

ANEXO 26

ANÁLISIS DE CORTO CIRCUITO

AÑO 2007
CASOS MHT7, MHTCB7, MHTGBC7,
MHTGDC7 Y MHTTLA7
(1, 2, 3, 4 Y 5)

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
 PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2007
 AÑO 2007 ESC MODERADO DE DEMANDA. DEM MAX INVIERNO
 OUTPUT FOR AREA 6 [PANAMA]

TUE, MAY 15 2007 11:35
 SHORT CIRCUIT
 FAULT CURRENTS

X----- BUS -----X			THREE PHASE FAULT		ONE PHASE FAULT		
			RE(I+)	IM(I+)	RE(IA)	IM(IA)	
1	[PAN230	230.00	P.U.	4.5776	-23.8867	4.1329	-29.6068
2	[PAN115	115.00	P.U.	3.8548	-21.8722	3.9897	-29.2369
3	[PANII230	230.00	P.U.	4.4253	-23.6748	3.7435	-26.4245
4	[PANII115	115.00	P.U.	2.0721	-17.1129	1.1347	-18.0273
5	[CHO230	230.00	P.U.	3.9175	-21.3865	2.9986	-22.7951
6	[CHO115	115.00	P.U.	0.2741	-9.0788	-0.0316	-10.7670
8	[LSA230	230.00	P.U.	5.0891	-20.5540	3.8773	-17.9676
9	[LSA115	115.00	P.U.	1.0013	-8.5242	0.8140	-9.3905
11	[M.N230	230.00	P.U.	8.8389	-25.3468	8.0734	-22.9870
12	[M.N115	115.00	P.U.	4.4229	-14.5384	4.6649	-15.0571
14	[PRO230	230.00	P.U.	5.9311	-15.8764	4.3751	-13.1671
15	[PRO115	115.00	P.U.	2.0835	-7.7870	2.2205	-8.7482
18	[CAC115	115.00	P.U.	3.7747	-21.6611	3.7360	-28.0043
19	[C.V115	115.00	P.U.	2.1319	-15.8075	1.2060	-13.4535
20	[CH.AZUL	115.00	P.U.	1.3317	-4.1541	1.1249	-3.1987
21	[C.BAN115	115.00	P.U.	3.4129	-19.4154	2.4555	-20.0428
23	[CH115	115.00	P.U.	1.0389	-11.5696	0.5635	-8.7550
26	[LOC115	115.00	P.U.	3.5808	-19.9291	3.0130	-22.7225
30	[MAR115	115.00	P.U.	3.0423	-17.8297	2.2283	-17.1945
33	[STM115	115.00	P.U.	3.3757	-19.7959	3.0443	-23.2554
37	[SAN115	115.00	P.U.	3.1075	-18.5537	1.8202	-16.7727
48	[TINAJ115	115.00	P.U.	2.4371	-17.0421	1.4539	-15.1525
50	[M.O115	115.00	P.U.	2.7301	-18.0344	1.7537	-17.3311
52	[TOC115	115.00	P.U.	1.4882	-13.8478	0.8683	-11.1129
54	[LM1115	115.00	P.U.	0.9278	-15.8156	0.4879	-18.8805
55	[LM2115	115.00	P.U.	0.8469	-15.9253	0.3675	-19.0602
87	[CAL115	115.00	P.U.	3.9573	-11.6819	5.3283	-15.1508
88	[EST115	115.00	P.U.	3.6112	-10.2157	4.9380	-14.1884
92	[L.V115	115.00	P.U.	3.8362	-11.1202	5.2238	-15.3680
96	[FOR230	230.00	P.U.	9.4647	-27.5876	9.5398	-30.0686
100	[BAY230	230.00	P.U.	2.4701	-18.4565	1.9358	-20.9519
103	[COPESA23	230.00	P.U.	3.4231	-20.5723	2.7185	-22.3533
105	[PAN-AM23	230.00	P.U.	3.8645	-21.2813	2.9442	-22.6297
109	[STA RITA115	115.00	P.U.	0.8503	-14.9348	0.7884	-14.5919
110	[PTMD115A	115.00	P.U.	0.4695	-11.2216	0.5290	-9.2644
111	[PTMD115B	115.00	P.U.	0.4695	-11.2216	0.5290	-9.2644
115	[PACORA23	230.00	P.U.	3.0308	-19.8383	2.3133	-20.7250
144	[CANJ230	230.00	P.U.	7.3311	-22.1574	6.9225	-20.4693
147	[GUASQ230	230.00	P.U.	7.5933	-22.9999	7.2393	-21.5959
148	[VELAD230	230.00	P.U.	6.7110	-22.3719	5.3594	-17.5525
154	[CEMPAN15	115.00	P.U.	0.7306	-11.2580	0.4729	-8.8800
190	[CHANG230	230.00	P.U.	4.4871	-11.5971	1.4333	-5.5788
191	[CHANG115	115.00	P.U.	1.2418	-4.5941	1.0998	-4.4743
6000	[FRONTER	230.00	P.U.	5.8231	-15.4873	4.0685	-11.5817

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
 PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2007
 AÑO 2007 ESC MODERADO DE DEMANDA. DEM MAX INVIERNO
 OUTPUT FOR AREA 7 [ACANAL]

TUE, MAY 15 2007 11:35
 SHORT CIRCUIT
 FAULT CURRENTS

X----- BUS -----X				THREE PHASE FAULT		ONE PHASE FAULT	
				RE(I+)	IM(I+)	RE(IA)	IM(IA)
123	[MIR115	115.00	P.U.	2.2891	-16.8588	1.7021	-18.6364

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E
 PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2007
 AÑO 2007 ESC MODERADO DE DEMANDA. DEM MAX INVIERNO
 OUTPUT FOR AREA 9 [COLON]

TUE, MAY 15 2007 11:35
 SHORT CIRCUIT
 FAULT CURRENTS

X----- BUS -----X				THREE PHASE FAULT		ONE PHASE FAULT	
				RE(I+)	IM(I+)	RE(IA)	IM(IA)
61	[FFIELD	115.00	P.U.	0.7041	-12.7014	1.2765	-13.4319

AÑO 2008
CASOS MHT7, MHTCB7, MHTGBC7,
MHTGDC7 Y MHTTLA7
(1, 2, 3, 4 Y 5)

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 14:19
 PSIN CON C.A JUNIO DEL 2007 SHORT CIRCUIT
 Año 2008 ESC.MOD DEM MAX INV. FAULT CURRENTS

OUTPUT FOR AREA 6 [PANAMA]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AMPS	AN(I+)	/IA/ AMPS	AN(IA)
1	[PAN230	230.00]	6371.0	-81.20	7772.5	-84.07
2	[PAN115	115.00]	11777.0	-82.08	15545.0	-84.35
3	[PANII230	230.00]	6287.4	-81.33	6902.6	-83.77
4	[PANIII115	115.00]	8924.8	-85.04	9268.8	-88.28
5	[CHO230	230.00]	5609.9	-81.67	5934.9	-84.35
6	[CHO115	115.00]	4592.0	-90.39	5436.0	-92.02
8	[LSA230	230.00]	5448.8	-78.07	4840.9	-79.87
9	[LSA115	115.00]	4362.8	-85.19	4814.7	-87.19
11	[M.N230	230.00]	6931.6	-73.21	6230.7	-72.95
12	[M.N115	115.00]	8052.2	-75.59	8208.4	-75.07
14	[PRO230	230.00]	4305.4	-71.84	3499.1	-73.89
15	[PRO115	115.00]	4077.6	-77.32	4542.9	-78.03
18	[CAC115	115.00]	11656.9	-82.22	14855.7	-84.53
19	[C.V115	115.00]	8251.7	-84.26	6895.4	-86.72
20	[CH.AZUL	115.00]	2203.1	-74.48	1708.3	-72.86
21	[C.BAN115	115.00]	10313.6	-82.17	10420.2	-85.09
23	[CH115	115.00]	6109.8	-86.92	4508.9	-88.08
26	[LOC115	115.00]	10608.1	-81.97	11877.1	-84.56
30	[MAR115	115.00]	9478.9	-82.33	8940.5	-84.56
33	[STM115	115.00]	10588.8	-82.38	12228.0	-84.57
37	[SAN115	115.00]	9819.3	-82.61	8663.0	-85.82
48	[TINAJ115	115.00]	9014.8	-83.87	7827.7	-86.45
50	[M.O115	115.00]	9573.6	-83.43	8990.1	-86.19
52	[TOC115	115.00]	7166.7	-85.75	5671.0	-87.28
54	[LM1115	115.00]	9003.0	-89.44	10448.3	-91.15
55	[LM2115	115.00]	9005.8	-89.44	10497.5	-91.29
87	[CAL115	115.00]	6377.3	-73.42	8276.2	-72.71
88	[EST115	115.00]	5570.9	-72.59	7712.2	-72.86
92	[L.V115	115.00]	6069.1	-73.07	8358.5	-73.32
96	[FOR230	230.00]	7492.0	-73.44	8065.7	-74.75
100	[BAY230	230.00]	4790.8	-83.52	5385.7	-85.83
103	[COPESA23	230.00]	5408.0	-82.32	5788.8	-84.76
105	[PAN-AM23	230.00]	5579.0	-81.75	5887.5	-84.43
109	[STA RITA115	115.00]	8335.5	-89.36	7848.8	-89.04
110	[PTMD115A	115.00]	5934.5	-89.87	4793.3	-88.59
111	[PTMD115B	115.00]	5934.5	-89.87	4793.3	-88.59
115	[PACORA23	230.00]	5185.4	-82.97	5343.1	-85.20
144	[CANJ230	230.00]	5976.5	-74.02	5506.7	-73.59
147	[GUASQ230	230.00]	6206.3	-74.06	5807.9	-73.74
148	[VELAD230	230.00]	6000.9	-75.50	4708.9	-75.14
154	[CEMPAN15	115.00]	6029.5	-88.35	4614.1	-88.69
190	[CHANG230	230.00]	3144.0	-71.10	1434.4	-78.20
191	[CHANG115	115.00]	2402.0	-77.12	2299.1	-78.92
511	[LGUIAS230	230.00]	3692.9	-80.81	3435.0	-82.55
6000	[FRONTER	230.00]	4197.4	-71.72	3093.3	-72.92

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 14:19
 PSIN CON C.A JUNIO DEL 2007 SHORT CIRCUIT
 Año 2008 ESC.MOD DEM MAX INV. FAULT CURRENTS

OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AMPS	AN(I+)	/IA/ AMPS	AN(IA)
123	[MIR115	115.00]	8882.6	-84.45	9662.8	-86.90

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 14:19
 PSIN CON C.A JUNIO DEL 2007 SHORT CIRCUIT
 Año 2008 ESC.MOD DEM MAX INV. FAULT CURRENTS

OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AMPS	AN(I+)	/IA/ AMPS	AN(IA)
61	[FFIELD	115.00]	7045.5	-89.34	7263.4	-86.54

AÑO 2009
CASOS MHT7, MHTCB7, Y MHTGDC7
(1, 2, Y 3)

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 13:57
 PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2007 SHORT CIRCUIT
 AÑO 2009 ESC MODERADO DE DEMANDA. DEM MAX DE INVIERNO FAULT CURRENTS
 OUTPUT FOR AREA 6 [PANAMA]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AN(I+)	/IA/ AN(IA)		
1	[PAN230	230.00] AMPS	7034.0	-82.35	6761.1	-85.32
2	[PAN115	115.00] AMPS	13041.1	-83.06	12544.1	-87.07
3	[PANII230	230.00] AMPS	6939.6	-82.48	6671.2	-85.22
4	[PANII115	115.00] AMPS	9605.5	-86.21	9018.7	-89.55
5	[CHO230	230.00] AMPS	6049.2	-82.77	6066.0	-85.92
6	[CHO115	115.00] AMPS	4737.7	-91.26	5535.9	-92.90
8	[LSA230	230.00] AMPS	5926.9	-79.17	5096.9	-80.82
9	[LSA115	115.00] AMPS	4520.6	-86.13	4947.4	-88.09
11	[M.N230	230.00] AMPS	7186.4	-74.48	6382.7	-74.09
12	[M.N115	115.00] AMPS	8545.5	-76.53	8554.7	-75.94
14	[PRO230	230.00] AMPS	4546.9	-73.74	3812.4	-75.25
15	[PRO115	115.00] AMPS	4199.8	-79.21	4720.6	-79.80
18	[CAC115	115.00] AMPS	12895.6	-83.19	12300.3	-87.18
19	[C.V115	115.00] AMPS	8824.3	-85.27	6586.3	-87.83
20	[CH.AZUL	115.00] AMPS	2246.8	-76.24	1741.4	-74.52
21	[C.BAN115	115.00] AMPS	11258.4	-83.09	9159.6	-87.14
23	[CH115	115.00] AMPS	6552.9	-87.37	4468.1	-88.41
26	[LOC115	115.00] AMPS	11613.3	-82.88	10185.6	-86.92
30	[MAR115	115.00] AMPS	10272.7	-83.16	7941.0	-86.45
33	[STM115	115.00] AMPS	11595.9	-83.30	10286.4	-86.82
37	[SAN115	115.00] AMPS	10667.2	-83.55	7867.1	-87.49
48	[TINAJ115	115.00] AMPS	9734.7	-84.72	6970.1	-87.82
50	[M.O115	115.00] AMPS	10387.7	-84.34	7880.9	-87.77
52	[TOC115	115.00] AMPS	7584.5	-86.75	5559.3	-88.15
54	[LM1115	115.00] AMPS	10641.5	-90.15	11464.8	-92.20
55	[LM2115	115.00] AMPS	10655.0	-90.22	11399.3	-91.99
87	[CAL115	115.00] AMPS	7009.3	-74.47	8979.5	-73.64
88	[EST115	115.00] AMPS	5999.5	-73.49	8257.3	-73.76
92	[L.V115	115.00] AMPS	6618.2	-74.04	9048.7	-74.28
96	[FOR230	230.00] AMPS	7745.5	-74.72	8273.0	-75.99
100	[BAY230	230.00] AMPS	5033.1	-84.20	5571.7	-86.50
103	[COPESA23	230.00] AMPS	5855.8	-83.34	5840.5	-86.02
105	[PAN-AM23	230.00] AMPS	6011.9	-82.85	6019.7	-85.99
109	[STA RITA115	115.00] AMPS	9592.7	-89.98	8336.7	-89.49
110	[PTMD115A	115.00] AMPS	6381.0	-90.42	4811.2	-88.94
111	[PTMD115B	115.00] AMPS	6381.0	-90.42	4811.2	-88.94
115	[PACORA23	230.00] AMPS	5555.4	-83.91	5428.7	-86.27
144	[CANJ230	230.00] AMPS	6221.4	-75.27	5668.8	-74.74
147	[GUASQ230	230.00] AMPS	6470.7	-75.31	5987.7	-74.90
148	[VELAD230	230.00] AMPS	6650.4	-76.54	5180.4	-76.06
154	[CEMPAN15	115.00] AMPS	6587.6	-88.59	4711.4	-88.66
190	[CHANG230	230.00] AMPS	3163.6	-72.49	1440.0	-79.59
191	[CHANG115	115.00] AMPS	2412.2	-78.49	2307.7	-80.32
511	[LGUIAS230	230.00] AMPS	3894.2	-81.72	2956.6	-81.39
515	[PANPOWER230	230.00] AMPS	4535.1	-85.90	3459.0	-85.66
6000	[FRONTER	230.00] AMPS	4517.4	-73.77	3487.3	-74.44

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 13:57
 PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2007 SHORT CIRCUIT
 AÑO 2009 ESC MODERADO DE DEMANDA. DEM MAX DE INVIERNO FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AN(I+)	/IA/ AN(IA)		
123	[MIR115	115.00] AMPS	9516.4	-85.25	9116.4	-88.86

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 13:57
 PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2007 SHORT CIRCUIT
 AÑO 2009 ESC MODERADO DE DEMANDA. DEM MAX DE INVIERNO FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AN(I+)	/IA/ AN(IA)		
61	[FFIELD	115.00] AMPS	8016.5	-89.66	7765.5	-86.69

AÑO 2010
CASOS MHT7, MHTCB7, Y MHTGDC7
(1, 2, Y 3)

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 14:21
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2010 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO FAULT CURRENTS
 OUTPUT FOR AREA 6 [PANAMA]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AMPS	AN(I+)	/IA/ AMPS	AN(IA)
1	[PAN230	230.00]	6152.3	-76.71	6219.9	-80.79
2	[PAN115	115.00]	11122.9	-77.88	11284.3	-82.90
3	[PANII230	230.00]	6138.2	-77.03	6168.0	-80.84
4	[PANII115	115.00]	8697.4	-81.43	8517.0	-85.75
5	[CHO230	230.00]	5279.8	-76.87	5523.1	-80.87
6	[CHO115	115.00]	4453.3	-86.88	5270.6	-88.93
8	[LSA230	230.00]	5622.5	-70.39	4915.8	-72.90
9	[LSA115	115.00]	4367.5	-78.38	4831.5	-80.69
11	[M.N230	230.00]	7793.1	-61.76	6745.4	-61.60
12	[M.N115	115.00]	8886.0	-63.92	8787.0	-63.34
14	[PRO230	230.00]	5706.1	-60.92	4548.5	-62.09
15	[PRO115	115.00]	4602.3	-66.72	5129.9	-67.13
18	[CAC115	115.00]	11015.6	-78.06	11091.2	-83.08
19	[C.V115	115.00]	8039.5	-80.82	6306.5	-84.80
20	[CH.AZUL	115.00]	2346.3	-63.19	1783.1	-61.25
21	[C.BAN115	115.00]	9862.1	-78.25	8520.5	-83.68
23	[CH115	115.00]	5847.0	-84.57	4235.8	-86.95
26	[LOC115	115.00]	10118.9	-78.00	9382.8	-83.25
30	[MAR115	115.00]	9086.9	-78.66	7447.9	-83.39
33	[STM115	115.00]	10067.7	-78.48	9435.2	-83.19
37	[SAN115	115.00]	9427.0	-78.79	7410.0	-84.30
48	[TINAJ115	115.00]	8663.3	-80.20	6587.1	-84.94
50	[M.O115	115.00]	9166.2	-79.69	7388.6	-84.65
52	[TOC115	115.00]	7022.8	-82.57	5374.6	-85.30
54	[LM1115	115.00]	7981.5	-86.40	9261.1	-89.18
55	[LM2115	115.00]	8033.3	-86.72	9254.2	-89.24
87	[CAL115	115.00]	7313.7	-61.68	9311.1	-60.80
88	[EST115	115.00]	6205.8	-60.63	8518.0	-60.91
92	[L.V115	115.00]	6881.9	-61.22	9376.7	-61.46
96	[FOR230	230.00]	8434.4	-61.60	8784.6	-63.01
100	[BAY230	230.00]	4745.4	-81.19	5340.8	-83.93
103	[COPESA23	230.00]	5304.6	-78.61	5467.1	-82.15
105	[PAN-AM23	230.00]	5245.9	-76.97	5480.2	-80.95
109	[STA RITA115	115.00]	7536.1	-86.49	7185.0	-87.66
110	[PTMD115A	115.00]	5658.5	-87.39	4512.8	-87.46
111	[PTMD115B	115.00]	5658.5	-87.39	4512.8	-87.46
115	[PACORA23	230.00]	5059.2	-79.64	5106.8	-82.86
144	[CANJ230	230.00]	6517.3	-62.87	5810.6	-62.44
147	[GUASQ230	230.00]	6796.0	-62.88	6150.6	-62.58
148	[VELAD230	230.00]	6691.3	-65.30	5148.1	-65.29
154	[CEMPAN15	115.00]	5680.9	-86.24	4370.7	-87.72
190	[CHANG230	230.00]	4119.0	-54.08	1516.7	-60.24
191	[CHANG115	115.00]	2630.3	-59.37	2431.0	-60.81
306	[CHANG75	230.00]	4668.7	-54.37	1084.3	-55.20
310	[CONCEPCION23	230.00]	5634.3	-61.31	3613.8	-60.09
511	[LGUIAS230	230.00]	3644.5	-75.00	2824.4	-75.58
515	[PANPOWER230	230.00]	4224.1	-80.92	3317.9	-81.88
6000	[FRONTER	230.00]	5415.1	-60.77	3981.1	-60.99

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 14:21
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2010 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AMPS	AN(I+)	/IA/ AMPS	AN(IA)
123	[MIR115	115.00]	8559.6	-81.18	8523.3	-85.64

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 14:21
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2010 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AMPS	AN(I+)	/IA/ AMPS	AN(IA)
61	[FFIELD	115.00]	6411.9	-86.83	6660.1	-85.48

AÑO 2013
CASOS MHT7 Y MHTCB7
(1, Y 2)

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 18:17
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2013 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO FAULT CURRENTS
 OUTPUT FOR AREA 6 [PANAMA]

X----- BUS -----X			THREE PHASE FAULT		ONE PHASE FAULT		
			/I+/ AN(I+)	/IA/ AN(IA)			
1	[PAN230	230.00	AMPS	6611.7	-74.00	6532.7	-78.72
2	[PAN115	115.00	AMPS	11673.0	-75.17	11654.8	-80.95
3	[PANII230	230.00	AMPS	6661.6	-74.49	6505.5	-78.87
4	[PANII115	115.00	AMPS	9102.3	-79.37	8801.4	-84.12
5	[CHO230	230.00	AMPS	5540.5	-74.15	5705.1	-78.57
6	[CHO115	115.00	AMPS	4511.0	-84.84	5344.9	-87.01
8	[LSA230	230.00	AMPS	5834.0	-66.02	4979.9	-68.75
9	[LSA115	115.00	AMPS	5504.0	-72.86	5686.9	-75.76
11	[M.N230	230.00	AMPS	7999.6	-55.06	6605.9	-54.46
12	[M.N115	115.00	AMPS	8982.0	-57.09	8800.4	-56.39
14	[PRO230	230.00	AMPS	4921.5	-53.50	3638.0	-55.58
15	[PRO115	115.00	AMPS	4300.7	-58.99	4707.3	-59.60
18	[CAC115	115.00	AMPS	11553.6	-75.38	11450.6	-81.15
19	[C.V115	115.00	AMPS	8387.5	-78.74	6461.0	-83.34
20	[CH.AZUL	115.00	AMPS	2253.8	-55.74	1716.8	-54.05
21	[C.BAN115	115.00	AMPS	10326.3	-75.73	8754.6	-82.04
23	[CH115	115.00	AMPS	5994.2	-82.67	4290.0	-85.53
26	[LOC115	115.00	AMPS	10600.4	-75.42	9658.6	-81.51
30	[MAR115	115.00	AMPS	9475.7	-76.28	7622.8	-81.84
33	[STM115	115.00	AMPS	10526.4	-75.96	9701.0	-81.42
37	[SAN115	115.00	AMPS	9861.2	-76.37	7595.4	-82.79
48	[TINAJ115	115.00	AMPS	9016.1	-77.95	6725.7	-83.47
50	[M.O115	115.00	AMPS	9557.2	-77.34	7559.7	-83.10
52	[TOC115	115.00	AMPS	7295.6	-80.69	5495.9	-83.85
54	[LM1115	115.00	AMPS	8192.3	-83.97	9460.9	-87.04
55	[LM2115	115.00	AMPS	8246.1	-84.28	9453.0	-87.10
87	[CAL115	115.00	AMPS	7398.5	-54.91	9407.9	-54.03
88	[EST115	115.00	AMPS	6276.9	-53.88	8611.4	-54.16
92	[L.V115	115.00	AMPS	6961.0	-54.46	9478.6	-54.70
96	[FOR230	230.00	AMPS	8723.2	-54.73	8932.2	-56.12
100	[BAY230	230.00	AMPS	4934.7	-79.97	5483.5	-82.89
103	[COPESA23	230.00	AMPS	5663.2	-76.50	5705.0	-80.42
105	[PAN-AM23	230.00	AMPS	5502.0	-74.27	5657.5	-78.66
109	[STA RITA115	115.00	AMPS	7733.2	-84.20	7309.1	-85.75
110	[PTMD115A	115.00	AMPS	5792.8	-85.56	4573.0	-85.95
111	[PTMD115B	115.00	AMPS	5792.8	-85.56	4573.0	-85.95
115	[PACORA23	230.00	AMPS	5409.0	-77.81	5327.1	-81.31
144	[CANJ230	230.00	AMPS	6753.1	-56.13	5895.3	-55.59
147	[GUASQ230	230.00	AMPS	7057.8	-56.15	6250.0	-55.74
148	[VELAD230	230.00	AMPS	6915.5	-59.45	5184.0	-59.37
154	[CEMPAN15	115.00	AMPS	5802.8	-84.28	4422.6	-86.12
190	[CHANG230	230.00	AMPS	4479.7	-46.54	2008.6	-51.75
191	[CHANG115	115.00	AMPS	3490.3	-50.03	3622.0	-50.94
306	[CHANG75	230.00	AMPS	4956.8	-46.73	1307.7	-46.02
309	[CAISAN230	230.00	AMPS	3604.2	-53.51	0.0	0.00
310	[CONCEPCION23	230.00	AMPS	5867.5	-54.11	3613.9	-52.92
511	[LGUIAS230	230.00	AMPS	3710.4	-71.63	2819.8	-72.34
515	[PANPOWER230	230.00	AMPS	4864.8	-78.47	3550.9	-79.19
6000	[FRONTER	230.00	AMPS	4829.7	-53.42	3341.5	-54.59

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 18:17
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2013 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X----- BUS -----X				THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)		
123	[MIR115	115.00	AMPS	8867.7	-79.10	8731.3	-84.07

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 18:17
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2013 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X----- BUS -----X				THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)		
61	[FFIELD	115.00	AMPS	6555.5	-84.54	6761.9	-83.50

AÑO 2016
CASO MHT7
(1)

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 19:43
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2016 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO FAULT CURRENTS
 OUTPUT FOR AREA 6 [PANAMA]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				RE(I+)	IM(I+)	RE(IA)	IM(IA)
1	[PAN230	230.00	P.U.	8.7782	-28.1629	5.8181	-27.0602
2	[PAN115	115.00	P.U.	7.2382	-25.3727	4.1400	-24.7172
3	[PANII230	230.00	P.U.	8.4148	-27.9152	5.3410	-26.0399
4	[PANII115	115.00	P.U.	3.8399	-19.0840	1.9324	-17.8414
5	[CHO230	230.00	P.U.	9.1489	-27.5415	6.0353	-26.6734
6	[CHO115	115.00	P.U.	1.0142	-10.0844	0.7186	-11.6811
8	[LSA230	230.00	P.U.	11.4582	-25.0417	6.9819	-18.1285
9	[LSA115	115.00	P.U.	3.4610	-11.3182	2.7471	-11.0577
11	[M.N230	230.00	P.U.	23.6210	-34.6277	17.5027	-24.4026
12	[M.N115	115.00	P.U.	10.4032	-16.4721	10.1798	-15.4904
14	[PRO230	230.00	P.U.	14.5370	-19.6751	9.1370	-13.3279
15	[PRO115	115.00	P.U.	4.8138	-8.0724	5.0881	-8.7021
18	[CAC115	115.00	P.U.	7.0511	-25.1209	3.9693	-24.2810
19	[C.V115	115.00	P.U.	3.7234	-17.5184	1.5988	-13.0901
20	[CH.AZUL	115.00	P.U.	2.6741	-3.8875	2.0824	-2.8352
21	[C.BAN115	115.00	P.U.	6.0197	-22.0549	2.6605	-18.1756
23	[CH115	115.00	P.U.	1.7902	-12.8877	0.8084	-8.8801
26	[LOC115	115.00	P.U.	6.3463	-22.6983	3.1545	-20.1700
30	[MAR115	115.00	P.U.	5.2732	-20.1878	2.3830	-15.7543
33	[STM115	115.00	P.U.	6.0879	-22.6892	3.2444	-20.3362
37	[SAN115	115.00	P.U.	5.4399	-20.9794	2.0736	-15.6443
48	[TINAJ115	115.00	P.U.	4.3886	-19.2979	1.7073	-13.8968
50	[M.O115	115.00	P.U.	4.9202	-20.5224	2.0256	-15.6926
52	[TOC115	115.00	P.U.	2.6570	-15.1679	1.2555	-11.0559
54	[LM1115	115.00	P.U.	2.1137	-19.3952	1.1795	-21.5862
55	[LM2115	115.00	P.U.	2.0511	-19.4737	1.2005	-21.5017
87	[CAL115	115.00	P.U.	8.7881	-12.5362	11.3617	-15.6625
88	[EST115	115.00	P.U.	7.5840	-10.3810	10.3061	-14.2568
92	[L.V115	115.00	P.U.	8.3361	-11.6762	11.2449	-15.8941
96	[FOR230	230.00	P.U.	23.6836	-34.7346	21.7487	-33.9754
100	[BAY230	230.00	P.U.	3.7662	-20.2456	2.9349	-22.4181
103	[COPESA23	230.00	P.U.	6.0815	-23.5781	4.0951	-23.1963
105	[PAN-AM23	230.00	P.U.	8.9715	-27.2712	5.9190	-26.3927
109	[STA RITA115	115.00	P.U.	1.9689	-18.8815	1.4459	-16.5743
110	[PTMD115A	115.00	P.U.	1.0569	-12.7895	0.8276	-9.6334
111	[PTMD115B	115.00	P.U.	1.0569	-12.7895	0.8276	-9.6334
115	[PACORA23	230.00	P.U.	5.1805	-22.4338	3.4731	-21.6775
144	[CANJ230	230.00	P.U.	19.0981	-29.1377	15.0317	-22.4904
147	[GUASQ230	230.00	P.U.	20.2645	-30.9192	16.0296	-24.1212
148	[VELAD230	230.00	P.U.	17.2289	-29.4718	11.1447	-18.7115
154	[CEMPAN15	115.00	P.U.	1.4055	-12.7281	0.7808	-9.2847
190	[CHANG230	230.00	P.U.	12.2891	-13.4091	4.8381	-6.3853
191	[CHANG115	115.00	P.U.	4.3885	-5.4429	4.4302	-5.6894
306	[CHANG75	230.00	P.U.	13.6219	-15.0006	3.5452	-3.8298
309	[CAISAN230	230.00	P.U.	16.2385	-22.4465	5.1829	-8.7100
310	[CONCEPCION23	230.00	P.U.	20.5257	-29.0474	10.2557	-13.3100
341	[NVAEST230	230.00	P.U.	19.4696	-28.6621	9.0037	-16.2643
511	[LGUIAS230	230.00	P.U.	5.2907	-15.3129	3.6114	-10.9994
515	[PANPOWER230	230.00	P.U.	6.3093	-24.1986	2.7326	-13.6962
6000	[FRONTER	230.00	P.U.	13.7637	-18.5685	8.4250	-11.8004

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 19:43
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2016 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				RE(I+)	IM(I+)	RE(IA)	IM(IA)
123	[MIR115	115.00	P.U.	3.8697	-18.8857	2.0245	-18.2523

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 15 2007 19:43
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2016 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				RE(I+)	IM(I+)	RE(IA)	IM(IA)
61	[FFIELD	115.00	P.U.	1.5462	-14.9884	1.9226	-14.7828

AÑO 2016
CASO MHTCB7
(2)

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, MAY 16 2007 8:33
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2016 ESC MOD DEM MAX INV MMV 50 MW FAULT CURRENTS
 OUTPUT FOR AREA 6 [PANAMA]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			RE(I+)	IM(I+)	RE(IA)	IM(IA)
1	[PAN230	230.00] P.U.	8.2388	-27.6551	5.2154	-26.6619
2	[PAN115	115.00] P.U.	6.6059	-24.7712	3.4744	-24.2451
3	[PANII230	230.00] P.U.	7.9162	-27.4592	4.7872	-25.6916
4	[PANII115	115.00] P.U.	3.4377	-18.8017	1.4990	-17.5896
5	[CHO230	230.00] P.U.	8.6285	-27.1317	5.4636	-26.3302
6	[CHO115	115.00] P.U.	0.7872	-9.9549	0.4426	-11.5212
8	[LSA230	230.00] P.U.	10.9613	-24.8430	6.5641	-18.0019
9	[LSA115	115.00] P.U.	3.2210	-11.2323	2.4946	-10.9641
11	[M.N230	230.00] P.U.	22.9792	-34.6970	17.0168	-24.4781
12	[M.N115	115.00] P.U.	10.0876	-16.4909	9.8736	-15.5152
14	[PRO230	230.00] P.U.	14.1600	-19.7716	8.8781	-13.3867
15	[PRO115	115.00] P.U.	4.6614	-8.0974	4.9230	-8.7279
18	[CAC115	115.00] P.U.	6.4186	-24.5202	3.3078	-23.8133
19	[C.V115	115.00] P.U.	3.3134	-17.2535	1.2282	-12.9054
20	[CH.AZUL	115.00] P.U.	2.5976	-3.9053	2.0251	-2.8504
21	[C.BAN115	115.00] P.U.	5.4672	-21.6117	2.1303	-17.8750
23	[CH115	115.00] P.U.	1.3264	-12.5309	0.4503	-8.6864
26	[LOC115	115.00] P.U.	5.7757	-22.2274	2.5797	-19.8260
30	[MAR115	115.00] P.U.	4.7368	-19.7913	1.8946	-15.4986
33	[STM115	115.00] P.U.	5.5019	-22.1934	2.6579	-19.9751
37	[SAN115	115.00] P.U.	4.9165	-20.5786	1.6050	-15.3942
48	[TINAJ115	115.00] P.U.	3.8778	-18.9159	1.2730	-13.6672
50	[M.O115	115.00] P.U.	4.3858	-20.1027	1.5478	-15.4280
52	[TOC115	115.00] P.U.	2.3071	-14.9586	0.9503	-10.9085
54	[LM1115	115.00] P.U.	1.3597	-18.2033	0.3479	-20.4750
55	[LM2115	115.00] P.U.	1.2866	-18.2965	0.3544	-20.4172
87	[CAL115	115.00] P.U.	8.5423	-12.5526	11.0499	-15.6886
88	[EST115	115.00] P.U.	7.3771	-10.3966	10.0223	-14.2770
92	[L.V115	115.00] P.U.	8.1056	-11.6926	10.9312	-15.9153
96	[FOR230	230.00] P.U.	23.0379	-34.7757	21.1032	-34.0111
100	[BAY230	230.00] P.U.	3.5598	-20.1644	2.6707	-22.3409
103	[COPESA23	230.00] P.U.	5.6672	-23.2647	3.6266	-22.9248
105	[PAN-AM23	230.00] P.U.	8.4548	-26.8677	5.3518	-26.0535
109	[STA RITA115	115.00] P.U.	1.2211	-17.4990	0.6951	-15.7192
110	[PTMD115A	115.00] P.U.	0.6012	-12.3014	0.4206	-9.3644
111	[PTMD115B	115.00] P.U.	0.6012	-12.3014	0.4206	-9.3644
115	[PACORA23	230.00] P.U.	4.8034	-22.1777	3.0522	-21.4554
144	[CANJ230	230.00] P.U.	18.5483	-29.1549	14.5807	-22.5199
147	[GUASQ230	230.00] P.U.	19.6842	-30.9340	15.5477	-24.1497
148	[VELAD230	230.00] P.U.	16.6638	-29.3916	10.7350	-18.6873
154	[CEMPAN15	115.00] P.U.	0.8948	-12.2611	0.3667	-9.0331
190	[CHANG230	230.00] P.U.	12.0447	-13.5270	4.7250	-6.4276
191	[CHANG115	115.00] P.U.	4.2978	-5.4887	4.3356	-5.7351
306	[CHANG75	230.00] P.U.	13.3448	-15.1163	3.4732	-3.8611
309	[CAISAN230	230.00] P.U.	15.8213	-22.5570	5.0217	-8.7396
310	[CONCEPCION23	230.00] P.U.	19.9837	-29.1517	9.9884	-13.3777
341	[NVAEST230	230.00] P.U.	18.9292	-28.7304	8.6931	-16.2839
511	[LGUIAS230	230.00] P.U.	4.9417	-15.1727	3.3281	-10.9087
515	[PANPOWER230	230.00] P.U.	5.8527	-23.8584	2.3936	-13.5365
6000	[FRONTER	230.00] P.U.	13.4076	-18.6647	8.1939	-11.8601

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, MAY 16 2007 8:33
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2016 ESC MOD DEM MAX INV MMV 50 MW FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			RE(I+)	IM(I+)	RE(IA)	IM(IA)
123	[MIR115	115.00] P.U.	3.3483	-18.5351	1.4832	-17.9436

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E WED, MAY 16 2007 8:33
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2016 ESC MOD DEM MAX INV MMV 50 MW FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			RE(I+)	IM(I+)	RE(IA)	IM(IA)
61	[FFIELD	115.00] P.U.	0.9306	-14.2226	1.2126	-14.2039

AÑO 2009 CASO MHTGBC7

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AMPS	AN(I+)	/IA/ AMPS	AN(IA)
1	[PAN230	230.00]	7045.5	-81.63	6774.9	-84.58
2	[PAN115	115.00]	13053.5	-82.12	12560.4	-86.11
3	[PANII230	230.00]	6950.0	-81.85	6684.3	-84.56
4	[PANII115	115.00]	9618.3	-85.49	9034.0	-88.81
5	[CHO230	230.00]	6059.0	-82.12	6078.8	-85.25
6	[CHO115	115.00]	4746.2	-90.60	5546.6	-92.23
7	[CHO34	34.500]	7612.6	-93.66	7342.9	-97.33
8	[LSA230	230.00]	5937.7	-78.76	5139.7	-80.26
9	[LSA115	115.00]	4529.4	-85.70	4965.5	-87.63
10	[L.S.34	34.500]	6085.5	-92.00	4406.4	-95.09
11	[M.N230	230.00]	7193.6	-74.27	6141.1	-73.37
12	[M.N115	115.00]	8551.9	-76.32	8485.3	-75.52
13	[MDNA34	34.500]	11513.8	-78.40	5638.1	-82.25
14	[PRO230	230.00]	4551.1	-73.52	2963.4	-77.48
15	[PRO115	115.00]	4203.8	-78.99	4386.5	-80.08
16	[PRO34	34.500]	7065.9	-81.61	4282.4	-83.81
18	[CAC115	115.00]	12908.0	-82.25	12316.3	-86.22
19	[C.V115	115.00]	8835.9	-84.48	6597.2	-87.02
20	[CH.AZUL	115.00]	2249.0	-76.01	1695.6	-74.64
21	[C.BAN115	115.00]	11270.0	-82.18	9172.4	-86.21
23	[CH115	115.00]	6559.7	-86.02	4473.4	-87.05
26	[LOC115	115.00]	11624.9	-81.97	10199.3	-85.98
30	[MAR115	115.00]	10283.5	-82.23	7952.1	-85.50
33	[STM115	115.00]	11607.5	-82.36	10300.1	-85.86
37	[SAN115	115.00]	10678.7	-82.65	7878.5	-86.56
48	[TINAJ115	115.00]	9745.1	-83.78	6979.9	-86.86
50	[M.O115	115.00]	10398.5	-83.40	7891.8	-86.81
52	[TOC115	115.00]	7595.2	-86.02	5568.9	-87.41
54	[LM1115	115.00]	10653.2	-88.26	11478.2	-90.30
55	[LM2115	115.00]	10664.5	-88.33	11410.3	-90.10
87	[CAL115	115.00]	7012.6	-74.26	8982.7	-73.43
88	[EST115	115.00]	6002.1	-73.28	8260.8	-73.55
92	[L.V115	115.00]	6621.2	-73.83	9052.7	-74.07
96	[FOR230	230.00]	7752.0	-74.55	8232.6	-75.90
100	[BAY230	230.00]	5036.8	-83.82	5576.1	-86.12
103	[COPESA23	230.00]	5864.5	-82.74	5850.6	-85.40
105	[PAN-AM23	230.00]	6021.6	-82.21	6032.3	-85.32
109	[STA RITA115	115.00]	9602.5	-88.18	8346.2	-87.69
110	[PTMD115A	115.00]	6389.6	-88.99	4818.4	-87.50
111	[PTMD115B	115.00]	6389.6	-88.99	4818.4	-87.50
115	[PACORA23	230.00]	5562.4	-83.36	5436.6	-85.71
144	[CANJ230	230.00]	6228.6	-75.10	5664.1	-74.62
147	[GUASQ230	230.00]	6478.1	-75.14	5981.5	-74.78
148	[VELAD230	230.00]	6660.5	-76.26	5391.0	-75.41
154	[CEMPAN15	115.00]	6594.0	-86.97	4716.6	-87.03
190	[CHANG230	230.00]	3165.4	-72.29	1440.9	-79.39
191	[CHANG115	115.00]	2413.7	-78.30	2309.0	-80.12
192	[CHANG34	34.500]	3780.9	-80.25	2221.0	-83.08
321	[CALDERA34.5	34.500]	7966.0	-76.01	0.0	0.00
511	[LGUIAS230	230.00]	3901.9	-81.20	2967.7	-80.82
512	[LGUIAS 34.5	34.500]	5513.0	-91.70	0.0	0.00
515	[PANPOWER230	230.00]	4543.2	-85.41	3467.4	-85.14
6000	[FRONTER	230.00]	4521.4	-73.55	2823.4	-76.55

OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AMPS	AN(I+)	/IA/ AMPS	AN(IA)
123	[MIR115	115.00]	9526.2	-84.29	9127.6	-87.89
124	[MIR44	44.000]	11716.5	-92.65	14028.2	-92.87
131	[BAL44	44.000]	7410.2	-90.29	6390.6	-89.04
132	[SUM44	44.000]	7376.5	-86.58	7559.8	-86.39
133	[MAD44	44.000]	4131.1	-82.57	4993.5	-84.06
137	[GAM44	44.000]	5278.5	-83.74	4425.7	-81.56
138	[ACL44	44.000]	2798.2	-80.50	3259.3	-79.83
139	[GAT44	44.000]	2760.2	-80.32	3328.5	-82.10

OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AMPS	AN(I+)	/IA/ AMPS	AN(IA)
56	[L.M.44	44.000]	7407.4	-96.90	9472.6	-97.51
58	[MHOPE	44.000]	3961.9	-86.35	2993.5	-84.31
61	[FFIELD	115.00]	8025.8	-87.76	7775.2	-84.78
63	[RCITY	44.000]	4361.9	-91.32	3456.9	-87.97
64	[COLON44	44.000]	4352.5	-91.30	3445.5	-87.95

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X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/	AN(I+)	/IA/	AN(IA)
1	[PAN230	230.00]	AMPS	6015.8	-76.57	6125.3	-80.75
2	[PAN115	115.00]	AMPS	10900.1	-77.70	11131.2	-82.81
3	[PANII230	230.00]	AMPS	5989.6	-76.89	6065.8	-80.81
4	[PANII115	115.00]	AMPS	8549.8	-81.33	8419.7	-85.77
5	[CHO230	230.00]	AMPS	5193.6	-76.82	5459.9	-80.88
6	[CHO115	115.00]	AMPS	4419.1	-86.99	5237.1	-89.08
7	[CHO34	34.500]	AMPS	7292.9	-91.04	7115.3	-95.24
8	[LSA230	230.00]	AMPS	5556.0	-70.45	4908.8	-72.94
9	[LSA115	115.00]	AMPS	4343.3	-78.59	4816.7	-80.91
10	[L.S.34	34.500]	AMPS	5902.3	-85.59	4339.3	-89.11
11	[M.N230	230.00]	AMPS	7792.4	-62.03	6660.4	-61.47
12	[M.N115	115.00]	AMPS	8968.9	-64.24	8860.7	-63.56
13	[MDNA34	34.500]	AMPS	11776.5	-66.31	5653.9	-70.15
14	[PRO230	230.00]	AMPS	5701.4	-61.20	3903.2	-63.35
15	[PRO115	115.00]	AMPS	4597.2	-67.02	4929.8	-67.53
16	[PRO34	34.500]	AMPS	7330.6	-69.33	4343.6	-71.26
18	[CAC115	115.00]	AMPS	10798.0	-77.89	10943.8	-83.00
19	[C.V115	115.00]	AMPS	7916.0	-80.75	6250.8	-84.90
20	[CH.AZUL	115.00]	AMPS	2343.4	-63.50	1756.9	-61.68
21	[C.BAN115	115.00]	AMPS	9686.8	-78.12	8430.4	-83.69
23	[CH115	115.00]	AMPS	5775.4	-84.50	4208.5	-87.04
26	[LOC115	115.00]	AMPS	9934.5	-77.85	9275.1	-83.23
30	[MAR115	115.00]	AMPS	8937.8	-78.56	7377.4	-83.44
33	[STM115	115.00]	AMPS	9884.3	-78.34	9325.5	-83.17
37	[SAN115	115.00]	AMPS	9266.3	-78.67	7340.0	-84.34
48	[TINAJ115	115.00]	AMPS	8527.2	-80.10	6530.7	-85.02
50	[M.O115	115.00]	AMPS	9014.3	-79.57	7319.2	-84.69
52	[TOC115	115.00]	AMPS	6924.2	-82.54	5330.6	-85.45
54	[LM1115	115.00]	AMPS	7839.4	-86.28	9135.2	-89.08
55	[LM2115	115.00]	AMPS	7857.6	-86.39	9100.4	-88.98
66	[BLM13B	13.800]	AMPS	31074.8	-97.33	23966.8	-98.35
67	[BLM13C	13.800]	AMPS	32549.3	-97.41	32662.2	-98.07
68	[BLM13D	13.800]	AMPS	15086.6	-99.69	0.0	0.00
69	[TGJB13.8	13.800]	AMPS	30372.1	-97.38	20551.9	-99.25
70	[TGJB13A	13.800]	AMPS	29254.8	-97.62	22221.9	-98.77
71	[TGJB13B	13.800]	AMPS	21808.0	-98.34	16233.8	-99.57
72	[BLMCCA	13.800]	AMPS	14906.8	-99.71	0.0	0.00
73	[BLMCCB	13.800]	AMPS	14906.8	-99.71	0.0	0.00
86	[CC13.8	13.800]	AMPS	18571.7	-98.81	0.0	0.00
87	[CAL115	115.00]	AMPS	7407.5	-62.09	9423.3	-61.21
88	[EST115	115.00]	AMPS	6291.6	-61.07	8632.9	-61.35
89	[EST.13	13.800]	AMPS	49347.0	-61.68	29483.5	-64.28
90	[EST-13L	13.800]	AMPS	21791.0	-62.15	22747.3	-62.34
91	[EST-13T	13.800]	AMPS	21791.0	-62.15	22747.3	-62.34
92	[L.V115	115.00]	AMPS	6971.4	-61.64	9494.6	-61.88
93	[L.V.13	13.800]	AMPS	53550.4	-62.19	30362.9	-64.65
94	[LV-13.8L	13.800]	AMPS	21960.4	-61.71	22841.7	-61.87
95	[LV-13.8T	13.800]	AMPS	21960.4	-61.71	22841.7	-61.87
96	[FOR230	230.00]	AMPS	8424.8	-61.85	8750.3	-63.30
97	[FOR13A	13.800]	AMPS	60595.9	-62.56	53350.2	-62.96
98	[FOR13B	13.800]	AMPS	60595.9	-62.56	53350.2	-62.96
99	[FOR13C	13.800]	AMPS	60595.9	-62.56	53350.2	-62.96
100	[BAY230	230.00]	AMPS	4676.5	-81.10	5278.8	-83.90
101	[BAY13A	13.800]	AMPS	36267.0	-86.99	31726.7	-88.25
102	[BAY13B	13.800]	AMPS	36267.0	-86.98	31726.7	-88.24
103	[COPESA23	230.00]	AMPS	5196.8	-78.52	5388.0	-82.14
104	[COPESA13	13.800]	AMPS	18668.1	-93.59	0.0	0.00
105	[PAN-AM23	230.00]	AMPS	5160.9	-76.93	5418.0	-80.97
106	[PANAM13A	13.800]	AMPS	30308.1	-88.76	25952.8	-89.57
107	[PANAM13B	13.800]	AMPS	14620.6	-93.29	0.0	0.00
108	[BAY13C	13.800]	AMPS	36788.6	-87.01	35251.3	-88.09
109	[STA RITA115	115.00]	AMPS	7414.5	-86.37	7111.0	-87.64
110	[PTMD115A	115.00]	AMPS	5596.3	-87.35	4484.6	-87.55
111	[PTMD115B	115.00]	AMPS	5596.3	-87.35	4484.6	-87.55
112	[TGP13.8	13.800]	AMPS	69353.1	-84.26	0.0	0.00
113	[TGP13A	13.800]	AMPS	18948.4	-97.54	0.0	0.00
114	[TGP13B	13.800]	AMPS	18948.4	-97.54	0.0	0.00
115	[PACORA23	230.00]	AMPS	4967.2	-79.56	5040.8	-82.88
116	[PACORA13	13.800]	AMPS	26580.4	-91.42	22567.2	-93.31
142	[CANJ13A	13.800]	AMPS	16085.8	-54.15	13143.2	-54.23
143	[CANJ13B	13.800]	AMPS	16085.8	-54.15	13143.2	-54.23
144	[CANJ230	230.00]	AMPS	6504.1	-63.11	5798.1	-62.73
147	[GUASQ230	230.00]	AMPS	6782.0	-63.12	6137.0	-62.87
148	[VELAD230	230.00]	AMPS	6656.4	-65.47	5340.6	-65.16
154	[CEMPAN15	115.00]	AMPS	5604.1	-86.12	4339.0	-87.75
160	[GEEHAN13.8	13.800]	AMPS	5005.7	-93.77	0.0	0.00
190	[CHANG230	230.00]	AMPS	4107.9	-54.34	1512.6	-60.50
191	[CHANG115	115.00]	AMPS	2623.2	-59.63	2424.4	-61.08
192	[CHANG34	34.500]	AMPS	3910.9	-60.99	2253.8	-63.46
301	[CONC13.8	13.800]	AMPS	23326.2	-67.82	8745.3	-70.66
302	[PASOANCH13.8	13.800]	AMPS	21533.2	-67.94	1865.3	-71.56
303	[SIND13.8	13.800]	AMPS	14333.7	-62.11	7805.4	-62.32
306	[CHANG75	230.00]	AMPS	4654.5	-54.61	1080.9	-55.46
307	[CHANG75A	13.800]	AMPS	41598.5	-53.82	27468.7	-54.92
308	[CHANG75B	13.800]	AMPS	41598.5	-53.82	27468.7	-54.92
310	[CONCEPCION23	230.00]	AMPS	5630.4	-61.59	3574.3	-60.60

317	[MENDRE13.8	13.800]	AMPS	19162.6	-61.24	14567.5	-61.38
320	[CONCEP34.5	34.500]	AMPS	9453.7	-67.42	0.0	0.00
321	[CALDERA34.5	34.500]	AMPS	9313.4	-62.77	0.0	0.00
340	[PEDGALITO138	13.800]	AMPS	19205.8	-65.84	15210.8	-66.06
511	[LGUIAS230	230.00]	AMPS	3608.9	-75.12	2811.6	-75.77
512	[LGUIAS 34.5	34.500]	AMPS	5295.3	-87.15	0.0	0.00
515	[PANPOWER230	230.00]	AMPS	4064.8	-81.00	3247.2	-82.20
516	[PANAPOW13A	13.800]	AMPS	19186.2	-91.93	8352.3	-93.99
6000	[FRONTER	230.00]	AMPS	5410.0	-61.05	3521.1	-62.24

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 11:49
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2010 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTGBC7 FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)	/I+/ AN(I+)	/IA/ AN(IA)
123	[MIR115	115.00]	AMPS	8437.4	-81.12	8440.5	-85.66
124	[MIR44	44.000]	AMPS	11491.3	-91.93	13816.1	-92.38
126	[MIR13A	12.000]	AMPS	13221.6	-95.78	8702.8	-96.40
127	[MIR13B	12.000]	AMPS	13314.3	-95.79	8729.5	-96.43
128	[MIR13C	12.000]	AMPS	11339.7	-89.76	0.0	0.00
129	[MIR13D	13.800]	AMPS	11515.9	-89.85	0.0	0.00
130	[MIR13F	13.800]	AMPS	19709.8	-95.86	18935.8	-96.55
131	[BAL44	44.000]	AMPS	7320.0	-90.02	6347.3	-89.08
132	[SUM44	44.000]	AMPS	7300.4	-86.51	7507.9	-86.49
133	[MAD44	44.000]	AMPS	4113.7	-82.85	4977.2	-84.37
134	[MAD6A	6.9000]	AMPS	12245.8	-86.57	10276.8	-87.95
135	[MAD6B	6.9000]	AMPS	12179.0	-86.57	10245.4	-87.93
136	[MAD6C	6.9000]	AMPS	12187.9	-86.57	10249.6	-87.93
137	[GAM44	44.000]	AMPS	5242.4	-83.88	4409.4	-81.84
138	[ACL44	44.000]	AMPS	2791.7	-80.86	3253.5	-80.22
139	[GAT44	44.000]	AMPS	2753.9	-80.69	3322.7	-82.48
140	[GAT6A	6.9000]	AMPS	10824.8	-85.46	9963.5	-87.34
141	[GAT6B	6.9000]	AMPS	11428.0	-83.78	10703.7	-85.60

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 11:49
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2010 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTGBC7 FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)	/I+/ AN(I+)	/IA/ AN(IA)
56	[L.M.44	44.000]	AMPS	6794.8	-97.58	8796.0	-98.50
57	[L.M.13	13.800]	AMPS	14571.3	-99.32	7182.7	-103.38
58	[MHOPE	44.000]	AMPS	3761.5	-88.67	2910.1	-87.15
61	[FFIELD	115.00]	AMPS	6321.0	-86.75	6594.3	-85.49
63	[RCITY	44.000]	AMPS	4128.4	-93.29	3349.7	-90.64
64	[COLON44	44.000]	AMPS	4119.9	-93.28	3338.9	-90.62

AÑO 2013
CASO MHTGBC7

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)	/I+/ AN(I+)	/IA/ AN(IA)
1	[PAN230	230.00]	AMPS	7044.2	-79.61	6781.1	-83.87
2	[PAN115	115.00]	AMPS	12700.3	-80.63	12202.8	-86.10
3	[PANII230	230.00]	AMPS	6877.5	-79.74	6610.0	-83.69
4	[PANIII115	115.00]	AMPS	9339.2	-84.24	8814.7	-88.69
5	[CHO230	230.00]	AMPS	6039.2	-79.89	6033.0	-83.91
6	[CHO115	115.00]	AMPS	4644.3	-89.88	5461.2	-91.84
7	[CHO34	34.500]	AMPS	7396.7	-93.22	7206.7	-97.57
8	[LSA230	230.00]	AMPS	6008.5	-72.65	5100.1	-74.95
9	[LSA115	115.00]	AMPS	5585.2	-79.21	5749.5	-81.96
10	[L.S.34	34.500]	AMPS	6450.0	-86.88	4504.0	-90.23
11	[M.N230	230.00]	AMPS	8483.1	-63.54	6953.4	-62.55
12	[M.N115	115.00]	AMPS	9068.1	-65.87	8891.5	-65.07
13	[MDNA34	34.500]	AMPS	11700.1	-67.69	5662.5	-71.85
14	[PRO230	230.00]	AMPS	5258.9	-61.82	3757.6	-63.73
15	[PRO115	115.00]	AMPS	4424.7	-67.20	4806.0	-67.75
16	[PRO34	34.500]	AMPS	7169.0	-69.48	4310.8	-71.56
18	[CAC115	115.00]	AMPS	12571.7	-80.84	11989.6	-86.30
19	[C.V115	115.00]	AMPS	8655.9	-83.64	6508.7	-87.76
20	[CH.AZUL	115.00]	AMPS	2288.0	-63.77	1730.3	-62.03
21	[C.BAN115	115.00]	AMPS	11036.2	-81.02	9006.3	-86.84
23	[CH115	115.00]	AMPS	6522.9	-87.56	4454.1	-89.58
26	[LOC115	115.00]	AMPS	11371.4	-80.73	9986.2	-86.42
30	[MAR115	115.00]	AMPS	10098.6	-81.47	7824.0	-86.47
33	[STM115	115.00]	AMPS	11340.3	-81.29	10064.0	-86.32
37	[SAN115	115.00]	AMPS	10473.0	-81.62	7762.3	-87.44
48	[TINAJ115	115.00]	AMPS	9585.4	-83.16	6879.6	-88.01
50	[M.O115	115.00]	AMPS	10207.0	-82.61	7761.9	-87.75
52	[TOC115	115.00]	AMPS	7442.0	-85.36	5499.0	-88.11
54	[LM1115	115.00]	AMPS	10615.2	-90.42	11459.2	-93.04
55	[LM2115	115.00]	AMPS	10626.9	-90.50	11391.1	-92.84
66	[BLM13B	13.800]	AMPS	32073.4	-99.92	24375.9	-100.57
67	[BLM13C	13.800]	AMPS	33558.4	-99.97	33350.2	-100.39
68	[BLM13D	13.800]	AMPS	34213.3	-99.91	33778.9	-100.37
69	[TGJB13.8	13.800]	AMPS	43800.6	-96.94	35056.3	-97.74
70	[TGJB13A	13.800]	AMPS	36894.0	-96.70	32286.0	-97.13
71	[TGJB13B	13.800]	AMPS	36894.0	-96.70	32286.0	-97.13
72	[BLMCCA	13.800]	AMPS	24035.9	-100.57	20223.0	-101.19
73	[BLMCCB	13.800]	AMPS	34542.8	-99.90	30945.5	-100.43
86	[CC13.8	13.800]	AMPS	34855.1	-99.94	27374.5	-100.91
87	[CAL115	115.00]	AMPS	7287.3	-63.80	9282.3	-62.93
88	[EST115	115.00]	AMPS	6194.6	-62.80	8504.5	-63.08
89	[EST.13	13.800]	AMPS	48595.3	-63.42	29130.2	-66.03
90	[EST-13L	13.800]	AMPS	21364.7	-63.98	22307.6	-64.17
91	[EST-13T	13.800]	AMPS	21364.7	-63.98	22307.6	-64.17
92	[L.V115	115.00]	AMPS	6861.5	-63.37	9351.7	-63.62
93	[L.V.13	13.800]	AMPS	52755.8	-63.97	30030.7	-66.44
94	[LV-13.8L	13.800]	AMPS	21616.7	-63.92	22490.0	-64.09
95	[LV-13.8T	13.800]	AMPS	21616.7	-63.92	22490.0	-64.09
96	[FOR230	230.00]	AMPS	9069.0	-63.40	9179.6	-64.72
97	[FOR13A	13.800]	AMPS	61104.2	-63.93	53568.1	-64.28
98	[FOR13B	13.800]	AMPS	61104.2	-63.93	53568.1	-64.28
99	[FOR13C	13.800]	AMPS	61104.2	-63.93	53568.1	-64.28
100	[BAY230	230.00]	AMPS	5026.6	-82.99	5549.5	-85.75
101	[BAY13A	13.800]	AMPS	36893.5	-87.36	32041.5	-88.47
102	[BAY13B	13.800]	AMPS	36893.5	-87.32	32041.5	-88.43
103	[COPESA23	230.00]	AMPS	5796.0	-81.27	5765.9	-84.85
104	[COPESA13	13.800]	AMPS	18729.2	-95.90	0.0	0.00
105	[PAN-AM23	230.00]	AMPS	6001.3	-80.01	5985.0	-83.99
106	[PANAM13A	13.800]	AMPS	30219.9	-90.11	25719.3	-90.76
107	[PANAM13B	13.800]	AMPS	30219.9	-90.11	25719.3	-90.76
108	[BAY13C	13.800]	AMPS	37418.1	-87.34	35631.6	-88.30
109	[STA RITA115	115.00]	AMPS	9563.7	-90.26	8322.0	-90.59
110	[PTMD115A	115.00]	AMPS	6358.4	-90.81	4796.9	-90.12
111	[PTMD115B	115.00]	AMPS	6358.4	-90.81	4796.9	-90.12
112	[TGP13.8	13.800]	AMPS	77393.4	-87.75	0.0	0.00
113	[TGP13A	13.800]	AMPS	19459.7	-100.46	0.0	0.00
114	[TGP13B	13.800]	AMPS	19459.7	-100.46	0.0	0.00
115	[PACORA23	230.00]	AMPS	5514.0	-82.22	5369.0	-85.40
116	[PACORA13	13.800]	AMPS	31016.1	-92.45	29063.0	-93.85
142	[CANJ13A	13.800]	AMPS	16113.5	-55.43	13155.4	-55.50
143	[CANJ13B	13.800]	AMPS	16113.5	-55.43	13155.4	-55.50
144	[CANJ230	230.00]	AMPS	6961.4	-64.56	6011.8	-63.90
147	[GUASQ230	230.00]	AMPS	7287.2	-64.59	6381.9	-64.06
148	[VELAD230	230.00]	AMPS	7195.1	-67.19	5528.8	-66.49
149	[GUASQ34	34.500]	AMPS	4898.6	-66.21	4177.6	-66.39
150	[GUALAC34	34.500]	AMPS	4370.3	-63.24	2797.8	-59.21
151	[GUALAC13	13.800]	AMPS	13773.3	-60.78	15173.5	-60.96
154	[CEMPAN15	115.00]	AMPS	6567.7	-89.24	4704.1	-90.08
160	[GEEHAN13.8	13.800]	AMPS	5118.7	-94.28	0.0	0.00
190	[CHANG230	230.00]	AMPS	4486.7	-56.72	2000.3	-61.94
191	[CHANG115	115.00]	AMPS	3462.5	-60.42	3583.7	-61.34
192	[CHANG34	34.500]	AMPS	4389.3	-61.53	2380.1	-63.86
193	[GEBONYIC	13.800]	AMPS	23034.4	-58.63	17848.8	-58.89
204	[BJOMIN13	13.800]	AMPS	28739.8	-64.96	31752.3	-65.42
301	[CONC13.8	13.800]	AMPS	23266.1	-69.35	8773.0	-72.45
302	[PASOANCH13.813.800]	13.800]	AMPS	21475.5	-69.47	1873.9	-73.42

303	[SIND13.8	13.800]	AMPS	13631.0	-64.92	7647.2	-65.15
305	[ELALTO13.8	13.800]	AMPS	44352.1	-65.41	34563.0	-66.05
306	[CHANG75	230.00]	AMPS	4972.6	-57.06	1303.4	-56.36
307	[CHANG75A	13.800]	AMPS	42372.4	-57.49	27690.4	-58.48
308	[CHANG75B	13.800]	AMPS	42372.4	-57.49	27690.4	-58.48
309	[CAISAN230	230.00]	AMPS	4438.6	-62.44	1967.6	-58.40
310	[CONCEPCION23	230.00]	AMPS	6576.3	-62.69	3792.1	-60.90
317	[MENDRE13.8	13.800]	AMPS	14252.9	-64.98	8734.7	-65.19
320	[CONCEP34.5	34.500]	AMPS	9564.2	-67.60	0.0	0.00
321	[CALDERA34.5	34.500]	AMPS	8293.0	-65.50	0.0	0.00
322	[TGGN100A	13.800]	AMPS	27721.0	-99.53	0.0	0.00
323	[TGGN100A	13.800]	AMPS	27721.0	-99.53	0.0	0.00
340	[PEDGALITO138	13.800]	AMPS	19169.0	-65.79	15131.3	-65.95
511	[LGUIAS230	230.00]	AMPS	3832.7	-77.50	2873.6	-77.74
512	[LGUIAS 34.5	34.500]	AMPS	5274.3	-89.00	0.0	0.00
515	[PANPOWER230	230.00]	AMPS	4220.0	-83.80	3279.2	-84.59
516	[PANAPOW13A	13.800]	AMPS	15112.3	-94.90	0.0	0.00
517	[PANAPOW13B	13.800]	AMPS	15112.3	-94.90	0.0	0.00
6000	[FRONTER	230.00]	AMPS	5109.7	-61.72	3429.9	-62.71

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 11:53
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2013 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTGBC7 FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)		
123	[MIR115	115.00]	AMPS	9379.9	-84.16	9007.5	-88.81
124	[MIR44	44.000]	AMPS	11737.8	-94.87	14050.3	-95.28
126	[MIR13A	12.000]	AMPS	13256.5	-98.52	8709.3	-99.12
127	[MIR13B	12.000]	AMPS	13350.0	-98.54	8736.2	-99.14
128	[MIR13C	12.000]	AMPS	11397.0	-92.50	0.0	0.00
129	[MIR13D	13.800]	AMPS	11585.3	-92.60	0.0	0.00
130	[MIR13F	13.800]	AMPS	19824.3	-98.64	19005.9	-99.30
131	[BAL44	44.000]	AMPS	7420.2	-92.80	6393.6	-91.85
132	[SUM44	44.000]	AMPS	7379.4	-89.26	7561.7	-89.23
133	[MAD44	44.000]	AMPS	4130.4	-85.57	4993.2	-87.10
134	[MAD6A	6.9000]	AMPS	12262.6	-89.32	10284.7	-90.70
135	[MAD6B	6.9000]	AMPS	12195.6	-89.31	10253.2	-90.67
136	[MAD6C	6.9000]	AMPS	12204.5	-89.31	10257.4	-90.68
137	[GAM44	44.000]	AMPS	5279.4	-86.59	4425.1	-84.58
138	[ACL44	44.000]	AMPS	2798.9	-83.61	3259.5	-82.98
139	[GAT44	44.000]	AMPS	2760.7	-83.44	3329.1	-85.25
140	[GAT6A	6.9000]	AMPS	10839.8	-88.28	9972.1	-90.18
141	[GAT6B	6.9000]	AMPS	11443.7	-86.60	10713.1	-88.43

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 11:53
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2013 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTGBC7 FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)		
56	[L.M.44	44.000]	AMPS	7436.5	-100.45	9509.7	-101.20
57	[L.M.13	13.800]	AMPS	15497.6	-101.65	7355.3	-105.10
58	[MHOPE	44.000]	AMPS	3971.4	-90.34	3002.4	-88.54
61	[FFIELD	115.00]	AMPS	8012.7	-90.32	7754.5	-87.98
63	[RCITY	44.000]	AMPS	4375.2	-95.25	3467.7	-92.16
64	[COLON44	44.000]	AMPS	4365.7	-95.23	3456.2	-92.14

AÑO 2016
CASO MHTGBC7

X----- BUS -----X			THREE PHASE FAULT		ONE PHASE FAULT		
			/I+/	AN(I+)	/IA/	AN(IA)	
1	[PAN230	230.00]	AMPS	7829.1	-79.60	7265.3	-84.02
2	[PAN115	115.00]	AMPS	14309.1	-79.34	13092.9	-85.31
3	[PANII230	230.00]	AMPS	7546.5	-79.90	7012.7	-83.98
4	[PANII115	115.00]	AMPS	10017.3	-84.28	9202.1	-88.86
5	[CHO230	230.00]	AMPS	6488.0	-80.71	6329.5	-84.80
6	[CHO115	115.00]	AMPS	4785.2	-90.73	5589.2	-92.76
7	[CHO34	34.500]	AMPS	7519.8	-93.91	7275.6	-98.65
8	[LSA230	230.00]	AMPS	6286.5	-75.96	5251.7	-78.26
9	[LSA115	115.00]	AMPS	5752.3	-82.47	5865.6	-85.40
10	[L.S.34	34.500]	AMPS	6544.1	-90.48	4529.7	-94.00
11	[M.N230	230.00]	AMPS	8485.2	-69.89	6971.8	-68.92
12	[M.N115	115.00]	AMPS	9033.4	-72.33	8858.2	-71.60
13	[MDNA34	34.500]	AMPS	11671.3	-74.21	5637.1	-78.80
14	[PRO230	230.00]	AMPS	5275.7	-68.56	3757.3	-70.48
15	[PRO115	115.00]	AMPS	4445.8	-73.94	4807.0	-74.52
16	[PRO34	34.500]	AMPS	7203.3	-76.28	4301.1	-78.47
18	[CAC115	115.00]	AMPS	14167.8	-79.54	12862.7	-85.46
19	[C.V115	115.00]	AMPS	9273.1	-83.36	6721.4	-87.63
20	[CH.AZUL	115.00]	AMPS	2299.6	-70.55	1735.7	-68.88
21	[C.BAN115	115.00]	AMPS	12209.2	-79.91	9472.4	-86.19
23	[CH115	115.00]	AMPS	7131.3	-84.56	4626.3	-86.36
26	[LOC115	115.00]	AMPS	12627.8	-79.55	10565.2	-85.72
30	[MAR115	115.00]	AMPS	11092.1	-80.31	8178.6	-85.66
33	[STM115	115.00]	AMPS	12608.2	-80.08	10663.1	-85.47
37	[SAN115	115.00]	AMPS	11511.3	-80.65	8103.1	-86.85
48	[TINAJ115	115.00]	AMPS	10478.4	-82.12	7154.3	-87.15
50	[M.O115	115.00]	AMPS	11225.1	-81.53	8113.1	-86.92
52	[TOC115	115.00]	AMPS	7863.4	-85.40	5641.9	-88.15
54	[LM1115	115.00]	AMPS	13849.5	-85.62	13758.5	-87.97
55	[LM2115	115.00]	AMPS	13774.6	-85.43	13600.6	-87.54
66	[BLM13B	13.800]	AMPS	32751.6	-91.56	24633.5	-92.00
67	[BLM13C	13.800]	AMPS	34241.0	-91.59	33795.6	-91.88
68	[BLM13D	13.800]	AMPS	34959.8	-91.77	34259.1	-92.09
69	[TGJB13.8	13.800]	AMPS	45049.6	-90.39	35584.1	-90.93
70	[TGJB13A	13.800]	AMPS	37510.4	-89.92	32597.8	-90.21
71	[TGJB13B	13.800]	AMPS	37510.4	-89.92	32597.8	-90.21
72	[BLMCCA	13.800]	AMPS	40903.7	-88.09	41240.5	-88.28
73	[BLMCCB	13.800]	AMPS	42509.9	-87.48	42123.8	-87.68
86	[CC13.8	13.800]	AMPS	49320.7	-88.56	45255.9	-88.97
87	[CAL115	115.00]	AMPS	7201.9	-70.30	9173.5	-69.45
88	[EST115	115.00]	AMPS	6110.5	-69.30	8389.3	-69.59
89	[EST.13	13.800]	AMPS	47856.8	-69.93	28690.7	-72.58
90	[EST-13L	13.800]	AMPS	20736.2	-70.41	21651.4	-70.61
91	[EST-13T	13.800]	AMPS	20736.2	-70.41	21651.4	-70.61
92	[L.V115	115.00]	AMPS	6776.3	-69.89	9235.7	-70.14
93	[L.V.13	13.800]	AMPS	52009.5	-70.52	29609.2	-73.04
94	[LV-13.8L	13.800]	AMPS	20980.8	-70.57	21828.5	-70.73
95	[LV-13.8T	13.800]	AMPS	20980.8	-70.57	21828.5	-70.73
96	[FOR230	230.00]	AMPS	8989.6	-69.96	9145.7	-71.28
97	[FOR13A	13.800]	AMPS	61101.2	-70.57	53610.0	-70.92
98	[FOR13B	13.800]	AMPS	61101.2	-70.57	53610.0	-70.92
99	[FOR13C	13.800]	AMPS	61101.2	-70.57	53610.0	-70.92
100	[BAY230	230.00]	AMPS	5261.0	-83.20	5739.1	-85.96
101	[BAY13A	13.800]	AMPS	37394.7	-87.50	32358.8	-88.56
102	[BAY13B	13.800]	AMPS	37394.7	-87.51	32358.8	-88.57
103	[COPESA23	230.00]	AMPS	6236.0	-81.50	6049.6	-85.13
104	[COPESA13	13.800]	AMPS	18969.5	-96.06	0.0	0.00
105	[PAN-AM23	230.00]	AMPS	6442.9	-80.82	6275.8	-84.88
106	[PANAM13A	13.800]	AMPS	30436.7	-90.78	25844.6	-91.38
107	[PANAM13B	13.800]	AMPS	30436.7	-90.78	25844.6	-91.38
108	[BAY13C	13.800]	AMPS	37923.4	-87.53	35999.9	-88.44
109	[STA RITA115	115.00]	AMPS	13167.4	-85.87	9902.0	-84.77
110	[PTMD115A	115.00]	AMPS	7196.7	-87.64	5099.3	-86.11
111	[PTMD115B	115.00]	AMPS	7196.7	-87.64	5099.3	-86.11
112	[TGP13.8	13.800]	AMPS	84132.8	-87.11	0.0	0.00
113	[TGP13A	13.800]	AMPS	19856.9	-99.65	0.0	0.00
114	[TGP13B	13.800]	AMPS	19856.9	-99.65	0.0	0.00
115	[PACORA23	230.00]	AMPS	5871.9	-82.40	5590.4	-85.59
116	[PACORA13	13.800]	AMPS	31219.6	-91.63	29135.8	-93.06
142	[CANJ13A	13.800]	AMPS	16111.1	-60.84	13154.4	-60.91
143	[CANJ13B	13.800]	AMPS	16111.1	-60.84	13154.4	-60.91
144	[CANJ230	230.00]	AMPS	6976.4	-70.75	6041.4	-70.10
147	[GUASQ230	230.00]	AMPS	7300.8	-70.78	6411.9	-70.26
148	[VELAD230	230.00]	AMPS	7348.7	-72.43	5621.3	-71.70
149	[GUASQ34	34.500]	AMPS	4922.9	-72.47	4198.9	-72.65
150	[GUALAC34	34.500]	AMPS	4386.1	-69.49	2808.3	-65.47
151	[GUALAC13	13.800]	AMPS	13772.5	-67.05	15172.9	-67.24
154	[CEMPAN15	115.00]	AMPS	7391.7	-84.77	4966.2	-85.15
160	[GEEHAN13.8	13.800]	AMPS	5118.3	-93.32	0.0	0.00

190	[CHANG230	230.00]	AMPS	3994.0	-65.96	1934.4	-71.54
191	[CHANG115	115.00]	AMPS	3213.5	-70.98	3404.5	-72.05
192	[CHANG34	34.500]	AMPS	4268.4	-72.31	2358.1	-75.03
193	[GEBONYIC	13.800]	AMPS	17999.3	-72.04	12876.1	-72.47
204	[BJOMIN13	13.800]	AMPS	28727.9	-72.49	31742.7	-72.95
301	[CONC13.8	13.800]	AMPS	23190.4	-76.08	8728.6	-79.49
302	[PASOANCH13.813	13.800]	AMPS	21405.8	-76.19	1863.3	-80.54
303	[SIND13.8	13.800]	AMPS	13553.4	-71.61	7603.7	-71.85
305	[ELALTO13.8	13.800]	AMPS	44338.1	-72.64	34557.4	-73.29
306	[CHANG75	230.00]	AMPS	4248.6	-65.99	1269.1	-66.29
307	[CHANG75A	13.800]	AMPS	40539.6	-66.94	27158.0	-68.23
308	[CHANG75B	13.800]	AMPS	26245.1	-70.97	0.0	0.00
309	[CAISAN230	230.00]	AMPS	4445.5	-69.32	1971.4	-65.30
310	[CONCEPCION23230	230.00]	AMPS	6588.6	-69.34	3800.7	-67.58
317	[MENDRE13.8	13.800]	AMPS	14252.9	-71.62	8734.7	-71.84
320	[CONCEP34.5	34.500]	AMPS	9614.4	-74.43	0.0	0.00
321	[CALDERA34.5	34.500]	AMPS	8245.7	-72.13	0.0	0.00
322	[TGGN100A	13.800]	AMPS	48936.6	-89.96	32623.5	-91.24
323	[TGGN100B	13.800]	AMPS	48936.6	-89.96	32623.5	-91.24
340	[PEDGALITO13813	13.800]	AMPS	19279.1	-72.77	15219.1	-72.93
511	[LGUIAS230	230.00]	AMPS	3987.6	-79.77	2944.4	-79.95
512	[LGUIAS 34.5	34.500]	AMPS	5360.6	-91.19	0.0	0.00
515	[PANPOWER230	230.00]	AMPS	4447.0	-84.71	3374.9	-85.30
516	[PANAPOW13A	13.800]	AMPS	15312.0	-95.57	0.0	0.00
517	[PANAPOW13B	13.800]	AMPS	15312.0	-95.57	0.0	0.00
6000	[FRONTER	230.00]	AMPS	5127.3	-68.50	3432.9	-69.50

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 11:56
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2016 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTGBC7 FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X----- BUS -----X	THREE PHASE FAULT		ONE PHASE FAULT			
	/I+/ AN(I+)	/IA/ AN(IA)	/I+/ AN(I+)	/IA/ AN(IA)		
123 [MIR115	115.00]	AMPS	10165.2	-83.12	9459.3	-87.96
124 [MIR44	44.000]	AMPS	11926.2	-94.03	14228.8	-94.44
126 [MIR13A	12.000]	AMPS	13285.3	-97.69	8716.0	-98.27
127 [MIR13B	12.000]	AMPS	13379.6	-97.70	8743.1	-98.30
128 [MIR13C	12.000]	AMPS	11441.0	-91.64	0.0	0.00
129 [MIR13D	13.800]	AMPS	11638.3	-91.74	0.0	0.00
130 [MIR13F	13.800]	AMPS	19909.8	-97.72	19058.1	-98.37
131 [BAL44	44.000]	AMPS	7496.7	-91.89	6428.5	-90.99
132 [SUM44	44.000]	AMPS	7438.3	-88.36	7601.7	-88.35
133 [MAD44	44.000]	AMPS	4142.4	-84.71	5004.8	-86.25
134 [MAD6A	6.9000]	AMPS	12274.9	-88.50	10290.5	-89.88
135 [MAD6B	6.9000]	AMPS	12207.7	-88.49	10258.9	-89.86
136 [MAD6C	6.9000]	AMPS	12216.7	-88.49	10263.1	-89.86
137 [GAM44	44.000]	AMPS	5306.8	-85.69	4436.6	-83.72
138 [ACL44	44.000]	AMPS	2804.5	-82.73	3264.2	-82.13
139 [GAT44	44.000]	AMPS	2766.0	-82.56	3334.1	-84.40
140 [GAT6A	6.9000]	AMPS	10851.8	-87.42	9979.0	-89.34
141 [GAT6B	6.9000]	AMPS	11456.3	-85.80	10720.6	-87.65

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 11:56
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2016 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTGBC7 FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X----- BUS -----X	THREE PHASE FAULT		ONE PHASE FAULT			
	/I+/ AN(I+)	/IA/ AN(IA)	/I+/ AN(I+)	/IA/ AN(IA)		
56 [L.M.44	44.000]	AMPS	7907.7	-94.48	10016.9	-95.12
57 [L.M.13	13.800]	AMPS	16125.0	-95.33	7442.7	-98.52
58 [MHOPE	44.000]	AMPS	4106.5	-83.57	3053.3	-81.67
61 [FFIELD	115.00]	AMPS	9722.0	-84.87	8753.9	-81.61
63 [RCITY	44.000]	AMPS	4537.8	-88.69	3535.4	-85.37
64 [COLON44	44.000]	AMPS	4527.7	-88.67	3523.4	-85.35

AÑO 2013
CASO MHTGDC7

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)	/I+/ AN(I+)	/IA/ AN(IA)
1	[PAN230	230.00]	AMPS	7037.4	-79.69	6787.6	-83.92
2	[PAN115	115.00]	AMPS	12702.6	-80.59	12217.4	-86.04
3	[PAN1230	230.00]	AMPS	6865.1	-79.83	6610.8	-83.76
4	[PAN1115	115.00]	AMPS	9372.5	-84.35	8864.6	-88.78
5	[CHO230	230.00]	AMPS	6035.2	-80.08	6033.5	-84.08
6	[CHO115	115.00]	AMPS	4657.7	-90.04	5464.8	-92.01
7	[CHO34	34.500]	AMPS	7426.1	-93.43	7207.1	-97.81
8	[LSA230	230.00]	AMPS	5953.1	-73.29	5085.0	-75.59
9	[LSA115	115.00]	AMPS	5577.8	-79.83	5754.8	-82.58
10	[L.S.34	34.500]	AMPS	6471.8	-87.50	4525.6	-90.86
11	[M.N230	230.00]	AMPS	8038.3	-64.61	6745.8	-63.79
12	[M.N115	115.00]	AMPS	8846.3	-67.00	8724.7	-66.29
13	[MDNA34	34.500]	AMPS	11555.2	-68.94	5610.6	-73.21
14	[PRO230	230.00]	AMPS	4945.9	-63.09	3631.8	-65.12
15	[PRO115	115.00]	AMPS	4311.4	-68.54	4694.6	-69.16
16	[PRO34	34.500]	AMPS	7077.1	-70.98	4257.8	-73.17
18	[CAC115	115.00]	AMPS	12574.8	-80.80	12004.6	-86.22
19	[C.V115	115.00]	AMPS	8674.7	-83.70	6522.2	-87.78
20	[CH.AZUL	115.00]	AMPS	2256.8	-65.30	1715.1	-63.64
21	[C.BAN115	115.00]	AMPS	11046.2	-80.99	9023.3	-86.79
23	[CH115	115.00]	AMPS	6532.1	-87.30	4462.9	-89.31
26	[LOC115	115.00]	AMPS	11380.1	-80.70	10002.8	-86.36
30	[MAR115	115.00]	AMPS	10106.8	-81.42	7838.3	-86.40
33	[STM115	115.00]	AMPS	11345.5	-81.24	10079.1	-86.25
37	[SAN115	115.00]	AMPS	10484.7	-81.59	7779.3	-87.39
48	[TINAJ115	115.00]	AMPS	9593.2	-83.10	6893.0	-87.93
50	[M.O115	115.00]	AMPS	10214.0	-82.56	7776.0	-87.68
52	[TOC115	115.00]	AMPS	7455.9	-85.46	5508.9	-88.16
54	[LM1115	115.00]	AMPS	10623.6	-89.90	11465.9	-92.51
55	[LM2115	115.00]	AMPS	10636.1	-89.97	11398.5	-92.31
66	[BLM13B	13.800]	AMPS	32070.1	-98.60	24374.6	-99.25
67	[BLM13C	13.800]	AMPS	33555.0	-98.65	33347.9	-99.07
68	[BLM13D	13.800]	AMPS	34209.6	-98.75	33776.4	-99.21
69	[TGJB13.8	13.800]	AMPS	43806.0	-96.41	35062.9	-97.21
70	[TGJB13A	13.800]	AMPS	36890.9	-96.17	32284.4	-96.60
71	[TGJB13B	13.800]	AMPS	36890.9	-96.17	32284.4	-96.60
72	[BLMCCA	13.800]	AMPS	24044.2	-100.04	20231.0	-100.66
73	[BLMCCB	13.800]	AMPS	34539.1	-99.36	30943.5	-99.89
86	[CC13.8	13.800]	AMPS	34865.3	-99.40	27384.6	-100.38
87	[CAL115	115.00]	AMPS	7125.8	-64.96	9087.7	-64.11
88	[EST115	115.00]	AMPS	6059.0	-63.96	8323.0	-64.24
89	[EST.13	13.800]	AMPS	47518.4	-64.57	28574.7	-67.21
90	[EST-13L	13.800]	AMPS	20720.8	-65.02	21640.2	-65.22
91	[EST-13T	13.800]	AMPS	20720.8	-65.02	21640.2	-65.22
92	[L.V115	115.00]	AMPS	6710.4	-64.53	9152.1	-64.78
93	[L.V.13	13.800]	AMPS	51591.4	-65.13	29478.7	-67.64
94	[LV-13.8L	13.800]	AMPS	20964.1	-64.97	21816.4	-65.14
95	[LV-13.8T	13.800]	AMPS	20964.1	-64.97	21816.4	-65.14
96	[FOR230	230.00]	AMPS	8774.2	-64.50	8978.1	-65.84
97	[FOR13A	13.800]	AMPS	60963.8	-65.16	53539.4	-65.52
98	[FOR13B	13.800]	AMPS	60963.8	-65.16	53539.4	-65.52
99	[FOR13C	13.800]	AMPS	60963.8	-65.16	53539.4	-65.52
100	[BAY230	230.00]	AMPS	5024.6	-83.05	5552.1	-85.79
101	[BAY13A	13.800]	AMPS	36868.2	-87.35	32028.9	-88.47
102	[BAY13B	13.800]	AMPS	36868.2	-87.36	32028.9	-88.48
103	[COPESA23	230.00]	AMPS	5791.7	-81.34	5770.8	-84.91
104	[COPESA13	13.800]	AMPS	18799.2	-95.94	0.0	0.00
105	[PAN-AM23	230.00]	AMPS	5997.7	-80.20	5985.9	-84.17
106	[PANAM13A	13.800]	AMPS	30351.3	-90.35	25836.6	-91.00
107	[PANAM13B	13.800]	AMPS	30351.3	-90.35	25836.6	-91.00
108	[BAY13C	13.800]	AMPS	37392.8	-87.39	35616.3	-88.34
109	[STA RITA115	115.00]	AMPS	9572.1	-89.79	8330.5	-90.11
110	[PTMD115A	115.00]	AMPS	6367.9	-90.50	4806.1	-89.81
111	[PTMD115B	115.00]	AMPS	6367.9	-90.50	4806.1	-89.81
112	[TGP13.8	13.800]	AMPS	77464.5	-87.69	0.0	0.00
113	[TGP13A	13.800]	AMPS	19506.5	-100.38	0.0	0.00
114	[TGP13B	13.800]	AMPS	19506.5	-100.38	0.0	0.00
115	[PACORA23	230.00]	AMPS	5512.4	-82.30	5375.5	-85.46
116	[PACORA13	13.800]	AMPS	31124.4	-92.53	29172.9	-93.93
142	[CANJ13A	13.800]	AMPS	16104.6	-56.67	13151.5	-56.74
143	[CANJ13B	13.800]	AMPS	16104.6	-56.67	13151.5	-56.74
144	[CANJ230	230.00]	AMPS	6799.3	-65.65	5933.5	-65.05
147	[GUASQ230	230.00]	AMPS	7108.2	-65.67	6292.6	-65.21
148	[VELAD230	230.00]	AMPS	7016.4	-68.15	5464.6	-67.53
149	[GUASQ34	34.500]	AMPS	4896.4	-67.42	4178.0	-67.60
150	[GUALAC34	34.500]	AMPS	4369.4	-64.46	2798.6	-60.43
151	[GUALAC13	13.800]	AMPS	13770.2	-62.01	15171.0	-62.19
154	[CEMPAN15	115.00]	AMPS	6576.5	-88.83	4712.0	-89.67
160	[GEEHAN13.8	13.800]	AMPS	5139.3	-94.37	0.0	0.00
190	[CHANG230	230.00]	AMPS	4468.7	-57.49	1988.0	-62.71
191	[CHANG115	115.00]	AMPS	3459.1	-61.18	3565.4	-62.11
192	[CHANG34	34.500]	AMPS	4376.3	-62.30	2358.8	-64.66
193	[GEBONYIC	13.800]	AMPS	23030.1	-59.39	17847.0	-59.66
204	[BJOMIN13	13.800]	AMPS	27298.9	-66.68	30566.9	-67.31
301	[CONC13.8	13.800]	AMPS	23016.0	-70.64	8699.1	-73.83
302	[PASOANCH13.813.800]	13.800]	AMPS	21243.0	-70.76	1859.1	-74.83

303	[SIND13.8	13.800]	AMPS	13527.0	-66.10	7592.0	-66.34
306	[CHANG75	230.00]	AMPS	4946.9	-57.77	1298.1	-57.09
307	[CHANG75A	13.800]	AMPS	42312.6	-57.73	27673.4	-58.73
308	[CHANG75B	13.800]	AMPS	42312.6	-57.73	27673.4	-58.73
309	[CAISAN230	230.00]	AMPS	3633.0	-63.31	1841.8	-60.57
310	[CONCEPCION23	230.00]	AMPS	5906.1	-63.75	3625.8	-62.47
317	[MENDRE13.8	13.800]	AMPS	14243.8	-66.16	8732.4	-66.39
320	[CONCEP34.5	34.500]	AMPS	9433.4	-69.21	0.0	0.00
321	[CALDERA34.5	34.500]	AMPS	8222.6	-66.68	0.0	0.00
340	[PEDGALITO138	13.800]	AMPS	19067.6	-67.51	15083.0	-67.70
511	[LGUIAS230	230.00]	AMPS	3829.2	-77.95	2880.1	-78.21
512	[LGUIAS 34.5	34.500]	AMPS	5298.4	-89.46	0.0	0.00
515	[PANPOWER230	230.00]	AMPS	4222.2	-83.95	3288.1	-84.76
516	[PANAPOW13A	13.800]	AMPS	15180.5	-95.05	0.0	0.00
517	[PANAPOW13B	13.800]	AMPS	15180.5	-95.05	0.0	0.00
6000	[FRONTER	230.00]	AMPS	4852.5	-63.01	3338.1	-64.13

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 14:46
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2013 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTGDC7 FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)		
123	[MIR115	115.00]	AMPS	9388.1	-84.10	9021.5	-88.73
124	[MIR44	44.000]	AMPS	11749.2	-94.80	14065.0	-95.21
126	[MIR13A	12.000]	AMPS	13273.8	-98.46	8720.9	-99.05
127	[MIR13B	12.000]	AMPS	13367.5	-98.47	8747.9	-99.07
128	[MIR13C	12.000]	AMPS	11411.4	-92.43	0.0	0.00
129	[MIR13D	13.800]	AMPS	11599.8	-92.53	0.0	0.00
130	[MIR13F	13.800]	AMPS	19822.2	-98.57	19004.6	-99.23
131	[BAL44	44.000]	AMPS	7428.4	-92.73	6401.4	-91.77
132	[SUM44	44.000]	AMPS	7385.3	-89.19	7568.2	-89.16
133	[MAD44	44.000]	AMPS	4131.9	-85.49	4995.1	-87.03
134	[MAD6A	6.9000]	AMPS	12262.3	-89.24	10284.6	-90.62
135	[MAD6B	6.9000]	AMPS	12195.3	-89.24	10253.0	-90.60
136	[MAD6C	6.9000]	AMPS	12204.3	-89.24	10257.2	-90.60
137	[GAM44	44.000]	AMPS	5283.3	-86.52	4428.7	-84.50
138	[ACL44	44.000]	AMPS	2799.8	-83.53	3260.5	-82.91
139	[GAT44	44.000]	AMPS	2761.5	-83.36	3330.1	-85.17
140	[GAT6A	6.9000]	AMPS	10839.6	-88.20	9972.0	-90.10
141	[GAT6B	6.9000]	AMPS	11443.5	-86.52	10712.9	-88.35

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 14:46
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2013 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTGDC7 FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)		
56	[L.M.44	44.000]	AMPS	7426.2	-99.94	9493.8	-100.68
57	[L.M.13	13.800]	AMPS	15460.4	-101.13	7327.6	-104.58
58	[MHOPE	44.000]	AMPS	3960.4	-89.80	2991.8	-88.01
61	[FFIELD	115.00]	AMPS	8021.0	-89.79	7762.3	-87.45
63	[RCITY	44.000]	AMPS	4363.8	-94.72	3456.0	-91.63
64	[COLON44	44.000]	AMPS	4354.4	-94.71	3444.5	-91.61

AÑO 2016 CASO MHTGDC7

X----- BUS -----X		THREE PHASE FAULT		ONE PHASE FAULT	
		/I+/	AN(I+)	/IA/	AN(IA)
1	[PAN230 230.00] AMPS	7751.2	-79.90	7247.1	-84.21
2	[PAN115 115.00] AMPS	14225.8	-80.53	13252.7	-86.27
3	[PANII230 230.00] AMPS	7560.4	-80.07	7050.5	-84.05
4	[PANII115 115.00] AMPS	10072.4	-84.82	9375.7	-89.29
5	[CHO230 230.00] AMPS	6477.5	-80.46	6339.9	-84.52
6	[CHO115 115.00] AMPS	4818.7	-90.44	5619.5	-92.46
7	[CHO34 34.500] AMPS	7591.2	-93.68	7321.9	-98.40
8	[LSA230 230.00] AMPS	6323.4	-73.81	5273.1	-76.06
9	[LSA115 115.00] AMPS	5760.2	-80.27	5889.1	-83.17
10	[L.S.34 34.500] AMPS	6561.7	-88.17	4559.9	-91.68
11	[M.N230 230.00] AMPS	8604.0	-65.08	7019.0	-64.10
12	[M.N115 115.00] AMPS	9142.4	-67.43	8942.6	-66.71
13	[MDNA34 34.500] AMPS	11734.1	-69.30	5678.5	-73.83
14	[PRO230 230.00] AMPS	5292.8	-63.12	3772.2	-65.05
15	[PRO115 115.00] AMPS	4441.2	-68.50	4820.4	-69.08
16	[PRO34 34.500] AMPS	7187.3	-70.81	4317.0	-72.99
18	[CAC115 115.00] AMPS	14075.6	-80.75	13008.7	-86.46
19	[C.V115 115.00] AMPS	9300.6	-84.06	6790.9	-88.20
20	[CH.AZUL 115.00] AMPS	2293.9	-65.09	1732.9	-63.42
21	[C.BAN115 115.00] AMPS	12171.6	-81.02	9568.1	-87.13
23	[CH115 115.00] AMPS	7037.3	-87.02	4637.9	-88.77
26	[LOC115 115.00] AMPS	12581.7	-80.69	10679.5	-86.66
30	[MAR115 115.00] AMPS	11051.8	-81.48	8249.9	-86.68
33	[STM115 115.00] AMPS	12548.1	-81.26	10775.4	-86.47
37	[SAN115 115.00] AMPS	11486.9	-81.71	8178.2	-87.77
48	[TINAJ115 115.00] AMPS	10442.4	-83.29	7213.1	-88.22
50	[M.O115 115.00] AMPS	11181.3	-82.70	8185.1	-87.97
52	[TOC115 115.00] AMPS	7894.3	-85.91	5703.5	-88.54
54	[LM1115 115.00] AMPS	12904.9	-89.54	13726.4	-91.75
55	[LM2115 115.00] AMPS	12866.6	-89.41	13435.7	-91.01
66	[BLM13B 13.800] AMPS	32582.3	-96.06	24569.6	-96.56
67	[BLM13C 13.800] AMPS	34070.6	-96.10	33684.9	-96.43
68	[BLM13D 13.800] AMPS	34773.3	-96.27	34139.8	-96.62
69	[TGJB13.8 13.800] AMPS	44745.8	-94.89	35460.8	-95.50
70	[TGJB13A 13.800] AMPS	37356.6	-94.49	32520.3	-94.81
71	[TGJB13B 13.800] AMPS	37356.6	-94.49	32520.3	-94.81
72	[BLMCCA 13.800] AMPS	40755.3	-93.62	41140.0	-93.84
73	[BLMCCB 13.800] AMPS	42357.4	-93.32	42024.0	-93.54
86	[CC13.8 13.800] AMPS	49030.1	-94.03	45102.1	-94.49
87	[CAL115 115.00] AMPS	7354.1	-65.40	9334.9	-64.52
88	[EST115 115.00] AMPS	6206.8	-64.39	8508.7	-64.68
89	[EST.13 13.800] AMPS	48462.4	-65.06	28801.4	-67.70
90	[EST-13L 13.800] AMPS	20779.1	-65.85	21682.6	-66.04
91	[EST-13T 13.800] AMPS	20779.1	-65.85	21682.6	-66.04
92	[L.V115 115.00] AMPS	6905.2	-64.97	9393.3	-65.22
93	[L.V.13 13.800] AMPS	52785.0	-65.62	29737.9	-68.11
94	[LV-13.8L 13.800] AMPS	21027.6	-65.77	21862.2	-65.94
95	[LV-13.8T 13.800] AMPS	21027.6	-65.77	21862.2	-65.94
96	[FOR230 230.00] AMPS	9183.2	-65.12	9265.7	-66.44
97	[FOR13A 13.800] AMPS	61300.4	-65.91	53712.0	-66.25
98	[FOR13B 13.800] AMPS	61300.4	-65.91	53712.0	-66.25
99	[FOR13C 13.800] AMPS	61300.4	-65.91	53712.0	-66.25
100	[BAY230 230.00] AMPS	5199.9	-83.12	5683.0	-85.87
101	[BAY13A 13.800] AMPS	36054.4	-87.49	31217.7	-88.55
102	[BAY13B 13.800] AMPS	36054.4	-87.11	31217.7	-88.17
103	[COPESA23 230.00] AMPS	6246.7	-81.60	6079.2	-85.18
104	[COPESA13 13.800] AMPS	19188.6	-96.06	0.0	0.00
105	[PAN-AM23 230.00] AMPS	6433.3	-80.58	6287.0	-84.60
106	[PANAM13A 13.800] AMPS	30745.8	-90.54	26119.2	-91.14
107	[PANAM13B 13.800] AMPS	30745.8	-90.54	26119.2	-91.14
108	[BAY13C 13.800] AMPS	36564.6	-87.13	34727.9	-88.04
109	[STA RITA115 115.00] AMPS	11970.1	-89.89	11184.8	-91.09
110	[PTMD115A 115.00] AMPS	7003.3	-90.57	5218.9	-89.51
111	[PTMD115B 115.00] AMPS	7003.3	-90.57	5218.9	-89.51
112	[TGP13.8 13.800] AMPS	83878.3	-88.25	0.0	0.00
113	[TGP13A 13.800] AMPS	19891.0	-100.80	0.0	0.00
114	[TGP13B 13.800] AMPS	19891.0	-100.80	0.0	0.00
115	[PACORA23 230.00] AMPS	5874.9	-82.48	5610.3	-85.63
116	[PACORA13 13.800] AMPS	31490.2	-91.73	29407.7	-93.15
142	[CANJ13A 13.800] AMPS	16117.0	-60.41	13157.0	-60.48
143	[CANJ13B 13.800] AMPS	16117.0	-60.41	13157.0	-60.48
144	[CANJ230 230.00] AMPS	7057.9	-66.36	6070.0	-65.68
147	[GUASQ230 230.00] AMPS	7392.0	-66.38	6446.1	-65.82
148	[VELAD230 230.00] AMPS	7395.0	-68.72	5626.0	-67.95
149	[GUASQ34 34.500] AMPS	4912.1	-67.97	4188.2	-68.15
150	[GUALAC34 34.500] AMPS	4378.8	-64.99	2802.8	-60.96
151	[GUALAC13 13.800] AMPS	13774.5	-62.54	15174.5	-62.72
154	[CEMPAN15 115.00] AMPS	7212.5	-88.14	4962.6	-88.47
160	[GEEHAN13.8 13.800] AMPS	5168.3	-93.43	0.0	0.00

190	[CHANG230	230.00]	AMPS	4494.6	-58.44	1991.9	-63.70
191	[CHANG115	115.00]	AMPS	3466.8	-62.42	3570.9	-63.39
192	[CHANG34	34.500]	AMPS	4382.5	-63.54	2358.4	-66.13
193	[GEBONYIC	13.800]	AMPS	23040.1	-61.32	17851.0	-61.60
204	[BJOMIN13	13.800]	AMPS	28764.7	-65.50	31772.6	-65.97
301	[CONC13.8	13.800]	AMPS	23335.3	-71.14	8796.3	-74.51
302	[PASOANCH13.813	13.800]	AMPS	21539.6	-71.25	1878.6	-75.55
303	[SIND13.8	13.800]	AMPS	14201.4	-65.60	7728.5	-65.81
305	[ELALTO13.8	13.800]	AMPS	44381.6	-64.86	34574.9	-65.51
306	[CHANG75	230.00]	AMPS	4983.7	-58.77	1300.2	-58.11
307	[CHANG75A	13.800]	AMPS	42391.2	-59.16	27695.8	-60.16
308	[CHANG75B	13.800]	AMPS	42391.2	-59.16	27695.8	-60.16
309	[CAISAN230	230.00]	AMPS	4460.0	-63.28	1972.5	-59.25
310	[CONCEPCION23230.00]	AMPS	6630.4	-63.93	3808.1	-62.15	
317	[MENDRE13.8	13.800]	AMPS	19178.9	-64.61	14573.8	-64.75
320	[CONCEP34.5	34.500]	AMPS	9580.4	-68.69	0.0	0.00
321	[CALDERA34.5	34.500]	AMPS	9238.4	-66.16	0.0	0.00
322	[CCGD250	13.800]	AMPS	62032.0	-96.11	36124.2	-99.12
340	[PEDGALITO13813.800]	AMPS	19189.0	-66.69	15145.1	-66.85	
511	[LGUIAS230	230.00]	AMPS	3997.2	-78.40	2952.5	-78.55
512	[LGUIAS 34.5	34.500]	AMPS	5374.8	-89.79	0.0	0.00
515	[PANPOWER230	230.00]	AMPS	4865.0	-84.11	3552.9	-84.34
516	[PANAPOW13A	13.800]	AMPS	15768.4	-94.54	0.0	0.00
517	[PANAPOW13B	13.800]	AMPS	31347.1	-87.71	23520.3	-88.47
6000	[FRONTER	230.00]	AMPS	5141.0	-63.05	3442.4	-64.05

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 14:48
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2016 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTGDC7 FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)		
123	[MIR115	115.00]	AMPS	10130.4	-84.32	9505.1	-89.04
124	[MIR44	44.000]	AMPS	11930.1	-95.24	14236.8	-95.65
126	[MIR13A	12.000]	AMPS	13302.5	-98.92	8728.2	-99.51
127	[MIR13B	12.000]	AMPS	13397.0	-98.93	8755.3	-99.53
128	[MIR13C	12.000]	AMPS	11454.4	-92.87	0.0	0.00
129	[MIR13D	13.800]	AMPS	11651.4	-92.97	0.0	0.00
130	[MIR13F	13.800]	AMPS	19903.9	-98.95	19054.6	-99.60
131	[BAL44	44.000]	AMPS	7502.2	-93.11	6435.3	-92.21
132	[SUM44	44.000]	AMPS	7442.0	-89.58	7606.9	-89.58
133	[MAD44	44.000]	AMPS	4143.5	-85.93	5006.3	-87.48
134	[MAD6A	6.9000]	AMPS	12274.0	-89.73	10290.1	-91.11
135	[MAD6B	6.9000]	AMPS	12206.9	-89.72	10258.5	-91.09
136	[MAD6C	6.9000]	AMPS	12215.8	-89.72	10262.7	-91.09
137	[GAM44	44.000]	AMPS	5309.8	-86.91	4439.9	-84.94
138	[ACL44	44.000]	AMPS	2805.2	-83.95	3265.1	-83.36
139	[GAT44	44.000]	AMPS	2766.7	-83.79	3335.0	-85.62
140	[GAT6A	6.9000]	AMPS	10851.3	-88.64	9978.7	-90.56
141	[GAT6B	6.9000]	AMPS	11455.7	-87.02	10720.2	-88.87

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 14:48
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2016 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTGDC7 FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)		
56	[L.M.44	44.000]	AMPS	7775.3	-98.82	9888.9	-99.48
57	[L.M.13	13.800]	AMPS	15927.5	-99.76	7390.5	-103.09
58	[MHOPE	44.000]	AMPS	4059.6	-88.12	3030.5	-86.26
61	[FFIELD	115.00]	AMPS	9254.3	-88.99	8739.9	-85.66
63	[RCITY	44.000]	AMPS	4483.7	-93.19	3507.7	-89.94
64	[COLON44	44.000]	AMPS	4473.8	-93.18	3495.9	-89.92

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X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)		/IA/ AN(IA)	
1	[PAN230	230.00]	AMPS	6881.3	-79.29	6720.2	-83.55
2	[PAN115	115.00]	AMPS	12070.8	-80.46	11983.0	-85.90
3	[PANII230	230.00]	AMPS	6842.1	-79.62	6665.2	-83.52
4	[PANII115	115.00]	AMPS	9373.7	-84.40	9006.1	-88.83
5	[CHO230	230.00]	AMPS	6174.0	-80.24	6204.6	-84.09
6	[CHO115	115.00]	AMPS	4777.4	-90.14	5585.9	-92.08
7	[CHO34	34.500]	AMPS	7619.3	-93.61	7340.4	-97.92
8	[LSA230	230.00]	AMPS	7153.8	-75.96	6496.7	-77.93
9	[LSA115	115.00]	AMPS	8899.3	-81.73	10952.7	-82.97
10	[L.S.34	34.500]	AMPS	7503.4	-87.52	4814.5	-89.62
11	[M.N230	230.00]	AMPS	8429.0	-66.46	7000.2	-65.24
12	[M.N115	115.00]	AMPS	9084.4	-68.59	8917.7	-67.73
13	[MDNA34	34.500]	AMPS	11737.4	-70.35	5663.2	-74.48
14	[PRO230	230.00]	AMPS	5077.5	-64.58	3707.2	-66.43
15	[PRO115	115.00]	AMPS	4391.0	-69.88	4775.8	-70.44
16	[PRO34	34.500]	AMPS	7186.8	-72.23	4317.5	-74.34
18	[CAC115	115.00]	AMPS	11927.2	-80.65	11747.3	-86.10
19	[C.V115	115.00]	AMPS	8588.3	-83.72	6538.9	-87.90
20	[CH.AZUL	115.00]	AMPS	2292.7	-66.54	1740.3	-64.82
21	[C.BAN115	115.00]	AMPS	10617.7	-80.91	8904.4	-86.84
23	[CH115	115.00]	AMPS	5913.2	-87.42	4238.8	-90.17
26	[LOC115	115.00]	AMPS	10911.0	-80.62	9855.3	-86.35
30	[MAR115	115.00]	AMPS	9703.4	-81.40	7722.1	-86.56
33	[STM115	115.00]	AMPS	10832.7	-81.17	9906.1	-86.26
37	[SAN115	115.00]	AMPS	10122.0	-81.52	7694.8	-87.52
48	[TINAJ115	115.00]	AMPS	9218.1	-83.09	6796.7	-88.17
50	[M.O115	115.00]	AMPS	9793.4	-82.51	7661.2	-87.85
52	[TOC115	115.00]	AMPS	7452.5	-85.56	5556.6	-88.29
54	[LM1115	115.00]	AMPS	7715.7	-88.68	9009.3	-91.70
55	[LM2115	115.00]	AMPS	7707.8	-88.64	8952.0	-91.49
66	[BLM13B	13.800]	AMPS	30656.1	-100.55	23642.6	-101.63
67	[BLM13C	13.800]	AMPS	14284.7	-103.05	0.0	0.00
68	[BLM13D	13.800]	AMPS	14869.0	-102.89	0.0	0.00
69	[TGJB13.8	13.800]	AMPS	42020.3	-98.51	34240.8	-99.83
70	[TGJB13A	13.800]	AMPS	36053.6	-98.77	31855.2	-99.49
71	[TGJB13B	13.800]	AMPS	36053.6	-98.77	31855.2	-99.49
72	[BLMCCA	13.800]	AMPS	14703.4	-102.96	0.0	0.00
73	[BLMCCB	13.800]	AMPS	14703.4	-102.96	0.0	0.00
86	[CC13.8	13.800]	AMPS	18319.7	-102.00	0.0	0.00
87	[CAL115	115.00]	AMPS	7293.9	-66.55	9296.4	-65.67
88	[EST115	115.00]	AMPS	6199.8	-65.53	8513.9	-65.80
89	[EST.13	13.800]	AMPS	48618.9	-66.13	29188.1	-68.71
90	[EST-13L	13.800]	AMPS	21252.0	-66.64	22192.5	-66.83
91	[EST-13T	13.800]	AMPS	21252.0	-66.64	22192.5	-66.83
92	[L.V115	115.00]	AMPS	6867.6	-66.12	9363.0	-66.36
93	[L.V.13	13.800]	AMPS	52790.2	-66.74	30104.8	-69.17
94	[LV-13.8L	13.800]	AMPS	21502.1	-66.88	22373.5	-67.05
95	[LV-13.8T	13.800]	AMPS	21502.1	-66.88	22373.5	-67.05
96	[FOR230	230.00]	AMPS	9143.9	-66.38	9281.8	-67.50
97	[FOR13A	13.800]	AMPS	61176.1	-66.48	53648.1	-66.79
98	[FOR13B	13.800]	AMPS	61176.1	-66.48	53648.1	-66.79
99	[FOR13C	13.800]	AMPS	61176.1	-66.48	53648.1	-66.79
100	[BAY230	230.00]	AMPS	5028.6	-82.81	5578.5	-85.57
101	[BAY13A	13.800]	AMPS	36763.2	-87.29	31976.4	-88.43
102	[BAY13B	13.800]	AMPS	36763.2	-87.12	31976.4	-88.26
103	[COPESA23	230.00]	AMPS	5797.5	-81.13	5825.6	-84.70
104	[COPESA13	13.800]	AMPS	19189.6	-95.85	0.0	0.00
105	[PAN-AM23	230.00]	AMPS	6135.7	-80.35	6155.2	-84.17
106	[PANAM13A	13.800]	AMPS	31011.7	-90.65	26404.6	-91.30
107	[PANAM13B	13.800]	AMPS	31011.7	-90.65	26404.6	-91.30
108	[BAY13C	13.800]	AMPS	37287.3	-87.15	35552.9	-88.13
109	[STA RITA115	115.00]	AMPS	7372.5	-88.96	7058.4	-90.52
110	[PTMD115A	115.00]	AMPS	5696.8	-90.33	4510.2	-90.62
111	[PTMD115B	115.00]	AMPS	5696.8	-90.33	4510.2	-90.62
112	[TGP13.8	13.800]	AMPS	74617.7	-87.60	0.0	0.00
113	[TGP13A	13.800]	AMPS	19220.1	-100.84	0.0	0.00
114	[TGP13B	13.800]	AMPS	19220.1	-100.84	0.0	0.00
115	[PACORA23	230.00]	AMPS	5524.8	-82.03	5428.2	-85.22
116	[PACORA13	13.800]	AMPS	31425.8	-91.64	29488.9	-93.05
142	[CANJ13A	13.800]	AMPS	16276.0	-58.76	13287.6	-58.83
143	[CANJ13B	13.800]	AMPS	16276.0	-58.76	13287.6	-58.83
144	[CANJ230	230.00]	AMPS	7121.8	-67.50	6151.8	-66.56
147	[GUASQ230	230.00]	AMPS	7457.5	-67.56	6533.5	-66.74
148	[VELAD230	230.00]	AMPS	7714.5	-70.41	5948.4	-69.00
149	[GUASQ34	34.500]	AMPS	4954.4	-68.94	4225.9	-69.10
150	[GUALAC34	34.500]	AMPS	4405.3	-66.04	2820.5	-61.99
151	[GUALAC13	13.800]	AMPS	13773.9	-63.86	15174.0	-64.05
154	[CEMPAN15	115.00]	AMPS	5618.8	-88.92	4322.8	-90.81
160	[GEEHAN13.8	13.800]	AMPS	5200.5	-93.54	0.0	0.00
190	[CHANG230	230.00]	AMPS	4498.9	-59.78	1977.4	-64.99
191	[CHANG115	115.00]	AMPS	3470.5	-63.45	3545.3	-64.39
192	[CHANG34	34.500]	AMPS	4364.6	-64.58	2323.7	-66.98
193	[GEBONYIC	13.800]	AMPS	23033.3	-61.65	17848.3	-61.91
204	[BJOMIN13	13.800]	AMPS	27374.4	-67.95	30629.6	-68.56
301	[CONC13.8	13.800]	AMPS	23305.9	-72.00	8768.2	-75.07
302	[PASOANCH13.813.800]	13.800]	AMPS	21513.1	-72.12	1871.8	-76.03

303	[SIND13.8	13.800]	AMPS	13679.3	-67.74	7675.9	-67.97
306	[CHANG75	230.00]	AMPS	4987.4	-60.18	1295.6	-59.48
307	[CHANG75A	13.800]	AMPS	42359.3	-60.97	27686.6	-61.94
308	[CHANG75B	13.800]	AMPS	42359.3	-60.97	27686.6	-61.94
309	[CAISAN230	230.00]	AMPS	3710.6	-64.67	1869.9	-61.75
310	[CONCEPCION23230.00]	AMPS	6095.5	-65.31	3708.0	-63.74	
317	[MENDRE13.8	13.800]	AMPS	14286.1	-67.74	8756.7	-67.95
320	[CONCEP34.5	34.500]	AMPS	9585.6	-70.47	0.0	0.00
321	[CALDERA34.5	34.500]	AMPS	8318.6	-68.26	0.0	0.00
340	[PEDGALITO13813.800]	AMPS	19354.0	-68.79	15304.1	-68.97	
511	[LGUIAS230	230.00]	AMPS	4150.7	-78.88	3140.1	-78.58
512	[LGUIAS 34.5	34.500]	AMPS	5518.9	-89.62	0.0	0.00
515	[PANPOWER230	230.00]	AMPS	4580.5	-84.03	3500.0	-84.55
516	[PANAPOW13A	13.800]	AMPS	15787.9	-94.77	0.0	0.00
517	[PANAPOW13B	13.800]	AMPS	23400.3	-91.61	14097.4	-92.86
518	[PGREENP13A	13.800]	AMPS	73360.5	-83.11	50626.0	-86.34
6000	[FRONTER	230.00]	AMPS	4976.4	-64.49	3404.8	-65.43

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 15:35
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2013 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTTLA7 FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X----- BUS -----X	THREE PHASE FAULT		ONE PHASE FAULT			
	/I+/ AN(I+)		/IA/ AN(IA)			
123 [MIR115	115.00]	AMPS	9038.4	-84.16	8838.6	-88.86
124 [MIR44	44.000]	AMPS	11645.0	-95.30	13954.1	-95.76
126 [MIR13A	12.000]	AMPS	13210.2	-99.16	8682.5	-99.78
127 [MIR13B	12.000]	AMPS	13303.3	-99.17	8709.3	-99.80
128 [MIR13C	12.000]	AMPS	11349.8	-93.13	0.0	0.00
129 [MIR13D	13.800]	AMPS	11534.7	-93.21	0.0	0.00
130 [MIR13F	13.800]	AMPS	19799.1	-99.25	18990.6	-99.94
131 [BAL44	44.000]	AMPS	7375.2	-93.32	6363.6	-92.45
132 [SUM44	44.000]	AMPS	7344.3	-89.84	7532.2	-89.84
133 [MAD44	44.000]	AMPS	4122.1	-86.23	4984.3	-87.77
134 [MAD6A	6.9000]	AMPS	12258.7	-90.00	10282.9	-91.39
135 [MAD6B	6.9000]	AMPS	12191.7	-89.99	10251.4	-91.36
136 [MAD6C	6.9000]	AMPS	12200.6	-90.00	10255.6	-91.37
137 [GAM44	44.000]	AMPS	5260.3	-87.22	4412.6	-85.23
138 [ACL44	44.000]	AMPS	2795.1	-84.29	3255.5	-83.67
139 [GAT44	44.000]	AMPS	2757.1	-84.13	3325.2	-85.94
140 [GAT6A	6.9000]	AMPS	10837.2	-88.97	9970.6	-90.88
141 [GAT6B	6.9000]	AMPS	11440.9	-87.29	10711.5	-89.13

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 15:35
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2013 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTTLA7 FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X----- BUS -----X	THREE PHASE FAULT		ONE PHASE FAULT			
	/I+/ AN(I+)		/IA/ AN(IA)			
56 [L.M.44	44.000]	AMPS	6734.7	-100.50	8724.1	-101.53
57 [L.M.13	13.800]	AMPS	14484.3	-102.38	7151.6	-106.99
58 [MHOPE	44.000]	AMPS	3733.4	-91.98	2893.7	-90.66
61 [FFIELD	115.00]	AMPS	6232.7	-89.23	6501.4	-88.31
63 [RCITY	44.000]	AMPS	4098.4	-96.54	3330.6	-94.10
64 [COLON44	44.000]	AMPS	4090.1	-96.53	3319.8	-94.09

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X----- BUS -----X		THREE PHASE FAULT		ONE PHASE FAULT	
		/I+/ AN(I+)	/IA/ AN(IA)		
1	[PAN230 230.00] AMPS	8101.7	-81.28	7458.1	-85.25
2	[PAN115 115.00] AMPS	14295.7	-81.90	13215.7	-87.36
3	[PANII230 230.00] AMPS	7966.3	-81.53	7299.2	-85.12
4	[PANII115 115.00] AMPS	10309.6	-86.09	9424.5	-90.27
5	[CHO230 230.00] AMPS	6799.2	-81.92	6575.2	-85.55
6	[CHO115 115.00] AMPS	4866.6	-91.38	5673.0	-93.25
7	[CHO34 34.500] AMPS	7583.4	-94.26	7319.9	-98.86
8	[LSA230 230.00] AMPS	7477.2	-77.11	6628.4	-78.89
9	[LSA115 115.00] AMPS	8668.1	-82.51	10692.3	-83.81
10	[L.S.34 34.500] AMPS	7425.9	-88.46	4795.9	-90.78
11	[M.N230 230.00] AMPS	8949.5	-67.43	7216.9	-66.01
12	[M.N115 115.00] AMPS	9331.4	-69.30	9062.9	-68.41
13	[MDNA34 34.500] AMPS	11809.7	-71.00	5650.7	-75.48
14	[PRO230 230.00] AMPS	5392.8	-65.39	3806.3	-67.14
15	[PRO115 115.00] AMPS	4491.9	-70.64	4848.0	-71.16
16	[PRO34 34.500] AMPS	7247.7	-72.89	4318.0	-75.02
18	[CAC115 115.00] AMPS	14123.2	-82.10	12961.1	-87.54
19	[C.V115 115.00] AMPS	9433.0	-85.23	6791.3	-89.04
20	[CH.AZUL 115.00] AMPS	2314.9	-67.14	1743.9	-65.42
21	[C.BAN115 115.00] AMPS	12233.2	-82.28	9531.7	-88.10
23	[CH115 115.00] AMPS	6810.9	-87.92	4542.9	-89.69
26	[LOC115 115.00] AMPS	12643.3	-81.97	10643.9	-87.67
30	[MAR115 115.00] AMPS	11068.3	-82.67	8203.4	-87.60
33	[STM115 115.00] AMPS	12584.7	-82.54	10729.5	-87.48
37	[SAN115 115.00] AMPS	11549.6	-82.94	8142.9	-88.69
48	[TINAJ115 115.00] AMPS	10445.1	-84.48	7166.4	-89.10
50	[M.O115 115.00] AMPS	11194.0	-83.92	8136.7	-88.88
52	[TOC115 115.00] AMPS	8025.0	-87.01	5707.1	-89.29
54	[LM1115 115.00] AMPS	11290.1	-89.81	12436.8	-92.14
55	[LM2115 115.00] AMPS	11245.8	-89.65	12181.1	-91.46
66	[BLM13B 13.800] AMPS	32144.6	-97.49	24358.8	-98.09
67	[BLM13C 13.800] AMPS	33625.5	-97.53	33352.6	-97.93
68	[BLM13D 13.800] AMPS	16072.7	-101.11	0.0	0.00
69	[TGJB13.8 13.800] AMPS	44103.8	-95.98	35164.3	-96.72
70	[TGJB13A 13.800] AMPS	37073.4	-95.68	32377.1	-96.08
71	[TGJB13B 13.800] AMPS	37073.4	-95.68	32377.1	-96.08
72	[BLMCCA 13.800] AMPS	24142.5	-99.33	20253.1	-99.90
73	[BLMCCB 13.800] AMPS	34757.2	-98.55	31059.6	-99.04
86	[CC13.8 13.800] AMPS	35116.4	-98.75	27451.5	-99.64
87	[CAL115 115.00] AMPS	7513.6	-67.10	9532.3	-66.19
88	[EST115 115.00] AMPS	6341.7	-66.03	8691.5	-66.31
89	[EST.13 13.800] AMPS	49519.8	-66.66	29391.9	-69.24
90	[EST-13L 13.800] AMPS	21309.9	-67.16	22234.5	-67.35
91	[EST-13T 13.800] AMPS	21309.9	-67.16	22234.5	-67.35
92	[L.V115 115.00] AMPS	7057.8	-66.66	9597.9	-66.90
93	[L.V.13 13.800] AMPS	54010.6	-67.28	30382.1	-69.71
94	[LV-13.8L 13.800] AMPS	21798.8	-67.36	22661.9	-67.51
95	[LV-13.8T 13.800] AMPS	21798.8	-67.36	22661.9	-67.51
96	[FOR230 230.00] AMPS	9506.3	-67.39	9514.7	-68.48
97	[FOR13A 13.800] AMPS	61498.1	-67.82	53812.7	-68.11
98	[FOR13B 13.800] AMPS	61498.1	-67.82	53812.7	-68.11
99	[FOR13C 13.800] AMPS	61498.1	-67.82	53812.7	-68.11
100	[BAY230 230.00] AMPS	5398.2	-84.04	5851.3	-86.66
101	[BAY13A 13.800] AMPS	37652.2	-87.67	32526.7	-88.66
102	[BAY13B 13.800] AMPS	37652.2	-87.67	32526.7	-88.66
103	[COPESA23 230.00] AMPS	6504.9	-82.88	6237.0	-86.16
104	[COPESA13 13.800] AMPS	19152.8	-96.65	0.0	0.00
105	[PAN-AM23 230.00] AMPS	6748.6	-82.03	6515.5	-85.62
106	[PANAM13A 13.800] AMPS	30593.4	-90.93	25945.7	-91.46
107	[PANAM13B 13.800] AMPS	30593.4	-90.93	25945.7	-91.46
108	[BAY13C 13.800] AMPS	38183.1	-87.69	36193.8	-88.54
109	[STA RITA115 115.00] AMPS	10696.9	-89.98	10376.0	-91.44
110	[PTMD115A 115.00] AMPS	6731.7	-91.13	5088.4	-90.23
111	[PTMD115B 115.00] AMPS	6731.7	-91.13	5088.4	-90.23
112	[TGP13.8 13.800] AMPS	83779.7	-89.45	0.0	0.00
113	[TGP13A 13.800] AMPS	19717.1	-101.57	0.0	0.00
114	[TGP13B 13.800] AMPS	19717.1	-101.57	0.0	0.00
115	[PACORA23 230.00] AMPS	6087.9	-83.62	5734.2	-86.49
116	[PACORA13 13.800] AMPS	31431.6	-92.09	29296.1	-93.46
142	[CANJ13A 13.800] AMPS	16416.9	-61.45	13398.2	-61.51
143	[CANJ13B 13.800] AMPS	16416.9	-61.45	13398.2	-61.51
144	[CANJ230 230.00] AMPS	7333.7	-68.51	6243.5	-67.47
147	[GUASQ230 230.00] AMPS	7693.0	-68.57	6639.2	-67.64
148	[VELAD230 230.00] AMPS	8029.9	-71.39	6042.7	-69.75
149	[GUASQ34 34.500] AMPS	4966.4	-69.50	4233.1	-69.65
150	[GUALAC34 34.500] AMPS	4425.2	-66.53	2831.5	-62.48
151	[GUALAC13 13.800] AMPS	13915.7	-64.14	15329.0	-64.33
154	[CEMPAN15 115.00] AMPS	6811.9	-88.98	4803.6	-89.50
160	[GEEHAN13.8 13.800] AMPS	5137.7	-93.65	0.0	0.00

190	[CHANG230	230.00]	AMPS	4515.7	-60.61	2007.1	-65.82
191	[CHANG115	115.00]	AMPS	3474.6	-64.97	3594.1	-65.94
192	[CHANG34	34.500]	AMPS	4401.8	-66.07	2383.5	-68.63
193	[GEBONYIC	13.800]	AMPS	23042.9	-64.87	17852.2	-65.14
204	[BJOMIN13	13.800]	AMPS	28822.8	-69.33	31819.7	-69.78
301	[CONCL3.8	13.800]	AMPS	23358.8	-72.82	8731.9	-76.14
302	[PASOANCH13.8	13.800]	AMPS	21564.2	-72.94	1860.8	-77.16
303	[SIND13.8	13.800]	AMPS	14331.3	-67.51	7798.1	-67.71
305	[ELALTO13.8	13.800]	AMPS	44449.9	-69.48	34602.4	-70.10
306	[CHANG75	230.00]	AMPS	5014.2	-60.92	1308.2	-60.18
307	[CHANG75A	13.800]	AMPS	42434.4	-61.45	27708.0	-62.43
308	[CHANG75B	13.800]	AMPS	42434.4	-61.45	27708.0	-62.43
309	[CAISAN230	230.00]	AMPS	4516.2	-66.21	1985.0	-62.02
310	[CONCEPCION23	230.00]	AMPS	6788.3	-66.41	3857.9	-64.34
317	[MENDRE13.8	13.800]	AMPS	19182.5	-66.76	14575.2	-66.89
320	[CONCEP34.5	34.500]	AMPS	9674.8	-71.29	0.0	0.00
321	[CALDERA34.5	34.500]	AMPS	9327.9	-68.06	0.0	0.00
322	[TURBA-250A	13.800]	AMPS	46398.2	-94.77	31673.5	-96.48
323	[TURBA-250B	13.800]	AMPS	28584.2	-98.89	0.0	0.00
340	[PEDGALITO138	13.800]	AMPS	19364.7	-69.72	15279.1	-69.87
511	[LGUIAS230	230.00]	AMPS	4277.0	-79.96	3154.4	-79.32
512	[LGUIAS 34.5	34.500]	AMPS	5448.2	-90.25	0.0	0.00
515	[PANPOWER230	230.00]	AMPS	5164.9	-85.62	3684.3	-85.16
516	[PANAPOW13A	13.800]	AMPS	23836.5	-91.81	14191.0	-92.78
517	[PANAPOW13B	13.800]	AMPS	23836.5	-91.81	14191.0	-92.78
518	[PGREENP13A	13.800]	AMPS	67449.2	-84.78	48241.6	-87.27
6000	[FRONTER	230.00]	AMPS	5233.8	-65.28	3474.1	-66.09

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E THU, MAY 17 2007 15:37
 PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2016 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTTLA7 FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)		
123	[MIR115	115.00]	AMPS	10117.7	-85.48	9454.2	-90.03
124	[MIR44	44.000]	AMPS	11887.6	-96.30	14182.6	-96.69
126	[MIR13A	12.000]	AMPS	13245.7	-100.40	8690.2	-100.97
127	[MIR13B	12.000]	AMPS	13339.7	-100.40	8717.1	-100.99
128	[MIR13C	12.000]	AMPS	11404.1	-93.86	0.0	0.00
129	[MIR13D	13.800]	AMPS	11600.8	-93.96	0.0	0.00
130	[MIR13F	13.800]	AMPS	19909.2	-99.93	19057.7	-100.58
131	[BAL44	44.000]	AMPS	7472.7	-94.13	6407.8	-93.21
132	[SUM44	44.000]	AMPS	7421.4	-90.59	7584.2	-90.57
133	[MAD44	44.000]	AMPS	4138.3	-86.92	4999.7	-88.47
134	[MAD6A	6.9000]	AMPS	12275.0	-90.70	10290.5	-92.09
135	[MAD6B	6.9000]	AMPS	12207.8	-90.70	10258.9	-92.06
136	[MAD6C	6.9000]	AMPS	12216.7	-90.70	10263.1	-92.06
137	[GAM44	44.000]	AMPS	5296.2	-87.91	4427.6	-85.93
138	[ACL44	44.000]	AMPS	2802.2	-84.94	3261.5	-84.34
139	[GAT44	44.000]	AMPS	2763.9	-84.78	3331.6	-86.62
140	[GAT6A	6.9000]	AMPS	10852.0	-89.63	9979.1	-91.55
141	[GAT6B	6.9000]	AMPS	11456.5	-88.01	10720.7	-89.86

PLAN DE EXPANSION DEL SIN CON CENTROAMERICA JUNIO DEL 2007 SHORT CIRCUIT
 AÑO 2016 ESCENARIO MODERADO DEMANDA MAXIMA INVIERNO MHTTLA7 FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X		THREE PHASE FAULT		ONE PHASE FAULT	
				/I+/ AN(I+)	/IA/ AN(IA)		
56	[L.M.44	44.000]	AMPS	7499.9	-99.63	9582.1	-100.38
57	[L.M.13	13.800]	AMPS	15536.4	-100.75	7305.8	-104.41
58	[MHOPE	44.000]	AMPS	3969.4	-89.42	2987.9	-87.67
61	[FFIELD	115.00]	AMPS	8376.8	-89.52	8163.5	-86.69
63	[RCITY	44.000]	AMPS	4378.0	-94.38	3454.2	-91.29
64	[COLON44	44.000]	AMPS	4368.4	-94.36	3442.6	-91.28

**ACTUALIZACIÓN DEL PLAN DE EXPANSION
JUNIO DEL 2007**

**CASO MHT7
CON NUEVA GENERACIÓN EN COLON
TERMICAS: BALBOA, CARIBE Y ATLÁNTICO**

AÑO 2009

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, OCT 01 2007 15:57
P. EXP-SIN CON C.A. JUNIO 2007 MHT7 ESC MOD DEM MAX INV SHORT CIRCUIT
Año 2009 TBALBOA, TCARIBE Y TATLANTICO (EN STA RITA) FAULT CURRENTS
OUTPUT FOR AREA 6 [PANAMA]

X----- BUS -----X			THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AN(I+)	/IA/ AN(IA)		
1	[PAN230	230.00] AMPS	7720.2	-79.53	6944.9	-82.24
2	[PAN115	115.00] AMPS	14812.1	-78.29	12933.3	-82.37
3	[PANII230	230.00] AMPS	7436.0	-79.93	6642.2	-82.55
4	[PANIII115	115.00] AMPS	10115.6	-82.80	8988.9	-85.91
5	[CHO230	230.00] AMPS	6366.7	-80.55	6253.1	-83.50
6	[CHO115	115.00] AMPS	4821.6	-88.58	5605.5	-90.11
8	[LSA230	230.00] AMPS	5836.6	-79.99	4601.8	-81.82
9	[LSA115	115.00] AMPS	4507.8	-86.76	4808.1	-88.71
11	[M.N230	230.00] AMPS	6314.9	-78.89	5506.3	-78.48
12	[M.N115	115.00] AMPS	7395.7	-81.62	7619.5	-81.21
14	[PRO230	230.00] AMPS	4316.7	-78.46	2885.0	-82.62
15	[PRO115	115.00] AMPS	4100.3	-84.01	4305.2	-85.19
18	[CAC115	115.00] AMPS	14659.3	-78.36	12646.6	-82.44
19	[C.V115	115.00] AMPS	9346.0	-81.33	6624.3	-83.54
20	[CH.AZUL	115.00] AMPS	2217.4	-81.22	1681.7	-79.94
21	[C.BAN115	115.00] AMPS	12472.1	-78.37	9343.2	-82.25
23	[CH115	115.00] AMPS	7415.9	-79.04	4723.5	-79.35
26	[LOC115	115.00] AMPS	12930.3	-78.12	10411.5	-82.12
30	[MAR115	115.00] AMPS	11327.2	-78.14	8095.5	-81.22
33	[STM115	115.00] AMPS	12979.6	-78.37	10557.2	-81.82
37	[SAN115	115.00] AMPS	11718.7	-78.90	8002.6	-82.50
48	[TINAJ115	115.00] AMPS	10693.4	-79.68	7102.5	-82.38
50	[M.O115	115.00] AMPS	11483.6	-79.36	8045.0	-82.46
52	[TOC115	115.00] AMPS	7906.3	-83.11	5561.0	-84.17
54	[LM1115	115.00] AMPS	16325.9	-80.12	15290.0	-81.27
55	[LM2115	115.00] AMPS	16271.3	-79.99	15288.4	-81.07
87	[CAL115	115.00] AMPS	6009.4	-80.28	7839.1	-79.65
88	[EST115	115.00] AMPS	5280.9	-79.60	7328.9	-79.89
92	[L.V115	115.00] AMPS	5733.3	-80.00	7919.9	-80.27
96	[FOR230	230.00] AMPS	6572.4	-79.50	7293.1	-81.07
100	[BAY230	230.00] AMPS	5192.6	-82.61	5685.7	-84.83
103	[COPESA23	230.00] AMPS	6179.6	-80.81	5912.3	-83.42
105	[PAN-AM23	230.00] AMPS	6324.2	-80.63	6203.4	-83.55
109	[STA RITA115	115.00] AMPS	14715.7	-80.27	9703.5	-77.26
110	[PTMD115A	115.00] AMPS	7490.7	-81.93	3514.1	-78.73
111	[PTMD115B	115.00] AMPS	7490.7	-81.93	3514.1	-78.73
115	[PACORA23	230.00] AMPS	5816.5	-81.47	5504.6	-83.73
144	[CANJ230	230.00] AMPS	5576.5	-79.92	5273.8	-79.80
147	[GUASQ230	230.00] AMPS	5772.0	-79.90	5545.5	-79.90
148	[VELAD230	230.00] AMPS	6192.8	-79.64	4793.0	-79.04
154	[CEMPAN15	115.00] AMPS	8789.6	-78.57	5417.1	-76.97
190	[CHANG230	230.00] AMPS	3070.6	-78.00	1426.5	-85.15
191	[CHANG115	115.00] AMPS	2384.3	-84.04	2290.1	-85.90
511	[LGUIAS230	230.00] AMPS	3930.8	-81.09	2912.3	-80.69
515	[PANPOWER230	230.00] AMPS	4433.4	-83.65	3042.6	-83.20
522	[TBALBOA 115	115.00] AMPS	16335.9	-80.16	15338.7	-81.21
6000	[FRONTER	230.00] AMPS	4312.0	-78.47	2755.9	-81.70

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, OCT 01 2007 15:57
P. EXP-SIN CON C.A. JUNIO 2007 MHT7 ESC MOD DEM MAX INV SHORT CIRCUIT
Año 2009 TBALBOA, TCARIBE Y TATLANTICO (EN STA RITA) FAULT CURRENTS
OUTPUT FOR AREA 7 [ACANAL]

X----- BUS -----X			THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AN(I+)	/IA/ AN(IA)		
123	[MIR115	115.00] AMPS	10370.7	-79.94	9423.8	-83.60

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, OCT 01 2007 15:57
P. EXP-SIN CON C.A. JUNIO 2007 MHT7 ESC MOD DEM MAX INV SHORT CIRCUIT
Año 2009 TBALBOA, TCARIBE Y TATLANTICO (EN STA RITA) FAULT CURRENTS
OUTPUT FOR AREA 9 [COLON]

X----- BUS -----X			THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AN(I+)	/IA/ AN(IA)		
61	[FFIELD	115.00] AMPS	10899.6	-78.37	9418.3	-73.62

AÑO 2011

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, OCT 01 2007 15:53
P. EXP-SIN CON C.A. JUNIO 2007 MHT7 ESC MOD DEM MAX INV SHORT CIRCUIT
AÑO 2011 TBALBOA, TCARIBE Y TATLANTICO (EN STA RITA 115) FAULT CURRENTS
OUTPUT FOR AREA 6 [PANAMA]

X----- BUS -----X			THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AN(I+)	/IA/ AN(IA)		
1	[PAN230	230.00] AMPS	8541.9	-79.53	7763.8	-82.08
2	[PAN115	115.00] AMPS	15294.8	-79.04	13860.0	-82.80
3	[PANII230	230.00] AMPS	8660.1	-80.04	7874.9	-82.34
4	[PANII115	115.00] AMPS	10923.8	-83.43	9899.3	-86.30
5	[CHO230	230.00] AMPS	6823.8	-80.11	6604.5	-82.96
6	[CHO115	115.00] AMPS	4966.9	-88.26	5765.3	-89.75
8	[LSA230	230.00] AMPS	6149.6	-77.81	4745.4	-79.53
9	[LSA115	115.00] AMPS	4598.0	-84.52	4894.1	-86.51
11	[M.N230	230.00] AMPS	6644.3	-74.23	5682.0	-73.55
12	[M.N115	115.00] AMPS	7756.8	-76.51	7885.3	-75.98
14	[PRO230	230.00] AMPS	4421.0	-73.55	2914.4	-77.67
15	[PRO115	115.00] AMPS	4144.5	-79.07	4336.5	-80.24
18	[CAC115	115.00] AMPS	15102.5	-79.10	13596.4	-82.82
19	[C.V115	115.00] AMPS	9893.9	-81.94	7057.0	-83.84
20	[CH.AZUL	115.00] AMPS	2229.6	-76.21	1685.7	-74.93
21	[C.BAN115	115.00] AMPS	12911.8	-79.11	9907.5	-82.70
23	[CH115	115.00] AMPS	7476.5	-80.53	4770.2	-81.20
26	[LOC115	115.00] AMPS	13375.2	-78.86	11085.5	-82.54
30	[MAR115	115.00] AMPS	11664.5	-78.89	8526.8	-81.70
33	[STM115	115.00] AMPS	13378.2	-79.13	11204.8	-82.28
37	[SAN115	115.00] AMPS	12151.1	-79.63	8447.0	-82.99
48	[TTNAJ115	115.00] AMPS	11000.3	-80.40	7436.2	-82.99
50	[M.O115	115.00] AMPS	11820.6	-80.11	8454.6	-83.03
52	[TOC115	115.00] AMPS	8432.4	-83.62	5949.1	-84.33
54	[LM1115	115.00] AMPS	17844.6	-81.90	17025.2	-84.23
55	[LM2115	115.00] AMPS	17685.4	-81.56	16601.3	-84.24
87	[CAL115	115.00] AMPS	6436.7	-74.99	8347.0	-74.30
88	[EST115	115.00] AMPS	5620.2	-74.22	7778.7	-74.51
92	[L.V115	115.00] AMPS	6124.4	-74.67	8432.0	-74.93
96	[FOR230	230.00] AMPS	6963.3	-74.61	7685.1	-75.98
100	[BAY230	230.00] AMPS	5528.6	-82.64	5956.5	-84.85
103	[COPESA23	230.00] AMPS	6956.4	-80.91	6614.5	-83.22
105	[PAN-AM23	230.00] AMPS	6774.0	-80.19	6547.5	-83.02
109	[STA RITA115	115.00] AMPS	17195.6	-82.00	13871.0	-81.52
115	[PACORA23	230.00] AMPS	6438.3	-81.62	6010.8	-83.68
117	[STA RITA230	230.00] AMPS	7108.8	-83.14	5925.9	-83.27
144	[CANJ230	230.00] AMPS	5827.4	-75.34	5443.9	-74.99
147	[GUASQ230	230.00] AMPS	6042.8	-75.33	5736.0	-75.09
148	[VELAD230	230.00] AMPS	6483.7	-75.98	4913.2	-75.16
154	[CEMPAN15	115.00] AMPS	8911.7	-80.51	5463.1	-79.57
190	[CHANG230	230.00] AMPS	3569.4	-71.82	2442.5	-67.76
191	[CHANG115	115.00] AMPS	2500.7	-77.35	2722.0	-76.52
306	[CHANG75	230.00] AMPS	3834.0	-72.08	3680.9	-55.39
511	[LGUIAS230	230.00] AMPS	4082.0	-79.59	2975.8	-79.06
515	[PANPOWER230	230.00] AMPS	4802.8	-83.48	3274.9	-82.59
522	[TBALBOA 115	115.00] AMPS	17804.9	-81.82	16799.0	-84.32
6000	[FRONTER	230.00] AMPS	4408.4	-73.54	2780.5	-76.70

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, OCT 01 2007 15:53
P. EXP-SIN CON C.A. JUNIO 2007 MHT7 ESC MOD DEM MAX INV SHORT CIRCUIT
AÑO 2011 TBALBOA, TCARIBE Y TATLANTICO (EN STA RITA 115) FAULT CURRENTS
OUTPUT FOR AREA 7 [ACANAL]

X----- BUS -----X			THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AN(I+)	/IA/ AN(IA)		
123	[MIR115	115.00] AMPS	10627.6	-80.74	9821.1	-84.14

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, OCT 01 2007 15:53
P. EXP-SIN CON C.A. JUNIO 2007 MHT7 ESC MOD DEM MAX INV SHORT CIRCUIT
AÑO 2011 TBALBOA, TCARIBE Y TATLANTICO (EN STA RITA 115) FAULT CURRENTS
OUTPUT FOR AREA 9 [COLON]

X----- BUS -----X			THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AN(I+)	/IA/ AN(IA)		
61	[FFIELD	115.00] AMPS	11560.1	-80.61	10047.1	-76.26

AÑO 2013

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, OCT 01 2007 17:10
 P. EXP-SIN CON C.A. JUNIO 2007 MHT7 ESC MOD DEM MAX INV SHORT CIRCUIT
 AÑO 2011 TBALBOA, TCARIBE Y TATLANTICO (EN STA RITA 115) FAULT CURRENTS
 OUTPUT FOR AREA 6 [PANAMA]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT		
			/I+/ AN(I+)	/IA/ AN(IA)			
1	[PAN230	230.00]	AMPS	8629.7	-80.52	7769.1	-83.49
2	[PAN115	115.00]	AMPS	15453.5	-80.10	13875.4	-84.43
3	[PANII230	230.00]	AMPS	8744.0	-80.97	7852.8	-83.69
4	[PANII115	115.00]	AMPS	10970.5	-84.72	9848.9	-87.97
5	[CHO230	230.00]	AMPS	6875.0	-81.26	6608.4	-84.38
6	[CHO115	115.00]	AMPS	4952.0	-89.80	5732.7	-91.43
8	[LSA230	230.00]	AMPS	6262.5	-78.57	4762.4	-80.49
9	[LSA115	115.00]	AMPS	4606.7	-85.45	4879.0	-87.69
11	[M.N230	230.00]	AMPS	7245.7	-74.64	6230.3	-73.97
12	[M.N115	115.00]	AMPS	8606.6	-76.63	8529.4	-76.00
14	[PRO230	230.00]	AMPS	5495.9	-73.97	3832.7	-76.07
15	[PRO115	115.00]	AMPS	4551.5	-79.65	4881.1	-80.20
18	[CAC115	115.00]	AMPS	15254.0	-80.18	13605.3	-84.47
19	[C.V115	115.00]	AMPS	9924.4	-83.31	7004.3	-85.73
20	[CH.AZUL	115.00]	AMPS	2340.4	-76.23	1758.8	-74.50
21	[C.BAN115	115.00]	AMPS	13014.3	-80.28	9873.1	-84.55
23	[CH115	115.00]	AMPS	7461.7	-82.38	4648.5	-83.57
26	[LOC115	115.00]	AMPS	13489.0	-80.00	11063.7	-84.32
30	[MAR115	115.00]	AMPS	11729.8	-80.19	8482.1	-83.63
33	[STM115	115.00]	AMPS	13478.3	-80.34	11183.3	-84.04
37	[SAN115	115.00]	AMPS	12234.4	-80.87	8401.2	-84.93
48	[TINAJ115	115.00]	AMPS	11049.8	-81.82	7390.0	-84.96
50	[M.O115	115.00]	AMPS	11887.5	-81.45	8412.7	-84.95
52	[TOC115	115.00]	AMPS	8436.8	-85.07	5896.6	-86.17
54	[LM1115	115.00]	AMPS	17942.0	-83.56	14449.2	-86.26
55	[LM2115	115.00]	AMPS	17777.0	-83.23	11841.1	-87.58
87	[CAL115	115.00]	AMPS	7184.4	-74.56	9167.5	-73.72
88	[EST115	115.00]	AMPS	6120.3	-73.53	8409.6	-73.82
92	[L.V115	115.00]	AMPS	6770.5	-74.13	9237.3	-74.38
96	[FOR230	230.00]	AMPS	7357.2	-74.87	8024.7	-76.19
100	[BAY230	230.00]	AMPS	5543.5	-83.31	5958.4	-85.62
103	[COPESA23	230.00]	AMPS	6993.3	-81.94	6599.1	-84.54
105	[PAN-AM23	230.00]	AMPS	6823.8	-81.35	6550.6	-84.45
109	[STA RITA115	115.00]	AMPS	17295.4	-83.60	13122.4	-83.87
115	[PACORA23	230.00]	AMPS	6453.7	-82.57	5992.9	-84.81
117	[STA RITA230	230.00]	AMPS	7142.3	-84.55	5730.9	-85.03
144	[CANJ230	230.00]	AMPS	6060.2	-75.66	5576.5	-75.22
147	[GUASQ230	230.00]	AMPS	6296.2	-75.66	5886.1	-75.33
148	[VELAD230	230.00]	AMPS	6724.7	-76.48	4985.2	-75.62
154	[CEMPAN15	115.00]	AMPS	8908.5	-82.45	5111.0	-82.33
190	[CHANG230	230.00]	AMPS	3591.7	-71.84	2446.9	-67.76
191	[CHANG115	115.00]	AMPS	2503.1	-77.38	2721.6	-76.58
306	[CHANG75	230.00]	AMPS	3866.8	-72.11	3700.3	-55.25
310	[CONCEPCION23	230.00]	AMPS	5388.7	-74.29	3503.0	-73.31
511	[LGUIAS230	230.00]	AMPS	4096.7	-80.71	2961.5	-80.33
515	[PANPOWER230	230.00]	AMPS	4810.1	-84.77	3249.8	-84.09
522	[TBALBOA 115	115.00]	AMPS	17899.9	-83.50	0.0	0.00
6000	[FRONTER	230.00]	AMPS	5252.1	-73.89	3474.1	-75.05

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, OCT 01 2007 17:10
 P. EXP-SIN CON C.A. JUNIO 2007 MHT7 ESC MOD DEM MAX INV SHORT CIRCUIT
 AÑO 2011 TBALBOA, TCARIBE Y TATLANTICO (EN STA RITA 115) FAULT CURRENTS
 OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT		
			/I+/ AN(I+)	/IA/ AN(IA)			
123	[MIR115	115.00]	AMPS	10653.9	-82.30	9787.4	-86.05

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, OCT 01 2007 17:10
 P. EXP-SIN CON C.A. JUNIO 2007 MHT7 ESC MOD DEM MAX INV SHORT CIRCUIT
 AÑO 2011 TBALBOA, TCARIBE Y TATLANTICO (EN STA RITA 115) FAULT CURRENTS
 OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT		
			/I+/ AN(I+)	/IA/ AN(IA)			
61	[FFIELD	115.00]	AMPS	11581.6	-82.42	9068.3	-79.19

AÑO 2016

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, OCT 01 2007 17:12
P. EXP-SIN CON C.A. JUNIO 2007 ESC MOD DEM MAX INV SHORT CIRCUIT
AÑO 2016 TBALBOA, TCARIBE Y TATLANTICO (EN STA RITA 115) FAULT CURRENTS
OUTPUT FOR AREA 6 [PANAMA]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT		
			/I+/ AN(I+)	/IA/ AN(IA)			
1	[PAN230	230.00]	AMPS	8192.0	-80.06	7603.3	-84.23
2	[PAN115	115.00]	AMPS	14599.4	-80.12	13555.4	-85.75
3	[PANII230	230.00]	AMPS	8273.5	-80.45	7869.9	-84.14
4	[PANII115	115.00]	AMPS	10529.3	-85.16	9856.2	-89.40
5	[CHO230	230.00]	AMPS	6691.8	-80.96	6472.1	-84.89
6	[CHO115	115.00]	AMPS	4876.5	-90.80	5642.1	-92.79
8	[LSA230	230.00]	AMPS	6403.9	-75.69	5302.4	-77.95
9	[LSA115	115.00]	AMPS	5795.8	-82.09	5979.4	-84.48
11	[M.N230	230.00]	AMPS	8816.6	-68.52	6883.9	-67.23
12	[M.N115	115.00]	AMPS	9161.9	-70.26	8835.3	-69.37
14	[PRO230	230.00]	AMPS	6173.7	-67.26	3997.8	-69.13
15	[PRO115	115.00]	AMPS	4706.7	-72.88	4970.3	-73.32
18	[CAC115	115.00]	AMPS	14418.7	-80.28	13290.3	-85.86
19	[C.V115	115.00]	AMPS	9588.8	-84.12	6973.6	-87.93
20	[CH.AZUL	115.00]	AMPS	2357.3	-69.12	1746.6	-67.36
21	[C.BAN115	115.00]	AMPS	12440.6	-80.66	9726.7	-86.55
23	[CH115	115.00]	AMPS	7187.7	-84.94	4649.7	-86.80
26	[LOC115	115.00]	AMPS	12866.3	-80.31	10874.4	-86.11
30	[MAR115	115.00]	AMPS	11253.8	-80.97	8352.3	-85.97
33	[STM115	115.00]	AMPS	12828.1	-80.79	10964.4	-85.85
37	[SAN115	115.00]	AMPS	11733.8	-81.39	8302.3	-87.19
48	[TINAJ115	115.00]	AMPS	10622.6	-82.77	7284.7	-87.48
50	[M.O115	115.00]	AMPS	11393.3	-82.21	8282.9	-87.27
52	[TOC115	115.00]	AMPS	8185.7	-86.12	5900.3	-88.41
54	[LM1115	115.00]	AMPS	15893.2	-85.38	15777.6	-87.91
55	[LM2115	115.00]	AMPS	15783.7	-85.20	15323.0	-87.11
87	[CAL115	115.00]	AMPS	7454.1	-67.76	9441.9	-66.86
88	[EST115	115.00]	AMPS	6286.2	-66.63	8610.1	-66.92
92	[L.V115	115.00]	AMPS	6996.6	-67.29	9506.9	-67.53
96	[FOR230	230.00]	AMPS	8559.3	-68.32	8877.7	-69.64
100	[BAY230	230.00]	AMPS	5414.1	-83.50	5860.4	-86.18
103	[COPESA23	230.00]	AMPS	6700.0	-82.00	6517.2	-85.31
105	[PAN-AM23	230.00]	AMPS	6643.5	-81.07	6416.3	-84.97
109	[STA RITA115	115.00]	AMPS	14899.6	-84.99	12910.8	-85.96
115	[PACORA23	230.00]	AMPS	6226.7	-82.86	5912.1	-85.77
117	[STA RITA230	230.00]	AMPS	6599.9	-85.24	5772.2	-86.68
144	[CANJ230	230.00]	AMPS	6792.0	-69.47	5925.8	-68.78
147	[GUASQ230	230.00]	AMPS	7103.5	-69.49	6288.6	-68.92
148	[VELAD230	230.00]	AMPS	7410.2	-71.50	5280.2	-70.44
154	[CEMPAN15	115.00]	AMPS	8417.4	-85.43	5297.4	-85.26
190	[CHANG230	230.00]	AMPS	4400.1	-63.02	2637.4	-63.97
191	[CHANG115	115.00]	AMPS	3425.1	-66.94	3731.3	-67.17
306	[CHANG75	230.00]	AMPS	4854.5	-63.39	2836.8	-59.79
309	[CAISAN230	230.00]	AMPS	3749.0	-67.18	1853.6	-64.25
310	[CONCEPCION23	230.00]	AMPS	6261.1	-67.69	3687.7	-66.08
341	[NVAEST230	230.00]	AMPS	7618.4	-68.65	4417.8	-73.63
511	[LGUIAS230	230.00]	AMPS	4052.9	-79.61	2975.4	-79.66
515	[PANPOWER230	230.00]	AMPS	4678.8	-85.09	3555.4	-85.34
522	[TBALBOA 115	115.00]	AMPS	15866.3	-85.36	15545.4	-87.33
6000	[FRONTER	230.00]	AMPS	5779.5	-67.10	3584.0	-67.99

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, OCT 01 2007 17:12
P. EXP-SIN CON C.A. JUNIO 2007 ESC MOD DEM MAX INV SHORT CIRCUIT
AÑO 2016 TBALBOA, TCARIBE Y TATLANTICO (EN STA RITA 115) FAULT CURRENTS
OUTPUT FOR AREA 7 [ACANAL]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT		
			/I+/ AN(I+)	/IA/ AN(IA)			
123	[MIR115	115.00]	AMPS	10275.0	-83.68	9607.0	-88.27

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, OCT 01 2007 17:12
P. EXP-SIN CON C.A. JUNIO 2007 ESC MOD DEM MAX INV SHORT CIRCUIT
AÑO 2016 TBALBOA, TCARIBE Y TATLANTICO (EN STA RITA 115) FAULT CURRENTS
OUTPUT FOR AREA 9 [COLON]

X-----	BUS	-----X	THREE PHASE FAULT		ONE PHASE FAULT		
			/I+/ AN(I+)	/IA/ AN(IA)			
61	[FFIELD	115.00]	AMPS	10688.3	-85.10	9519.3	-81.49