



GENERATION INTERCONNECTION

REQUEST # GI-2009-08

SYSTEM IMPACT STUDY REPORT

30 MW PHOTOVOLTAIC SOLAR in
ALAMOSA COUNTY, COLORADO

Performed By: Xcel Energy with consulting services from
TranServ International, Inc.

October 2012

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Revision History

Version	Date	Description	Author
1.0	10/22/2012	Original Final SIS Report	Xcel Energy / TranServ



Legal Notice

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Executive Summary

PSCo received an interconnection request (GI-2009-08) for a solar photovoltaic generation facility connecting to the PSCo system at the Alamosa Terminal 69 kV bus. Although the original GI-2009-08 requested maximum output level was 40 MW, the Customer subsequently notified PSCo of its desire to reduce the capacity to **30 MW**. PSCo commissioned TranServ to perform an Interconnection System Impact Study (SIS) for a 30 MW interconnection of 30 SMA 1 MW, 500 V photovoltaic inverters interconnection to the PSCo system at the Alamosa Terminal 69 kV bus. The requested in-service date was March 31, 2013.

This is a joint SIS report by PSCo and TranServ. The steady-state and stability analyses were performed by TranServ under PSCo direction. The short circuit analysis was performed by PSCo. PSCo made the determination of injection constraints that require mitigation prior to interconnecting the Customer and developed the mitigation plan for interconnection. Engineering construction cost estimates were provided by PSCo.

This SIS evaluated the impact of the proposed generator on the transmission system performance; including steady-state, stability, and short circuit analyses. The scope of the SIS was limited to identifying mitigation for injection constraints that likely would limit the ability of the solar generation facility to interconnect. In accordance with PSCo SIS practices, this study only identified injection related steady-state impacts, stability impacts and short-circuit impacts that require mitigation in order for this facility to interconnect at the requested Point of Interconnection (POI).

The proposed generating facility will consist of thirty SMA 1 MW photovoltaic inverters. The generator will be connected through a collector system to a dedicated generator step-up transformer with the terminal voltage of 34.5 kV. The photovoltaic inverters are capable of producing and consuming 0.345 MVARs each for a total plant capability of +/- 10.35 MVARs. The POI is PSCo's Alamosa Terminal 69 kV bus.

The subject interconnection request includes both a Network Resource Interconnection Service (NRIS) option and an Energy Resource Interconnection Service (ERIS) option. NRIS is an Interconnection Service that allows the Interconnection Customer to integrate their Large Generating Facility with the Transmission Provider's Transmission System in a manner



comparable to that in which the Transmission Provider integrates its generating facilities to serve native load Customers. NRIS in and of itself does not convey transmission rights.

The interconnection request was studied as a Network Resource and a stand-alone project only, with no evaluations made of other potential new generation requests that may exist in the Large Generator Interconnection Request (LGIR) queue, other than the generation projects that are already approved and planned to be in service by the summer of 2013. This stand-alone analysis consisted of a study of the system behavior with the addition of the Customer's 30 MW project to the PSCo system compared with that associated with the existing PSCo system. The main purpose of this SIS was to evaluate the potential impact of GI-2009-08 on the PSCo transmission infrastructure as well as that of neighboring entities when injecting a total of 30 MW of generation and delivering that additional generation to remote PSCo loads. The costs to interconnect the project with the transmission system at the Alamosa Terminal 69 kV Substation were evaluated by PSCo Engineering. This study considered facilities that are part of the PSCo transmission system as well as monitoring other nearby entities' regional transmission systems.

Power Flow Analysis Summary

The power flow analyses were performed using a 2013 Heavy Summer and a 2013 Light Load Model with origins in a Western Electricity Coordinating Council (WECC) approved model. The study area for the contingency analysis was defined as Areas 70 PSCOLORADO and 73 WAPA R.M. in the study models. All study area elements were monitored. The study considered only NERC Category A (system intact), Category B, and Category C contingency categories for the steady state analysis. The incremental impact of the 30 MW request was evaluated by comparing flows and voltages with and without the 30 MW request. The contingency analyses found that there are no 2013 Heavy Summer or 2013 Light Load system intact or single contingency thermal constraints due to the installation of the proposed generation. The contingency analyses found that there are no 2013 Heavy Summer or 2013 Light Load system intact or single contingency voltage constraints due to the installation of the proposed generation.

Stability Analysis Summary

The power flow model used in the stability portion of this study is a 2013 Heavy Summer model with origins in a Western Electricity Coordinating Council (WECC) approved model. The stability analysis consisted of monitoring all Zone 710 (SLV) bus voltages and frequencies as well as GI-2009-08 and other SLV generation parameters during the first 30 seconds of the tested

disturbances. The stability analysis results indicate that with the proposed addition of the GI-2009-08 generation, the system is stable with satisfactory damping for all studied disturbances. Also the voltage and frequency responses of all monitored buses are within WECC criteria for all studied disturbances. No stability constraints were identified; thus no transmission upgrades are required to mitigate any stability impacts.

Short Circuit Analysis Summary

A short circuit study was conducted to determine the fault currents, Thevenin equivalent impedances and circuit breaker short circuit duties at the Alamosa Terminal 69 kV substation. The approximate fault currents and Thevenin Impedances at Alamosa Terminal without the addition of the GI-2009-08 30 MW photovoltaic solar facility are summarized in Tables 3 & 4. No breakers were found to be over-dutied due to the installation of the proposed generation.

Cost Estimate Summary

The estimates for the required Interconnection Facilities and the associated mitigation strategies to address adversely impacted transmission facilities are summarized below. The estimated costs and construction times for the transmission interconnection (in 2012 dollars) are as follows:

Transmission Proposal

The total estimated cost of the recommended system improvements to interconnect the project is approximately **\$2.511 million** and includes:

- \$ 1.599 million for PSCo-Owned, Customer-Funded Interconnection Facilities
- \$ 0.912 million for PSCo-Owned, PSCo-Funded Network Upgrades for Interconnection
- \$ 0.000 million for PSCo Network Upgrades for Delivery to PSCo Loads

PSCo Engineering estimates that it will require 12 months to complete the PSCo and Customer Funded Interconnection Facilities at the Alamosa Terminal 69 kV substation. Therefore, the requested in-service date of March 31, 2013 is not feasible.

Figure 1: San Luis Valley Area Transmission System

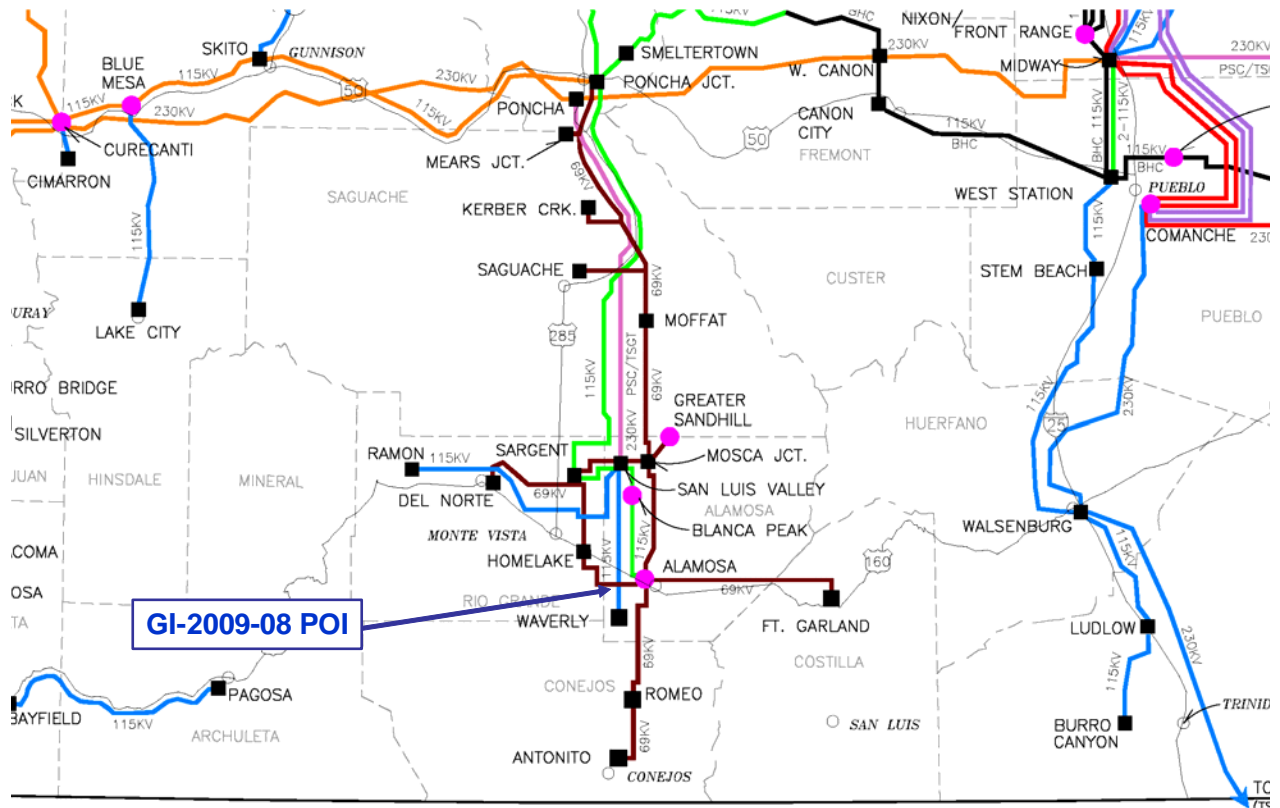


Figure 2 - Preliminary One-Line of the Proposed 30 MW Solar PV Generating Facility

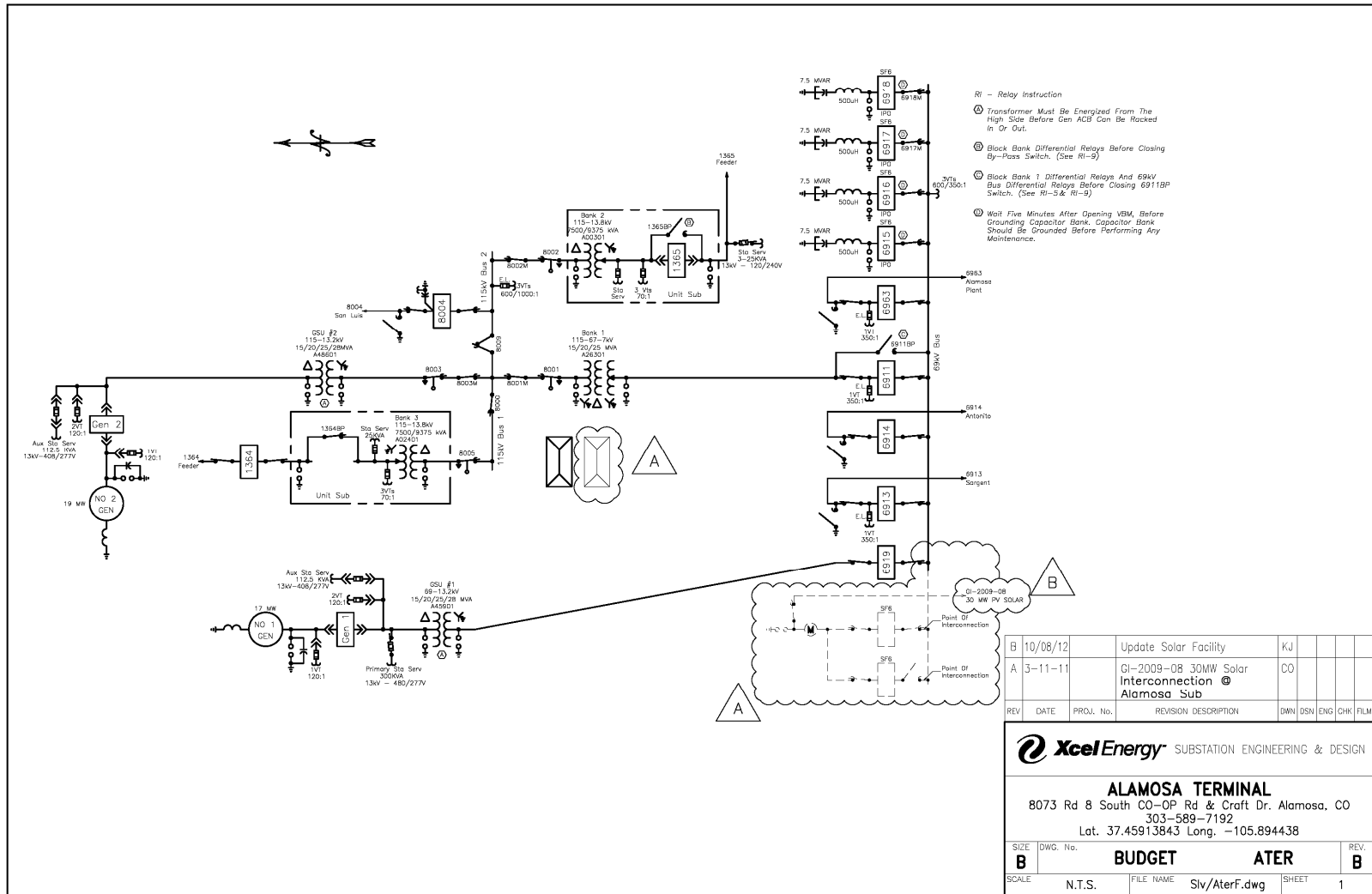
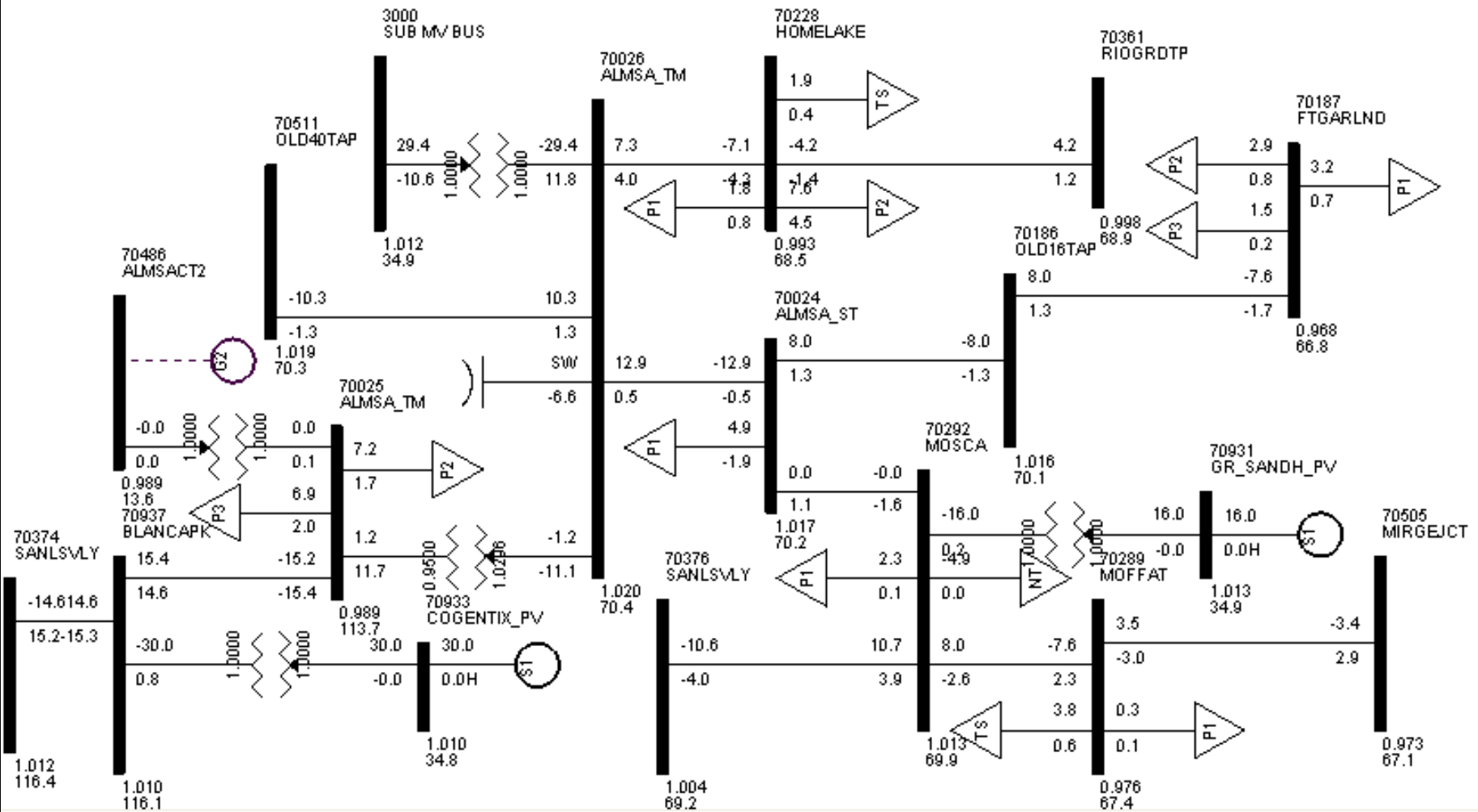


Figure 3 - Modeling of the Proposed 30 MW Generating Facility



Introduction

PSCo received an interconnection request (GI-2009-08) for a solar photovoltaic generation facility connecting to the PSCo system at the Alamosa Terminal 69 kV bus. Although the original GI-2009-08 requested maximum output level was 40 MW, the Customer subsequently notified PSCo of its desire to reduce the capacity to **30 MW**. PSCo commissioned TranServ to perform an Interconnection System Impact Study (SIS) for a 30 MW interconnection of 30 SMA 1 MW, 500 V photovoltaic inverters to the PSCo system at the Alamosa Terminal 69 kV bus. The details of the GI-2009-08 request are given below:

Queue Position	Queue Date	Location	Max Output (MW)	Point of Inter-connection	OASIS In Service Date	Inter-connection Service Type	Fuel Type
GI-2009-08	July 15, 2009	Alamosa County, Colorado	40 (30)	Alamosa Terminal 69 kV bus	March 31, 2013	NR/ER	Photovoltaic

Study Scope and Analysis

This is a joint SIS report by PSCo and TranServ. The SIS evaluated the transmission impacts associated with the proposed generation increase. It consisted of power flow, short circuit and dynamic analyses. The power flow analysis identified any thermal or voltage limit violations resulting from the generation addition and an identification of network upgrades required to deliver the proposed generation to PSCo loads. The short circuit analysis evaluated the impact on the transmission system of the increase in available fault current due to the generation addition. The short circuit analysis was performed by PSCo. The steady-state and dynamic analyses were performed by TranServ under PSCo direction. The dynamic analysis identified any transient and oscillatory stability impacts due to the addition of the new generation. The study report was written by TranServ under PSCo direction. PSCo made the determination of injection constraints that are required to be mitigated by the interconnection Customer and developed the mitigation plan for interconnection. Planning level cost estimates were provided by PSCo.

This Generation Interconnection SIS analyzed the impact of this addition, located in South Central Colorado, in accordance with PSCo's study criteria. PSCo adheres to North American Electric Reliability Corporation (NERC) and Western Electricity Coordinating Council (WECC)



Reliability Criteria, as well as internal Company criteria for planning studies. The criterion used to identify thermal injection constraints met or exceeded the following criteria:

- There was a detrimental change in the facility loading due to the subject request.
- The resultant facility loading exceeded 100% of the continuous rating (Rate A in PSS/E) system intact or post contingent.

The criterion used to identify voltage injection constraints met or exceeded the following criteria.

- There was a detrimental change in bus voltage due to the subject request.
- The resultant bus voltage was outside of the acceptable range of 0.95 to 1.05 pu system intact or 0.90 to 1.05 pu post contingent.

Transient stability criteria require that all generating machines remain in synchronism and all power swings should be well damped. Also, transient voltage performance should meet the following criteria:

- Following fault clearing for Category B contingencies, voltage may not dip more than 25% of the pre-fault voltage at load buses, more than 30% at non-load buses, or more than 20% for more than 20 cycles at load buses.
- Following fault clearing for Category C contingencies, voltage may not dip more than 30% of the pre-fault voltage at any bus or more than 20% for more than 40 cycles at load buses.

In addition, transient frequency performance should meet the following criteria:

- Following fault clearing for Category B contingencies, frequency should not dip below 59.6 Hz for 6 cycles or more at a load bus.
- Following fault clearing for Category C contingencies, frequency should not dip below 59.0 Hz for 6 cycles or more at a load bus.

Note that load buses include generating unit auxiliary loads.

This project was studied as a Network Resource. NRIS shall mean an Interconnection Service that allows the Interconnection Customer to integrate its Large Generating Facility with the Transmission Provider's Transmission System in a manner comparable to that in which the



Transmission Provider integrates its generating facilities to serve native load Customers. NRIS in and of itself does not convey transmission service.

For this project, TSG&T is a possible Affected Party.

Power Flow Study Models

WECC coordinates the preparation of regional power flow cases for transmission planning purposes. PSCo Transmission developed a starting point model with a 2013 Summer Peak load representation from WECC approved models for use in the steady state and stability analyses.

Modeling of Request

The GI-2009-08 generation was not included in the starting point model, 13hs.sav. The new 30 MW photovoltaic solar power plant will transform the collected solar energy to DC electricity and utilize inverters to convert to AC electricity. The photovoltaic solar power plant will be connected through a dedicated step-up transformer with a terminal voltage of 34.5 kV. The photovoltaic solar power plant was modeled as rated at 30 MW with the capability of producing or consuming reactive power. This facility will be interconnected to the PSCo system at the Alamosa Terminal 69 kV bus.

The following is a summary of Project GI-2009-08 parameters as provided by PSCo:

Total Plant Capacity	= 30 MW
Reactive Capability	= +/- 10.35 MVARs
Generator Step-up Transformer	= 34.5/69 kV step up transformer rated at 32 MVA, 8% positive sequence impedance on the transformer base, X/R Ratio of 34, Winding Ratio - 1.0
Voltage Regulation	= 1.02 at the Alamosa Terminal 69 kV bus

Interconnecting to the PSCo bulk transmission system involves the Customer adhering to certain interconnection requirements. These requirements are contained in the Interconnection Guidelines for Transmission Interconnected Producer-Owned Generation Greater than 20 MW (Guidelines). In addition, PSCo System Operations conducts commissioning tests prior to the commercial in-service date for a Customer's facilities. Some of the requirements with which the Customer must comply include the following:

1. A generating plant shall maintain a power factor within the range of 0.95 leading to 0.95 lagging, measured at the POI, if the Transmission Provider's System Impact Study shows that such a requirement is necessary to ensure safety or reliability.
2. The results of the System Impact Study will not absolve the Customer from their responsibility to demonstrate to the satisfaction of PSCo System Operations prior to the commercial in-service date that it can safely operate within the required power factor and voltage ranges.
3. Reactive Power Control at the POI is the responsibility of the Customer. Additional Customer studies should be conducted by the Customer to ensure that the facilities can meet the power factor control test and the voltage controller test when the facility is undergoing commissioning testing.
4. PSCo System Operations will require the Customer to perform operational tests prior to commercial operation that would verify that the equipment installed by the Customer meets operational requirements.
5. It is the responsibility of the Customer to determine what type of equipment (DVAR, added switched capacitors, SVC, reactors, etc.), the ratings (MVAR, voltage--34.5 kV or 69 kV), and the locations of those facilities that may be needed for acceptable performance during the commissioning testing.
6. PSCo requires the Customer to provide a single point of contact to coordinate compliance with the power factor and voltage regulation at the POI. The reactive flow at the POI, SLV 230 kV bus, will need to be controlled according to the Interconnection Guidelines.

Pre GI-2009-08 Model Development

Analyses were performed using a 2013 Heavy Summer and a 2013 Light Load Model, both derived from the 13hs.sav model. The modifications made to the 13hs.sav model to form the Pre-GI-2009-8 2013 Heavy Summer Model were as follows:

- The reactive component of the Mosca negative load was set to zero.
- The GR_SANDH_PV generation was maximized by setting Pgen to 16 MW.
- The IBEDROL_PV generation was maximized by setting Pgen to 30 MW.
- The COGENTIX_PV generation was maximized by setting Pgen to 30 MW.

- The CHEROK4 generation was adjusted to compensate for the generation increases by setting Pgen to 324.8 MW.
- The Iberdrola gen was moved from the SLV 230 kV bus to the SLV 115 kV bus.
- The Poncha 230-115 kV transformer was added.
- Two 20 MVAR reactors were added at the Poncha 230 kV bus with Vhigh set at 1.04 pu and Vlow set at 1.02 pu.
- The second SLV 230-115 kV transformer was placed in-service.
- The 40 MVAR capacitor modeled at the SLV 115 kV bus was removed.
- Four 10 MVAR reactors were added at the SLV 230 kV bus with Vhigh set at 1.04 pu and Vlow set at 1.02 pu

The model was solved using the Full Newton-Raphson method with transformer taps, switched shunts, phase shifter, area interchange lines and loads, and DC tap adjustments enabled.

The modifications made to the 13hs.sav model to form the Pre-GI-2009-08 2013 Light Load Model included all of the above listed modifications and an adjustment to the SLV load levels. The SLV (Zone 710) load levels were scaled to 60 MW, a reduction of 76 MW and the CHEROK4 generation was adjusted to compensate for the load decrease by setting Pgen to 248.8 MW. The Pre-GI-2009-08 2013 Light Load Model was also solved using the Full Newton-Raphson method with transformer taps, switched shunts, phase shifter, area interchange lines and loads, and DC tap adjustments enabled.

The following Pre- GI-2009-08 steady state models were developed.

- 13HS_PreGI-2009-08.sav - 2013 Summer Heavy.
- 13LL_PreGI-2009-08.sav - 2013 Light Load.

Post GI-2009-08 Model Development

The Pre GI-2009-08 Models, described above, were modified by adding the new generation to create the Post GI-2009-08 Models. The GI-2009-08 generation was modeled as thirty 1 MW generator with a reactive capability of +/- 0.345 MVARs, holding 1.02 pu voltage at the Alamosa 69 kV bus. More detailed modeling information is given in the Modeling of Request Section of this report. The Cherokee generation was decremented by 30 MW to compensate.

The following Post- GI-2009-8 steady state models were developed.

- 13HS_PostGI-2009-08.sav- 2013 Summer Heavy.
- 13LL_PostGI-2009-08.sav- 2015 Light Load..

These Post-GI-2009-08 Models were also solved using the Full Newton-Raphson method with transformer taps, switched shunts, phase shifter, area interchange lines and loads, and DC tap adjustments enabled.

A summary of the selected modeling information is given in Table 1.

Table 1
Selected GI-2009-8 Modeling Information

Bus	kV	LF Id	Maximum Generation MW	13hs.sav	Pre 2013 Heavy Summer MW	Post 2013 Heavy Sumer MW	Pre 2013 Light Load MW	Post 2013 Light Load MW
G-SANDHIL_PV	34.5	S1	16	10	16	16	16	16
IBERDROLA_PV	34.5	S2	30	20.4	30	30	30	30
COGENTRIX_PV	34.5	1	30	20.4	30	30	30	30
ALMSACT1	13.8	G1	17	Off-line	Off-line	Off-line	Off-line	Off-line
ALMSACT2	13.8	G2	19	Off-line	Off-line	Off-line	Off-line	Off-line
SLV_SOLAR	34.5	1	130	Not Modeled	Not Modeled	Not Modeled	Not Modeled	Not Modeled
SLV_SOLAR	34.5	2	70	Not Modeled	Not Modeled	Not Modeled	Not Modeled	Not Modeled
Almsa_TM	34.5		30	Not Modeled	Not Modeled	30	Not Modeled	30
MOSCA	69	NT	4.95	P4.95, Q -6.5	P4.95, Q 0.0	P4.95, Q 0.0	P4.95, Q 0.0	P4.95, Q 0.0
CHEROK4	22	C4	383	350	324.8	294.8	248.8	218.8
Zone 710 SLV Load				136	136	136	60	60

Power Flow Study Process

Siemens Power Technologies, Inc. (PTI) PSS/E and MUST computer power flow programs and evaluation software were used to determine system performance. A MUST activity ACC was used to determine system performance. Comparisons were made between the Pre and Post GI-2009-08 results.

The study area was defined as areas 70 PSCOLORADO and 73 WAPA R.M. in the study models. All study area elements were monitored. The study considered only the following contingency categories in the study area for the steady state analysis.

- Category A (System Intact).
- Category B
- Category C (Poncha 230 kV and SLV 115 kV Breaker Failure Contingencies only).

Thermal and voltage injection constraints were identified based on the following study criteria:

- The criterion used to flag thermal overloads was 100% of the monitored element's continuous rating (Rate A in PSS/E).
- The criterion used to flag voltage violations met or exceeded the following criteria.
 - There was a detrimental change in bus voltage due to the subject request.
 - The resultant bus voltage was outside of the acceptable range of 0.95 to 1.05 pu system intact or 0.90 to 1.05 pu during a single contingency. Voltage violations which were both found as voltage violations in the Pre GI-2009-08 Analysis and only slightly impacted by the GI-2009-08 generation were not considered constraints by PSCo. These results are listed in Appendix A.

The analysis was performed using MUST version 10.1 and PSS/E version 32. During the MUST AC contingency analysis, models were solved with transformer tap, switched shunt adjustments, phase shifter and DC tap adjustments enabled and area interchange adjustment disabled. The analysis results were obtained by comparing results from the Pre GI-2009-08 model to results from the Post GI-2009-08 model to determine the impact of the GI-2009-08 generation on the transmission system.

In addition to the traditional constraint analysis detailed above, a 5% voltage impact analysis was performed. The 5% voltage impact investigation consisted of identifying any contingency that would result in a voltage differential between the Pre GI-2009-08 results and the Post GI-2009-08 results of 5% or greater on any given bus regardless of whether or not the voltages were within acceptable limits. This analysis included all contingencies in the study area but due to the magnitude of the data involved was limited to monitoring only Zone 710 buses.

Power Flow Results

A contingency analysis was performed using models, criteria, and methodology described earlier in this report. The incremental impact of the 30 MW request was evaluated by comparing



flows and voltages with and without the 30 MW request. This study identified the system intact and single-event contingency (N-1) interconnection constraints. All system intact and N-1 interconnection constraints will require mitigation prior to granting the subject request.

It should be noted that the existing UVLS scheme as modeling when appropriate in both the Pre and Post GI-2009-08 analyses.

- **2013 Heavy Summer Analysis Results**

Thermal

No 2013 Heavy Summer system intact or single contingency thermal constraints due to the subject request were found.

Voltage

No 2013 Heavy Summer system intact or single contingency voltage constraints due to the subject request were found.

- **2013 Light Load Results**

Thermal

No 2013 Light Load system intact or single contingency thermal constraints due to the subject request were found.

Voltage

No 2013 Light Load system intact or single contingency voltage constraints due to the subject request were found.

5% Voltage Impact Analysis

As discussed earlier, in addition to the traditional constraint analysis, a 5% Voltage Impact Analysis was performed. The results of this analysis identified that the following contingencies would result in a voltage differential between the Pre GI-2009-8 results and the Post GI-2009-8 results of 5% or greater on a Zone 710 bus:

- Alamosa 115-69 kV Transformer.
- Alamosa – Blanca Peak 115 kV line.
- San Luis Valley – Blanca Peak 115 kV line.

- Poncha 230 kV breaker failure contingencies.
- San Luis Valley 115 kV breaker failure contingencies.

All of these contingencies with the exception of the breaker failure contingencies were included in the GI-2009-08 stability analysis.

Dynamic Stability Results

An analysis was performed to assess the transient stability system performance with the GI-2009-08 generation at 30 MW. The examined disturbances are provided in Appendix C. The list of evaluated disturbances was limited to that necessary to adequately assess the transient stability performance of the system with the proposed addition as determined by PSCo. To perform the analyses, plots of generator power output, line MW flow, bus voltage, and bus frequency were produced for each disturbance. Minimum transient bus voltage dips and maximum transient frequency deviations, occurring after the fault was cleared, were also determined. The results can be found in Appendix D. Plots of generator power output, line MW flow, bus voltage, and bus frequency can be found in Appendix E. The results indicate that with the proposed addition of generation, the system is stable with satisfactory damping for all modeled disturbances. As requested by PSCo, the voltage and frequency at all Zone 710 buses were monitored.

The after fault clearing transient voltage dip results show that the system response is well within WECC transient voltage dip criteria. The after fault clearing lowest voltage dip among the disturbances was to 81% at the PLAZA 69 kV bus. In addition, the after fault clearing maximum transient frequency deviation was to 59.59 Hz for 3 cycles at the COGENTIX Generation 34.5 kV bus. The after fault clearing transient frequency deviation results were within WECC criteria.

Short Circuit Analysis

A short circuit study was conducted to determine the fault currents (three phase and single-line to ground), circuit breaker short circuit duties and Thevenin equivalent impedances at the Alamosa Terminal 69 kV substation. The approximate fault currents at Alamosa Terminal without the addition of the GI-2009-08 30 MW photovoltaic solar facility are summarized in



Table 3. The Thevenin equivalent impedances are given in Table 4. No breakers were found to be over-dutied due to the installation of the proposed generation.

**Table 3
Summary of fault results at
Alamosa Terminal 69 kV Substation
for 2013 ISD of GI-2009-8**

System Condition	Three Phase Fault (Amps)	Single-Line-Ground Fault (Amps)
All Facilities in Service w/o GI-2009-08	3364	4350

**Table 4
Thevenin Equivalent Impedance at
Alamosa Terminal 69 kV Substation
for 2013 ISD of GI-2009-8**

System Condition	Impedance (pu on 100 MVA base)
All Facilities in Service w/o GI-2009-08	Z1 → 0.06105 + j 0.25129
	Z2 → 0.06105 + j 0.25129
	Z0 → 0.00676 + j 0.10747

Costs Estimates and Assumptions

GI-2009-8 (System Impact Study Report)
October 16, 2012

Scoping level cost estimates for Interconnection Facilities and Network/Infrastructure Upgrades for Delivery (+/- 30% accuracy) were developed by Xcel Energy/PSCo Engineering. The cost estimates are in 2012 dollars with escalation and contingencies applied (AFUDC is not included) and are based upon typical construction costs for previously performed similar construction. These estimated costs include all applicable labor and overheads associated with the siting support, engineering, design, material/equipment procurement and construction of these new PSCo facilities. This estimate does not include the cost for any other Customer owned equipment and associated design and engineering.

The estimated total cost for the required upgrades is **\$2,511,000**. Figure 2 above represents a conceptual one-line of the proposed expansion/interconnection at the Alamosa Terminal 69kV Substation. The estimated project schedule can be found in Appendix C below. These estimates do not include costs for any other Customer owned equipment and associated design



and engineering. The following tables list the improvements required to accommodate the interconnection and the delivery of the Project generation output. The cost responsibilities associated with these facilities shall be handled per current FERC guidelines. System improvements are subject to change upon a more detailed and refined design.

Table 1 – PSCo Owned; Customer Funded Transmission Provider Interconnection Facilities

Element	Description	Cost Est. (Millions)
PSCo's Alamosa Terminal 69kV Transmission Substation	Interconnect Customer to the 69kV bus at the Alamosa Terminal Substation. The new equipment includes: <ul style="list-style-type: none"> • Two 69kV, gas circuit breakers • Five 69kV, 1200 amp gang switches • One 69kV combination CT/PT metering unit • Three 69kV lightning arresters • Primary metering for Load Frequency/Automated Generation Control • Associated electrical equipment, bus, wiring and grounding • Associated foundations and structures • Associated transmission line communications, fiber, relaying and testing 	\$1.282
PSCo's Alamosa Terminal 69kV Transmission Substation	Transmission line tap from Customer's last line structure outside of PSCo's yard into new bay position (assumed 300' span, conductor, hardware and labor).	\$0.050
	Siting and Land Rights and Project Management support	\$0.010
Customer's 69kV Substation	Load Frequency/Automated Generation Control (LF/AGC) RTU and associated equipment	\$0.257
	Total Cost Estimate for PSCo-Owned, Customer-Funded Interconnection Facilities	\$1.599
Time Frame	Site, design, procure and construct	12 Months

Table 2: PSCo Owned; PSCo Funded Interconnection Network Facilities

Element	Description	Cost Estimate (Millions)
PSCo's Alamosa Terminal 69kV Transmission Substation	Interconnect Customer to the bus at the Alamosa Terminal Substation. The new equipment includes: <ul style="list-style-type: none"> • One Electrical Equipment Enclosure (control bldg.) • Associated station controls, communications, supervisory and SCADA equipment • Associated electrical equipment, bus, wiring and grounding • Associated foundations and structures • Associated equipment and system testing • Associated yard surfacing, landscaping, fencing 	\$0.912
	Total Cost Estimate for PSCo-Owned, PSCo-Funded Interconnection Facilities	\$0.912
Time Frame	Site, design, procure and construct	12 months

Table 3 – PSCo Network Upgrades for Delivery

Element	Description	Cost Est. (Millions)
	Not Applicable	
	Total Cost Estimate for PSCo Network Upgrades for Delivery	\$0
Time Frame	Site, design, procure and construct	
	Total Project Estimate	\$2.511

Cost Estimate Assumptions

- Scoping level cost estimates for Interconnection Facilities and Network/Infrastructure Upgrades for Delivery (+/- 30% accuracy) were developed by Xcel Energy/PSCo Engineering.
- Estimates are based on 2012 dollars (appropriate contingency and escalation applied).

- AFUDC has been excluded.
- Engineering will be contracted out to a Design Consultant.
- Lead times for materials were considered for the schedule.
- The Solar Generation Facility is in PSCo's retail service territory
- PSCo (or it's Contractor) crews will perform all construction, wiring, testing and commissioning for PSCo owned and maintained facilities.
- Construction labor is estimated for straight time only – no overtime included.
- The estimated time to site (support), design, procure and construct the interconnection facilities is approximately 12 months after authorization to proceed has been obtained.
- This project is completely independent of other queued projects and their respective ISD's.
- A CPCN will not be required for the interconnection facilities construction.
- Line and substation bus outages will be authorized during the construction period to meet requested backfeed dates.

GI-2009-08

Appendix A - Detailed Steady State Analysis Results

No 2013 Heavy Summer or Light Load thermal constraints were found. The 2013 Light Load Thermal results with loadings in excess of 70% are given in Table A-1.

**Table A-1
2013 Light Load Thermal Results**

Limiting Element	Rating N/E	Pre Project		Post Project		DF	Contingency
		MVA	%	MVA	%		
ALMSA_TM 115-69 kV Transformer	25	NA	NA	18	71	NA	70292 MOSCA 69.0 70376 SANLSVLY 69.0 1
MOSCA - SANLSVLY 69 kV Line	32	20	63	30	94	35%	70374 SANLSVLY 115 70937 BLANCAPK 115 1
MOSCA - SANLSVLY 69 kV Line	32	20	63	30	94	35%	SLV115 BF2
MOSCA - SANLSVLY 69 kV Line	32	19	59	29	91	34%	SLV115 BF3

No 2013 Heavy Summer or Light Load Voltage constraints were found. The 2013 Heavy Summer Voltage results found but not considered as constraints by PSCo are given in Table A-2.

**Table A-2
2013 Heavy Summer Voltage Results**

BUS/NAME		KV	Pre Project	Post Project	Delta Volt %	Contingency
70187	FTGARLND	69	0.884	0.8802	-0.380%	70024 ALMSA_ST 69.0 70026 ALMSA_TM 69.0 1
74050	DENBURY	69	0.9304	0.9303	-0.010%	System Intact
73415	MONUMENT	69	1.0516	1.0521	0.050%	70025 ALMSA_TM 115 70937 BLANCAPK 115 1



The San Luis Valley 115 kV Breaker Failure Contingencies are defined as follows:

- SLV115 BF1 implies loss of
 - San Luis Valley – Sargent 115 kV line
 - San Luis Valley – Stanley 115 kV line
 - San Luis Valley 230-115 kV Transformer #1
 - San Luis Valley 115-69 kV Transformer #3

- SLV115 BF2 implies loss of
 - San Luis Valley – Blanca Peak 115 kV line
 - San Luis Valley – Waverly 115 kV line
 - San Luis Valley 230-115 kV Transformer #2
 - San Luis Valley 115-69 kV Transformer #4
 - Iberdrola 115-34.5 kV Transformer

- SLV115 BF3 implies loss of
 - San Luis Valley – Sargent 115 kV line
 - San Luis Valley – Stanley 115 kV line
 - San Luis Valley – Blanca Peak 115 kV line
 - San Luis Valley – Waverly 115 kV line
 - Both San Luis Valley 230-115 kV Transformers
 - Both San Luis Valley 115-69 kV Transformers
 - Iberdrola 115-34.5 kV Transformer



GI-2009-08

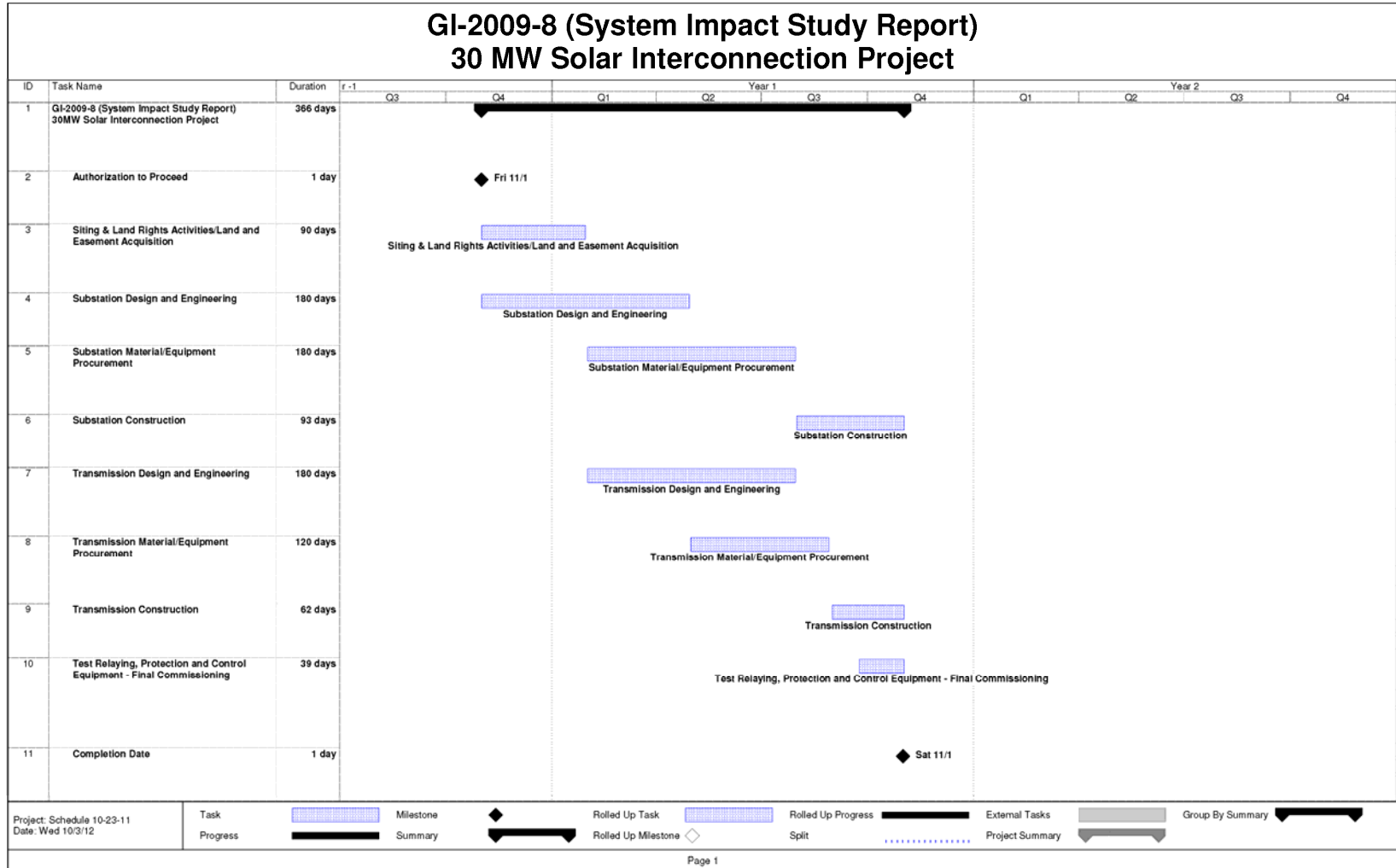
Appendix B - Generation Dispatch

**Pre GI-2009-08 Dispatch of Major Generating Units (Pmax > 75 MW) in the Study Area
(Areas 70 and 73)**

Bus	kV	LF Id	Maximum Generation MW	Pre 2009-08 2013 Heavy Summer MW	Post 2009-08 2013 Heavy Summer MW	Pre 2009-08 2013 Light Load MW	Post 2009-08 2013 Light Load MW
ARAP4	13.8	C4	118	98	98	98	98
BAC_MSA	13.8	G1	100	100	100	100	100
BAC_MSA	13.8	G1	100	100	100	100	100
BAC_MSA	13.8	G1	100	80	80	80	80
CABCRKA	13.8	HA	162	80	80	80	80
CABCRKB	13.8	HB	162	80	80	80	80
CEDAR3	34.5	W3	250	53	53	53	53
CEDARCK1	34.5	W1	150	32	32	32	32
CEDARCK2	34.5	W2	150	32	32	32	32
CHEROK3	20	C3	150	139	139	137	139
CHEROK4	22	C4	383	325	295	249	219
CO_GRN_E	34.5	W1	81	17	17	17	17
CO_GRN_W	34.5	W2	81	17	17	17	17
COMAN_1	24	C1	360	355	355	355	355
COMAN_2	24	C2	365	360	360	360	360
COMAN_3	27	C3	870	800	800	800	800
CRAIG 1	22	1	470	451	451	451	451
CRAIG 2	22	1	470	451	451	451	451
CRAIG 3	22	1	470	456	456	456	456
DRAKE 6	13.8	1	90	82	82	82	82
DRAKE 7	13.8	1	150	139	139	139	139
DRYFORK	19	1	420	420	420	420	420
ELBERT-1	12.5	1	100	80	80	80	80
ELBERT-2	12.5	1	100	80	80	80	80
FTRNG1CC	18	1	158	88	88	88	88
FTRNG2CC	18	1	158	88	88	88	88
FTRNG3CC	21	1	180	106	106	106	106
HAYDEN1	18	1	212	175	175	175	175
HAYDEN2	22	1	286	250	250	250	250
LAMAR_DC	230	DC	210	-101	-101	-101	-101
MANCHEF1	16	G1	140	110	110	110	110
MANCHEF2	16	G2	140	110	110	110	110
MBPP-1	24	1	605	601	601	601	602
MBPP-2	24	1	605	605	605	605	605
MIS_SITE	34.5	W1	250	53	53	53	53
MORRO1-2	12.5	1	82	60	60	60	60

Bus	kV	LF Id	Maximum Generation MW	Pre 2009-08 2013 Heavy Summer MW	Post 2009-08 2013 Heavy Summer MW	Pre 2009-08 2013 Light Load MW	Post 2009-08 2013 Light Load MW
MORRO1-2	12.5	2	82	60	60	60	60
NSS2	13.8	2	94	94	94	94	94
PAWNEE	22	C1	530	505	505	505	505
PTZLOGN1	34.5	W1	201	42	42	42	42
PTZLOGN2	34.5	W2	120	25	25	25	25
PTZLOGN3	34.5	W3	80	17	17	17	17
PTZLOGN4	34.5	W4	175	37	37	37	37
RAWHIDE	24	C1	304	300	300	300	300
RAWHIDEF	18	GF	138	125	125	125	125
RCDC W	230	1	200	15	15	15	15
RD_NIXON	20	1	230	225	225	225	225
RMEC1	15	G1	142	140	140	140	140
RMEC2	15	G2	141	140	140	140	140
RMEC3	23	G3	322	300	300	300	300
SIDNEYDC	230	1	200	196	196	196	196
SPNDLE1	18	G1	134	110	110	110	110
SPNDLE2	18	G2	134	110	110	110	110
SPRUCE1	18	G1	140	110	110	110	110
SPRUCE2	18	G2	140	110	110	110	110
ST.VR_2	18	G2	130	110	110	110	110
ST.VR_3	18	G3	130	130	130	130	130
ST.VR_4	18	G4	130	130	130	130	130
ST.VR_5	18	G5	150	110	110	110	110
ST.VR_6	18	G6	150	110	110	110	110
ST.VRAIN	22	G1	342	300	300	300	300
TWNBUTTE	34.5	W1	75	16	16	16	16
VALMONT	20	C5	188	180	180	180	180
WYGEN	13.8	1	94	94	94	94	94
WYGEN2	13.8	1	100	99	99	99	99
WYGEN3	13.8	1	110	110	110	110	110

Appendix C – GI-2009-08 Project Schedule



Appendix D – Transient Stability Study Contingencies

Listing of Disturbances Tested Disturbance Scenario #	Fault Type	Clearing Time	Faulted Bus	Disturbance Description
01s	Three Phase	4 Cycles	San Luis Valley 230 kV	Fault on the San Luis Valley - Poncha 230 kV line: clear the fault by tripping the San Luis Valley - Poncha 230 kV line.
02s	Three Phase	4 Cycles	Poncha 230 kV	Fault on the Poncha - San Luis Valley 230 kV line: clear the fault by tripping the Poncha - San Luis Valley 230 kV line.
03s	Three Phase	5 Cycles	Poncha 115 kV	Fault on the Poncha - Sargent 115 kV line: clear the fault by tripping the Poncha - Sargent 115 kV line.
04s	Three Phase	5 Cycles	Sargent 115 kV	Fault on the Poncha - Sargent 115 kV line: clear the fault by tripping the Poncha - Sargent 115 kV line.
05s	Three Phase	5 Cycles	Sargent 115 kV	Fault on the San Luis Valley - Sargent 115 kV line: clear the fault by tripping the San Luis Valley - Sargent 115 kV line.
06s	Three Phase	5 Cycles	San Luis Valley 115 kV	Fault on the Sargent - San Luis Valley 115 kV line: clear the fault by tripping the Sargent - San Luis Valley 115 kV line.
07s	Three Phase	5 Cycles	San Luis Valley 115 kV	Fault on the San Luis Valley - Blanca peak 115 kV line: clear the fault by tripping the San Luis Valley - Blanca peak 115 kV line.
08s	Three Phase	5 Cycles	Blanca peak 115 kV	Fault on the Blanca peak - San Luis Valley 115 kV line: clear the fault by tripping the Blanca peak - San Luis Valley 115 kV line.
09s	Three Phase	5 Cycles	Alamosa 115 kV	Fault on the Alamosa 115-69 kV Tx: clear the fault by tripping the Alamosa 115-69 kV Tx.
10s	Three Phase	5 Cycles	Alamosa 69 kV	Fault on the Alamosa 115-69 kV Tx: clear the fault by tripping the Alamosa 115-69 kV Tx.
11s	Three Phase	5 Cycles	Alamosa 115 kV	Fault on the Alamosa - Blanca peak 115 kV line: clear the fault by tripping the Alamosa - Blanca peak 115 kV line.
12s	Three Phase	5 Cycles	Blanca peak 115 kV	Fault on the Blanca peak - Alamosa 115 kV line: clear the fault by tripping the Blanca peak - Alamosa 115 kV line.
13s	Three Phase	5 Cycles	Sargent 115 kV	Fault on the Sargent 115-69 kV Tx: clear the fault by tripping the Sargent 115-69 kV Tx.
14s	Three Phase	5 Cycles	Sargent 69 kV	Fault on the Sargent 115-69 kV Tx: clear the fault by tripping the Sargent 115-69 kV Tx.
15s	Three Phase	5 Cycles	San Luis Valley 230 kV	Fault on the San Luis Valley 230-115 kV Tx #2: clear the fault by tripping the San Luis Valley 230-115 kV Tx #2.
16s	Three Phase	5 Cycles	San Luis Valley 115 kV	Fault on the San Luis Valley 230-115 kV Tx #2: clear the fault by tripping the San Luis Valley 230-115 kV Tx #2.

Appendix E – Transient Stability Study Results

Minimum Voltage and Frequency following Fault Clearing for each Studied Disturbance

Disturbance Scenario #	Transient Voltage Dip			Minimum Transient Frequency		
	Bus	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Bus	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
01s	PLAZA 69 kV	0.81	0	COGENTIX_PV 34.5 kV	59.67	0
02s	PLAZA 69 kV	0.83	0	COGENTIX_PV 34.5 kV	59.76	0
03s	PLAZA 69 kV	0.92	0	COGENTIX_PV 34.5 kV	59.91	0
04s	PLAZA 69 kV	0.90	0	COGENTIX_PV 34.5 kV	59.85	0
05s	PLAZA 69 kV	0.91	0	COGENTIX_PV 34.5 kV	59.86	0
06s	PLAZA 69 kV	0.89	0	COGENTIX_PV 34.5 kV	59.76	0
07s	ALMSACT2 13.8 kV	0.81	0	COGENTIX_PV 34.5 kV	59.59	3
08s	ALMSACT2 13.8 kV	0.81	0	COGENTIX_PV 34.5 kV	59.59	2
09s	FTGARLND 69 kV	0.90	0	COGENTIX_PV 34.5 kV	59.94	0
10s	FTGARLND 69 kV	0.90	0	COGENTIX_PV 34.5 kV	59.97	0
11s	ALMSACT2 13.8 kV	0.84	0	COGENTIX_PV 34.5 kV	59.94	0
12s	ALMSACT2 13.8 kV	0.83	0	COGENTIX_PV 34.5 kV	59.79	0
13s	PLAZA 69 kV	0.91	0	COGENTIX_PV 34.5 kV	59.86	0
14s	PLAZA 69 kV	0.92	0	COGENTIX_PV 34.5 kV	59.90	0
15s	PLAZA 69 kV	0.89	0	COGENTIX_PV 34.5 kV	59.77	0
16s	PLAZA 69 kV	0.88	0	COGENTIX_PV 34.5 kV	59.75	0

Transient Stability Study Results

Minimum Voltage and Frequency after Fault Clearing for All Monitored Elements

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
Disturbance 01s – Three phase fault at San Luis Valley on the San Luis Valley - Poncha 230 kV line				
1JB1 34.5 kV	0.88	0	59.73	0
ALMSA_ST 69 kV	0.88	0	59.72	0
ALMSA_TM 115 kV	0.85	0	59.70	0
ALMSA_TM 69 kV	0.88	0	59.72	0
ALMSACT1 13.8 kV	0.88	0	59.72	0
ALMSACT2 13.8 kV	0.85	0	59.70	0
ANSEL_TS 69 kV	0.87	0	59.71	0
ANTONITO 69 kV	0.85	0	59.72	0
BLANCAPK 115 kV	0.88	0	59.70	0
CARMEL 69 kV	0.84	0	59.69	0
CENTER 69 kV	0.84	0	59.70	0
COCENTER 69 kV	0.87	0	59.71	0
COGENTIX_PV 34.5 kV	0.87	0	59.67	0
CREEDE 69 kV	0.88	0	59.70	0
DELNORTE 69 kV	0.85	0	59.71	0
FTGARLND 69 kV	0.83	0	59.72	0
G-SANDHILL_PV 34.5 kV	0.88	0	59.68	0
GSU 1A 34.5 kV	0.88	0	59.73	0
GSU 1B 34.5 kV	0.88	0	59.73	0
GSU 1C 34.5 kV	0.88	0	59.73	0
HILANDSL 69 kV	0.88	0	59.70	0
HOMELAKE 69 kV	0.86	0	59.71	0
HOOPER 69 kV	0.84	0	59.70	0
HOOPERTP 69 kV	0.84	0	59.70	0
IBEDROL_PV 34.5 kV	0.87	0	59.68	0
KERBERCK 69 kV	0.99	0	59.96	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
LAGARITA 69 kV	0.82	0	59.69	0
MEARSJCT 69 kV	0.99	0	59.96	0
MIRGEJCT 69 kV	0.84	0	59.69	0
MOFFAT 69 kV	0.84	0	59.69	0
MOSCA 69 kV	0.88	0	59.69	0
OLD16TAP 69 kV	0.88	0	59.72	0
OLD40TAP 69 kV	0.88	0	59.72	0
OXCART 69 kV	0.99	0	59.96	0
PLAZA 69 kV	0.81	0	59.69	0
PONCHA 115 kV	1.00	0	59.96	0
PONCHA 230 kV	1.02	0	59.97	0
PONCHA 69 kV	0.99	0	59.96	0
RAMON 115 kV	0.88	0	59.70	0
RAMON 69 kV	0.88	0	59.70	0
REATAP 69 kV	0.85	0	59.72	0
RIOGRAND 69 kV	0.86	0	59.71	0
RIOGRDTP 69 kV	0.87	0	59.71	0
ROMEO 69 kV	0.85	0	59.72	0
S.ACACIO 69 kV	0.82	0	59.69	0
SAGUACHE 69 kV	0.83	0	59.69	0
SANLSVLY 115 kV	0.88	0	59.70	0
SANLSVLY 230 kV	0.88	0	59.70	0
SANLSVLY 69 kV	0.87	0	59.70	0
SARGENT 115 kV	0.88	0	59.72	0
SARGENT 69 kV	0.87	0	59.71	0
SFORK_SL 69 kV	0.88	0	59.70	0
STANLEY 115 kV	0.88	0	59.70	0
STOCKADE 69 kV	0.84	0	59.69	0
SUB MV BUS 34.5 kV	0.88	0	59.73	0
VILLA 69 kV	0.99	0	59.96	0
WAVERLY 115 kV	0.86	0	59.70	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
WAVERLY6 69 kV	0.85	0	59.69	0
ZINZER 69 kV	0.84	0	59.69	0
Disturbance 02s – Three phase fault at Poncha on the San Luis Valley - Poncha 230 kV line				
1JB1 34.5 kV	0.90	0	59.80	0
ALMSA_ST 69 kV	0.90	0	59.80	0
ALMSA_TM 115 kV	0.87	0	59.79	0
ALMSA_TM 69 kV	0.90	0	59.80	0
ALMSACT1 13.8 kV	0.90	0	59.80	0
ALMSACT2 13.8 kV	0.87	0	59.79	0
ANSEL_TS 69 kV	0.88	0	59.79	0
ANTONITO 69 kV	0.86	0	59.80	0
BLANCAPK 115 kV	0.89	0	59.78	0
CARMEL 69 kV	0.87	0	59.78	0
CENTER 69 kV	0.85	0	59.78	0
COCENTER 69 kV	0.88	0	59.79	0
COGENTIX_PV 34.5 kV	0.89	0	59.76	0
CREEDE 69 kV	0.89	0	59.78	0
DELNORTE 69 kV	0.86	0	59.79	0
FTGARLND 69 kV	0.85	0	59.80	0
GR_SANDH_PV 34.5 kV	0.89	0	59.78	0
GSU 1A 34.5 kV	0.90	0	59.80	0
GSU 1B 34.5 kV	0.90	0	59.80	0
GSU 1C 34.5 kV	0.90	0	59.80	0
HILANDSL 69 kV	0.90	0	59.78	0
HOMELAKE 69 kV	0.87	0	59.80	0
HOOPER 69 kV	0.85	0	59.78	0
HOOPERTP 69 kV	0.85	0	59.78	0
IBEDROL_PV 34.5 kV	0.89	0	59.77	0
KERBERCK 69 kV	0.99	0	59.96	0
LAGARITA 69 kV	0.84	0	59.78	0
MEARSJCT 69 kV	0.99	0	59.96	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
MIRGEJCT 69 kV	0.85	0	59.78	0
MOFFAT 69 kV	0.85	0	59.78	0
MOSCA 69 kV	0.89	0	59.78	0
OLD16TAP 69 kV	0.89	0	59.80	0
OLD40TAP 69 kV	0.90	0	59.80	0
OXCART 69 kV	0.99	0	59.96	0
PLAZA 69 kV	0.83	0	59.78	0
PONCHA 115 kV	1.005	0	59.96	0
PONCHA 230 kV	1.018	0	59.97	0
PONCHA 69 kV	0.99	0	59.96	0
RAMON 115 kV	0.89	0	59.78	0
RAMON 69 kV	0.90	0	59.78	0
REATAP 69 kV	0.87	0	59.80	0
RIOGRAND 69 kV	0.87	0	59.79	0
RIOGRDTP 69 kV	0.88	0	59.79	0
ROMEO 69 kV	0.86	0	59.80	0
S.ACACIO 69 kV	0.85	0	59.78	0
SAGUACHE 69 kV	0.84	0	59.78	0
SANLSVLY 115 kV	0.89	0	59.78	0
SANLSVLY 230 kV	0.89	0	59.78	0
SANLSVLY 69 kV	0.88	0	59.78	0
SARGENT 115 kV	0.89	0	59.80	0
SARGENT 69 kV	0.88	0	59.79	0
SFORK_SL 69 kV	0.90	0	59.78	0
STANLEY 115 kV	0.89	0	59.78	0
STOCKADE 69 kV	0.86	0	59.78	0
SUB MV BUS 34.5 kV	0.90	0	59.80	0
VILLA 69 kV	0.99	0	59.96	0
WAVERLY 115 kV	0.88	0	59.78	0
WAVERLY6 69 kV	0.87	0	59.78	0
ZINZER 69 kV	0.86	0	59.78	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
Disturbance 03s – Three phase fault at Poncha on the Poncha - Sargent 115 kV line				
1JB1 34.5 kV	0.99	0	59.96	0
ALMSA_ST 69 kV	0.98	0	59.95	0
ALMSA_TM 115 kV	0.96	0	59.93	0
ALMSA_TM 69 kV	0.99	0	59.95	0
ALMSACT1 13.8 kV	0.99	0	59.95	0
ALMSACT2 13.8 kV	0.96	0	59.93	0
ANSEL_TS 69 kV	0.98	0	59.93	0
ANTONITO 69 kV	0.95	0	59.95	0
BLANCAPK 115 kV	0.99	0	59.93	0
CARMEL 69 kV	0.97	0	59.93	0
CENTER 69 kV	0.95	0	59.93	0
COCENTER 69 kV	0.98	0	59.93	0
COGENTIX_PV 34.5 kV	0.98	0	59.91	0
CREEDE 69 kV	1	0	59.93	0
DELNORTE 69 kV	0.96	0	59.94	0
FTGARLND 69 kV	0.94	0	59.95	0
GR_SANDH_PV 34.5 kV	0.98	0	59.93	0
GSU 1A 34.5 kV	0.99	0	59.96	0
GSU 1B 34.5 kV	0.99	0	59.96	0
GSU 1C 34.5 kV	0.99	0	59.96	0
HILANDSL 69 kV	1.00	0	59.93	0
HOMELAKE 69 kV	0.96	0	59.94	0
HOOPER 69 kV	0.95	0	59.93	0
HOOPERTP 69 kV	0.95	0	59.93	0
IBEDROL_PV 34.5 kV	0.99	0	59.91	0
KERBERCK 69 kV	1.01	0	59.97	0
LAGARITA 69 kV	0.93	0	59.93	0
MEARSJCT 69 kV	1.01	0	59.97	0
MIRGEJCT 69 kV	0.95	0	59.94	0
MOFFAT 69 kV	0.95	0	59.94	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
MOSCA 69 kV	0.99	0	59.93	0
OLD16TAP 69 kV	0.98	0	59.95	0
OLD40TAP 69 kV	0.99	0	59.95	0
OXCART 69 kV	1.01	0	59.97	0
PLAZA 69 kV	0.92	0	59.93	0
PONCHA 115 kV	1.02	0	59.97	0
PONCHA 230 kV	1.03	0	59.96	0
PONCHA 69 kV	1.01	0	59.97	0
RAMON 115 kV	1	0	59.93	0
RAMON 69 kV	1.00	0	59.93	0
REATAP 69 kV	0.96	0	59.95	0
RIOGRAND 69 kV	0.96	0	59.94	0
RIOGRDTP 69 kV	0.97	0	59.94	0
ROMEO 69 kV	0.95	0	59.95	0
S.ACACIO 69 kV	0.95	0	59.93	0
SAGUACHE 69 kV	0.94	0	59.94	0
SANLSVLY 115 kV	0.99	0	59.93	0
SANLSVLY 230 kV	1.01	0	59.94	0
SANLSVLY 69 kV	0.98	0	59.93	0
SARGENT 115 kV	0.99	0	59.93	0
SARGENT 69 kV	0.98	0	59.93	0
SFORK_SL 69 kV	1.00	0	59.93	0
STANLEY 115 kV	0.99	0	59.93	0
STOCKADE 69 kV	0.96	0	59.93	0
SUB MV BUS 34.5 kV	0.99	0	59.96	0
VILLA 69 kV	1.01	0	59.97	0
WAVERLY 115 kV	0.98	0	59.93	0
WAVERLY6 69 kV	0.97	0	59.93	0
ZINZER 69 kV	0.96	0	59.93	0
Disturbance 04s – Three phase fault at Sargent on the Poncha - Sargent 115 kV line				
1JB1 34.5 kV	0.97	0	59.91	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
ALMSA_ST 69 kV	0.96	0	59.90	0
ALMSA_TM 115 kV	0.94	0	59.88	0
ALMSA_TM 69 kV	0.97	0	59.90	0
ALMSACT1 13.8 kV	0.97	0	59.90	0
ALMSACT2 13.8 kV	0.94	0	59.88	0
ANSEL_TS 69 kV	0.96	0	59.88	0
ANTONITO 69 kV	0.93	0	59.90	0
BLANCAPK 115 kV	0.97	0	59.88	0
CARMEL 69 kV	0.94	0	59.89	0
CENTER 69 kV	0.92	0	59.88	0
COCENTER 69 kV	0.96	0	59.89	0
COGENTIX_PV 34.5 kV	0.96	0	59.85	0
CREEDE 69 kV	0.98	0	59.89	0
DELNORTE 69 kV	0.94	0	59.89	0
FTGARLND 69 kV	0.91	0	59.90	0
GR_SANDH_PV 34.5 kV	0.96	0	59.87	0
GSU 1A 34.5 kV	0.97	0	59.91	0
GSU 1B 34.5 kV	0.97	0	59.91	0
GSU 1C 34.5 kV	0.97	0	59.91	0
HILANDSL 69 kV	0.98	0	59.89	0
HOMELAKE 69 kV	0.94	0	59.89	0
HOOPER 69 kV	0.93	0	59.88	0
HOOPERTP 69 kV	0.93	0	59.88	0
IBEDROL_PV 34.5 kV	0.96	0	59.86	0
KERBERCK 69 kV	1.00	0	59.96	0
LAGARITA 69 kV	0.91	0	59.88	0
MEARSJCT 69 kV	1.00	0	59.96	0
MIRGEJCT 69 kV	0.93	0	59.88	0
MOFFAT 69 kV	0.93	0	59.88	0
MOSCA 69 kV	0.97	0	59.88	0
OLD16TAP 69 kV	0.96	0	59.90	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
OLD40TAP 69 kV	0.96	0	59.90	0
OXCART 69 kV	1.00	0	59.96	0
PLAZA 69 kV	0.90	0	59.88	0
PONCHA 115 kV	1.01	0	59.96	0
PONCHA 230 kV	1.02	0	59.95	0
PONCHA 69 kV	1.00	0	59.96	0
RAMON 115 kV	0.98	0	59.88	0
RAMON 69 kV	0.98	0	59.89	0
REATAP 69 kV	0.94	0	59.90	0
RIOGRAND 69 kV	0.94	0	59.89	0
RIOGRDTP 69 kV	0.95	0	59.89	0
ROMEO 69 kV	0.93	0	59.90	0
S.ACACIO 69 kV	0.92	0	59.88	0
SAGUACHE 69 kV	0.92	0	59.88	0
SANLSVLY 115 kV	0.97	0	59.88	0
SANLSVLY 230 kV	0.99	0	59.90	0
SANLSVLY 69 kV	0.96	0	59.88	0
SARGENT 115 kV	0.97	0	59.88	0
SARGENT 69 kV	0.96	0	59.89	0
SFORK_SL 69 kV	0.98	0	59.89	0
STANLEY 115 kV	0.97	0	59.88	0
STOCKADE 69 kV	0.94	0	59.88	0
SUB MV BUS 34.5 kV	0.97	0	59.91	0
VILLA 69 kV	1.00	0	59.96	0
WAVERLY 115 kV	0.96	0	59.88	0
WAVERLY6 69 kV	0.94	0	59.89	0
ZINZER 69 kV	0.94	0	59.89	0
Disturbance 05s – Three phase fault at Sargent on the San Luis Valley - Sargent 115 kV line				
1JB1 34.5 kV	0.98	0	59.92	0
ALMSA_ST 69 kV	0.97	0	59.91	0
ALMSA_TM 115 kV	0.95	0	59.89	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
ALMSA_TM 69 kV	0.98	0	59.92	0
ALMSACT1 13.8 kV	0.98	0	59.92	0
ALMSACT2 13.8 kV	0.95	0	59.89	0
ANSEL_TS 69 kV	0.96	0	59.91	0
ANTONITO 69 kV	0.94	0	59.92	0
BLANCAPK 115 kV	0.98	0	59.89	0
CARMEL 69 kV	0.95	0	59.89	0
CENTER 69 kV	0.93	0	59.90	0
COGENTIX_PV 34.5 kV	0.97	0	59.91	0
COGENTRIX kV	0.97	0	59.86	0
CREEDE 69 kV	0.98	0	59.89	0
DELNORTE 69 kV	0.95	0	59.91	0
FTGARLND 69 kV	0.93	0	59.92	0
GR_SANDH_PV 34.5 kV	0.97	0	59.88	0
GSU 1A 34.5 kV	0.98	0	59.92	0
GSU 1B 34.5 kV	0.98	0	59.92	0
GSU 1C 34.5 kV	0.98	0	59.92	0
HILANDSL 69 kV	0.99	0	59.89	0
HOMELAKE 69 kV	0.95	0	59.91	0
HOOPER 69 kV	0.94	0	59.90	0
HOOPERTP 69 kV	0.94	0	59.90	0
IBEDROL_PV 34.5 kV	0.97	0	59.86	0
KERBERCK 69 kV	1.00	0	59.96	0
LAGARITA 69 kV	0.92	0	59.90	0
MEARSJCT 69 kV	1.00	0	59.96	0
MIRGEJCT 69 kV	0.94	0	59.89	0
MOFFAT 69 kV	0.94	0	59.89	0
MOSCA 69 kV	0.98	0	59.89	0
OLD16TAP 69 kV	0.97	0	59.91	0
OLD40TAP 69 kV	0.98	0	59.92	0
OXCART 69 kV	1.00	0	59.96	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
PLAZA 69 kV	0.91	0	59.90	0
PONCHA 115 kV	1.01	0	59.96	0
PONCHA 230 kV	1.02	0	59.95	0
PONCHA 69 kV	1.00	0	59.96	0
RAMON 115 kV	0.98	0	59.89	0
RAMON 69 kV	0.99	0	59.89	0
REATAP 69 kV	0.95	0	59.92	0
RIOGRAND 69 kV	0.95	0	59.91	0
RIOGRDTP 69 kV	0.96	0	59.91	0
ROMEO 69 kV	0.94	0	59.92	0
S.ACACIO 69 kV	0.93	0	59.89	0
SAGUACHE 69 kV	0.93	0	59.89	0
SANLSVLY 115 kV	0.98	0	59.89	0
SANLSVLY 230 kV	0.99	0	59.91	0
SANLSVLY 69 kV	0.97	0	59.90	0
SARGENT 115 kV	0.98	0	59.92	0
SARGENT 69 kV	0.96	0	59.91	0
SFORK_SL 69 kV	0.99	0	59.89	0
STANLEY 115 kV	0.98	0	59.89	0
STOCKADE 69 kV	0.94	0	59.89	0
SUB MV BUS 34.5 kV	0.98	0	59.92	0
VILLA 69 kV	1.00	0	59.96	0
WAVERLY 115 kV	0.97	0	59.89	0
WAVERLY6 69 kV	0.95	0	59.89	0
ZINZER 69 kV	0.94	0	59.89	0
Disturbance 06s – Three phase fault at San Luis Valley on the San Luis Valley - Sargent 115 kV line				
1JB1 34.5 kV	0.96	0	59.85	0
ALMSA_ST 69 kV	0.95	0	59.84	0
ALMSA_TM 115 kV	0.93	0	59.82	0
ALMSA_TM 69 kV	0.96	0	59.84	0
ALMSACT1 13.8 kV	0.96	0	59.84	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
ALMSACT2 13.8 kV	0.93	0	59.82	0
ANSEL_TS 69 kV	0.95	0	59.84	0
ANTONITO 69 kV	0.92	0	59.84	0
BLANCAPK 115 kV	0.95	0	59.81	0
CARMEL 69 kV	0.92	0	59.82	0
CENTER 69 kV	0.91	0	59.83	0
COCENTER 69 kV	0.95	0	59.84	0
COGENTIX_PV 34.5 kV	0.94	0	59.76	0
CREEDE 69 kV	0.96	0	59.82	0
DELNORTE 69 kV	0.93	0	59.84	0
FTGARLND 69 kV	0.90	0	59.84	0
GR_SANDH_PV 34.5 kV	0.95	0	59.80	0
GSU 1A 34.5 kV	0.96	0	59.85	0
GSU 1B 34.5 kV	0.96	0	59.85	0
GSU 1C 34.5 kV	0.96	0	59.85	0
HILANDSL 69 kV	0.97	0	59.82	0
HOMELAKE 69 kV	0.93	0	59.84	0
HOOPER 69 kV	0.91	0	59.83	0
HOOPERTP 69 kV	0.92	0	59.83	0
IBEDROL_PV 34.5 kV	0.94	0	59.77	0
KERBERCK 69 kV	0.99	0	59.93	0
LAGARITA 69 kV	0.90	0	59.83	0
MEARSJCT 69 kV	0.99	0	59.93	0
MIRGEJCT 69 kV	0.92	0	59.81	0
MOFFAT 69 kV	0.92	0	59.81	0
MOSCA 69 kV	0.96	0	59.81	0
OLD16TAP 69 kV	0.95	0	59.84	0
OLD40TAP 69 kV	0.95	0	59.84	0
OXCART 69 kV	0.99	0	59.93	0
PLAZA 69 kV	0.89	0	59.83	0
PONCHA 115 kV	1.00	0	59.93	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
PONCHA 230 kV	1.01	0	59.93	0
PONCHA 69 kV	0.99	0	59.93	0
RAMON 115 kV	0.96	0	59.82	0
RAMON 69 kV	0.97	0	59.82	0
REATAP 69 kV	0.93	0	59.84	0
RIOGRAND 69 kV	0.93	0	59.84	0
RIOGRDTP 69 kV	0.94	0	59.84	0
ROMEO 69 kV	0.92	0	59.84	0
S.ACACIO 69 kV	0.90	0	59.82	0
SAGUACHE 69 kV	0.91	0	59.82	0
SANLSVLY 115 kV	0.96	0	59.82	0
SANLSVLY 230 kV	0.98	0	59.85	0
SANLSVLY 69 kV	0.95	0	59.83	0
SARGENT 115 kV	0.97	0	59.86	0
SARGENT 69 kV	0.95	0	59.84	0
SFORK_SL 69 kV	0.97	0	59.82	0
STANLEY 115 kV	0.96	0	59.82	0
STOCKADE 69 kV	0.92	0	59.82	0
SUB MV BUS 34.5 kV	0.96	0	59.85	0
VILLA 69 kV	0.99	0	59.93	0
WAVERLY 115 kV	0.95	0	59.82	0
WAVERLY6 69 kV	0.93	0	59.82	0
ZINZER 69 kV	0.92	0	59.82	0
Disturbance 07s – Three phase fault at San Luis Valley on the San Luis Valley - BlancaPk 115 kV line				
1JB1 34.5 kV	0.97	0	59.87	0
ALMSA_ST 69 kV	0.96	0	59.87	0
ALMSA_TM 115 kV	0.81	0	59.69	0
ALMSA_TM 69 kV	0.97	0	59.87	0
ALMSACT1 13.8 kV	0.97	0	59.87	0
ALMSACT2 13.8 kV	0.81	0	59.69	0
ANSEL TS 69 kV	0.96	0	59.91	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
ANTONITO 69 kV	0.93	0	59.87	0
BLANCAPK 115 kV	0.82	0	59.63	0
CARMEL 69 kV	0.97	0	59.90	0
CENTER 69 kV	0.93	0	59.90	0
COCENTER 69 kV	0.96	0	59.91	0
COGENTIX_PV 34.5 kV	0.81	0	59.59	3
CREEDE 69 kV	0.99	0	59.90	0
DELNORTE 69 kV	0.94	0	59.91	0
FTGARLND 69 kV	0.92	0	59.87	0
GR_SANDH_PV 34.5 kV	0.96	0	59.88	0
GSU 1A 34.5 kV	0.97	0	59.87	0
GSU 1B 34.5 kV	0.97	0	59.87	0
GSU 1C 34.5 kV	0.97	0	59.87	0
HILANDSL 69 kV	1.00	0	59.90	0
HOMELAKE 69 kV	0.94	0	59.91	0
HOOPER 69 kV	0.93	0	59.90	0
HOOPERTP 69 kV	0.93	0	59.90	0
IBEDROL_PV 34.5 kV	0.99	0	59.86	0
KERBERCK 69 kV	1.00	0	59.96	0
LAGARITA 69 kV	0.92	0	59.90	0
MEARSJCT 69 kV	1.00	0	59.96	0
MIRGEJCT 69 kV	0.92	0	59.89	0
MOFFAT 69 kV	0.92	0	59.89	0
MOSCA 69 kV	0.96	0	59.89	0
OLD16TAP 69 kV	0.96	0	59.87	0
OLD40TAP 69 kV	0.96	0	59.87	0
OXCART 69 kV	1.00	0	59.96	0
PLAZA 69 kV	0.91	0	59.90	0
PONCHA 115 kV	1.01	0	59.96	0
PONCHA 230 kV	1.02	0	59.96	0
PONCHA 69 kV	1.00	0	59.96	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
RAMON 115 kV	0.99	0	59.90	0
RAMON 69 kV	1.00	0	59.90	0
REATAP 69 kV	0.94	0	59.87	0
RIOGRAND 69 kV	0.94	0	59.91	0
RIOGRDTP 69 kV	0.95	0	59.91	0
ROMEO 69 kV	0.93	0	59.87	0
S.ACACIO 69 kV	0.95	0	59.90	0
SAGUACHE 69 kV	0.91	0	59.89	0
SANLSVLY 115 kV	0.99	0	59.91	0
SANLSVLY 230 kV	1.00	0	59.92	0
SANLSVLY 69 kV	0.96	0	59.90	0
SARGENT 115 kV	0.99	0	59.91	0
SARGENT 69 kV	0.96	0	59.91	0
SFORK_SL 69 kV	1.00	0	59.90	0
STANLEY 115 kV	0.99	0	59.90	0
STOCKADE 69 kV	0.96	0	59.90	0
SUB MV BUS 34.5 kV	0.97	0	59.87	0
VILLA 69 kV	1.00	0	59.96	0
WAVERLY 115 kV	0.98	0	59.90	0
WAVERLY6 69 kV	0.97	0	59.90	0
ZINZER 69 kV	0.96	0	59.90	0
Disturbance 08s – Three phase fault at BlancaPk on the San Luis Valley - BlancaPk 115 kV line				
1JB1 34.5 kV	0.97	0	59.87	0
ALMSA_ST 69 kV	0.97	0	59.88	0
ALMSA_TM 115 kV	0.81	0	59.69	0
ALMSA_TM 69 kV	0.97	0	59.87	0
ALMSACT1 13.8 kV	0.97	0	59.87	0
ALMSACT2 13.8 kV	0.81	0	59.69	0
ANSEL_TS 69 kV	0.96	0	59.93	0
ANTONITO 69 kV	0.93	0	59.87	0
BLANCAPK 115 kV	0.82	0	59.64	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
CARMEL 69 kV	0.97	0	59.94	0
CENTER 69 kV	0.93	0	59.93	0
COCENTER 69 kV	0.96	0	59.93	0
COGENTIX_PV 34.5 kV	0.81	0	59.59	2
CREEDE 69 kV	0.99	0	59.94	0
DELNORTE 69 kV	0.94	0	59.93	0
FTGARLND 69 kV	0.92	0	59.87	0
GR_SANDH_PV 34.5 kV	0.96	0	59.91	0
GSU 1A 34.5 kV	0.97	0	59.87	0
GSU 1B 34.5 kV	0.97	0	59.87	0
GSU 1C 34.5 kV	0.97	0	59.87	0
HILANDSL 69 kV	1.00	0	59.94	0
HOMELAKE 69 kV	0.94	0	59.91	0
HOOPER 69 kV	0.93	0	59.93	0
HOOPERTP 69 kV	0.93	0	59.93	0
IBEDROL_PV 34.5 kV	0.99	0	59.90	0
KERBERCK 69 kV	1.00	0	59.97	0
LAGARITA 69 kV	0.92	0	59.93	0
MEARSJCT 69 kV	1.00	0	59.97	0
MIRGEJCT 69 kV	0.92	0	59.91	0
MOFFAT 69 kV	0.92	0	59.91	0
MOSCA 69 kV	0.96	0	59.91	0
OLD16TAP 69 kV	0.96	0	59.88	0
OLD40TAP 69 kV	0.97	0	59.87	0
OXCART 69 kV	1.00	0	59.97	0
PLAZA 69 kV	0.91	0	59.93	0
PONCHA 115 kV	1.01	0	59.97	0
PONCHA 230 kV	1.02	0	59.97	0
PONCHA 69 kV	1.00	0	59.97	0
RAMON 115 kV	0.99	0	59.94	0
RAMON 69 kV	1.00	0	59.94	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
REATAP 69 kV	0.94	0	59.87	0
RIOGRAND 69 kV	0.94	0	59.93	0
RIOGRDTP 69 kV	0.95	0	59.93	0
ROMEO 69 kV	0.93	0	59.87	0
S.ACACIO 69 kV	0.95	0	59.94	0
SAGUACHE 69 kV	0.91	0	59.91	0
SANLSVLY 115 kV	0.99	0	59.94	0
SANLSVLY 230 kV	1.00	0	59.95	0
SANLSVLY 69 kV	0.96	0	59.93	0
SARGENT 115 kV	0.99	0	59.94	0
SARGENT 69 kV	0.96	0	59.93	0
SFORK_SL 69 kV	1.00	0	59.94	0
STANLEY 115 kV	0.99	0	59.94	0
STOCKADE 69 kV	0.96	0	59.94	0
SUB MV BUS 34.5 kV	0.97	0	59.87	0
VILLA 69 kV	1.00	0	59.97	0
WAVERLY 115 kV	0.98	0	59.94	0
WAVERLY6 69 kV	0.97	0	59.94	0
ZINZER 69 kV	0.96	0	59.94	0
Disturbance 09s – Three phase fault at Alamosa 115 kV side on the Alamosa 115-69 kV Tx				
1JB1 34.5 kV	0.95	0	59.98	0
ALMSA_ST 69 kV	0.95	0	59.98	0
ALMSA_TM 115 kV	0.99	0	59.96	0
ALMSA_TM 69 kV	0.95	0	59.98	0
ALMSACT1 13.8 kV	0.95	0	59.98	0
ALMSACT2 13.8 kV	0.99	0	59.96	0
ANSEL_TS 69 kV	0.98	0	59.97	0
ANTONITO 69 kV	0.91	0	59.98	0
BLANCAPK 115 kV	1	0	59.96	0
CARMEL 69 kV	0.98	0	59.96	0
CENTER 69 kV	0.95	0	59.97	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
COCENTER 69 kV	0.98	0	59.97	0
COGENTIX_PV 34.5 kV	0.99	0	59.94	0
CREEDE 69 kV	1.01	0	59.96	0
DELNORTE 69 kV	0.96	0	59.97	0
FTGARLND 69 kV	0.9	0	59.98	0
GR_SANDH_PV 34.5 kV	0.98	0	59.97	0
GSU 1A 34.5 kV	0.95	0	59.98	0
GSU 1B 34.5 kV	0.95	0	59.98	0
GSU 1C 34.5 kV	0.95	0	59.98	0
HILANDSL 69 kV	1.01	0	59.96	0
HOMELAKE 69 kV	0.95	0	59.98	0
HOOPER 69 kV	0.95	0	59.97	0
HOOPERTP 69 kV	0.95	0	59.97	0
IBEDROL_PV 34.5 kV	1	0	59.95	0
KERBERCK 69 kV	1.01	0	59.98	0
LAGARITA 69 kV	0.94	0	59.97	0
MEARSJCT 69 kV	1	0	59.98	0
MIRGEJCT 69 kV	0.94	0	59.97	0
MOFFAT 69 kV	0.95	0	59.97	0
MOSCA 69 kV	0.98	0	59.97	0
OLD16TAP 69 kV	0.94	0	59.98	0
OLD40TAP 69 kV	0.95	0	59.98	0
OXCART 69 kV	1.01	0	59.98	0
PLAZA 69 kV	0.93	0	59.97	0
PONCHA 115 kV	1.02	0	59.98	0
PONCHA 230 kV	1.03	0	59.98	0
PONCHA 69 kV	1	0	59.98	0
RAMON 115 kV	1	0	59.96	0
RAMON 69 kV	1.01	0	59.96	0
REATAP 69 kV	0.92	0	59.98	0
RIOGRAND 69 kV	0.96	0	59.97	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
RIOGRDTP 69 kV	0.97	0	59.97	0
ROMEO 69 kV	0.91	0	59.98	0
S.ACACIO 69 kV	0.96	0	59.96	0
SAGUACHE 69 kV	0.94	0	59.97	0
SANLSVLY 115 kV	1	0	59.96	0
SANLSVLY 230 kV	1.01	0	59.97	0
SANLSVLY 69 kV	0.98	0	59.97	0
SARGENT 115 kV	1	0	59.96	0
SARGENT 69 kV	0.98	0	59.97	0
SFORK_SL 69 kV	1.01	0	59.96	0
STANLEY 115 kV	1	0	59.96	0
STOCKADE 69 kV	0.97	0	59.96	0
SUB MV BUS 34.5 kV	0.95	0	59.98	0
VILLA 69 kV	1.01	0	59.98	0
WAVERLY 115 kV	0.99	0	59.96	0
WAVERLY6 69 kV	0.98	0	59.96	0
ZINZER 69 kV	0.97	0	59.96	0
Disturbance 10s – Three phase fault at Alamosa 69 kV side on the Alamosa 115-69 kV Tx				
1JB1 34.5 kV	0.95	0	59.99	0
ALMSA_ST 69 kV	0.95	0	59.99	0
ALMSA_TM 115 kV	1	0	59.98	0
ALMSA_TM 69 kV	0.95	0	59.99	0
ALMSACT1 13.8 kV	0.95	0	59.99	0
ALMSACT2 13.8 kV	0.99	0	59.98	0
ANSEL_TS 69 kV	0.98	0	59.98	0
ANTONITO 69 kV	0.91	0	59.99	0
BLANCAPK 115 kV	1	0	59.98	0
CARMEL 69 kV	0.98	0	59.98	0
CENTER 69 kV	0.95	0	59.98	0
COCENTER 69 kV	0.98	0	59.98	0
COGENTIX PV 34.5 kV	1	0	59.97	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
CREEDE 69 kV	1.01	0	59.98	0
DELNORTE 69 kV	0.96	0	59.98	0
FTGARLND 69 kV	0.9	0	59.99	0
GR_SANDH_PV 34.5 kV	0.98	0	59.97	0
GSU 1A 34.5 kV	0.95	0	59.99	0
GSU 1B 34.5 kV	0.95	0	59.99	0
GSU 1C 34.5 kV	0.95	0	59.99	0
HILANDSL 69 kV	1.01	0	59.98	0
HOMELAKE 69 kV	0.96	0	59.98	0
HOOPER 69 kV	0.96	0	59.98	0
HOOPERTP 69 kV	0.96	0	59.98	0
IBEDROL_PV 34.5 kV	1	0	59.98	0
KERBERCK 69 kV	1.01	0	59.99	0
LAGARITA 69 kV	0.94	0	59.98	0
MEARSJCT 69 kV	1	0	59.99	0
MIRGEJCT 69 kV	0.94	0	59.98	0
MOFFAT 69 kV	0.95	0	59.98	0
MOSCA 69 kV	0.98	0	59.98	0
OLD16TAP 69 kV	0.95	0	59.99	0
OLD40TAP 69 kV	0.95	0	59.99	0
OXCART 69 kV	1.01	0	59.99	0
PLAZA 69 kV	0.93	0	59.98	0
PONCHA 115 kV	1.02	0	59.99	0
PONCHA 230 kV	1.03	0	59.99	0
PONCHA 69 kV	1	0	59.99	0
RAMON 115 kV	1.01	0	59.98	0
RAMON 69 kV	1.01	0	59.98	0
REATAP 69 kV	0.92	0	59.99	0
RIOGRAND 69 kV	0.96	0	59.98	0
RIOGRDTP 69 kV	0.98	0	59.98	0
ROMEO 69 kV	0.91	0	59.99	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
S.ACACIO 69 kV	0.97	0	59.98	0
SAGUACHE 69 kV	0.94	0	59.98	0
SANLSVLY 115 kV	1	0	59.98	0
SANLSVLY 230 kV	1.01	0	59.98	0
SANLSVLY 69 kV	0.98	0	59.98	0
SARGENT 115 kV	1	0	59.98	0
SARGENT 69 kV	0.98	0	59.98	0
SFORK_SL 69 kV	1.01	0	59.98	0
STANLEY 115 kV	1	0	59.98	0
STOCKADE 69 kV	0.97	0	59.98	0
SUB MV BUS 34.5 kV	0.95	0	59.99	0
VILLA 69 kV	1.01	0	59.99	0
WAVERLY 115 kV	0.99	0	59.98	0
WAVERLY6 69 kV	0.98	0	59.98	0
ZINZER 69 kV	0.97	0	59.98	0
Disturbance 11s – Three phase fault at Alamosa on the Alamosa - BlancaPk 115 kV line				
1JB1 34.5 kV	0.93	0	59.97	0
ALMSA_ST 69 kV	0.93	0	59.97	0
ALMSA_TM 115 kV	0.84	0	59.98	0
ALMSA_TM 69 kV	0.93	0	59.97	0
ALMSACT1 13.8 kV	0.93	0	59.97	0
ALMSACT2 13.8 kV	0.84	0	59.98	0
ANSEL_TS 69 kV	0.98	0	59.97	0
ANTONITO 69 kV	0.89	0	59.97	0
BLANCAPK 115 kV	1.01	0	59.96	0
CARMEL 69 kV	0.99	0	59.96	0
CENTER 69 kV	0.96	0	59.97	0
COCENTER 69 kV	0.98	0	59.97	0
COGENTIX_PV 34.5 kV	1.01	0	59.94	0
CREEDE 69 kV	1.01	0	59.96	0
DELNORTE 69 kV	0.96	0	59.97	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
FTGARLND 69 kV	0.88	0	59.97	0
GR_SANDH_PV 34.5 kV	0.99	0	59.97	0
GSU 1A 34.5 kV	0.93	0	59.97	0
GSU 1B 34.5 kV	0.93	0	59.97	0
GSU 1C 34.5 kV	0.93	0	59.97	0
HILANDSL 69 kV	1.02	0	59.96	0
HOMELAKE 69 kV	0.95	0	59.97	0
HOOPER 69 kV	0.96	0	59.97	0
HOOPERTP 69 kV	0.96	0	59.97	0
IBEDROL_PV 34.5 kV	1.01	0	59.95	0
KERBERCK 69 kV	1.01	0	59.98	0
LAGARITA 69 kV	0.94	0	59.97	0
MEARSJCT 69 kV	1.01	0	59.98	0
MIRGEJCT 69 kV	0.95	0	59.97	0
MOFFAT 69 kV	0.95	0	59.97	0
MOSCA 69 kV	0.99	0	59.97	0
OLD16TAP 69 kV	0.93	0	59.97	0
OLD40TAP 69 kV	0.92	0	59.97	0
OXCART 69 kV	1.01	0	59.98	0
PLAZA 69 kV	0.94	0	59.97	0
PONCHA 115 kV	1.02	0	59.98	0
PONCHA 230 kV	1.03	0	59.98	0
PONCHA 69 kV	1.01	0	59.98	0
RAMON 115 kV	1.01	0	59.96	0
RAMON 69 kV	1.02	0	59.96	0
REATAP 69 kV	0.9	0	59.97	0
RIOGRAND 69 kV	0.96	0	59.97	0
RIOGRDTP 69 kV	0.97	0	59.97	0
ROMEO 69 kV	0.89	0	59.97	0
S.ACACIO 69 kV	0.97	0	59.96	0
SAGUACHE 69 kV	0.94	0	59.97	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
SANLSVLY 115 kV	1.01	0	59.96	0
SANLSVLY 230 kV	1.02	0	59.97	0
SANLSVLY 69 kV	0.99	0	59.97	0
SARGENT 115 kV	1	0	59.97	0
SARGENT 69 kV	0.98	0	59.97	0
SFORK_SL 69 kV	1.02	0	59.96	0
STANLEY 115 kV	1.01	0	59.96	0
STOCKADE 69 kV	0.98	0	59.96	0
SUB MV BUS 34.5 kV	0.93	0	59.97	0
VILLA 69 kV	1.01	0	59.98	0
WAVERLY 115 kV	1	0	59.96	0
WAVERLY6 69 kV	0.99	0	59.96	0
ZINZER 69 kV	0.98	0	59.96	0
Disturbance 12s – Three phase fault at BlancaPk on the Alamosa - BlancaPk 115 kV line				
1JB1 34.5 kV	0.92	0	59.87	0
ALMSA_ST 69 kV	0.92	0	59.86	0
ALMSA_TM 115 kV	0.83	0	59.87	0
ALMSA_TM 69 kV	0.92	0	59.86	0
ALMSACT1 13.8 kV	0.92	0	59.86	0
ALMSACT2 13.8 kV	0.83	0	59.87	0
ANSEL_TS 69 kV	0.97	0	59.86	0
ANTONITO 69 kV	0.88	0	59.86	0
BLANCAPK 115 kV	0.99	0	59.84	0
CARMEL 69 kV	0.97	0	59.85	0
CENTER 69 kV	0.94	0	59.85	0
COCENTER 69 kV	0.97	0	59.86	0
COGENTIX_PV 34.5 kV	0.99	0	59.79	0
CREEDE 69 kV	1	0	59.85	0
DELNORTE 69 kV	0.95	0	59.86	0
FTGARLND 69 kV	0.87	0	59.86	0
GR SANDH PV 34.5 kV	0.97	0	59.84	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
GSU 1A 34.5 kV	0.92	0	59.87	0
GSU 1B 34.5 kV	0.92	0	59.87	0
GSU 1C 34.5 kV	0.92	0	59.87	0
HILANDSL 69 kV	1	0	59.85	0
HOMELAKE 69 kV	0.94	0	59.86	0
HOOPER 69 kV	0.94	0	59.85	0
HOOPERTP 69 kV	0.95	0	59.85	0
IBEDROL_PV 34.5 kV	0.99	0	59.82	0
KERBERCK 69 kV	1	0	59.94	0
LAGARITA 69 kV	0.93	0	59.85	0
MEARSJCT 69 kV	1	0	59.94	0
MIRGEJCT 69 kV	0.93	0	59.85	0
MOFFAT 69 kV	0.93	0	59.85	0
MOSCA 69 kV	0.97	0	59.85	0
OLD16TAP 69 kV	0.92	0	59.86	0
OLD40TAP 69 kV	0.92	0	59.86	0
OXCART 69 kV	1	0	59.94	0
PLAZA 69 kV	0.92	0	59.85	0
PONCHA 115 kV	1.01	0	59.94	0
PONCHA 230 kV	1.02	0	59.94	0
PONCHA 69 kV	1	0	59.94	0
RAMON 115 kV	1	0	59.85	0
RAMON 69 kV	1	0	59.85	0
REATAP 69 kV	0.89	0	59.86	0
RIOGRAND 69 kV	0.95	0	59.86	0
RIOGRDTP 69 kV	0.96	0	59.86	0
ROMEO 69 kV	0.88	0	59.86	0
S.ACACIO 69 kV	0.96	0	59.85	0
SAGUACHE 69 kV	0.92	0	59.85	0
SANLSVLY 115 kV	0.99	0	59.85	0
SANLSVLY 230 kV	1	0	59.87	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
SANLSVLY 69 kV	0.97	0	59.85	0
SARGENT 115 kV	0.99	0	59.86	0
SARGENT 69 kV	0.97	0	59.86	0
SFORK_SL 69 kV	1	0	59.85	0
STANLEY 115 kV	0.99	0	59.85	0
STOCKADE 69 kV	0.97	0	59.85	0
SUB MV BUS 34.5 kV	0.92	0	59.87	0
VILLA 69 kV	1	0	59.94	0
WAVERLY 115 kV	0.98	0	59.85	0
WAVERLY6 69 kV	0.97	0	59.85	0
ZINZER 69 kV	0.96	0	59.85	0
Disturbance 13s – Three phase fault at Sargent 115 kV side on the Sargent 115-69 kV Tx				
1JB1 34.5 kV	0.97	0	59.92	0
ALMSA_ST 69 kV	0.97	0	59.91	0
ALMSA_TM 115 kV	0.95	0	59.89	0
ALMSA_TM 69 kV	0.97	0	59.91	0
ALMSACT1 13.8 kV	0.97	0	59.91	0
ALMSACT2 13.8 kV	0.95	0	59.89	0
ANSEL_TS 69 kV	0.95	0	59.89	0
ANTONITO 69 kV	0.93	0	59.91	0
BLANCAPK 115 kV	0.98	0	59.89	0
CARMEL 69 kV	0.95	0	59.89	0
CENTER 69 kV	0.93	0	59.89	0
COCENTER 69 kV	0.95	0	59.89	0
COGENTIX_PV 34.5 kV	0.97	0	59.86	0
CREEDE 69 kV	0.99	0	59.90	0
DELNORTE 69 kV	0.93	0	59.90	0
FTGARLND 69 kV	0.92	0	59.91	0
GR_SANDH_PV 34.5 kV	0.97	0	59.88	0
GSU 1A 34.5 kV	0.97	0	59.92	0
GSU 1B 34.5 kV	0.97	0	59.92	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
GSU 1C 34.5 kV	0.97	0	59.92	0
HILANDSL 69 kV	0.99	0	59.90	0
HOMELAKE 69 kV	0.94	0	59.90	0
HOOPER 69 kV	0.93	0	59.89	0
HOOPERTP 69 kV	0.93	0	59.89	0
IBEDROL_PV 34.5 kV	0.97	0	59.86	0
KERBERCK 69 kV	1	0	59.96	0
LAGARITA 69 kV	0.91	0	59.89	0
MEARSJCT 69 kV	1	0	59.96	0
MIRGEJCT 69 kV	0.93	0	59.89	0
MOFFAT 69 kV	0.94	0	59.89	0
MOSCA 69 kV	0.97	0	59.89	0
OLD16TAP 69 kV	0.97	0	59.91	0
OLD40TAP 69 kV	0.97	0	59.91	0
OXCART 69 kV	1	0	59.96	0
PLAZA 69 kV	0.91	0	59.89	0
PONCHA 115 kV	1.01	0	59.96	0
PONCHA 230 kV	1.02	0	59.95	0
PONCHA 69 kV	1	0	59.96	0
RAMON 115 kV	0.99	0	59.89	0
RAMON 69 kV	0.99	0	59.89	0
REATAP 69 kV	0.94	0	59.91	0
RIOGRAND 69 kV	0.94	0	59.90	0
RIOGRDTP 69 kV	0.95	0	59.90	0
ROMEO 69 kV	0.94	0	59.91	0
S.ACACIO 69 kV	0.93	0	59.89	0
SAGUACHE 69 kV	0.93	0	59.89	0
SANLSVLY 115 kV	0.98	0	59.89	0
SANLSVLY 230 kV	1	0	59.91	0
SANLSVLY 69 kV	0.96	0	59.89	0
SARGENT 115 kV	0.99	0	59.90	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
SARGENT 69 kV	0.95	0	59.89	0
SFORK_SL 69 kV	0.99	0	59.89	0
STANLEY 115 kV	0.98	0	59.89	0
STOCKADE 69 kV	0.95	0	59.89	0
SUB MV BUS 34.5 kV	0.97	0	59.92	0
VILLA 69 kV	1	0	59.96	0
WAVERLY 115 kV	0.97	0	59.89	0
WAVERLY6 69 kV	0.95	0	59.89	0
ZINZER 69 kV	0.95	0	59.89	0
Disturbance 14s – Three phase fault at Sargent 69 kV side on the Sargent 115-69 kV Tx				
1JB1 34.5 kV	0.98	0	59.95	0
ALMSA_ST 69 kV	0.98	0	59.95	0
ALMSA_TM 115 kV	0.96	0	59.93	0
ALMSA_TM 69 kV	0.98	0	59.95	0
ALMSACT1 13.8 kV	0.98	0	59.95	0
ALMSACT2 13.8 kV	0.96	0	59.93	0
ANSEL_TS 69 kV	0.96	0	59.93	0
ANTONITO 69 kV	0.94	0	59.95	0
BLANCAPK 115 kV	0.99	0	59.92	0
CARMEL 69 kV	0.97	0	59.93	0
CENTER 69 kV	0.94	0	59.93	0
COCENTER 69 kV	0.96	0	59.93	0
COGENTIX_PV 34.5 kV	0.98	0	59.90	0
CREEDE 69 kV	1	0	59.93	0
DELNORTE 69 kV	0.94	0	59.93	0
FTGARLND 69 kV	0.93	0	59.95	0
GR_SANDH_PV 34.5 kV	0.98	0	59.92	0
GSU 1A 34.5 kV	0.98	0	59.95	0
GSU 1B 34.5 kV	0.98	0	59.95	0
GSU 1C 34.5 kV	0.98	0	59.95	0
HILANDSL 69 kV	1	0	59.93	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
HOMELAKE 69 kV	0.95	0	59.94	0
HOOPER 69 kV	0.94	0	59.93	0
HOOPERTP 69 kV	0.94	0	59.93	0
IBEDROL_PV 34.5 kV	0.99	0	59.90	0
KERBERCK 69 kV	1	0	59.97	0
LAGARITA 69 kV	0.92	0	59.93	0
MEARSJCT 69 kV	1	0	59.97	0
MIRGEJCT 69 kV	0.94	0	59.93	0
MOFFAT 69 kV	0.95	0	59.93	0
MOSCA 69 kV	0.98	0	59.93	0
OLD16TAP 69 kV	0.98	0	59.95	0
OLD40TAP 69 kV	0.98	0	59.95	0
OXCART 69 kV	1	0	59.97	0
PLAZA 69 kV	0.92	0	59.93	0
PONCHA 115 kV	1.01	0	59.97	0
PONCHA 230 kV	1.02	0	59.97	0
PONCHA 69 kV	1	0	59.97	0
RAMON 115 kV	0.99	0	59.93	0
RAMON 69 kV	1	0	59.93	0
REATAP 69 kV	0.95	0	59.95	0
RIOGRAND 69 kV	0.95	0	59.93	0
RIOGRDTP 69 kV	0.96	0	59.93	0
ROMEO 69 kV	0.95	0	59.95	0
S.ACACIO 69 kV	0.95	0	59.93	0
SAGUACHE 69 kV	0.94	0	59.93	0
SANLSVLY 115 kV	0.99	0	59.93	0
SANLSVLY 230 kV	1	0	59.94	0
SANLSVLY 69 kV	0.97	0	59.93	0
SARGENT 115 kV	0.99	0	59.93	0
SARGENT 69 kV	0.96	0	59.93	0
SFORK_SL 69 kV	1	0	59.93	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
STANLEY 115 kV	0.99	0	59.93	0
STOCKADE 69 kV	0.96	0	59.93	0
SUB MV BUS 34.5 kV	0.98	0	59.95	0
VILLA 69 kV	1	0	59.97	0
WAVERLY 115 kV	0.98	0	59.93	0
WAVERLY6 69 kV	0.97	0	59.93	0
ZINZER 69 kV	0.96	0	59.93	0
Disturbance 15s – Three phase fault at San Luis Valley 230 kV side on the San Luis Valley 230-115 kV Tx #2				
1JB1 34.5 kV	0.96	0	59.85	0
ALMSA_ST 69 kV	0.96	0	59.84	0
ALMSA_TM 115 kV	0.94	0	59.82	0
ALMSA_TM 69 kV	0.96	0	59.84	0
ALMSACT1 13.8 kV	0.96	0	59.84	0
ALMSACT2 13.8 kV	0.94	0	59.82	0
ANSEL_TS 69 kV	0.95	0	59.83	0
ANTONITO 69 kV	0.92	0	59.84	0
BLANCAPK 115 kV	0.96	0	59.82	0
CARMEL 69 kV	0.93	0	59.83	0
CENTER 69 kV	0.92	0	59.82	0
COCENTER 69 kV	0.95	0	59.83	0
COGENTIX_PV 34.5 kV	0.95	0	59.77	0
CREEDE 69 kV	0.97	0	59.83	0
DELNORTE 69 kV	0.93	0	59.83	0
FTGARLND 69 kV	0.91	0	59.84	0
GR_SANDH_PV 34.5 kV	0.96	0	59.80	0
GSU 1A 34.5 kV	0.96	0	59.85	0
GSU 1B 34.5 kV	0.96	0	59.85	0
GSU 1C 34.5 kV	0.96	0	59.85	0
HILANDSL 69 kV	0.97	0	59.83	0
HOMELAKE 69 kV	0.94	0	59.83	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
HOOPER 69 kV	0.92	0	59.82	0
HOOPERTP 69 kV	0.92	0	59.82	0
IBEDROL_PV 34.5 kV	0.95	0	59.79	0
KERBERCK 69 kV	1	0	59.93	0
LAGARITA 69 kV	0.9	0	59.82	0
MEARSJCT 69 kV	1	0	59.93	0
MIRGEJCT 69 kV	0.92	0	59.82	0
MOFFAT 69 kV	0.93	0	59.82	0
MOSCA 69 kV	0.96	0	59.81	0
OLD16TAP 69 kV	0.95	0	59.84	0
OLD40TAP 69 kV	0.96	0	59.84	0
OXCART 69 kV	1	0	59.93	0
PLAZA 69 kV	0.89	0	59.82	0
PONCHA 115 kV	1.01	0	59.93	0
PONCHA 230 kV	1.02	0	59.93	0
PONCHA 69 kV	1	0	59.93	0
RAMON 115 kV	0.97	0	59.83	0
RAMON 69 kV	0.97	0	59.83	0
REATAP 69 kV	0.93	0	59.84	0
RIOGRAND 69 kV	0.94	0	59.83	0
RIOGRDTP 69 kV	0.95	0	59.83	0
ROMEO 69 kV	0.92	0	59.84	0
S.ACACIO 69 kV	0.91	0	59.83	0
SAGUACHE 69 kV	0.92	0	59.82	0
SANLSVLY 115 kV	0.97	0	59.83	0
SANLSVLY 230 kV	0.99	0	59.87	0
SANLSVLY 69 kV	0.95	0	59.82	0
SARGENT 115 kV	0.97	0	59.84	0
SARGENT 69 kV	0.95	0	59.83	0
SFORK_SL 69 kV	0.97	0	59.83	0
STANLEY 115 kV	0.97	0	59.83	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
STOCKADE 69 kV	0.93	0	59.83	0
SUB MV BUS 34.5 kV	0.96	0	59.85	0
VILLA 69 kV	1	0	59.93	0
WAVERLY 115 kV	0.95	0	59.83	0
WAVERLY6 69 kV	0.94	0	59.83	0
ZINZER 69 kV	0.93	0	59.83	0
Disturbance 16s – Three phase fault at San Luis Valley 115 kV side on the San Luis Valley 230-115 kV Tx #2				
1JB1 34.5 kV	0.95	0	59.83	0
ALMSA_ST 69 kV	0.94	0	59.82	0
ALMSA_TM 115 kV	0.92	0	59.80	0
ALMSA_TM 69 kV	0.95	0	59.82	0
ALMSACT1 13.8 kV	0.95	0	59.82	0
ALMSACT2 13.8 kV	0.92	0	59.80	0
ANSEL_TS 69 kV	0.94	0	59.81	0
ANTONITO 69 kV	0.91	0	59.82	0
BLANCAPK 115 kV	0.95	0	59.80	0
CARMEL 69 kV	0.92	0	59.81	0
CENTER 69 kV	0.91	0	59.80	0
COCENTER 69 kV	0.94	0	59.81	0
COGENTIX_PV 34.5 kV	0.94	0	59.75	0
CREEDE 69 kV	0.96	0	59.81	0
DELNORTE 69 kV	0.92	0	59.81	0
FTGARLND 69 kV	0.9	0	59.82	0
GR_SANDH_PV 34.5 kV	0.95	0	59.78	0
GSU 1A 34.5 kV	0.95	0	59.83	0
GSU 1B 34.5 kV	0.95	0	59.83	0
GSU 1C 34.5 kV	0.95	0	59.83	0
HILANDSL 69 kV	0.96	0	59.81	0
HOMELAKE 69 kV	0.93	0	59.82	0
HOOPER 69 kV	0.91	0	59.81	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
HOOPERTP 69 kV	0.91	0	59.80	0
IBEDROL_PV 34.5 kV	0.94	0	59.76	0
KERBERCK 69 kV	0.99	0	59.93	0
LAGARITA 69 kV	0.89	0	59.80	0
MEARSJCT 69 kV	0.99	0	59.93	0
MIRGEJCT 69 kV	0.91	0	59.79	0
MOFFAT 69 kV	0.92	0	59.79	0
MOSCA 69 kV	0.95	0	59.79	0
OLD16TAP 69 kV	0.94	0	59.82	0
OLD40TAP 69 kV	0.95	0	59.82	0
OXCART 69 kV	0.99	0	59.93	0
PLAZA 69 kV	0.88	0	59.80	0
PONCHA 115 kV	1	0	59.93	0
PONCHA 230 kV	1.01	0	59.93	0
PONCHA 69 kV	0.99	0	59.93	0
RAMON 115 kV	0.96	0	59.81	0
RAMON 69 kV	0.96	0	59.81	0
REATAP 69 kV	0.92	0	59.82	0
RIOGRAND 69 kV	0.92	0	59.81	0
RIOGRDTP 69 kV	0.94	0	59.81	0
ROMEO 69 kV	0.91	0	59.82	0
S.ACACIO 69 kV	0.9	0	59.81	0
SAGUACHE 69 kV	0.91	0	59.79	0
SANLSVLY 115 kV	0.96	0	59.81	0
SANLSVLY 230 kV	0.98	0	59.86	0
SANLSVLY 69 kV	0.94	0	59.81	0
SARGENT 115 kV	0.96	0	59.82	0
SARGENT 69 kV	0.94	0	59.81	0
SFORK_SL 69 kV	0.96	0	59.81	0
STANLEY 115 kV	0.96	0	59.81	0
STOCKADE 69 kV	0.91	0	59.81	0

Bus	Transient Voltage Dip		Minimum Transient Frequency	
	Minimum Voltage Dip (pu)	Time at or Below WECC Limit (cycles)	Minimum Frequency (Hz)	Time at or Below WECC Limit (cycles)
SUB MV BUS 34.5 kV	0.95	0	59.83	0
VILLA 69 kV	0.99	0	59.93	0
WAVERLY 115 kV	0.94	0	59.81	0
WAVERLY6 69 kV	0.92	0	59.81	0
ZINZER 69 kV	0.92	0	59.81	0

Appendix E

Transient Stability Study Plots

GI-2009-8_post_01s.pdf

GI-2009-8_post_02s.pdf

GI-2009-8_post_03s.pdf

GI-2009-8_post_04s.pdf

GI-2009-8_post_05s.pdf

GI-2009-8_post_06s.pdf

GI-2009-8_post_07s.pdf

GI-2009-8_post_08s.pdf

GI-2009-8_post_09s.pdf

GI-2009-8_post_10s.pdf

GI-2009-8_post_11s.pdf

GI-2009-8_post_12s.pdf

GI-2009-8_post_13s.pdf

GI-2009-8_post_14s.pdf

GI-2009-8_post_15s.pdf

GI-2009-8_post_16s.pdf

Appendix E

Transient Stability Study Plots

GI-2009-8_post_01s.pdf

GI-2009-8_post_02s.pdf

GI-2009-8_post_03s.pdf

GI-2009-8_post_04s.pdf

GI-2009-8_post_05s.pdf

GI-2009-8_post_06s.pdf

GI-2009-8_post_07s.pdf

GI-2009-8_post_08s.pdf

GI-2009-8_post_09s.pdf

GI-2009-8_post_10s.pdf

GI-2009-8_post_11s.pdf

GI-2009-8_post_12s.pdf

GI-2009-8_post_13s.pdf

GI-2009-8_post_14s.pdf

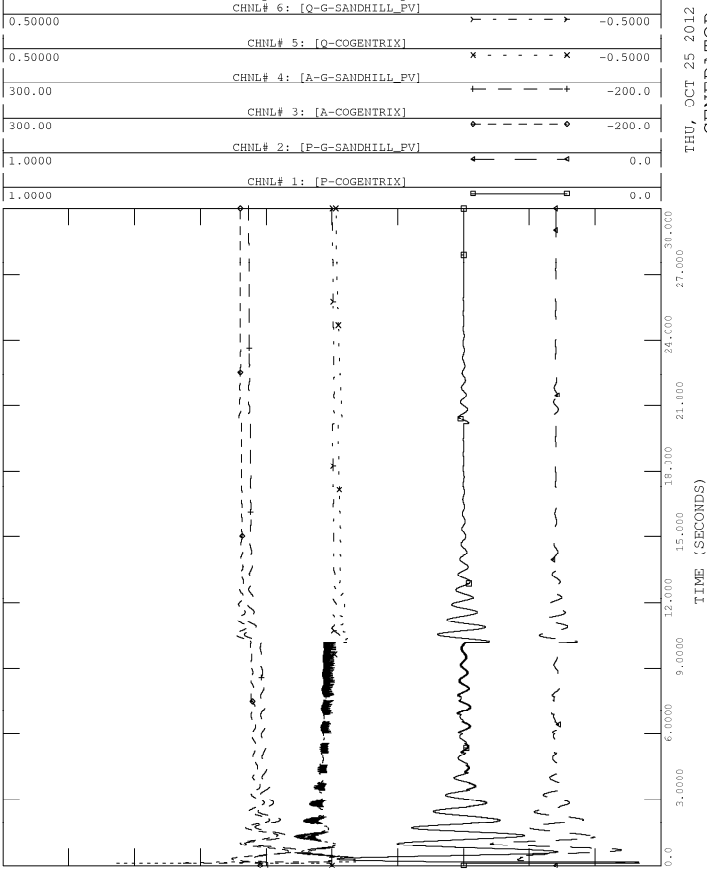
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GI-2009-8_post_16s.pdf



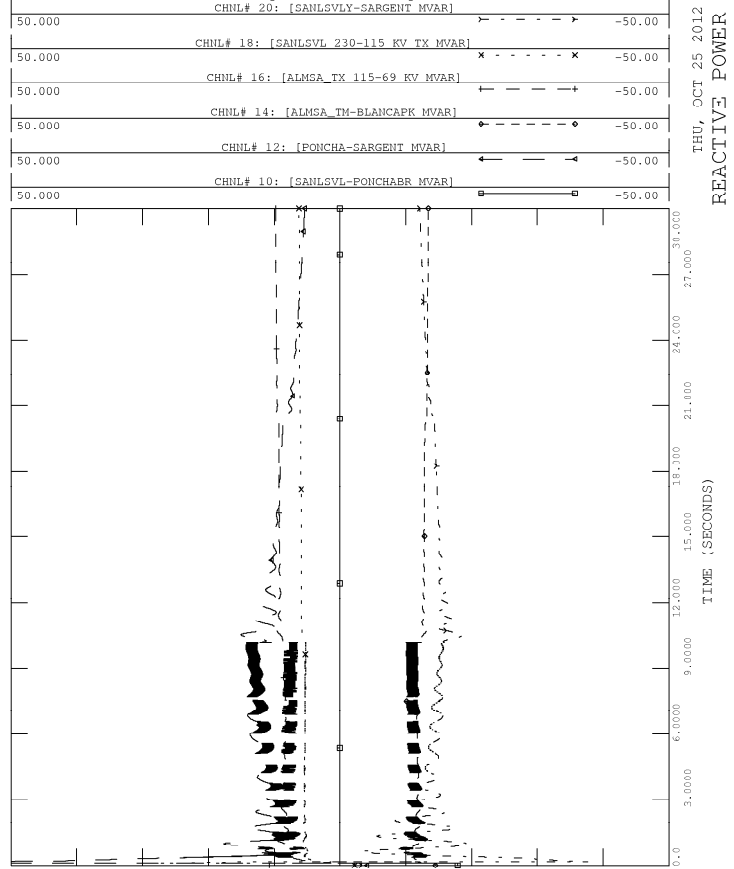
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_01s.out
CHNL# 6: [Q-G-SANDHILL_PV]



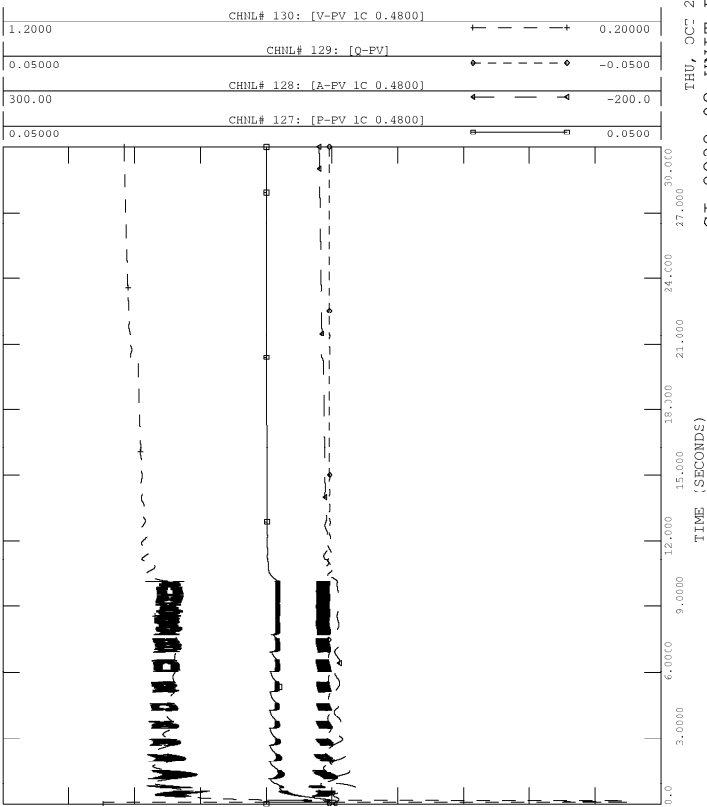
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_01s.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]



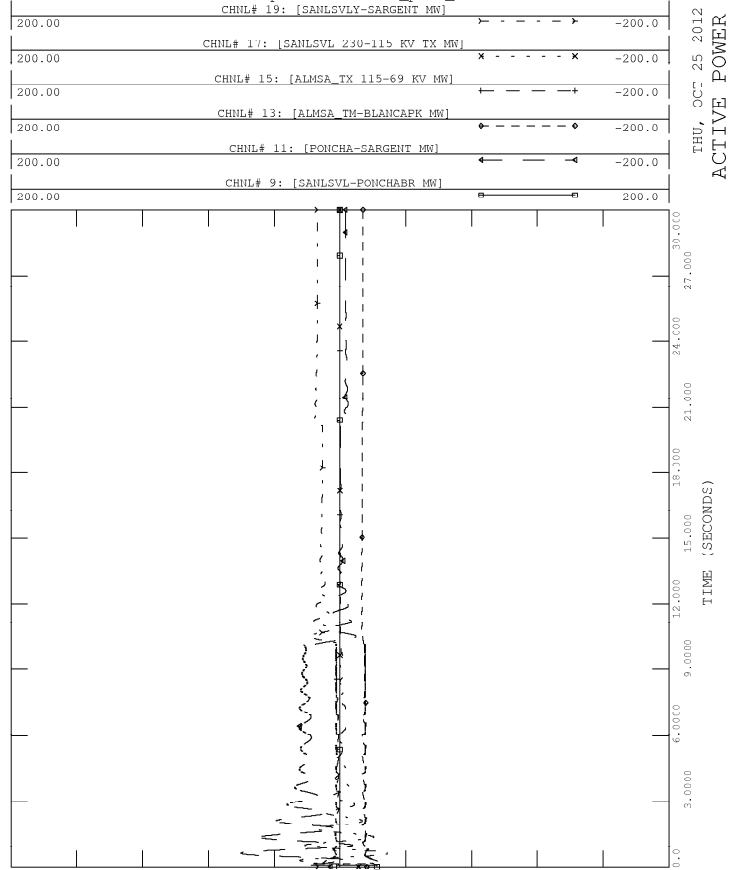
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3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_01s.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_01s.out



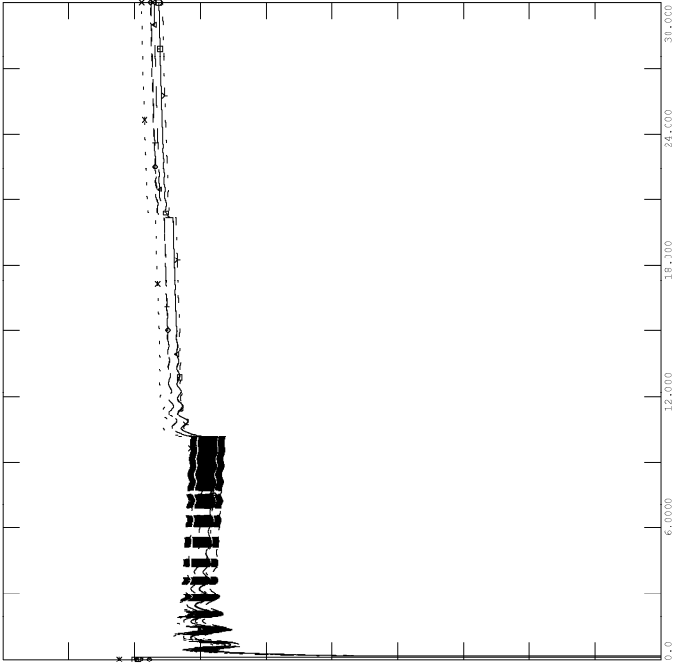


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009 8_post_01s.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

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VOLTAGE II

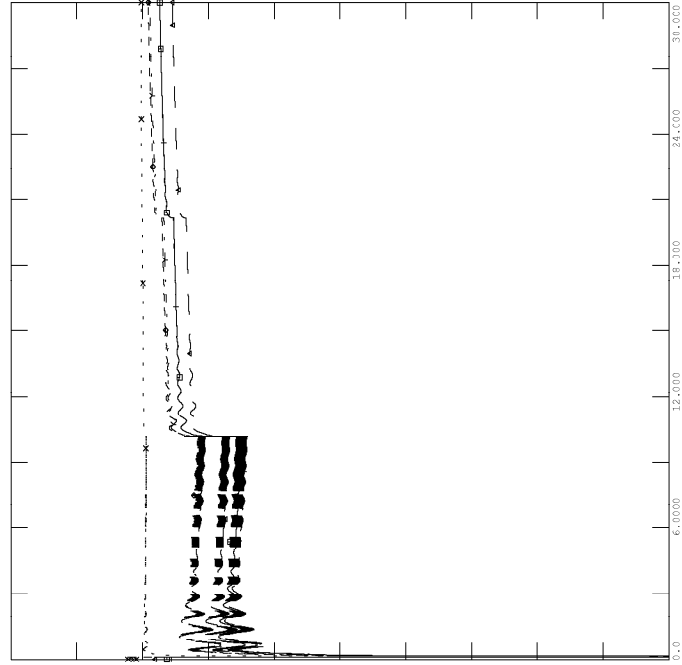


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009 8_post_01s.out
CHNL# 41: [V-PONCHA 69]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

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VOLTAGE IV

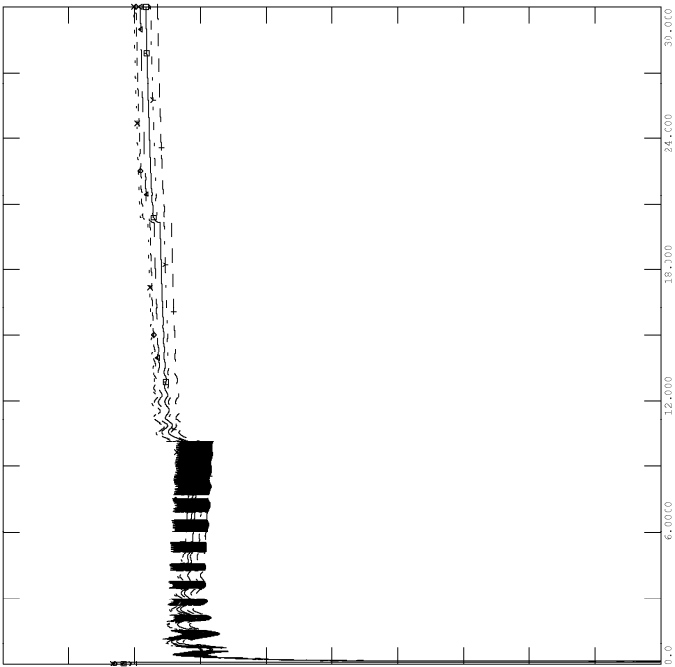


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009 8_post_01s.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

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VOLTAGE I

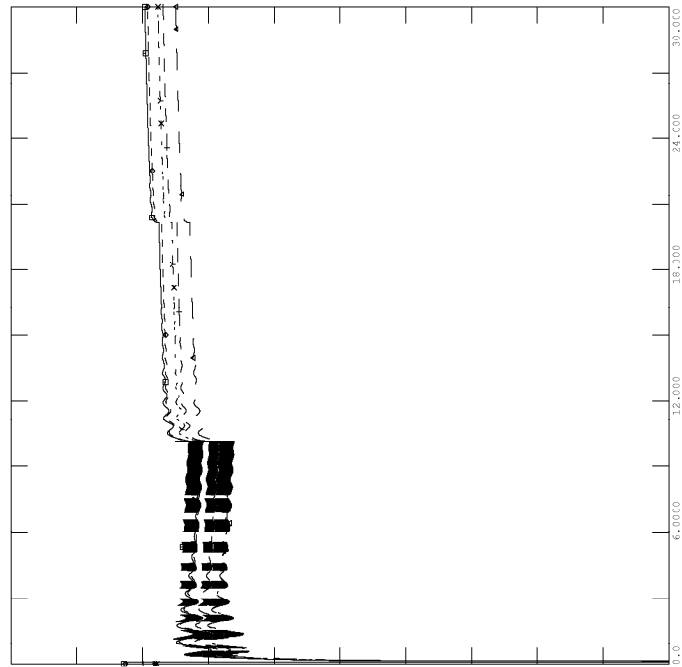


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3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009 8_post_01s.out
CHNL# 36: [V-HOOPER TP 69]

1.2000	CHNL# 36: [V-HOOPER TP 69]	x - - - - x	0.20000
1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	+ - - - - +	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	o - - - - o	0.20000
1.2000	CHNL# 32: [V-FTGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

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VOLTAGE III



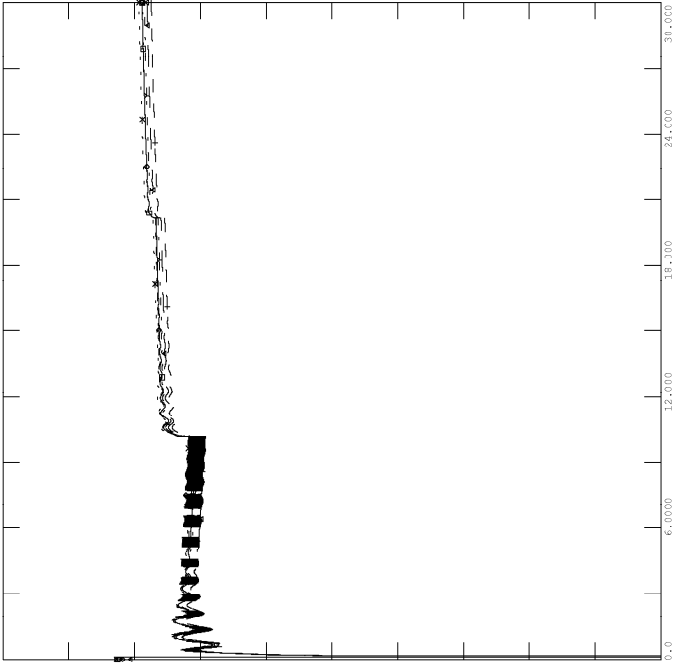


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009 8_post_01s.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK_SL 69]	x - - - - x	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	- - - - -	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	+ - - - +	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	o - - - o	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	← - - - →	0.20000
1.2000	CHNL# 48: [V-SANLSVLY 115]	▬ - - - ▬	0.20000

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VOLTAGE VI

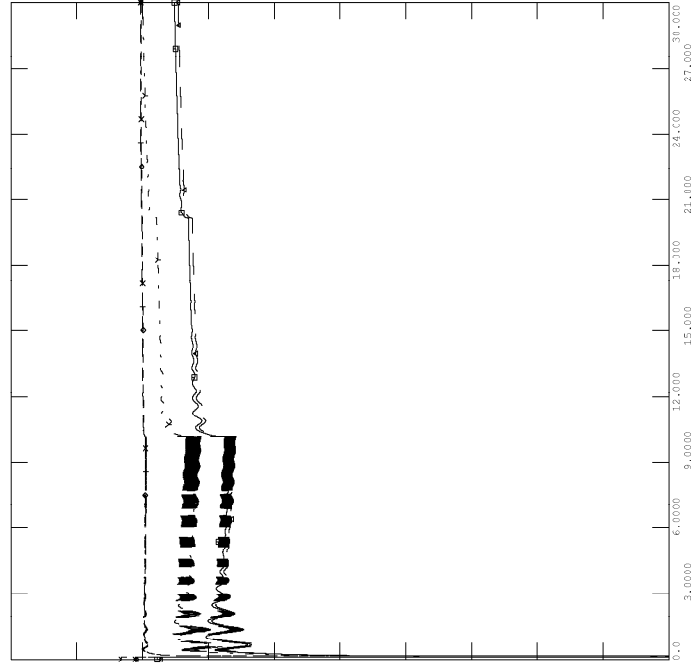


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009 8_post_01s.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	x - - - - x	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	- - - - -	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	+ - - - +	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	o - - - o	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	← - - - →	0.20000
1.2000	CHNL# 60: [V-ALMSACT2 13.8]	▬ - - - ▬	0.20000

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VOLTAGE VIII

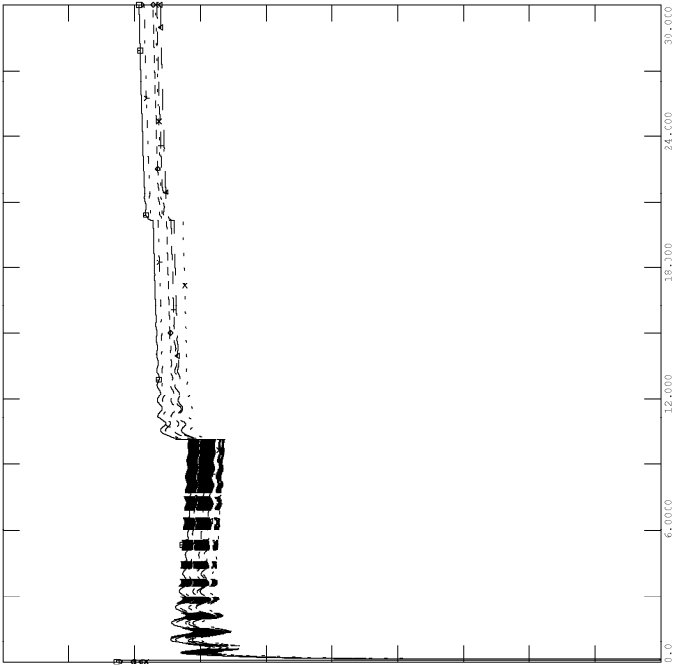


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009 8_post_01s.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	x - - - - x	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	- - - - -	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	+ - - - +	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	o - - - o	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	← - - - →	0.20000
1.2000	CHNL# 42: [V-SANLSVLY 230]	▬ - - - ▬	0.20000

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VOLTAGE V

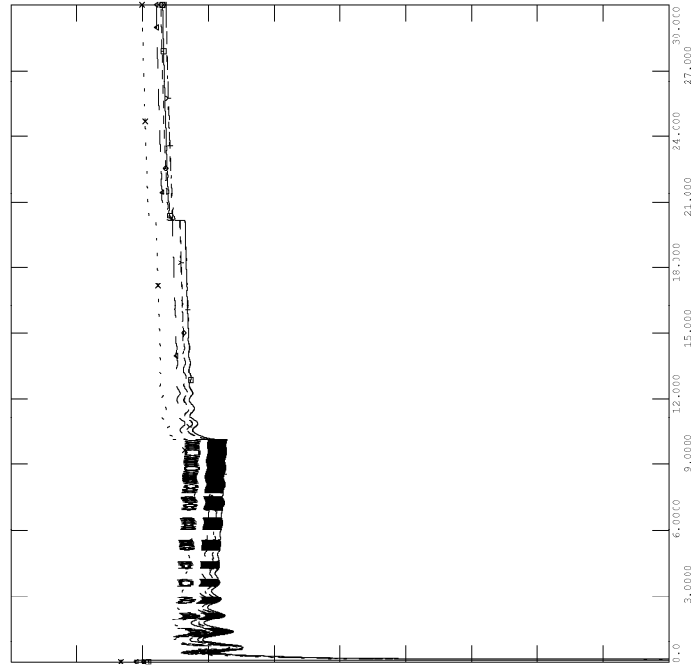


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009 8_post_01s.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	x - - - - x	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	- - - - -	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	+ - - - +	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	o - - - o	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	← - - - →	0.20000
1.2000	CHNL# 54: [V-SANLSVLY 230]	▬ - - - ▬	0.20000

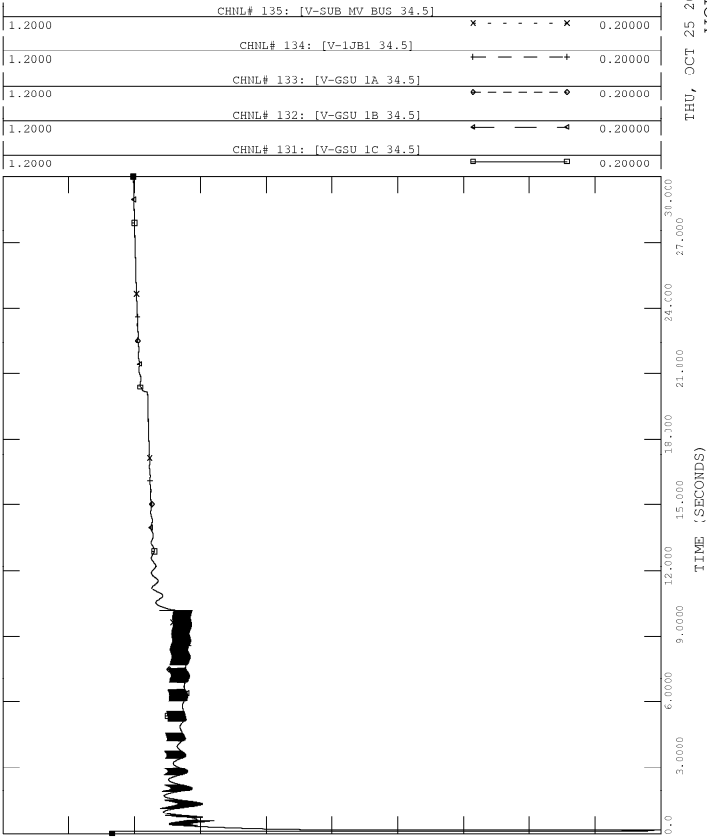
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VOLTAGE VII





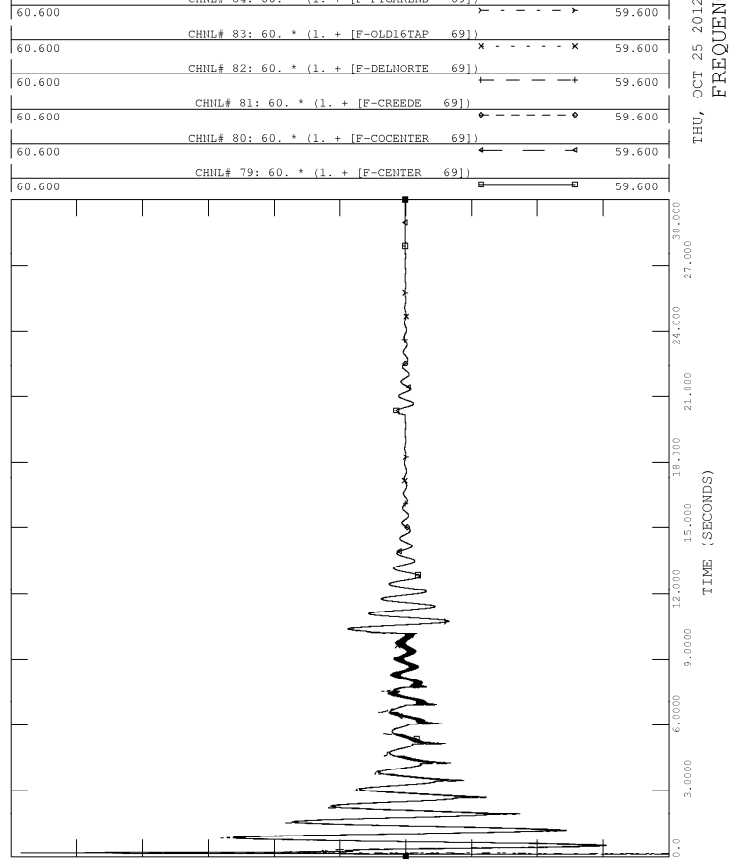
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3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

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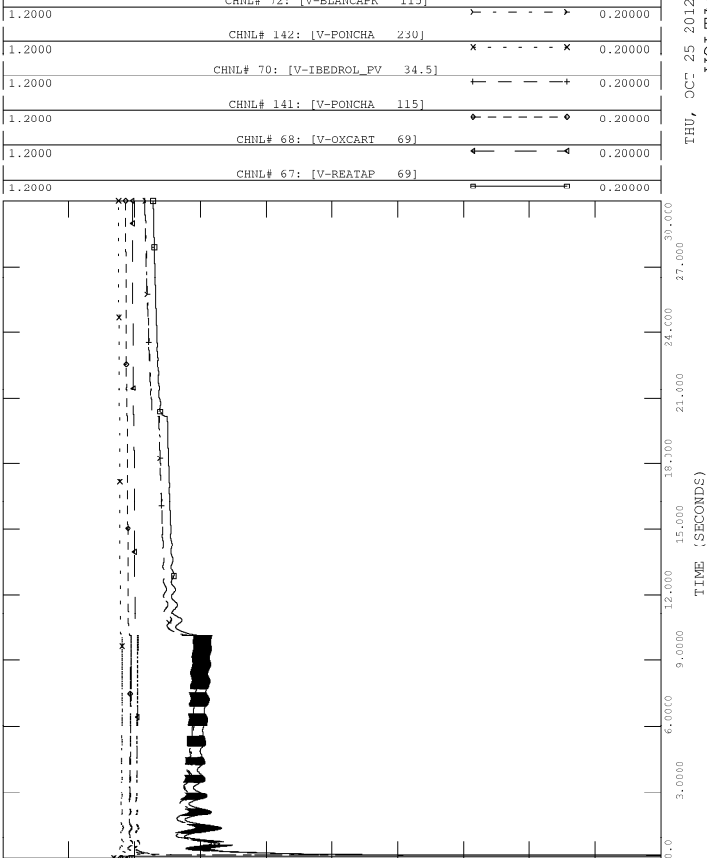
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3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

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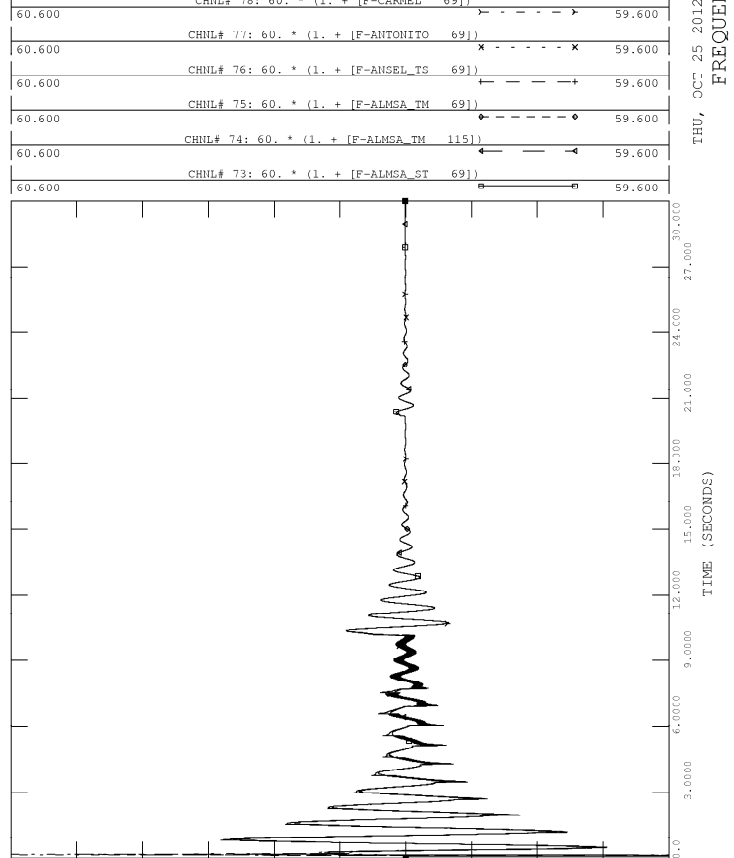
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3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

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WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

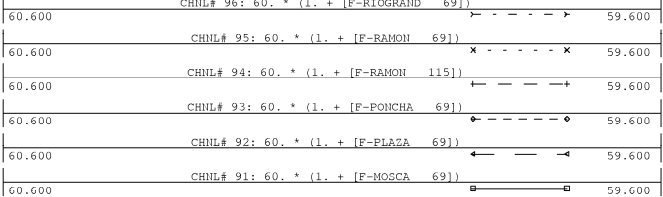
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WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_01s.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

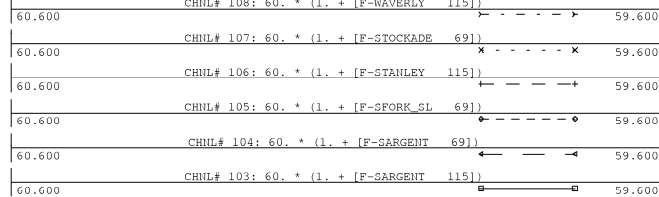


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FREQUENCY IV



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_01s.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

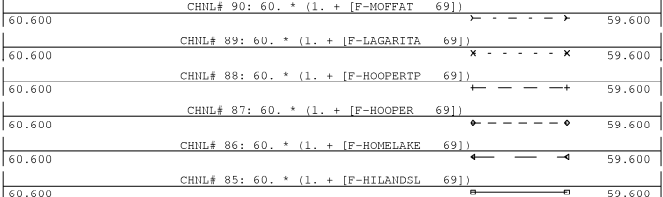


THU, OCT 25 2012 14:21
FREQUENCY VI



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_01s.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

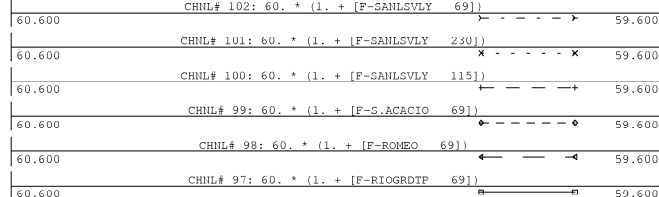


THU, OCT 25 2012 14:21
FREQUENCY III



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_01s.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])



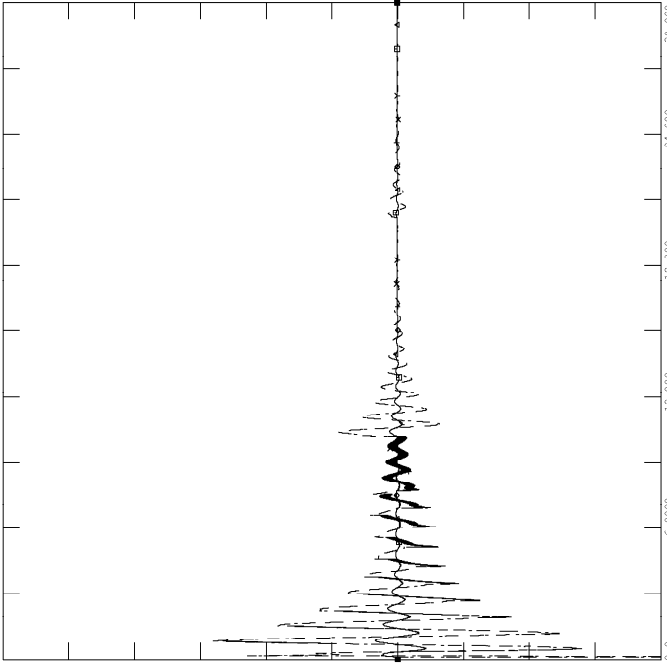
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FREQUENCY V



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_01s.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

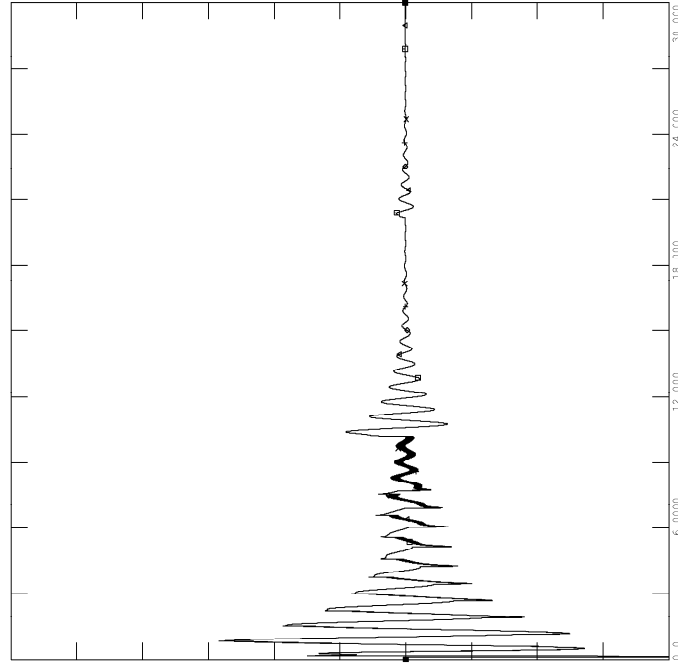
60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KERBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_01s.out

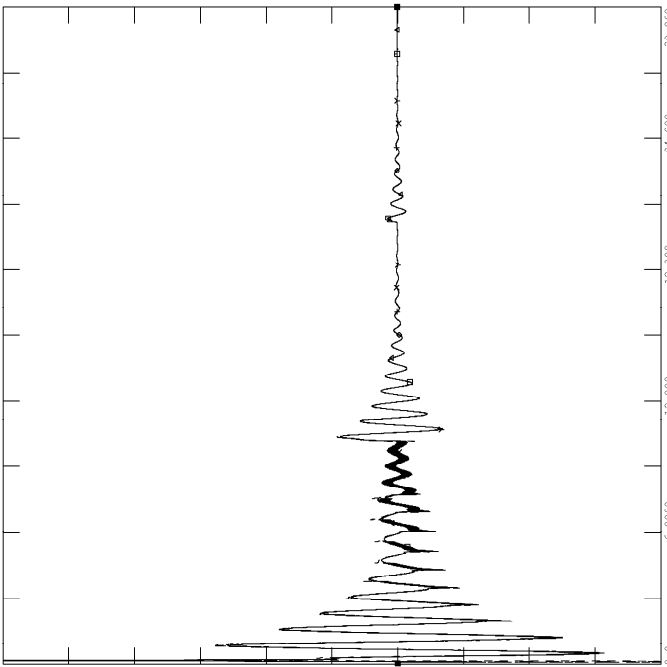
60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJBL 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_01s.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

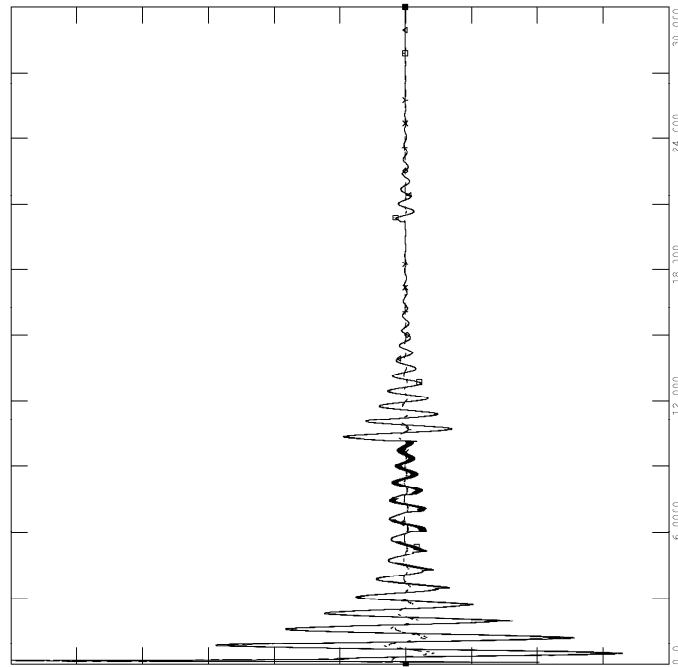
60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMSACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMSACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY ON SANLSVLY - PONCHA 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_01s.out
CHNL# 144: 60. * (1. + [F-PONCHA 230])

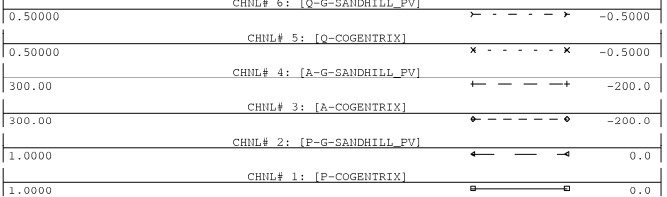
60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-COGENITX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600



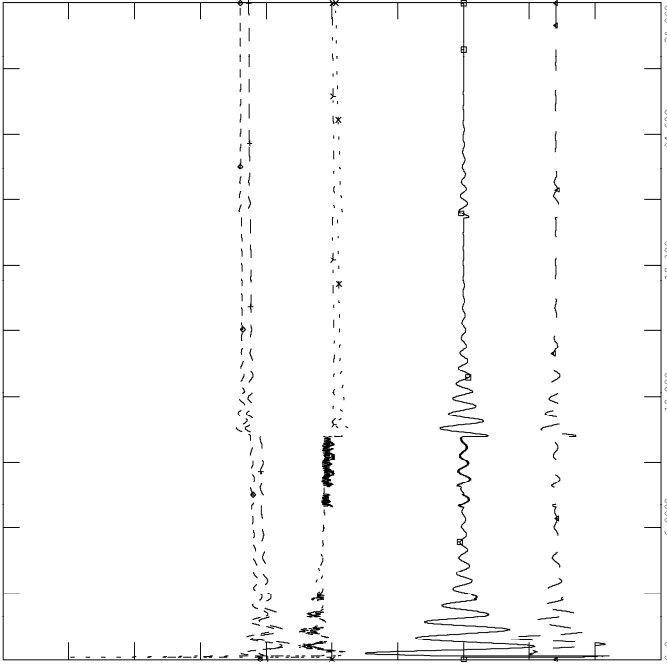


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3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02s.out
CHNL# 6: [Q-G-SANDHILL_PV]

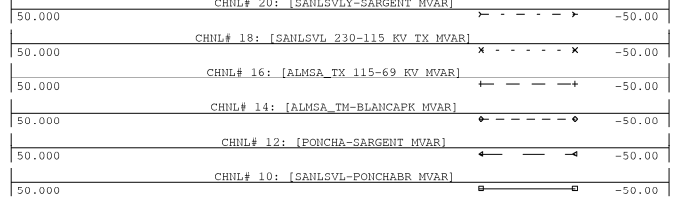


THU, OCT 25 2012 14:55
GENERATOR INFO

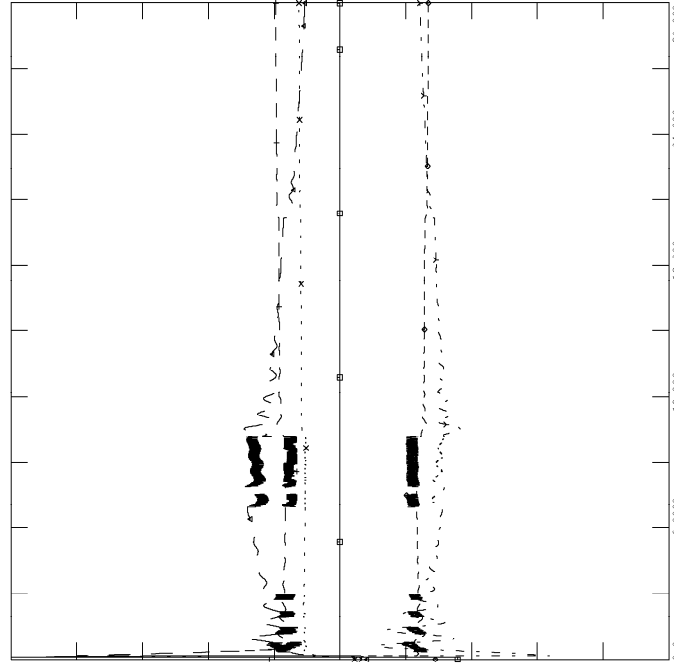


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3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02s.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]

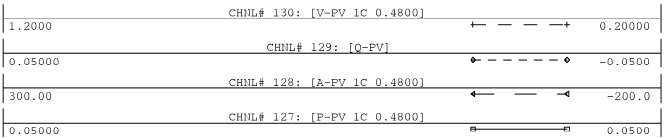


THU, OCT 25 2012 14:55
REACTIVE POWER FLOW

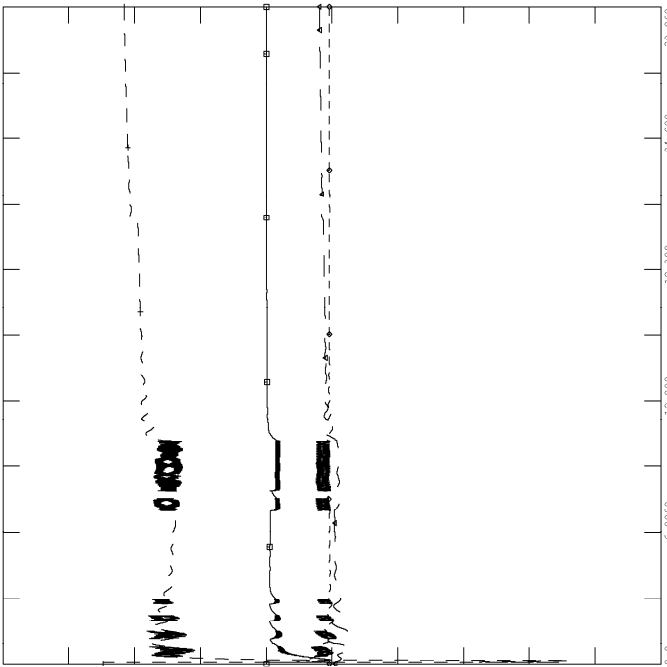


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02s.out

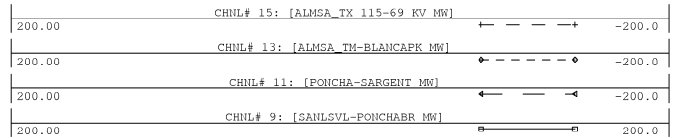


THU, OCT 25 2012 14:55
GI-2009-08 UNIT PV 1C INF

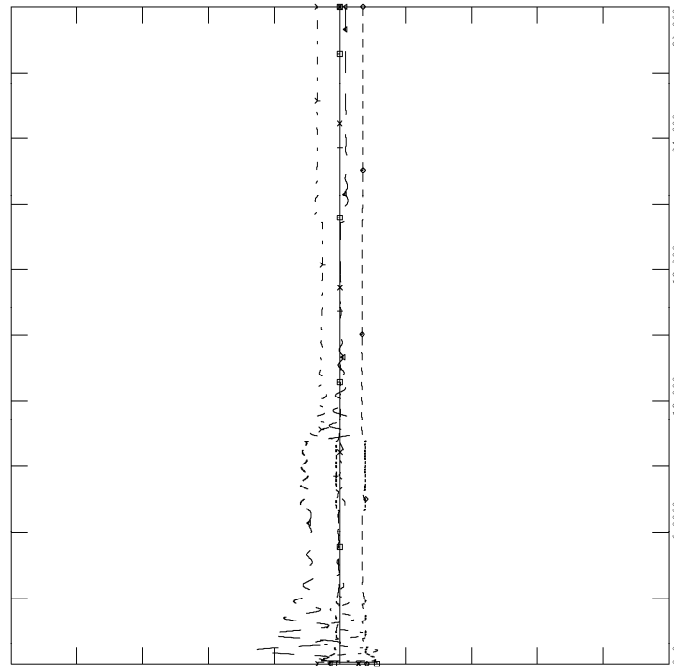


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3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02s.out



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ACTIVE POWER FLOW



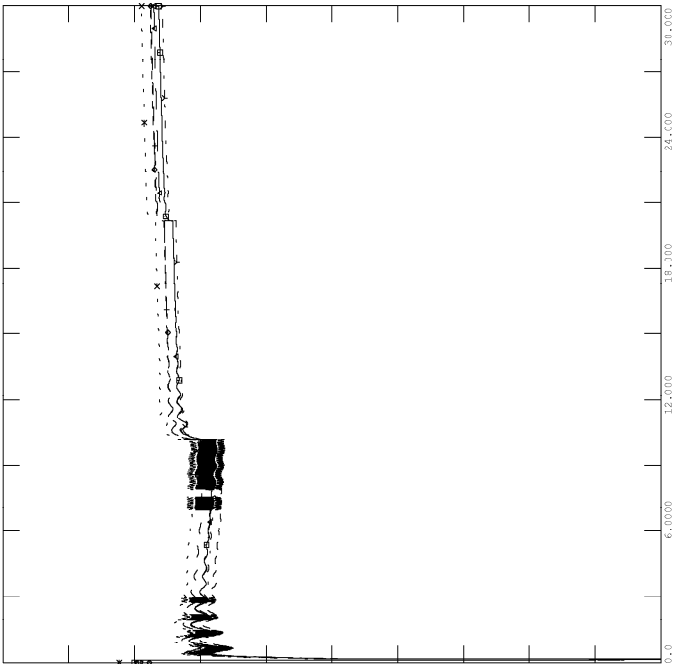


WECC APPROVED 2012 HS4A OPERATING CASE
 3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out
 CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

THU, OCT 25 2012 14:55
 VOLTAGE II

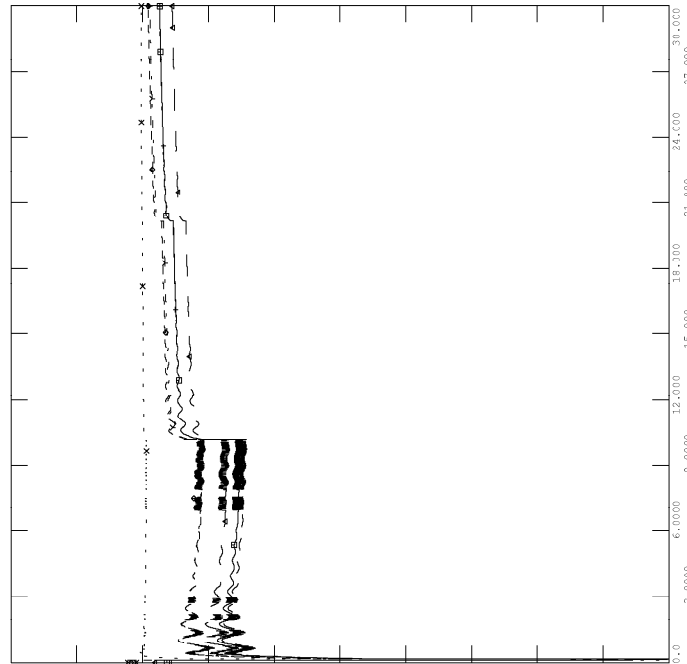


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 3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out
 CHNL# 41: [V-PONCHA 69]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

THU, OCT 25 2012 14:55
 VOLTAGE IV

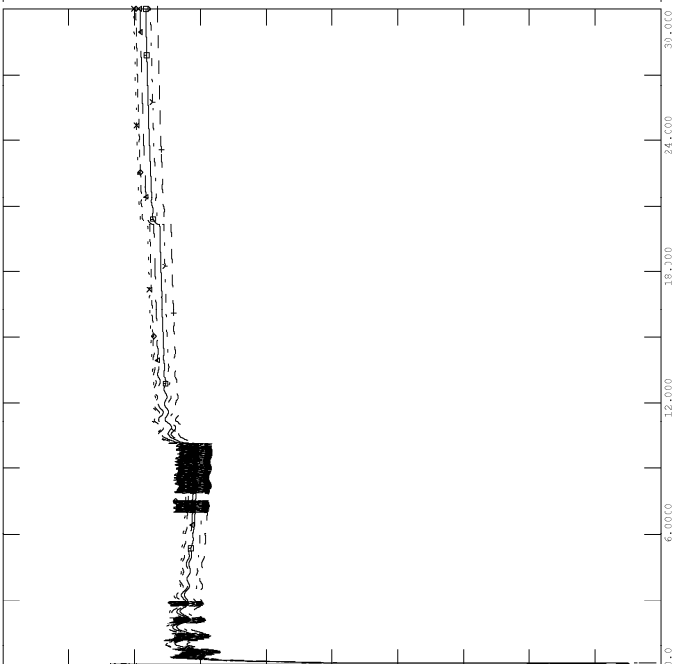


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 3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out
 CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

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 VOLTAGE I

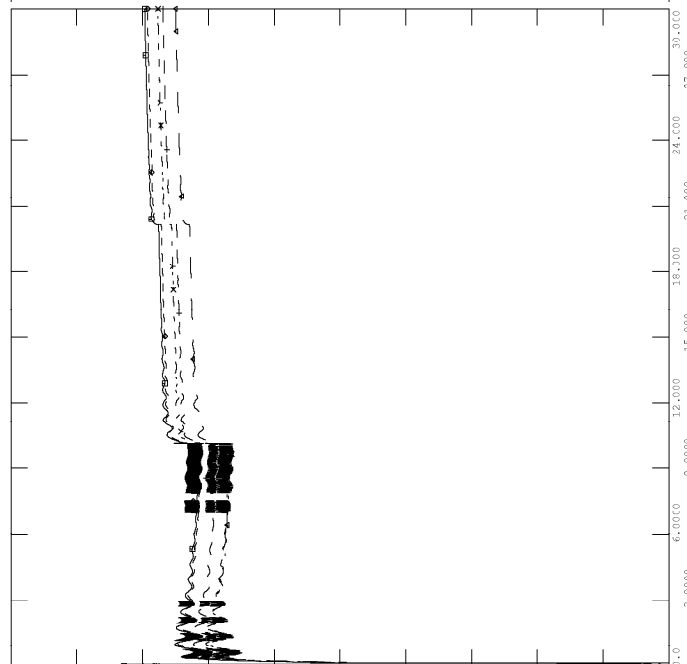


WECC APPROVED 2012 HS4A OPERATING CASE
 3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out
 CHNL# 36: [V-HOOPER TP 69]

1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	x - - - - - x	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	+ - - - - +	0.20000
1.2000	CHNL# 32: [V-FTGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

THU, OCT 25 2012 14:55
 VOLTAGE III



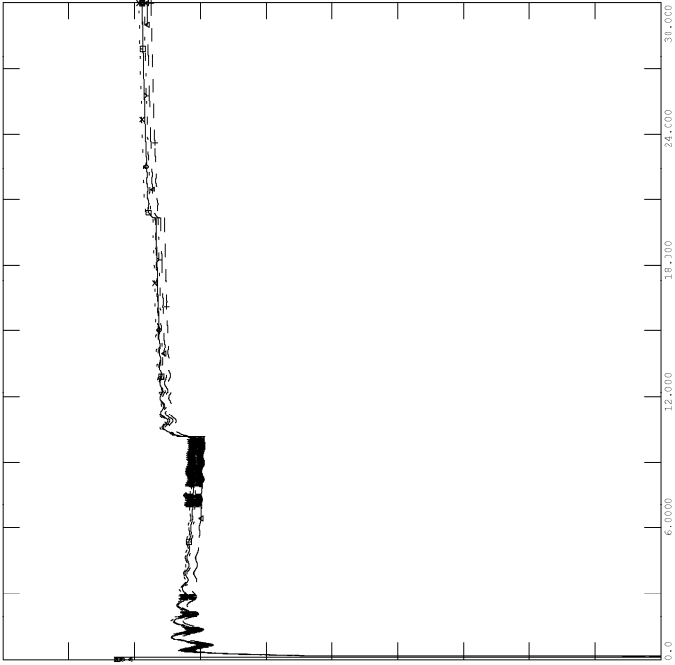


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK_SL 69]	→ - - - - - →	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	× - - - - - ×	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	← - - - - - ←	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	◆ - - - - - ◆	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	◀ - - - - - ▶	0.20000
1.2000	CHNL# 48: [V-SANLSVLY 115]	▬ - - - - - ▬	0.20000

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VOLTAGE VI

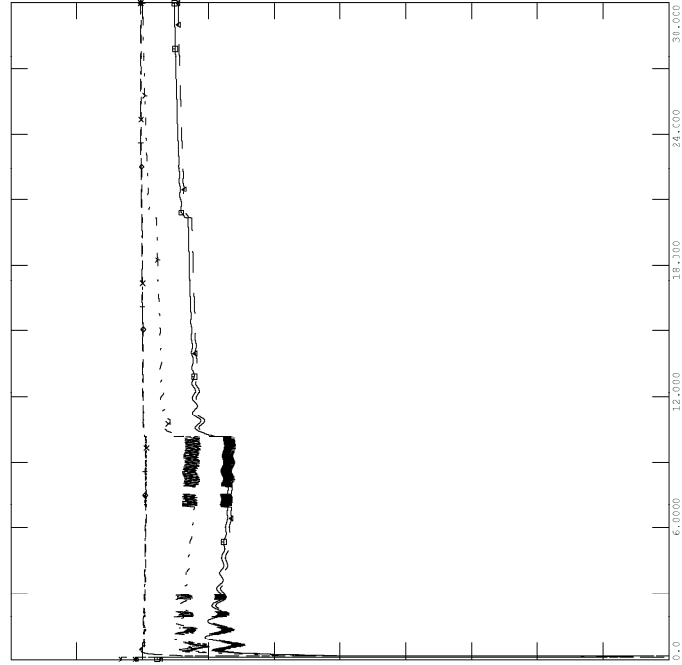


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	→ - - - - - →	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	× - - - - - ×	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	← - - - - - ←	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	◆ - - - - - ◆	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	◀ - - - - - ▶	0.20000
1.2000	CHNL# 60: [V-ALMSACT2 13.8]	▬ - - - - - ▬	0.20000

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VOLTAGE VIII

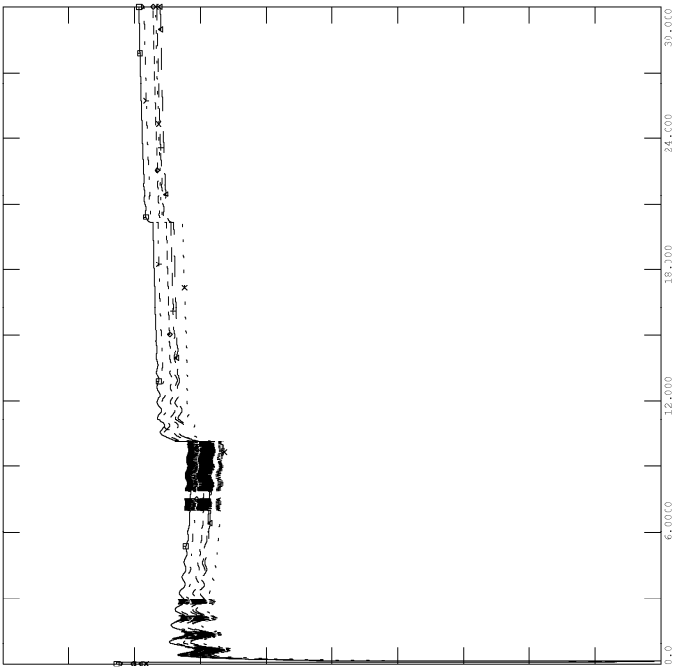


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3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	→ - - - - - →	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	× - - - - - ×	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	← - - - - - ←	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	◆ - - - - - ◆	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	◀ - - - - - ▶	0.20000
1.2000	CHNL# 42: [V-SANLSVLY 115]	▬ - - - - - ▬	0.20000

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VOLTAGE V

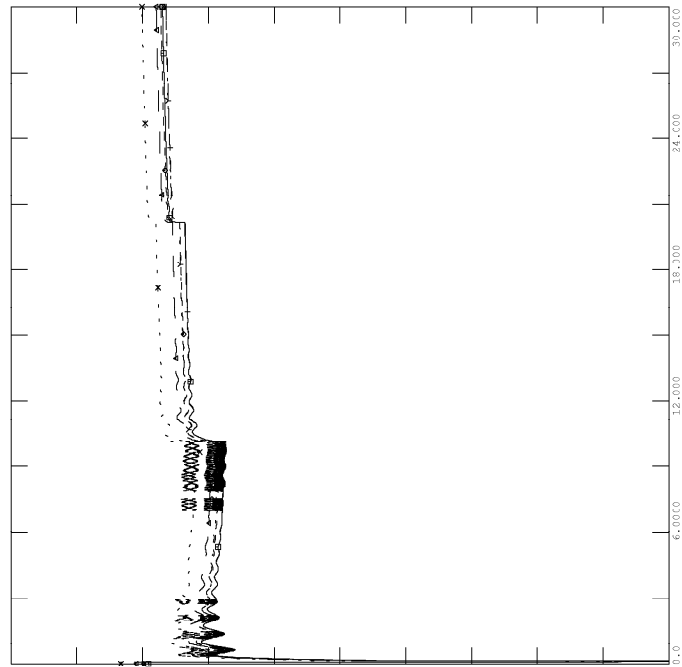


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3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	→ - - - - - →	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	× - - - - - ×	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	← - - - - - ←	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	◆ - - - - - ◆	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	◀ - - - - - ▶	0.20000
1.2000	CHNL# 54: [V-SANLSVLY 115]	▬ - - - - - ▬	0.20000

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VOLTAGE VII

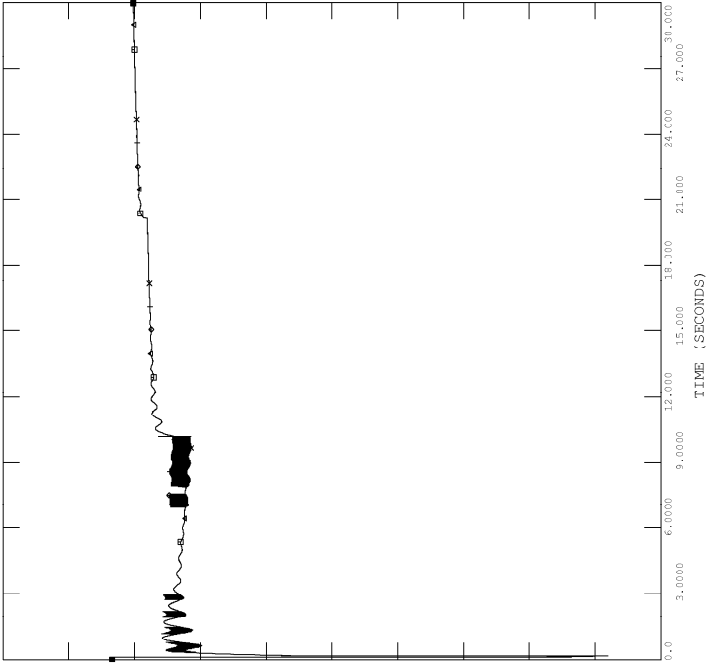




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3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out

1.2000	CHNL# 135: [V-SUB MV BUS 34.5]	x - - - - x	0.20000
1.2000	CHNL# 134: [V-LJB1 34.5]	- - - - -	0.20000
1.2000	CHNL# 133: [V-GSU 1A 34.5]	- - - - -	0.20000
1.2000	CHNL# 132: [V-GSU 1B 34.5]	- - - - -	0.20000
1.2000	CHNL# 131: [V-GSU 1C 34.5]	- - - - -	0.20000



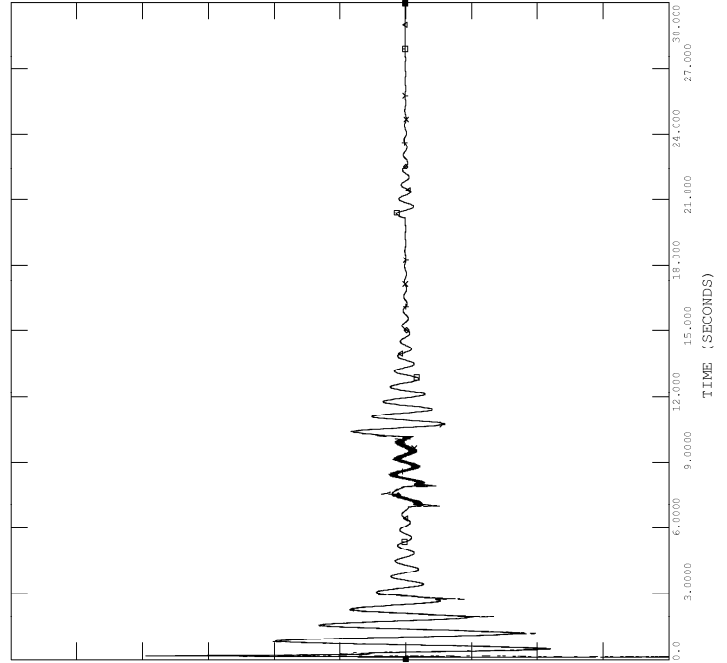
THU, OCT 25 2012 14:55
VOLTAGE X



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3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out

60.600	CHNL# 83: 60. * (1. + [F-OLD16TAP 69])	x - - - - x	59.600
60.600	CHNL# 82: 60. * (1. + [F-DELNORTE 69])	- - - - -	59.600
60.600	CHNL# 81: 60. * (1. + [F-CREEDE 69])	- - - - -	59.600
60.600	CHNL# 80: 60. * (1. + [F-COCENTER 69])	- - - - -	59.600
60.600	CHNL# 79: 60. * (1. + [F-CENTER 69])	- - - - -	59.600



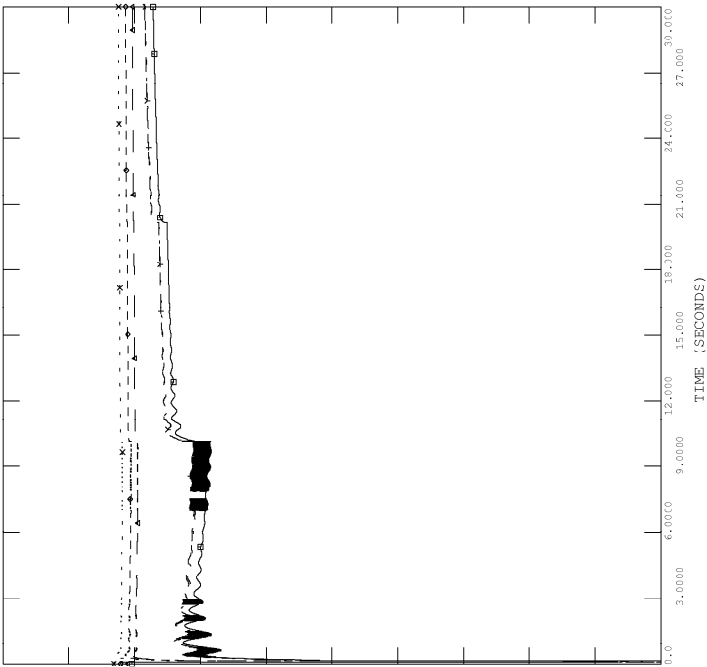
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FREQUENCY II



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3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out

1.2000	CHNL# 72: [V-BLANCAPK 115]	- - - - -	0.20000
1.2000	CHNL# 142: [V-PONCHA 230]	x - - - - x	0.20000
1.2000	CHNL# 70: [V-IBEDROL_PV 34.5]	- - - - -	0.20000
1.2000	CHNL# 141: [V-PONCHA 115]	- - - - -	0.20000
1.2000	CHNL# 68: [V-OXCART 69]	- - - - -	0.20000
1.2000	CHNL# 67: [V-REATAP 69]	- - - - -	0.20000



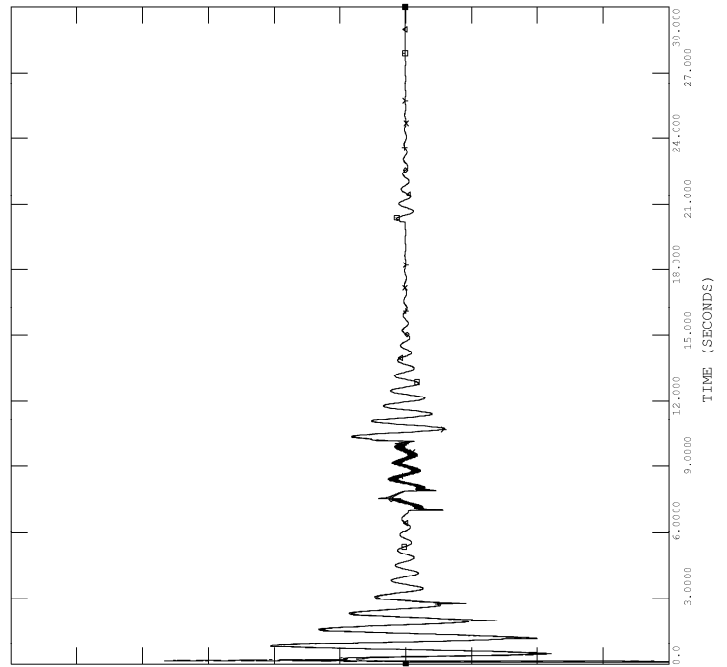
THU, OCT 25 2012 14:55
VOLTAGE IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out

60.600	CHNL# 78: 60. * (1. + [F-CARNEI 69])	- - - - -	59.600
60.600	CHNL# 77: 60. * (1. + [F-ANTONITO 69])	x - - - - x	59.600
60.600	CHNL# 76: 60. * (1. + [F-ANSEL_TS 69])	- - - - -	59.600
60.600	CHNL# 75: 60. * (1. + [F-ALMSA_TM 69])	- - - - -	59.600
60.600	CHNL# 74: 60. * (1. + [F-ALMSA_TM 115])	- - - - -	59.600
60.600	CHNL# 73: 60. * (1. + [F-ALMSA_ST 69])	- - - - -	59.600



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FREQUENCY I

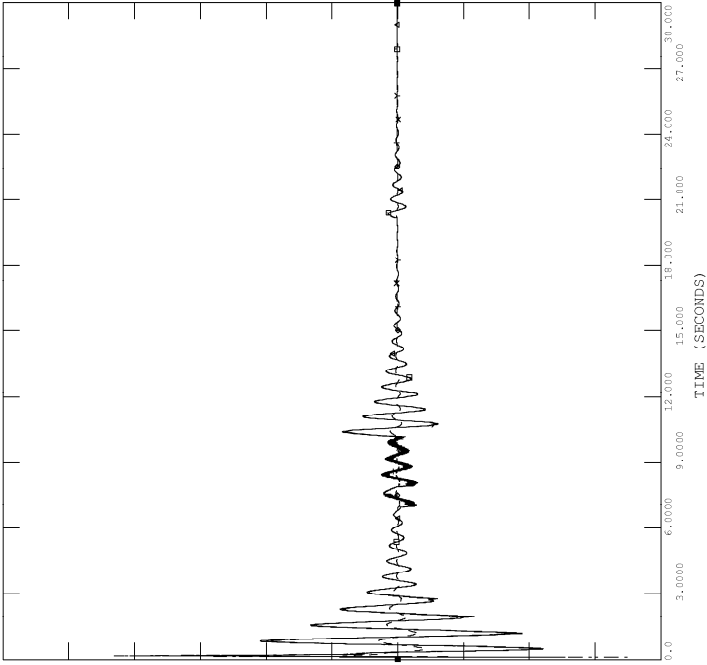


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3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

60.600	CHNL# 95: 60. * (1. + [F-RAMON 69])	59.600
60.600	CHNL# 94: 60. * (1. + [F-RAMON 115])	59.600
60.600	CHNL# 93: 60. * (1. + [F-PONCHA 69])	59.600
60.600	CHNL# 92: 60. * (1. + [F-PLAZA 69])	59.600
60.600	CHNL# 91: 60. * (1. + [F-MOSCA 69])	59.600

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FREQUENCY IV

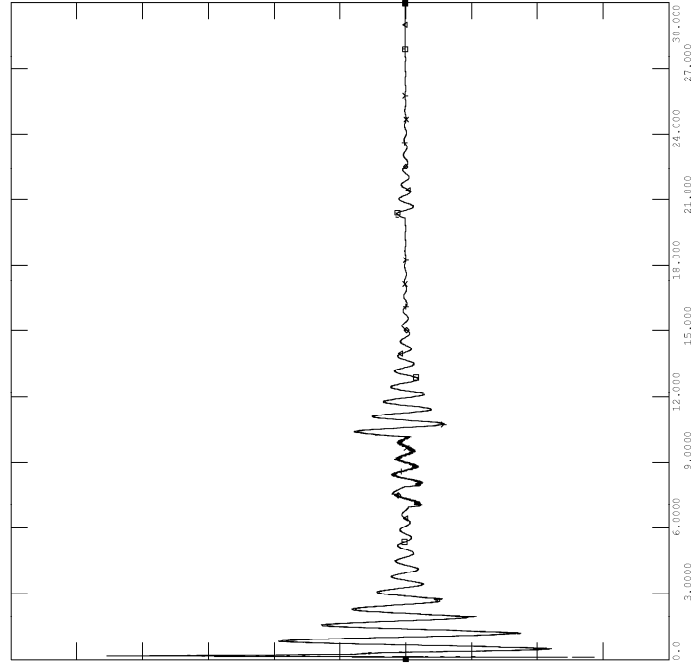


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3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

60.600	CHNL# 107: 60. * (1. + [F-STOCKADE 69])	59.600
60.600	CHNL# 106: 60. * (1. + [F-STANLEY 115])	59.600
60.600	CHNL# 105: 60. * (1. + [F-SFORK_GL 69])	59.600
60.600	CHNL# 104: 60. * (1. + [F-SARGENT 69])	59.600
60.600	CHNL# 103: 60. * (1. + [F-SARGENT 115])	59.600

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FREQUENCY VI

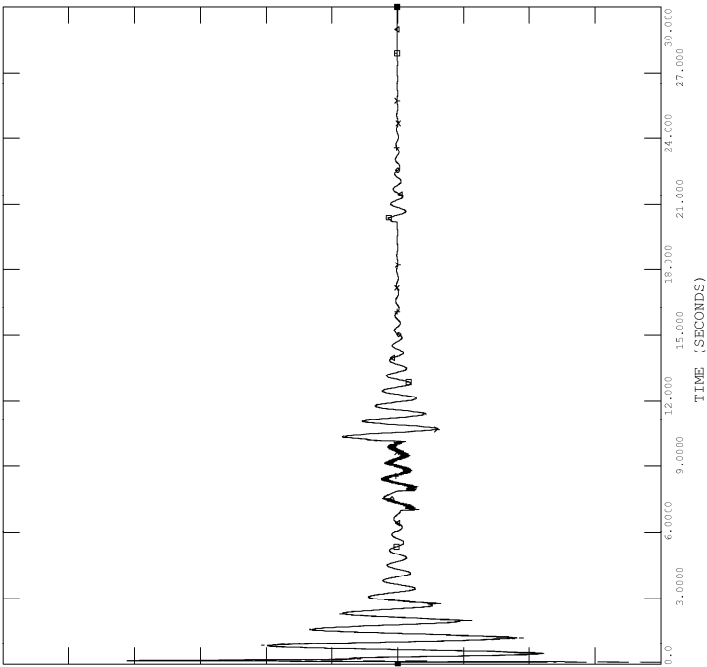


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3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

60.600	CHNL# 89: 60. * (1. + [F-LAGARITA 69])	59.600
60.600	CHNL# 88: 60. * (1. + [F-HOOPERTP 69])	59.600
60.600	CHNL# 87: 60. * (1. + [F-HOOPER 69])	59.600
60.600	CHNL# 86: 60. * (1. + [F-HOMELAKE 69])	59.600
60.600	CHNL# 85: 60. * (1. + [F-HILANDSL 69])	59.600

THU, OCT 25 2012 14:55
FREQUENCY III

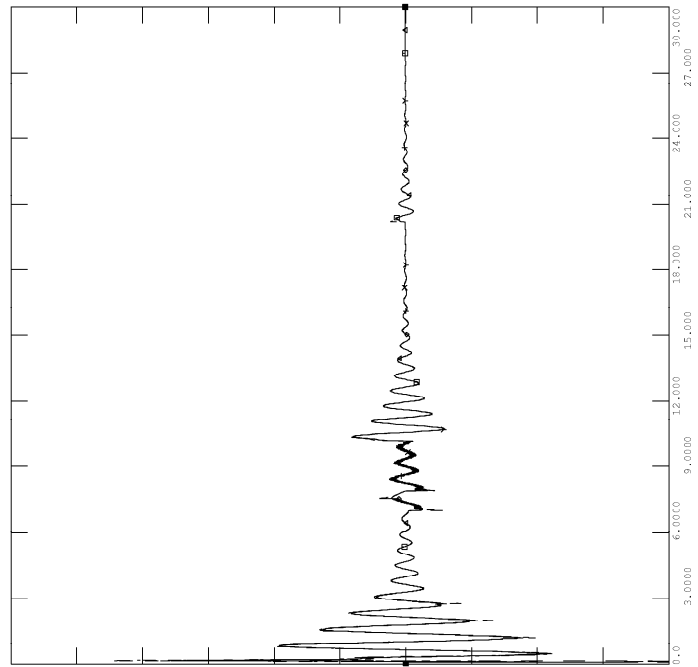


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02a.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])

60.600	CHNL# 101: 60. * (1. + [F-SANLSVLY 230])	59.600
60.600	CHNL# 100: 60. * (1. + [F-SANLSVLY 115])	59.600
60.600	CHNL# 99: 60. * (1. + [F-S.ACACIO 69])	59.600
60.600	CHNL# 98: 60. * (1. + [F-ROMEO 69])	59.600
60.600	CHNL# 97: 60. * (1. + [F-RIOGRDTP 69])	59.600

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FREQUENCY V

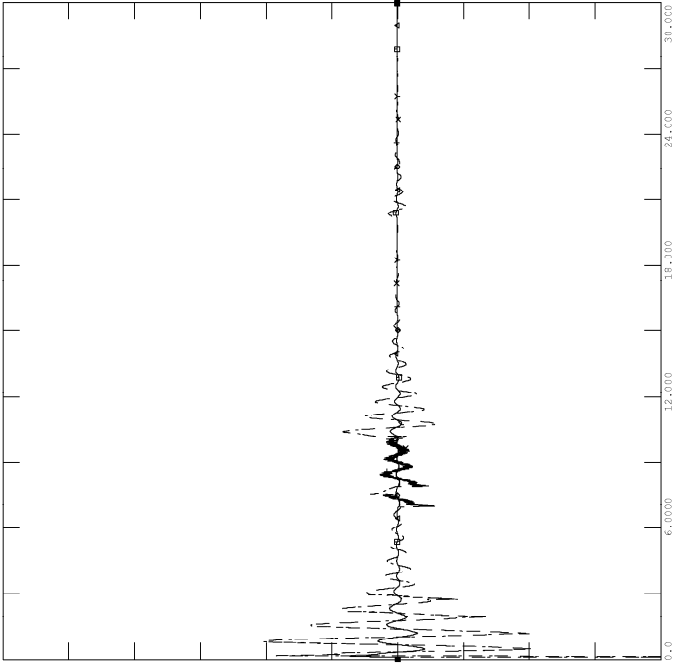




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3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02s.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KERBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



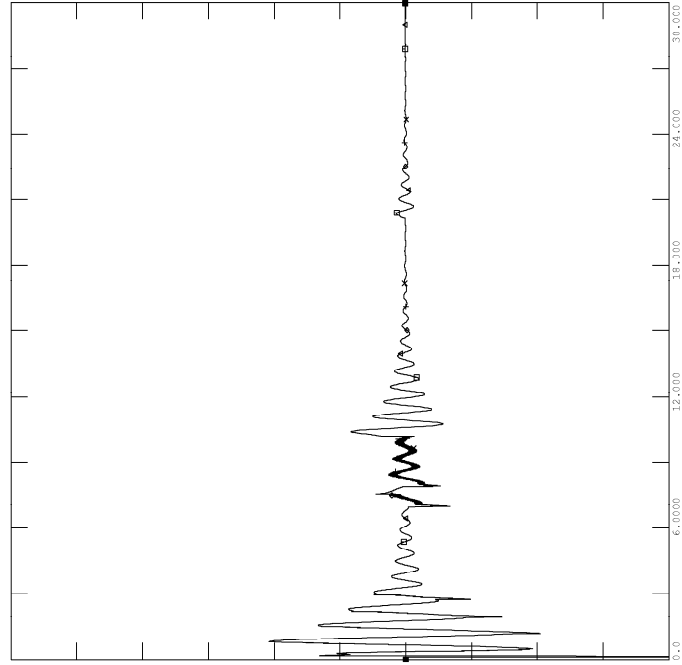
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FREQUENCY VIII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02s.out

60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJBI 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



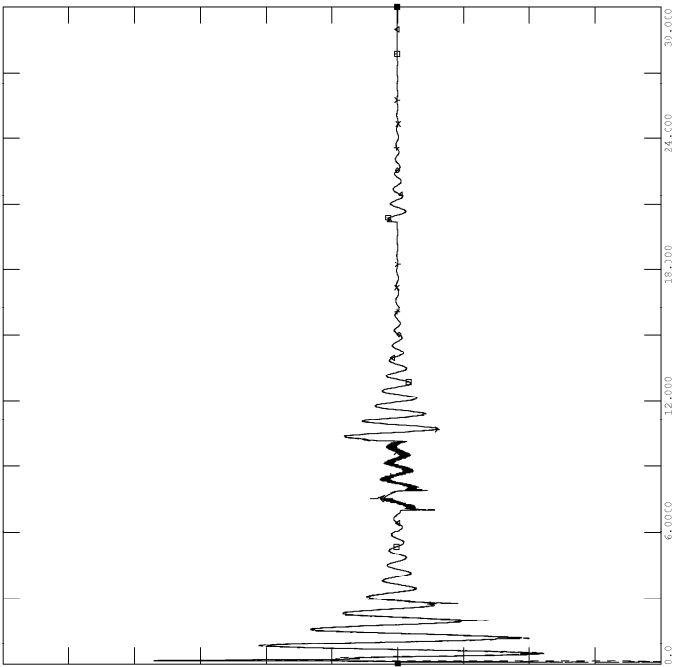
THU, OCT 25 2012 14:55
FREQUENCY IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02s.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMSACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMSACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



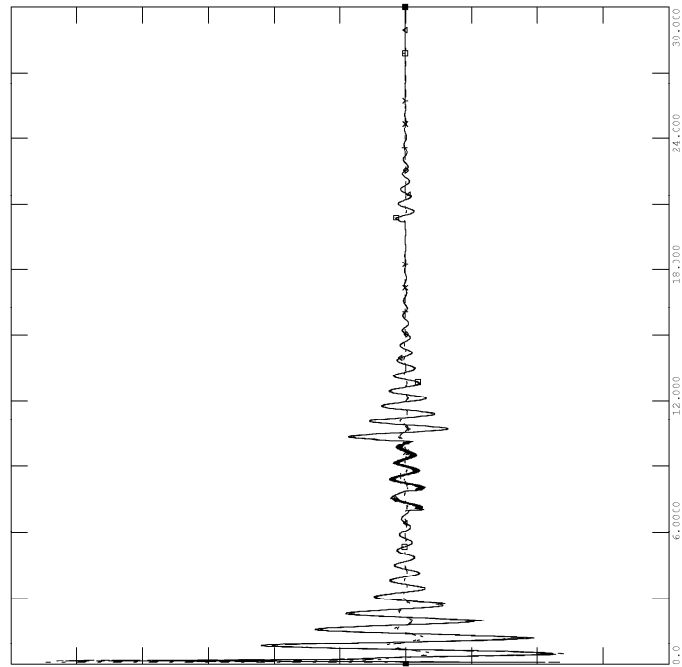
THU, OCT 25 2012 14:55
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA- SAN LUIS VALLEY 230 KV LINE

FILE: ..\bin\post\GI 2009_8_post_02s.out
CHNL# 144: 60. * (1. + [F-PONCHA 230])

60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-CEGENTIX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600

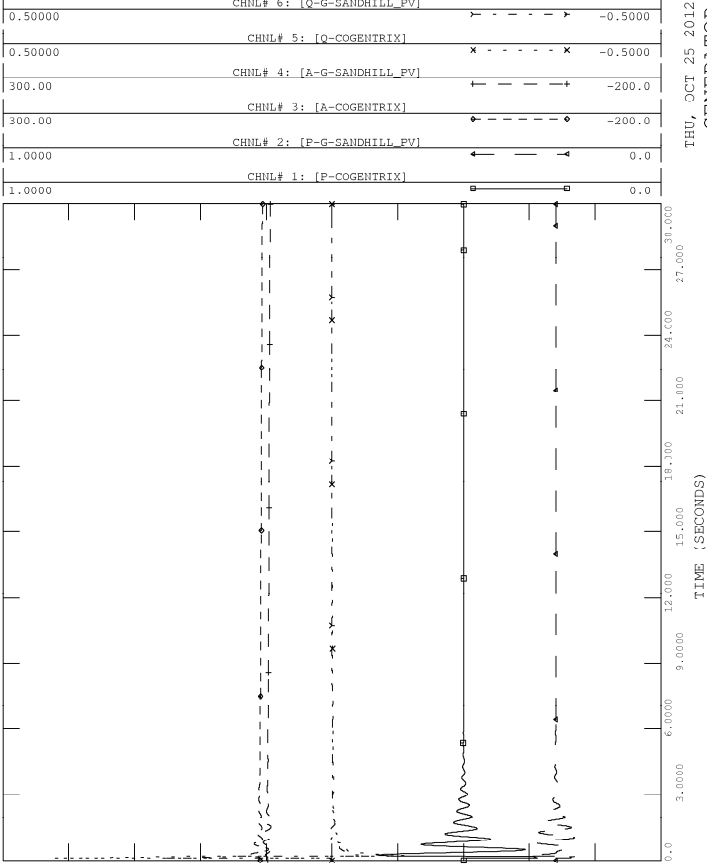


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FREQUENCY IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 6: [Q-G-SANDHILL_PV]

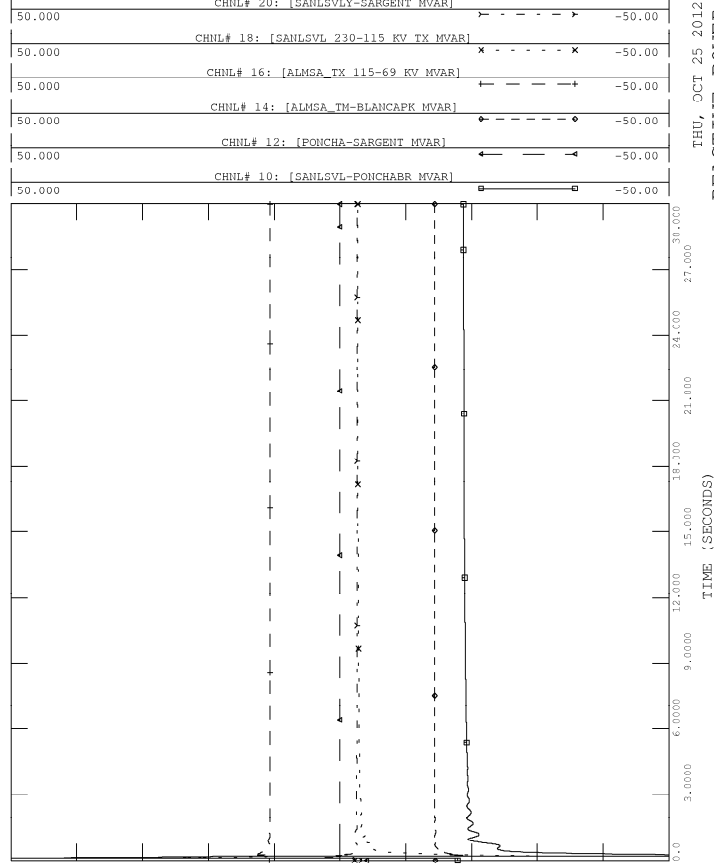


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GENERATOR INFO



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 20: [SANLSVLY-SARGENT_MVAR]

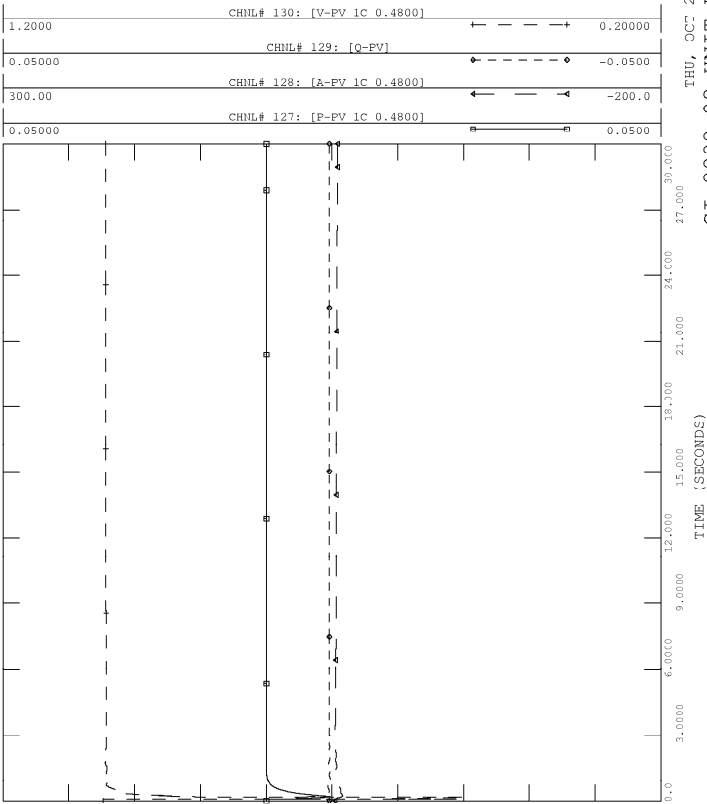


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REACTIVE POWER FLOW



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03s.out

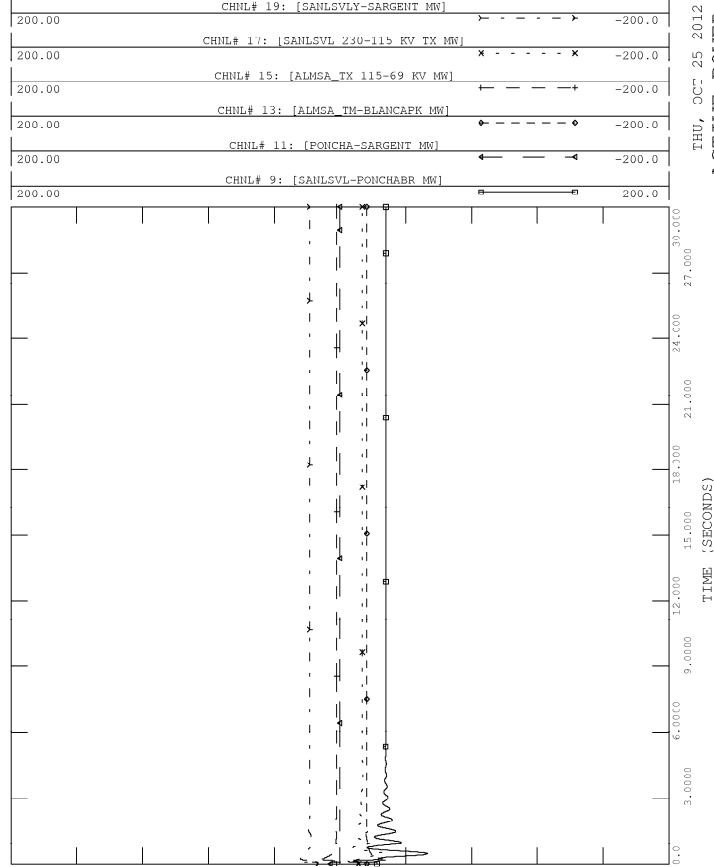


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GI-2009-08 UNIT PV 1C INF



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3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03s.out



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ACTIVE POWER FLOW

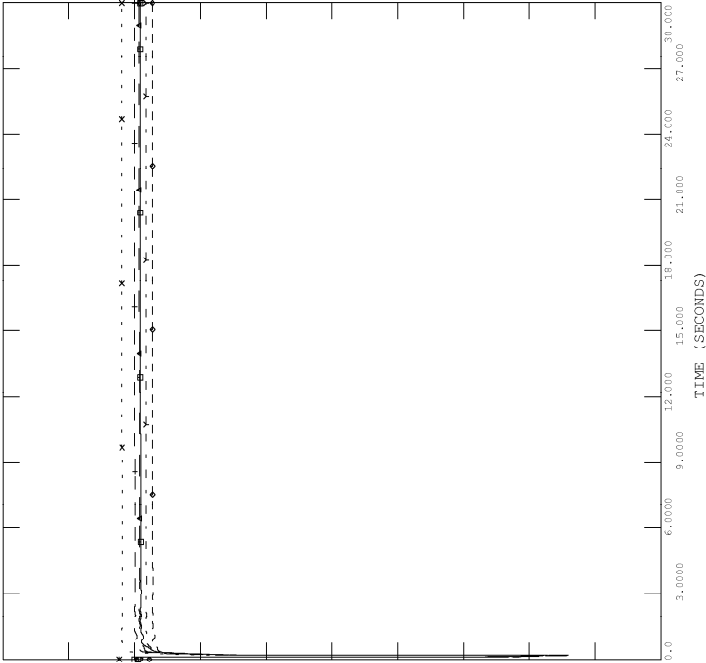


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

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VOLTAGE II

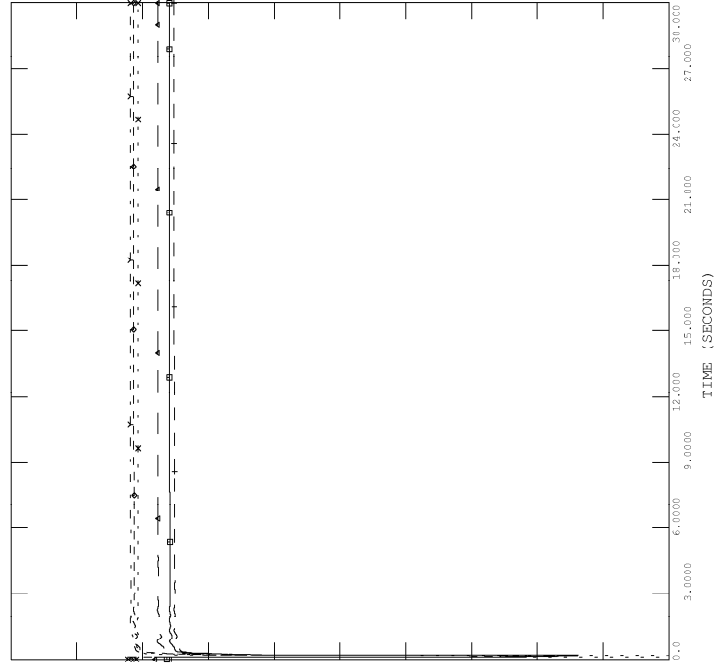


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 42: [V-RAMON 115]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

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VOLTAGE IV

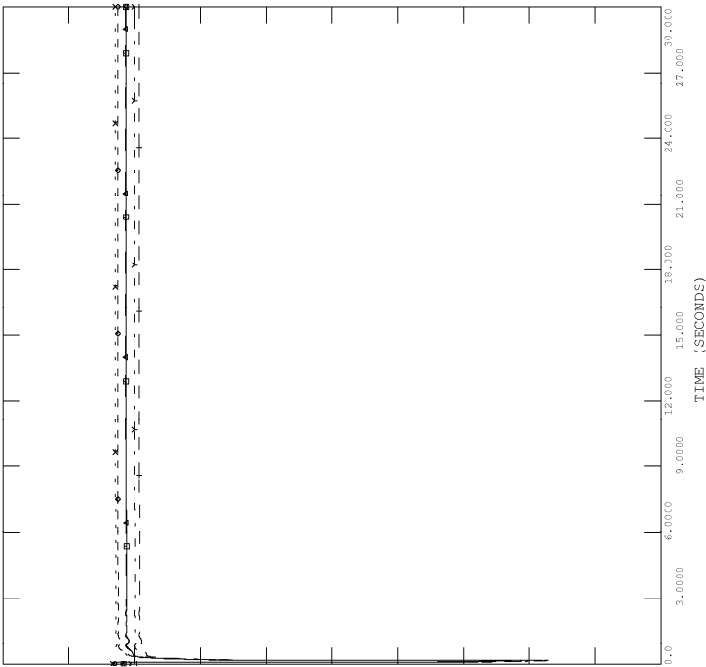


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

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VOLTAGE I

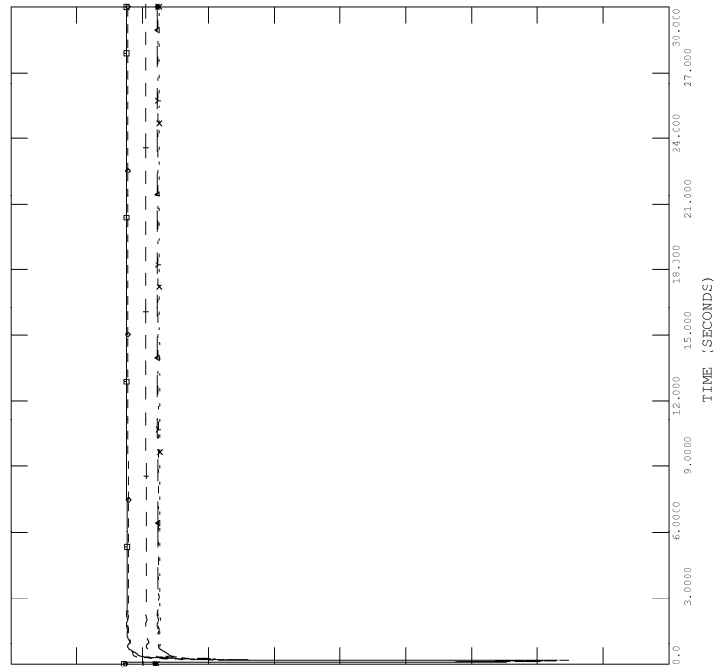


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3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 36: [V-HOOPERTIP 69]

1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	x - - - - x	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	+ - - - - +	0.20000
1.2000	CHNL# 32: [V-FIGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

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VOLTAGE III



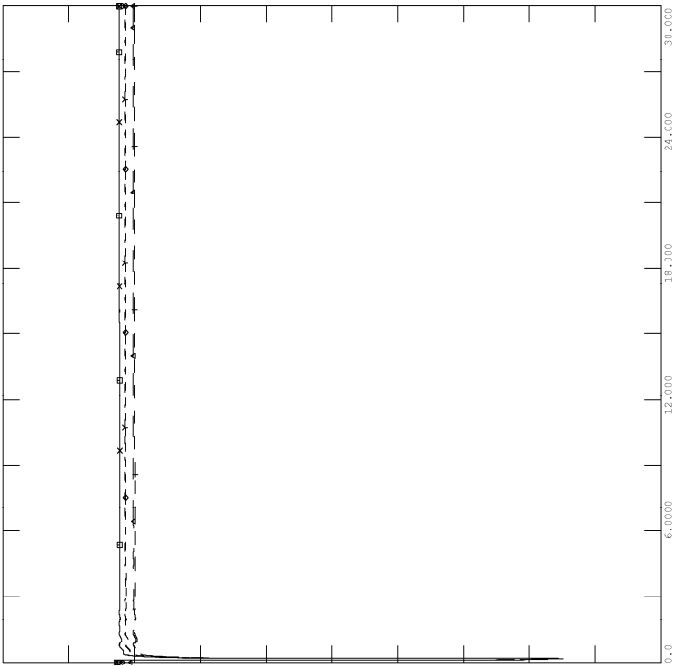


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3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK SL 69]	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	0.20000

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VOLTAGE VI

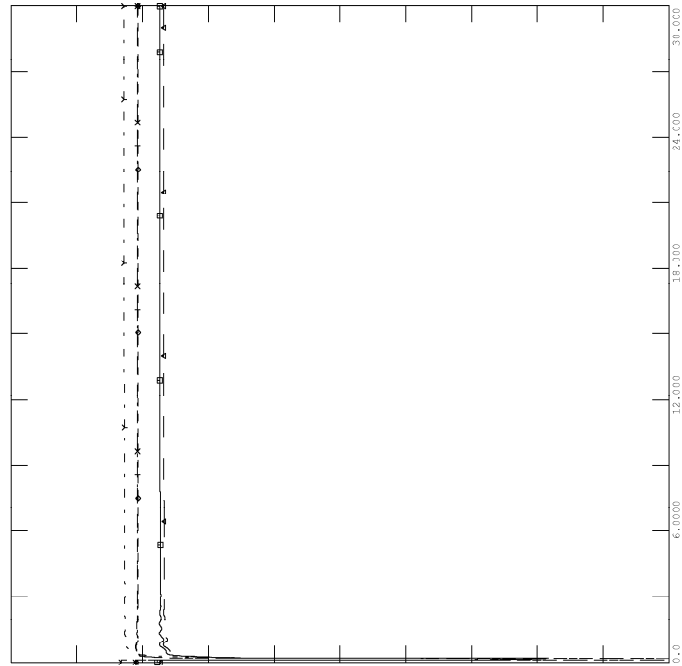


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3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	0.20000

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VOLTAGE VIII

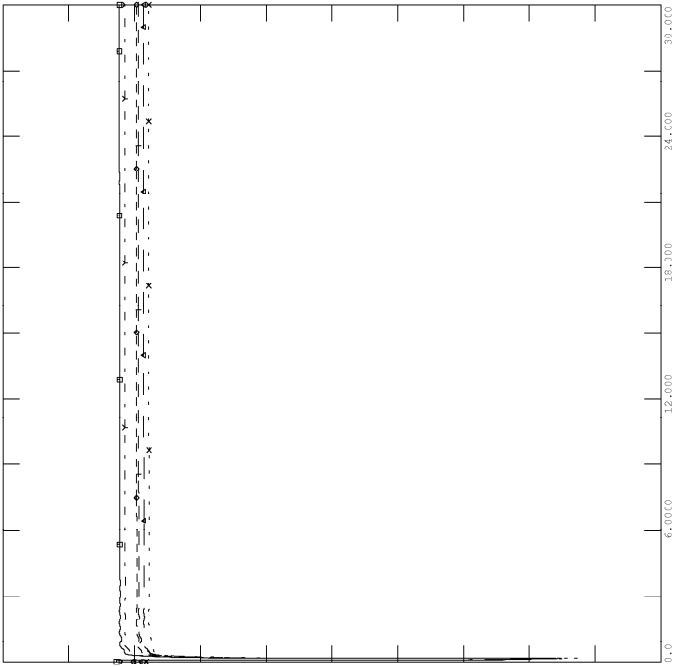


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3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	0.20000

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VOLTAGE V

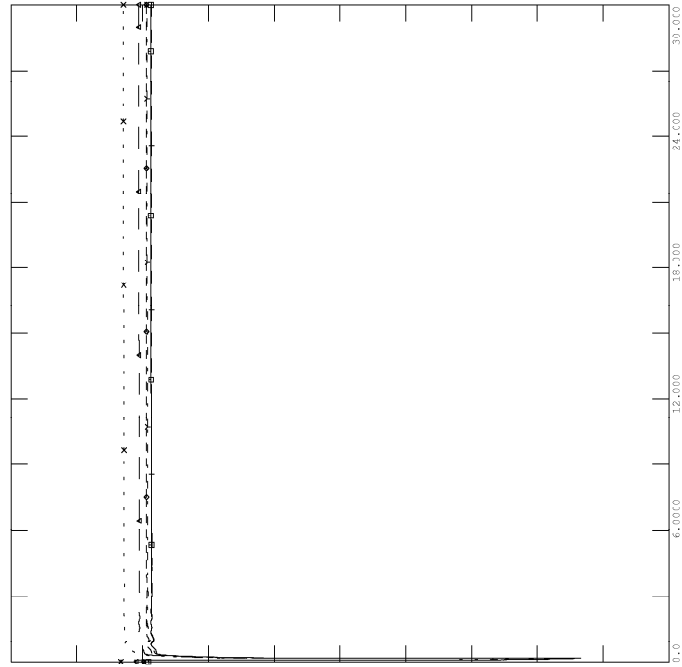


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3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	0.20000

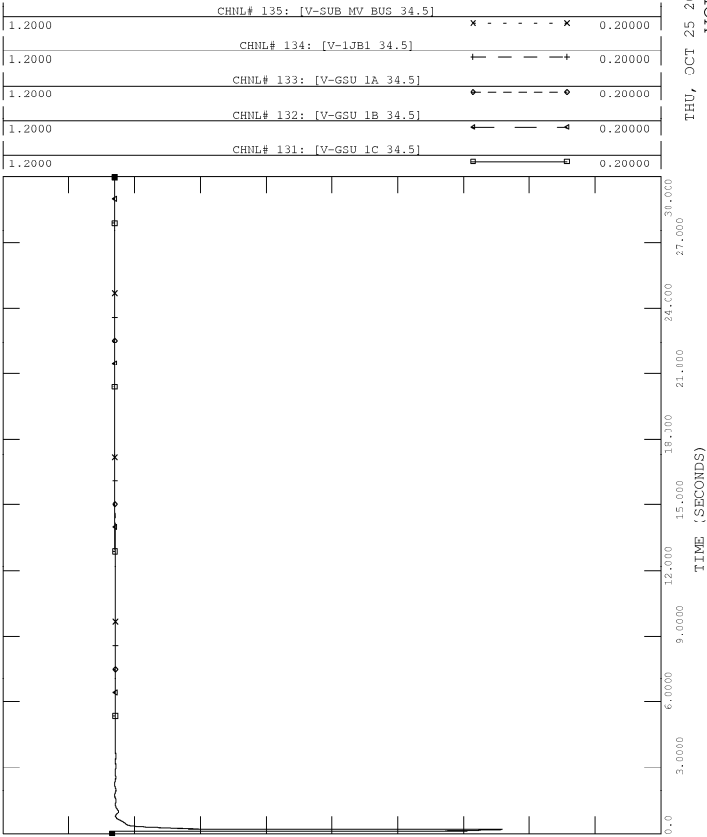
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VOLTAGE VII





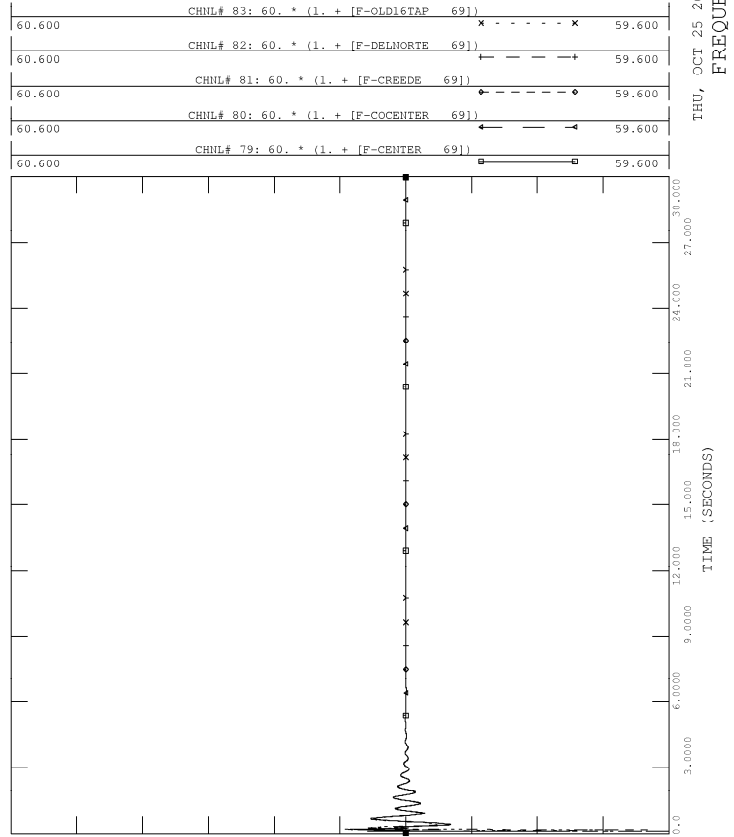
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out



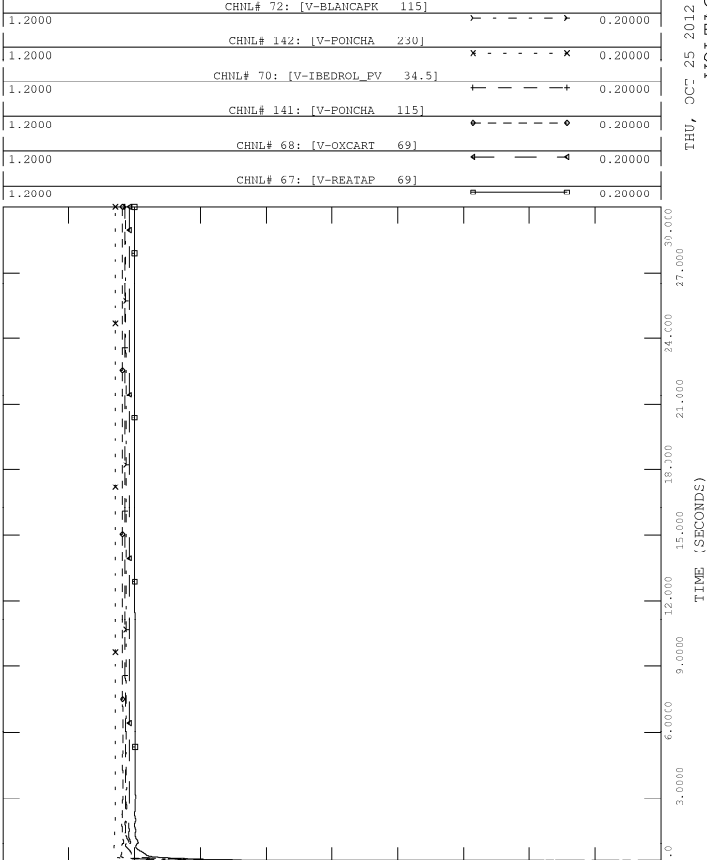
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out



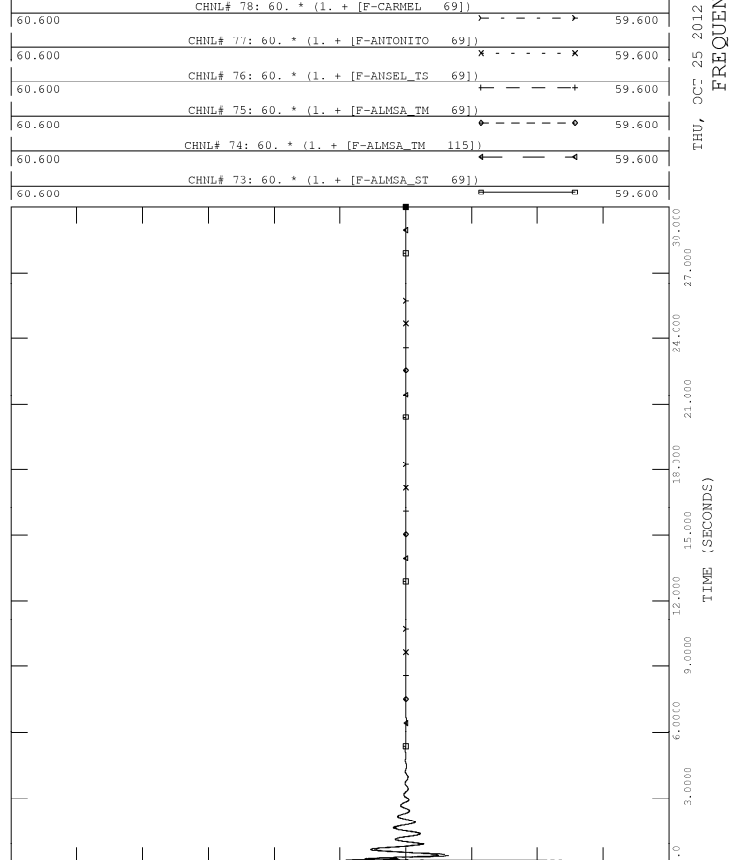
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3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out



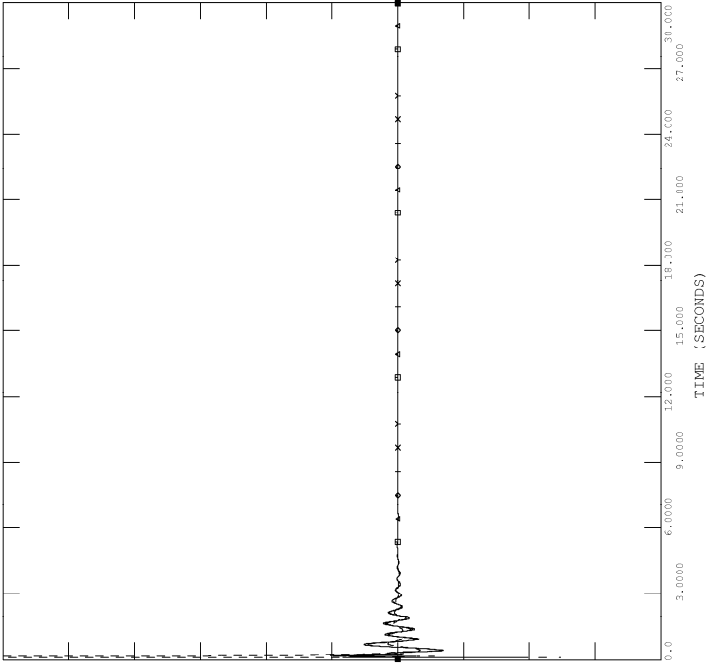


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3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

60.600	CHNL# 95: 60. * (1. + [F-RAMON 69])	59.600
60.600	CHNL# 94: 60. * (1. + [F-RAMON 115])	59.600
60.600	CHNL# 93: 60. * (1. + [F-PONCHA 69])	59.600
60.600	CHNL# 92: 60. * (1. + [F-PLAZA 69])	59.600
60.600	CHNL# 91: 60. * (1. + [F-MOSCA 69])	59.600

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FREQUENCY IV

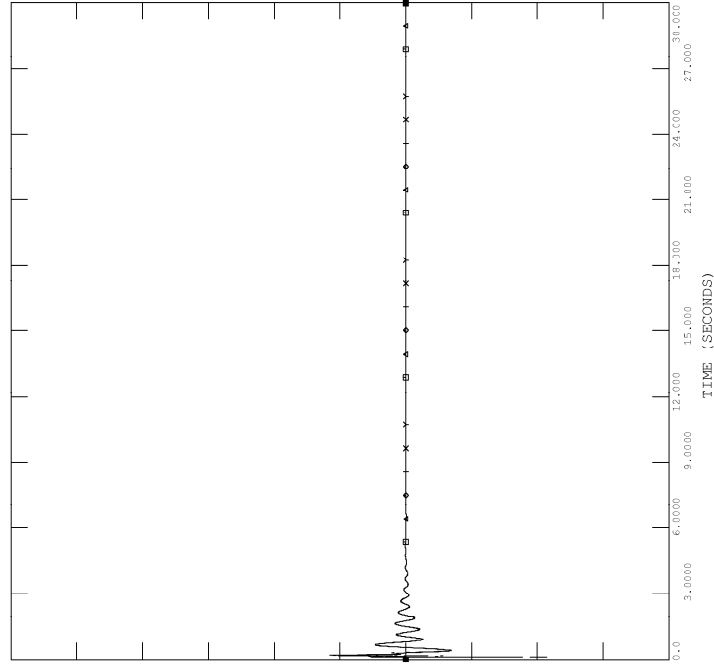


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3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

60.600	CHNL# 107: 60. * (1. + [F-STOCKADE 69])	59.600
60.600	CHNL# 106: 60. * (1. + [F-STANLEY 115])	59.600
60.600	CHNL# 105: 60. * (1. + [F-SFORK_GL 69])	59.600
60.600	CHNL# 104: 60. * (1. + [F-SARGENT 69])	59.600
60.600	CHNL# 103: 60. * (1. + [F-SARGENT 115])	59.600

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FREQUENCY VI

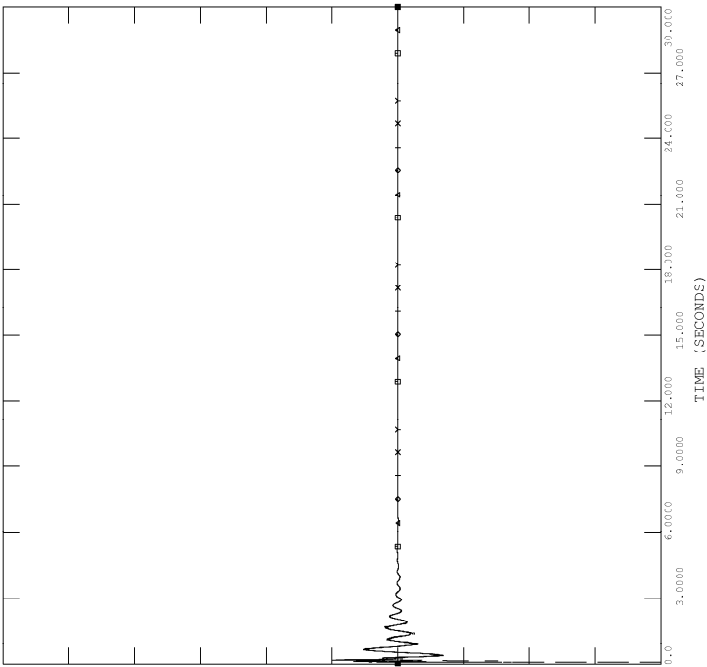


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03s.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

60.600	CHNL# 89: 60. * (1. + [F-LAGARITA 69])	59.600
60.600	CHNL# 88: 60. * (1. + [F-HOOPERTP 69])	59.600
60.600	CHNL# 87: 60. * (1. + [F-HOOPER 69])	59.600
60.600	CHNL# 86: 60. * (1. + [F-HOMELAKE 69])	59.600
60.600	CHNL# 85: 60. * (1. + [F-HILANDSL 69])	59.600

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FREQUENCY III

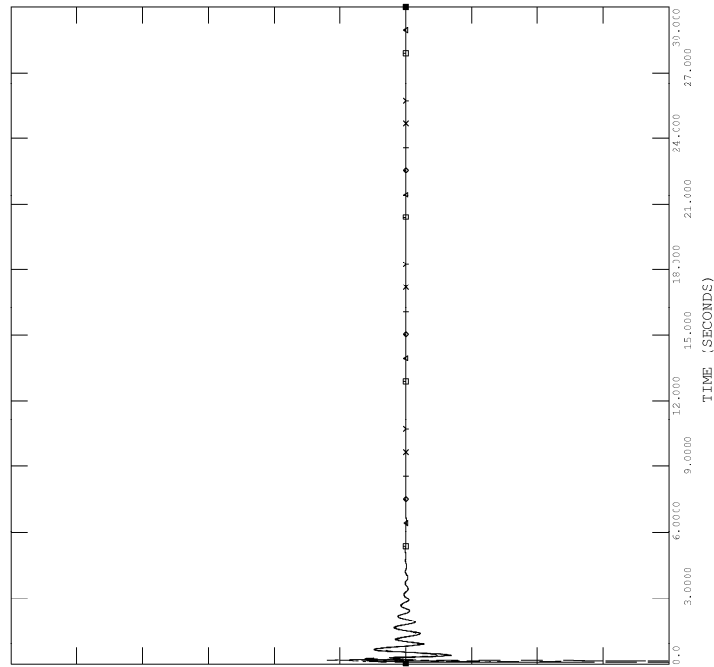


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03s.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])

60.600	CHNL# 101: 60. * (1. + [F-SANLSVLY 230])	59.600
60.600	CHNL# 100: 60. * (1. + [F-SANLSVLY 115])	59.600
60.600	CHNL# 99: 60. * (1. + [F-S.ACACIO 69])	59.600
60.600	CHNL# 98: 60. * (1. + [F-ROMEO 69])	59.600
60.600	CHNL# 97: 60. * (1. + [F-RIOGRDTP 69])	59.600

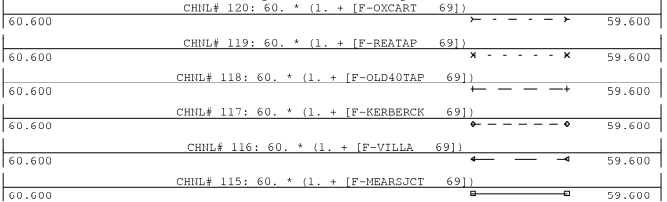
THU, OCT 25 2012 14:55
FREQUENCY V



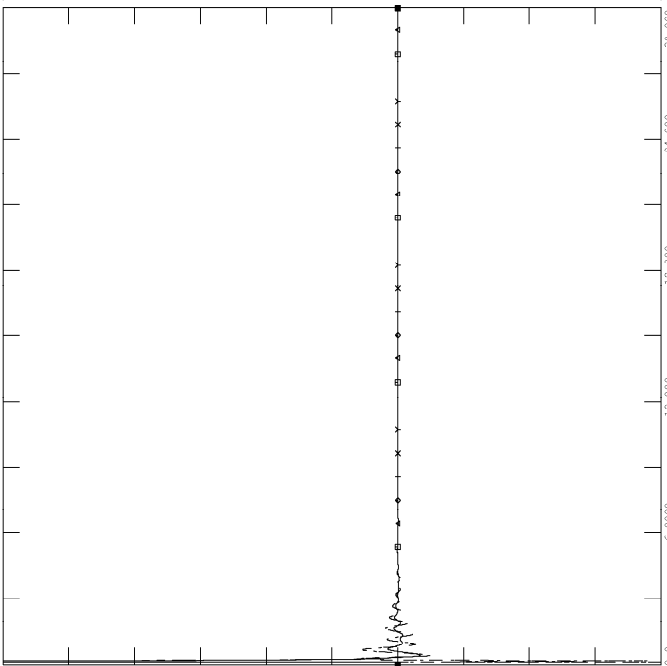


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

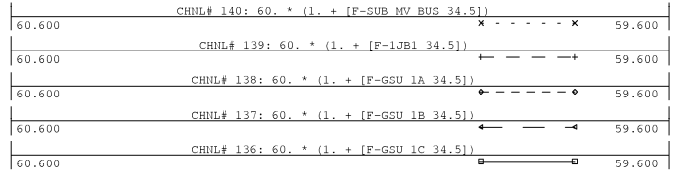


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FREQUENCY VIII

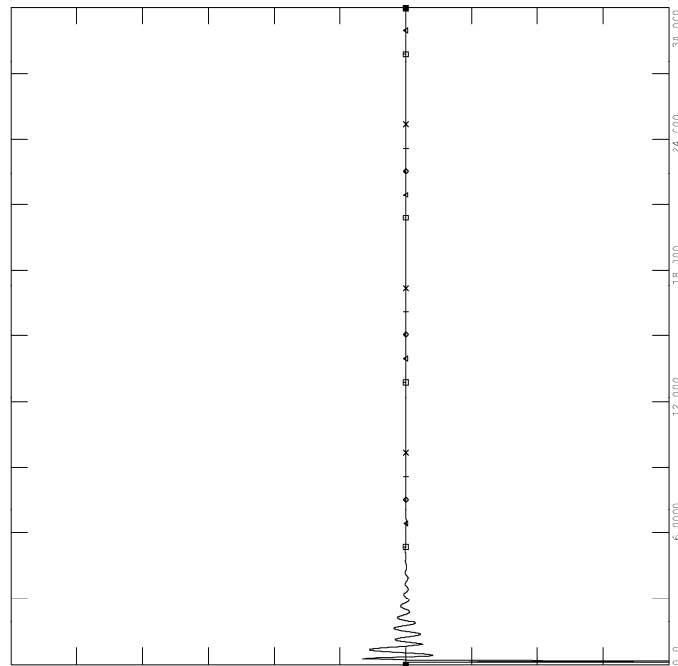


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03a.out

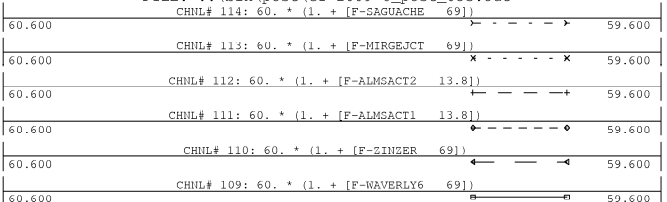


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FREQUENCY IX

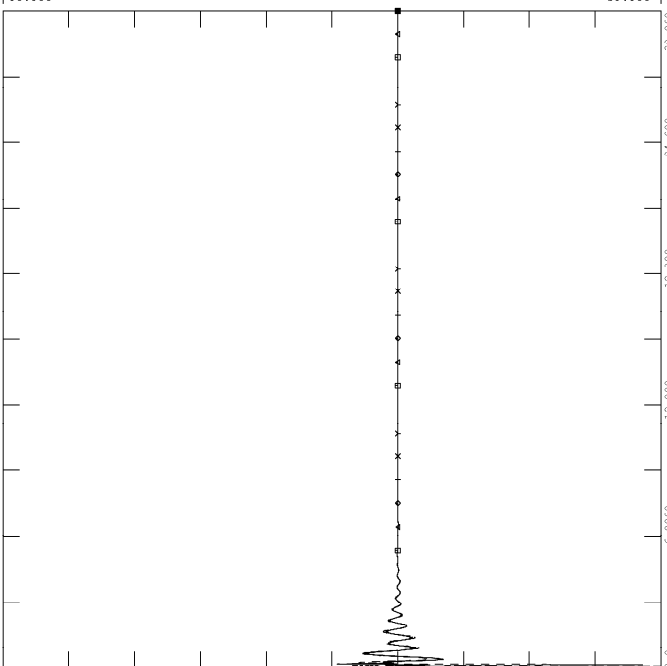


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03s.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

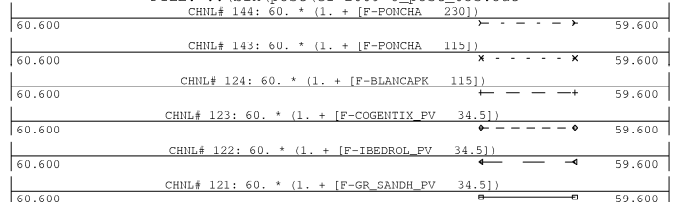


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FREQUENCY VII

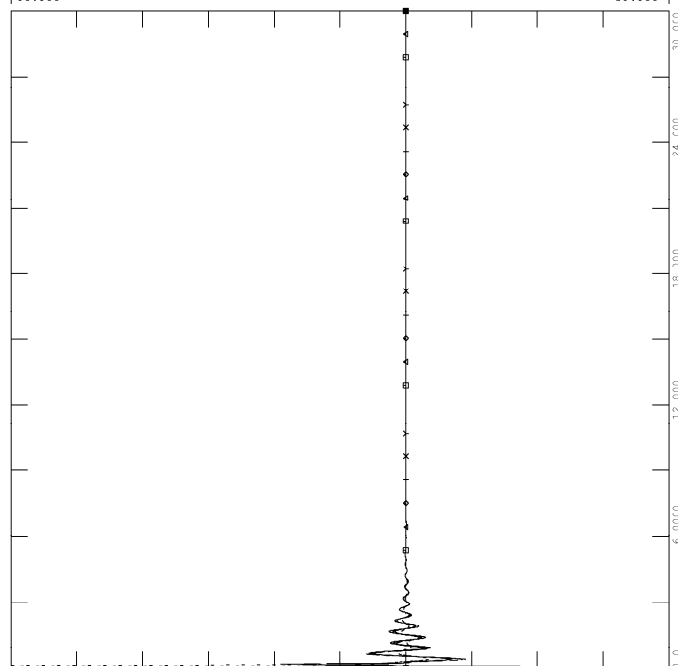


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3PH @ PONCHA ON PONCHA - SARGENT 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_03s.out
CHNL# 144: 60. * (1. + [F-PONCHA 230])



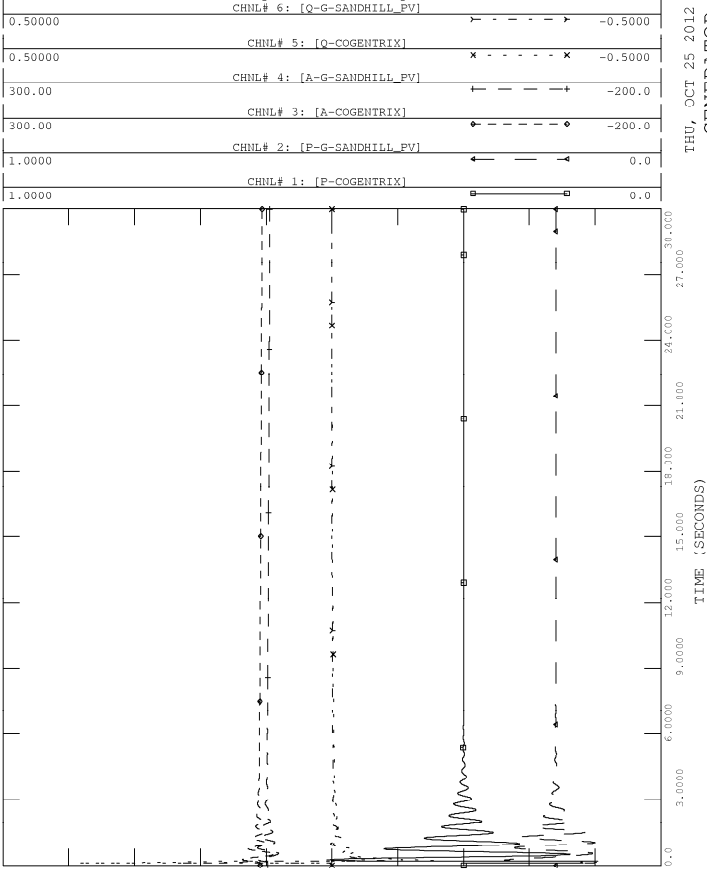
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FREQUENCY IX





WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out
CHNL# 6: [Q-G-SANDHILL_PV]

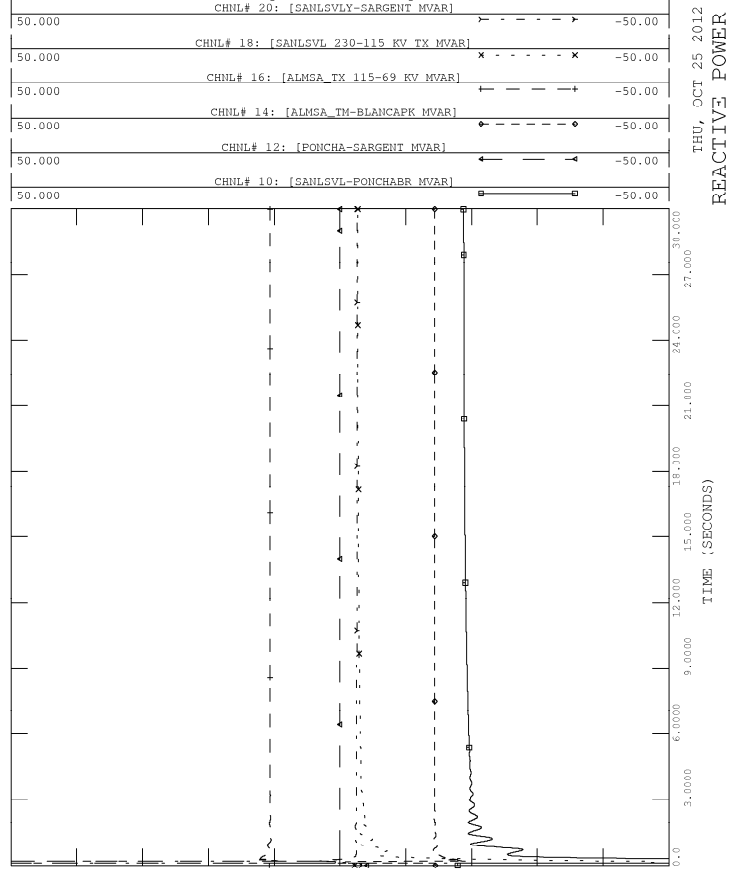


THU, OCT 25 2012 14:56
GENERATOR INFO



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out
CHNL# 20: [SANLSVLY-SARGENT_MVAR]

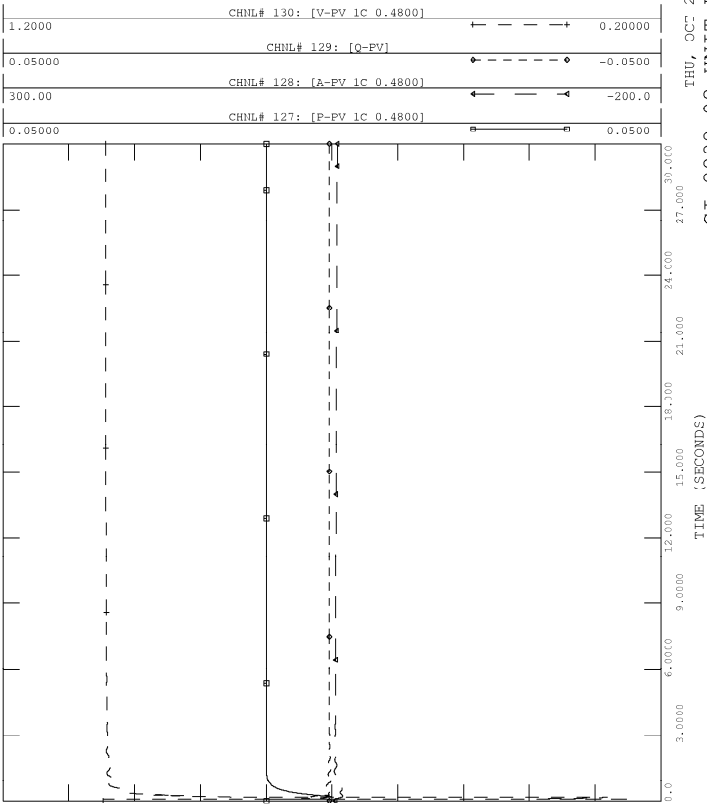


THU, OCT 25 2012 14:56
REACTIVE POWER FLOW



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out

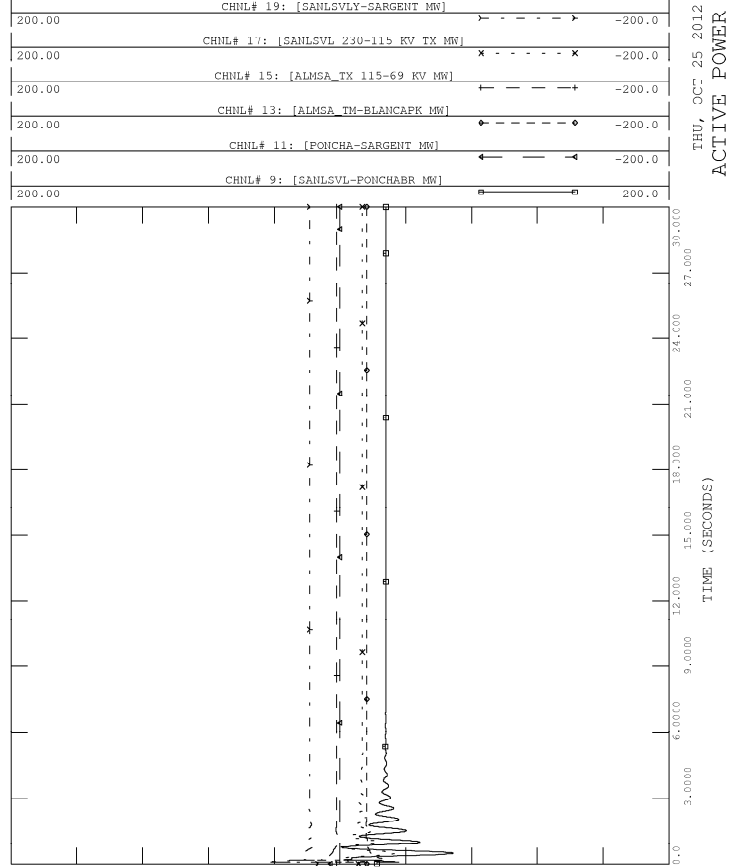


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GI-2009-08 UNIT PV 1C INF



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3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out



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ACTIVE POWER FLOW

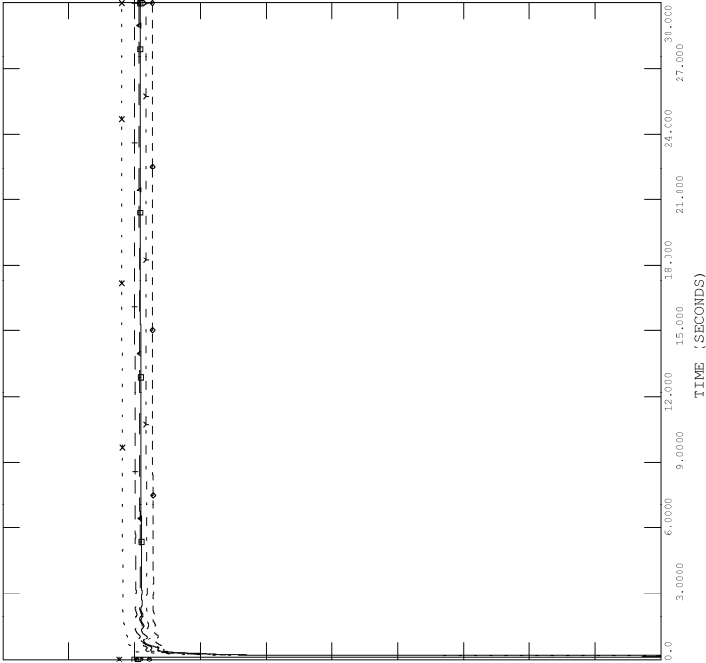


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

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VOLTAGE II

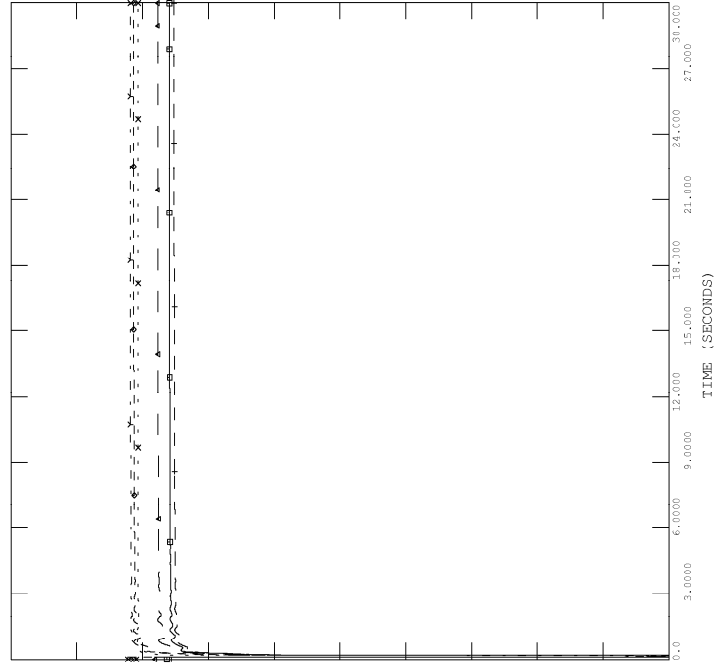


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3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out
CHNL# 41: [V-PONCHA 69]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

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VOLTAGE IV

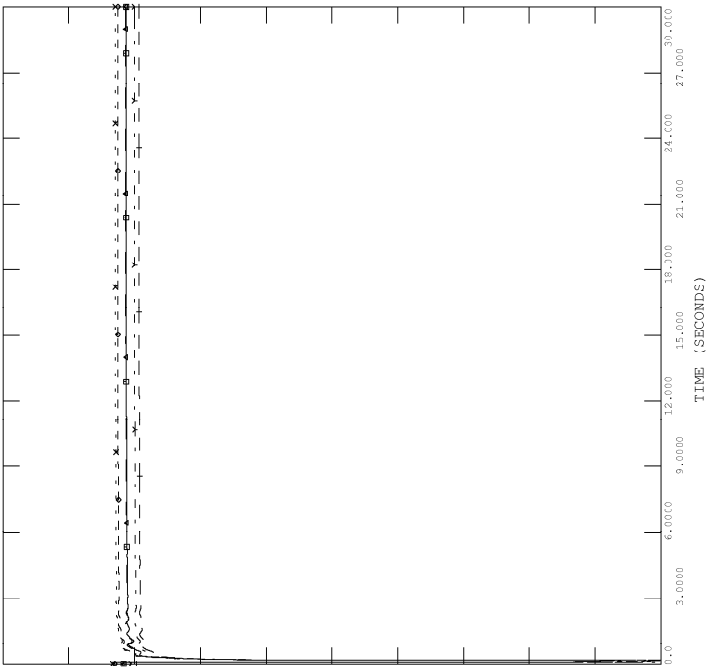


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

THU, OCT 25 2012 14:56
VOLTAGE I

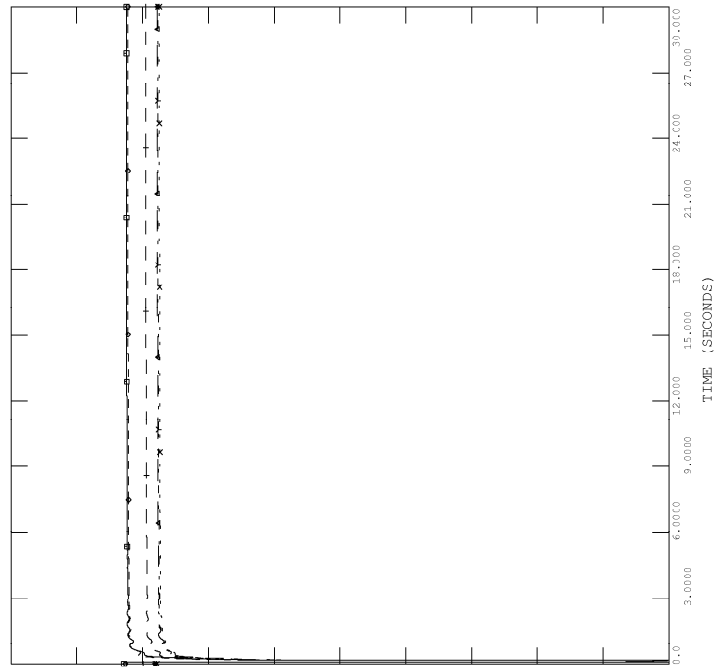


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3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out
CHNL# 36: [V-HOOPERTIP 69]

1.2000	CHNL# 36: [V-HOOPERTIP 69]	x - - - - x	0.20000
1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	+ - - - - +	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	o - - - - o	0.20000
1.2000	CHNL# 32: [V-FIGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

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VOLTAGE III

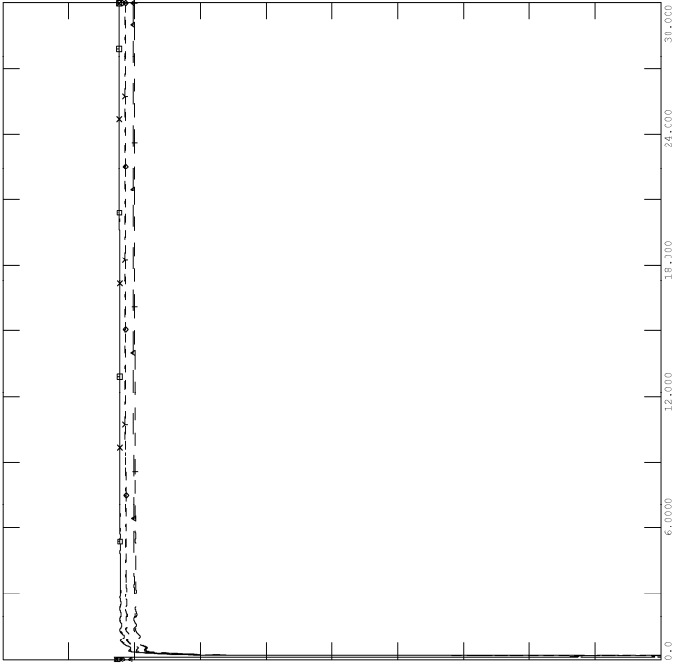




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009 8_post_04s.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK_SL 69]	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	0.20000



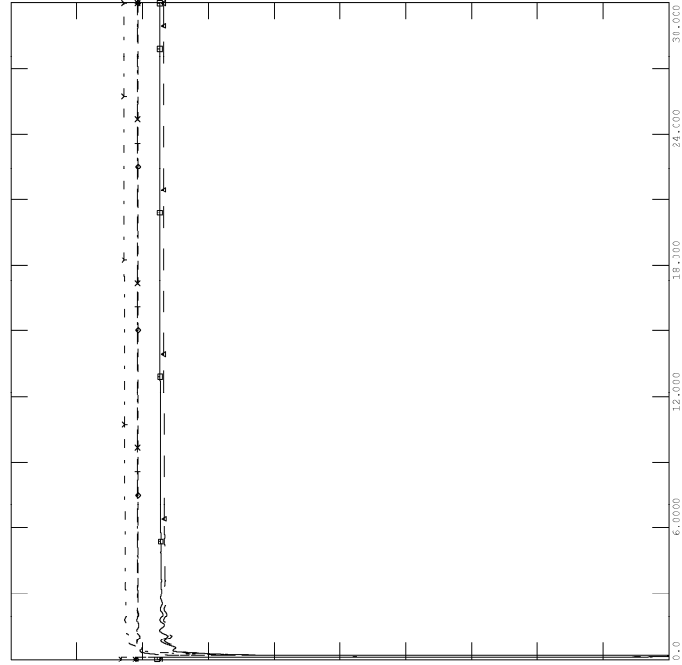
THU, OCT 25 2012 14:56
VOLTAGE VI



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009 8_post_04s.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	0.20000



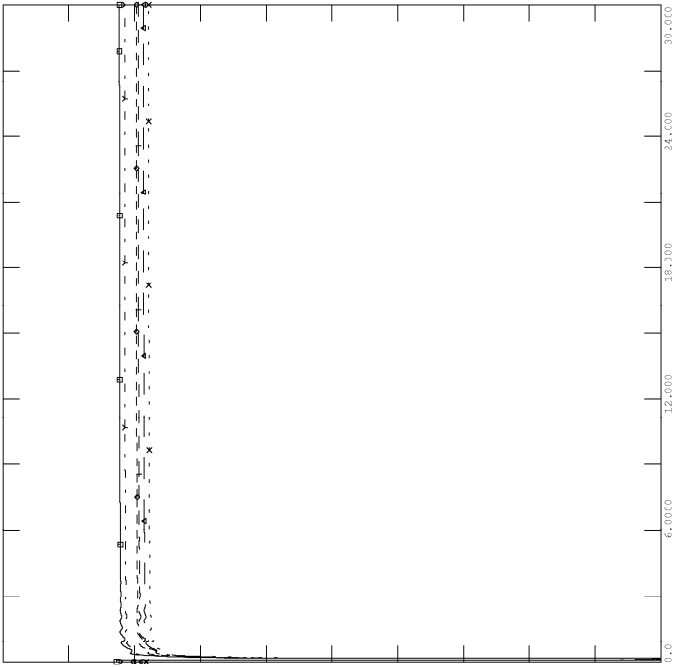
THU, OCT 25 2012 14:56
VOLTAGE VIII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009 8_post_04s.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	0.20000



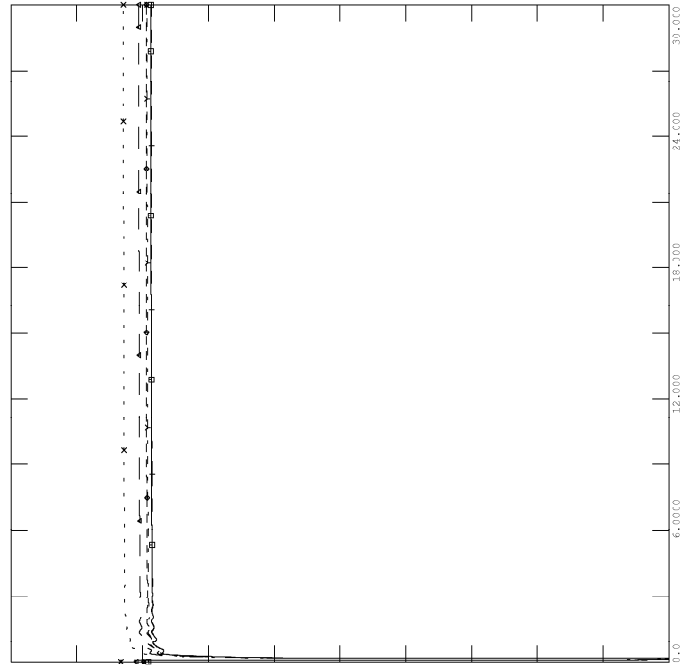
THU, OCT 25 2012 14:56
VOLTAGE V



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009 8_post_04s.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	0.20000

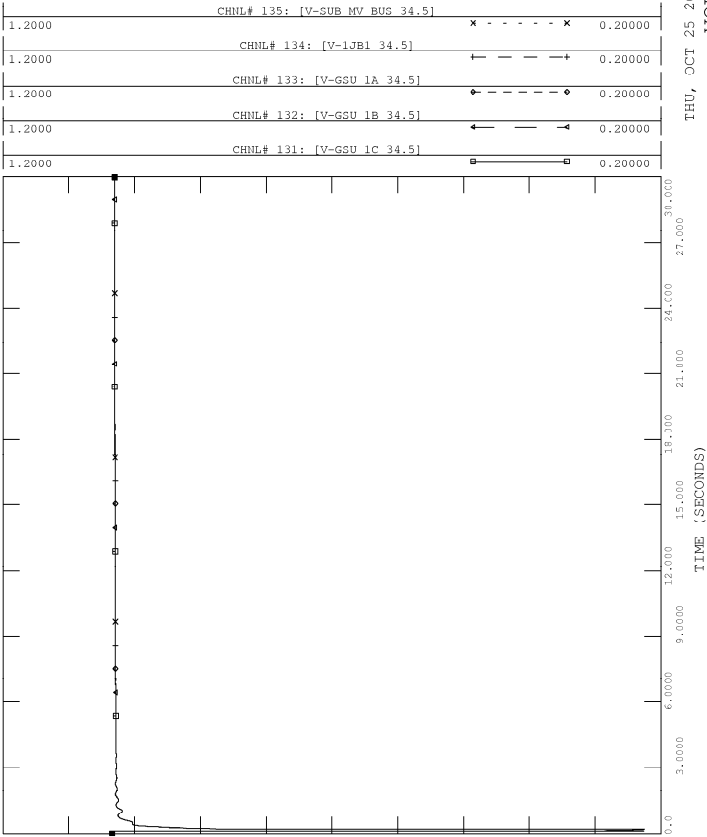


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VOLTAGE VII



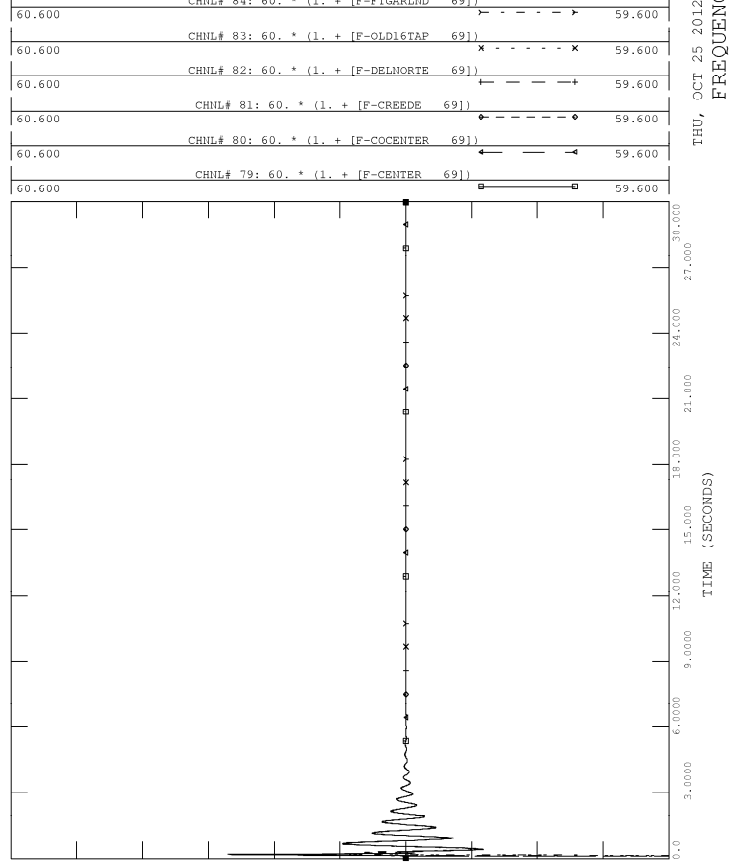
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out



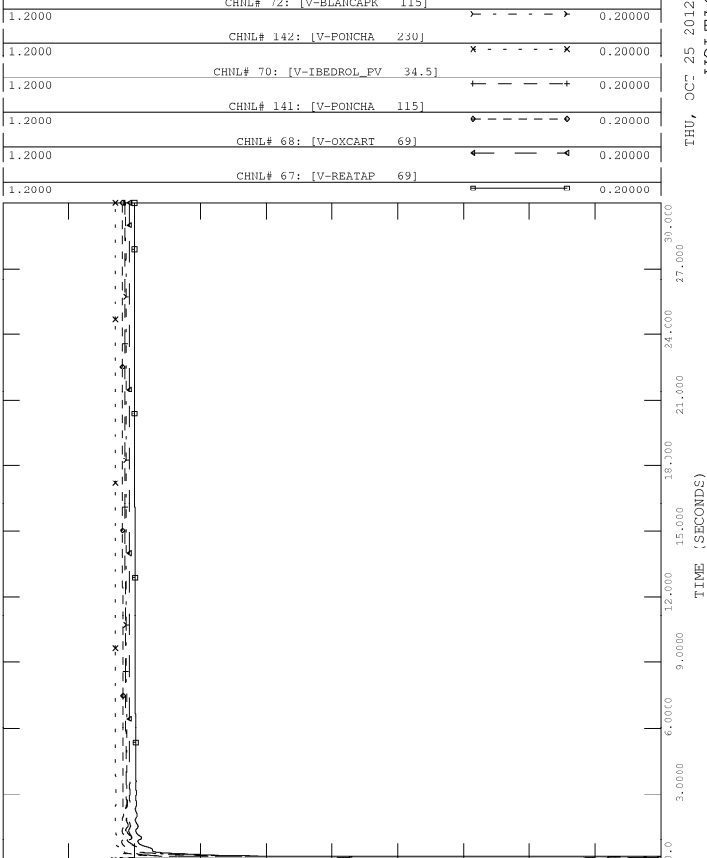
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out



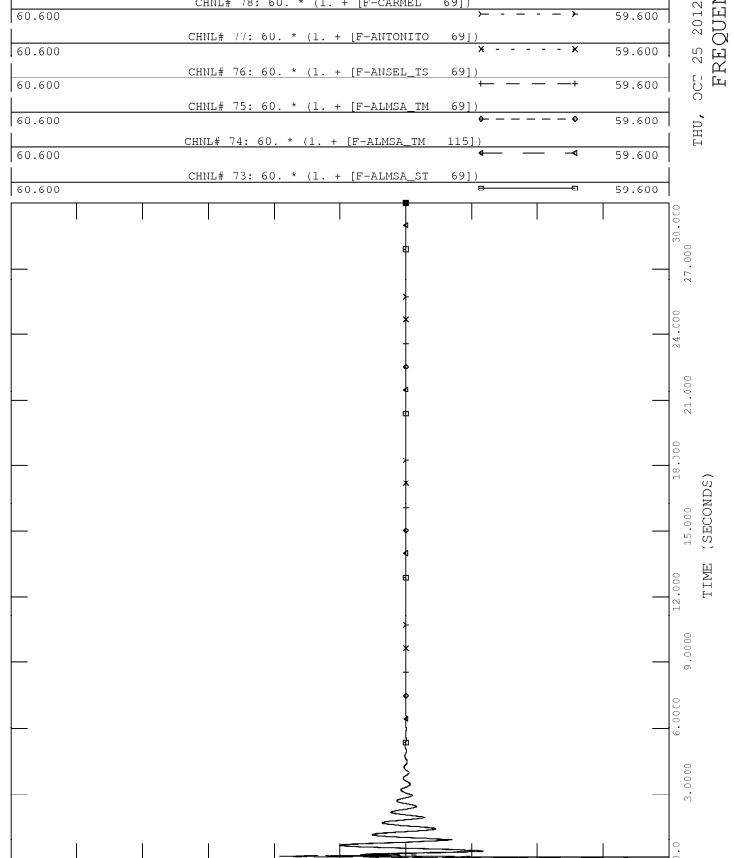
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out



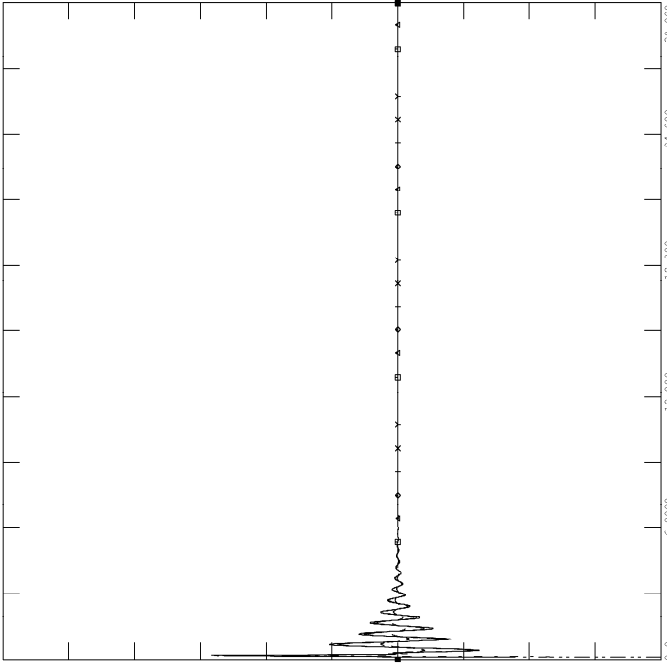


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

60.600	CHNL# 95: 60. * (1. + [F-RAMON 69])	59.600
60.600	CHNL# 94: 60. * (1. + [F-RAMON 115])	59.600
60.600	CHNL# 93: 60. * (1. + [F-PONCHA 69])	59.600
60.600	CHNL# 92: 60. * (1. + [F-PLAZA 69])	59.600
60.600	CHNL# 91: 60. * (1. + [F-MOSCA 69])	59.600

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FREQUENCY IV

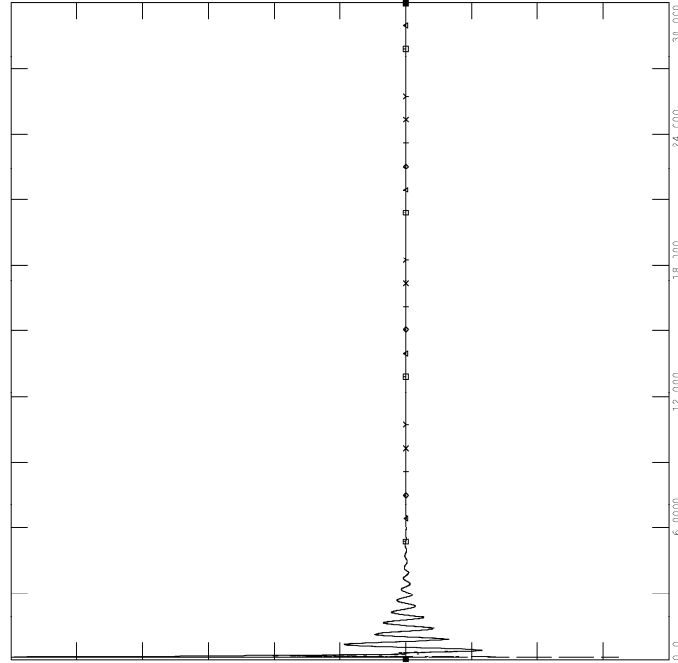


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

60.600	CHNL# 107: 60. * (1. + [F-STOCKADE 69])	59.600
60.600	CHNL# 106: 60. * (1. + [F-STANLEY 115])	59.600
60.600	CHNL# 105: 60. * (1. + [F-SFORK_GL 69])	59.600
60.600	CHNL# 104: 60. * (1. + [F-SARGENT 69])	59.600
60.600	CHNL# 103: 60. * (1. + [F-SARGENT 115])	59.600

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FREQUENCY VI

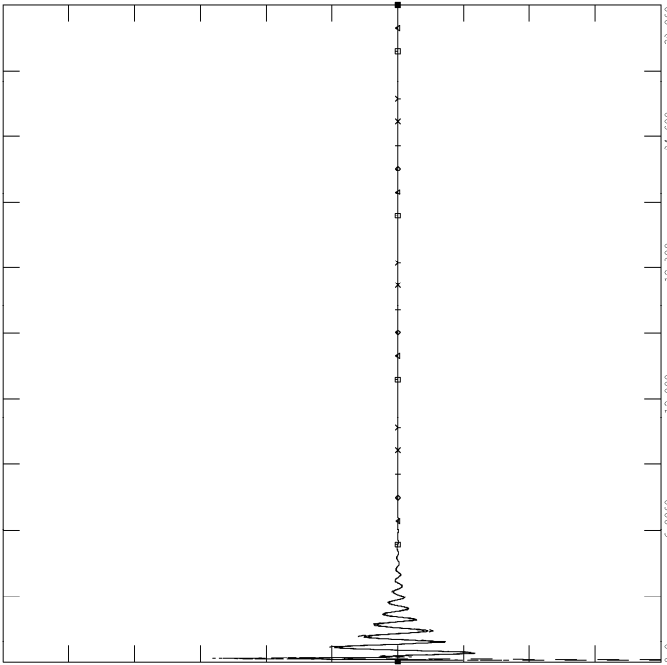


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

60.600	CHNL# 89: 60. * (1. + [F-LAGARITA 69])	59.600
60.600	CHNL# 88: 60. * (1. + [F-HOOPERTP 69])	59.600
60.600	CHNL# 87: 60. * (1. + [F-HOOPER 69])	59.600
60.600	CHNL# 86: 60. * (1. + [F-HOMELAKE 69])	59.600
60.600	CHNL# 85: 60. * (1. + [F-HILANDSL 69])	59.600

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FREQUENCY III

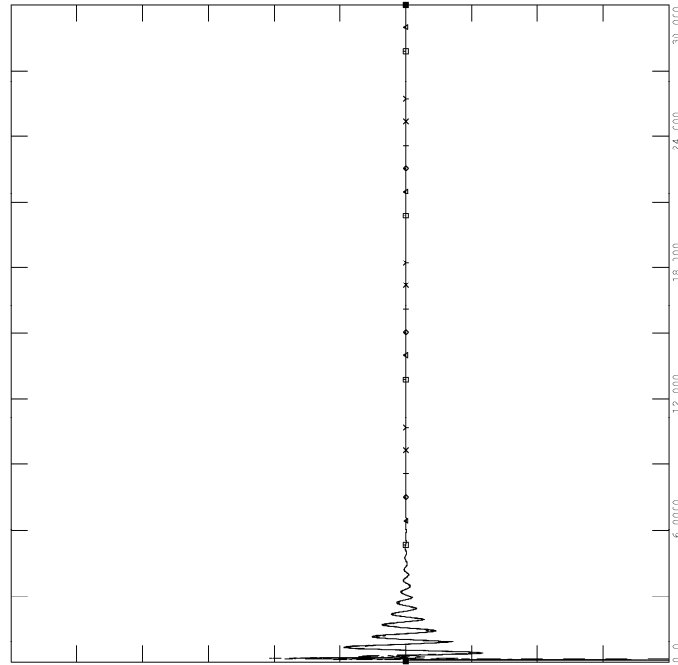


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3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])

60.600	CHNL# 101: 60. * (1. + [F-SANLSVLY 230])	59.600
60.600	CHNL# 100: 60. * (1. + [F-SANLSVLY 115])	59.600
60.600	CHNL# 99: 60. * (1. + [F-S.ACACIO 69])	59.600
60.600	CHNL# 98: 60. * (1. + [F-ROMEO 69])	59.600
60.600	CHNL# 97: 60. * (1. + [F-RIOGRDTP 69])	59.600

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FREQUENCY V

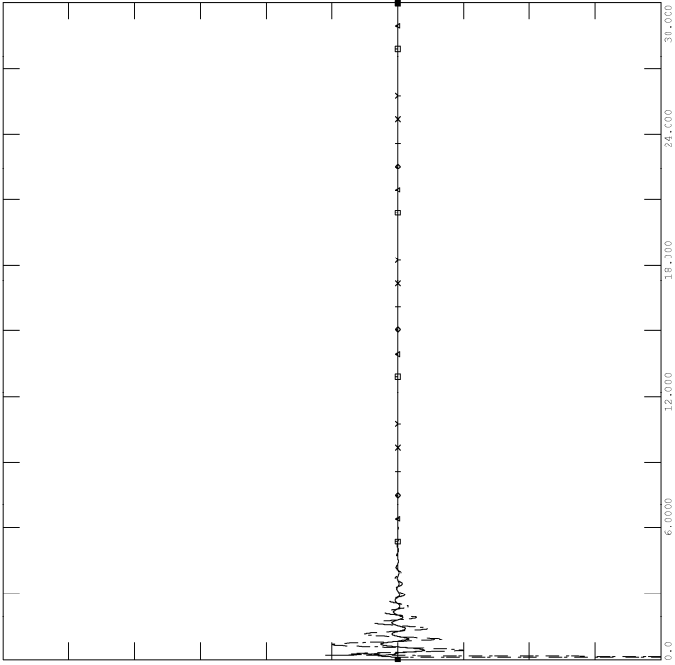




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3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KEBBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



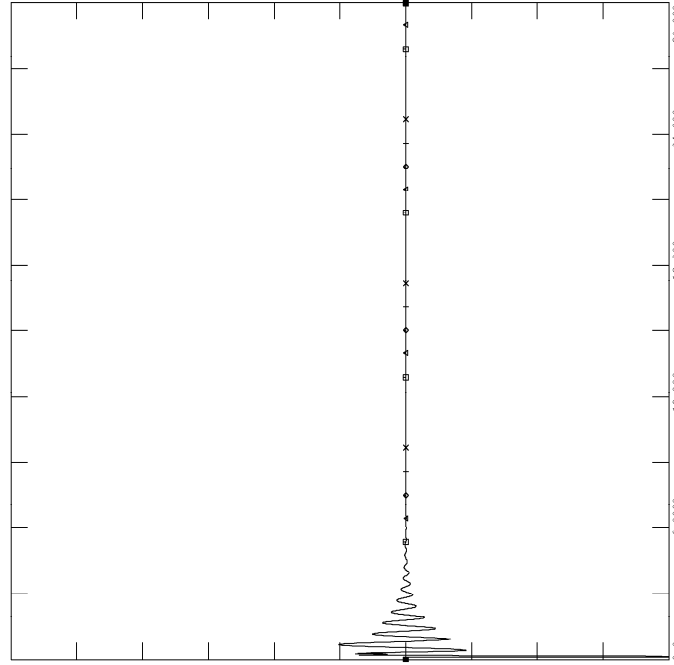
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FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out

60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJB1 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



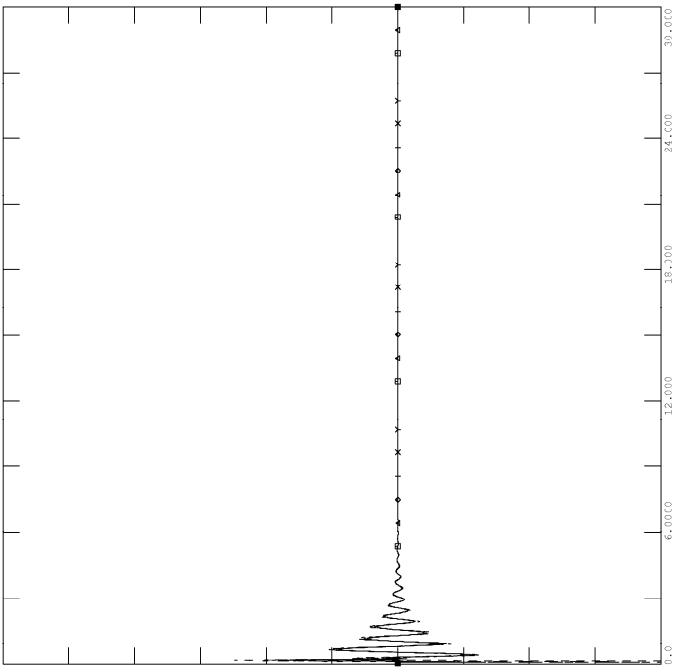
THU, OCT 25 2012 14:56
FREQUENCY X



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMSACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMSACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



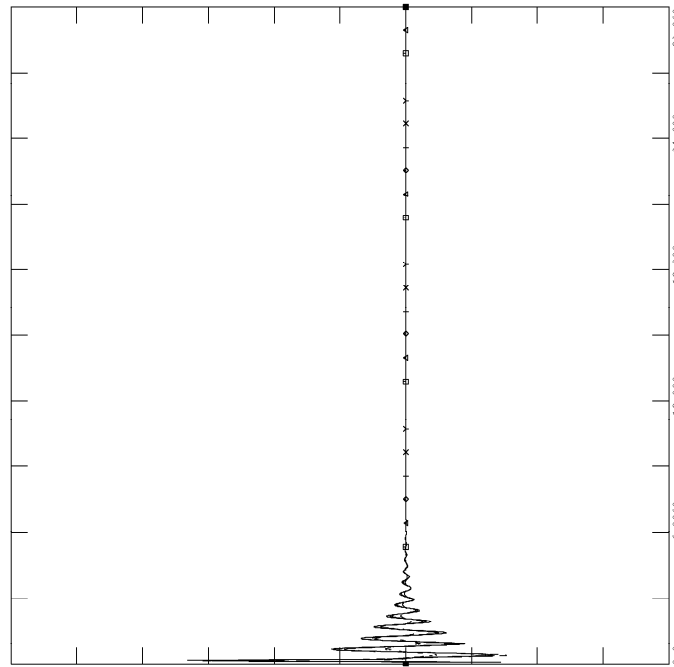
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FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - PONCHA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_04s.out

60.600	CHNL# 144: 60. * (1. + [F-PONCHA 230])	59.600
60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-COGENITX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600

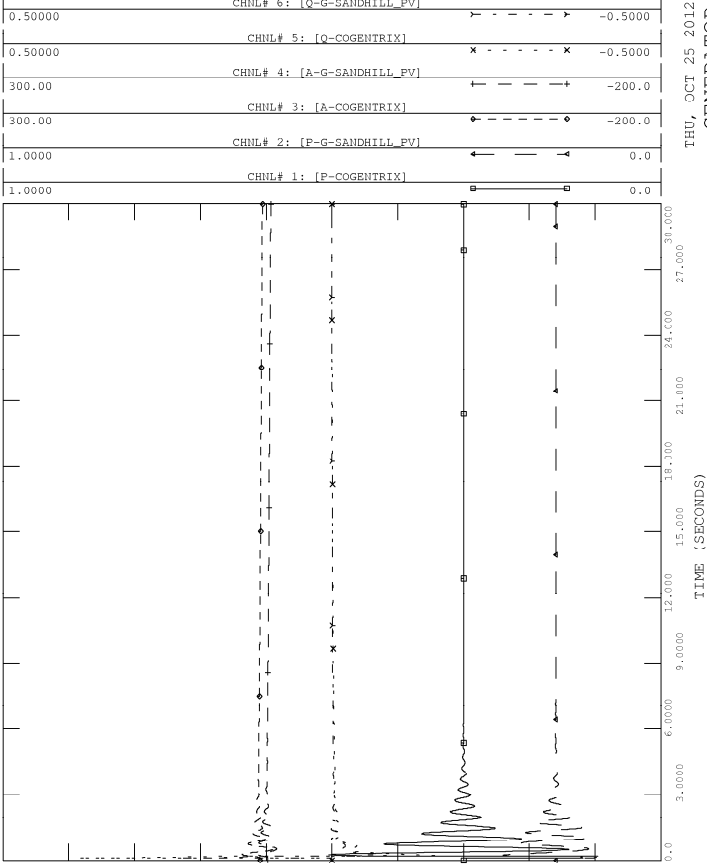


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FREQUENCY IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 6: [Q-G-SANDHILL_PV]

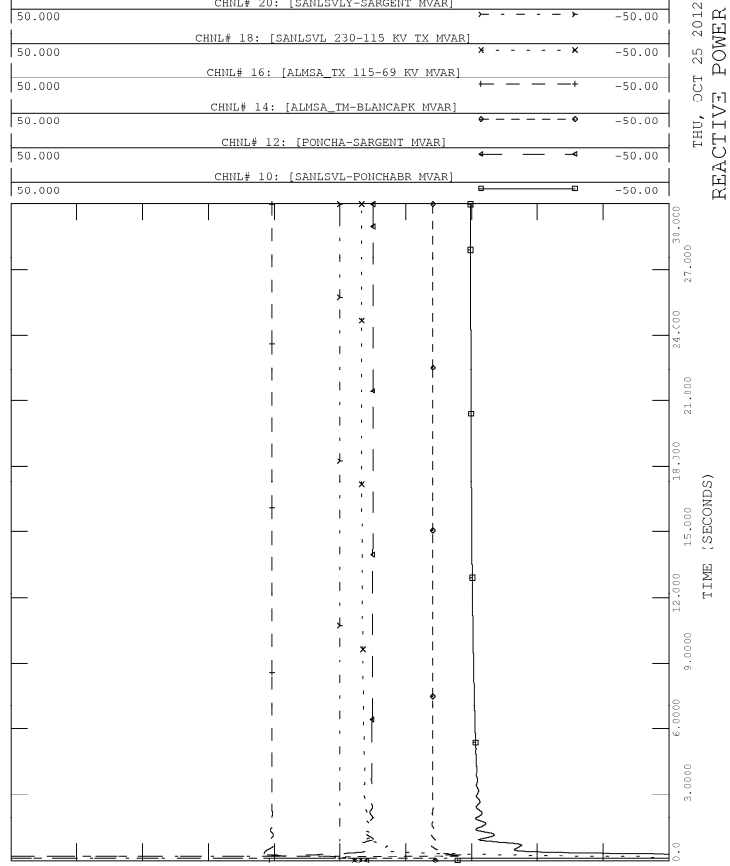


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GENERATOR INFO



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3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]

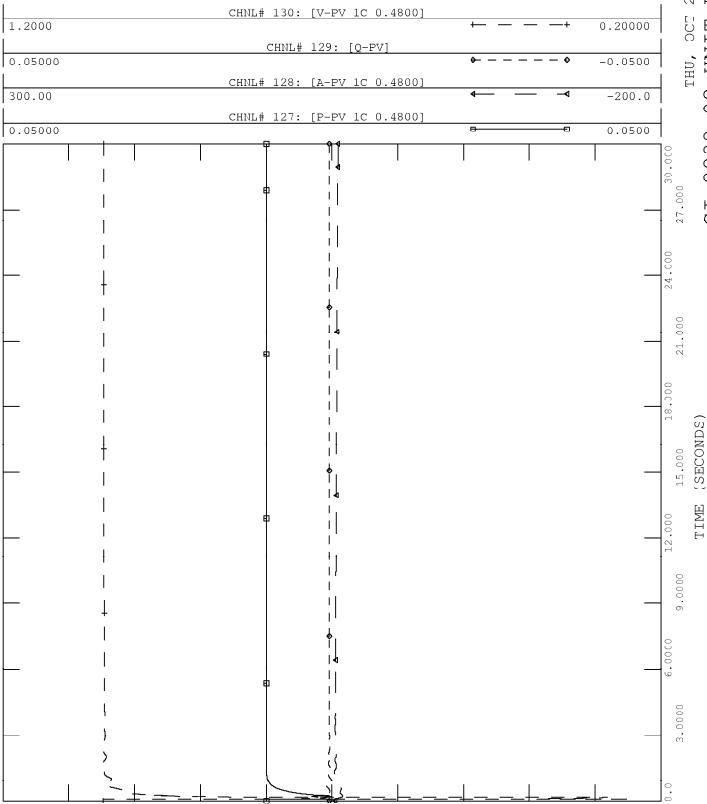


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REACTIVE POWER FLOW



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3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out

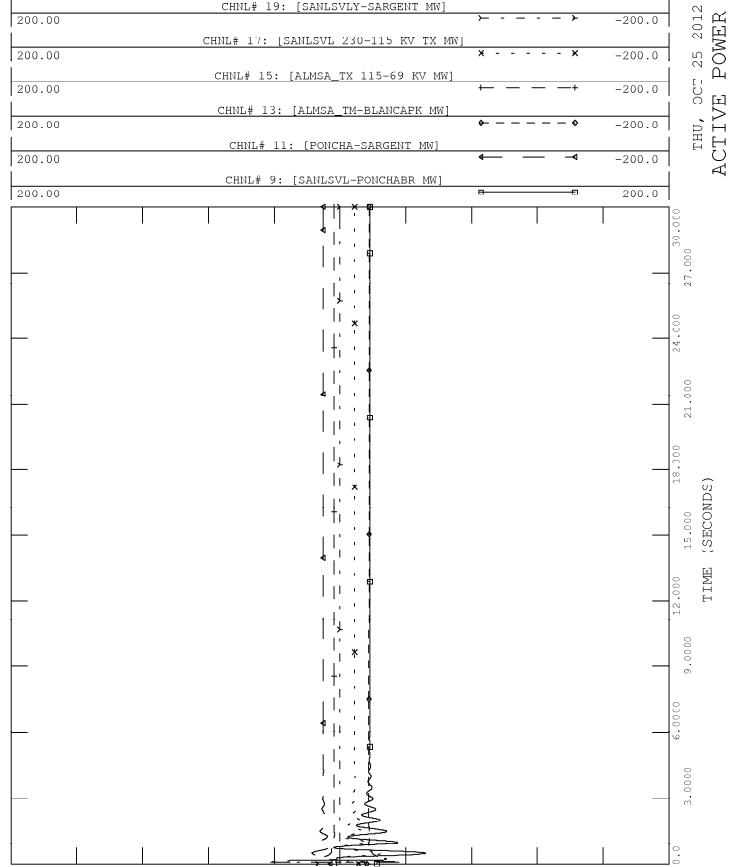


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GI-2009-08 UNIT PV 1C INF



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3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out



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ACTIVE POWER FLOW

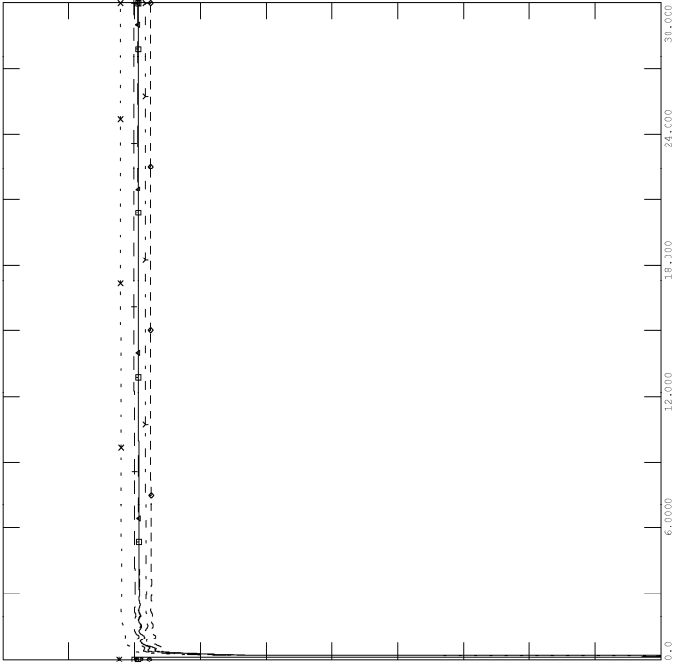


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - o	0.20000

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VOLTAGE II

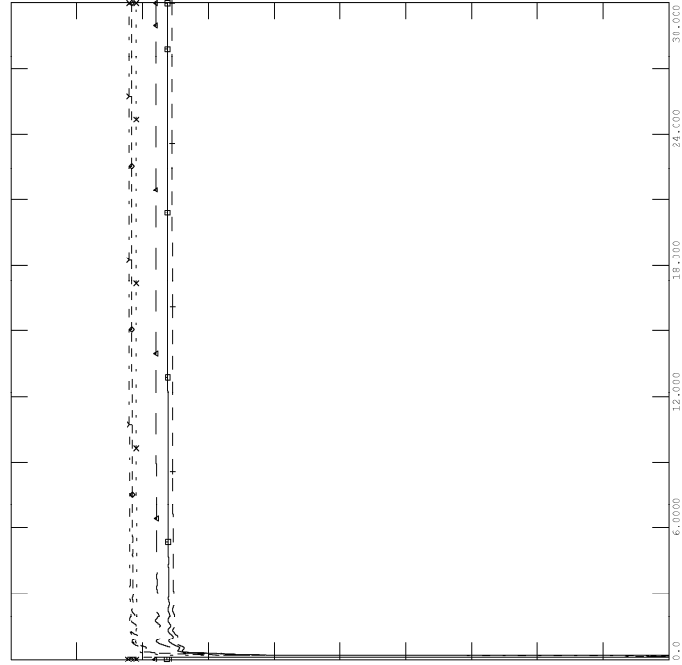


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 42: [V-RAMON 115]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - o	0.20000

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VOLTAGE IV

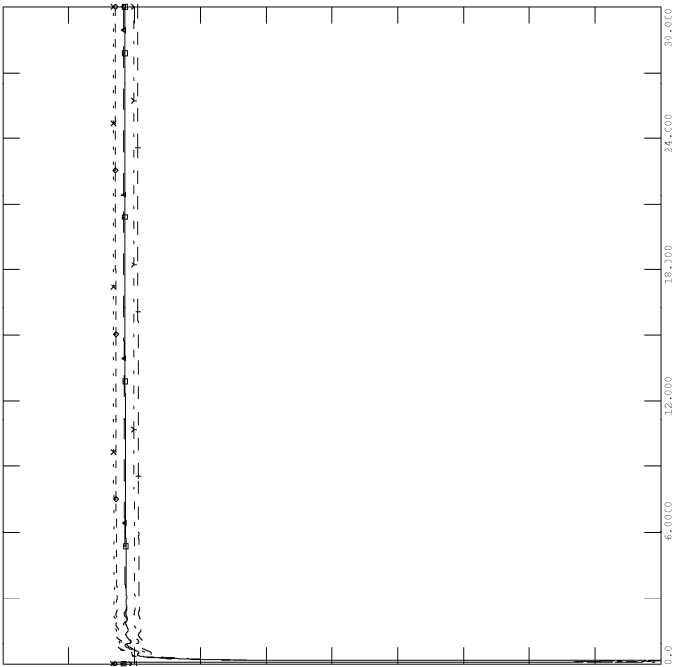


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - o	0.20000

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VOLTAGE I

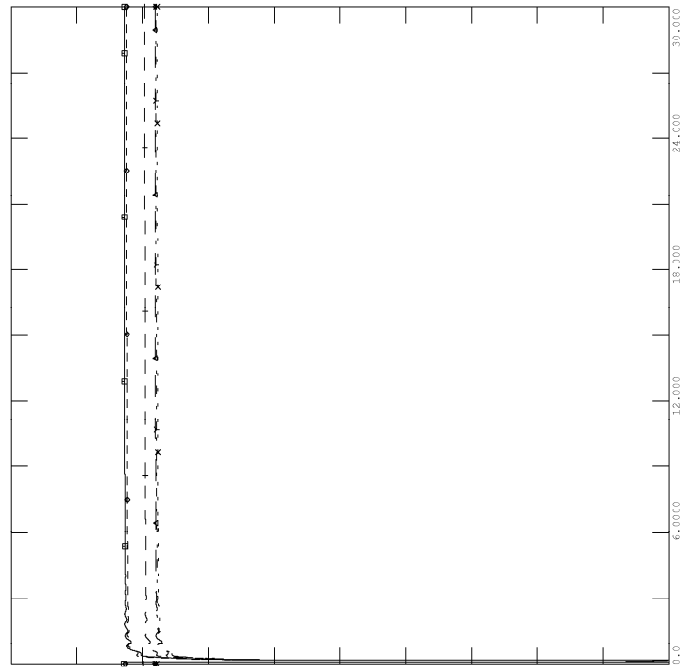


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3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 36: [V-HOOPER TP 69]

1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	x - - - - x	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	+ - - - +	0.20000
1.2000	CHNL# 32: [V-FTGARLND 69]	o - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - o	0.20000

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VOLTAGE III



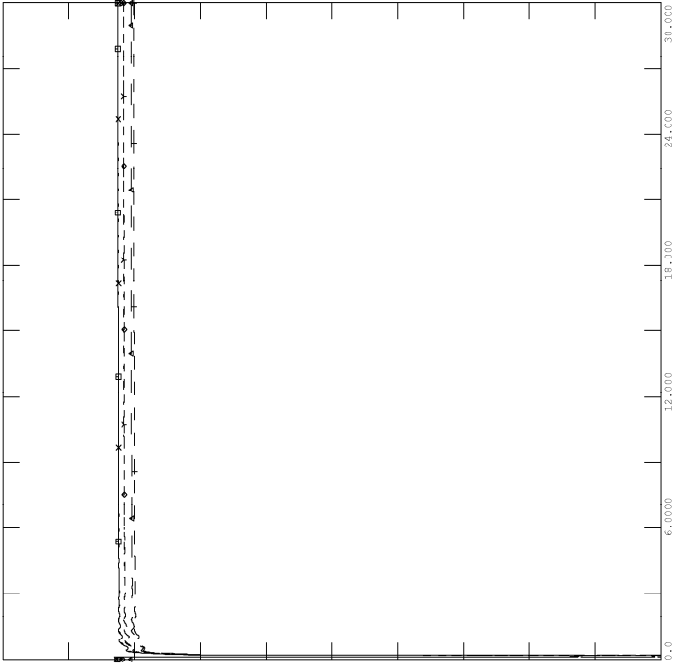


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK SL 69]	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	0.20000

THU, OCT 25 2012 14:56
VOLTAGE VI

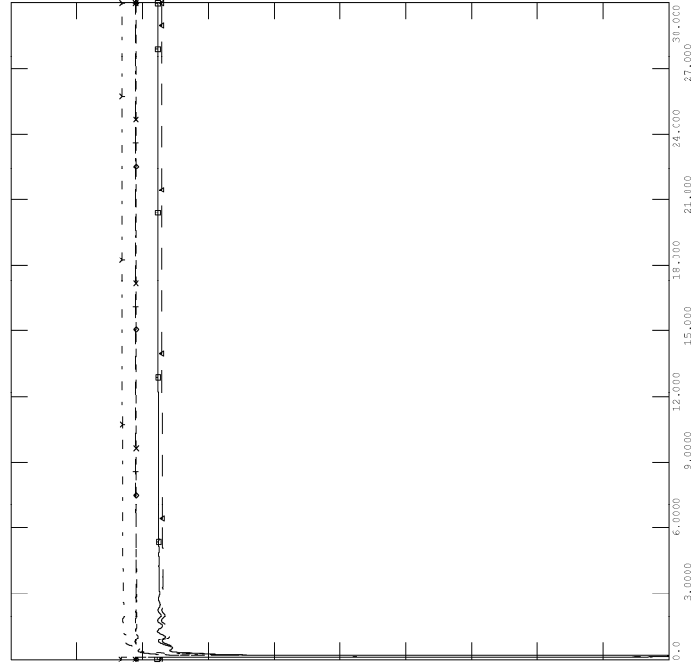


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	0.20000

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VOLTAGE VIII

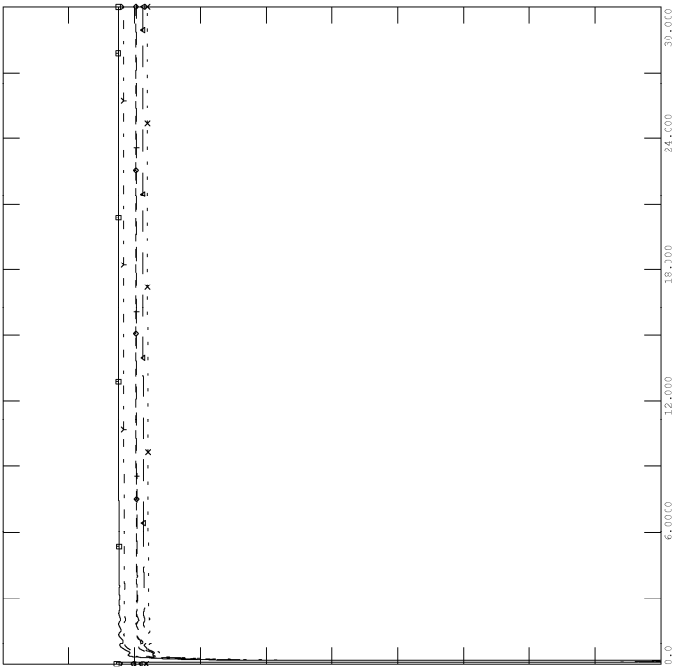


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3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	0.20000

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VOLTAGE V

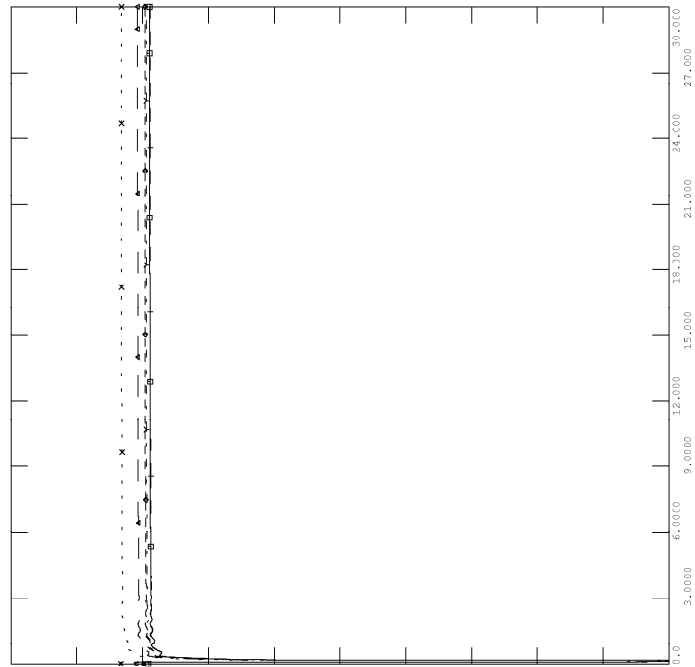


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3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	0.20000

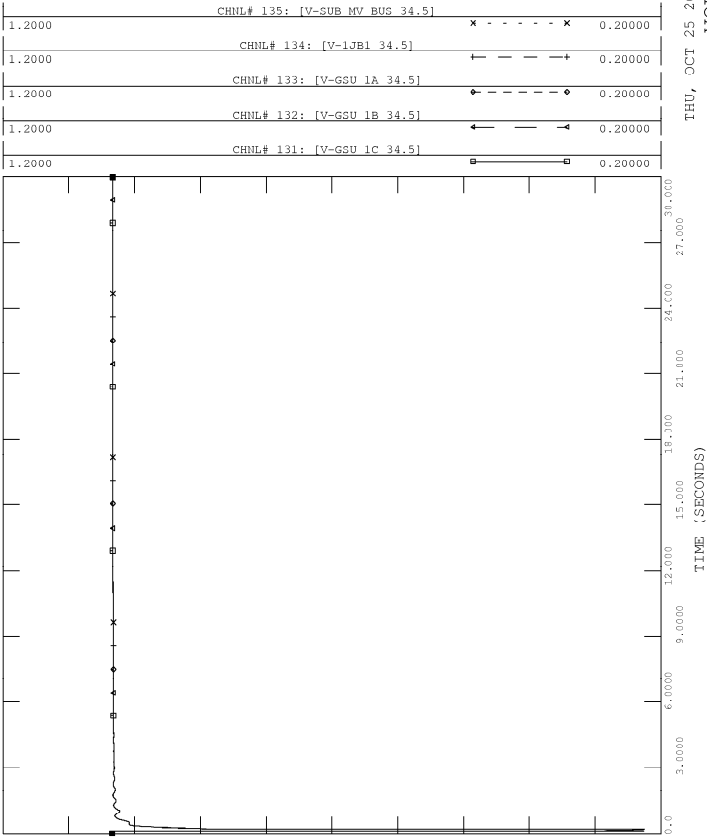
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VOLTAGE VII





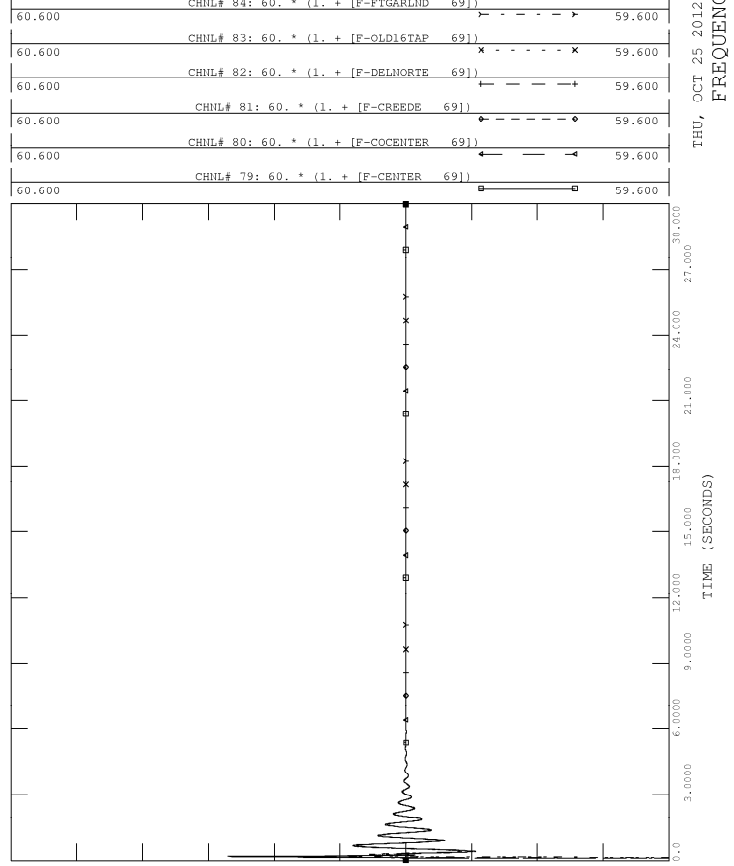
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3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out



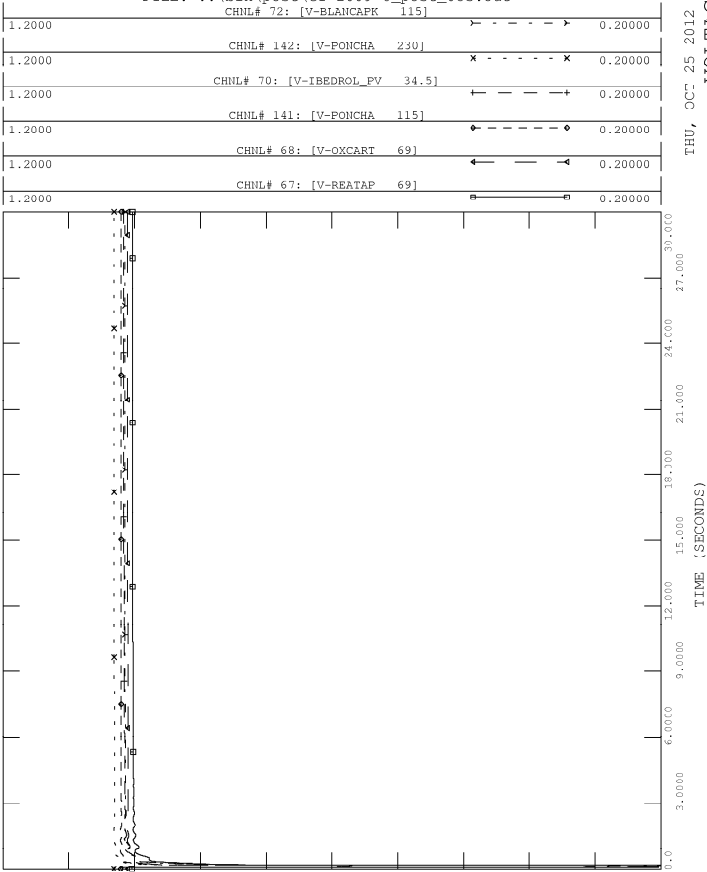
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3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out



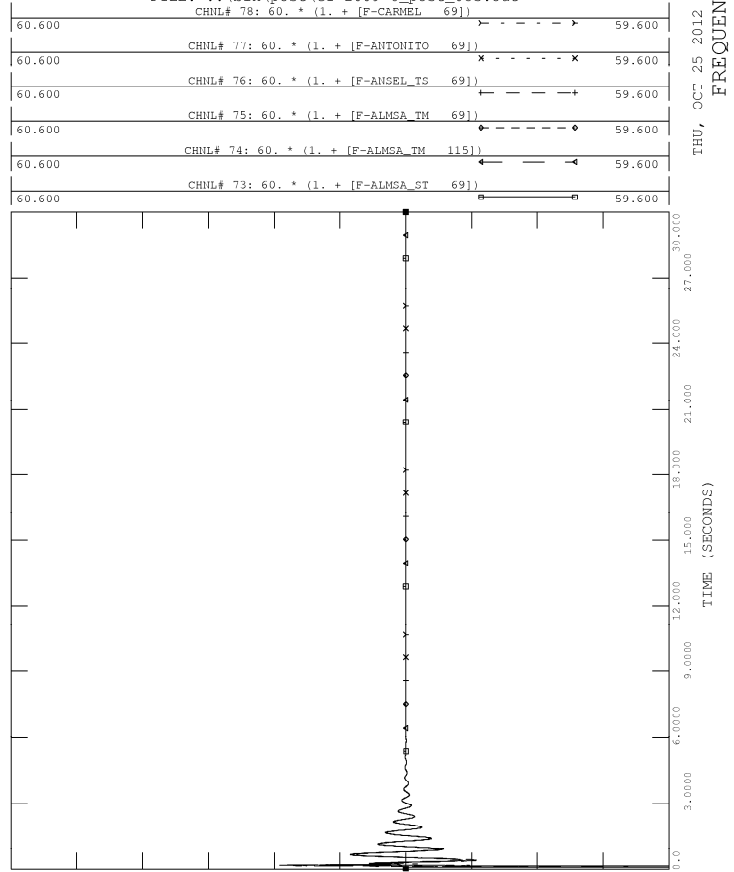
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

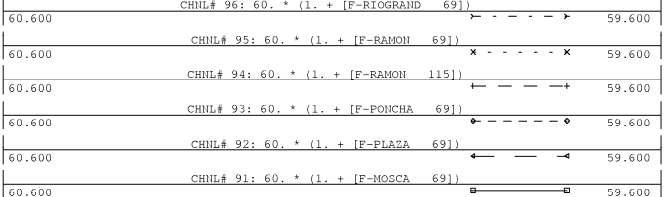
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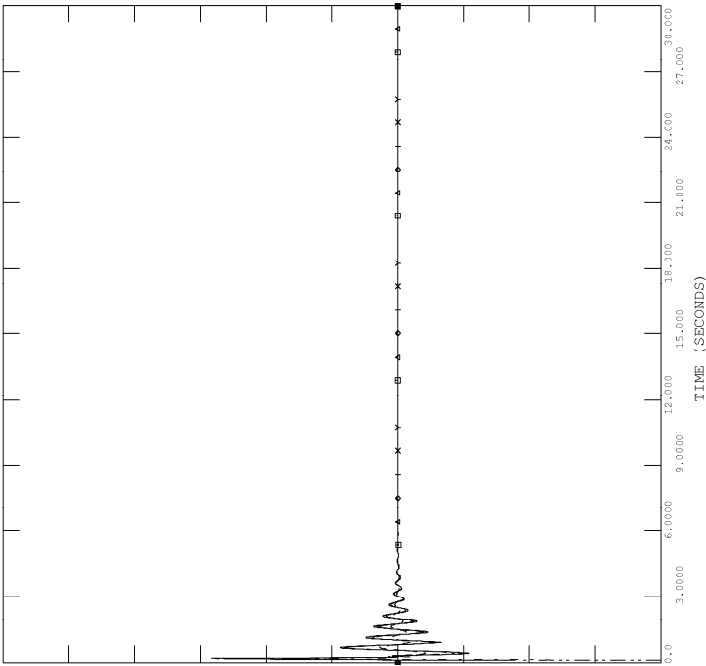


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

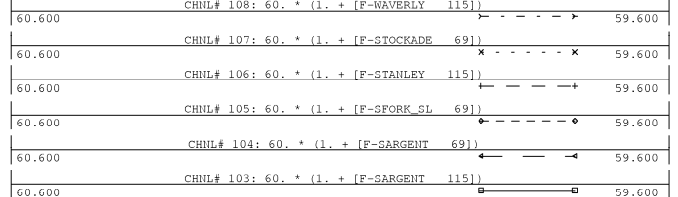


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FREQUENCY IV

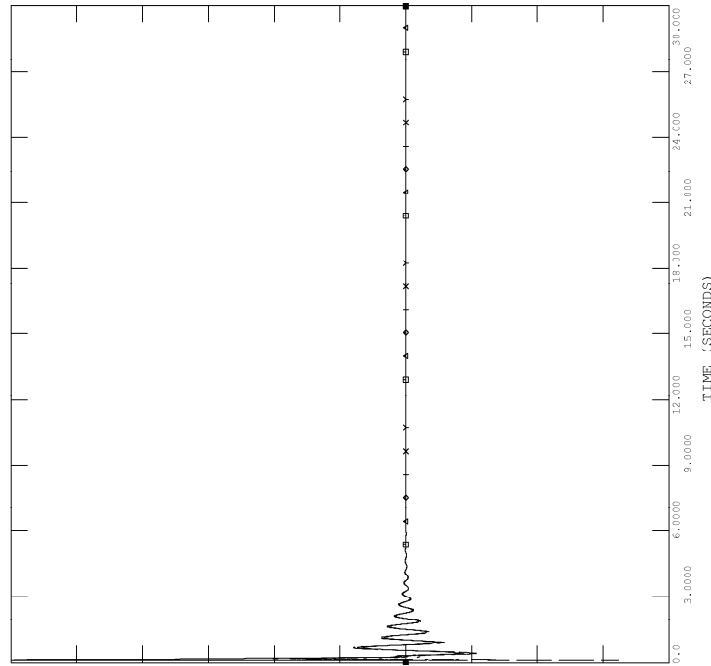


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

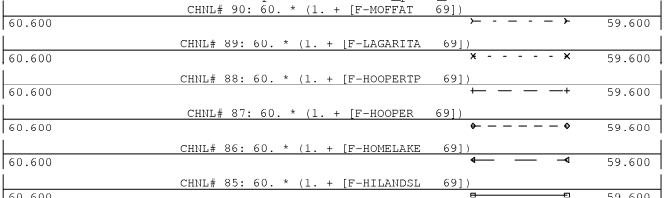


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FREQUENCY VI

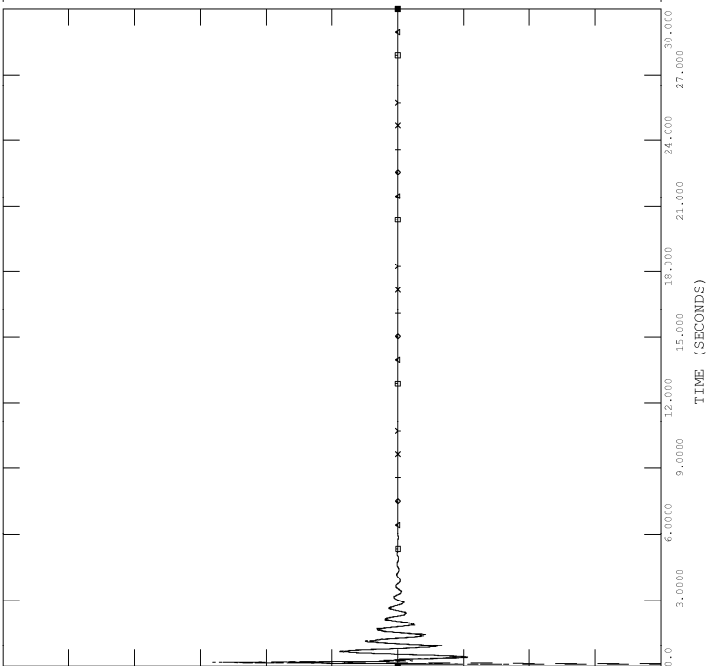


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

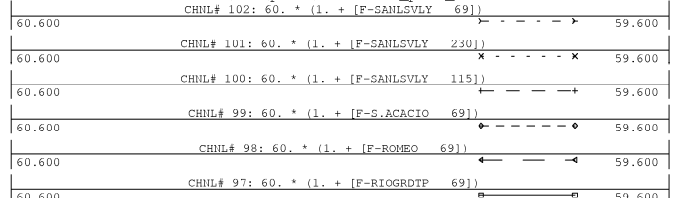


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FREQUENCY III

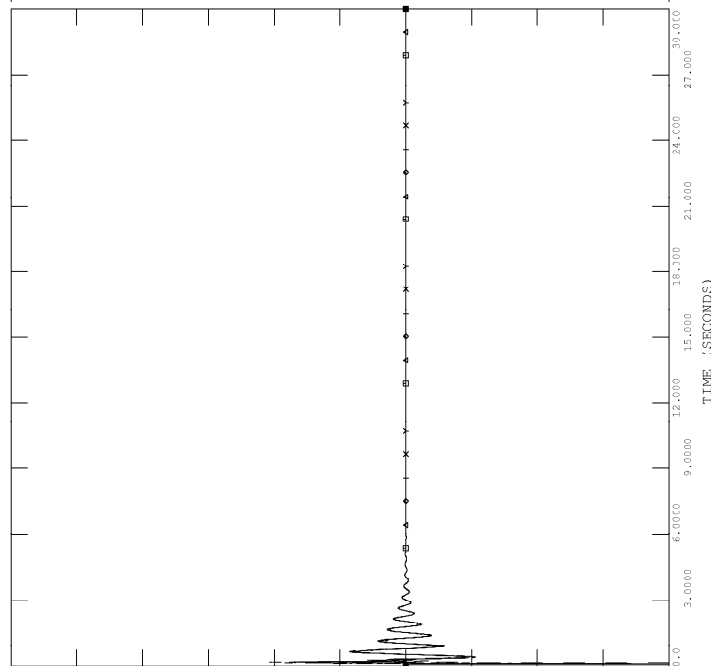


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])



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FREQUENCY V

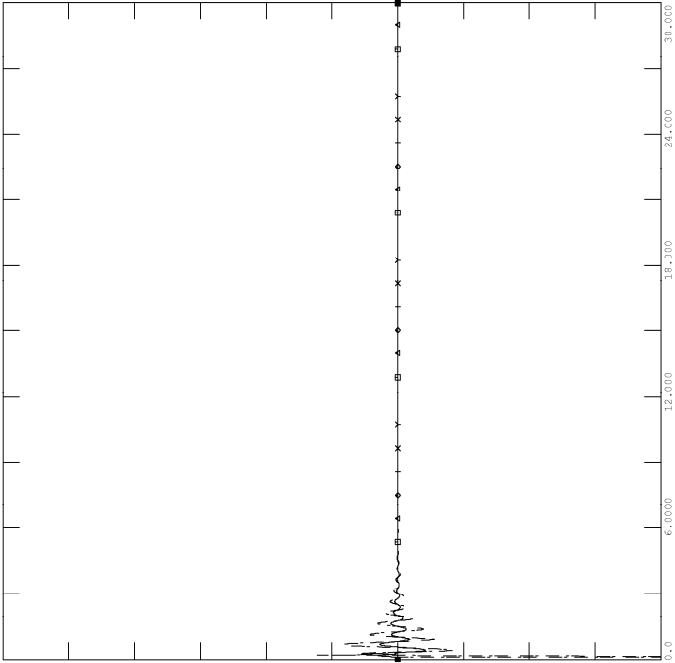




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KEBBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



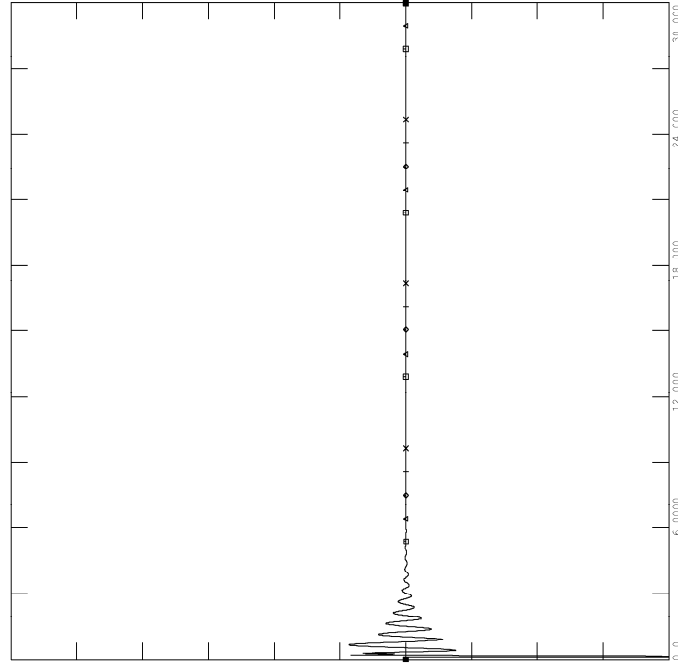
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FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out

60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJB1 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



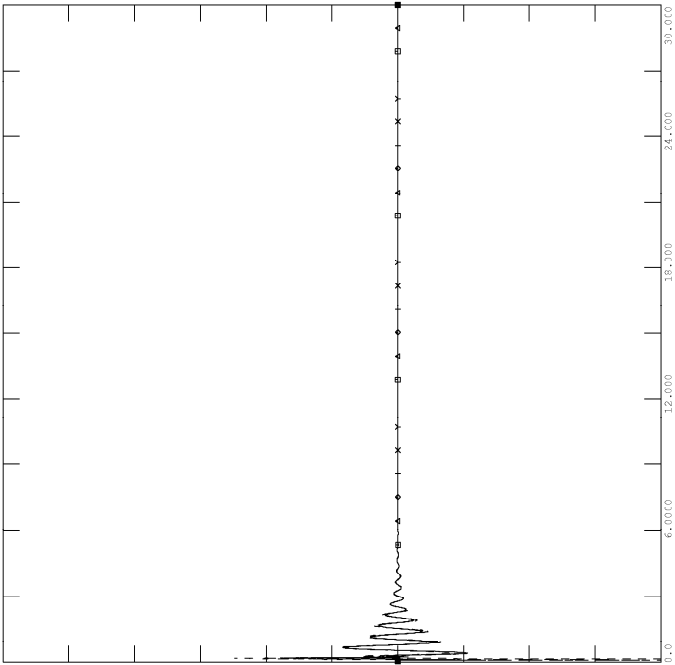
THU, OCT 25 2012 14:56
FREQUENCY X



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMSACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMSACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



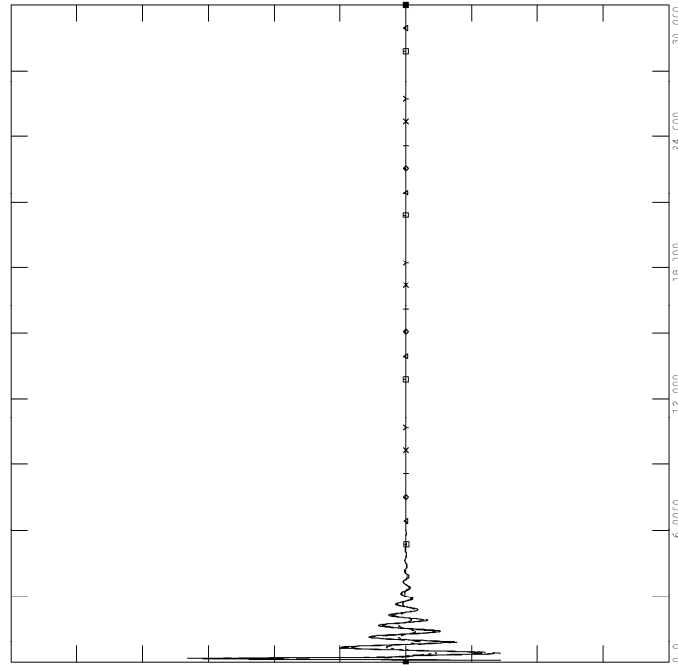
THU, OCT 25 2012 14:56
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT ON SARGENT - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_05a.out
CHNL# 144: 60. * (1. + [F-PONCHA 230])

60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-COGENITX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600

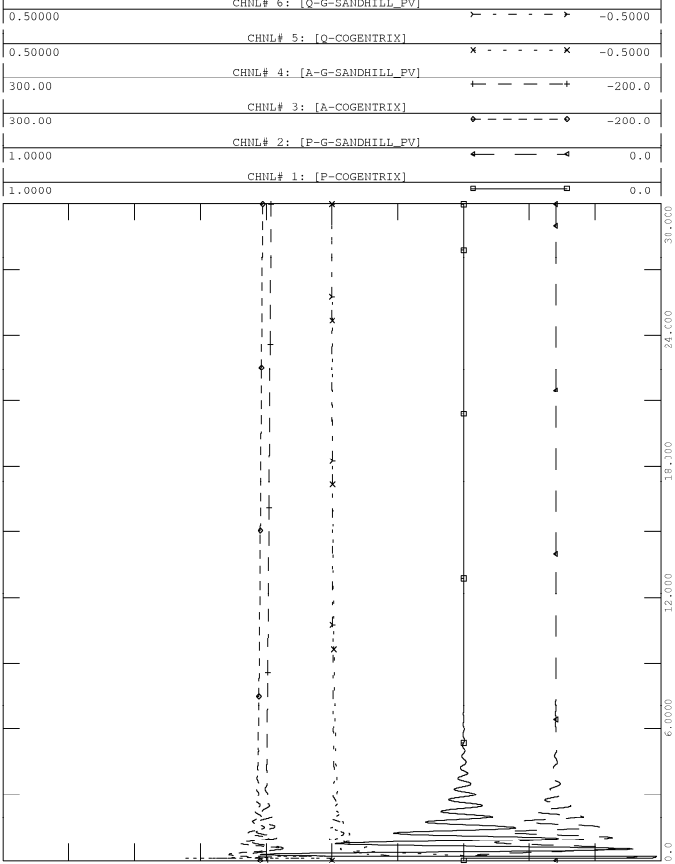


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FREQUENCY IX



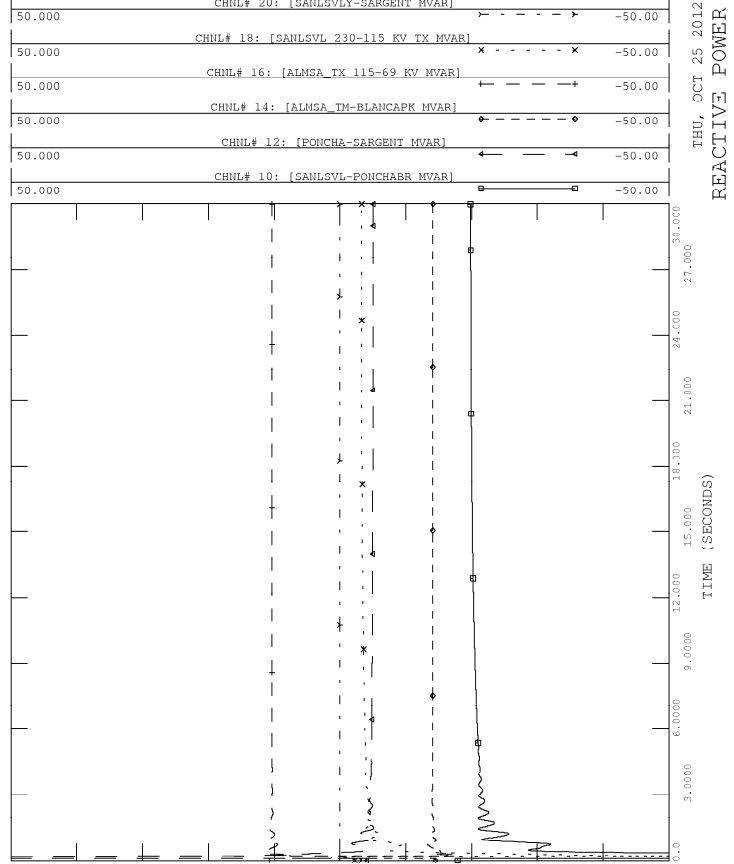
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 6: [Q-G-SANDHILL_PV]



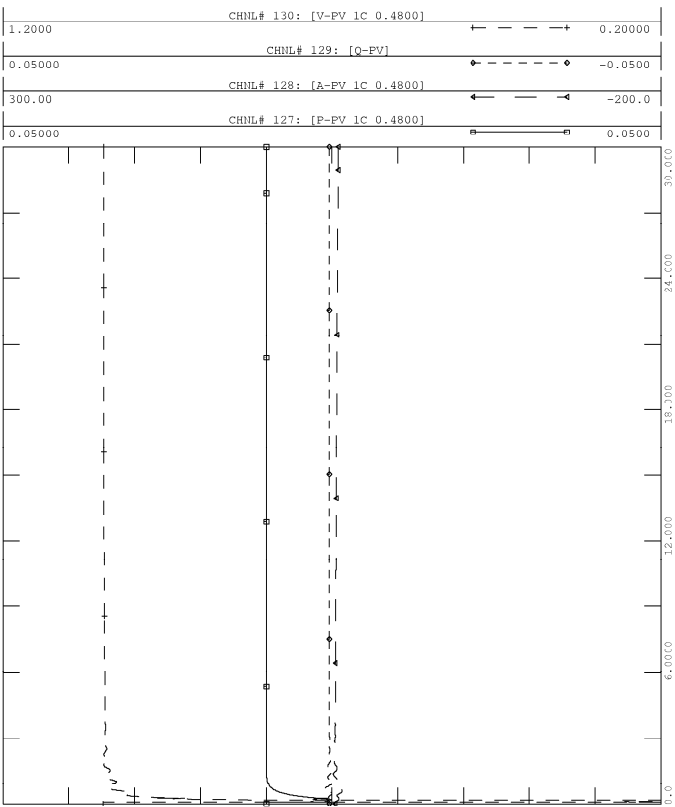
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]



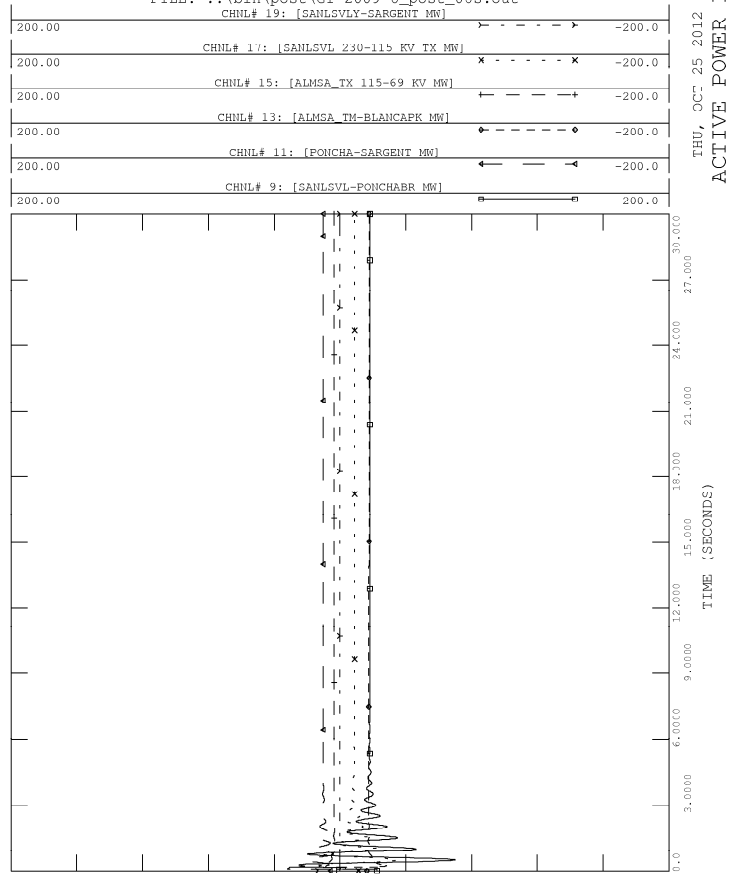
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3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out



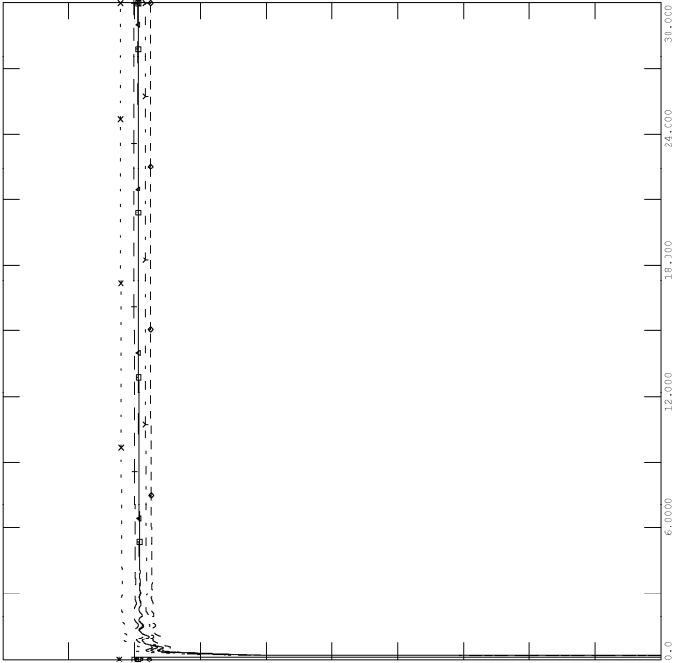


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

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VOLTAGE II

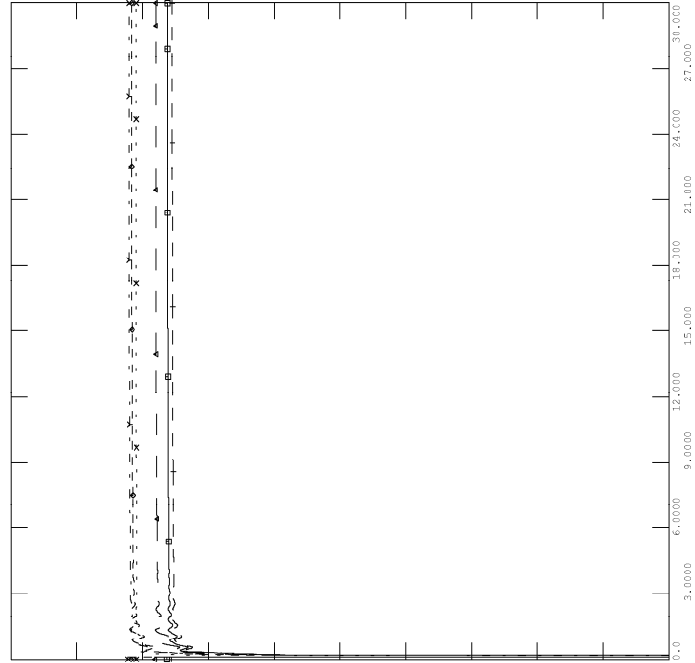


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3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 41: [V-PONCHA 69]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

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VOLTAGE IV

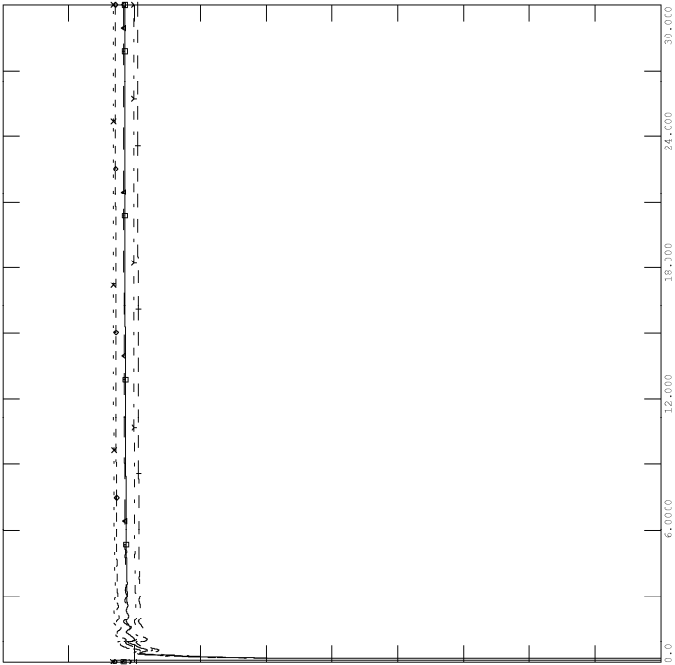


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3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 24: [V-ANSEL TS 69]	x - - - - x	0.20000
1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	+ - - - - +	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	o - - - - o	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

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VOLTAGE I

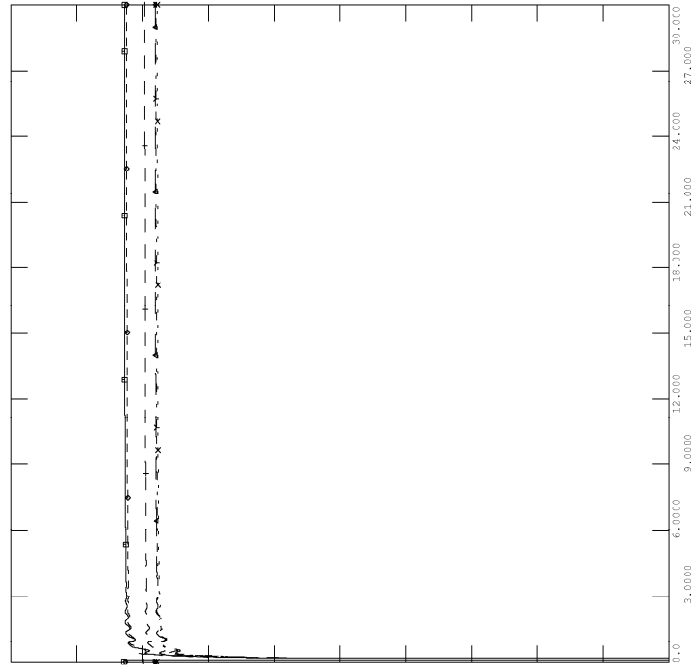


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3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 36: [V-HOOPER TP 69]

1.2000	CHNL# 36: [V-HOOPER TP 69]	x - - - - x	0.20000
1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	+ - - - - +	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	o - - - - o	0.20000
1.2000	CHNL# 32: [V-FTGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

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VOLTAGE III



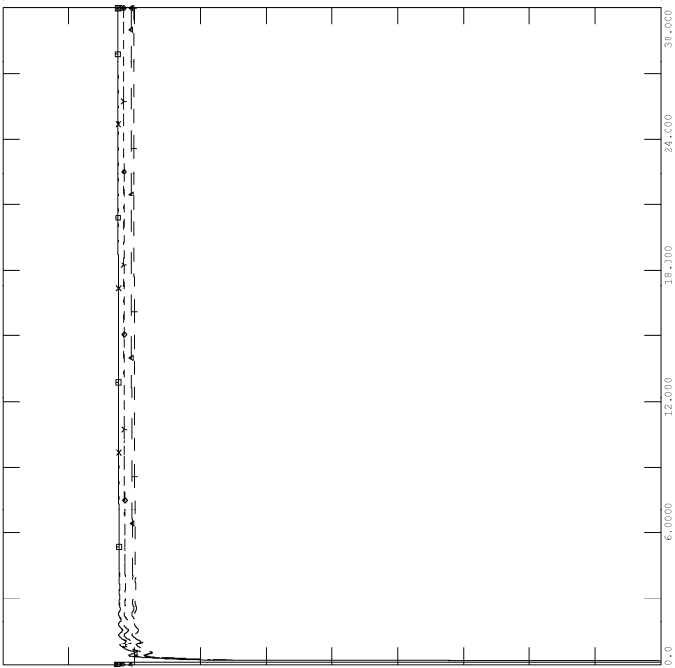


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK_SL 69]	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	0.20000

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VOLTAGE VI

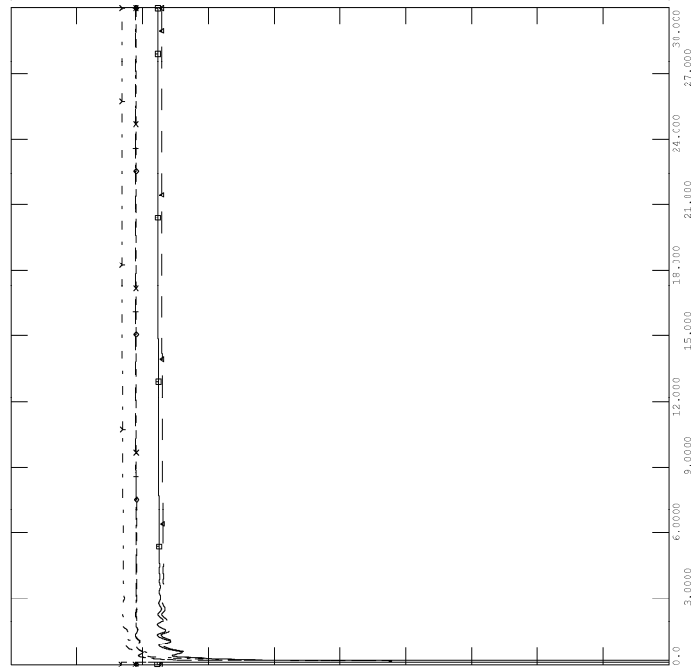


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	0.20000

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VOLTAGE VIII

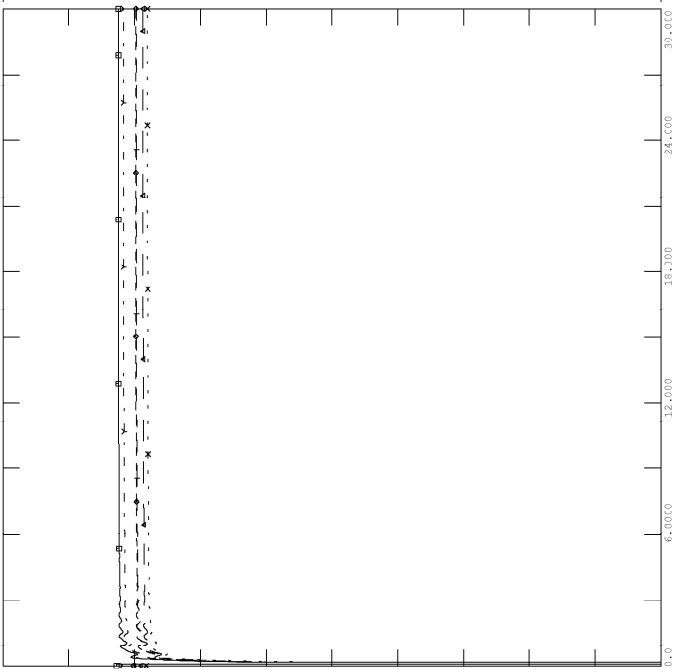


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	0.20000

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VOLTAGE V

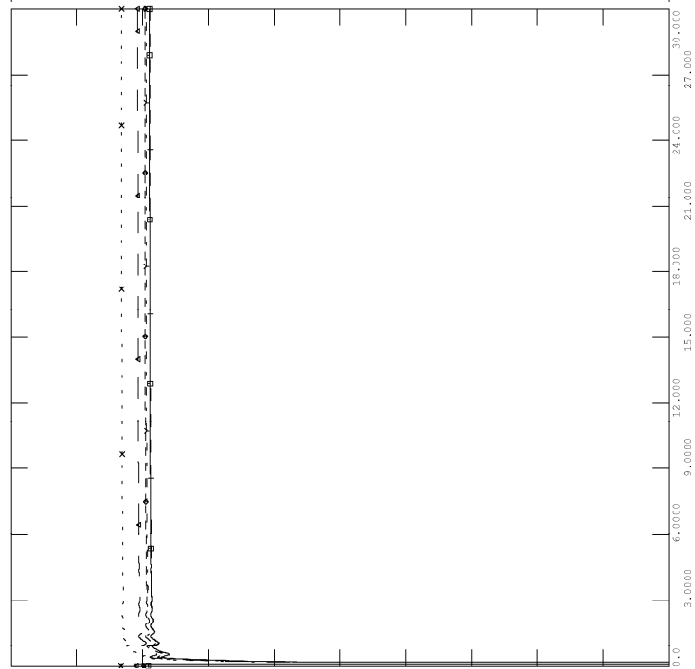


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	0.20000

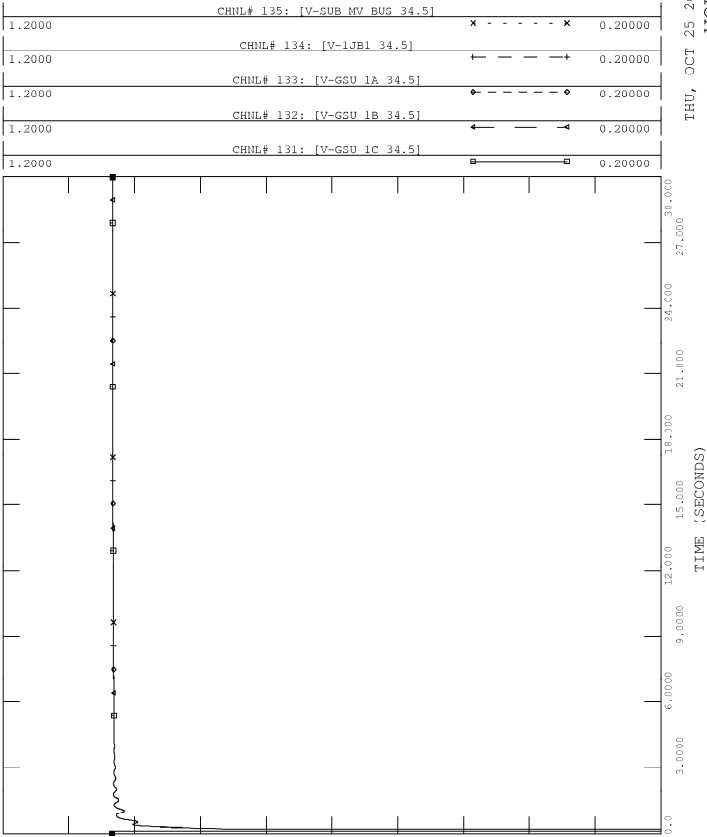
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VOLTAGE VII





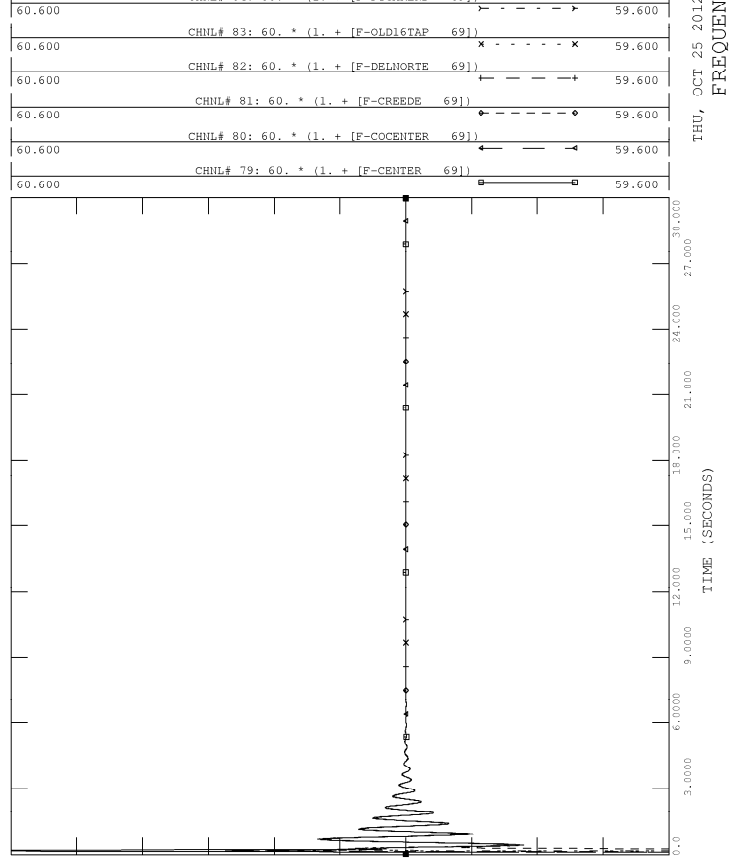
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out



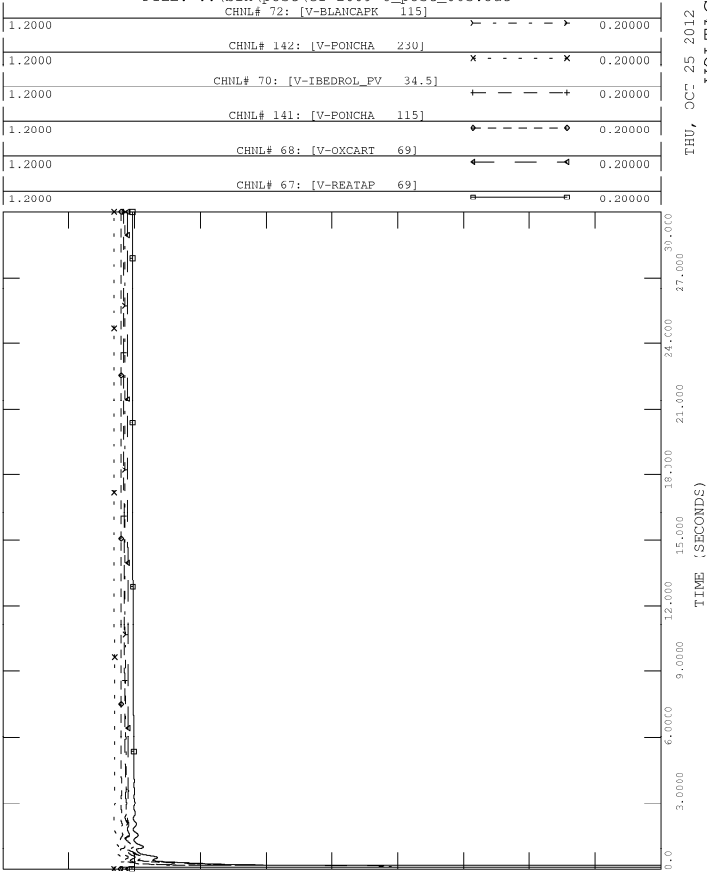
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3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out



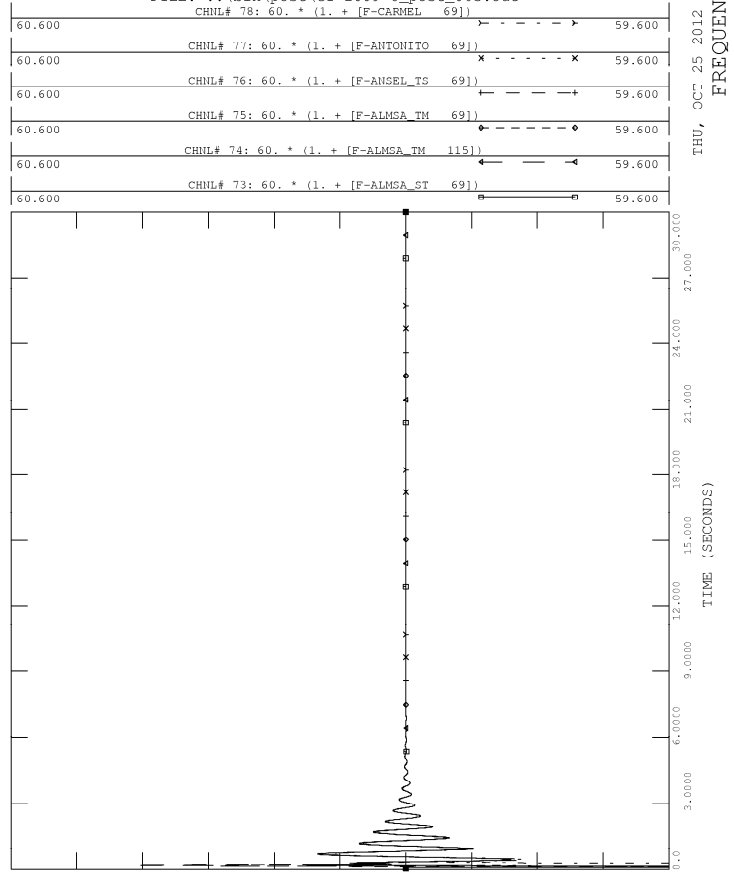
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3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out

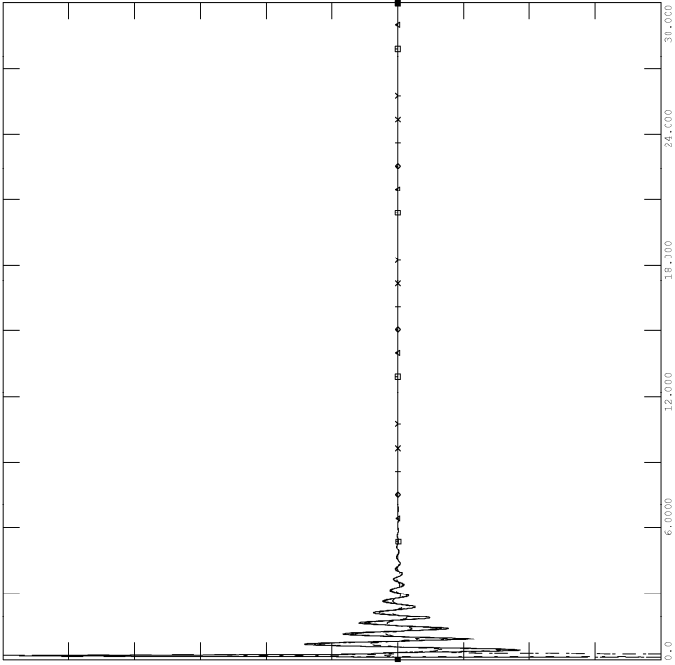




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

60.600	CHNL# 95: 60. * (1. + [F-RAMON 69])	59.600
60.600	CHNL# 94: 60. * (1. + [F-RAMON 115])	59.600
60.600	CHNL# 93: 60. * (1. + [F-PONCHA 69])	59.600
60.600	CHNL# 92: 60. * (1. + [F-PLAZA 69])	59.600
60.600	CHNL# 91: 60. * (1. + [F-MOSCA 69])	59.600



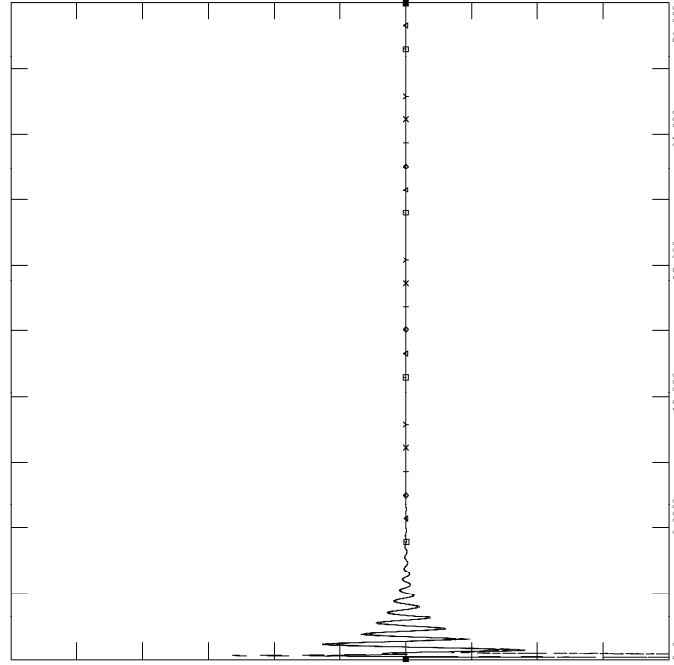
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FREQUENCY IV



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

60.600	CHNL# 107: 60. * (1. + [F-STOCKADE 69])	59.600
60.600	CHNL# 106: 60. * (1. + [F-STANLEY 115])	59.600
60.600	CHNL# 105: 60. * (1. + [F-SFORK_GL 69])	59.600
60.600	CHNL# 104: 60. * (1. + [F-SARGENT 69])	59.600
60.600	CHNL# 103: 60. * (1. + [F-SARGENT 115])	59.600



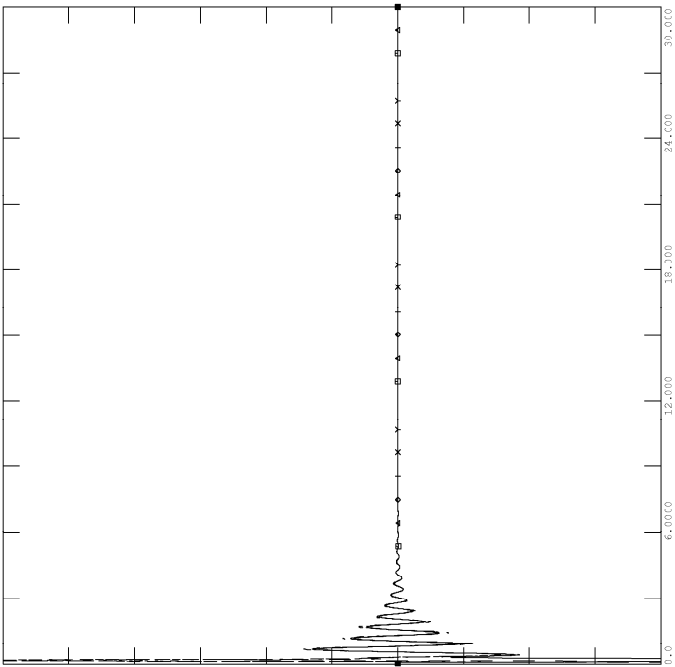
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FREQUENCY VI



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06s.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

60.600	CHNL# 89: 60. * (1. + [F-LAGARITA 69])	59.600
60.600	CHNL# 88: 60. * (1. + [F-HOOPERTP 69])	59.600
60.600	CHNL# 87: 60. * (1. + [F-HOOPER 69])	59.600
60.600	CHNL# 86: 60. * (1. + [F-HOMELAKE 69])	59.600
60.600	CHNL# 85: 60. * (1. + [F-HILANDSL 69])	59.600



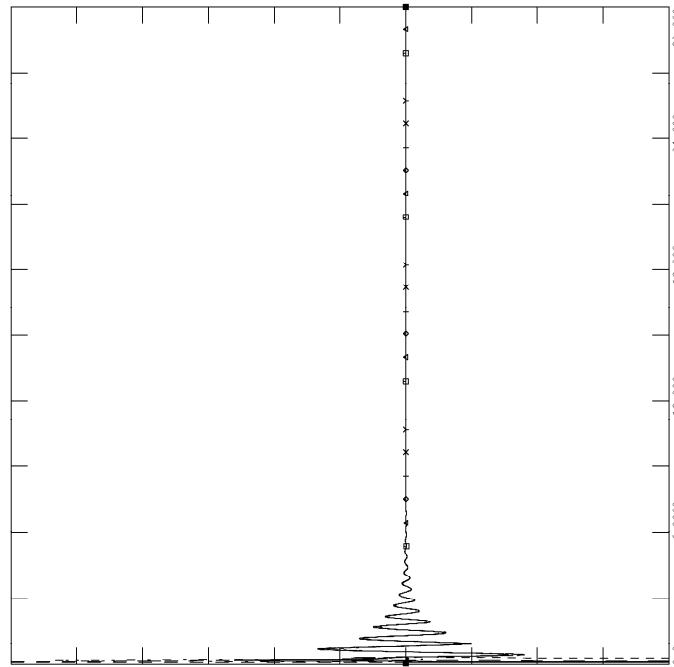
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FREQUENCY III



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06s.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])

60.600	CHNL# 101: 60. * (1. + [F-SANLSVLY 230])	59.600
60.600	CHNL# 100: 60. * (1. + [F-SANLSVLY 115])	59.600
60.600	CHNL# 99: 60. * (1. + [F-S.ACACIO 69])	59.600
60.600	CHNL# 98: 60. * (1. + [F-ROMEO 69])	59.600
60.600	CHNL# 97: 60. * (1. + [F-RIOGRDTP 69])	59.600



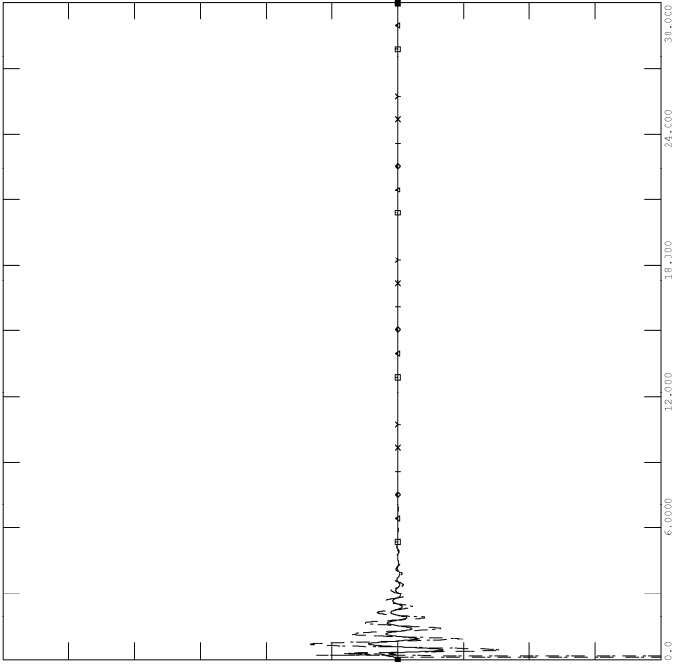
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FREQUENCY V



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KERBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



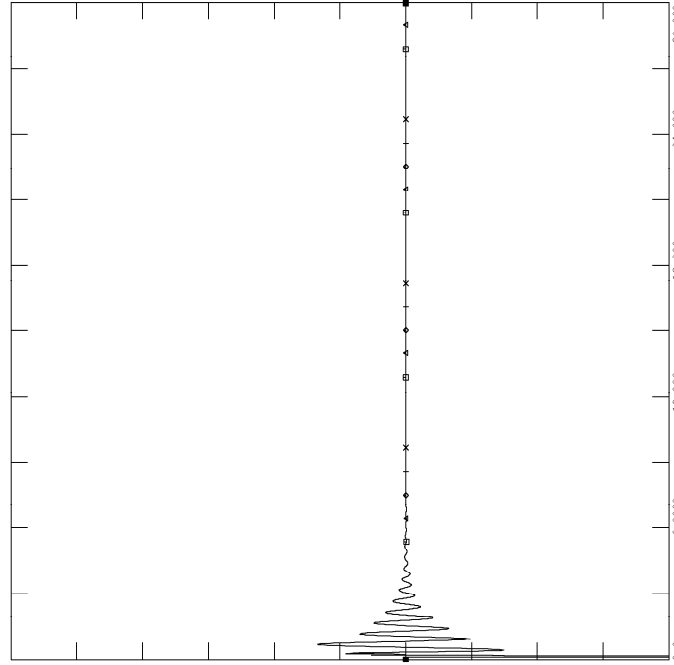
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FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06a.out

60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJBI 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



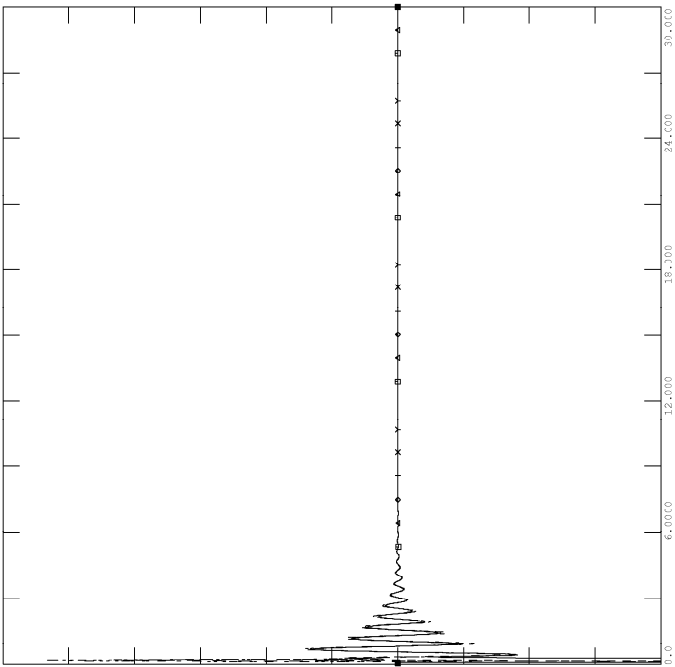
THU, OCT 25 2012 14:56
FREQUENCY X



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06s.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMSACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMSACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



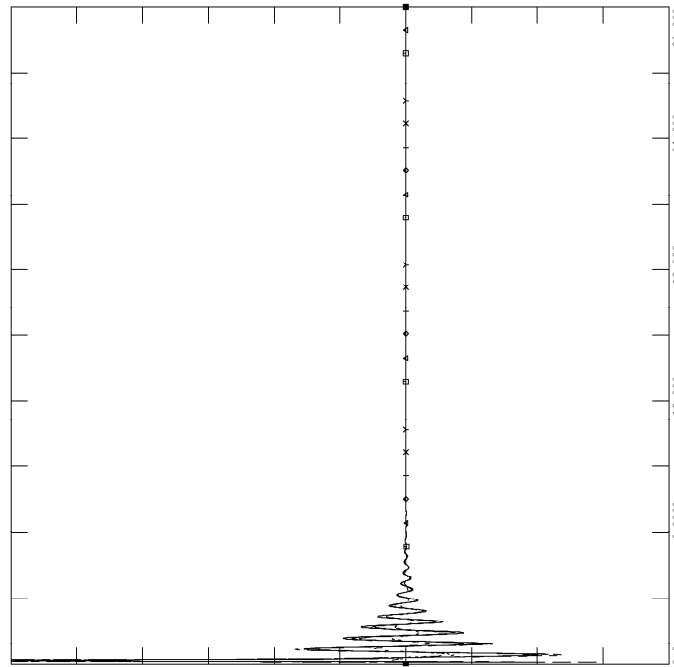
THU, OCT 25 2012 14:56
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - SARGENT 115 KV LI

FILE: ..\bin\post\GI 2009_8_post_06s.out

60.600	CHNL# 144: 60. * (1. + [F-PONCHA 230])	59.600
60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-COGENITX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600

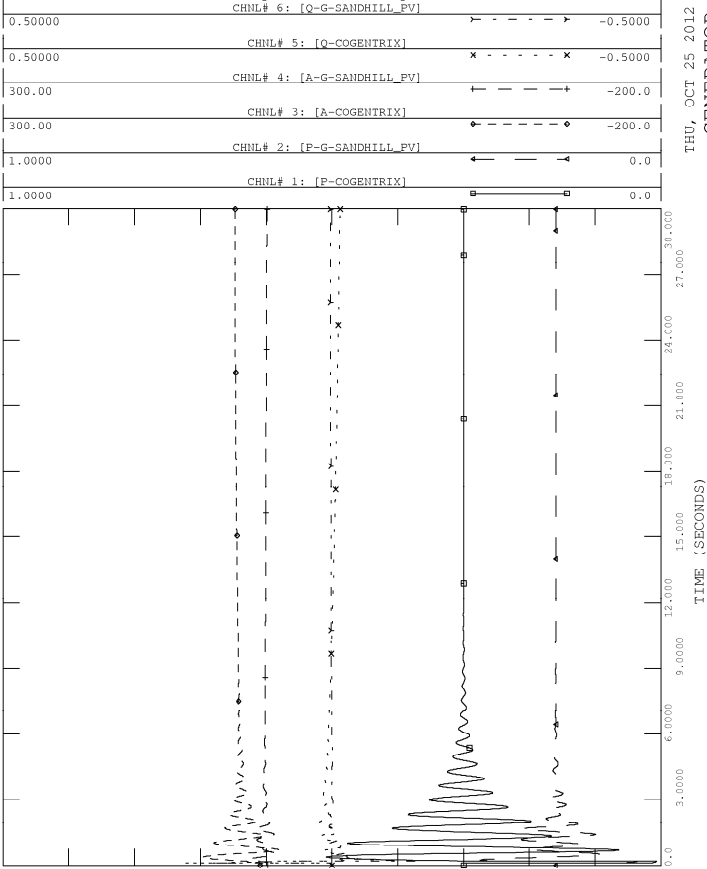


THU, OCT 25 2012 14:56
FREQUENCY IX



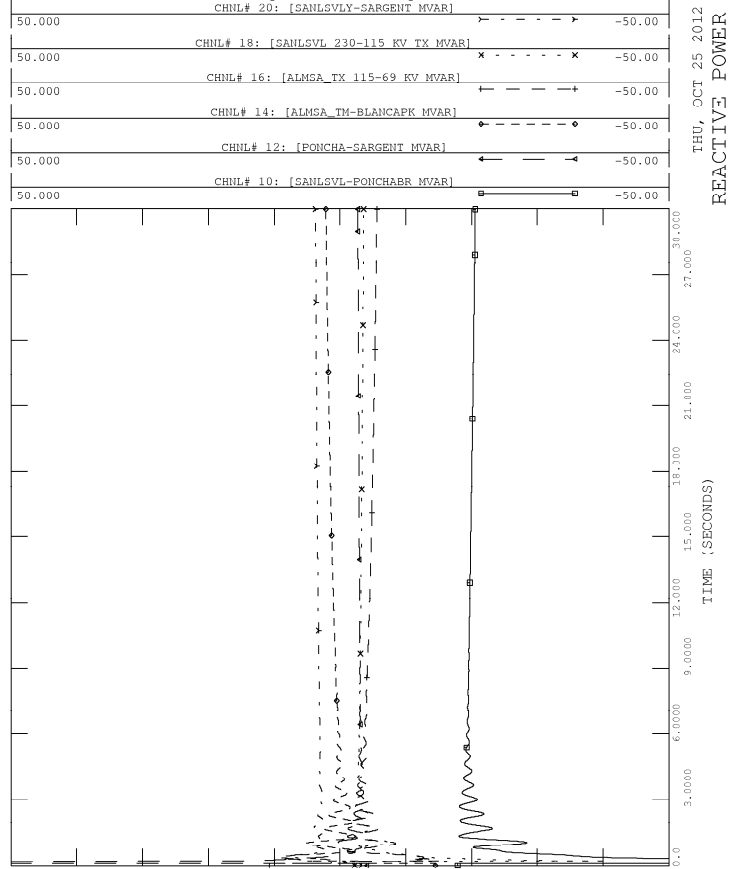
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 6: [Q-G-SANDHILL_PV]



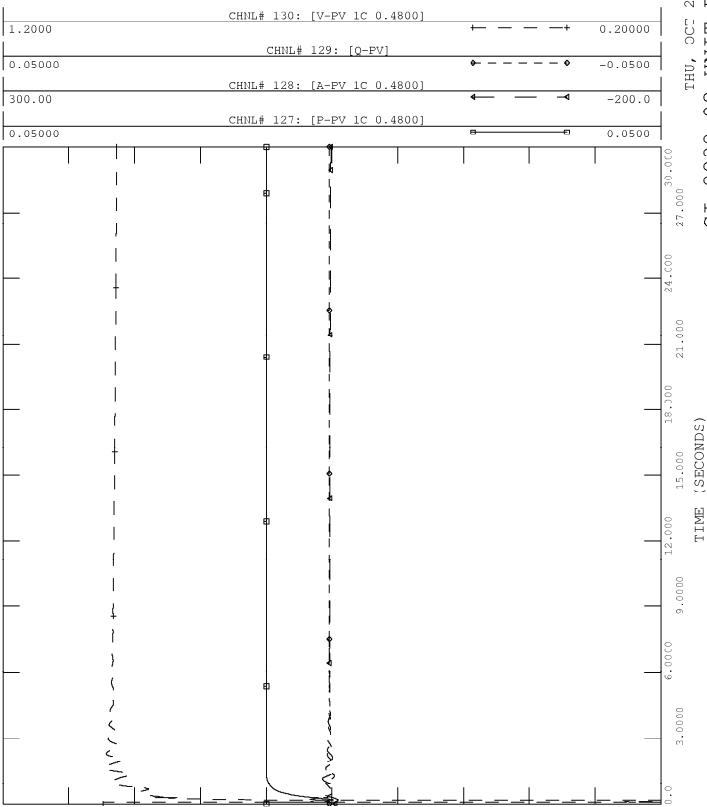
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]



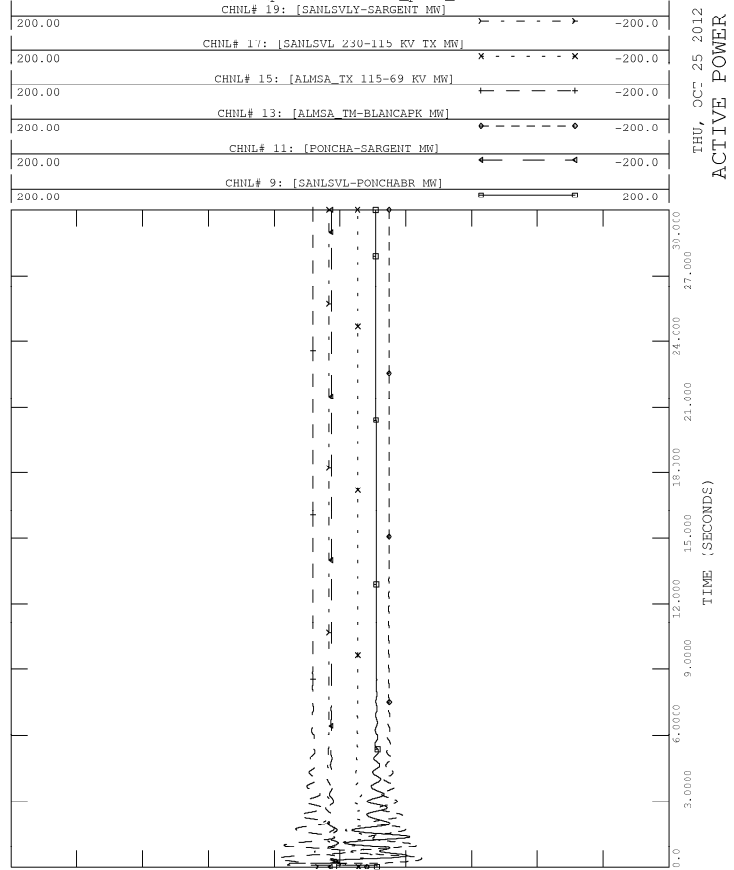
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out



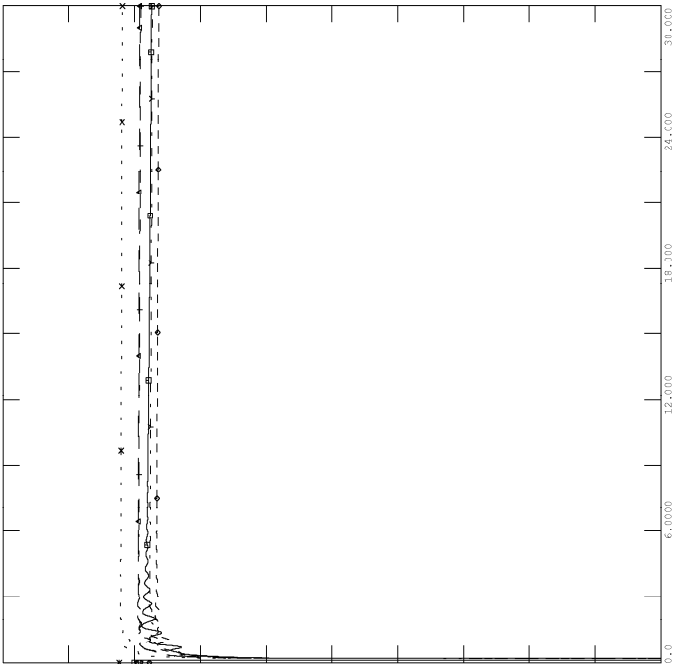


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:02
VOLTAGE II

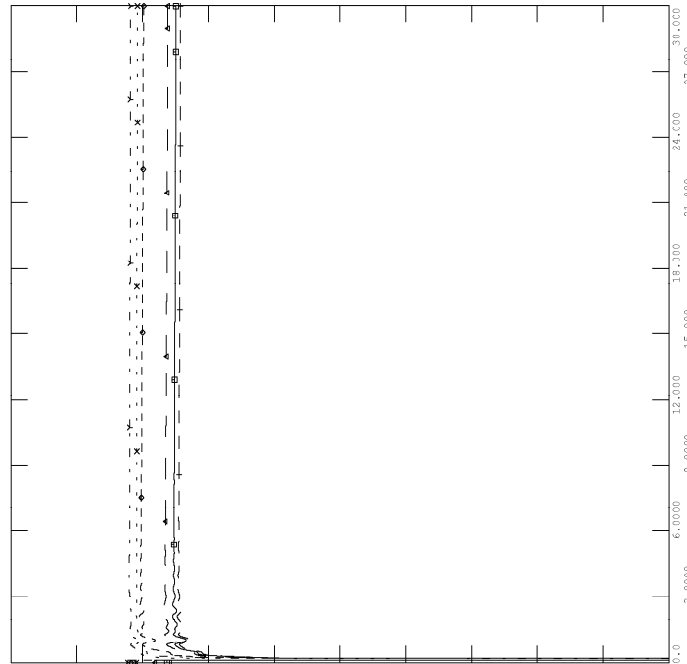


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 42: [V-RAMON 115]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:02
VOLTAGE IV

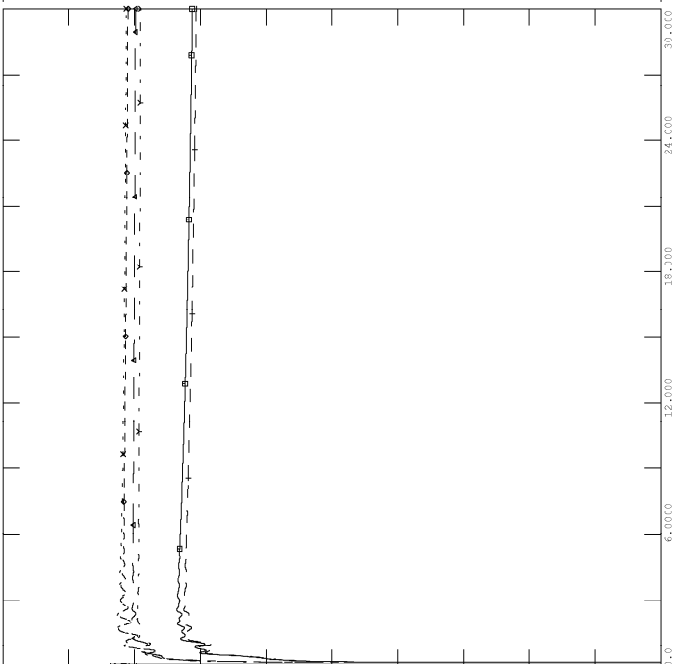


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

THU, OCT 25 2012 15:02
VOLTAGE I

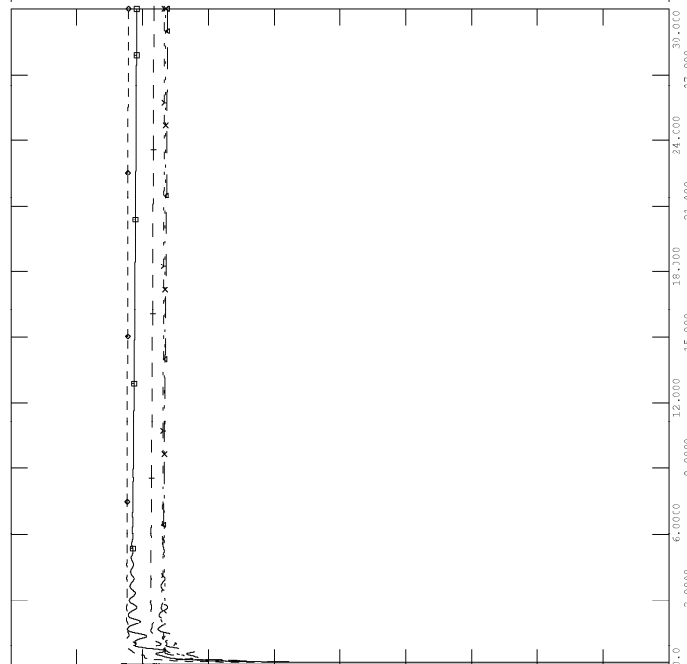


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 36: [V-HOOPER TP 69]

1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	x - - - - - x	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	+ - - - - +	0.20000
1.2000	CHNL# 32: [V-FIGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:02
VOLTAGE III



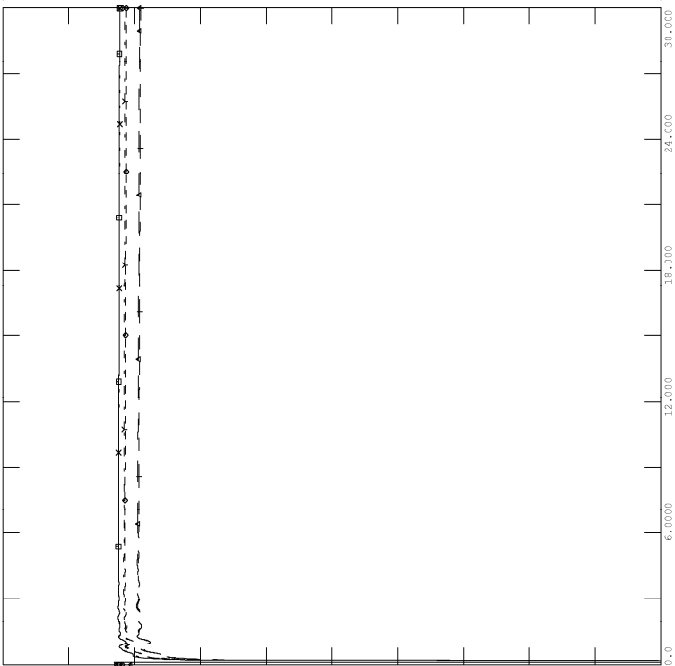


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK_SL 69]	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	0.20000

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VOLTAGE VI

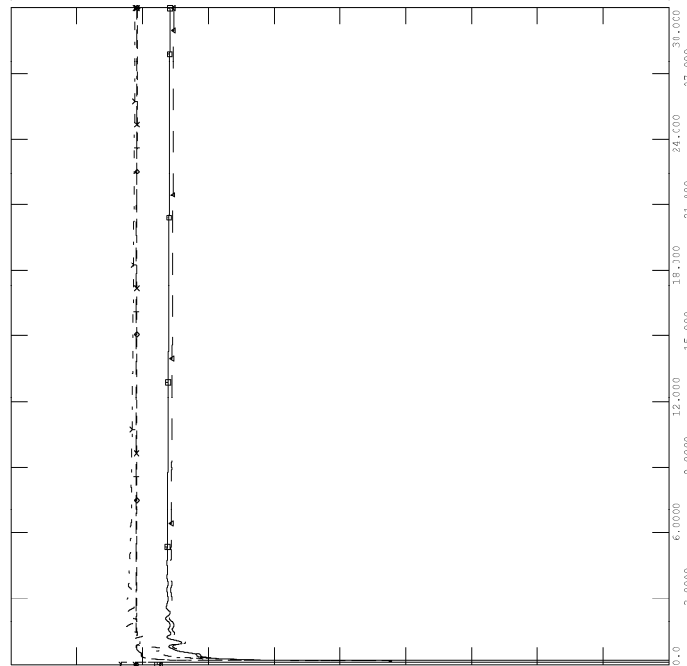


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	0.20000

THU, OCT 25 2012 15:02
VOLTAGE VIII

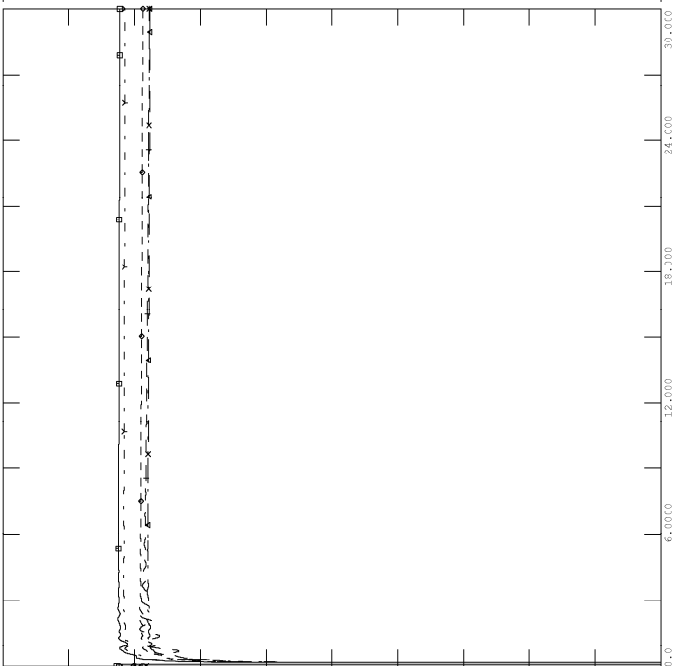


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	0.20000

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VOLTAGE V

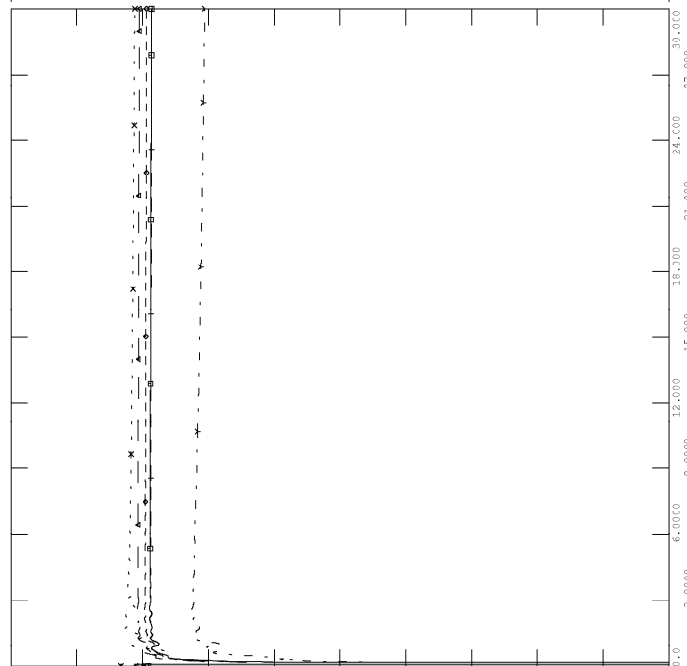


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	0.20000

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VOLTAGE VII

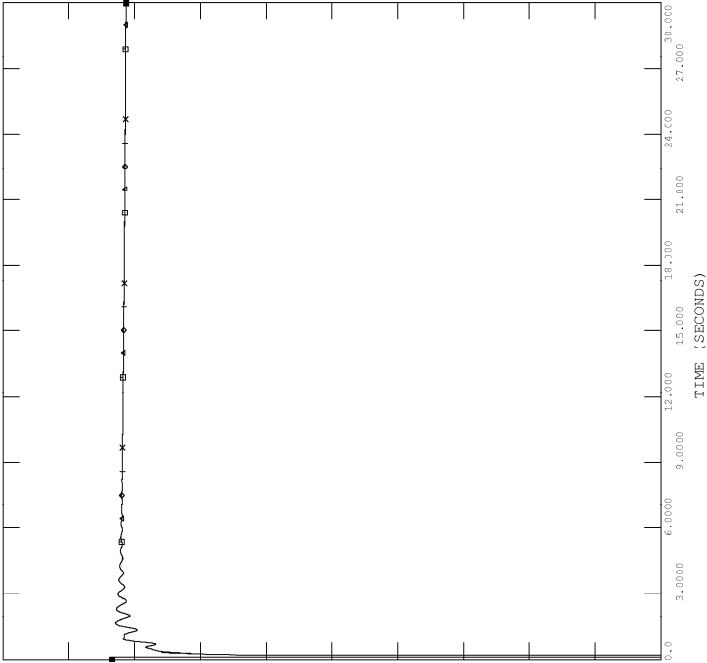




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out

1.2000	CHNL# 135: [V-SUB MV BUS 34.5]	x - - - - x	0.20000
1.2000	CHNL# 134: [V-LJB1 34.5]	+ - - - - +	0.20000
1.2000	CHNL# 133: [V-GSU 1A 34.5]	o - - - - o	0.20000
1.2000	CHNL# 132: [V-GSU 1B 34.5]	o - - - - o	0.20000
1.2000	CHNL# 131: [V-GSU 1C 34.5]	o - - - - o	0.20000



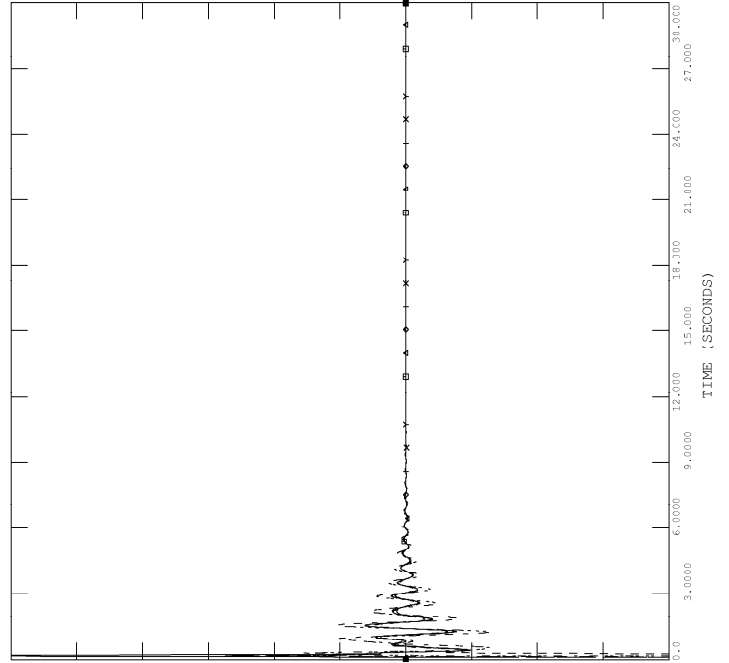
THU, OCT 25 2012 15:02
VOLTAGE X



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out

60.600	CHNL# 83: 60. * (1. + [F-OLD16TAP 69])	x - - - - x	59.600
60.600	CHNL# 82: 60. * (1. + [F-DELNORTE 69])	+ - - - - +	59.600
60.600	CHNL# 81: 60. * (1. + [F-CREEDE 69])	o - - - - o	59.600
60.600	CHNL# 80: 60. * (1. + [F-COCENTER 69])	o - - - - o	59.600
60.600	CHNL# 79: 60. * (1. + [F-CENTER 69])	o - - - - o	59.600



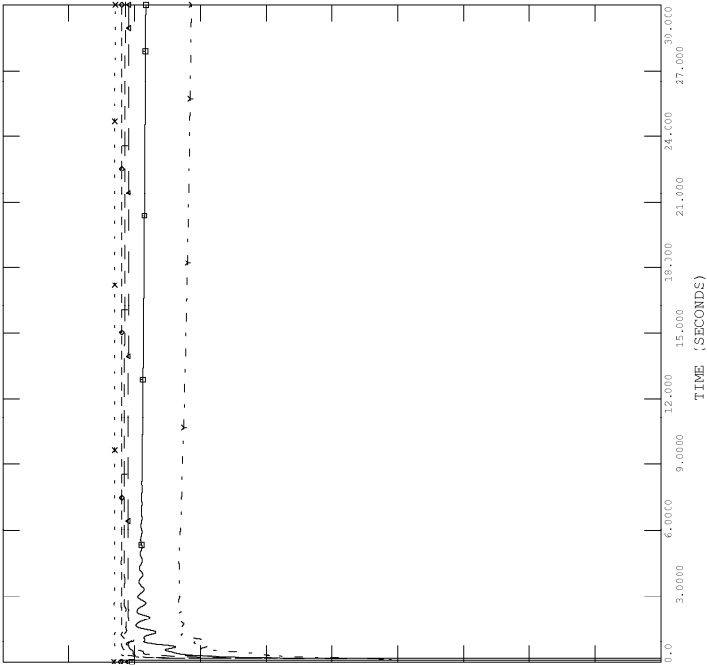
THU, OCT 25 2012 15:02
FREQUENCY II



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out

1.2000	CHNL# 72: [V-BLANCAPK 115]	+ - - - - +	0.20000
1.2000	CHNL# 142: [V-PONCHA 230]	x - - - - x	0.20000
1.2000	CHNL# 70: [V-IBEDROL_PV 34.5]	+ - - - - +	0.20000
1.2000	CHNL# 141: [V-PONCHA 115]	o - - - - o	0.20000
1.2000	CHNL# 68: [V-OXCART 69]	o - - - - o	0.20000
1.2000	CHNL# 67: [V-REATAP 69]	o - - - - o	0.20000



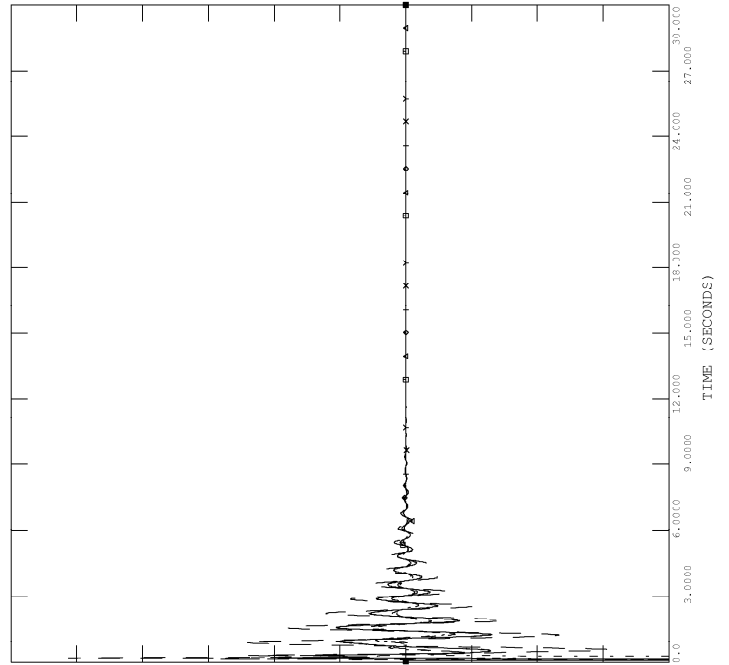
THU, OCT 25 2012 15:02
VOLTAGE IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out

60.600	CHNL# 78: 60. * (1. + [F-CARNEI 69])	+ - - - - +	59.600
60.600	CHNL# 77: 60. * (1. + [F-ANTONIOITO 69])	x - - - - x	59.600
60.600	CHNL# 76: 60. * (1. + [F-ANSEL_TS 69])	+ - - - - +	59.600
60.600	CHNL# 75: 60. * (1. + [F-ALMSA_TM 69])	o - - - - o	59.600
60.600	CHNL# 74: 60. * (1. + [F-ALMSA_TM 115])	o - - - - o	59.600
60.600	CHNL# 73: 60. * (1. + [F-ALMSA_ST 69])	o - - - - o	59.600

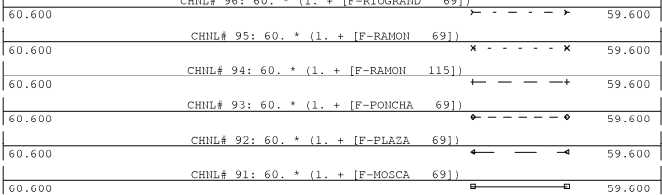


THU, OCT 25 2012 15:02
FREQUENCY I

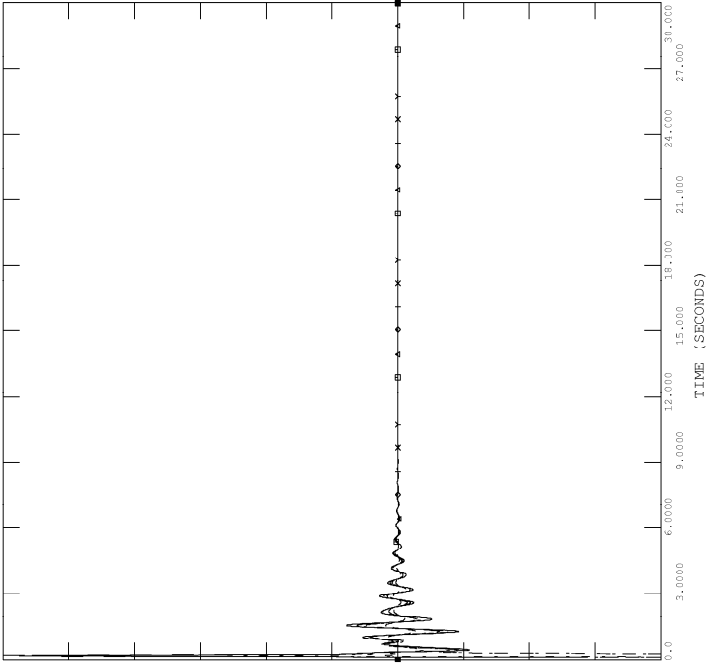


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

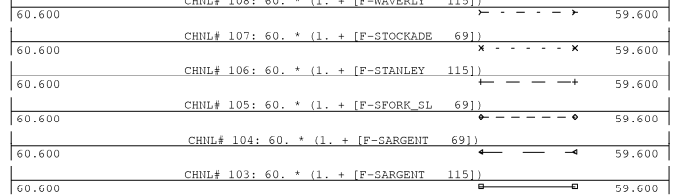


THU, OCT 25 2012 15:02
FREQUENCY IV

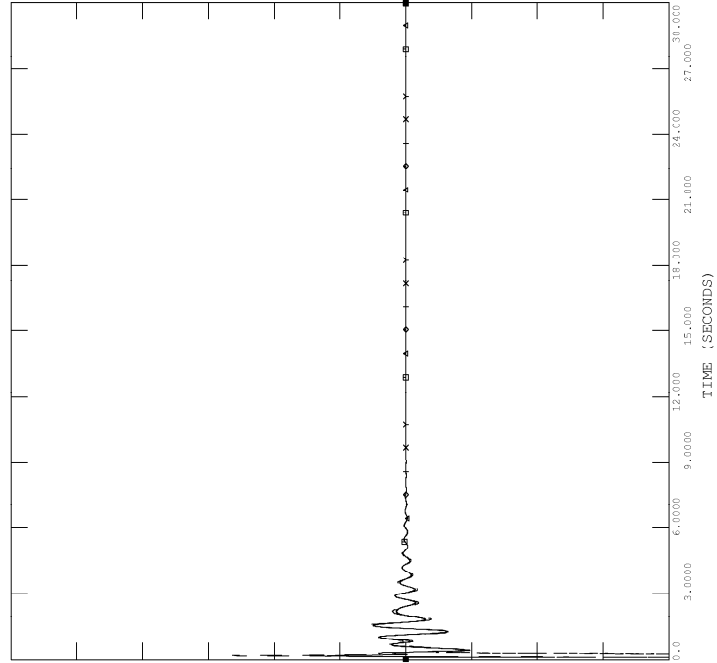


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

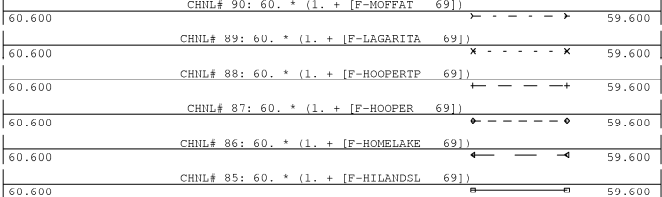


THU, OCT 25 2012 15:02
FREQUENCY VI

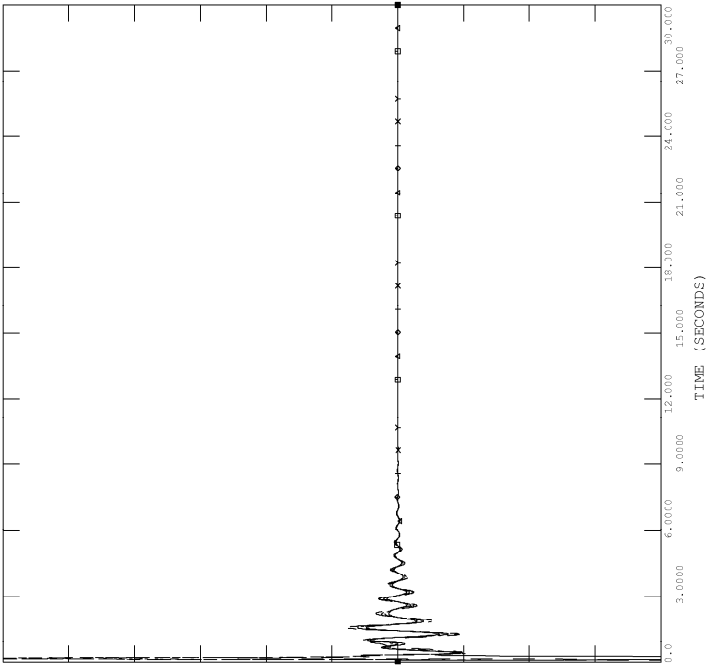


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

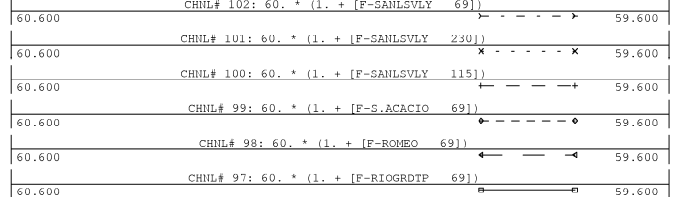


THU, OCT 25 2012 15:02
FREQUENCY III

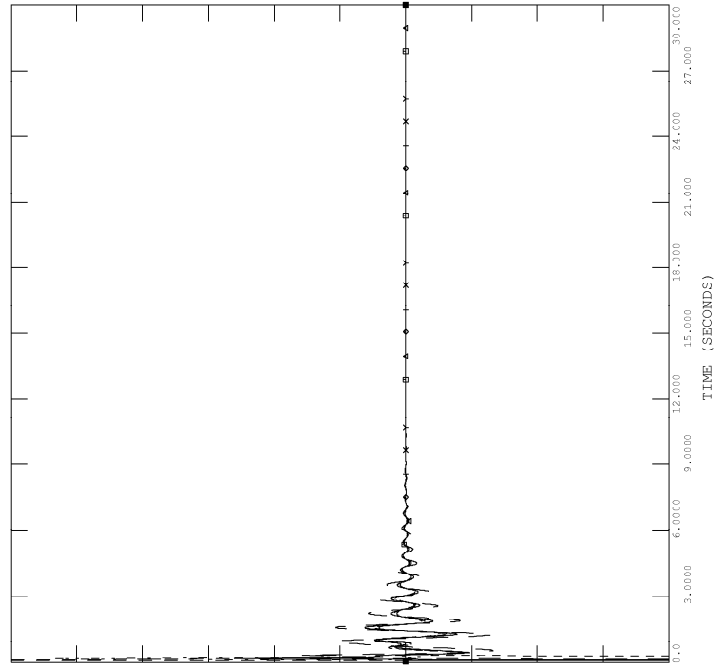


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])



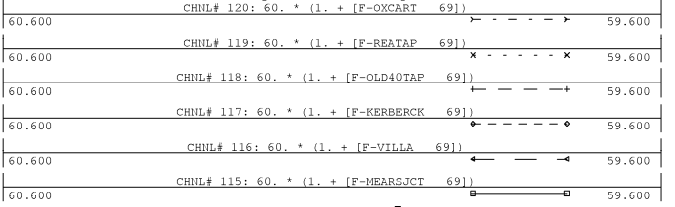
THU, OCT 25 2012 15:02
FREQUENCY V





WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

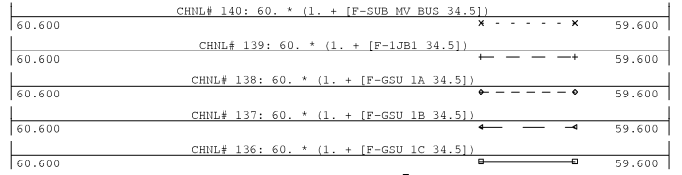


THU, OCT 25 2012 15:02
FREQUENCY VIII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out

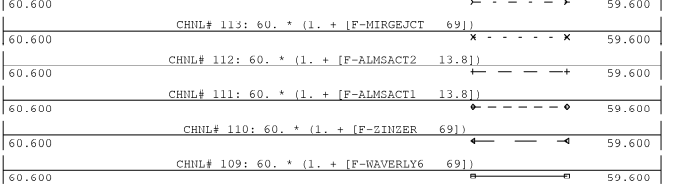


THU, OCT 25 2012 15:02
FREQUENCY IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

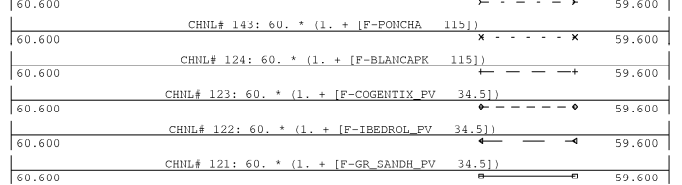


THU, OCT 25 2012 15:02
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SAN LUIS VALLEY ON SAN LUIS VALLEY - BLANCAPEAK 115 K

FILE: ..\bin\post\GI 2009_8_post_07s.out
CHNL# 144: 60. * (1. + [F-PONCHA 230])

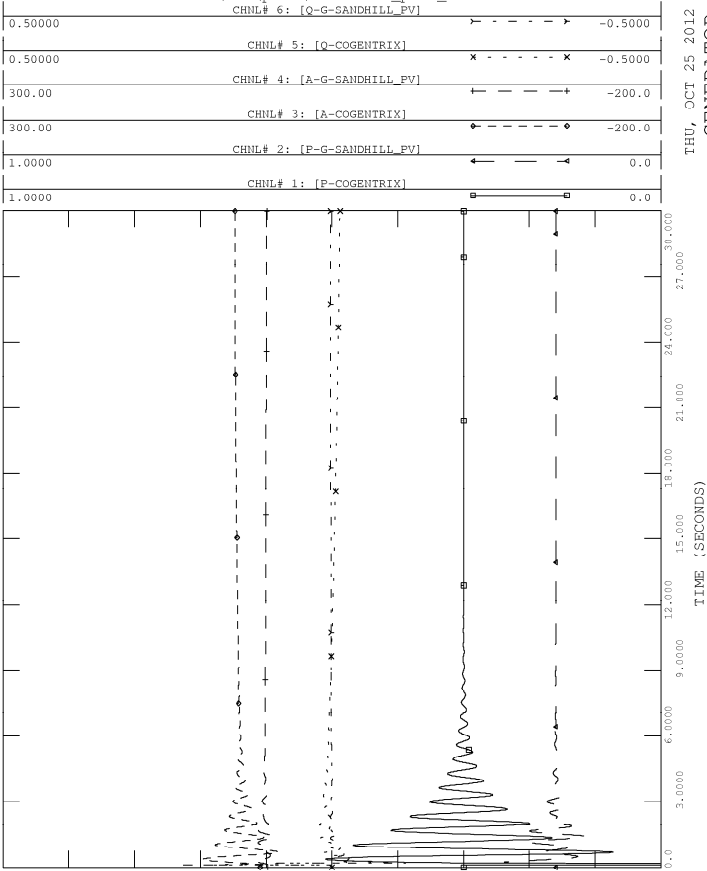


THU, OCT 25 2012 15:02
FREQUENCY IX



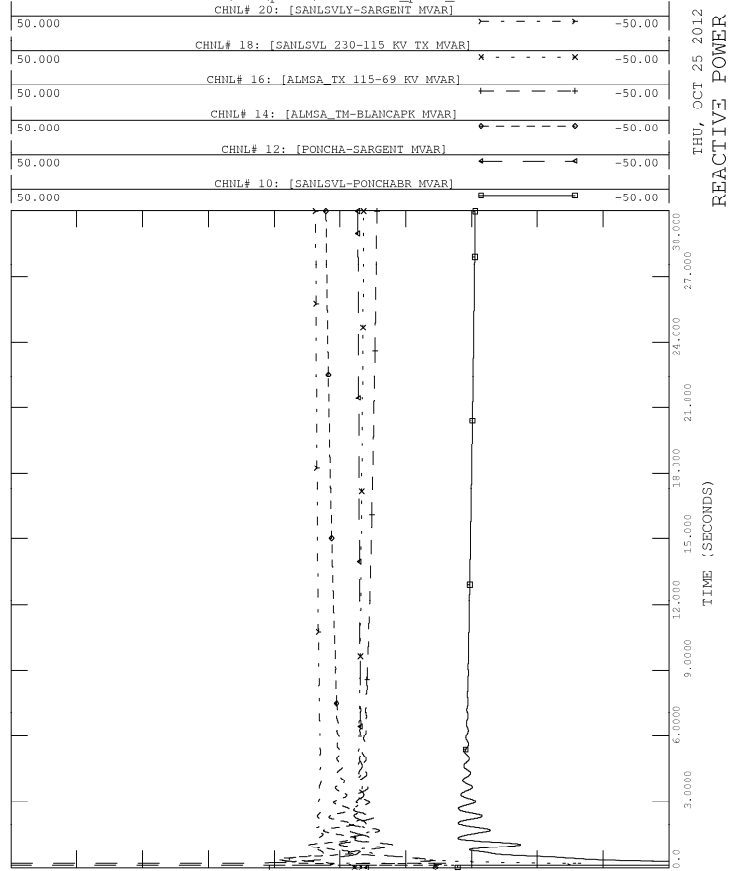
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 6: [Q-G-SANDHILL_PV]



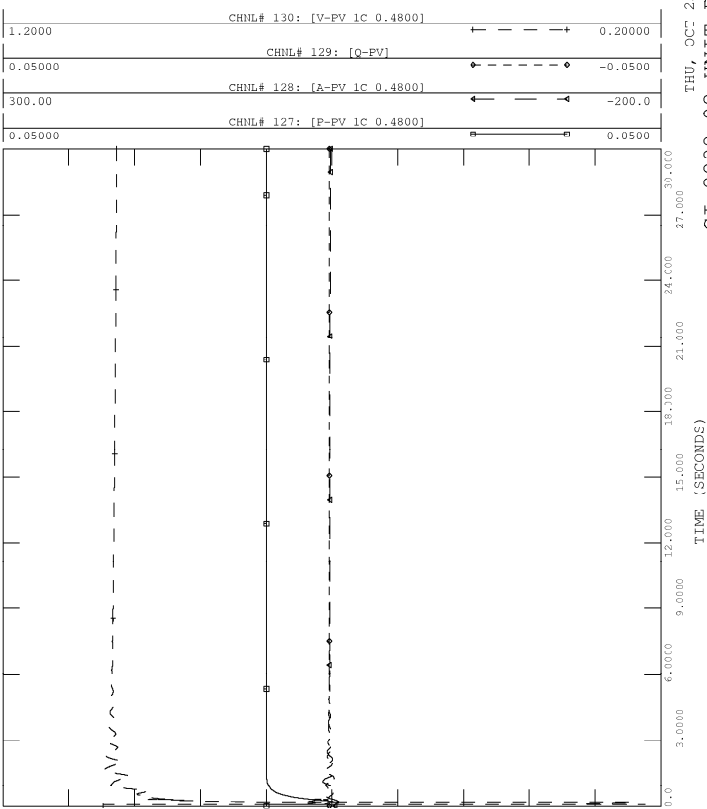
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]



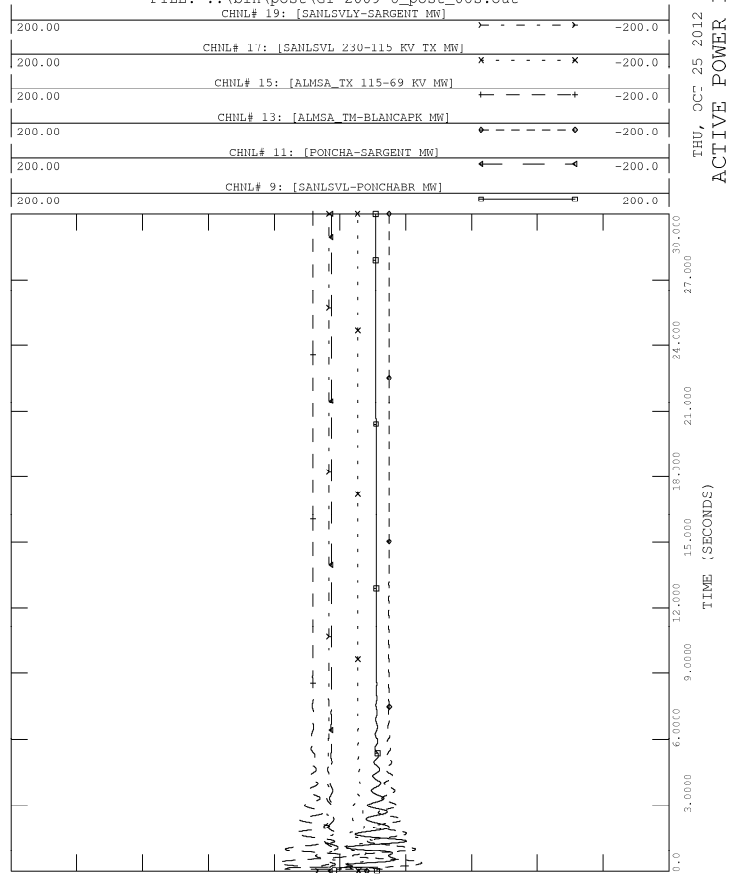
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out



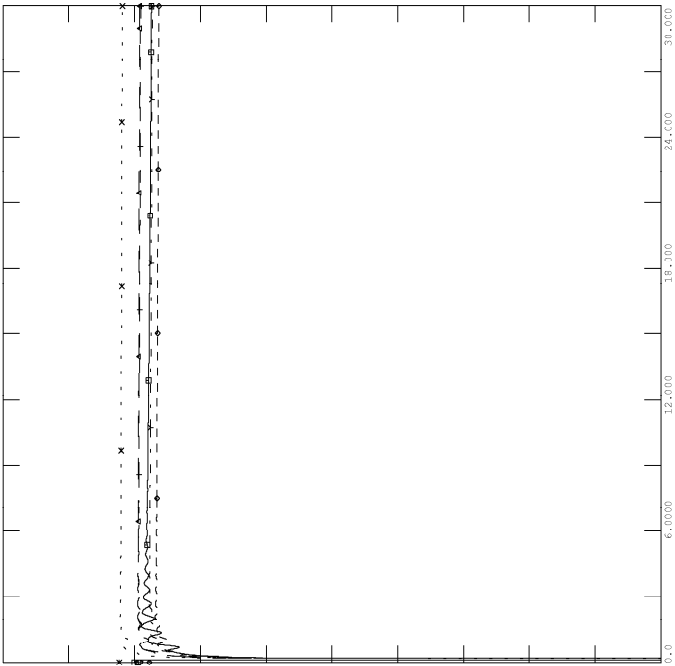


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:10
VOLTAGE II

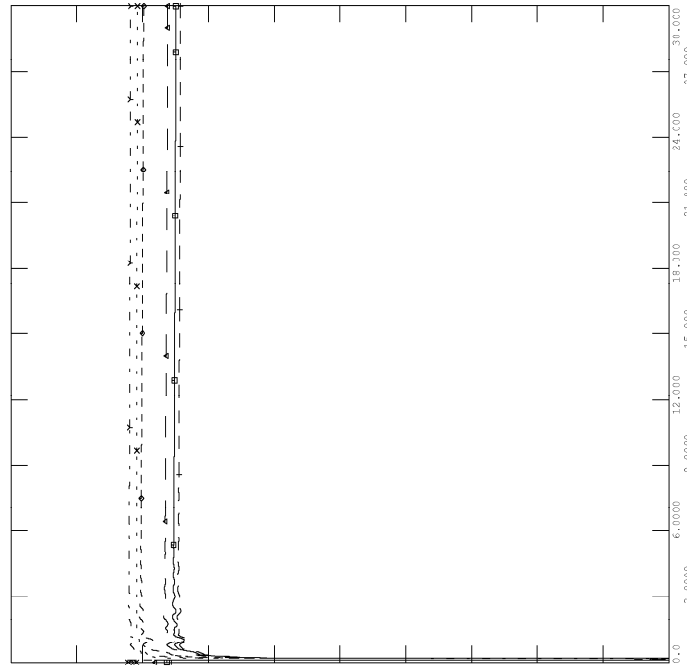


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 42: [V-RAMON 115]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

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VOLTAGE IV

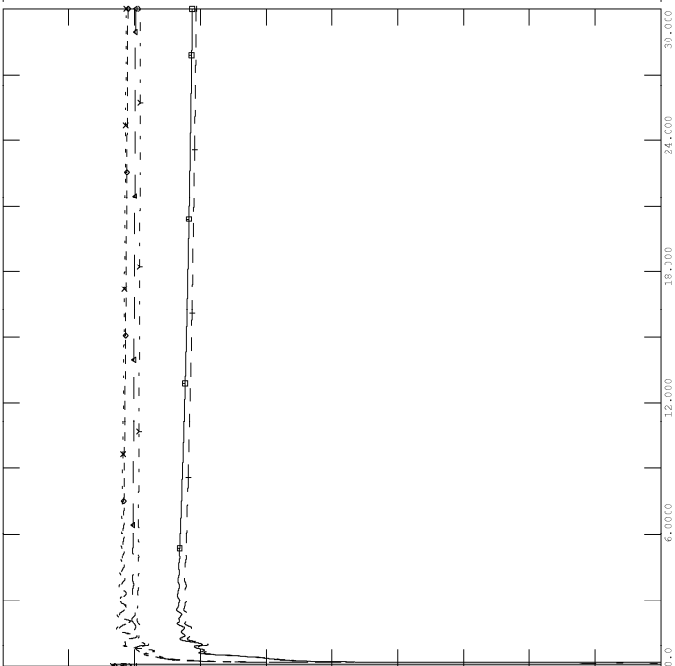


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

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VOLTAGE I

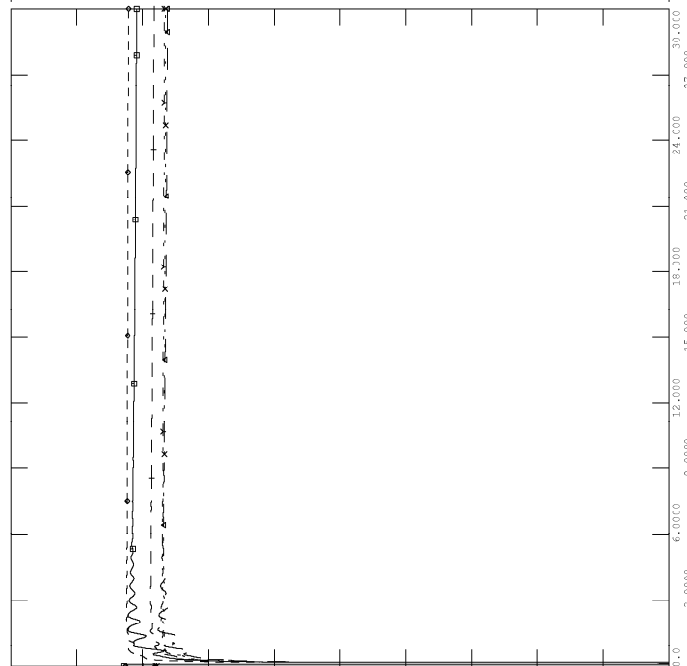


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 36: [V-HOOPER TP 69]

1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	x - - - - - x	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	+ - - - - +	0.20000
1.2000	CHNL# 32: [V-FIGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

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VOLTAGE III



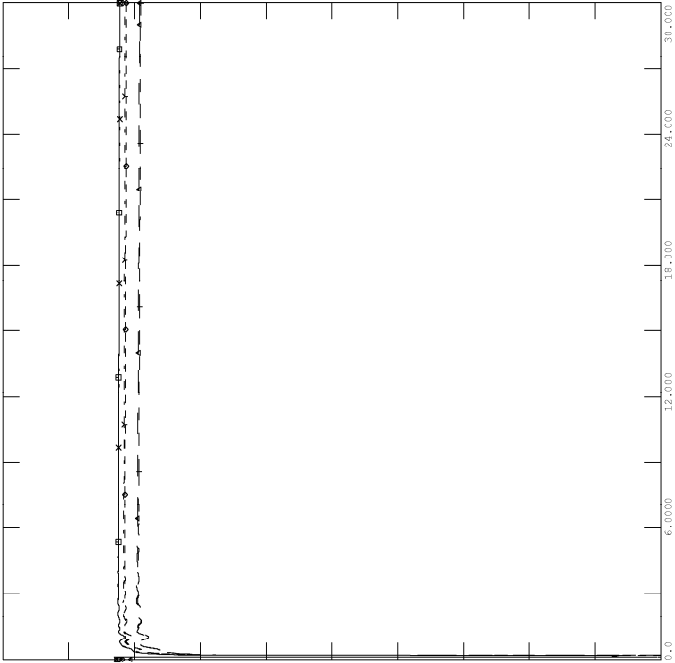


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK SL 69]	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	0.20000

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VOLTAGE VI

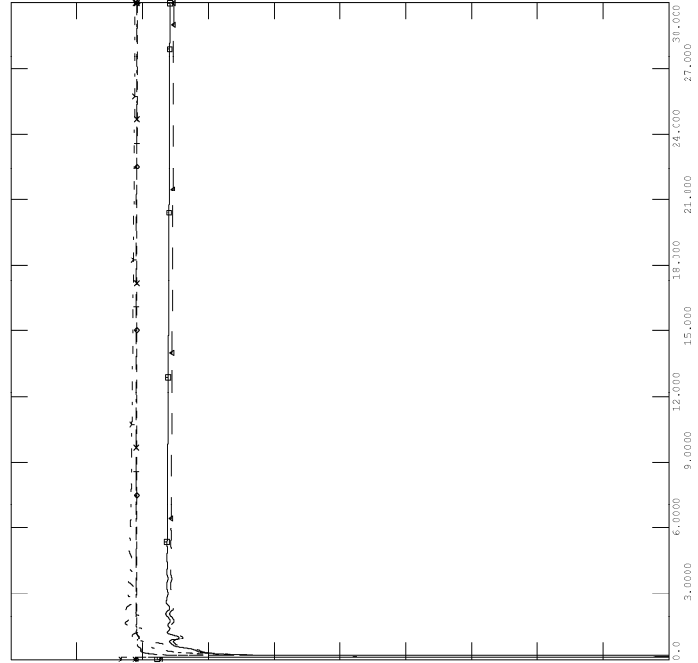


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	0.20000

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VOLTAGE VIII

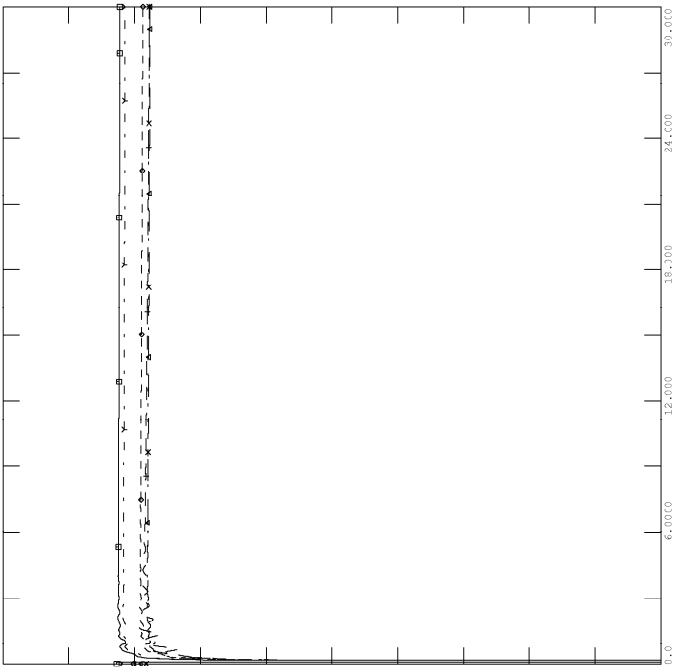


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	0.20000

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VOLTAGE V

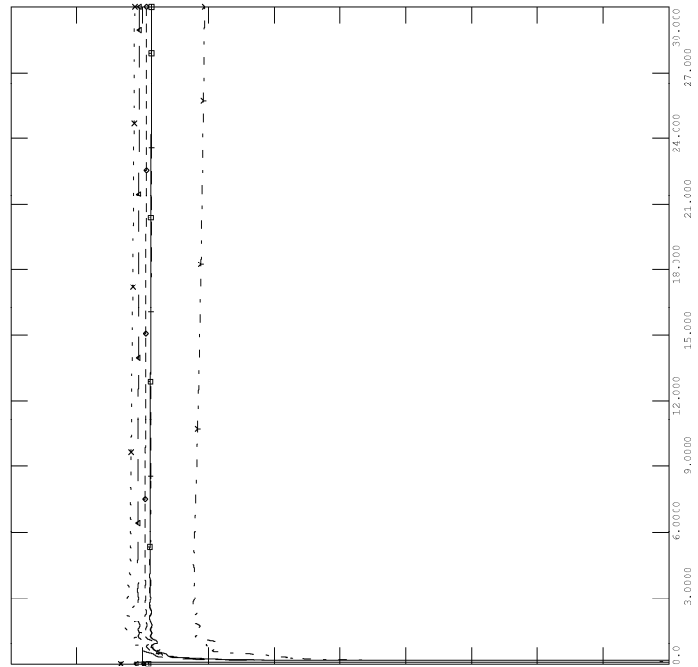


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	0.20000

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VOLTAGE VII

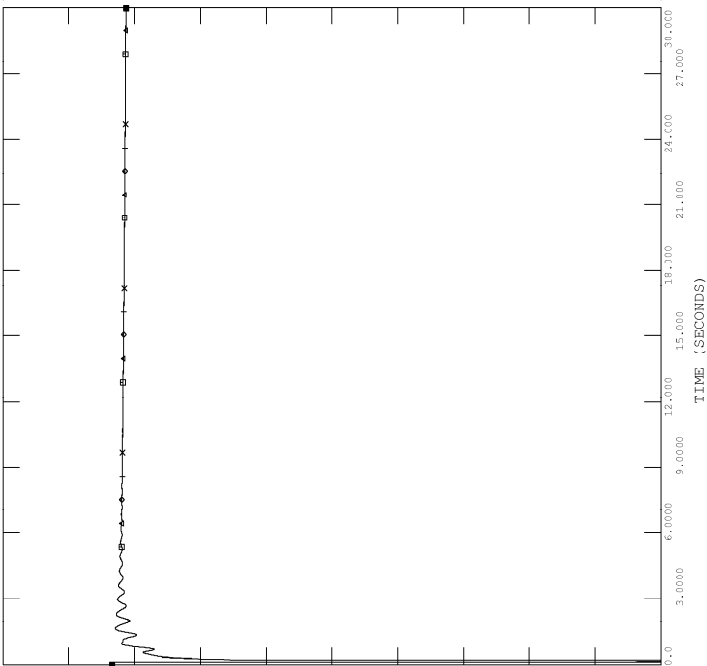




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out

1.2000	CHNL# 135: [V-SUB MV BUS 34.5]	x - - - - x	0.20000
1.2000	CHNL# 134: [V-LJB1 34.5]	+ - - - - +	0.20000
1.2000	CHNL# 133: [V-GSU 1A 34.5]	o - - - - o	0.20000
1.2000	CHNL# 132: [V-GSU 1B 34.5]	o - - - - o	0.20000
1.2000	CHNL# 131: [V-GSU 1C 34.5]	o - - - - o	0.20000



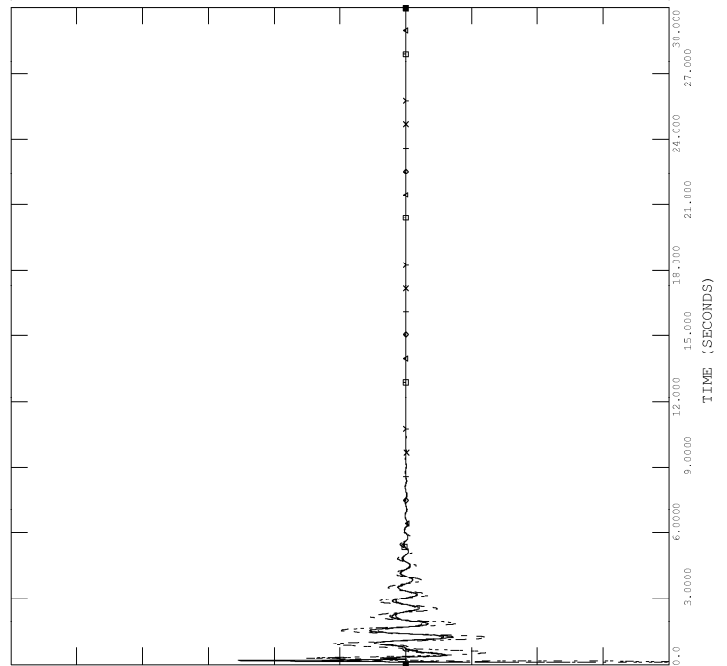
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VOLTAGE X



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out

60.600	CHNL# 83: 60. * (1. + [F-OLD16TAP 69])	x - - - - x	59.600
60.600	CHNL# 82: 60. * (1. + [F-DELNORTE 69])	+ - - - - +	59.600
60.600	CHNL# 81: 60. * (1. + [F-CREEDE 69])	o - - - - o	59.600
60.600	CHNL# 80: 60. * (1. + [F-COCENTER 69])	o - - - - o	59.600
60.600	CHNL# 79: 60. * (1. + [F-CENTER 69])	o - - - - o	59.600



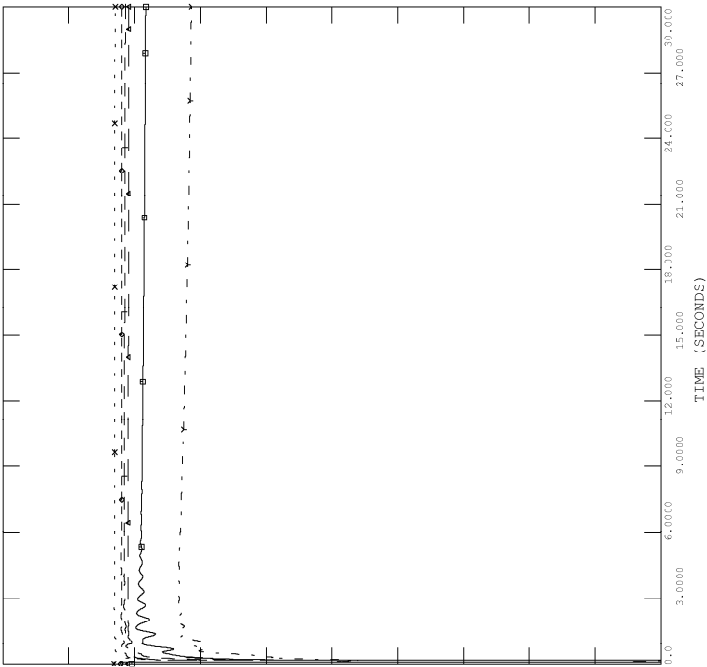
THU, OCT 25 2012 15:10
FREQUENCY II



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3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out

1.2000	CHNL# 72: [V-BLANCAPK 115]	x - - - - x	0.20000
1.2000	CHNL# 142: [V-PONCHA 230]	+ - - - - +	0.20000
1.2000	CHNL# 70: [V-IBEDROL_PV 34.5]	o - - - - o	0.20000
1.2000	CHNL# 141: [V-PONCHA 115]	o - - - - o	0.20000
1.2000	CHNL# 68: [V-OXCART 69]	o - - - - o	0.20000
1.2000	CHNL# 67: [V-REATAP 69]	o - - - - o	0.20000



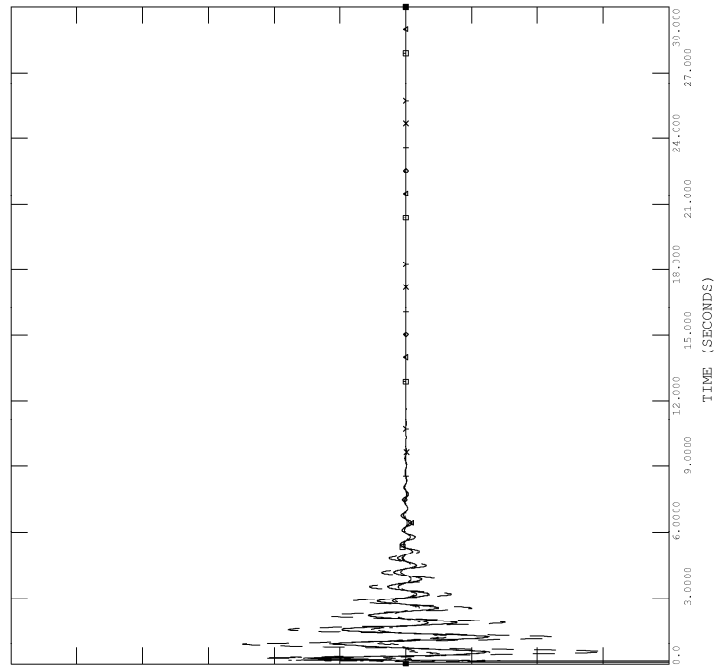
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VOLTAGE IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out

60.600	CHNL# 78: 60. * (1. + [F-CARNEI 69])	x - - - - x	59.600
60.600	CHNL# 77: 60. * (1. + [F-ANTONIOITO 69])	+ - - - - +	59.600
60.600	CHNL# 76: 60. * (1. + [F-ANSEL_TS 69])	o - - - - o	59.600
60.600	CHNL# 75: 60. * (1. + [F-ALMSA_TM 69])	o - - - - o	59.600
60.600	CHNL# 74: 60. * (1. + [F-ALMSA_TM 115])	o - - - - o	59.600
60.600	CHNL# 73: 60. * (1. + [F-ALMSA_ST 69])	o - - - - o	59.600



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FREQUENCY I

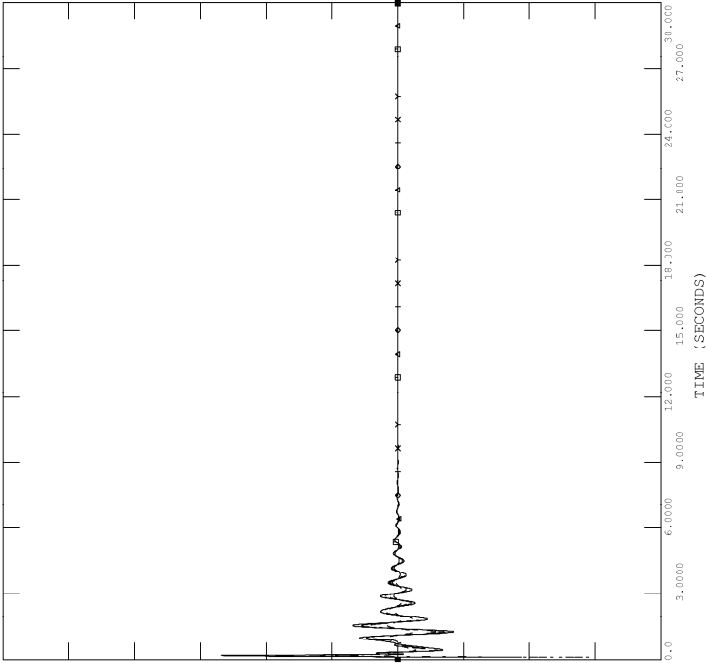


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

60.600	CHNL# 95: 60. * (1. + [F-RAMON 69])	59.600
60.600	CHNL# 94: 60. * (1. + [F-RAMON 115])	59.600
60.600	CHNL# 93: 60. * (1. + [F-PONCHA 69])	59.600
60.600	CHNL# 92: 60. * (1. + [F-PLAZA 69])	59.600
60.600	CHNL# 91: 60. * (1. + [F-MOSCA 69])	59.600

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FREQUENCY IV

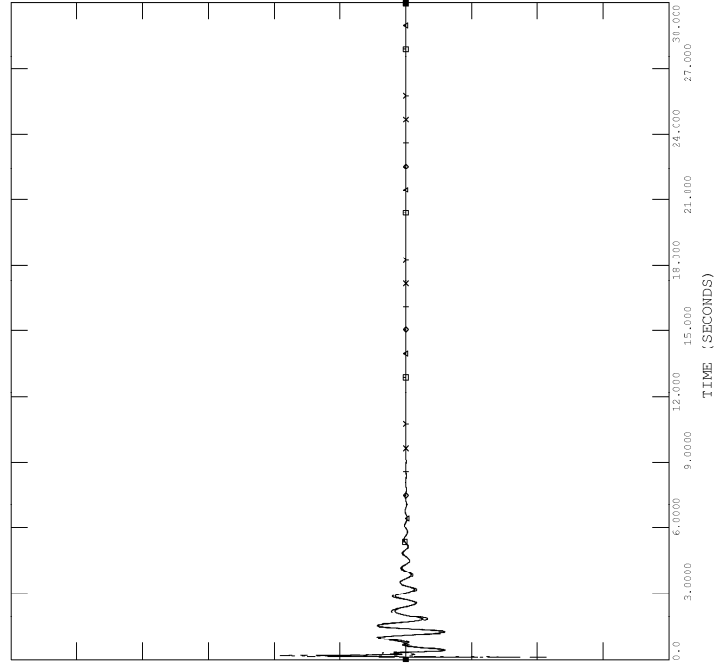


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

60.600	CHNL# 107: 60. * (1. + [F-STOCKADE 69])	59.600
60.600	CHNL# 106: 60. * (1. + [F-STANLEY 115])	59.600
60.600	CHNL# 105: 60. * (1. + [F-SFORK_GL 69])	59.600
60.600	CHNL# 104: 60. * (1. + [F-SARGENT 69])	59.600
60.600	CHNL# 103: 60. * (1. + [F-SARGENT 115])	59.600

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FREQUENCY VI

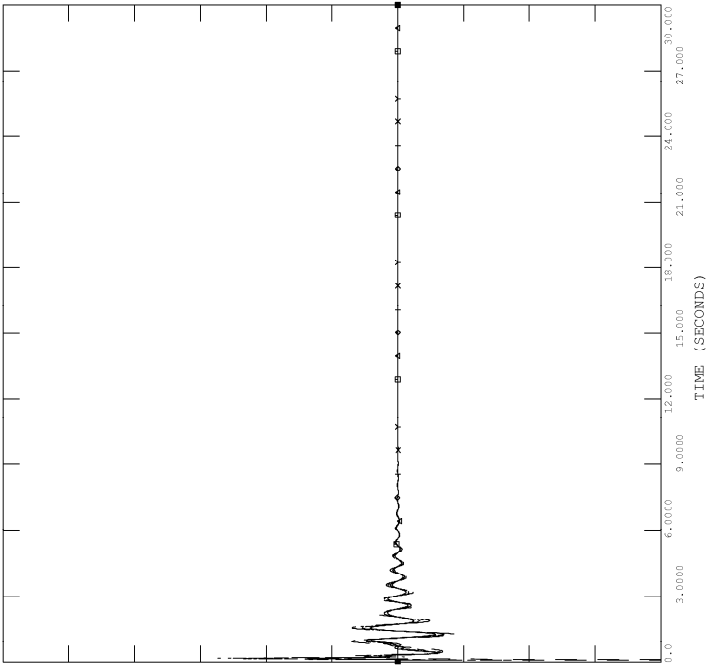


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08s.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

60.600	CHNL# 89: 60. * (1. + [F-LAGARITA 69])	59.600
60.600	CHNL# 88: 60. * (1. + [F-HOOPERTP 69])	59.600
60.600	CHNL# 87: 60. * (1. + [F-HOOPER 69])	59.600
60.600	CHNL# 86: 60. * (1. + [F-HOMELAKE 69])	59.600
60.600	CHNL# 85: 60. * (1. + [F-HILANDSL 69])	59.600

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FREQUENCY III

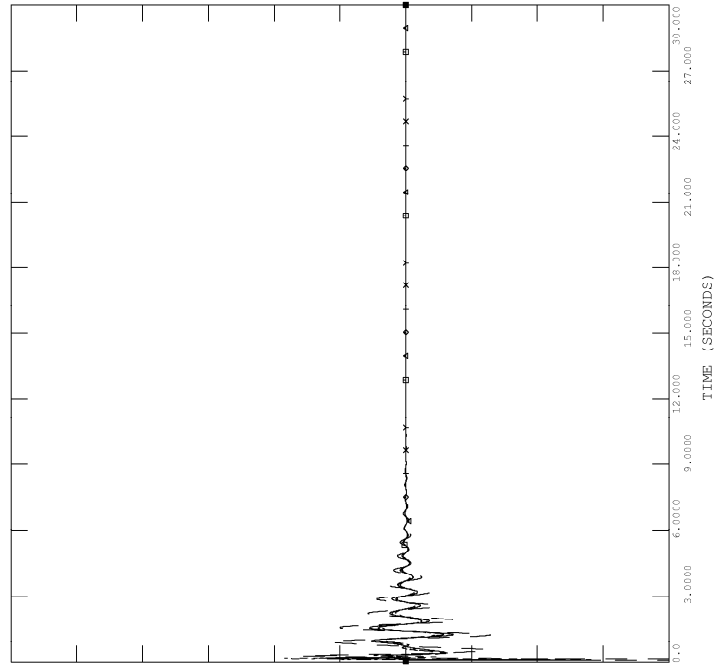


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08s.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])

60.600	CHNL# 101: 60. * (1. + [F-SANLSVLY 230])	59.600
60.600	CHNL# 100: 60. * (1. + [F-SANLSVLY 115])	59.600
60.600	CHNL# 99: 60. * (1. + [F-S.ACACIO 69])	59.600
60.600	CHNL# 98: 60. * (1. + [F-ROMEO 69])	59.600
60.600	CHNL# 97: 60. * (1. + [F-RIOGRDTP 69])	59.600

THU, OCT 25 2012 15:10
FREQUENCY V

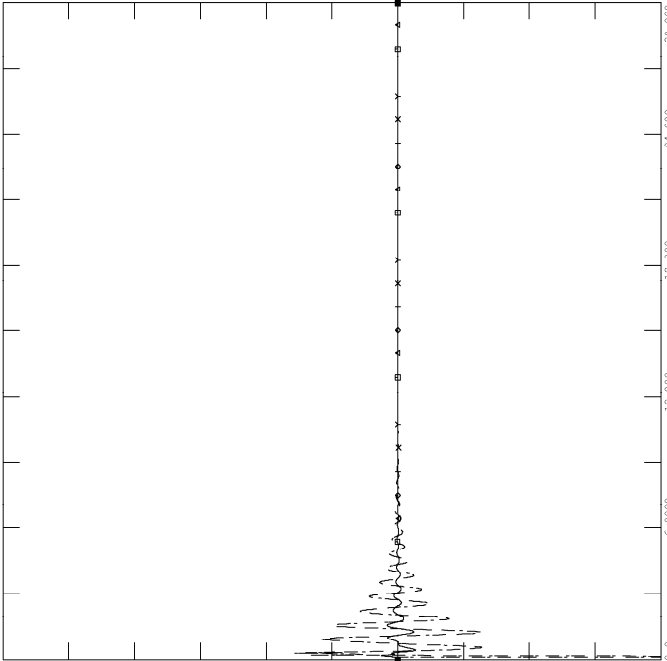




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KERBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



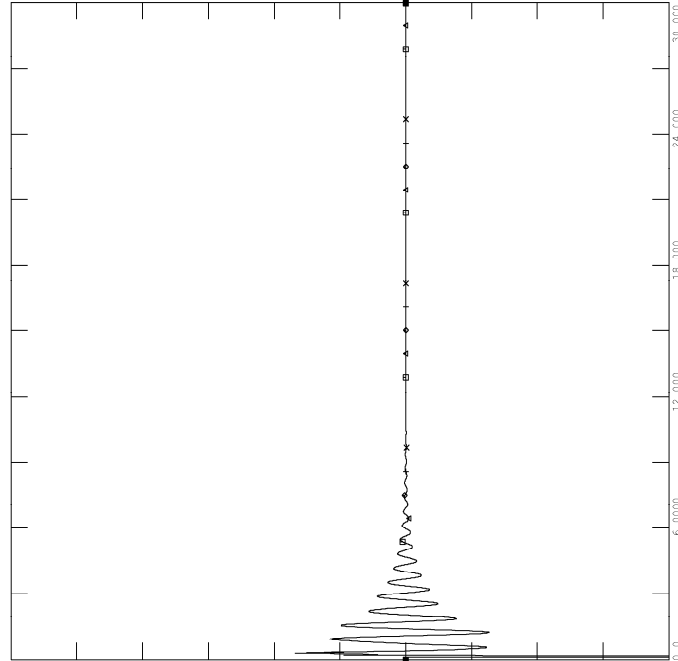
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FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08a.out

60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJBL 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



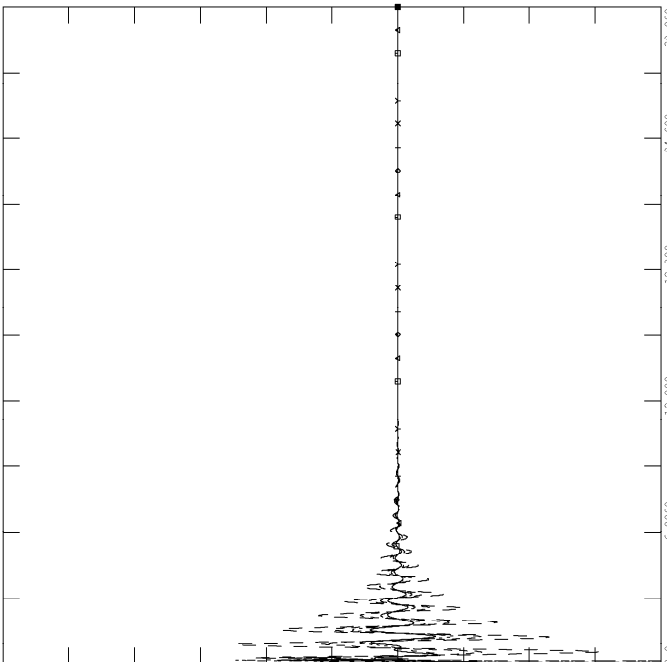
THU, OCT 25 2012 15:10
FREQUENCY X



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08s.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMSACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMSACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



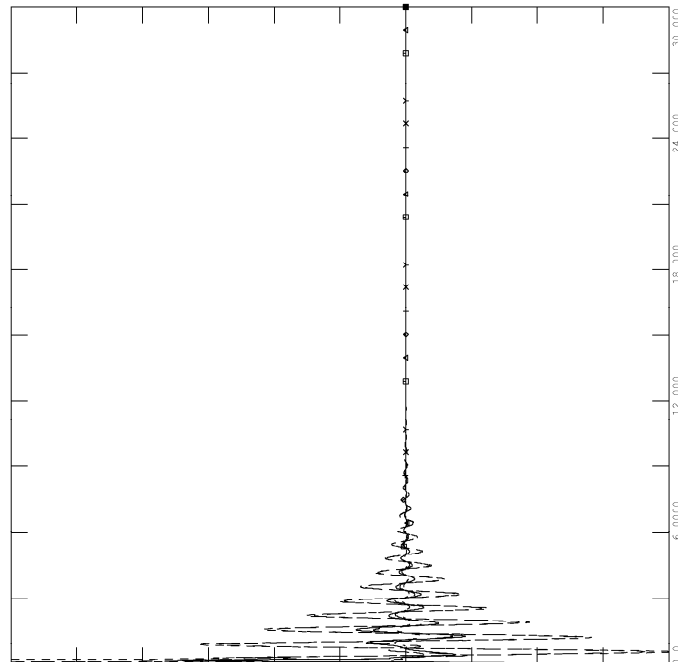
THU, OCT 25 2012 15:10
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - SAN LUIS VALLEY 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_08s.out
CHNL# 144: 60. * (1. + [F-PONCHA 230])

60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-COGENITX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600

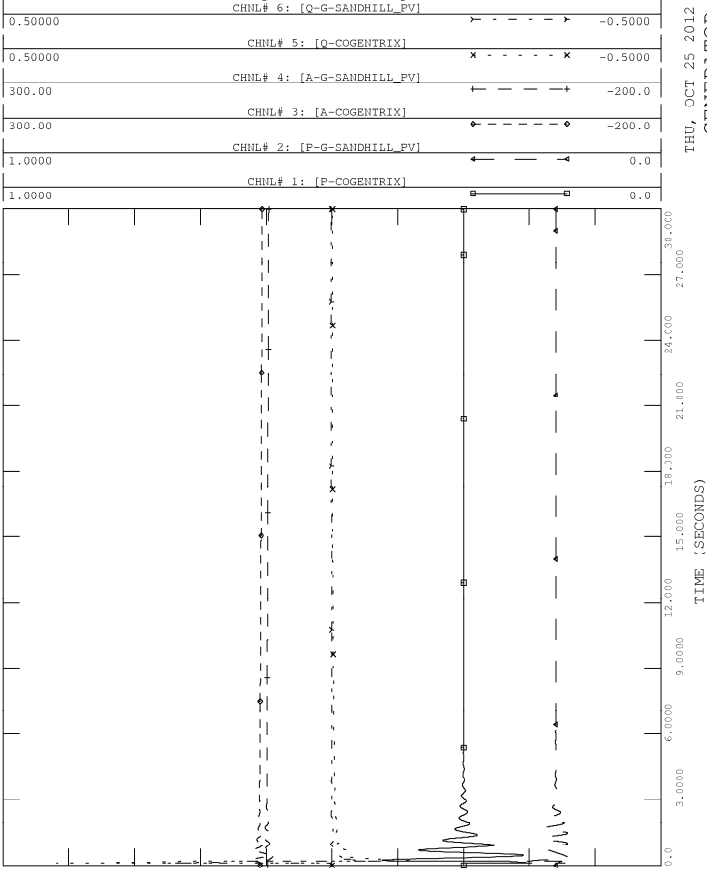


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FREQUENCY IX



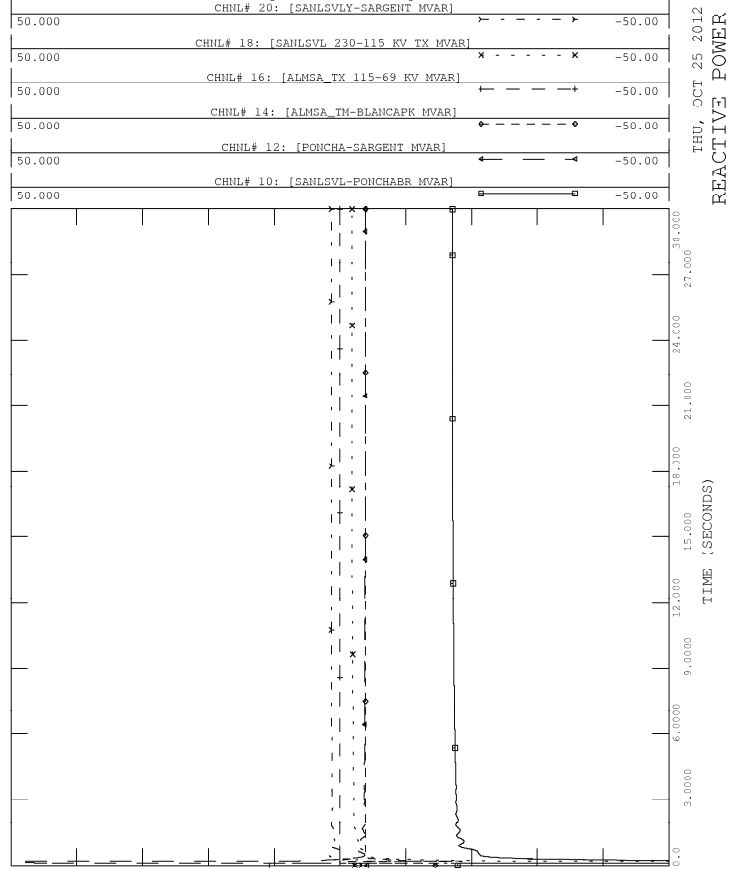
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 6: [Q-G-SANDHILL_PV]



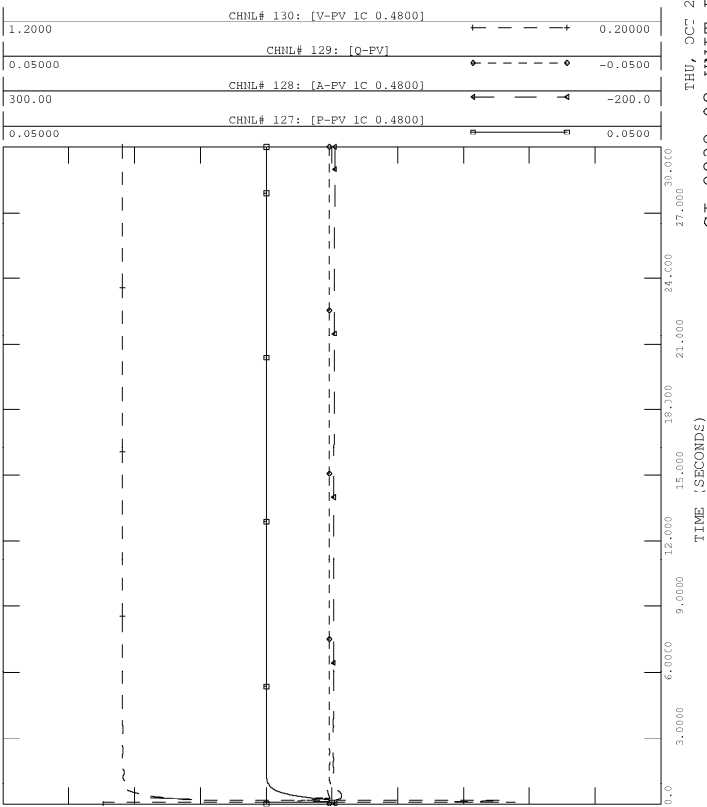
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 20: [SANLSVLY-SARGENT_MVAR]



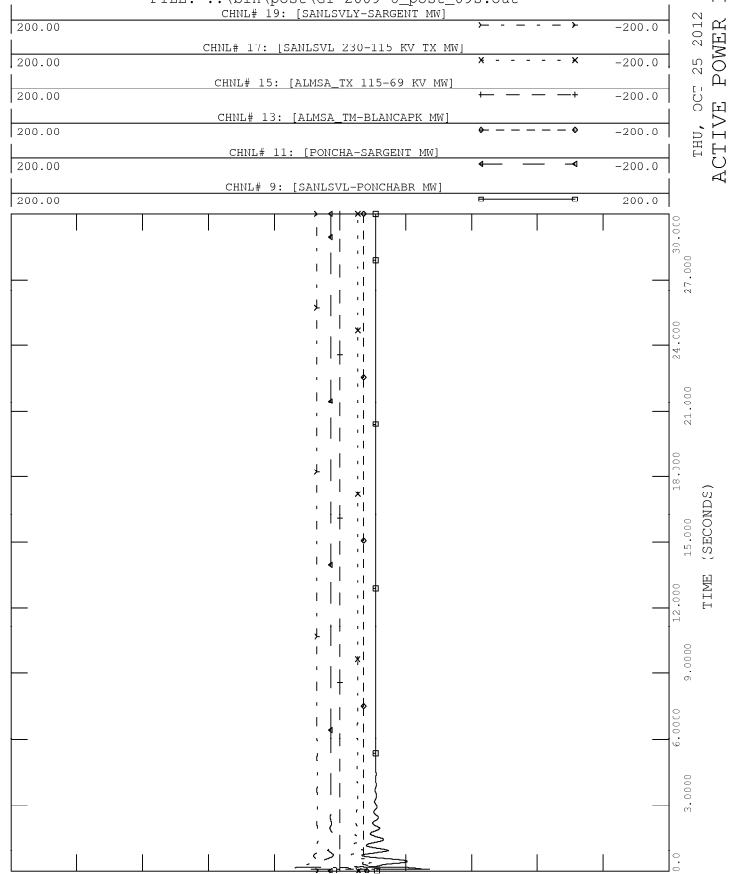
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out



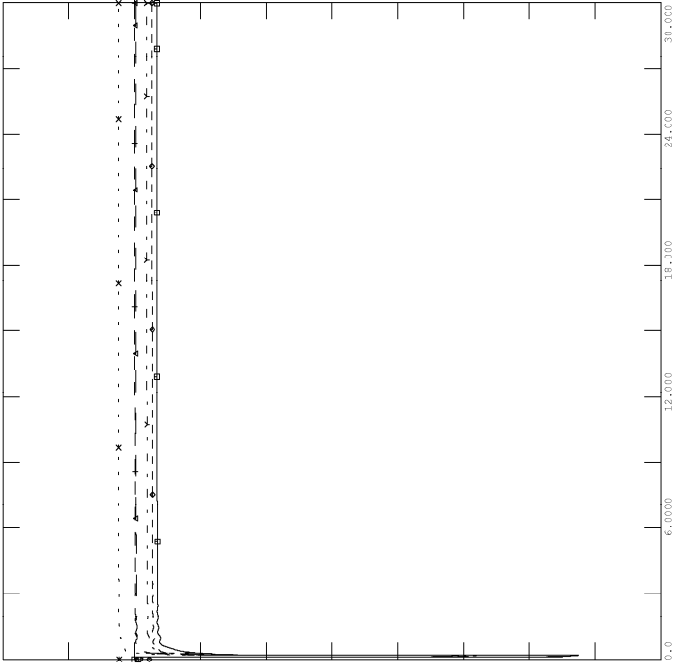


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:14
VOLTAGE II

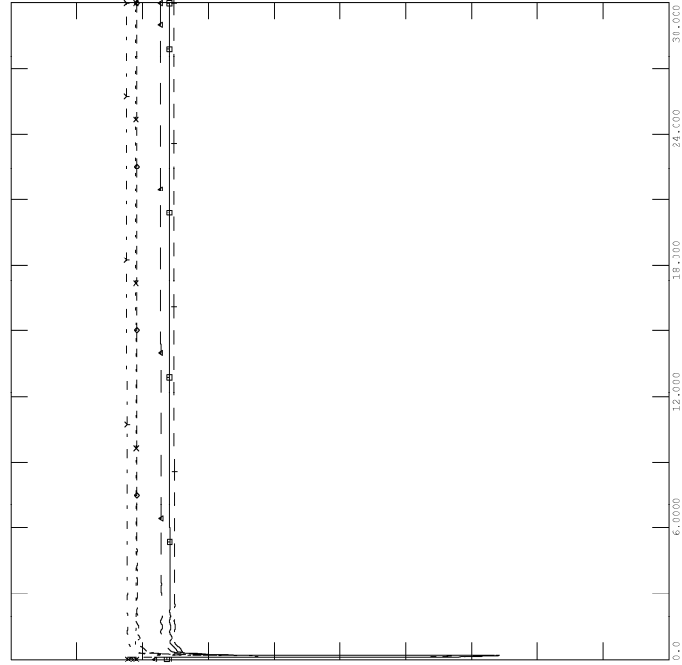


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 42: [V-RAMON 115]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:14
VOLTAGE IV

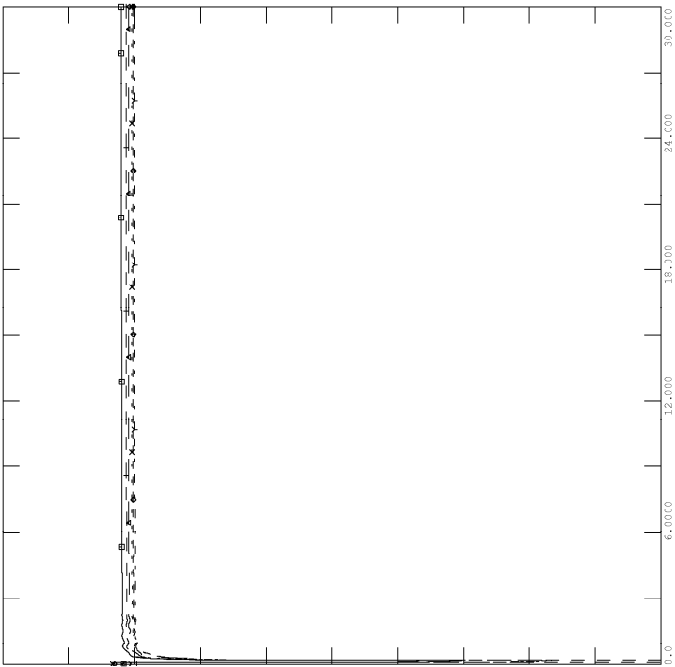


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA_TM 69]	x - - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA_TM 115]	x - - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA_ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL_FV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

THU, OCT 25 2012 15:14
VOLTAGE I

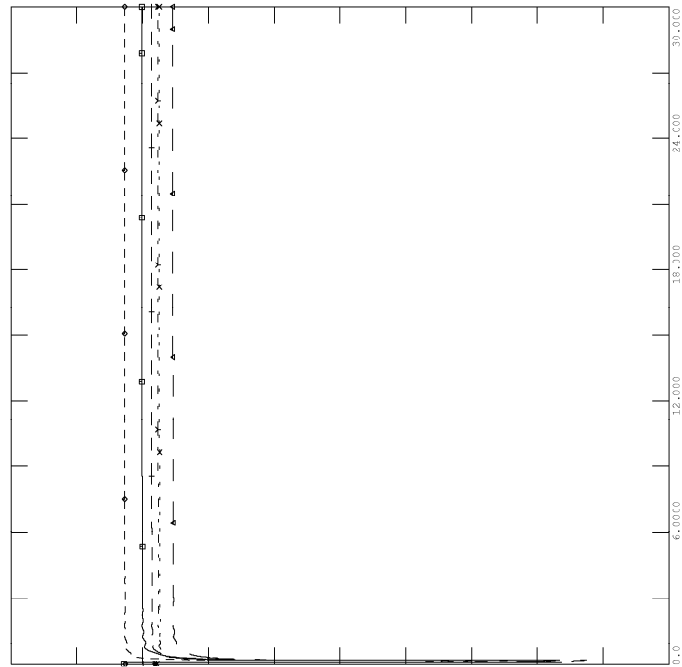


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 36: [V-HOOPERTIP 69]

1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	x - - - - - x	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	+ - - - - +	0.20000
1.2000	CHNL# 32: [V-FTGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

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VOLTAGE III



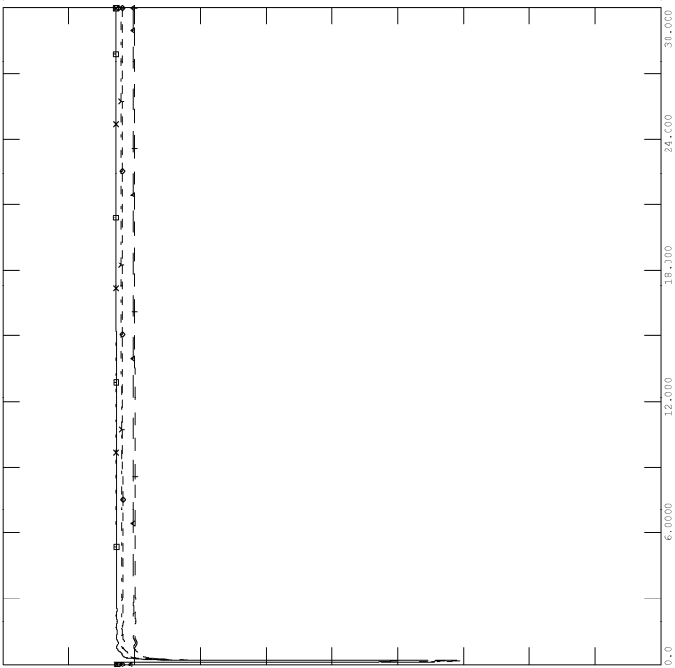


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK_SL 69]	x - - - - - x	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	- - - - -	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	- - - - -	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	- - - - -	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	- - - - -	0.20000

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VOLTAGE VI

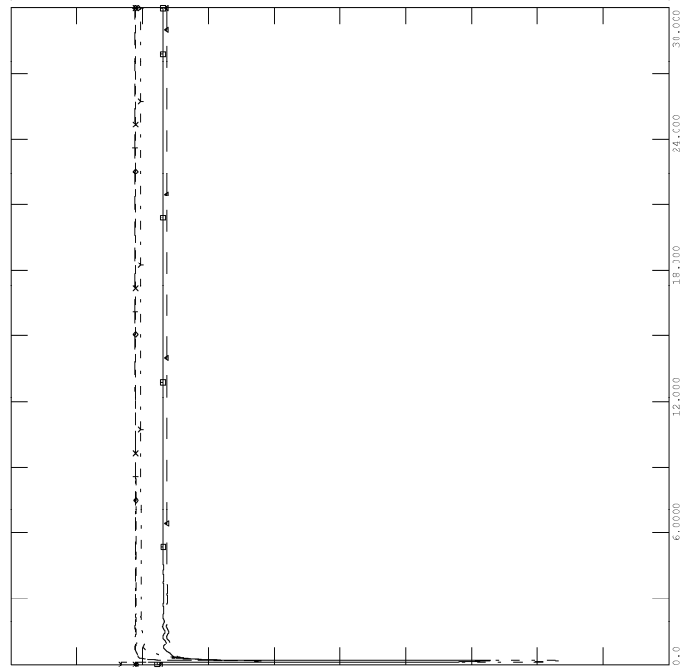


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	x - - - - - x	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	- - - - -	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	- - - - -	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	- - - - -	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	- - - - -	0.20000

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VOLTAGE VIII

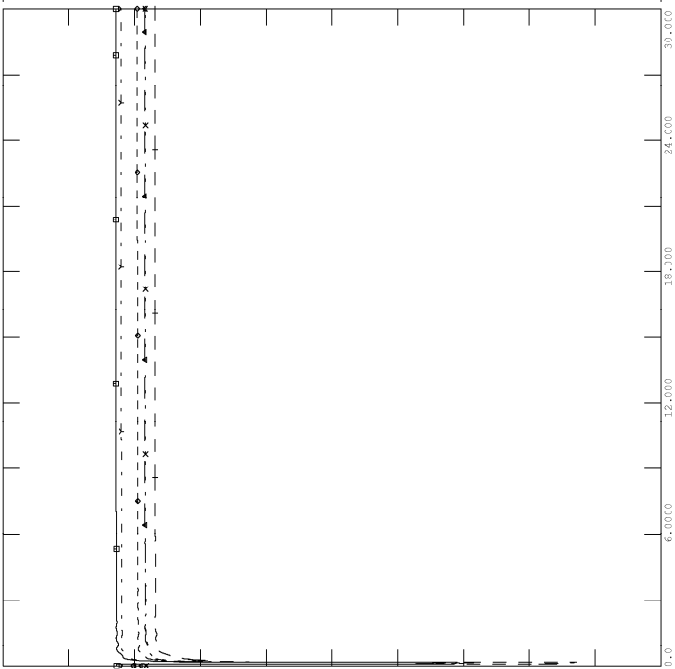


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	x - - - - - x	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	- - - - -	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	- - - - -	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	- - - - -	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	- - - - -	0.20000

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VOLTAGE V

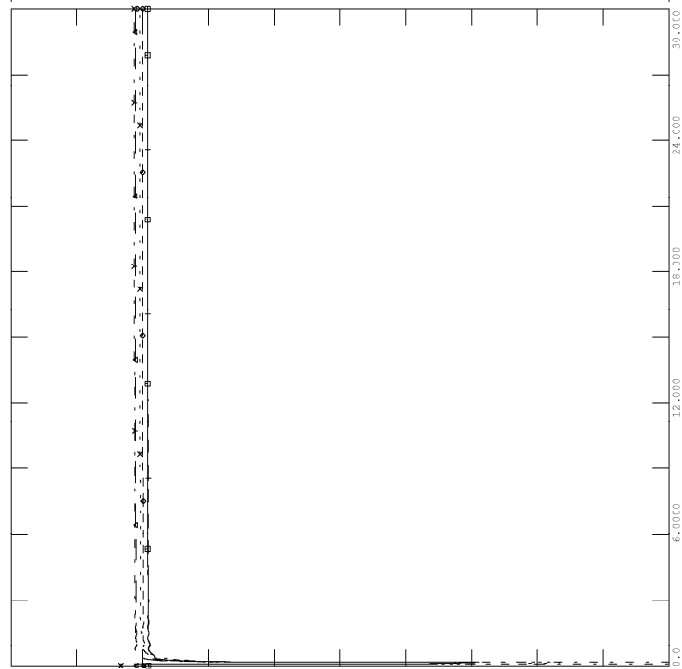


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	x - - - - - x	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	- - - - -	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	- - - - -	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	- - - - -	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	- - - - -	0.20000

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VOLTAGE VII



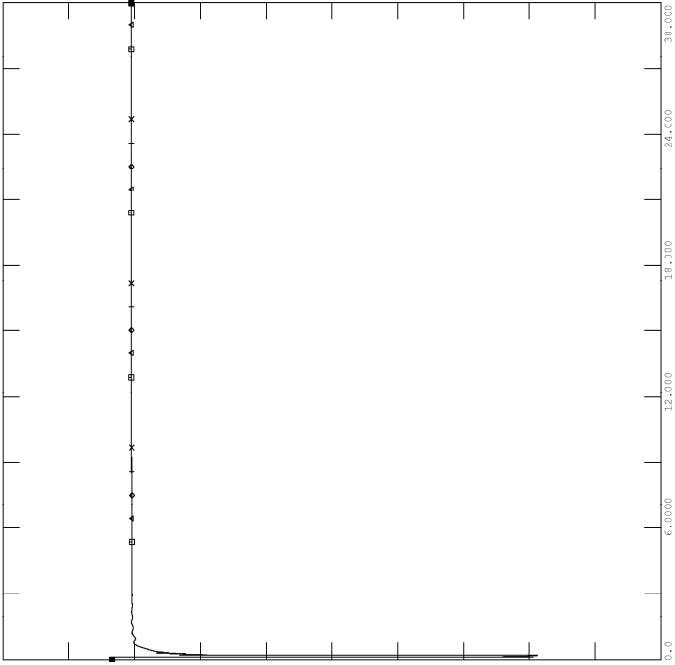


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out

1.2000	CHNL# 135: [V-SUB MV BUS 34.5]	x - - - - x	0.20000
1.2000	CHNL# 134: [V-LJB1 34.5]	+ - - - - +	0.20000
1.2000	CHNL# 133: [V-GSU 1A 34.5]	o - - - - o	0.20000
1.2000	CHNL# 132: [V-GSU 1B 34.5]	o - - - - o	0.20000
1.2000	CHNL# 131: [V-GSU 1C 34.5]	o - - - - o	0.20000

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VOLTAGE X

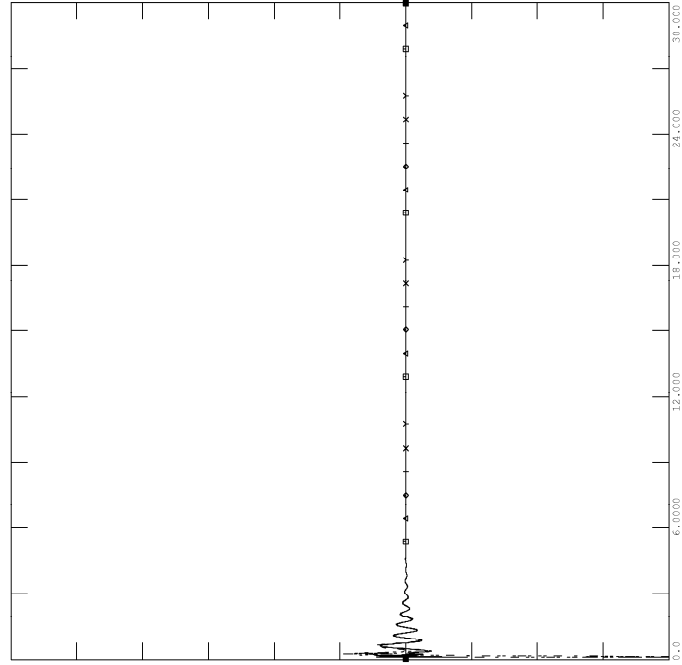


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out

60.600	CHNL# 83: 60. * (1. + [F-OLD16TAP 69])	x - - - - x	59.600
60.600	CHNL# 82: 60. * (1. + [F-DELNORTE 69])	+ - - - - +	59.600
60.600	CHNL# 81: 60. * (1. + [F-CREEDE 69])	o - - - - o	59.600
60.600	CHNL# 80: 60. * (1. + [F-COCENTER 69])	o - - - - o	59.600
60.600	CHNL# 79: 60. * (1. + [F-CENTER 69])	o - - - - o	59.600

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FREQUENCY II

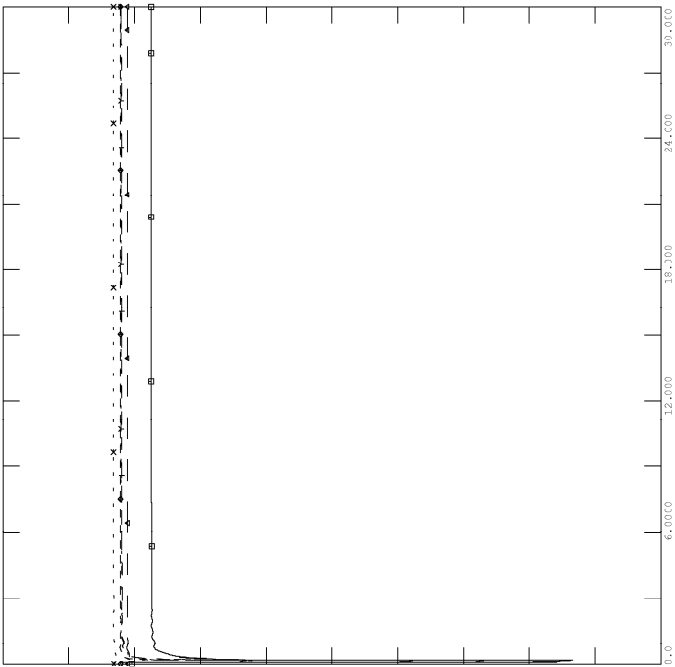


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out

1.2000	CHNL# 72: [V-BLANCAPK 115]	x - - - - x	0.20000
1.2000	CHNL# 142: [V-PONCHA 230]	+ - - - - +	0.20000
1.2000	CHNL# 70: [V-IBEDROL_PV 34.5]	o - - - - o	0.20000
1.2000	CHNL# 141: [V-PONCHA 115]	o - - - - o	0.20000
1.2000	CHNL# 68: [V-OXCART 69]	o - - - - o	0.20000
1.2000	CHNL# 67: [V-REATAP 69]	o - - - - o	0.20000

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VOLTAGE IX

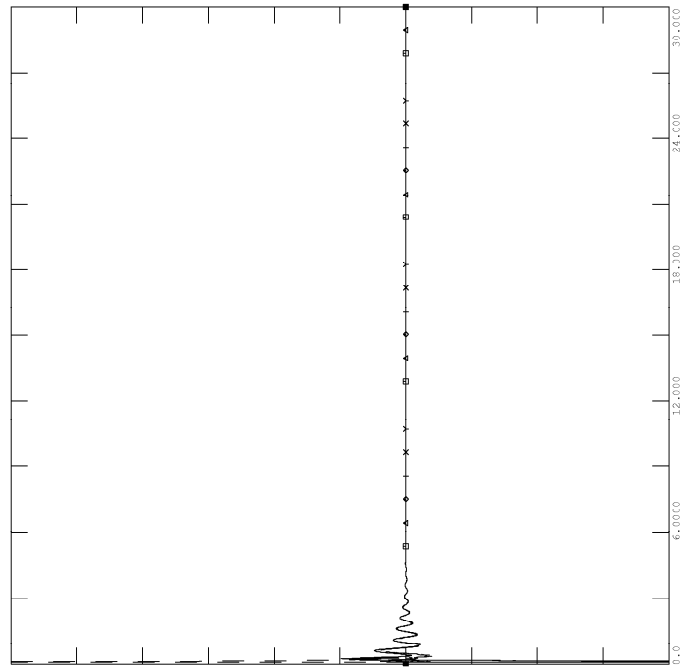


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out

60.600	CHNL# 78: 60. * (1. + [F-CARNEI 69])	x - - - - x	59.600
60.600	CHNL# 77: 60. * (1. + [F-ANTONIOITO 69])	+ - - - - +	59.600
60.600	CHNL# 76: 60. * (1. + [F-ANSEL_TS 69])	o - - - - o	59.600
60.600	CHNL# 75: 60. * (1. + [F-ALMSA_TM 69])	o - - - - o	59.600
60.600	CHNL# 74: 60. * (1. + [F-ALMSA_TM 115])	o - - - - o	59.600
60.600	CHNL# 73: 60. * (1. + [F-ALMSA_ST 69])	o - - - - o	59.600

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FREQUENCY I



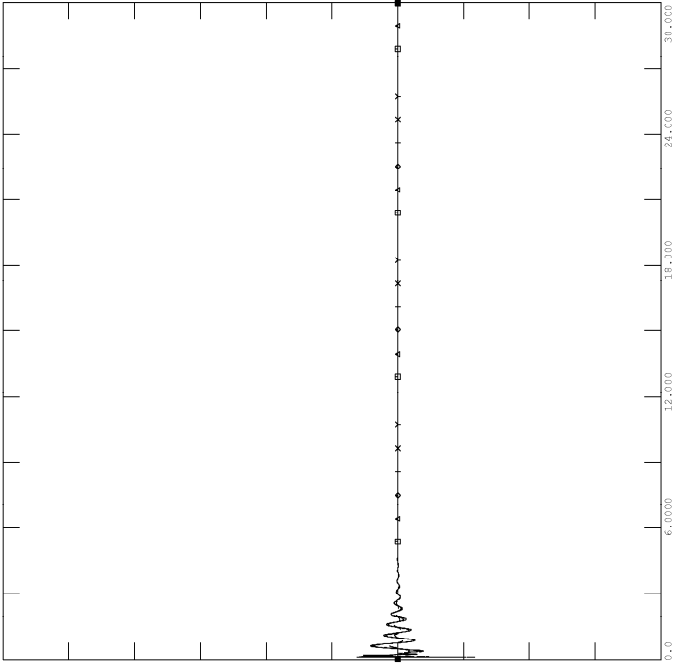


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

60.600	CHNL# 95: 60. * (1. + [F-RAMON 69])	59.600
60.600	CHNL# 94: 60. * (1. + [F-RAMON 115])	59.600
60.600	CHNL# 93: 60. * (1. + [F-PONCHA 69])	59.600
60.600	CHNL# 92: 60. * (1. + [F-PLAZA 69])	59.600
60.600	CHNL# 91: 60. * (1. + [F-MOSCA 69])	59.600

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FREQUENCY IV

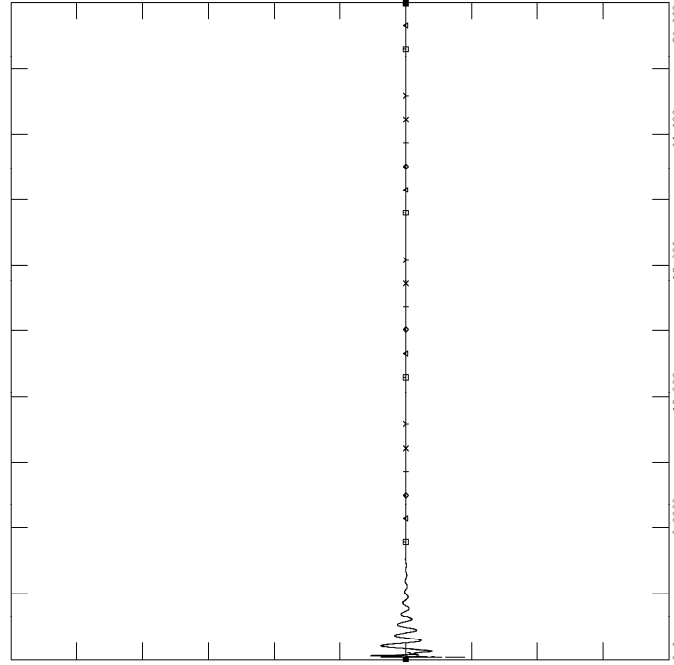


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

60.600	CHNL# 107: 60. * (1. + [F-STOCKADE 69])	59.600
60.600	CHNL# 106: 60. * (1. + [F-STANLEY 115])	59.600
60.600	CHNL# 105: 60. * (1. + [F-SFORK_GL 69])	59.600
60.600	CHNL# 104: 60. * (1. + [F-SARGENT 69])	59.600
60.600	CHNL# 103: 60. * (1. + [F-SARGENT 115])	59.600

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FREQUENCY VI

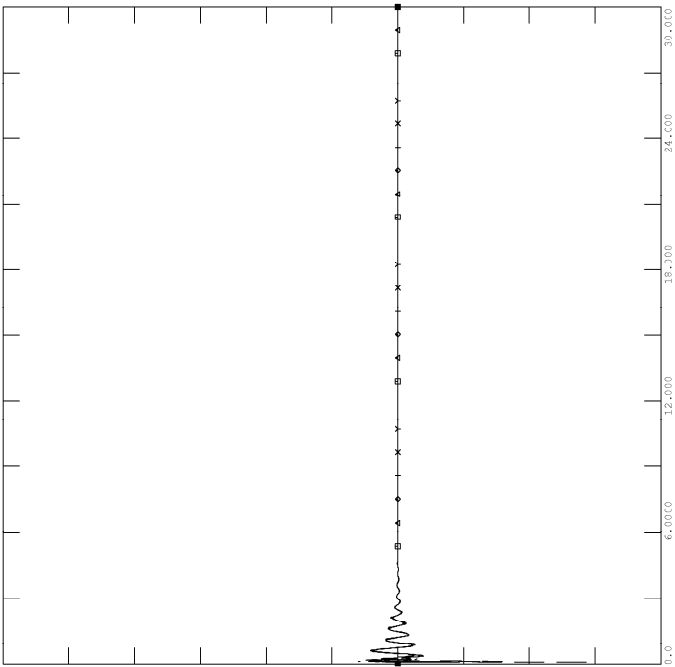


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

60.600	CHNL# 89: 60. * (1. + [F-LAGARITA 69])	59.600
60.600	CHNL# 88: 60. * (1. + [F-HOOPERTP 69])	59.600
60.600	CHNL# 87: 60. * (1. + [F-HOOPER 69])	59.600
60.600	CHNL# 86: 60. * (1. + [F-HOMELAKE 69])	59.600
60.600	CHNL# 85: 60. * (1. + [F-HILANDSL 69])	59.600

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FREQUENCY III

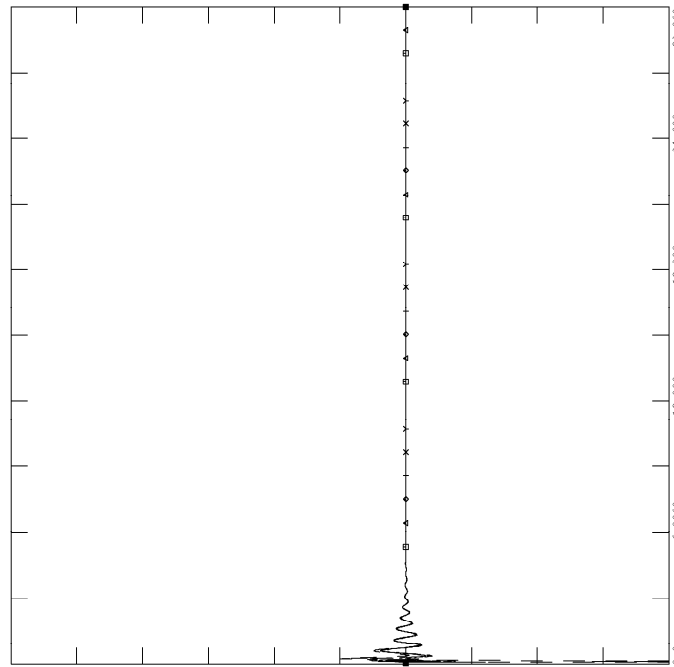


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])

60.600	CHNL# 101: 60. * (1. + [F-SANLSVLY 230])	59.600
60.600	CHNL# 100: 60. * (1. + [F-SANLSVLY 115])	59.600
60.600	CHNL# 99: 60. * (1. + [F-S.ACACIO 69])	59.600
60.600	CHNL# 98: 60. * (1. + [F-ROMEO 69])	59.600
60.600	CHNL# 97: 60. * (1. + [F-RIOGRDTP 69])	59.600

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FREQUENCY V

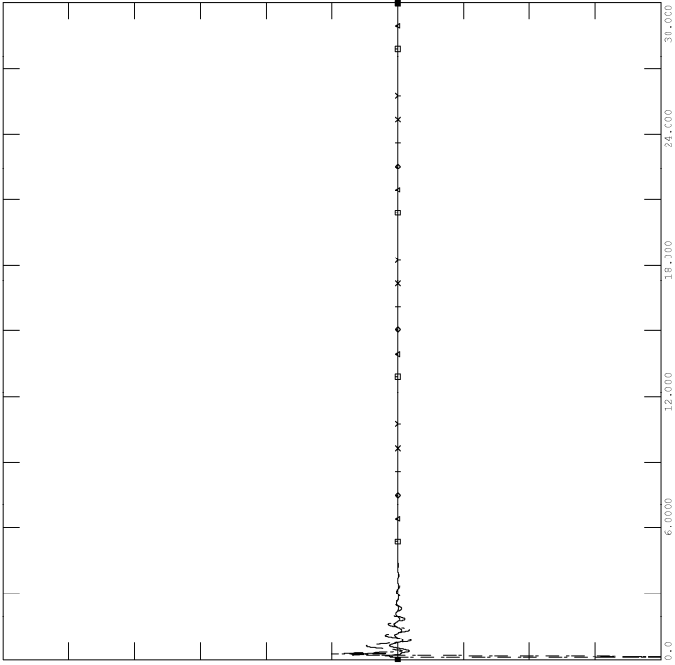




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KEBBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



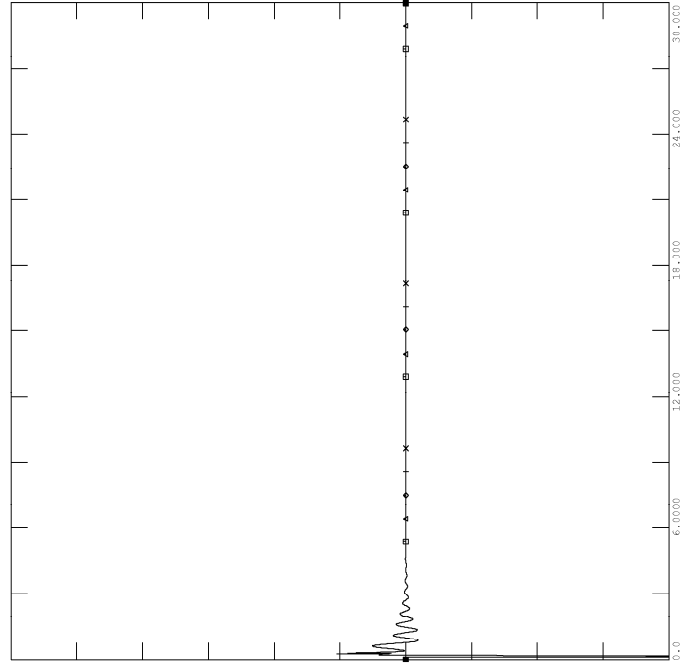
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FREQUENCY VIII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out

60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJB1 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



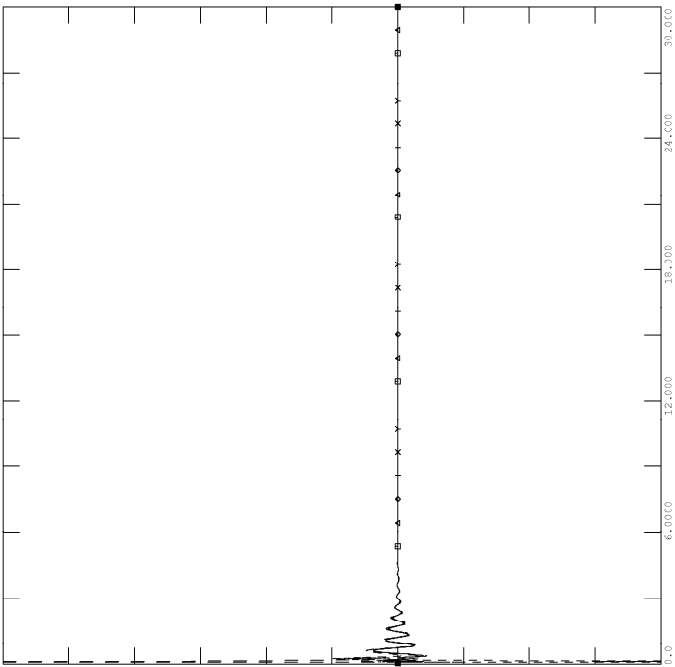
THU, OCT 25 2012 15:14
FREQUENCY IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out

60.600	CHNL# 114: 60. * (1. + [F-SAGUACHE 69])	59.600
60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMSGACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMSGACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



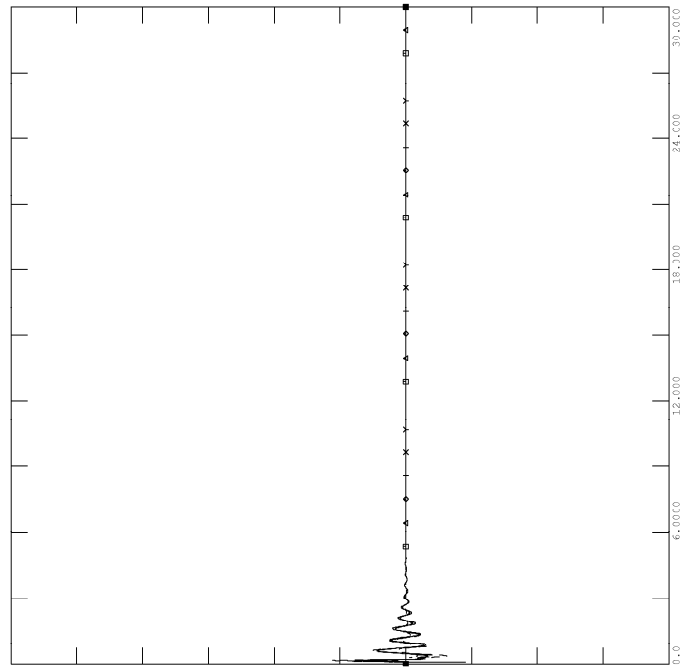
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FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 115 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_09a.out

60.600	CHNL# 144: 60. * (1. + [F-PONCHA 230])	59.600
60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-COGENITX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600

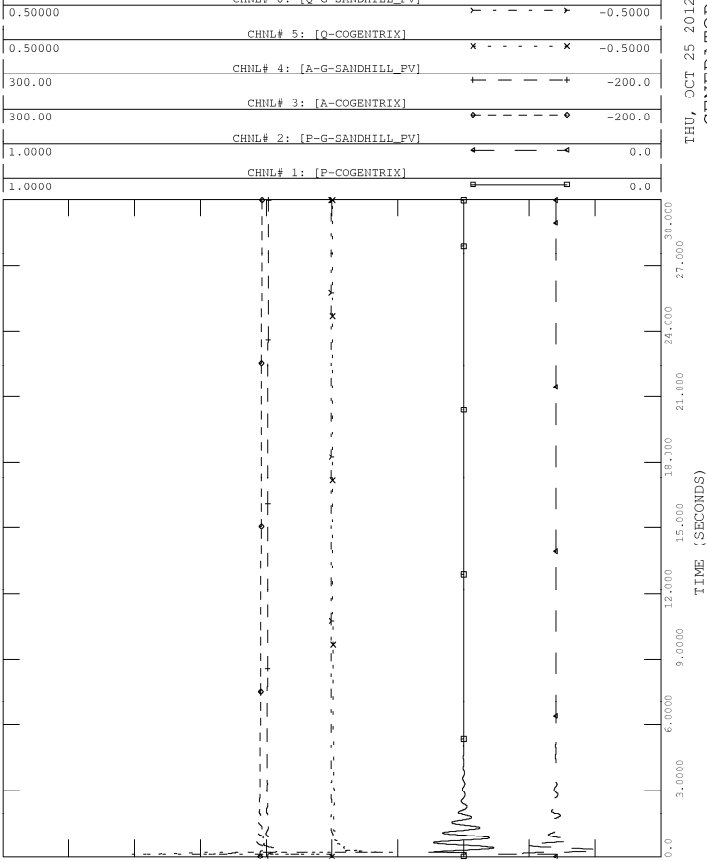


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FREQUENCY IX



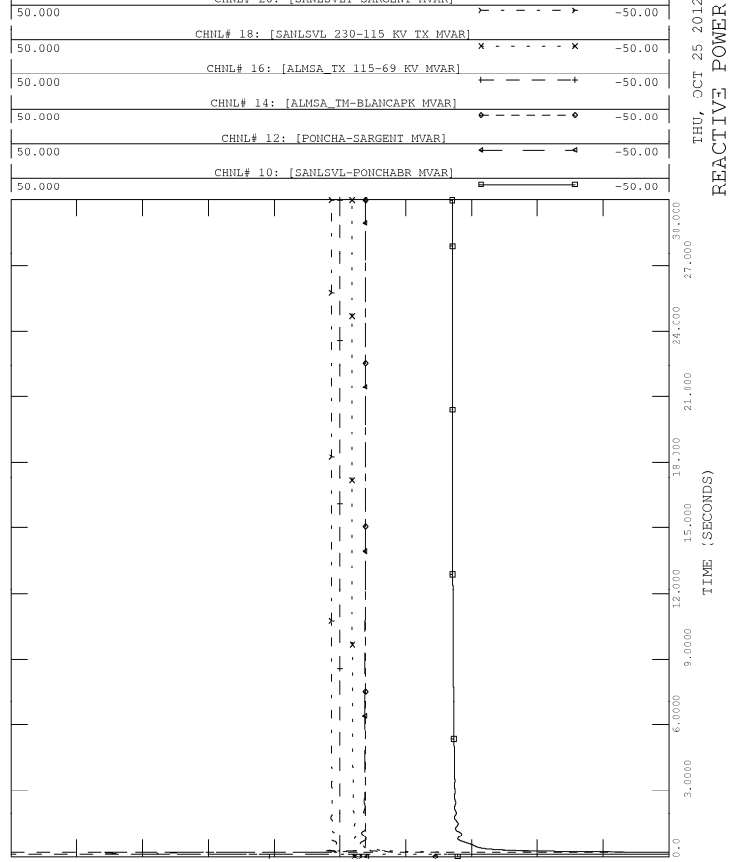
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out
CHNL# 6: [Q-G-SANDHILL_PV]



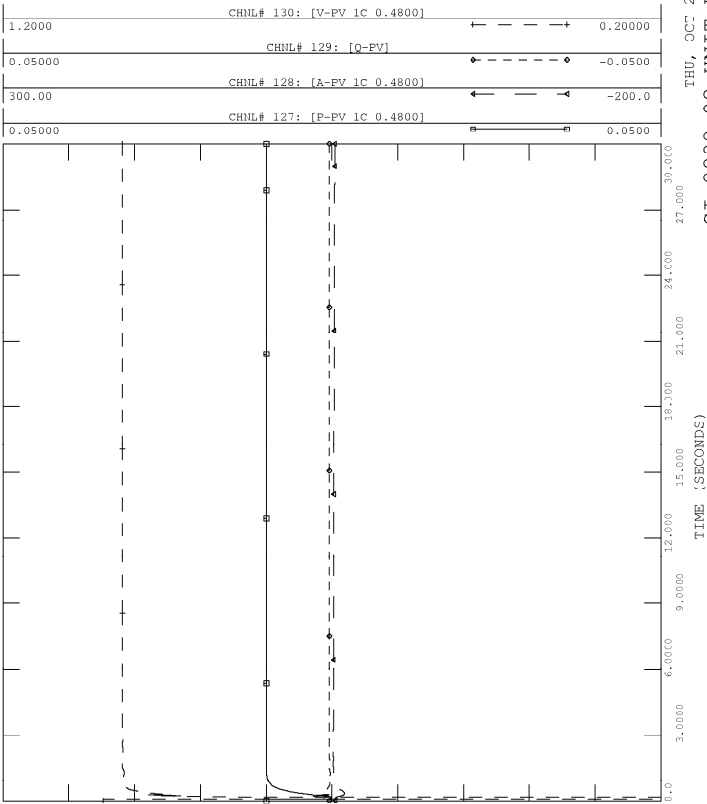
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]



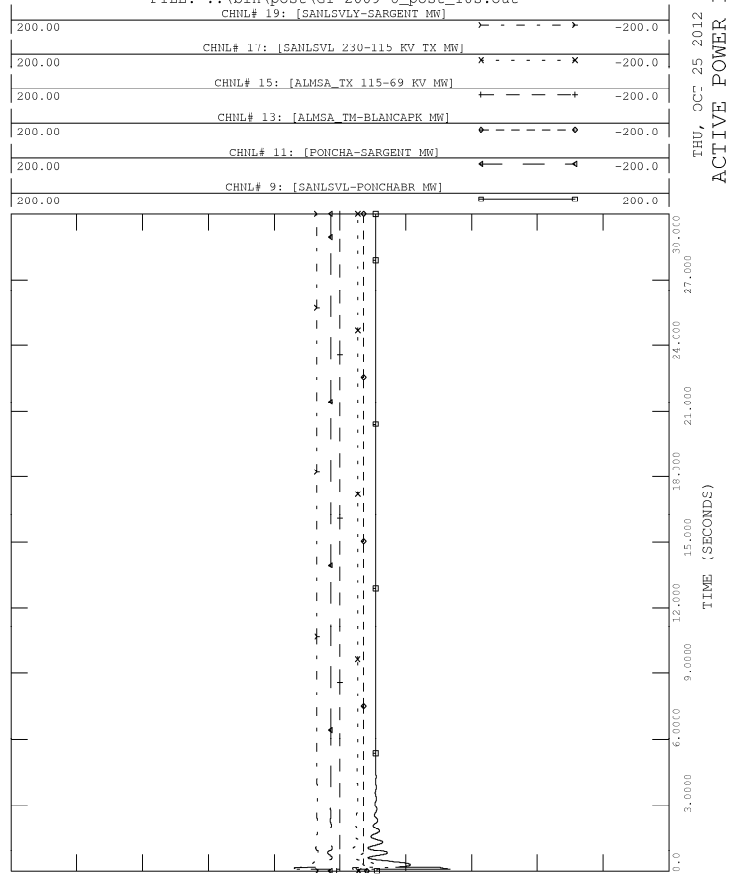
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out



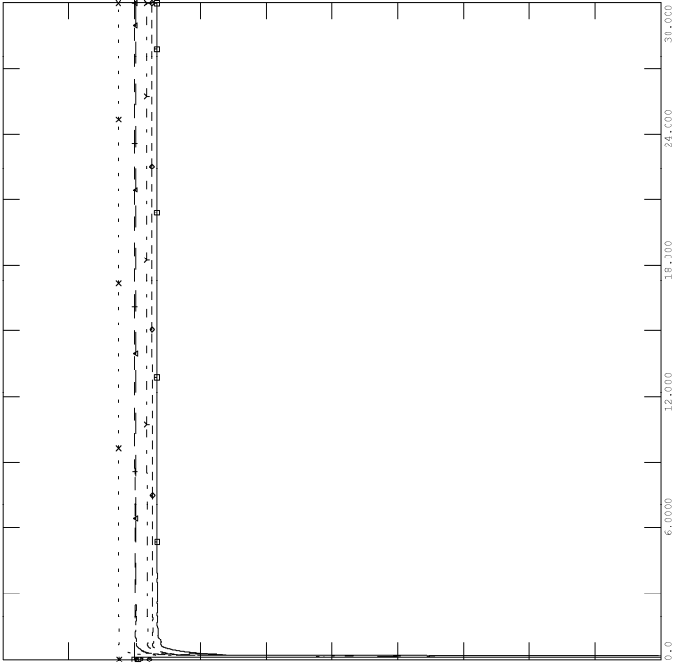


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009 8_post_10s.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

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VOLTAGE II

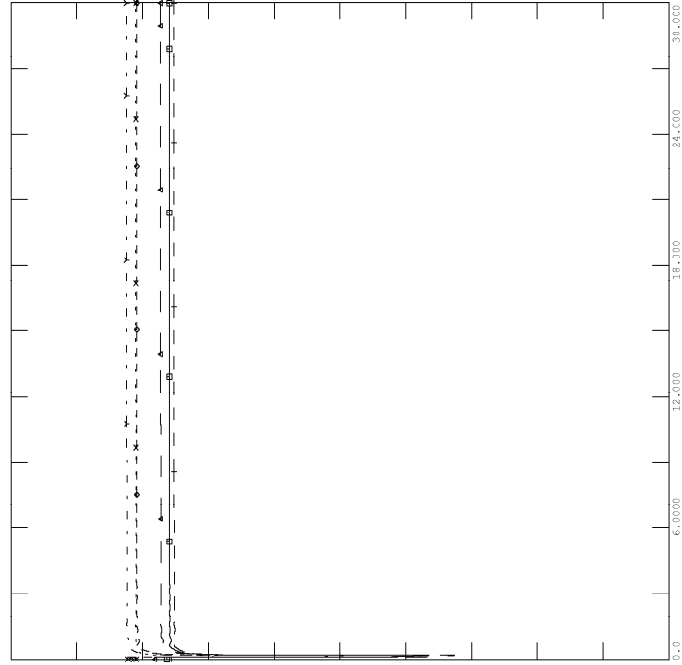


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009 8_post_10s.out
CHNL# 42: [V-RAMON 115]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

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VOLTAGE IV

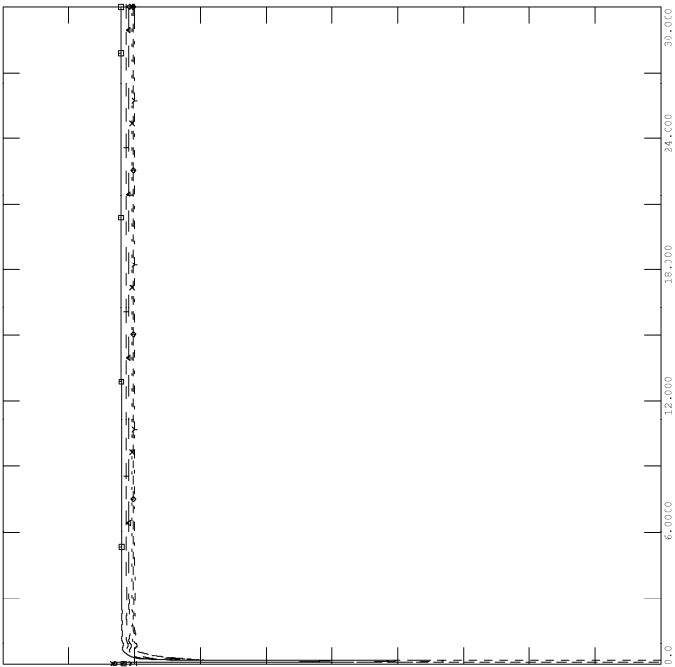


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009 8_post_10s.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

THU, OCT 25 2012 15:32
VOLTAGE I

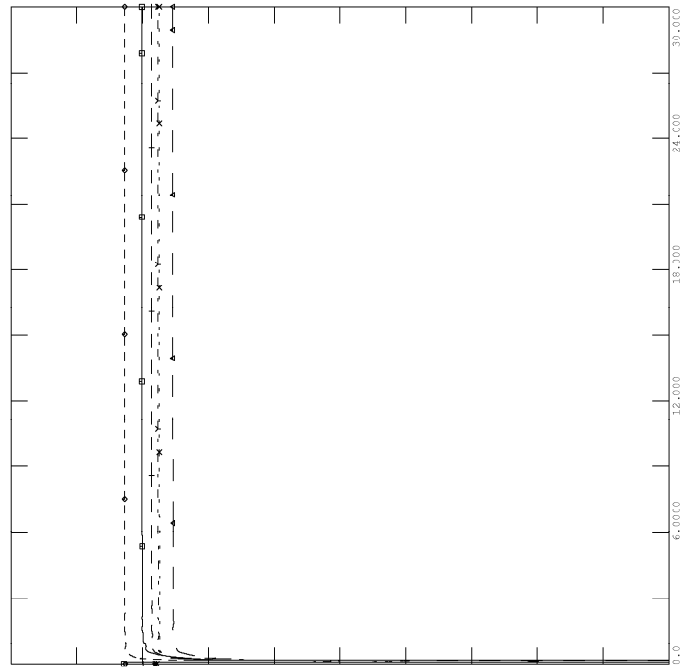


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009 8_post_10s.out
CHNL# 36: [V-HOOPER TP 69]

1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	x - - - - - x	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	+ - - - - +	0.20000
1.2000	CHNL# 32: [V-FTGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:32
VOLTAGE III



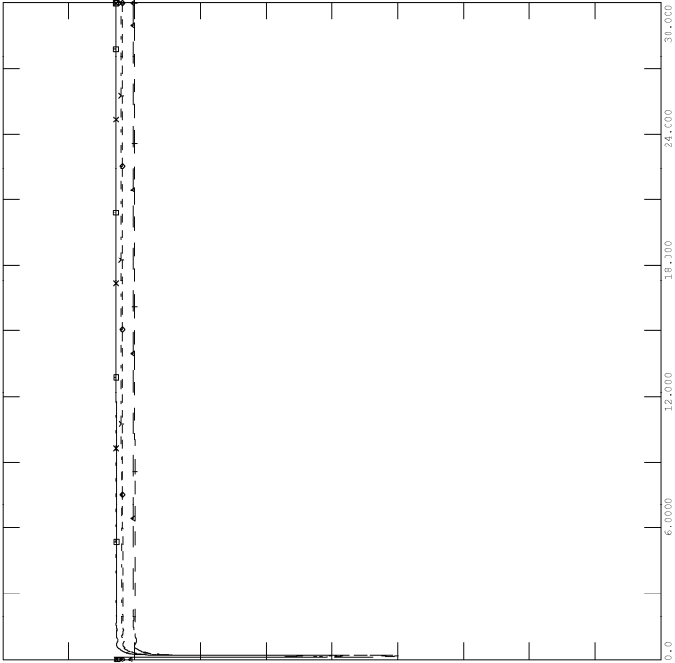


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009 8_post_10s.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK_SL 69]	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	0.20000

THU, OCT 25 2012 15:32
VOLTAGE VI

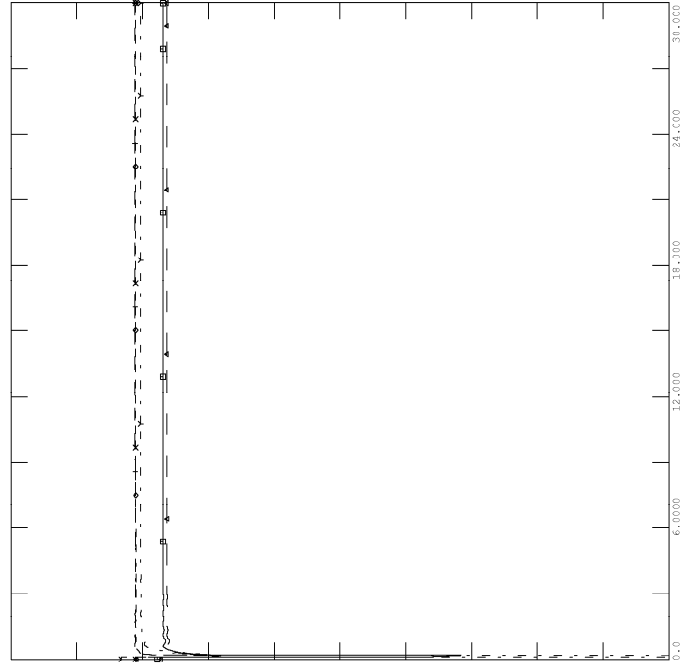


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009 8_post_10s.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	0.20000

THU, OCT 25 2012 15:32
VOLTAGE VIII

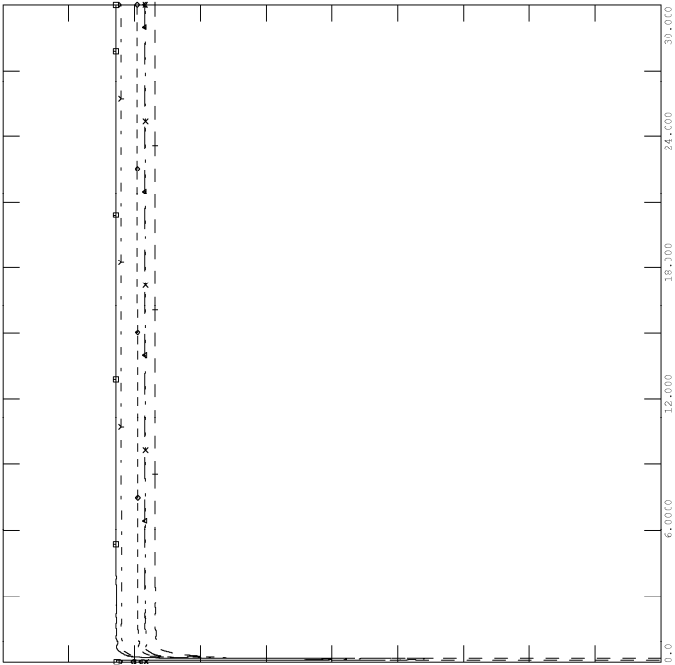


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009 8_post_10s.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	0.20000

THU, OCT 25 2012 15:32
VOLTAGE V

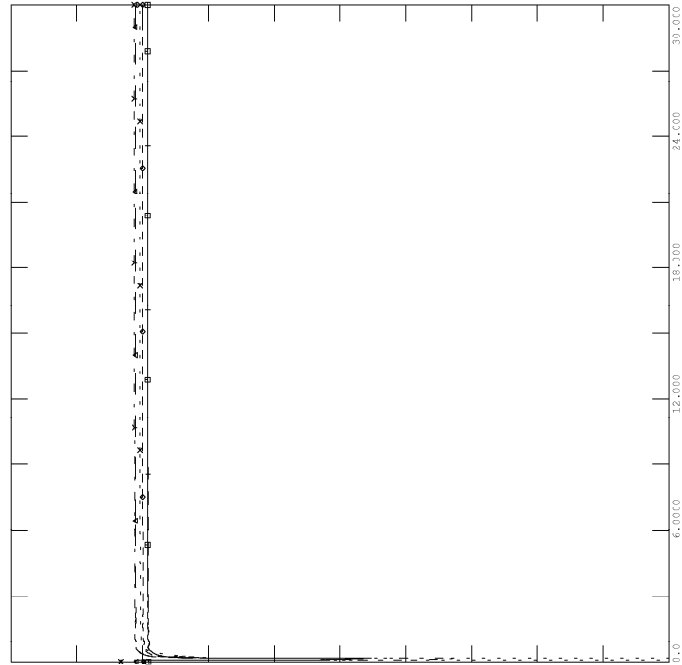


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009 8_post_10s.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	0.20000

THU, OCT 25 2012 15:32
VOLTAGE VII

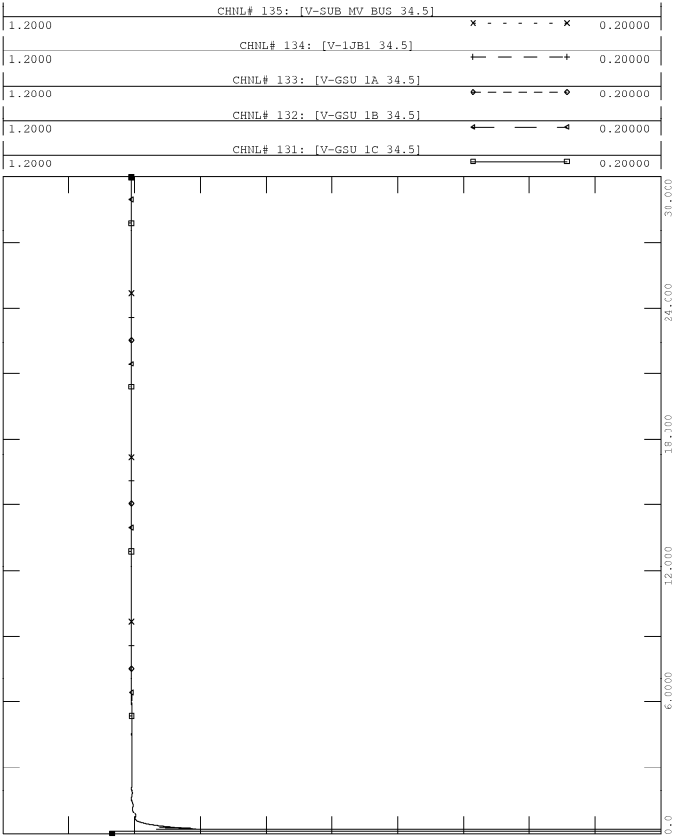




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out

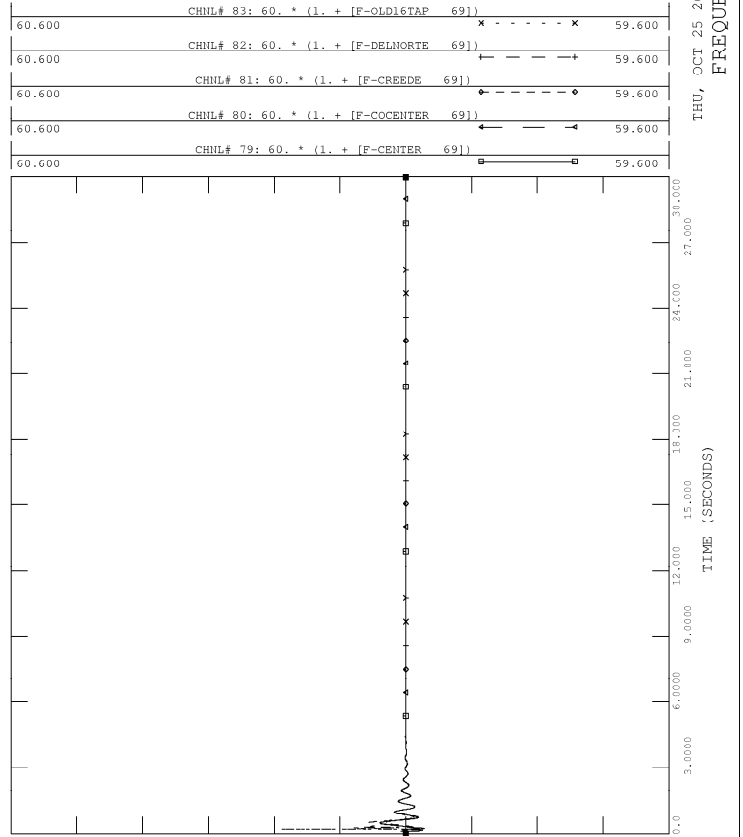
THU, OCT 25 2012 15:32
VOLTAGE X



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out

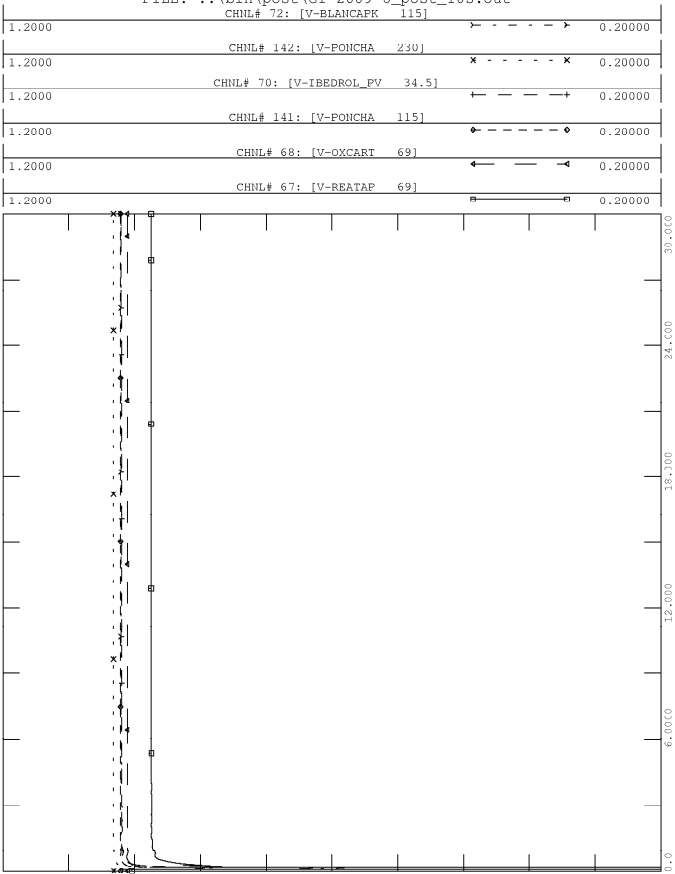
THU, OCT 25 2012 15:32
FREQUENCY II



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out

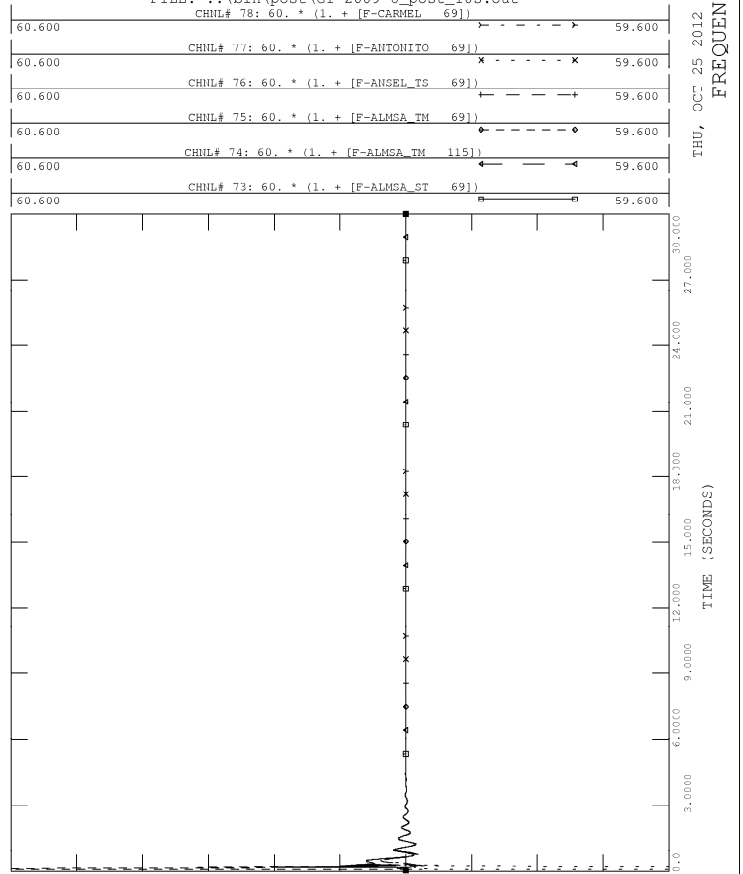
THU, OCT 25 2012 15:32
VOLTAGE IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out

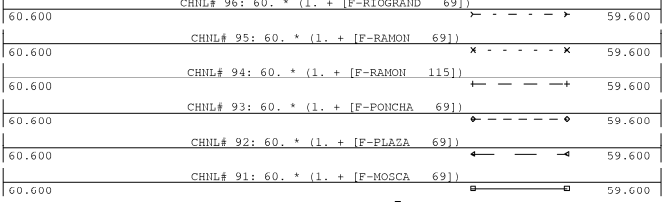
THU, OCT 25 2012 15:32
FREQUENCY I



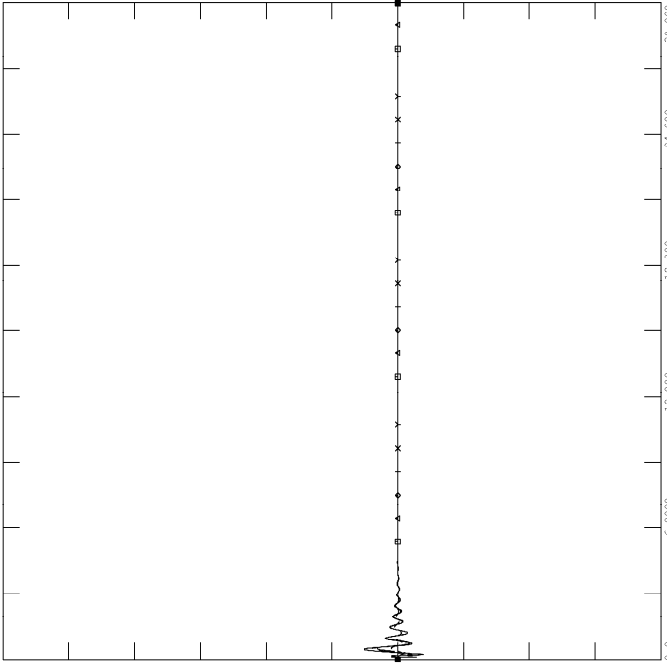


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

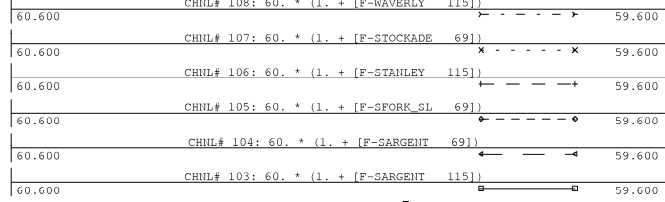


THU, OCT 25 2012 15:32
FREQUENCY IV

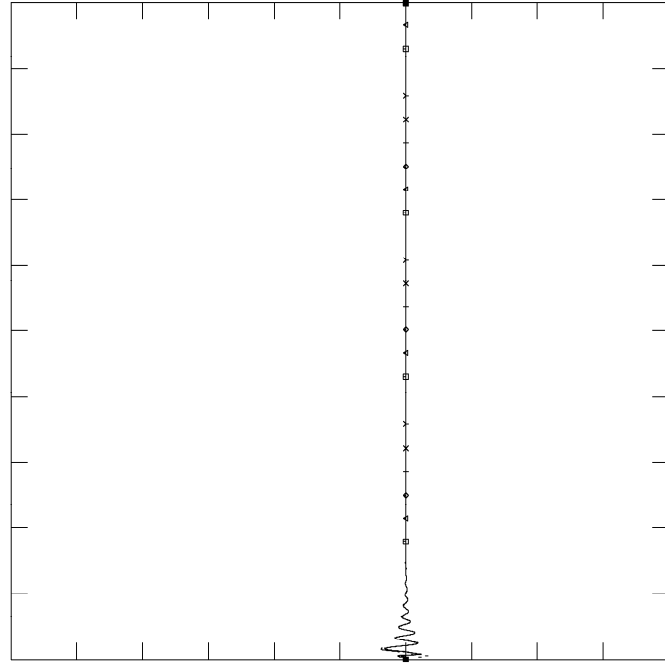


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

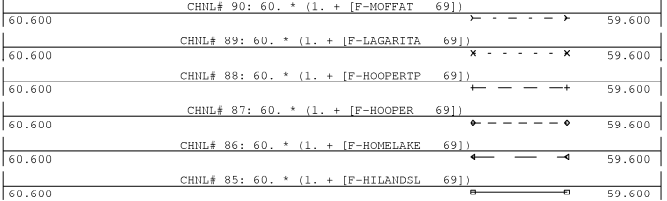


THU, OCT 25 2012 15:32
FREQUENCY VI

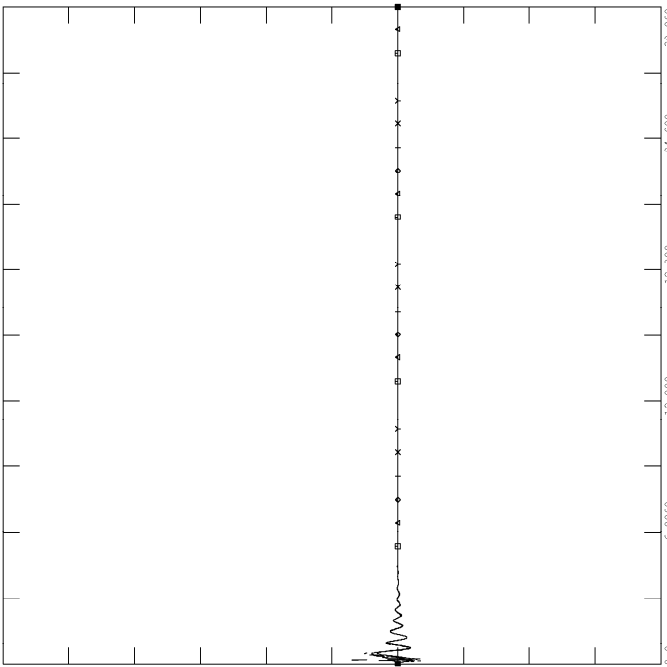


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

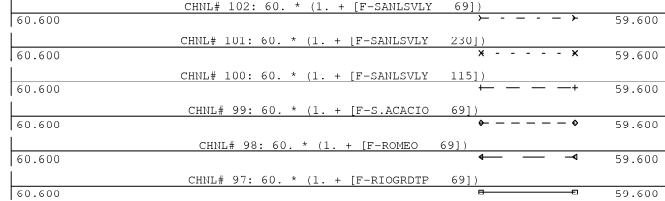


THU, OCT 25 2012 15:32
FREQUENCY III

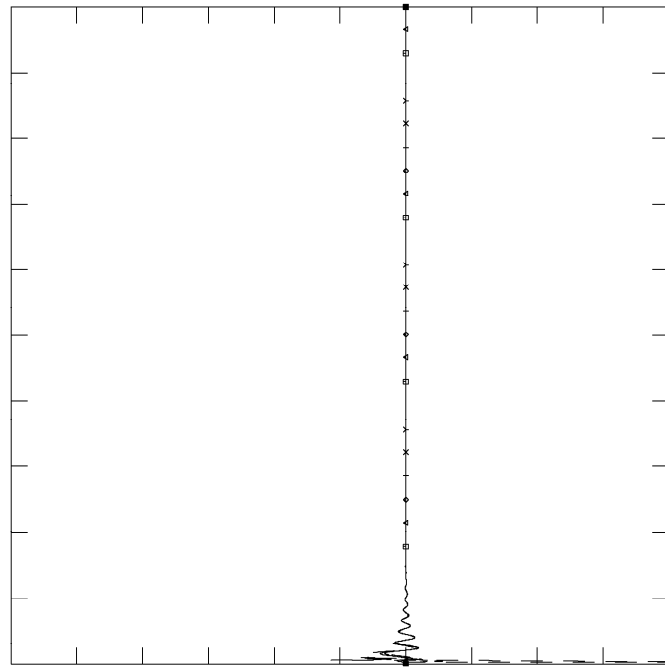


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])



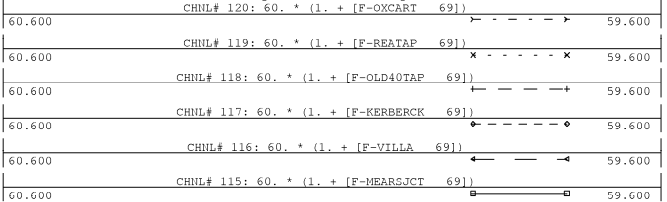
THU, OCT 25 2012 15:32
FREQUENCY V





WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

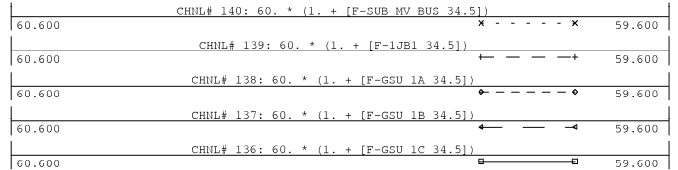


THU, OCT 25 2012 15:32
FREQUENCY VIII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out

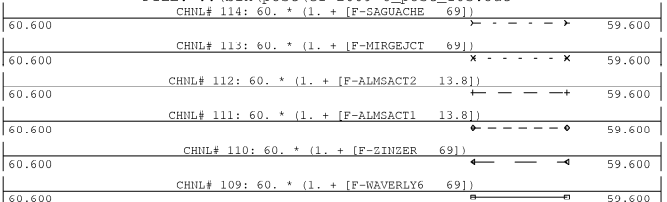


THU, OCT 25 2012 15:32
FREQUENCY IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

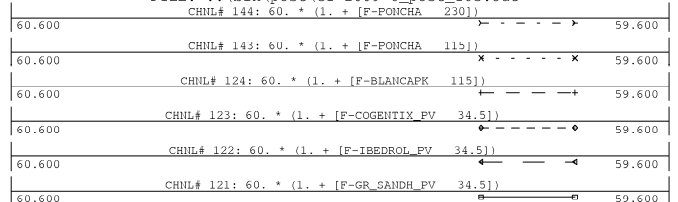


THU, OCT 25 2012 15:32
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA 69 KV SIDE ON ALMOSA 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_10s.out
CHNL# 144: 60. * (1. + [F-PONCHA 230])

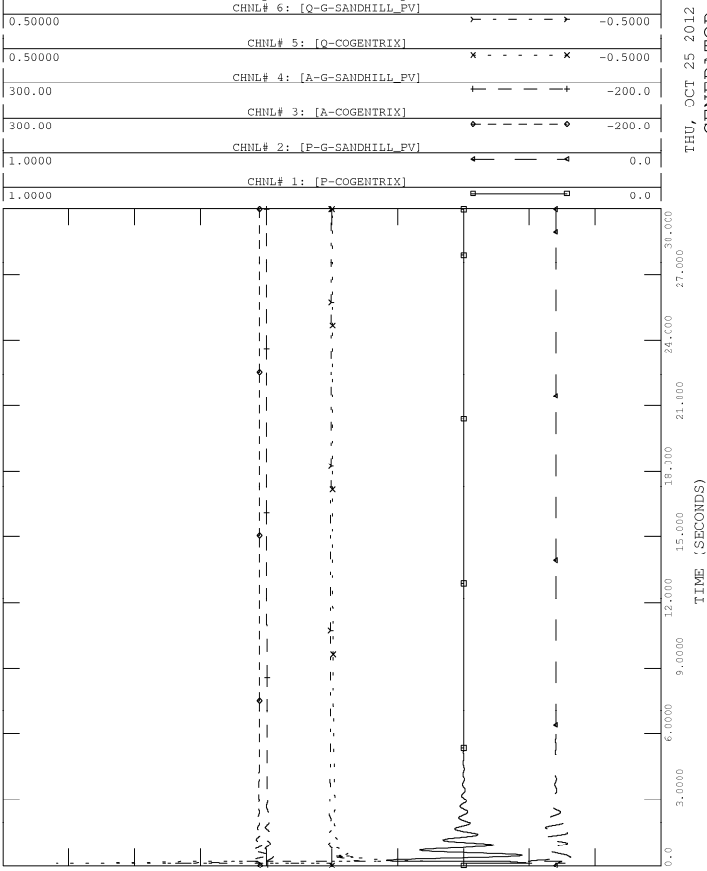


THU, OCT 25 2012 15:32
FREQUENCY IX



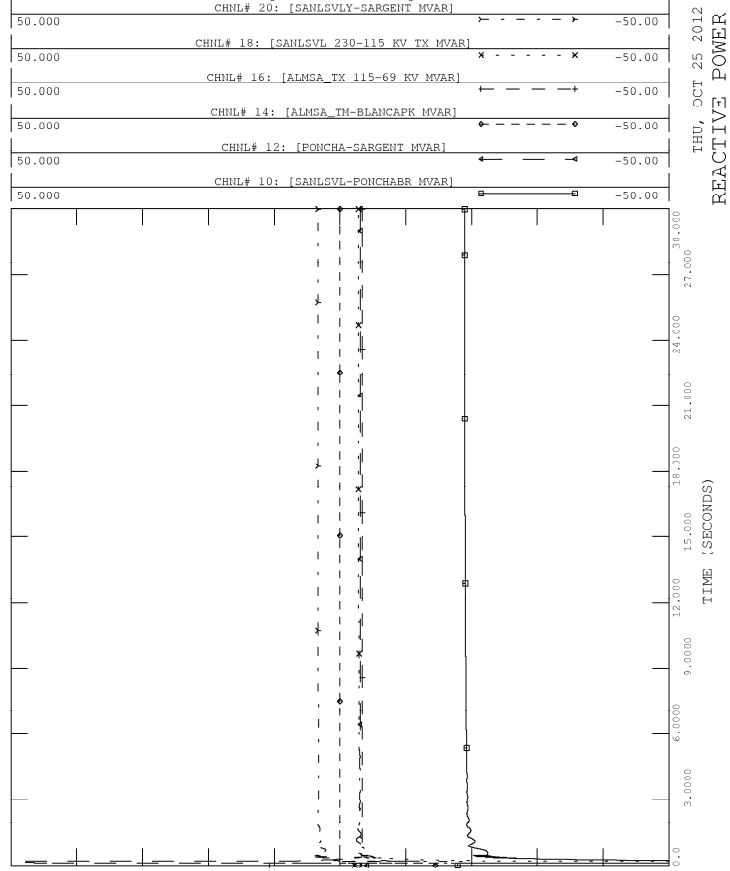
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out
CHNL# 6: [Q-G-SANDHILL_PV]



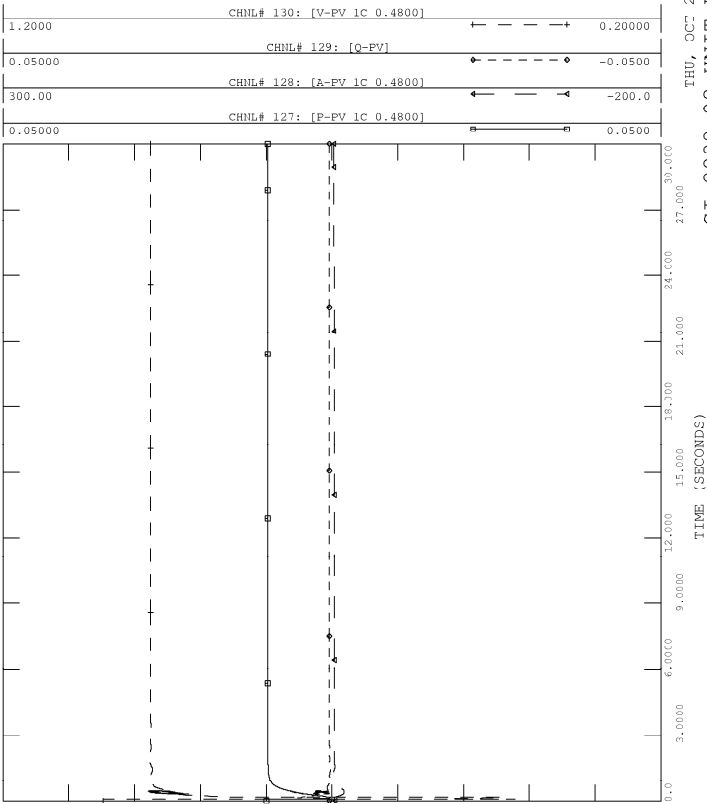
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]



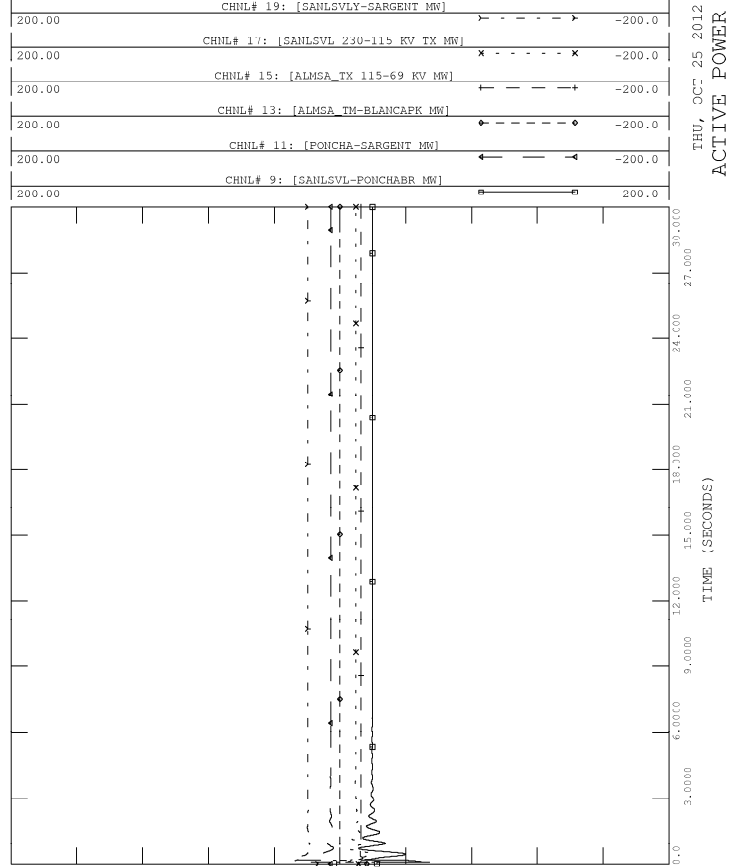
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out



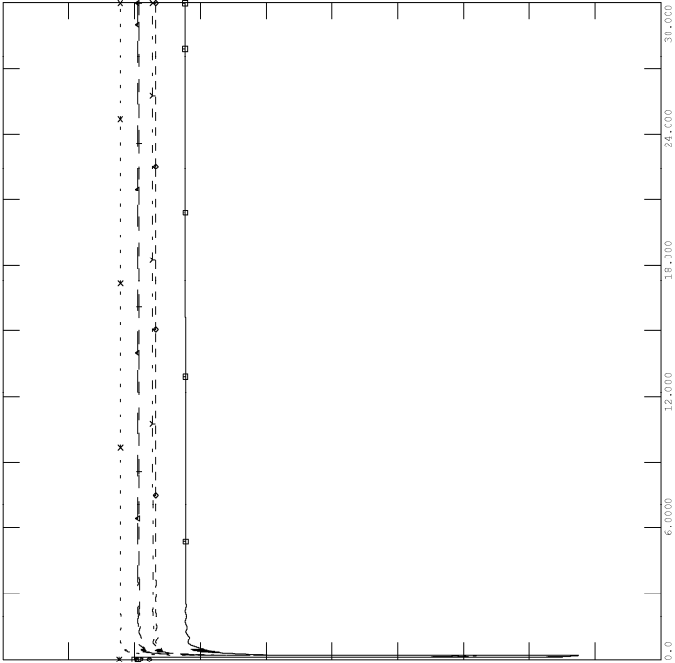


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009 8_post_11s.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:32
VOLTAGE II

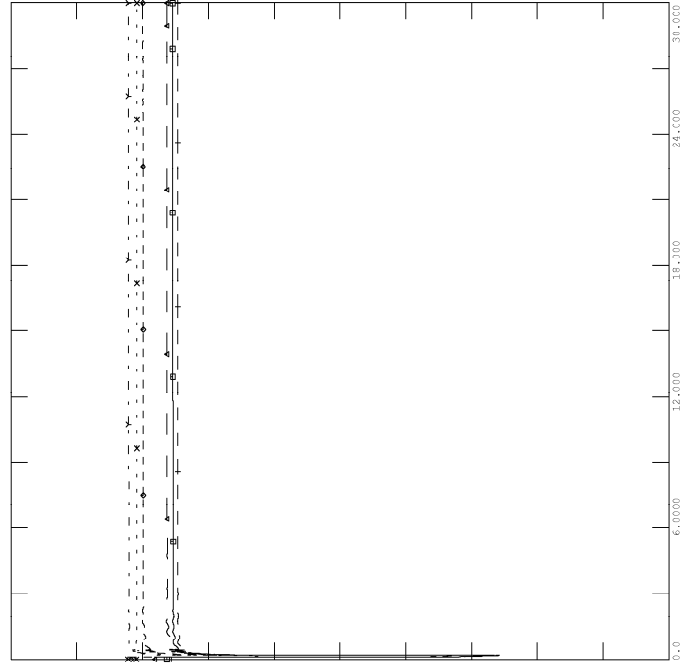


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009 8_post_11s.out
CHNL# 42: [V-RAMON 115]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:32
VOLTAGE IV

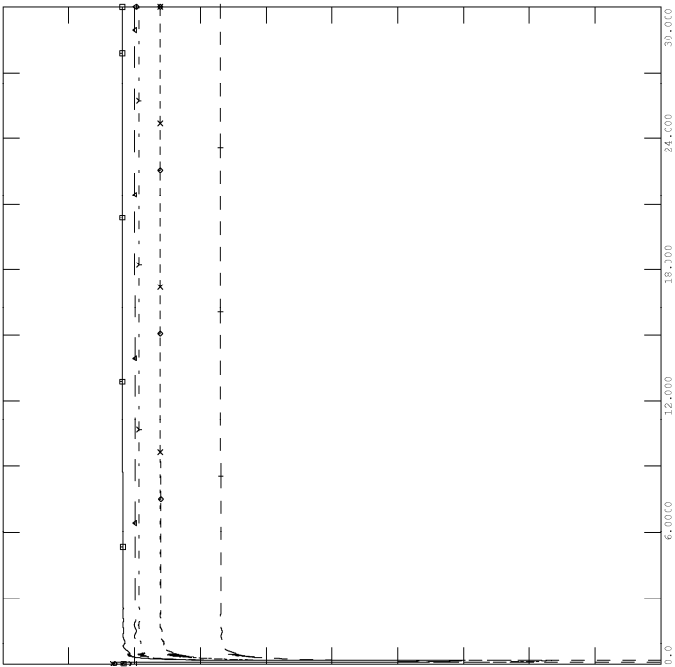


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009 8_post_11s.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

THU, OCT 25 2012 15:32
VOLTAGE I

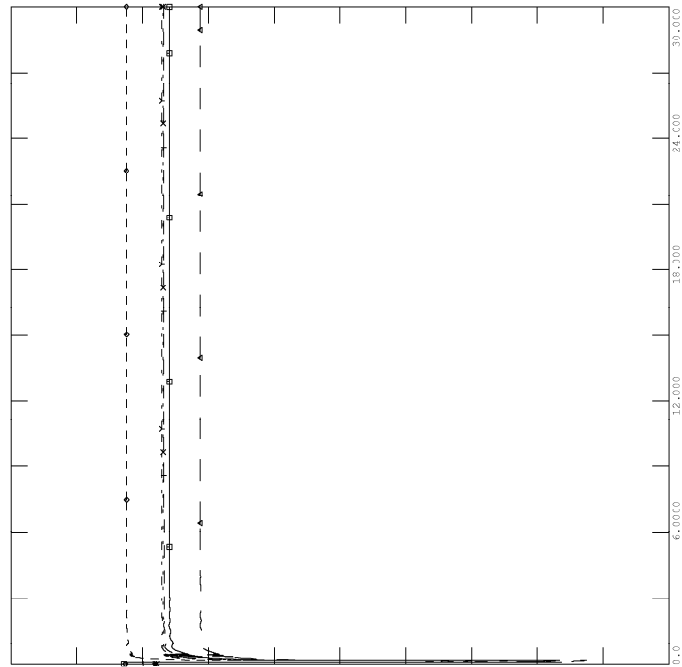


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009 8_post_11s.out
CHNL# 36: [V-HOOPERTIP 69]

1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	x - - - - x	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	+ - - - - +	0.20000
1.2000	CHNL# 32: [V-FIGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:32
VOLTAGE III



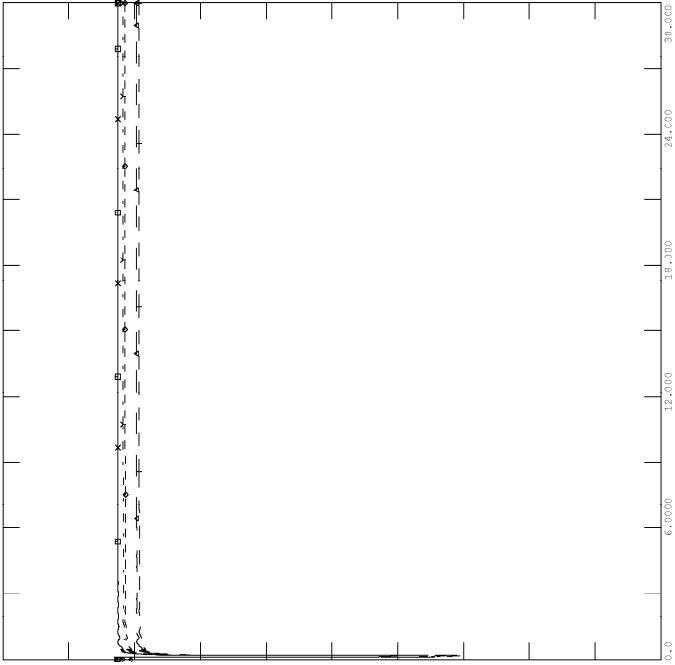


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009 8_post_11s.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK_SL 69]	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	0.20000

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VOLTAGE VI

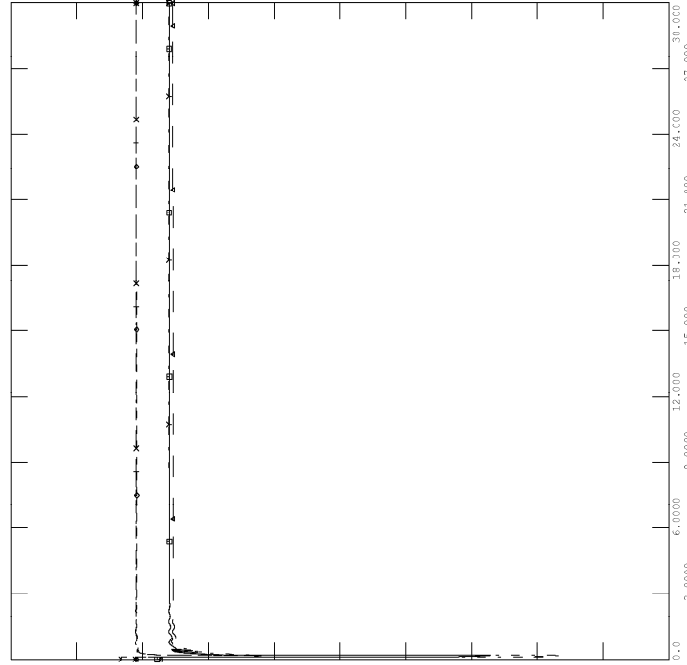


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009 8_post_11s.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	0.20000

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VOLTAGE VIII

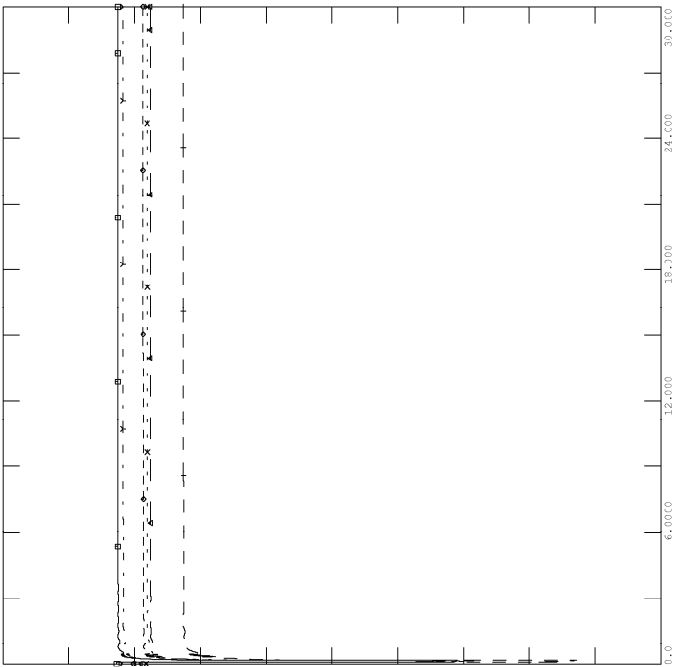


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009 8_post_11s.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	0.20000

THU, OCT 25 2012 15:32
VOLTAGE V

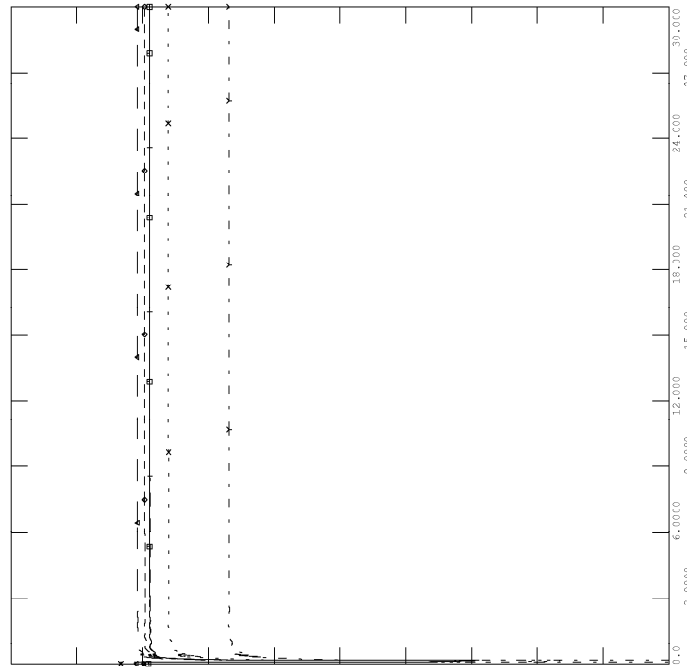


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009 8_post_11s.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	0.20000

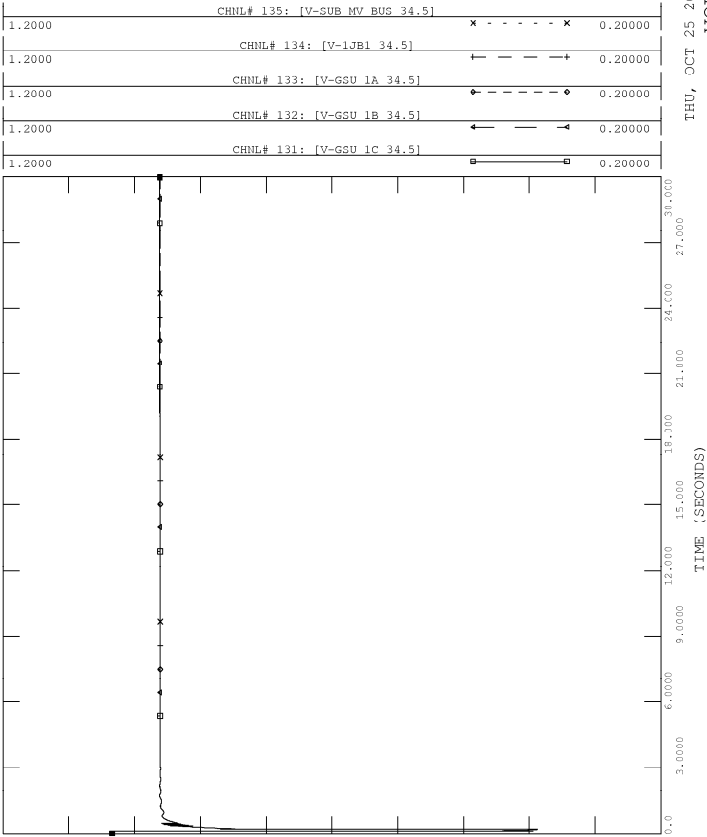
THU, OCT 25 2012 15:32
VOLTAGE VII





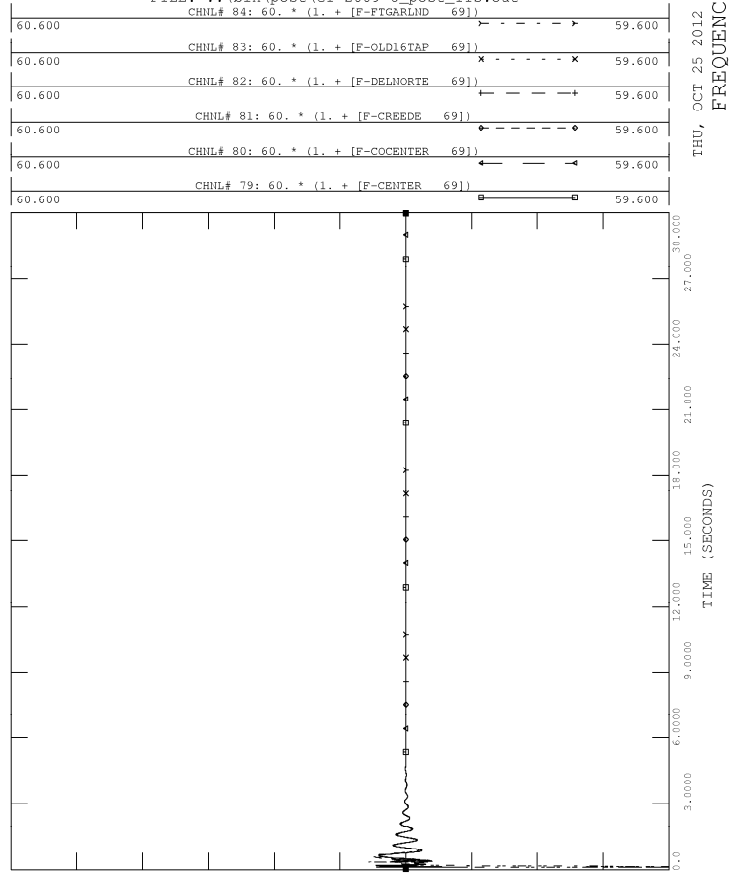
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out



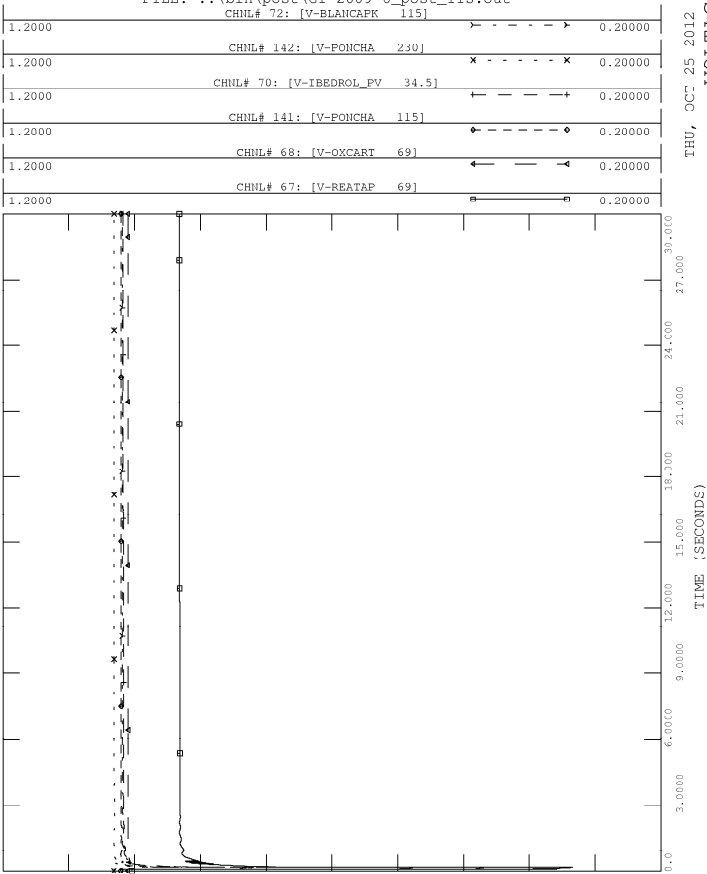
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out



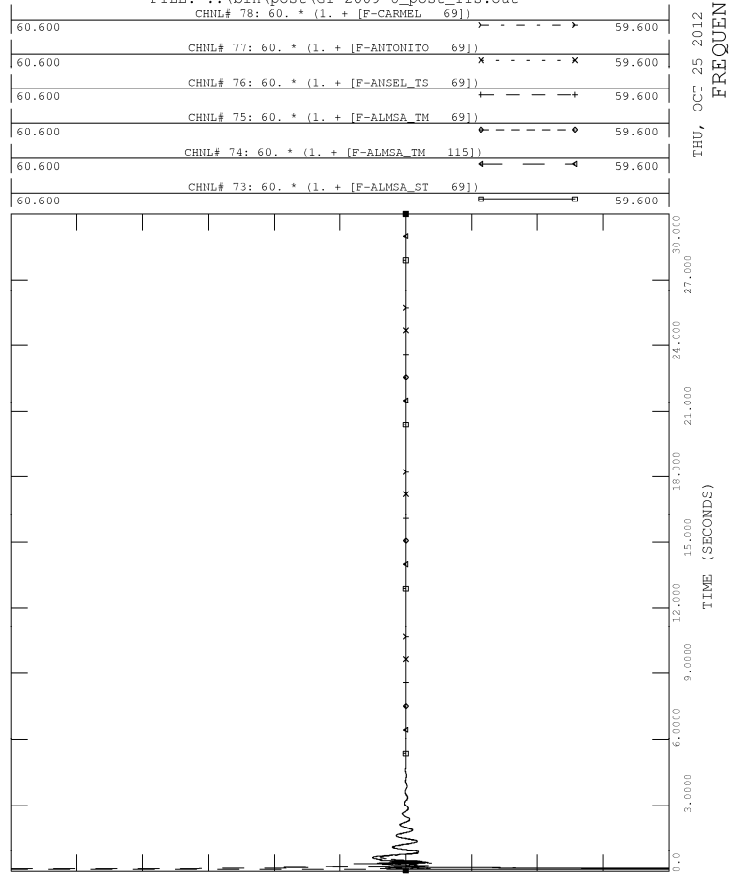
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out



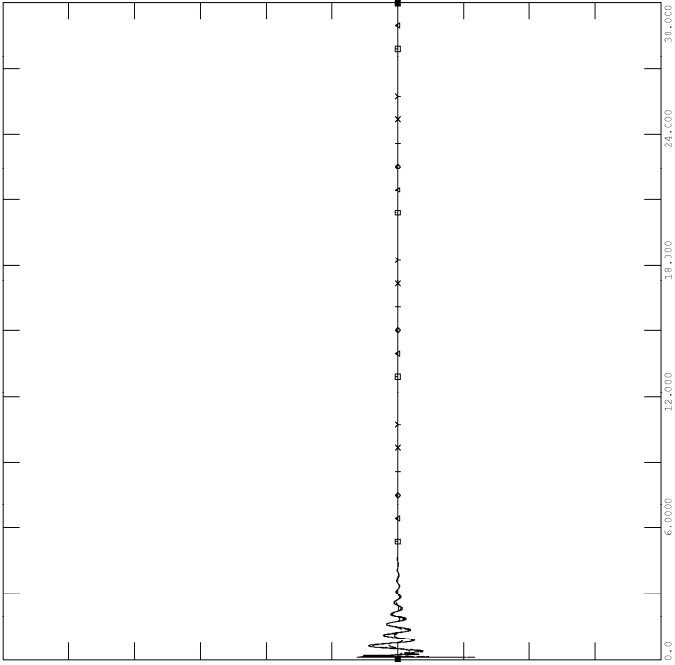


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

60.600	CHNL# 95: 60. * (1. + [F-RAMON 69])	59.600
60.600	CHNL# 94: 60. * (1. + [F-RAMON 115])	59.600
60.600	CHNL# 93: 60. * (1. + [F-PONCHA 69])	59.600
60.600	CHNL# 92: 60. * (1. + [F-PLAZA 69])	59.600
60.600	CHNL# 91: 60. * (1. + [F-MOSCA 69])	59.600

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FREQUENCY IV

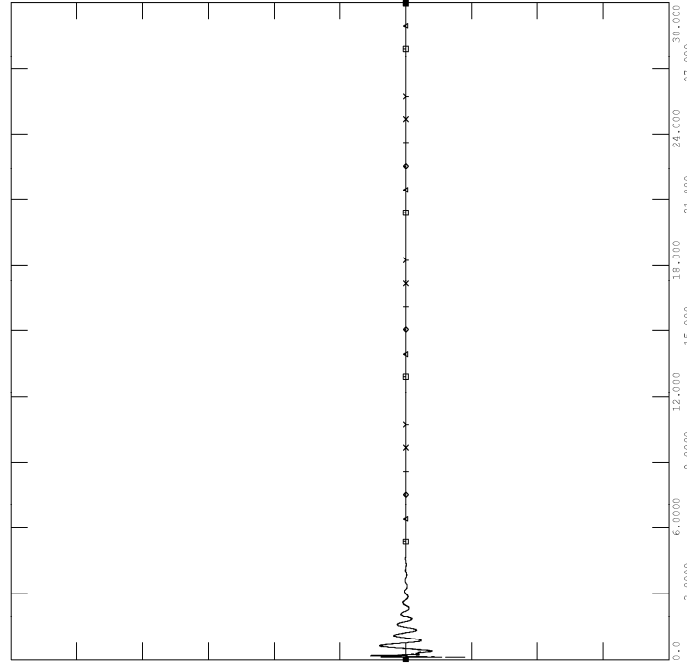


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

60.600	CHNL# 107: 60. * (1. + [F-STOCKADE 69])	59.600
60.600	CHNL# 106: 60. * (1. + [F-STANLEY 115])	59.600
60.600	CHNL# 105: 60. * (1. + [F-SFORK_GL 69])	59.600
60.600	CHNL# 104: 60. * (1. + [F-SARGENT 69])	59.600
60.600	CHNL# 103: 60. * (1. + [F-SARGENT 115])	59.600

THU, OCT 25 2012 15:32
FREQUENCY VI

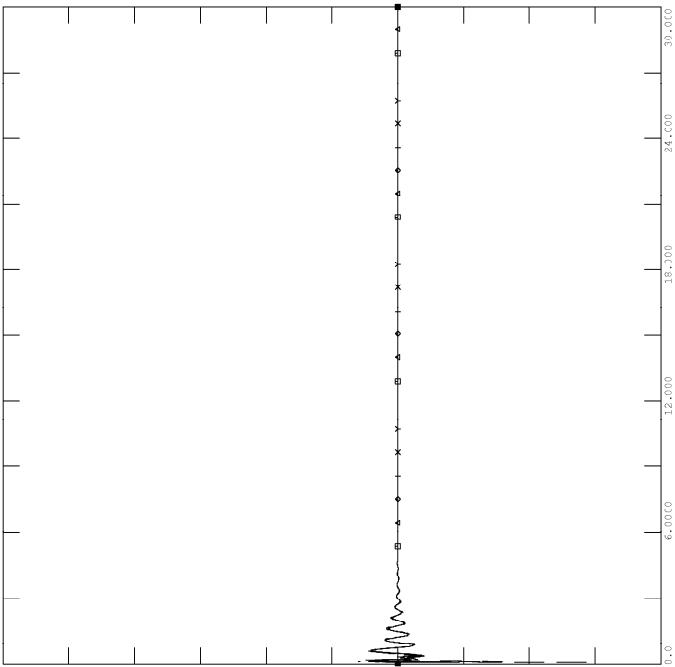


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

60.600	CHNL# 89: 60. * (1. + [F-LAGARITA 69])	59.600
60.600	CHNL# 88: 60. * (1. + [F-HOOPERTP 69])	59.600
60.600	CHNL# 87: 60. * (1. + [F-HOOPER 69])	59.600
60.600	CHNL# 86: 60. * (1. + [F-HOMELAKE 69])	59.600
60.600	CHNL# 85: 60. * (1. + [F-HILANDSL 69])	59.600

THU, OCT 25 2012 15:32
FREQUENCY III

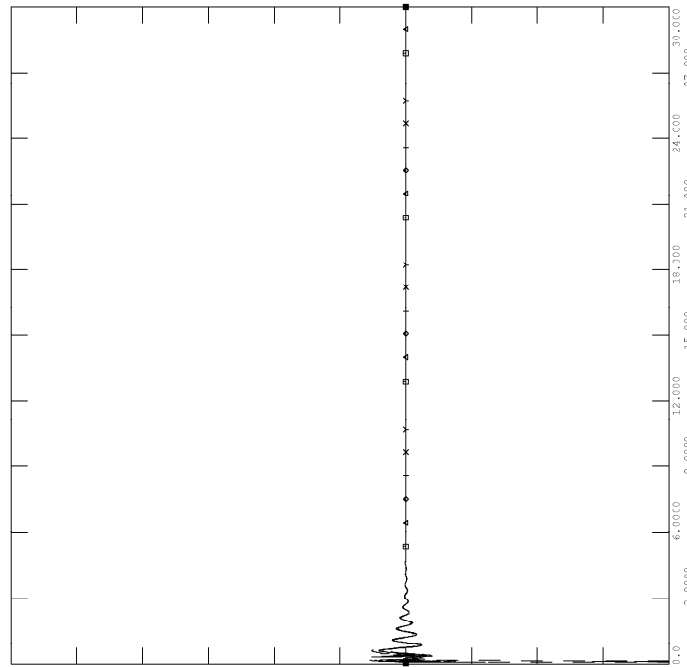


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])

60.600	CHNL# 101: 60. * (1. + [F-SANLSVLY 230])	59.600
60.600	CHNL# 100: 60. * (1. + [F-SANLSVLY 115])	59.600
60.600	CHNL# 99: 60. * (1. + [F-S.ACACIO 69])	59.600
60.600	CHNL# 98: 60. * (1. + [F-ROMEO 69])	59.600
60.600	CHNL# 97: 60. * (1. + [F-RIOGRDTP 69])	59.600

THU, OCT 25 2012 15:32
FREQUENCY V

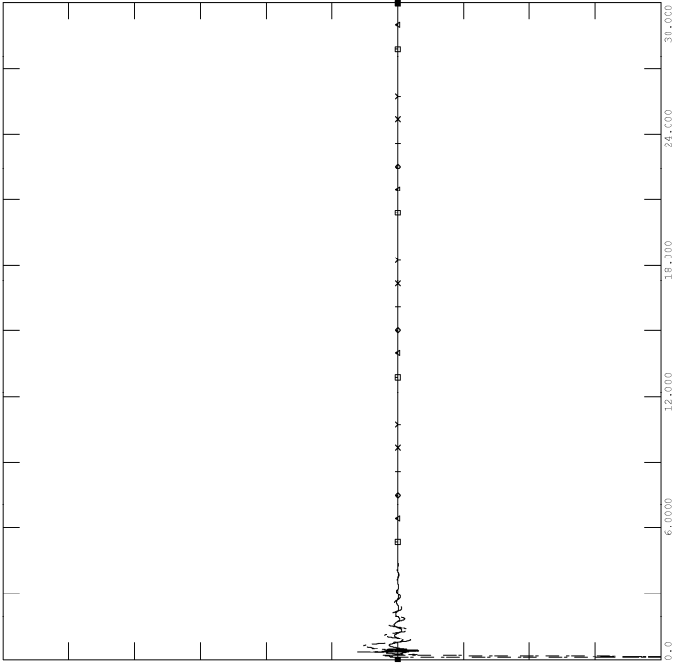




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KEBBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



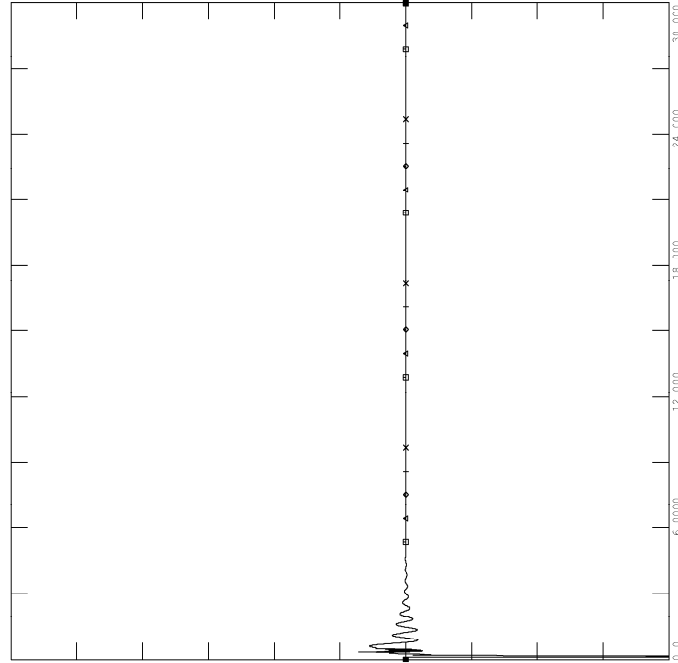
THU, OCT 25 2012 15:32
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out

60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJBI 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



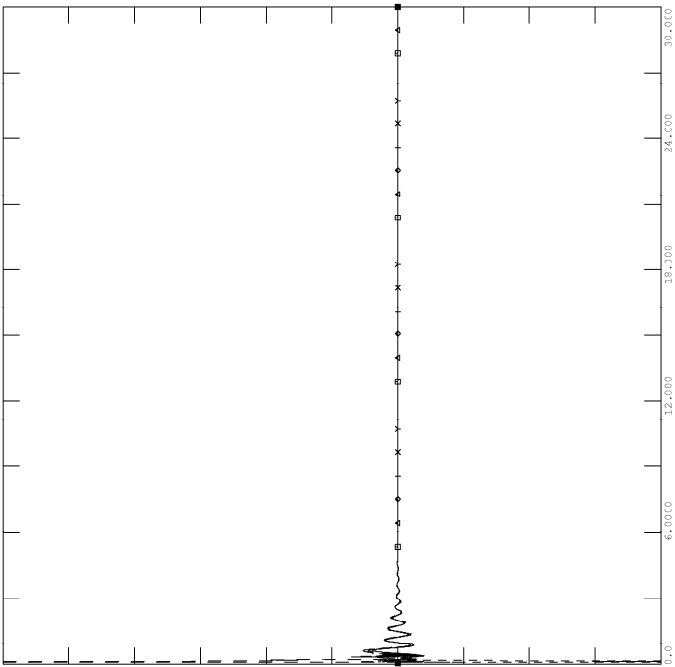
THU, OCT 25 2012 15:32
FREQUENCY X



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out

60.600	CHNL# 114: 60. * (1. + [F-SAGUACHE 69])	59.600
60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMSACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMSACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



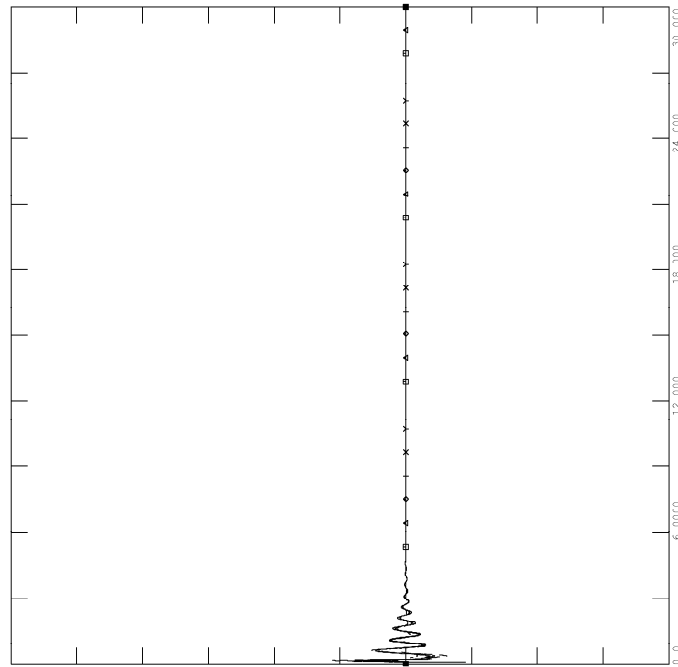
THU, OCT 25 2012 15:32
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ ALMOSA ON ALMOSA - BLANCAPEAK 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_11s.out

60.600	CHNL# 144: 60. * (1. + [F-PONCHA 230])	59.600
60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-COGENITX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600

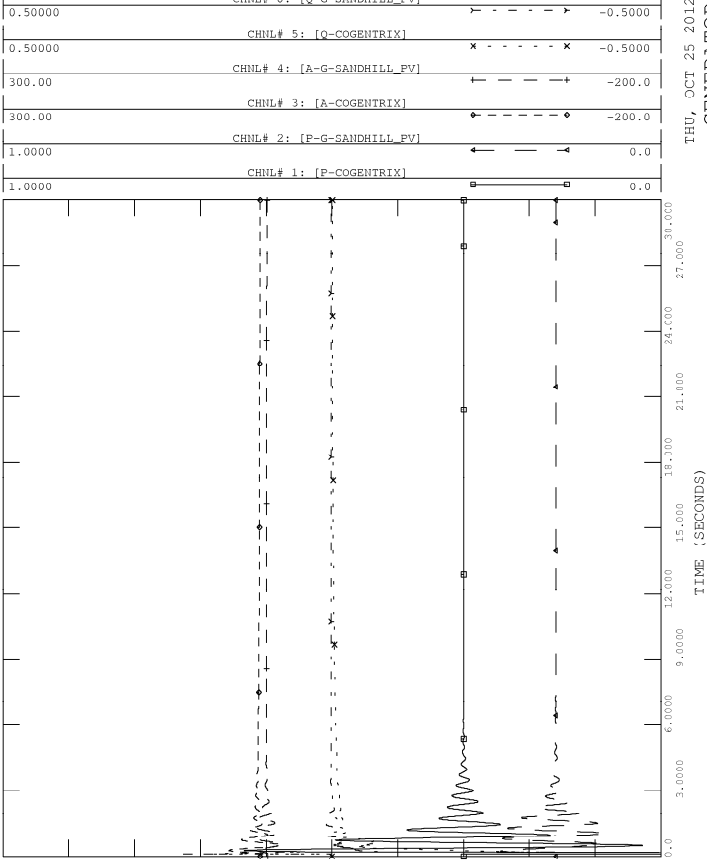


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FREQUENCY IX



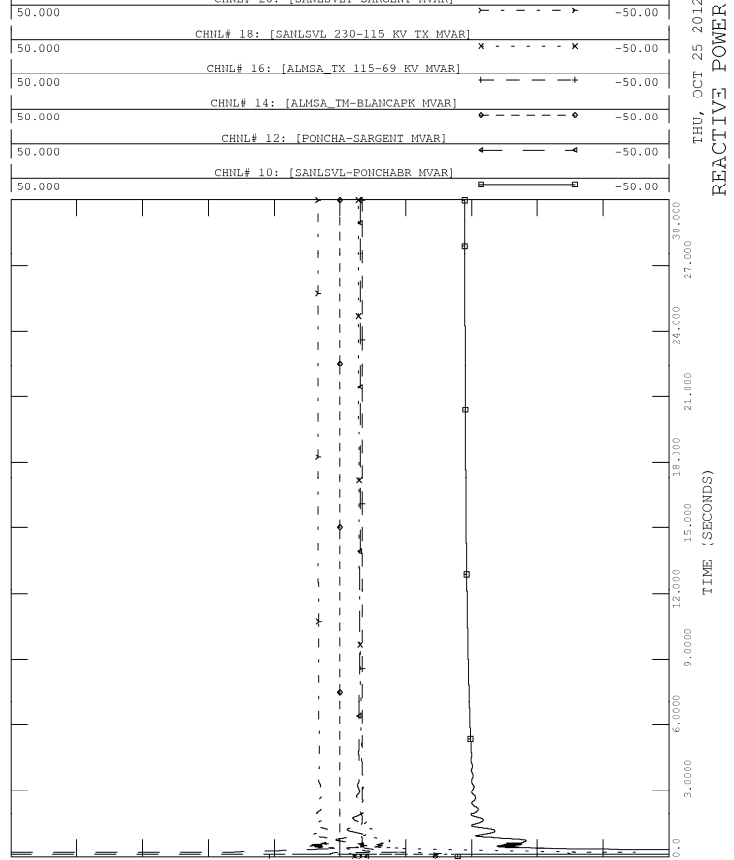
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 6: [Q-G-SANDHILL_PV]



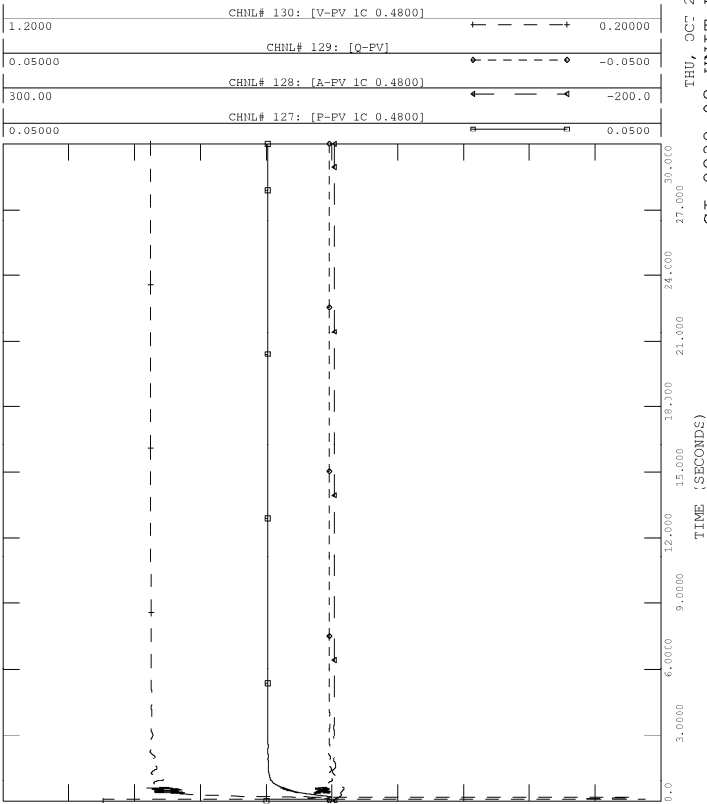
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]



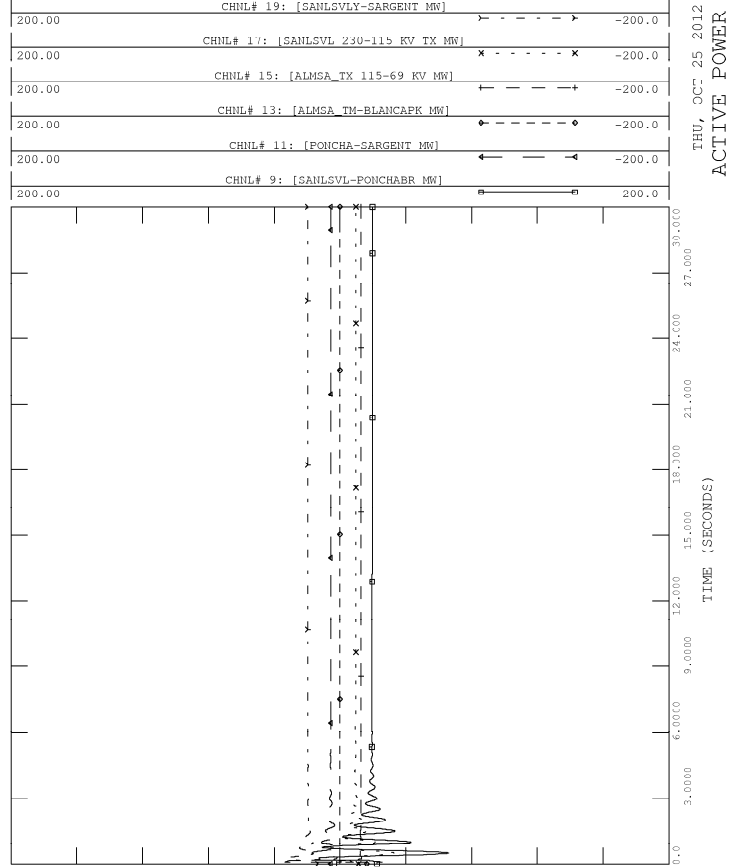
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out



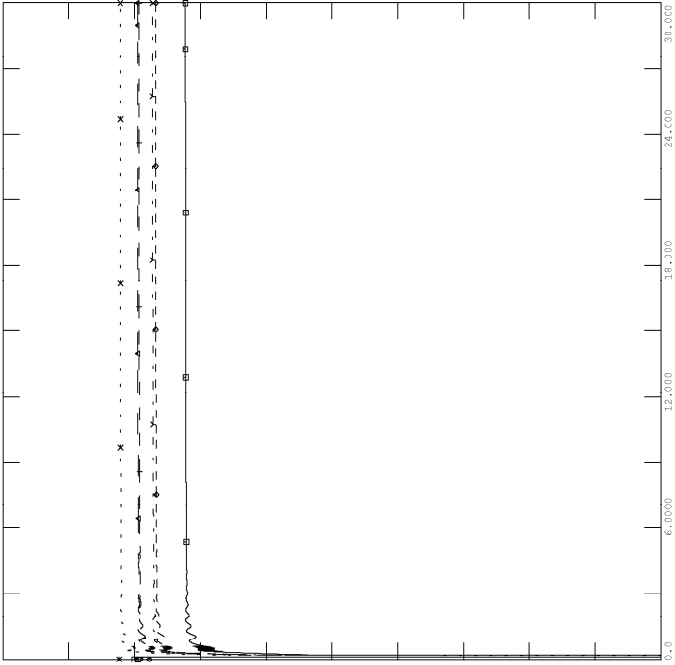


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMELO 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

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VOLTAGE II

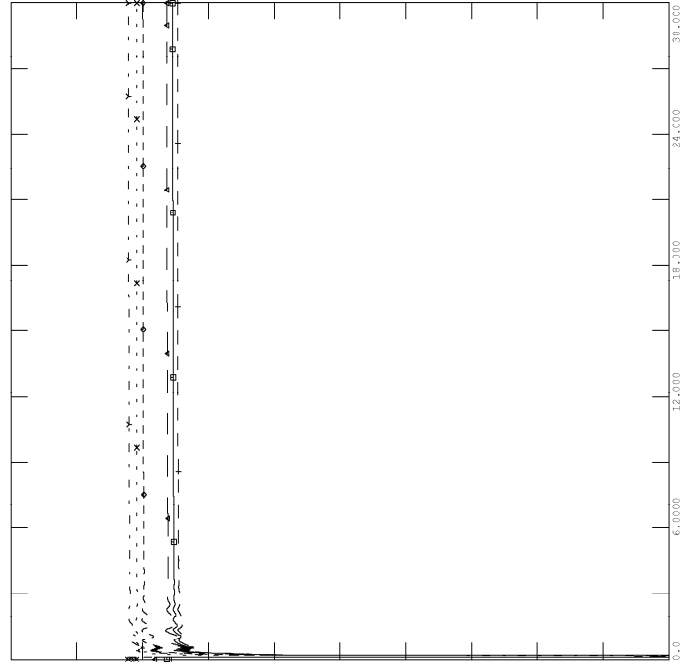


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 41: [V-PONCHA 69]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	+ - - - - +	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	o - - - - o	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:33
VOLTAGE IV

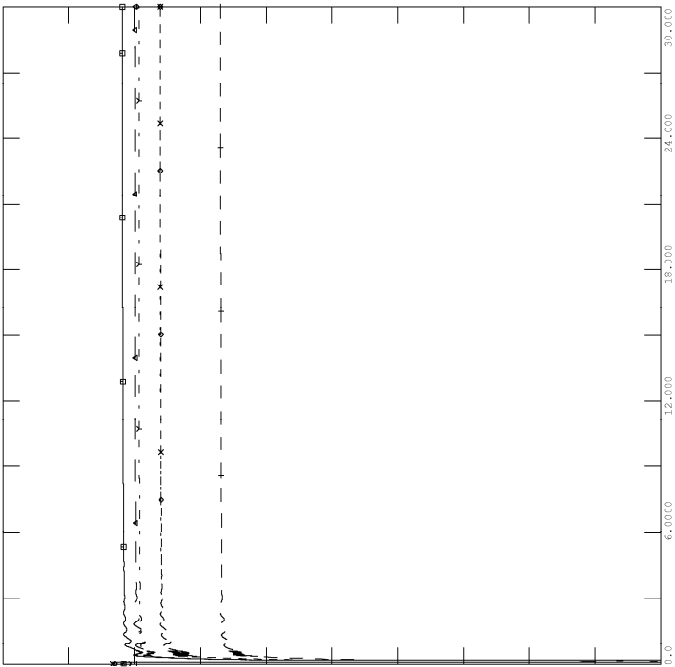


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

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VOLTAGE I

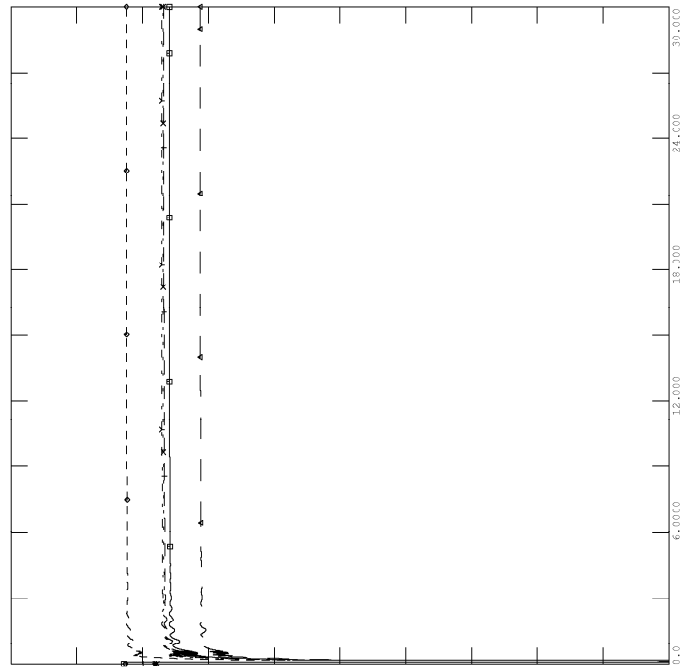


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 36: [V-HOOPERTIP 69]

1.2000	CHNL# 36: [V-HOOPERTIP 69]	x - - - - - x	0.20000
1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	+ - - - - +	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	o - - - - o	0.20000
1.2000	CHNL# 32: [V-FIGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:33
VOLTAGE III



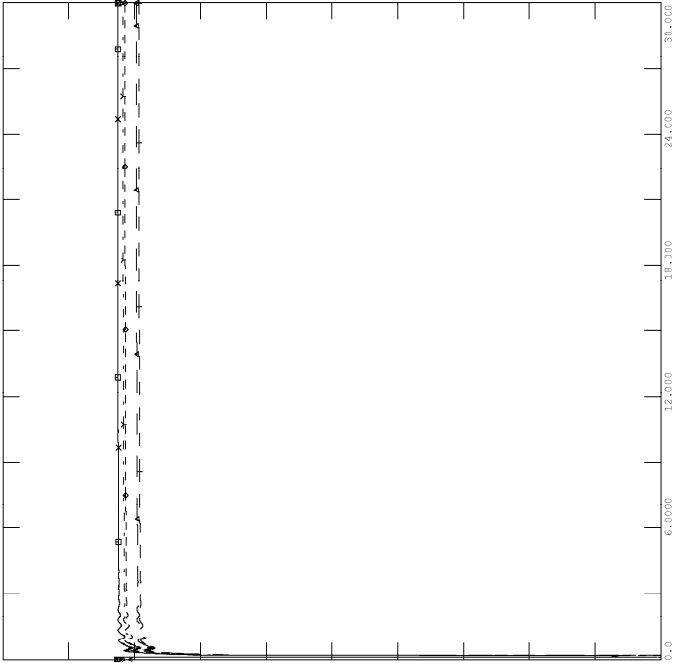


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK_SL 69]	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	0.20000

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VOLTAGE VI

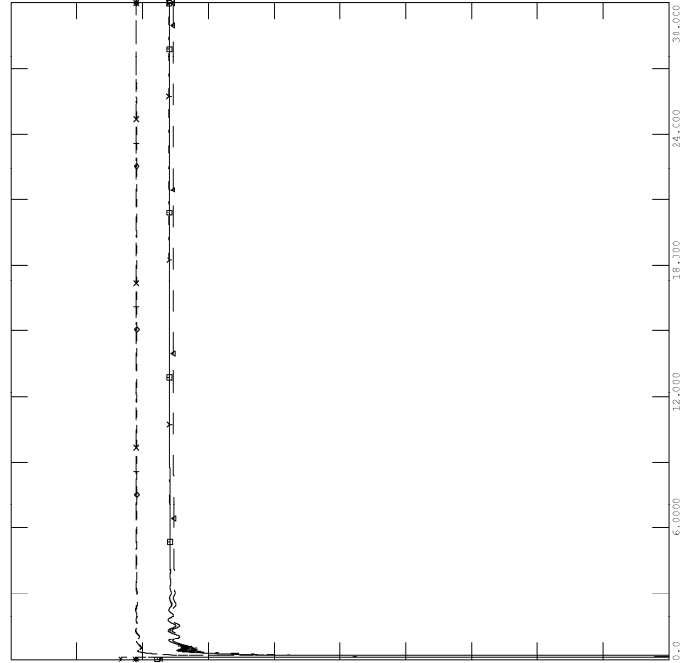


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	0.20000

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VOLTAGE VIII

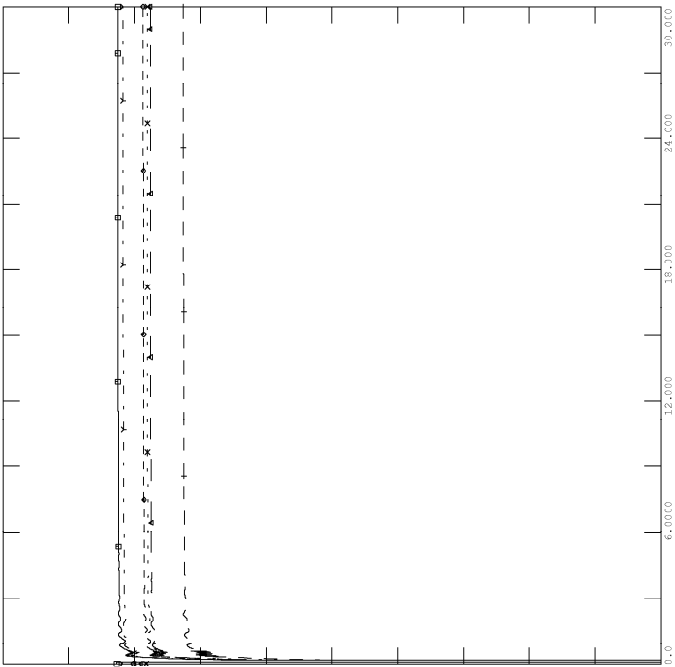


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	0.20000

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VOLTAGE V

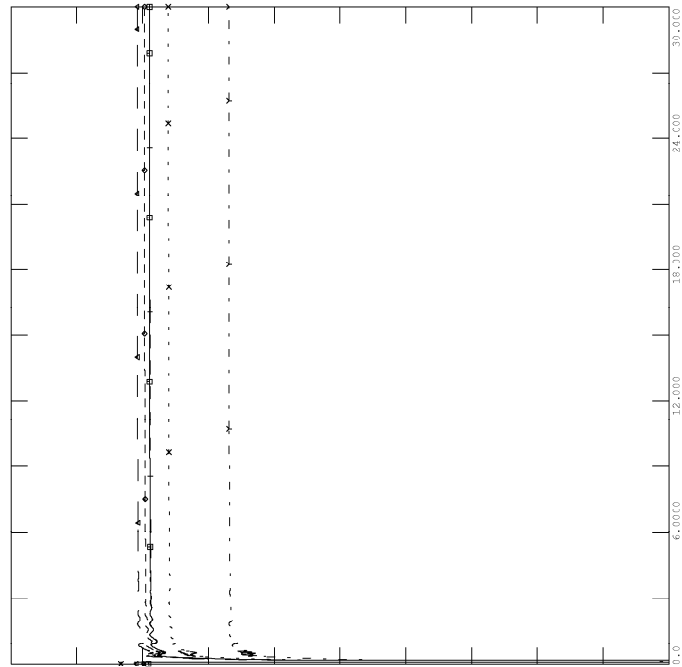


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	0.20000

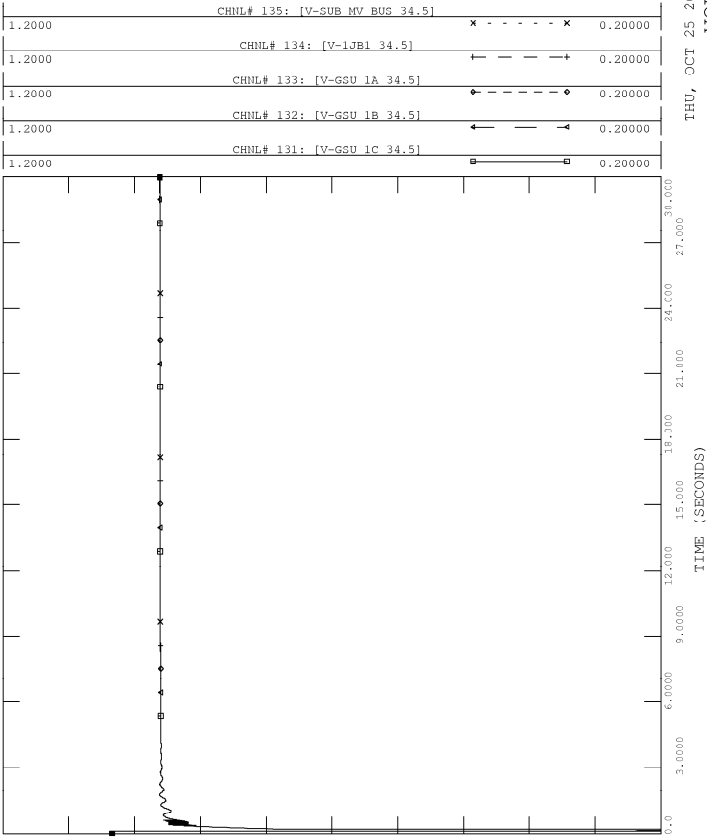
THU, OCT 25 2012 15:33
VOLTAGE VII





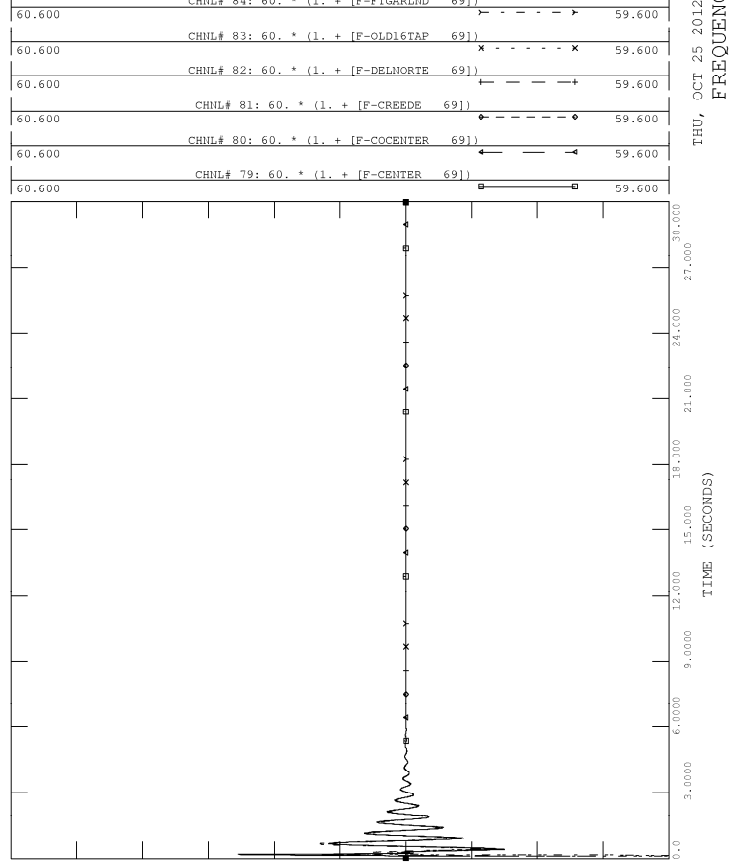
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out



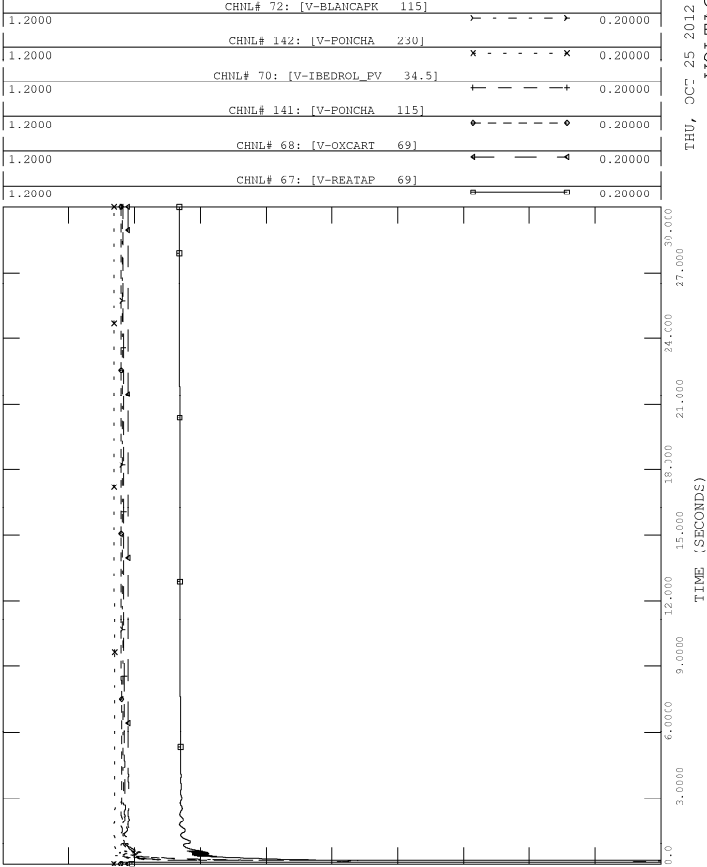
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out



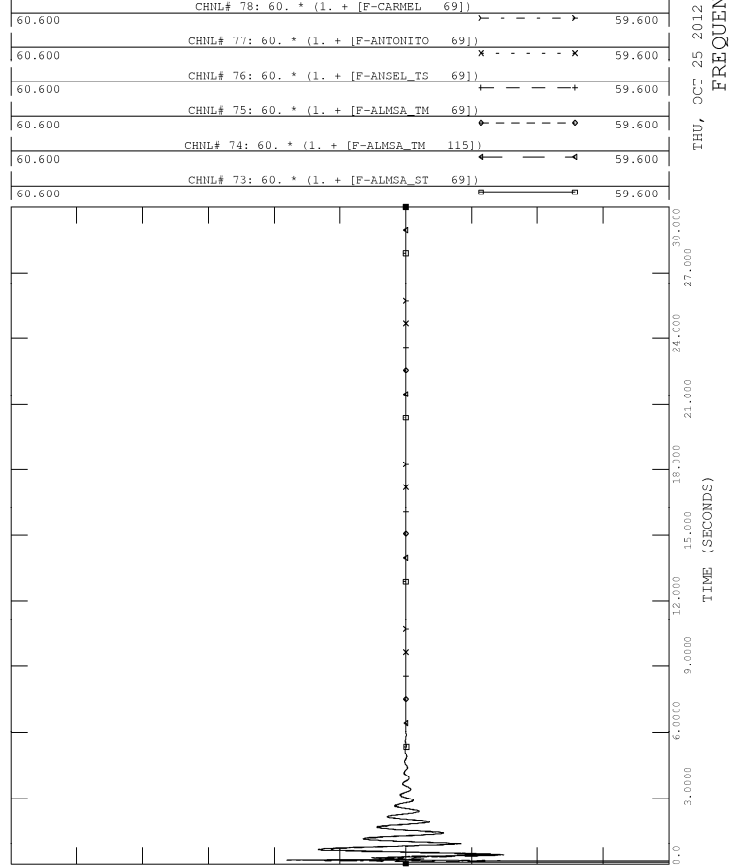
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out



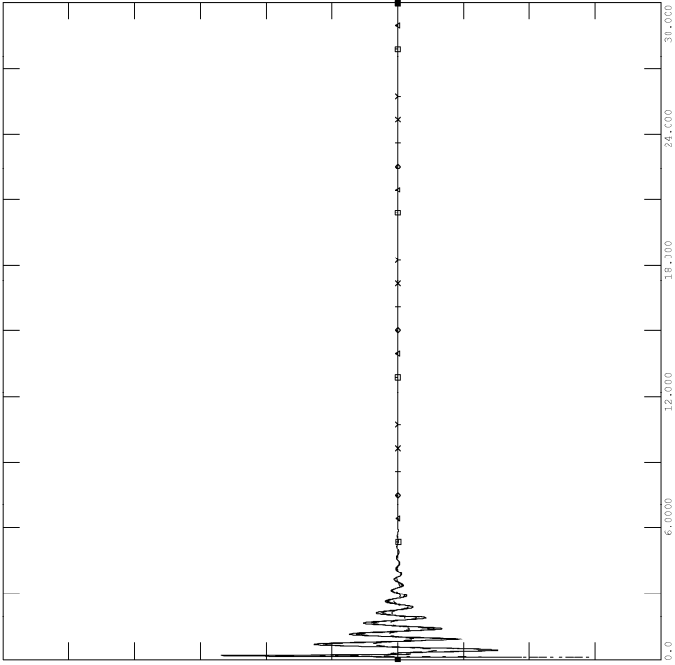


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

60.600	CHNL# 95: 60. * (1. + [F-RAMON 69])	59.600
60.600	CHNL# 94: 60. * (1. + [F-RAMON 115])	59.600
60.600	CHNL# 93: 60. * (1. + [F-PONCHA 69])	59.600
60.600	CHNL# 92: 60. * (1. + [F-PLAZA 69])	59.600
60.600	CHNL# 91: 60. * (1. + [F-MOSCA 69])	59.600

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FREQUENCY IV

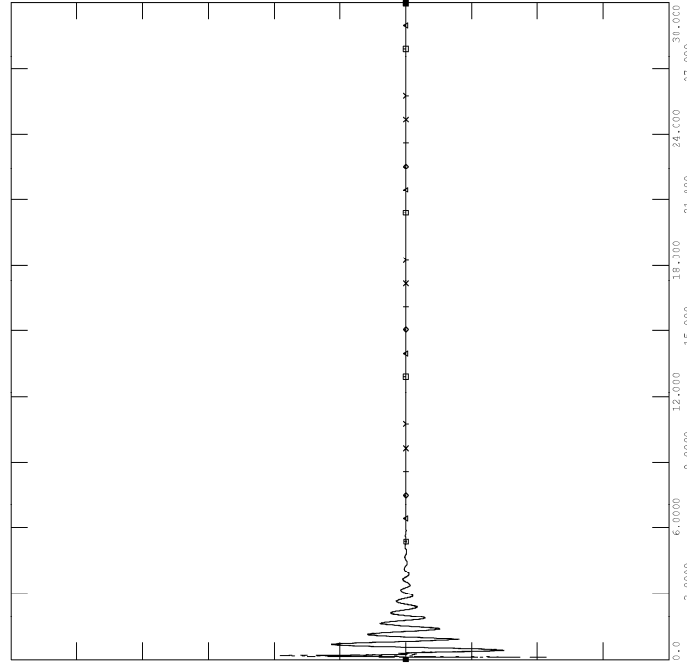


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

60.600	CHNL# 107: 60. * (1. + [F-STOCKADE 69])	59.600
60.600	CHNL# 106: 60. * (1. + [F-STANLEY 115])	59.600
60.600	CHNL# 105: 60. * (1. + [F-SFORK_GL 69])	59.600
60.600	CHNL# 104: 60. * (1. + [F-SARGENT 69])	59.600
60.600	CHNL# 103: 60. * (1. + [F-SARGENT 115])	59.600

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FREQUENCY VI

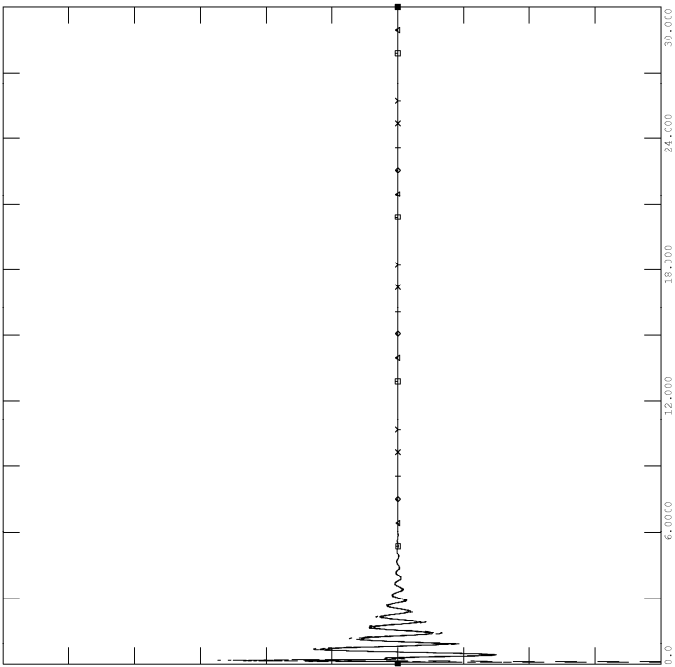


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

60.600	CHNL# 89: 60. * (1. + [F-LAGARITA 69])	59.600
60.600	CHNL# 88: 60. * (1. + [F-HOOPERTP 69])	59.600
60.600	CHNL# 87: 60. * (1. + [F-HOOPER 69])	59.600
60.600	CHNL# 86: 60. * (1. + [F-HOMELAKE 69])	59.600
60.600	CHNL# 85: 60. * (1. + [F-HILANDSL 69])	59.600

THU, OCT 25 2012 15:33
FREQUENCY III

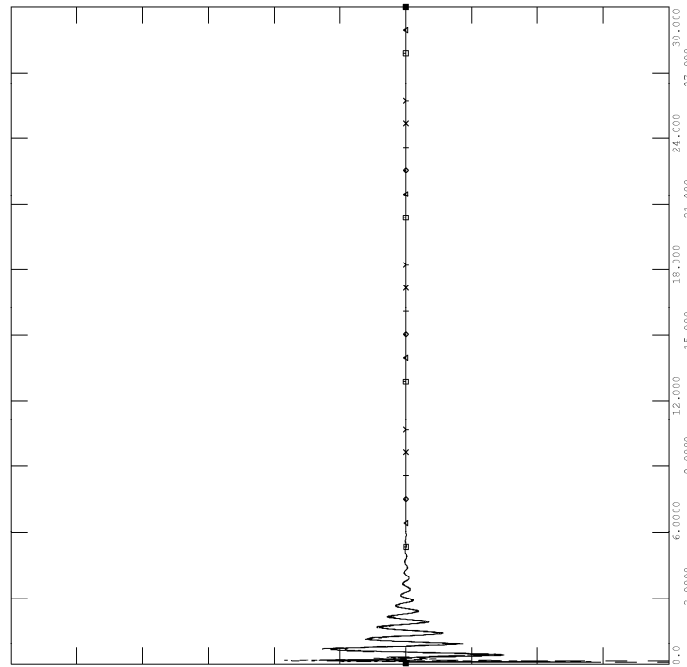


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])

60.600	CHNL# 101: 60. * (1. + [F-SANLSVLY 230])	59.600
60.600	CHNL# 100: 60. * (1. + [F-SANLSVLY 115])	59.600
60.600	CHNL# 99: 60. * (1. + [F-S.ACACIO 69])	59.600
60.600	CHNL# 98: 60. * (1. + [F-ROMEO 69])	59.600
60.600	CHNL# 97: 60. * (1. + [F-RIOGRDTP 69])	59.600

THU, OCT 25 2012 15:33
FREQUENCY V

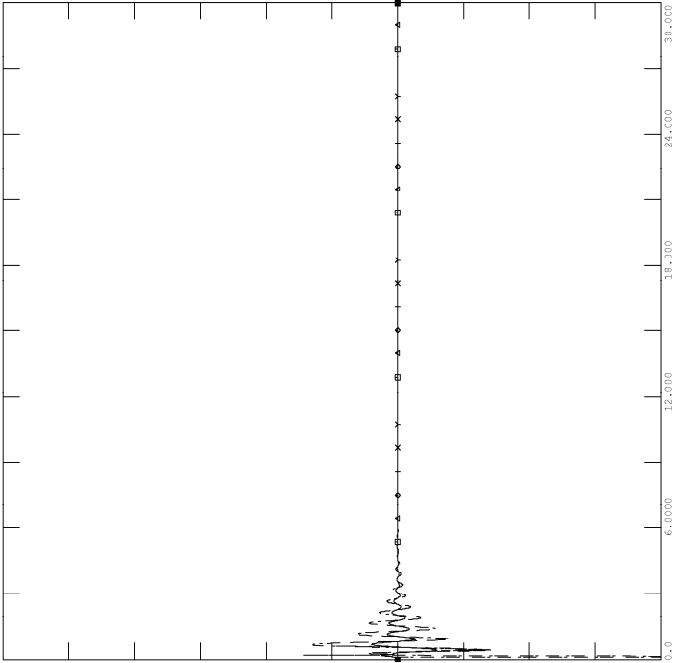




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KERBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



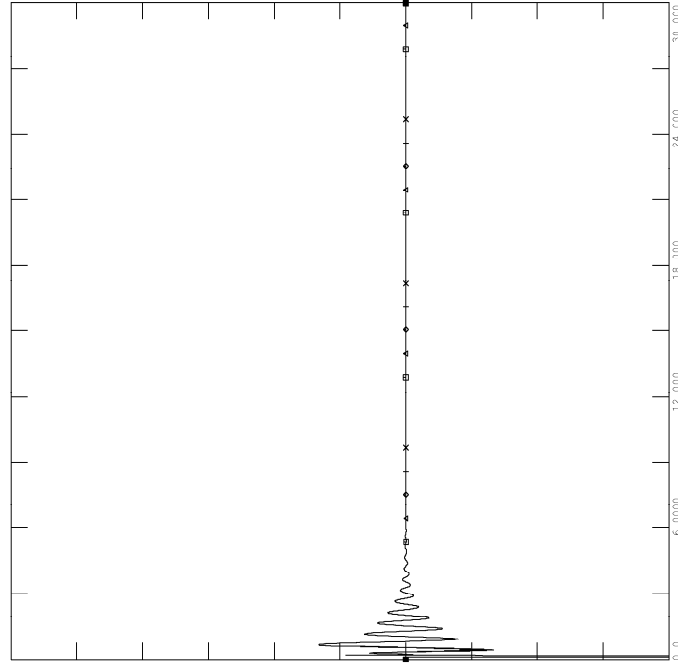
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FREQUENCY VIII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out

60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJBL 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



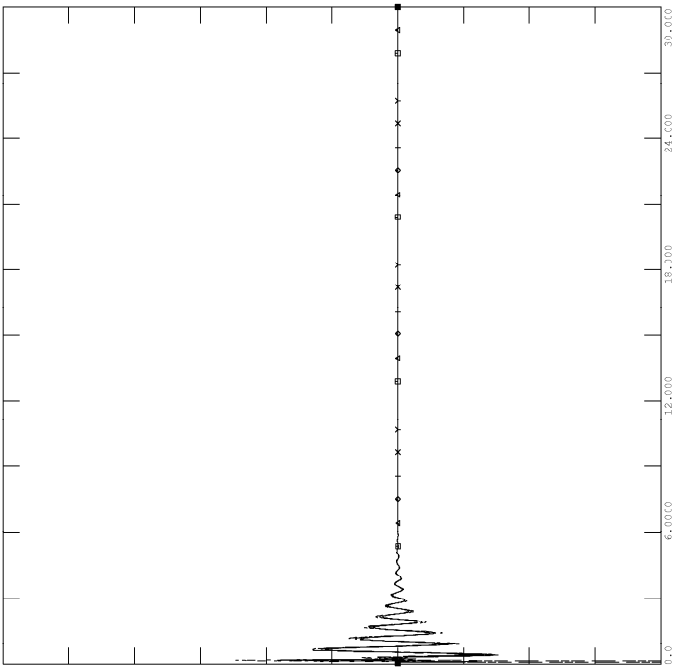
THU, OCT 25 2012 15:33
FREQUENCY IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMSACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMSACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



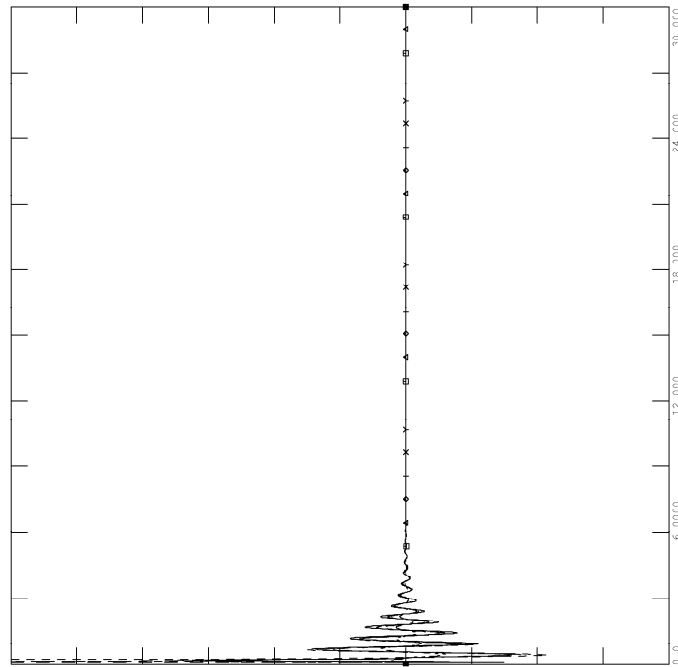
THU, OCT 25 2012 15:33
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ BLANCAPEAK ON BLANCAPEAK - ALMOSA 115 KV LINE

FILE: ..\bin\post\GI 2009_8_post_12s.out
CHNL# 144: 60. * (1. + [F-PONCHA 230])

60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-CEGENTIX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600

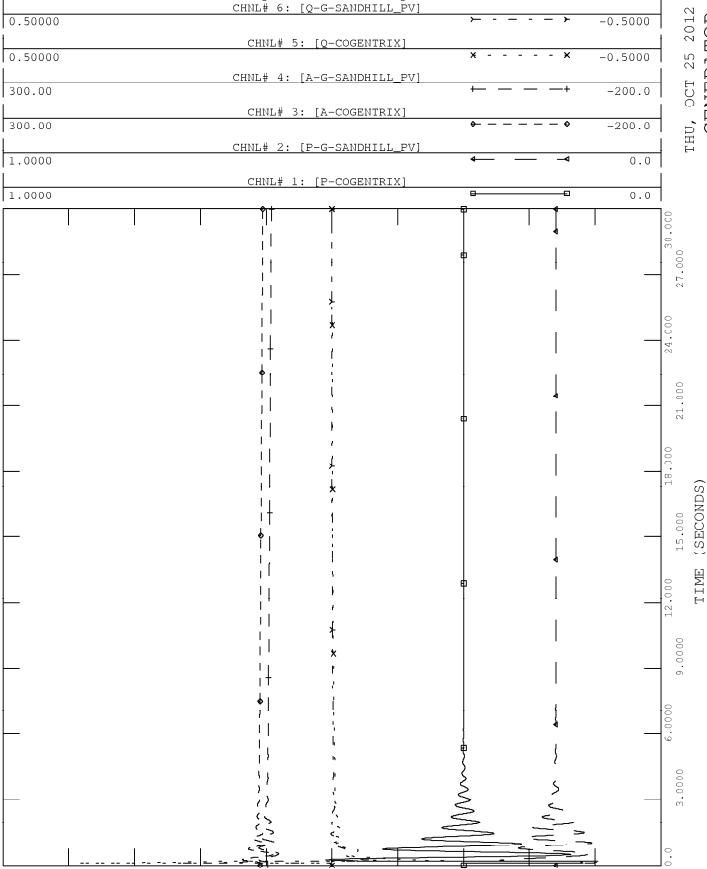


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FREQUENCY IX



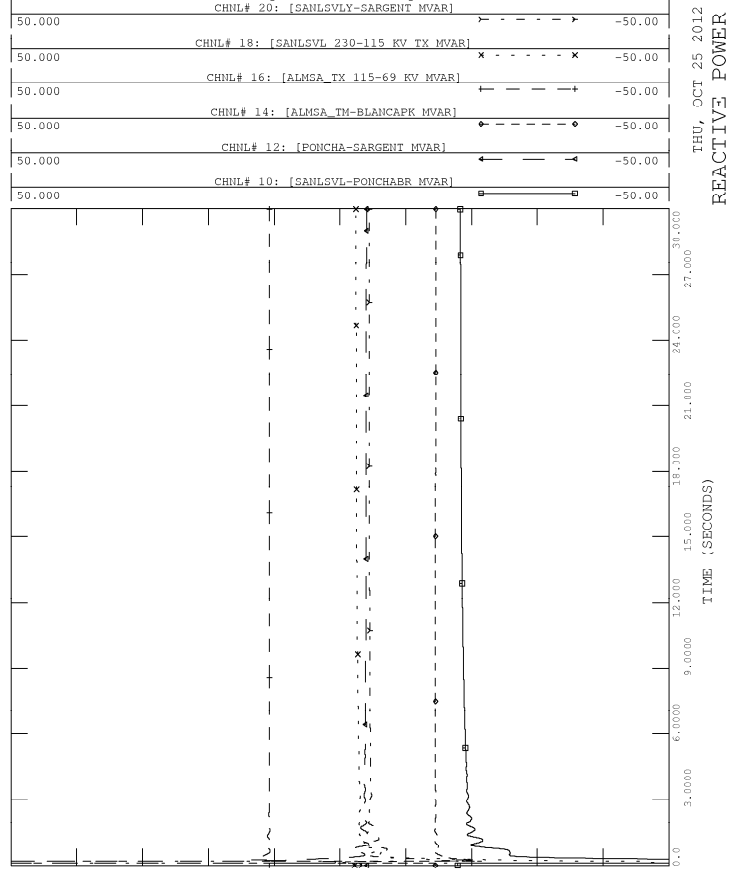
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 6: [Q-G-SANDHILL_PV]



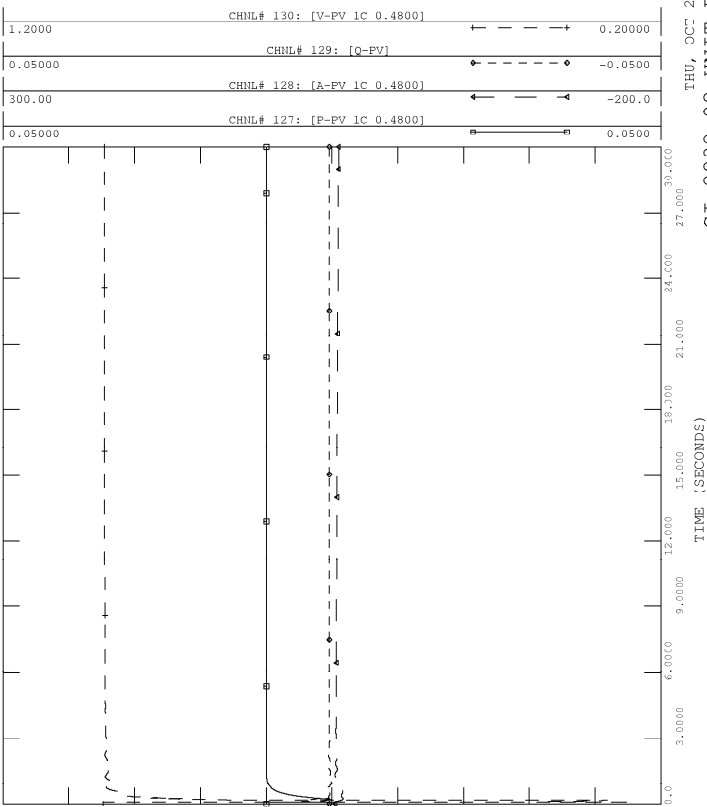
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]



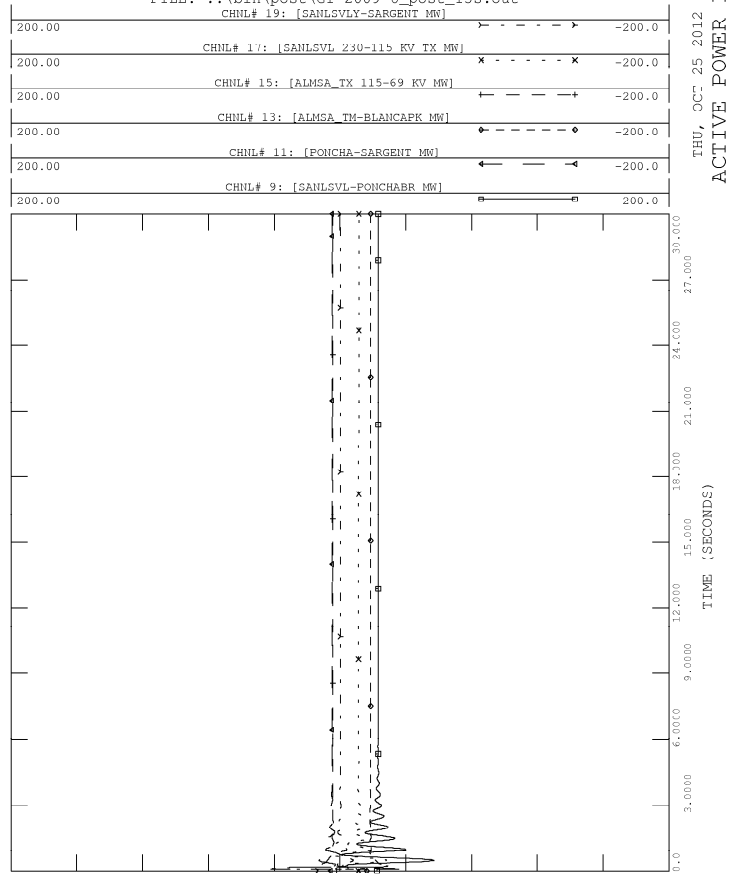
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out



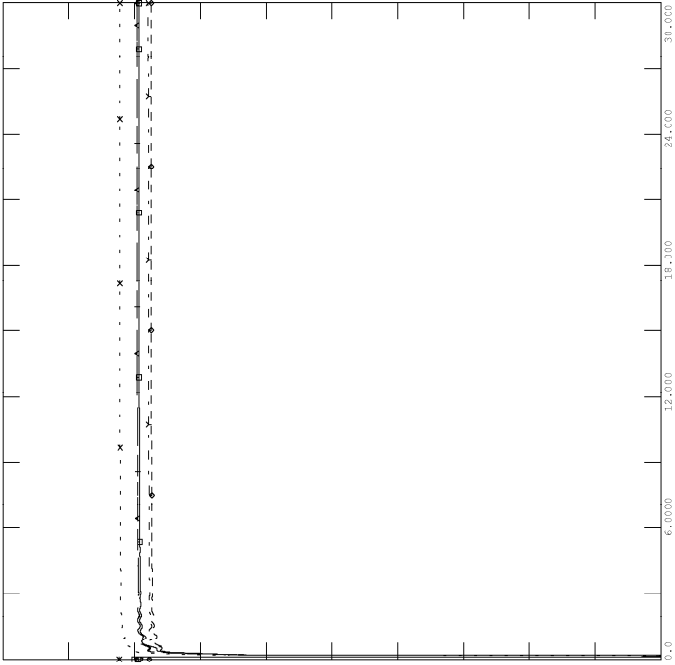


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

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VOLTAGE II

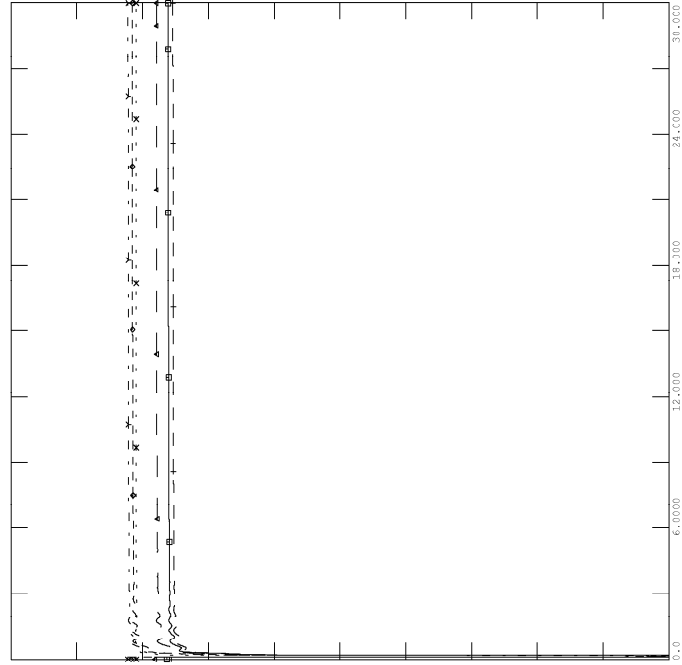


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 42: [V-RAMON 115]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

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VOLTAGE IV

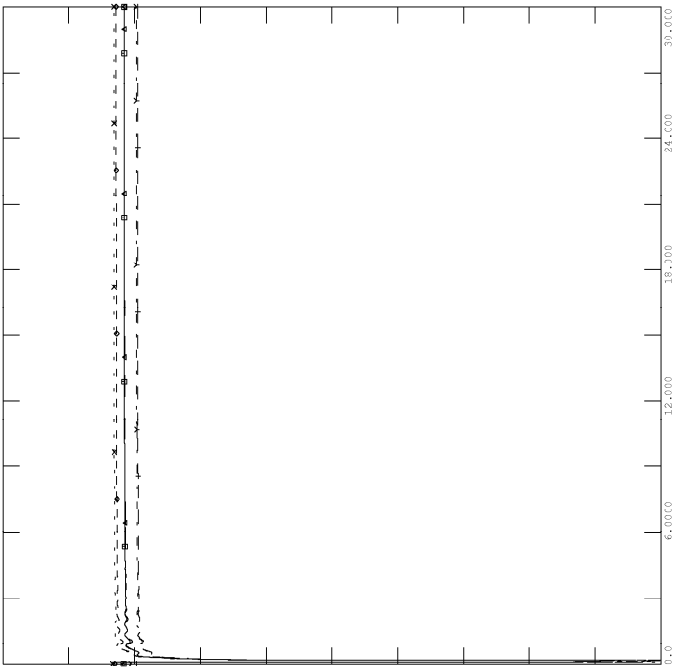


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

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VOLTAGE I

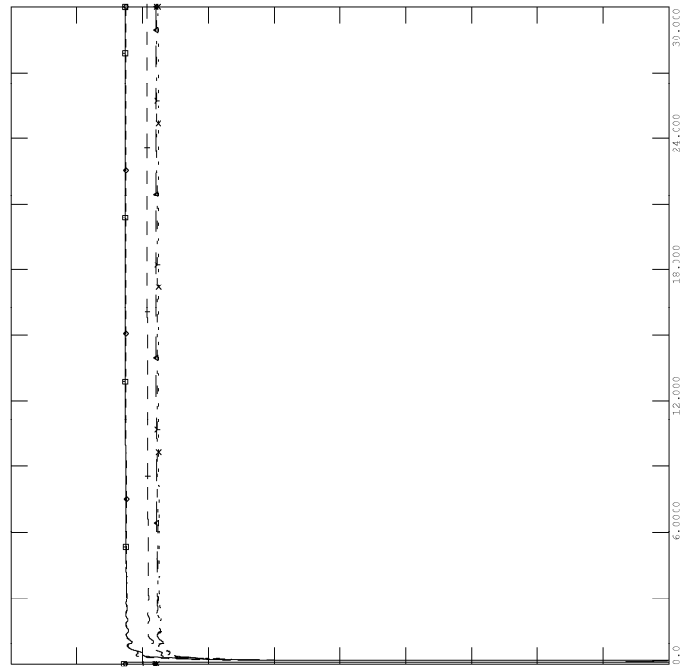


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 36: [V-HOOPER TP 69]

1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	x - - - - - x	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	+ - - - - +	0.20000
1.2000	CHNL# 32: [V-FTGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

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VOLTAGE III



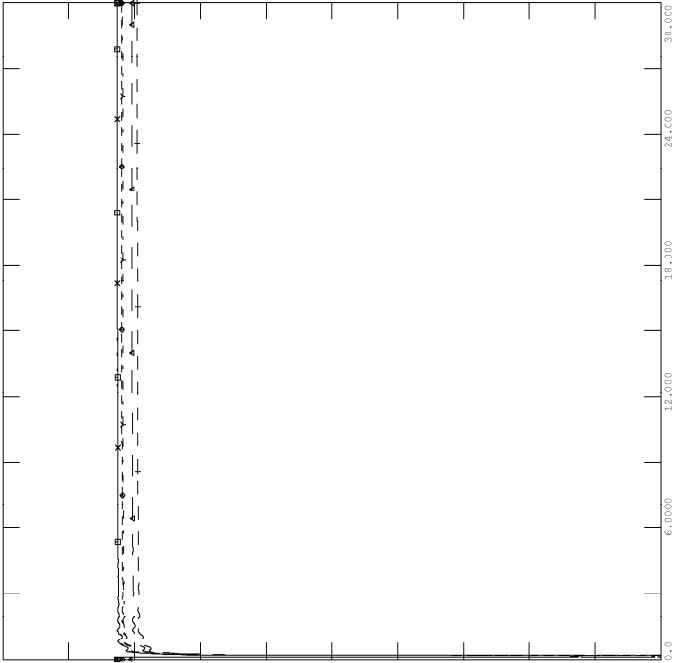


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK SL 69]	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	0.20000

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VOLTAGE VI

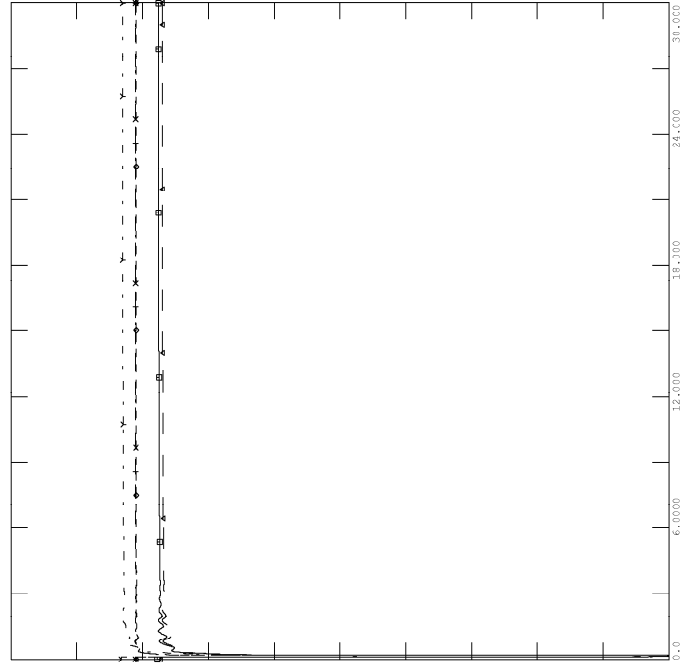


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	0.20000

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VOLTAGE VIII

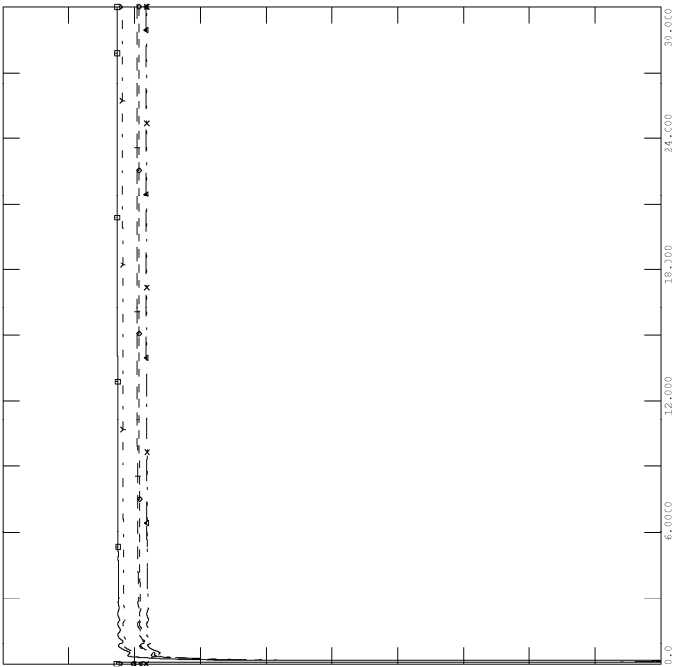


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	0.20000

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VOLTAGE V

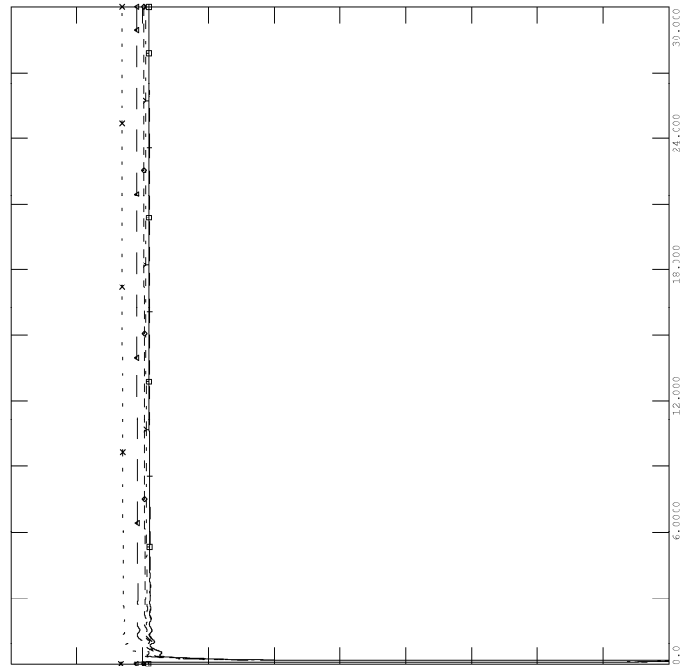


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	0.20000

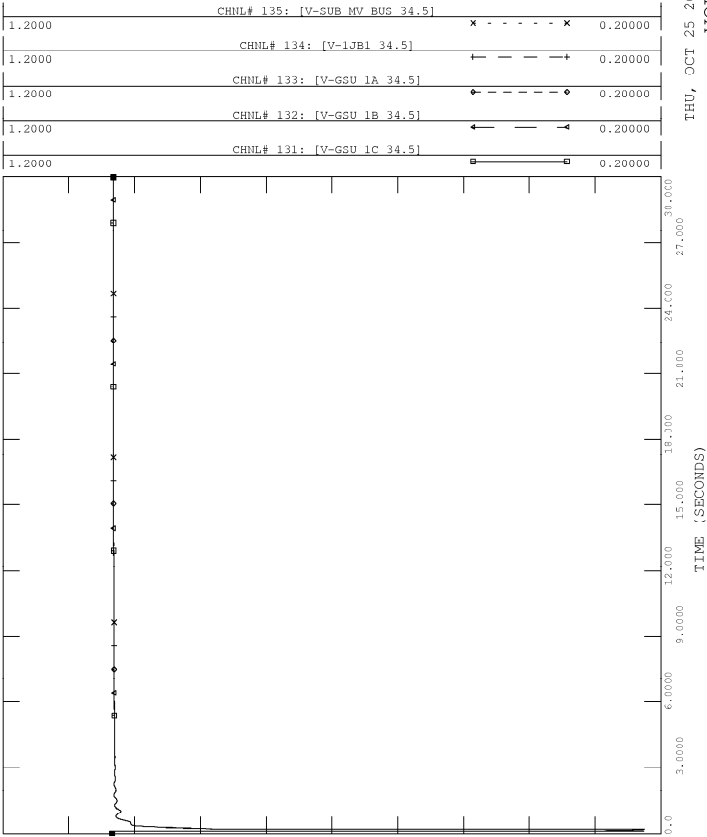
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VOLTAGE VII





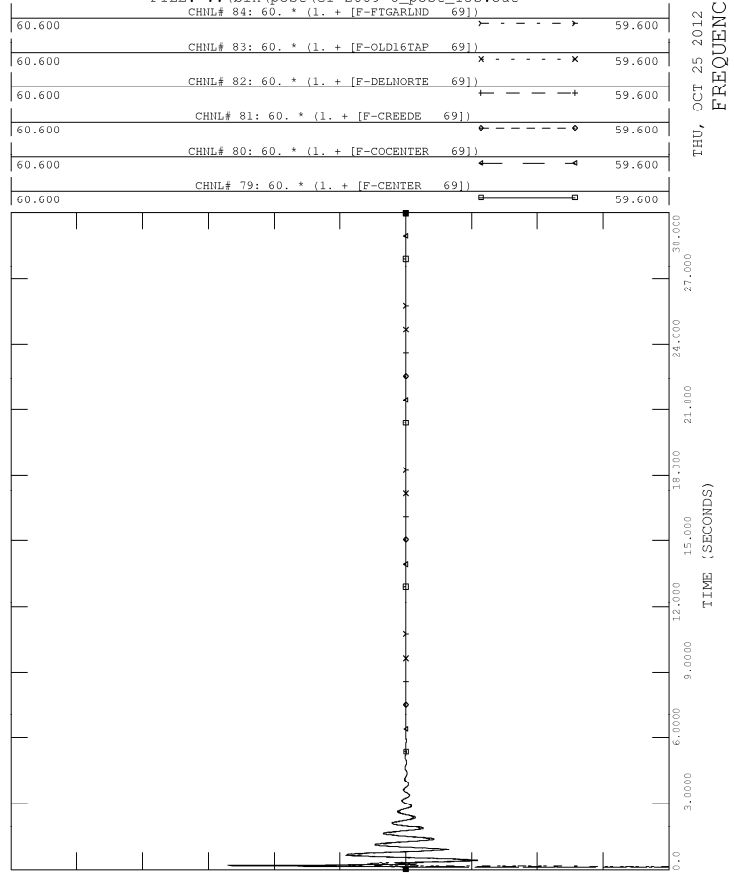
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out



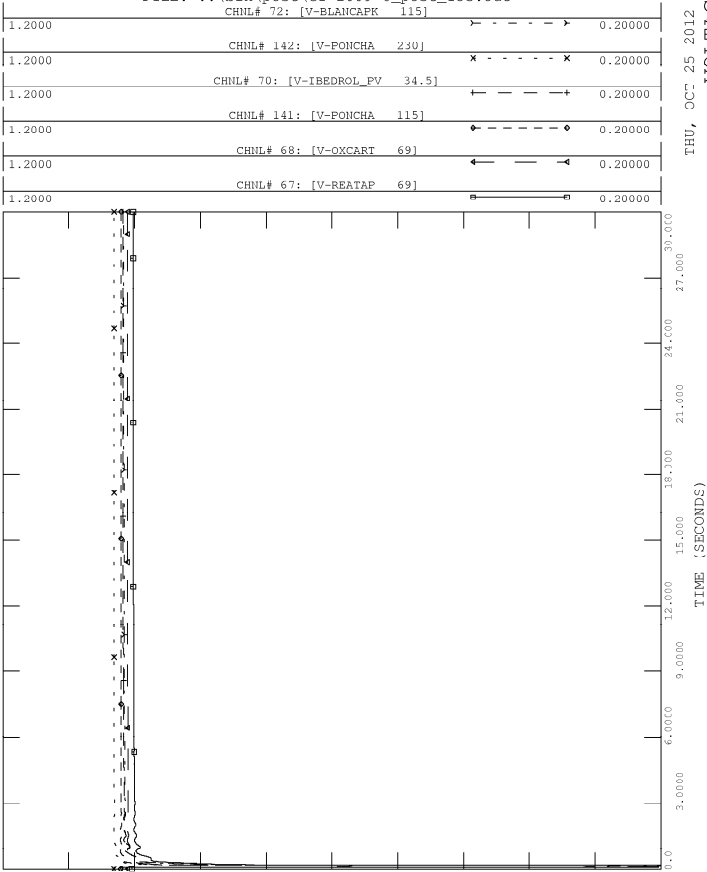
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out



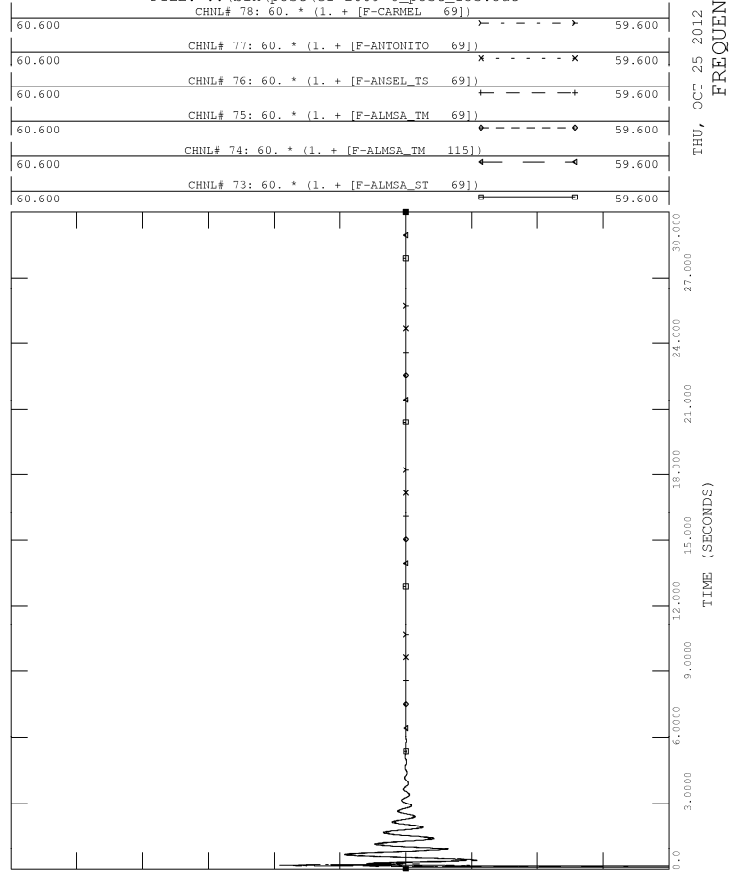
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

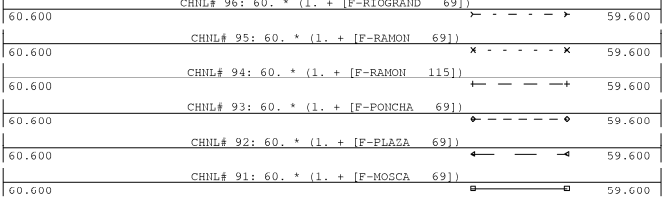
FILE: ..\bin\post\GI 2009_8_post_13a.out



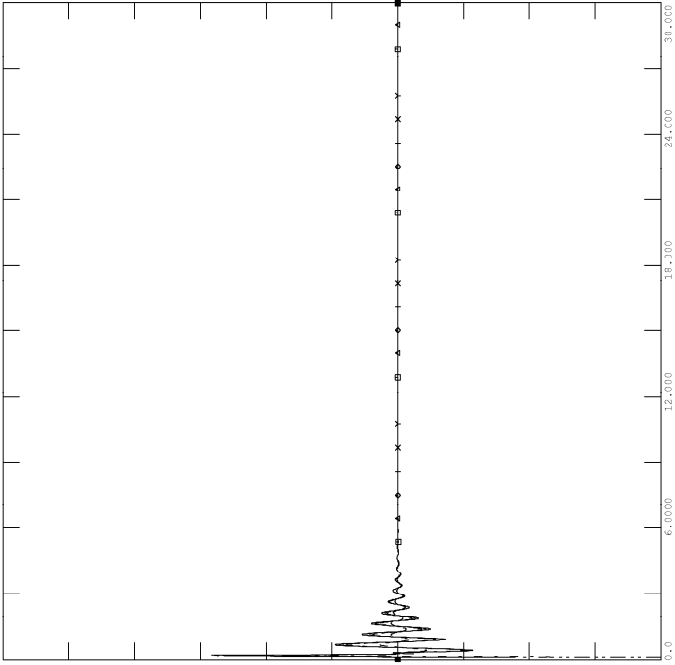


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

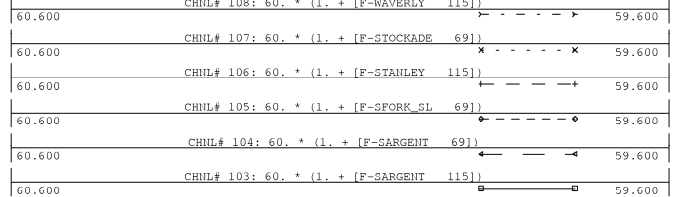


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FREQUENCY IV

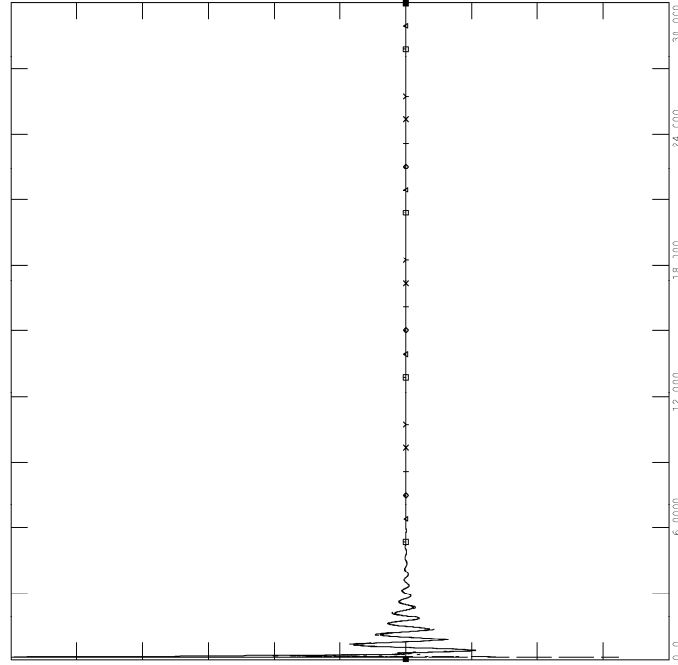


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

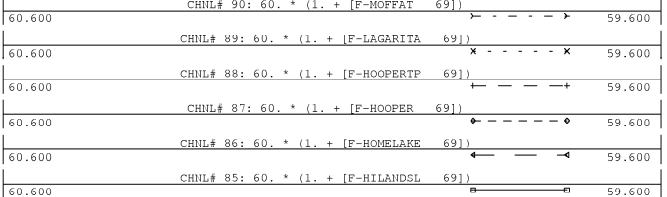


THU, OCT 25 2012 15:48
FREQUENCY VI

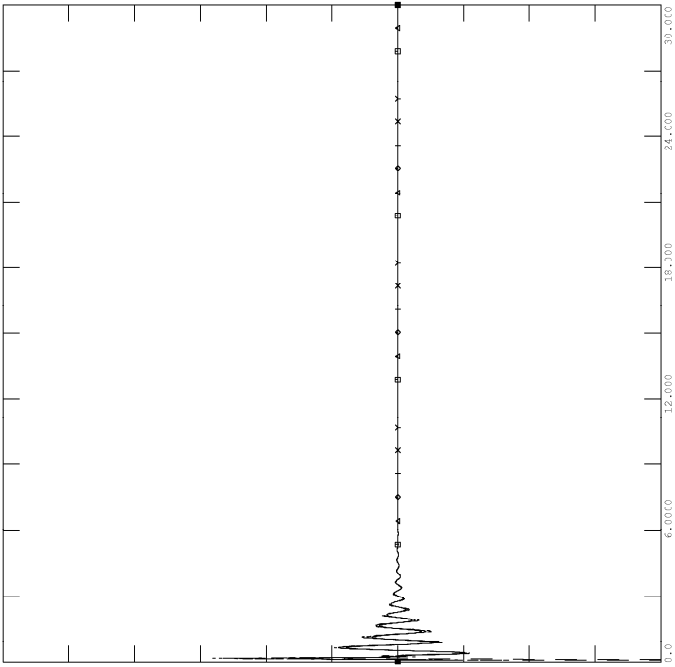


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

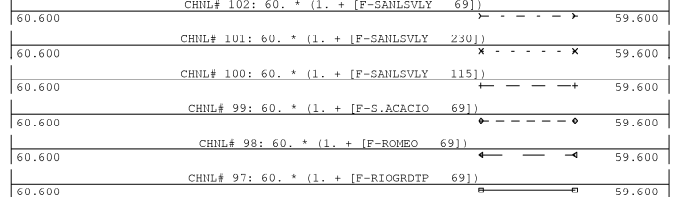


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FREQUENCY III

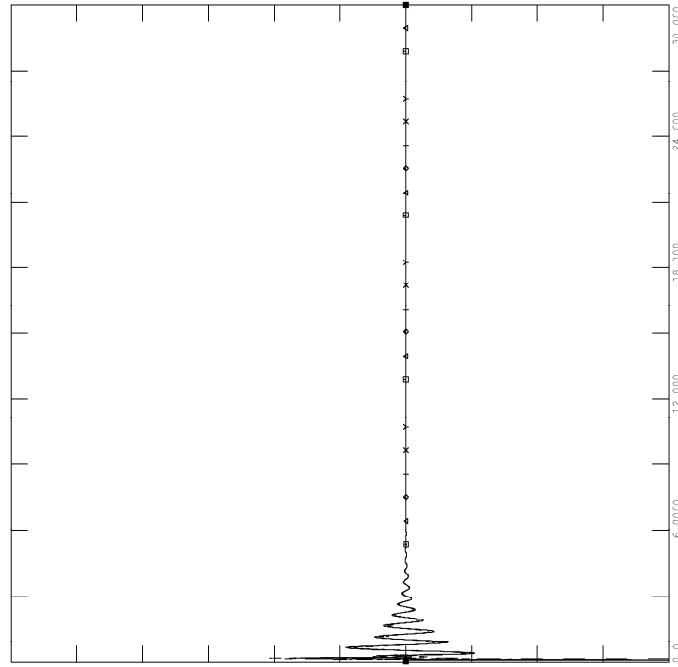


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13a.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])



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FREQUENCY V

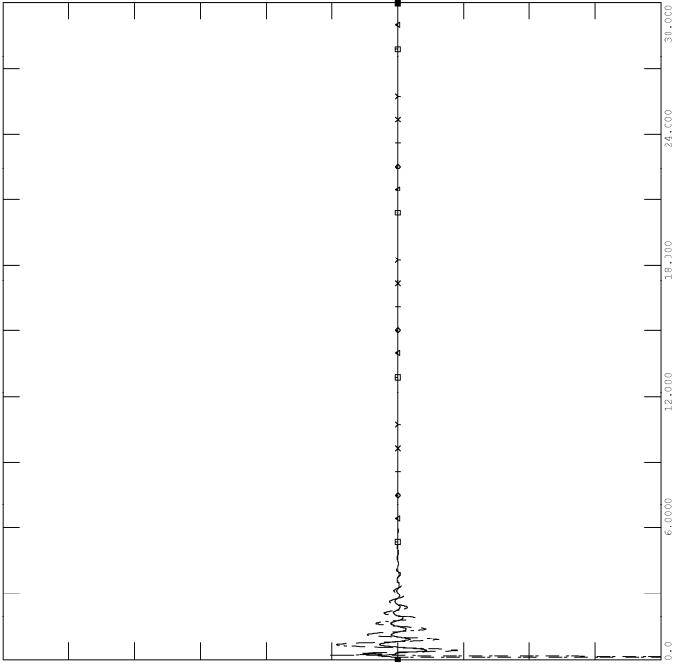




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13s.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KERBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



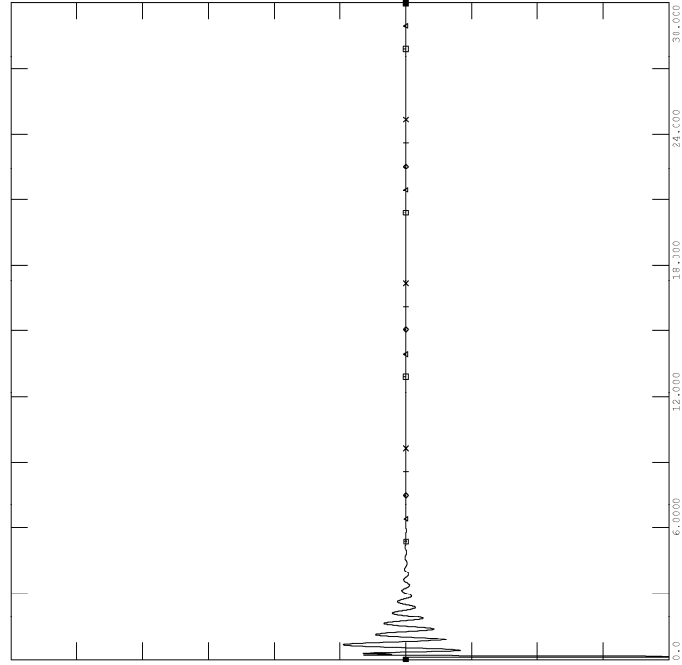
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FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13s.out

60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJB1 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



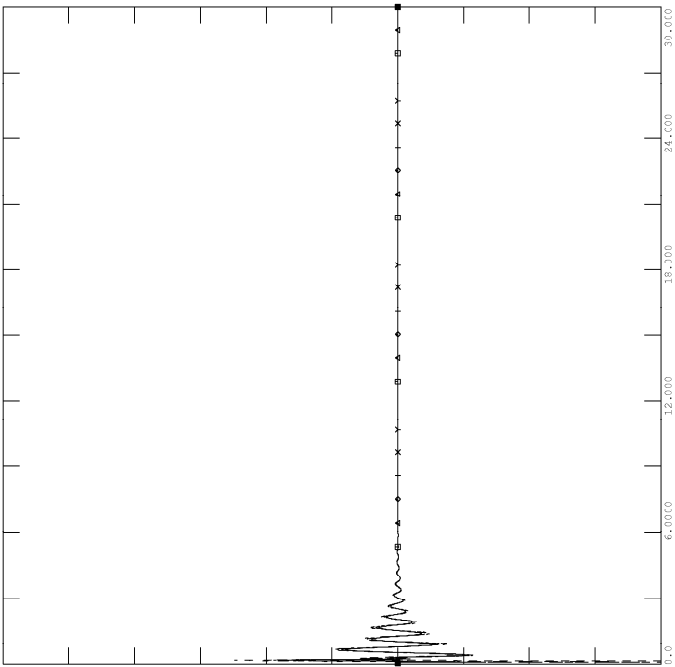
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FREQUENCY X



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13s.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMSGACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMSGACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



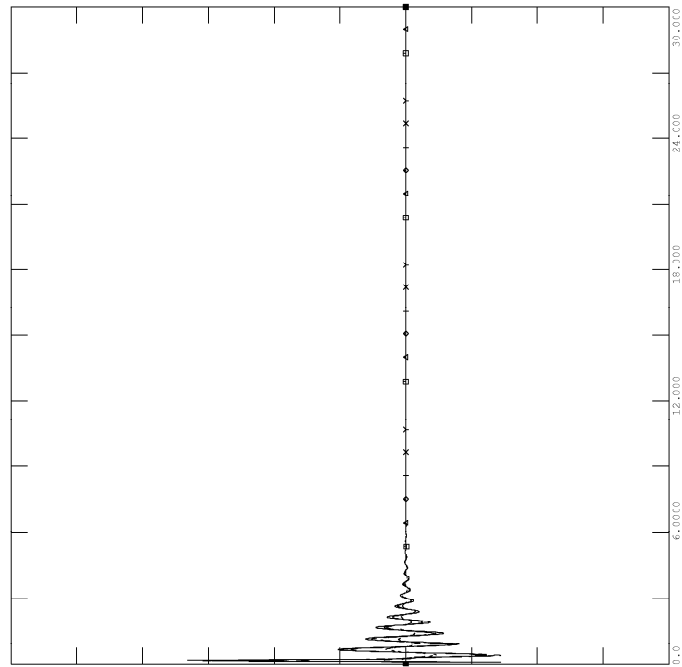
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FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 115 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_13s.out

60.600	CHNL# 144: 60. * (1. + [F-PONCHA 230])	59.600
60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-COGENITX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600

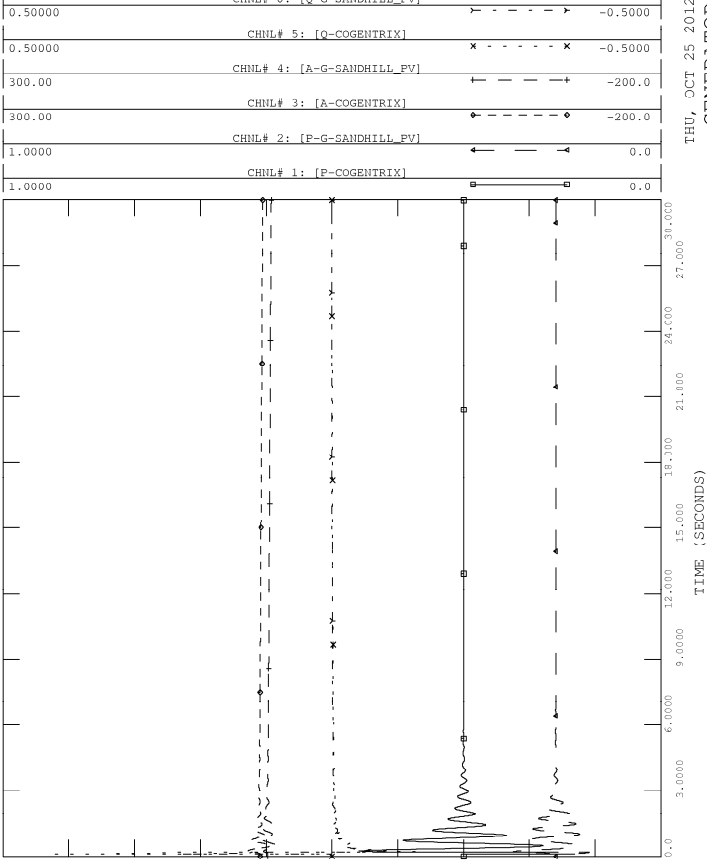


THU, OCT 25 2012 15:48
FREQUENCY IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 6: [Q-G-SANDHILL_PV]

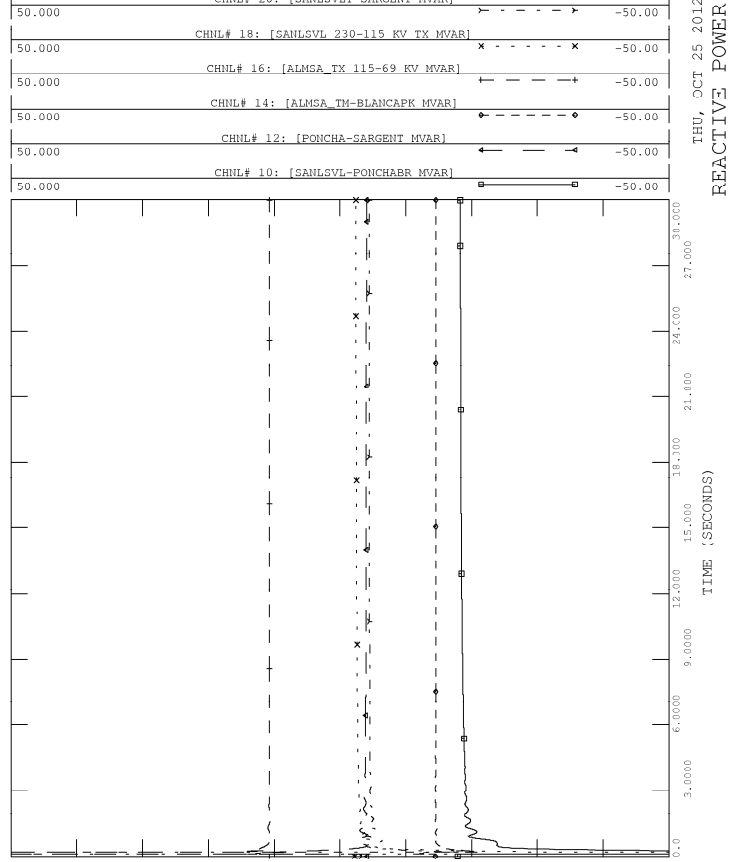


THU, OCT 25 2012 15:48
GENERATOR INFO



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]

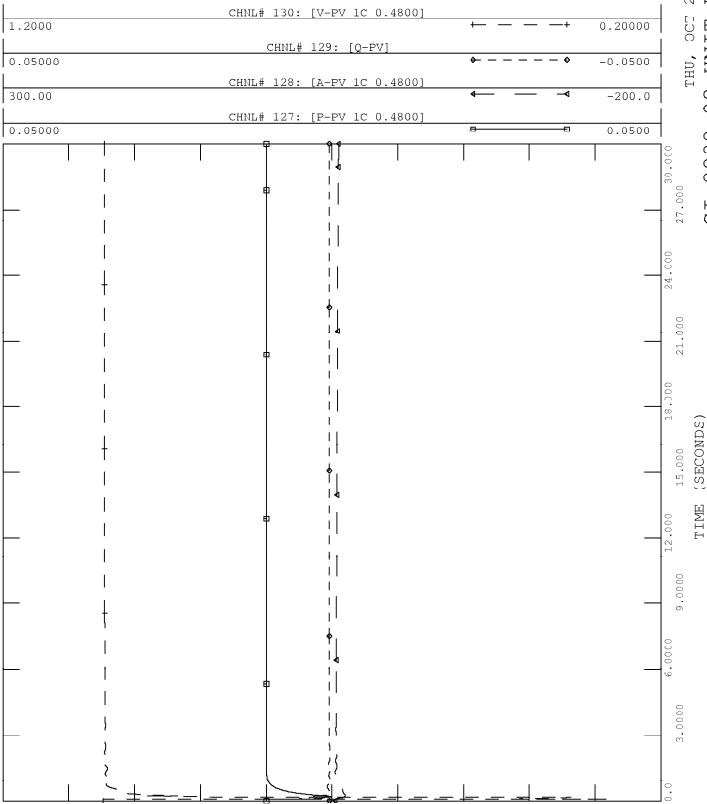


THU, OCT 25 2012 15:48
REACTIVE POWER FLOW



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out

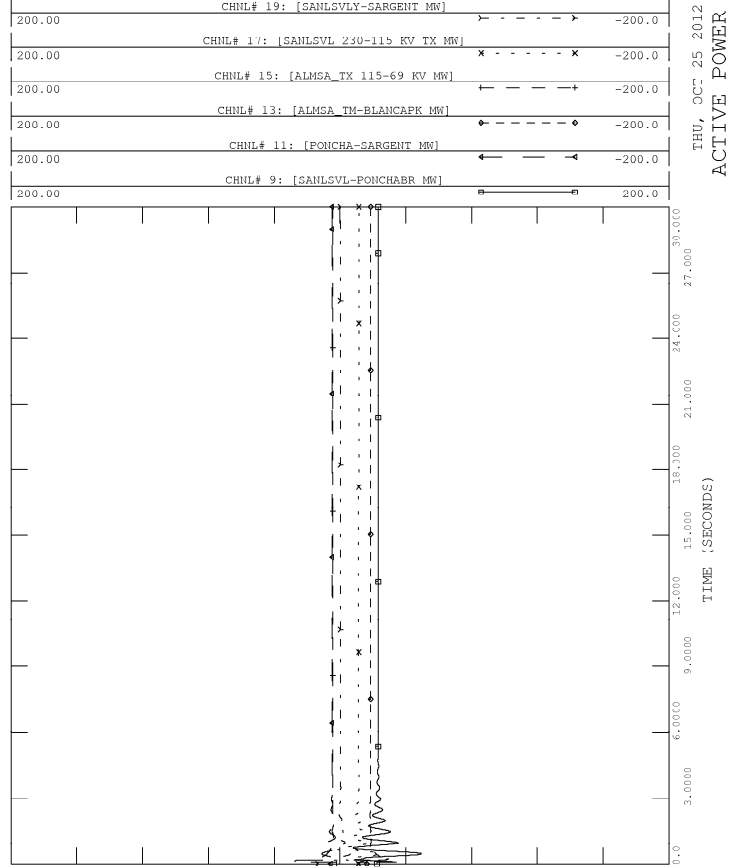


THU, OCT 25 2012 15:48
GI-2009-08 UNIT PV 1C INF



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 19: [SANLSVLY-SARGENT MW]



THU, OCT 25 2012 15:48
ACTIVE POWER FLOW

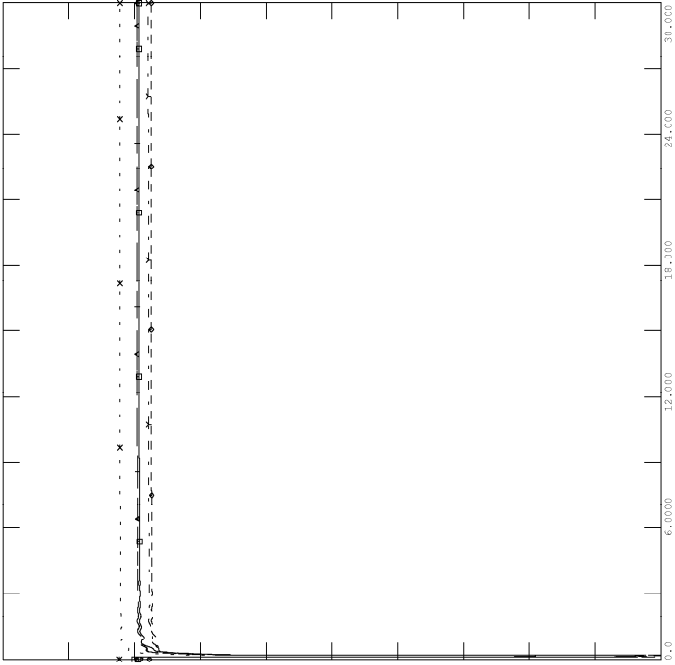


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:48
VOLTAGE II

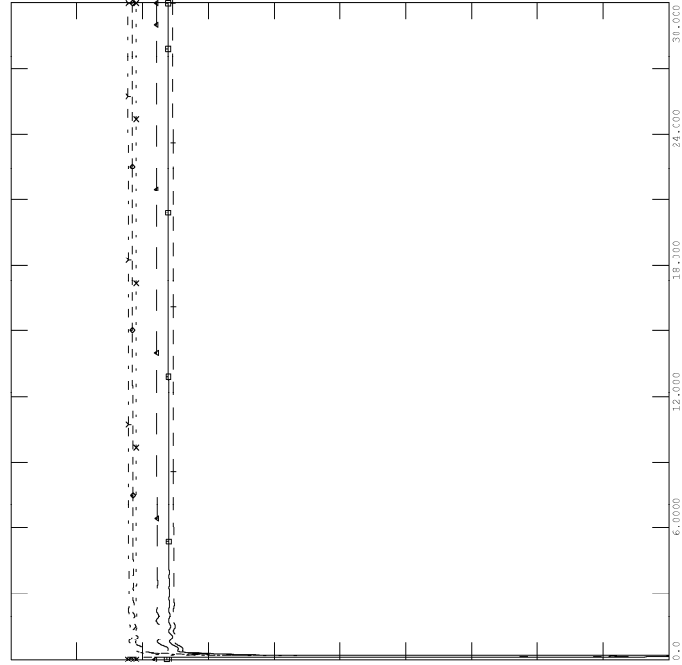


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 42: [V-RAMON 115]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:48
VOLTAGE IV

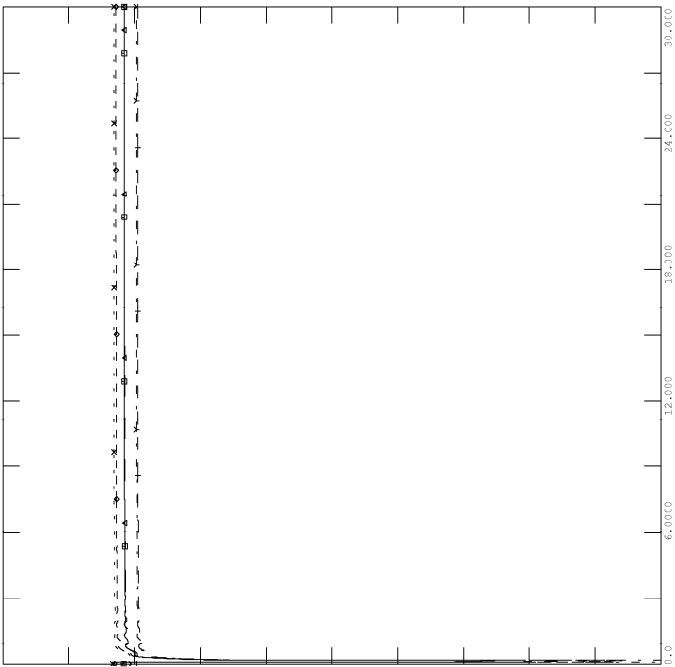


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

THU, OCT 25 2012 15:48
VOLTAGE I

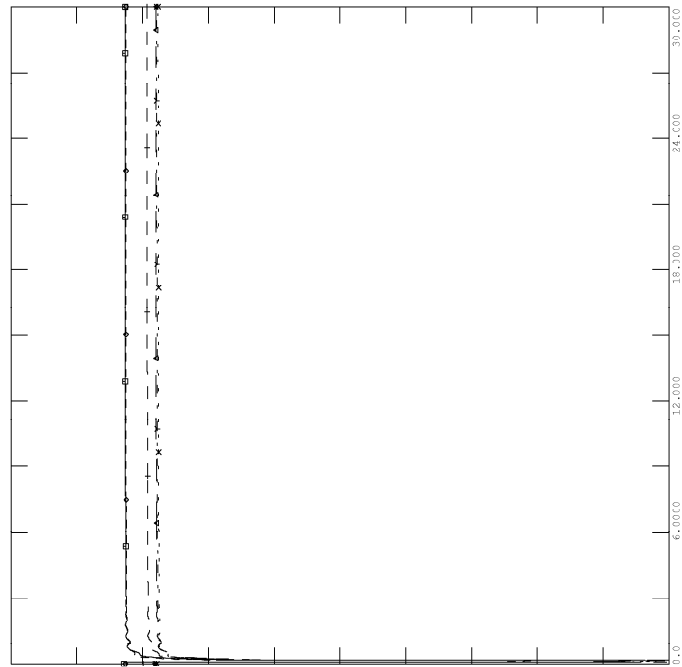


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 36: [V-HOOPER TP 69]

1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	x - - - - - x	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	+ - - - - +	0.20000
1.2000	CHNL# 32: [V-FTGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

THU, OCT 25 2012 15:48
VOLTAGE III



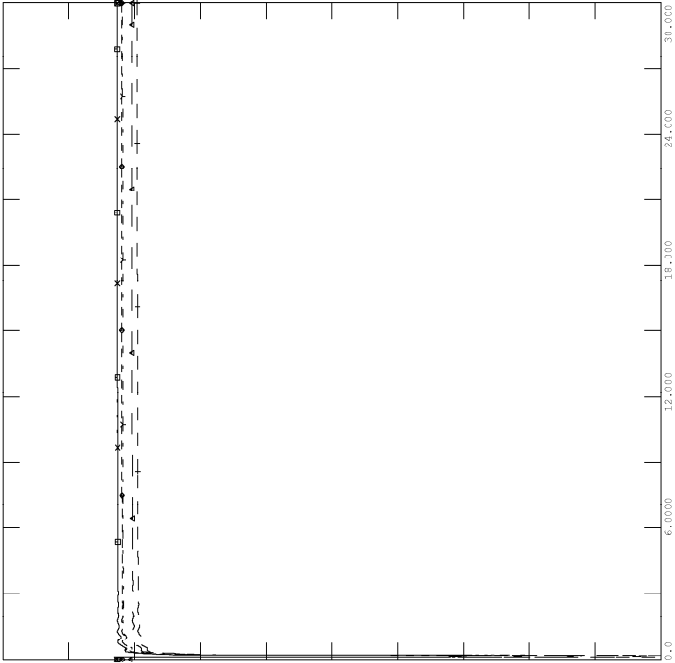


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK_SL 69]	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	0.20000

THU, OCT 25 2012 15:48
VOLTAGE VI

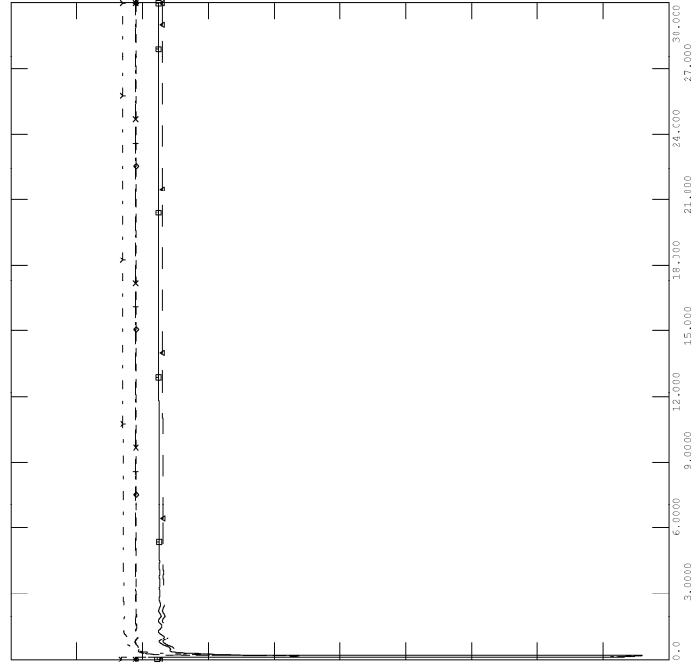


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	0.20000

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VOLTAGE VIII

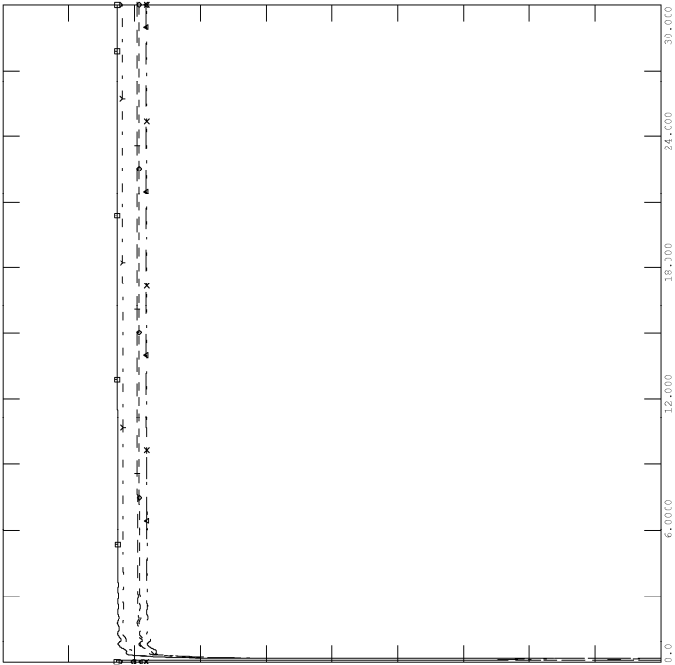


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	0.20000

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VOLTAGE V

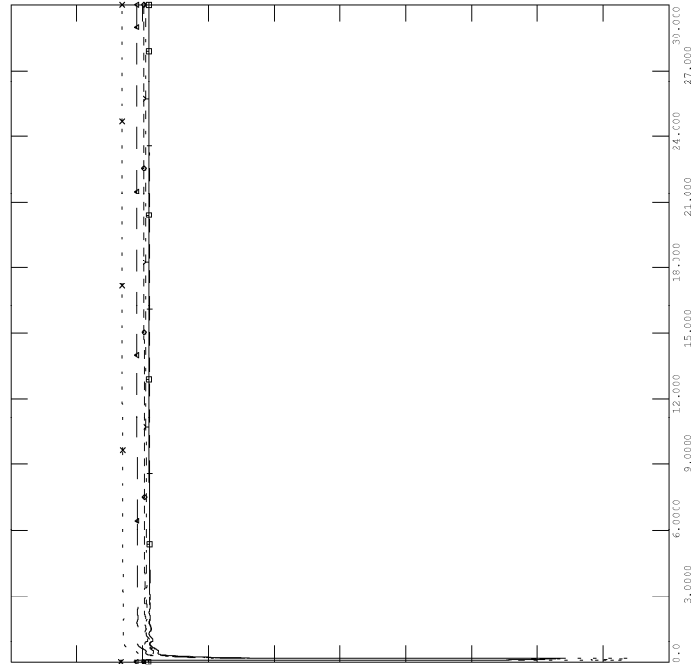


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	0.20000

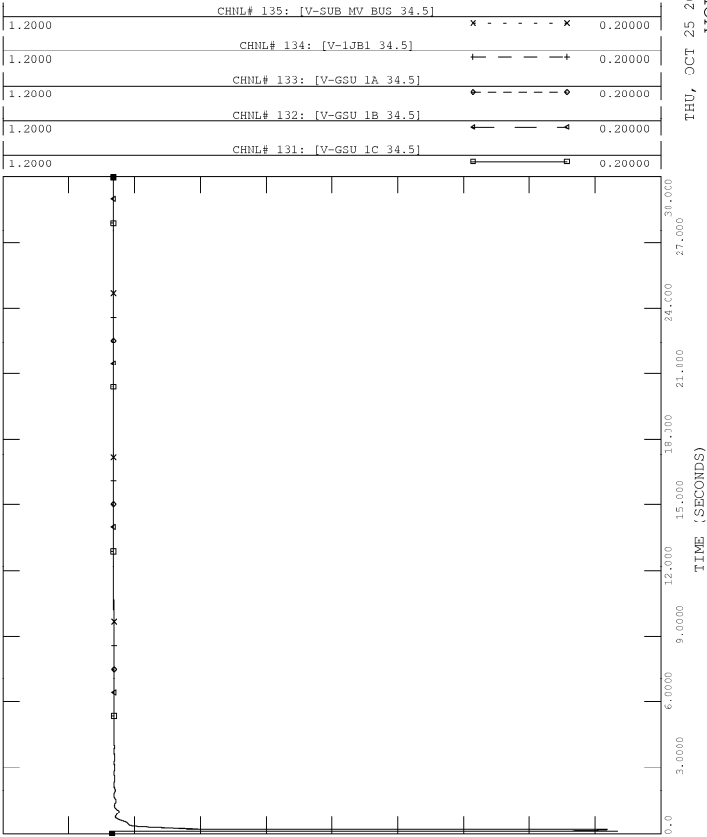
THU, OCT 25 2012 15:48
VOLTAGE VII





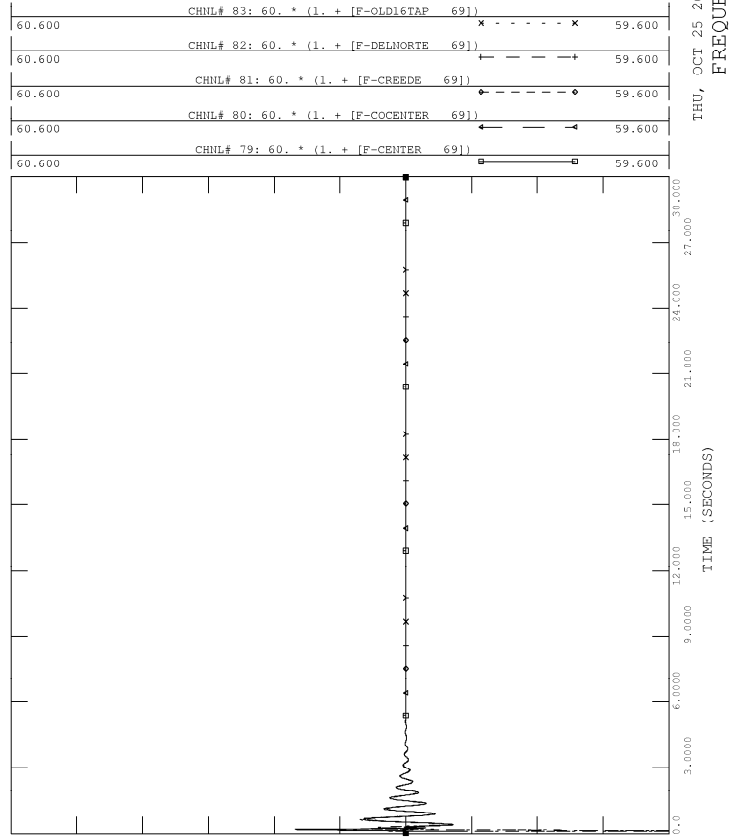
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out



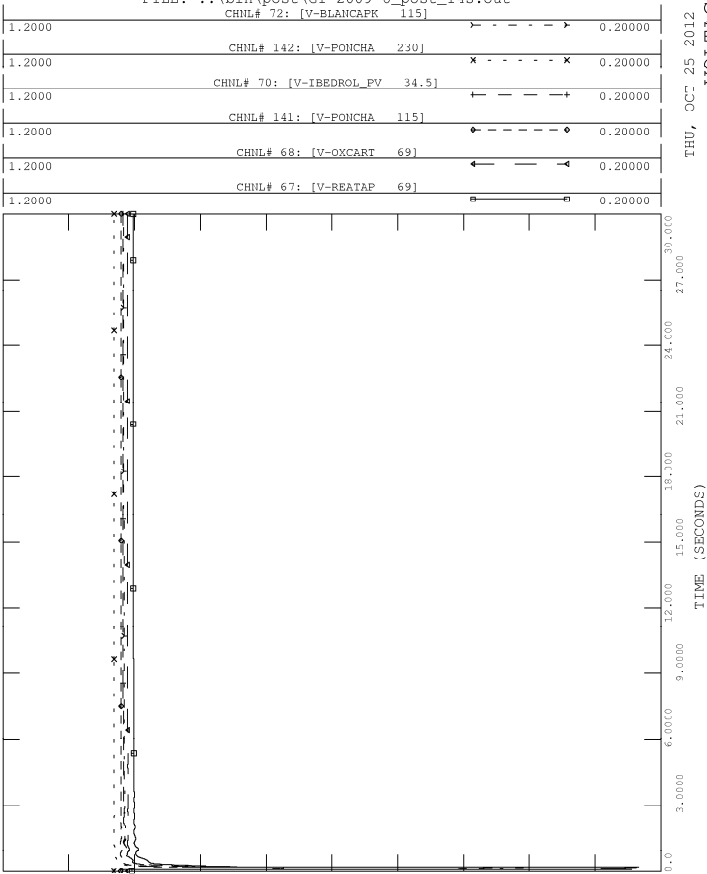
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out



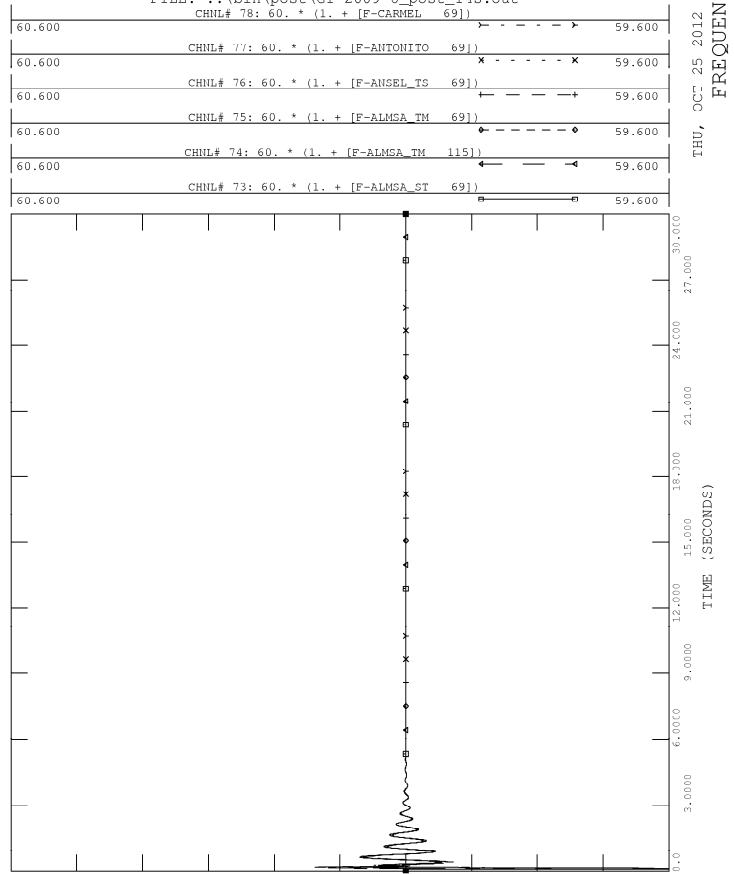
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out



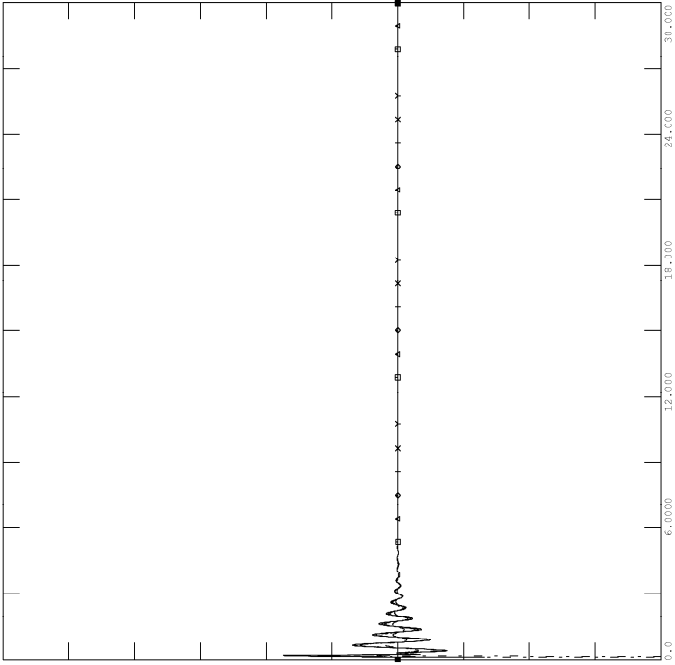


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

60.600	CHNL# 95: 60. * (1. + [F-RAMON 69])	59.600
60.600	CHNL# 94: 60. * (1. + [F-RAMON 115])	59.600
60.600	CHNL# 93: 60. * (1. + [F-PONCHA 69])	59.600
60.600	CHNL# 92: 60. * (1. + [F-PLAZA 69])	59.600
60.600	CHNL# 91: 60. * (1. + [F-MOSCA 69])	59.600

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FREQUENCY IV

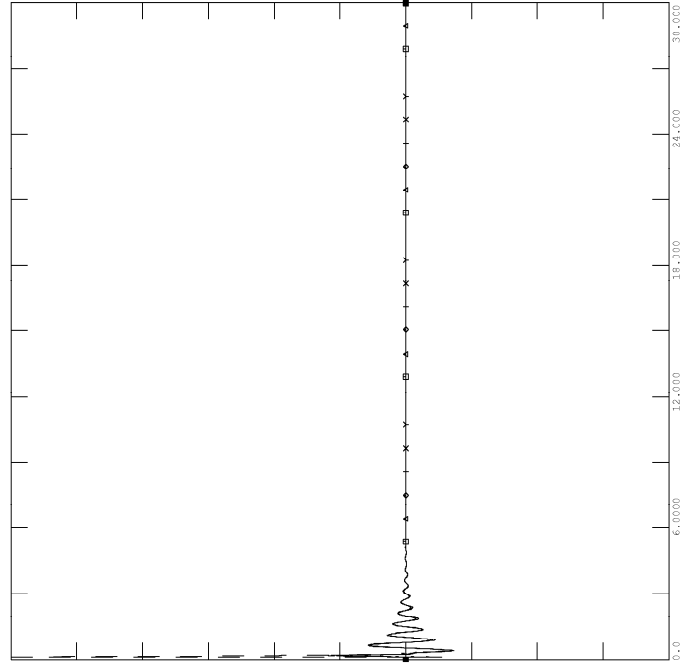


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

60.600	CHNL# 107: 60. * (1. + [F-STOCKADE 69])	59.600
60.600	CHNL# 106: 60. * (1. + [F-STANLEY 115])	59.600
60.600	CHNL# 105: 60. * (1. + [F-SFORK_GL 69])	59.600
60.600	CHNL# 104: 60. * (1. + [F-SARGENT 69])	59.600
60.600	CHNL# 103: 60. * (1. + [F-SARGENT 115])	59.600

THU, OCT 25 2012 15:49
FREQUENCY VI

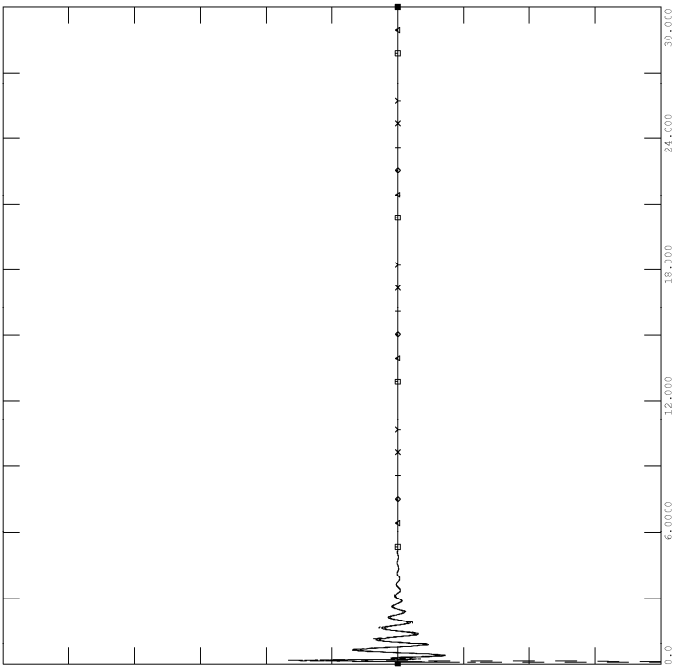


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

60.600	CHNL# 89: 60. * (1. + [F-LAGARITA 69])	59.600
60.600	CHNL# 88: 60. * (1. + [F-HOOPERTP 69])	59.600
60.600	CHNL# 87: 60. * (1. + [F-HOOPER 69])	59.600
60.600	CHNL# 86: 60. * (1. + [F-HOMELAKE 69])	59.600
60.600	CHNL# 85: 60. * (1. + [F-HILANDSL 69])	59.600

THU, OCT 25 2012 15:49
FREQUENCY III

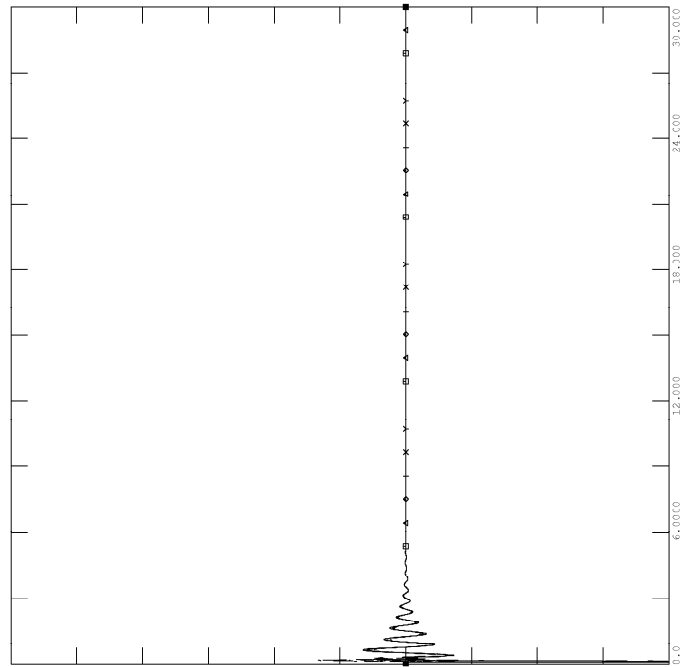


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])

60.600	CHNL# 101: 60. * (1. + [F-SANLSVLY 230])	59.600
60.600	CHNL# 100: 60. * (1. + [F-SANLSVLY 115])	59.600
60.600	CHNL# 99: 60. * (1. + [F-S.ACACIO 69])	59.600
60.600	CHNL# 98: 60. * (1. + [F-ROMEO 69])	59.600
60.600	CHNL# 97: 60. * (1. + [F-RIOGRDTP 69])	59.600

THU, OCT 25 2012 15:49
FREQUENCY V

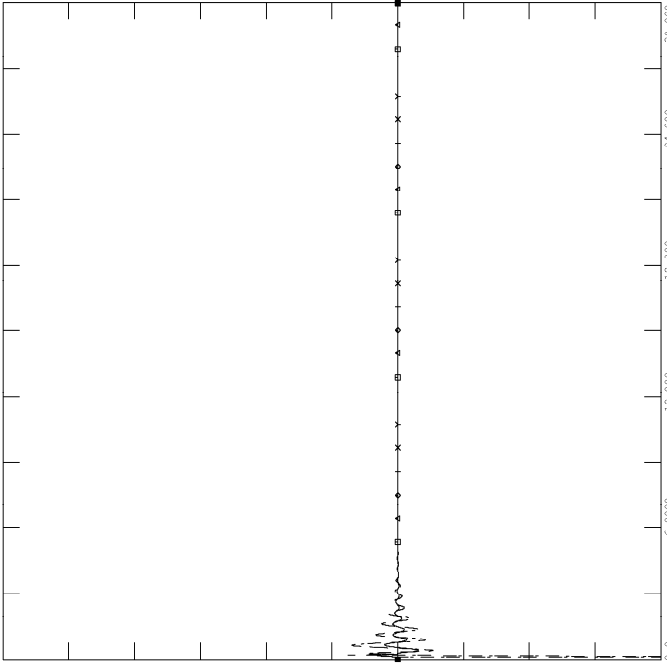




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KEBBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



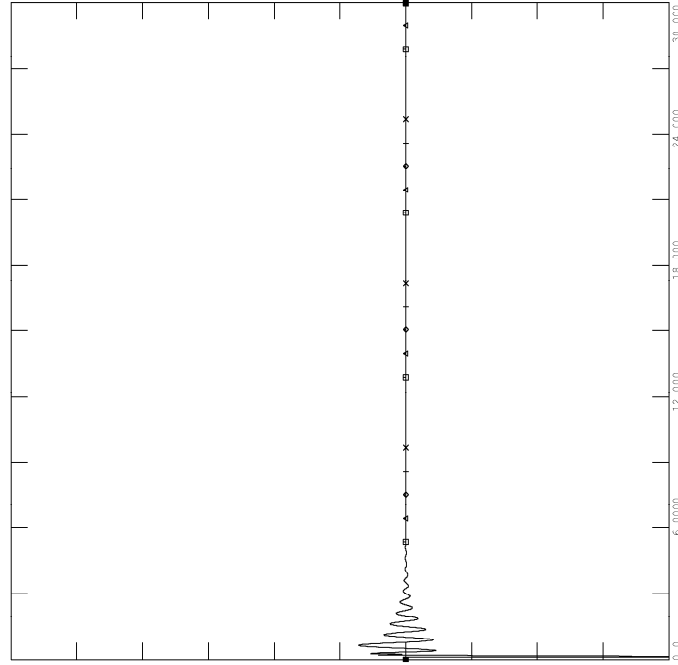
THU, OCT 25 2012 15:49
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out

60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJB1 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



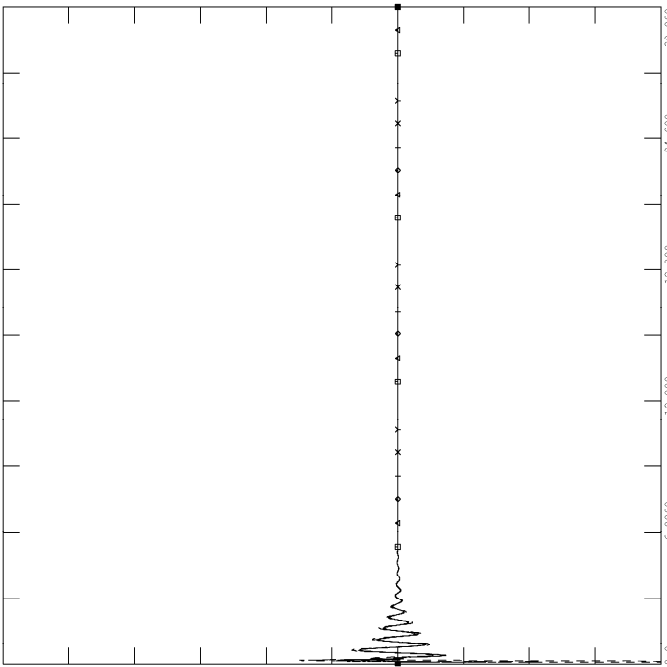
THU, OCT 25 2012 15:49
FREQUENCY X



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMSACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMSACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



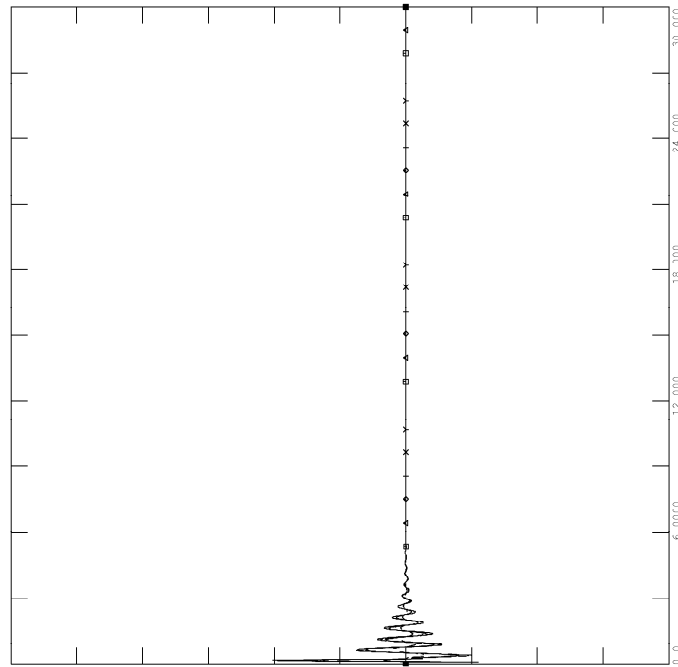
THU, OCT 25 2012 15:49
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SARGENT 69 KV SIDE ON SARGENT 115-69 KV TX

FILE: ..\bin\post\GI 2009_8_post_14s.out

60.600	CHNL# 144: 60. * (1. + [F-PONCHA 230])	59.600
60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-COGENITX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600

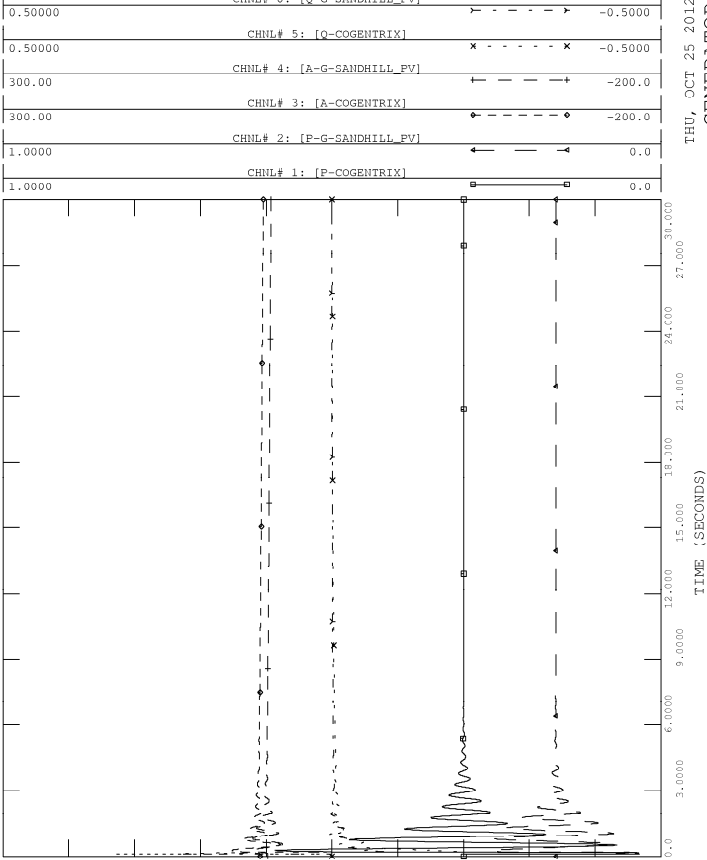


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FREQUENCY IX



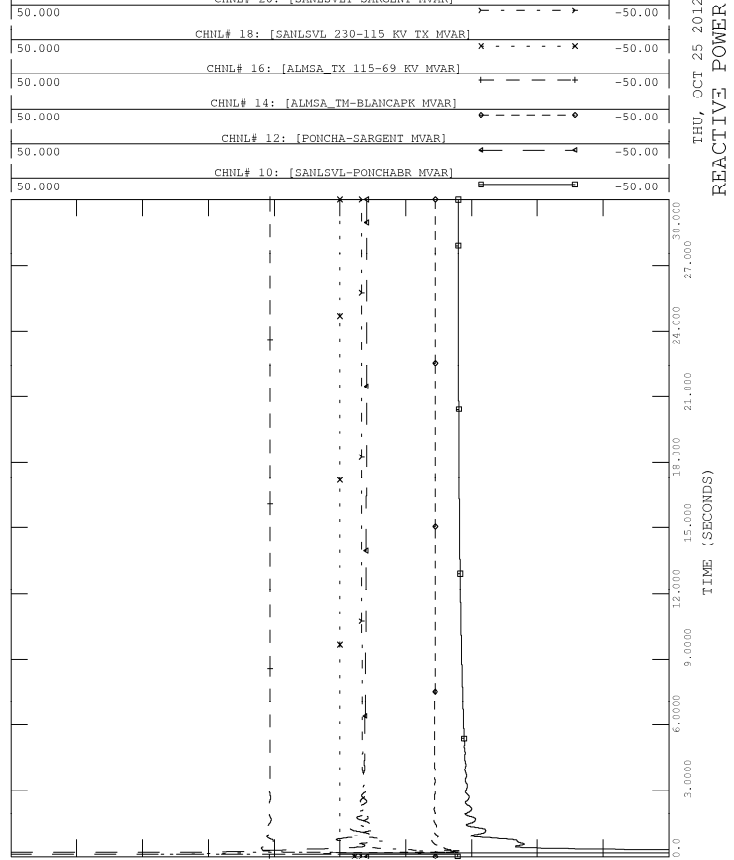
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 6: [Q-G-SANDHILL_PV]



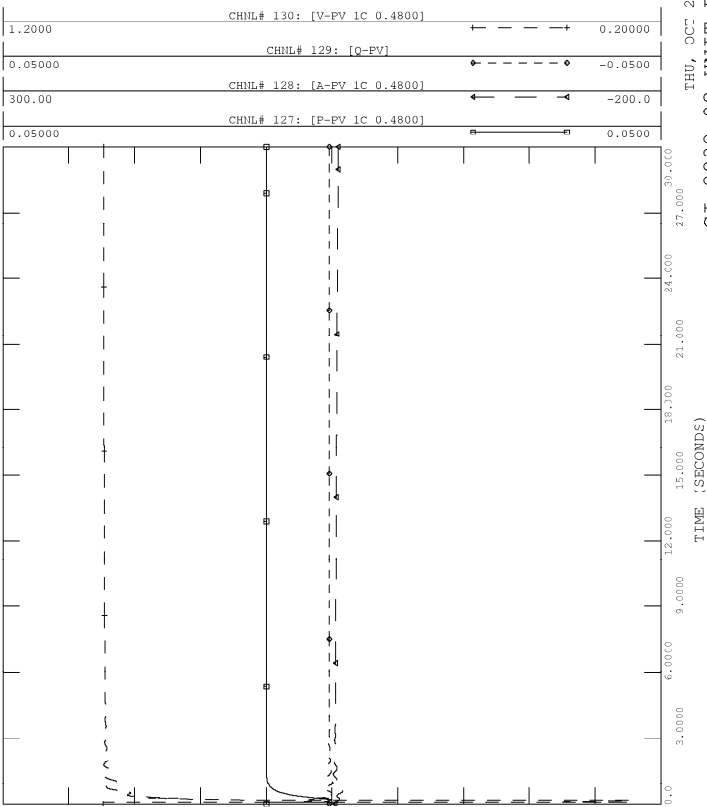
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]



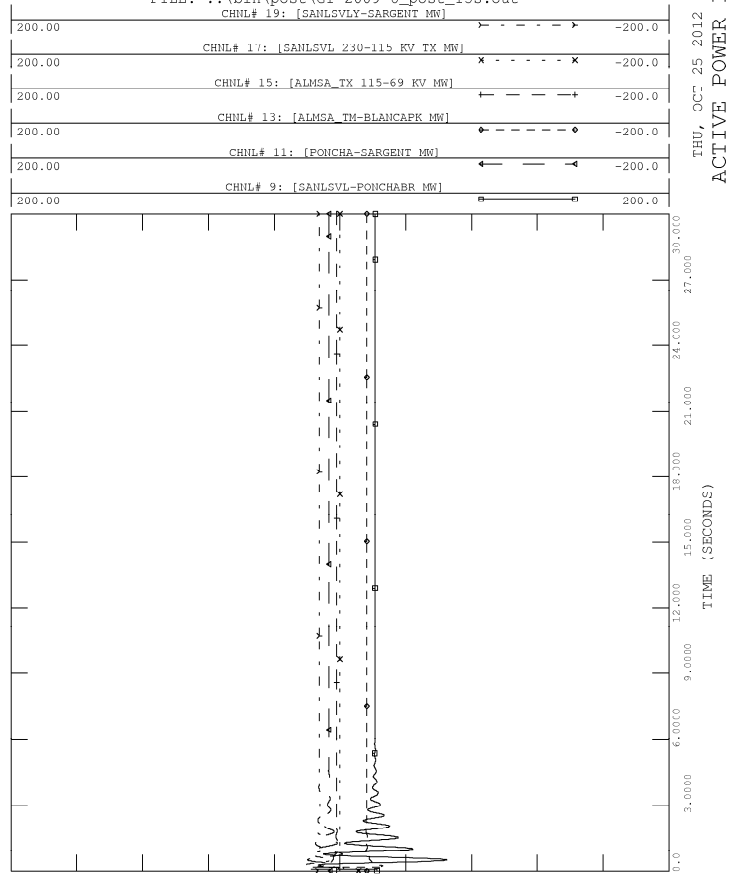
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out



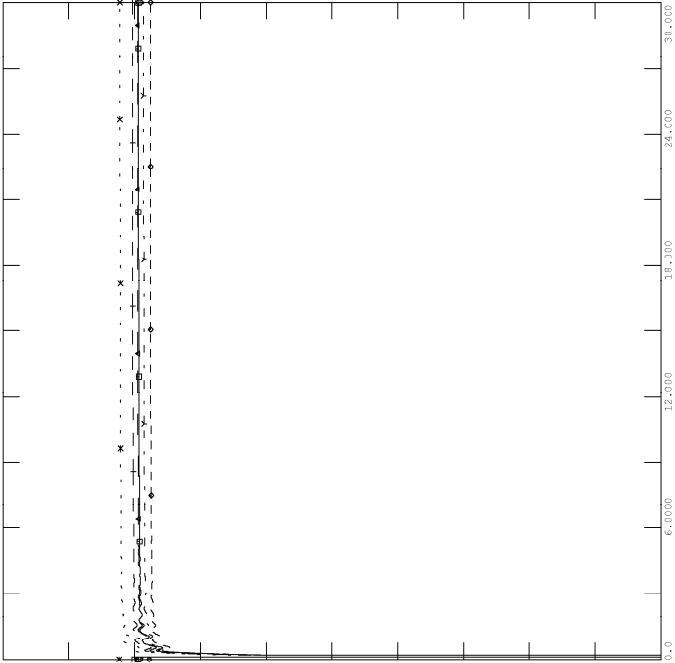


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

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VOLTAGE II

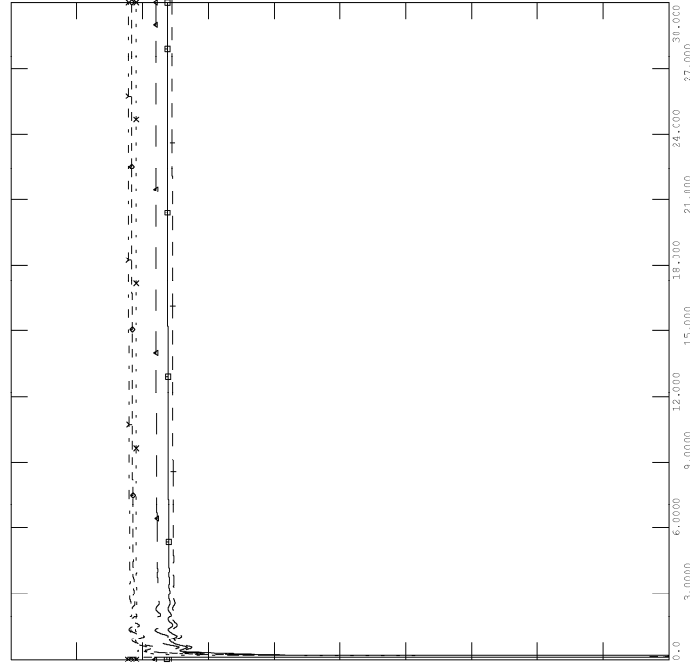


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 42: [V-RAMON 115]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

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VOLTAGE IV

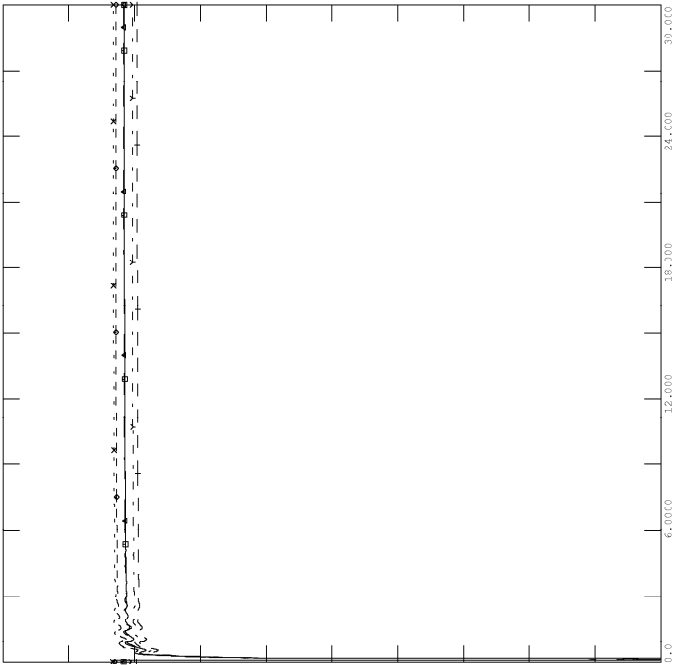


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

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VOLTAGE I

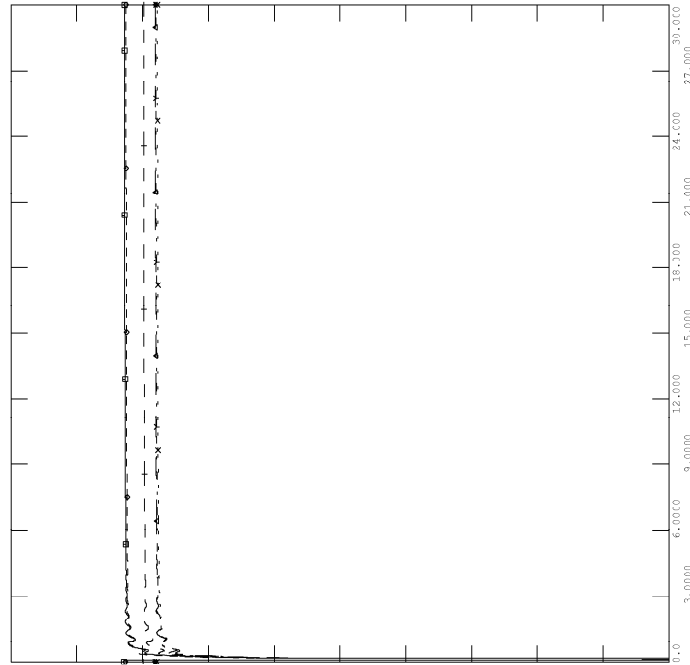


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 36: [V-HOOPERTIP 69]

1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	x - - - - x	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	+ - - - - +	0.20000
1.2000	CHNL# 32: [V-FIGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

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VOLTAGE III



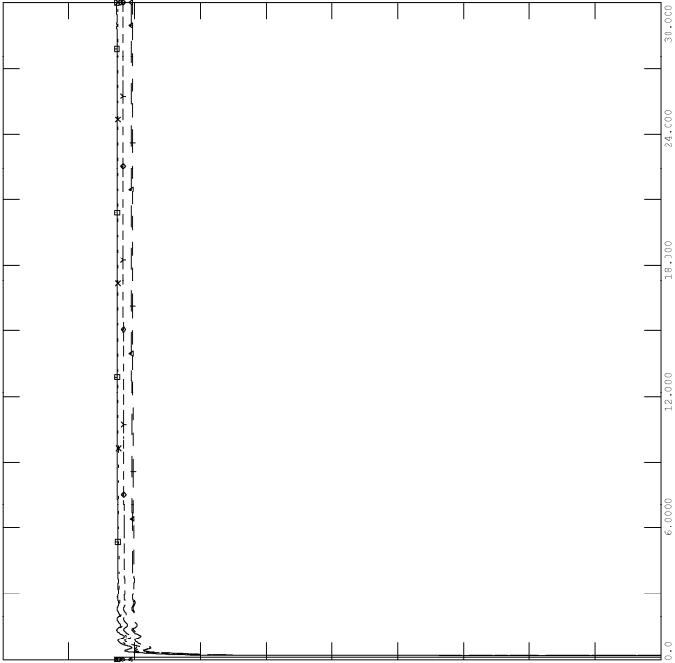


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK SL 69]	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	0.20000

THU, OCT 25 2012 15:53
VOLTAGE VI

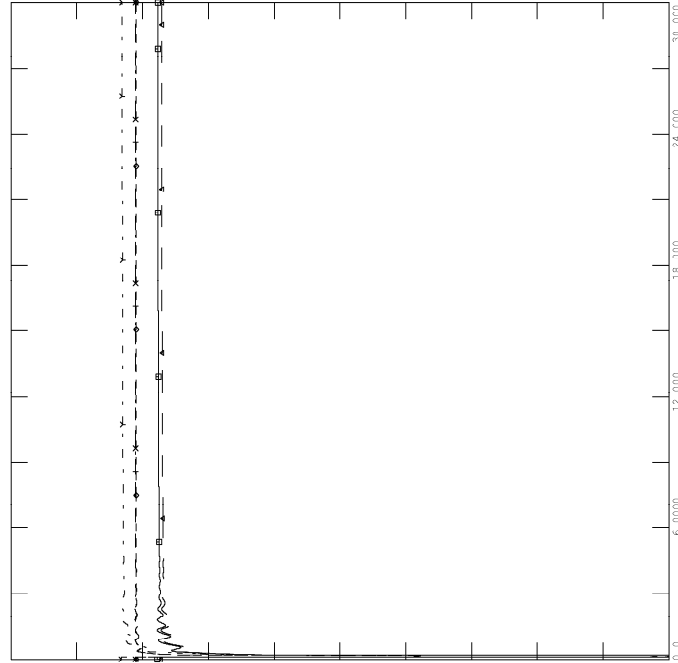


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	0.20000

THU, OCT 25 2012 15:53
VOLTAGE VIII

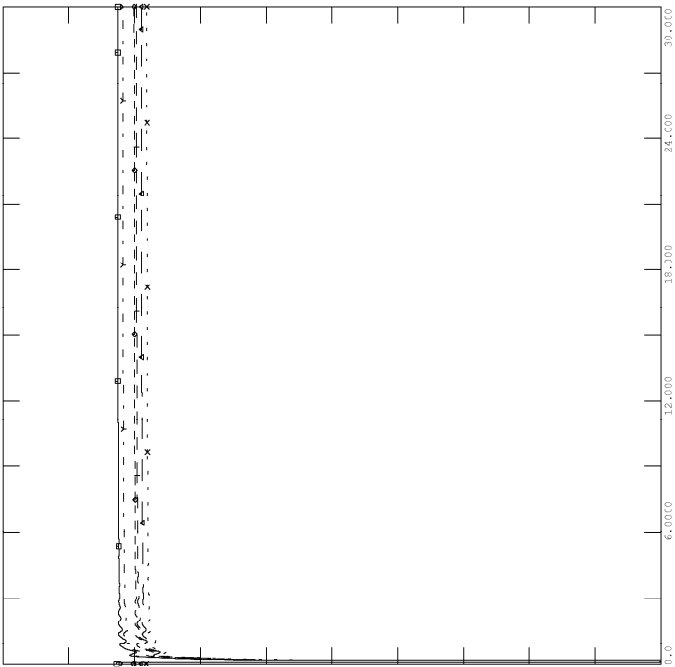


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	0.20000

THU, OCT 25 2012 15:53
VOLTAGE V

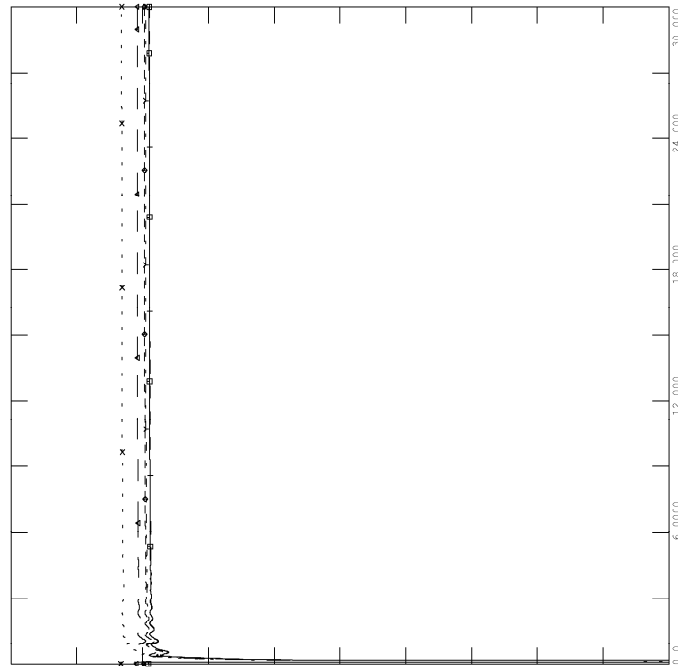


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	0.20000

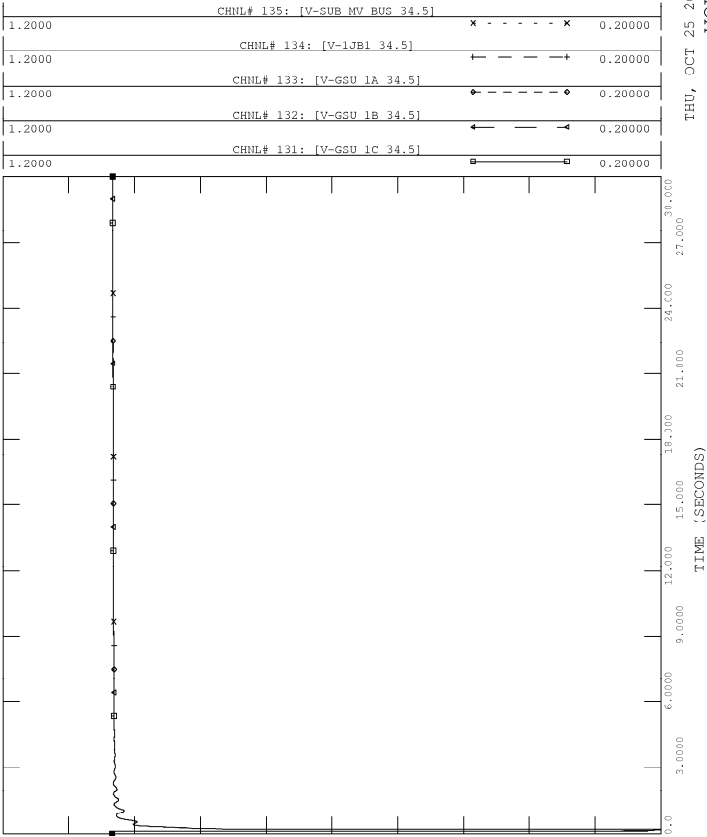
THU, OCT 25 2012 15:53
VOLTAGE VII





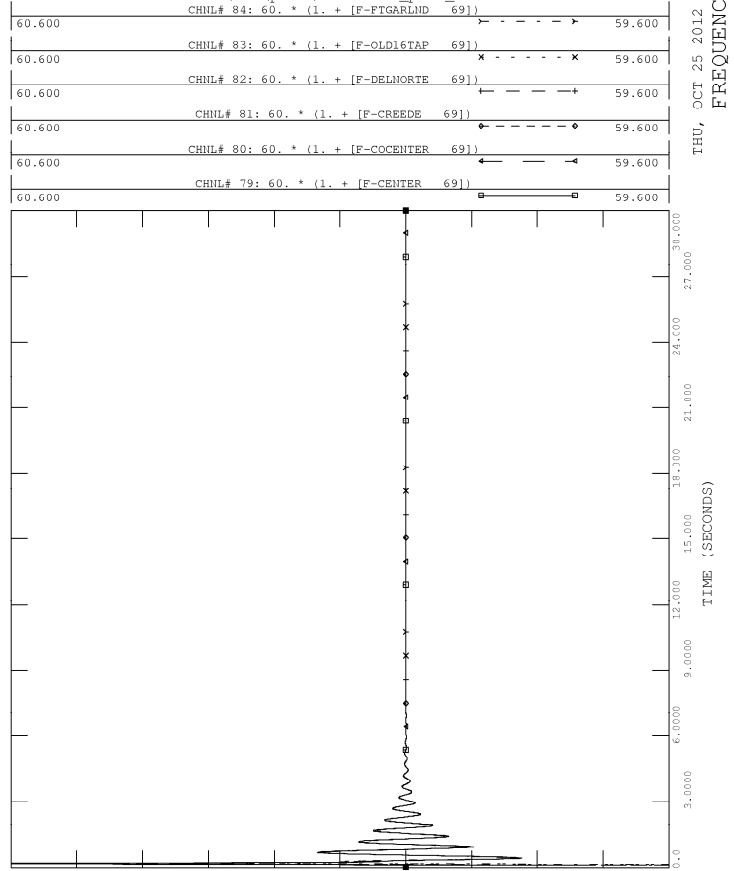
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out



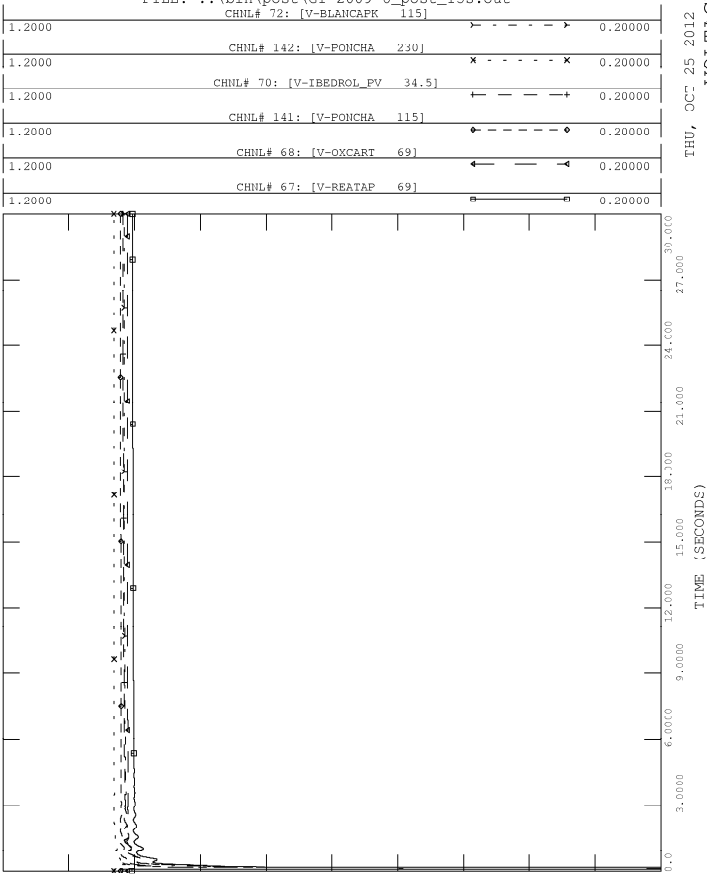
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out



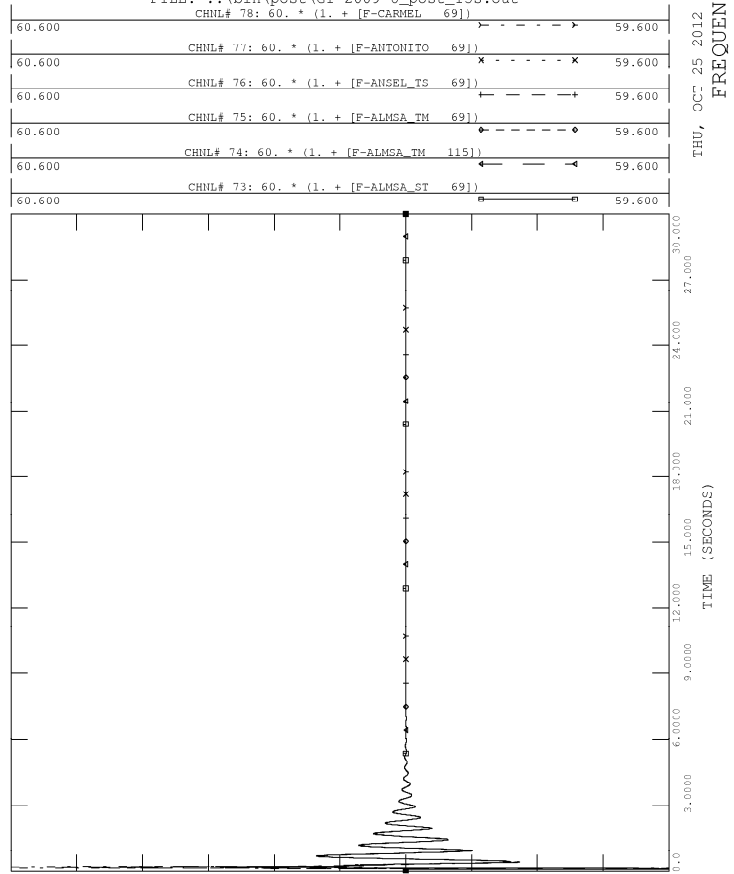
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out



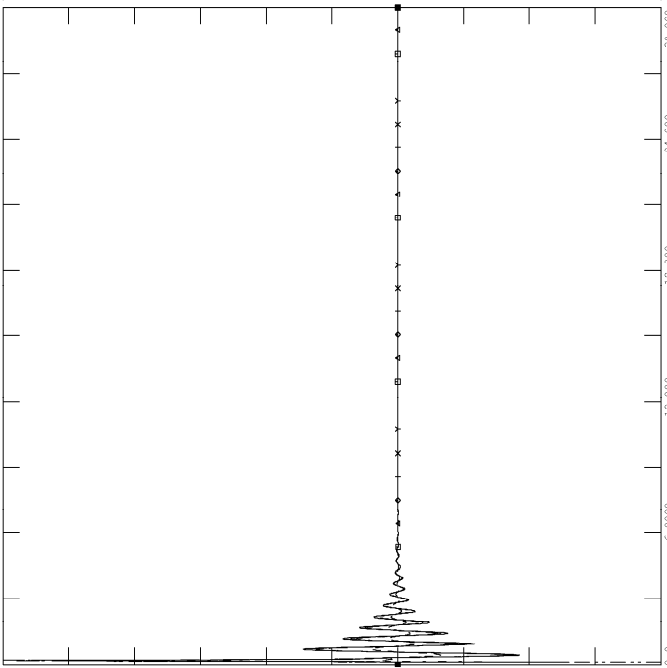


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

60.600	CHNL# 95: 60. * (1. + [F-RAMON 69])	59.600
60.600	CHNL# 94: 60. * (1. + [F-RAMON 115])	59.600
60.600	CHNL# 93: 60. * (1. + [F-PONCHA 69])	59.600
60.600	CHNL# 92: 60. * (1. + [F-PLAZA 69])	59.600
60.600	CHNL# 91: 60. * (1. + [F-MOSCA 69])	59.600

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FREQUENCY IV

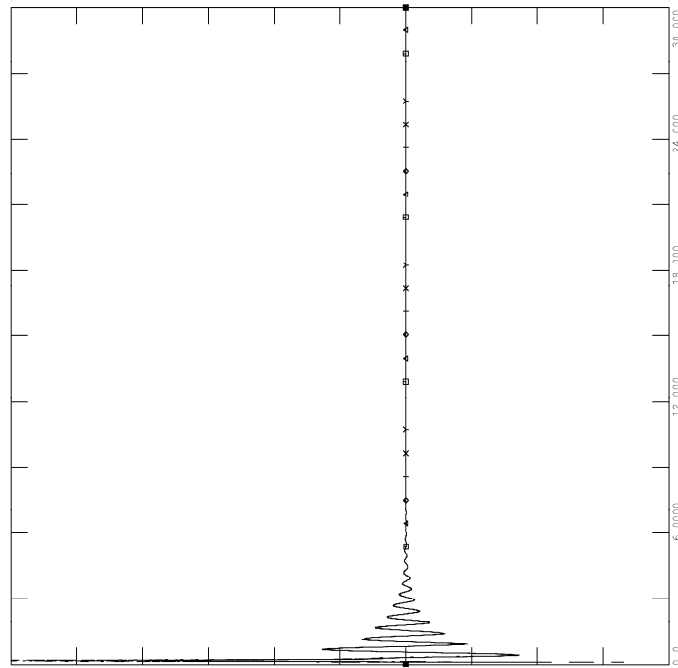


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

60.600	CHNL# 107: 60. * (1. + [F-STOCKADE 69])	59.600
60.600	CHNL# 106: 60. * (1. + [F-STANLEY 115])	59.600
60.600	CHNL# 105: 60. * (1. + [F-SFORK_GL 69])	59.600
60.600	CHNL# 104: 60. * (1. + [F-SARGENT 69])	59.600
60.600	CHNL# 103: 60. * (1. + [F-SARGENT 115])	59.600

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FREQUENCY VI

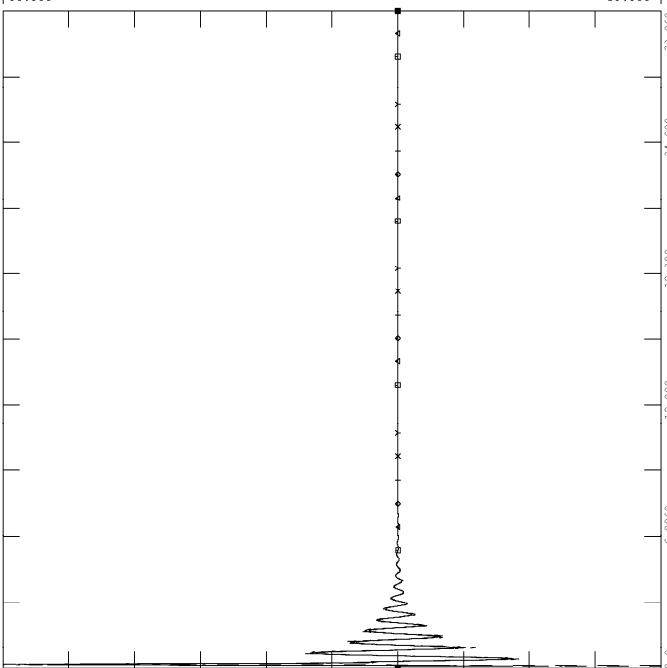


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

60.600	CHNL# 89: 60. * (1. + [F-LAGARITA 69])	59.600
60.600	CHNL# 88: 60. * (1. + [F-HOOPERTP 69])	59.600
60.600	CHNL# 87: 60. * (1. + [F-HOOPER 69])	59.600
60.600	CHNL# 86: 60. * (1. + [F-HOMELAKE 69])	59.600
60.600	CHNL# 85: 60. * (1. + [F-HILANDSL 69])	59.600

THU, OCT 25 2012 15:53
FREQUENCY III

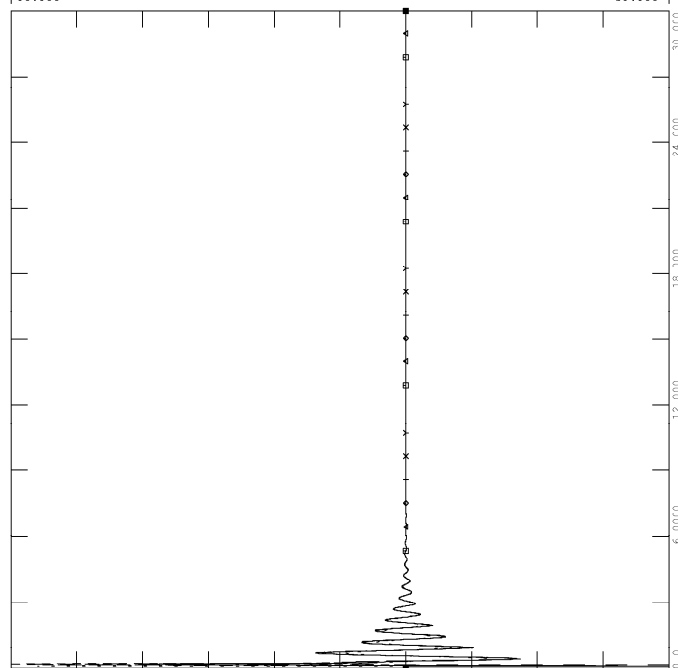


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])

60.600	CHNL# 101: 60. * (1. + [F-SANLSVLY 230])	59.600
60.600	CHNL# 100: 60. * (1. + [F-SANLSVLY 115])	59.600
60.600	CHNL# 99: 60. * (1. + [F-S.ACACIO 69])	59.600
60.600	CHNL# 98: 60. * (1. + [F-ROMEO 69])	59.600
60.600	CHNL# 97: 60. * (1. + [F-RIOGRDTP 69])	59.600

THU, OCT 25 2012 15:53
FREQUENCY V

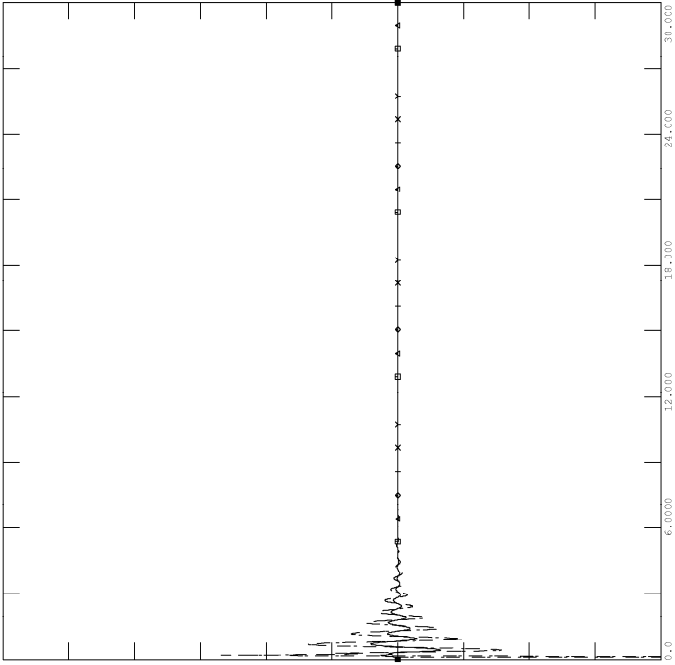




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KERBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



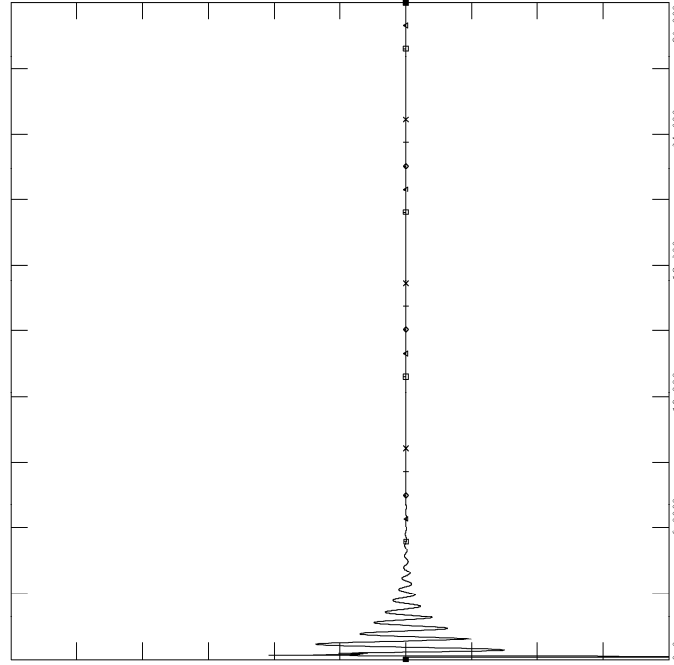
THU, OCT 25 2012 15:53
FREQUENCY VIII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out

60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJBL 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



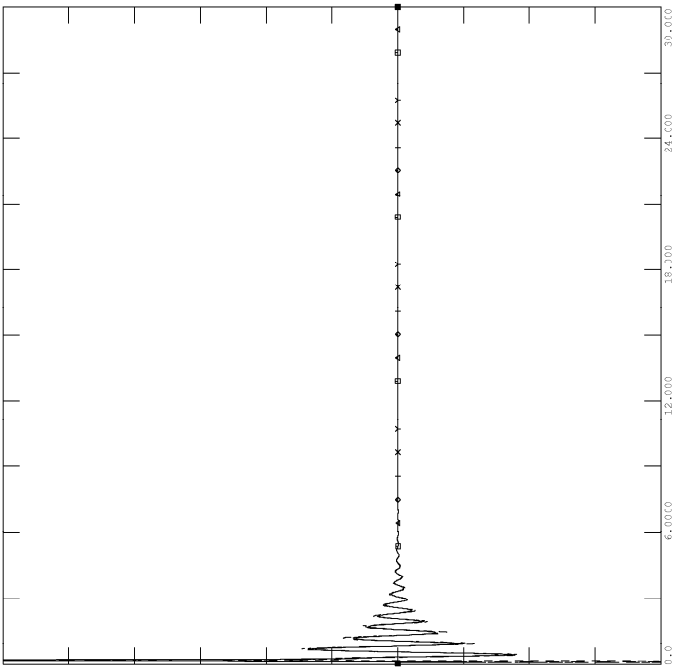
THU, OCT 25 2012 15:53
FREQUENCY IX



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMSACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMSACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



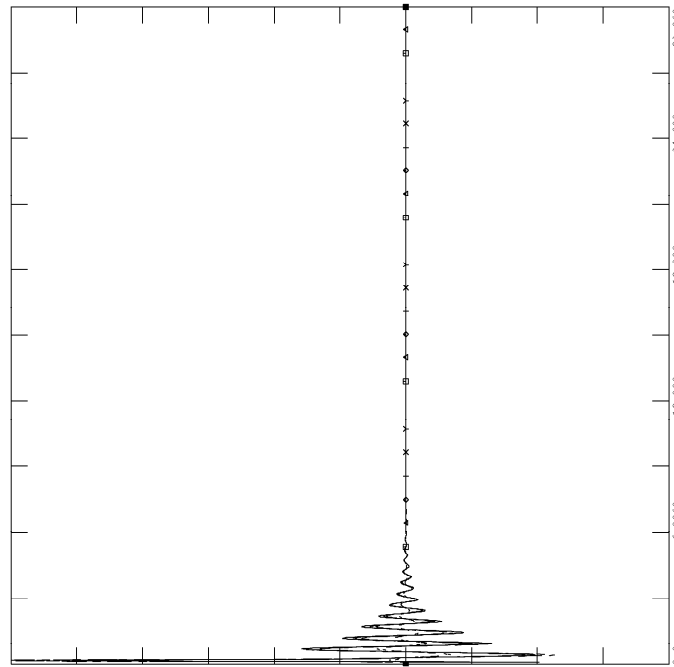
THU, OCT 25 2012 15:53
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY HIGH SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_15s.out
CHNL# 144: 60. * (1. + [F-PONCHA 230])

60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-COGENITX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600

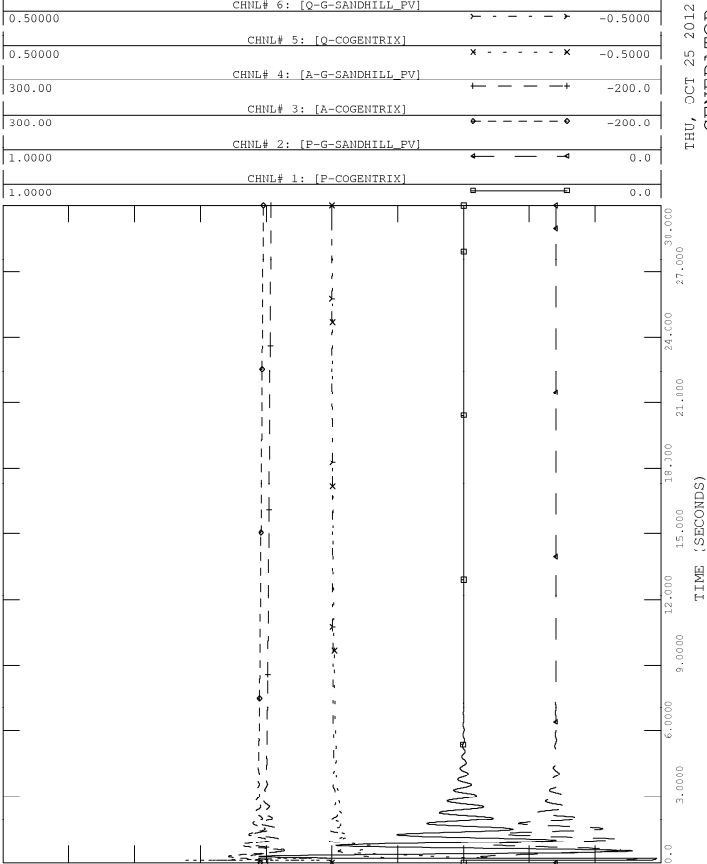


THU, OCT 25 2012 15:53
FREQUENCY IX



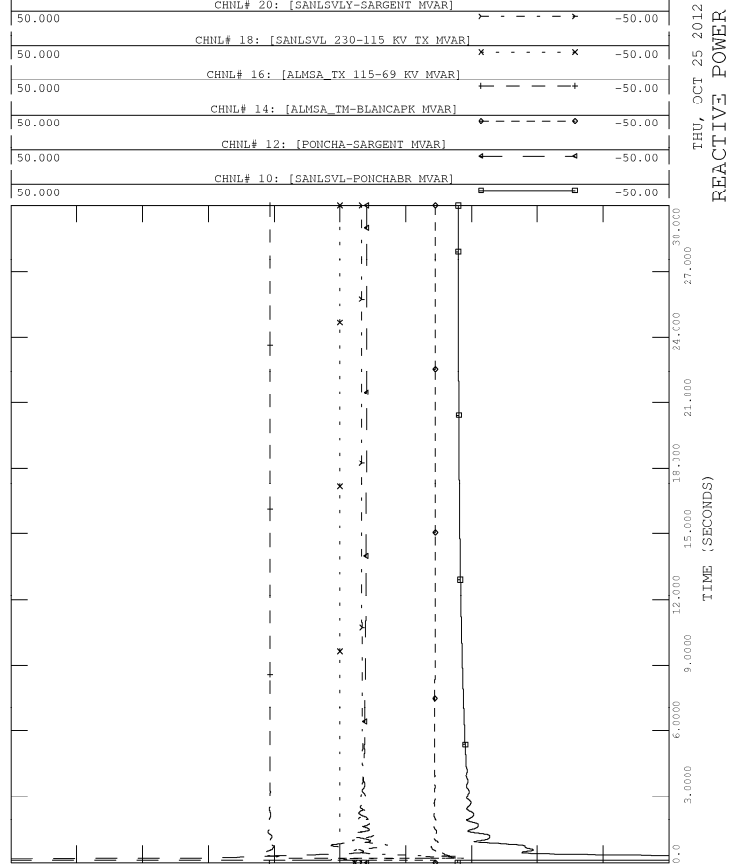
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009 8_post_16a.out
CHNL# 6: [Q-G-SANDHILL_PV]



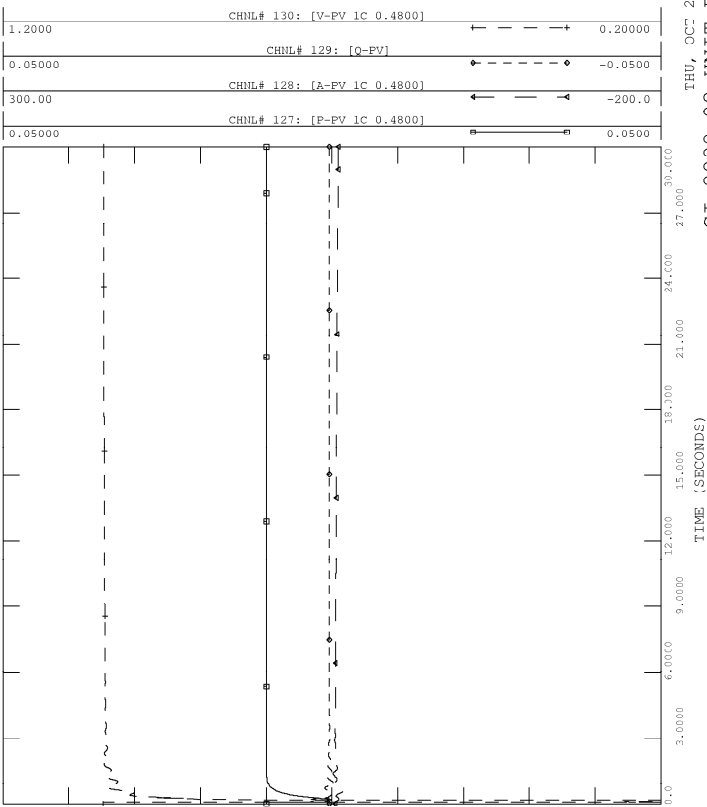
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009 8_post_16a.out
CHNL# 20: [SANLSVLY-SARGENT MVAR]



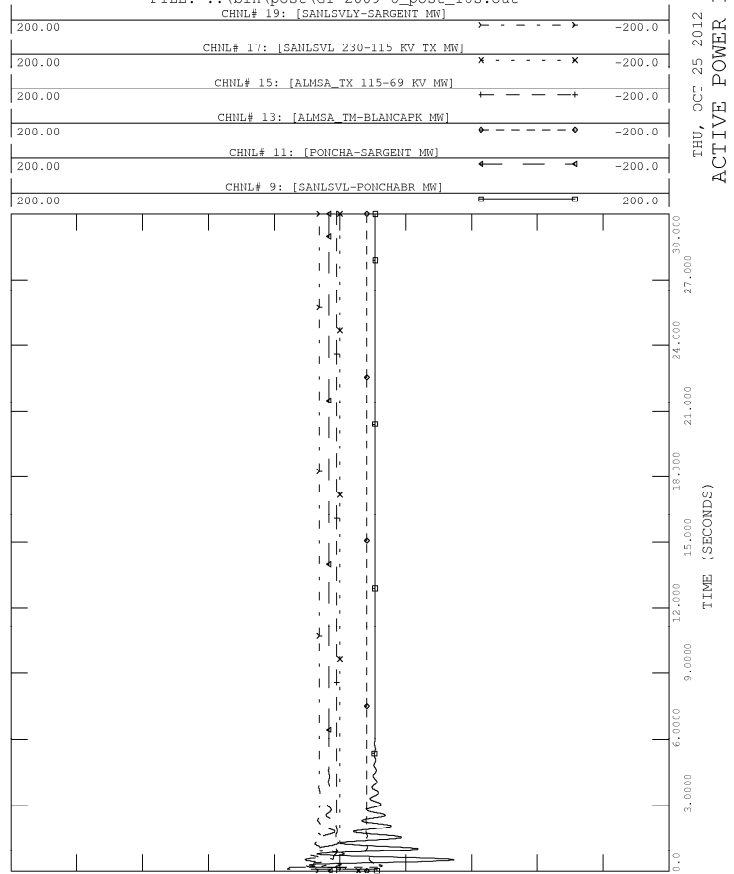
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3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009 8_post_16a.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009 8_post_16a.out



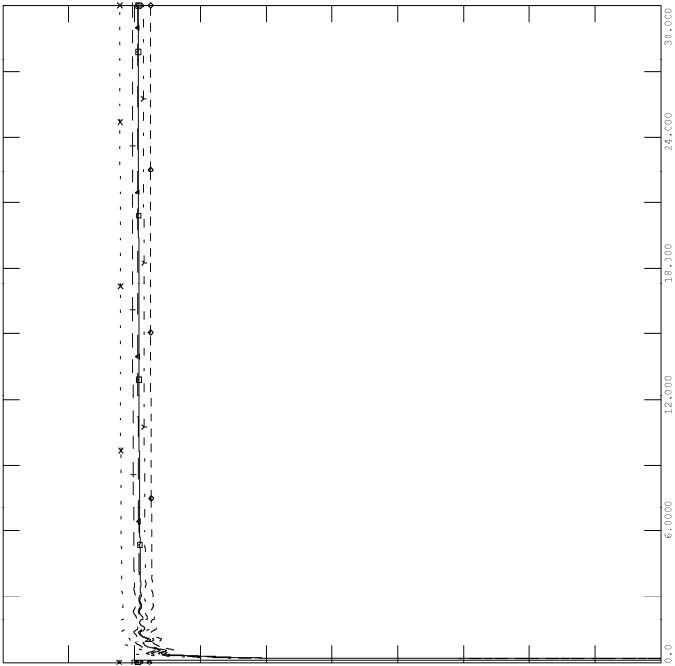


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 30: [V-DELNORTE 69]

1.2000	CHNL# 29: [V-CREEDE 69]	x - - - - - x	0.20000
1.2000	CHNL# 28: [V-COCENTER 69]	x - - - - - x	0.20000
1.2000	CHNL# 27: [V-CENTER 69]	+ - - - - +	0.20000
1.2000	CHNL# 26: [V-CARMEL 69]	o - - - - o	0.20000
1.2000	CHNL# 25: [V-ANTONITO 69]	o - - - - o	0.20000

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VOLTAGE II

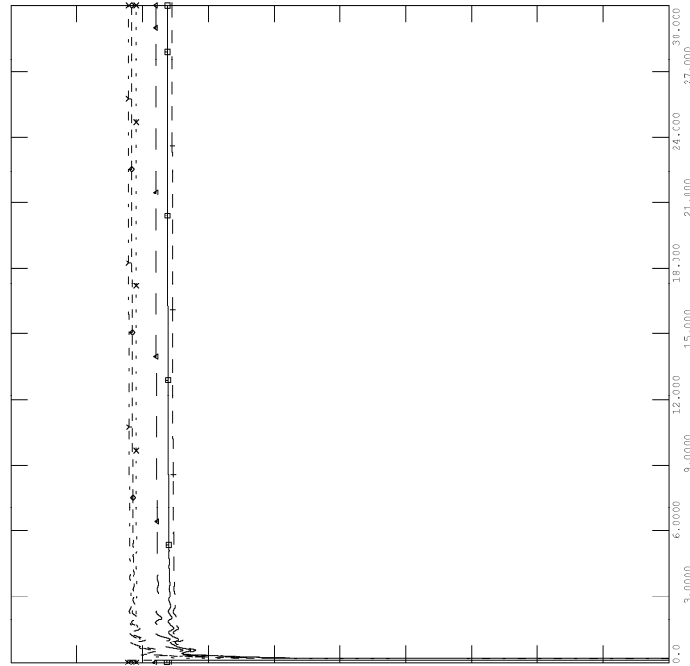


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 42: [V-RAMON 115]

1.2000	CHNL# 41: [V-PONCHA 69]	x - - - - - x	0.20000
1.2000	CHNL# 40: [V-PLAZA 69]	x - - - - - x	0.20000
1.2000	CHNL# 39: [V-MOSCA 69]	+ - - - - +	0.20000
1.2000	CHNL# 38: [V-MOFFAT 69]	o - - - - o	0.20000
1.2000	CHNL# 37: [V-LAGARITA 69]	o - - - - o	0.20000

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VOLTAGE IV

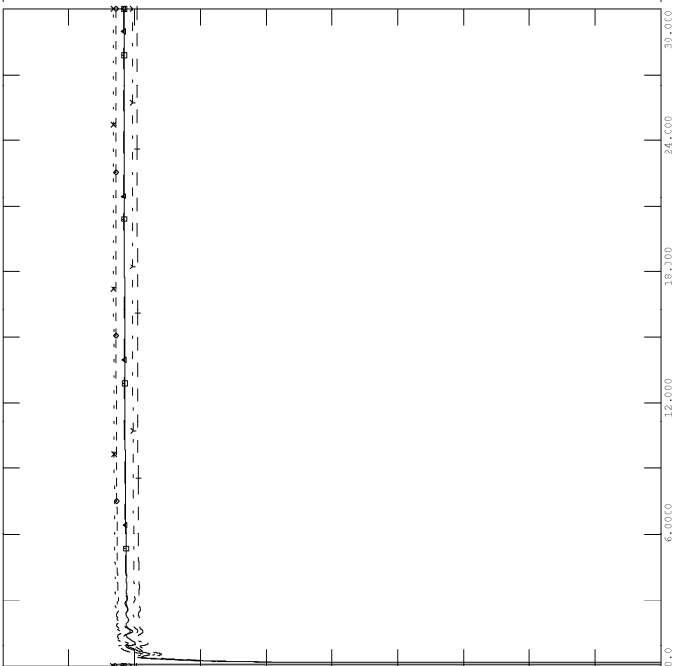


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 24: [V-ANSEL TS 69]

1.2000	CHNL# 23: [V-ALMSA TM 69]	x - - - - - x	0.20000
1.2000	CHNL# 22: [V-ALMSA TM 115]	x - - - - - x	0.20000
1.2000	CHNL# 21: [V-ALMSA ST 69]	+ - - - - +	0.20000
1.2000	CHNL# 8: [V-G-SANDHILL PV]	o - - - - o	0.20000
1.2000	CHNL# 7: [V-COGENTRIX]	o - - - - o	0.20000

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VOLTAGE I

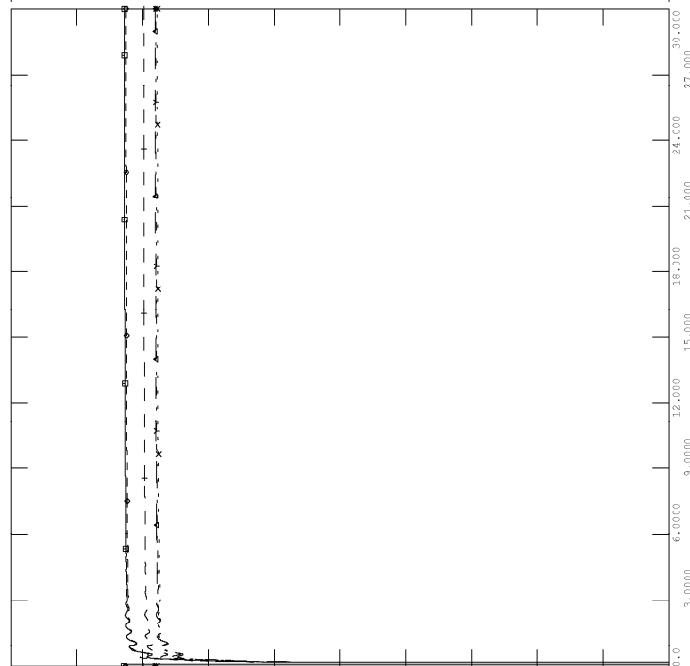


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 36: [V-HOOPERTIP 69]

1.2000	CHNL# 35: [V-HOOPER 69]	x - - - - - x	0.20000
1.2000	CHNL# 34: [V-HOMELAKE 69]	x - - - - - x	0.20000
1.2000	CHNL# 33: [V-HILANDSL 69]	+ - - - - +	0.20000
1.2000	CHNL# 32: [V-FTGARLND 69]	o - - - - o	0.20000
1.2000	CHNL# 31: [V-OLD16TAP 69]	o - - - - o	0.20000

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VOLTAGE III



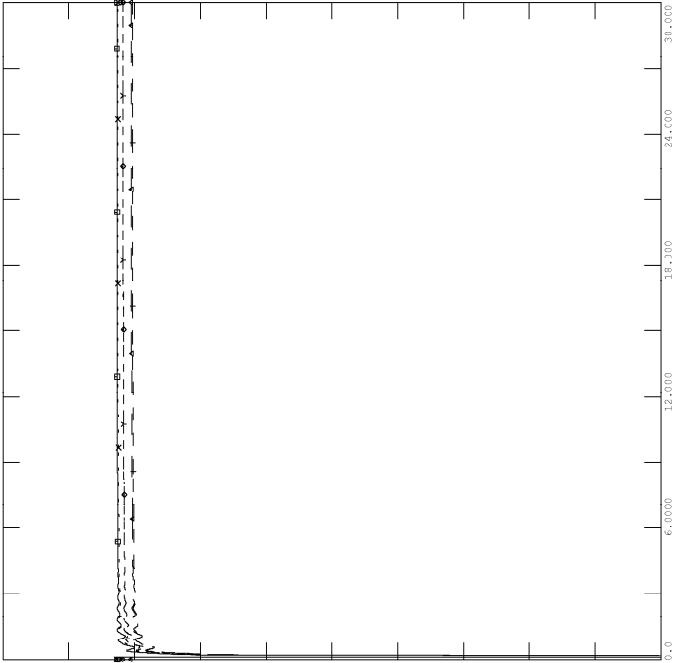


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 54: [V-STANLEY 115]

1.2000	CHNL# 53: [V-SFORK SL 69]	x - - - - x	0.20000
1.2000	CHNL# 52: [V-SARGENT 69]	↑ - - - - ↑	0.20000
1.2000	CHNL# 51: [V-SARGENT 115]	↓ - - - - ↓	0.20000
1.2000	CHNL# 50: [V-SANLSVLY 69]	◆ - - - - ◆	0.20000
1.2000	CHNL# 49: [V-SANLSVLY 230]	◀ - - - - ▶	0.20000

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VOLTAGE VI

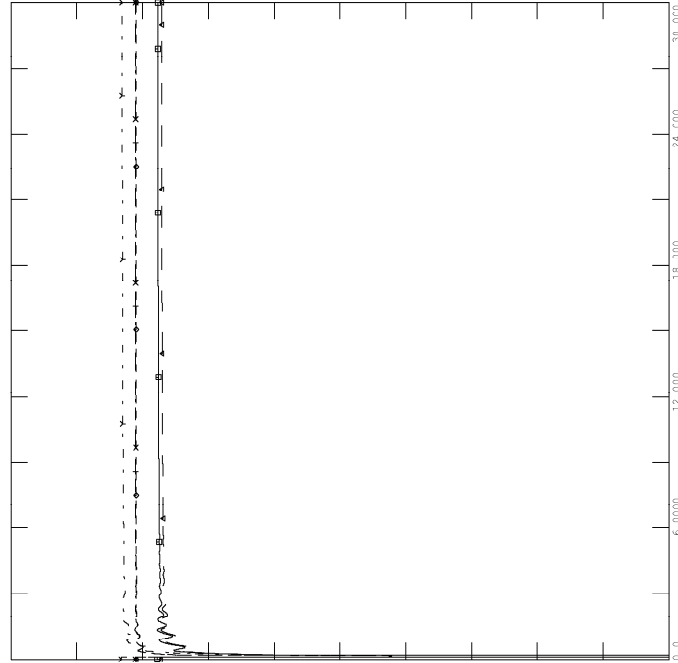


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 66: [V-OLD40TAP 69]

1.2000	CHNL# 65: [V-KERBERCK 69]	x - - - - x	0.20000
1.2000	CHNL# 64: [V-VILLA 69]	↑ - - - - ↑	0.20000
1.2000	CHNL# 63: [V-MEARSJCT 69]	↓ - - - - ↓	0.20000
1.2000	CHNL# 62: [V-SAGUACHE 69]	◆ - - - - ◆	0.20000
1.2000	CHNL# 61: [V-MIRGEJCT 69]	◀ - - - - ▶	0.20000

THU, OCT 25 2012 16:00
VOLTAGE VIII

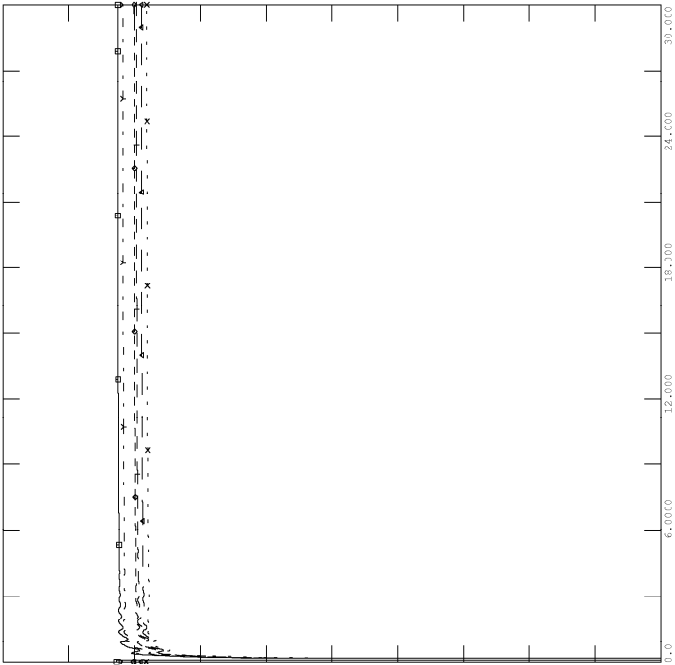


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 48: [V-SANLSVLY 115]

1.2000	CHNL# 47: [V-S.ACACIO 69]	x - - - - x	0.20000
1.2000	CHNL# 46: [V-ROMEO 69]	↑ - - - - ↑	0.20000
1.2000	CHNL# 45: [V-RIOGRDTP 69]	↓ - - - - ↓	0.20000
1.2000	CHNL# 44: [V-RIOGRAND 69]	◆ - - - - ◆	0.20000
1.2000	CHNL# 43: [V-RAMON 69]	◀ - - - - ▶	0.20000

THU, OCT 25 2012 16:00
VOLTAGE V

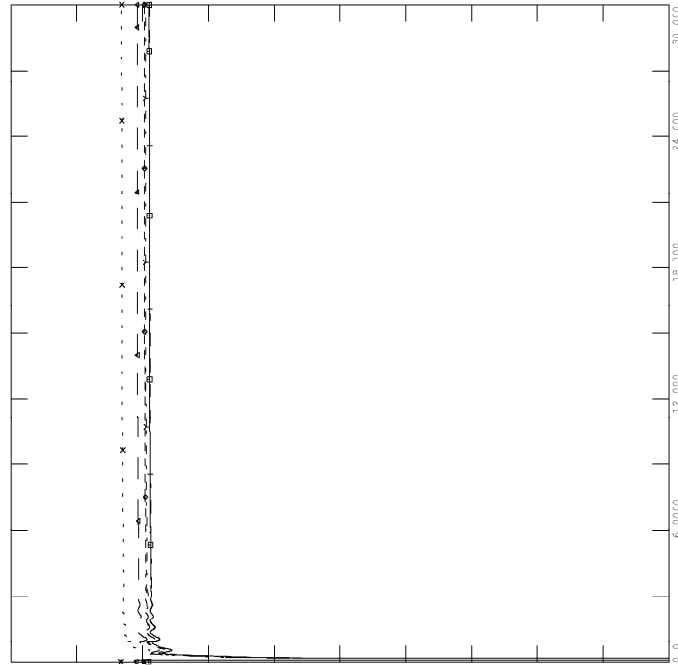


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 60: [V-ALMSACT2 13.8]

1.2000	CHNL# 59: [V-ALMSACT1 13.8]	x - - - - x	0.20000
1.2000	CHNL# 58: [V-ZINZER 69]	↑ - - - - ↑	0.20000
1.2000	CHNL# 57: [V-WAVERLY6 69]	↓ - - - - ↓	0.20000
1.2000	CHNL# 56: [V-WAVERLY 115]	◆ - - - - ◆	0.20000
1.2000	CHNL# 55: [V-STOCKADE 69]	◀ - - - - ▶	0.20000

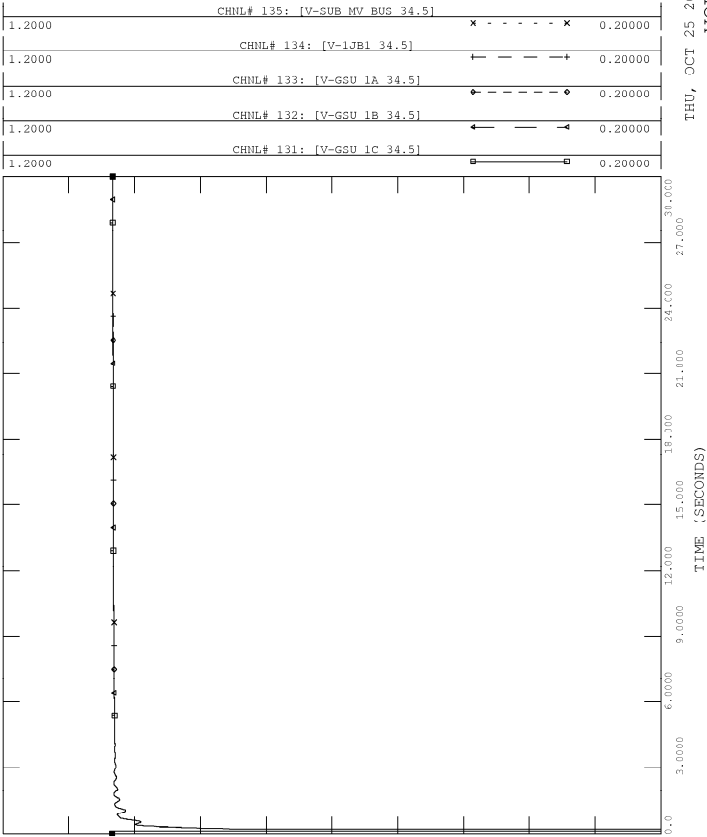
THU, OCT 25 2012 16:00
VOLTAGE VII





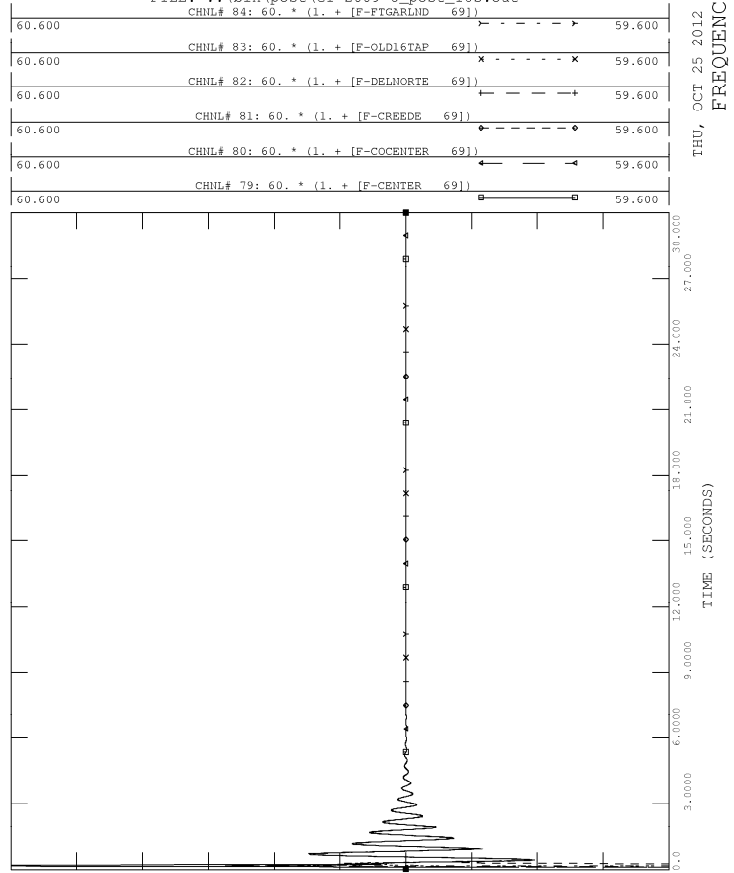
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out



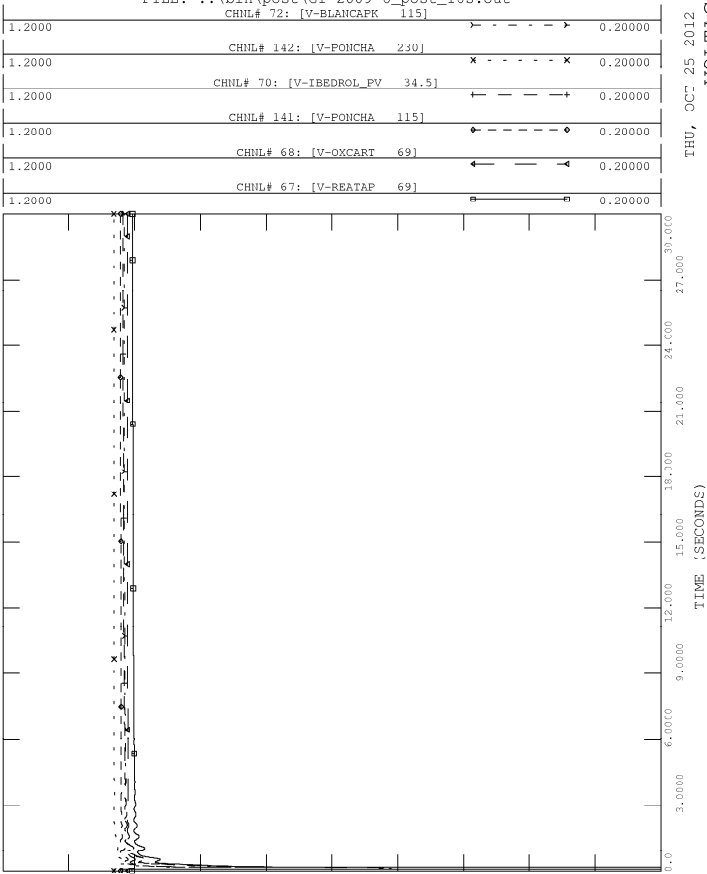
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3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out



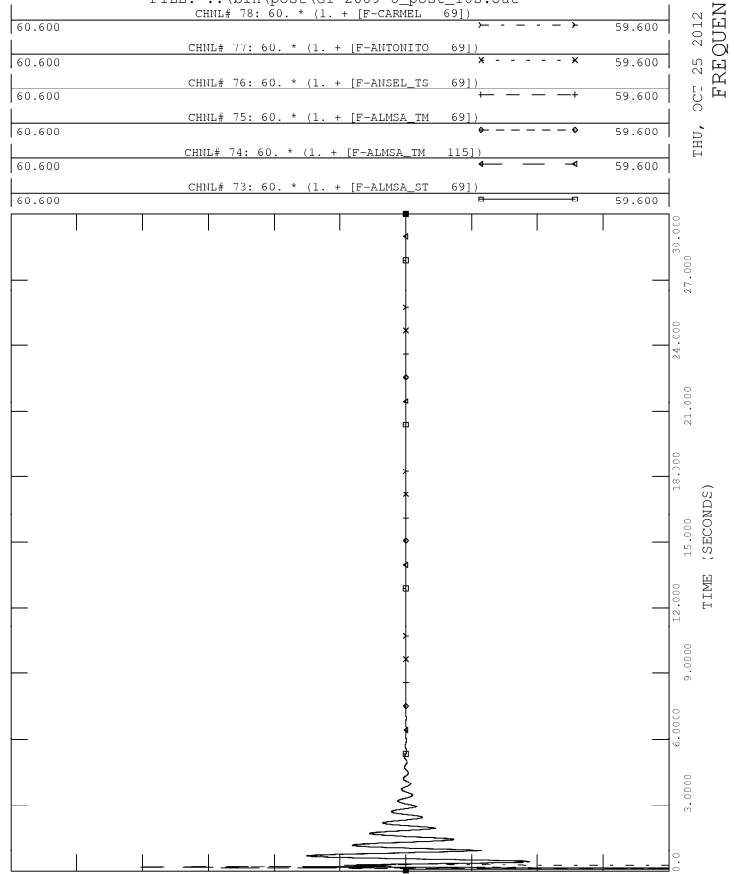
WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out



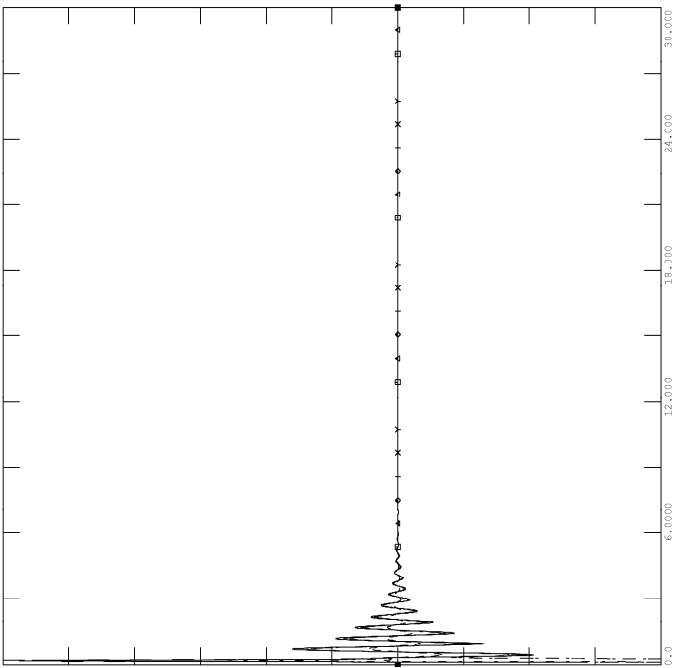


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 96: 60. * (1. + [F-RIOGRAND 69])

60.600	CHNL# 95: 60. * (1. + [F-RAMON 69])	59.600
60.600	CHNL# 94: 60. * (1. + [F-RAMON 115])	59.600
60.600	CHNL# 93: 60. * (1. + [F-PONCHA 69])	59.600
60.600	CHNL# 92: 60. * (1. + [F-PLAZA 69])	59.600
60.600	CHNL# 91: 60. * (1. + [F-MOSCA 69])	59.600

THU, OCT 25 2012 16:00
FREQUENCY IV

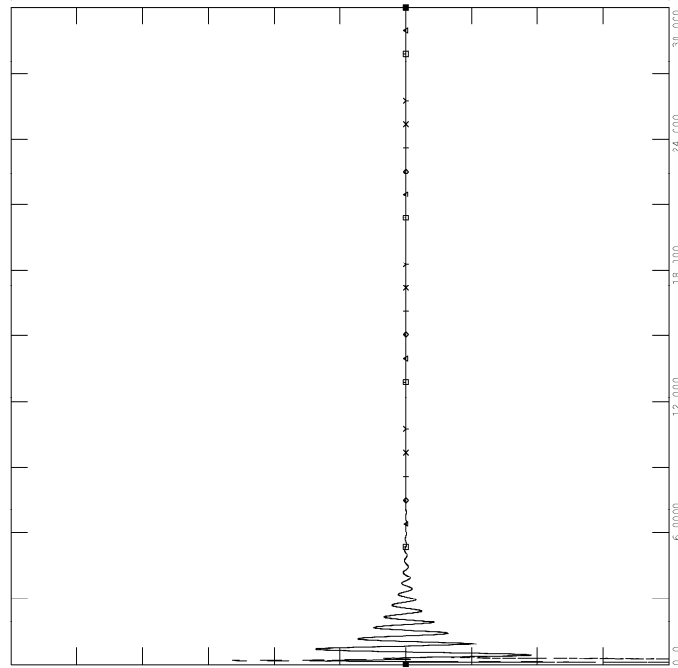


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 108: 60. * (1. + [F-WAVERLY 115])

60.600	CHNL# 107: 60. * (1. + [F-STOCKADE 69])	59.600
60.600	CHNL# 106: 60. * (1. + [F-STANLEY 115])	59.600
60.600	CHNL# 105: 60. * (1. + [F-SFORK_GL 69])	59.600
60.600	CHNL# 104: 60. * (1. + [F-SARGENT 69])	59.600
60.600	CHNL# 103: 60. * (1. + [F-SARGENT 115])	59.600

THU, OCT 25 2012 16:00
FREQUENCY VI

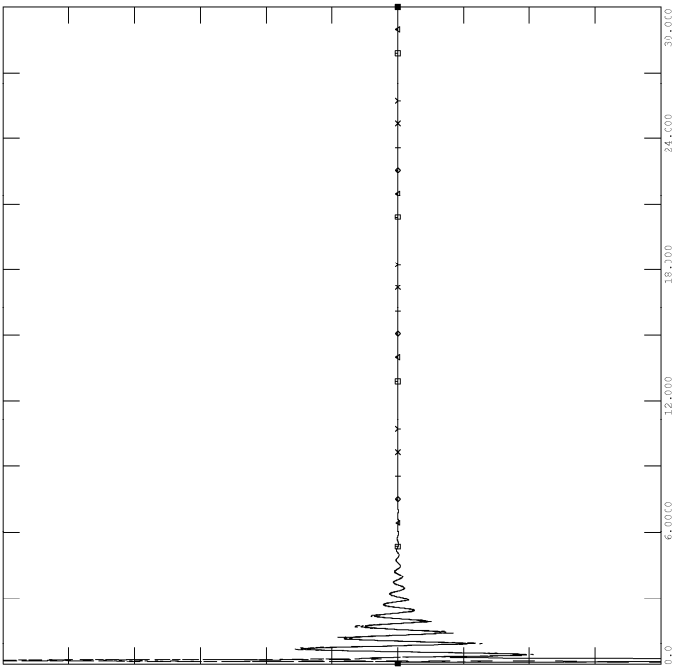


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 90: 60. * (1. + [F-MOFFAT 69])

60.600	CHNL# 89: 60. * (1. + [F-LAGARITA 69])	59.600
60.600	CHNL# 88: 60. * (1. + [F-HOOPERTP 69])	59.600
60.600	CHNL# 87: 60. * (1. + [F-HOOPER 69])	59.600
60.600	CHNL# 86: 60. * (1. + [F-HOMELAKE 69])	59.600
60.600	CHNL# 85: 60. * (1. + [F-HILANDSL 69])	59.600

THU, OCT 25 2012 16:00
FREQUENCY III

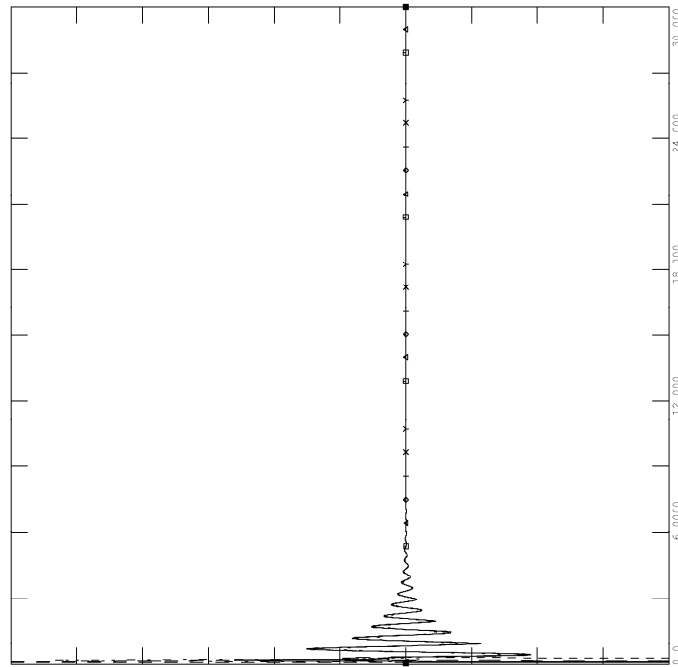


WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 102: 60. * (1. + [F-SANLSVLY 69])

60.600	CHNL# 101: 60. * (1. + [F-SANLSVLY 230])	59.600
60.600	CHNL# 100: 60. * (1. + [F-SANLSVLY 115])	59.600
60.600	CHNL# 99: 60. * (1. + [F-S.ACACIO 69])	59.600
60.600	CHNL# 98: 60. * (1. + [F-ROMEO 69])	59.600
60.600	CHNL# 97: 60. * (1. + [F-RIOGRDTP 69])	59.600

THU, OCT 25 2012 16:00
FREQUENCY V

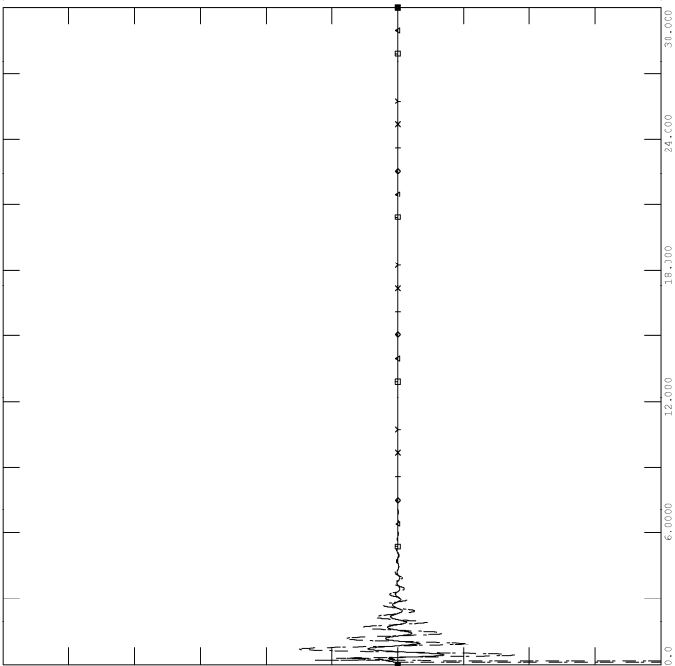




WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 120: 60. * (1. + [F-OXCART 69])

60.600	CHNL# 119: 60. * (1. + [F-REATAP 69])	59.600
60.600	CHNL# 118: 60. * (1. + [F-OLD40TAP 69])	59.600
60.600	CHNL# 117: 60. * (1. + [F-KERBERCK 69])	59.600
60.600	CHNL# 116: 60. * (1. + [F-VILLA 69])	59.600
60.600	CHNL# 115: 60. * (1. + [F-MEARSJCT 69])	59.600



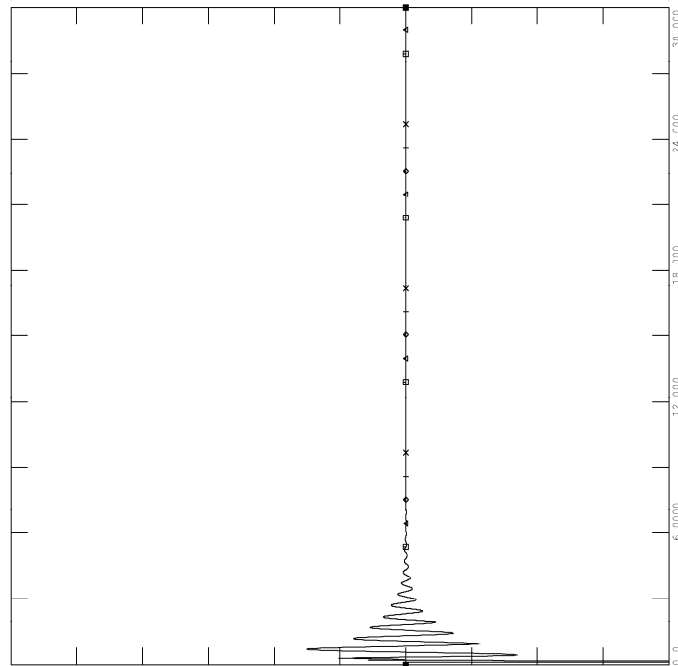
THU, OCT 25 2012 16:00
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out

60.600	CHNL# 140: 60. * (1. + [F-SUB MV BUS 34.5])	59.600
60.600	CHNL# 139: 60. * (1. + [F-LJBL 34.5])	59.600
60.600	CHNL# 138: 60. * (1. + [F-GSU 1A 34.5])	59.600
60.600	CHNL# 137: 60. * (1. + [F-GSU 1B 34.5])	59.600
60.600	CHNL# 136: 60. * (1. + [F-GSU 1C 34.5])	59.600



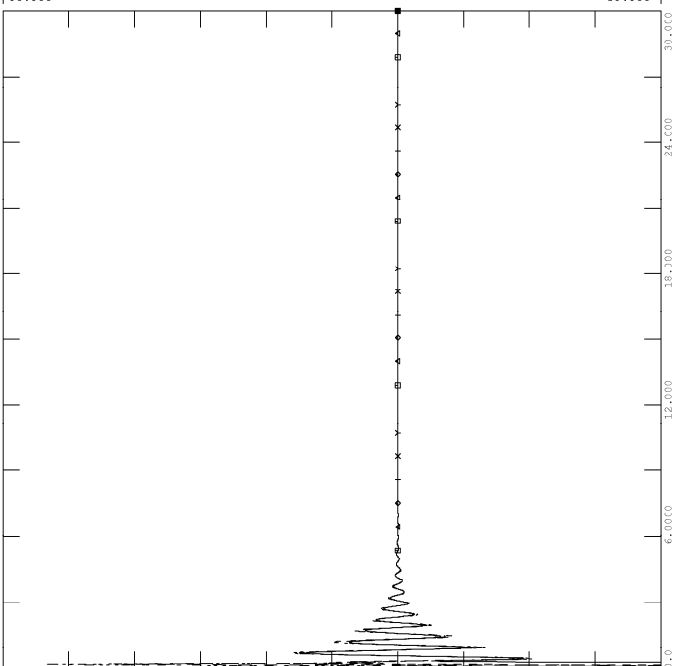
THU, OCT 25 2012 16:00
FREQUENCY X



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 114: 60. * (1. + [F-SAGUACHE 69])

60.600	CHNL# 113: 60. * (1. + [F-MIRGEJCT 69])	59.600
60.600	CHNL# 112: 60. * (1. + [F-ALMGACT2 13.8])	59.600
60.600	CHNL# 111: 60. * (1. + [F-ALMGACT1 13.8])	59.600
60.600	CHNL# 110: 60. * (1. + [F-ZINZER 69])	59.600
60.600	CHNL# 109: 60. * (1. + [F-WAVERLY6 69])	59.600



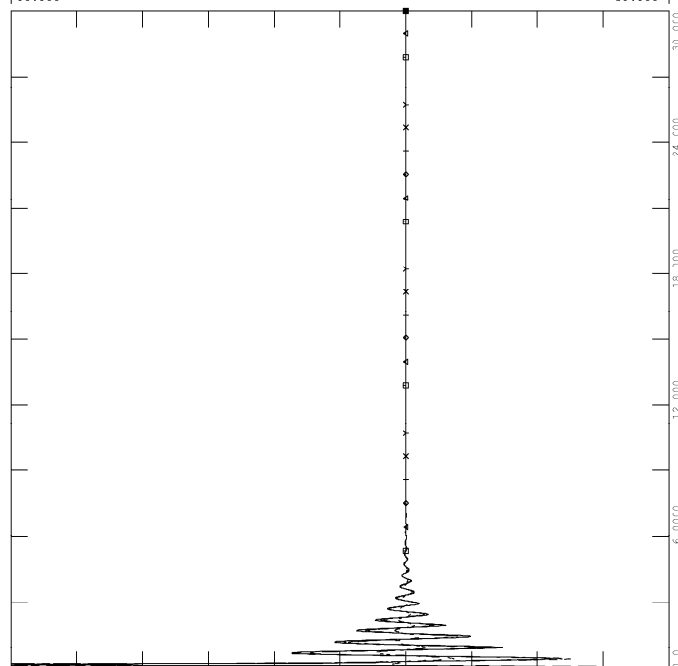
THU, OCT 25 2012 16:00
FREQUENCY VII



WECC APPROVED 2012 HS4A OPERATING CASE
3PH @ SANLSVLY LOW SIDE OF SAN LUIS VALLEY 230 - 115 KV TX

FILE: ..\bin\post\GI 2009_8_post_16a.out
CHNL# 144: 60. * (1. + [F-PONCHA 230])

60.600	CHNL# 143: 60. * (1. + [F-PONCHA 115])	59.600
60.600	CHNL# 124: 60. * (1. + [F-BLANCAPK 115])	59.600
60.600	CHNL# 123: 60. * (1. + [F-COGENITX PV 34.5])	59.600
60.600	CHNL# 122: 60. * (1. + [F-IBEDROL PV 34.5])	59.600
60.600	CHNL# 121: 60. * (1. + [F-GR_SANDH_PV 34.5])	59.600



THU, OCT 25 2012 16:00
FREQUENCY IX