

**ANEXO 29**

**ANÁLISIS DE CORTO CIRCUITO**



*de*

# INTERCAMBIO CERO



*de*

**CASOS REGMHTCB8, REGMHTGDC8 Y REGMHTTLA8  
INTERCAMBIO CERO**

**AÑOS 2008 – 2011**



*de*

**Año 2008**

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	6510.3	-80.42	7915.9	-83.49
2	[PAN115	115.00] AMPS	11996.7	-81.05	15802.0	-83.44
3	[PANII230	230.00] AMPS	6431.2	-80.65	6930.1	-83.37
4	[PANII115	115.00] AMPS	9017.6	-84.40	9219.2	-87.87
5	[CHO230	230.00] AMPS	5609.8	-80.95	6010.8	-83.90
6	[CHO115	115.00] AMPS	4576.3	-89.92	5434.3	-91.78
8	[LSA230	230.00] AMPS	5595.6	-77.68	4684.6	-80.16
9	[LSA115	115.00] AMPS	4382.5	-85.01	4762.3	-87.12
11	[M.N230	230.00] AMPS	6806.7	-72.92	6070.9	-72.95
12	[M.N115	115.00] AMPS	7747.1	-75.26	8435.8	-74.99
14	[PRO230	230.00] AMPS	4416.2	-72.47	2915.0	-76.54
15	[PRO115	115.00] AMPS	4112.1	-78.03	4324.2	-79.10
18	[CAC115	115.00] AMPS	11876.1	-81.18	15089.5	-83.62
19	[C.V115	115.00] AMPS	8342.3	-83.58	6777.1	-85.95
20	[CH.AZUL	115.00] AMPS	2204.4	-75.25	1673.4	-73.54
21	[C.BAN115	115.00] AMPS	10483.1	-81.20	9340.5	-81.97
23	[CH115	115.00] AMPS	6097.4	-86.01	4509.9	-87.54
26	[LOC115	115.00] AMPS	10787.2	-80.98	10850.5	-80.63
30	[MAR115	115.00] AMPS	9619.0	-81.45	8668.6	-82.63
33	[STM115	115.00] AMPS	10765.8	-81.42	12382.5	-83.79
37	[SAN115	115.00] AMPS	9972.8	-81.68	8062.0	-83.58
48	[TINAJ115	115.00] AMPS	9142.1	-83.03	7886.2	-85.86
50	[M.O115	115.00] AMPS	9713.3	-82.61	9068.4	-85.56
52	[TOC115	115.00] AMPS	7226.6	-85.21	5648.3	-87.02
54	[LM1115	115.00] AMPS	8651.9	-87.89	10716.0	-89.97
55	[LM2115	115.00] AMPS	8701.2	-88.14	10774.3	-90.21
87	[CAL115	115.00] AMPS	6147.9	-73.36	8101.1	-72.84
88	[EST115	115.00] AMPS	5374.7	-72.52	7450.1	-72.79
92	[L.V115	115.00] AMPS	5853.8	-73.02	8091.3	-73.25
96	[FOR230	230.00] AMPS	7410.0	-73.19	7973.9	-74.57
100	[BAY230	230.00] AMPS	4895.8	-83.37	5456.9	-85.76
103	[COPESA23	230.00] AMPS	5509.3	-81.81	5821.8	-84.46
105	[PAN-AM23	230.00] AMPS	5575.4	-81.04	5957.3	-83.98
109	[STA RITA115	115.00] AMPS	8088.5	-88.00	7946.9	-88.02
110	[PTMD115A	115.00] AMPS	5893.1	-88.95	4797.8	-87.89
111	[PTMD115B	115.00] AMPS	5893.1	-88.95	4812.4	-87.83
115	[PACORA23	230.00] AMPS	5275.9	-82.54	5373.5	-84.94
144	[CANJ230	230.00] AMPS	5976.9	-73.81	5493.7	-73.44
147	[GUASQ230	230.00] AMPS	6210.2	-73.84	5798.0	-73.59
148	[VELADERO230	230.00] AMPS	6333.7	-75.05	4961.6	-75.03
154	[CEMPAN15	115.00] AMPS	6703.7	-88.18	6570.5	-90.49
190	[CHANG230	230.00] AMPS	3113.2	-71.31	1440.6	-78.07
191	[CHANG115	115.00] AMPS	2380.7	-77.35	2304.5	-78.67
511	[LGUIAS230	230.00] AMPS	3712.6	-80.56	3403.0	-82.43
522	[TCATIV115	115.00] AMPS	8686.1	-88.06	10760.8	-90.16
6000	[FRONTER	230.00] AMPS	4396.9	-72.50	2778.2	-75.62

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	9132.1	-83.46	9896.9	-86.05

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	6806.1	-88.18	7365.3	-85.49

**Año 2009**

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	7020.6	-81.02	8422.0	-84.06
2	[PAN115	115.00] AMPS	13217.2	-81.24	17208.7	-83.71



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3	[PANII230	230.00	AMPS	6873.4	-81.23	7278.0	-83.84
4	[PANII115	115.00	AMPS	9555.8	-84.90	9616.0	-88.27
5	[CHO230	230.00	AMPS	5926.0	-81.57	6260.7	-84.40
6	[CHO115	115.00	AMPS	4698.3	-90.45	5548.7	-92.14
8	[LSA230	230.00	AMPS	5779.0	-78.38	4780.9	-80.80
9	[LSA115	115.00	AMPS	4451.1	-85.71	4823.6	-87.76
11	[M.N230	230.00	AMPS	6915.5	-73.74	6130.5	-73.81
12	[M.N115	115.00	AMPS	7862.9	-76.14	8529.4	-75.88
14	[PRO230	230.00	AMPS	4448.2	-73.38	2925.7	-77.49
15	[PRO115	115.00	AMPS	4128.2	-78.97	4337.0	-80.06
18	[CAC115	115.00	AMPS	13089.1	-81.37	16394.6	-83.85
19	[C.V115	115.00	AMPS	8829.5	-83.93	6995.8	-86.07
20	[CH.AZUL	115.00	AMPS	2209.7	-76.21	1675.9	-74.51
21	[C.BAN115	115.00	AMPS	11384.4	-81.38	9826.4	-81.89
23	[CH115	115.00	AMPS	6571.0	-85.44	4710.9	-86.58
26	[LOC115	115.00	AMPS	11750.0	-81.14	11508.8	-80.53
30	[MAR115	115.00	AMPS	10394.8	-81.54	9098.7	-82.51
33	[STM115	115.00	AMPS	11744.8	-81.56	13247.2	-83.89
37	[SAN115	115.00	AMPS	10775.0	-81.88	8420.4	-83.54
48	[TINAJ115	115.00	AMPS	9845.0	-83.17	8245.0	-85.79
50	[M.O115	115.00	AMPS	10507.3	-82.77	9537.4	-85.56
52	[TOC115	115.00	AMPS	7564.1	-85.60	5790.7	-87.15
54	[LM1115	115.00	AMPS	10334.3	-87.37	12987.9	-88.92
55	[LM2115	115.00	AMPS	10321.3	-87.30	12966.9	-88.84
85	[PTP230	230.00	AMPS	5108.9	-73.11	1123.6	-75.58
87	[CAL115	115.00	AMPS	6196.5	-74.23	8157.9	-73.71
88	[EST115	115.00	AMPS	5408.6	-73.39	7493.8	-73.66
92	[L.V115	115.00	AMPS	5896.4	-73.89	8146.0	-74.13
96	[FOR230	230.00	AMPS	7529.0	-73.97	8065.5	-75.41
100	[BAY230	230.00	AMPS	5062.5	-83.70	5599.6	-86.02
103	[COPESA23	230.00	AMPS	5817.0	-82.31	6058.5	-84.83
105	[PAN-AM23	230.00	AMPS	5887.7	-81.65	6203.3	-84.47
109	[STA RITA115	115.00	AMPS	10428.3	-87.94	11517.9	-88.90
110	[PTMD115A	115.00	AMPS	6588.4	-88.69	5303.8	-87.13
111	[PTMD115B	115.00	AMPS	6588.4	-88.69	5320.1	-87.08
115	[PACORA23	230.00	AMPS	5533.1	-83.03	5560.2	-85.30
144	[CANJ230	230.00	AMPS	6059.2	-74.59	5541.1	-74.24
147	[GUASQ230	230.00	AMPS	6299.6	-74.62	5851.1	-74.39
148	[VELAD230	230.00	AMPS	6467.2	-75.85	5023.1	-75.80
154	[CEMPAN15	115.00	AMPS	7446.8	-87.13	7073.6	-89.15
190	[CHANG230	230.00	AMPS	3253.9	-72.84	1437.7	-79.69
191	[CHANG115	115.00	AMPS	2415.9	-78.64	2298.1	-80.39
511	[LGUIAS230	230.00	AMPS	3831.4	-80.95	3475.8	-82.93
522	[TCATIVÁ 115	115.00	AMPS	10338.9	-87.38	13002.4	-88.96
6000	[FRONTER	230.00	AMPS	4426.4	-73.42	2787.4	-76.58

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PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 9:48  
PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
Año 2009 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	9771.7	-83.54	10404.4	-86.05

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PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 9:48  
PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
Año 2009 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	7822.8	-87.27	8411.0	-83.39

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PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 9:53  
PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT

**Año 2010**

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	7317.3	-82.23	8685.6	-85.41
2	[PAN115 115.00] AMPS	14048.3	-82.07	18116.6	-84.72
3	[PANII230 230.00] AMPS	7136.4	-82.41	7452.3	-85.12
4	[PANIII115 115.00] AMPS	9795.4	-86.08	9728.9	-89.57
5	[CHO230 230.00] AMPS	6009.6	-83.00	6304.0	-85.94
6	[CHO115 115.00] AMPS	4692.1	-92.04	5539.1	-93.79
8	[LSA230 230.00] AMPS	5856.7	-80.50	4812.8	-83.05
9	[LSA115 115.00] AMPS	4461.0	-87.92	4836.7	-90.11
11	[M.N230 230.00] AMPS	6993.3	-76.61	6165.8	-76.78
12	[M.N115 115.00] AMPS	8013.8	-78.96	8643.5	-78.75
14	[PRO230 230.00] AMPS	4465.6	-76.38	2927.6	-80.58
15	[PRO115 115.00] AMPS	4132.1	-82.05	4337.1	-83.17



*Handwritten signature or initials.*

18	[CAC115	115.00]	AMPS	13916.8	-82.21	17223.3	-84.87
19	[C.V115	115.00]	AMPS	9069.7	-85.07	7066.0	-87.35
20	[CH.AZUL	115.00]	AMPS	2208.4	-79.33	1673.6	-77.65
21	[C.BAN115	115.00]	AMPS	11953.2	-82.26	10054.7	-82.93
23	[CH115	115.00]	AMPS	7009.4	-86.00	4839.0	-86.95
26	[LOC115	115.00]	AMPS	12368.2	-82.00	11850.1	-81.47
30	[MAR115	115.00]	AMPS	10875.1	-82.45	9295.7	-83.55
33	[STM115	115.00]	AMPS	12381.9	-82.44	13744.2	-84.93
37	[SAN115	115.00]	AMPS	11265.2	-82.82	8569.7	-84.67
48	[TINAJ115	115.00]	AMPS	10271.6	-84.17	8400.3	-86.91
50	[M.O115	115.00]	AMPS	11002.6	-83.73	9762.5	-86.67
52	[TOC115	115.00]	AMPS	7710.5	-86.81	5825.3	-88.47
54	[LM1115	115.00]	AMPS	13158.9	-88.15	15898.8	-89.54
55	[LM2115	115.00]	AMPS	13175.5	-88.20	15898.9	-89.55
85	[PTP230	230.00]	AMPS	5138.2	-76.03	1130.2	-78.99
87	[CAL115	115.00]	AMPS	6416.3	-77.07	8411.8	-76.53
88	[EST115	115.00]	AMPS	5559.7	-76.18	7687.4	-76.46
92	[L.V115	115.00]	AMPS	6088.4	-76.71	8390.2	-76.95
96	[FOR230	230.00]	AMPS	7598.9	-76.88	8114.6	-78.44
100	[BAY230	230.00]	AMPS	5151.5	-84.46	5663.0	-86.82
103	[COPESA23	230.00]	AMPS	5984.3	-83.46	6160.4	-86.06
105	[PAN-AM23	230.00]	AMPS	5967.1	-83.09	6242.8	-86.02
109	[STA RITA115	115.00]	AMPS	12758.6	-88.59	13905.3	-89.45
110	[PTMD115A	115.00]	AMPS	7078.8	-89.35	5531.2	-87.38
111	[PTMD115B	115.00]	AMPS	7078.8	-89.35	5548.7	-87.32
115	[PACORA23	230.00]	AMPS	5668.7	-84.14	5634.7	-86.46
144	[CANJ230	230.00]	AMPS	6106.0	-77.56	5562.8	-77.31
147	[GUASQ230	230.00]	AMPS	6350.8	-77.57	5876.0	-77.45
148	[VELADERO 230	230.00]	AMPS	6536.9	-78.46	5045.1	-78.51
154	[CEMPAN15	115.00]	AMPS	7551.0	-86.89	7116.7	-89.03
190	[CHANG230	230.00]	AMPS	3255.8	-76.09	1450.7	-83.08
191	[CHANG115	115.00]	AMPS	2412.8	-82.03	2313.4	-83.80
511	[LGUIAS230	230.00]	AMPS	3853.7	-82.87	3476.4	-84.91
522	[TCATIVA 115	115.00]	AMPS	13196.4	-88.27	15946.3	-89.67
6000	[FRONTER	230.00]	AMPS	4441.8	-76.44	2788.5	-79.67

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 9:53  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2010 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	10149.5	-84.54	10655.7	-87.15

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 9:53  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2010 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)
61 [FFIELD 115.00] AMPS	9336.7	-87.50	9554.3	-82.57

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 9:54  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT

**Año 2011**

OUTPUT FOR AREA 6 [PANAMA ]

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	6974.1	-77.79	8436.7	-81.33
2 [PAN115 115.00] AMPS	13044.2	-78.47	17155.0	-81.32
3 [PANII230 230.00] AMPS	6754.2	-77.94	7133.9	-81.33
4 [PANIII115 115.00] AMPS	9385.7	-82.21	9518.6	-86.26
5 [CHO230 230.00] AMPS	5961.7	-78.00	6266.7	-81.23
6 [CHO115 115.00] AMPS	4665.7	-87.74	5522.1	-89.63
8 [LSA230 230.00] AMPS	5991.9	-71.18	4865.6	-73.79
9 [LSA115 115.00] AMPS	4452.1	-79.05	4838.6	-81.35
11 [M.N230 230.00] AMPS	7977.8	-62.28	6623.6	-61.80
12 [M.N115 115.00] AMPS	9087.7	-64.47	9450.5	-63.94
14 [PRO230 230.00] AMPS	4709.5	-61.42	2996.2	-65.54
15 [PRO115 115.00] AMPS	4235.7	-67.08	4413.9	-68.14
18 [CAC115 115.00] AMPS	12925.6	-78.65	16383.2	-81.59
19 [C.V115 115.00] AMPS	8724.8	-81.49	7095.4	-85.00
20 [CH.AZUL 115.00] AMPS	2239.5	-64.21	1686.6	-62.48
21 [C.BAN115 115.00] AMPS	11273.7	-78.78	11126.0	-82.78
23 [CH115 115.00] AMPS	6624.4	-84.61	4748.3	-86.24
26 [LOC115 115.00] AMPS	11629.6	-78.51	12806.0	-82.00
30 [MAR115 115.00] AMPS	10311.1	-79.20	9481.7	-82.39
33 [STM115 115.00] AMPS	11618.3	-79.03	13228.1	-81.96
37 [SAN115 115.00] AMPS	10677.3	-79.36	9135.0	-83.82
48 [TINAJ115 115.00] AMPS	9771.1	-80.96	8250.6	-84.44



50	[M.O115	115.00]	AMPS	10418.4	-80.44	9540.5	-84.06
52	[TOC115	115.00]	AMPS	7466.1	-83.25	5758.2	-85.65
54	[LM1115	115.00]	AMPS	10667.2	-86.89	13241.8	-87.89
55	[LM2115	115.00]	AMPS	10750.2	-87.25	13295.4	-87.94
85	[PTP230	230.00]	AMPS	4706.6	-60.13	4091.7	-55.03
87	[CAL115	115.00]	AMPS	7662.4	-62.64	9699.1	-61.69
88	[EST115	115.00]	AMPS	6441.5	-61.45	8817.2	-61.73
92	[L.V115	115.00]	AMPS	7183.2	-62.15	9753.6	-62.38
96	[FOR230	230.00]	AMPS	8997.4	-62.11	9360.4	-63.25
100	[BAY230	230.00]	AMPS	4916.5	-81.59	5485.3	-84.28
103	[COPESA23	230.00]	AMPS	5710.8	-79.45	5959.1	-82.62
105	[PAN-AM23	230.00]	AMPS	5923.8	-78.11	6209.0	-81.32
109	[STA RITA115	115.00]	AMPS	9630.8	-86.74	10969.3	-88.04
115	[PACORA23	230.00]	AMPS	5307.7	-80.28	5390.6	-83.22
144	[CANJ230	230.00]	AMPS	7503.5	-62.75	6516.2	-62.12
146	[GUALACA230	230.00]	AMPS	7101.4	-55.99	6096.2	-57.99
147	[GUASQ230	230.00]	AMPS	7884.9	-62.78	6961.8	-62.30
148	[VELADERO 230	230.00]	AMPS	7176.2	-65.86	5212.8	-65.15
154	[CEMPAN15	115.00]	AMPS	7285.7	-86.83	7351.8	-89.50
190	[CHANG230	230.00]	AMPS	5550.2	-57.74	4516.5	-50.01
191	[CHANG115	115.00]	AMPS	3640.7	-61.63	4179.4	-60.96
306	[CHAN1 230	230.00]	AMPS	5562.0	-57.16	4789.5	-42.29
511	[LGUIAS230	230.00]	AMPS	3843.7	-75.70	3452.6	-77.96
522	[TCATIVÁ 115	115.00]	AMPS	10729.5	-87.16	13328.5	-88.27
6000	[FRONTER	230.00]	AMPS	4660.2	-61.42	2843.8	-64.53

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 9:54  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2011 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	9833.4 -81.84	10469.1 -84.82

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 9:54  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2011 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	8039.9 -87.04	8539.8 -82.93

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, MAY 26 2008 9:37  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT

## AÑO 2012 REGMHTCB8

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	7383.3 -74.36	9082.9 -77.78
2 [PAN115 115.00] AMPS	13435.1 -74.87	17588.6 -77.60
3 [PAN11230 230.00] AMPS	7583.0 -74.98	8075.3 -78.31
4 [PAN11115 115.00] AMPS	10919.9 -79.09	11293.2 -82.81
5 [CHO230 230.00] AMPS	5905.6 -74.77	6428.3 -78.35
6 [CHO115 115.00] AMPS	5798.7 -83.54	6994.8 -85.57
8 [LSA230 230.00] AMPS	6329.8 -68.10	5090.3 -71.11
9 [LSA115 115.00] AMPS	6647.7 -74.06	6513.4 -76.57
11 [M.N230 230.00] AMPS	8634.2 -58.39	7397.3 -57.43
12 [M.N115 115.00] AMPS	9107.9 -60.28	9656.9 -59.79
14 [PRO230 230.00] AMPS	5002.1 -57.27	3695.3 -59.24
15 [PRO115 115.00] AMPS	4358.9 -62.85	4755.3 -63.40
18 [CAC115 115.00] AMPS	13284.0 -75.04	16762.6 -77.83
19 [C.V115 115.00] AMPS	9487.2 -78.52	7460.9 -81.44
20 [CH.AZUL 115.00] AMPS	2278.3 -59.81	1738.3 -57.73
21 [C.BAN115 115.00] AMPS	11609.3 -75.43	10015.5 -77.07
23 [CH115 115.00] AMPS	6597.6 -80.52	4745.8 -82.65
26 [LOC115 115.00] AMPS	11968.8 -75.11	11720.6 -75.39
30 [MAR115 115.00] AMPS	10562.0 -75.82	9238.2 -77.80
33 [STM115 115.00] AMPS	11933.2 -75.53	13495.2 -78.45
37 [SAN115 115.00] AMPS	11013.5 -76.10	8605.6 -78.98
48 [TINAJ115 115.00] AMPS	10000.7 -77.60	8364.4 -81.22
50 [M.O115 115.00] AMPS	10677.1 -77.03	9688.7 -80.76
52 [TOC115 115.00] AMPS	8415.6 -80.39	6378.3 -82.46
54 [LM1115 115.00] AMPS	11246.7 -80.93	14114.7 -82.89
55 [LM2115 115.00] AMPS	11220.2 -80.94	14068.8 -82.87
85 [PTP230 230.00] AMPS	4910.4 -56.37	4473.1 -50.45
87 [CAL115 115.00] AMPS	7491.6 -58.23	9661.1 -57.54
88 [EST115 115.00] AMPS	6331.2 -57.11	8684.5 -57.38
92 [L.V115 115.00] AMPS	7037.8 -57.76	9603.7 -57.98
96 [FOR230 230.00] AMPS	9713.5 -58.39	10546.7 -57.24



100	[BAY230	230.00]	AMPS	5261.1	-80.41	5776.1	-83.21
103	[COPESA23	230.00]	AMPS	6278.8	-77.02	6483.6	-80.23
105	[PAN-AM23	230.00]	AMPS	5858.3	-74.89	6355.0	-78.45
109	[STA RITA115	115.00]	AMPS	11714.8	-80.76	13913.0	-82.55
115	[PACORA23	230.00]	AMPS	5668.9	-77.96	5704.5	-81.02
144	[CANJ230	230.00]	AMPS	8182.4	-59.16	7813.2	-57.96
145	[BJOMIN230	230.00]	AMPS	4620.4	-57.23	2973.4	-54.54
146	[GUALACA230	230.00]	AMPS	7787.8	-52.47	7769.8	-52.64
147	[GUASQ230	230.00]	AMPS	8640.6	-59.21	8507.2	-58.20
148	[VELADERO 230	230.00]	AMPS	7957.8	-62.54	5709.4	-61.83
154	[CEMPAN15	115.00]	AMPS	6669.5	-81.44	6611.3	-84.51
155	[TABASARAI	230.00]	AMPS	5862.6	-62.50	4492.4	-61.77
190	[CHANG230	230.00]	AMPS	5697.3	-54.14	4242.7	-52.14
191	[CHANG115	115.00]	AMPS	3696.7	-58.51	4182.6	-58.43
306	[CHAN1 230	230.00]	AMPS	5711.6	-53.60	6211.2	-50.39
310	[CONCEPCION23	230.00]	AMPS	5937.9	-57.58	3714.7	-56.36
325	[STA RITA230	230.00]	AMPS	6814.5	-79.70	6593.5	-83.47
345	[LORENA230	230.00]	AMPS	6661.5	-44.61	6805.9	-46.46
511	[LGUIAS230	230.00]	AMPS	3912.9	-72.88	3504.6	-75.28
522	[TCATIVÁ 115	115.00]	AMPS	11232.9	-80.93	14106.2	-82.92
6000	[FRONTER	230.00]	AMPS	4914.6	-57.28	3396.4	-58.33

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 8:53  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2012 FAULT CURRENTS

		OUTPUT FOR AREA 7 [ACANAL ]					
		THREE PHASE FAULT		ONE PHASE FAULT			
X-----	BUS	-----X	/I+/ AN(I+)	/IA/ AN(IA)			
123	[MIR115	115.00]	AMPS	9989.1	-78.44	10620.5	-81.47

AÑO 2012 FAULT CURRENTS

		OUTPUT FOR AREA 9 [COLON ]					
		THREE PHASE FAULT		ONE PHASE FAULT			
X-----	BUS	-----X	/I+/ AN(I+)	/IA/ AN(IA)			
61	[FFIELD	115.00]	AMPS	8376.4	-81.71	8895.1	-78.27

## CASO REGMHTTLA8 INTERCAMBIO CERO

AÑO 2012



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**Año 2012 REGMHTTLA8**

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	7538.6	-75.42	9206.3	-78.78
2	[PAN115	115.00] AMPS	13788.8	-75.93	17968.0	-78.63
3	[PANI1230	230.00] AMPS	7742.9	-76.04	8181.8	-79.21
4	[PANI1115	115.00] AMPS	11138.7	-80.12	11446.5	-83.67
5	[CHO230	230.00] AMPS	6070.2	-75.78	6558.0	-79.20
6	[CHO115	115.00] AMPS	5881.9	-84.26	7078.2	-86.21
8	[LSA230	230.00] AMPS	6911.5	-69.71	5332.0	-72.00
9	[LSA115	115.00] AMPS	7966.0	-75.50	7303.3	-77.53
11	[M.N230	230.00] AMPS	8775.0	-58.63	7464.8	-57.50
12	[M.N115	115.00] AMPS	9127.1	-60.28	9662.8	-59.75
14	[PRO230	230.00] AMPS	5037.1	-57.30	3707.5	-59.19
15	[PRO115	115.00] AMPS	4371.0	-62.81	4764.6	-63.33
18	[CAC115	115.00] AMPS	13623.0	-76.09	17093.2	-78.84
19	[C.V115	115.00] AMPS	9631.9	-79.45	7492.4	-82.11
20	[CH.AZUL	115.00] AMPS	2281.5	-59.71	1739.5	-57.62
21	[C.BAN115	115.00] AMPS	11849.9	-76.42	10094.8	-77.81
23	[CH115	115.00] AMPS	6633.5	-81.29	4736.6	-83.25
26	[LOC115	115.00] AMPS	12229.6	-76.11	11850.6	-76.16
30	[MAR115	115.00] AMPS	10750.2	-76.75	9297.3	-78.51
33	[STM115	115.00] AMPS	12196.2	-76.53	13685.2	-79.34
37	[SAN115	115.00] AMPS	11222.6	-77.08	8651.7	-79.69
48	[TINAJ115	115.00] AMPS	10165.4	-78.54	8404.8	-81.93
50	[M.O115	115.00] AMPS	10873.1	-78.00	9757.8	-81.54
52	[TOC115	115.00] AMPS	8523.3	-81.28	6399.9	-83.08
54	[LM1115	115.00] AMPS	11387.3	-81.89	14243.2	-83.80
55	[LM2115	115.00] AMPS	11359.2	-81.89	14195.7	-83.77
85	[PTP230	230.00] AMPS	4944.3	-56.39	4492.6	-50.38
87	[CAL115	115.00] AMPS	7470.4	-58.09	9630.5	-57.39
88	[EST115	115.00] AMPS	6306.8	-56.94	8649.5	-57.21
92	[L.V115	115.00] AMPS	7015.1	-57.61	9570.8	-57.83
96	[FOR230	230.00] AMPS	9854.3	-58.59	10657.4	-57.34
100	[BAY230	230.00] AMPS	5312.3	-80.99	5817.9	-83.71
103	[COPESA23	230.00] AMPS	6382.3	-77.92	6553.7	-80.97
105	[PAN-AM23	230.00] AMPS	6020.3	-75.89	6482.1	-79.29
109	[STA RITA115	115.00] AMPS	11888.1	-81.78	14051.3	-83.48
115	[PACORA23	230.00] AMPS	5749.3	-78.78	5758.0	-81.68
144	[CANJ230	230.00] AMPS	8307.9	-59.40	7890.1	-58.05
145	[BJOMIN230	230.00] AMPS	4652.4	-57.25	2981.9	-54.46
146	[GUALACA230	230.00] AMPS	7905.7	-52.56	7847.8	-52.65
147	[GUASQ230	230.00] AMPS	8781.7	-59.47	8598.8	-58.32
148	[VELADERO	230230.00] AMPS	8278.8	-63.33	5820.2	-62.12



154	[CEMPAN15	115.00]	AMPS	6701.4	-82.22	6612.9	-85.19
155	[TABASARAI	230.00]	AMPS	6027.5	-62.99	4558.0	-61.94
190	[CHANG230	230.00]	AMPS	5718.7	-54.08	4250.6	-52.04
191	[CHANG115	115.00]	AMPS	3699.5	-58.40	4184.9	-58.31
306	[CHAN1 230	230.00]	AMPS	5733.0	-53.53	6228.3	-50.30
310	[CONCEPCION23	230.00]	AMPS	5993.2	-57.66	3728.6	-56.31
325	[STA RITA230	230.00]	AMPS	6881.3	-80.77	6586.0	-84.39
345	[LORENA230	230.00]	AMPS	6749.0	-44.54	6866.5	-46.39
511	[LGUIAS230	230.00]	AMPS	4059.8	-73.76	3584.3	-75.85
522	[TCATIVÁ 115	115.00]	AMPS	11372.7	-81.88	14234.2	-83.82
6000	[FRONTER	230.00]	AMPS	4947.1	-57.30	3406.4	-58.27

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 10:03  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 Año 2012 REGMHTLA8 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	10129.2	-79.31	10696.5	-82.22

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 10:03  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 Año 2012 REGMHTLA8 FAULT CURRENTS

OUTPUT FOR AREA 9 [COLON ]

X----- BUS -----X	THREE PHASE FAULT		ONE PHASE FAULT			
	/I+/	AN(I+)	/IA/	AN(IA)		
<b>61 [FFIELD</b>	<b>115.00]</b>	<b>AMPS</b>	<b>8436.3</b>	<b>-82.55</b>	<b>8923.1</b>	<b>-78.97</b>



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**CASO REGMHTCB8  
INTERCAMBIO CERO**

**AÑOS 2016 – 2021**



*de*

**AÑO 2016 REGMHTCB8**

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	7683.7	-71.75
2	[PAN115	115.00]	AMPS	14150.9	-72.63
3	[PAN11230	230.00]	AMPS	7650.3	-72.62
4	[PAN11115	115.00]	AMPS	11072.6	-77.56
5	[CHO230	230.00]	AMPS	6752.8	-71.23
6	[CHO115	115.00]	AMPS	6250.5	-82.18
8	[LSA230	230.00]	AMPS	6798.3	-64.81
9	[LSA115	115.00]	AMPS	6818.0	-71.96
11	[M.N230	230.00]	AMPS	9651.1	-53.70
12	[M.N115	115.00]	AMPS	9520.6	-55.86
14	[PRO230	230.00]	AMPS	5589.1	-52.11
15	[PRO115	115.00]	AMPS	4545.7	-57.76
18	[CAC115	115.00]	AMPS	13991.4	-72.88
19	[C.V115	115.00]	AMPS	9662.5	-77.31
20	[CH.AZUL	115.00]	AMPS	2319.1	-54.50
21	[C.BAN115	115.00]	AMPS	12108.0	-73.58
23	[CH115	115.00]	AMPS	6827.8	-80.35
26	[LOC115	115.00]	AMPS	12509.3	-73.16
30	[MAR115	115.00]	AMPS	11006.9	-74.30
33	[STM115	115.00]	AMPS	12504.8	-73.68
37	[SAN115	115.00]	AMPS	11442.4	-74.44
48	[TINAJ115	115.00]	AMPS	10413.5	-76.32
50	[M.O115	115.00]	AMPS	11146.1	-75.56
52	[TOC115	115.00]	AMPS	8518.6	-79.49
54	[LM1115	115.00]	AMPS	12314.7	-80.48
55	[LM2115	115.00]	AMPS	12269.3	-80.45
85	[PTP230	230.00]	AMPS	5056.3	-51.64
87	[CAL115	115.00]	AMPS	7787.1	-53.69
88	[EST115	115.00]	AMPS	6537.5	-52.56
92	[L.V115	115.00]	AMPS	7294.9	-53.21
96	[FOR230	230.00]	AMPS	10551.5	-53.53
100	[BAY230	230.00]	AMPS	4797.6	-78.92
103	[COPESA23	230.00]	AMPS	6240.7	-75.28
105	[PAN-AM23	230.00]	AMPS	6685.6	-71.40
109	[STA RITA115	115.00]	AMPS	12937.7	-80.16
115	[PACORA23	230.00]	AMPS	5572.2	-76.49
144	[CANJ230	230.00]	AMPS	8873.3	-54.40
145	[BJOMIN230	230.00]	AMPS	6086.9	-51.85
146	[GUALACA230	230.00]	AMPS	8516.0	-47.87
147	[GUASQ230	230.00]	AMPS	9429.9	-54.42
148	[VELADERO 230	230.00]	AMPS	8463.0	-58.98
154	[CEMPAN15	115.00]	AMPS	7051.5	-81.57
155	[TABASARAI	230.00]	AMPS	6091.1	-59.47
190	[CHANG230	230.00]	AMPS	5774.5	-49.17
191	[CHANG115	115.00]	AMPS	3678.8	-53.32
306	[CHAN1 230	230.00]	AMPS	5787.4	-48.57
310	[CONCEPCION230	230.00]	AMPS	7263.8	-52.46
325	[STA RITA230	230.00]	AMPS	7097.9	-78.76
341	[PRUDENCIA230	230.00]	AMPS	6328.1	-34.48
345	[LORENA230	230.00]	AMPS	7312.9	-40.51
511	[LGUIAS230	230.00]	AMPS	5323.8	-69.11
522	[TCATIVÁ 115	115.00]	AMPS	12294.9	-80.47
6000	[FRONTER	230.00]	AMPS	5389.8	-52.21



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PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, MAY 26 2008 9:50  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2016 FAULT CURRENTS

OUTPUT FOR AREA 7 [ACANAL ]  
 THREE PHASE FAULT ONE PHASE FAULT  
 /I+/ AN(I+) /IA/ AN(IA)  
 X----- BUS -----X  
 123 [MIR115 115.00] AMPS 10424.9 -77.72 10951.7 -81.43

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, MAY 26 2008 9:50  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2016 FAULT CURRENTS

OUTPUT FOR AREA 9 [COLON ]  
 THREE PHASE FAULT ONE PHASE FAULT  
 /I+/ AN(I+) /IA/ AN(IA)  
 X----- BUS -----X  
 61 [FFIELD 115.00] AMPS 8945.8 -81.60 9289.3 -78.27

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, MAY 26 2008 9:52  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT

## AÑO 2021 REGMHTCB8

FAULT CURRENTS

OUTPUT FOR AREA 6 [PANAMA ]  
 THREE PHASE FAULT ONE PHASE FAULT  
 /I+/ AN(I+) /IA/ AN(IA)  
 X----- BUS -----X  
 1 [PAN230 230.00] AMPS 10838.5 -74.98 12471.3 -79.41  
 2 [PAN115 115.00] AMPS 18587.7 -76.05 23292.9 -79.78  
 3 [PAN11230 230.00] AMPS 10969.9 -75.91 10833.2 -80.12  
 4 [PAN11115 115.00] AMPS 13907.6 -81.68 13612.1 -85.98  
 5 [CHO230 230.00] AMPS 9194.5 -74.40 9325.0 -78.70  
 6 [CHO115 115.00] AMPS 8304.1 -84.40 9842.5 -86.51  
 8 [LSA230 230.00] AMPS 7891.0 -67.73 5947.6 -70.62  
 9 [LSA115 115.00] AMPS 7278.6 -74.41 7052.3 -77.25  
 11 [M.N230 230.00] AMPS 10304.9 -56.28 8448.0 -55.38  
 12 [M.N115 115.00] AMPS 9497.4 -58.87 10045.4 -58.70  
 14 [PRO230 230.00] AMPS 5903.7 -54.09 4293.2 -55.72  
 15 [PRO115 115.00] AMPS 4646.2 -59.70 5080.5 -60.22  
 18 [CAC115 115.00] AMPS 18267.2 -76.31 21814.9 -80.13  
 19 [C.V115 115.00] AMPS 11627.3 -81.01 8264.5 -84.56  
 20 [CH.AZUL 115.00] AMPS 2343.1 -56.43 1768.6 -54.27  
 21 [C.BAN115 115.00] AMPS 15201.5 -76.96 11538.2 -79.70  
 23 [CH115 115.00] AMPS 7650.4 -82.76 5051.1 -85.17  
 26 [LOC115 115.00] AMPS 15840.6 -76.48 13899.4 -77.50  
 30 [MAR115 115.00] AMPS 13470.9 -77.60 10521.0 -80.51  
 33 [STM115 115.00] AMPS 15827.6 -77.09 16589.0 -80.94  
 37 [SAN115 115.00] AMPS 14165.2 -77.93 9682.9 -82.03  
 48 [TINAJ115 115.00] AMPS 12590.8 -79.90 9425.8 -84.16  
 50 [M.O115 115.00] AMPS 13689.1 -79.15 11158.8 -83.68  
 52 [TOC115 115.00] AMPS 10059.5 -83.15 7014.3 -85.34  
 54 [LM1115 115.00] AMPS 15827.6 -82.82 18618.6 -85.16  
 55 [LM2115 115.00] AMPS 15673.0 -82.56 18445.2 -84.92  
 85 [PTP230 230.00] AMPS 5296.3 -54.48 4763.5 -48.25  
 87 [CAL115 115.00] AMPS 7539.6 -57.03 9700.6 -56.40  
 88 [EST115 115.00] AMPS 6351.8 -56.03 8703.7 -56.34  
 92 [L.V115 115.00] AMPS 7073.9 -56.59 9640.4 -56.87  
 96 [FOR230 230.00] AMPS 11502.5 -56.65 12048.4 -55.66  
 100 [BAY230 230.00] AMPS 6084.3 -81.77 6379.6 -84.76  
 103 [COPESA23 230.00] AMPS 8241.6 -78.67 7859.9 -82.28  
 105 [PAN-AM23 230.00] AMPS 9066.9 -74.60 9145.3 -78.84  
 109 [STA RITA115 115.00] AMPS 17975.5 -82.81 19286.9 -84.70  
 115 [PACORA23 230.00] AMPS 7109.4 -79.71 6632.9 -83.03  
 144 [CANJ230 230.00] AMPS 10185.2 -57.31 9475.2 -56.15  
 145 [BJOMIN230 230.00] AMPS 6976.8 -54.01 5276.0 -53.92  
 146 [GUALACA230 230.00] AMPS 9658.5 -49.52 9453.3 -49.64  
 147 [GUASQ230 230.00] AMPS 10937.2 -57.33 10572.5 -56.44  
 148 [VELADERO 230230.00] AMPS 9787.6 -61.38 6487.3 -60.75  
 154 [CEMPAN15 115.00] AMPS 7956.0 -83.48 7387.5 -86.65  
 155 [TABASARAI 230.00] AMPS 6714.6 -61.37 4926.2 -60.71  
 190 [CHANG230 230.00] AMPS 5855.7 -52.11 4297.6 -50.31  
 191 [CHANG115 115.00] AMPS 3702.9 -56.55 4197.6 -56.62  
 306 [CHAN1 230 230.00] AMPS 5862.2 -51.56 6305.5 -48.31  
 310 [CONCEPCION23230.00] AMPS 8021.9 -54.64 5735.4 -54.44  
 325 [STA RITA230 230.00] AMPS 11827.6 -80.38 9971.2 -84.26  
 341 [PRUDENCIA230230.00] AMPS 6856.0 -35.14 6860.7 -36.21  
 345 [LORENA230 230.00] AMPS 8070.6 -41.37 8074.9 -42.90  
 511 [LGUIAS230 230.00] AMPS 6147.8 -72.14 4761.7 -74.72  
 522 [TCATIVÁ 115 115.00] AMPS 15753.5 -82.69 18560.2 -85.10  
 6000 [FRONTER 230.00] AMPS 5646.4 -54.19 3833.9 -54.79

OUTPUT FOR AREA 7 [ACANAL ]  
 THREE PHASE FAULT ONE PHASE FAULT  
 /I+/ AN(I+) /IA/ AN(IA)  
 X----- BUS -----X  
 123 [MIR115 115.00] AMPS 12291.1 -81.18 12232.9 -84.67

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, MAY 26 2008 9:52  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2021 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	10673.0	-83.42	10485.0	-79.13



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**CASO REGMHTGDC8  
INTERCAMBIO CERO**

**AÑOS 2016 – 2021**



**Año 2016 REGMHTGDC8**

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			8014.7 -72.92	9682.8 -77.18
2 [PAN115 115.00] AMPS			14798.8 -73.68	19156.0 -77.00
3 [PANII230 230.00] AMPS			7971.4 -73.77	7408.3 -78.65
4 [PANIII115 115.00] AMPS			11451.3 -78.64	10859.2 -83.13
5 [CHO230 230.00] AMPS			6974.0 -72.36	7580.9 -77.18
6 [CHO115 115.00] AMPS			6344.6 -82.91	7598.0 -85.31
8 [LSA230 230.00] AMPS			6957.6 -66.10	5554.9 -69.48
9 [LSA115 115.00] AMPS			6910.2 -73.00	6807.0 -75.76
11 [M.N230 230.00] AMPS			9552.8 -55.19	8076.9 -54.36
12 [M.N115 115.00] AMPS			11366.6 -57.39	11305.4 -57.13
14 [PRO230 230.00] AMPS			5425.4 -53.89	4119.8 -55.62
15 [PRO115 115.00] AMPS			4495.8 -59.56	4963.1 -60.10
18 [CAC115 115.00] AMPS			14624.5 -73.92	18196.2 -77.35
19 [C.V115 115.00] AMPS			9934.0 -78.22	7471.8 -82.09
20 [CH.AZUL 115.00] AMPS			2307.6 -56.39	1757.6 -54.25
21 [C.BAN115 115.00] AMPS			12564.3 -74.54	10473.7 -77.18
23 [CH115 115.00] AMPS			7063.3 -80.81	4889.5 -83.30
26 [LOC115 115.00] AMPS			13000.6 -74.13	12371.3 -75.22
30 [MAR115 115.00] AMPS			11382.6 -75.16	9643.9 -78.05
33 [STM115 115.00] AMPS			13003.2 -74.64	14397.5 -78.28
37 [SAN115 115.00] AMPS			11844.0 -75.38	8909.2 -79.33
48 [TINAJ115 115.00] AMPS			10749.8 -77.17	8697.4 -81.62
50 [M.O115 115.00] AMPS			11534.1 -76.46	10142.7 -81.05
52 [TOC115 115.00] AMPS			8718.3 -80.35	6210.9 -83.20
54 [LM1115 115.00] AMPS			13739.6 -81.61	16634.9 -83.80
55 [LM2115 115.00] AMPS			13650.3 -81.44	16524.2 -83.63
85 [PTP230 230.00] AMPS			5060.6 -53.06	4532.6 -47.14
87 [CAL115 115.00] AMPS			8315.9 -55.01	10546.1 -54.35
88 [EST115 115.00] AMPS			6830.8 -53.89	9299.6 -54.24
92 [L.V115 115.00] AMPS			7724.1 -54.52	10439.6 -54.84
96 [FOR230 230.00] AMPS			10513.6 -55.02	11159.9 -53.89
100 [BAY230 230.00] AMPS			4861.6 -79.52	5431.8 -82.79
103 [COPEGA23 230.00] AMPS			6436.0 -76.24	6263.5 -80.57
105 [PAN-AM23 230.00] AMPS			6902.3 -72.52	7468.0 -77.28
109 [STA RITA115 115.00] AMPS			14055.9 -81.15	16014.9 -83.13
115 [PACORA23 230.00] AMPS			5716.1 -77.33	5554.9 -81.33
144 [CANJ230 230.00] AMPS			8890.4 -55.85	8206.1 -54.72
145 [BJOMIN230 230.00] AMPS			5548.2 -53.57	4666.8 -54.20
146 [GUALACA230 230.00] AMPS			8534.2 -49.30	8237.7 -49.48
147 [GUASO230 230.00] AMPS			9448.9 -55.89	8991.6 -54.95
148 [VELADERO 230230.00] AMPS			8639.6 -60.45	6023.4 -60.35
154 [CEMPAN15 115.00] AMPS			7389.6 -81.96	7060.7 -85.15
155 [TABASARAI 230.00] AMPS			6184.2 -60.78	4665.5 -60.44
190 [CHANG230 230.00] AMPS			5772.6 -50.64	4249.2 -48.75
191 [CHANG115 115.00] AMPS			3678.9 -54.78	4155.9 -54.76
306 [CHAN1 230 230.00] AMPS			5784.4 -50.04	6249.4 -46.84
310 [CONCEPCION23 230.00] AMPS			6846.9 -54.14	5302.3 -54.38
325 [STA RITA230 230.00] AMPS			7453.7 -79.82	6927.5 -83.98
341 [PRUDENCIA230 230.00] AMPS			6340.9 -35.86	6286.6 -37.20
345 [LORENA230 230.00] AMPS			7328.4 -41.91	7251.0 -43.65
511 [LGUIAS230 230.00] AMPS			5440.3 -70.17	4486.8 -73.27
522 [TCATIVÁ 115 115.00] AMPS			13698.0 -81.53	16603.1 -83.77
6000 [FRONTER 230.00] AMPS			5263.1 -53.97	3713.2 -54.72

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			10723.4 -78.45	11165.4 -81.96

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			9678.3 -82.33	9827.3 -78.37



*Handwritten signature or initials.*



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	10100.9	-71.88	11843.1	-76.60
2	[PAN115	115.00] AMPS	17187.0	-72.99	21831.3	-76.88
3	[PANII230	230.00] AMPS	10189.2	-72.82	10305.8	-77.61
4	[PANII115	115.00] AMPS	13128.1	-78.81	13047.9	-83.68
5	[CHO230	230.00] AMPS	8730.9	-71.56	8987.2	-76.34
6	[CHO115	115.00] AMPS	8060.4	-82.34	9611.6	-84.65
8	[LSA230	230.00] AMPS	7690.6	-65.17	5860.2	-68.57
9	[LSA115	115.00] AMPS	7146.9	-72.26	6983.7	-75.34
11	[M.N230	230.00] AMPS	10297.7	-53.85	8430.2	-53.01
12	[M.N115	115.00] AMPS	9656.1	-56.31	10158.0	-56.11
14	[PRO230	230.00] AMPS	5889.2	-51.65	4281.5	-53.30
15	[PRO115	115.00] AMPS	4633.3	-57.29	5066.1	-57.82
18	[CAC115	115.00] AMPS	16915.8	-73.29	20529.1	-77.35
19	[C.V115	115.00] AMPS	11103.1	-78.46	8080.3	-82.88
20	[CH.AZUL	115.00] AMPS	2336.2	-54.03	1763.3	-51.88
21	[C.BAN115	115.00] AMPS	14286.8	-74.15	11161.7	-77.82
23	[CH115	115.00] AMPS	7307.4	-80.75	4934.0	-83.87
26	[LOC115	115.00] AMPS	14842.2	-73.63	13352.9	-75.48
30	[MAR115	115.00] AMPS	12744.4	-75.01	10204.6	-78.73
33	[STM115	115.00] AMPS	14808.1	-74.28	15830.1	-78.58
37	[SAN115	115.00] AMPS	13377.3	-75.19	9419.0	-80.27
48	[TINAJ115	115.00] AMPS	11947.5	-77.35	9169.0	-82.41
50	[M.O115	115.00] AMPS	12930.5	-76.49	10807.1	-81.77
52	[TOC115	115.00] AMPS	9670.1	-80.76	6878.4	-83.79
54	[LM1115	115.00] AMPS	13946.3	-79.89	16843.8	-82.48
55	[LM2115	115.00] AMPS	13667.2	-79.18	16548.0	-81.85
85	[PTP230	230.00] AMPS	5279.5	-52.14	4748.3	-45.94
87	[CAL115	115.00] AMPS	7765.1	-54.33	9948.3	-53.65
88	[EST115	115.00] AMPS	6495.3	-53.25	8882.7	-53.56
92	[L.V115	115.00] AMPS	7264.9	-53.86	9876.0	-54.12
96	[FOR230	230.00] AMPS	11474.2	-54.26	12015.4	-53.32
100	[BAY230	230.00] AMPS	5903.3	-80.24	6231.3	-83.49
103	[COPESA23	230.00] AMPS	7799.5	-76.15	7561.7	-80.30
105	[PAN-AM23	230.00] AMPS	8614.7	-71.78	8817.4	-76.50
109	[STA RITA115	115.00] AMPS	15683.1	-79.62	17446.1	-82.00
115	[PACORA23	230.00] AMPS	6785.4	-77.50	6416.0	-81.31
144	[CANJ230	230.00] AMPS	10147.5	-54.94	9439.7	-53.85
145	[BJOMIN230	230.00] AMPS	6968.8	-51.46	5267.9	-51.40
146	[GUALACA230	230.00] AMPS	9620.0	-47.19	9417.5	-47.37
147	[GUASQ230	230.00] AMPS	10896.3	-54.94	10532.7	-54.12
148	[VELADERO 230	230.00] AMPS	9672.2	-58.87	6427.0	-58.51
154	[CEMPAN15	115.00] AMPS	7386.5	-81.29	7038.0	-84.94
155	[TABASARAI	230.00] AMPS	6642.6	-59.02	4881.5	-58.52
190	[CHANG230	230.00] AMPS	5846.2	-49.66	4295.5	-47.90
191	[CHANG115	115.00] AMPS	3698.6	-54.12	4202.3	-54.20
306	[CHAN1 230	230.00] AMPS	5854.0	-49.06	6296.5	-45.83
310	[CONCEPCION23	230.00] AMPS	8009.2	-52.15	5722.8	-51.98
325	[STA RITA230	230.00] AMPS	10596.5	-77.04	9395.9	-81.69
341	[PRUDENCIA230	230.00] AMPS	6828.3	-32.90	6835.2	-34.01
345	[LORENA230	230.00] AMPS	8037.7	-39.10	8044.7	-40.67
511	[LGUIAS230	230.00] AMPS	5967.4	-69.81	4658.7	-72.85
522	[TCATIVA 115	115.00] AMPS	13804.9	-79.52	16715.6	-82.20
6000	[FRONTER	230.00] AMPS	5631.5	-51.76	3822.9	-52.39

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	11741.1	-78.89	11860.6	-82.80

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	9775.8	-81.08	9857.3	-77.59



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# CASO REGMHTTLA8 INTERCAMBIO CERO

AÑOS 2016 – 2021

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E      TUE, MAY 27 2008 14:03  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV      SHORT CIRCUIT  
**Año 2016 REGMHTTLA8**

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	8998.8	-76.65	10550.0	-80.64
2 [PAN115	115.00]	AMPS	16452.1	-77.41	20927.0	-80.54
3 [PANII230	230.00]	AMPS	9086.2	-77.29	8387.8	-80.94
4 [PANIII115	115.00]	AMPS	12554.3	-81.95	11862.8	-85.47
5 [CHO230	230.00]	AMPS	7765.8	-76.65	8189.8	-80.83

FAULT



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6	[CHO115	115.00]	AMPS	6686.2	-86.07	7903.9	-88.13
8	[LSA230	230.00]	AMPS	8582.8	-72.49	6762.7	-74.18
9	[LSA115	115.00]	AMPS	8814.0	-79.08	8194.1	-80.92
11	[M.N230	230.00]	AMPS	9557.0	-60.03	8089.5	-58.92
12	[M.N115	115.00]	AMPS	9413.4	-61.74	9960.9	-61.34
14	[PRO230	230.00]	AMPS	5353.0	-58.45	4089.1	-60.08
15	[PRO115	115.00]	AMPS	4464.7	-64.00	4935.4	-64.52
18	[CAC115	115.00]	AMPS	16203.4	-77.60	19745.4	-80.73
19	[C.V115	115.00]	AMPS	10686.5	-81.18	7821.1	-83.82
20	[CH.AZUL	115.00]	AMPS	2297.0	-60.82	1751.7	-58.67
21	[C.BAN115	115.00]	AMPS	13690.7	-77.94	10961.8	-79.37
23	[CH115	115.00]	AMPS	7282.5	-82.85	4936.2	-84.62
26	[LOC115	115.00]	AMPS	14217.6	-77.57	13070.6	-77.59
30	[MAR115	115.00]	AMPS	12270.3	-78.30	10024.2	-80.15
33	[STM115	115.00]	AMPS	14231.1	-78.07	15328.7	-81.15
37	[SAN115	115.00]	AMPS	12833.1	-78.68	9262.1	-81.36
48	[TINAJ115	115.00]	AMPS	11535.2	-80.30	8987.7	-83.71
50	[M.O115	115.00]	AMPS	12457.8	-79.72	10556.3	-83.36
52	[TOC115	115.00]	AMPS	9329.7	-83.07	6528.1	-84.69
54	[LM1115	115.00]	AMPS	14475.3	-84.16	17307.3	-86.07
55	[LM2115	115.00]	AMPS	14358.2	-83.88	17171.0	-85.81
85	[PTP230	230.00]	AMPS	5068.0	-57.32	4527.1	-51.25
87	[CAL115	115.00]	AMPS	7659.2	-59.40	9831.8	-58.68
88	[EST115	115.00]	AMPS	6422.4	-58.22	8790.3	-58.51
92	[L.V115	115.00]	AMPS	7172.9	-58.91	9761.4	-59.14
96	[FOR230	230.00]	AMPS	10560.9	-59.68	11178.9	-58.35
100	[BAY230	230.00]	AMPS	5674.2	-81.84	6090.6	-84.65
103	[COPESA23	230.00]	AMPS	7226.0	-79.24	6886.3	-82.63
105	[PAN-AM23	230.00]	AMPS	7677.3	-76.80	8060.1	-80.90
109	[STA RITA115	115.00]	AMPS	14512.2	-83.91	16367.8	-85.48
115	[PACORA23	230.00]	AMPS	6391.4	-80.04	6050.1	-83.19
144	[CANJ230	230.00]	AMPS	9013.4	-60.53	8268.0	-59.11
145	[BJOMIN230	230.00]	AMPS	5284.4	-58.11	4532.6	-58.79
146	[GUALACA230	230.00]	AMPS	8656.1	-53.75	8305.2	-53.75
147	[GUASQ230	230.00]	AMPS	9592.9	-60.61	9071.8	-59.38
148	[VELADERO 230	230.00]	AMPS	9331.3	-66.14	6357.8	-64.93
154	[CEMPAN15	115.00]	AMPS	7481.5	-83.67	7090.5	-86.54
155	[TABASARAI	230.00]	AMPS	6522.8	-65.85	4862.2	-64.81
190	[CHANG230	230.00]	AMPS	5740.2	-54.74	4208.9	-52.73
191	[CHANG115	115.00]	AMPS	3658.0	-58.75	4113.9	-58.70
306	[CHAN1 230	230.00]	AMPS	5738.4	-54.09	6193.7	-50.83
310	[CONCEPCION23	230.00]	AMPS	6650.6	-58.75	5216.7	-58.92
325	[STA RITA230	230.00]	AMPS	7859.9	-82.98	7060.1	-86.46
341	[PRUDENCIA230	230.00]	AMPS	6401.8	-39.90	6318.4	-41.21
345	[LORENA230	230.00]	AMPS	7415.2	-46.09	7298.8	-47.76
511	[LGUIAS230	230.00]	AMPS	6131.8	-75.07	4889.1	-76.87
522	[TCATIVÁ 115	115.00]	AMPS	14415.7	-84.01	17260.1	-85.99
540	[HV-PETOABRE	230.00]	AMPS	5141.2	-80.04	4906.7	-80.45
6000	[FRONTIER	230.00]	AMPS	5211.3	-58.51	3694.5	-59.16

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 14:03  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2016 REGMHTLA8 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	11393.6	-81.23	11602.2	-84.19

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 14:03  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2016 REGMHTLA8 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	10007.5	-84.35	10037.7	-79.83



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PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 14:05  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2021 REGMHTTLA8 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	11592.6	-77.27	13078.5	-81.38
2	[PAN115	115.00] AMPS	19724.1	-78.07	24434.6	-81.61
3	[PANI1230	230.00] AMPS	11590.7	-77.93	11227.7	-81.58
4	[PANI1115	115.00] AMPS	14467.6	-83.34	13991.5	-87.14
5	[CHO230	230.00] AMPS	10256.0	-77.56	10034.0	-81.22
6	[CHO115	115.00] AMPS	8764.2	-86.66	10239.7	-88.47
8	[LSA230	230.00] AMPS	9202.9	-73.80	6867.1	-75.24
9	[LSA115	115.00] AMPS	9034.0	-80.10	8246.2	-82.16
11	[M.N230	230.00] AMPS	9832.6	-63.04	8259.4	-62.03
12	[M.N115	115.00] AMPS	9566.6	-65.20	10089.3	-64.98
14	[PRO230	230.00] AMPS	5430.9	-61.32	4121.8	-63.02
15	[PRO115	115.00] AMPS	4515.6	-66.91	4966.0	-67.50
18	[CAC115	115.00] AMPS	19342.7	-78.28	22791.6	-81.82
19	[C.V115	115.00] AMPS	12005.3	-82.40	8392.0	-85.24
20	[CH.AZUL	115.00] AMPS	2318.0	-63.87	1763.3	-61.80
21	[C.BAN115	115.00] AMPS	15901.4	-78.69	11796.3	-80.58
23	[CH115	115.00] AMPS	7851.7	-83.26	5105.4	-85.18



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26	[LOC115	115.00]	AMPS	16612.9	-78.25	14288.5	-78.51
30	[MAR115	115.00]	AMPS	14016.1	-79.12	10732.7	-81.32
33	[STM115	115.00]	AMPS	16629.2	-78.85	17147.9	-82.26
37	[SAN115	115.00]	AMPS	14758.0	-79.58	9857.6	-82.81
48	[TINAJ115	115.00]	AMPS	13073.5	-81.40	9594.7	-84.94
50	[M.O115	115.00]	AMPS	14267.3	-80.75	11398.3	-84.61
52	[TOC115	115.00]	AMPS	10339.5	-84.38	7112.6	-85.92
54	[LM1115	115.00]	AMPS	17389.3	-83.73	20010.5	-85.82
55	[LM2115	115.00]	AMPS	17151.3	-83.27	19765.3	-85.42
85	[PTP230	230.00]	AMPS	5298.3	-60.74	4777.4	-54.43
87	[CAL115	115.00]	AMPS	7732.3	-63.29	9917.9	-62.62
88	[EST115	115.00]	AMPS	6478.2	-62.22	8864.1	-62.52
92	[L.V115	115.00]	AMPS	7236.1	-62.83	9843.6	-63.09
96	[FOR230	230.00]	AMPS	11316.2	-63.31	11938.9	-62.19
100	[BAY230	230.00]	AMPS	6269.5	-82.72	6540.5	-85.50
103	[COPESA23	230.00]	AMPS	8592.8	-80.19	8090.3	-83.32
105	[PAN-AM23	230.00]	AMPS	10098.5	-77.74	9829.5	-81.33
109	[STA RITA115	115.00]	AMPS	18646.6	-83.50	19768.2	-85.05
115	[PACORA23	230.00]	AMPS	7372.6	-81.00	6807.8	-83.89
144	[CANJ230	230.00]	AMPS	10135.4	-63.85	9477.6	-62.50
145	[BJOMIN230	230.00]	AMPS	5374.4	-61.10	4595.5	-61.84
146	[GUALACA230	230.00]	AMPS	9629.1	-56.04	9458.7	-55.95
147	[GUASQ230	230.00]	AMPS	10872.9	-63.91	10565.6	-62.82
148	[VELADERO 230	230.00]	AMPS	10122.4	-67.91	6712.9	-66.47
154	[CEMPAN15	115.00]	AMPS	8116.9	-83.55	7471.5	-86.51
155	[TABASARAI	230.00]	AMPS	6895.7	-67.41	5068.8	-66.27
190	[CHANG230	230.00]	AMPS	5847.6	-58.33	4291.9	-56.45
191	[CHANG115	115.00]	AMPS	3707.4	-62.68	4184.9	-62.74
306	[CHAN1 230	230.00]	AMPS	5852.2	-57.73	6302.9	-54.46
310	[CONCEPCION23	230.00]	AMPS	6775.1	-61.72	5288.4	-61.97
325	[STA RITA230	230.00]	AMPS	11870.4	-81.28	9899.0	-84.60
341	[PRUDENCIA230	230.00]	AMPS	6862.2	-41.44	6876.5	-42.33
345	[LORENA230	230.00]	AMPS	8066.6	-47.77	8087.5	-49.10
511	[LGUIAS230	230.00]	AMPS	6758.4	-76.32	5100.7	-77.76
522	[TCATIVÁ 115	115.00]	AMPS	17268.3	-83.49	19915.0	-85.67
540	[HV-PETOABRE	230.00]	AMPS	6614.8	-80.96	5037.1	-83.08
6000	[FRONTER	230.00]	AMPS	5281.8	-61.37	3723.3	-62.06

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 14:05  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2021 REGMHTTLA8 FAULT CURRENTS

OUTPUT FOR AREA 7 [ACANAL ]

X----- BUS -----X			THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AN(I+)	AN(I+)	/IA/ AN(IA)	AN(IA)
123 [MIR115	115.00]	AMPS	12691.3	-82.44	12483.7	-85.54

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E TUE, MAY 27 2008 14:05  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV SHORT CIRCUIT  
 AÑO 2021 REGMHTTLA8 FAULT CURRENTS

OUTPUT FOR AREA 9 [COLON ]

X----- BUS -----X			THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AN(I+)	AN(I+)	/IA/ AN(IA)	AN(IA)
61 [FFIELD	115.00]	AMPS	11348.6	-83.77	10920.9	-78.84



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# CON INTERCAMBIO



*de*

# CASOS REGMHTCB8 Y REGMHTGDC8 CON INTERCAMBIO

AÑO 2012

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E      MON, MAY 26 2008 10:35  
 PLAN. EXP-SIN JUN-2008 ESC MOD DEM MAX INV EXPORTA A C.A.      SHORT CIRCUIT  
**AÑO 2012 REGMHTCB8 Y REGMHTGDC8**  
 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	8257.7	-80.36	9744.1	-83.70
2	[PAN115	115.00] AMPS	15507.1	-80.56	19728.5	-83.34
3	[PANII230	230.00] AMPS	8492.6	-80.86	8213.2	-83.67
4	[PANII115	115.00] AMPS	12053.6	-84.63	11635.5	-87.67
5	[CHO230	230.00] AMPS	6451.4	-81.17	6838.1	-84.13
6	[CHO115	115.00] AMPS	6121.0	-89.03	7279.3	-90.78
8	[LSA230	230.00] AMPS	6666.8	-77.86	5263.6	-79.96
9	[LSA115	115.00] AMPS	6935.5	-83.32	6697.6	-85.35
11	[M.N230	230.00] AMPS	8777.8	-72.44	7315.5	-71.79
12	[M.N115	115.00] AMPS	9458.2	-74.39	9842.0	-73.84
14	[PRO230	230.00] AMPS	5010.5	-73.43	3686.9	-75.48
15	[PRO115	115.00] AMPS	4376.5	-79.01	4753.0	-79.57
18	[CAC115	115.00] AMPS	15299.6	-80.68	18657.8	-83.46
19	[C.V115	115.00] AMPS	10317.3	-83.65	7786.1	-86.00
20	[CH.AZUL	115.00] AMPS	2289.6	-75.97	1744.6	-73.91
21	[C.BAN115	115.00] AMPS	13029.2	-80.84	12080.5	-84.25
23	[CH115	115.00] AMPS	7146.1	-84.35	4884.5	-85.49
26	[LOC115	115.00] AMPS	13505.2	-80.55	14111.7	-83.63
30	[MAR115	115.00] AMPS	11720.8	-80.94	10137.4	-83.45
33	[STM115	115.00] AMPS	13503.4	-80.93	14657.5	-83.46
37	[SAN115	115.00] AMPS	12253.7	-81.45	9766.9	-85.07
48	[TINAJ115	115.00] AMPS	11033.1	-82.73	8736.7	-85.38
50	[M.O115	115.00] AMPS	11880.3	-82.29	10217.6	-85.18
52	[TOC115	115.00] AMPS	9041.5	-85.33	6460.2	-86.33
54	[LM1115	115.00] AMPS	14171.7	-85.61	16504.9	-86.36
55	[LM2115	115.00] AMPS	14082.8	-85.42	16357.4	-85.83
61	[FFIELD	115.00] AMPS	9868.2	-85.52	9780.6	-80.34
85	[PTP230	230.00] AMPS	4977.3	-70.81	4247.0	-65.45
87	[CAL115	115.00] AMPS	7814.2	-72.26	9868.5	-71.27
88	[EST115	115.00] AMPS	6542.1	-71.02	8945.4	-71.29
92	[L.V115	115.00] AMPS	7313.8	-71.73	9917.5	-71.96



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96	[FOR230	230.00]	AMPS	9864.7	-72.30	10027.3	-73.27
100	[BAY230	230.00]	AMPS	5473.6	-83.40	5866.8	-86.17
103	[COPESA23	230.00]	AMPS	6855.0	-82.09	0.0	0.00
105	[PAN-AM23	230.00]	AMPS	6397.1	-81.27	6759.0	-84.21
109	[STA RITA115	115.00]	AMPS	15419.8	-85.84	15662.0	-86.61
115	[PACORA23	230.00]	AMPS	6106.7	-82.54	5824.5	-84.95
144	[CANJ230	230.00]	AMPS	8416.5	-72.81	6999.5	-71.81
145	[BJOMIN230	230.00]	AMPS	4649.7	-72.20	2811.4	-70.15
146	[GUALACA230	230.00]	AMPS	8067.8	-66.46	6589.6	-68.01
147	[GUASQ230	230.00]	AMPS	8899.1	-72.87	7512.0	-72.01
148	[VELADERO 230	230.00]	AMPS	8051.2	-75.01	5587.0	-73.73
154	[CEMPAN15	115.00]	AMPS	7389.6	-84.88	7271.2	-87.51
155	[TABASARAI	230.00]	AMPS	5787.0	-74.62	3814.9	-73.22
190	[CHANG230	230.00]	AMPS	5692.4	-70.31	4579.4	-62.35
191	[CHANG115	115.00]	AMPS	3693.9	-74.28	4203.5	-73.54
306	[CHAN1 230	230.00]	AMPS	5717.4	-69.27	4876.8	-54.07
310	[CONCEPCION23	230.00]	AMPS	5979.1	-72.61	3714.8	-71.51
325	[STA RITA230	230.00]	AMPS	7823.7	-85.07	6638.8	-87.31
345	[LORENA230	230.00]	AMPS	6952.6	-59.00	5584.9	-63.62
511	[LGUIAS230	230.00]	AMPS	4139.4	-80.60	3668.1	-82.51
522	[TCATIVÁ 115	115.00]	AMPS	14134.7	-85.53	16495.7	-86.45
6000	[FRONTER	230.00]	AMPS	4914.6	-73.85	3388.1	-75.00

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, MAY 26 2008 10:35  
 PLAN. EXP-SIN JUN-2008 ESC MOD DEM MAX INV EXPORTA A C.A. SHORT CIRCUIT  
 AÑO 2012 FAULT CURRENTS

OUTPUT FOR AREA 7 [ACANAL ]

X----- BUS -----X			THREE PHASE FAULT		ONE PHASE FAULT	
			/I+/ AN(I+)	AN(I+)	/IA/ AN(IA)	AN(IA)
123 [MIR115	115.00]	AMPS	10856.3	-83.14	11131.3	-85.72



*Handwritten signature or initials.*

**CASO REGMHTCB8  
CON INTERCAMBIO**

**AÑOS 2016 – 2021**



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	8646.2	-76.08	10215.6	-80.14
2	[PAN115	115.00]	AMPS	16246.2	-76.73	20727.6	-79.92
3	[PANII230	230.00]	AMPS	8669.0	-76.80	7851.4	-80.91
4	[PANII115	115.00]	AMPS	12318.5	-81.44	11485.8	-85.25
5	[CHO230	230.00]	AMPS	7438.6	-75.94	7963.6	-80.34
6	[CHO115	115.00]	AMPS	6650.5	-85.63	7868.5	-87.84
8	[LSA230	230.00]	AMPS	7300.1	-71.55	5742.5	-74.29
9	[LSA115	115.00]	AMPS	6190.4	-78.91	6329.1	-81.04
11	[M.N230	230.00]	AMPS	9829.6	-63.19	8253.5	-62.13
12	[M.N115	115.00]	AMPS	9562.5	-65.11	10054.2	-64.67
14	[PRO230	230.00]	AMPS	5642.1	-62.94	4206.5	-64.54
15	[PRO115	115.00]	AMPS	4594.4	-68.53	5035.2	-69.00
18	[CAC115	115.00]	AMPS	16022.7	-76.93	19590.6	-80.14
19	[C.V115	115.00]	AMPS	10556.6	-80.74	7737.4	-83.68
20	[CH.AZUL	115.00]	AMPS	2345.3	-65.24	1778.4	-63.06
21	[C.BAN115	115.00]	AMPS	13551.3	-77.35	10916.8	-79.03
23	[CH115	115.00]	AMPS	7313.4	-82.30	4959.8	-84.16
26	[LOC115	115.00]	AMPS	14067.8	-76.97	13003.3	-77.21
30	[MAR115	115.00]	AMPS	12180.8	-77.75	10009.6	-79.81
33	[STM115	115.00]	AMPS	14091.8	-77.45	15250.7	-80.67
37	[SAN115	115.00]	AMPS	12709.1	-78.12	9226.5	-81.06
48	[TINAJ115	115.00]	AMPS	11461.9	-79.75	8987.8	-83.37
50	[M.O115	115.00]	AMPS	12364.6	-79.14	10543.7	-82.99
52	[TOC115	115.00]	AMPS	9216.6	-82.69	6430.9	-84.63
54	[LM1115	115.00]	AMPS	14683.8	-83.14	17514.8	-85.13
55	[LM2115	115.00]	AMPS	14588.9	-82.96	17399.0	-84.95
61	[FFIELD	115.00]	AMPS	10116.3	-83.42	10118.0	-78.93
85	[PTP230	230.00]	AMPS	5131.8	-61.55	4595.0	-55.57
87	[CAL115	115.00]	AMPS	7737.3	-62.74	9930.7	-62.03
88	[EST115	115.00]	AMPS	6480.4	-61.56	8869.5	-61.85
92	[L.V115	115.00]	AMPS	7243.0	-62.24	9856.4	-62.48
96	[FOR230	230.00]	AMPS	10708.8	-63.08	11349.4	-61.87
100	[BAY230	230.00]	AMPS	5599.7	-81.54	6053.4	-84.44
103	[COPESA23	230.00]	AMPS	7001.1	-78.80	6662.6	-82.53
105	[PAN-AM23	230.00]	AMPS	7359.5	-76.09	7844.7	-80.42
109	[STA RITA115	115.00]	AMPS	15881.4	-83.21	17525.9	-84.77
115	[PACORA23	230.00]	AMPS	6237.3	-79.65	5923.1	-83.08
144	[CANJ230	230.00]	AMPS	9055.7	-63.79	8353.3	-62.55
145	[BJOMIN230	230.00]	AMPS	6140.3	-61.86	4948.0	-62.12
146	[GUALACA230	230.00]	AMPS	8694.8	-57.17	8385.5	-57.28
147	[GUASQ230	230.00]	AMPS	9626.1	-63.83	9153.9	-62.80
148	[VELADERO 230	230.00]	AMPS	8863.7	-67.50	6187.1	-67.07
154	[CEMPAN15	115.00]	AMPS	7645.4	-83.09	7200.4	-85.97
155	[TABASARAI	230.00]	AMPS	6356.7	-67.65	4797.3	-67.09
190	[CHANG230	230.00]	AMPS	5794.0	-60.40	4249.6	-58.43
191	[CHANG115	115.00]	AMPS	3691.1	-64.53	4135.1	-64.48
306	[CHAN1 230	230.00]	AMPS	5810.6	-59.48	6277.8	-56.26
310	[CONCEPCION23	230.00]	AMPS	7345.4	-62.54	5518.1	-62.48
325	[STA RITA230	230.00]	AMPS	7938.9	-82.12	7074.4	-85.65
341	[PRUDENCIA230	230.00]	AMPS	6457.3	-43.60	6396.5	-44.90
345	[LORENA230	230.00]	AMPS	7465.3	-49.71	7379.6	-51.40
511	[LGUIAS230	230.00]	AMPS	5735.2	-74.51	4694.0	-77.08
522	[TCATIVÁ 115	115.00]	AMPS	14649.1	-83.09	17491.4	-85.12
6000	[FRONTIER	230.00]	AMPS	5438.1	-63.31	3778.9	-63.94

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	11342.1	-80.75	11591.1	-83.82



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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	11481.6	-77.86	12999.5	-82.05
2	[PAN115	115.00]	AMPS	19808.7	-78.53	24536.7	-82.15
3	[PANII230	230.00]	AMPS	11618.5	-78.44	11256.5	-82.19
4	[PANII115	115.00]	AMPS	14472.7	-83.85	13987.6	-87.74
5	[CHO230	230.00]	AMPS	9684.0	-78.48	9675.4	-82.40
6	[CHO115	115.00]	AMPS	8602.0	-87.88	10084.9	-89.84
8	[LSA230	230.00]	AMPS	8257.7	-75.81	6156.2	-78.22
9	[LSA115	115.00]	AMPS	9152.7	-81.01	8132.7	-83.89
11	[M.N230	230.00]	AMPS	10423.7	-69.57	8524.7	-68.56
12	[M.N115	115.00]	AMPS	9715.3	-71.85	10193.6	-71.60
14	[PRO230	230.00]	AMPS	5858.7	-70.07	4275.8	-71.75
15	[PRO115	115.00]	AMPS	4631.3	-75.73	5067.9	-76.27
18	[CAC115	115.00]	AMPS	19442.8	-78.75	22899.7	-82.38
19	[C.V115	115.00]	AMPS	12040.2	-82.99	8431.7	-85.92
20	[CH.AZUL	115.00]	AMPS	2338.6	-72.50	1766.4	-70.36
21	[C.BAN115	115.00]	AMPS	15961.3	-79.23	11836.2	-81.25
23	[CH115	115.00]	AMPS	7913.5	-83.66	5119.5	-85.59
26	[LOC115	115.00]	AMPS	16677.3	-78.78	14337.2	-79.16
30	[MAR115	115.00]	AMPS	14074.4	-79.70	10769.9	-82.00
33	[STM115	115.00]	AMPS	16696.8	-79.38	17211.2	-82.88
37	[SAN115	115.00]	AMPS	14811.3	-80.14	9891.7	-83.49
48	[TINAJ115	115.00]	AMPS	13124.3	-81.99	9625.5	-85.65
50	[M.O115	115.00]	AMPS	14324.1	-81.32	11436.5	-85.30
52	[TOC115	115.00]	AMPS	10376.1	-84.97	7151.5	-86.61
54	[LM1115	115.00]	AMPS	17972.8	-83.65	20494.7	-85.78
55	[LM2115	115.00]	AMPS	17757.1	-83.29	20270.6	-85.45
61	[FFIELD	115.00]	AMPS	11571.4	-83.67	11036.7	-78.63
85	[PTP230	230.00]	AMPS	5318.4	-68.59	4784.7	-62.35
87	[CAL115	115.00]	AMPS	7772.7	-69.78	9958.7	-69.10
88	[EST115	115.00]	AMPS	6494.9	-68.68	8882.5	-68.98
92	[L.V115	115.00]	AMPS	7269.3	-69.30	9882.4	-69.56
96	[FOR230	230.00]	AMPS	11582.5	-69.87	12130.0	-68.84
100	[BAY230	230.00]	AMPS	6245.1	-82.95	6514.4	-85.77
103	[COPESA23	230.00]	AMPS	8603.6	-80.72	8099.8	-83.93
105	[PAN-AM23	230.00]	AMPS	9545.4	-78.67	9487.7	-82.52
109	[STA RITA115	115.00]	AMPS	20689.8	-83.82	21232.7	-85.24
115	[PACORA23	230.00]	AMPS	7375.2	-81.51	6809.2	-84.46
144	[CANJ230	230.00]	AMPS	10278.8	-70.29	9561.1	-69.08
145	[BJOMIN230	230.00]	AMPS	6946.9	-68.54	5257.4	-68.46
146	[GUALACA230	230.00]	AMPS	9741.4	-62.38	9531.5	-62.46
147	[GUASQ230	230.00]	AMPS	11038.7	-70.32	10668.9	-69.38
148	[VELADERO 230230.00]	AMPS	10069.2	-72.84	6658.9	-71.99	
154	[CEMPAN15	115.00]	AMPS	8322.4	-83.83	7578.4	-86.74
155	[TABASARAI	230.00]	AMPS	6896.4	-72.69	5051.3	-71.89
190	[CHANG230	230.00]	AMPS	5801.1	-68.52	4253.1	-66.73
191	[CHANG115	115.00]	AMPS	3676.7	-73.00	4140.9	-73.06
306	[CHAN1 230	230.00]	AMPS	5818.6	-67.39	6263.2	-64.16
310	[CONCEPCION23230.00]	AMPS	8008.2	-69.22	5732.8	-69.02	
325	[STA RITA230	230.00]	AMPS	12637.1	-81.62	10223.4	-84.82
341	[PRUDENCIA230230.00]	AMPS	6906.6	-47.80	6908.9	-48.86	
345	[LORENA230	230.00]	AMPS	8134.1	-54.11	8135.4	-55.61
511	[GUIAS230	230.00]	AMPS	6435.6	-78.24	4952.6	-80.44
522	[TCATIVÁ 115	115.00]	AMPS	17888.1	-83.53	20432.9	-85.72
6000	[FRONTIER	230.00]	AMPS	5592.0	-70.66	3815.3	-71.36

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	12734.3	-83.04	12519.0	-86.21



*Handwritten signature or initials.*

**CASO REGMHTGDC8  
CON INTERCAMBIO**

**AÑOS 2016 – 2021**



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PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, MAY 26 2008 10:49  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV  
 AÑO 2016 REGMHTGDC8 CON INTERCAMBIOSC MOD DEM MAX INV  
 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	8913.7	-76.89	10443.7	-80.93
2	[PAN115	115.00]	AMPS	16767.5	-77.47	21257.7	-80.67
3	[PANII230	230.00]	AMPS	8933.7	-77.59	7972.8	-81.53
4	[PANII115	115.00]	AMPS	12571.6	-82.19	11590.8	-85.84
5	[CHO230	230.00]	AMPS	7607.2	-76.77	8084.4	-81.08
6	[CHO115	115.00]	AMPS	6694.9	-86.28	7919.0	-88.42
8	[LSA230	230.00]	AMPS	7435.5	-72.52	5800.9	-75.09
9	[LSA115	115.00]	AMPS	7287.3	-78.84	7033.6	-81.16
11	[M.N230	230.00]	AMPS	9747.4	-64.41	8218.3	-63.39
12	[M.N115	115.00]	AMPS	11536.1	-66.47	11436.0	-66.12
14	[PRO230	230.00]	AMPS	5483.1	-64.44	4137.1	-66.10
15	[PRO115	115.00]	AMPS	4548.3	-70.06	4981.0	-70.57
18	[CAC115	115.00]	AMPS	16525.4	-77.66	20053.4	-80.86
19	[C.V115	115.00]	AMPS	10728.2	-81.39	7765.2	-84.12
20	[CH.AZUL	115.00]	AMPS	2335.7	-66.87	1774.3	-64.73
21	[C.BAN115	115.00]	AMPS	13883.6	-78.04	11020.7	-79.50
23	[CH115	115.00]	AMPS	7434.0	-82.68	4981.1	-84.36
26	[LOC115	115.00]	AMPS	14432.9	-77.66	13172.9	-77.70
30	[MAR115	115.00]	AMPS	12441.0	-78.39	10091.7	-80.26
33	[STM115	115.00]	AMPS	14466.1	-78.14	15505.1	-81.28
37	[SAN115	115.00]	AMPS	12991.4	-78.81	9287.5	-81.52
48	[TINAJ115	115.00]	AMPS	11688.9	-80.40	9047.8	-83.83
50	[M.O115	115.00]	AMPS	12637.4	-79.82	10639.4	-83.49
52	[TOC115	115.00]	AMPS	9336.1	-83.32	6440.7	-85.03
54	[LM1115	115.00]	AMPS	15684.5	-83.87	18435.4	-85.76
55	[LM2115	115.00]	AMPS	15540.5	-83.56	18274.3	-85.47
61	[FFIELD	115.00]	AMPS	10568.4	-83.87	10412.5	-79.02
85	[PTP230	230.00]	AMPS	5137.7	-62.69	4600.0	-56.70
87	[CAL115	115.00]	AMPS	8398.2	-64.00	10650.1	-63.32
88	[EST115	115.00]	AMPS	6891.3	-62.85	9381.8	-63.20
92	[L.V115	115.00]	AMPS	7797.6	-63.50	10538.7	-63.81
96	[FOR230	230.00]	AMPS	10690.5	-64.29	11338.6	-63.07
100	[BAY230	230.00]	AMPS	5667.9	-81.98	6099.5	-84.81
103	[COPESA23	230.00]	AMPS	7154.8	-79.49	6739.1	-83.07
105	[PAN-AM23	230.00]	AMPS	7523.9	-76.92	7961.0	-81.16
109	[STA RITA115	115.00]	AMPS	16686.7	-83.87	18152.1	-85.27
115	[PACORA23	230.00]	AMPS	6349.5	-80.26	5977.4	-83.55
144	[CANJ230	230.00]	AMPS	9078.9	-64.94	8369.6	-63.68
145	[BJOMIN230	230.00]	AMPS	5606.2	-63.30	4710.9	-63.89
146	[GUALACA230	230.00]	AMPS	8718.2	-58.30	8402.9	-58.39
147	[GUASQ230	230.00]	AMPS	9652.0	-65.00	9172.8	-63.93
148	[VELADERO 230	230.00]	AMPS	9030.9	-68.63	6243.7	-68.01
154	[CEMPAN15	115.00]	AMPS	8054.4	-83.63	7427.7	-86.30
155	[TABASARAI	230.00]	AMPS	6438.1	-68.67	4829.8	-68.00
190	[CHANG230	230.00]	AMPS	5794.6	-61.59	4255.3	-59.63
191	[CHANG115	115.00]	AMPS	3692.0	-65.72	4144.6	-65.67
306	[CHAN1 230	230.00]	AMPS	5810.6	-60.66	6278.8	-57.44
310	[CONCEPCION23	230.00]	AMPS	6934.5	-63.95	5361.6	-64.10
325	[STA RITA230	230.00]	AMPS	8184.2	-82.84	7190.3	-86.15
341	[PRUDENCIA230	230.00]	AMPS	6473.1	-44.69	6409.2	-45.99
345	[LORENA230	230.00]	AMPS	7484.4	-50.81	7394.6	-52.49
511	[LGUIAS230	230.00]	AMPS	5816.9	-75.33	4723.9	-77.74
522	[TCATIVÁ 115	115.00]	AMPS	15615.9	-83.72	18382.8	-85.68
6000	[FRONTIER	230.00]	AMPS	5315.6	-64.81	3732.6	-65.50

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, MAY 26 2008 10:49  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV  
 AÑO 2016 REGMHTGDC8 CON INTERCAMBIOSC MOD DEM MAX INV  
 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	11533.0	-81.33	11696.3	-84.31



*Handwritten signature or initials.*

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, MAY 26 2008 10:50  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV  
 AÑO 2021 REGMHTGDC8 CON INTERCAMBIOSC MOD DEM MAX INV  
 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	11626.4	-77.28	13070.9	-81.41
2	[PAN115	115.00]	AMPS	20319.0	-77.86	25023.6	-81.47
3	[PANII230	230.00]	AMPS	11750.2	-77.91	11319.7	-81.51
4	[PANIII115	115.00]	AMPS	14659.3	-83.26	14092.8	-87.03
5	[CHO230	230.00]	AMPS	9781.6	-77.75	9742.1	-81.55
6	[CHO115	115.00]	AMPS	8649.4	-86.95	10133.1	-88.86
8	[LSA230	230.00]	AMPS	8335.2	-74.81	6189.4	-77.09
9	[LSA115	115.00]	AMPS	7634.5	-81.10	7288.7	-83.57
11	[M.N230	230.00]	AMPS	10523.3	-68.35	8583.7	-67.27
12	[M.N115	115.00]	AMPS	9791.6	-70.60	10244.4	-70.31
14	[PRO230	230.00]	AMPS	5921.7	-68.73	4298.0	-70.34
15	[PRO115	115.00]	AMPS	4671.2	-74.34	5088.3	-74.86
18	[CAC115	115.00]	AMPS	19931.0	-78.07	23309.1	-81.67
19	[C.V115	115.00]	AMPS	12148.6	-82.29	8428.1	-85.04
20	[CH.AZUL	115.00]	AMPS	2357.6	-71.07	1777.6	-68.92
21	[C.BAN115	115.00]	AMPS	16244.4	-78.51	11887.9	-80.34
23	[CH115	115.00]	AMPS	8064.2	-82.50	5152.3	-84.25
26	[LOC115	115.00]	AMPS	16998.0	-78.06	14444.1	-78.25
30	[MAR115	115.00]	AMPS	14283.9	-78.92	10806.1	-81.07
33	[STM115	115.00]	AMPS	17031.5	-78.65	17402.5	-82.06
37	[SAN115	115.00]	AMPS	15038.9	-79.43	9910.7	-82.59
48	[TINAJ115	115.00]	AMPS	13301.3	-81.22	9646.8	-84.71
50	[M.O115	115.00]	AMPS	14548.0	-80.57	11485.3	-84.40
52	[TOC115	115.00]	AMPS	10437.3	-84.26	7140.6	-85.72
54	[LM1115	115.00]	AMPS	20066.1	-82.98	22275.2	-84.95
55	[LM2115	115.00]	AMPS	19685.5	-82.28	21918.8	-84.37
61	[FFIELD	115.00]	AMPS	12425.0	-82.56	11574.6	-76.99
85	[PTP230	230.00]	AMPS	5364.7	-67.29	4824.2	-61.02
87	[CAL115	115.00]	AMPS	7839.9	-68.54	10044.7	-67.86
88	[EST115	115.00]	AMPS	6552.0	-67.44	8960.6	-67.75
92	[L.V115	115.00]	AMPS	7332.5	-68.06	9968.4	-68.32
96	[FOR230	230.00]	AMPS	11696.4	-68.70	12239.5	-67.64
100	[BAY230	230.00]	AMPS	6254.9	-82.50	6518.4	-85.26
103	[COPESA23	230.00]	AMPS	8672.9	-80.10	8139.6	-83.19
105	[PAN-AM23	230.00]	AMPS	9640.4	-77.93	9552.4	-81.67
109	[STA RITA115	115.00]	AMPS	22044.1	-83.03	22175.2	-84.26
115	[PACORA23	230.00]	AMPS	7422.5	-80.88	6837.0	-83.73
144	[CANJ230	230.00]	AMPS	10376.4	-69.13	9643.2	-67.88
145	[BJOMIN230	230.00]	AMPS	7013.7	-67.12	5300.7	-67.02
146	[GUALACA230	230.00]	AMPS	9833.6	-61.18	9613.2	-61.24
147	[GUASQ230	230.00]	AMPS	11144.9	-69.16	10761.6	-68.18
148	[VELADERO	230230.00]	AMPS	10162.1	-71.71	6702.8	-70.75
154	[CEMPAN15	115.00]	AMPS	8488.4	-82.37	7669.9	-85.23
155	[TABASARAI	230.00]	AMPS	6950.0	-71.49	5082.3	-70.64
190	[CHANG230	230.00]	AMPS	5860.1	-67.07	4291.3	-65.24
191	[CHANG115	115.00]	AMPS	3708.8	-71.39	4176.8	-71.44
306	[CHAN1 230	230.00]	AMPS	5877.1	-65.92	6323.3	-62.68
310	[CONCEPCION	230230.00]	AMPS	8088.2	-67.87	5777.6	-67.63
325	[STA RITA230	230.00]	AMPS	12647.1	-81.17	10152.7	-84.15
341	[PRUDENCIA	230230.00]	AMPS	6967.3	-46.56	6965.2	-47.61
345	[LORENA230	230.00]	AMPS	8208.1	-52.88	8203.4	-54.38
511	[LGUIAS230	230.00]	AMPS	6482.3	-77.26	4975.9	-79.35
522	[TCATIVÁ	115 115.00]	AMPS	19917.8	-82.72	22167.0	-84.80
6000	[FRONTER	230.00]	AMPS	5654.9	-69.33	3837.9	-69.95

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS/E MON, MAY 26 2008 10:50  
 PLAN. EXP-SIN CON C.A. JUNIO 2008 ESC MOD DEM MAX INV  
 AÑO 2021 REGMHTGDC8 CON INTERCAMBIOSC MOD DEM MAX INV  
 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	12883.2	-82.22	12583.2	-85.30



*Handwritten signature or initials.*