

ANEXO 22
CONFIABILIDAD

Contenido

1.	ESTADÍSTICA DE FALLAS EN LÍNEAS A 115 KV.....	3
2.	ESTADÍSTICA DE FALLAS EN LÍNEAS A 230 KV.....	6
3.	ESTADÍSTICA DE FALLAS SIMULTÁNEAS EN LÍNEAS A 115 KV	8
4.	ESTADÍSTICA DE FALLAS SIMULTÁNEAS EN LÍNEAS A 230 KV	9
5.	RESUMEN ESTADÍSTICAS DE GENERADORES.....	10
6.	DEMANDAS POR BARRA 2008 - 2009.....	11
7.	DEMANDAS POR BARRA 2010 - 2013.....	12
8.	DESPACHOS DE GENERACIÓN (MW)	13
9.	INDICADORES PROMEDIO DE CONFIABILIDAD DEL SISTEMA	15
10.	INDICADORES PROMEDIO DE CONFIABILIDAD POR CARGAS.....	16
11.	INDICADORES PROMEDIO DE CONFIABILIDAD POR BARRAS	20
12.	INDICADORES PROMEDIO ANUAL DE CONFIABILIDAD POR BARRAS	33

1. Estadística de Fallas en Líneas a 115 kV

N	Elemento	Barra 1	Barra 2	km	Salida	Entrada	Tiempo en Falla [h]	Tiempo en Operación [h]
1	lne_109_110_1	COLON115	PTMD115A	21.00	25-04-00 00:00	25-04-00 00:27	0.4500	
2	lne_109_110_1	COLON115	PTMD115A	21.00	22-04-02 00:00	22-04-02 00:03	0.0500	17,447.55
3	lne_109_110_1	COLON115	PTMD115A	21.00	29-04-03 00:00	29-04-03 00:02	0.0333	8,927.95
4	lne_109_110_1	COLON115	PTMD115A	21.00	01-08-03 00:00	01-08-03 00:01	0.0167	2,255.97
5	lne_109_111_2	COLON115	PTMD115B	21.00	24-03-00 00:00	24-03-00 03:50	3.8333	
6	lne_109_111_2	COLON115	PTMD115B	21.00	03-03-01 00:00	03-03-01 01:55	1.9167	8,252.17
7	lne_109_111_2	COLON115	PTMD115B	21.00	29-06-01 00:00	29-06-01 00:04	0.0667	2,830.08
8	lne_12_87_1	M_N115	CAL115	24.98	01-11-02 00:00	01-11-02 00:02	0.0333	11,759.93
9	lne_12_87_1	M_N115	CAL115	24.98	10-08-05 00:00	10-08-05 00:01	0.0167	24,311.97
10	lne_12_87_2	M_N115	CAL115	24.98	12-09-02 00:00	12-09-02 00:02	0.0333	
11	lne_12_87_2	M_N115	CAL115	24.98	23-08-03 00:00	23-08-03 00:02	0.0333	8,279.97
12	lne_12_87_2	M_N115	CAL115	24.98	15-06-04 00:00	15-06-04 00:01	0.0167	7,127.97
13	lne_12_87_2	M_N115	CAL115	24.98	16-09-04 00:00	16-09-04 00:02	0.0333	2,231.98
14	lne_15_20_1	PRO115	CH_AZUL	30.00	03-10-03 00:00	03-10-03 02:49	2.8167	
15	lne_15_20_1	PRO115	CH_AZUL	30.00	04-10-03 00:00	04-10-03 04:00	4.0000	21.18
16	lne_15_20_1	PRO115	CH_AZUL	30.00	12-10-03 00:00	12-10-03 03:25	3.4167	188.00
17	lne_15_20_1	PRO115	CH_AZUL	30.00	22-10-03 00:00	22-10-03 00:12	0.2000	236.58
18	lne_15_20_1	PRO115	CH_AZUL	30.00	09-02-04 00:00	09-02-04 00:05	0.0833	2,639.80
19	lne_15_20_1	PRO115	CH_AZUL	30.00	19-02-04 00:00	19-02-04 00:04	0.0667	239.92
20	lne_15_20_1	PRO115	CH_AZUL	30.00	25-02-04 00:00	25-02-04 00:04	0.0667	143.93
21	lne_15_20_1	PRO115	CH_AZUL	30.00	12-06-04 00:00	12-06-04 00:03	0.0500	2,591.93
22	lne_15_20_1	PRO115	CH_AZUL	30.00	25-08-04 00:00	25-08-04 00:22	0.3667	1,775.95
23	lne_15_20_1	PRO115	CH_AZUL	30.00	28-08-04 00:00	28-08-04 00:08	0.1333	71.63
24	lne_15_20_1	PRO115	CH_AZUL	30.00	29-08-04 00:00	29-08-04 00:15	0.2500	23.87
25	lne_15_20_1	PRO115	CH_AZUL	30.00	08-12-04 00:00	08-12-04 00:02	0.0333	2,423.75
26	lne_15_20_1	PRO115	CH_AZUL	30.00	15-02-05 00:00	15-02-05 00:03	0.0500	1,655.97
27	lne_15_20_1	PRO115	CH_AZUL	30.00	11-11-05 00:00	11-11-05 00:02	0.0333	6,455.95
28	lne_15_20_1	PRO115	CH_AZUL	30.00	16-12-05 00:00	16-12-05 00:08	0.1333	839.97
29	lne_18_110_1	CAC115	PTMD115A	26.00	05-07-03 00:00	05-07-03 11:36	11.6000	
30	lne_18_110_1	CAC115	PTMD115A	26.00	18-08-03 00:00	18-08-03 00:03	0.0500	1,044.40
31	lne_18_110_1	CAC115	PTMD115A	26.00	14-01-04 00:00	14-01-04 17:21	17.3500	3,575.95
32	lne_18_110_1	CAC115	PTMD115A	26.00	19-06-05 00:00	19-06-05 00:01	0.0167	12,510.65
33	lne_18_111_2	CAC115	PTMD115B	26.00	17-12-00 00:00	17-12-00 00:09	0.1500	
34	lne_18_111_2	CAC115	PTMD115B	26.00	05-03-01 01:00	05-03-01 01:01	0.0167	1,872.85
35	lne_18_111_2	CAC115	PTMD115B	26.00	15-08-01 00:00	15-08-01 04:16	4.2667	3,910.98
36	lne_18_111_2	CAC115	PTMD115B	26.00	13-02-03 00:00	13-02-03 00:08	0.1333	13,123.73
37	lne_18_111_2	CAC115	PTMD115B	26.00	04-08-04 00:00	04-08-04 00:02	0.0333	12,911.87
38	lne_19_37_1	C_V115	SAN115	11.00	01-11-01 00:00	01-11-01 00:03	0.0500	
39	lne_2_154_4A	PAN115	CEMPAN15	40.70	31-12-00 00:00	31-12-00 00:04	0.0667	
40	lne_2_154_4A	PAN115	CEMPAN15	40.70	05-03-01 00:00	05-03-01 00:08	0.1333	1,535.93
41	lne_2_154_4A	PAN115	CEMPAN15	40.70	29-03-02 00:00	29-03-02 00:01	0.0167	9,335.87
42	lne_2_154_4A	PAN115	CEMPAN15	40.70	28-03-03 00:00	28-03-03 00:02	0.0333	8,735.98

N	Elemento	Barra 1	Barra 2	km	Salida	Entrada	Tiempo en Falla [h]	Tiempo en Operación [h]
43	lne_2_154_4A	PAN115	CEMPAN15	40.70	13-06-03 00:00	13-06-03 00:05	0.0833	1,847.97
44	lne_2_154_4A	PAN115	CEMPAN15	40.70	17-09-03 00:00	17-09-03 00:03	0.0500	2,303.92
45	lne_2_154_4A	PAN115	CEMPAN15	40.70	01-11-03 00:00	02-11-03 04:32	28.5333	1,079.95
46	lne_2_154_4A	PAN115	CEMPAN15	40.70	23-05-04 00:00	23-05-04 03:50	3.8333	4,867.47
47	lne_2_154_4A	PAN115	CEMPAN15	40.70	04-03-05 00:00	04-03-05 00:01	0.0167	6,836.17
48	lne_2_18_1	PAN115	CAC115	0.80	12-05-05 00:00	12-05-05 00:05	0.0833	
49	lne_2_18_1	PAN115	CAC115	0.80	28-06-05 00:00	28-06-05 00:19	0.3167	1,127.92
50	lne_2_23_3A	PAN115	CH115	22.50	02-03-00 00:00	02-03-00 00:18	0.3000	
51	lne_2_23_3A	PAN115	CH115	22.50	28-03-00 01:00	28-03-00 01:04	0.0667	624.70
52	lne_2_23_3A	PAN115	CH115	22.50	13-08-00 00:00	13-08-00 00:05	0.0833	3,310.93
53	lne_2_23_3A	PAN115	CH115	22.50	07-03-02 00:00	07-03-02 00:03	0.0500	13,703.92
54	lne_2_23_3A	PAN115	CH115	22.50	05-06-03 00:00	05-06-03 00:05	0.0833	10,919.95
55	lne_2_23_3A	PAN115	CH115	22.50	14-06-03 01:00	14-06-03 16:56	15.9333	216.92
56	lne_2_23_3A	PAN115	CH115	22.50	13-02-04 00:00	13-02-04 00:06	0.1000	5,839.07
57	lne_2_23_3A	PAN115	CH115	22.50	05-06-04 01:00	05-06-04 01:07	0.1167	2,712.90
58	lne_2_23_3A	PAN115	CH115	22.50	26-09-04 01:00	26-09-04 01:19	0.3167	2,711.88
59	lne_2_23_3A	PAN115	CH115	22.50	11-10-04 00:00	11-10-04 00:05	0.0833	358.68
60	lne_2_23_3A	PAN115	CH115	22.50	01-03-05 00:00	01-03-05 00:02	0.0333	3,383.92
61	lne_2_23_3A	PAN115	CH115	39.00	22-03-06 00:00	22-03-06 00:04	0.0789	9,263.97
62	lne_2_23_3A	PAN115	CH115	39.00	12-05-06 00:00	12-05-06 00:01	0.0311	1,223.92
63	lne_2_33_1	PAN115	STM115	1.40	27-08-00 00:00	27-08-00 00:41	0.6833	
64	lne_23_55_3B	CH115	LM2115	31.50	28-03-00 00:00	28-03-00 00:12	0.2000	
65	lne_23_55_3B	CH115	LM2115	31.50	29-03-00 00:00	29-03-00 00:14	0.2333	23.80
66	lne_23_55_3B	CH115	LM2115	31.50	17-06-00 00:00	17-06-00 00:04	0.0667	1,919.77
67	lne_23_55_3B	CH115	LM2115	31.50	26-05-01 00:00	26-05-01 00:06	0.1000	8,231.93
68	lne_23_55_3B	CH115	LM2115	31.50	20-03-02 00:00	20-03-02 00:08	0.1333	7,151.90
69	lne_23_55_3B	CH115	LM2115	31.50	22-08-02 00:00	22-08-02 00:07	0.1167	3,719.87
70	lne_23_55_3B	CH115	LM2115	31.50	28-02-03 00:00	28-02-03 00:06	0.1000	4,559.88
71	lne_23_55_3B	CH115	LM2115	31.50	14-06-03 00:00	14-06-03 00:06	0.1000	2,543.90
72	lne_23_55_3B	CH115	LM2115	31.50	05-06-04 00:00	05-06-04 00:03	0.0500	8,567.90
73	lne_23_55_3B	CH115	LM2115	31.50	26-09-04 00:00	26-09-04 00:03	0.0500	2,711.95
74	lne_23_55_3B	CH115	LM2115	31.50	28-09-04 00:00	28-09-04 00:03	0.0500	47.95
75	lne_23_55_3B	CH115	LM2115	31.50	23-03-06 00:00	23-03-06 00:07	0.1269	12,983.95
76	lne_23_55_3B	CH115	LM2115	31.50	23-03-06 01:00	23-03-06 02:23	1.3911	0.87
77	lne_54_109_1	LM1115	COLON115	6.20	20-07-01 00:00	20-07-01 00:08	0.1333	
78	lne_54_109_1	LM1115	COLON115	6.20	01-09-01 00:00	01-09-01 00:02	0.0333	1,031.87
79	lne_54_109_1	LM1115	COLON115	6.20	28-02-02 00:00	28-02-02 00:06	0.1000	4,319.97
80	lne_54_109_1	LM1115	COLON115	6.20	24-05-02 00:00	24-05-02 00:03	0.0500	2,039.90
81	lne_54_109_1	LM1115	COLON115	6.20	30-07-03 00:00	30-07-03 00:05	0.0833	10,367.95
82	lne_54_109_1	LM1115	COLON115	6.20	15-08-03 00:00	15-08-03 00:03	0.0500	383.92
83	lne_54_109_2	LM1115	COLON115	6.20	13-05-00 00:00	13-05-00 00:02	0.0333	
84	lne_54_109_2	LM1115	COLON115	6.20	17-03-01 00:00	17-03-01 08:49	8.8167	7,391.97
85	lne_54_109_2	LM1115	COLON115	6.20	20-08-04 00:00	20-08-04 00:01	0.0167	30,039.18

N	Elemento	Barra 1	Barra 2	km	Salida	Entrada	Tiempo en Falla [h]	Tiempo en Operación [h]
86	lne_55_154_4B	LM2115	CEMPAN15	16.70	04-08-00 00:00	04-08-00 00:08	0.1333	
87	lne_55_154_4B	LM2115	CEMPAN15	16.70	11-03-01 00:00	11-03-01 00:03	0.0500	5,255.87
88	lne_55_154_4B	LM2115	CEMPAN15	16.70	11-11-03 00:00	11-11-03 01:00	1.0000	23,399.95
89	lne_55_154_4B	LM2115	CEMPAN15	16.70	28-07-04 00:00	28-07-04 00:37	0.6167	6,239.00
90	lne_55_154_4B	LM2115	CEMPAN15	16.70	07-09-04 00:00	07-09-04 00:08	0.1333	983.38
91	lne_55_154_4B	LM2115	CEMPAN15	16.70	21-02-05 00:00	21-02-05 00:01	0.0167	4,007.87
92	lne_55_154_4B	LM2115	CEMPAN15	16.70	01-11-05 00:00	01-11-05 00:18	0.3000	6,071.98
93	lne_55_154_4B	LM2115	CEMPAN15	16.70	02-11-06 00:00	02-11-06 00:03	0.0589	8,783.70
94	lne_87_88_1	CAL115	EST115	5.80	03-08-00 00:00	03-08-00 00:09	0.1500	
95	lne_87_88_1	CAL115	EST115	5.80	06-08-04 00:00	06-08-04 00:03	0.0500	35,135.85

2. Estadística de Fallas en Líneas a 230 kV

n	Elemento	Barra 1	Barra 2	km	Salida	Entrada	Tiempo en Falla [h]	Tiempo en Operación [h]
1	lne_1_5_1	PAN230	CHO230	39.00	15-03-03 00:00	15-03-03 09:24	9.4000	
2	lne_1_5_1	PAN230	CHO230	39.00	29-07-04 00:00	29-07-04 00:05	0.0833	12,038.60
3	lne_1_5_1	PAN230	CHO230	39.00	15-09-05 00:00	15-09-05 00:01	0.0167	9,911.92
4	lne_1_5_2	PAN230	CHO230	39.00	18-10-00 00:00	18-10-00 00:01	0.0167	
5	lne_1_5_2	PAN230	CHO230	39.00	03-07-01 00:00	03-07-01 00:01	0.0167	6,191.98
6	lne_1_5_2	PAN230	CHO230	39.00	01-10-01 00:00	01-10-01 00:03	0.0500	2,159.98
7	lne_1_5_2	PAN230	CHO230	39.00	24-08-02 00:00	24-08-02 00:01	0.0167	7,847.95
8	lne_1_5_2	PAN230	CHO230	39.00	22-11-02 00:00	22-11-02 00:01	0.0167	2,159.98
9	lne_1_5_2	PAN230	CHO230	39.00	01-08-04 00:00	01-08-04 03:20	3.3333	14,831.98
10	lne_1_5_2	PAN230	CHO230	39.00	20-08-04 00:00	20-08-04 03:28	3.4667	452.67
11	lne_100_103_2A	BAY230	COPESA23	58.14	14-04-00 00:00	14-04-00 00:01	0.0167	
12	lne_100_103_2A	BAY230	COPESA23	58.14	09-12-00 00:00	09-12-00 13:45	13.7500	5,735.98
13	lne_100_103_2A	BAY230	COPESA23	58.14	28-07-02 00:00	28-07-02 00:12	0.2000	14,290.25
14	lne_100_103_2A	BAY230	COPESA23	58.14	22-08-02 00:00	22-08-02 00:26	0.4333	599.80
15	lne_100_103_2A	BAY230	COPESA23	58.14	08-07-03 00:00	08-07-03 00:01	0.0167	7,679.57
16	lne_100_115_1A	BAY230	PACORA23	49.14	25-03-00 00:00	25-03-00 00:01	0.0167	
17	lne_100_115_1A	BAY230	PACORA23	49.14	15-03-03 00:00	15-03-03 02:08	2.1333	26,039.98
18	lne_100_115_1A	BAY230	PACORA23	49.14	16-03-03 00:00	16-03-03 06:53	6.8833	21.87
19	lne_100_115_1A	BAY230	PACORA23	49.14	17-03-03 00:00	17-03-03 08:00	8.0000	17.12
20	lne_11_14_9	M_N230	PRO230	54.00	18-09-01 00:00	18-09-01 00:06	0.1000	
21	lne_11_14_9	M_N230	PRO230	54.00	09-10-01 00:00	09-10-01 00:05	0.0833	503.90
22	lne_11_14_9	M_N230	PRO230	54.00	09-10-01 01:00	09-10-01 01:06	0.1000	0.92
23	lne_11_14_9	M_N230	PRO230	54.00	14-11-01 00:00	14-11-01 00:01	0.0167	862.90
24	lne_11_14_9	M_N230	PRO230	54.00	19-10-02 00:00	19-10-02 00:01	0.0167	8,135.98
25	lne_11_14_9	M_N230	PRO230	54.00	08-09-05 00:00	08-09-05 00:06	0.1000	25,319.98
26	lne_11_14_9	M_N230	PRO230	54.00	17-05-06 00:00	17-05-06 00:00	0.0139	6,023.90
27	lne_11_14_9	M_N230	PRO230	54.00	03-07-06 00:00	03-07-06 00:01	0.0267	1,127.99
28	lne_11_148_1	M_N230	VELAD230	84.49	25-08-02 00:00	25-08-02 00:01	0.0167	
29	lne_11_148_2	M_N230	VELAD230	84.49	27-01-06 00:00	27-01-06 11:00	11.0142	
30	lne_11_96_1	M_N230	FOR230	37.50	27-08-00 00:00	27-08-00 00:41	0.6833	
31	lne_11_96_2	M_N230	FOR230	37.50	28-04-03 00:00	28-04-03 00:02	0.0333	
32	lne_14_6000_10	PRO230	FRONTER	9.70	09-01-06 00:00	09-01-06 00:16	0.2697	
33	lne_3_103_2B	PANII230	COPESA23	10.00	15-07-00 00:00	15-07-00 00:04	0.0667	
34	lne_3_115_1B	PANII230	PACORA23	19.00	25-03-00 01:00	25-03-00 01:01	0.0167	
35	lne_3_115_1B	PANII230	PACORA23	19.00	20-04-02 00:00	20-04-02 02:53	2.8833	18,142.98
36	lne_3_115_1B	PANII230	PACORA23	19.00	06-10-05 00:00	06-10-05 00:04	0.0667	30,357.12
37	lne_5_8_1	CHO230	LSA230	142.19	11-06-03 00:00	11-06-03 00:01	0.0167	
38	lne_5_8_1	CHO230	LSA230	142.19	21-09-04 00:00	21-09-04 00:03	0.0500	11,231.98
39	lne_5_8_1	CHO230	LSA230	142.19	02-08-06 00:00	02-08-06 00:04	0.0744	16,319.95
40	lne_5_8_1	CHO230	LSA230	142.19	11-08-06 00:00	11-08-06 00:01	0.0186	215.93
41	lne_5_8_2	CHO230	LSA230	142.19	05-08-00 00:00	05-08-00 00:01	0.0167	
42	lne_5_8_2	CHO230	LSA230	142.19	07-11-01 00:00	07-11-01 00:02	0.0333	11,015.98

n	Elemento	Barra 1	Barra 2	km	Salida	Entrada	Tiempo en Falla [h]	Tiempo en Operación [h]
43	lne_5_8_2	CHO230	LSA230	142.19	15-03-03 00:00	15-03-03 05:11	5.1833	11,831.97
44	lne_5_8_2	CHO230	LSA230	142.19	24-06-03 00:00	24-06-03 00:01	0.0167	2,418.82
45	lne_5_8_2	CHO230	LSA230	142.19	27-08-04 00:00	27-08-04 00:15	0.2500	10,319.98
46	lne_5_8_2	CHO230	LSA230	142.19	31-08-04 00:00	31-08-04 00:04	0.0667	95.75
47	lne_5_8_2	CHO230	LSA230	142.19	20-02-05 00:00	20-02-05 00:07	0.1167	4,151.93
48	lne_5_8_2	CHO230	LSA230	142.19	13-02-06 00:00	13-02-06 00:00	0.0089	8,591.88
49	lne_8_148_1	LSA230	VELAD230	109.36	13-09-01 00:00	13-09-01 00:26	0.4333	
50	lne_8_148_1	LSA230	VELAD230	109.36	22-03-02 00:00	22-03-02 00:01	0.0167	4,559.57
51	lne_8_148_1	LSA230	VELAD230	109.36	09-03-05 00:00	09-03-05 02:27	2.4500	25,991.98
52	lne_8_148_2	LSA230	VELAD230	109.36	05-10-03 00:00	05-10-03 00:01	0.0167	
53	lne_8_148_2	LSA230	VELAD230	109.36	01-11-03 00:00	01-11-03 00:02	0.0333	647.98
54	lne_8_148_2	LSA230	VELAD230	109.36	06-11-04 00:00	06-11-04 00:03	0.0500	8,903.97
55	lne_8_148_3	LSA230	VELAD230	110.07	05-09-04 00:00	05-09-04 00:01	0.0167	
56	lne_8_148_3	LSA230	VELAD230	110.07	03-02-05 00:00	03-02-05 01:02	1.0333	3,623.98
57	lne_96_147_1	FOR230	GUASQ230	16.00	22-08-03 00:00	22-08-03 00:07	0.1167	
58	lne_96_147_1	FOR230	GUASQ230	16.00	08-05-05 00:00	08-05-05 00:00	0.0000	14,999.88

3. Estadística de Fallas Simultáneas en Líneas a 115 kV

bus i, c1	bus j, c1	N	bus i, c2	bus j, c2	n	salida	entrada
PAN115	CEMPAN15	L1	PAN115	CH115	L1	28-05-00 00:00	28-05-00 00:25
PAN115	CEMPAN15	L1	CH115	LM2115	L2	05-10-00 00:00	05-10-00 00:39
PAN115	CH115	L1	LM2115	CEMPAN15	L1	12-10-00 00:00	12-10-00 00:04
PAN115	CEMPAN15	L1	CH115	LM2115	L2	12-10-00 01:00	12-10-00 01:03
PAN115	CH115	L1	LM2115	CEMPAN15	L2	03-11-00 00:00	03-11-00 00:04
COLON115	PTMD115B	L1	CAC115	PTMD115A	L2	29-06-01 00:00	29-06-01 00:04
COLON115	PTMD115A	L2	LM1115	COLON115	L1	30-07-01 00:00	30-07-01 00:03
PAN115	CEMPAN15	L1	PAN115	CH115	L1	10-12-01 00:00	10-12-01 00:09
CAC115	PTMD115A	L1	LM1115	COLON115	L1	21-12-01 00:00	21-12-01 00:13
PAN115	CEMPAN15	L1	PAN115	CH115	L1	08-08-02 00:00	08-08-02 00:07
M_N115	CAL115	L1	CAL115	EST115	L1	30-09-02 00:00	30-09-02 00:15
M_N115	CAL115	L1	M_N115	CAL115	L1	10-11-02 00:00	10-11-02 00:05
PAN115	CH115	L1	LM2115	CEMPAN15	L2	22-11-02 00:00	22-11-02 00:06
PAN115	CEMPAN15	L1	LM2115	CEMPAN15	L1	28-03-03 01:00	28-03-03 01:09
LM1115	COLON115	L1	LM1115	COLON115	L2	10-05-03 00:00	10-05-03 00:26
CAL115	EST115	L1	CAL115	L_V115	L2	24-08-03 00:00	24-08-03 00:02
M_N115	CAL115	L1	CAL115	L_V115	L1	29-09-03 00:00	29-09-03 00:02
PAN115	CEMPAN15	L1	PAN115	CH115	L2	04-08-04 00:00	04-08-04 00:23
M_N115	CAL115	L1	M_N115	CAL115	L1	05-09-04 00:00	05-09-04 00:06
M_N115	CAL115	L1	M_N115	CAL115	L1	24-09-04 00:00	24-09-04 00:04
PAN115	CEMPAN15	L1	PAN115	CH115	L1	31-03-05 00:00	31-03-05 00:06
PAN115	CEMPAN15	L1	PAN115	CH115	L2	09-09-05 00:00	09-09-05 00:02
PAN115	CH115	L1	CH115	LM2115	L1	09-11-05 00:00	09-11-05 00:06
CH115	LM2115	L1	LM2115	CEMPAN15	L2	16-04-06 00:00	16-04-06 00:50
M_N115	CAL115	L1	M_N115	CAL115	L1	11-09-06 00:00	11-09-06 01:03
CAL115	EST115	L1	CAL115	L_V115	L2	31-10-06 00:00	31-10-06 02:33

4. Estadística de Fallas Simultáneas en Líneas a 230 kV

bus i, c1	bus j, c1	N	bus i, c2	bus j, c2	n	salida	entrada
LSA230	VELAD230	L1	LSA230	VELAD230	L2	26-06-00 00:00	26-06-00 01:08
PAN230	CHO230	L2	PAN230	CHO230	L1	27-09-00 00:00	27-09-00 00:28
CHO230	LSA230	L1	CHO230	LSA230	L2	06-08-01 00:00	06-08-01 00:01
BAY230	PACORA23	L1	PANII230	PACORA23	L1	18-08-01 00:00	18-08-01 00:21
M_N230	VELAD230	L1	M_N230	VELAD230	L1	20-10-01 00:00	20-10-01 00:34
CHO230	LSA230	L1	CHO230	LSA230	L2	15-03-03 00:00	15-03-03 06:44
BAY230	COPESA23	L1	BAY230	PACORA23	L2	16-03-03 00:00	16-03-03 04:41
BAY230	COPESA23	L1	BAY230	PACORA23	L2	17-03-03 00:00	17-03-03 01:08
CHO230	LSA230	L1	CHO230	LSA230	L2	25-07-03 00:00	25-07-03 00:02
CHO230	LSA230	L1	CHO230	LSA230	L2	11-03-04 00:00	11-03-04 01:36
PAN230	CHO230	L1	PAN230	CHO230	L2	09-08-04 00:00	09-08-04 00:49
LSA230	VELAD230	L1	LSA230	VELAD230	L2	08-05-05 00:00	08-05-05 00:01
PAN230	PANII230	L1	PAN230	PANII230	L2	17-05-05 00:00	17-05-05 01:25
M_N230	VELAD230	L1	M_N230	VELAD230	L2	01-06-06 00:00	01-06-06 00:01
M_N230	VELAD230	L1	M_N230	VELAD230	L2	09-10-06 00:00	09-10-06 00:01

5. Resumen Estadísticas de Generadores

Unidad	HON	HOL	HSR	HMP	FOH	SAL	Total	Promedios		Promedios Agrupados	
								HS	HFS	HS	HFS
BAYAN 1	3685.19	2.55	3490.88	1458.23	71.63	7.14	8514.42	1005.01	214.18	1077.3029	136.6349
BAYAN 2	3726.56	87.85	3840.26	779.55	123.49	6.00	8557.71	1275.78	150.51	1077.3029	136.6349
BAYAN 3	2778.58	0.43	3878.85	304.98	11.56	7.00	6974.40	951.12	45.22	1077.3029	136.6349
ESTRE 1	4040.53	2777.36	933.64	740.99	65.16	10.14	8557.69	764.24	79.48	880.7362	66.5953
ESTREL2	4665.75	2250.12	1204.49	405.95	31.41	8.14	8557.71	997.24	53.71	880.7362	66.5953
VALLE 1	4221.26	2279.83	784.45	1103.83	168.34	6.71	8557.71	1085.08	189.47	912.9250	135.8376
VALLE 2	4529.55	1928.32	949.81	669.62	152.41	10.00	8557.71	740.77	82.20	912.9250	135.8376
ESTI 1	4518.00	97.44	1680.67	93.37	72.53	9.00	6462.00	699.57	18.43	607.1355	15.6196
ESTI 2	4563.05	24.57	1717.51	80.51	76.37	12.25	6462.00	514.70	12.81	607.1355	15.6196
FORTU 1	7069.54	292.69	621.81	511.61	62.07	10.29	8557.71	776.23	55.77	607.9445	48.0051
FORTU 2	7057.26	264.09	608.00	563.10	65.27	15.29	8557.73	518.74	41.11	607.9445	48.0051
FORTU 3	6962.35	259.57	635.49	648.28	51.99	14.86	8557.68	528.86	47.13	607.9445	48.0051
PACOR 1	7747.50	3.44	112.76	293.01	183.30	14.50	8340.00	542.32	32.85	556.3495	32.6443
PACOR 2	7775.07	3.36	120.35	353.15	88.08	13.75	8340.00	574.46	32.09	556.3495	32.6443
PACOR 3	7750.59	2.68	116.55	362.61	107.57	14.25	8340.00	552.27	32.99	556.3495	32.6443
PANAM 1	6826.02	597.35	318.16	579.54	236.64	65.29	8557.71	118.58	12.50	121.5645	13.1680
PANAM 2	6215.12	1135.80	361.64	583.85	261.30	65.43	8557.71	117.88	12.92	121.5645	13.1680
PANAM 3	6426.11	1057.73	315.43	620.43	138.87	61.57	8558.57	126.67	12.33	121.5645	13.1680
PANAM 4	6971.50	478.24	341.94	565.08	197.52	67.29	8554.29	115.80	11.33	121.5645	13.1680
PANAM 5	6935.13	330.54	381.37	597.82	312.85	57.43	8557.71	133.16	15.86	121.5645	13.1680
PANAM 6	7059.25	191.97	390.19	637.38	278.92	65.14	8557.71	117.30	14.07	121.5645	13.1680
COPESA	322.35	0.00	7920.40	297.97	17.00	1.86	8557.71	4438.40	169.60	4438.4015	169.5985
BLM 2	0.00	3506.00	3749.96	278.84	1022.9	15.29	8557.71	474.69	85.16	408.0989	89.1312
BLM 3	296.61	4923.12	2209.12	559.13	569.73	32.14	8557.71	231.12	35.12	408.0989	89.1312
BLM 4	0.00	3954.89	2711.38	1086.83	804.62	12.86	8768.00	518.49	147.11	408.0989	89.1312
JB 5	782.29	2632.86	4303.11	254.37	585.09	7.71	8557.71	1000.52	108.82	877.1240	118.0132
JB 6	483.58	2644.38	4194.01	238.58	997.16	9.71	8557.71	753.73	127.21	877.1240	118.0132
BLM 8	1172.48	2730.52	3952.08	419.20	283.43	8.71	8557.71	901.40	80.63	743.7417	49.8202
BLM 9	4037.35	299.31	3952.19	117.41	151.45	14.14	8557.71	586.08	19.01	743.7417	49.8202
ACPTG_1	16.12	0.00	7116.89	335.09	720.70	1.80	8188.80	3962.78	586.55	2620.7623	400.6234
ACPTG_2	6.49	0.12	7235.78	599.87	346.54	3.40	8188.80	2130.11	278.36	2620.7623	400.6234
ACPTG_5	6.94	0.00	6008.98	679.13	466.55	3.40	7161.60	1769.39	336.96	2620.7623	400.6234
ACPTV_3	3395.61	168.00	4199.98	161.87	114.54	11.20	8040.00	693.18	24.68	611.0092	57.1501
ACPTV_4	6167.69	60.41	646.83	404.28	760.79	13.00	8040.00	528.84	89.62	611.0092	57.1501
ACPB_6	7419.92	3.28	116.20	257.85	602.75	15.25	8400.00	494.39	56.43	494.3867	56.4331

6. Demandas por Barra 2008 - 2009

Carga	2008				2009			
	Máxima		Mínima		Máxima		Mínima	
	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
10 L S 34	11.304	2.833	4.522	1.133	12.04	3.018	4.779	1.198
124 MIR44	13.46	3.373	5.384	1.349	14.332	3.592	5.688	1.426
13 MDNA34	51.893	13.006	20.757	5.202	54.814	13.738	21.755	5.452
131 BAL44	12.119	3.037	4.848	1.215	12.904	3.234	5.122	1.284
132 SUM44	1.341	0.336	0.536	0.134	1.427	0.358	0.566	0.142
137 GAM44	2.017	0.505	0.807	0.202	2.151	0.539	0.854	0.214
138 ACL44	2.017	0.505	0.807	0.202	2.151	0.539	0.854	0.214
154 CEMPAN15	4.162	1.043	1.665	0.417	4.291	1.076	1.703	0.427
16 PRO34	8.265	2.071	3.306	0.829	8.734	2.189	3.466	0.869
160 GEEHAN13	15.01	3.762	6.004	1.505	16.261	4.075	6.454	1.617
19 C V115	69.465	17.41	27.786	6.964	74.401	18.647	29.529	7.401
192 CHANG34	11.344	2.843	4.538	1.137	11.93	2.99	4.735	1.187
20 CH AZUL	7.132	1.788	2.853	0.715	7.528	1.887	2.988	0.749
21 C BAN115	66.783	16.737	26.713	6.695	71.135	17.828	28.233	7.076
23 CH115	31.589	7.917	12.635	3.167	31.065	7.786	12.329	3.09
26 LOC115	84.692	21.226	33.877	8.49	90.213	22.61	35.805	8.974
26 LOC115	0.656	0.164	0.262	0.066	0.7	0.176	0.278	0.07
30 MAR115	101.054	25.326	40.421	10.131	107.627	26.974	42.716	10.706
33 STM115	65.283	16.361	26.113	6.545	64.783	16.236	25.712	6.444
37 SAN115	74.233	18.605	29.693	7.442	79.065	19.815	31.38	7.865
48 TINAJ115	28.579	7.163	11.431	2.865	38.673	9.692	15.349	3.847
50 M O115	56.844	14.246	22.738	5.699	60.957	15.277	24.193	6.063
50 M O115	0.681	0.171	0.272	0.068	0.731	0.183	0.29	0.073
52 TOC115	35.128	8.804	14.051	3.522	37.595	9.422	14.921	3.74
52 TOC115	1.623	0.407	0.649	0.163	1.039	0.26	0.412	0.103
52 TOC115	0.971	0.243	0.388	0.097	1.737	0.435	0.689	0.173
52 TOC115	0.513	0.129	0.205	0.051	0.549	0.138	0.218	0.055
52 TOC115	0.596	0.149	0.238	0.06	0.638	0.16	0.253	0.063
57 L M 13	14.026	3.515	5.61	1.406	14.138	3.543	5.611	1.406
61 FFIELD	79.22	19.854	31.688	7.942	84.371	21.145	33.486	8.392
7 CHO34	57.336	14.37	22.935	5.748	60.391	15.136	23.969	6.007
87 CAL115	6.109	1.531	2.444	0.612	6.452	1.617	2.561	0.642
9 LSA115	94.011	23.561	37.604	9.425	99.024	24.818	39.302	9.85

7. Demandas por Barra 2010 - 2013

Carga	2010				2013			
	Máxima		Mínima		Máxima		Mínima	
	MW	Mvar	MW	Mvar	MW	Mvar	MW	Mvar
10 L_S_34	12.309	3.085	4.924	1.234	14.093	3.532	5.637	1.413
124 MIR44	14.652	3.672	5.861	1.469	16.781	4.206	6.712	1.682
13 MDNA34	55.56	13.925	22.224	5.57	62.99	15.787	25.196	6.315
131 BAL44	13.182	3.304	5.273	1.322	15.106	3.786	6.042	1.514
132 SUM44	1.459	0.366	0.584	0.146	1.675	0.42	0.67	0.168
137 GAM44	2.194	0.55	0.878	0.22	2.518	0.631	1.007	0.252
138 ACL44	2.194	0.55	0.878	0.22	2.518	0.631	1.007	0.252
154 CEMPAN15	5.321	1.334	2.129	0.533	5.597	1.403	2.239	0.561
16 PRO34	8.854	2.219	3.542	0.888	8.656	2.169	3.462	0.868
160 GEEHAN13	16.875	4.229	6.75	1.692	20.221	5.068	8.088	2.027
19 C_V115	76.623	19.204	30.649	7.681	89.862	22.521	35.945	9.009
192 CHANG34	12.259	3.072	4.903	1.229	13.992	3.507	5.597	1.403
20 CH_AZUL	7.634	1.913	3.054	0.765	8.656	2.169	3.462	0.868
21 C_BAN115	72.693	18.219	29.077	7.287	83.262	20.867	33.305	8.347
23 CH115	29.303	7.344	11.721	2.938	34.444	8.632	13.778	3.453
26 LOC115	92.189	23.105	36.876	9.242	105.589	26.463	42.235	10.585
26 LOC115	0.715	0.179	0.286	0.072	0.822	0.206	0.329	0.082
30 MAR115	109.997	27.568	43.999	11.027	125.981	31.574	50.392	12.629
33 STM115	61.744	15.474	24.698	6.19	72.559	18.185	29.023	7.274
37 SAN115	80.802	20.251	32.321	8.1	92.55	23.195	37.02	9.278
48 TINAJ115	47.588	11.927	19.035	4.771	55.929	14.017	22.371	5.607
50 M_O115	62.817	15.743	25.127	6.297	73.833	18.504	29.533	7.402
50 M_O115	0.752	0.189	0.301	0.075	0.883	0.221	0.353	0.089
512 LGUIAS 3	14.9	3.734	5.96	1.494	17.062	4.276	6.825	1.71
52 TOC115	38.694	9.698	15.478	3.879	45.306	11.355	18.122	4.542
52 TOC115	1.069	0.268	0.428	0.107	1.252	0.314	0.501	0.126
52 TOC115	1.788	0.448	0.715	0.179	2.093	0.524	0.837	0.21
52 TOC115	0.565	0.142	0.226	0.057	0.662	0.166	0.265	0.066
52 TOC115	0.658	0.165	0.263	0.066	0.769	0.193	0.308	0.077
57 L_M_13	15.406	3.861	6.162	1.544	18.185	4.558	7.274	1.823
61 FFIELD	87.016	21.808	34.807	8.723	102.72	25.744	41.088	10.298
7 CHO34	61.724	15.469	24.69	6.188	70.694	17.717	28.277	7.087
87 CAL115	6.543	1.64	2.617	0.656	7.422	1.86	2.969	0.744
9 LSA115	101.192	25.361	40.477	10.144	115.9	29.047	46.36	11.619

Unidad	2008			2009			2010			2013		
	Máxima		Mínima	Máxima		Mínima	Máxima		Mínima	Máxima		Mínima
	Inv	Ver		Inv	Ver		Inv	Ver		Inv	Ver	
301 CONC13_8	9.5	9.5	2.5	9.19	2.49	3.676	9.19	9.19	9.191	9.19	9.19	4
302 PASOANCH	0	0	0	4.42	4.3	4	4.42	4.3	4.419	4.42	4.42	4.3
516 PANAPOW1	14	14	14	14	15.8	14	14	15.9	14	14	14	10
516 PANAPOW1	14	14	14	14	15.8	10	14	15.9	14	14	14	10
516 PANAPOW1	14	14	14	0	15.8	0	0	0	14	14	14	10
66 BLM13B	30	38	29	27	38	24	27	38	23	38	38	23
67 BLM13C	30	38	29	27	38	24	27	38	23	38	38	23
68 BLM13D	30	38	29	27	38	24	27	38	27	38	38	38
70 TGJB13A	20	15	8	26	31	10.4	26	31	26	26	31	26
71 TGJB13B	26.1	26.1	26.121	26	31	10.4	26	31	26	26	31	26
72 BLMCCA	38	38	38	38	31	38	38	31	38	38	31	38
73 BLMCCB	30	25	12	25	50	10	25	47	25	35	57	35
90 EST-13L	22.9	20.2	15	20	17	15	20	15	15	20	17	17
91 EST-13T	22.9	20.2	9.16	20	20	15	20	20	20	20	20	20
94 LV-13_8L	25.8	23.8	17	24	19	17	24	17	17	24	20	19
95 LV-13_8T	25.8	23.8	10.32	24	24	17	24	24	24	24	24	24
97 FOR13A	95	95	0	93	91	0	93	90	0	95	90	0
98 FOR13B	95	95	57.84	93	91	63.47	93	90	57.55	95	90	57.99
99 FOR13C	95	95	57.84	93	91	40.97	93	90	93	95	90	94.999
317 MENDRE13 G1	0	0	0	8.5	4	14	8.5	8	4	8.5	8.5	8.5
317 MENDRE13 G2	0	0	0	8.5	8.5	14	8.5	8.5	8.5	8.5	8.5	8.5
303 SIND13_8	0	0	0	0	0	0	9.5	3	9.5	9.5	9.5	3
307 CHANG75A	0	0	0	0	0	0	105	60	60	105	60	50
308 CHANG75B	0	0	0	0	0	0	105	60	105	105	60	50
340 PEDGALIT	0	0	0	0	0	0	20	20	11	20	20	20
151 GUALAC13	0	0	0	0	0	0	0	0	0	25	22	24
193 GEBONYIC G1	0	0	0	0	0	0	0	0	0	9.09	6	8.4
193 GEBONYIC G2	0	0	0	0	0	0	0	0	0	9.09	6	8.4
193 GEBONYIC G3	0	0	0	0	0	0	0	0	0	9.09	6	6.5
204 BJOMIN13 G1	0	0	0	0	0	0	0	0	0	23.3	20	20
204 BJOMIN13 G2	0	0	0	0	0	0	0	0	0	23.3	20	14
517 PANAPOW1 G1	0	0	0	0	0	0	0	0	0	14	14	10
517 PANAPOW1 G2	0	0	0	0	0	0	0	0	0	14	14	10
517 PANAPOW1 G3	0	0	0	0	0	0	0	0	0	14	14	10
517 PANAPOW1 G4	0	0	0	0	0	0	0	0	0	14	14	10

9. Indicadores promedio de confiabilidad del sistema

Indicador	2008			2009			2010			2013		
	Máxima		Mínima	Máxima		Mínima	Máxima		Mínima	Máxima		Mínima
	Invierno	Verano	Inv y Ver	Invierno	Verano	Inv y Ver	Invierno	Verano	Inv y Ver	Invierno	Verano	Inv y Ver
SAIFI	0.0654	0.2694	0.0295	0.0404	0.0206	0.0286	0.0441	0.0204	0.0285	0.0740	0.0257	0.0271
CAIFI	0.0654	0.2694	0.0443	0.0430	0.0292	0.0442	0.0517	0.0301	0.0484	0.0967	0.0364	0.0485
SAIDI	0.1481	0.1053	0.0753	0.1542	0.0809	0.0728	0.1925	0.0903	0.0732	0.2948	0.0974	0.0413
CAIDI	0.9847	0.0839	0.8904	1.6606	0.8408	0.8908	1.9018	0.9496	0.8978	1.7368	0.8132	0.5331
ASAI	99.9961%	99.9944%	99.9975%	99.9960%	99.9957%	99.9976%	99.9950%	99.9952%	99.9976%	99.9923%	99.9948%	99.9987%
ASUI	0.0039%	0.0056%	0.0025%	0.0040%	0.0043%	0.0024%	0.0050%	0.0048%	0.0024%	0.0077%	0.0052%	0.0013%
EENS	70.01	34.64	6.25	55.42	31.92	6.44	100.40	44.51	6.90	298.91	78.03	4.11
DEM	2832.97	1395.34	2276.79	3010.83	1482.95	2419.73	3169.87	1561.28	2547.55	3665.56	1805.43	2945.92
VERE	0.0025%	0.0025%	0.0003%	0.0018%	0.0022%	0.0003%	0.0032%	0.0029%	0.0003%	0.0082%	0.0043%	0.0001%

- SAIFI: Frecuencia de interrupción promedio del sistema, Salidas/Año
- CAIFI: Frecuencia de interrupción promedio por usuario, Salidas/C-Año
- SAIDI: Duración de interrupción promedio del sistema, Horas/Año
- CAIDI: Duración de interrupción promedio por usuario, Horas/C-Año
- ASAI: Disponibilidad de servicio promedio, %
- ASUI: Indisponibilidad de servicio promedio, %
- ENS: Energía no suministrada, MWh/Año
- DEM: Demanda anual de energía del sistema, MWh
- VERE: Valor Esperado de Racionamiento de Energía, %

10. Indicadores promedio de confiabilidad por Cargas

Carga	Barra	2008											
		Máxima								Mínima			
		Invierno				Verano				Invierno y Verano			
		TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a
lod_9_1	9 LSA115	0.83	0.04	5.07	40.94	0.27	0.36	0.09	13.63	0.00	0.00	5.76	0.00
lod_61_1	61 FFIELD	0.01	0.01	0.31	0.45	0.00	0.01	0.00	0.00	0.00	0.00	0.27	0.00
lod_7_1	7 CHO34	0.28	0.01	5.07	8.57	0.12	0.16	0.09	3.63	0.00	0.00	5.76	0.00
lod_10_1	10 L_S_34	0.00	0.00	1.78	0.00	1.12	1.48	0.09	6.76	0.00	0.00	5.76	0.00
lod_192_1	192 CHANG34	1.71	0.50	0.78	10.19	0.89	1.68	0.06	5.40	1.08	0.05	4.51	2.94
lod_52_1	52 TOC115	0.00	0.00	2.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00
lod_20_1	20 CH_AZUL	1.64	1.18	0.32	6.15	0.86	2.01	0.05	3.26	1.32	0.78	0.36	2.26
lod_33_1	33 STM115	0.06	0.04	0.31	2.10	0.03	0.74	0.00	1.11	0.06	0.04	0.36	0.97
lod_37_1	37 SAN115	0.00	0.00	1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00
lod_48_1	48 TINAJ115	0.00	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00
lod_23_1	23 CH115	0.01	0.07	0.03	0.13	0.00	0.77	0.00	0.07	0.01	0.06	0.03	0.06
lod_16_1	16 PRO34	0.33	0.24	0.32	1.43	0.17	0.83	0.02	0.76	0.00	0.00	2.79	0.00
lod_154_1	154 CEMPAN15	0.01	0.07	0.04	0.03	0.01	0.77	0.00	0.01	0.01	0.06	0.05	0.01
lod_30_1	30 MAR115	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00
lod_50_1	50 M_O115	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00
lod_19_1	19 C_V115	0.00	0.00	3.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_57_1	57 L_M_13	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00

Carga	Barra	2009											
		Máxima								Mínima			
		Invierno				Verano				Invierno y Verano			
		TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a
lod_9_1	9 LSA115	0.47	0.02	4.98	21.76	0.27	0.01	2.50	12.54	0.00	0.00	5.76	0.00
lod_61_1	61 FFIELD	0.10	0.07	0.30	4.21	0.08	0.05	0.16	3.35	0.00	0.00	0.28	0.00
lod_7_1	7 CHO34	0.18	0.01	4.98	5.12	0.13	0.01	2.50	3.62	0.00	0.00	5.76	0.00
lod_10_1	10 L_S_34	2.09	0.10	4.98	9.24	1.06	0.05	2.50	4.71	0.00	0.00	5.76	0.00
lod_192_1	192 CHANG34	1.05	0.05	4.98	7.83	0.53	0.02	2.50	4.00	1.08	0.05	4.57	3.06
lod_52_1	52 TOC115	0.00	0.00	3.85	0.00	0.00	0.00	1.85	0.00	0.00	0.00	0.33	0.00
lod_20_1	20 CH_AZUL	1.28	0.95	0.30	5.07	0.65	0.47	0.16	2.59	1.32	0.78	0.36	2.36
lod_33_1	33 STM115	0.06	0.04	0.30	2.04	0.03	0.02	0.16	1.04	0.06	0.04	0.36	0.95
lod_37_1	37 SAN115	0.00	0.00	1.03	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.33	0.00
lod_48_1	48 TINAJ115	0.00	0.00	0.90	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.33	0.00
lod_23_1	23 CH115	0.01	0.07	0.03	0.12	0.00	0.03	0.01	0.06	0.01	0.06	0.03	0.06
lod_16_1	16 PRO34	0.00	0.00	7.43	0.00	0.00	0.00	3.40	0.00	0.00	0.00	2.79	0.00
lod_154_1	154 CEMPAN15	0.01	0.07	0.04	0.03	0.01	0.03	0.02	0.01	0.01	0.06	0.05	0.01
lod_30_1	30 MAR115	0.00	0.00	0.84	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.33	0.00
lod_50_1	50 M_O115	0.00	0.00	0.78	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.33	0.00
lod_19_1	19 C_V115	0.00	0.00	5.81	0.00	0.00	0.00	2.89	0.00	0.00	0.00	0.00	0.00
lod_57_1	57 L_M_13	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00

11. Indicadores promedio de confiabilidad por Barras

BARRA	2008								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
10 L S 34	0.00	0.00	4.78	0.00	0.00	0.00	0.00	0.00	5.76
6 CHO115	0.00	0.00	4.78	0.00	0.00	0.00	0.00	0.00	5.76
7 CHO34	0.00	0.00	4.78	0.00	0.00	0.00	0.00	0.00	5.76
9 LSA115	0.00	0.00	4.78	0.00	0.00	0.00	0.00	0.00	5.76
15 PRO115	0.17	0.24	0.32	0.09	0.84	0.02	0.00	0.00	2.79
16 PRO34	0.17	0.24	0.32	0.09	0.84	0.02	0.00	0.00	2.79
191 CHANG115	0.90	0.50	0.78	0.48	1.70	0.06	0.65	0.05	4.51
192 CHANG34	0.90	0.50	0.78	0.48	1.70	0.06	0.65	0.05	4.51
103 COPESA23	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.36
104 COPESA13	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.36
52 TOC115	0.00	0.00	0.77	0.00	0.00	0.00	0.00	0.00	0.33
50 M O115	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.33
30 MAR115	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.33
48 TINAJ115	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.33
37 SAN115	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.33
111 PTMD115B	0.00	0.00	0.77	0.00	0.01	0.00	0.00	0.00	0.31
61 FFIELD	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.27
6000 FRONTER	0.20	0.28	0.32	0.11	1.58	0.02	0.00	0.00	0.33
110 PTMD115A	0.00	0.00	0.72	0.00	0.01	0.00	0.00	0.00	0.29
20 CH AZUL	0.86	1.18	0.32	0.46	2.07	0.05	0.79	0.78	0.36
33 STM115	0.03	0.04	0.31	0.02	0.74	0.00	0.04	0.04	0.36
100 BAY230	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.12	0.81
101 BAY13A	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.12	0.81
102 BAY13B	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.12	0.81
108 BAY13C	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.12	0.81
190 CHANG230	0.34	0.45	0.32	0.18	0.96	0.04	0.00	0.00	0.33
14 PRO230	0.17	0.24	0.32	0.09	0.84	0.02	0.00	0.00	0.33
87 CAL115	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.13
109 STA RITA	0.00	0.00	0.69	0.00	0.00	0.00	0.00	0.00	0.03
54 LM1115	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
55 LM2115	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
56 L M 44	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
57 L M 13	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
58 MHOPE	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
63 RCITY	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
64 COLON44	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
66 BLM13B	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
67 BLM13C	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
68 BLM13D	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
69 TGJB13 8	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07

BARRA	2008								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
70 TGJB13A	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
71 TGJB13B	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
72 BLMCCA	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
73 BLMCCB	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
86 CC13_8	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.07
88 EST115	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00
89 EST_13	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00
90 EST-13L	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00
91 EST-13T	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00
92 L_V115	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00
93 L_V_13	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00
94 LV-13_8L	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00
95 LV-13_8T	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00
1 PAN230	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
105 PAN-AM23	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
106 PANAM13A	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
107 PANAM13B	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
112 TGP13_8	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
113 TGP13A	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
114 TGP13B	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
115 PACORA23	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
116 PACORA13	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
123 MIR115	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
124 MIR44	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
126 MIR13A	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
127 MIR13B	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
128 MIR13C	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
129 MIR13D	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
130 MIR13F	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
131 BAL44	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
132 SUM44	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
133 MAD44	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
134 MAD6A	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
135 MAD6B	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
136 MAD6C	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
137 GAM44	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
138 ACL44	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
139 GAT44	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
140 GAT6A	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
141 GAT6B	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
142 CANJ13A	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
143 CANJ13B	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
144 CANJ230	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00
147 GUASQ230	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00

BARRA	2009								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
10 L S 34	0.00	0.00	12.37	0.00	0.00	7.03	0.00	0.00	5.76
6 CHO115	0.00	0.00	12.37	0.00	0.00	7.03	0.00	0.00	5.76
7 CHO34	0.00	0.00	12.37	0.00	0.00	7.03	0.00	0.00	5.76
9 LSA115	0.00	0.00	12.37	0.00	0.00	7.03	0.00	0.00	5.76
15 PRO115	0.00	0.00	7.43	0.00	0.00	3.40	0.00	0.00	2.79
16 PRO34	0.00	0.00	7.43	0.00	0.00	3.40	0.00	0.00	2.79
191 CHANG115	0.55	0.05	4.98	0.28	0.02	2.50	0.65	0.05	4.57
192 CHANG34	0.55	0.05	4.98	0.28	0.02	2.50	0.65	0.05	4.57
103 COPESA23	0.00	0.00	0.82	0.00	0.00	0.48	0.00	0.00	0.39
104 COPESA13	0.00	0.00	0.82	0.00	0.00	0.48	0.00	0.00	0.39
52 TOC115	0.00	0.00	0.82	0.00	0.00	0.39	0.00	0.00	0.33
50 M O115	0.00	0.00	0.80	0.00	0.00	0.39	0.00	0.00	0.33
30 MAR115	0.00	0.00	0.78	0.00	0.00	0.39	0.00	0.00	0.33
48 TINAJ115	0.00	0.00	0.78	0.00	0.00	0.39	0.00	0.00	0.33
37 SAN115	0.00	0.00	0.77	0.00	0.00	0.39	0.00	0.00	0.33
111 PTMD115B	0.00	0.00	0.81	0.00	0.00	0.38	0.00	0.00	0.31
61 FFIELD	0.00	0.00	0.81	0.00	0.00	0.39	0.00	0.00	0.28
6000 FRONTER	0.00	0.00	0.88	0.00	0.00	0.40	0.00	0.00	0.33
110 PTMD115A	0.00	0.00	0.76	0.00	0.00	0.35	0.00	0.00	0.29
20 CH AZUL	0.67	0.95	0.30	0.34	0.47	0.16	0.79	0.78	0.36
33 STM115	0.03	0.04	0.30	0.02	0.02	0.16	0.04	0.04	0.36
100 BAY230	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
101 BAY13A	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
102 BAY13B	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
108 BAY13C	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
190 CHANG230	0.00	0.00	0.88	0.00	0.00	0.40	0.00	0.00	0.33
14 PRO230	0.00	0.00	0.88	0.00	0.00	0.40	0.00	0.00	0.33
87 CAL115	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.13
109 STA RITA	0.00	0.00	0.23	0.00	0.00	0.04	0.00	0.00	0.02
54 LM1115	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
55 LM2115	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
56 L M 44	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
57 L M 13	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
58 MHOPE	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
63 RCITY	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
64 COLON44	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
66 BLM13B	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
67 BLM13C	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
68 BLM13D	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
69 TGJB13 8	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
70 TGJB13A	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
71 TGJB13B	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
72 BLMCCA	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
73 BLMCCB	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05

BARRA	2009								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
86 CC13 8	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.05
88 EST115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89 EST 13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90 EST-13L	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91 EST-13T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92 L V115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93 L V 13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94 LV-13 8L	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95 LV-13 8T	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 PAN230	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
105 PAN-AM23	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
106 PANAM13A	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
107 PANAM13B	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
112 TGP13 8	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
113 TGP13A	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
114 TGP13B	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
115 PACORA23	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
116 PACORA13	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
123 MIR115	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
124 MIR44	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
126 MIR13A	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
127 MIR13B	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
128 MIR13C	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
129 MIR13D	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
130 MIR13F	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
131 BAL44	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
132 SUM44	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
133 MAD44	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
134 MAD6A	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
135 MAD6B	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
136 MAD6C	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
137 GAM44	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
138 ACL44	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
139 GAT44	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
140 GAT6A	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
141 GAT6B	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
142 CANJ13A	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
143 CANJ13B	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
144 CANJ230	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
147 GUASQ230	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
148 VELAD230	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
149 GUASQ34	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
160 GEEHAN13	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
18 CAC115	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00

BARRA	2009								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
19 C V115	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
2 PAN115	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
21 C BAN115	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
26 LOC115	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
3 PANII230	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
4 PANII115	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
5 CHO230	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
515 PANPOWER	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
516 PANAPOW1	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
8 LSA230	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
11 M N230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12 M N115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13 MDNA34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
301 CONC13 8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
302 PASOANCH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96 FOR230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97 FOR13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98 FOR13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99 FOR13C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
154 CEMPAN15	0.00	0.07	0.04	0.00	0.03	0.02	0.01	0.06	0.05
317 MENDRE13	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.13
321 CALDERA3	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.13
17 CEMEX	0.00	0.07	0.03	0.00	0.03	0.01	0.00	0.06	0.03
23 CH115	0.00	0.07	0.03	0.00	0.03	0.01	0.00	0.06	0.03
511 LGUIAS23	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
512 LGUIAS 3	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00

BARRA	2013								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
10 L S 34	0.00	0.00	11.26	0.00	0.00	5.68	0.00	0.00	5.13
6 CHO115	0.00	0.00	11.26	0.00	0.00	5.68	0.00	0.00	5.13
7 CHO34	0.00	0.00	11.26	0.00	0.00	5.68	0.00	0.00	5.13
9 LSA115	0.00	0.00	11.26	0.00	0.00	5.68	0.00	0.00	5.13
15 PRO115	0.00	0.00	11.26	0.00	0.00	5.68	0.00	0.00	5.13
16 PRO34	0.00	0.00	11.26	0.00	0.00	5.68	0.00	0.00	5.13
191 CHANG115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
192 CHANG34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
103 COPESA23	0.00	0.00	0.65	0.00	0.00	0.39	0.00	0.00	0.33
104 COPESA13	0.00	0.00	0.65	0.00	0.00	0.39	0.00	0.00	0.33
52 TOC115	0.00	0.00	0.63	0.00	0.00	0.32	0.00	0.00	0.29
50 M O115	0.00	0.00	0.63	0.00	0.00	0.32	0.00	0.00	0.29
30 MAR115	0.00	0.00	0.63	0.00	0.00	0.32	0.00	0.00	0.29
48 TINAJ115	0.00	0.00	0.63	0.00	0.00	0.32	0.00	0.00	0.29
37 SAN115	0.00	0.00	0.63	0.00	0.00	0.32	0.00	0.00	0.29
111 PTMD115B	0.00	0.00	0.61	0.00	0.00	0.30	0.00	0.00	0.28
61 FFIELD	0.00	0.00	0.56	0.00	0.00	0.32	0.00	0.00	0.29
6000 FRONTER	0.00	0.00	0.65	0.00	0.00	0.33	0.00	0.00	0.29
110 PTMD115A	0.00	0.00	0.56	0.00	0.00	0.29	0.00	0.00	0.26
20 CH AZUL	0.77	0.95	0.35	0.38	0.47	0.17	0.83	0.78	0.37
33 STM115	0.03	0.04	0.35	0.02	0.02	0.17	0.04	0.04	0.37
100 BAY230	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.12	0.86
101 BAY13A	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.12	0.86
102 BAY13B	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.12	0.86
108 BAY13C	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.12	0.86
190 CHANG230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14 PRO230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87 CAL115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
109 STA RITA	0.00	0.00	0.05	0.00	0.00	0.03	0.00	0.00	0.03
54 LM1115	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
55 LM2115	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
56 L M 44	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
57 L M 13	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
58 MHOPE	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
63 RCITY	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
64 COLON44	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
66 BLM13B	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
67 BLM13C	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
68 BLM13D	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
69 TGJB13 8	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
70 TGJB13A	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
71 TGJB13B	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
72 BLMCCA	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
73 BLMCCB	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00



12. Indicadores promedio Anual de confiabilidad por Barras

BARRA	2008			2009			2010			2013		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
10 L_S_34	0.00	0.00	10.54	0.00	0.00	25.16	0.00	0.00	21.97	0.00	0.00	22.06
6 CHO115	0.00	0.00	10.54	0.00	0.00	25.16	0.00	0.00	21.97	0.00	0.00	22.06
7 CHO34	0.00	0.00	10.54	0.00	0.00	25.16	0.00	0.00	21.97	0.00	0.00	22.06
9 LSA115	0.00	0.00	10.54	0.00	0.00	25.16	0.00	0.00	21.97	0.00	0.00	22.06
15 PRO115	0.27	1.08	3.14	0.00	0.00	13.62	0.00	0.00	21.97	0.00	0.00	22.06
16 PRO34	0.27	1.08	3.14	0.00	0.00	13.62	0.00	0.00	21.97	0.00	0.00	22.06
191 CHANG115	2.02	2.25	5.35	1.48	0.12	12.06	1.62	0.12	13.38	0.00	0.00	0.00
192 CHANG34	2.02	2.25	5.35	1.48	0.12	12.06	1.62	0.12	13.38	0.00	0.00	0.00
103 COPESA23	0.00	0.00	1.12	0.00	0.00	1.69	0.00	0.00	1.37	0.00	0.00	1.37
104 COPESA13	0.00	0.00	1.12	0.00	0.00	1.69	0.00	0.00	1.37	0.00	0.00	1.37
52 TOC115	0.00	0.00	1.09	0.00	0.00	1.54	0.00	0.00	1.23	0.00	0.00	1.24
50 M_O115	0.00	0.00	1.07	0.00	0.00	1.52	0.00	0.00	1.23	0.00	0.00	1.24
30 MAR115	0.00	0.00	1.07	0.00	0.00	1.50	0.00	0.00	1.23	0.00	0.00	1.24
48 TINAJ115	0.00	0.00	1.07	0.00	0.00	1.50	0.00	0.00	1.23	0.00	0.00	1.24
37 SAN115	0.00	0.00	1.07	0.00	0.00	1.49	0.00	0.00	1.23	0.00	0.00	1.24
111 PTMD115B	0.00	0.01	1.07	0.00	0.00	1.50	0.00	0.00	1.18	0.00	0.00	1.19
61 FFIELD	0.00	0.00	1.03	0.00	0.00	1.48	0.00	0.00	1.23	0.00	0.00	1.16
6000 FRONTER	0.31	1.86	0.67	0.00	0.00	1.62	0.00	0.00	1.27	0.00	0.00	1.27
110 PTMD115A	0.00	0.01	1.01	0.00	0.00	1.40	0.00	0.00	1.10	0.00	0.00	1.10
20 CH_AZUL	2.11	4.03	0.72	1.80	2.20	0.82	1.98	2.20	0.90	1.98	2.20	0.90
33 STM115	0.09	0.82	0.67	0.08	0.10	0.82	0.09	0.10	0.90	0.09	0.10	0.90
100 BAY230	0.27	0.12	0.81	0.00	0.00	0.24	0.28	0.12	0.86	0.28	0.12	0.86
101 BAY13A	0.27	0.12	0.81	0.00	0.00	0.24	0.28	0.12	0.86	0.28	0.12	0.86
102 BAY13B	0.27	0.12	0.81	0.00	0.00	0.24	0.28	0.12	0.86	0.28	0.12	0.86
108 BAY13C	0.27	0.12	0.81	0.00	0.00	0.24	0.28	0.12	0.86	0.28	0.12	0.86
190 CHANG230	0.51	1.41	0.69	0.00	0.00	1.62	0.00	0.00	0.00	0.00	0.00	0.00
14 PRO230	0.27	1.08	0.68	0.00	0.00	1.62	0.00	0.00	0.00	0.00	0.00	0.00
87 CAL115	0.00	0.00	0.94	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00

BARRA	2008			2009			2010			2013		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
109 STA RITA	0.00	0.00	0.72	0.00	0.00	0.29	0.00	0.00	0.11	0.00	0.00	0.11
54 LM1115	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
55 LM2115	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
56 L_M_44	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
57 L_M_13	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
58 MHOPE	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
63 RCITY	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
64 COLON44	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
66 BLM13B	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
67 BLM13C	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
68 BLM13D	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
69 TGJB13_8	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
70 TGJB13A	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
71 TGJB13B	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
72 BLMCCA	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
73 BLMCCB	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
86 CC13_8	0.00	0.00	0.76	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.10
88 EST115	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89 EST_13	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90 EST-13L	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91 EST-13T	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92 L_V115	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93 L_V_13	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94 LV-13_8L	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95 LV-13_8T	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 PAN230	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
105 PAN-AM23	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
106 PANAM13A	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
107 PANAM13B	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
112 TGP13_8	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00

BARRA	2008			2009			2010			2013		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
113 TGP13A	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
114 TGP13B	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
115 PACORA23	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
116 PACORA13	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
123 MIR115	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
124 MIR44	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
126 MIR13A	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
127 MIR13B	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
128 MIR13C	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
129 MIR13D	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
130 MIR13F	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
131 BAL44	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
132 SUM44	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
133 MAD44	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
134 MAD6A	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
135 MAD6B	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
136 MAD6C	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
137 GAM44	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
138 ACL44	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
139 GAT44	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
140 GAT6A	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
141 GAT6B	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
142 CANJ13A	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
143 CANJ13B	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
144 CANJ230	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
147 GUASQ230	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
148 VELAD230	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
149 GUASQ34	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
160 GEEHAN13	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
18 CAC115	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00

BARRA	2008			2009			2010			2013		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
19 C_V115	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
2 PAN115	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
21 C_BAN115	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
26 LOC115	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
3 PANII230	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
4 PANII115	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
5 CHO230	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
515 PANPOWER	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
516 PANAPOW1	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
8 LSA230	0.00	0.00	0.70	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
11 M_N230	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12 M_N115	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13 MDNA34	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
301 CONC13_8	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
302 PASOANCH	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96 FOR230	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97 FOR13A	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98 FOR13B	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99 FOR13C	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
154 CEMPAN15	0.01	0.90	0.08	0.01	0.16	0.10	0.02	0.16	0.11	0.02	0.16	0.11
317 MENDRE13	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00
321 CALDERA3	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00
17 CEMEX	0.01	0.90	0.06	0.01	0.16	0.07	0.01	0.16	0.08	0.01	0.16	0.08
23 CH115	0.01	0.90	0.06	0.01	0.16	0.07	0.01	0.16	0.08	0.01	0.16	0.08
511 LGUIAS23	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00
512 LGUIAS 3	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00