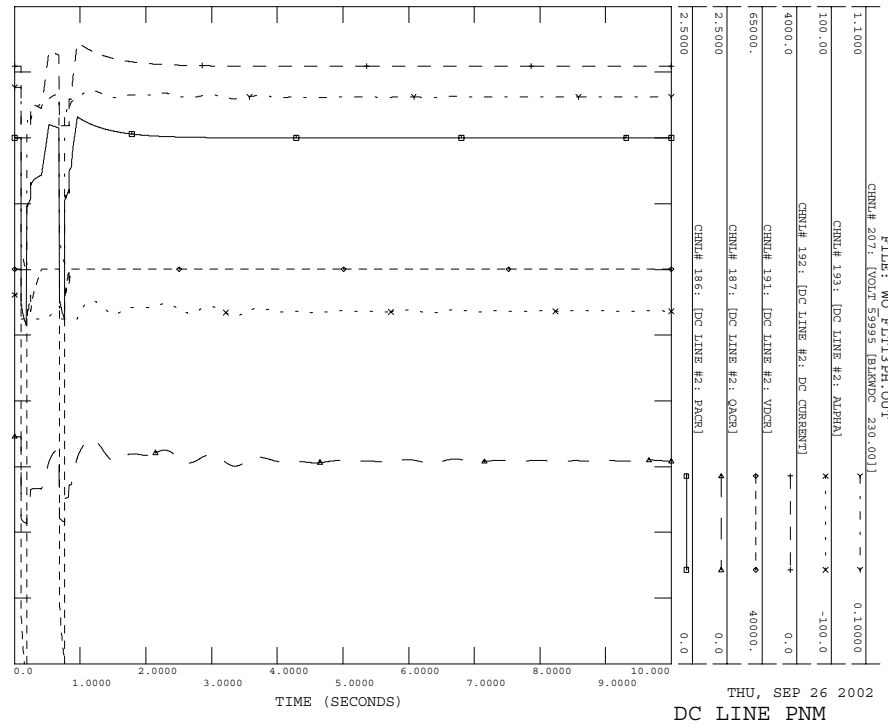


THU, SEP 26 2002 15:48
 BRANCH FLOW 11

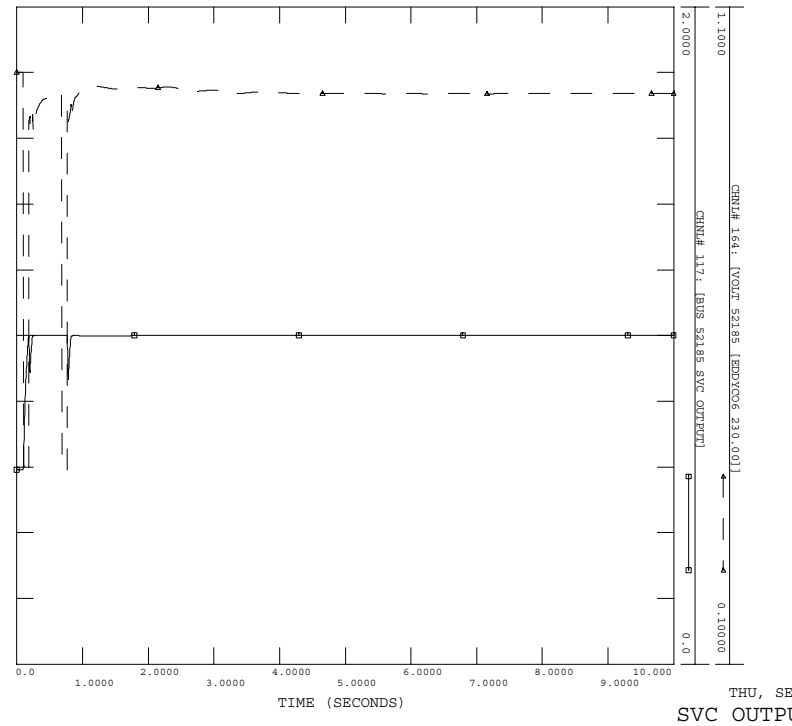
2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLT13PH.OUT



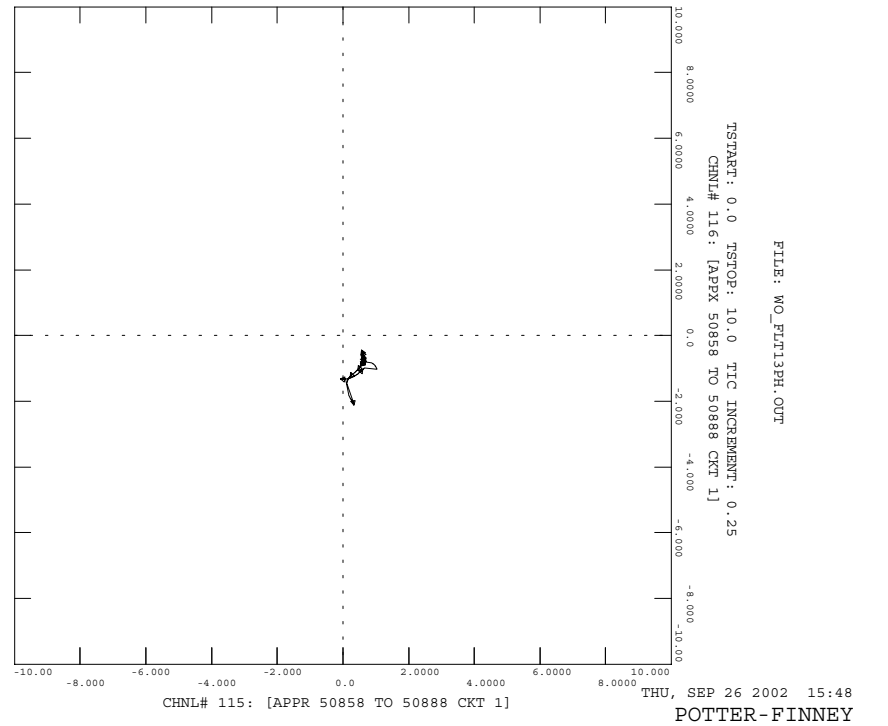
2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLT13PH.OUT
 CHNL# 207: [VOLT 59995-BLANKS-230.001]

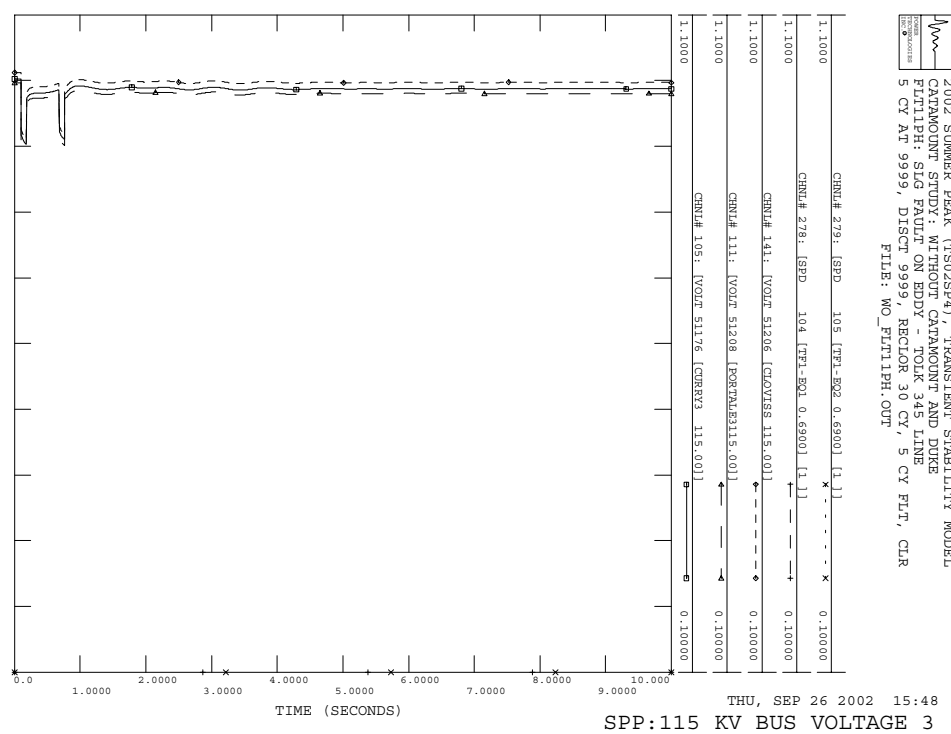
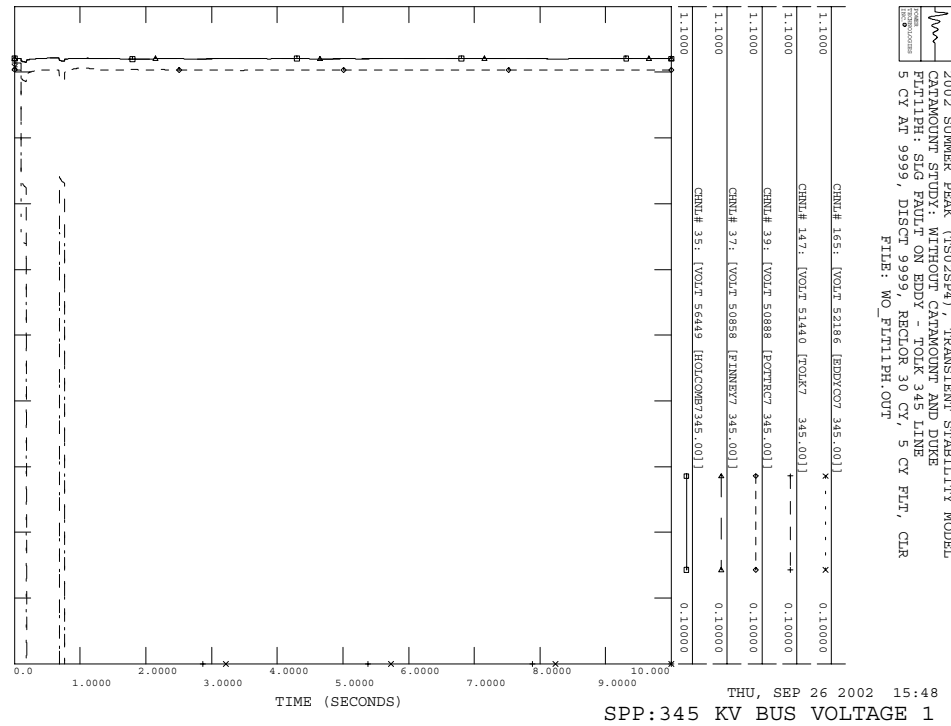
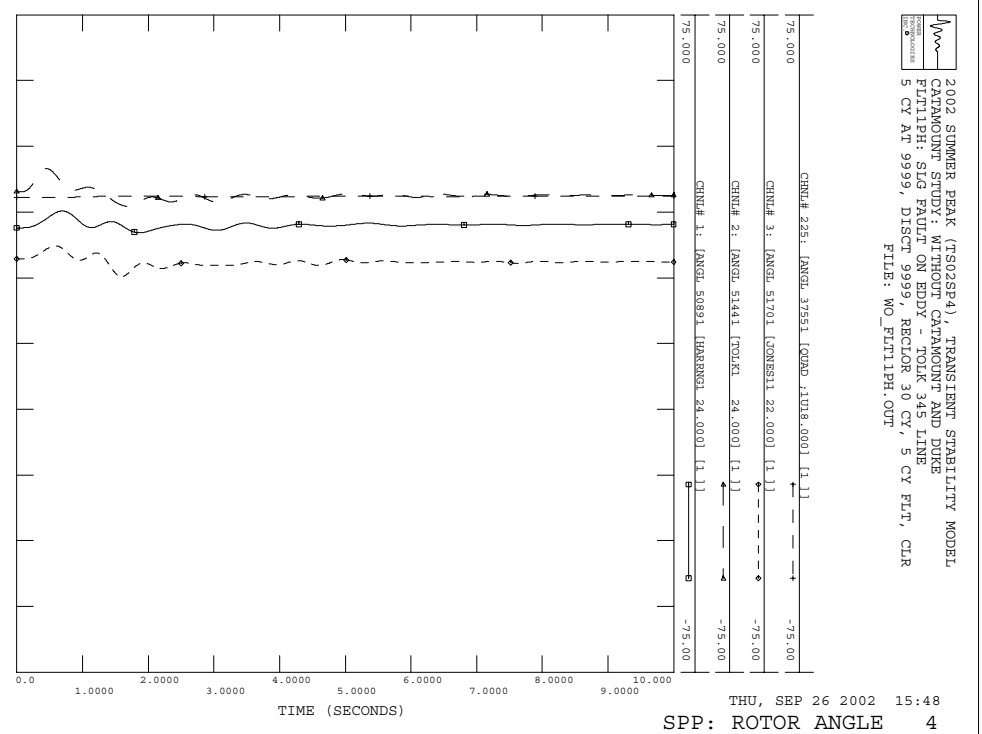
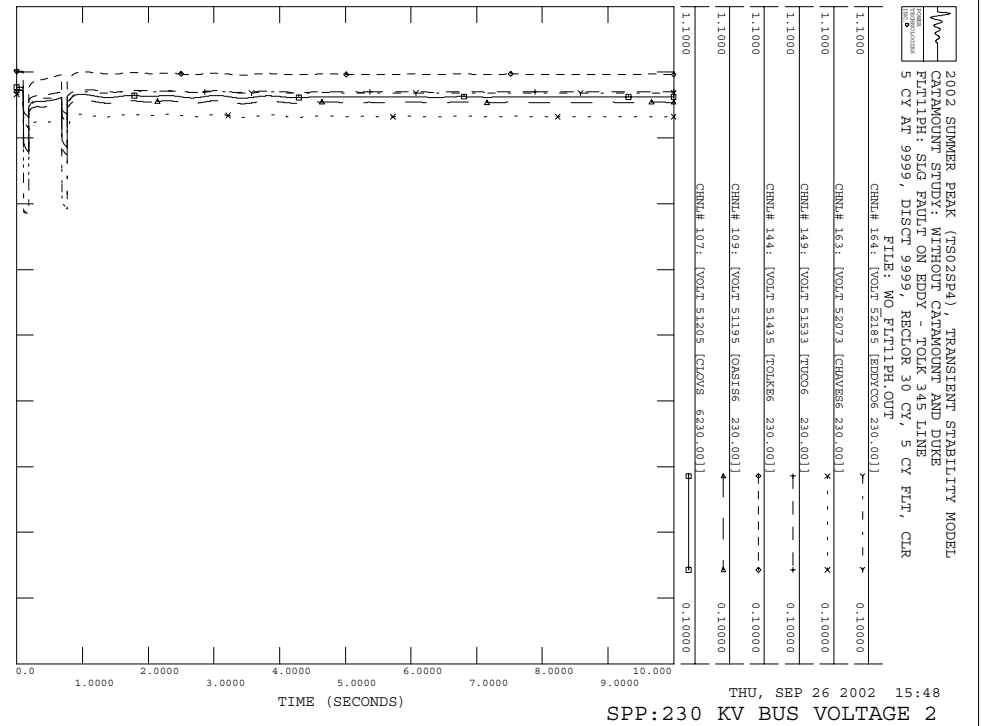


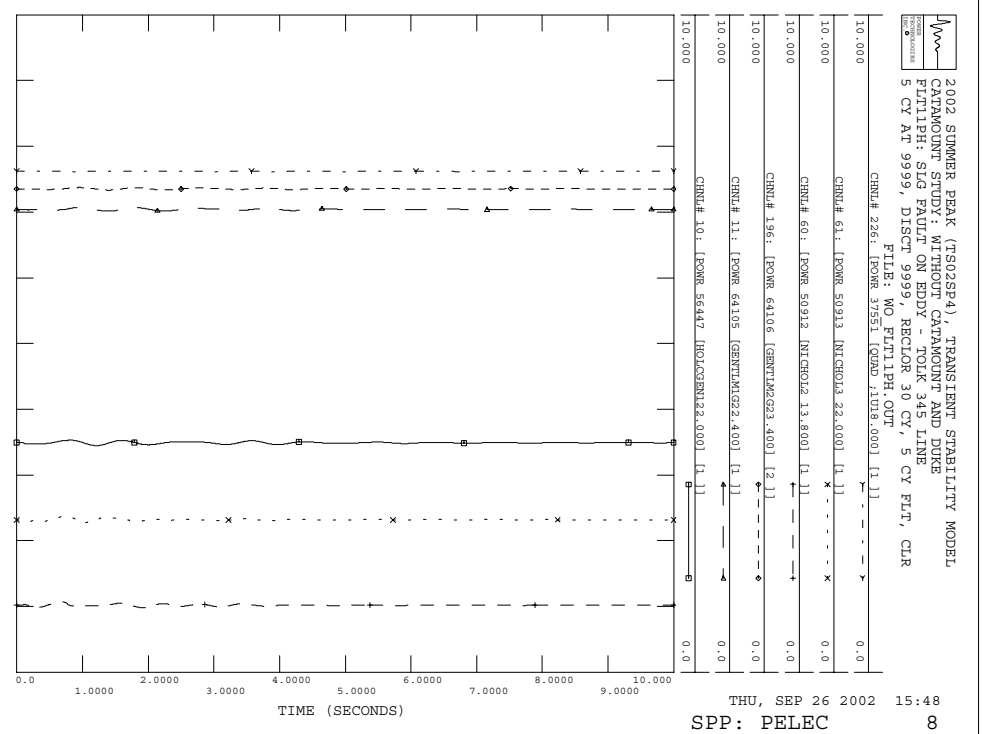
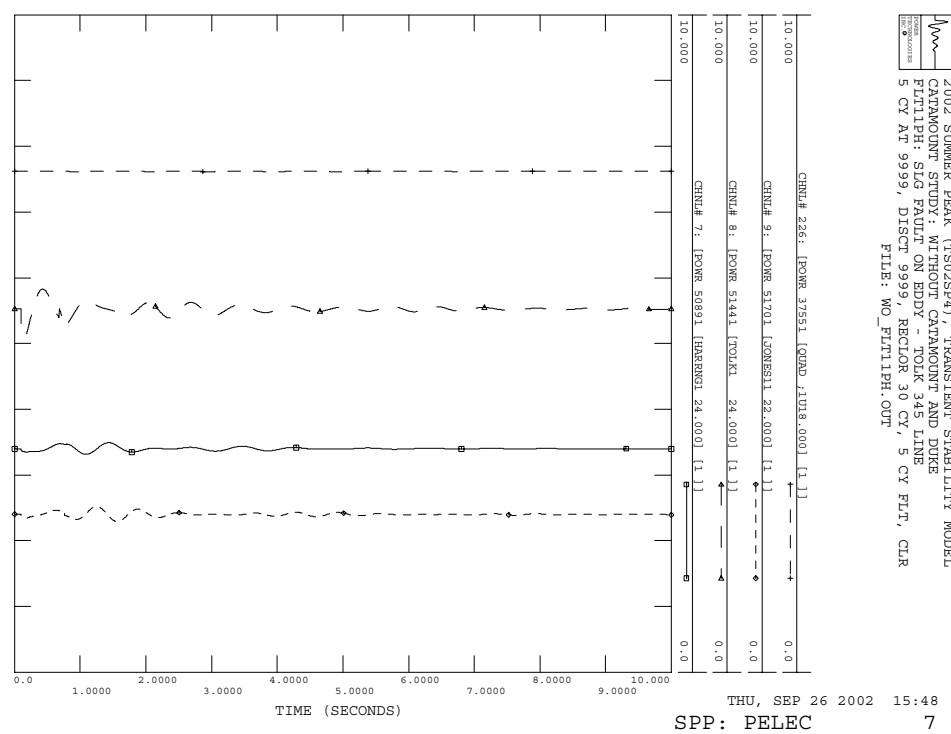
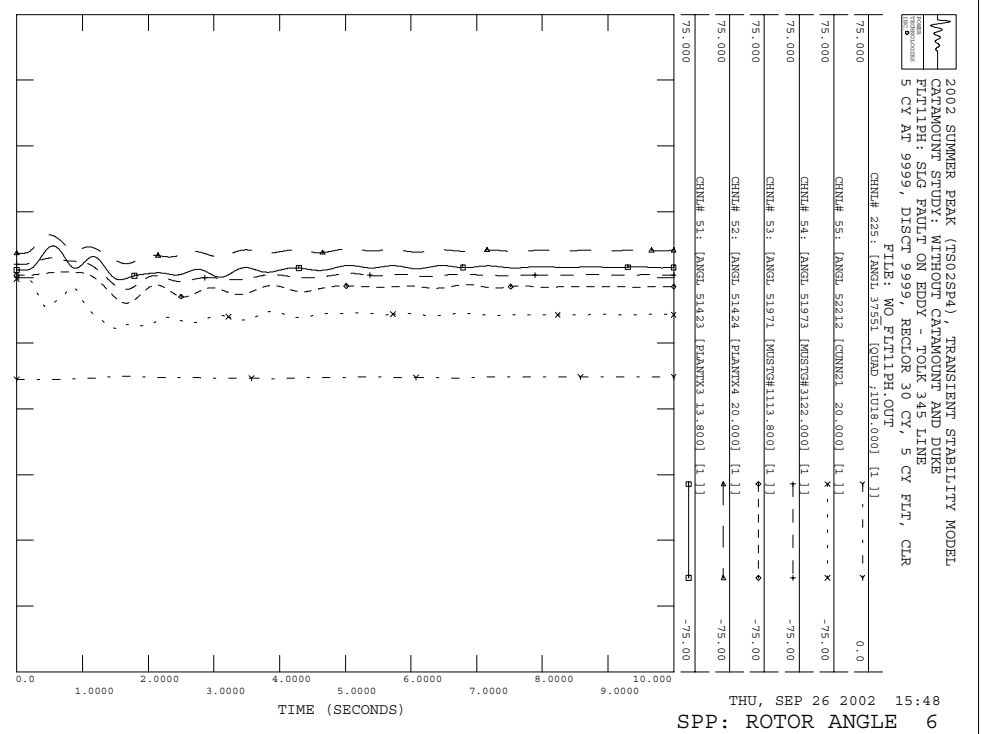
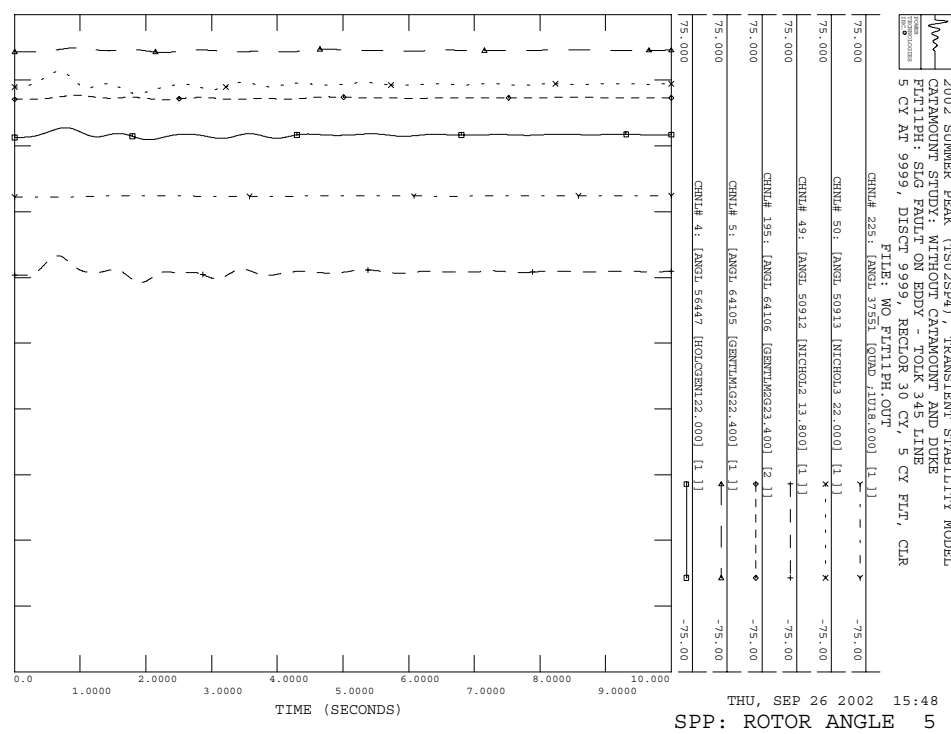
2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLT13PH.OUT



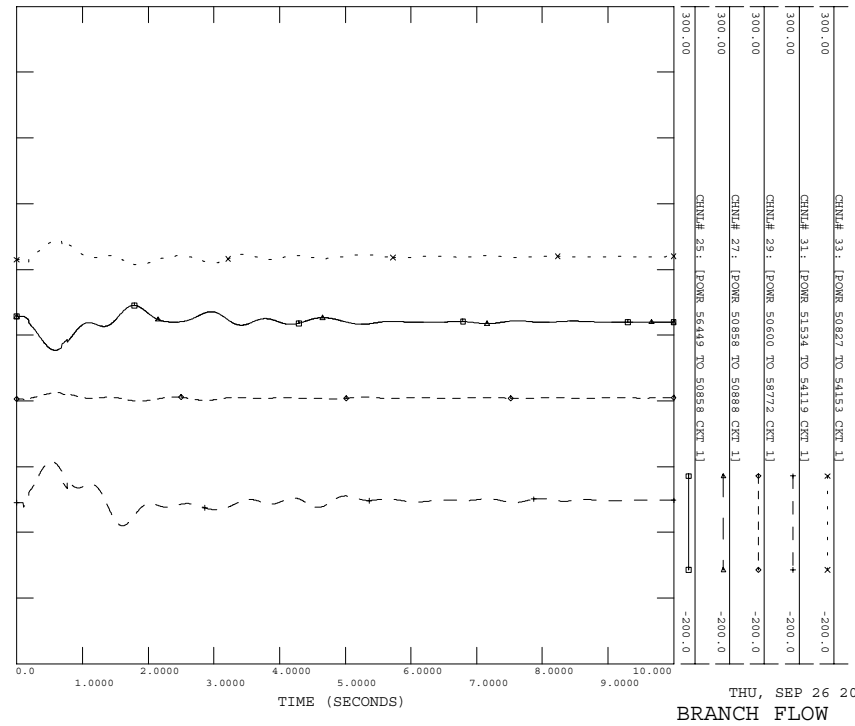
2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT13PH: THREE PHASE FAULT ON ON EDDY - TOLK 345 LINE
 5 CY AT 99990, DISCT 99990, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLT13PH.OUT





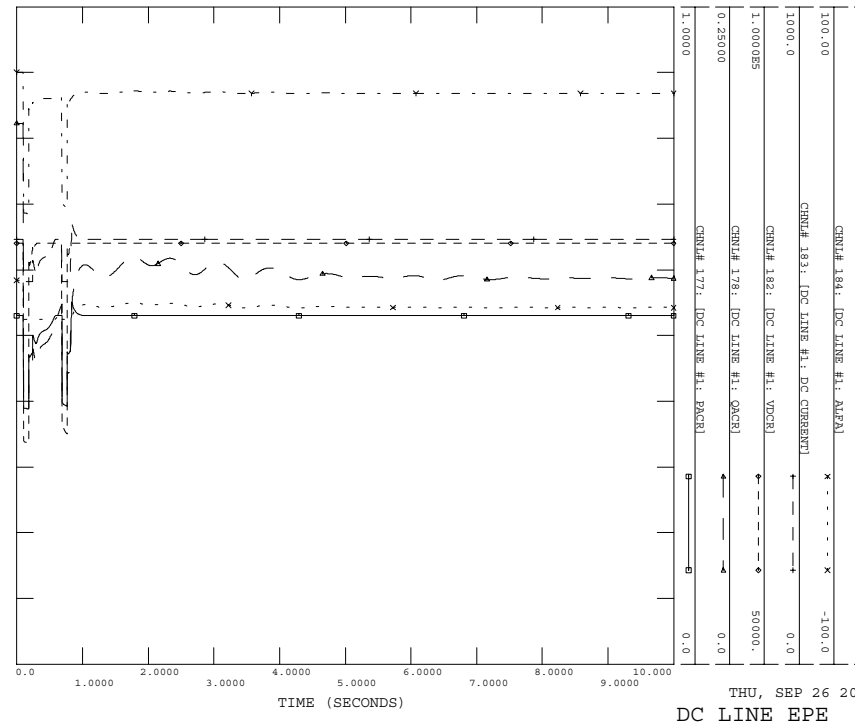


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FILTER: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLT1PH.OUT



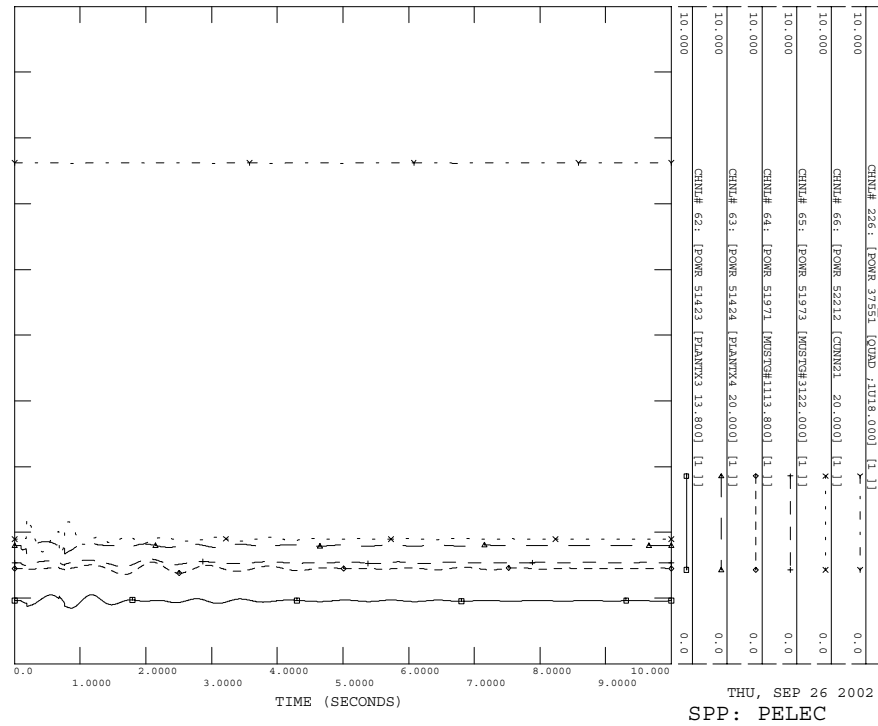
BRANCH FLOW 10

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FILTER: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLT1PH.OUT



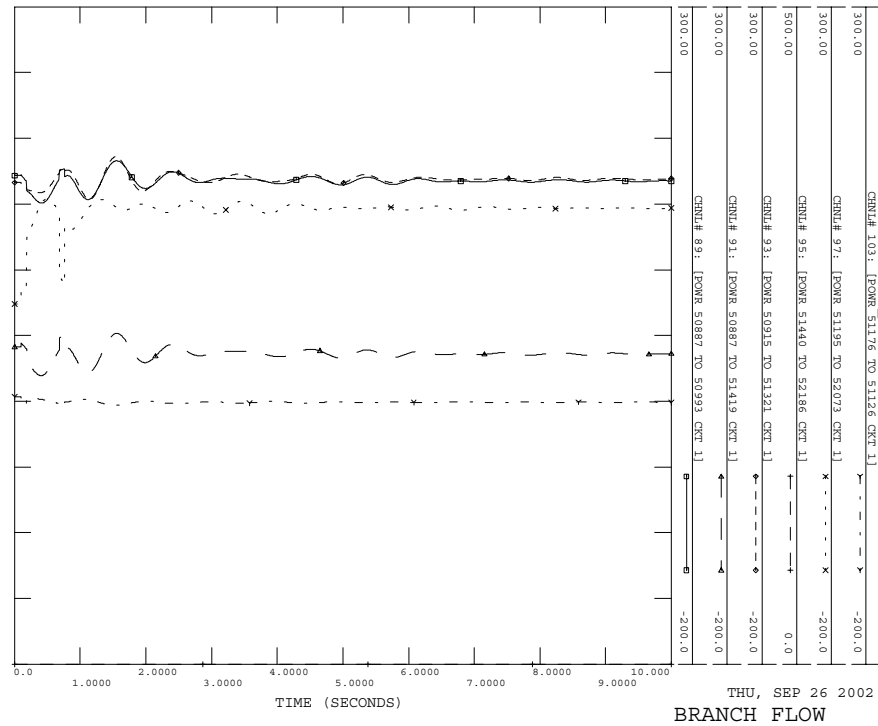
DC LINE EPE 12

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FILTER: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLT1PH.OUT



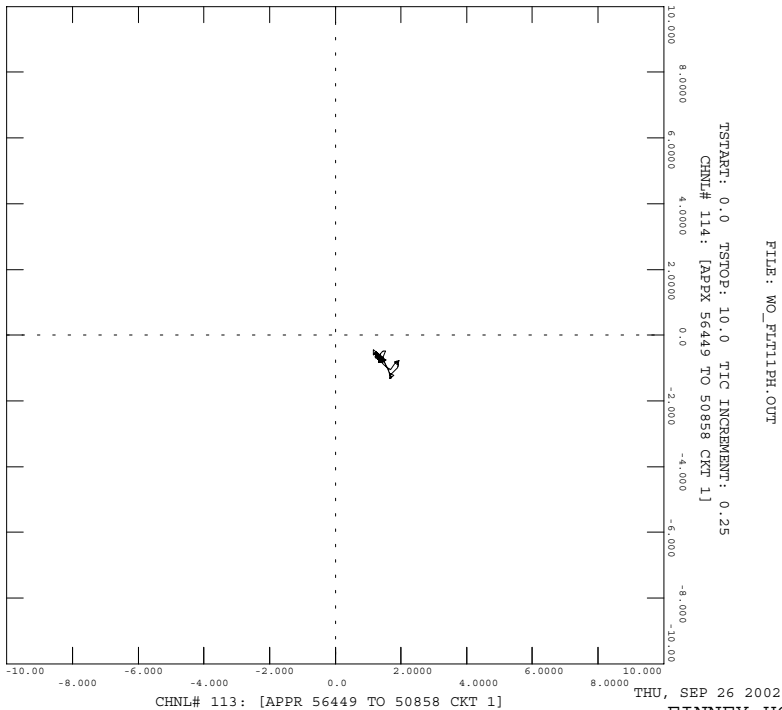
BRANCH FLOW 11

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FILTER: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLT1PH.OUT



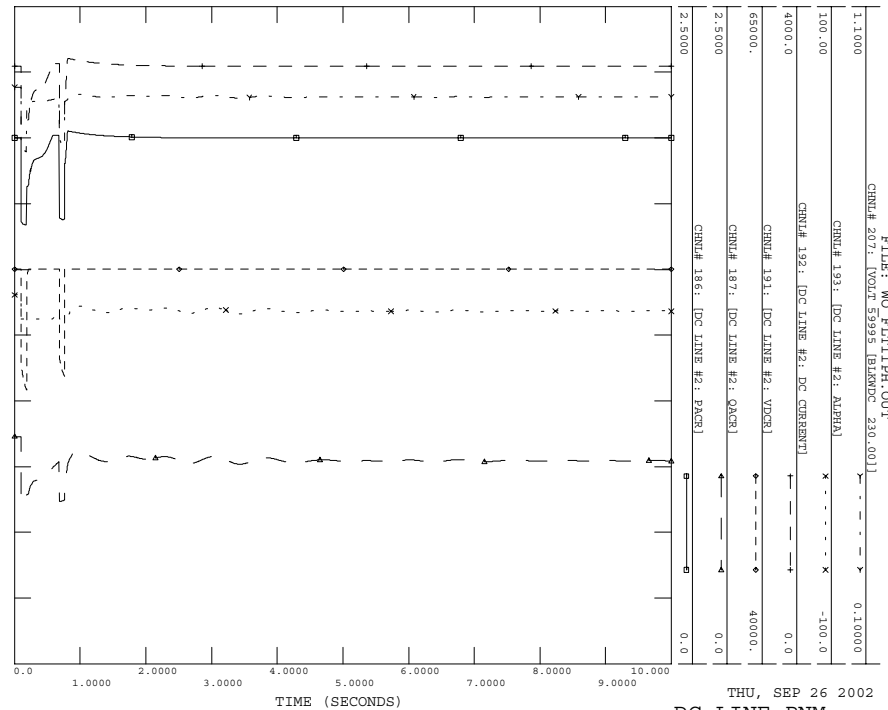
BRANCH FLOW 11

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLTL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLTL1PH.OUT



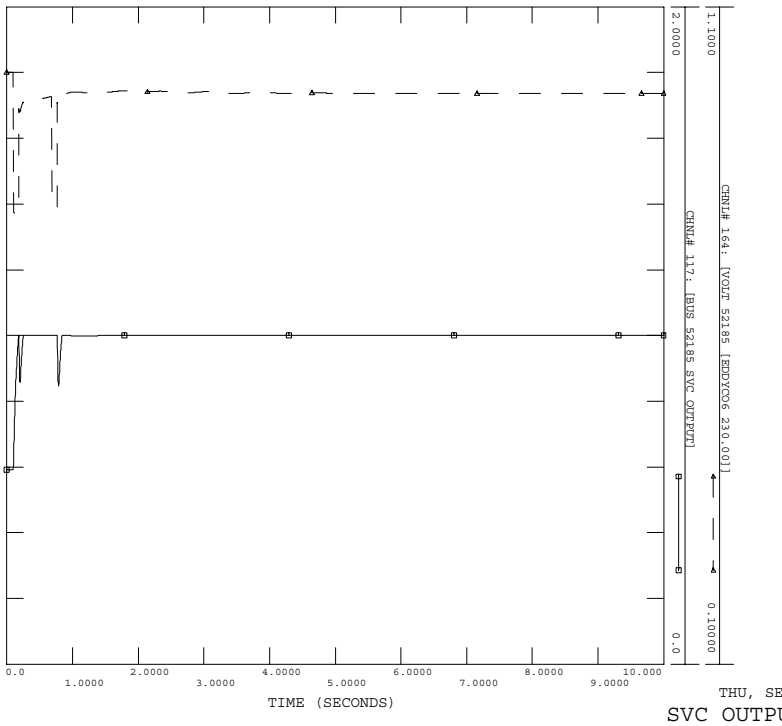
THU, SEP 26 2002 15:48
 CHNL# 113: [APPR 56449 TO 50858 CKT 1] FINNEY-HOLCOMB 14

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLTL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLTL1PH.OUT
 CHNL# 207: [VOLT 59999- [BARANG 230.001]]



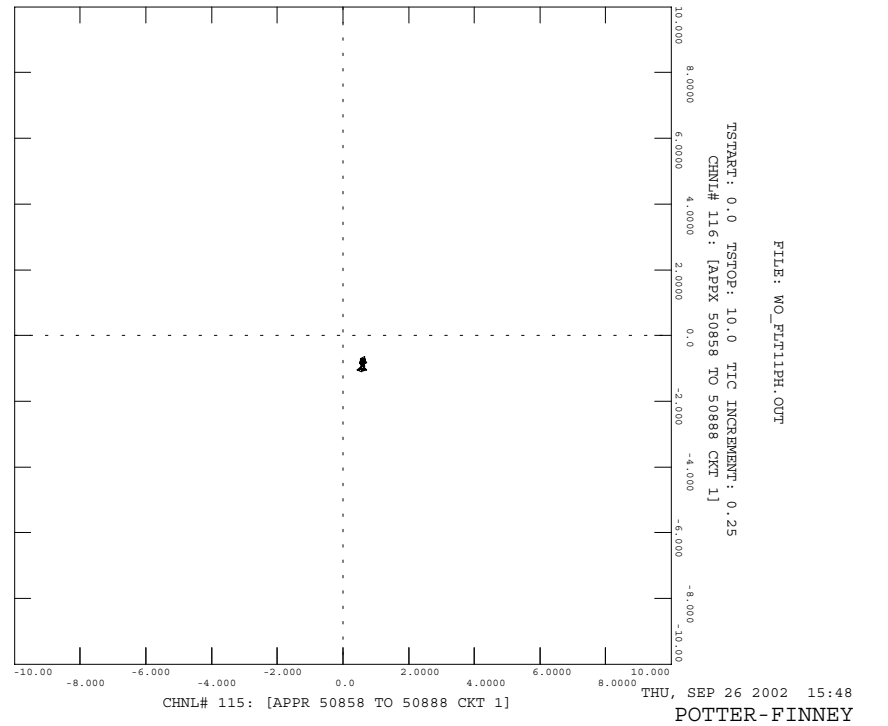
THU, SEP 26 2002 15:48
 DC LINE PNM 13

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLTL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLTL1PH.OUT



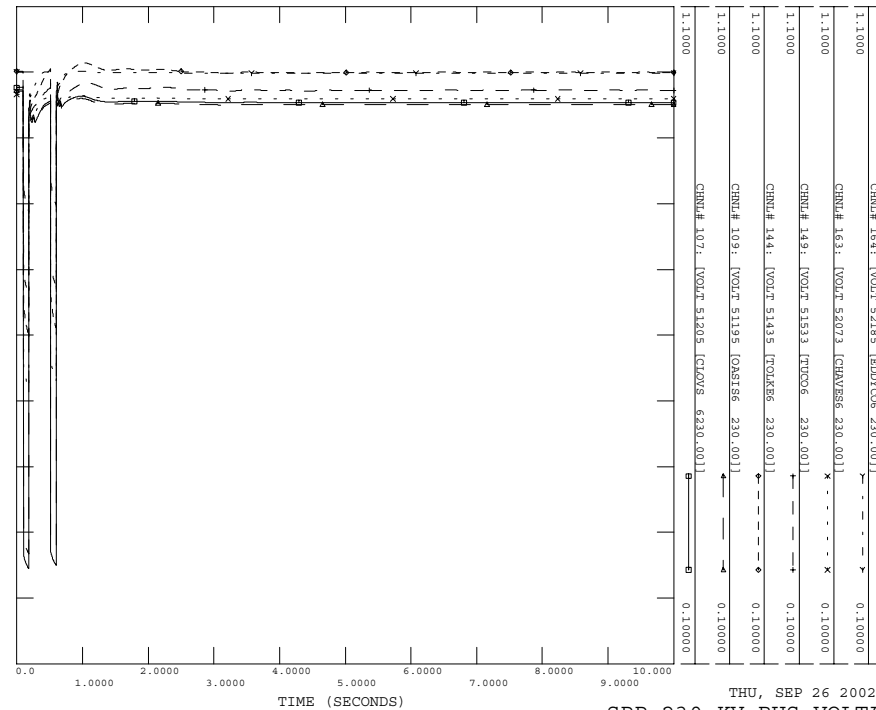
THU, SEP 26 2002 15:48
 SVC OUTPUT 16

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLTL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WO_FLTL1PH.OUT



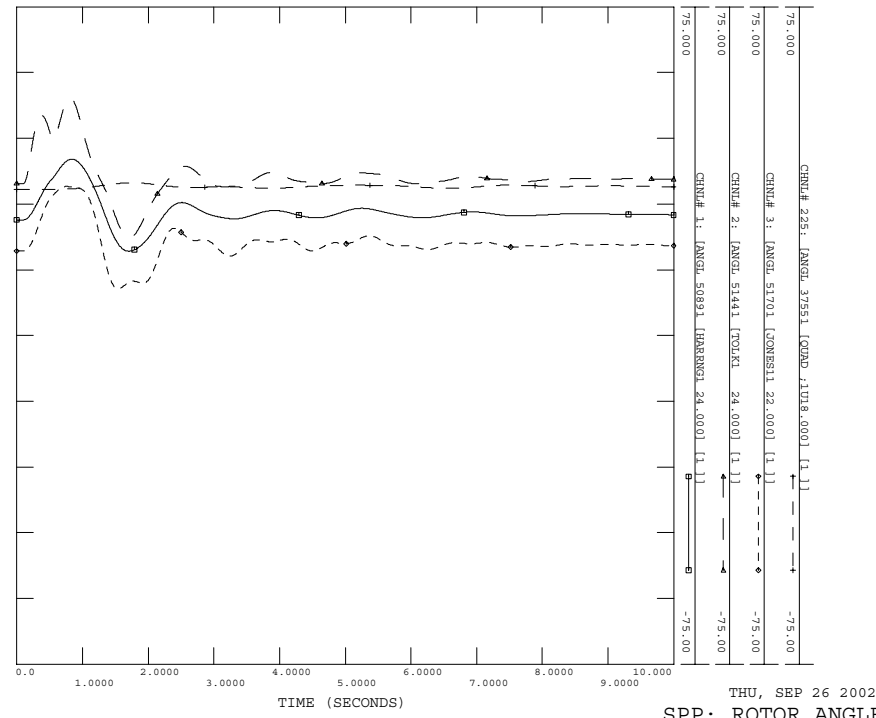
THU, SEP 26 2002 15:48
 CHNL# 115: [APPR 50858 TO 50888 CKT 1] POTTER-FINNEY 15

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT23PH.OUT



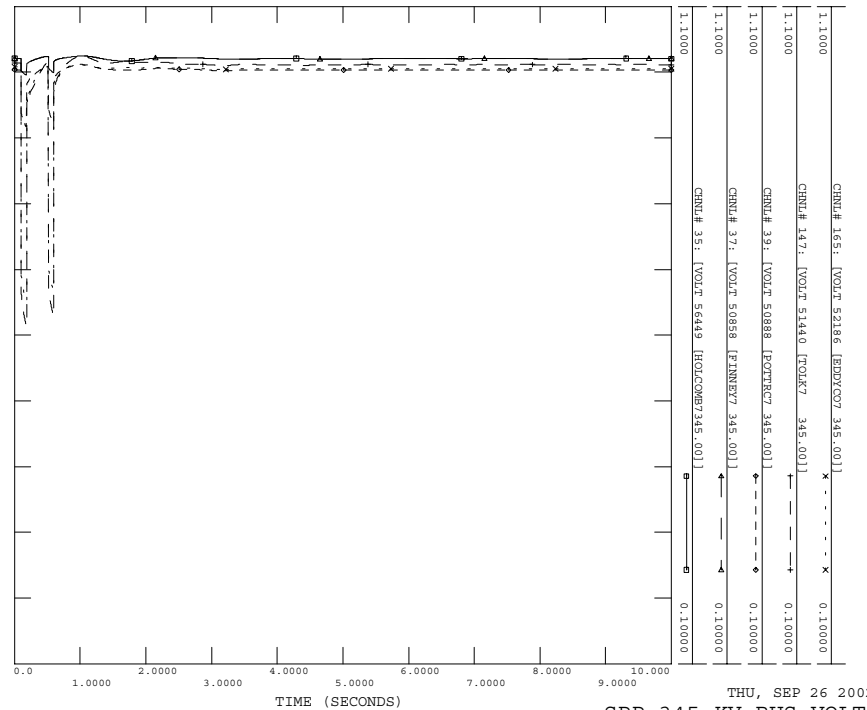
THU, SEP 26 2002 15:48
 SPP:230 KV BUS VOLTAGE 2

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT23PH.OUT



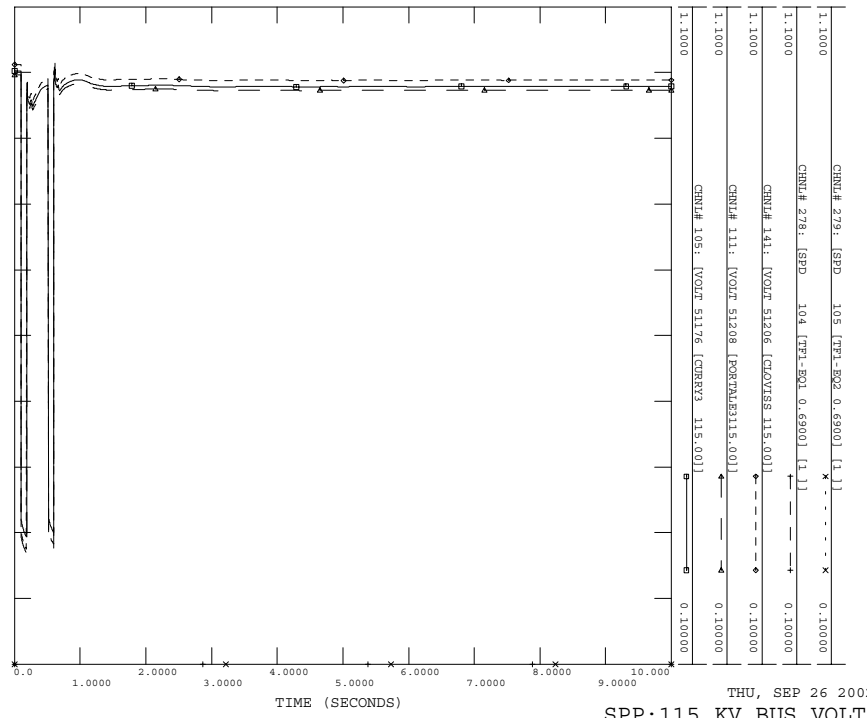
THU, SEP 26 2002 15:48
 SPP: ROTOR ANGLE 4

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT23PH.OUT

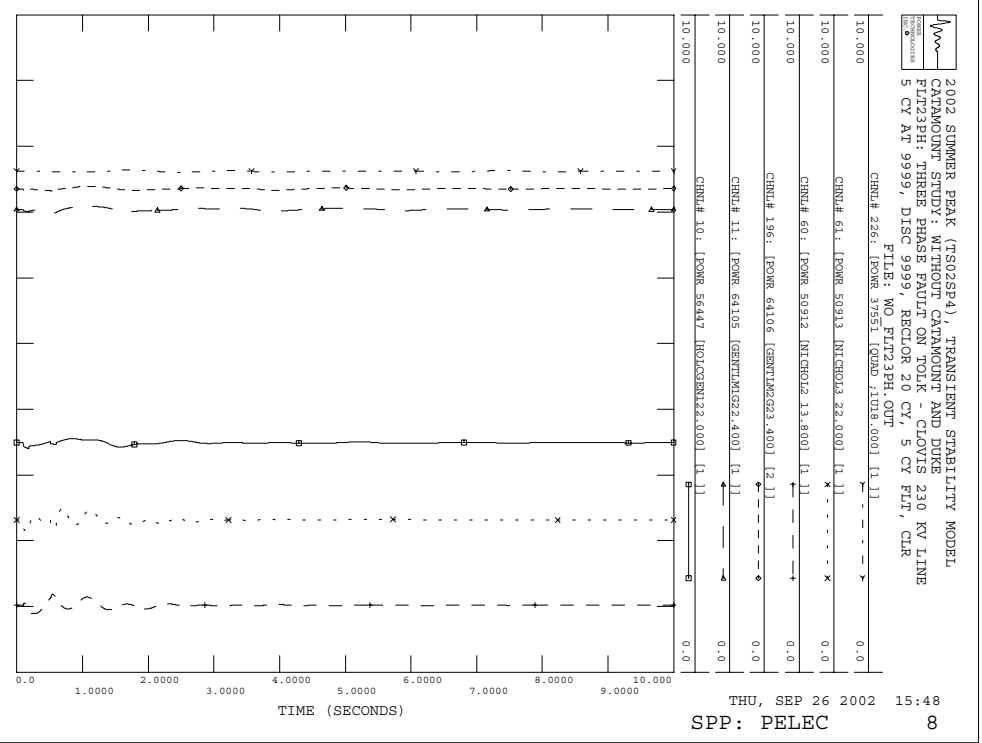
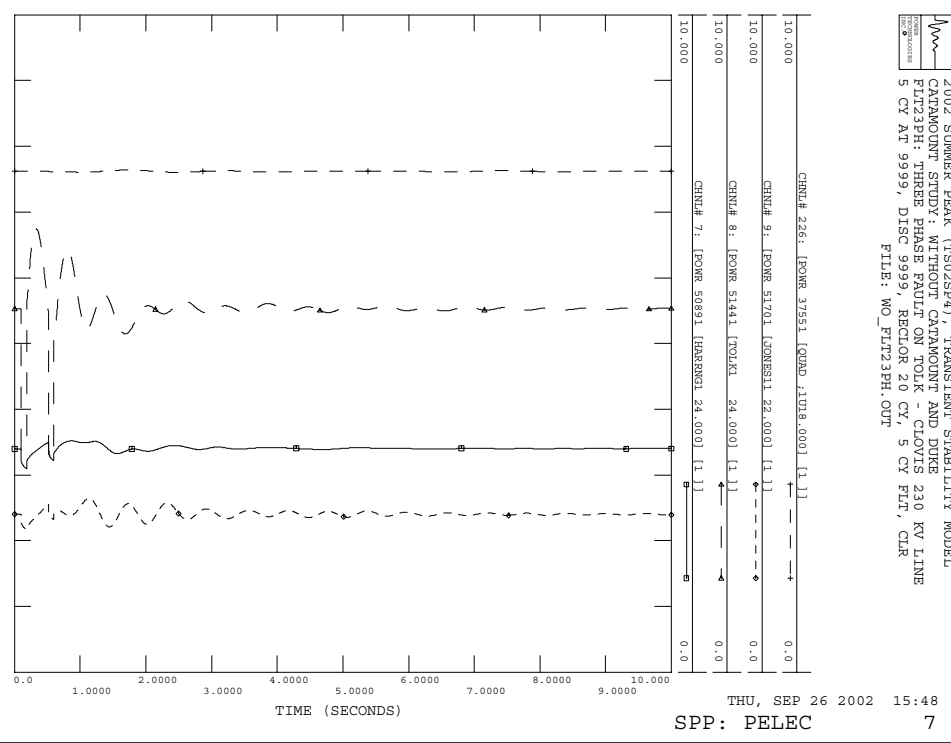
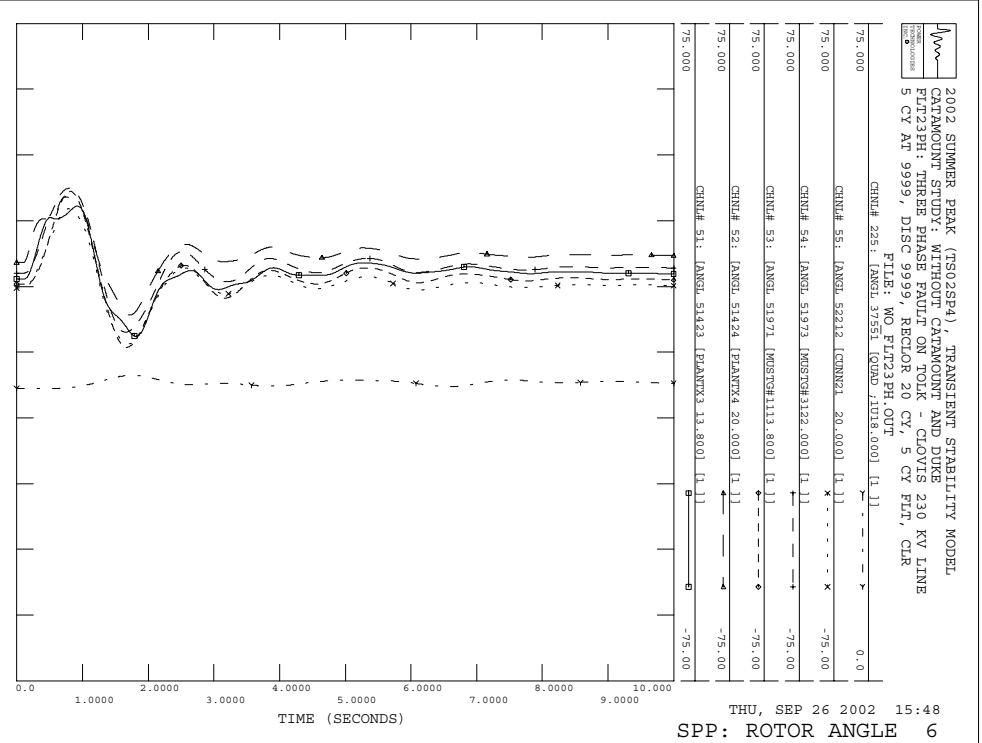
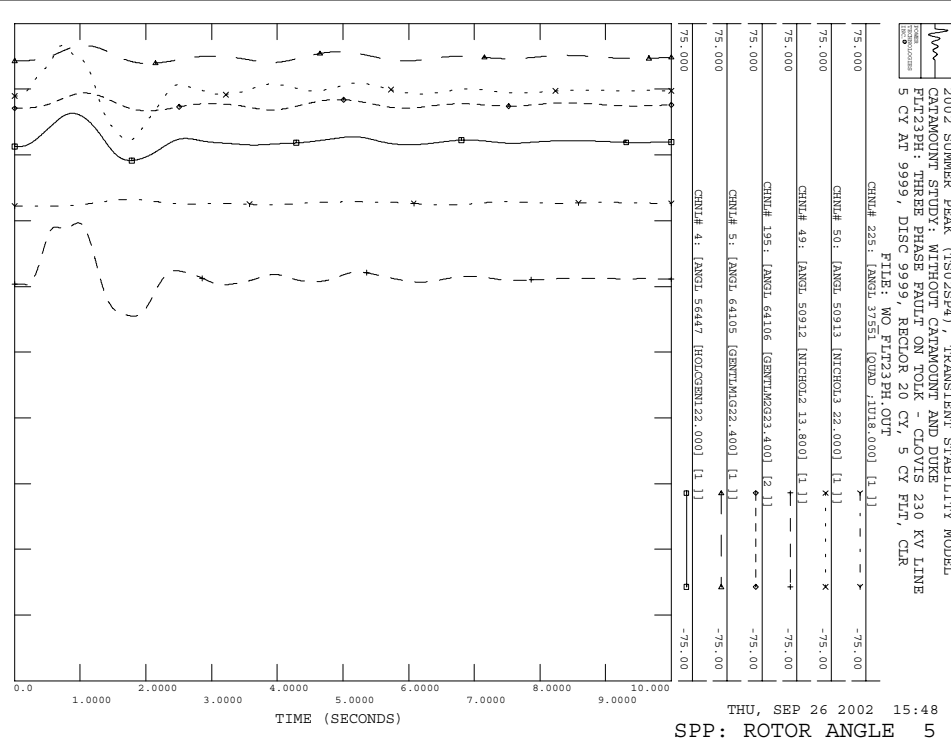


THU, SEP 26 2002 15:48
 SPP:345 KV BUS VOLTAGE 1

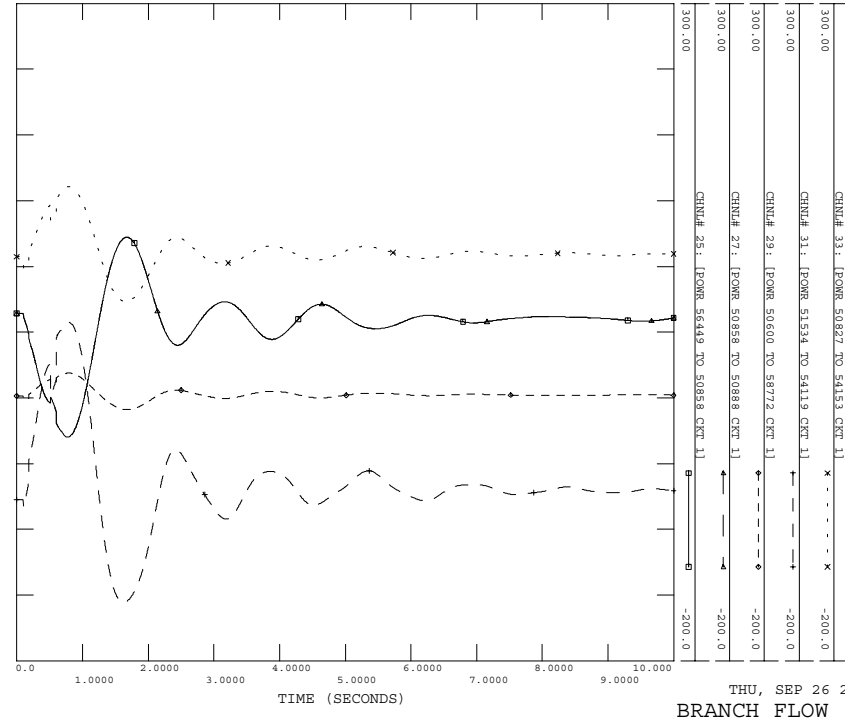
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT23PH.OUT



THU, SEP 26 2002 15:48
 SPP:115 KV BUS VOLTAGE 3

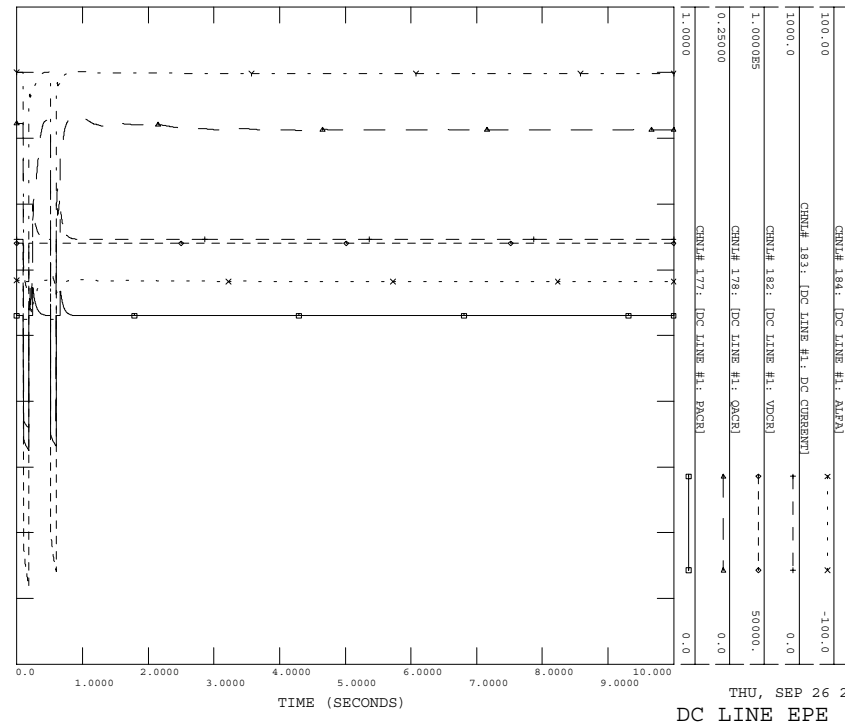


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FITZ3PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FITZ3PH.OUT



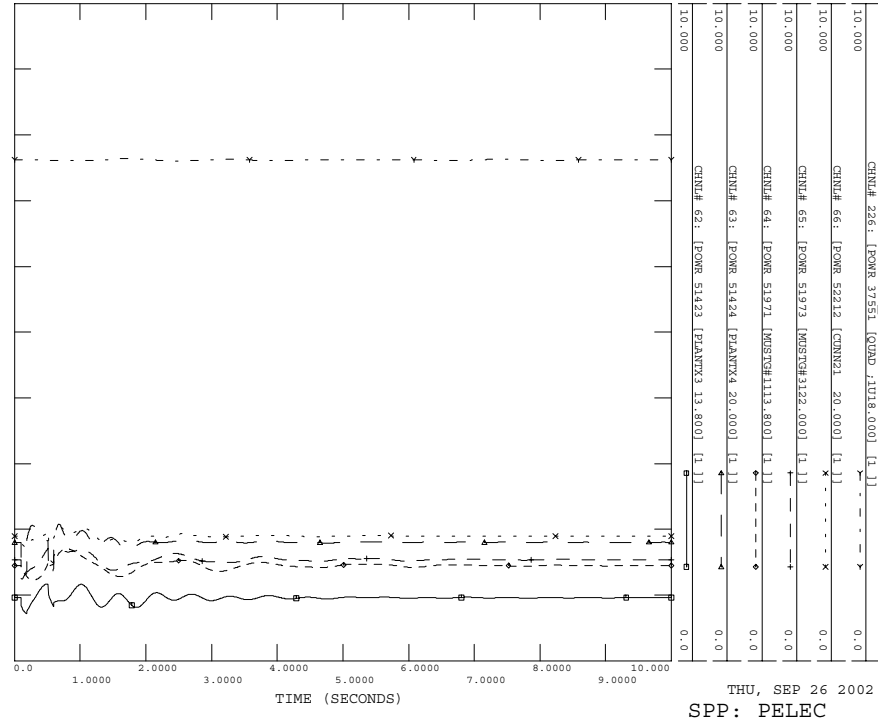
THU, SEP 26 2002 15:48
 BRANCH FLOW 10

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FITZ3PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FITZ3PH.OUT



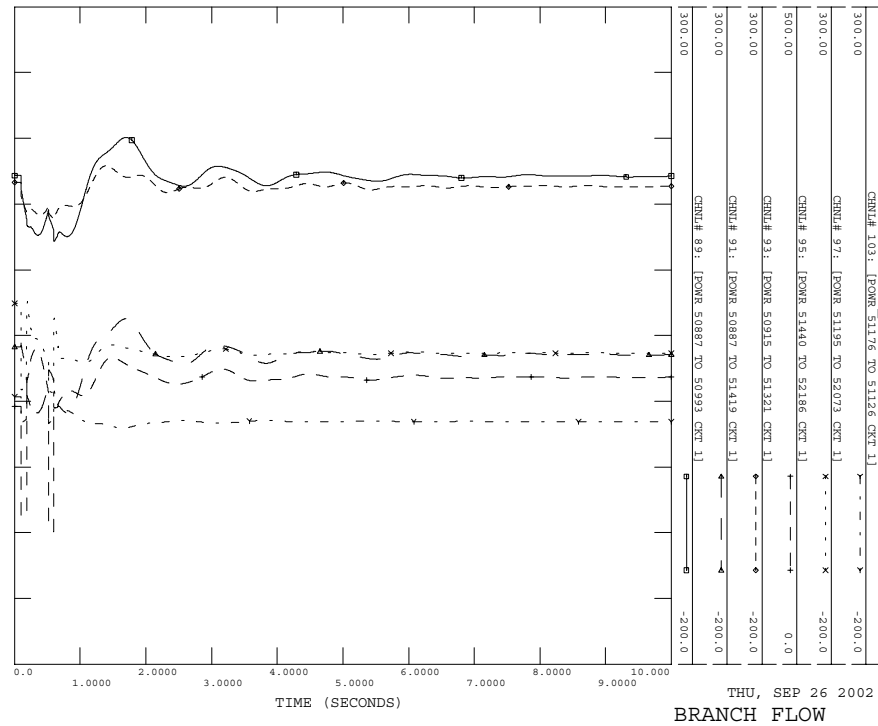
THU, SEP 26 2002 15:48
 DC LINE EPE 12

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FITZ3PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FITZ3PH.OUT



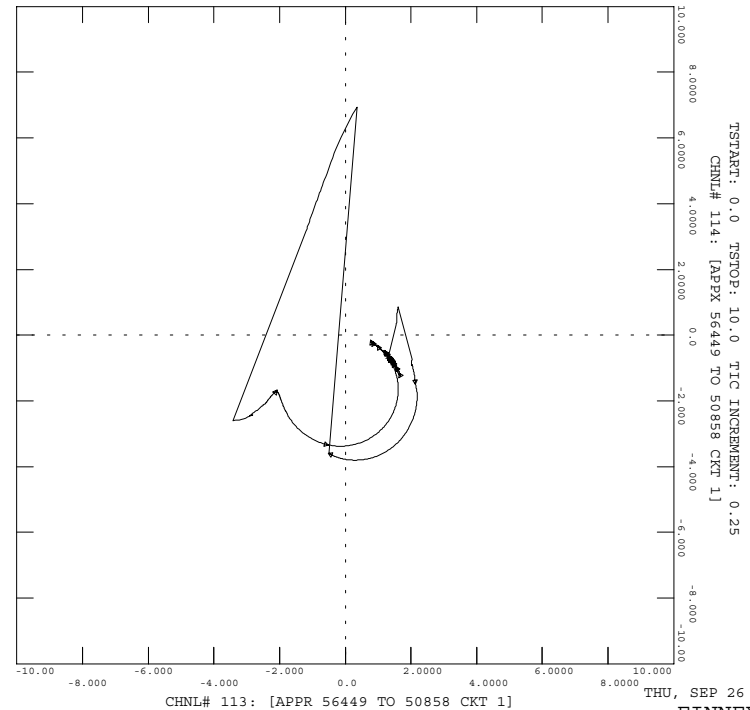
THU, SEP 26 2002 15:48
 SPP: PELEC 9

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FITZ3PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FITZ3PH.OUT



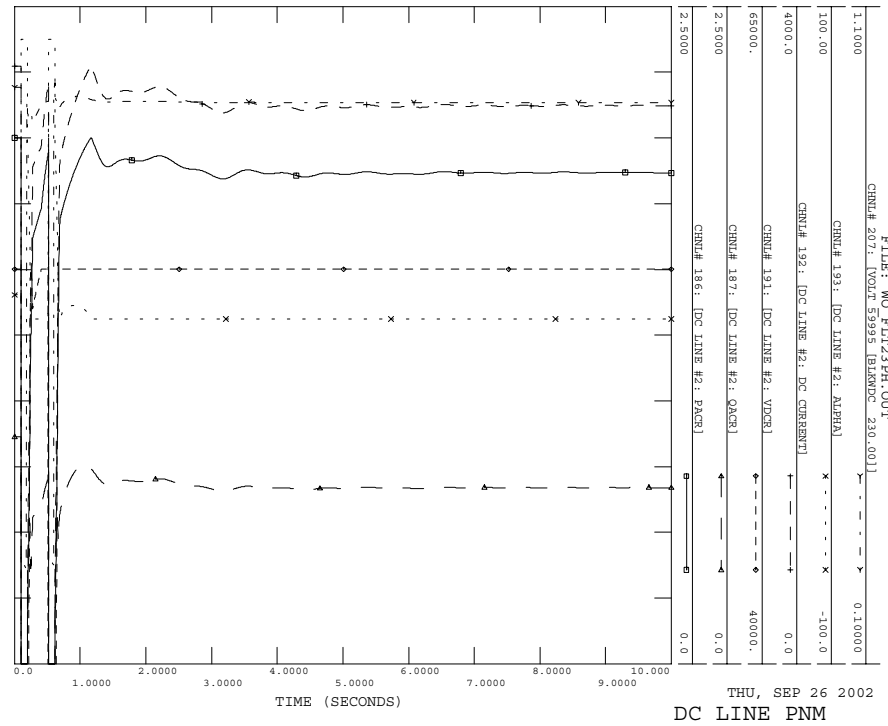
THU, SEP 26 2002 15:48
 BRANCH FLOW 11

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT23PH.OUT



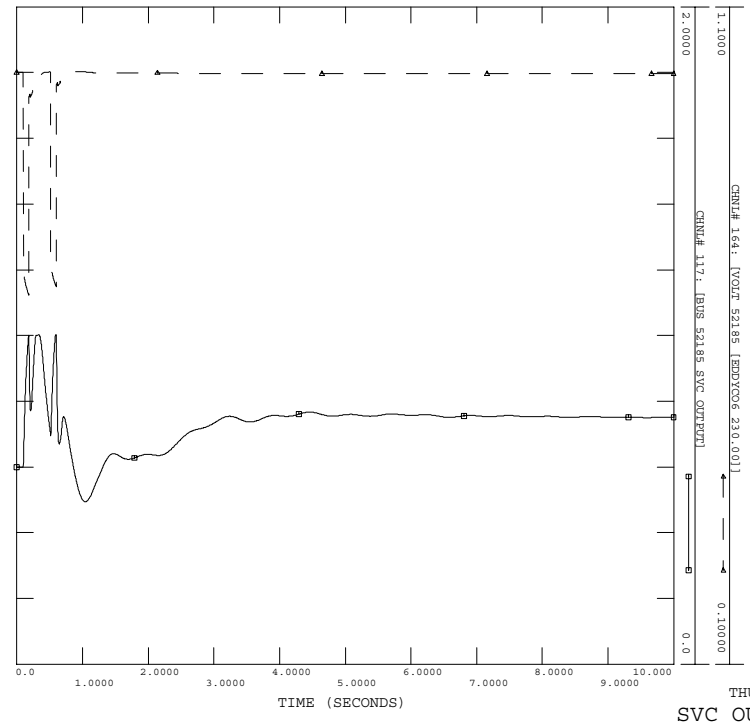
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2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT23PH.OUT



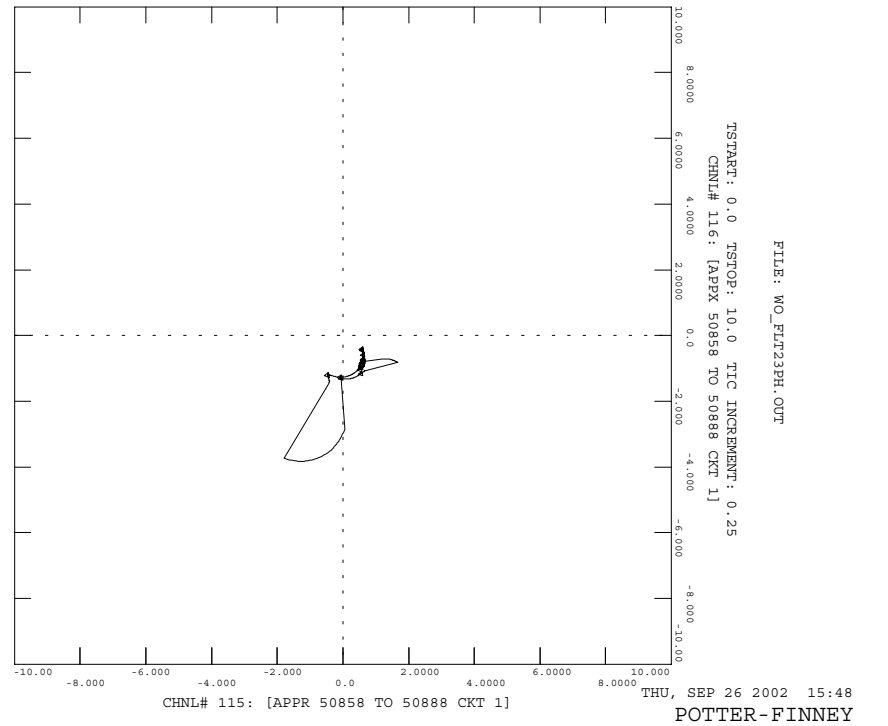
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2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT23PH.OUT



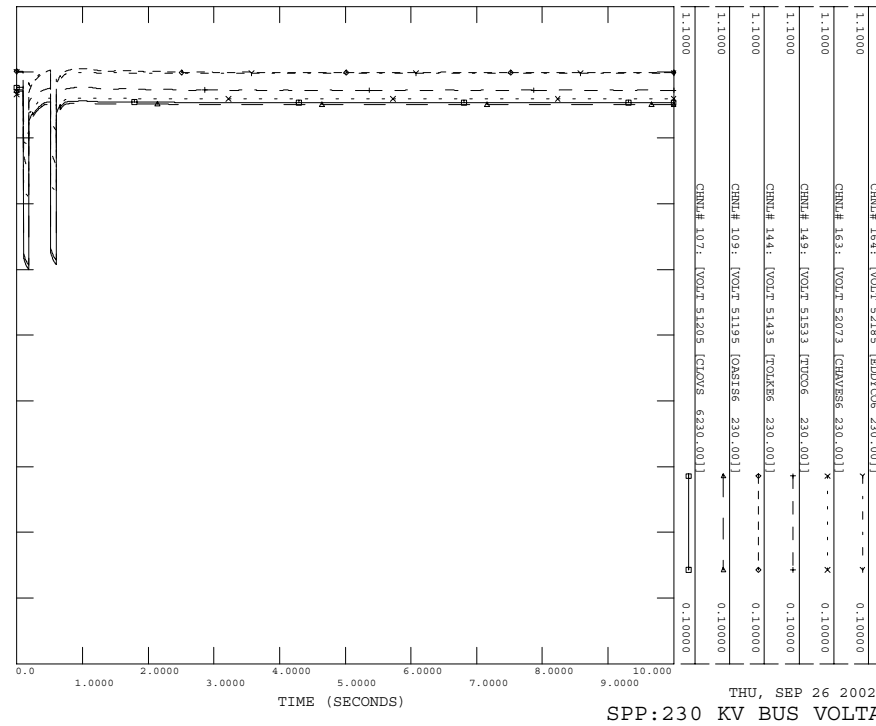
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2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT23PH: THREE PHASE FAULT ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT23PH.OUT

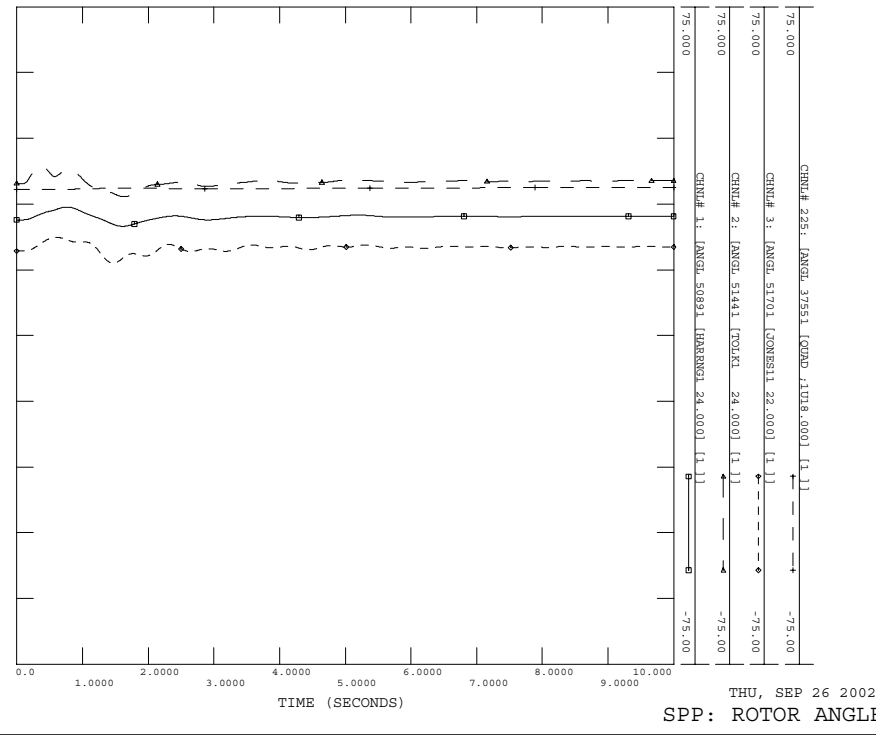


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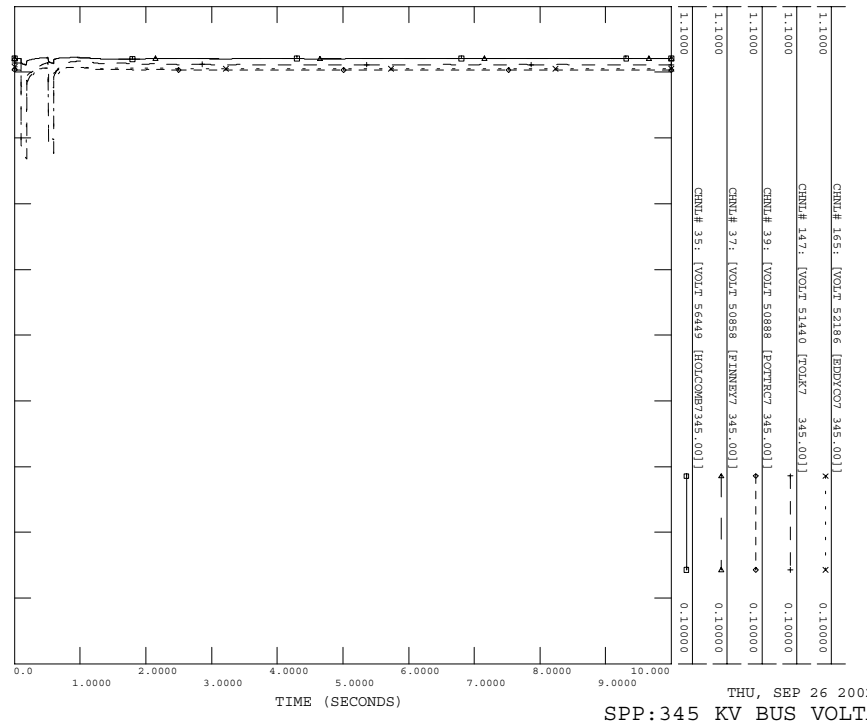
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT21PH.OUT



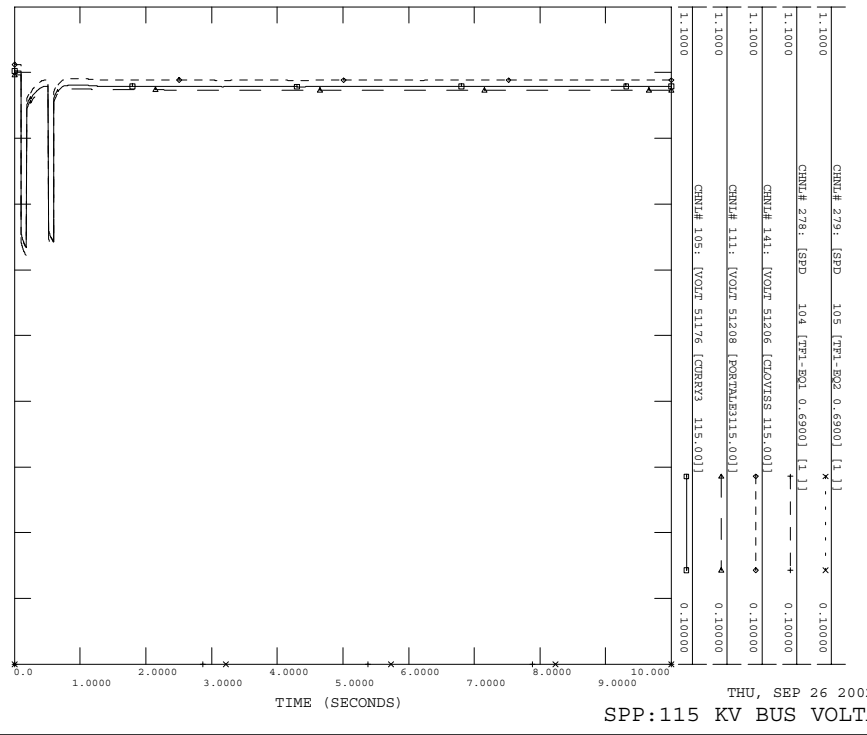
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT21PH.OUT

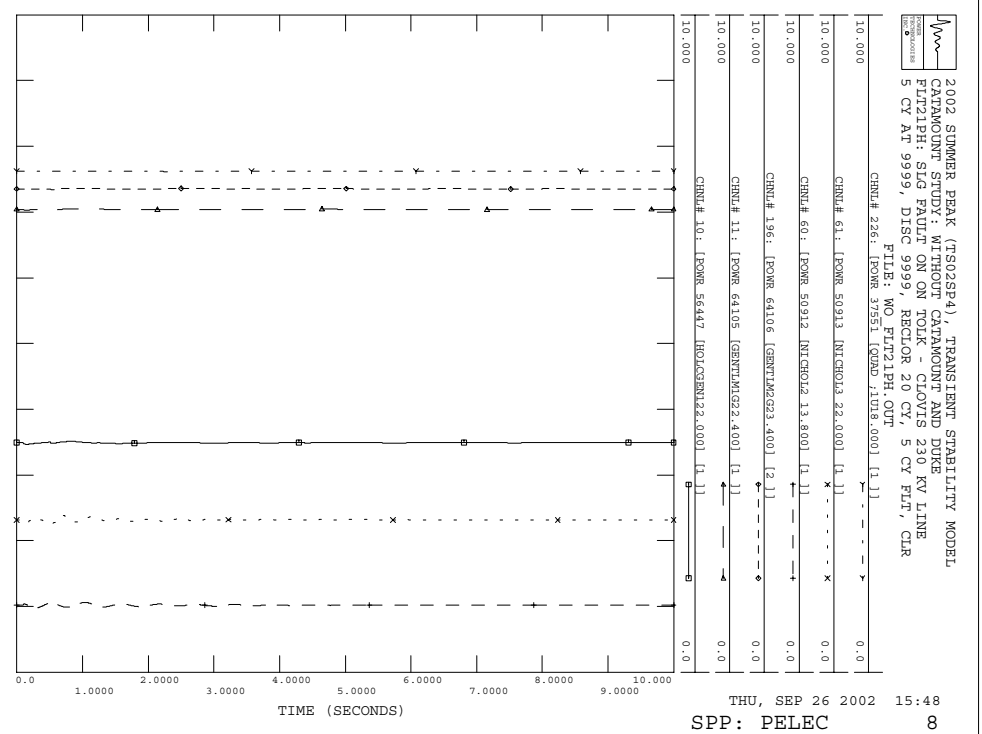
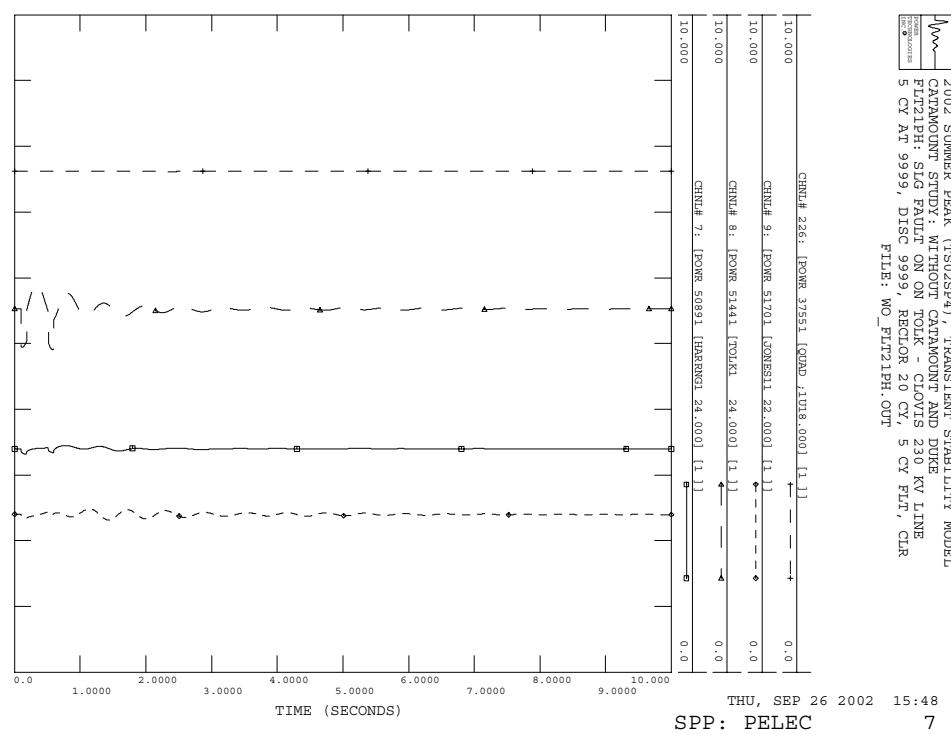
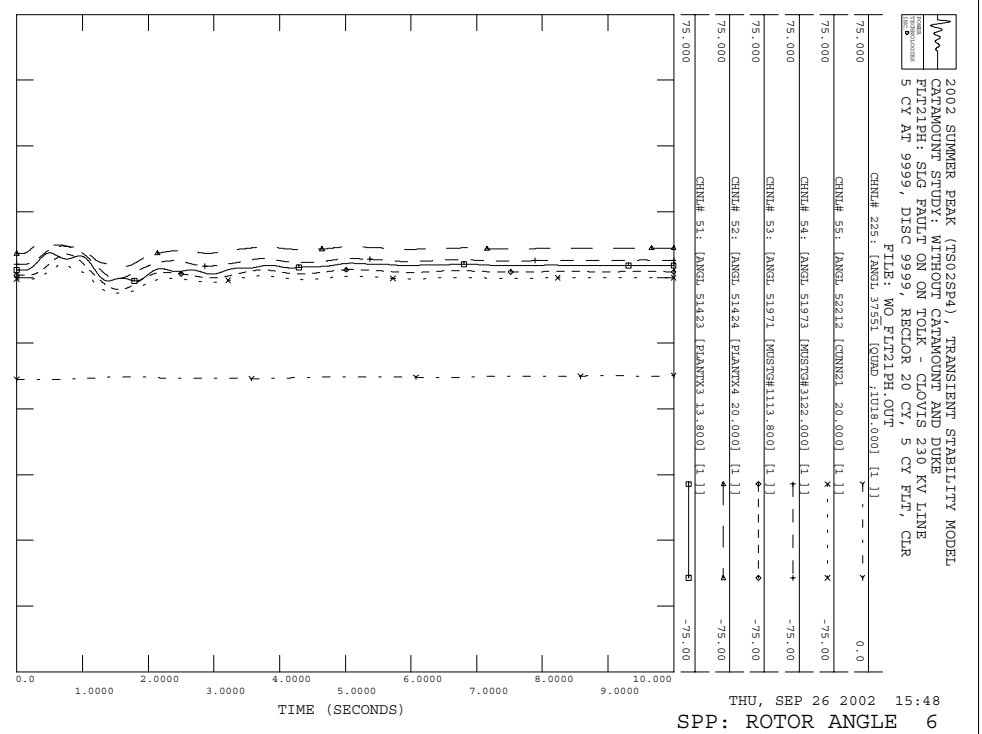
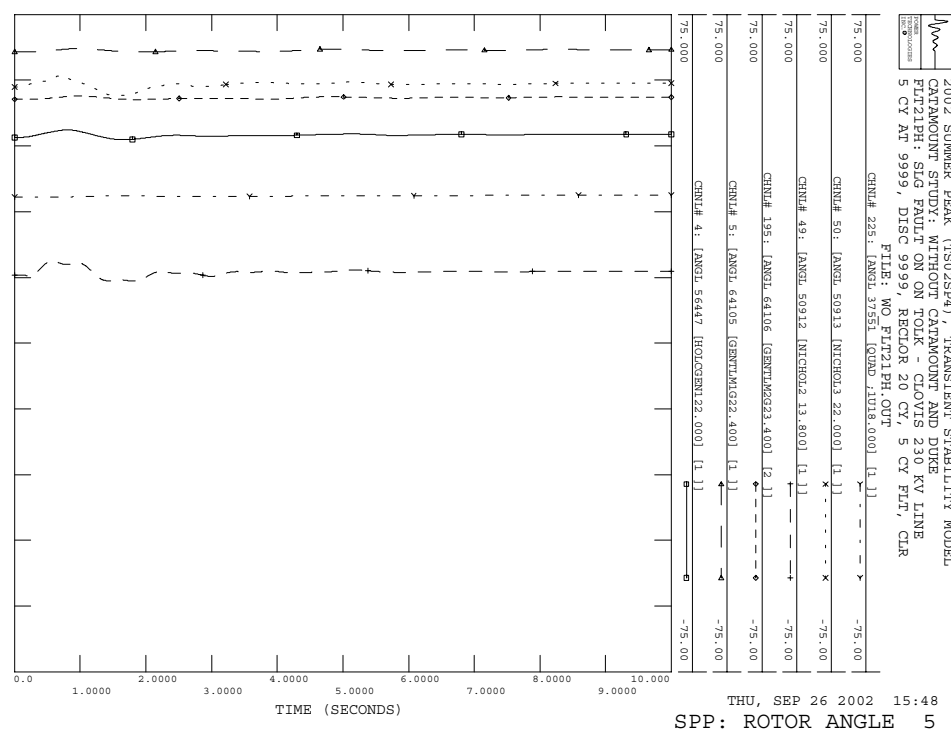


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT21PH.OUT

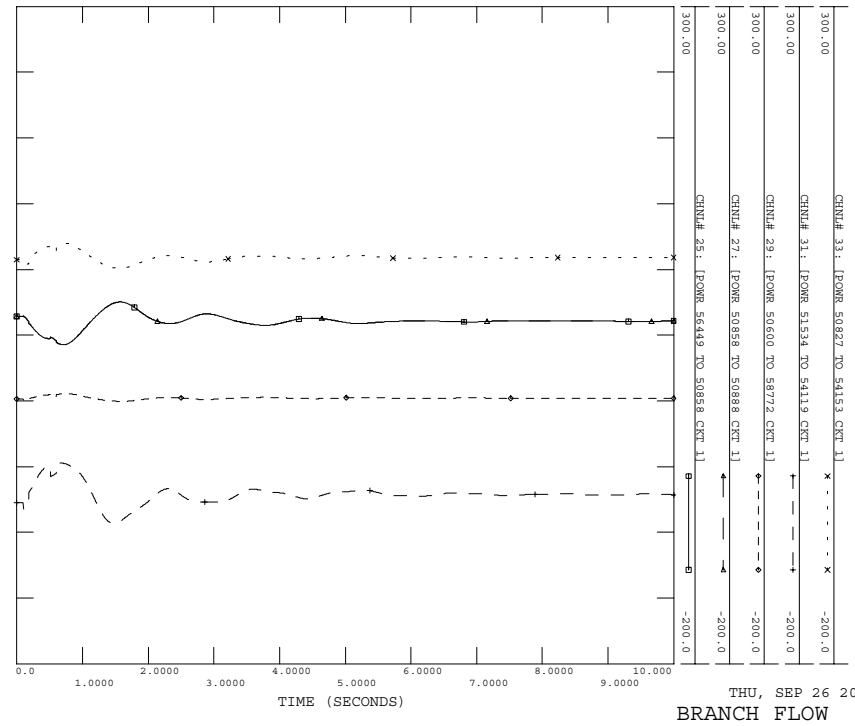


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT21PH.OUT



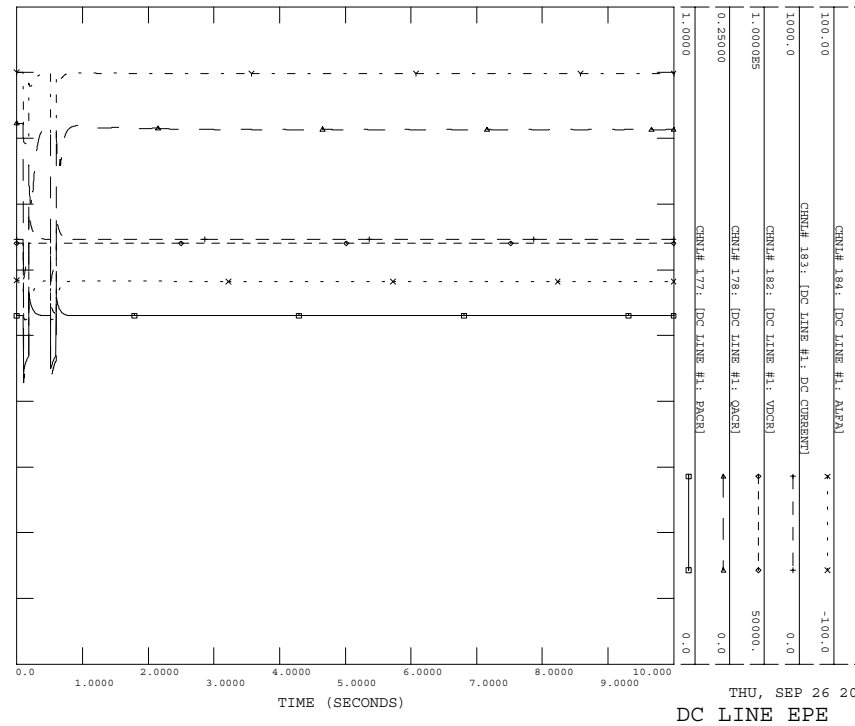


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FITZ1PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 FITZ1PH: 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FITZ1PH.OUT



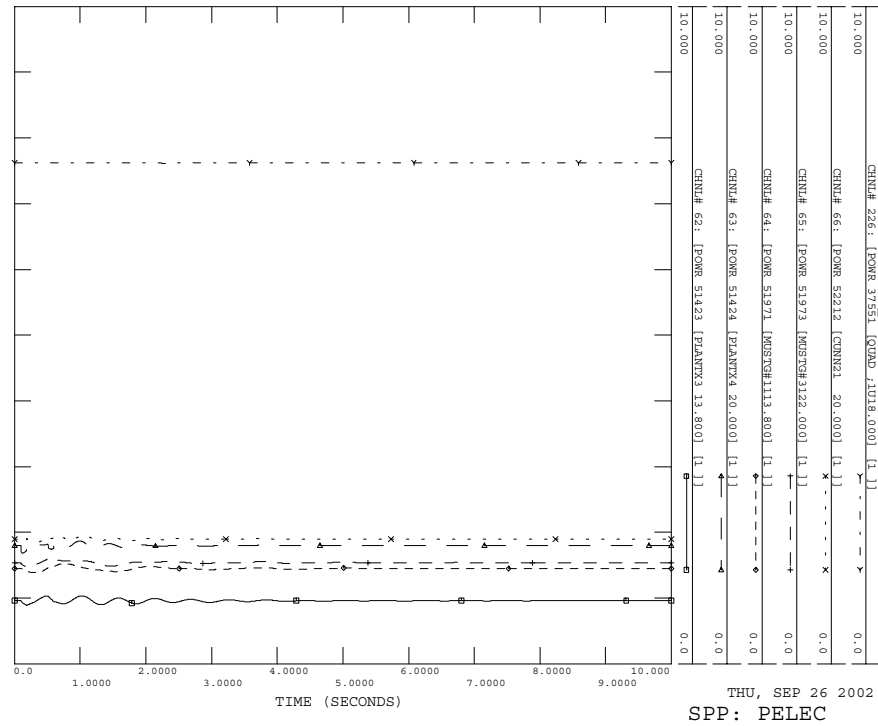
BRANCH FLOW 10

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FITZ1PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 FITZ1PH: 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FITZ1PH.OUT



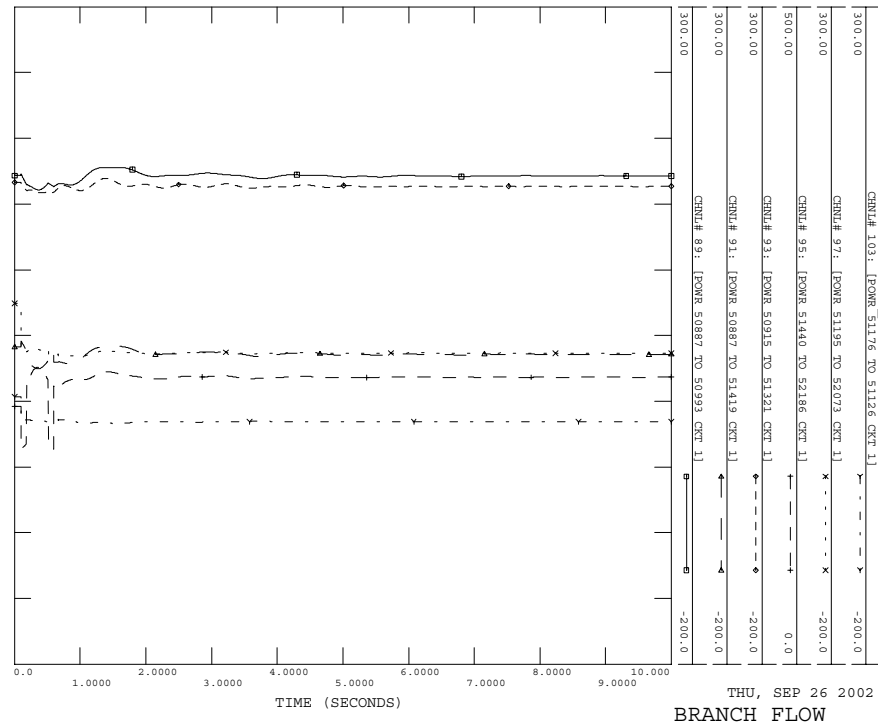
DC LINE EPE 12

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FITZ1PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 FITZ1PH: 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FITZ1PH.OUT



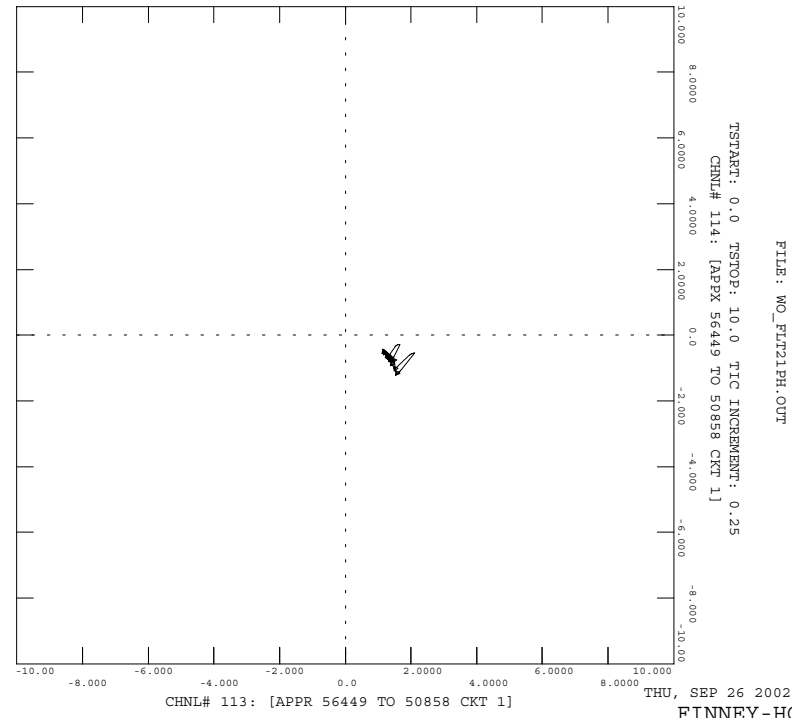
BRANCH FLOW 10

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FITZ1PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 FITZ1PH: 9999, DISC 9999, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FITZ1PH.OUT

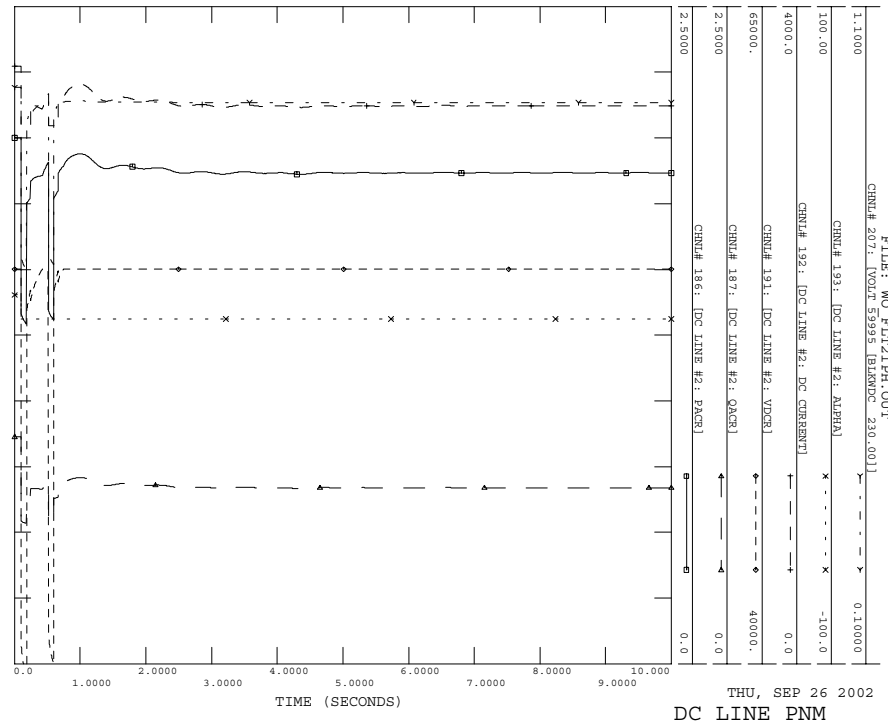


BRANCH FLOW 11

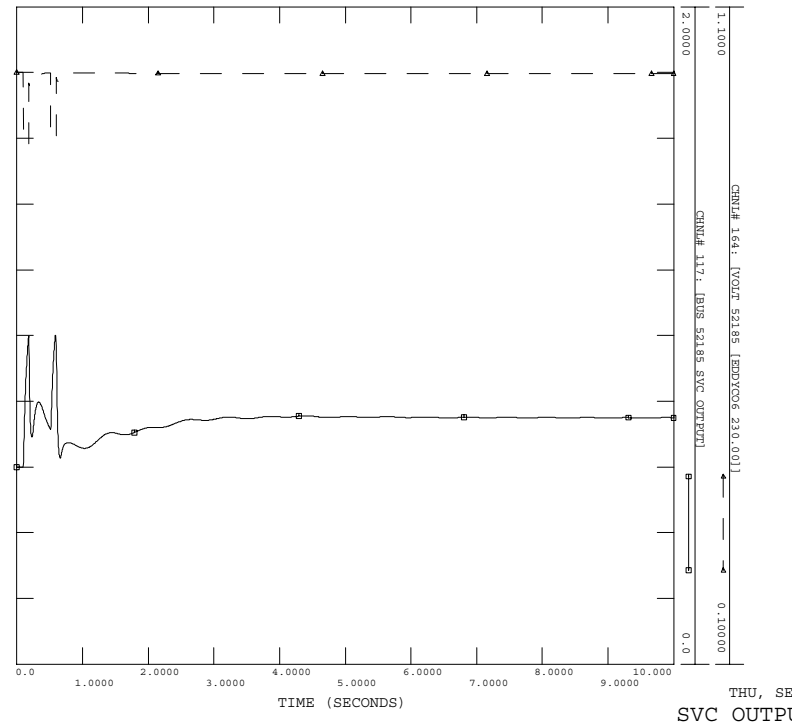
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT21PH.OUT



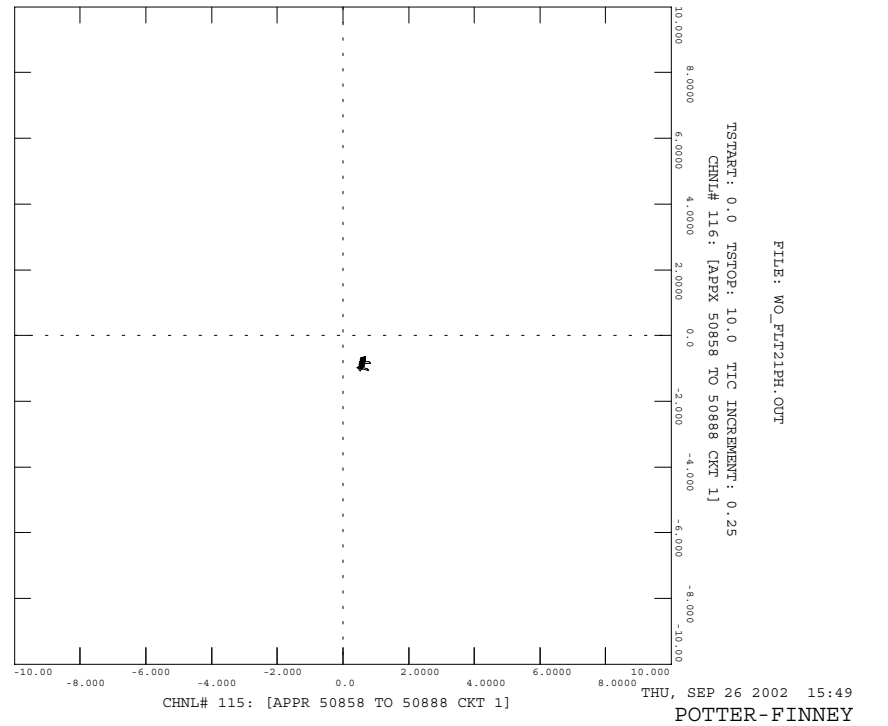
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT21PH.OUT
 CHNL# 207: [VOLT 59999, BLANKE 230.001]



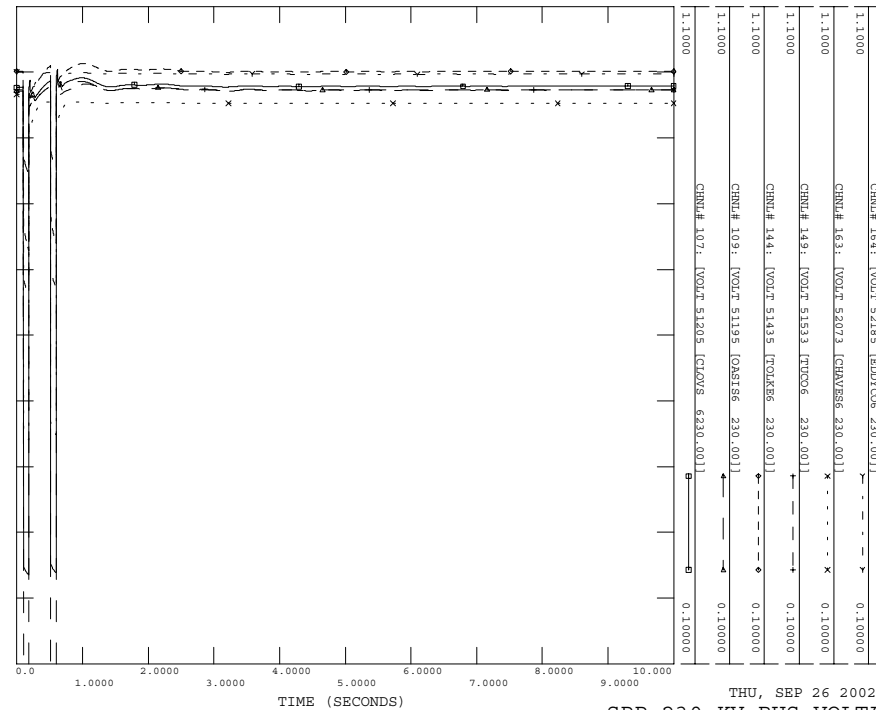
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT21PH.OUT



2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT21PH.OUT

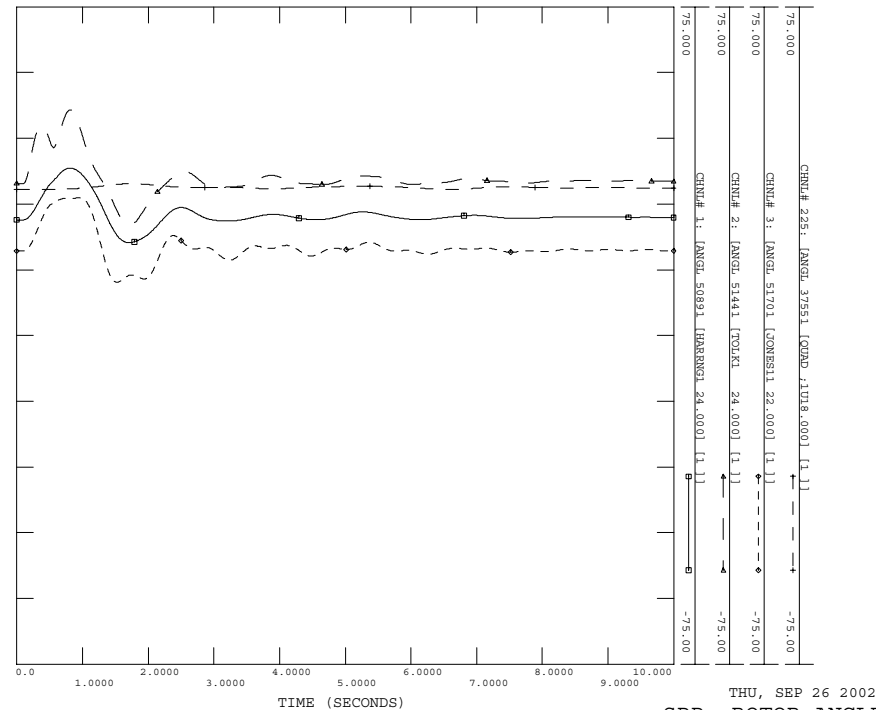


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT33PH.OUT



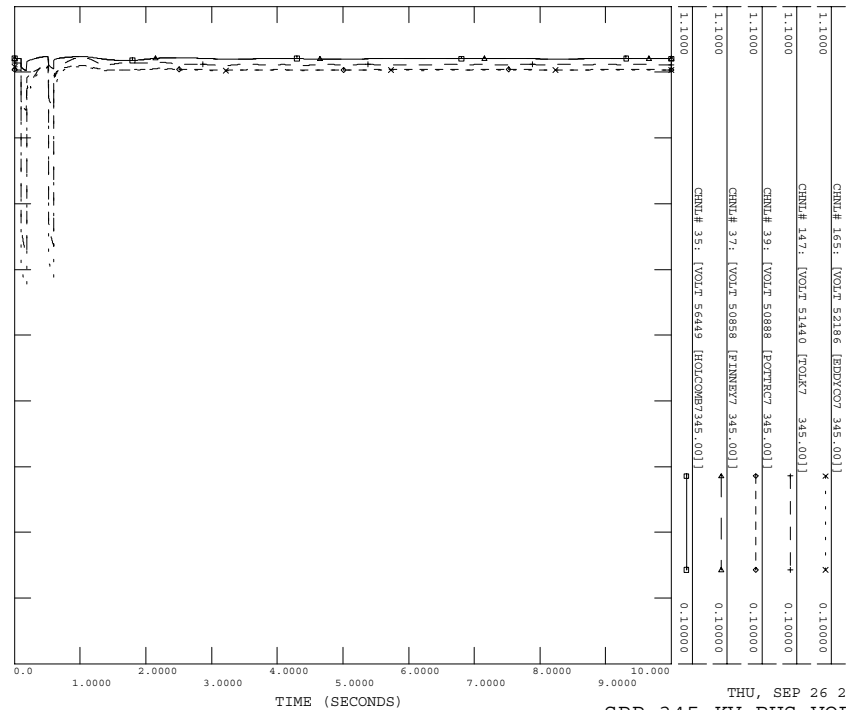
THU, SEP 26 2002 15:49
 SPP: 230 KV BUS VOLTAGE 2

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT33PH.OUT



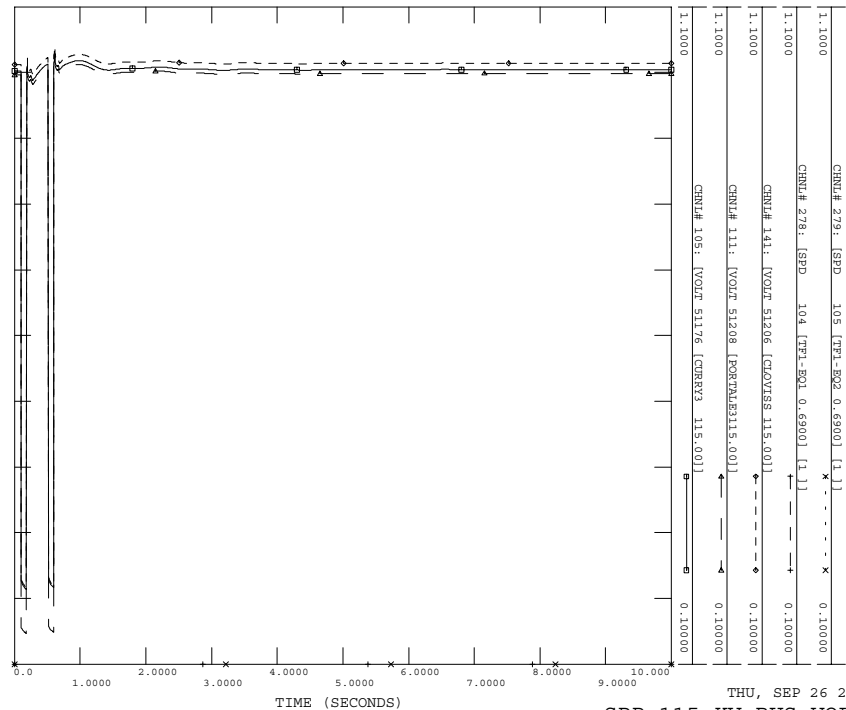
THU, SEP 26 2002 15:49
 SPP: ROTOR ANGLE 4

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT33PH.OUT

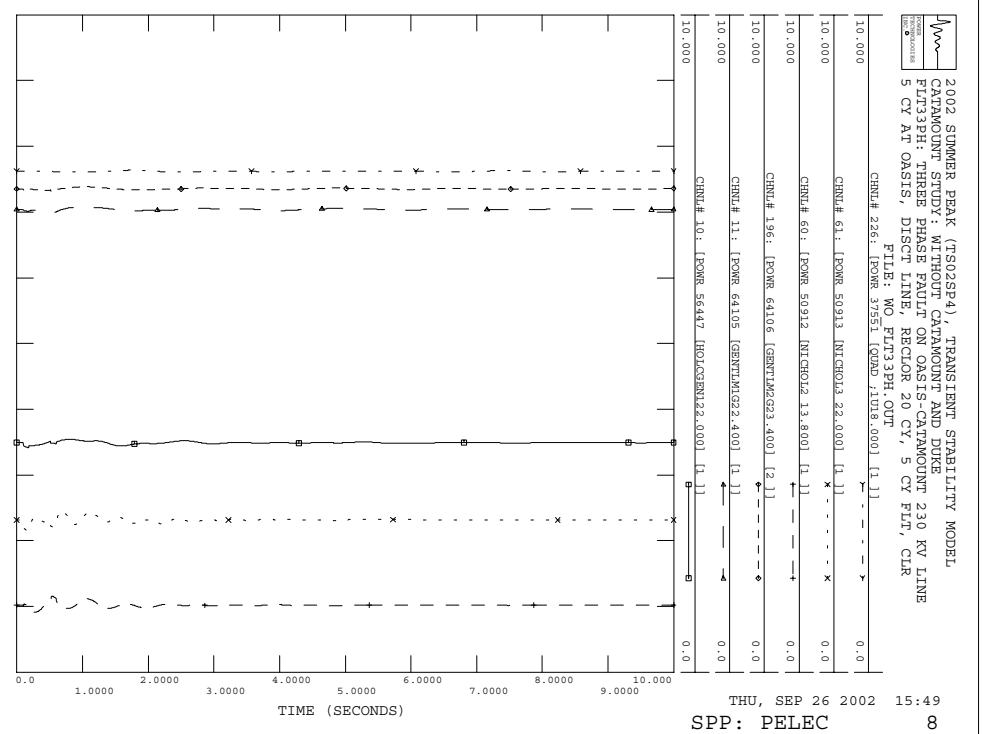
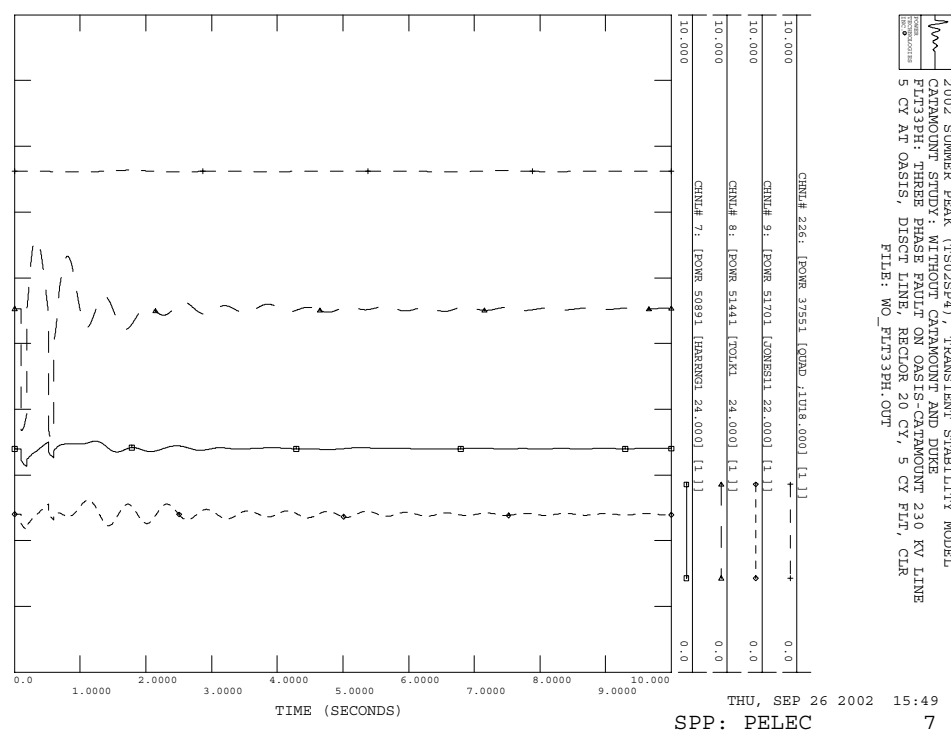
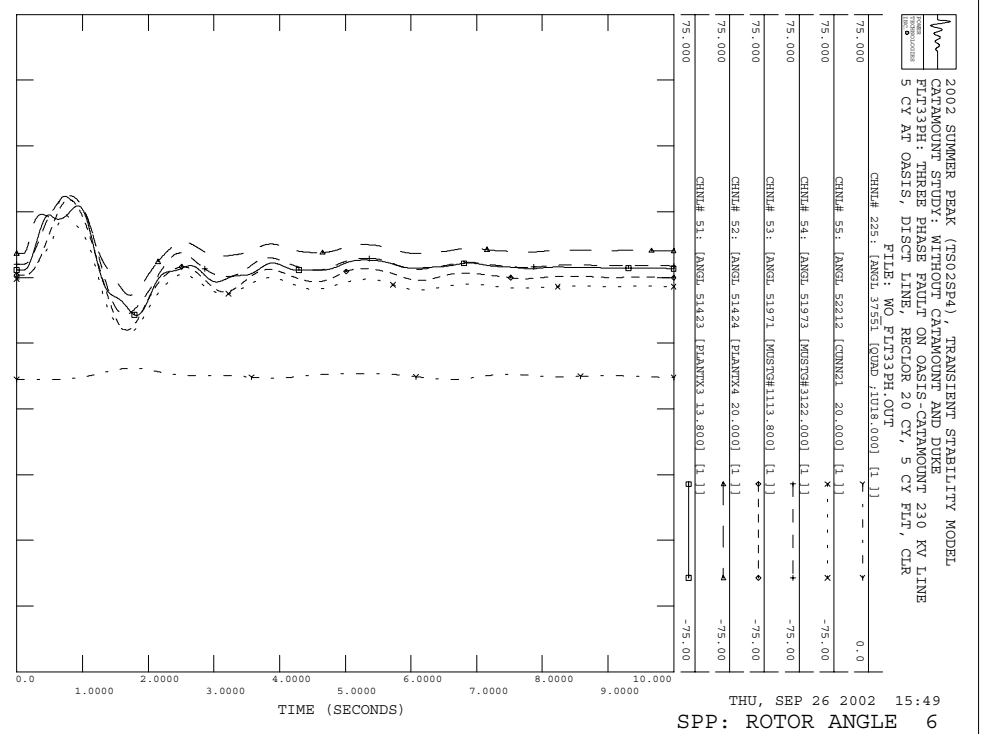
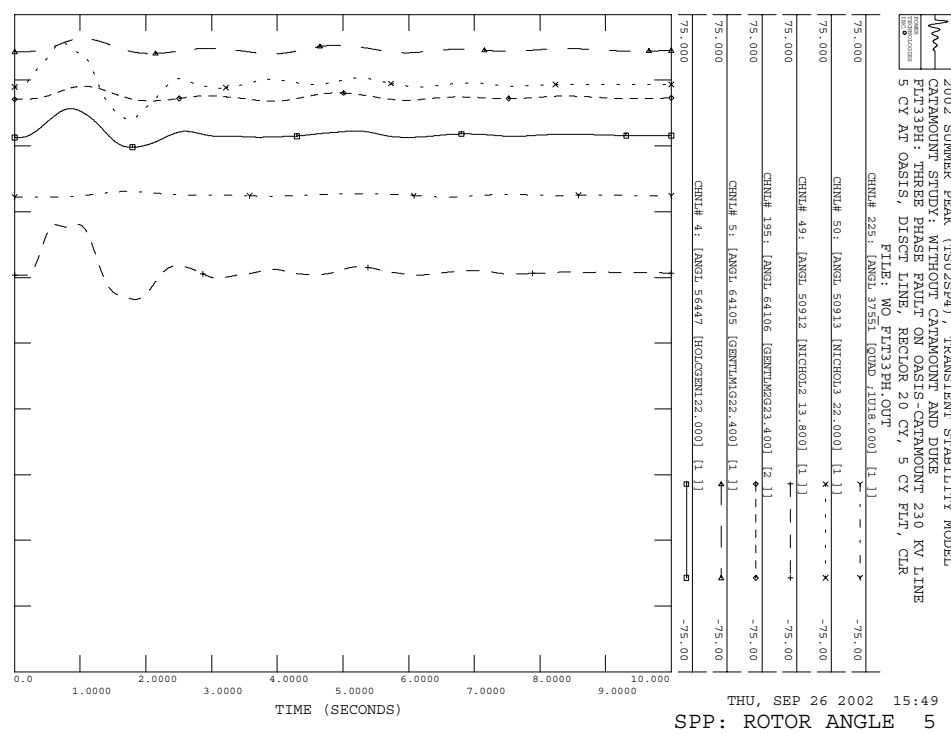


THU, SEP 26 2002 15:49
 SPP: 345 KV BUS VOLTAGE 1

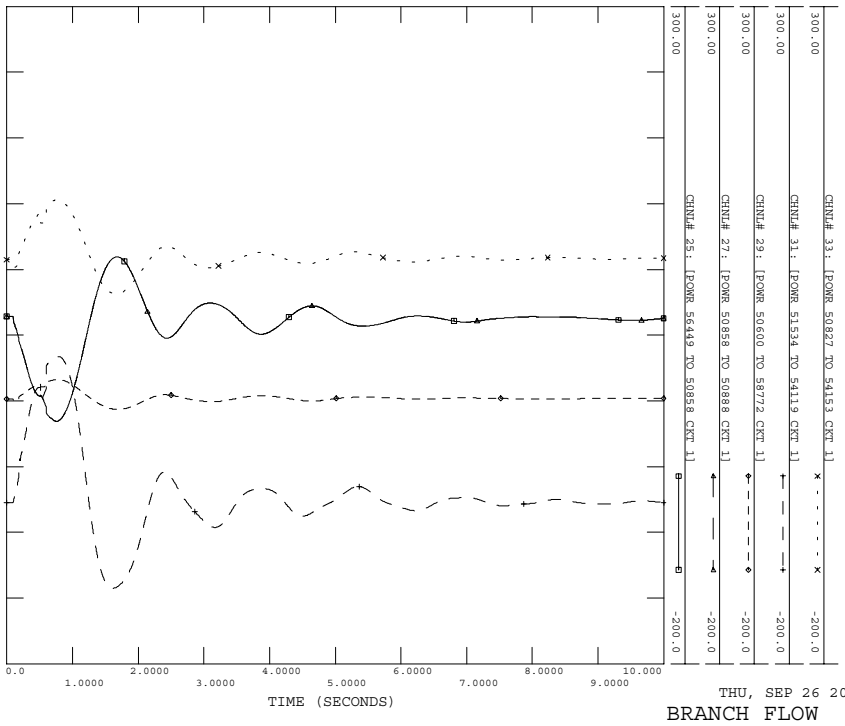
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT33PH: THREE PHASE FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT33PH.OUT



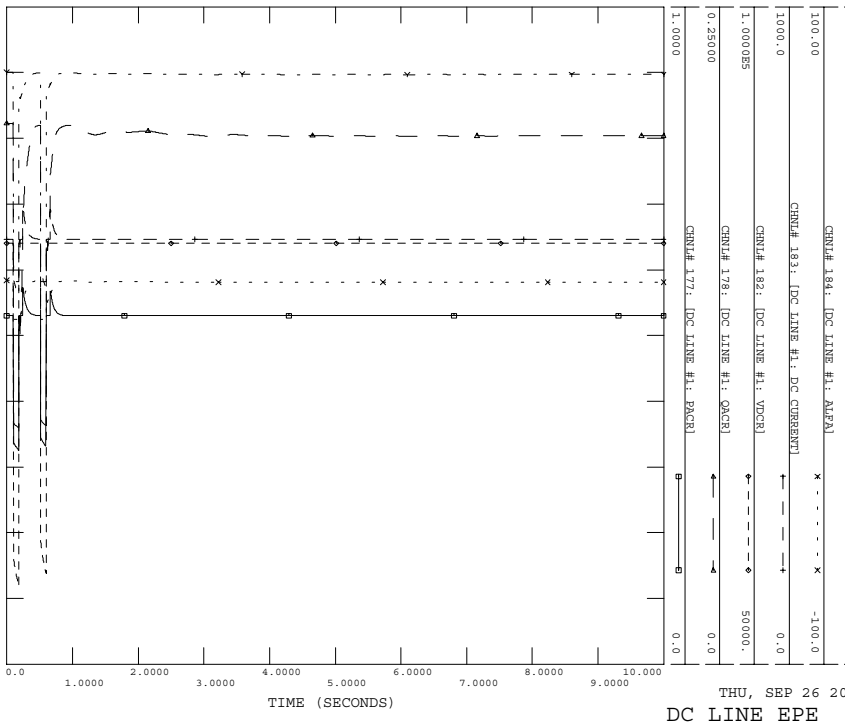
THU, SEP 26 2002 15:49
 SPP: 115 KV BUS VOLTAGE 3



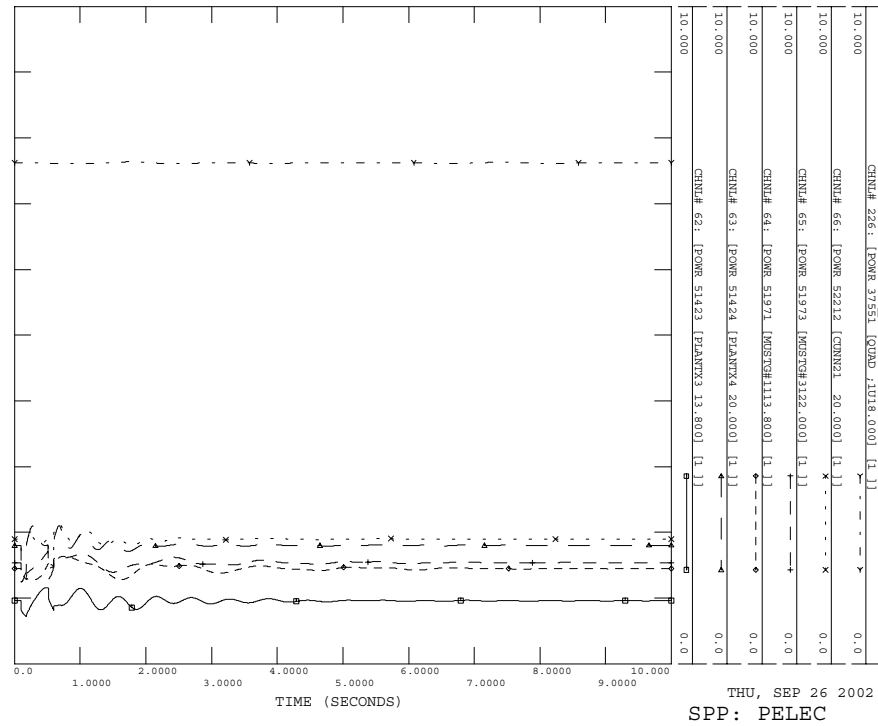
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT33PH: THREE PHASE FAULT ON OASIS-CATMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT33PH.OUT



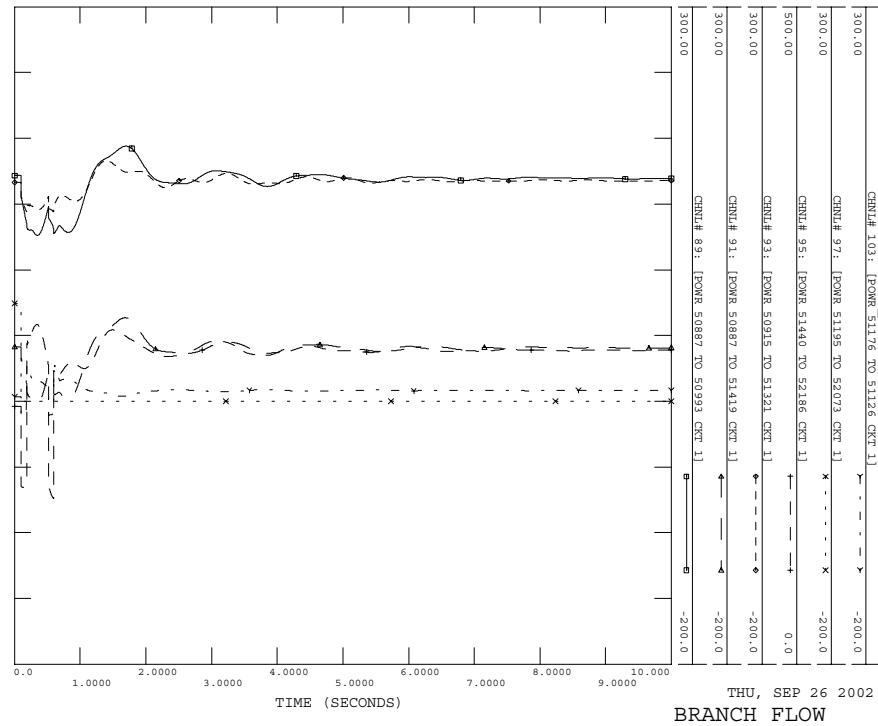
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT33PH: THREE PHASE FAULT ON OASIS-CATMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT33PH.OUT



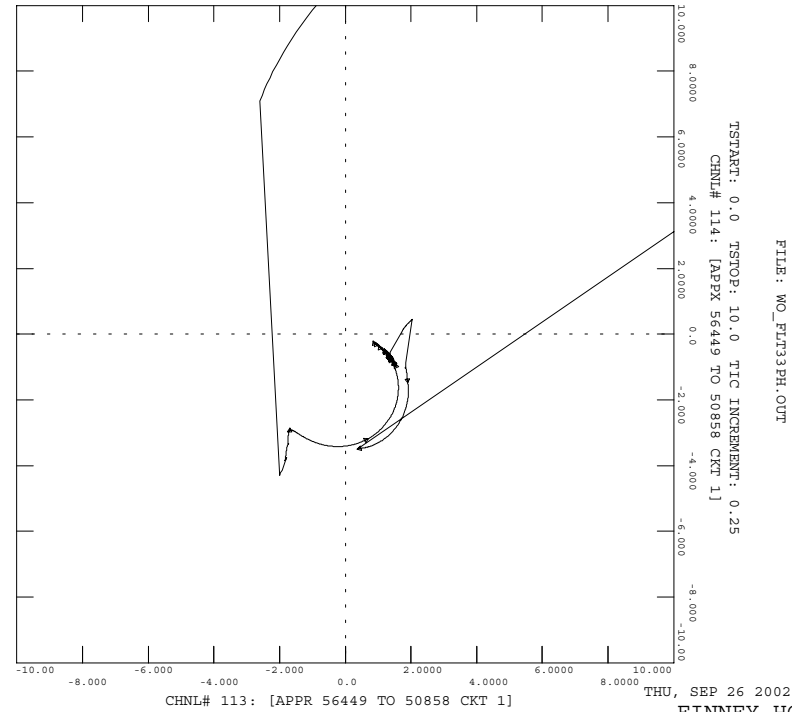
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT33PH: THREE PHASE FAULT ON OASIS-CATMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT33PH.OUT



2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT33PH: THREE PHASE FAULT ON OASIS-CATMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT33PH.OUT

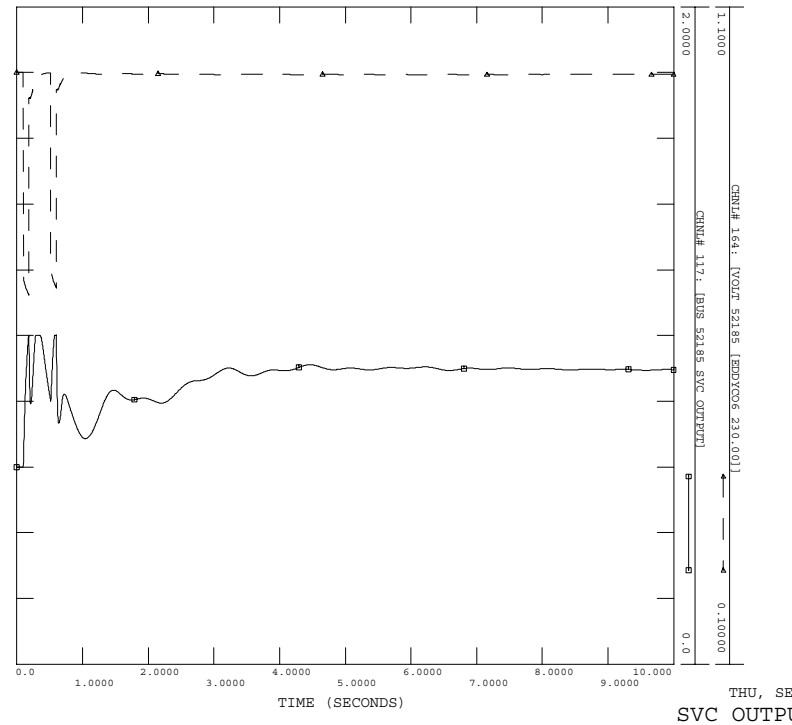


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT33PH: THREE PHASE FAULT ON OASIS-CATMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT33PH.OUT



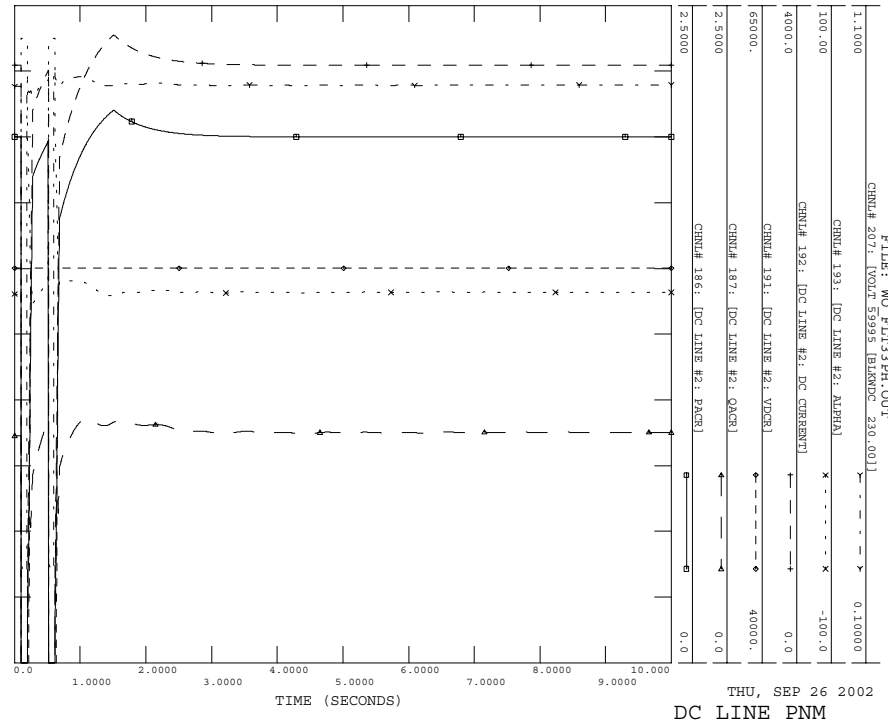
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2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT33PH: THREE PHASE FAULT ON OASIS-CATMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT33PH.OUT



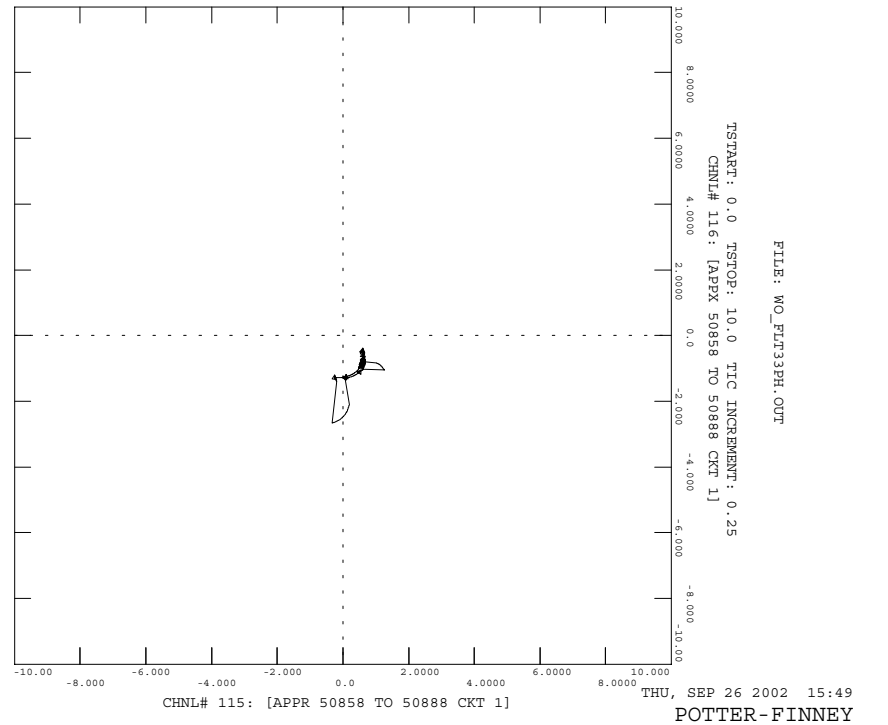
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2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT33PH: THREE PHASE FAULT ON OASIS-CATMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT33PH.OUT

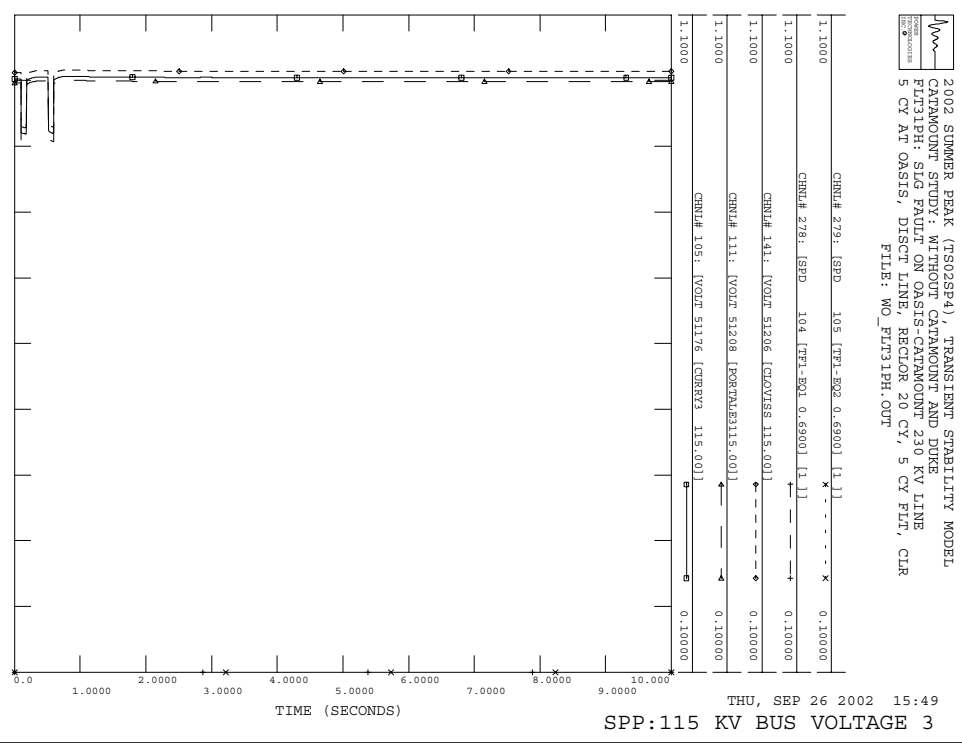
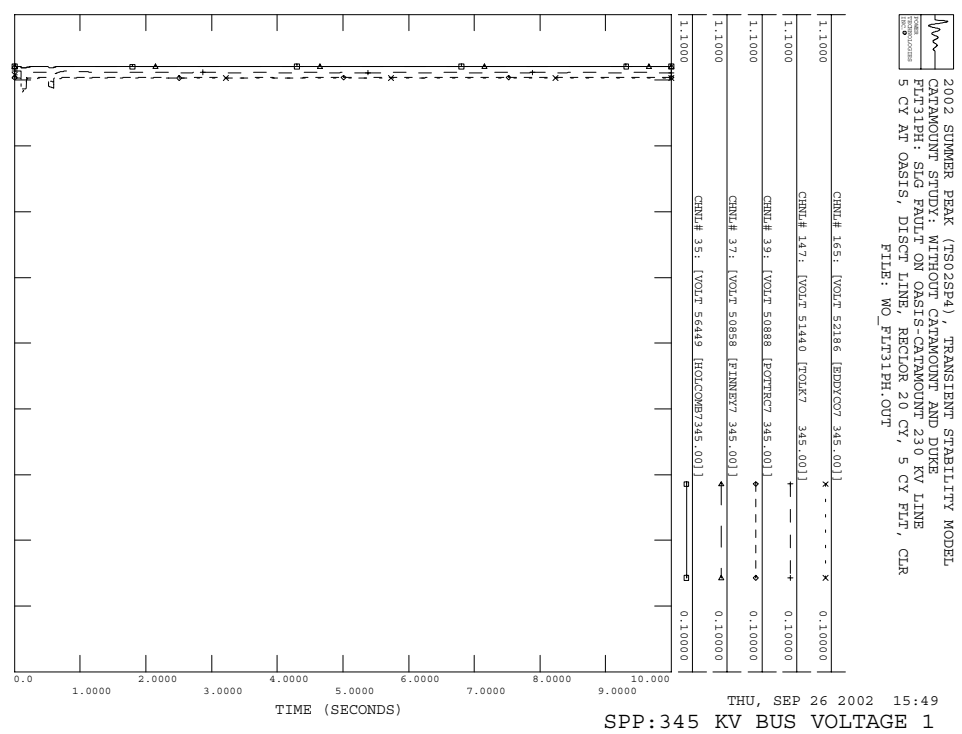
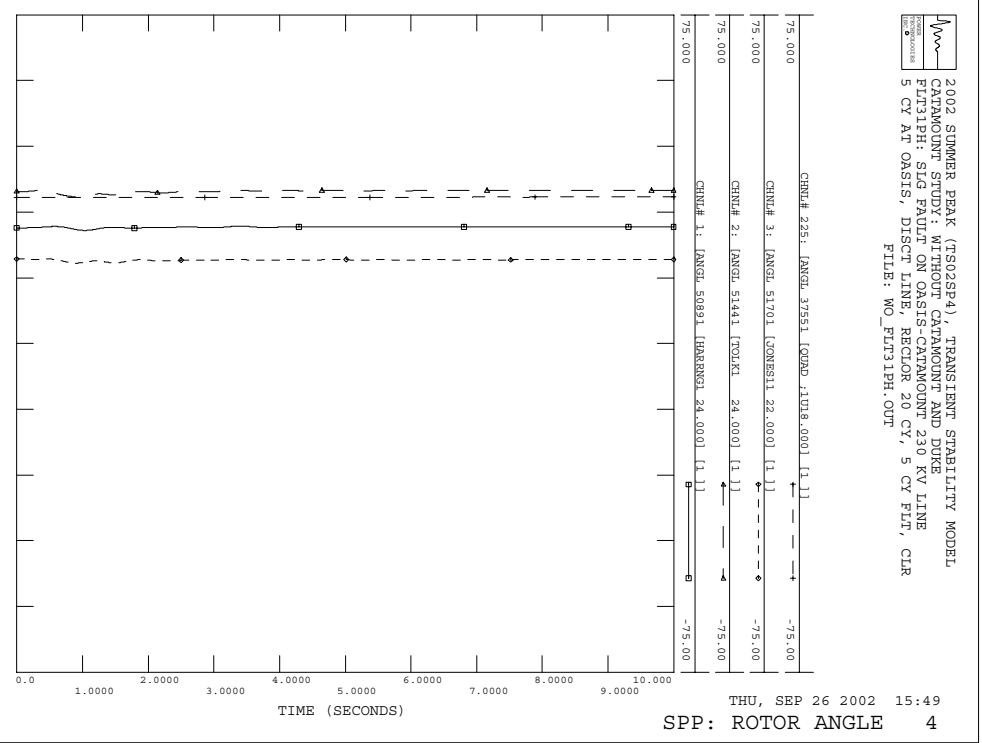
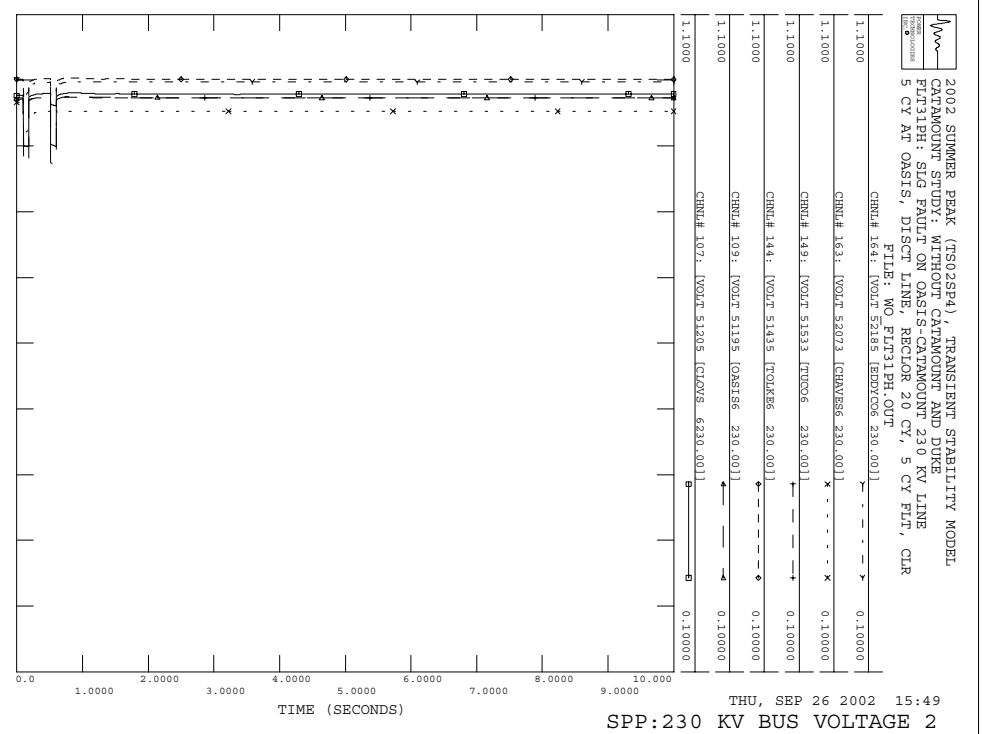


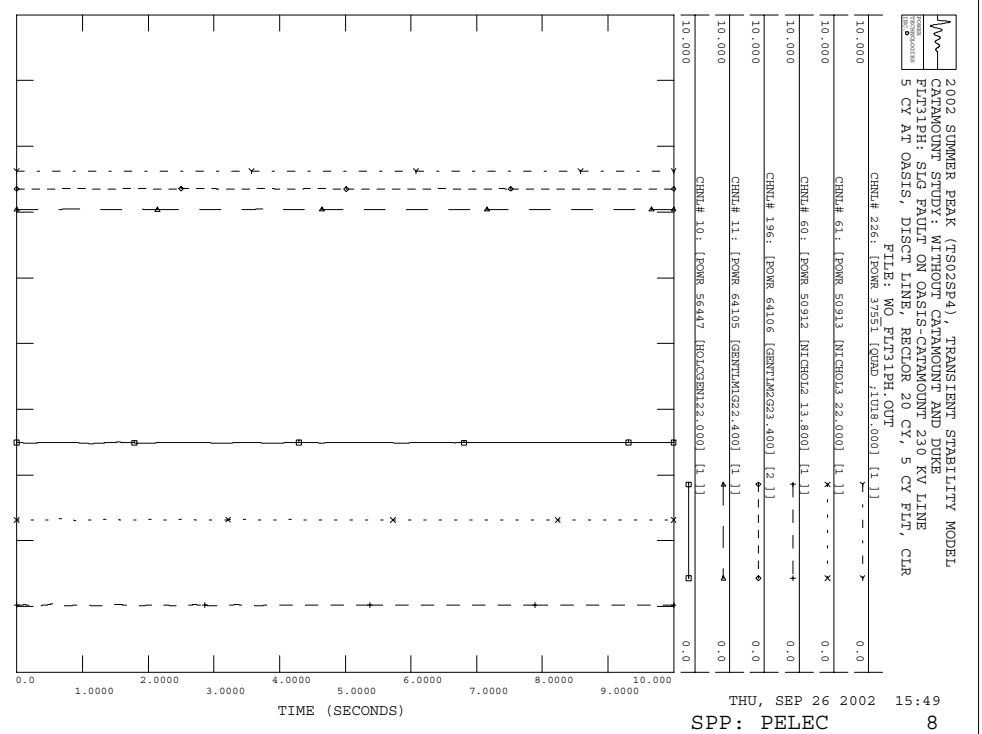
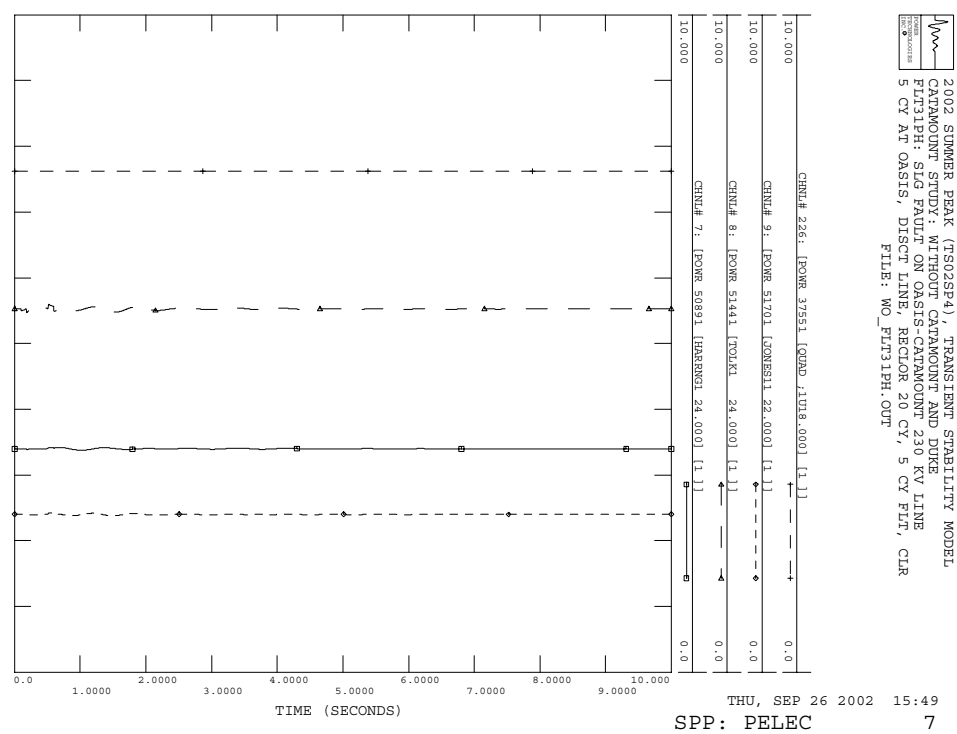
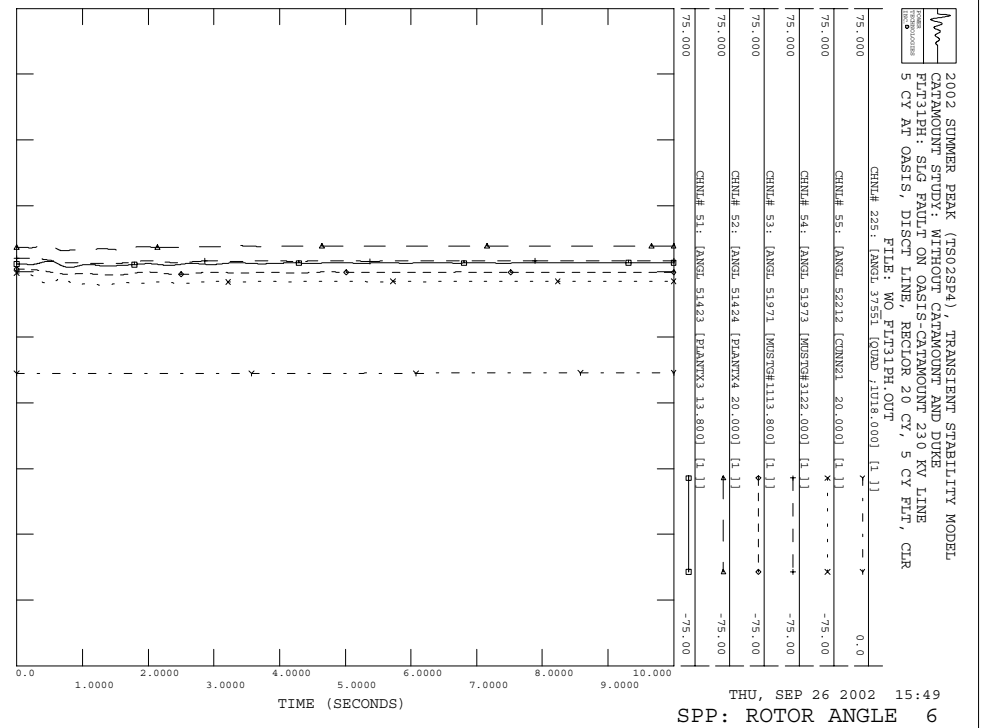
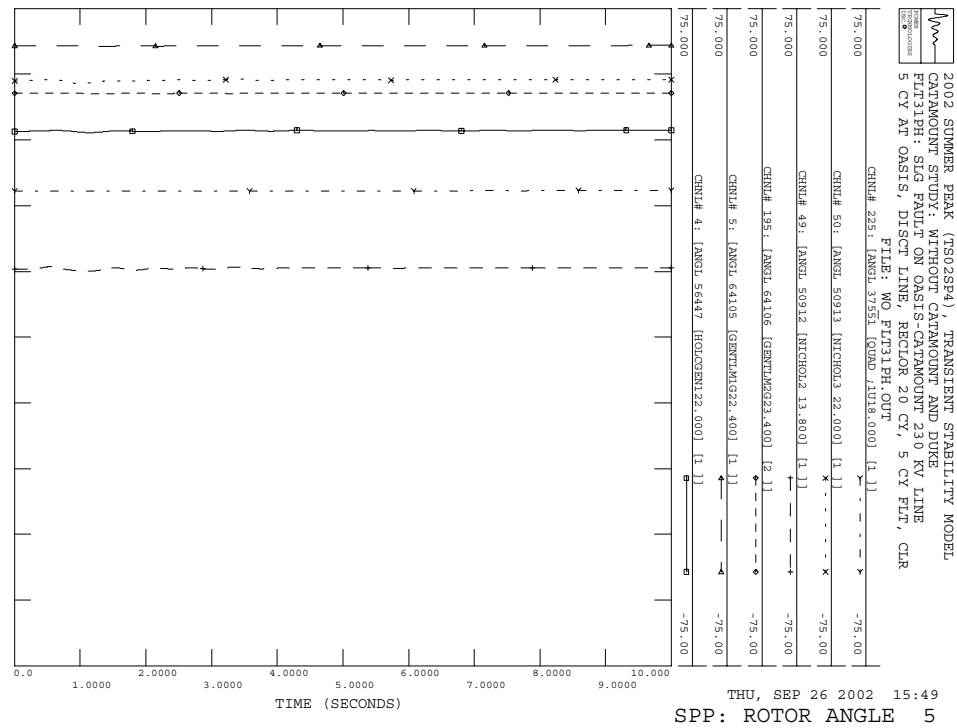
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2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT33PH: THREE PHASE FAULT ON OASIS-CATMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT33PH.OUT

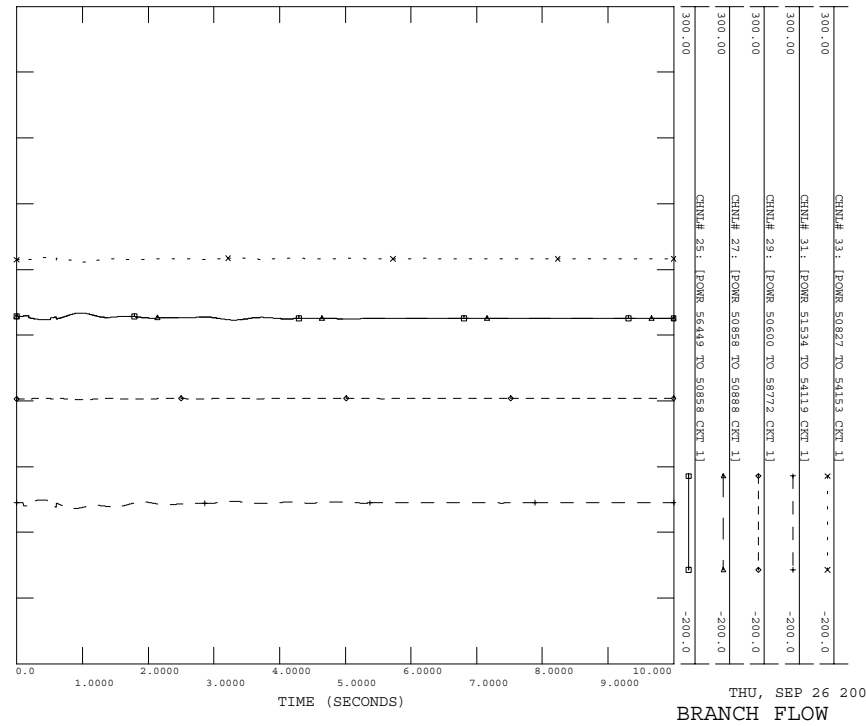


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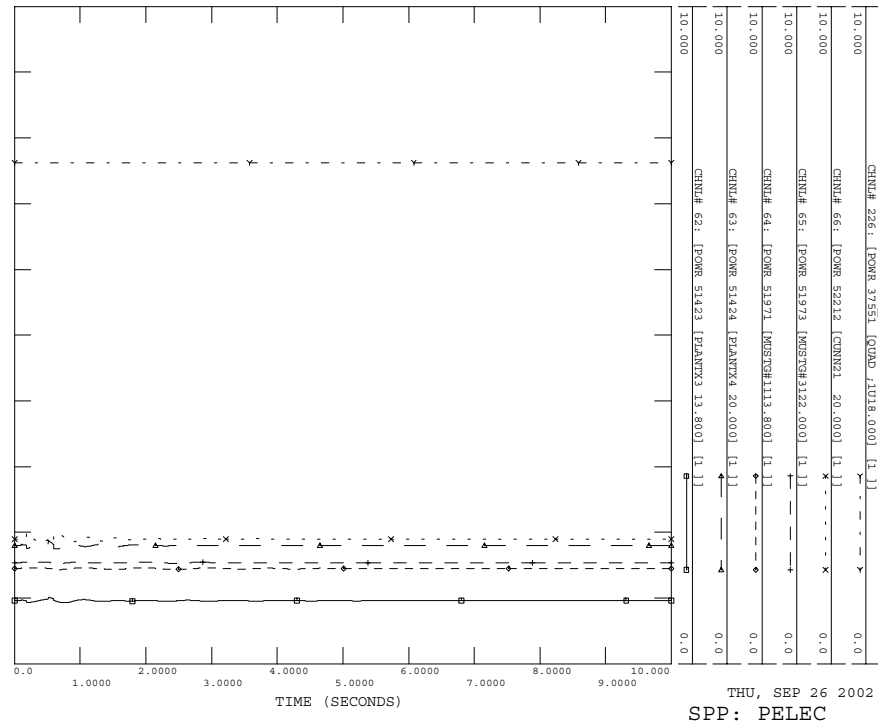


2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT31PH: SLG FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT31PH.OUT



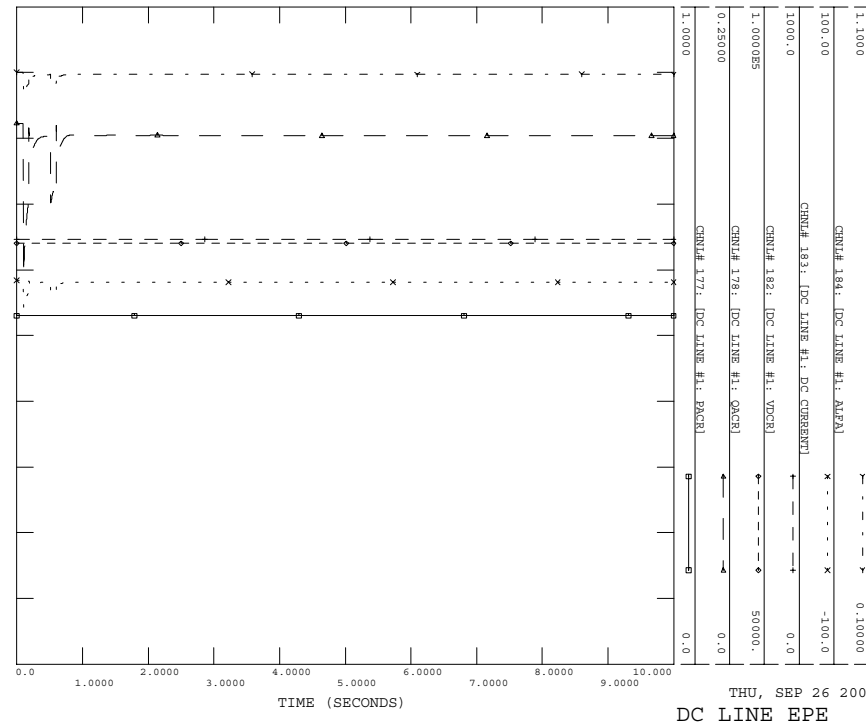
BRANCH FLOW 10

2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT31PH: SLG FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT31PH.OUT



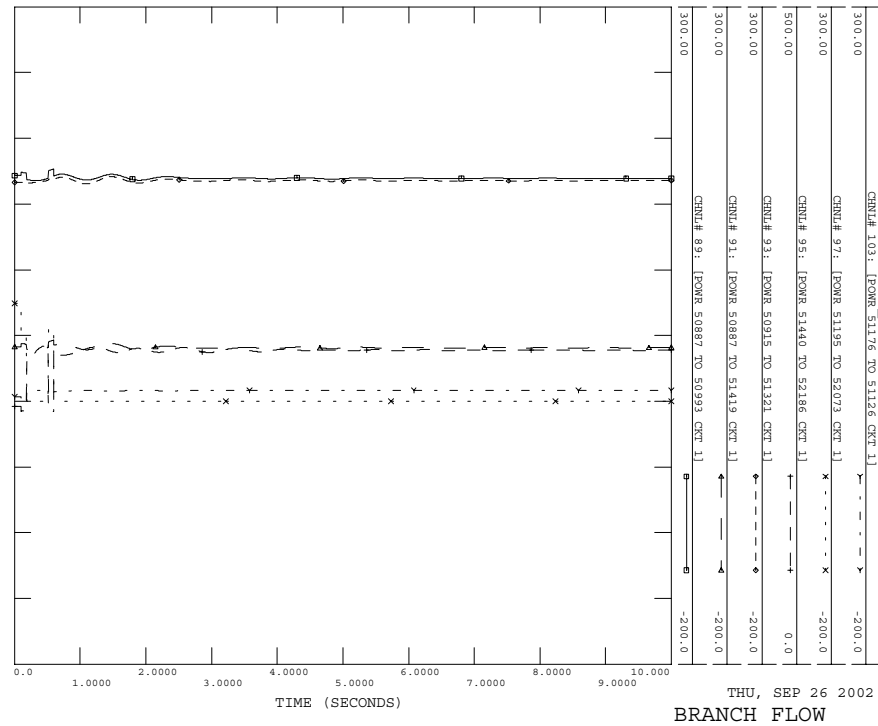
BRANCH FLOW 11

2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT31PH: SLG FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT31PH.OUT



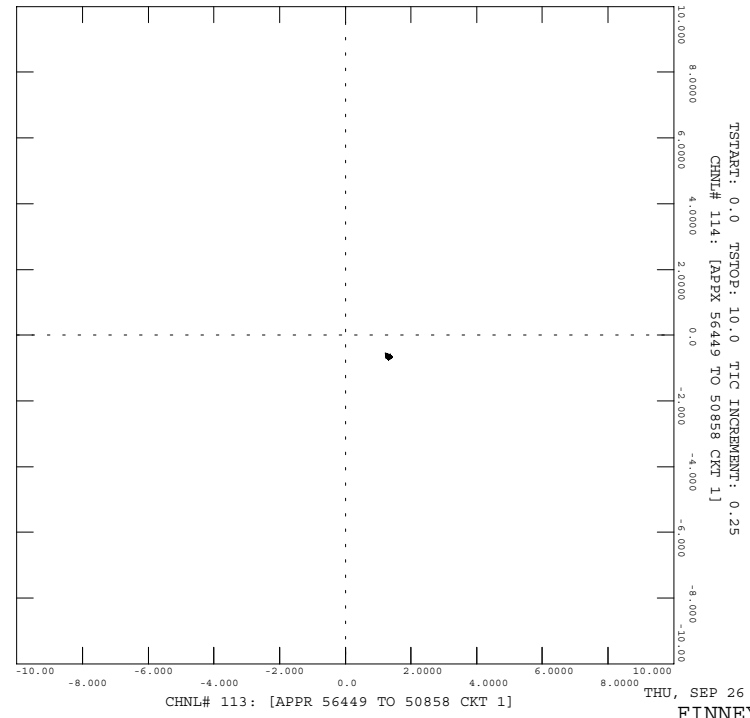
DC LINE EPE 12

2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT31PH: SLG FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT31PH.OUT



DC LINE EPE 11

2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT31PH: SLG FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT31PH.OUT

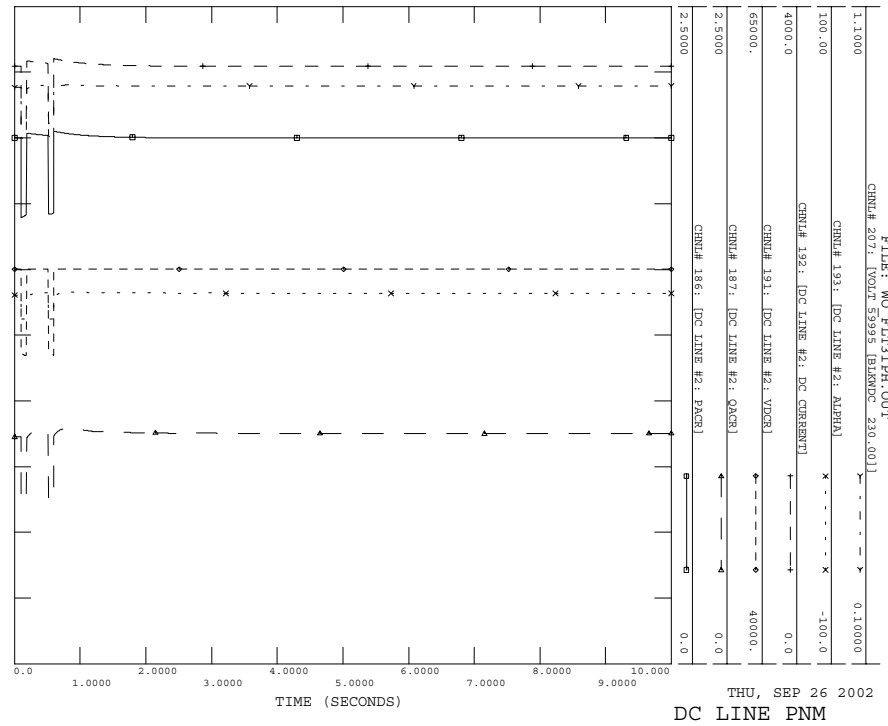


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 FINNEY-HOLCOMB

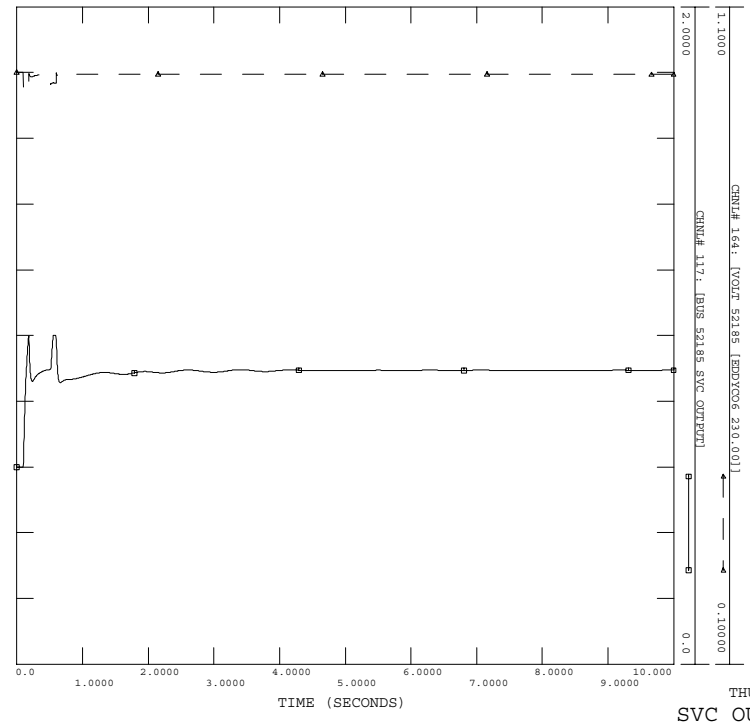
14

2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT31PH: SLG FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
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 CHNL# 207: [VOLT 52925 (BASEDC 230.00)]



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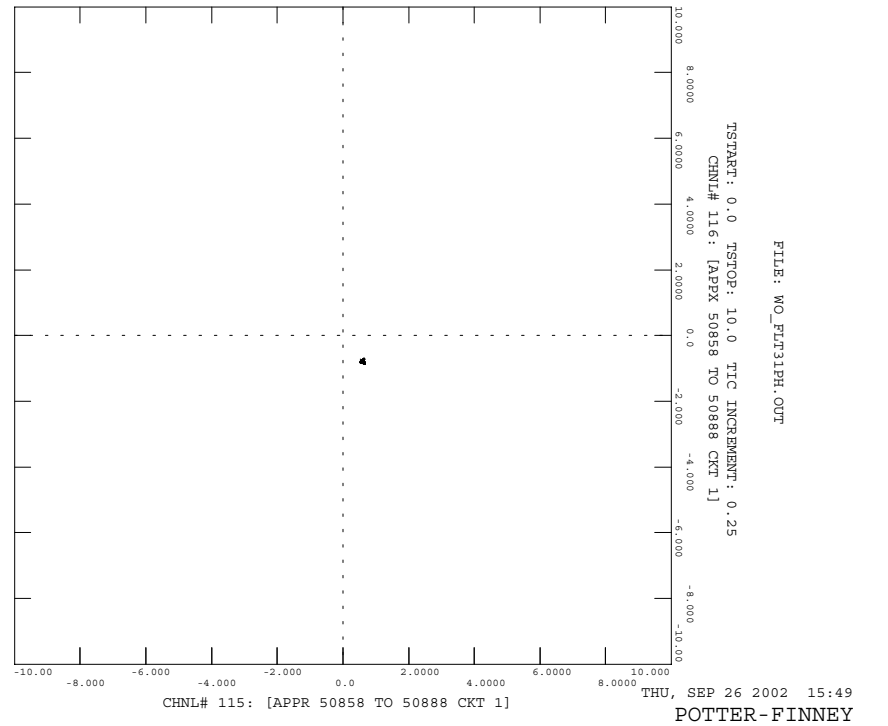
2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT31PH: SLG FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT31PH.OUT



THU, SEP 26 2002 15:49
 SVC OUTPUT

16

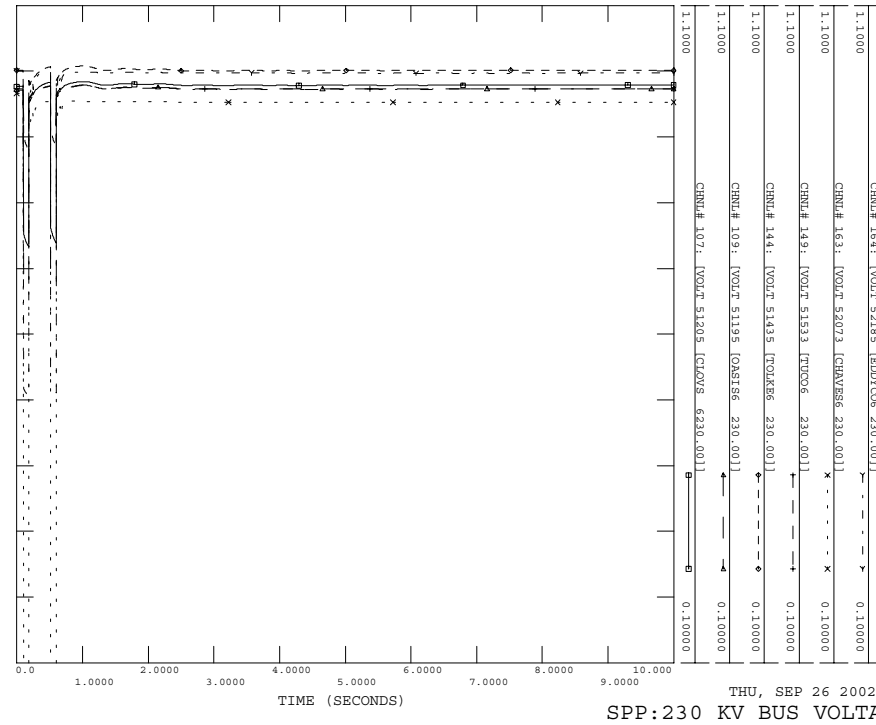
2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT31PH: SLG FAULT ON OASIS-CATAMOUNT 230 KV LINE
 5 CY AT OASIS, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT31PH.OUT



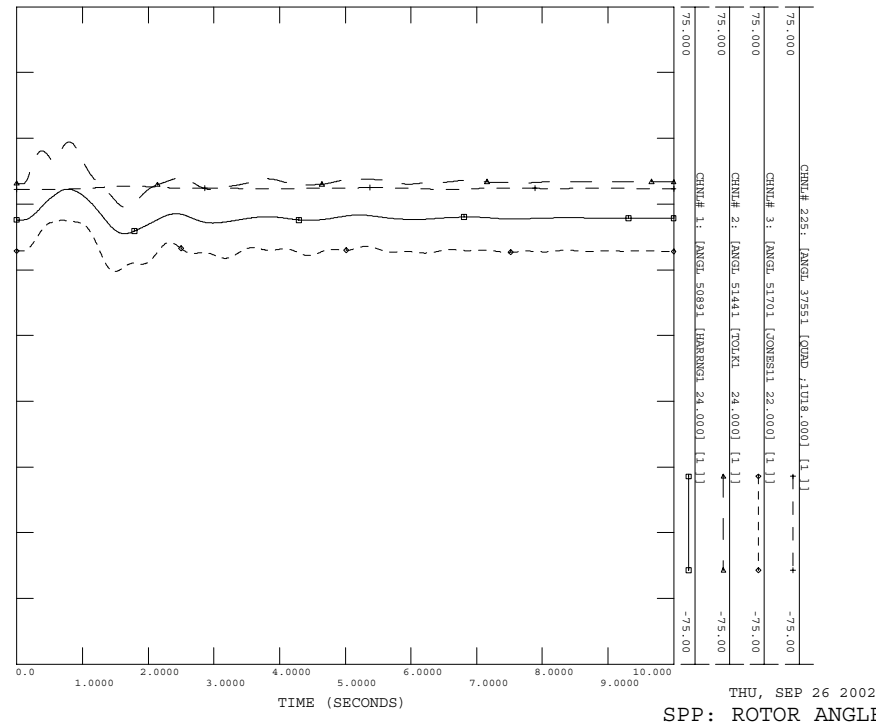
THU, SEP 26 2002 15:49
 POTTER-FINNEY

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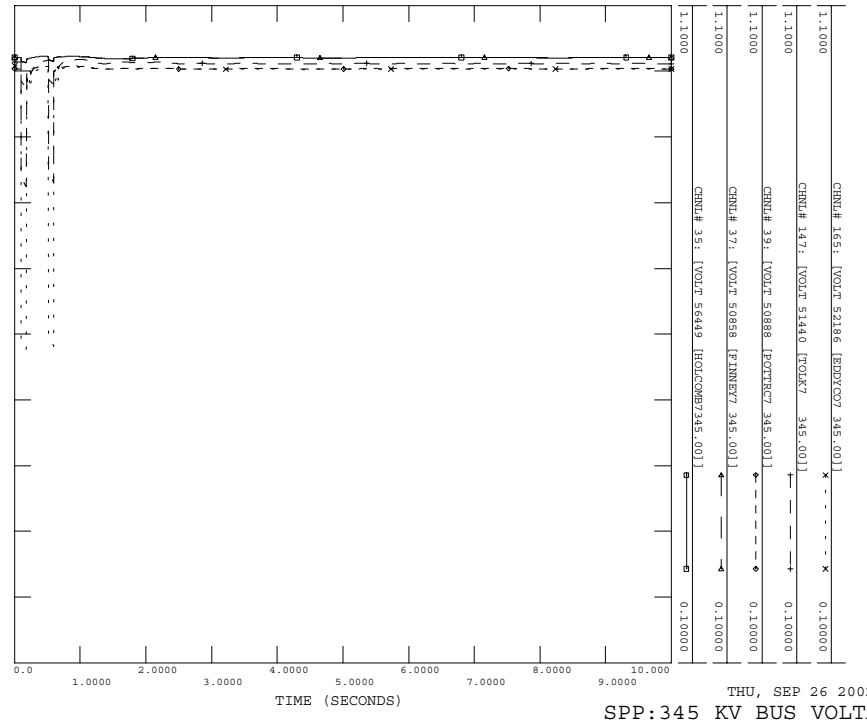
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT43PH.OUT



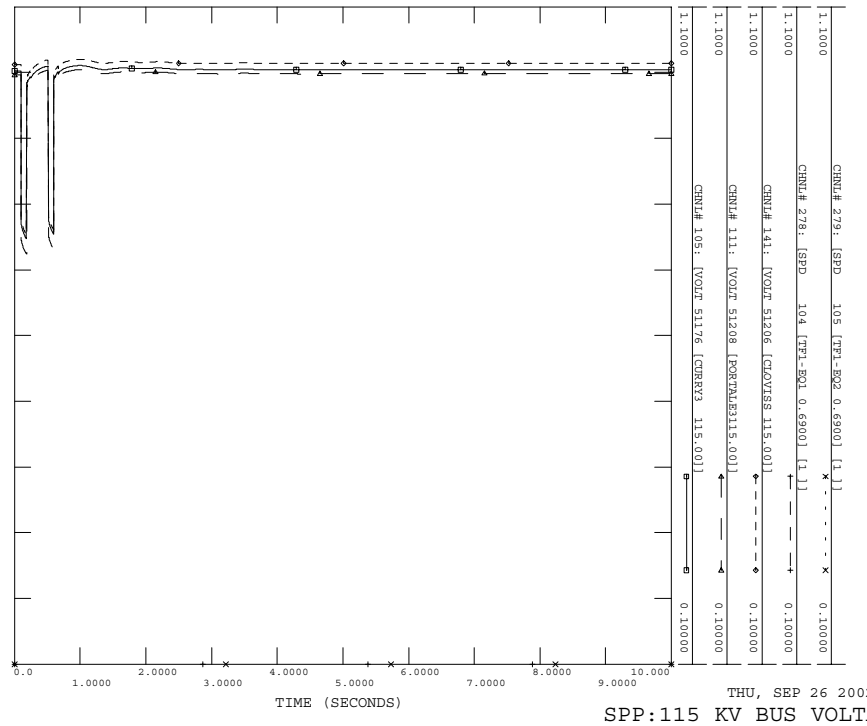
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT43PH.OUT

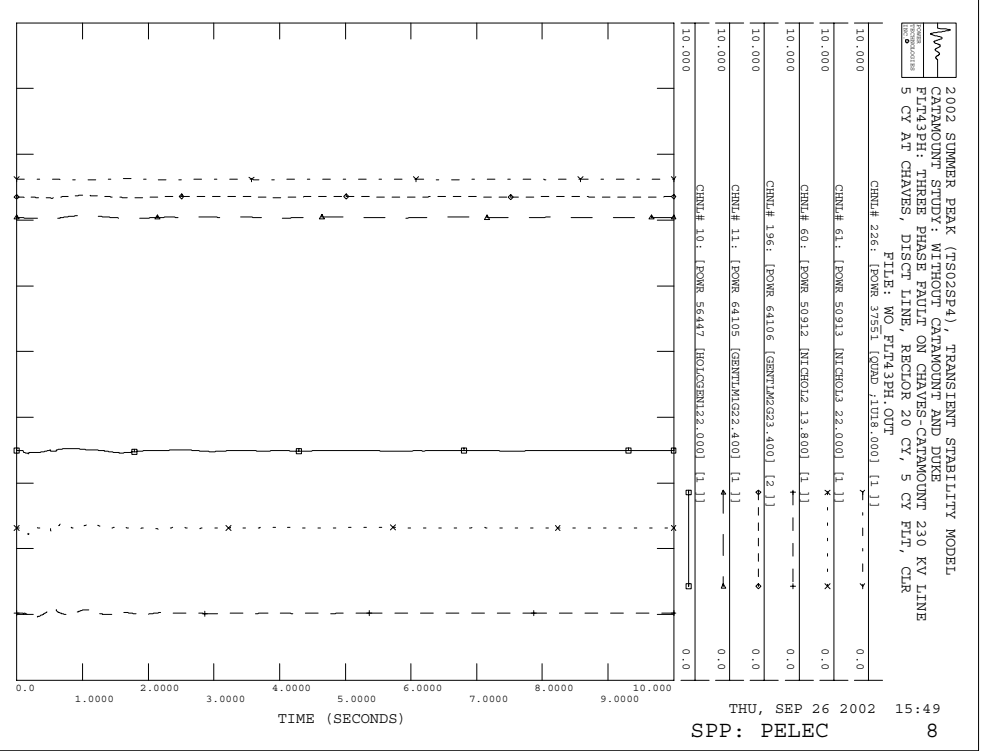
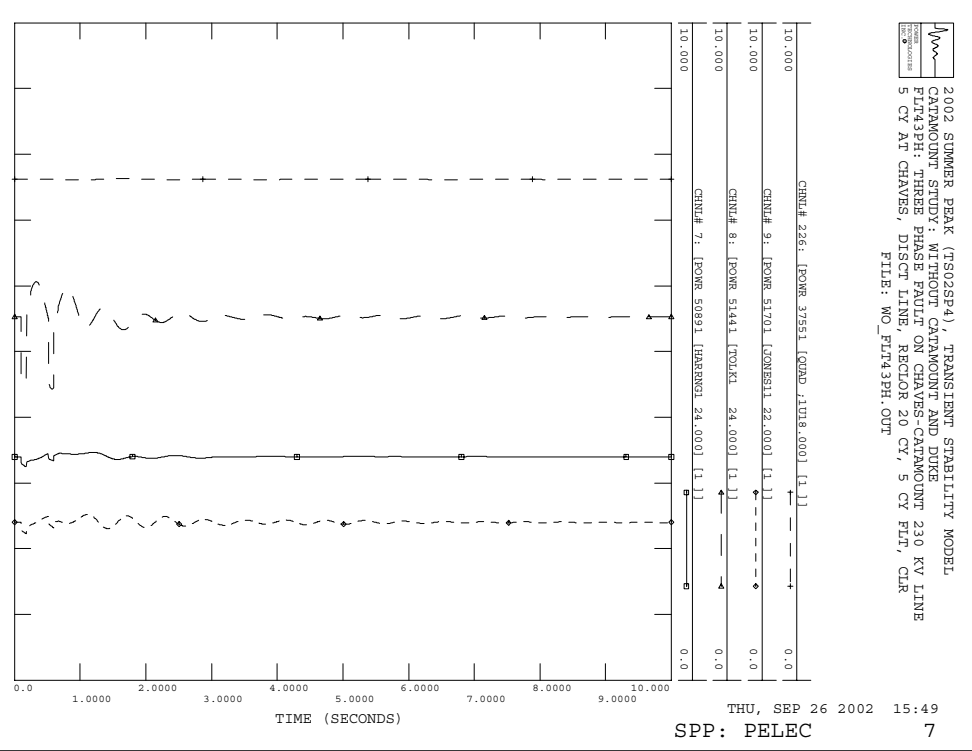
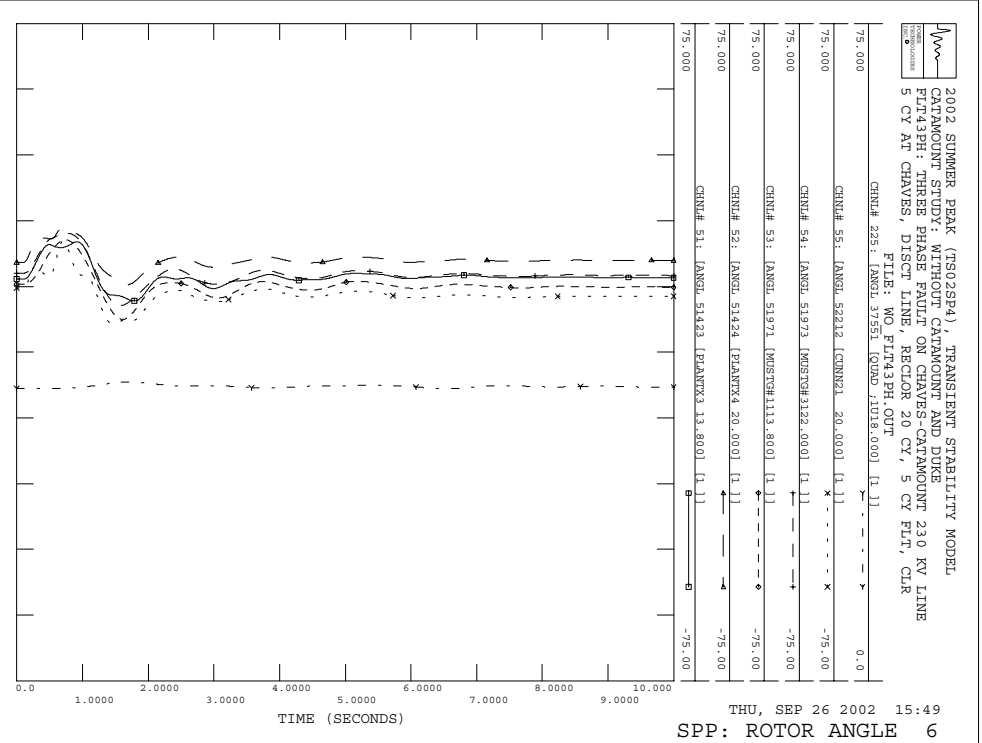
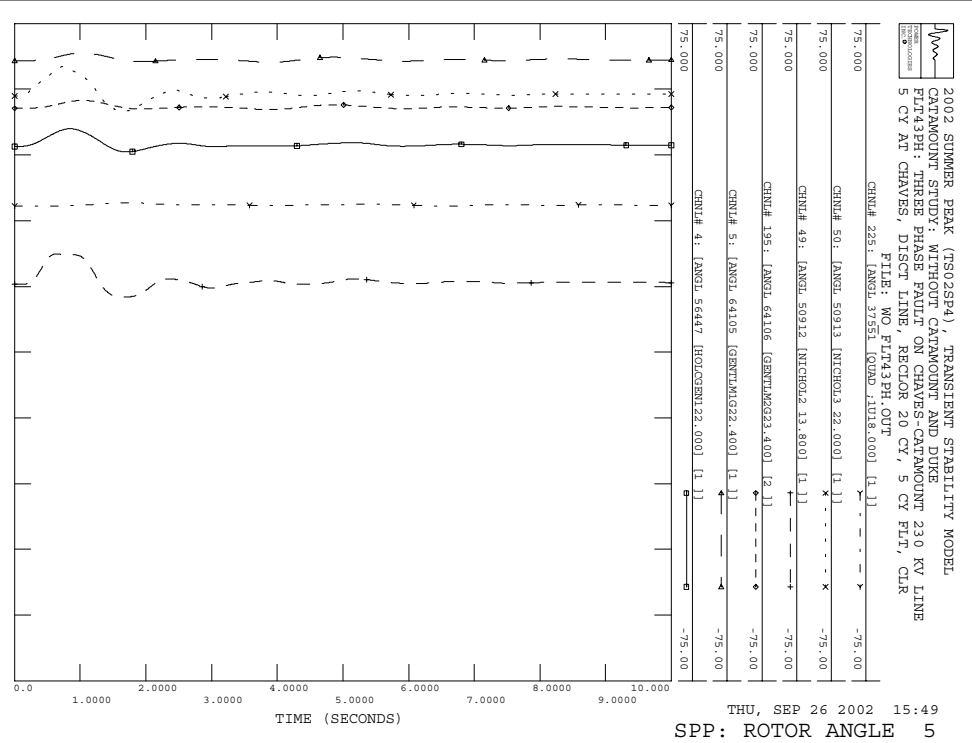


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT43PH.OUT

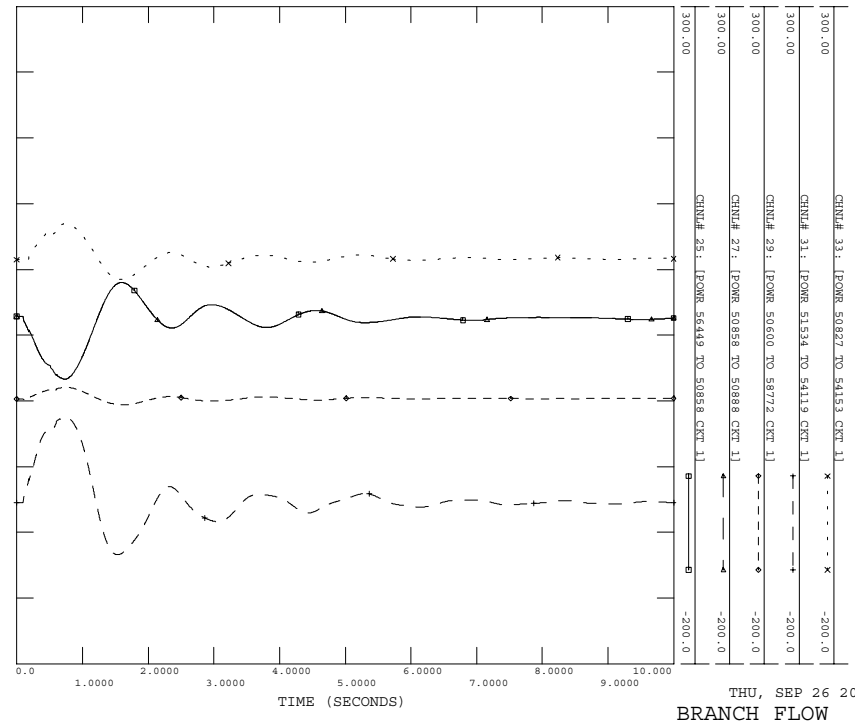


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT43PH.OUT

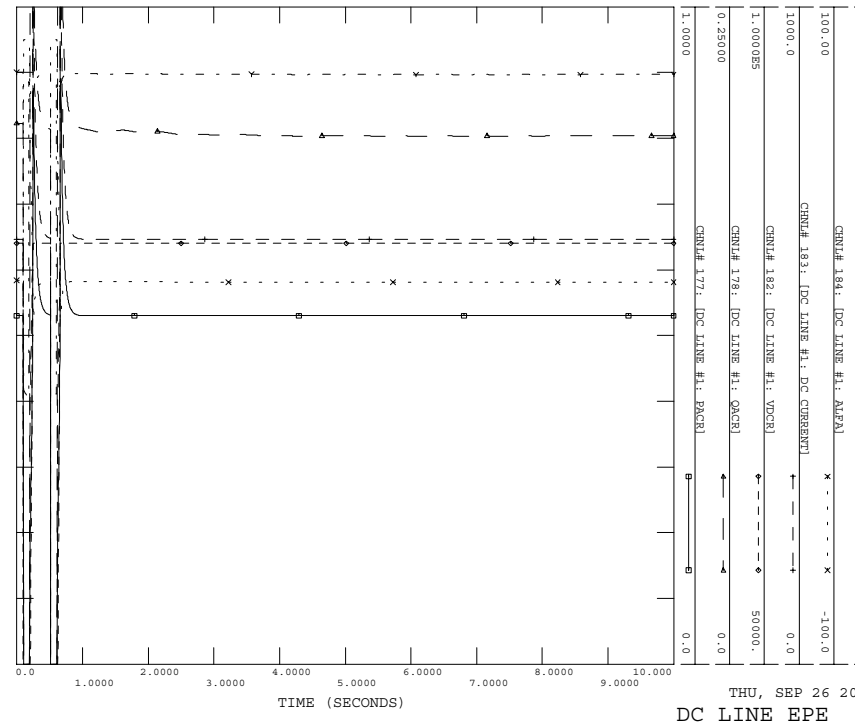




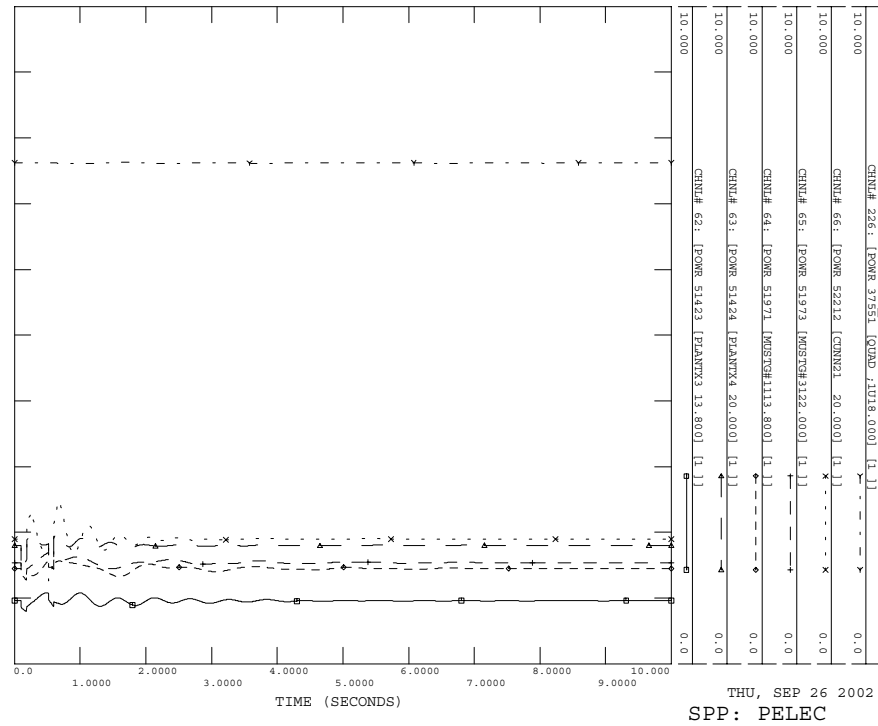
2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT43PH.OUT



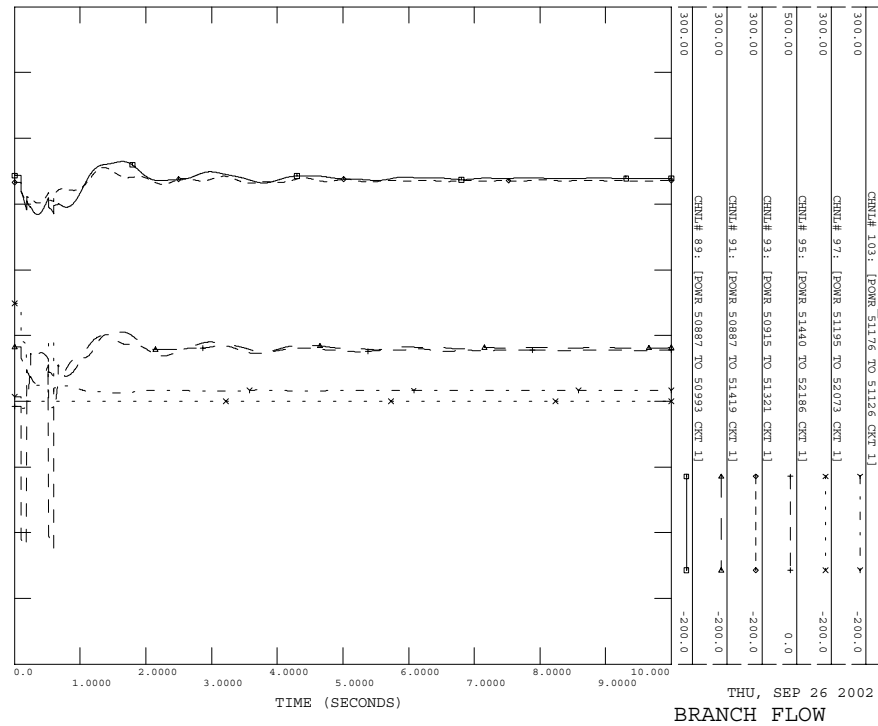
2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT43PH.OUT



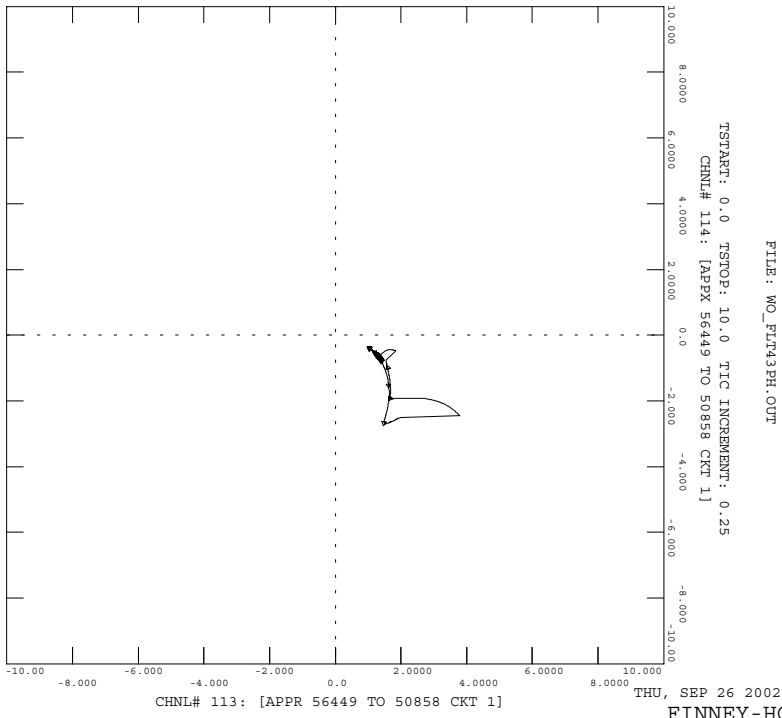
2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT43PH.OUT



2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT43PH.OUT



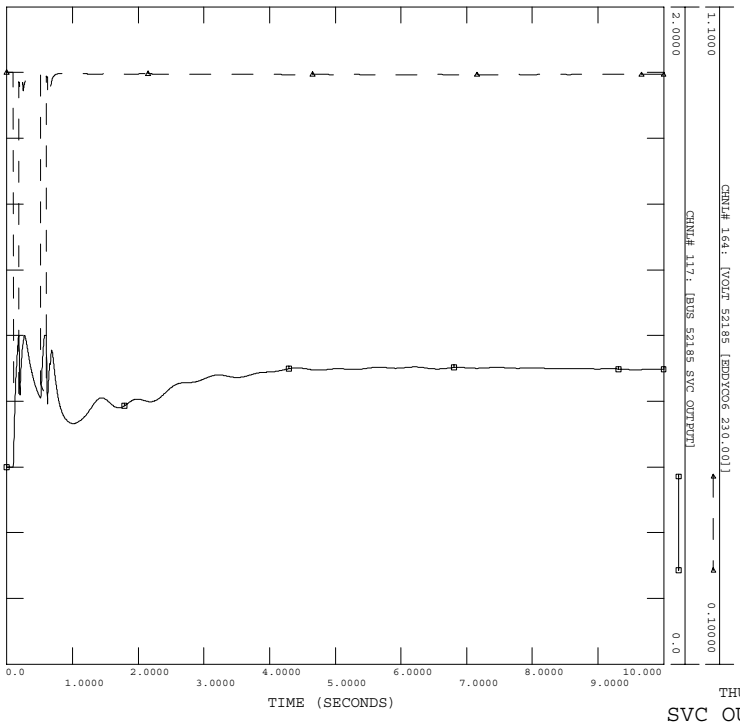
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT43PH.OUT



FILE: WO_FLT43PH.OUT

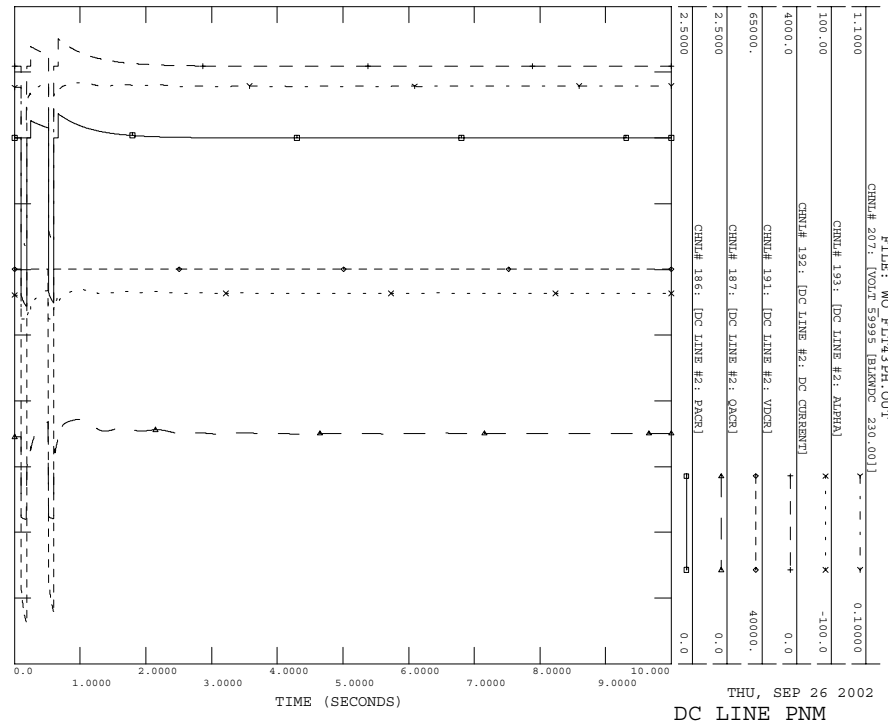
THU, SEP 26 2002 15:49
 FINNEY-HOLCOMB 14

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT43PH.OUT



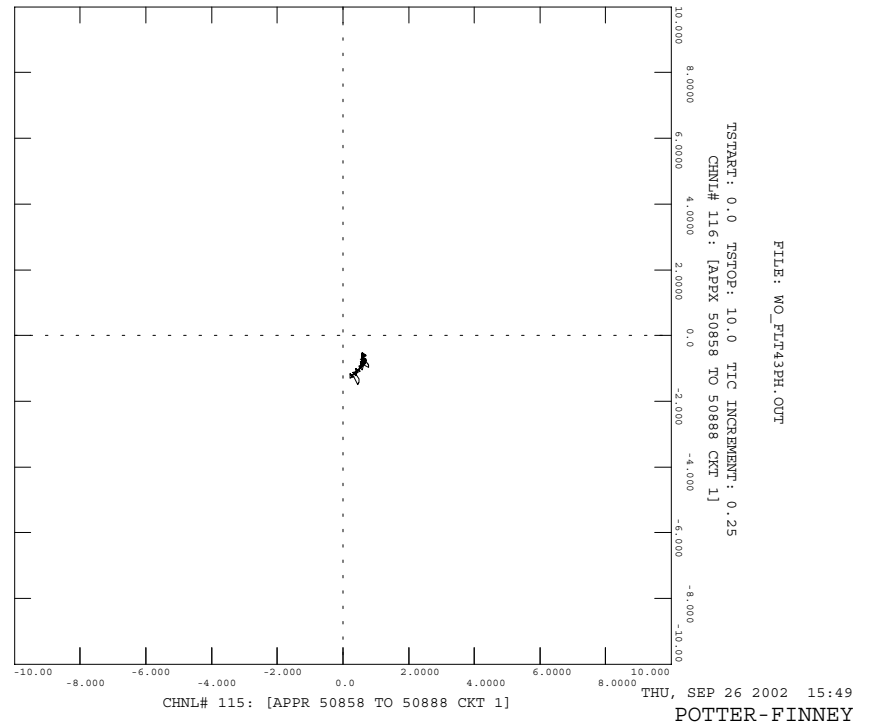
THU, SEP 26 2002 15:49
 SVC OUTPUT 16

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT43PH.OUT



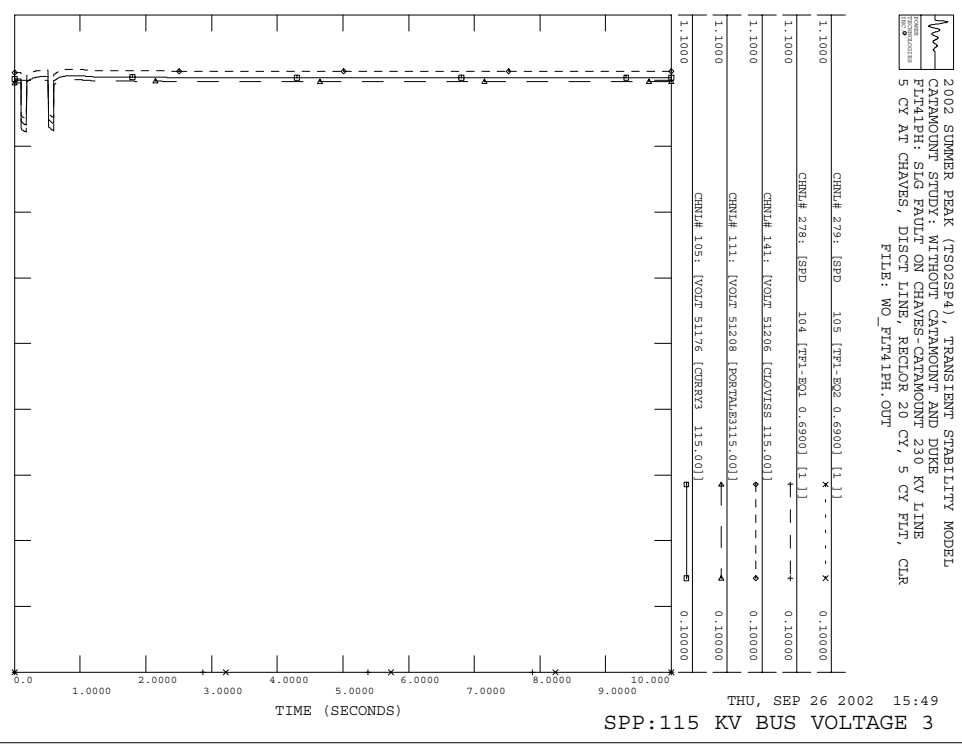
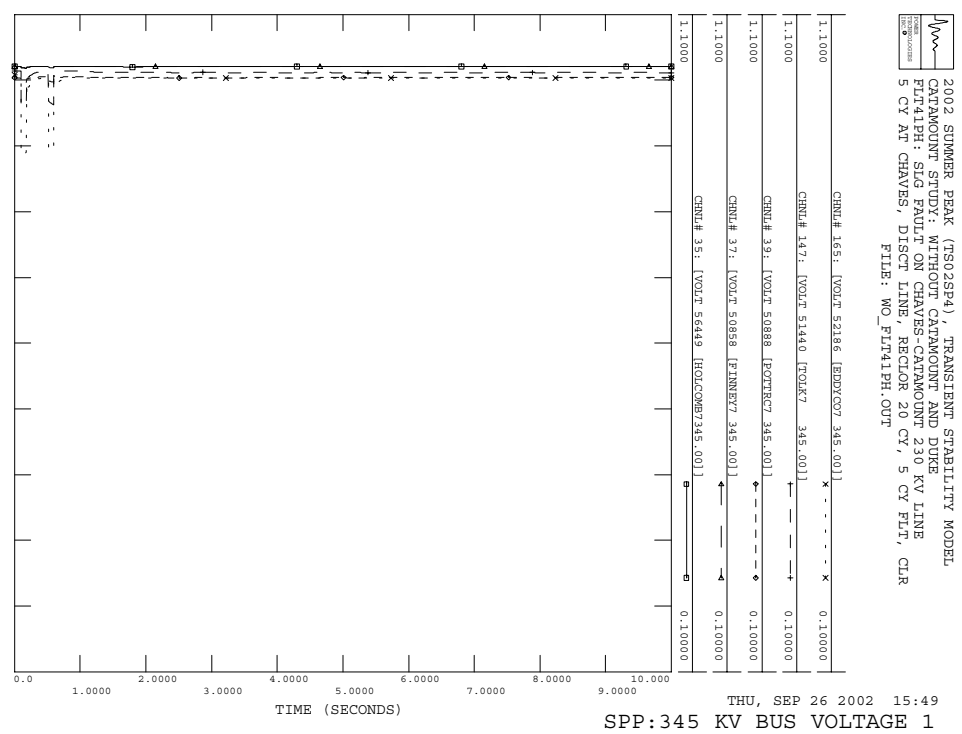
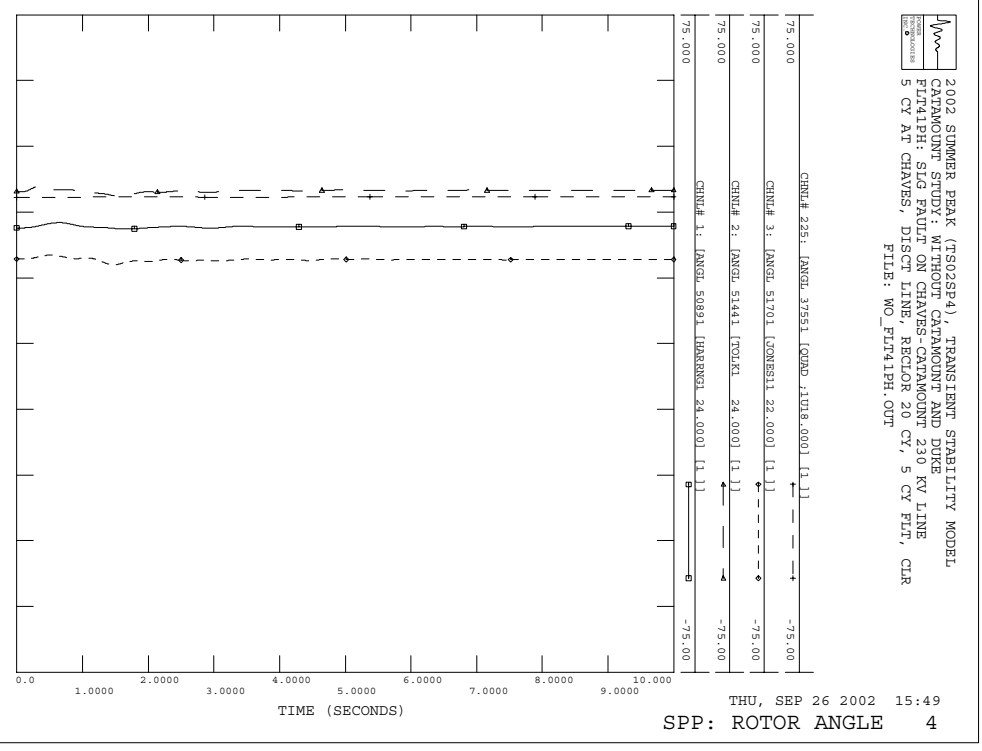
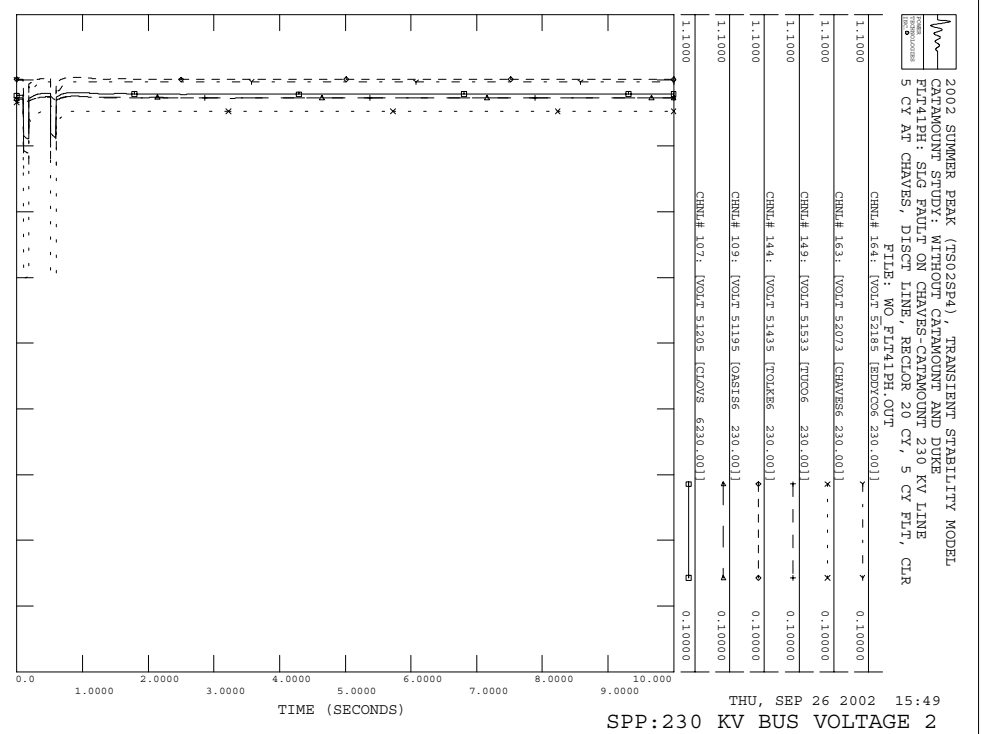
THU, SEP 26 2002 15:49
 DC LINE PNM 13

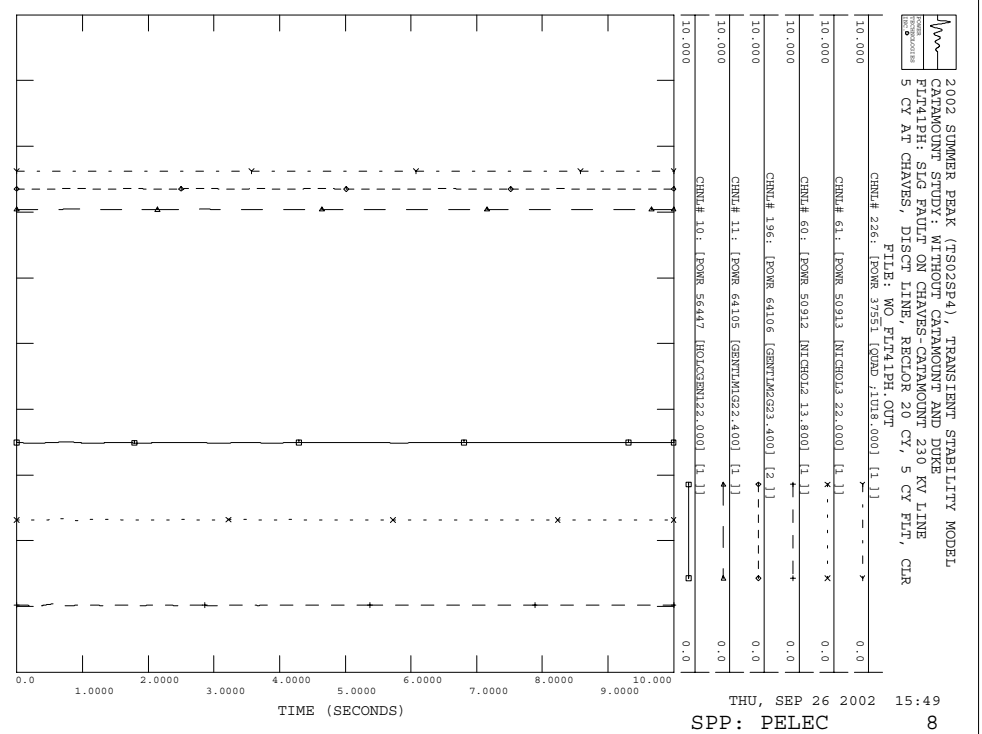
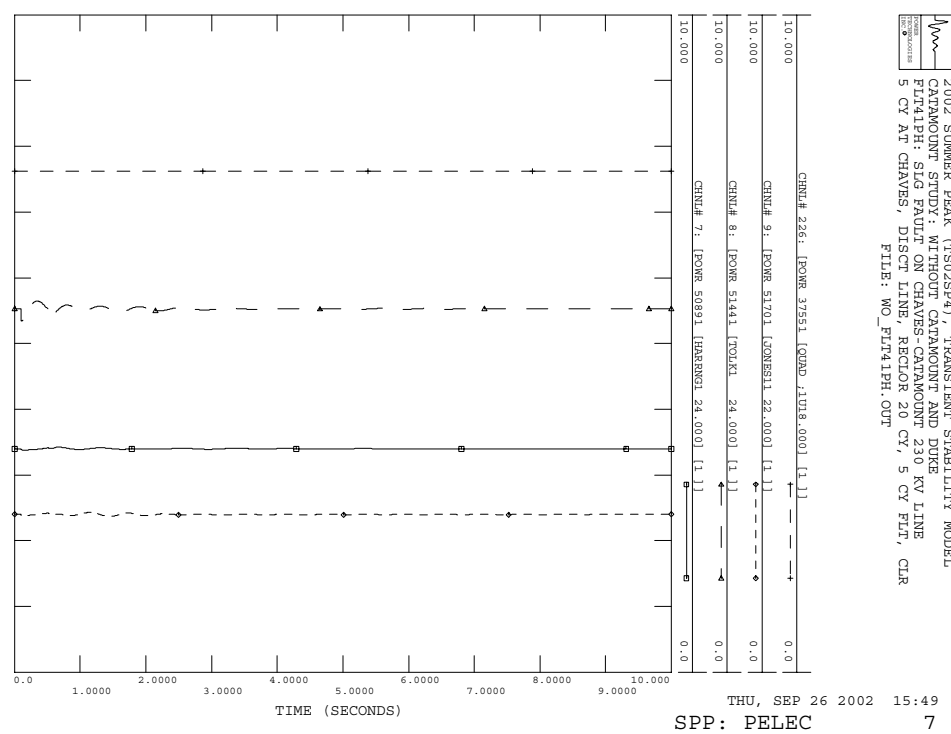
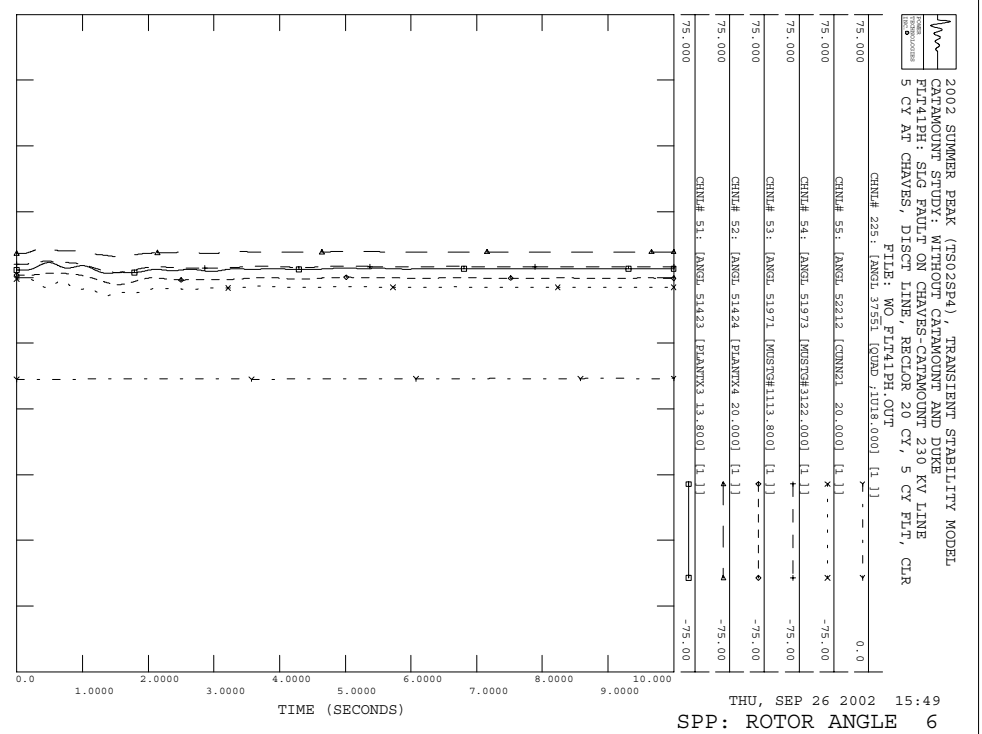
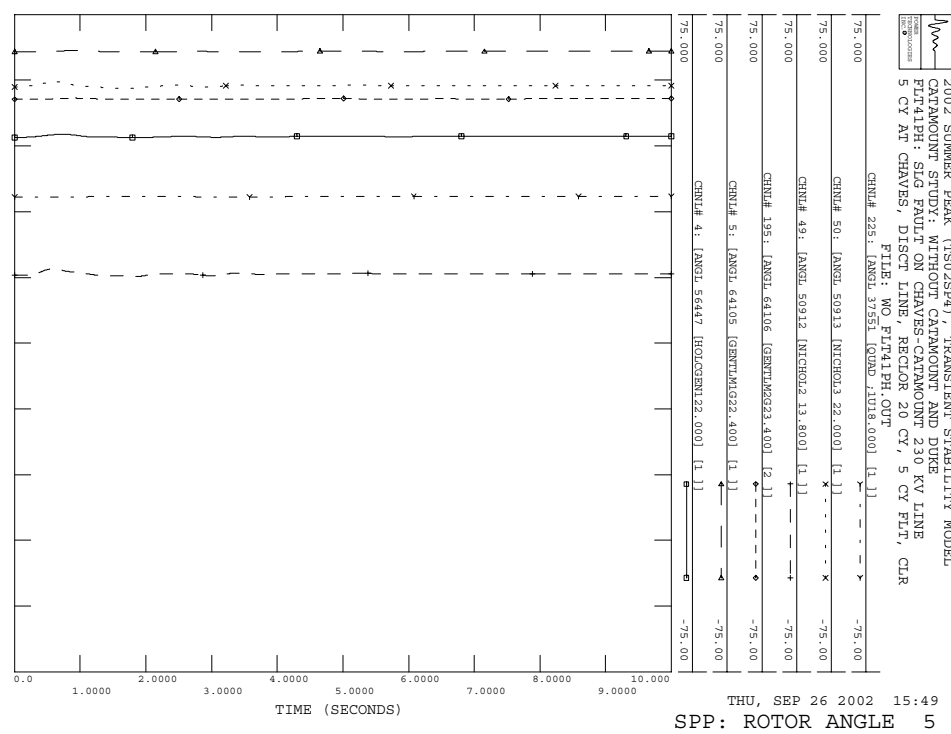
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT43PH: THREE PHASE FAULT ON CHAVES-CATMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT43PH.OUT



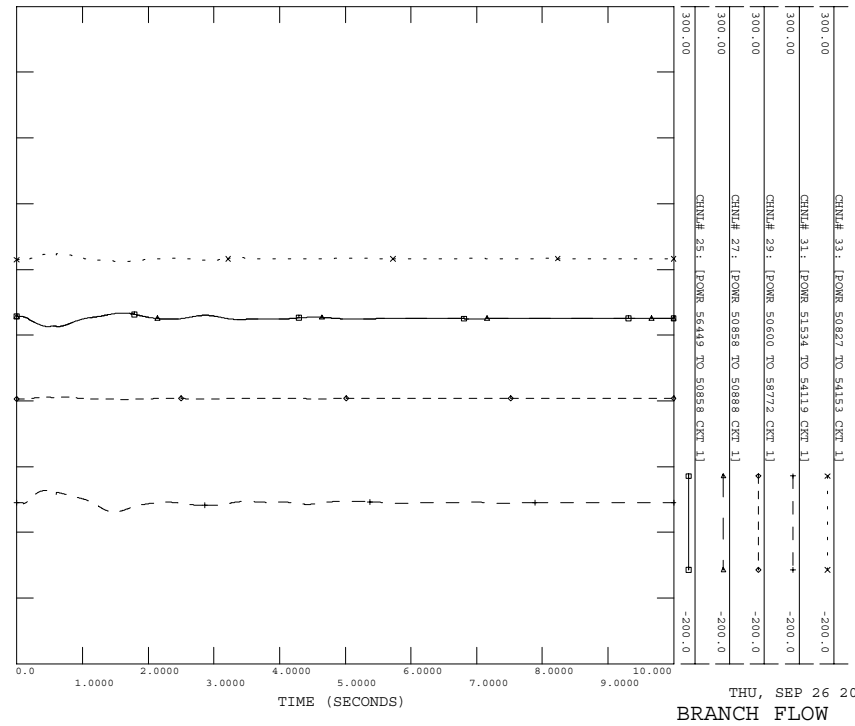
THU, SEP 26 2002 15:49
 POTTER-FINNEY 15

FILE: WO_FLT43PH.OUT



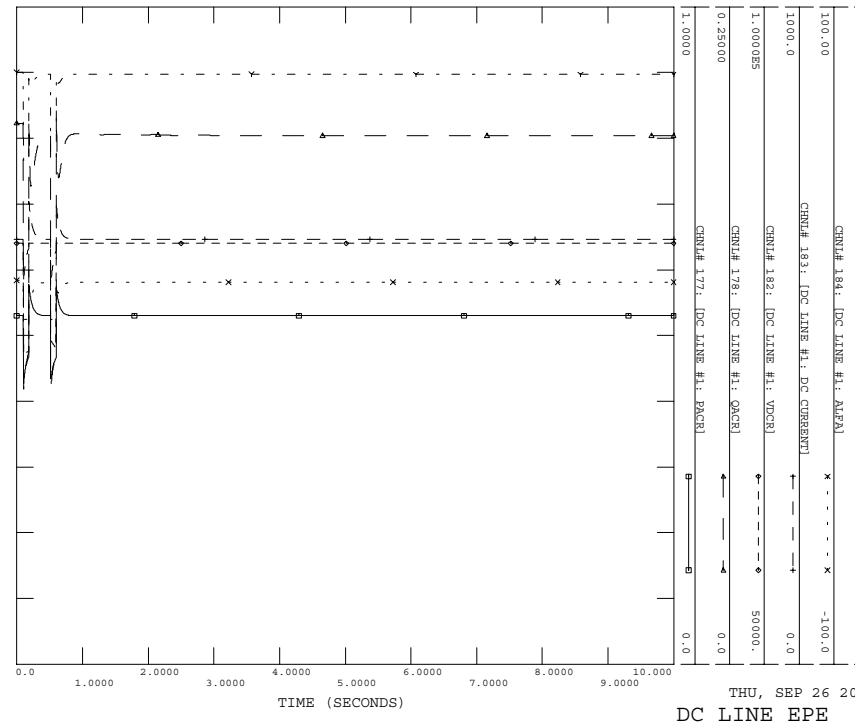


2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT41PH.OUT



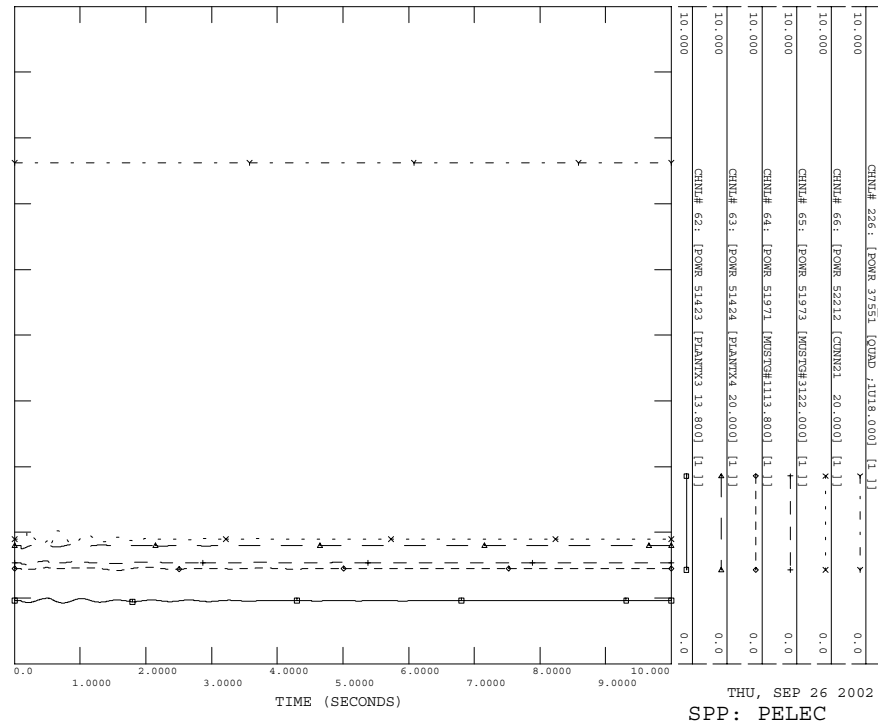
BRANCH FLOW 10

2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT41PH.OUT



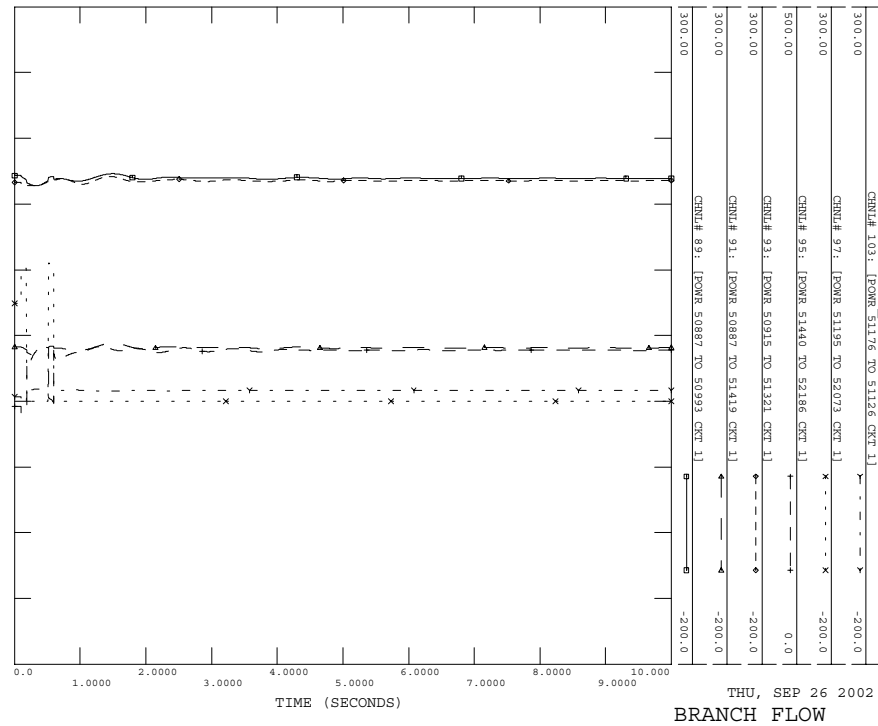
DC LINE EPE 12

2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT41PH.OUT



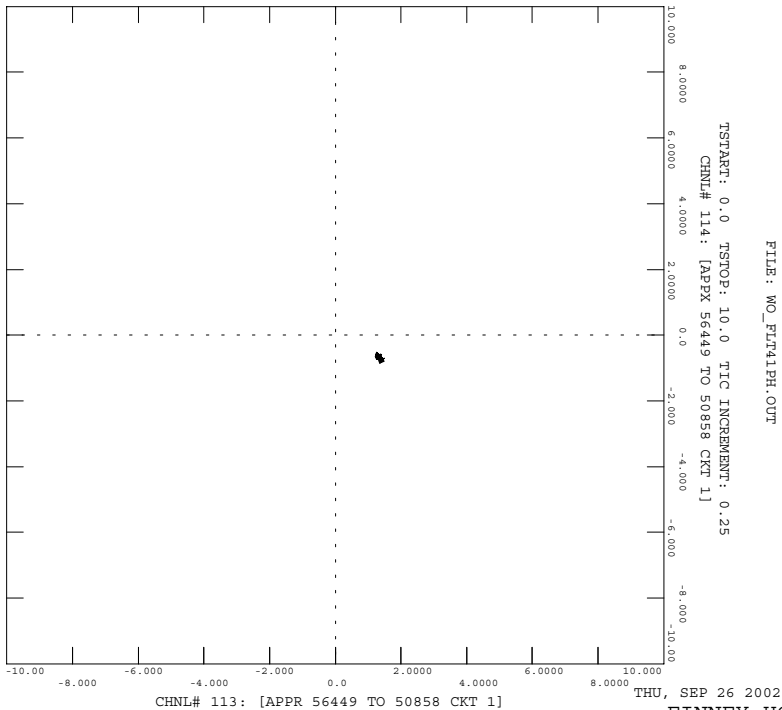
BRANCH FLOW 11

2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT41PH.OUT



BRANCH FLOW 11

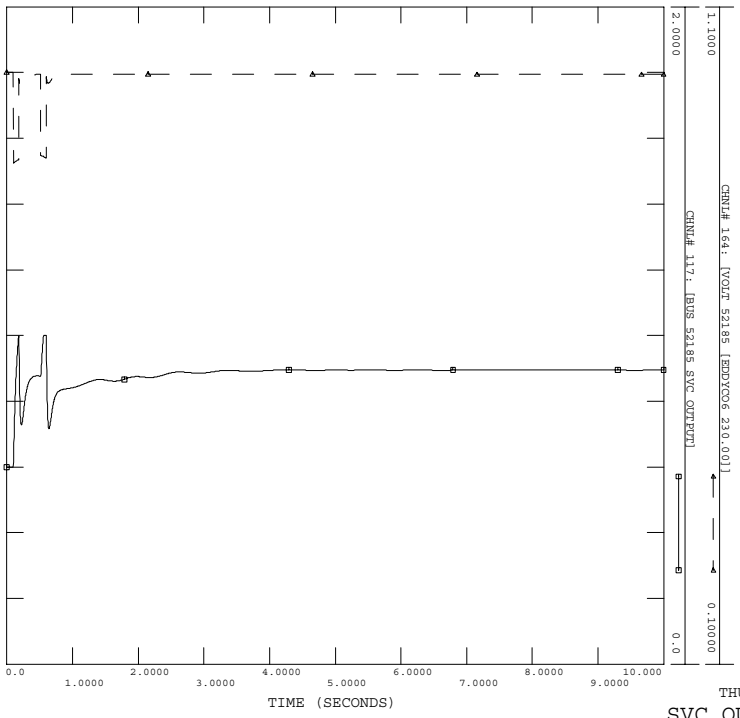
2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT41PH.OUT



FILE: WO_FLT41PH.OUT

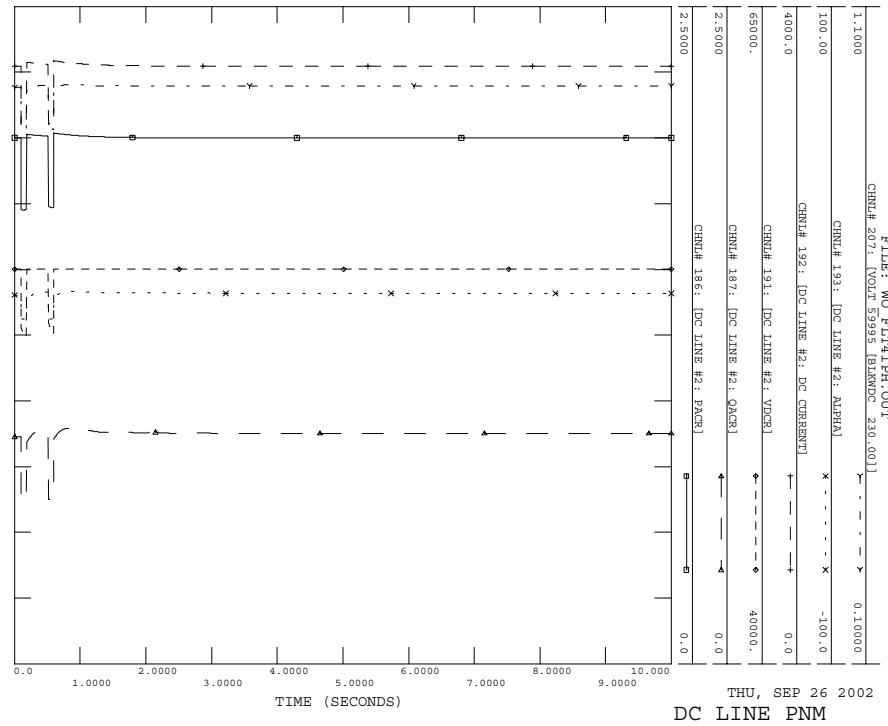
THU, SEP 26 2002 15:49
 FINNEY-HOLCOMB

2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT41PH.OUT



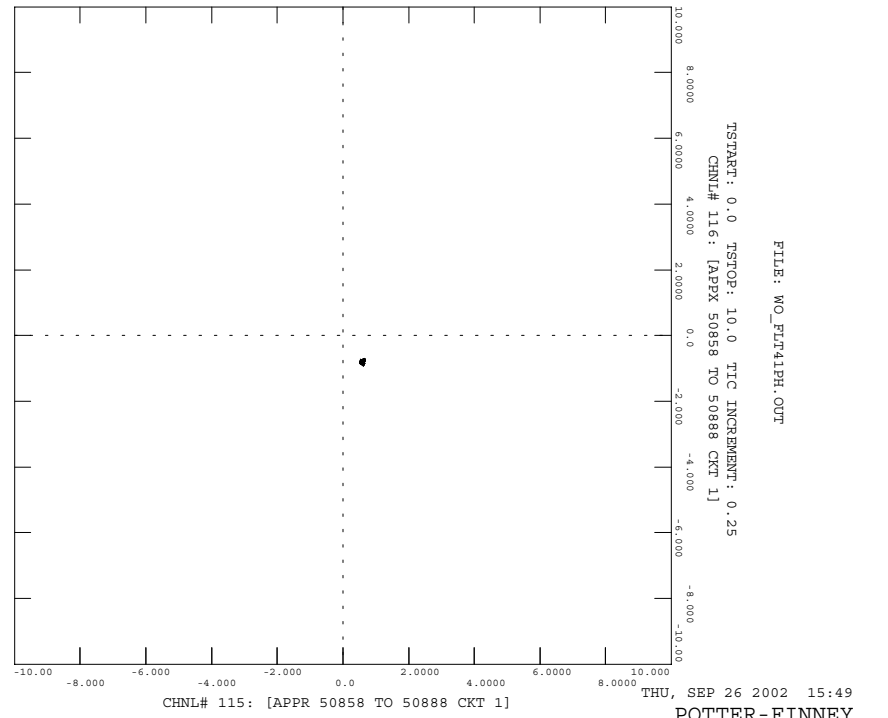
THU, SEP 26 2002 15:49
 SVC OUTPUT

2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT41PH.OUT

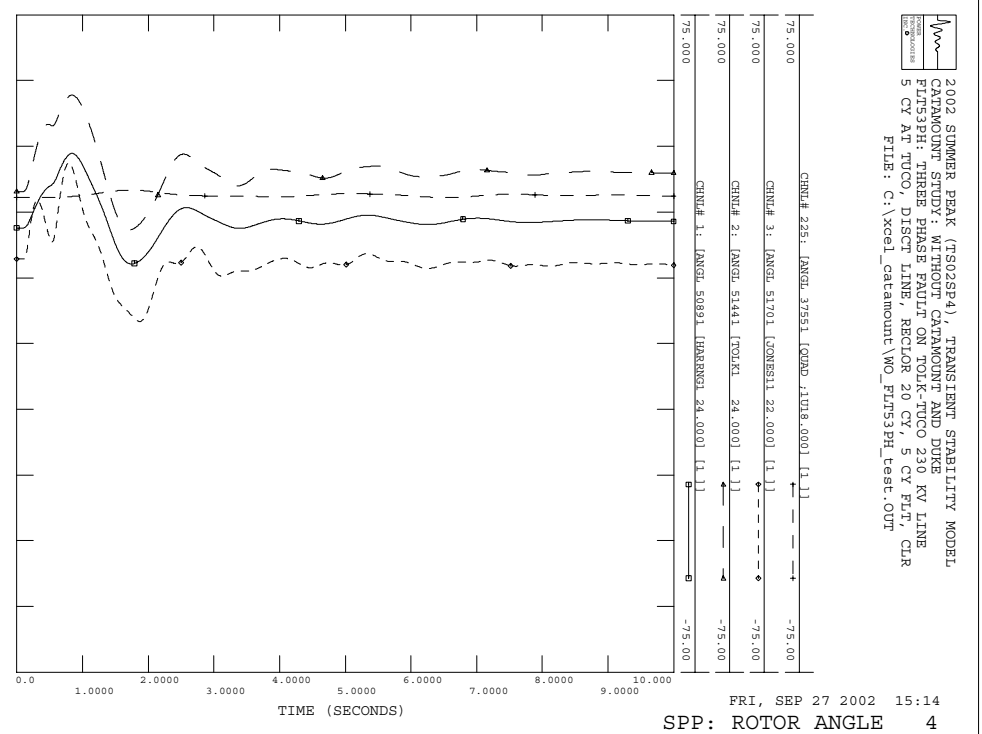
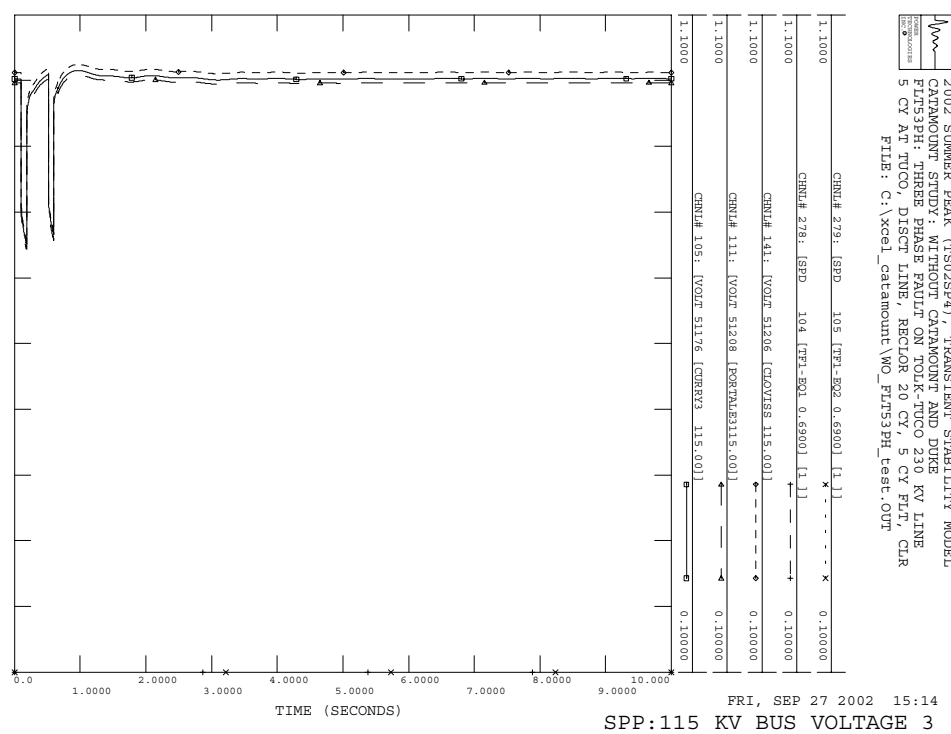
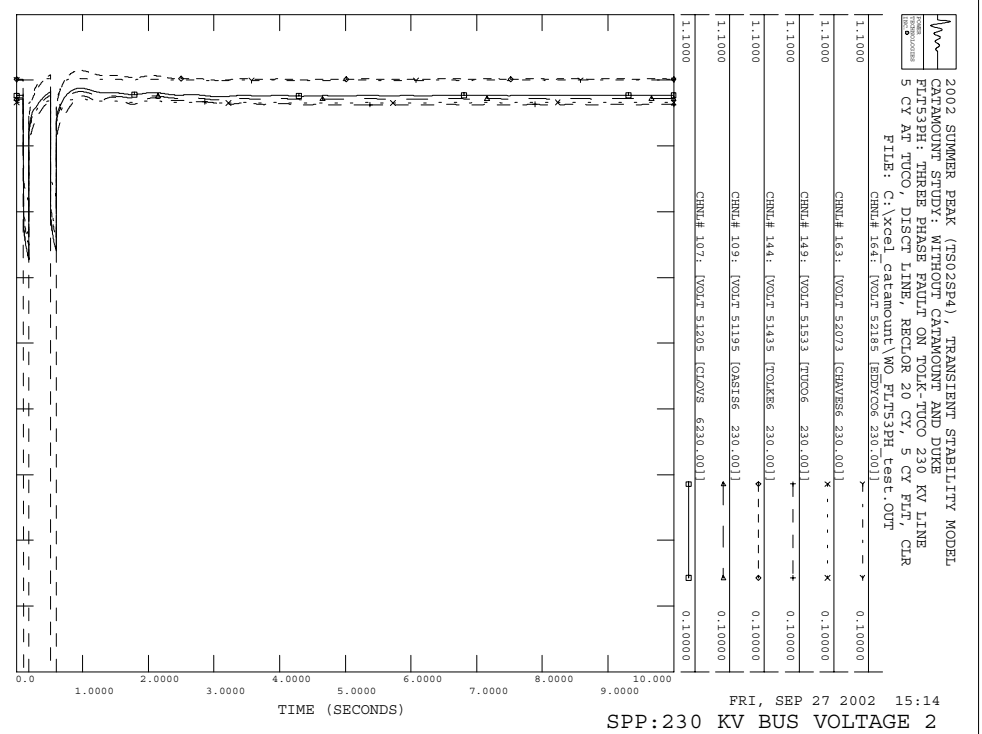
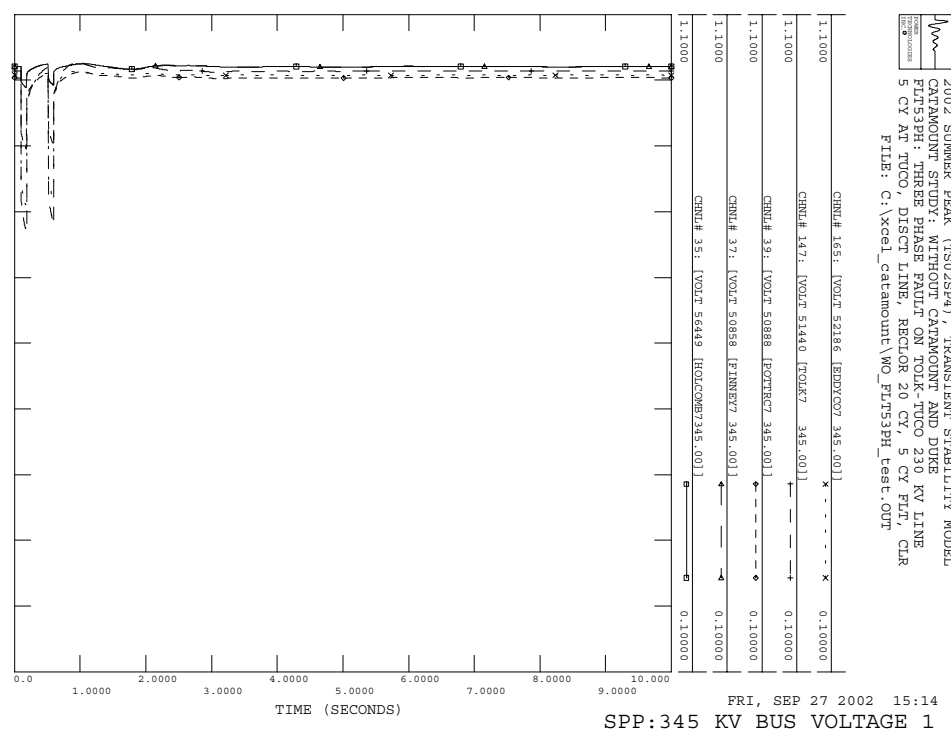


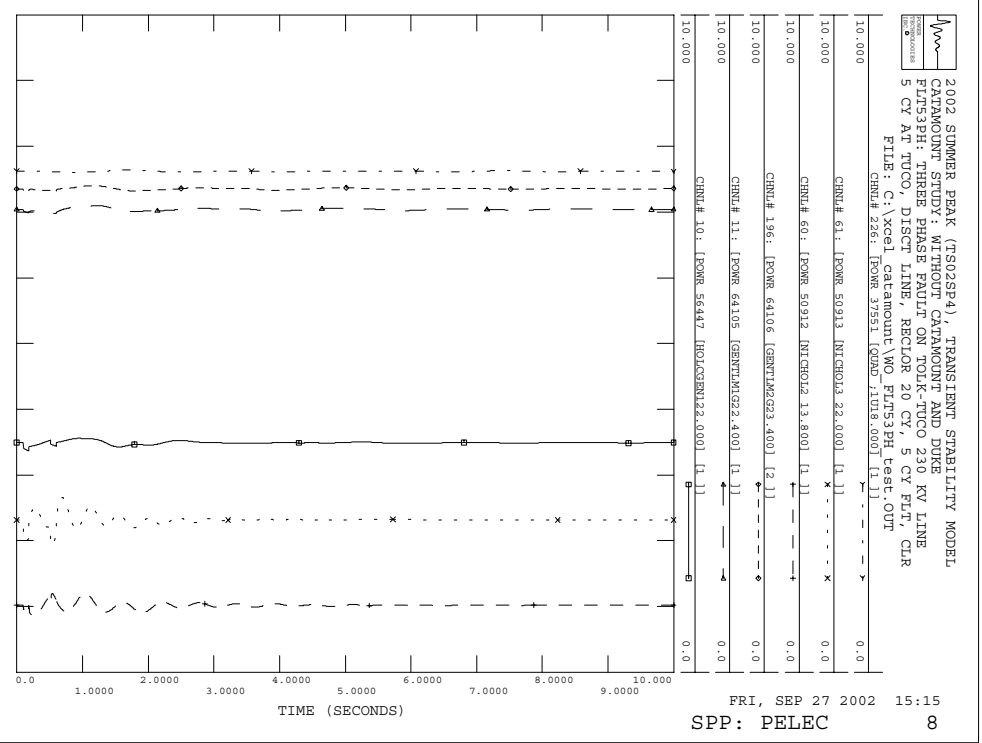
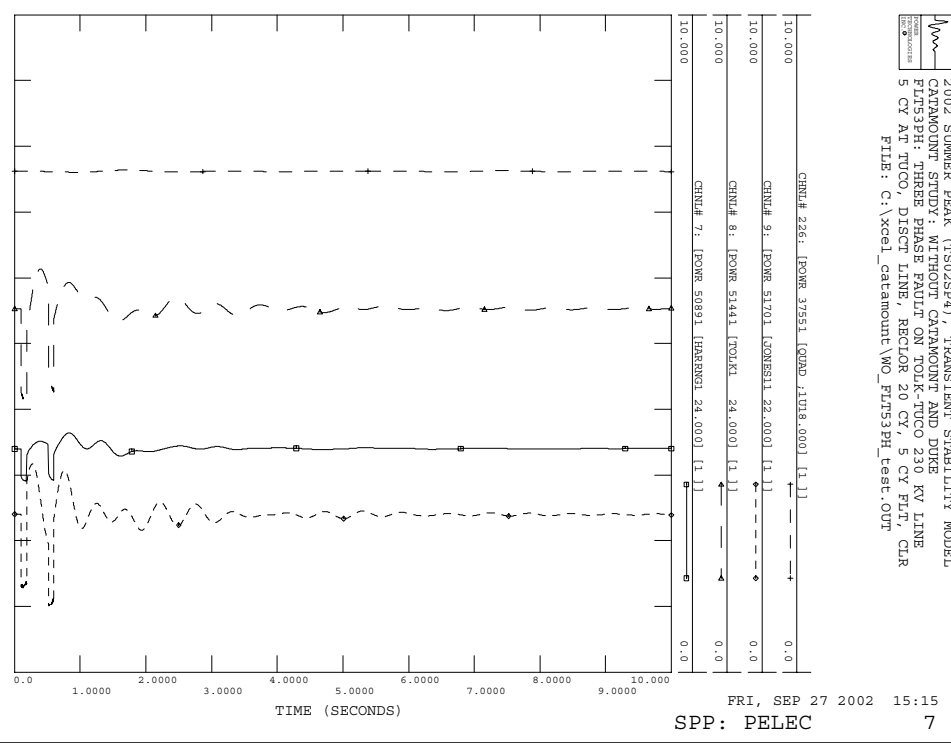
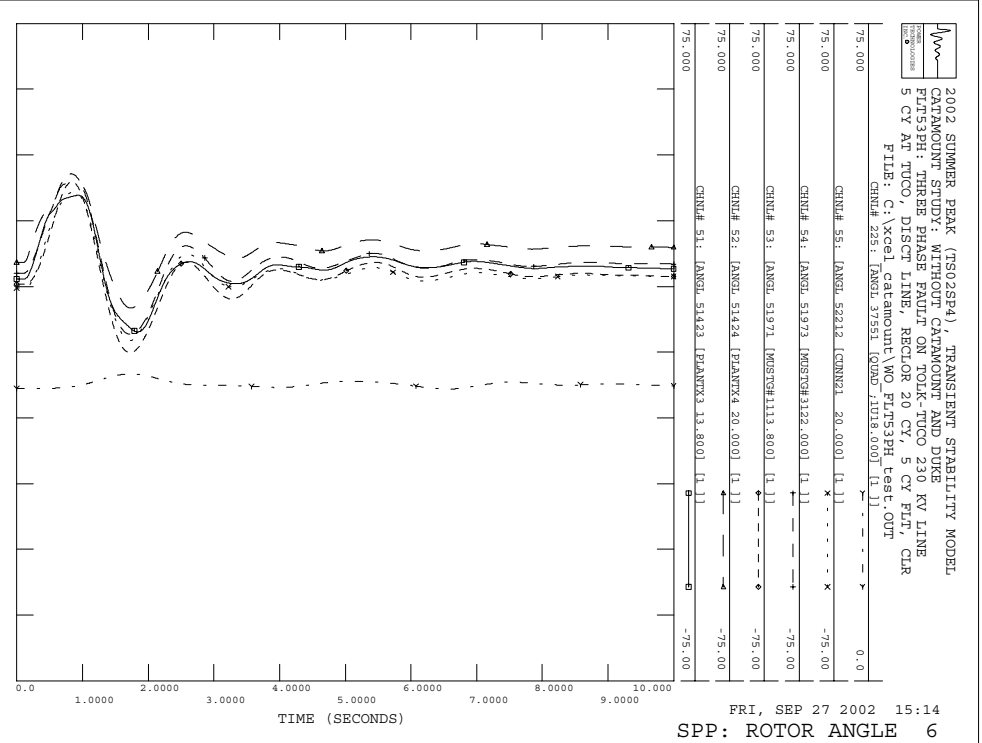
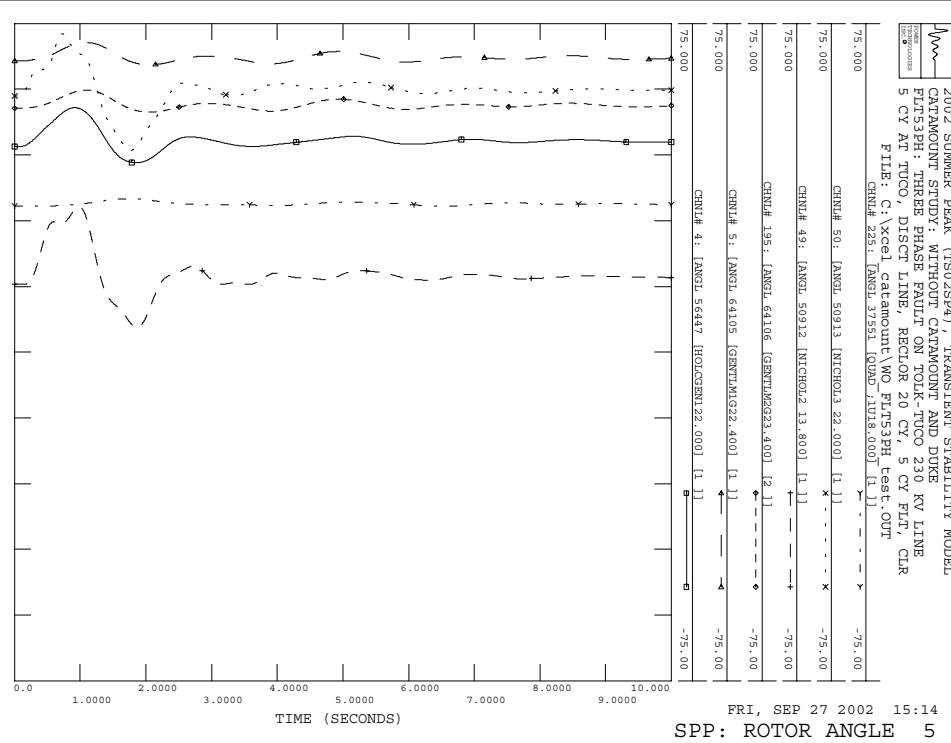
THU, SEP 26 2002 15:49
 DC LINE PNM

2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT41PH.OUT

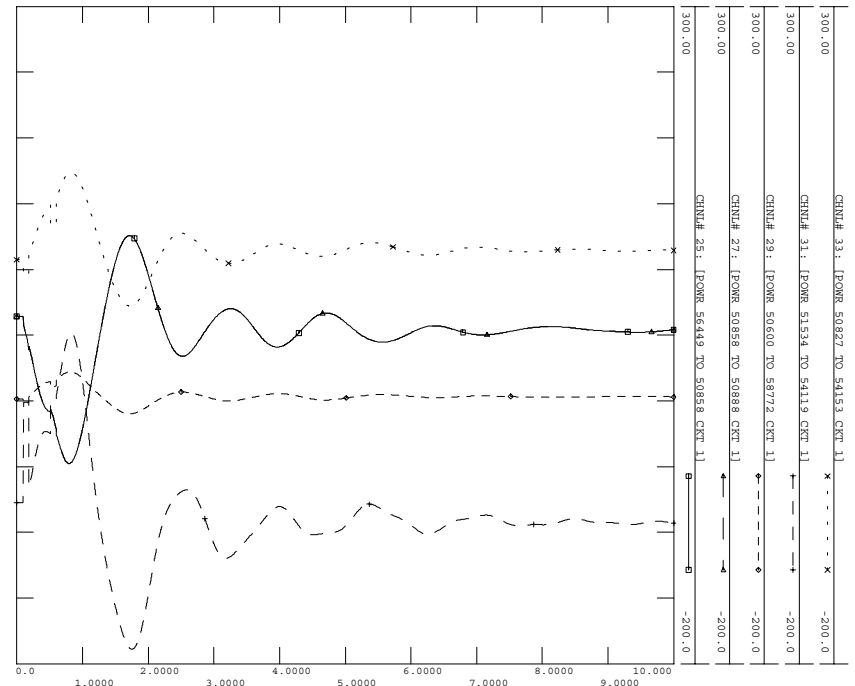


THU, SEP 26 2002 15:49
 POTTER-FINNEY



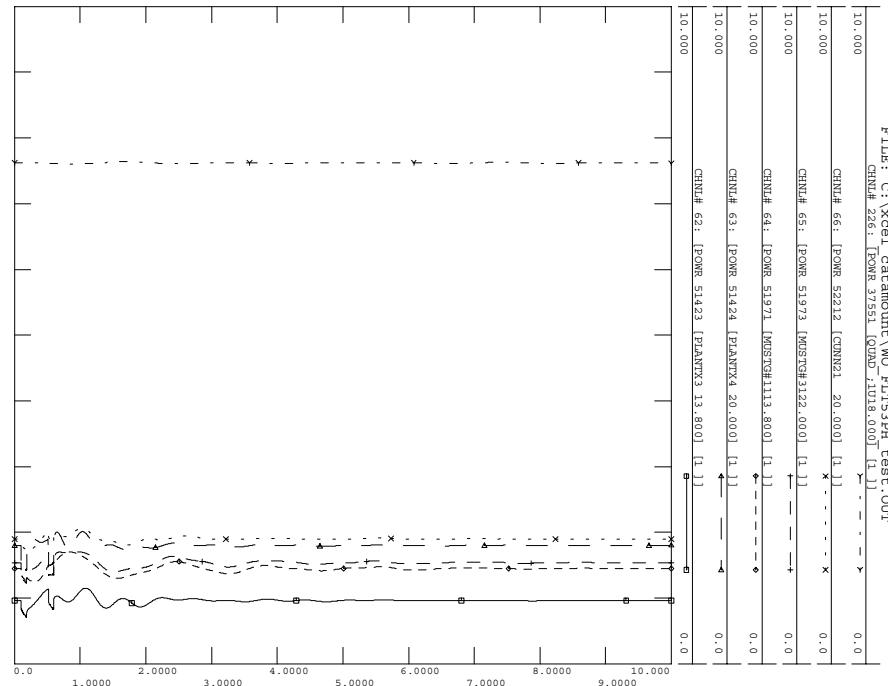


2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: C:\xcel_catamount\NO_FLT53PH_test.OUT



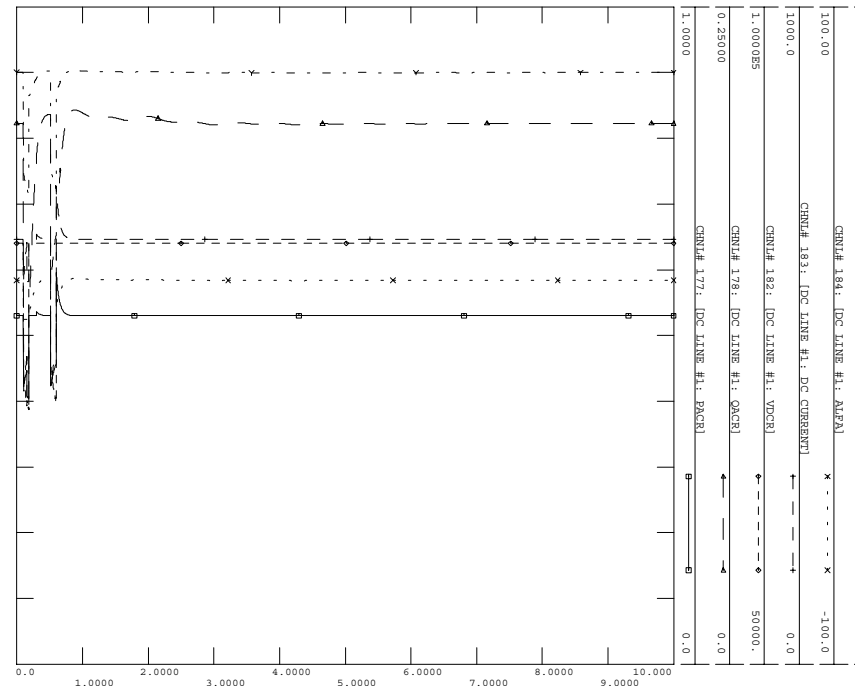
FRI, SEP 27 2002 15:15
 SPP: PELEC 9
 BRANCH FLOW 10

2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: C:\xcel_catamount\NO_FLT53PH_test.OUT



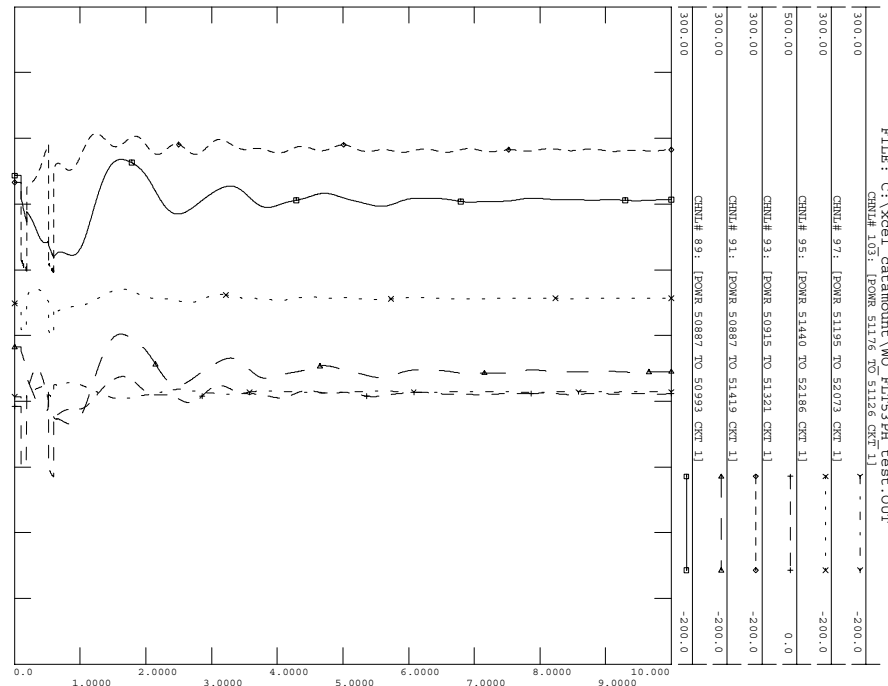
FRI, SEP 27 2002 15:15
 SPP: PELEC 9

2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: C:\xcel_catamount\NO_FLT53PH_test.OUT



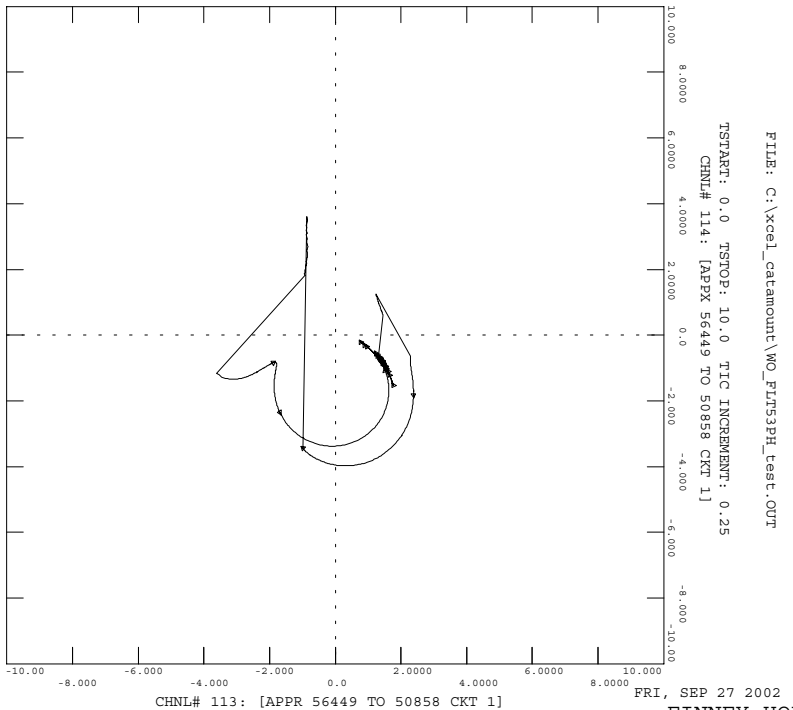
FRI, SEP 27 2002 15:15
 SPP: PELEC 9
 DC LINE EPE 12

2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: C:\xcel_catamount\NO_FLT53PH_test.OUT



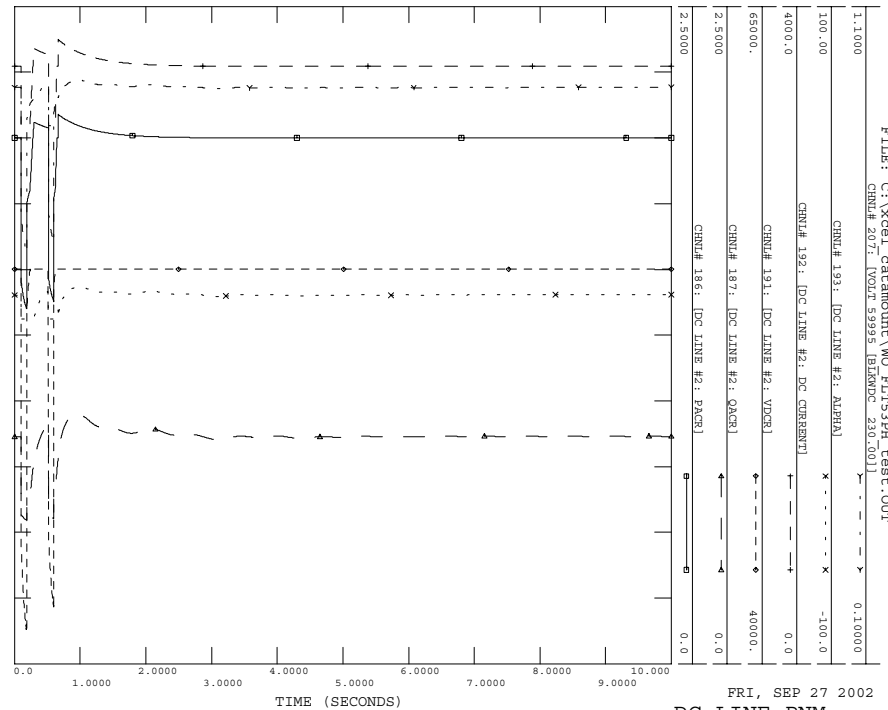
FRI, SEP 27 2002 15:15
 SPP: PELEC 9
 BRANCH FLOW 11

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: C:\xcel_catamount\wo_flt53ph_test.out



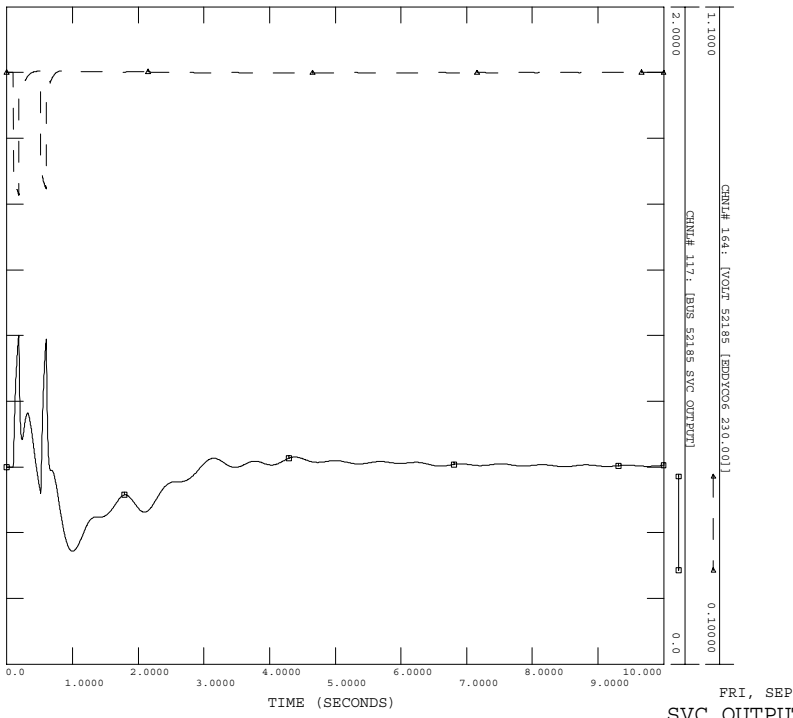
FRI, SEP 27 2002 15:15
 CHNL# 113: [APPR 56449 TO 50858 CKT 1]
 FINNEY-HOLCOMB 14

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: C:\xcel_catamount\wo_flt53ph_test.out



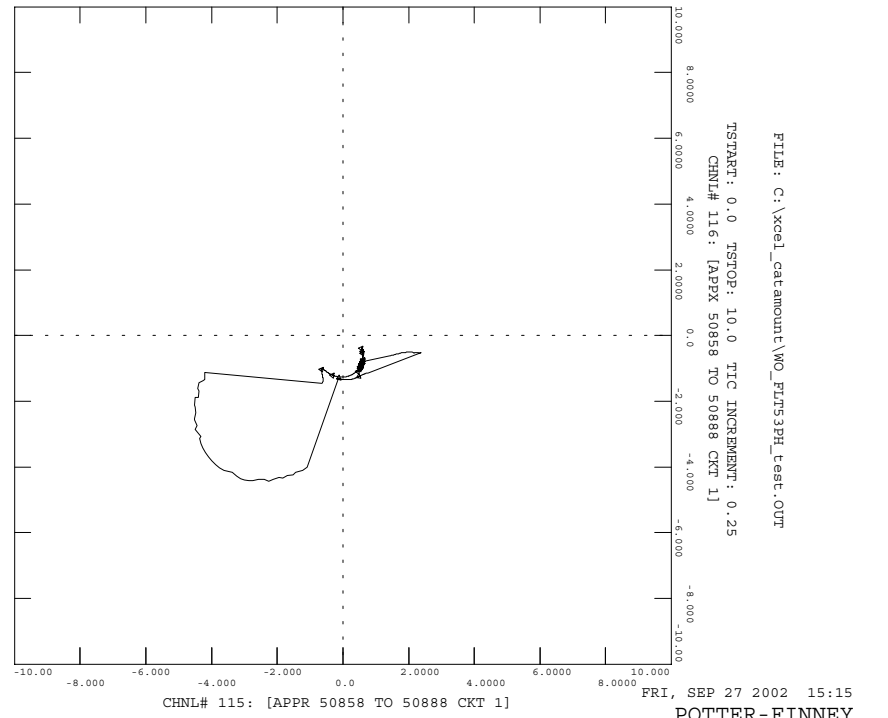
FRI, SEP 27 2002 15:15
 CHNL# 193: [DC LINE #2: ALPMA]
 DC LINE PNM 13

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: C:\xcel_catamount\wo_flt53ph_test.out



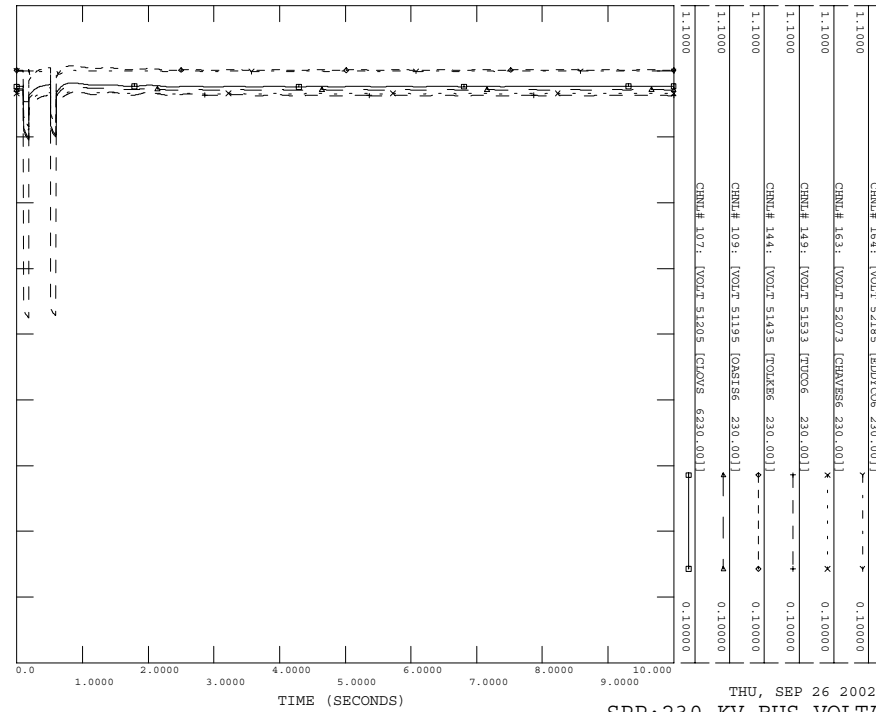
FRI, SEP 27 2002 15:15
 CHNL# 144: [BUS 52185_SVC_OUTPUT]
 SVC OUTPUT 16

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT53PH: THREE PHASE FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: C:\xcel_catamount\wo_flt53ph_test.out

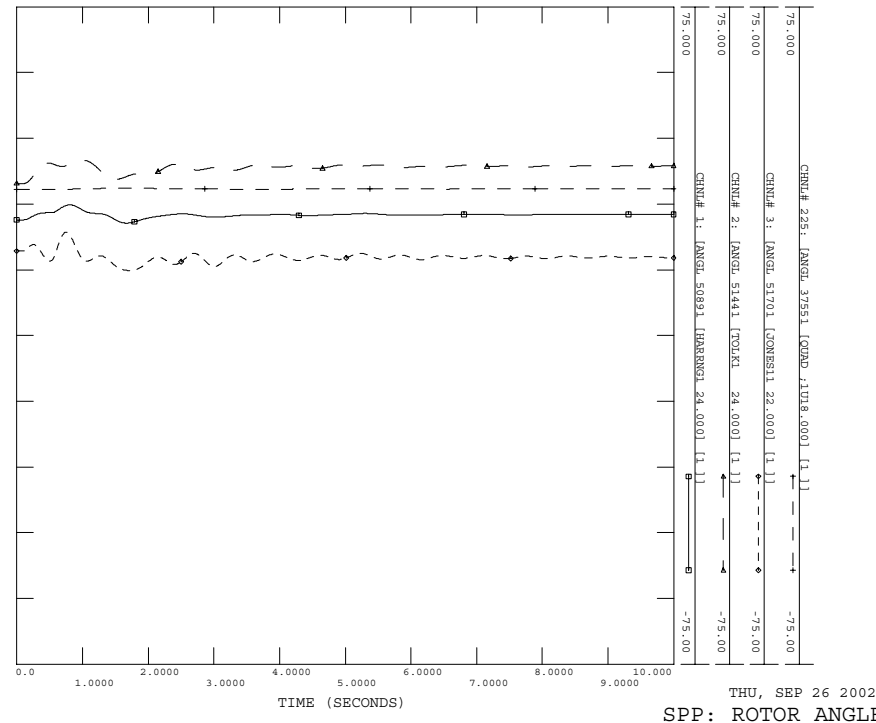


FRI, SEP 27 2002 15:15
 CHNL# 116: [APPX 50858 TO 50888 CKT 1]
 POTTER-FINNEY 15

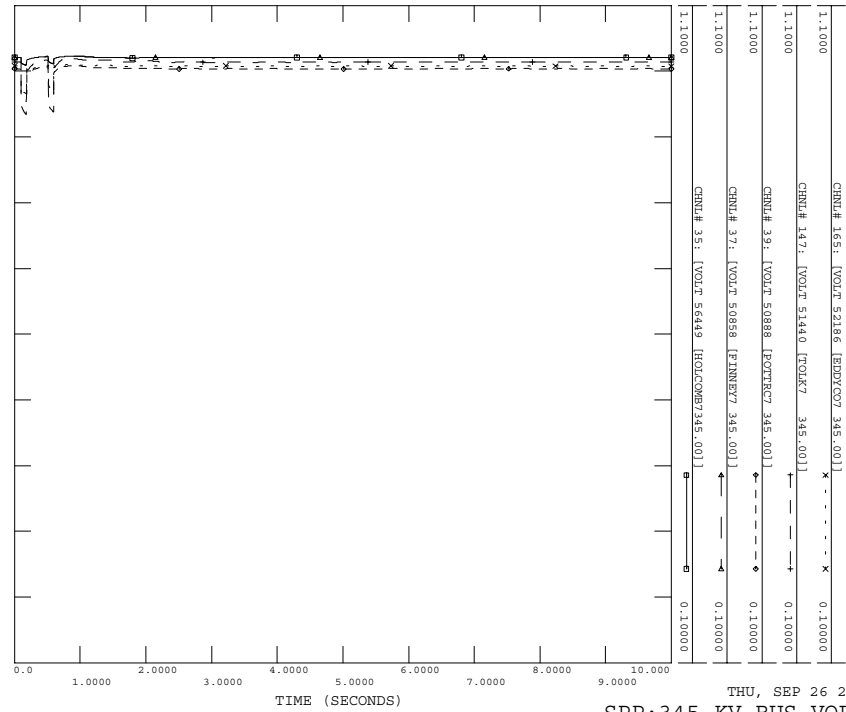
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT51PH: SLG FAULT ON TOLK-TUCCO 230 KV LINE
 5 CY AT TUCCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT51PH.OUT



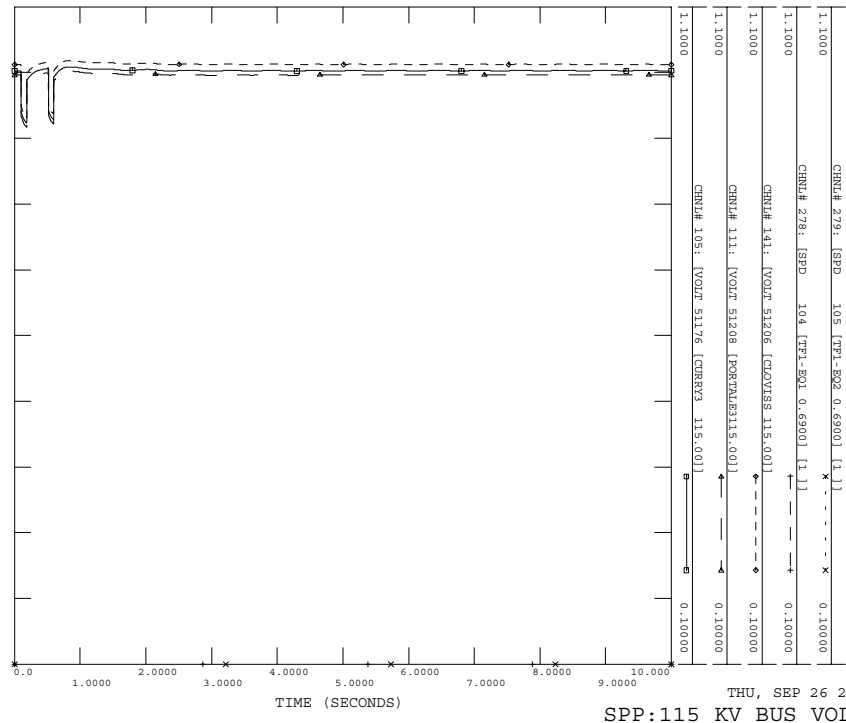
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT51PH: SLG FAULT ON TOLK-TUCCO 230 KV LINE
 5 CY AT TUCCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT51PH.OUT

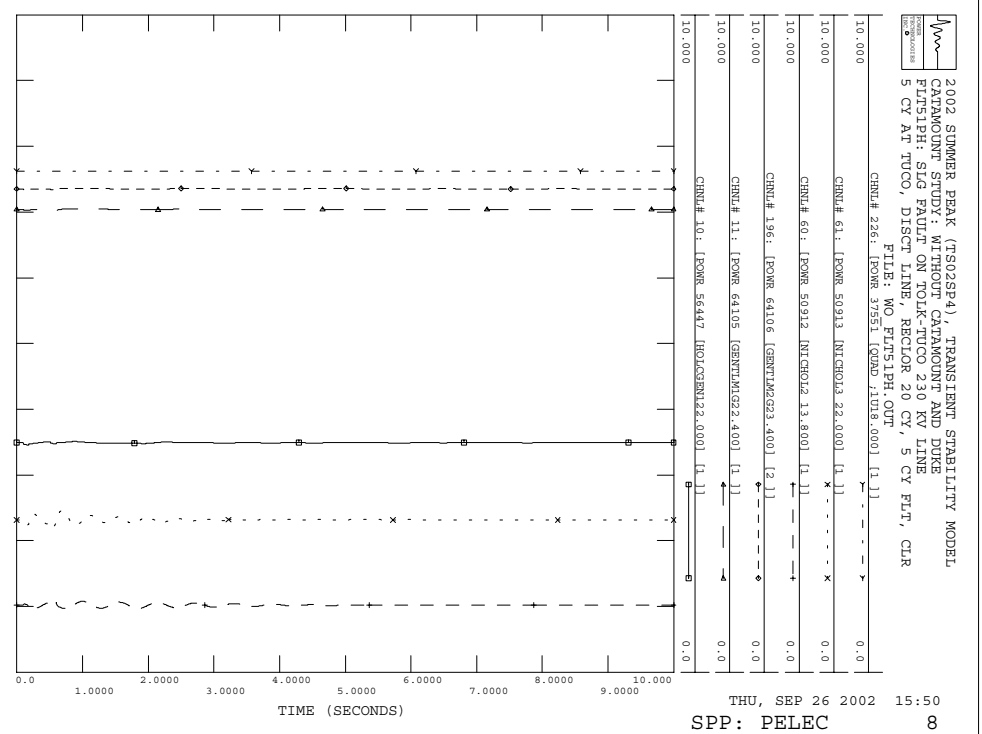
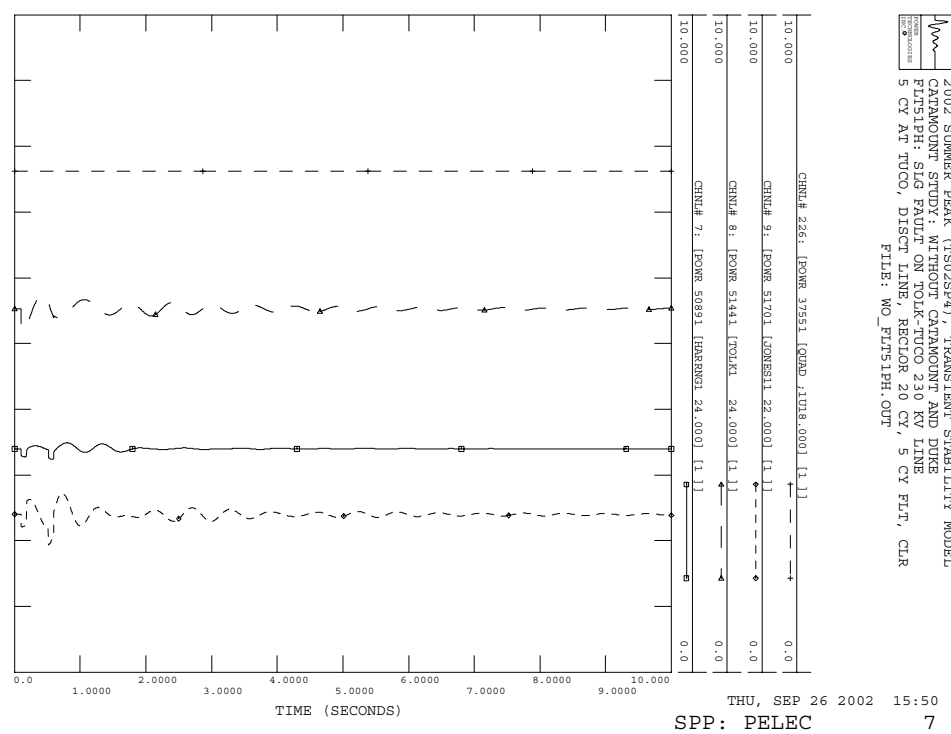
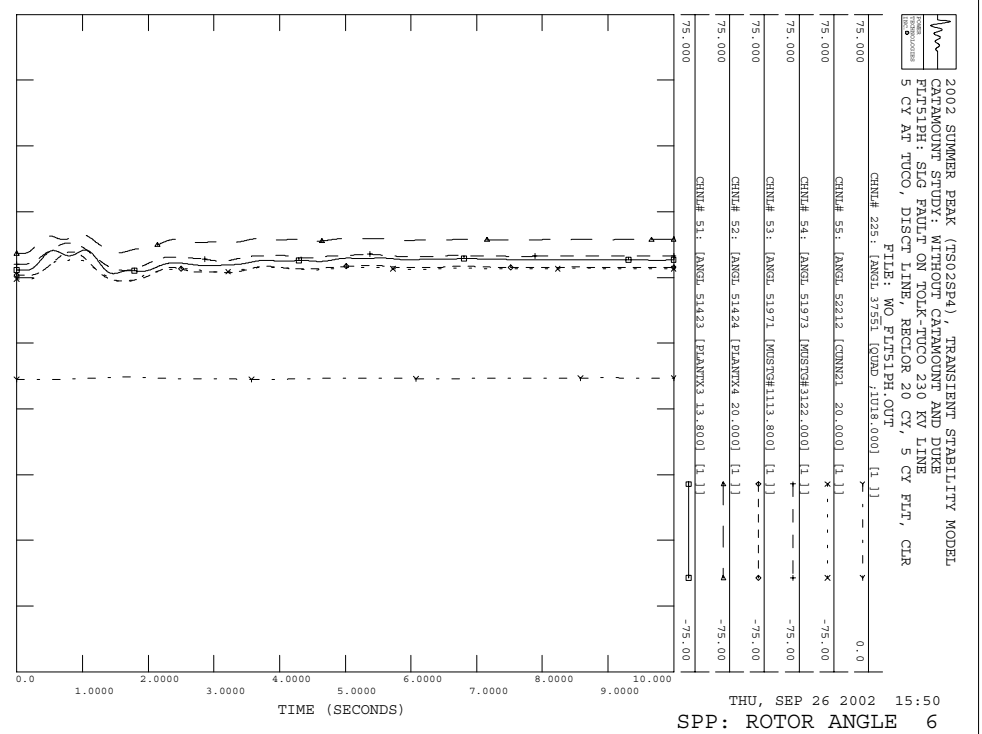
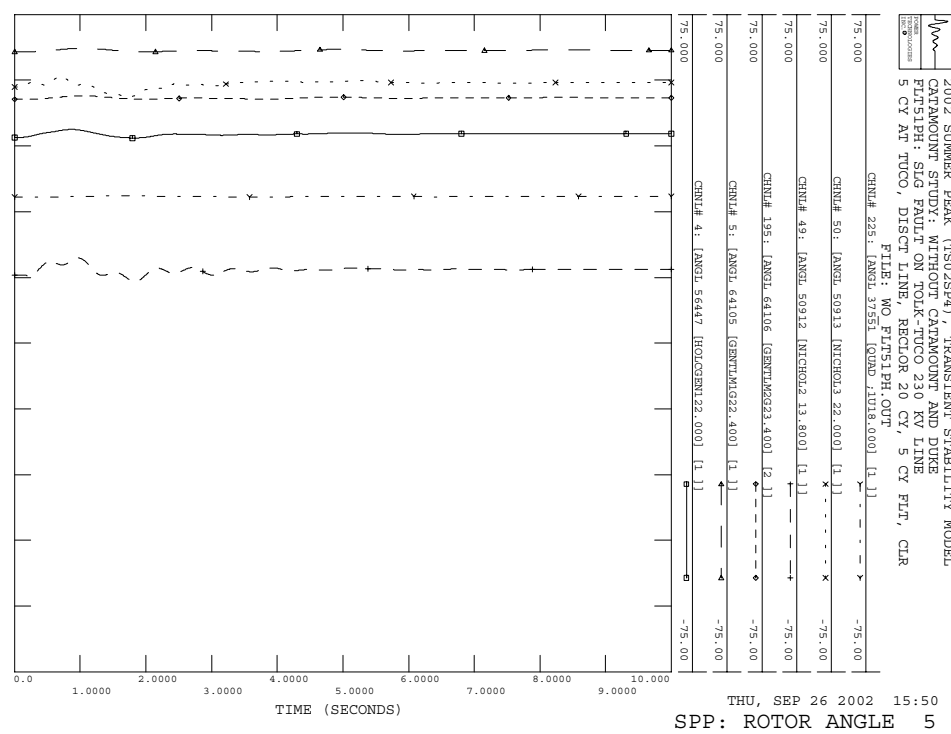


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT51PH: SLG FAULT ON TOLK-TUCCO 230 KV LINE
 5 CY AT TUCCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT51PH.OUT

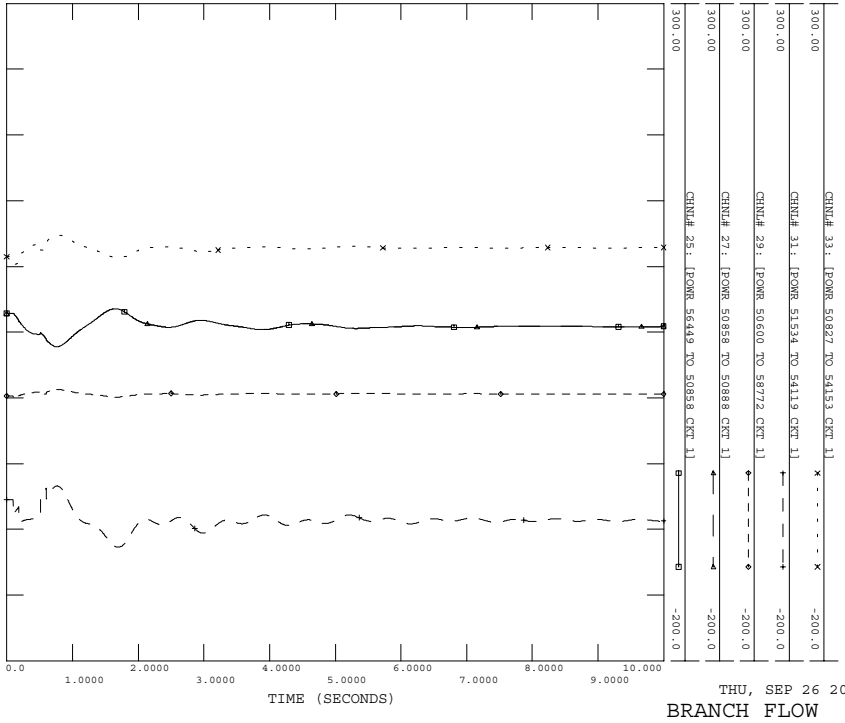


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT51PH: SLG FAULT ON TOLK-TUCCO 230 KV LINE
 5 CY AT TUCCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT51PH.OUT



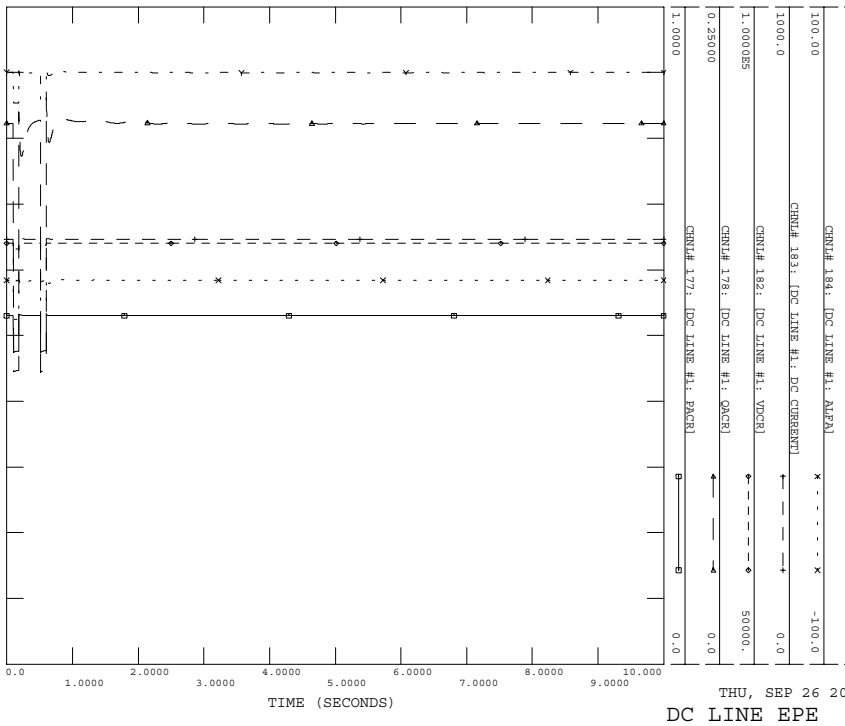


2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FITS1PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FITS1PH.OUT



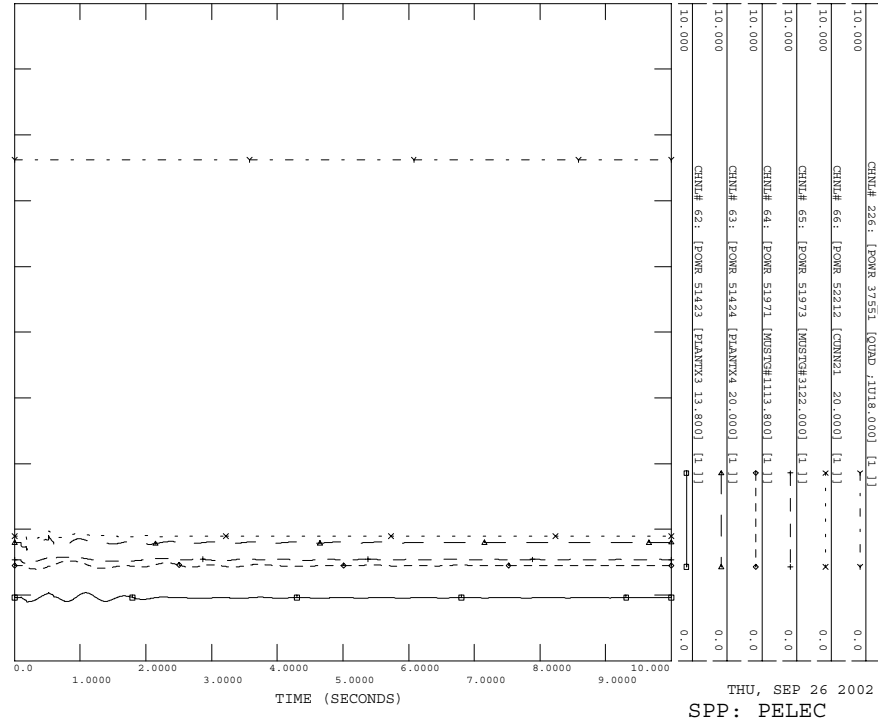
BRANCH FLOW 10

2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FITS1PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FITS1PH.OUT



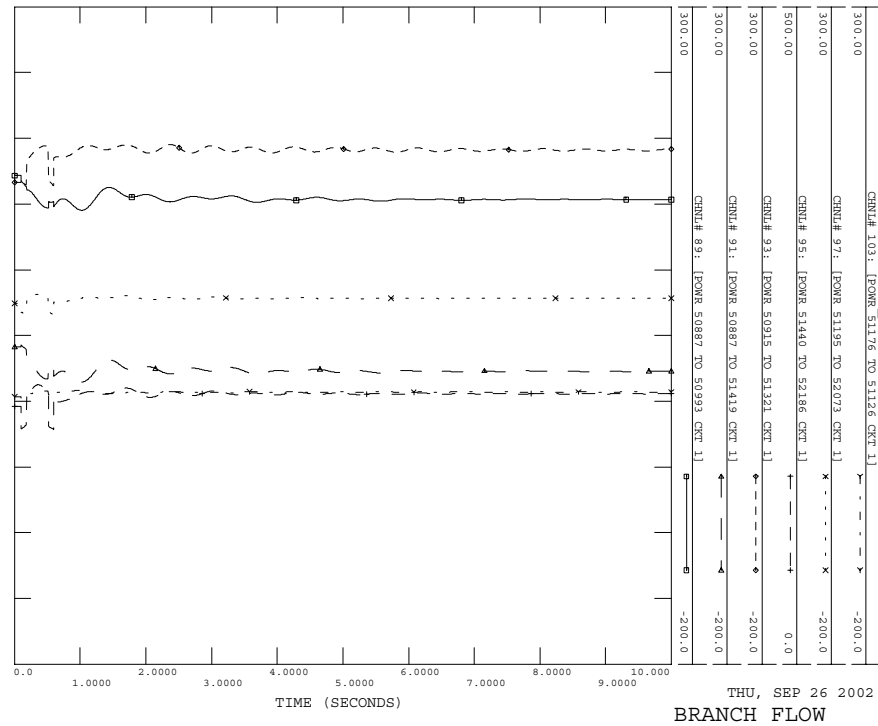
DC LINE EPE 12

2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FITS1PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FITS1PH.OUT



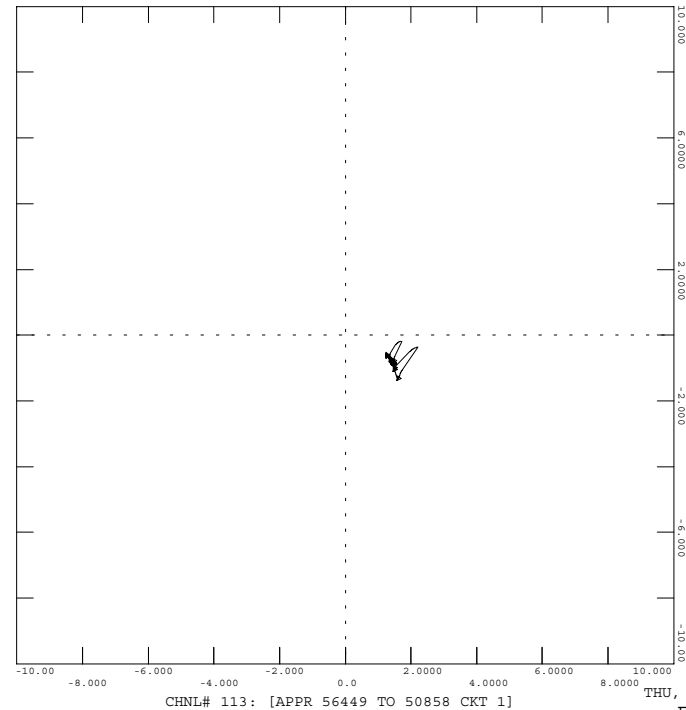
BRANCH FLOW 11

2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FITS1PH: SLG FAULT ON TOLK-TUCO 230 KV LINE
 5 CY AT TUCO, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FITS1PH.OUT



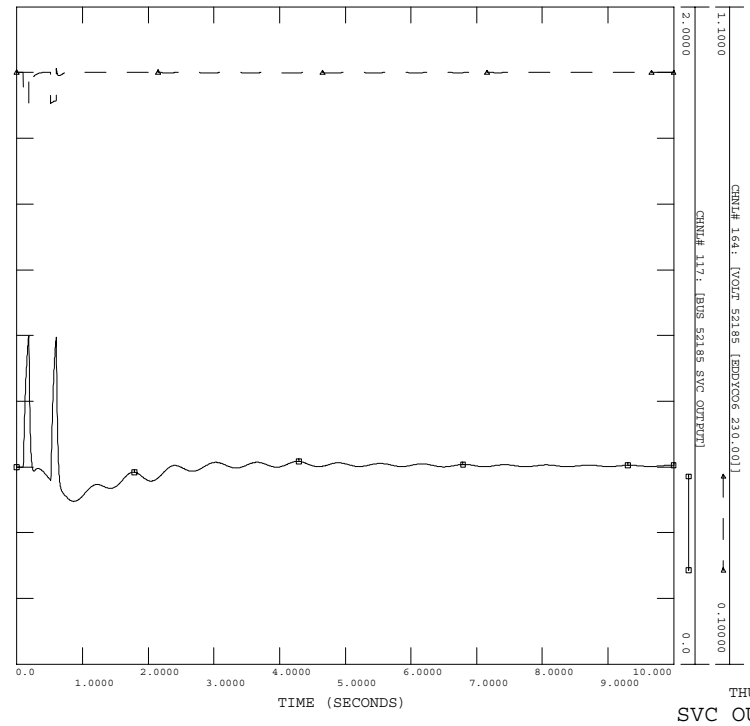
BRANCH FLOW 11

2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT51PH: SLG FAULT ON TOLK-TUCC 230 KV LINE
 5 CY AT TUCC, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT51PH.OUT

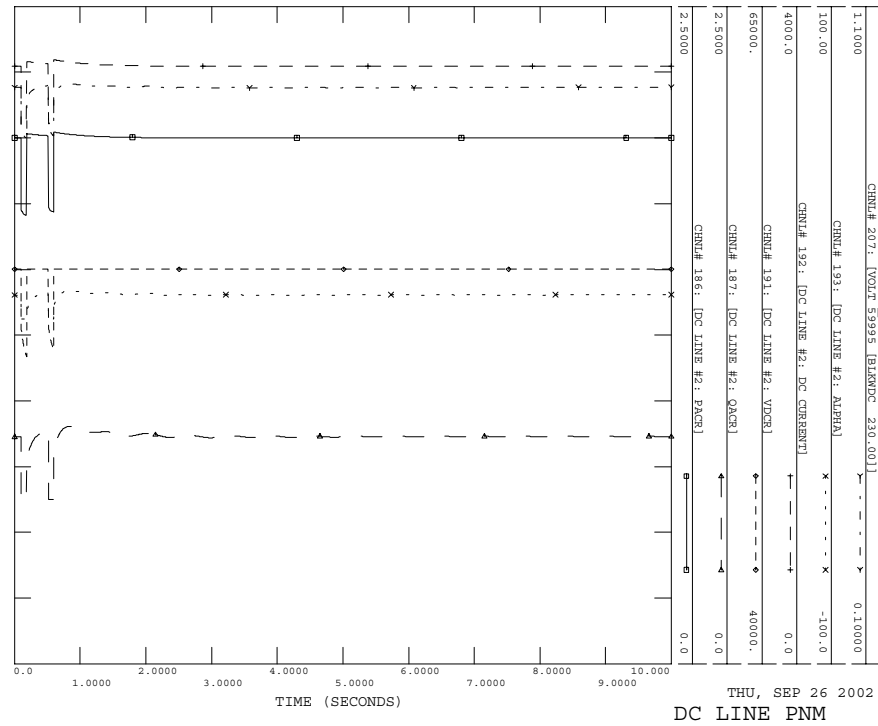


FILE: WO_FLT51PH.OUT

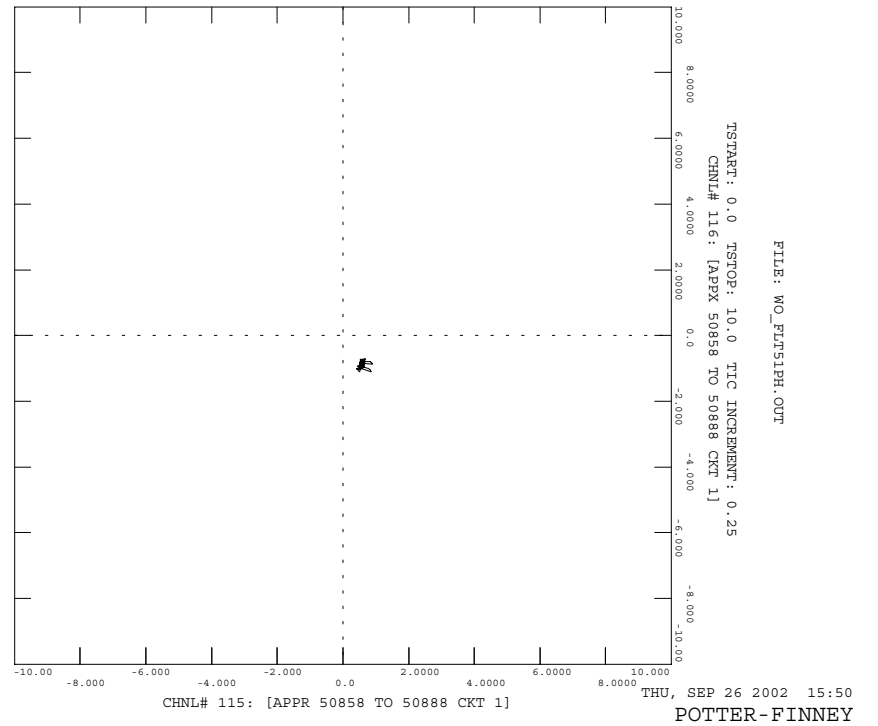
2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT51PH: SLG FAULT ON TOLK-TUCC 230 KV LINE
 5 CY AT TUCC, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT51PH.OUT

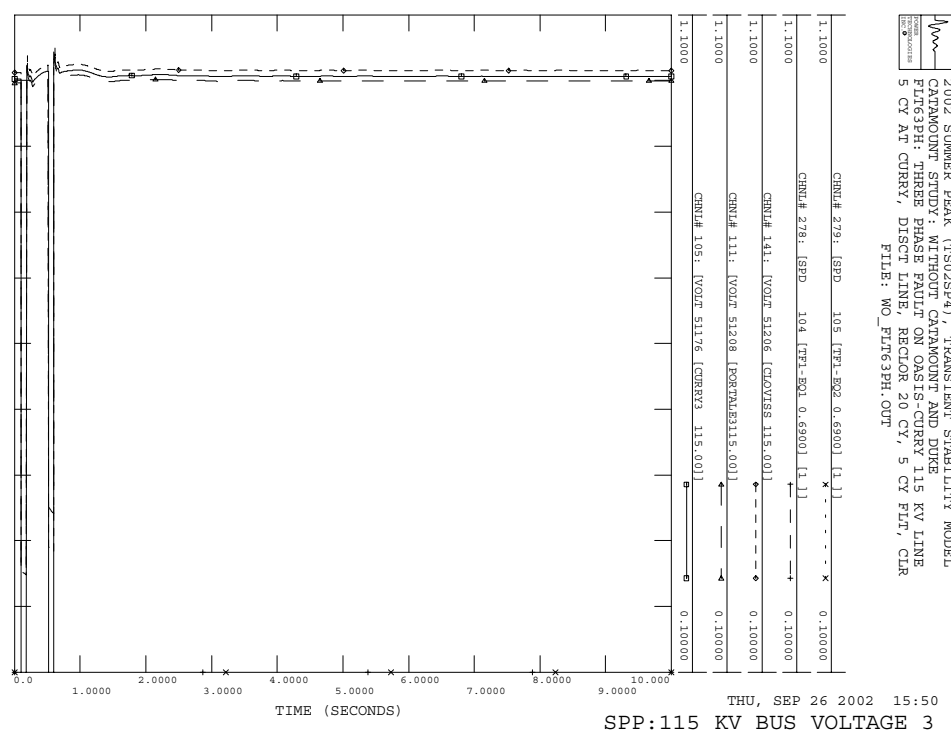
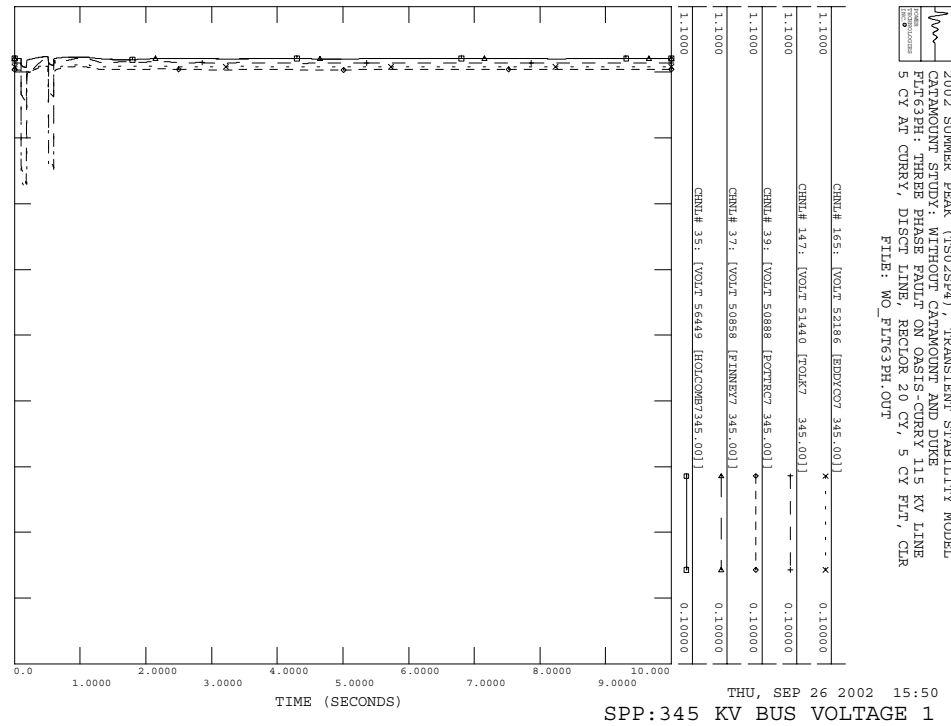
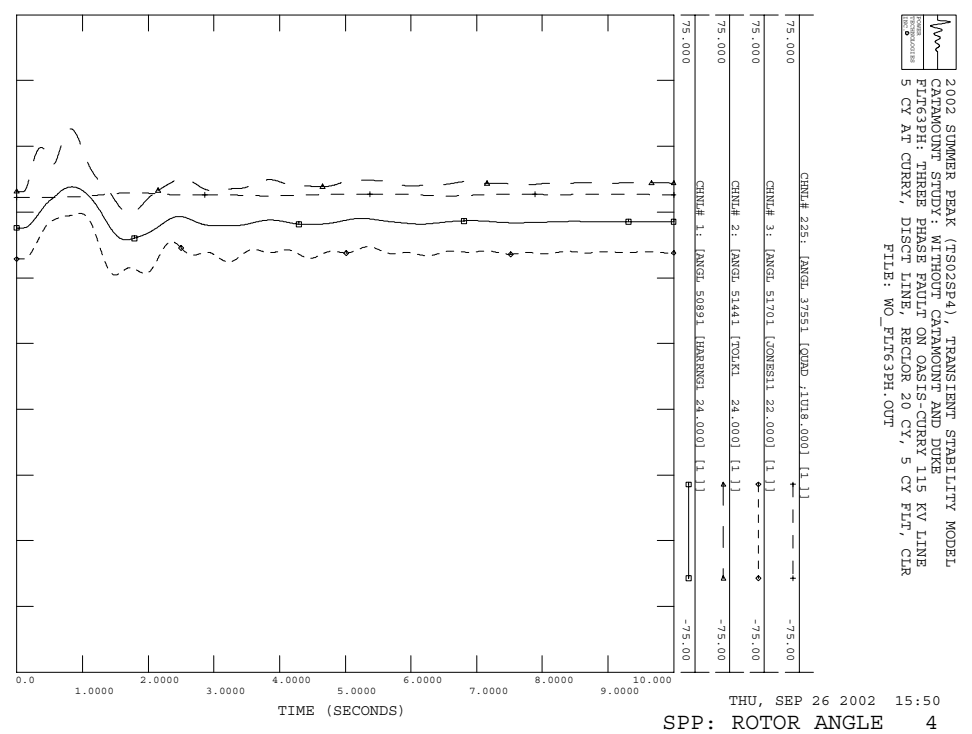
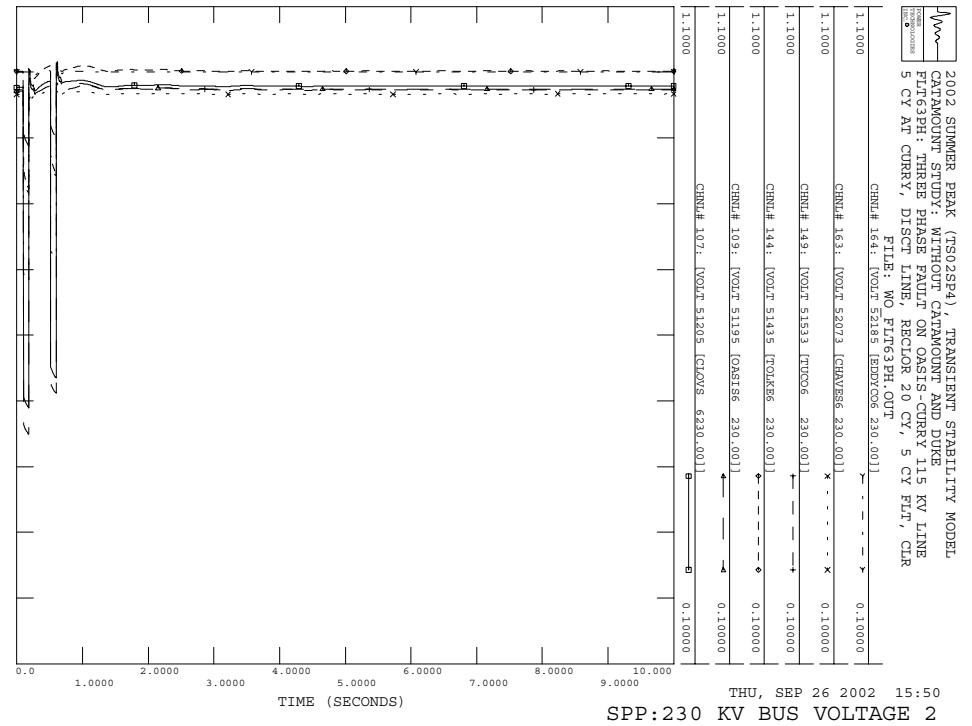


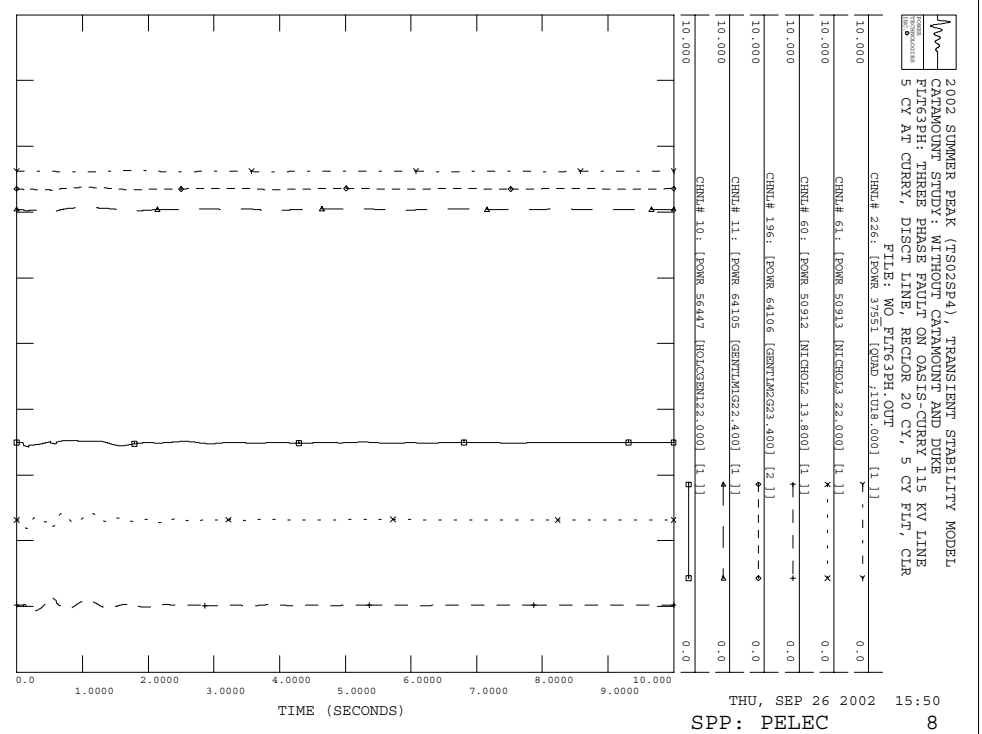
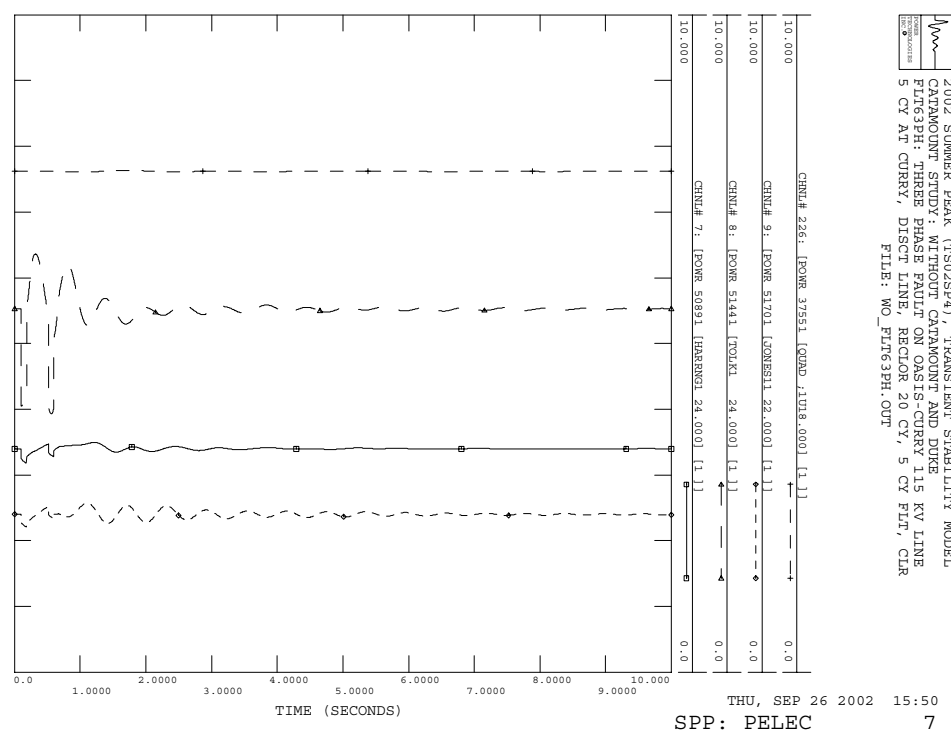
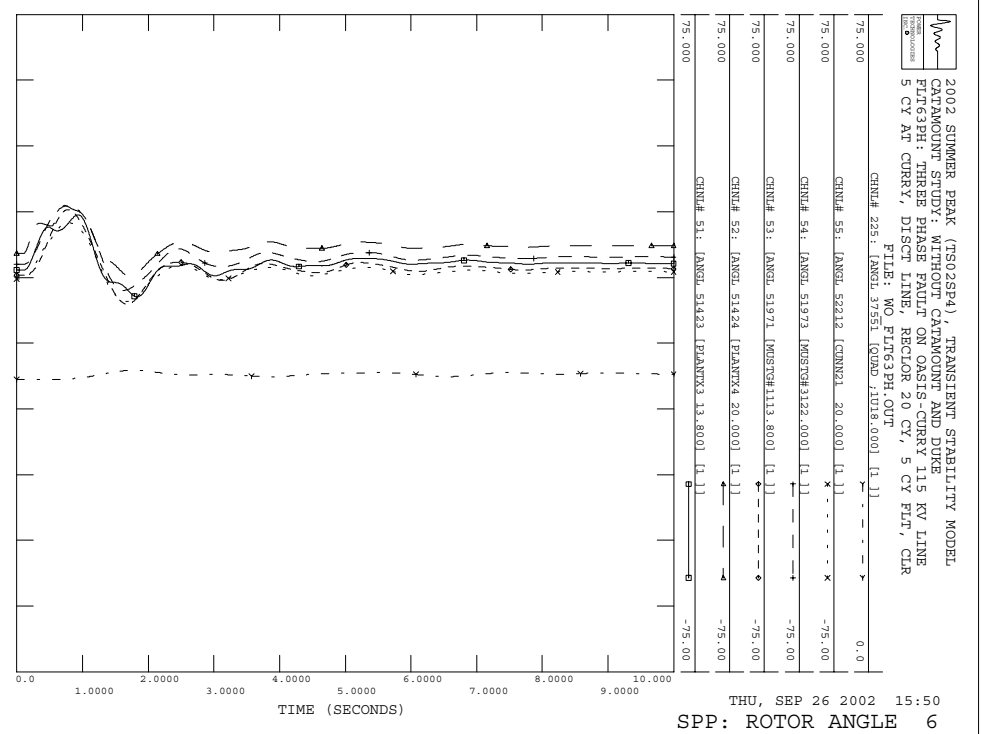
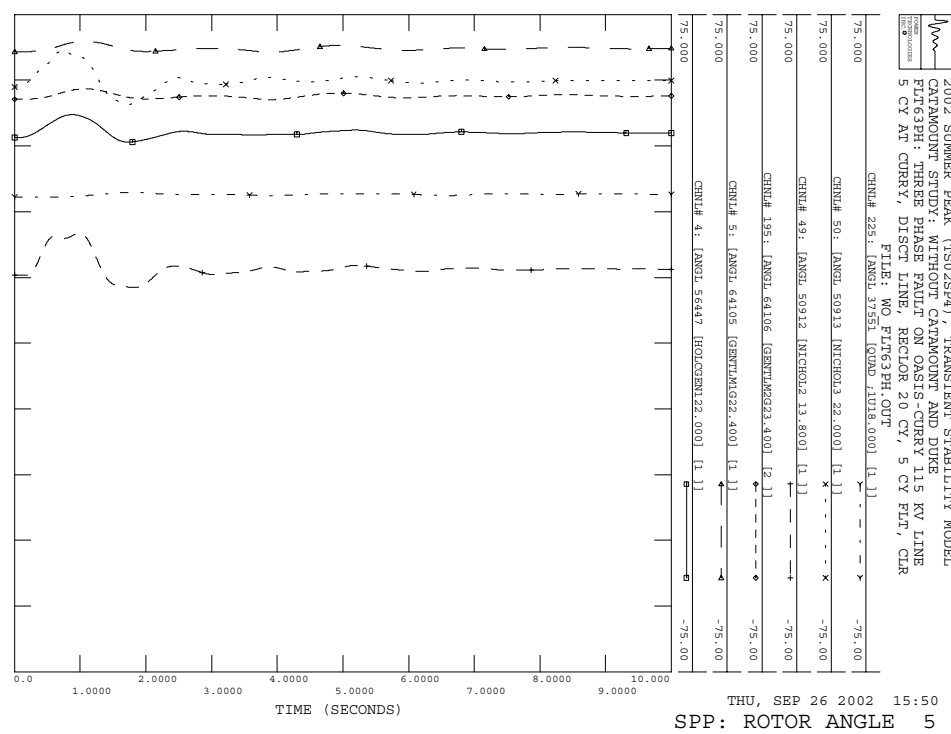
2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT51PH: SLG FAULT ON TOLK-TUCC 230 KV LINE
 5 CY AT TUCC, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT51PH.OUT



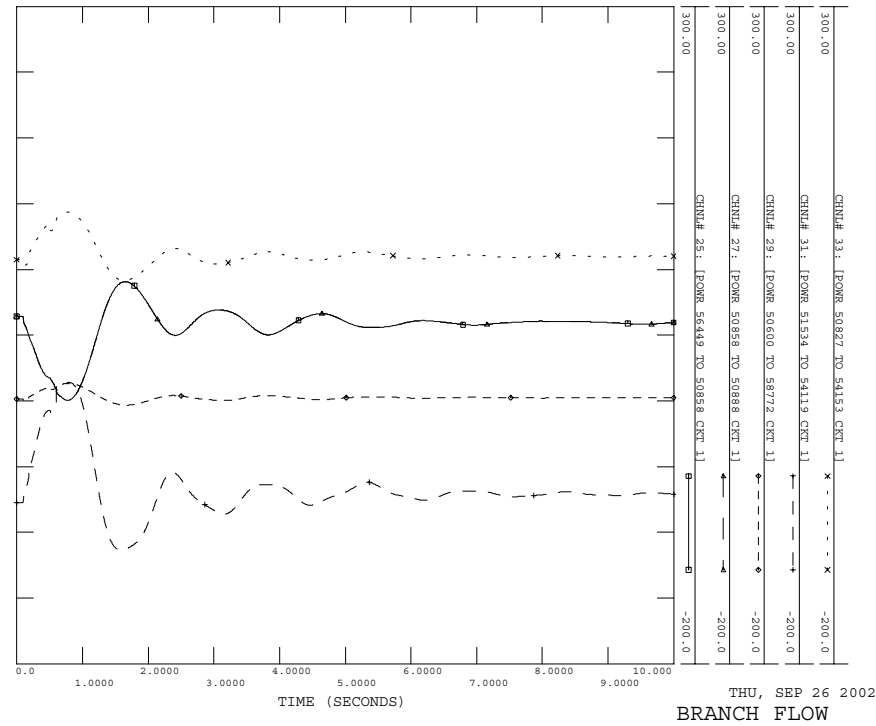
2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATMOUNT AND DUKE
 FLT51PH: SLG FAULT ON TOLK-TUCC 230 KV LINE
 5 CY AT TUCC, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT51PH.OUT





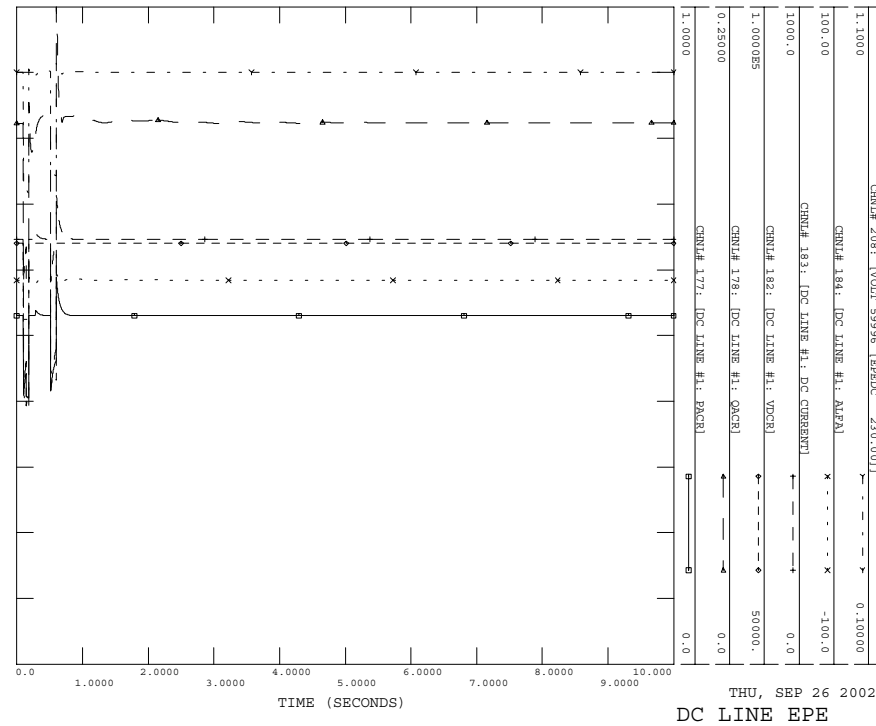


2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT63PH.OUT



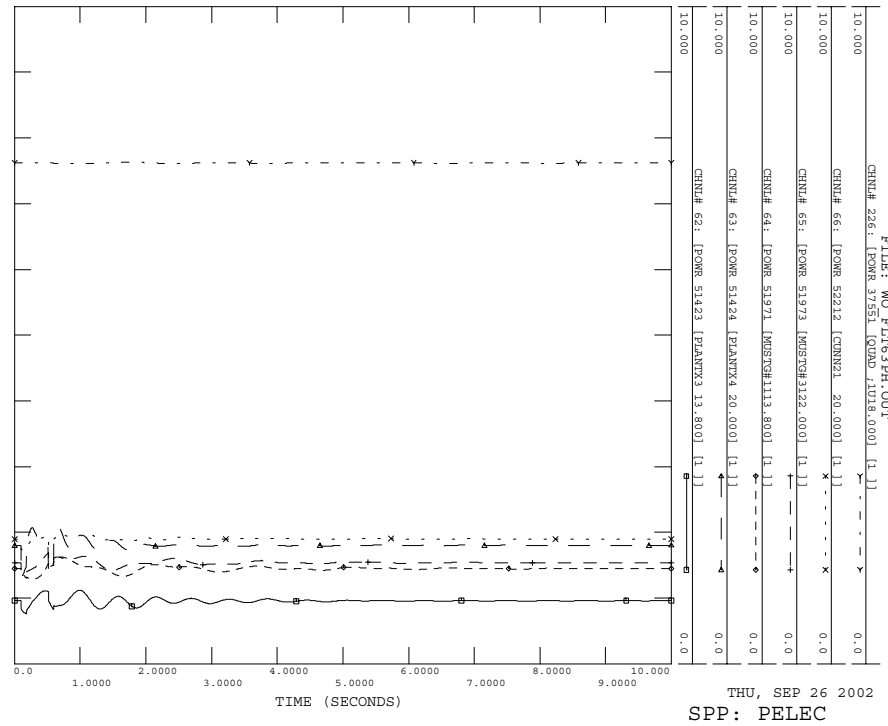
THU, SEP 26 2002 15:50
 BRANCH FLOW 10

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT63PH.OUT



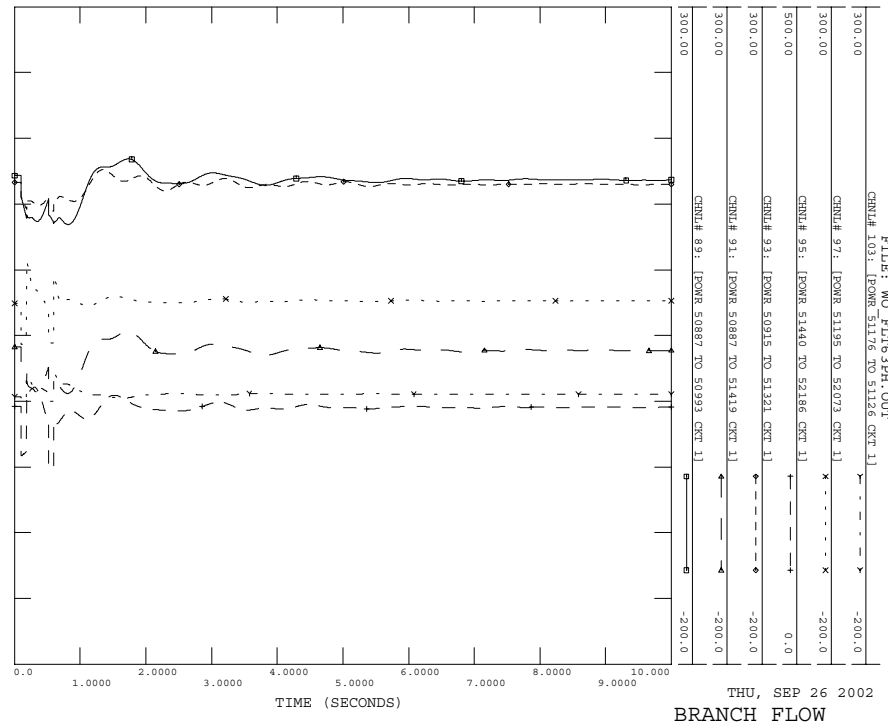
THU, SEP 26 2002 15:50
 DC LINE EPE 12

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT63PH.OUT



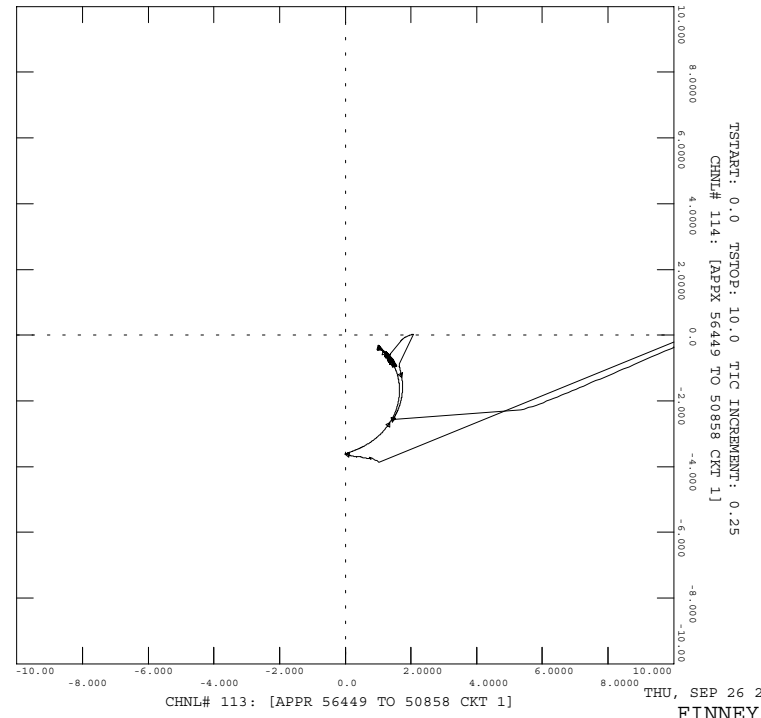
THU, SEP 26 2002 15:50
 SPP: PELEC 9

2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT63PH.OUT

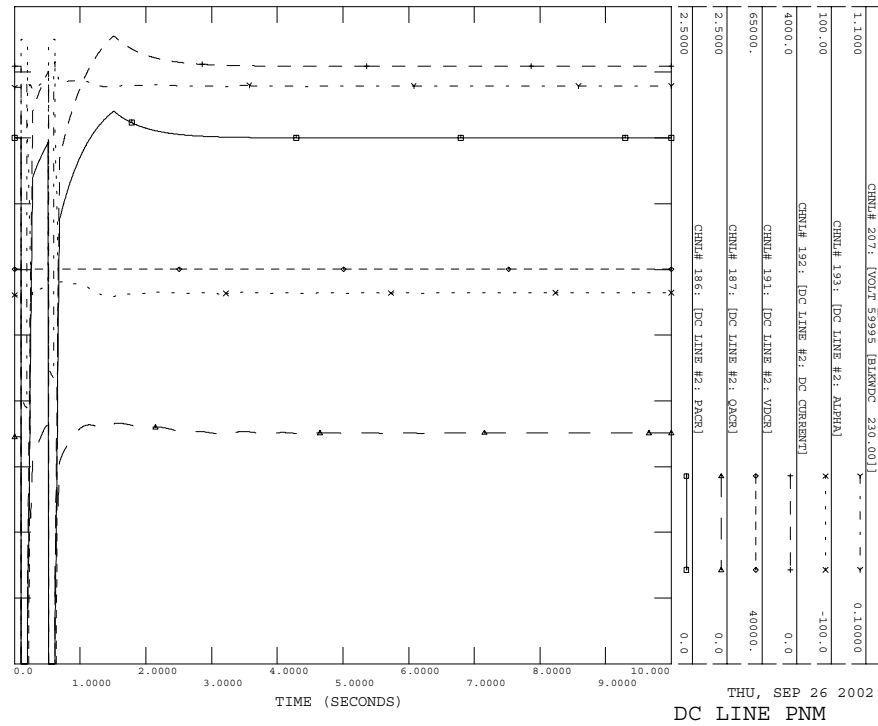


THU, SEP 26 2002 15:50
 BRANCH FLOW 11

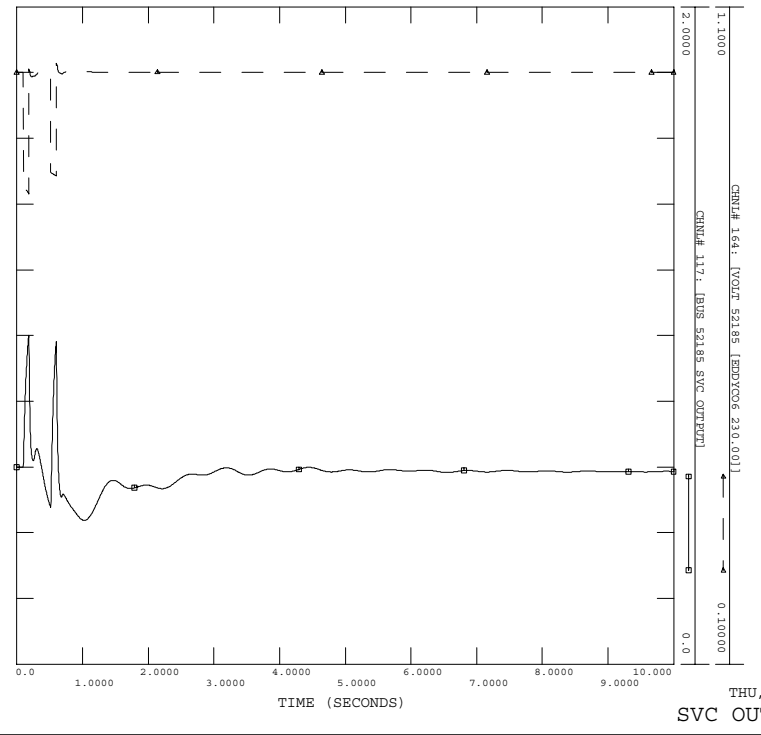
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT63PH.OUT



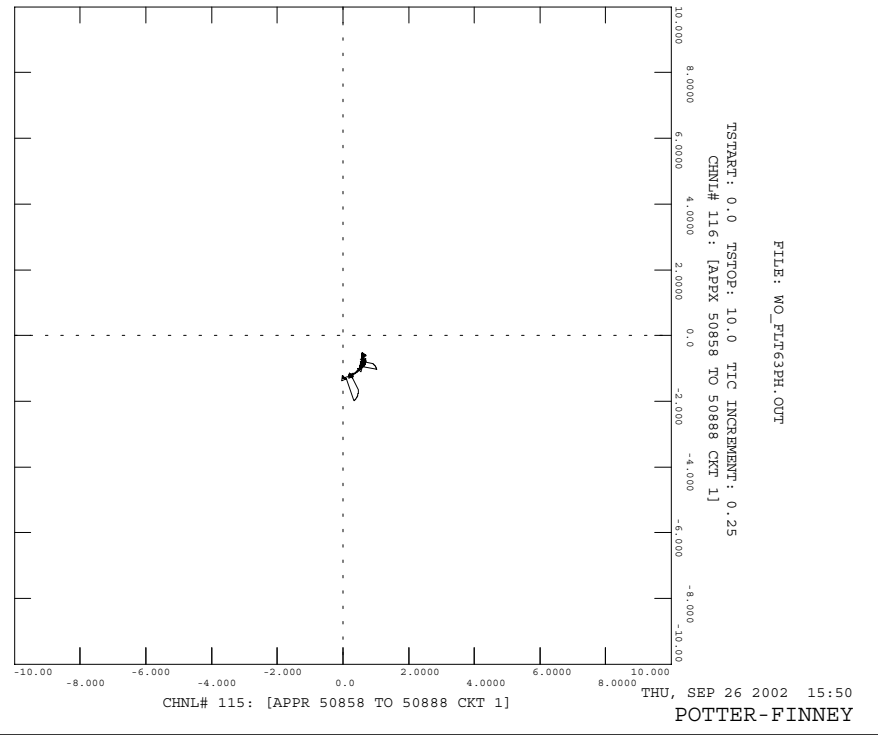
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT63PH.OUT

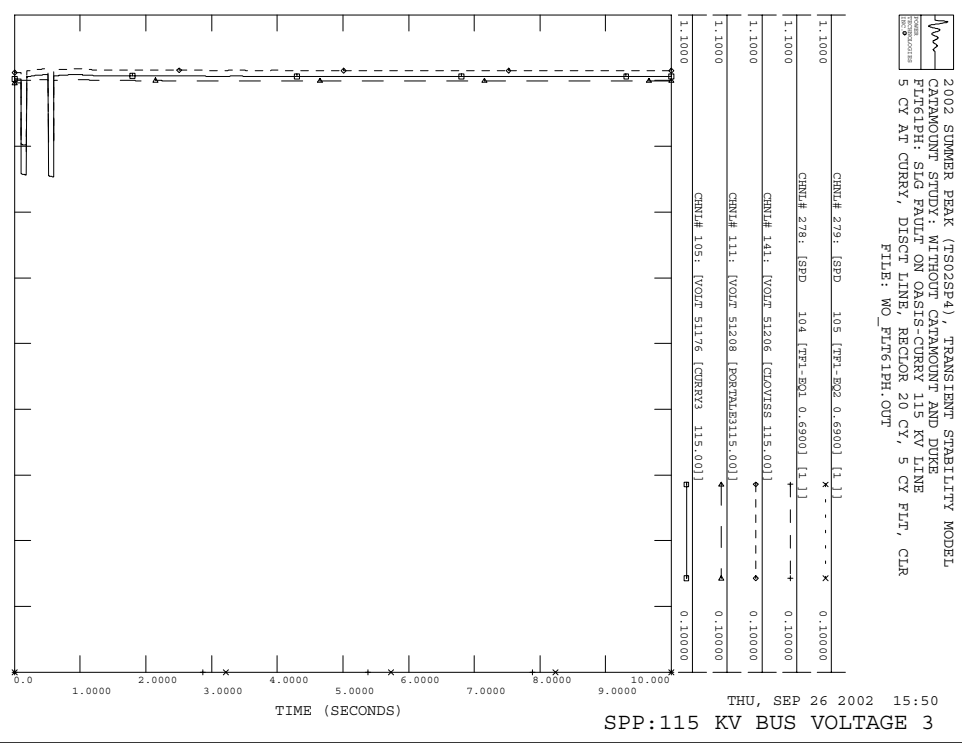
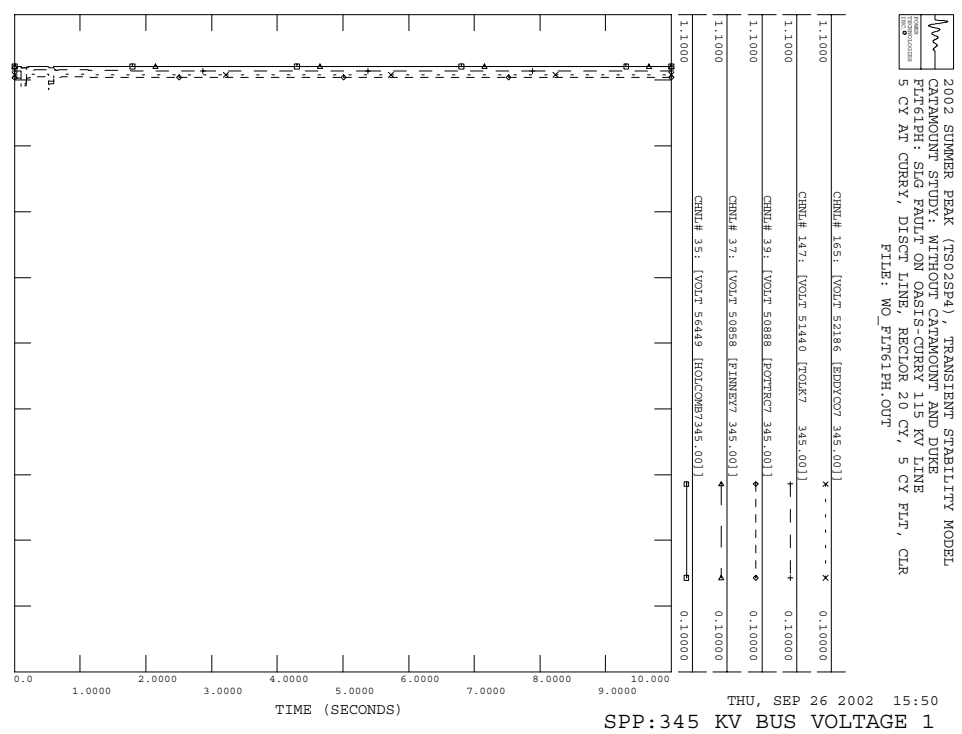
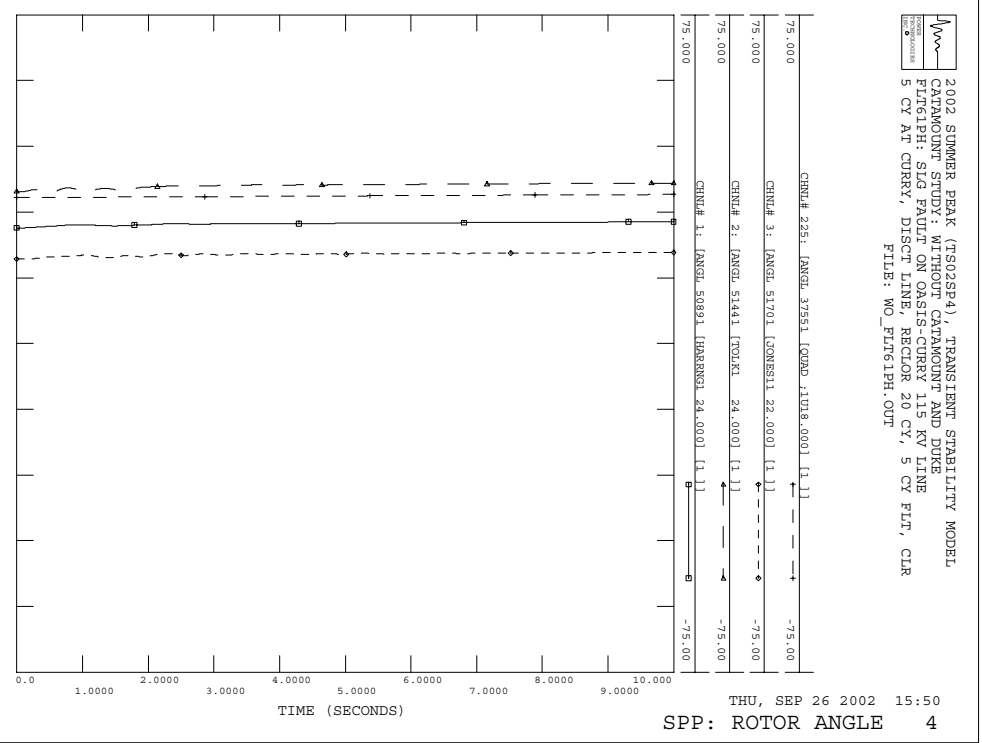
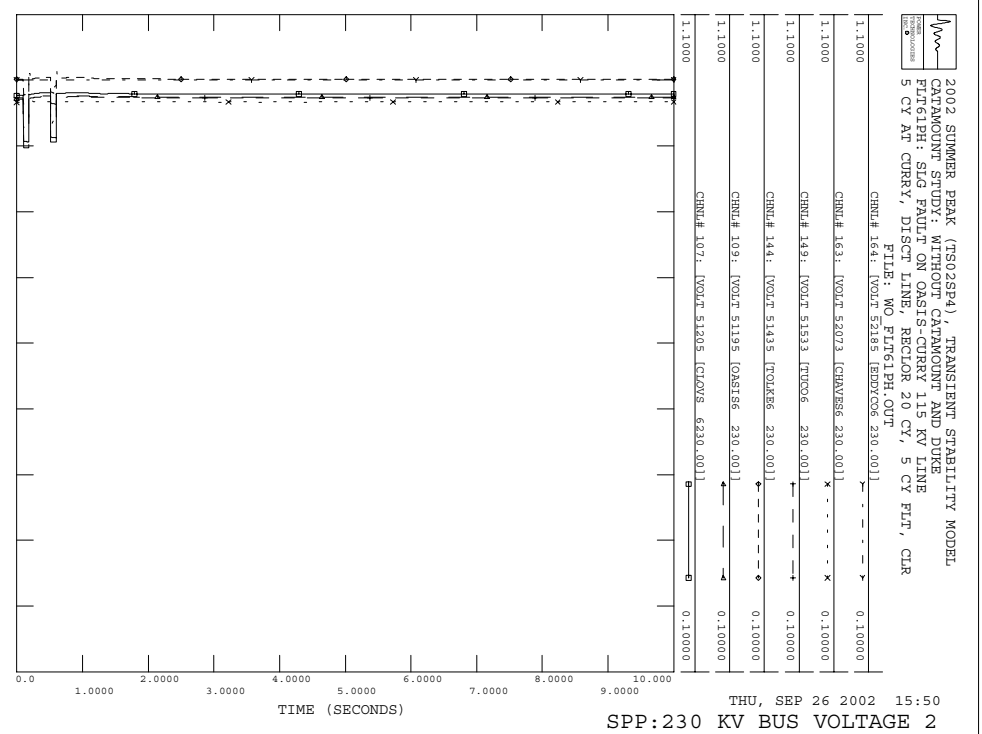


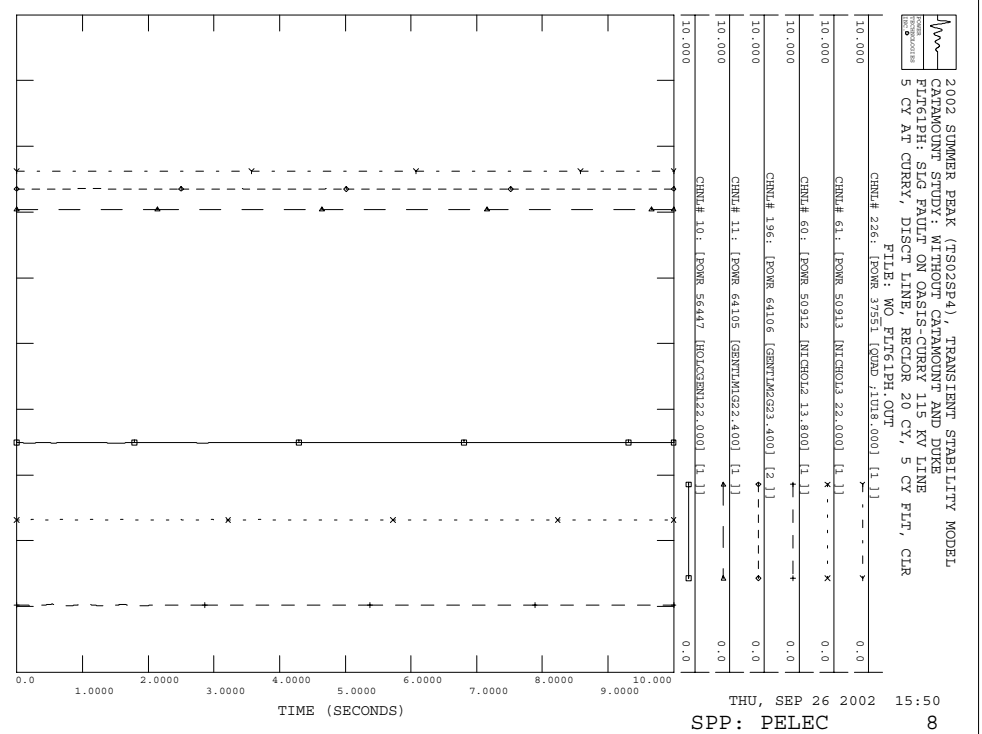
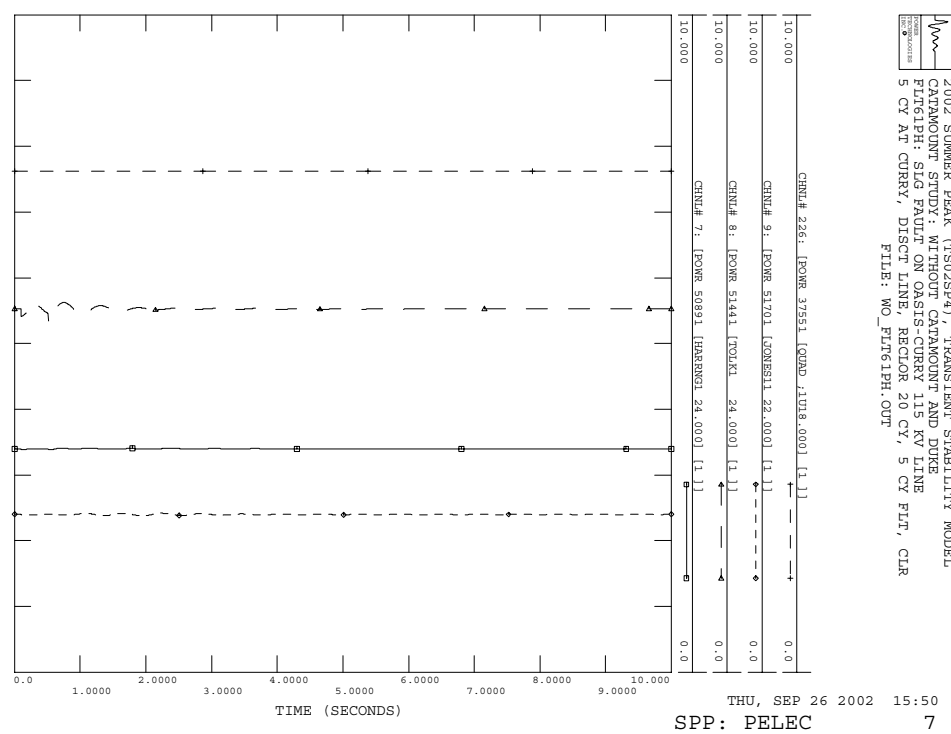
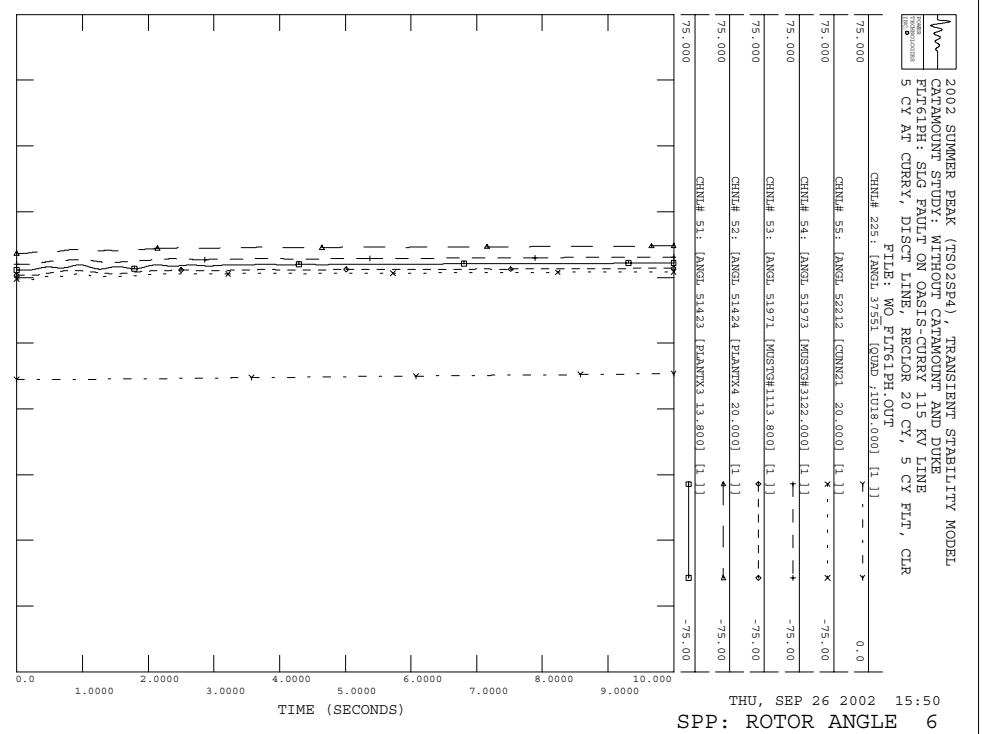
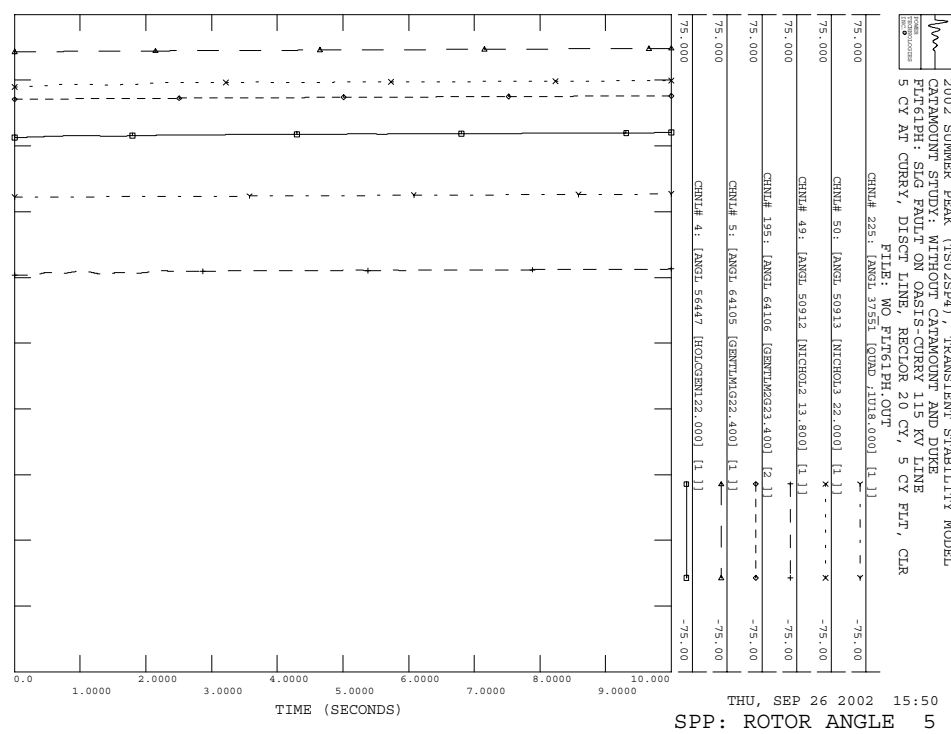
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT63PH.OUT



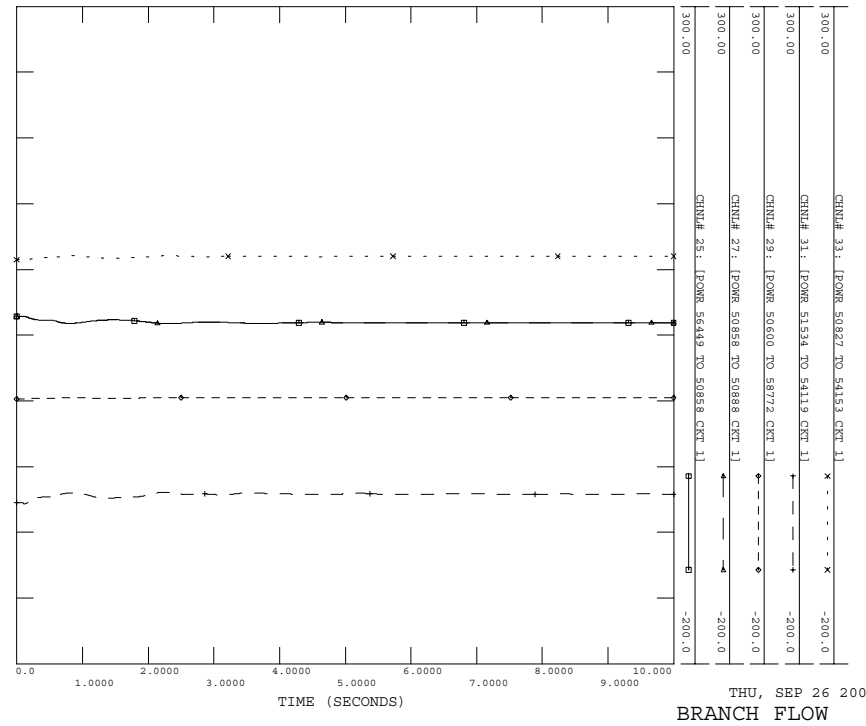
2002 SUMMER PEAK (TSO2SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT63PH: THREE PHASE FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT63PH.OUT



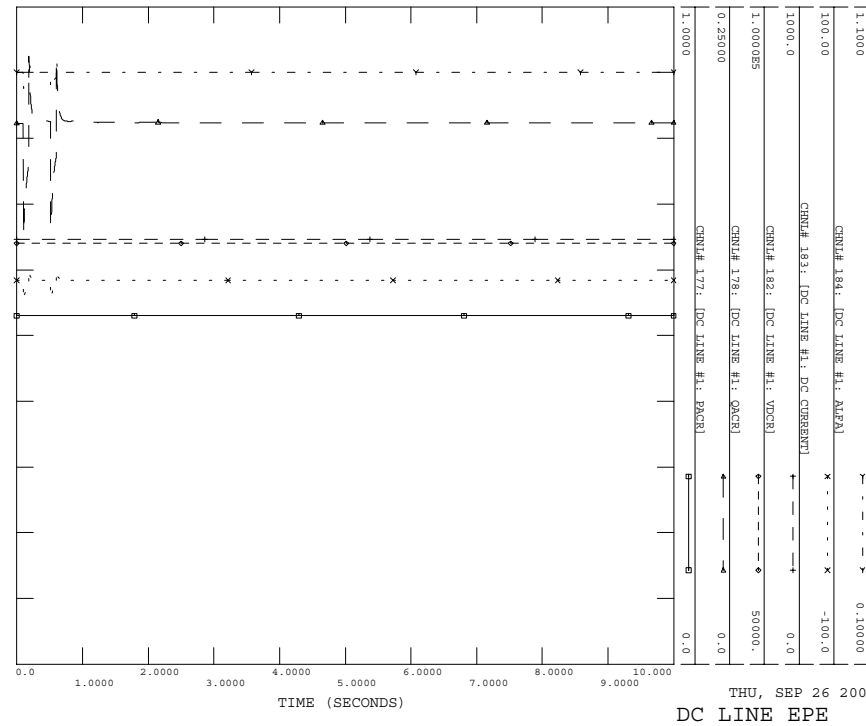




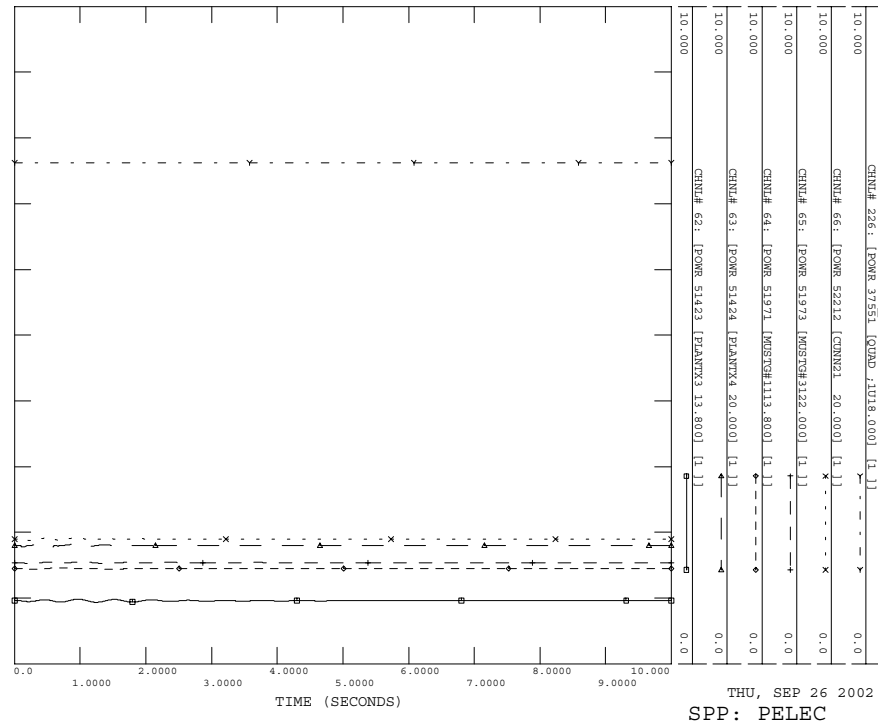
2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FILE: SLG_FAULT_ON_OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CT, 5 CY FLT, CLR
 FILE: WO_FLT61PH.OUT



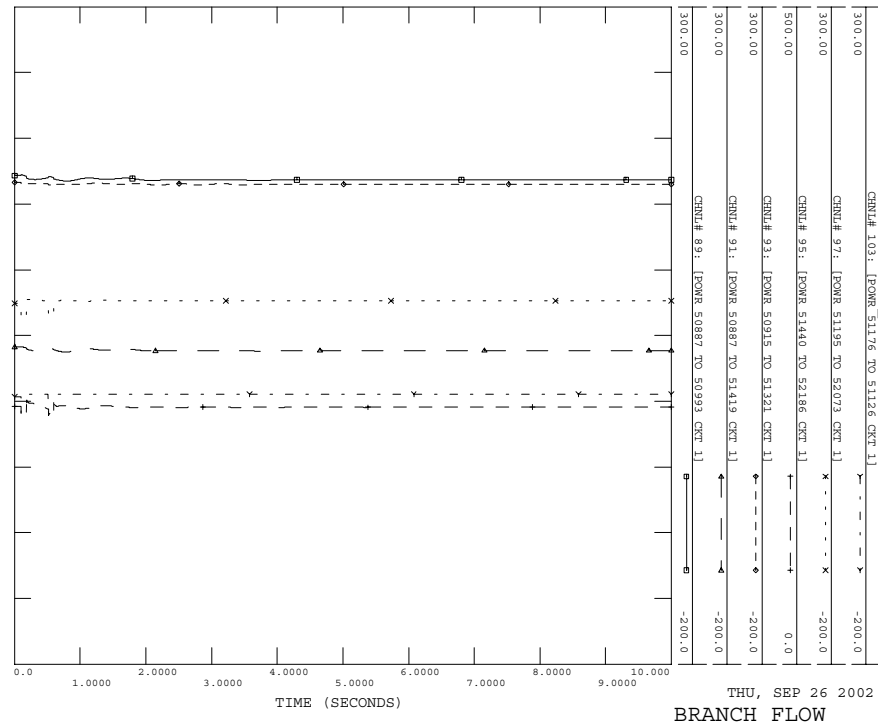
2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FILE: SLG_FAULT_ON_OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CT, 5 CY FLT, CLR
 FILE: WO_FLT61PH.OUT



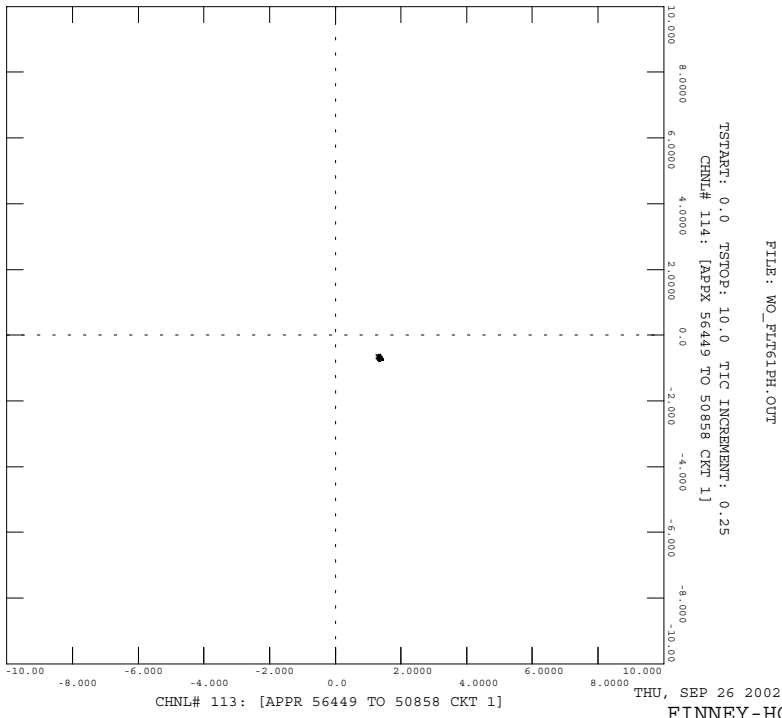
2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FILE: SLG_FAULT_ON_OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CT, 5 CY FLT, CLR
 FILE: WO_FLT61PH.OUT



2002 SUMMER PEAK (TSO2SP4) , TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FILE: SLG_FAULT_ON_OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECTOR 20 CT, 5 CY FLT, CLR
 FILE: WO_FLT61PH.OUT



2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT61PH.OUT

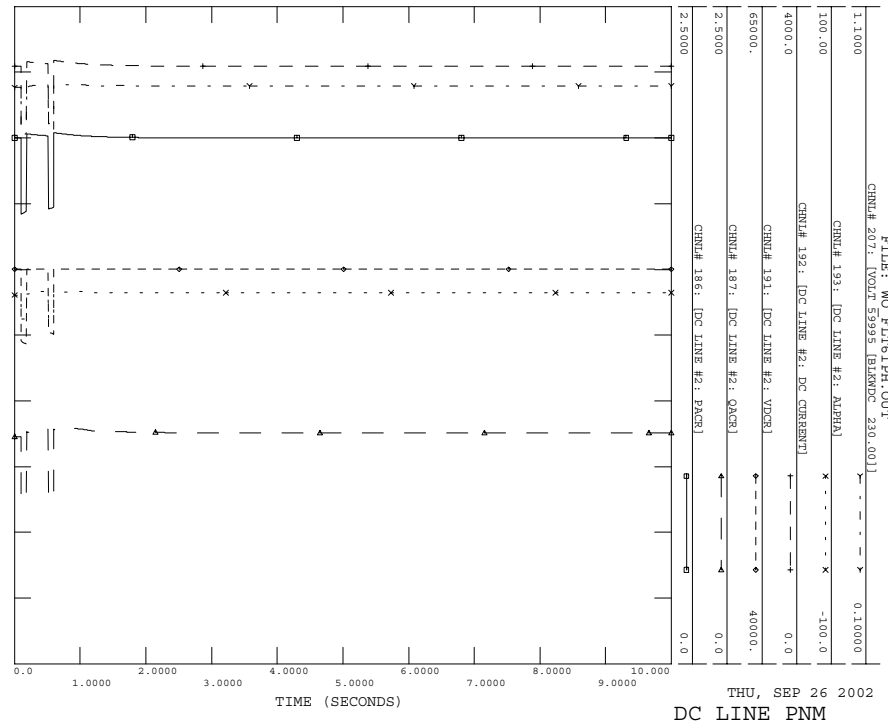


FILE: WO_FLT61PH.OUT

THU, SEP 26 2002 15:50
 FINNEY-HOLCOMB

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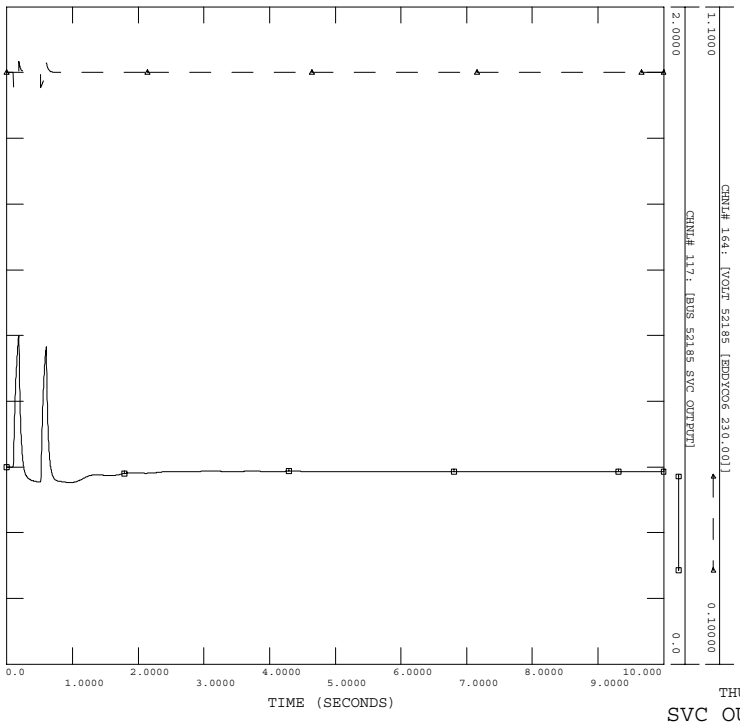
2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT61PH.OUT
 CHNL# 207: [VOLT 59395 (BASEDC 230.001)]



THU, SEP 26 2002 15:50
 DC LINE PNM

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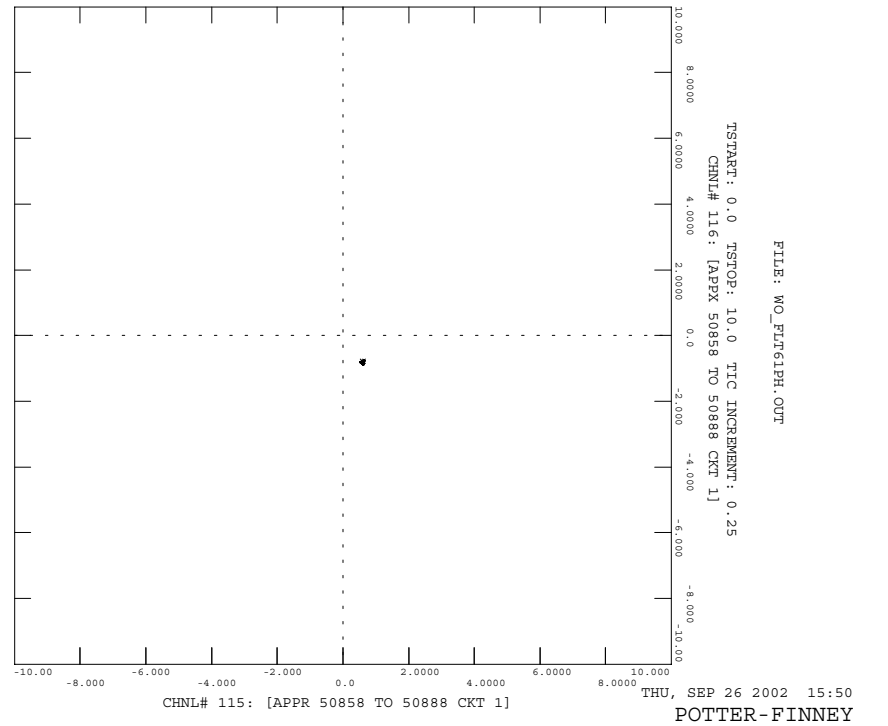
2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT61PH.OUT



THU, SEP 26 2002 15:50
 SVC OUTPUT

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2002 SUMMER PEAK (TS02SP4), TRANSIENT STABILITY MODEL
 CATAMOUNT STUDY: WITHOUT CATAMOUNT AND DUKE
 FLT61PH: SLG FAULT ON OASIS-CURRY 115 KV LINE
 5 CY AT CURRY, DISCT LINE, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WO_FLT61PH.OUT



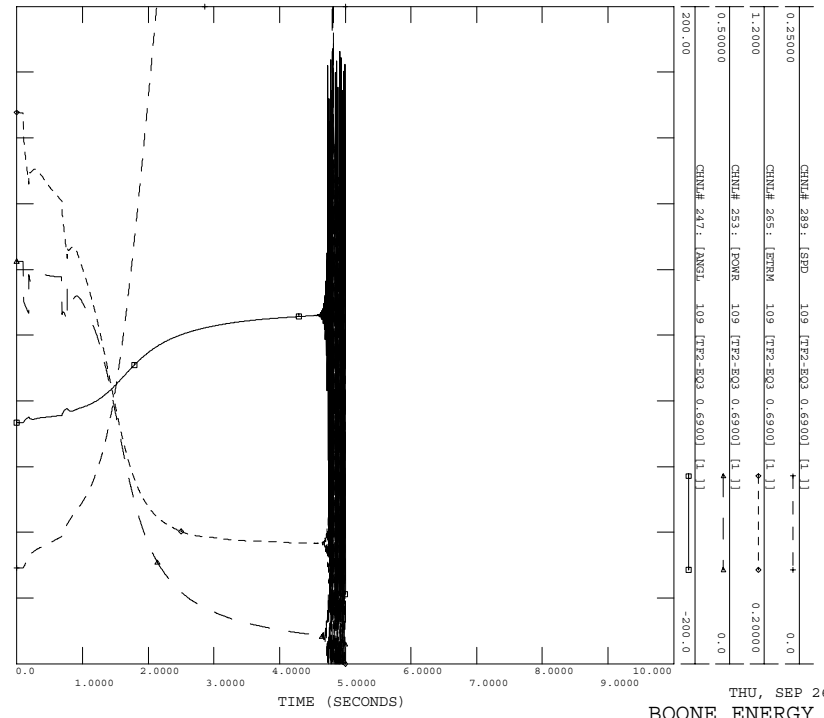
THU, SEP 26 2002 15:50
 POTTER-FINNEY

15

B.3 Specified Disturbances with Over/Under Voltage Protection Scheme Disabled

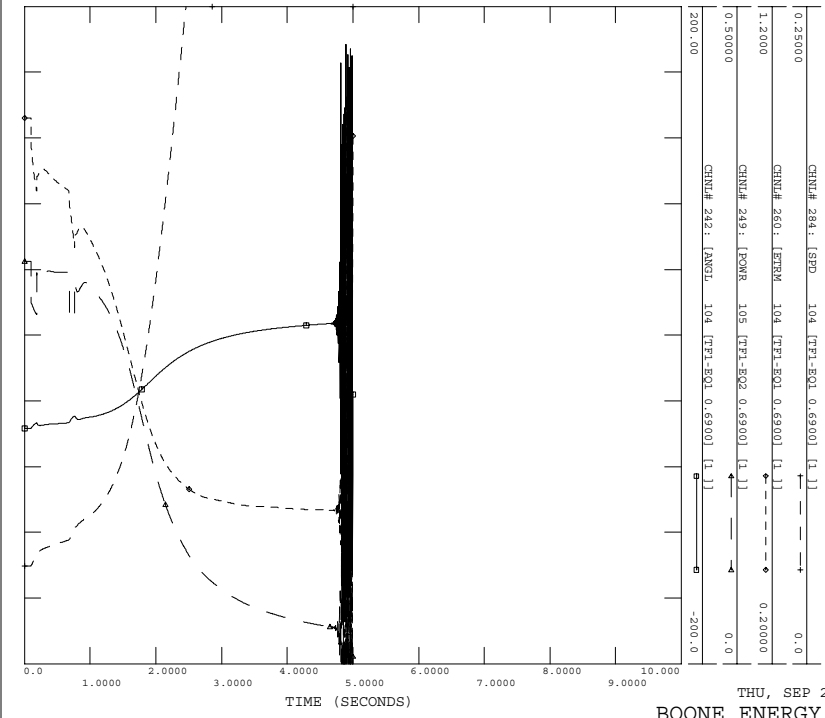
- FLT11PH
- FLT21PH
- FLT41PH

04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLTLPH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLTLPH.OPF.OUT



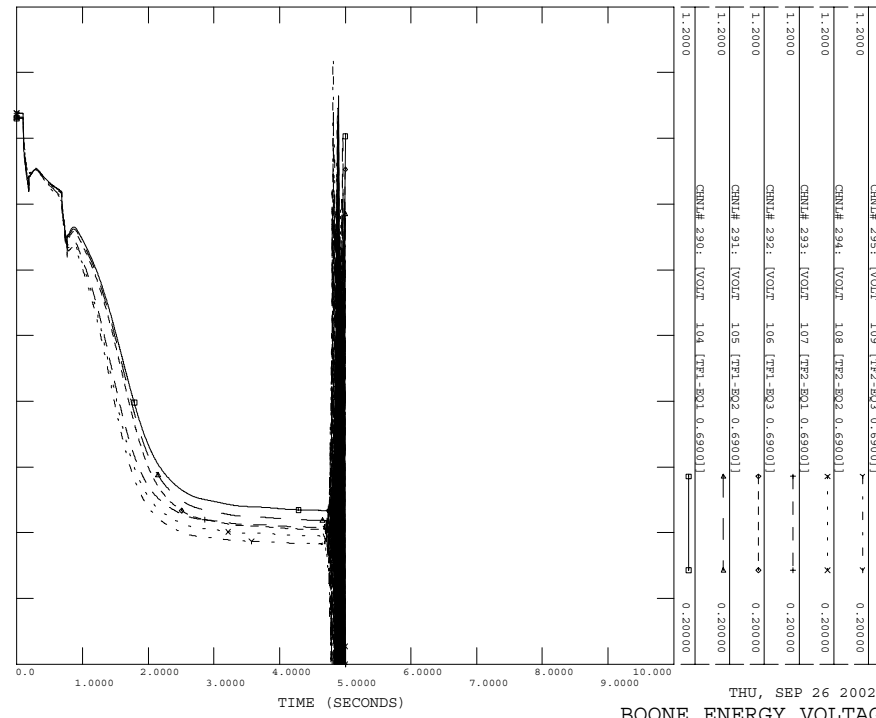
THU, SEP 26 2002 15:50
 BOONE ENERGY - CKT6 2

04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLTLPH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLTLPH.OPF.OUT



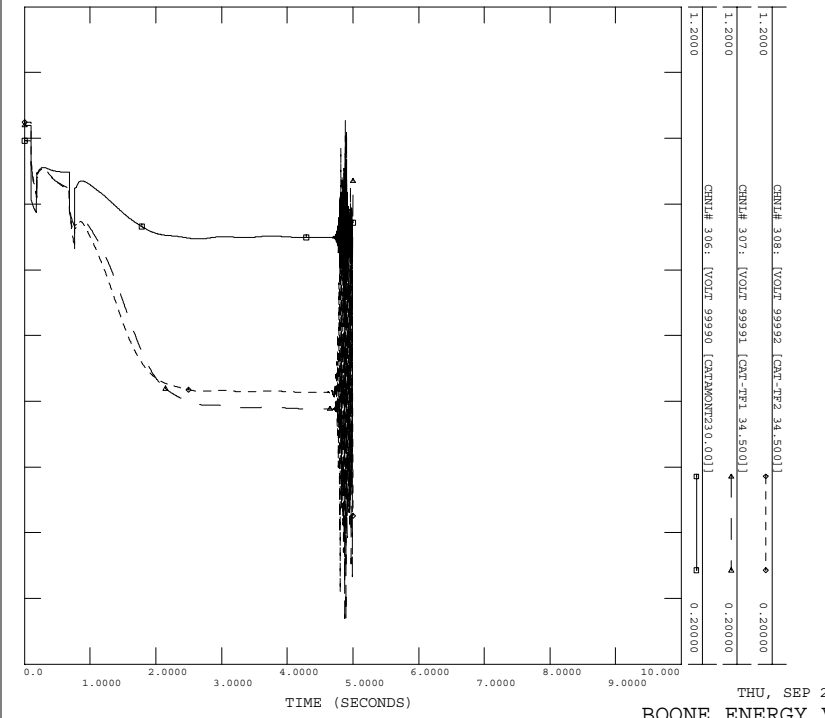
THU, SEP 26 2002 15:50
 BOONE ENERGY - CKT1 1

04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLTLPH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLTLPH.OPF.OUT



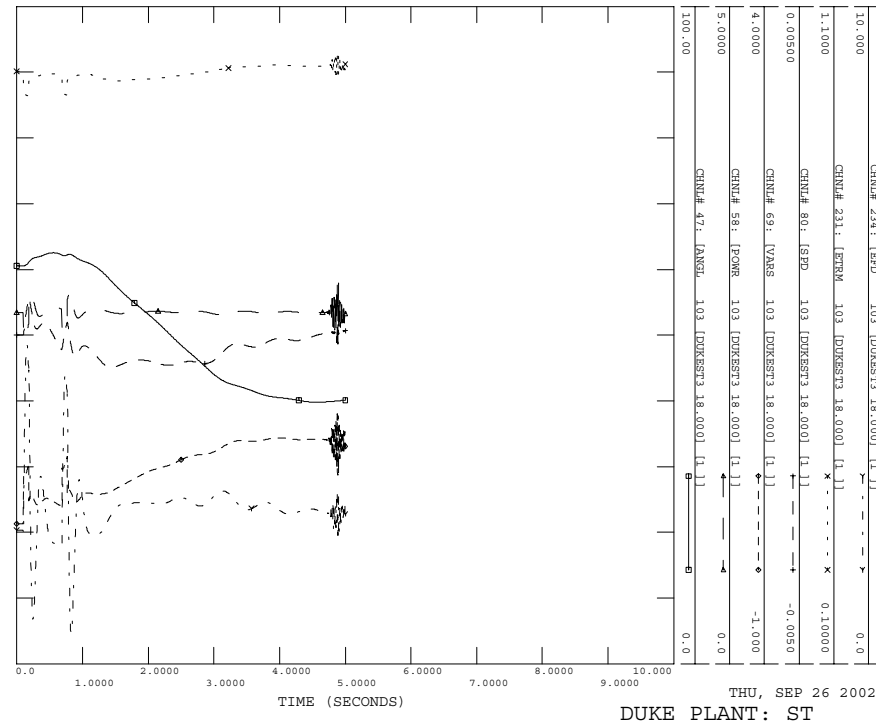
THU, SEP 26 2002 15:50
 BOONE ENERGY VOLTAGE 4

04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLTLPH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLTLPH.OPF.OUT



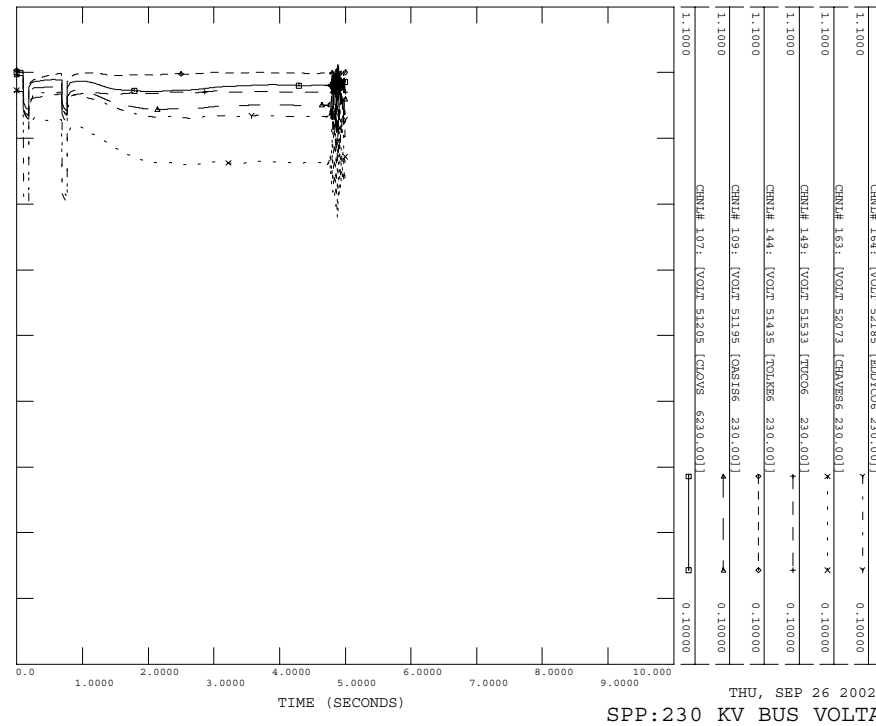
THU, SEP 26 2002 15:50
 BOONE ENERGY VOLTAGE 3

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMWR-200X 5/8/02
 FTLL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FTLL1PH.OPF.OUT



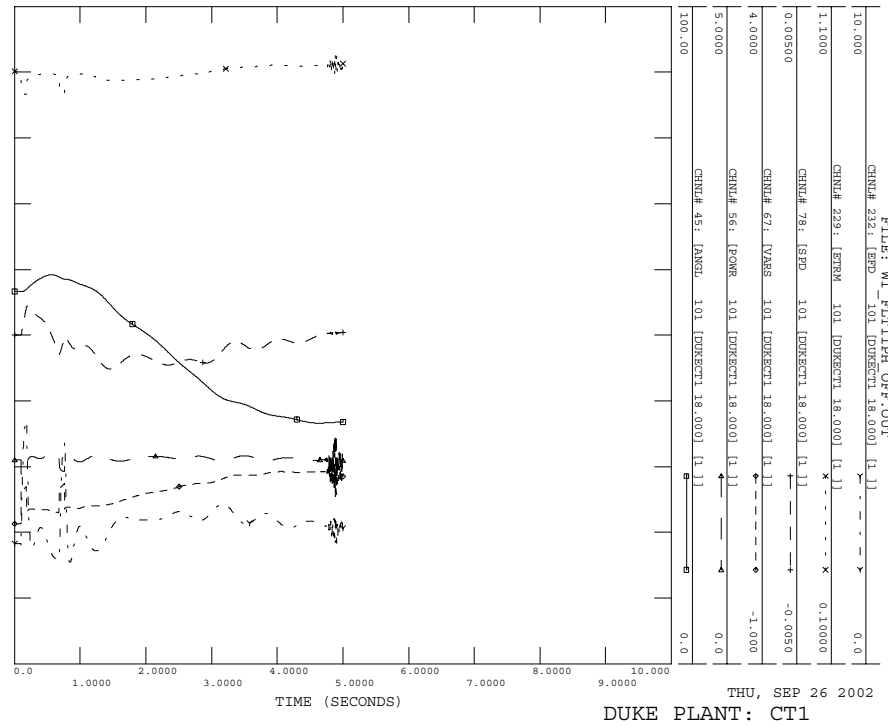
THU, SEP 26 2002 15:50
 DUKE PLANT: ST 6

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMWR-200X 5/8/02
 FTLL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FTLL1PH.OPF.OUT



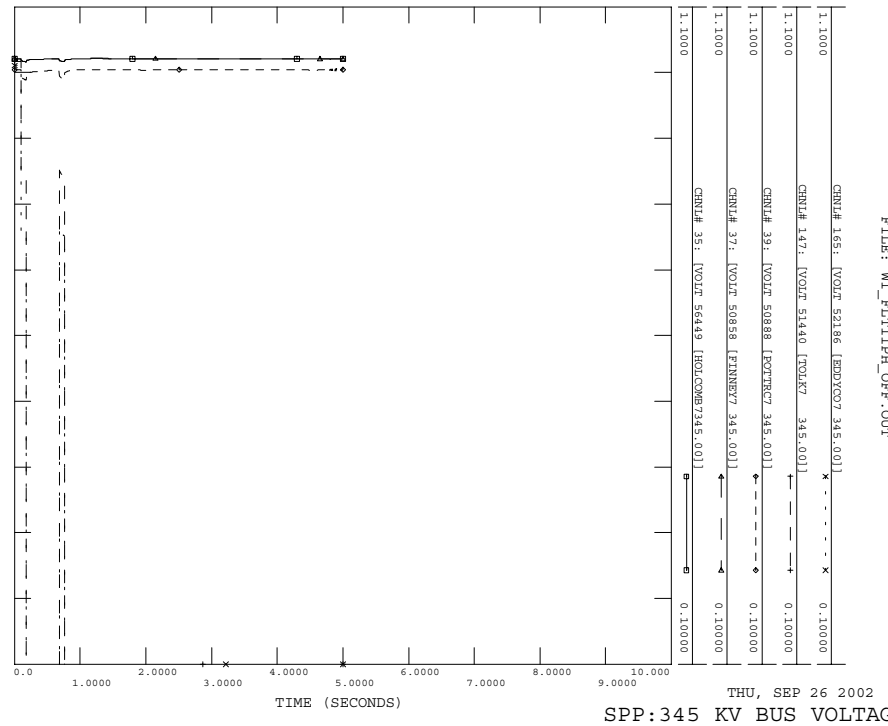
THU, SEP 26 2002 15:50
 SPP:230 KV BUS VOLTAGE 8

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMWR-200X 5/8/02
 FTLL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FTLL1PH.OPF.OUT



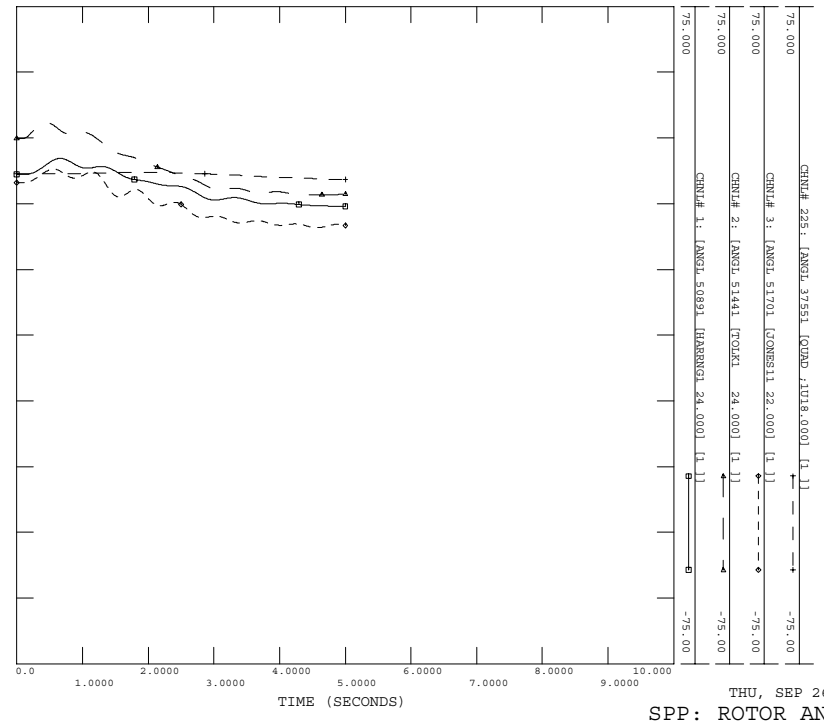
THU, SEP 26 2002 15:50
 DUKE PLANT: CT1 5

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMWR-200X 5/8/02
 FTLL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FTLL1PH.OPF.OUT

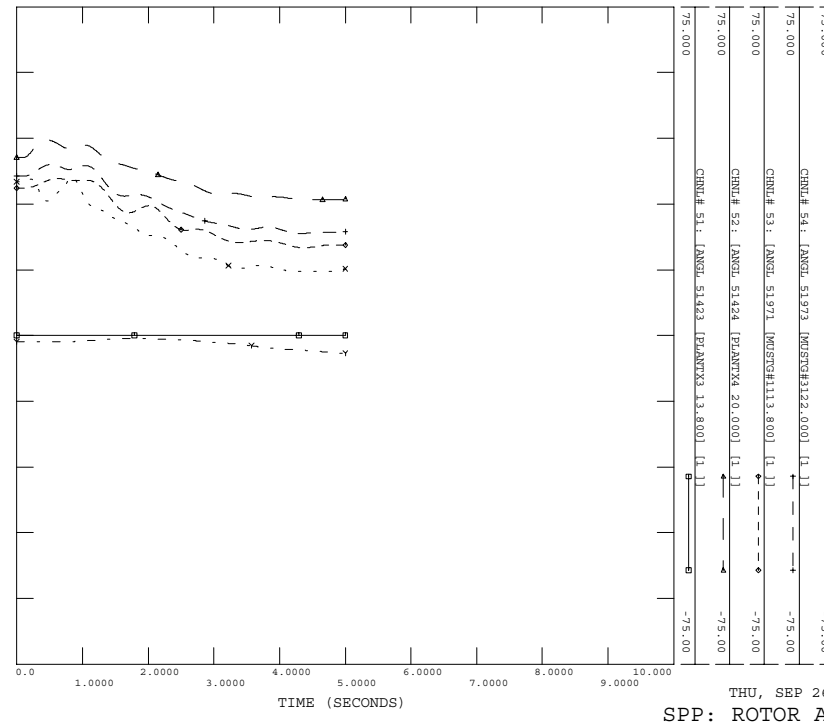


THU, SEP 26 2002 15:50
 SPP:345 KV BUS VOLTAGE 7

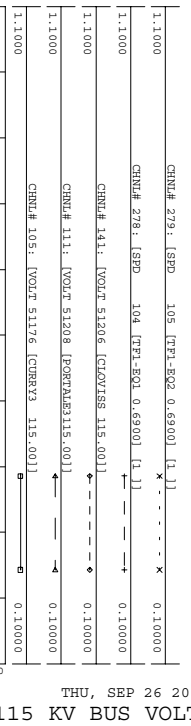
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKMTK-200X 5/8/02
 FLTL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLTL1PH.OPF.OUT



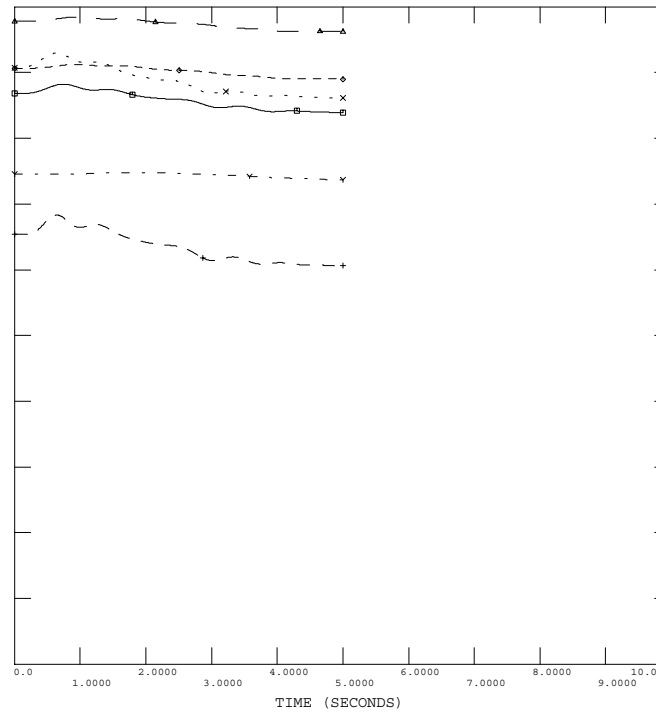
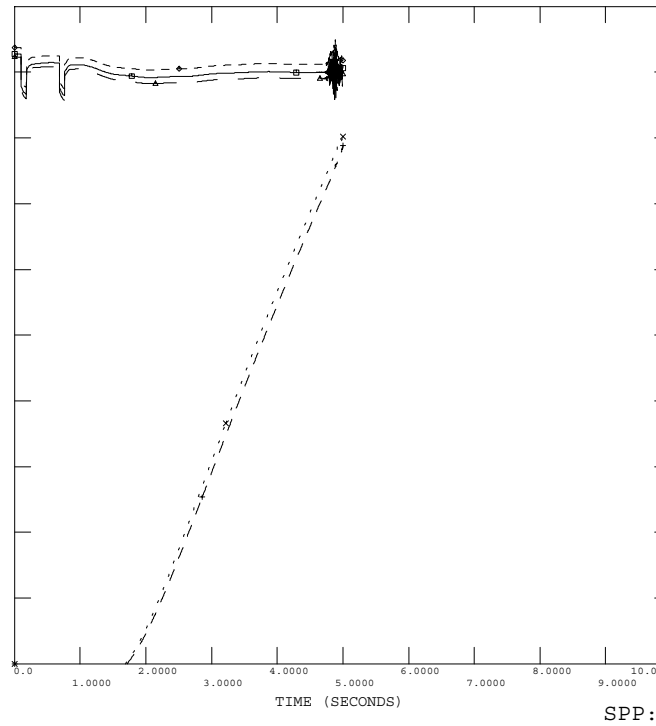
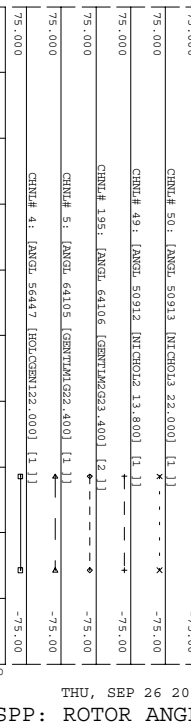
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKMTK-200X 5/8/02
 FLTL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
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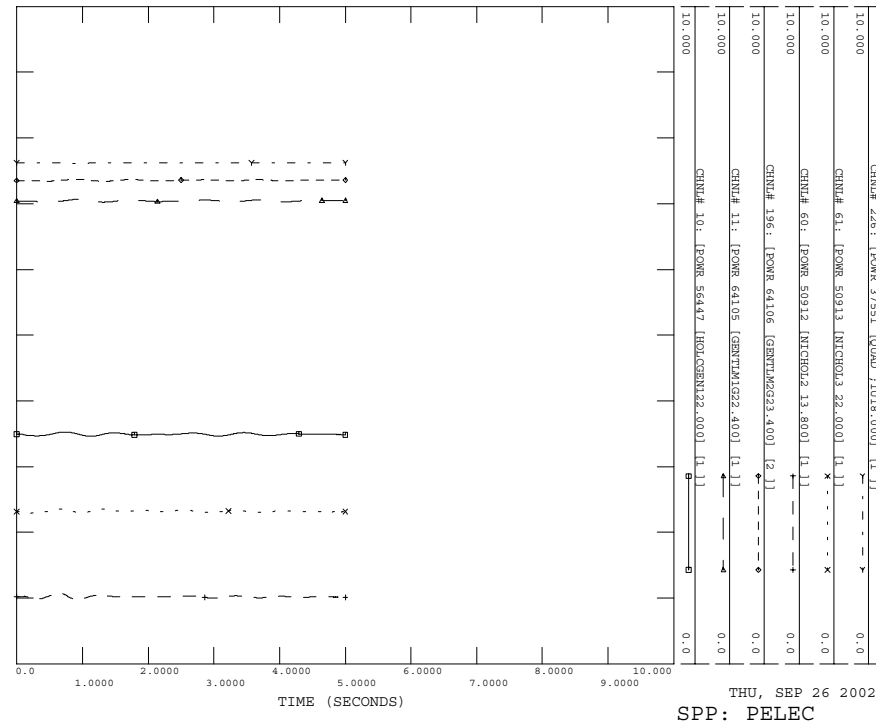
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKMTK-200X 5/8/02
 FLTL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
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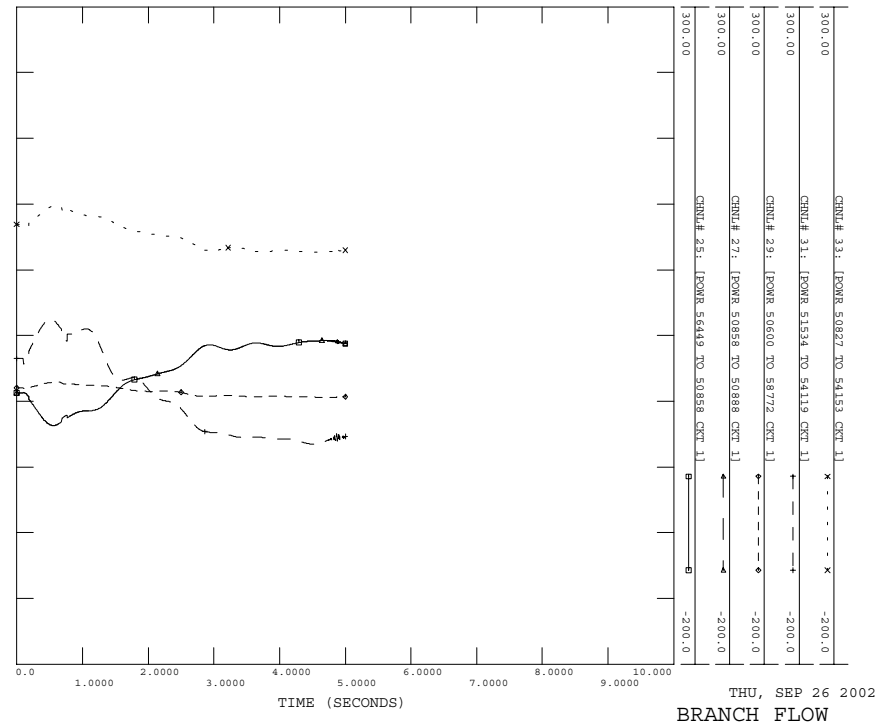
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 CATAMOUNT-184.8, CLOVIS-575, BIKMTK-200X 5/8/02
 FLTL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
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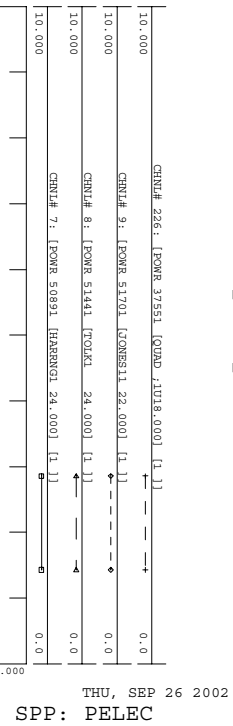
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 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLTLPH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLTLPH.OPF.OUT



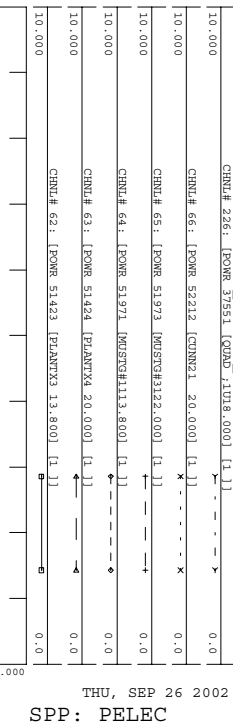
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLTLPH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
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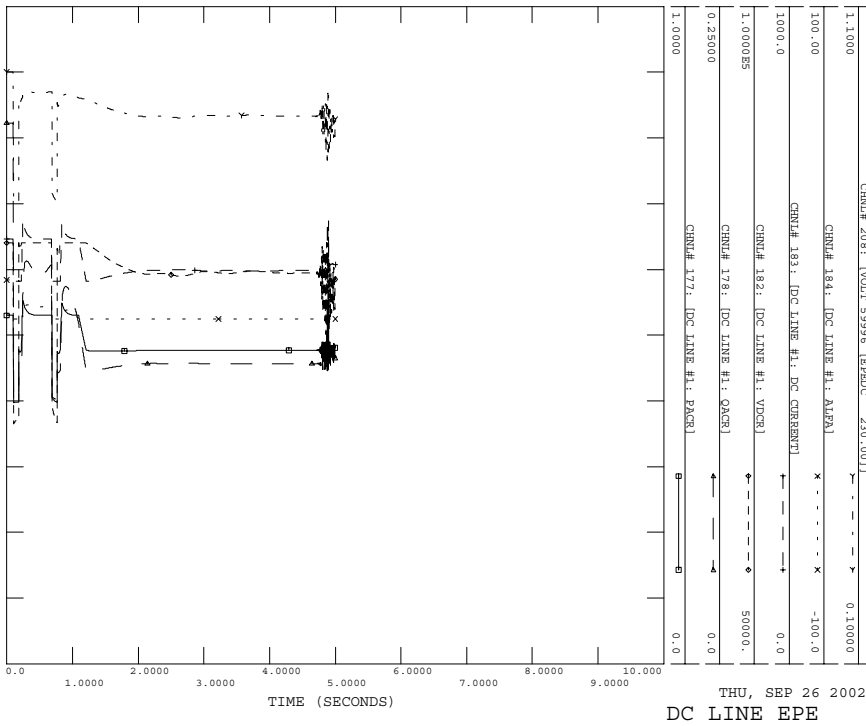
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLTLPH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLTLPH.OPF.OUT



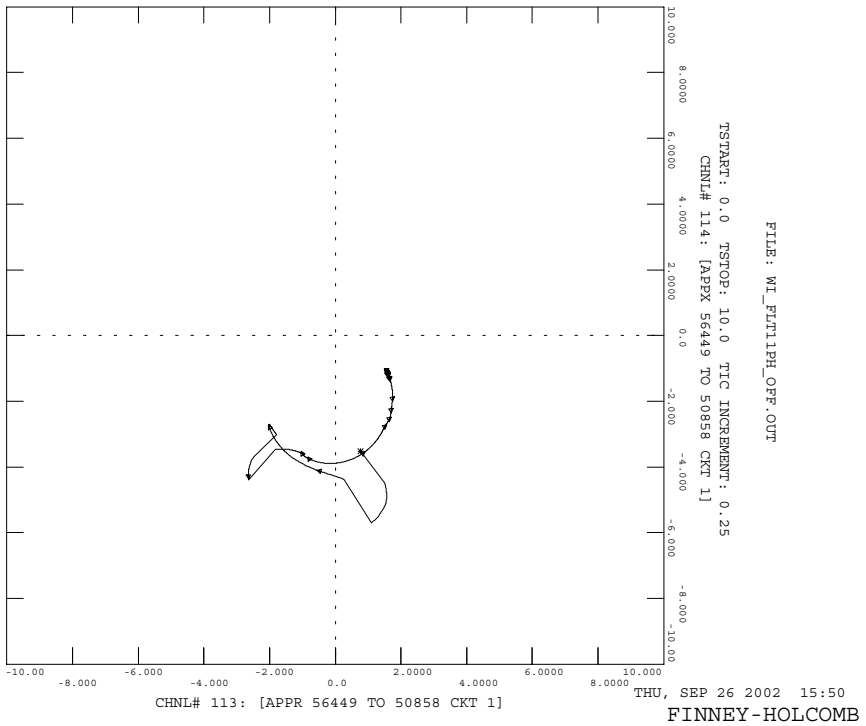
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 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLTLPH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLTLPH.OPF.OUT



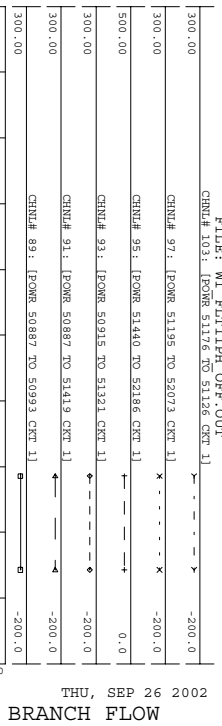
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 CATAMOUNT-184.8, CLOVIS-575, BLMWR-200X 5/8/02
 FTLL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FTLL1PH.OPF.OUT



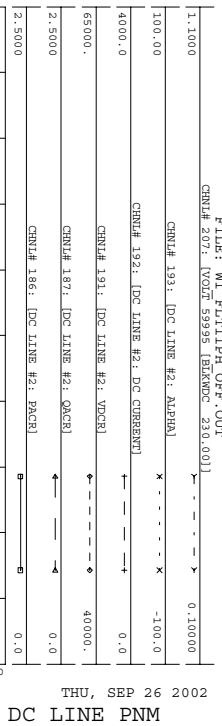
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 CATAMOUNT-184.8, CLOVIS-575, BLMWR-200X 5/8/02
 FTLL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECLOR 30 CY, 5 CY FLT, CLR
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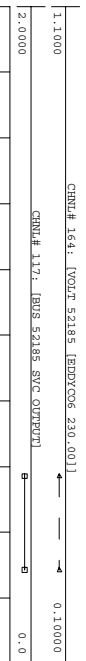
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMWR-200X 5/8/02
 FTLL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FTLL1PH.OPF.OUT



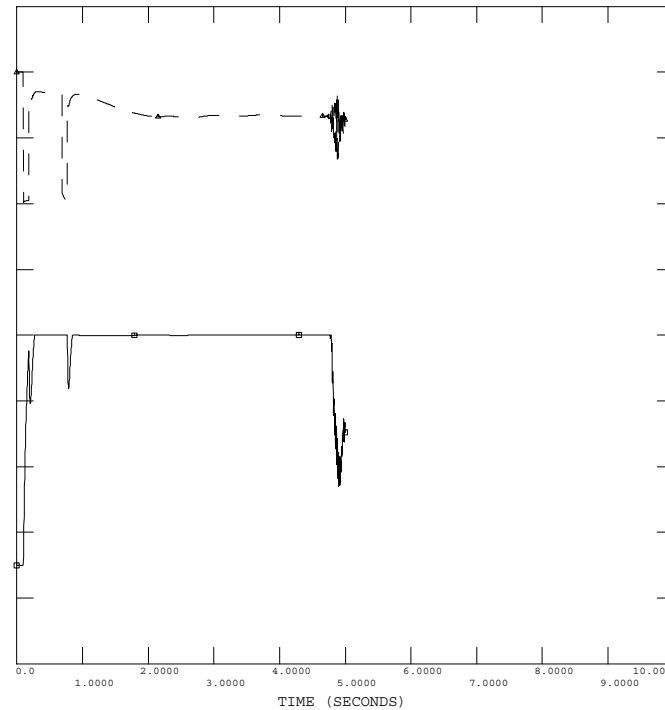
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 CATAMOUNT-184.8, CLOVIS-575, BLMWR-200X 5/8/02
 FTLL1PH: SLG FAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECLOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FTLL1PH.OPF.OUT



04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT1PH: SLG PAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR
 FILE: WI_FLT1PH_OFF.OUT



THU, SEP 26 2002 15:50
 SVC OUTPUT 22

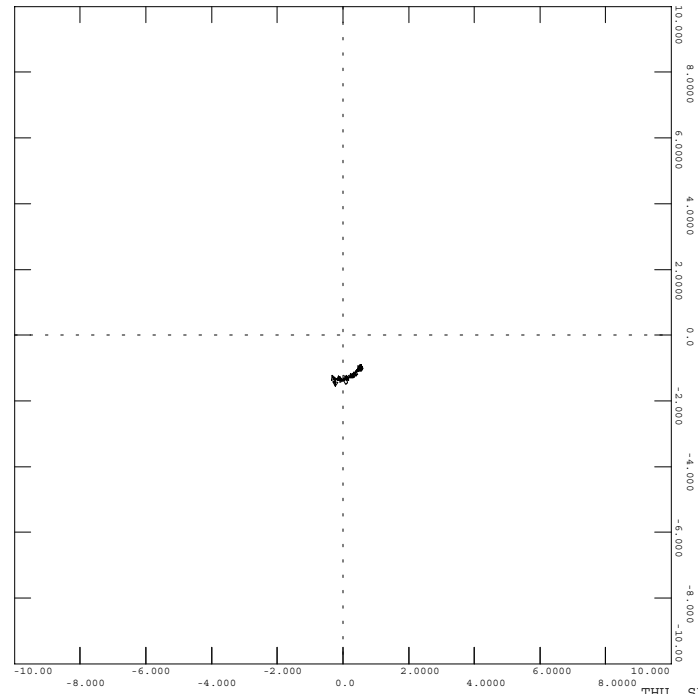


TIME (SECONDS)

04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT1PH: SLG PAULT ON EDDY - TOLK 345 LINE
 5 CY AT 9999, DISCT 9999, RECTOR 30 CY, 5 CY FLT, CLR

FILE: WI_FLT1PH_OFF.OUT

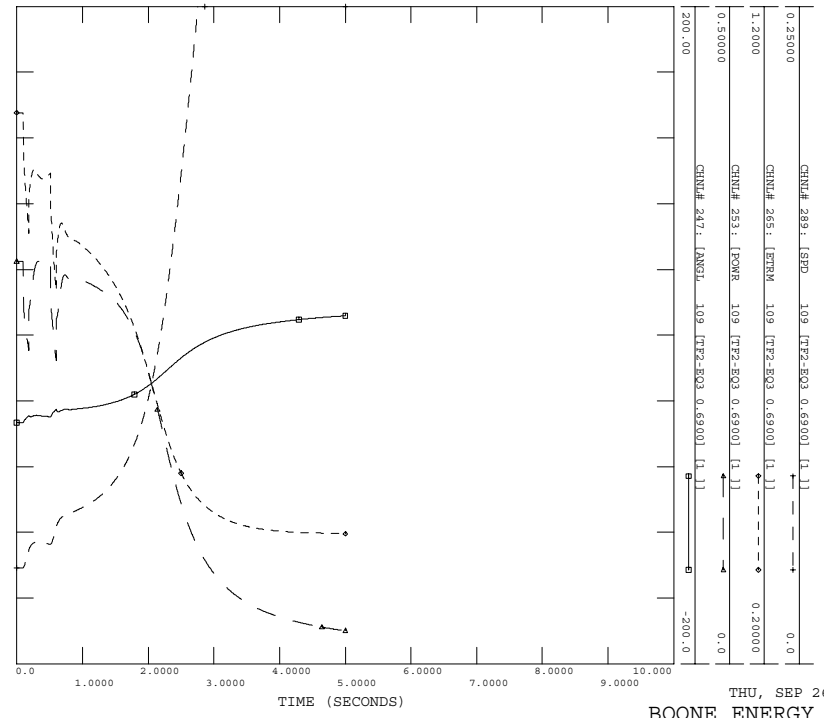
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 CHNL# 116: [APPX 50858 TO 50888 CKT 1]



CHNL# 115: [APPR 50858 TO 50888 CKT 1]

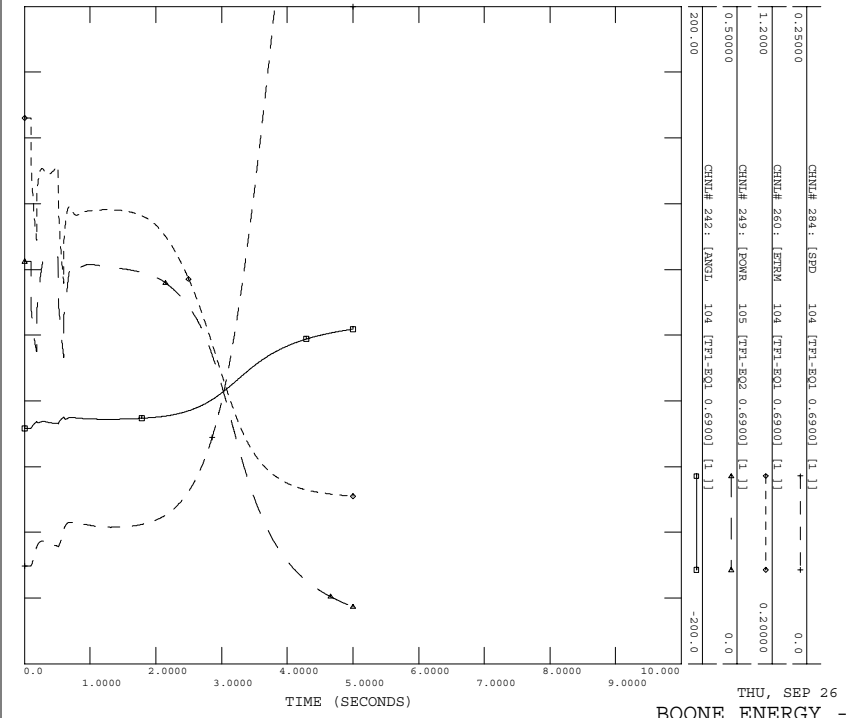
THU, SEP 26 2002 15:50
 POTTER-FINNEY

04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BUKWIR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OPF.OUT



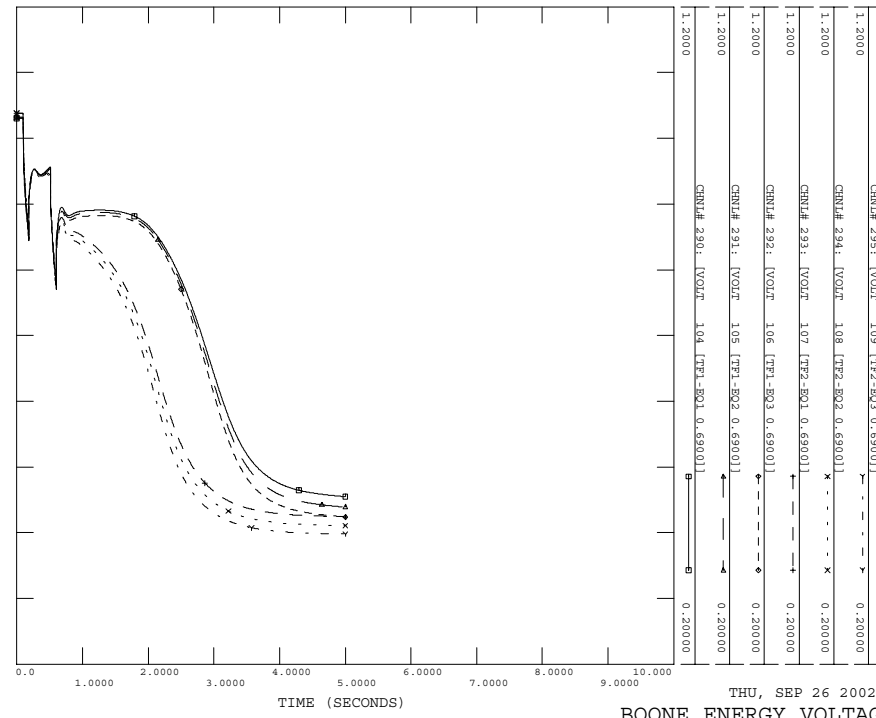
THU, SEP 26 2002 15:50
 BOONE ENERGY - CKT6 2

04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BUKWIR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OPF.OUT



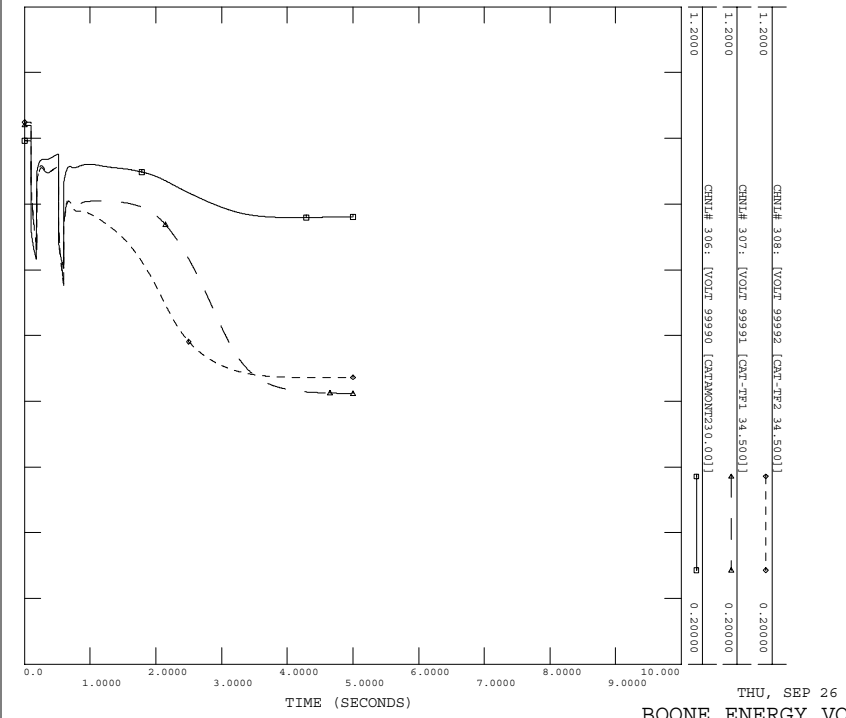
THU, SEP 26 2002 15:50
 BOONE ENERGY - CKT1 1

04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BUKWIR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OPF.OUT

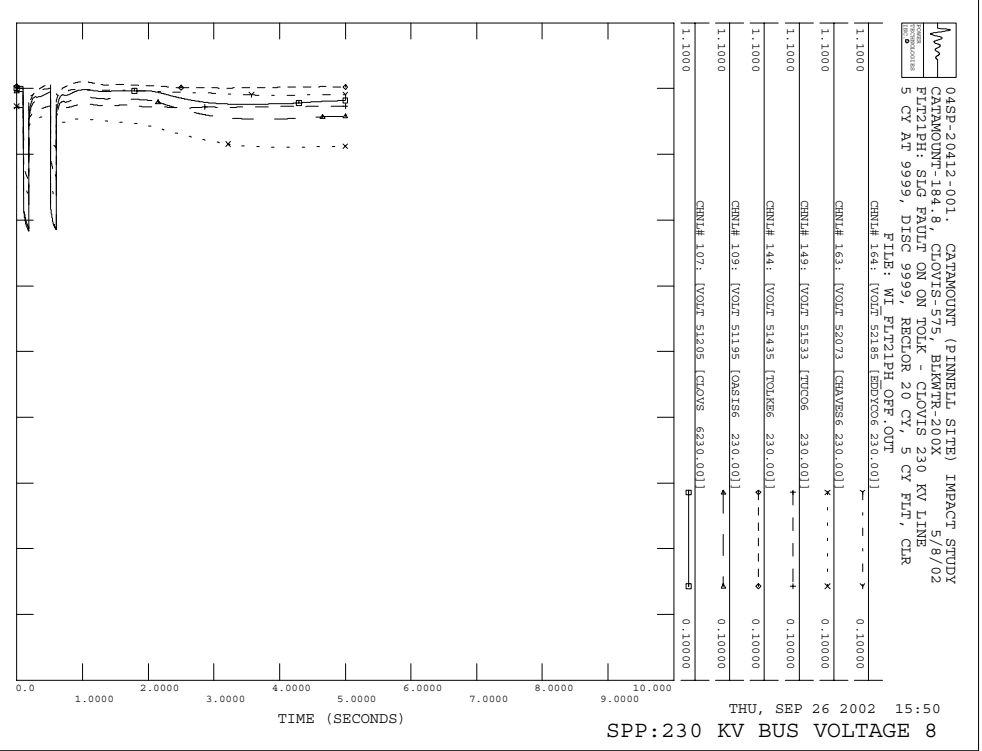
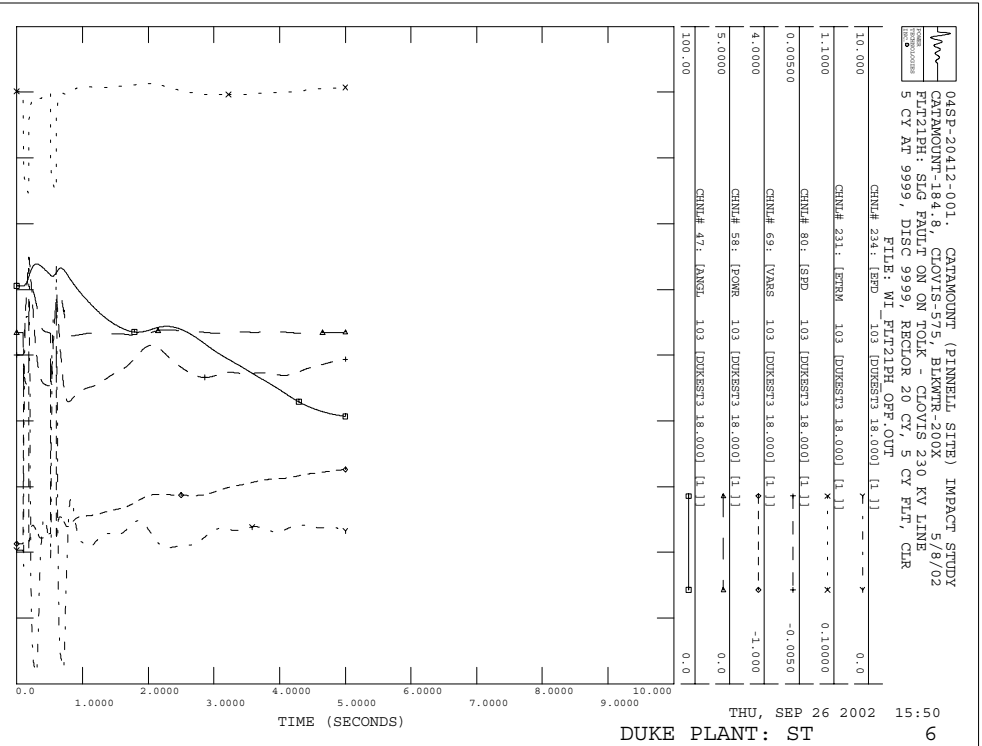
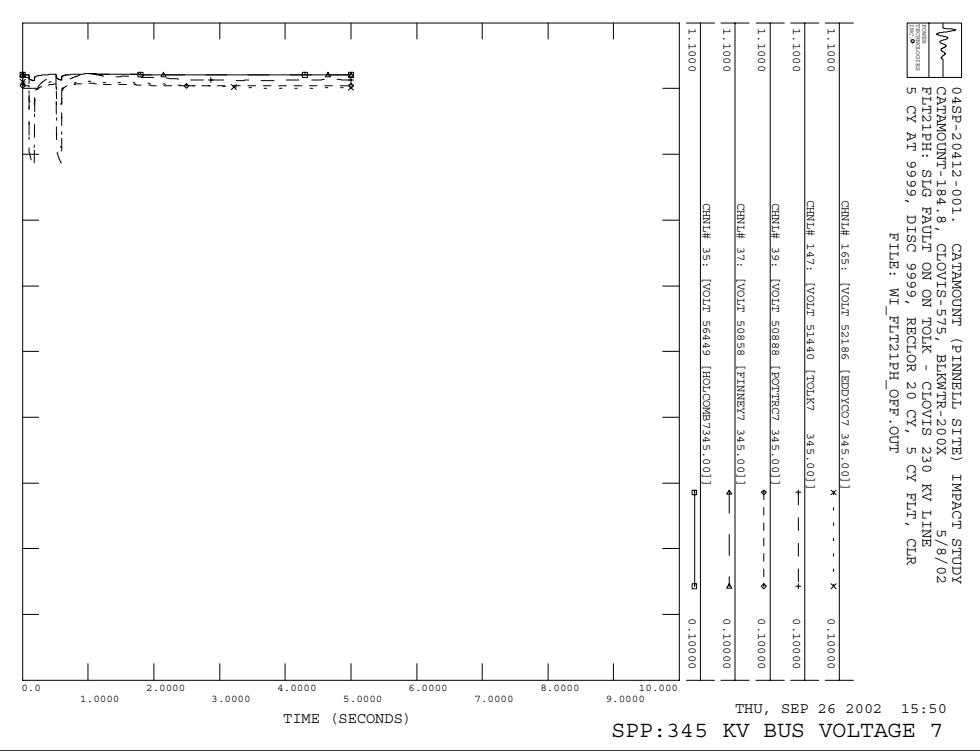
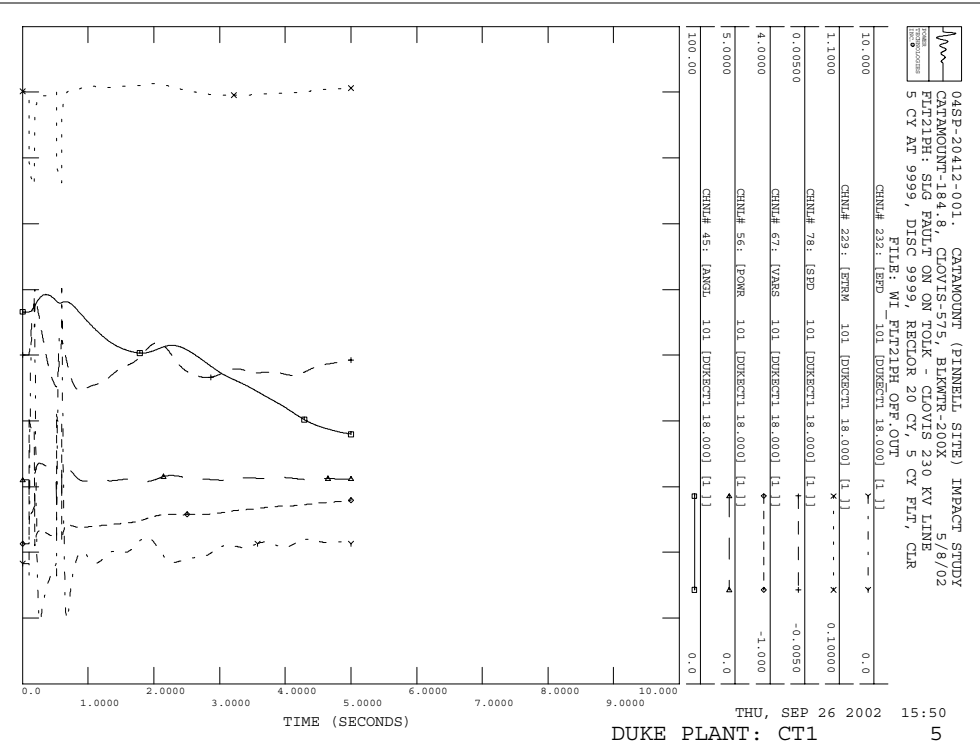


THU, SEP 26 2002 15:50
 BOONE ENERGY VOLTAGE 4

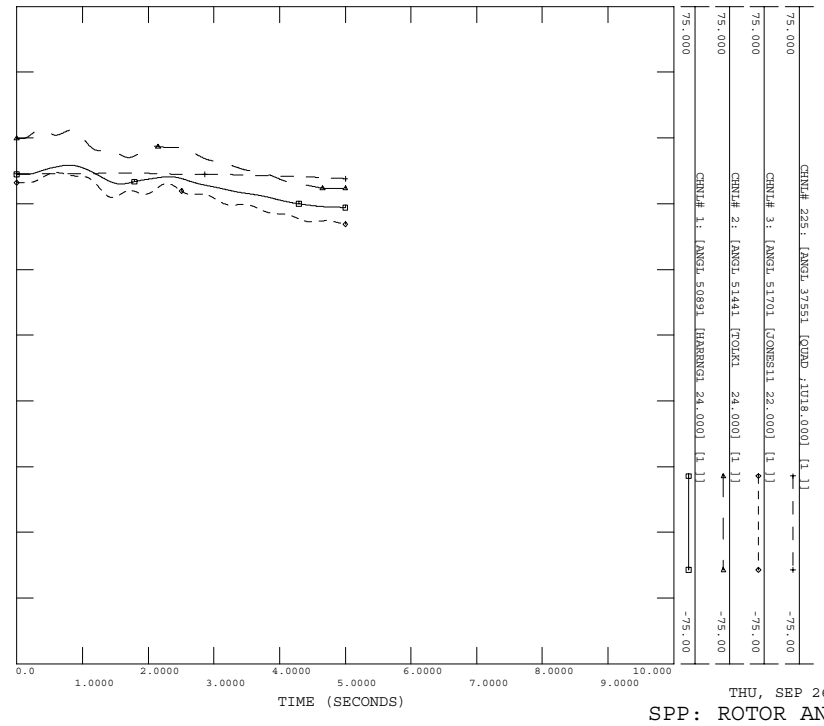
04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BUKWIR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OPF.OUT



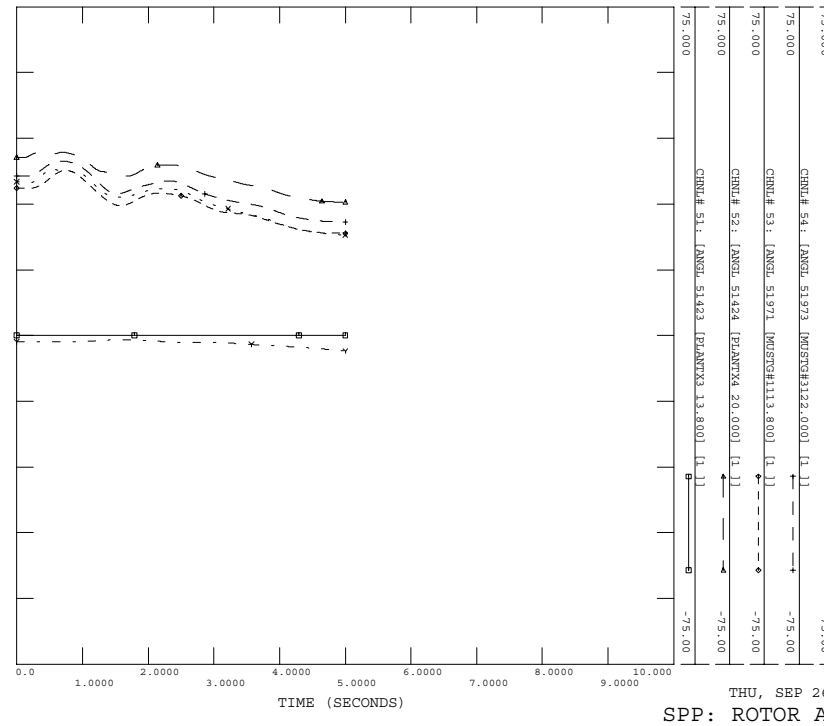
THU, SEP 26 2002 15:50
 BOONE ENERGY VOLTAGE 3



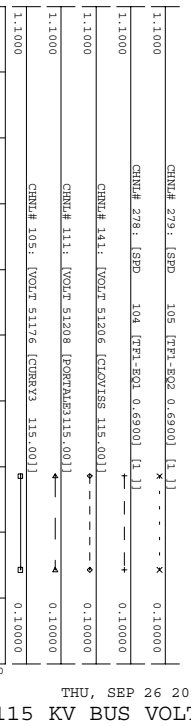
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BUKWTR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OPF.OUT



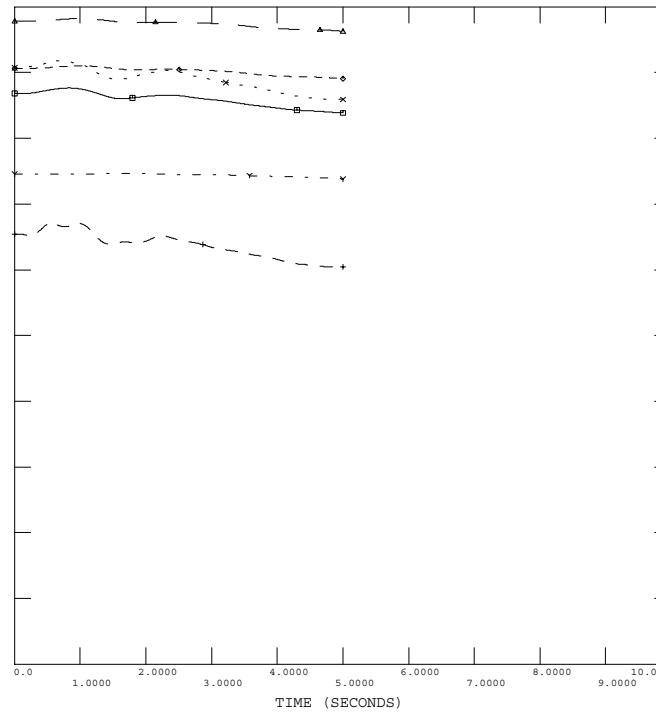
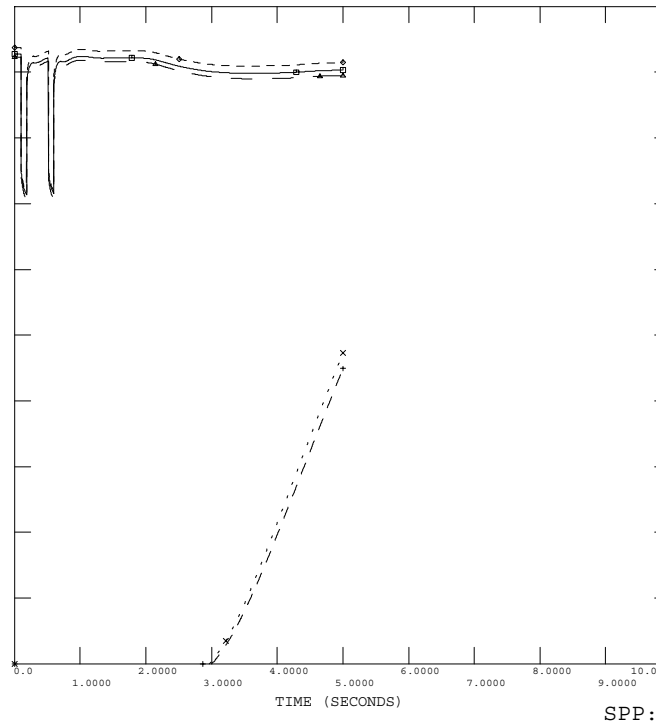
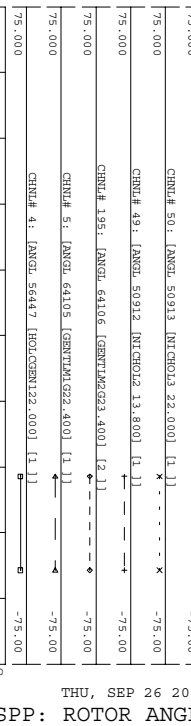
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BUKWTR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OPF.OUT



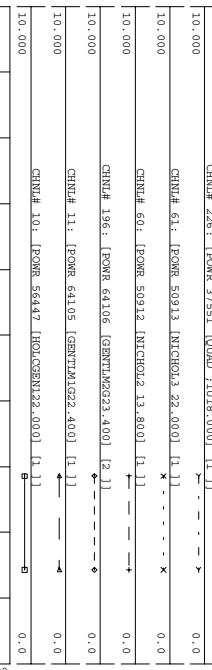
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BUKWTR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OPF.OUT



04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BUKWTR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OPF.OUT

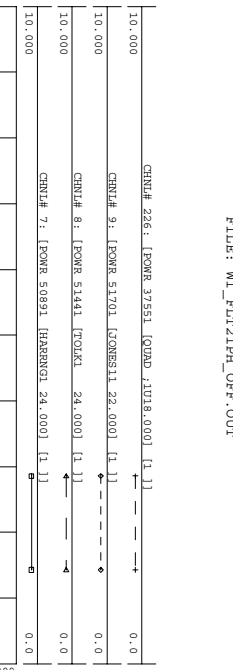


04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
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 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
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 FILE: WI_FLT21PH_OPF.OUT



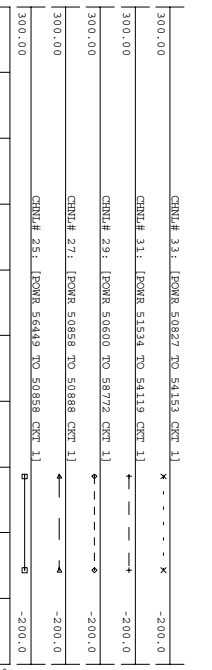
THU, SEP 26 2002 15:50
 SPP: PELEC 14

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKMT-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OPF.OUT



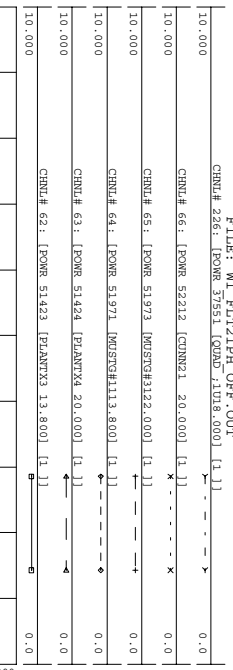
THU, SEP 26 2002 15:50
 SPP: PELEC 13

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKMT-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OPF.OUT



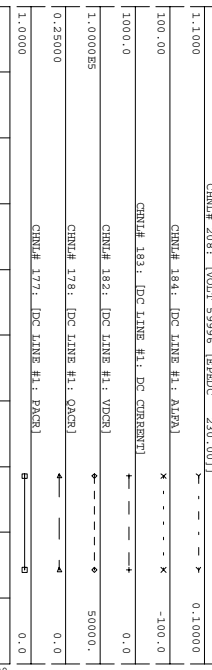
THU, SEP 26 2002 15:50
 BRANCH FLOW 16

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKMT-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OPF.OUT



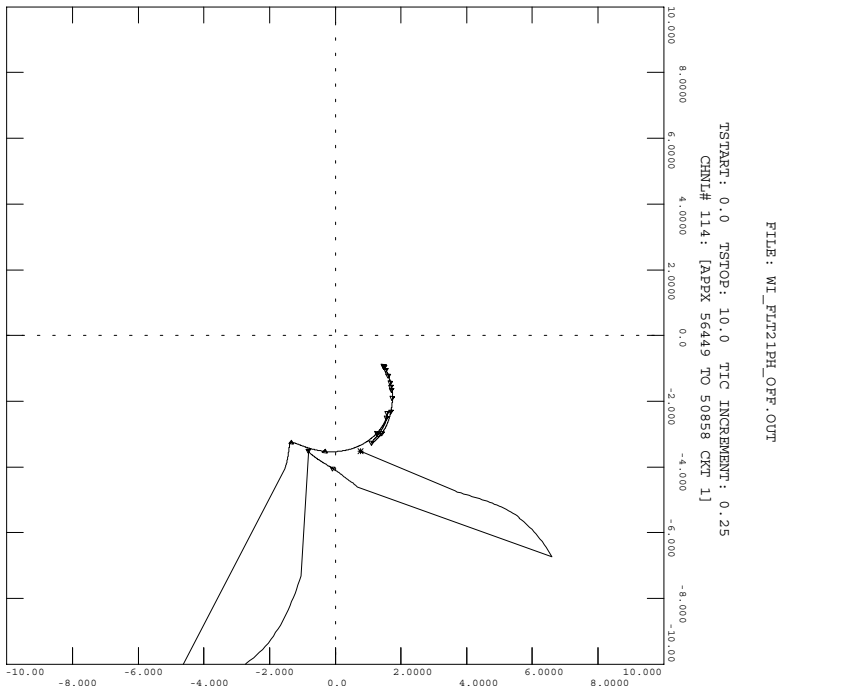
THU, SEP 26 2002 15:50
 SPP: PELEC 15

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMWTR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH.OPF.OUT
 CHNL# 208: [VOLT 59996 [EPRDC 239.00]]



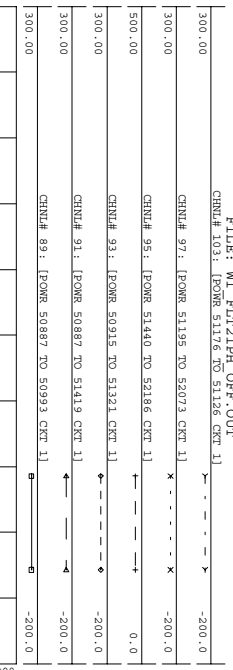
THU, SEP 26 2002 15:51
 DC LINE EPE 18

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMWTR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH.OPF.OUT



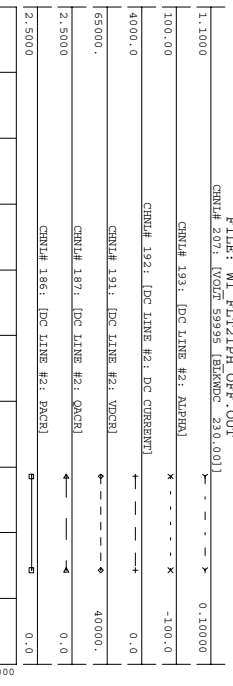
THU, SEP 26 2002 15:51
 FINNEY-HOLCOMB 20

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMWTR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH.OPF.OUT
 CHNL# 503: [PWR 51128 TO 51128 CKT 1]



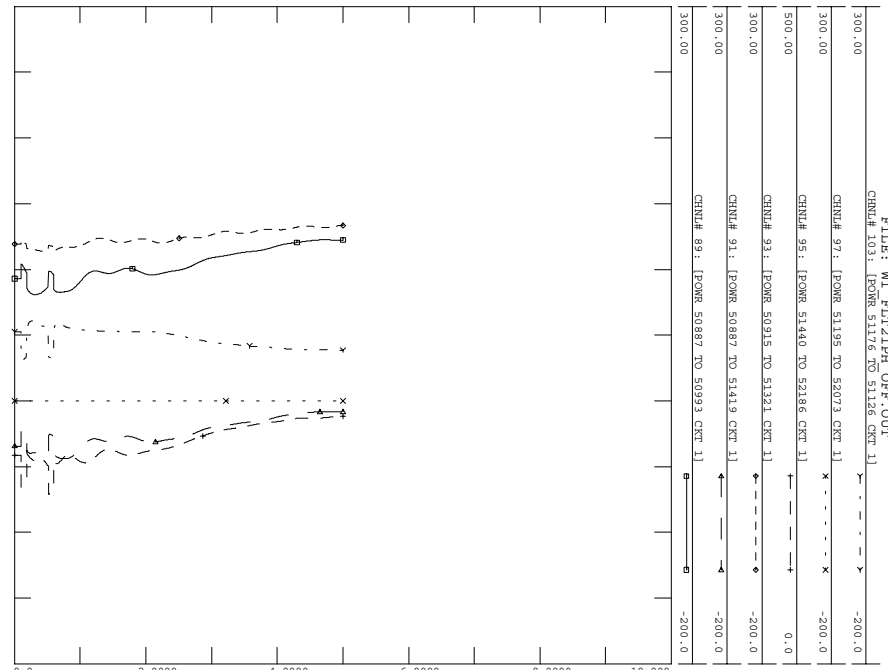
THU, SEP 26 2002 15:51
 BRANCH FLOW 17

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMWTR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH.OPF.OUT
 CHNL# 207: [VOLT 59999 [BLMWDG 239.00]]



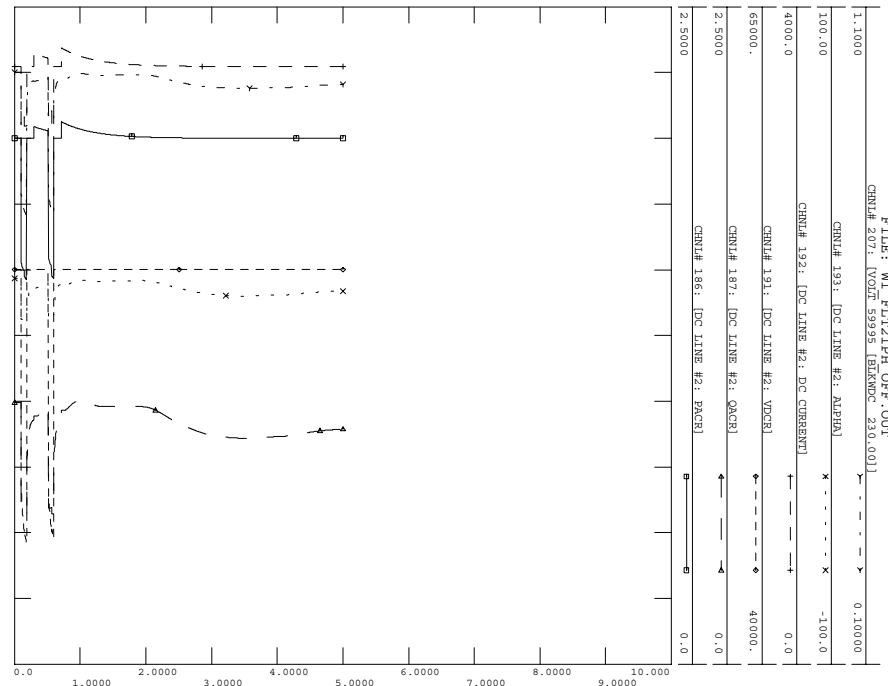
THU, SEP 26 2002 15:51
 DC LINE PNM 19

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMWTR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH.OPF.OUT
 CHNL# 183: [DC LINE #1: DC CURRENT]



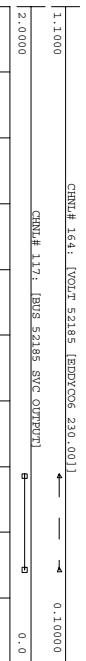
THU, SEP 26 2002 15:51
 DC LINE EPE 18

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLMWTR-200X 5/8/02
 FLT21PH: SLG FAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH.OPF.OUT
 CHNL# 182: [DC LINE #1: VDCR]



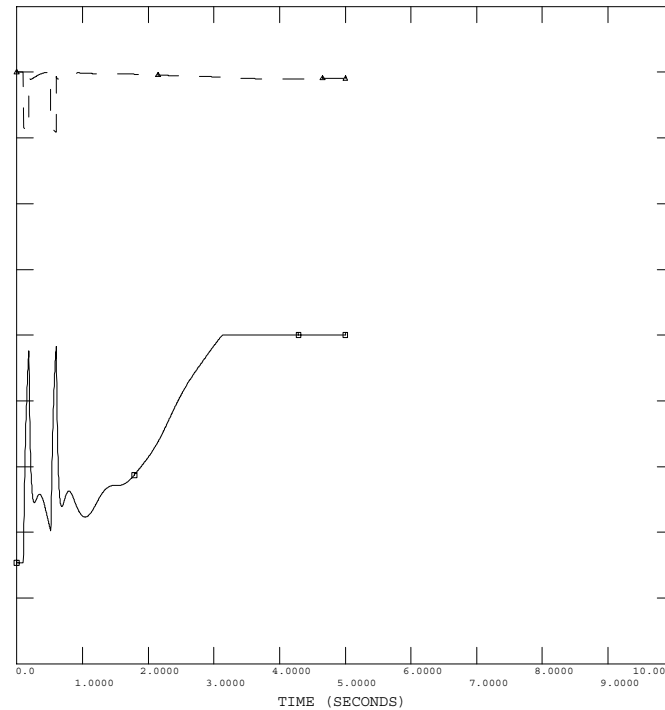
THU, SEP 26 2002 15:51
 DC LINE PNM 19

04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT21PH: SLG PAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OFF.OUT



THU, SEP 26 2002 15:51
 SVC OUTPUT 22

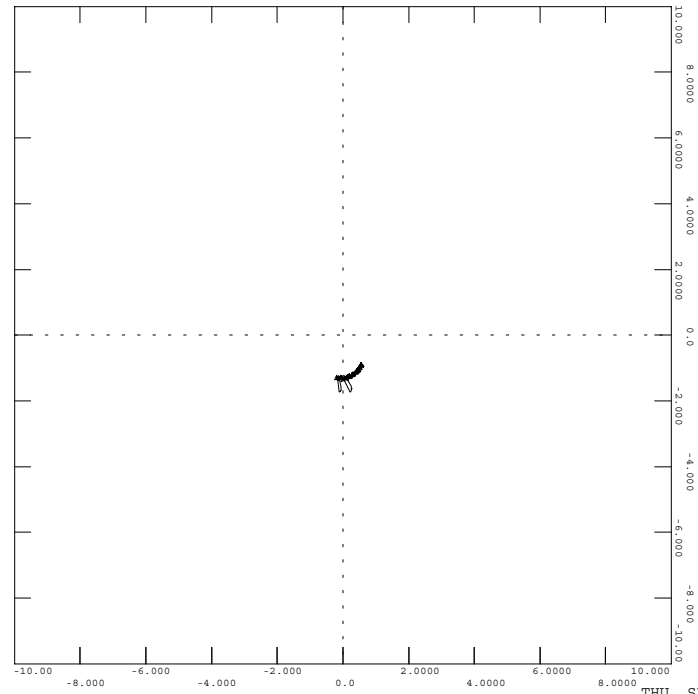
04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT21PH: SLG PAULT ON ON TOLK - CLOVIS 230 KV LINE
 5 CY AT 9999, DISC 9999, RECLOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT21PH_OFF.OUT



21

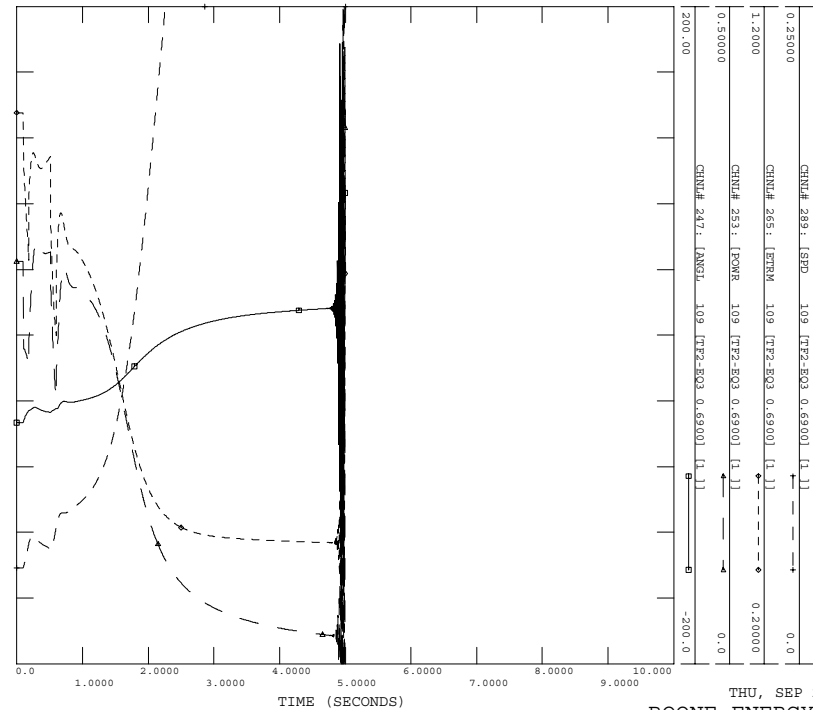
FILE: WI_FLT21PH_OFF.OUT

TSTART: 0.0 TSTOP: 10.0 TIC INCREMENT: 0.25
 CHNL# 116: [APPX 50858 TO 50888 CKT 1]



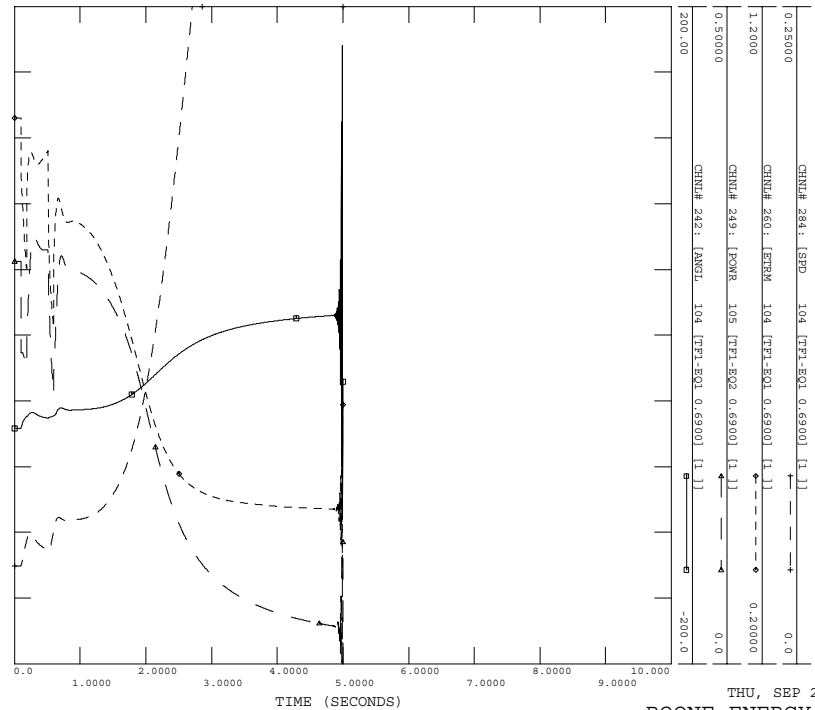
THU, SEP 26 2002 15:51
 POTTER-FINNEY

04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKMTW-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.OUT



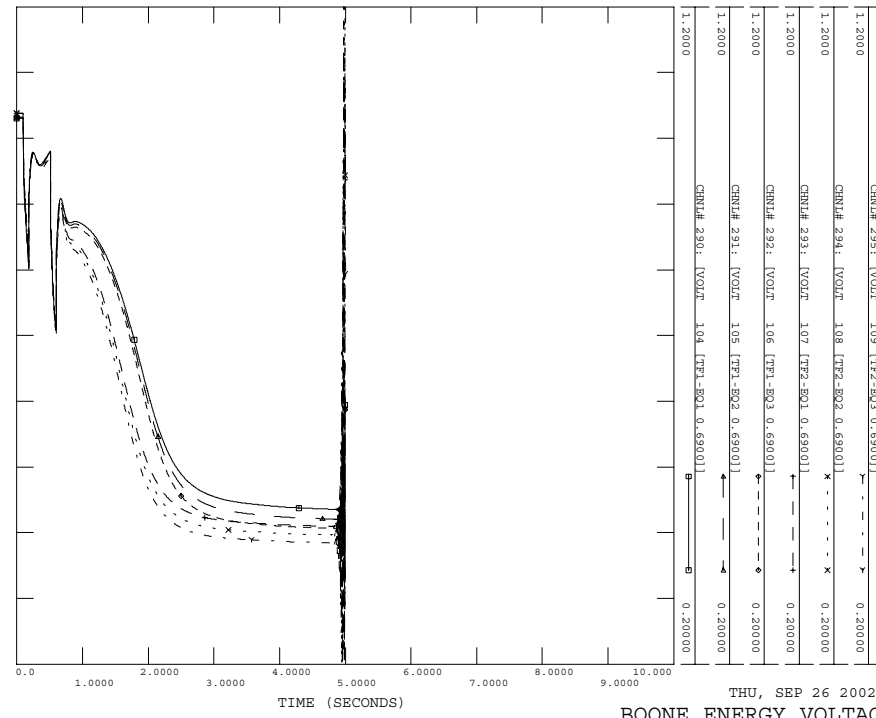
THU, SEP 26 2002 15:51
 BOONE ENERGY - CKT6 2

04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
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 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.OUT



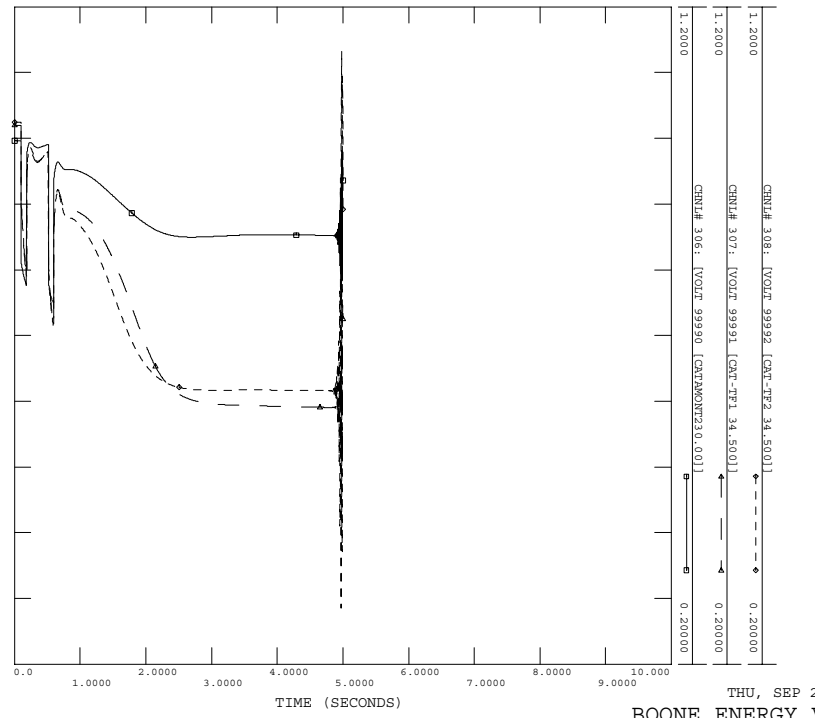
THU, SEP 26 2002 15:51
 BOONE ENERGY - CKT1 1

04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKMTW-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.OUT

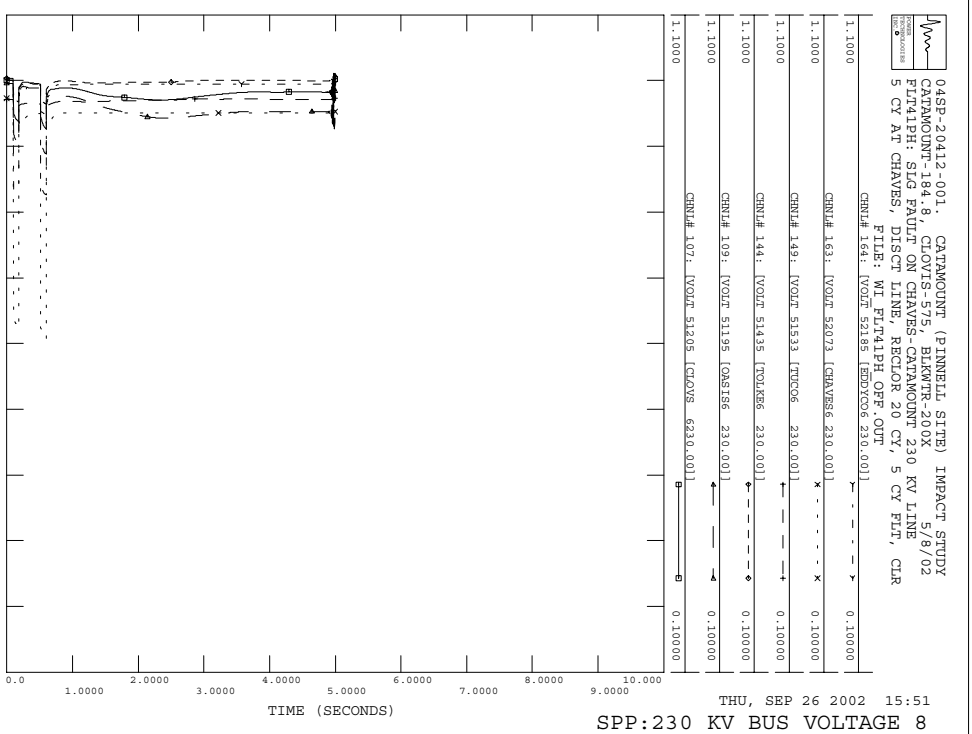
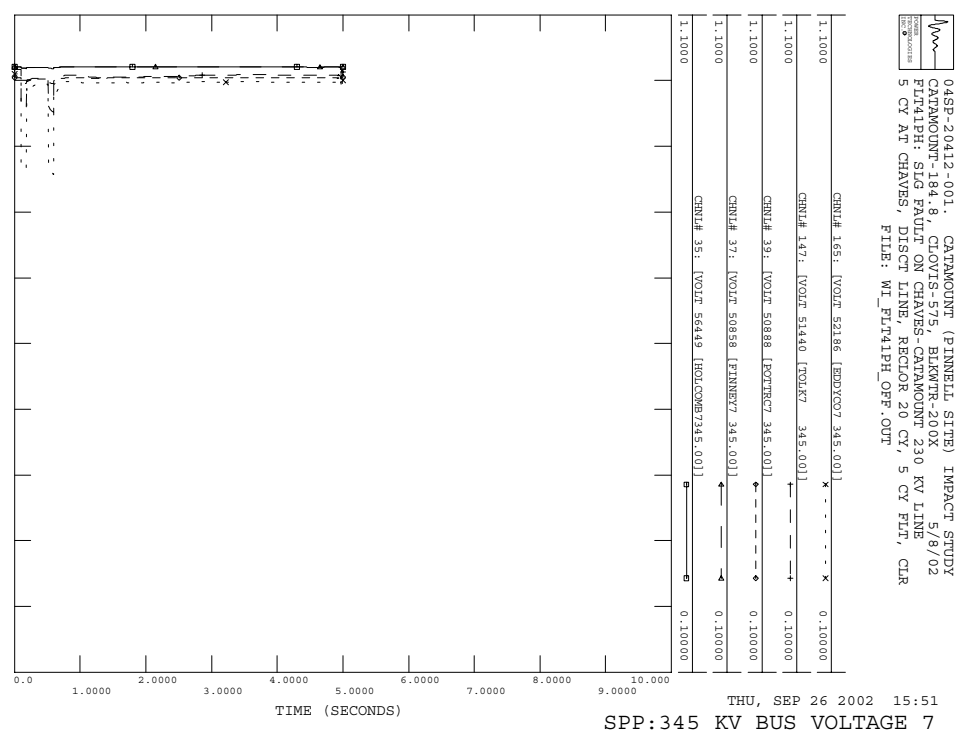
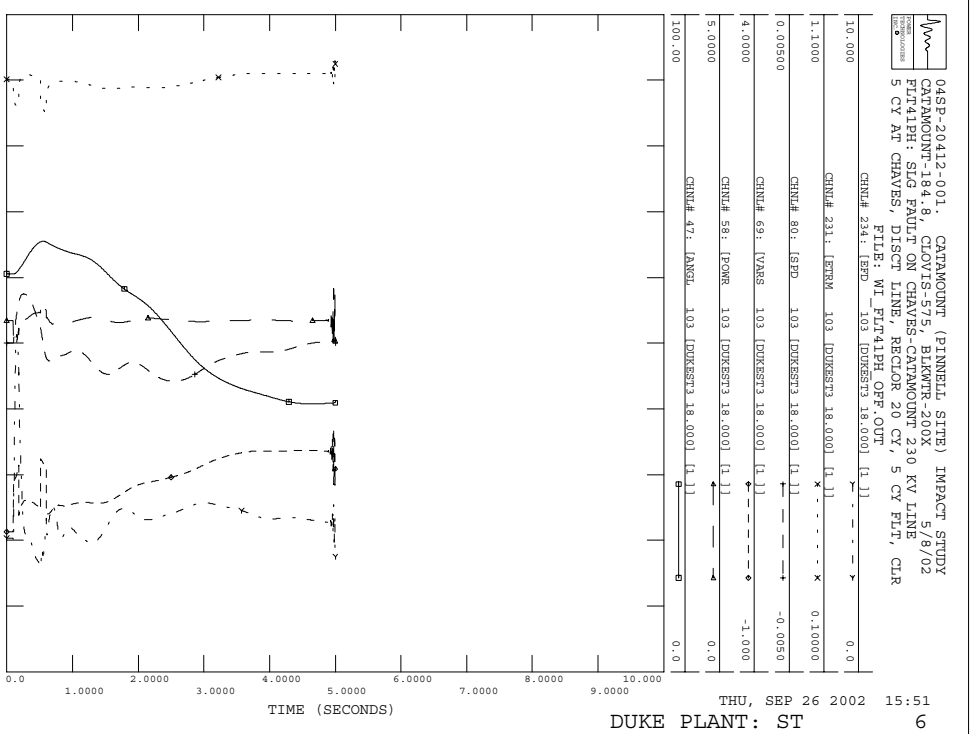
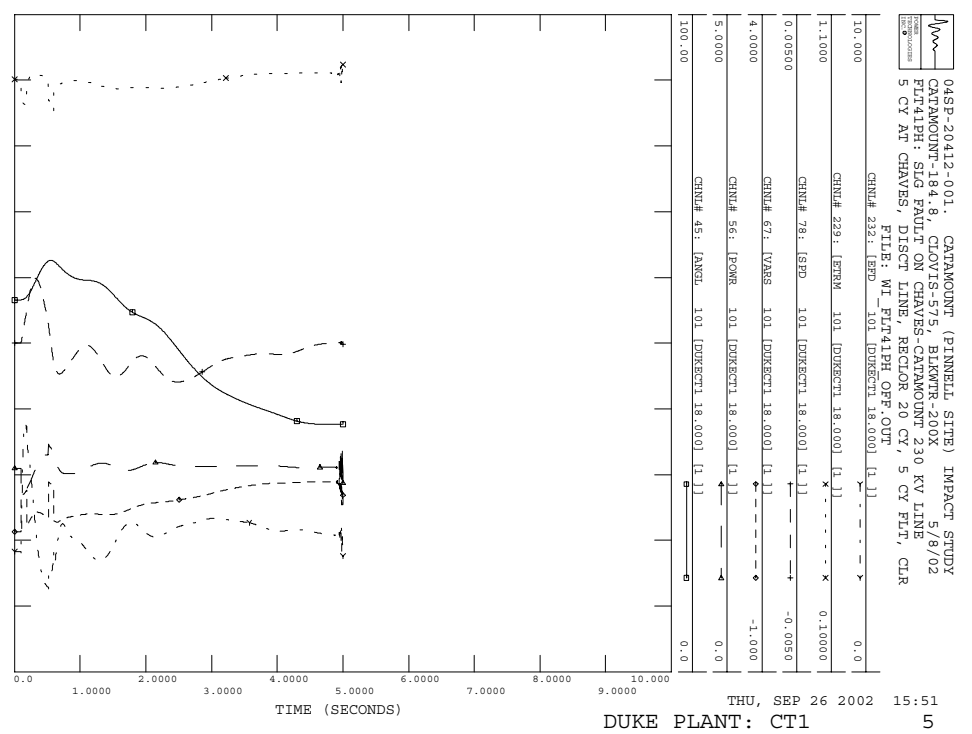


THU, SEP 26 2002 15:51
 BOONE ENERGY VOLTAGE 4

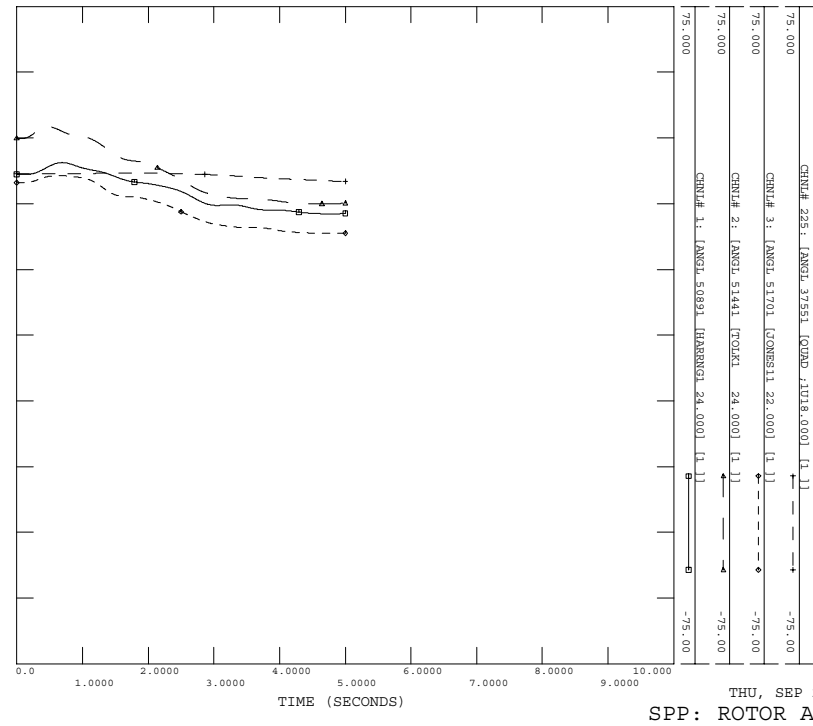
04SP-20412-001, CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKMTW-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.OUT



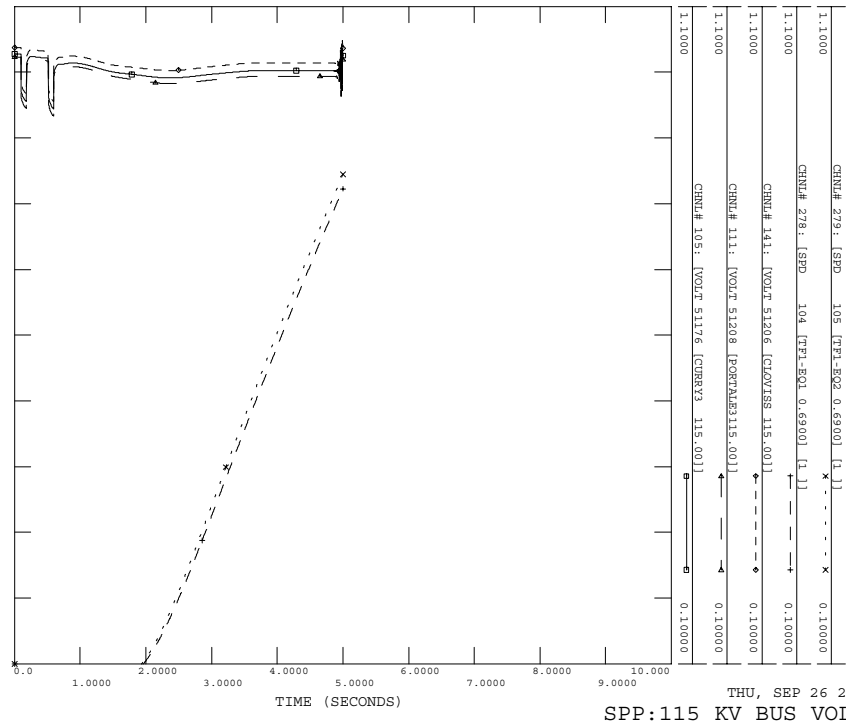
THU, SEP 26 2002 15:51
 BOONE ENERGY VOLTAGE 3



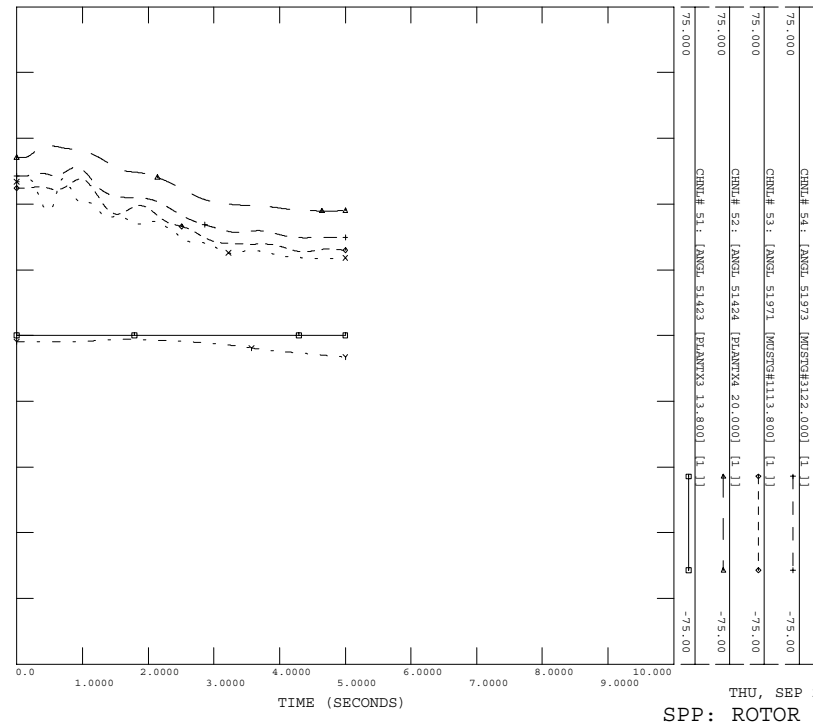
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKMTW-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.0UT



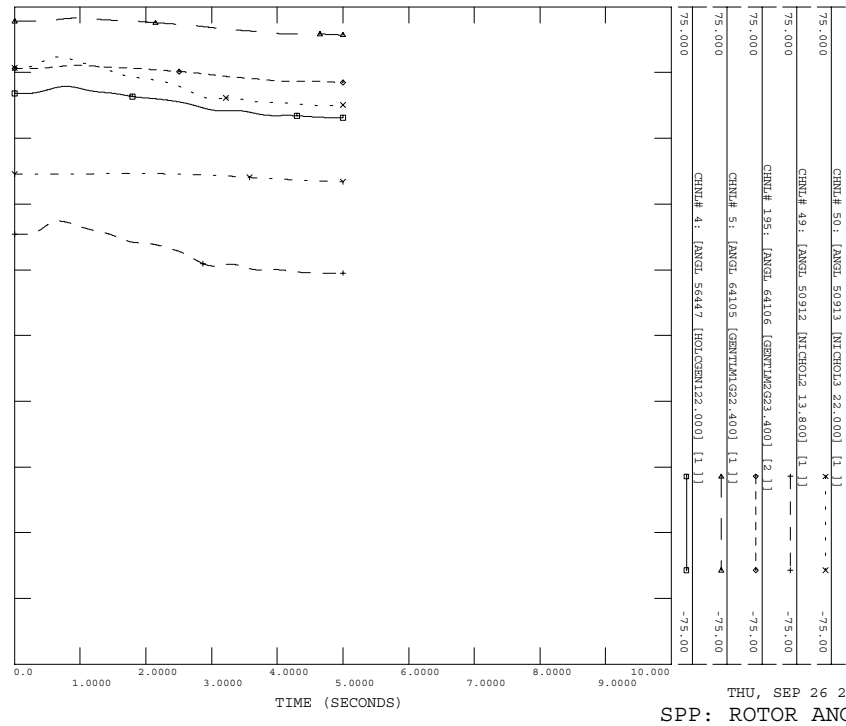
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 CATAMOUNT-184.8, CLOVIS-575, BIKMTW-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.0UT



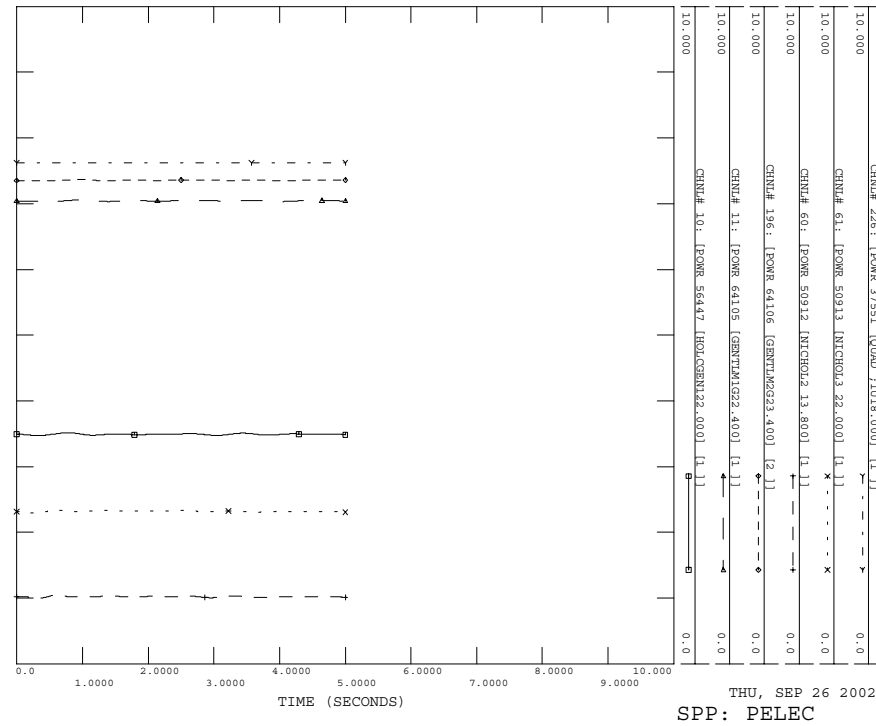
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 CATAMOUNT-184.8, CLOVIS-575, BIKMTW-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.0UT



04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKMTW-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.0UT

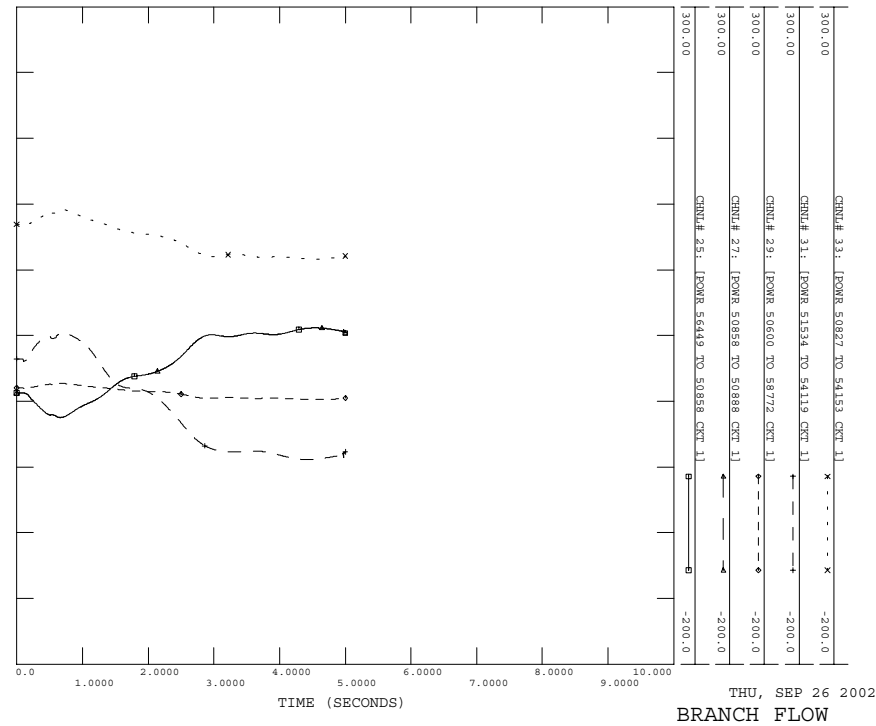


04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKMTN-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.OUT



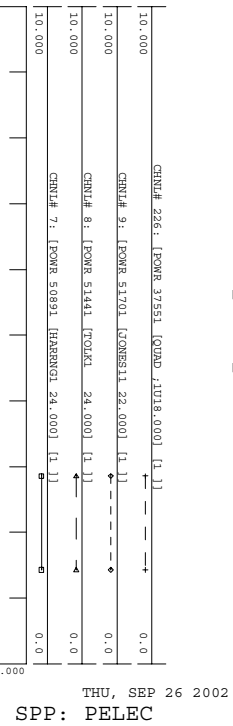
THU, SEP 26 2002 15:51
 SPP: PELEC 14

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKMTN-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.OUT



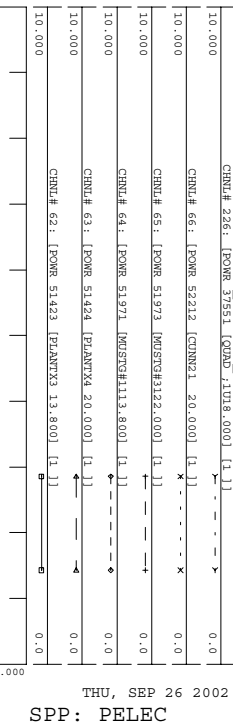
THU, SEP 26 2002 15:51
 BRANCH FLOW 16

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKMTN-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.OUT



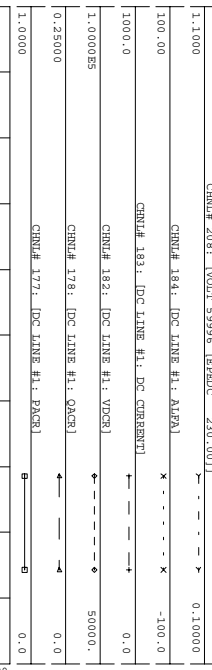
THU, SEP 26 2002 15:51
 SPP: PELEC 13

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BIKMTN-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.OUT

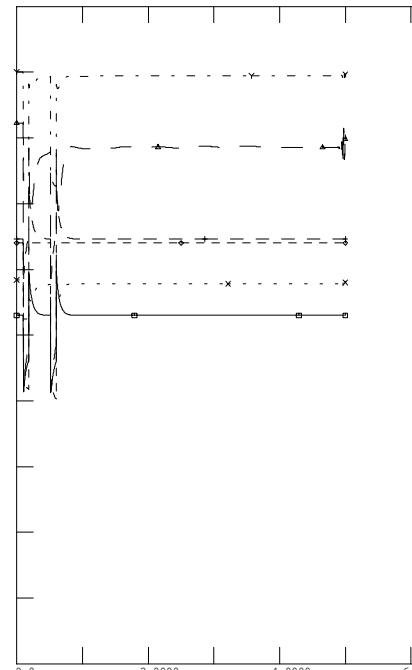


THU, SEP 26 2002 15:51
 SPP: PELEC 15

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BARKER-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH.OFF.OUT
 CHNL# 208: [VOLT 59996 [EPEDC 230.00]]

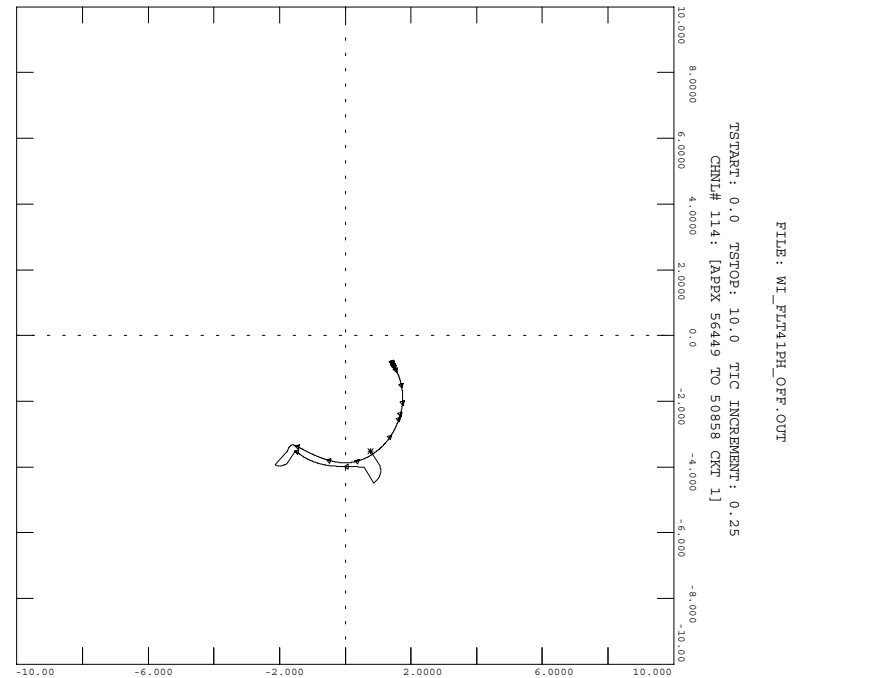


THU, SEP 26 2002 15:51
 DC LINE EPE 18



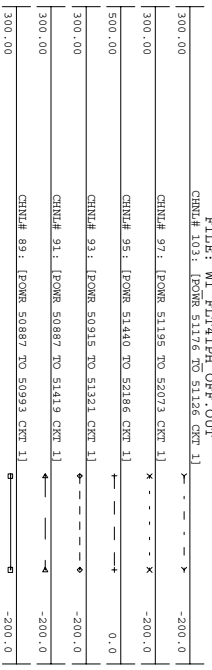
THU, SEP 26 2002 15:51
 DC LINE PNM 19

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BARKER-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH.OFF.OUT
 CHNL# 114: [APPX 56449 TO 50858 CKT 1]



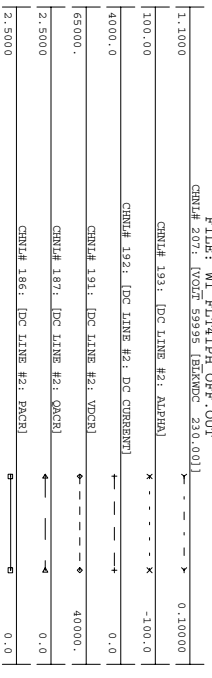
THU, SEP 26 2002 15:51
 FINNEY-HOLCOMB 20

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BARKER-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH.OFF.OUT
 CHNL# 97: [PWR 51195 TO 52073 CKT 1]

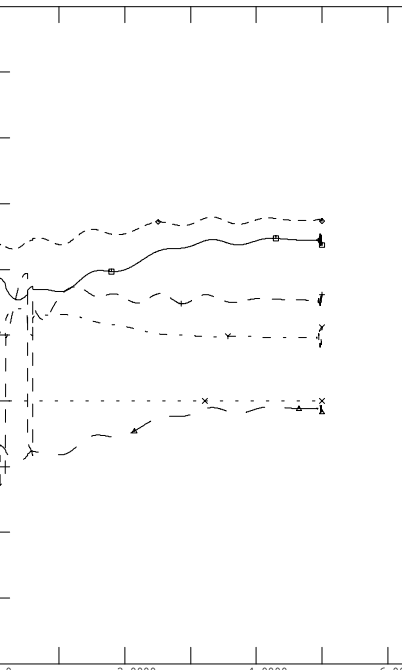


THU, SEP 26 2002 15:51
 BRANCH FLOW 17

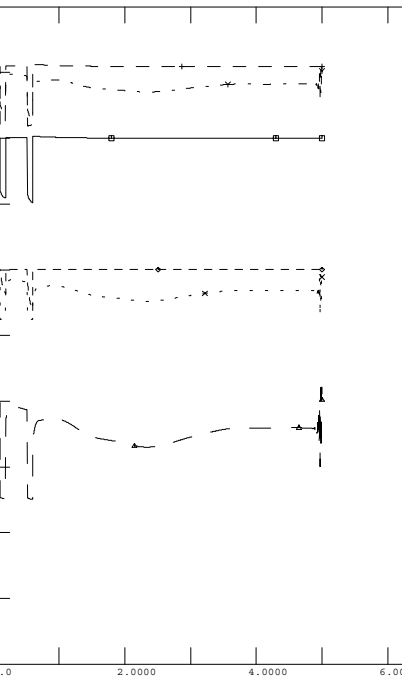
04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BARKER-200X 5/8/02
 FLT41PH: SLG FAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
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 CHNL# 207: [VOLT 59996 [EPEDC 230.00]]



THU, SEP 26 2002 15:51
 DC LINE PNM 19

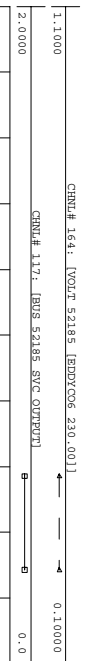


THU, SEP 26 2002 15:51
 BRANCH FLOW 17



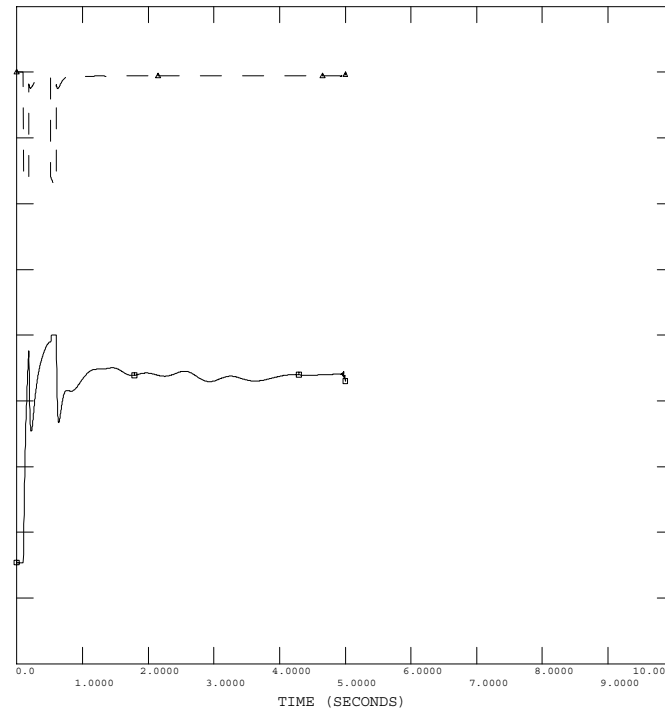
THU, SEP 26 2002 15:51
 DC LINE PNM 19

04SP-20412-001. CATAMOUNT (PINNELL SITE) IMPACT STUDY
 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT41PH: SLG PAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.OUT



THU, SEP 26 2002 15:51
 SVC OUTPUT 22

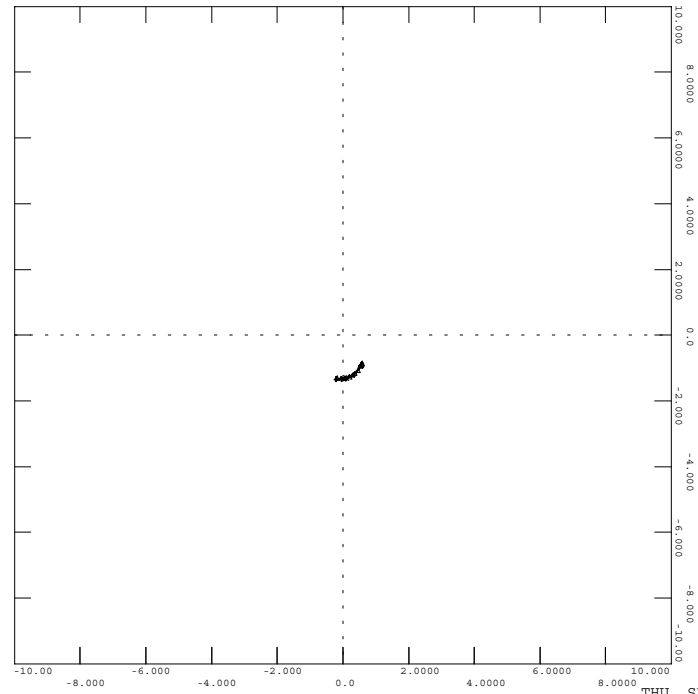
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 CATAMOUNT-184.8, CLOVIS-575, BLKWR-200X 5/8/02
 FLT41PH: SLG PAULT ON CHAVES-CATAMOUNT 230 KV LINE
 5 CY AT CHAVES, DISCT LINE, RECTOR 20 CY, 5 CY FLT, CLR
 FILE: WI_FLT41PH_OPF.OUT



21

FILE: WI_FLT41PH_OPF.OUT

TSTART: 0.0 TSTOP: 10.0 TIC INCREMENT: 0.25
 CHNL# 116: [APPX 50858 TO 50888 CKT 1]



THU, SEP 26 2002 15:51
 POTTER-FINNEY

CHNL# 115: [APPR 50858 TO 50888 CKT 1]

13 APPENDIX E *Estimated Construction Schedule*

ID	Task Name	Estimated Permitting & Construction Schedule													
		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14
1	Aquire Sub. Site & ROW														
2	Survey Selected Routes & Permit Filings														
3	CCN Filing Process														
4	Aquire Land & Right of Easements														
5	Right of Way Completion														
6	Substation Electrical Design														
7	Order Long Lead Time Materials/ Delivery														
8	Material Order/Delivery/16 weeks & less														
9	Complete Construction Design														
10	Complete Electrical Design/Tabs & Schematics														
11	Issue Engineering Design Package														
12	Issue Material														
13	Substation Construction														
14	Substation Site Work														
15	Substation Fence Work														
16	Substation Concrete & Foundations														
17	Substation Completion														
18	Substation Commission														
19	Transmission Line Design/ Construction/Materials														
20	Material Order and Delivery														
21	Foundation Installation														
22	Transmission Line Construction														
23	Transmission Line Completion														