

POTENCIAL TEORICO DEL RIO MOTUPE

12/17/78

I	L	H	Q	AFD	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE LA LECHE SUP											
25	87.0	2981.0	0.2	0.0							0.00
26	74.0	1672.0	1.4	0.0	13.0	1309.0	10.07	0.82	10.56	0.81	10.56
27	64.0	870.0	2.1	0.0	10.0	802.0	8.02	1.79	14.07	1.41	24.63
28	54.0	350.0	2.7	3.1	10.0	520.0	5.20	2.41	12.50	1.23	36.94
29	49.0	252.0	5.9	0.0	5.0	98.0	1.96	5.83	5.60	1.12	42.54
SUBTOTAL					38.0	2729.0			42.54	1.12	
=====											
AFLUENTE LA LECHE INF											
29	49.0	252.0	5.9	0.0							0.00
30	38.0	148.0	6.5	0.0	11.0	104.0	0.95	6.19	6.31	0.57	6.31
31	28.0	101.0	6.7	0.0	10.0	47.0	0.47	6.60	3.04	0.30	9.35
32	18.0	82.0	3.8	1.0	10.0	19.0	0.19	5.28	0.98	0.10	10.34
33	10.0	71.0	5.0	0.0	8.0	11.0	0.14	4.92	0.53	0.07	10.87
34	0.0	46.0	5.1	0.0	10.0	25.0	0.25	5.05	1.24	0.12	12.11
SUBTOTAL					49.0	206.0			12.11	0.25	
=====											
AFLUENTE MOTUPE											
35	105.0	2249.0	0.7	0.0							0.00
36	97.0	1280.0	1.1	0.0	8.0	969.0	12.11	0.91	8.61	1.08	8.61
37	87.0	589.0	1.8	0.0	10.0	691.0	6.91	1.43	9.73	0.97	18.54
38	77.0	210.0	2.1	0.0	10.0	379.0	3.79	1.93	7.17	0.72	25.51
39	67.0	137.0	2.2	1.3	10.0	73.0	0.73	2.14	1.53	0.15	27.04
40	54.0	97.0	2.9	0.0	13.0	40.0	0.31	3.23	1.27	0.10	28.31
41	44.0	75.0	2.4	2.0	10.0	22.0	0.22	2.64	0.57	0.06	28.88
42	40.0	68.0	4.4	1.6	4.0	7.0	0.18	4.36	0.50	0.07	29.18
43	33.0	62.0	5.2	0.0	7.0	6.0	0.09	5.60	0.33	0.05	29.51
44	23.0	46.0	2.8	5.1	10.0	16.0	0.16	4.00	0.63	0.06	30.14
45	10.0	34.0	5.7	0.0	13.0	12.0	0.09	6.79	0.80	0.06	30.93
46	0.0	24.0	5.8	0.0	10.0	10.0	0.10	5.72	0.56	0.06	31.50
SUBTOTAL					105.0	2225.0			31.50	0.50	

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*
* EL POTENCIAL TEORICO TOTAL DEL RIO LAMBAYEQUE ES DE 531.3 MW *
*
* Y TIENE UNA LONGITUD ACUMULADA DE 395.5 KM *
*
* Y UN POTENCIAL ESPECIFICO DE 1.34 MW/KM *
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POTENCIAL TEORICO DEL RIO LAMBAYEQUE 12/17/78

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE SAN JUAN											
1	16.5	3700.0	0.1	0.0							0.00
2	10.0	2800.0	0.3	0.0	6.5	900.0	15.85	0.21	1.81	0.28	1.81
3	0.0	1870.0	1.9	0.0	10.0	930.0	9.30	1.12	10.21	1.02	12.02
SUBTOTAL					16.5	1830.0			12.02	0.73	
=====											
AFLUENTE HUANBAYACU											
4	21.0	2900.0	0.0	0.0							0.00
5	10.0	1800.0	0.4	0.0	11.0	1100.0	10.00	0.19	2.05	0.19	2.05
6	0.0	1300.0	1.5	0.0	10.0	500.0	5.00	0.92	4.52	0.45	6.57
SUBTOTAL					21.0	1600.0			6.57	0.31	
=====											
AFLUENTE CANAD											
7	34.0	3500.0	0.0	0.0							0.00
8	20.0	2800.0	0.7	0.0	14.0	700.0	5.00	0.37	2.55	0.18	2.55
9	10.0	1490.0	2.1	0.0	10.0	1310.0	13.10	1.40	18.00	1.80	20.55
10	0.0	1075.0	2.6	0.0	10.0	415.0	4.15	2.36	9.62	0.96	30.16
SUBTOTAL					34.0	2425.0			30.16	0.89	
=====											
AFLUENTE SAN LORENZO											
11	40.0	3570.0	0.0	0.0							0.00
12	30.0	3300.0	0.6	0.0	10.0	270.0	2.70	0.30	0.79	0.08	0.79
13	20.0	2135.0	1.3	0.0	10.0	1165.0	11.65	0.93	10.66	1.07	11.46
14	10.0	1575.0	2.3	0.0	10.0	560.0	5.60	1.79	9.81	0.98	21.27
15	0.0	994.0	2.9	0.0	10.0	581.0	5.81	2.57	14.66	1.47	35.93
SUBTOTAL					40.0	2576.0			35.93	0.90	
=====											
AFLUENTE CHATO											
16	20.0	2990.0	0.0	0.0							0.00
17	10.0	1730.0	0.4	0.0	10.0	1260.0	12.60	0.22	2.76	0.28	2.76
18	0.0	850.0	1.2	0.0	10.0	880.0	8.80	0.84	7.23	0.72	9.99
SUBTOTAL					20.0	2140.0			9.99	0.50	
=====											
AFLUENTE MAICHAIL A											
19	32.0	3900.0	0.0	0.0							0.00
20	21.0	1650.0	0.6	0.0	11.0	2250.0	20.45	0.29	6.39	0.58	6.39
21	11.0	900.0	2.6	0.0	10.0	750.0	7.50	1.58	11.64	1.16	18.04
SUBTOTAL					21.0	3000.0			18.04	0.86	
=====											

POTENCIAL TEORICO DEL RIO LAMBAYEQUE 12/17/78

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE MAICHAIL B											
21	11.0	900.0	2.6	0.0							0.00
22	0.0	365.0	3.0	0.0	11.0	535.0	4.86	2.78	14.61	1.33	14.61
SUBTOTAL					11.0	535.0			14.61	1.33	
=====											
AFLUENTE CAMELLON											
23	40.0	3150.0	0.3	0.0							0.00
24	30.0	1225.0	0.6	0.0	10.0	1925.0	19.25	0.44	8.24	0.82	8.24
25	20.0	500.0	0.9	0.0	10.0	725.0	7.25	0.75	5.31	0.53	13.55
26	10.0	280.0	1.1	0.0	10.0	220.0	2.20	1.00	2.15	0.21	15.69
27	0.0	180.0	2.3	0.0	10.0	100.0	1.00	1.67	1.64	0.16	17.34
SUBTOTAL					40.0	2970.0			17.34	0.43	
=====											
AFLUENTE LAMBAYEQUE A											
28	192.0	3755.0	0.1	0.0							0.00
29	180.0	3175.0	0.9	0.0	12.0	580.0	4.83	0.51	2.89	0.24	2.89
30	170.0	2650.0	3.4	0.0	10.0	525.0	5.25	2.17	11.17	1.12	14.06
31	160.0	2310.0	4.7	0.0	10.0	340.0	3.40	4.05	13.50	1.35	27.55
32	150.0	1870.0	5.7	1.9	10.0	440.0	4.40	5.17	22.32	2.23	49.88
33	137.0	1590.0	12.8	0.0	13.0	280.0	2.15	10.20	28.01	2.15	77.89
34	126.0	1300.0	14.1	1.5	11.0	290.0	2.64	13.44	38.23	3.48	116.11
35	116.0	1075.0	16.3	2.6	10.0	225.0	2.25	15.92	35.14	3.51	151.26
36	110.0	994.0	18.7	2.9	6.0	81.0	1.35	18.84	14.97	2.49	166.22
37	109.0	950.0	21.6	0.0	1.0	44.0	4.40	21.61	9.33	9.33	175.55
38	103.0	850.0	22.0	1.2	6.0	100.0	1.67	21.82	21.40	3.57	196.95
39	88.0	365.0	24.1	3.0	15.0	485.0	3.23	23.67	112.60	7.51	309.55
40	86.0	325.0	27.1	0.0	2.0	40.0	2.00	27.07	10.62	5.31	320.17
SUBTOTAL					106.0	3430.0			320.17	3.02	
=====											
AFLUENTE LAMBAYEQUE B											
40	86.0	325.0	27.1	0.0							0.00
41	72.0	215.0	27.6	0.0	14.0	110.0	0.79	27.36	29.53	2.11	29.53
42	68.0	180.0	26.7	2.3	4.0	35.0	0.87	27.16	9.32	2.33	38.85
43	55.0	125.0	31.0	0.0	13.0	55.0	0.42	29.97	16.17	1.24	55.03
44	54.0	120.0	8.0	0.0	1.0	5.0	0.50	19.49	0.96	0.96	55.98
45	40.0	80.0	7.8	0.0	14.0	40.0	0.29	7.89	3.10	0.22	59.08
46	30.0	55.0	8.7	0.0	10.0	25.0	0.25	8.27	2.03	0.20	61.11
47	20.0	37.0	9.8	0.0	10.0	18.0	0.18	9.27	1.64	0.16	62.74
48	10.0	19.0	10.4	0.0	10.0	18.0	0.18	10.10	1.78	0.18	64.53
49	0.0	0.0	10.9	0.0	10.0	19.0	0.19	10.65	1.99	0.20	66.51
SUBTOTAL					86.0	325.0			66.51	0.77	

 * EL POTENCIAL TEORICO TOTAL DEL RIO RIO ZANA ES DE 124.8 MW *
 * Y TIENE UNA LONGITUD ACUMULADA DE 169.0 KM *
 * Y UN POTENCIAL ESPECIFICO DE 0.74 MW/KM *

 POTENCIAL TEORICO DEL RIO RIO ZANA 12/17/78

I	L	H	Q	AFO	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE RIO UDINA											
1	15.0	2300.0	0.6	0.0							0.00
2	0.0	349.0	1.2	0.0	15.0	1951.0	13.01	0.87	16.66	1.11	16.66
SUBTOTAL					15.0	1951.0			16.66	1.11	
=====											
AFLUENTE NAWCHOC											
3	39.0	3300.0	0.0	0.0							0.00
4	30.0	1250.0	0.2	0.0	9.0	2050.0	22.78	0.12	2.44	0.27	2.44
5	20.0	430.0	1.1	0.0	10.0	820.0	8.20	0.65	5.21	0.52	7.64
6	10.0	255.0	1.4	0.0	10.0	175.0	1.75	1.26	2.15	0.22	9.80
7	0.0	170.0	1.6	0.0	10.0	85.0	0.85	1.50	1.25	0.12	11.04
SUBTOTAL					39.0	3130.0			11.04	0.28	
=====											
AFLUENTE ZANA A											
8	115.0	3525.0	0.0	0.0							0.00
9	105.0	2675.0	1.3	0.0	10.0	850.0	8.50	0.64	5.32	0.53	5.32
10	95.0	1800.0	2.9	0.0	10.0	875.0	8.75	2.06	17.72	1.77	23.04
11	85.0	800.0	4.1	0.0	10.0	1000.0	10.00	3.49	34.27	3.43	57.31
12	75.0	349.0	4.9	1.2	10.0	451.0	4.51	4.50	19.90	1.99	77.21
13	59.0	195.0	6.5	0.0	16.0	154.0	0.96	6.29	9.50	0.59	86.71
SUBTOTAL					56.0	3330.0			86.71	1.55	
=====											
AFLUENTE ZANA B											
13	59.0	195.0	6.5	0.0							0.00
14	54.0	170.0	5.6	1.6	5.0	25.0	0.50	6.03	1.48	0.30	1.48
15	42.0	115.0	6.7	0.0	12.0	55.0	0.46	6.91	3.73	0.31	5.21
SUBTOTAL					17.0	80.0			5.21	0.31	
=====											
AFLUENTE ZANA C											
15	42.0	115.0	6.7	0.0							0.00
16	29.0	55.0	5.0	0.0	13.0	60.0	0.46	5.85	3.44	0.26	3.44
SUBTOTAL					13.0	60.0			3.44	0.26	
=====											
AFLUENTE ZANA D											
16	29.0	55.0	5.0	0.0							0.00
17	16.0	30.0	2.6	0.0	13.0	25.0	0.19	3.80	0.93	0.07	0.93
SUBTOTAL					13.0	25.0			0.93	0.07	
=====											
AFLUENTE ZANA E											
17	16.0	30.0	2.6	0.0							0.00
18	3.0	7.0	2.7	0.0	13.0	23.0	0.18	2.65	0.60	0.05	0.60
SUBTOTAL					13.0	23.0			0.60	0.05	
=====											
AFLUENTE ZANA F											
18	3.0	7.0	2.7	0.0							0.00
19	0.0	0.0	2.8	0.0	3.0	7.0	0.23	2.76	0.19	0.06	0.19
SUBTOTAL					3.0	7.0			0.19	0.06	
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* EL POTENCIAL TEORICO TOTAL DEL RIO RIO CHAMAN ES DE 19.3 MW *
* Y TIENE UNA LONGITUD ACUMULADA DE 99.0 KM *
* Y UN POTENCIAL ESPECIFICO DE 0.20 MW/KM *
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POTENCIAL TEORICO DEL RIO RIO CHAMAN 12/17/78

I	L	H	Q	AFQ	DL	DH	PE	GC	POT	ESP	CUM
AFLUENTE SANJOSE											
1	20.0	1800.0	0.0	0.0	10.0	1040.0	10.40	0.22	2.23	0.22	0.00
2	10.0	760.0	0.4	0.0	10.0	310.0	3.10	0.54	1.65	0.17	2.23
3	0.0	450.0	0.7	0.0							3.88
SUBTOTAL					20.0	1350.0			3.88	0.19	
AFLUENTE LOCODECHAMAN											
4	79.0	2600.0	0.0	0.0	9.0	1650.0	18.33	0.19	3.10	0.34	0.00
5	70.0	950.0	0.4	0.0	10.0	500.0	5.00	0.51	2.48	0.25	3.10
6	60.0	450.0	0.6	0.7	10.0	170.0	1.70	1.66	2.76	0.28	5.58
7	50.0	280.0	2.0	0.0	10.0	95.0	0.95	2.21	2.06	0.21	8.35
8	40.0	185.0	2.4	0.0	10.0	70.0	0.70	2.68	1.84	0.18	10.40
9	30.0	115.0	3.0	0.0	10.0	60.0	0.60	3.04	1.79	0.18	12.24
10	20.0	55.0	3.1	0.0	10.0	35.0	0.35	2.75	0.95	0.09	14.03
11	10.0	20.0	2.4	0.0	10.0	20.0	0.20	2.44	0.48	0.05	14.98
12	0.0	0.0	2.5	0.0							15.46
SUBTOTAL					79.0	2600.0			15.46	0.20	

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* EL POTENCIAL TEORICO TOTAL DEL RIO JEQUETEPEQUE ES DE 694.6 MW *
* Y TIENE UNA LONGITUD ACUMULADA DE 408.0 KM *
* Y UN POTENCIAL ESPECIFICO DE 1.70 MW/KM *
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POTENCIAL TEORICO DEL RIO JEQUETEPEQUE 12/17/78

I	L	H	Q	AFQ	DL	DM	PE	QC	POT	ESP	CUM
=====											
AFLUENTE CHELLITANO											
1	24.0	3550.0	0.0	0.0							0.00
2	20.0	3375.0	0.1	0.0	4.0	175.0	4.37	0.07	0.12	0.03	0.12
3	10.0	1850.0	1.0	0.0	10.0	1525.0	15.25	0.59	8.88	0.89	9.01
4	0.0	990.0	1.7	0.0	10.0	860.0	8.60	1.37	11.59	1.16	20.59
SUBTOTAL					24.0	2560.0			20.59	0.86	
=====											
AFLUENTE LLAMINCHAN											
5	27.0	3450.0	0.0	0.0							0.00
6	20.0	2750.0	0.9	0.0	7.0	700.0	10.00	0.44	3.05	0.44	3.05
7	10.0	1400.0	1.6	0.0	10.0	1350.0	13.50	1.22	16.19	1.62	19.24
8	0.0	855.0	2.3	0.0	10.0	545.0	5.45	1.95	10.44	1.04	29.68
SUBTOTAL					27.0	2595.0			29.68	1.10	
=====											
AFLUENTE CONTUMAZA											
9	30.0	3300.0	0.0	0.0							0.00
10	20.0	2400.0	0.5	0.0	10.0	900.0	9.00	0.27	2.35	0.24	2.35
11	10.0	1750.0	1.5	0.0	10.0	650.0	6.50	1.01	6.46	0.65	8.81
12	0.0	745.0	2.4	0.0	10.0	1005.0	10.05	1.97	19.43	1.94	28.25
SUBTOTAL					30.0	2555.0			28.25	0.94	
=====											
AFLUENTE CHACAPAMPA											
13	26.0	3760.0	0.1	0.0							0.00
14	20.0	3350.0	0.7	0.0	6.0	410.0	6.83	0.43	1.74	0.29	1.74
15	10.0	3075.0	1.5	0.0	10.0	275.0	2.75	1.12	3.03	0.30	4.77
16	0.0	2645.0	1.8	0.0	10.0	430.0	4.30	1.64	6.91	0.69	11.68
SUBTOTAL					26.0	1115.0			11.68	0.45	
=====											
AFLUENTE LLAPA											
17	32.0	3850.0	0.0	0.0							0.00
18	20.0	3200.0	1.1	0.0	12.0	650.0	5.42	0.54	3.46	0.29	3.46
19	10.0	2800.0	2.2	0.0	10.0	400.0	4.00	1.64	6.43	0.64	9.90
20	0.0	2125.0	2.9	0.0	10.0	675.0	6.75	2.57	17.00	1.70	26.90
SUBTOTAL					32.0	1725.0			26.90	0.84	
=====											
AFLUENTE PINCULLO											
21	17.0	3540.0	0.0	0.0							0.00
22	10.0	3000.0	0.6	0.0	7.0	540.0	7.71	0.31	1.65	0.24	1.65
23	0.0	1750.0	1.4	0.0	10.0	1250.0	12.50	1.02	12.51	1.25	14.15
SUBTOTAL					17.0	1790.0			14.15	0.83	
=====											

POTENCIAL TEORICO DEL RIO JEQUETEPEQUE 12/17/78

I	L	H	Q	AFQ	DL	DM	PE	QC	POT	ESP	CUM
=====											
AFLUENTE SANMIGUELSUP											
24	65.0	3850.0	0.0	0.0	13.0	700.0	5.38	1.16	7.94	0.61	0.00
25	52.0	3150.0	2.3	0.0	10.0	200.0	2.00	3.53	6.93	0.69	7.94
26	42.0	2950.0	4.8	0.0	10.0	305.0	3.05	5.52	16.52	1.65	14.86
27	32.0	2645.0	6.3	1.8	4.0	520.0	13.00	8.15	41.57	10.39	31.38
28	28.0	2125.0	8.2	2.9	5.0	375.0	7.50	11.25	41.40	8.28	72.95
29	23.0	1750.0	11.3	1.4	13.0	840.0	6.46	13.66	112.70	8.67	114.35
30	10.0	910.0	14.6	0.0	4.0	110.0	2.75	14.64	15.80	3.95	227.05
31	6.0	800.0	14.7	0.0							242.85
SUBTOTAL					59.0	3050.0			242.85	4.12	
=====											
AFLUENTE SANMIGUELINF											
31	6.0	800.0	14.7	0.0	6.0	95.0	1.58	14.78	13.77	2.30	0.00
32	0.0	705.0	14.9	0.0							13.77
SUBTOTAL					6.0	95.0			13.77	2.30	
=====											
AFLUENTE PULLAC											
33	27.0	3450.0	0.0	0.0	7.0	700.0	10.00	0.25	1.70	0.24	0.00
34	20.0	2750.0	0.5	0.0	10.0	1700.0	17.00	1.02	17.07	1.71	1.70
35	10.0	1050.0	1.6	0.0	10.0	455.0	4.55	1.89	8.42	0.84	18.77
36	0.0	595.0	2.2	0.0							27.19
SUBTOTAL					27.0	2855.0			27.19	1.01	
=====											
AFLUENTE JEQUETEPEQ A											
37	160.0	3900.0	0.0	0.0	10.0	1250.0	12.50	0.33	4.10	0.41	0.00
38	150.0	2650.0	0.7	0.0	10.0	790.0	7.90	1.16	8.96	0.90	4.10
39	140.0	1860.0	1.7	0.0	10.0	390.0	3.90	3.14	12.03	1.20	13.07
40	130.0	1470.0	4.6	0.0	10.0	245.0	2.45	5.32	12.78	1.28	25.10
41	120.0	1225.0	6.0	0.0	10.0	235.0	2.35	6.05	13.94	1.39	37.88
42	110.0	990.0	6.1	1.7	4.0	70.0	1.75	7.90	5.42	1.36	51.82
43	106.0	920.0	8.0	0.0							57.24
SUBTOTAL					54.0	2980.0			57.24	1.06	
=====											

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I	L	H	Q	AFQ	DL	DH	PE	GI	POT	FSP	CAM
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AFLUENTE JEQUETEPEQ B

43	106.0	920.0	6.0	0.0	6.0	65.0	1.08	7.64	5.00	0.83	0.00
44	100.0	855.0	7.7	2.3	7.0	110.0	1.57	9.38	10.12	1.45	5.00
45	93.0	745.0	8.7	2.4	2.0	40.0	2.00	11.18	4.39	2.19	15.11
46	91.0	705.0	11.2	14.9	4.0	45.0	1.12	26.17	11.55	2.89	19.50
47	87.0	660.0	26.3	0.0							31.06
SUBTOTAL					19.0	260.0			31.06	1.63	

AFLUENTE JEQUETEPEQ C

47	87.0	660.0	26.3	0.0	9.0	65.0	0.72	26.71	17.03	1.89	0.00
48	78.0	595.0	27.1	2.2	8.0	81.0	1.01	29.42	23.38	2.92	17.03
49	70.0	514.0	29.5	0.0	10.0	114.0	1.14	30.03	33.58	3.36	40.41
50	60.0	400.0	30.5	0.0	10.0	80.0	0.80	30.00	23.55	2.35	73.99
51	50.0	320.0	29.5	0.0	10.0	71.0	0.71	29.23	20.36	2.04	97.54
52	40.0	249.0	29.0	0.0							117.90
SUBTOTAL					47.0	411.0			117.90	2.51	

AFLUENTE JEQUETEPEQ D

52	40.0	249.0	29.0	0.0	10.0	81.0	0.81	29.30	23.28	2.33	0.00
53	30.0	168.0	29.6	0.0	10.0	66.0	0.66	30.02	19.44	1.94	23.28
54	20.0	102.0	30.4	0.0	10.0	62.0	0.62	30.55	18.58	1.86	42.72
55	10.0	40.0	30.5	0.0	10.0	40.0	0.40	30.71	12.05	1.21	61.30
56	0.0	0.0	30.8	0.0							73.35
SUBTOTAL					40.0	249.0			73.35	1.83	

 * EL POTENCIAL TEORICO TOTAL DEL RIO CHICAMA ES DE 443.1 MW *
 * Y TIENE UNA LONGITUD ACUMULADA DE 451.0 KM *
 * Y UN POTENCIAL ESPECIFICO DE 0.98 MW/KM *

POTENCIAL TEORICO DEL RIO CHICAMA 2/21/79

I	L	H	Q	AFQ	DL	OH	PE	QC	POT	ESP	CUM
AFLUENTE HUANRACHAL											
1	20.0	3980.0	0.0	0.0							0.00
2	0.0	1335.0	1.3	0.0	20.0	2645.0	13.23	0.65	16.78	0.84	16.78
SUBTOTAL					20.0	2645.0			16.78	0.84	
AFLUENTE SAYAPULLU											
3	21.0	3938.0	0.0	0.0							0.00
4	0.0	1205.0	0.6	0.0	21.0	2733.0	13.01	0.29	7.89	0.38	7.89
SUBTOTAL					21.0	2733.0			7.89	0.38	
AFLUENTE COSPAN											
5	27.0	3790.0	0.0	0.0							0.00
6	20.0	2560.0	0.4	0.0	7.0	1230.0	17.57	0.21	2.51	0.36	2.51
7	10.0	1650.0	1.6	0.0	10.0	910.0	9.10	1.01	9.00	0.90	11.51
8	0.0	940.0	2.6	0.0	10.0	710.0	7.10	2.08	14.48	1.45	25.99
SUBTOTAL					27.0	2850.0			25.99	0.96	
AFLUENTE SAN JORGE											
9	50.0	4000.0	0.0	0.0							0.00
10	41.0	2445.0	0.6	0.0	9.0	1555.0	17.28	0.32	4.81	0.53	4.81
11	31.0	1610.0	2.3	0.0	10.0	835.0	8.35	1.46	11.95	1.19	16.76
12	21.0	1205.0	3.8	0.6	10.0	405.0	4.05	3.07	12.21	1.22	28.96
13	10.0	940.0	5.5	2.6	11.0	265.0	2.41	4.96	12.89	1.17	41.85
14	0.0	697.0	8.4	0.0	10.0	243.0	2.43	8.21	19.57	1.96	61.42
SUBTOTAL					50.0	3303.0			61.42	1.23	
AFLUENTE CASCAS											
15	23.0	2854.0	0.0	0.0							0.00
16	10.0	1225.0	0.6	0.0	13.0	1629.0	12.53	0.28	4.54	0.35	4.54
17	0.0	626.0	0.7	0.0	10.0	599.0	5.99	0.64	3.75	0.38	8.29
SUBTOTAL					23.0	2228.0			8.29	0.36	
AFLUENTE OCHAPE											
18	28.0	3400.0	0.0	0.0							0.00
19	12.0	1450.0	1.0	0.0	16.0	1950.0	12.19	0.51	9.82	0.61	9.82
20	2.0	626.0	1.2	0.7	10.0	824.0	8.24	1.10	8.89	0.89	18.71
21	0.0	521.0	1.9	0.0	2.0	105.0	5.25	1.90	1.96	0.98	20.66
SUBTOTAL					28.0	2879.0			20.66	0.74	
AFLUENTE SAN BENITO											
22	23.0	3000.0	0.0	0.0							0.00
23	10.0	945.0	0.6	0.0	13.0	2055.0	15.81	0.28	5.60	0.43	5.60
24	0.0	545.0	0.9	0.0	10.0	400.0	4.00	0.75	2.93	0.29	8.53
SUBTOTAL					23.0	2455.0			8.53	0.37	

POTENCIAL TEORICO DEL RIO CHICAMA

2/21/79

I	L	H	W	AFG	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE SANTANERO											
25	35.0	2850.0	0.0	0.0	15.0	2058.0	13.72	0.25	5.06	0.34	0.00
26	20.0	792.0	0.5	0.0	10.0	247.0	2.47	0.66	1.59	0.16	5.06
27	10.0	545.0	0.8	0.9	10.0	171.0	1.71	2.12	3.56	0.36	6.65
28	0.0	374.0	2.5	0.0							10.21
SUBTOTAL					35.0	2476.0			10.21	0.29	
=====											
AFLUENTE QUIRRIPANO											
29	34.0	3670.0	0.0	0.0	19.0	2630.0	14.89	0.54	15.10	0.79	0.00
30	15.0	840.0	1.1	0.0	15.0	497.0	3.31	1.54	7.53	0.50	15.10
31	0.0	343.0	2.0	0.0							22.63
SUBTOTAL					34.0	3327.0			22.63	0.67	
=====											
AFLUENTE MALA ALMA											
32	23.0	1770.0	0.0	0.0	23.0	1500.0	6.52	0.23	3.38	0.15	0.00
33	0.0	270.0	0.5	0.0							3.38
SUBTOTAL					23.0	1500.0			3.38	0.15	
=====											
AFLUENTE CHICAMA SUP											
34	167.0	3980.0	0.0	0.0	10.0	980.0	9.80	0.46	4.38	0.44	0.00
35	157.0	3000.0	0.9	0.0	10.0	1070.0	10.70	1.63	17.15	1.71	4.38
36	147.0	1930.0	2.4	0.0	10.0	255.0	2.55	3.34	8.37	0.84	21.52
37	137.0	1675.0	4.3	0.0	10.0	340.0	3.40	5.11	17.03	1.70	29.89
38	127.0	1335.0	5.9	1.3	15.0	205.0	1.37	8.52	17.13	1.14	46.93
39	112.0	1150.0	9.8	0.0	10.0	227.0	2.27	10.52	23.42	2.34	64.05
40	102.0	903.0	11.2	0.0	10.0	206.0	2.06	11.47	23.19	2.32	87.47
41	92.0	697.0	11.8	8.4	17.0	176.0	1.04	20.86	36.02	2.12	110.66
42	75.0	521.0	21.6	1.9	16.0	147.0	0.92	23.44	33.80	2.11	146.68
43	59.0	374.0	23.4	2.5	5.0	31.0	0.62	25.69	7.81	1.56	180.48
44	54.0	343.0	25.5	2.0	1.0	3.0	0.30	27.50	0.81	0.81	188.30
45	53.0	340.0	27.5	0.0							189.11
SUBTOTAL					114.0	3640.0			189.11	1.66	
=====											
AFLUENTE CHICAMA INF											
45	53.0	340.0	27.5	0.0	8.0	70.0	0.87	25.08	17.22	2.15	0.00
46	45.0	270.0	22.7	0.5	10.0	60.0	0.60	20.86	12.28	1.23	17.22
47	35.0	210.0	18.6	0.0	15.0	107.0	0.71	18.73	19.66	1.31	29.50
48	20.0	103.0	18.9	0.0	20.0	103.0	0.51	18.90	19.09	0.95	49.17
49	0.0	0.0	18.9	0.0							68.26
SUBTOTAL					53.0	340.0			68.26	1.29	
=====											

 * EL POTENCIAL TEORICO TOTAL DEL RIO MOCHE ES DE 278.1 MW *
 * Y TIENE UNA LONGITUD ACUMULADA DE 304.0 KM *
 * Y UN POTENCIAL ESPECIFICO DE 0.91 MW/KM *

POTENCIAL TEORICO DEL RIO MOCHE 12/17/78

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE MOTIL											
1	22.0	3870.0	0.0	0.0							0.00
2	10.0	3175.0	0.6	0.0	12.0	695.0	5.79	0.30	2.06	0.17	2.06
3	0.0	2805.0	0.9	0.0	10.0	370.0	3.70	0.77	2.78	0.28	4.84
SUBTOTAL					22.0	1065.0			4.84	0.22	
=====											
AFLUENTE GRANDE											
4	23.0	3730.0	0.0	0.0							0.00
5	10.0	3130.0	0.5	0.0	13.0	600.0	4.62	0.28	1.62	0.12	1.62
6	0.0	2694.0	0.9	0.0	10.0	436.0	4.36	0.70	3.00	0.30	4.62
SUBTOTAL					23.0	1036.0			4.62	0.20	
=====											
AFLUENTE OTUZCO											
7	24.0	3590.0	0.0	0.0							0.00
8	10.0	2740.0	0.5	0.0	14.0	850.0	6.07	0.26	2.21	0.16	2.21
9	0.0	2481.0	1.4	0.0	10.0	259.0	2.59	0.96	2.44	0.24	4.64
SUBTOTAL					24.0	1109.0			4.64	0.19	
=====											
AFLUENTE CHANCHACAP											
10	18.0	3600.0	0.0	0.0							0.00
11	0.0	2080.0	0.7	0.0	18.0	1520.0	8.44	0.35	5.20	0.29	5.20
SUBTOTAL					18.0	1520.0			5.20	0.29	
=====											
AFLUENTE LLANTEN											
12	17.0	3000.0	0.0	0.0							0.00
13	0.0	738.0	0.3	0.0	17.0	2262.0	13.31	0.14	3.21	0.19	3.21
SUBTOTAL					17.0	2262.0			3.21	0.19	
=====											
AFLUENTE NARI											
14	27.0	3994.0	0.0	0.0							0.00
15	2.0	738.0	0.2	0.3	25.0	3256.0	13.02	0.12	3.88	0.16	3.88
16	0.0	663.0	0.5	0.0	2.0	75.0	3.75	0.54	0.39	0.20	4.27
SUBTOTAL					27.0	3331.0			4.27	0.16	
=====											
AFLUENTE CUESTA											
17	25.0	4000.0	0.0	0.0							0.00
18	10.0	1109.0	0.4	0.0	15.0	2891.0	19.27	0.22	6.29	0.42	6.29
19	0.0	450.0	0.5	0.0	10.0	659.0	6.59	0.48	3.12	0.31	9.41
SUBTOTAL					25.0	3550.0			9.41	0.38	
=====											

POTENCIAL TEORICO DEL RIO MOCHE

12/17/78

I	L	H	W	AFQ	DL	DH	PE	QC	PUT	ESP	CUM
=====											
AFLUENTE SINSICAP											
20	38.0	4090.0	0.0	0.0	9.0	1030.0	11.44	0.22	2.17	0.24	0.00
21	29.0	3060.0	0.4	0.0	10.0	1390.0	13.90	0.73	9.90	0.99	2.17
22	19.0	1670.0	1.0	0.0	10.0	1007.0	10.07	1.12	11.03	1.10	12.07
23	9.0	663.0	1.2	0.5	7.0	213.0	3.04	1.78	3.71	0.53	23.10
24	2.0	450.0	1.8	0.5	2.0	106.0	5.30	2.32	2.41	1.21	26.81
25	0.0	344.0	2.3	0.0							29.23
SUBTOTAL					38.0	3746.0			29.23	0.77	
=====											
AFLUENTE MOCHE SUPER											
26	110.0	4100.0	0.0	0.0	15.0	608.0	4.05	0.67	4.01	0.27	0.00
27	95.0	3492.0	1.3	0.0	10.0	545.0	5.43	1.57	8.39	0.84	4.01
28	85.0	2949.0	1.8	0.0	10.0	144.0	1.44	2.11	2.98	0.30	12.40
29	75.0	2805.0	2.4	0.9	6.0	111.0	1.85	3.41	3.72	0.62	15.37
30	69.0	2694.0	3.5	0.9	4.0	213.0	5.32	4.38	9.16	2.29	19.09
31	65.0	2481.0	4.4	1.4	7.0	401.0	5.73	6.13	24.13	3.45	28.25
32	58.0	2080.0	6.4	0.7	17.0	1430.0	8.41	7.54	105.72	6.22	52.38
33	41.0	650.0	7.9	0.0	10.0	506.0	3.06	7.74	23.24	2.32	158.09
34	31.0	344.0	7.6	2.3	7.0	144.0	2.06	9.99	14.11	2.02	181.33
35	24.0	200.0	10.1	0.0							195.44
SUBTOTAL					86.0	3900.0			195.44	2.27	
=====											
AFLUENTE MOCHE INFER											
35	24.0	200.0	10.1	0.0	9.0	106.0	1.18	9.18	9.55	1.06	0.00
36	15.0	94.0	8.3	0.0	15.0	94.0	0.63	8.37	7.71	0.51	9.55
37	0.0	0.0	8.5	0.0							17.26
SUBTOTAL					24.0	200.0			17.26	0.72	
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*
* EL POTENCIAL TEORICO TOTAL DEL RIO VIRU           ES DE  151.3 MW
*
*           Y TIENE UNA LONGITUD ACUMULADA DE      225.0 KM
*
*           Y UN POTENCIAL ESPECIFICO DE          0.67 MW/KM
*
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POTENCIAL TEORICO DEL RIO VIRU 12/17/78

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE TANTADA											
1	13.0	4015.0	0.0	0.0							0.00
2	0.0	2625.0	0.4	0.0	13.0	1390.0	10.69	0.22	3.01	0.23	3.01
SUBTOTAL					13.0	1390.0			3.01	0.23	
=====											
AFLUENTE SHIRITE											
3	19.0	4050.0	0.0	0.0							0.00
4	10.0	3555.0	0.4	0.0	9.0	495.0	5.50	0.19	0.91	0.10	0.91
5	0.0	2600.0	0.6	0.0	10.0	955.0	9.55	0.50	4.65	0.47	5.57
SUBTOTAL					19.0	1450.0			5.57	0.29	
=====											
AFLUENTE CAUTAHUAN											
6	14.0	3950.0	0.0	0.0							0.00
7	0.0	2240.0	0.3	0.0	14.0	1710.0	12.21	0.16	2.66	0.19	2.66
SUBTOTAL					14.0	1710.0			2.66	0.19	
=====											
AFLUENTE LA VEGA											
8	16.0	3450.0	0.1	0.0							0.00
9	11.0	2600.0	0.5	0.6	5.0	850.0	17.00	0.28	2.36	0.47	2.36
10	5.0	2240.0	1.3	0.3	6.0	360.0	6.00	1.22	4.31	0.72	6.67
11	0.0	2130.0	1.7	0.0	5.0	110.0	2.20	1.66	1.79	0.36	8.46
SUBTOTAL					16.0	1320.0			8.46	0.53	
=====											

I	L	H	V	AF	UL	Q	PL	SC	PIF	ESP	CO
=====											
AFLUENTE CARABAMBA											
12	41.0	3700.0	0.0	0.0							
13	30.0	3260.0	0.6	0.0	11.0	440.0	4.00	0.33	1.41	0.13	0.00
14	20.0	1675.0	0.9	0.0	10.0	1585.0	15.85	0.76	11.88	1.19	1.41
15	10.0	780.0	1.2	0.0	10.0	895.0	8.95	1.03	9.04	0.90	13.28
16	0.0	270.0	1.3	0.0	10.0	510.0	5.10	1.22	6.09	0.61	22.32
SUBTOTAL					41.0	3430.0			28.41	0.69	28.41
=====											
AFLUENTE LAS SALINAS											
17	33.0	1100.0	0.0	0.0							
18	21.0	515.0	0.2	0.0	12.0	585.0	4.87	0.08	0.47	0.04	0.00
19	11.0	270.0	0.9	1.3	10.0	245.0	2.45	0.55	1.31	0.13	0.47
20	0.0	116.0	2.5	0.0	11.0	154.0	1.40	2.35	3.54	0.32	1.78
SUBTOTAL					33.0	984.0			5.33	0.16	5.33
=====											
AFLUENTE VIRUSUPERIOR											
21	89.0	4050.0	0.0	0.0							
22	77.0	2625.0	0.8	0.4	12.0	1425.0	11.87	0.44	6.18	0.51	0.00
23	65.0	2130.0	1.7	1.7	12.0	495.0	4.12	1.50	7.29	0.61	6.18
24	54.0	1725.0	4.2	0.0	11.0	405.0	3.68	3.83	15.22	1.38	13.46
25	44.0	900.0	4.6	0.0	10.0	825.0	8.25	4.40	35.64	3.56	28.69
26	34.0	285.0	3.8	0.0	10.0	615.0	6.15	4.18	25.25	2.52	64.33
SUBTOTAL					55.0	3765.0			89.58	1.63	89.58
=====											
AFLUENTE VIRUINFERIOR											
26	34.0	285.0	3.8	0.0							
27	23.0	116.0	1.8	2.5	11.0	169.0	1.54	2.82	4.67	0.42	0.00
28	10.0	28.0	2.5	0.0	13.0	88.0	0.68	3.42	2.96	0.23	4.67
29	0.0	0.0	2.6	0.0	10.0	28.0	0.28	2.56	0.70	0.07	7.63
SUBTOTAL					34.0	285.0			8.33	0.25	8.33
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*****
* EL POTENCIAL TEORICO TOTAL DEL RIO CHAO      ES DE      82.5 MW      *
*                                               *
* Y TIENE UNA LONGITUD ACUMULADA DE          161.0 KM      *
*                                               *
* Y UN POTENCIAL ESPECIFICO DE              0.51 MW/KM     *
*                                               *
*****

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POTENCIAL TEORICO DEL RIO CHAO 12/17/78

I	L	H	Q	AFQ	DL	DM	PE	QC	POT	ESP	CUM
=====											
AFLUENTE HUARADAY											
1	46.0	4100.0	0.0	0.0	6.0	455.0	7.58	0.11	0.49	0.08	0.00
2	40.0	3645.0	0.2	0.0	10.0	595.0	5.95	0.46	2.67	0.27	0.49
3	30.0	3050.0	0.7	0.0	10.0	1570.0	15.70	0.99	15.20	1.52	3.15
4	20.0	1480.0	1.2	0.0	10.0	750.0	7.50	1.06	7.77	0.78	18.35
5	10.0	730.0	0.9	0.0	10.0	460.0	4.60	0.91	4.09	0.41	26.15
6	0.0	270.0	0.9	0.0							30.21
SUBTOTAL					46.0	3830.0			30.21	0.66	
=====											
AFLUENTE CARRIZAL											
7	35.0	3400.0	0.0	0.0	5.0	1025.0	20.50	0.09	0.92	0.18	0.00
8	30.0	2375.0	0.1	0.0	10.0	1555.0	15.55	0.20	3.04	0.30	0.92
9	20.0	820.0	0.3	0.0	10.0	497.0	4.97	0.35	1.69	0.17	3.96
10	10.0	323.0	0.4	0.0	10.0	183.0	1.83	0.46	0.83	0.08	5.65
11	0.0	140.0	0.5	0.0							6.46
SUBTOTAL					35.0	3260.0			6.46	0.19	
=====											
AFLUENTE CHAO											
12	80.0	4100.0	0.0	0.0	11.0	550.0	5.00	0.23	1.25	0.11	0.00
13	69.0	3550.0	0.5	0.0	10.0	250.0	2.50	0.66	1.63	0.16	1.25
14	59.0	3300.0	0.9	0.0	10.0	725.0	7.25	1.07	7.61	0.76	2.88
15	49.0	2575.0	1.3	0.0	10.0	1855.0	18.55	1.36	24.77	2.48	10.49
16	39.0	720.0	1.5	0.0	10.0	450.0	4.50	1.24	5.48	0.55	35.26
17	29.0	270.0	1.0	0.9	8.0	130.0	1.62	1.73	2.21	0.28	40.75
18	21.0	140.0	1.5	0.5	11.0	78.0	0.71	2.02	1.55	0.14	42.94
19	10.0	62.0	2.1	0.0	10.0	62.0	0.62	2.17	1.32	0.13	44.49
20	0.0	0.0	2.3	0.0							45.81
SUBTOTAL					80.0	4100.0			45.81	0.57	
=====											

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*****
* EL POTENCIAL TEORICO TOTAL DEL RIO SANTA      ES DE  4953.1 MW  *
*
*           Y TIENE UNA LONGITUD ACUMULADA DE  1140.0 KM  *
*
*           Y UN POTENCIAL ESPECIFICO DE      4.34 MW/KM  *
*****

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POTENCIAL TEORICO DEL RIO SANTA 2/21/79

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE COLLOTA											
1	23.0	4775.0	0.2	0.0							0.00
2	10.0	4250.0	1.6	0.0	13.0	525.0	4.04	0.90	4.64	0.36	4.64
3	0.0	4010.0	2.7	0.0	10.0	240.0	2.40	2.15	5.07	0.51	9.71
SUBTOTAL					23.0	765.0			9.71	0.42	
=====											
AFLUENTE PACHACOTO A											
4	28.0	4900.0	0.0	0.0	8.0	660.0	8.25	0.74	4.80	0.60	0.00
5	20.0	4240.0	1.5	0.0	10.0	220.0	2.20	2.75	5.94	0.59	4.80
6	10.0	4020.0	4.1	0.0	9.5	320.0	3.37	4.33	13.58	1.43	10.75
7	0.5	3700.0	4.6	0.0							24.33
SUBTOTAL					27.5	1200.0			24.33	0.88	
=====											
AFLUENTE PACHACOTO B											
7	0.5	3700.0	4.6	0.0	0.5	48.0	9.60	4.60	2.17	4.34	0.00
8	0.0	3652.0	4.6	0.0							2.17
SUBTOTAL					0.5	48.0			2.17	4.34	
=====											
AFLUENTE GUESHGUE											
9	22.0	4650.0	0.2	0.0	12.0	560.0	4.67	0.62	3.39	0.28	0.00
10	10.0	4090.0	1.1	0.0	10.0	505.0	5.05	1.17	5.80	0.58	3.39
11	0.0	3585.0	1.3	0.0							9.19
SUBTOTAL					22.0	1065.0			9.19	0.42	
=====											
AFLUENTE YANAYACU A											
12	23.0	4425.0	0.1	0.0	9.0	450.0	5.00	0.83	3.66	0.41	0.00
13	14.0	3975.0	1.6	0.0							3.66
SUBTOTAL					9.0	450.0			3.66	0.41	
=====											
AFLUENTE YANAYACU B											
13	14.0	3975.0	1.6	0.0	10.5	390.0	3.71	3.24	12.38	1.18	0.00
14	3.5	3585.0	4.9	1.3	3.5	110.0	3.14	6.22	6.71	1.92	12.38
15	0.0	3475.0	6.2	0.0							19.09
SUBTOTAL					14.0	500.0			19.09	1.36	
=====											
AFLUENTE NEGRO A											
16	25.0	4750.0	0.3	0.0	14.0	825.0	5.89	2.37	19.19	1.37	0.00
17	11.0	3925.0	4.4	0.0	10.0	519.0	5.19	5.66	28.81	2.88	19.19
18	1.0	3406.0	6.9	0.0							48.01
SUBTOTAL					24.0	1344.0			48.01	2.00	
=====											

POTENCIAL TEORICO DEL RIO SANTA

2/21/79

I	L	H	Q	AFU	DL	DH	PE	DC	POT	ESP	CUM
=====											
AFLUENTE NEGRO B											
18	1.0	3406.0	6.9	0.0	1.0	86.0	8.60	6.91	5.83	5.83	0.00
19	0.0	3320.0	6.9	0.0							5.83
SUBTOTAL					1.0	86.0			5.83	5.83	
=====											
AFLUENTE PARIAC											
20	23.0	4260.0	0.5	0.0	13.0	600.0	4.62	1.08	6.35	0.49	0.00
21	10.0	3660.0	1.6	0.0	10.0	540.0	5.40	1.84	9.73	0.97	6.35
22	0.0	3120.0	2.0	0.0							16.08
SUBTOTAL					23.0	1140.0			16.08	0.70	
=====											
AFLUENTE COJUP											
23	21.0	4600.0	0.2	0.0	11.0	600.0	5.45	0.73	4.27	0.39	0.00
24	10.0	4000.0	1.2	0.0	10.0	810.0	8.10	1.53	12.14	1.21	4.27
25	0.0	3190.0	1.8	0.0							16.41
SUBTOTAL					21.0	1410.0			16.41	0.78	
=====											
AFLUENTE QUELLCAYHU-A											
26	27.0	4610.0	0.2	0.0	13.5	795.0	5.89	1.80	14.04	1.04	0.00
27	13.5	3815.0	3.4	0.0	10.0	625.0	6.25	4.18	25.62	2.56	14.04
28	3.5	3190.0	4.9	1.8	0.5	50.0	10.00	6.78	3.33	6.65	39.65
29	3.0	3140.0	6.8	0.0							42.98
SUBTOTAL					24.0	1470.0			42.98	1.79	
=====											
AFLUENTE QUELLCAYHU B											
29	3.0	3140.0	6.8	0.0	3.0	130.0	4.33	6.81	8.69	2.90	0.00
30	0.0	3010.0	6.8	0.0							8.69
SUBTOTAL					3.0	130.0			8.69	2.90	
=====											
AFLUENTE QUE-HONDA A											
31	35.0	4400.0	0.9	0.0	9.0	575.0	6.39	2.05	11.56	1.28	0.00
32	26.0	3825.0	3.2	0.0	10.0	325.0	3.25	4.06	12.94	1.29	11.56
33	16.0	3500.0	5.0	0.0	10.0	525.0	5.25	5.98	30.81	3.08	24.50
34	6.0	2975.0	7.0	0.0							55.31
SUBTOTAL					29.0	1425.0			55.31	1.91	
=====											
AFLUENTE QUE-HONDA B											
34	6.0	2975.0	7.0	0.0	6.0	285.0	4.75	7.45	20.84	3.47	0.00
35	0.0	2690.0	7.9	0.0							20.84
SUBTOTAL					6.0	285.0			20.84	3.47	
=====											
AFLUENTE BUIN											
36	28.0	4910.0	0.0	0.0	8.0	1100.0	13.75	0.86	9.30	1.16	0.00
37	20.0	3810.0	1.7	0.0	10.0	640.0	6.40	2.24	14.06	1.41	9.30
38	10.0	3170.0	2.8	0.0	10.0	610.0	6.10	2.97	17.76	1.78	23.36
39	0.0	2560.0	3.1	0.0							41.12
SUBTOTAL					28.0	2350.0			41.12	1.47	
=====											
AFLUENTE RANRAHIRCA A											
40	23.0	4596.0	0.2	0.0	10.0	796.0	7.96	1.64	12.79	1.28	0.00
41	13.0	3800.0	3.1	0.0							12.79
SUBTOTAL					10.0	796.0			12.79	1.28	
=====											
AFLUENTE RANRAHIRCA B											
41	13.0	3800.0	3.1	0.0	13.0	1390.0	10.69	3.68	50.18	3.86	0.00
42	0.0	2410.0	4.3	0.0							50.18
SUBTOTAL					13.0	1390.0			50.18	3.86	
=====											

POTENCIAL TEORICO DEL RIO SANTA

2/21/79

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE LLULLAN A											
43	24.0	4270.0	0.3	0.0							0.00
44	19.0	4080.0	1.6	0.0	5.0	190.0	3.80	0.92	1.72	0.34	1.72
SUBTOTAL					5.0	190.0			1.72	0.34	
=====											
AFLUENTE LLULLAN B											
44	19.0	4080.0	1.6	0.0							0.00
45	10.0	3000.0	2.1	0.0	9.0	1080.0	12.00	1.83	19.35	2.15	19.35
46	0.0	2180.0	2.8	0.0	10.0	820.0	8.20	2.47	19.86	1.99	39.21
SUBTOTAL					19.0	1900.0			39.21	2.06	
=====											
AFLUENTE STA. CRUZ A											
47	32.0	4500.0	0.1	0.0							0.00
48	20.0	4030.0	2.6	0.0	12.0	470.0	3.92	1.32	6.08	0.51	6.08
49	10.0	3070.0	4.0	0.0	10.0	960.0	9.60	3.31	31.13	3.11	37.20
50	0.5	2050.0	5.4	0.0	9.5	1020.0	10.74	4.72	47.19	4.97	84.39
SUBTOTAL					31.5	2450.0			84.39	2.68	
=====											
AFLUENTE STA. CRUZ B											
50	0.5	2050.0	5.4	0.0							0.00
51	0.0	1940.0	5.4	0.0	0.5	110.0	22.00	5.40	5.83	11.66	5.83
SUBTOTAL					0.5	110.0			5.83	11.66	
=====											
AFLUENTE LOS CEDROS A											
52	20.0	4280.0	0.3	0.0							0.00
53	10.0	3825.0	2.3	0.0	10.0	455.0	4.55	1.28	5.73	0.57	5.73
54	0.5	2000.0	3.2	0.0	9.5	1825.0	19.21	2.74	49.03	5.16	54.77
SUBTOTAL					19.5	2280.0			54.77	2.81	
=====											
AFLUENTE LOS CEDROS B											
54	0.5	2000.0	3.2	0.0							0.00
55	0.0	1850.0	3.2	0.0	0.5	150.0	30.00	3.20	4.71	9.42	4.71
SUBTOTAL					0.5	150.0			4.71	9.42	
=====											
AFLUENTE QUITARACSA A											
56	43.0	4660.0	0.4	0.0							0.00
57	36.0	4065.0	2.6	0.0	7.0	595.0	8.50	1.49	8.73	1.25	8.73
58	26.0	3690.0	8.3	0.0	10.0	375.0	3.75	5.46	20.09	2.01	28.82
59	16.0	3250.0	11.6	0.0	10.0	440.0	4.40	9.96	42.98	4.30	71.80
60	3.0	1480.0	12.2	0.0	13.0	1770.0	13.62	11.90	206.65	15.90	278.45
SUBTOTAL					40.0	3180.0			278.45	6.96	
=====											

I	L	H	PA	AFQ	DL	DM	PE	QC	PQT	ESP	CUM
=====											
AFLUENTE QUITARACSA B											
60	3.0	1480.0	12.2	0.0							
					3.0	80.0	2.67	12.20	9.58	3.19	0.00
61	0.0	1400.0	12.2	0.0							
											9.58
SUBTOTAL					3.0	80.0			9.58	3.19	
=====											
AFLUENTE HUALLCALLANC											
62	20.0	4090.0	0.0	0.0							
					10.0	820.0	8.20	0.93	7.45	0.74	0.00
63	10.0	3270.0	1.8	0.0							
					10.0	1120.0	11.20	3.17	34.84	3.48	7.45
64	0.0	2150.0	4.5	0.0							
											42.29
SUBTOTAL					20.0	1940.0			42.29	2.11	
=====											
AFLUENTE MANTA A											
65	46.0	4220.0	0.1	0.0							
					10.0	545.0	5.45	0.94	5.02	0.50	0.00
66	36.0	3675.0	1.8	0.0							
					10.0	825.0	8.25	2.77	22.39	2.24	5.02
67	26.0	2850.0	3.8	0.0							
					10.0	700.0	7.00	4.52	31.04	3.10	27.40
68	16.0	2150.0	5.3	4.5							
					3.0	225.0	7.50	10.20	22.51	7.50	58.45
69	13.0	1925.0	10.6	0.0							
											80.95
SUBTOTAL					33.0	2295.0			80.95	2.45	
=====											
AFLUENTE MANTA B											
69	13.0	1925.0	10.6	0.0							
					13.0	945.0	7.27	12.66	117.39	9.03	0.00
70	0.0	980.0	14.7	0.0							
											117.39
SUBTOTAL					13.0	945.0			117.39	9.03	
=====											
AFLUENTE GRANDE											
71	26.0	4650.0	0.3	0.0							
					6.0	1950.0	32.50	0.75	14.01	2.34	0.00
72	20.0	2700.0	1.2	0.0							
					10.0	1250.0	12.50	3.30	40.41	4.04	14.01
73	10.0	1450.0	5.4	0.0							
					10.0	810.0	8.10	5.60	44.46	4.45	54.42
74	0.0	640.0	5.8	0.0							
											98.88
SUBTOTAL					26.0	4010.0			98.88	3.80	
=====											
AFLUENTE CONCHUCUS											
75	30.0	4150.0	0.1	0.0							
					10.0	825.0	8.25	0.98	7.95	0.80	0.00
76	20.0	3325.0	1.9	0.0							
					10.0	405.0	4.05	3.54	14.07	1.41	7.95
77	10.0	2920.0	5.2	0.0							
					10.0	770.0	7.70	5.45	41.18	4.12	22.02
78	0.0	2150.0	5.7	0.0							
											63.20
SUBTOTAL					30.0	2000.0			63.20	2.11	
=====											
AFLUENTE PISCOCHACA											
79	22.0	4000.0	0.1	0.0							
					12.0	860.0	7.17	0.47	3.99	0.33	0.00
80	10.0	3140.0	0.9	0.0							
					10.0	545.0	5.45	1.51	8.07	0.81	3.99
81	0.0	2595.0	2.1	0.0							
											12.06
SUBTOTAL					22.0	1405.0			12.06	0.55	
=====											
AFLUENTE ANGASMARCA											
82	33.0	3850.0	0.0	0.0							
					13.0	890.0	6.85	0.37	3.27	0.25	0.00
83	20.0	2960.0	0.7	0.0							
					10.0	365.0	3.65	1.01	3.62	0.36	3.27
84	10.0	2595.0	1.3	2.1							
					10.0	615.0	6.15	3.57	21.53	2.15	6.88
85	0.0	1980.0	3.7	0.0							
											28.41
SUBTOTAL					33.0	1870.0			28.41	0.86	
=====											
AFLUENTE SACAYCACHA											
86	24.0	4130.0	0.1	0.0							
					14.0	1705.0	12.18	0.87	14.51	1.04	0.00
87	10.0	2425.0	1.7	0.0							
					10.0	875.0	8.75	1.73	14.83	1.48	14.51
88	0.0	1550.0	1.8	0.0							
											29.35
SUBTOTAL					24.0	2580.0			29.35	1.22	
=====											

I	L	H	J	AFQ	DL	OH	PE	UC	POT	ESP	CUM
=====											
AFLUENTE HUARON											
89	23.0	4000.0	0.1	0.0							
					13.0	470.0	3.62	0.53	2.42	0.19	0.00
90	10.0	3530.0	0.9	0.0							2.42
					10.0	1270.0	12.70	1.64	20.49	2.05	
91	0.0	2260.0	2.3	0.0							22.91
					SUBTOTAL	23.0	1740.0		22.91	1.00	
=====											
AFLUENTE SANTIAGO											
92	46.0	4050.0	0.0	0.0							0.00
					9.0	670.0	7.44	0.17	1.11	0.12	
93	37.0	3380.0	0.3	0.0							1.11
					10.0	840.0	8.40	0.83	6.84	0.68	
94	27.0	2540.0	1.3	0.0							7.95
					10.0	280.0	2.80	2.46	6.74	0.67	
95	17.0	2260.0	3.6	2.3							14.70
					7.0	300.0	4.29	6.03	17.76	2.54	
96	10.0	1960.0	6.1	0.0							32.45
					10.0	510.0	5.10	6.40	32.02	3.20	
97	0.0	1450.0	6.7	0.0							64.47
					SUBTOTAL	46.0	2600.0		64.47	1.40	
=====											
AFLUENTE BOCADECABANA											
98	33.0	4375.0	0.1	0.0							0.00
					13.0	1175.0	9.04	0.89	10.24	0.79	
99	20.0	3200.0	1.7	0.0							10.24
					10.0	1180.0	11.80	2.10	24.26	2.43	
100	10.0	2020.0	2.5	0.0							34.50
					10.0	745.0	7.45	2.58	18.85	1.89	
101	0.0	1275.0	2.7	0.0							53.35
					SUBTOTAL	33.0	3100.0		53.35	1.62	
=====											
AFLUENTE ANCOS											
102	25.0	4320.0	0.1	0.0							0.00
					15.0	2490.0	16.60	0.65	15.83	1.06	
103	10.0	1830.0	1.2	0.0							15.83
					10.0	805.0	8.05	1.50	11.88	1.19	
104	0.0	1025.0	1.8	0.0							27.71
					SUBTOTAL	25.0	3295.0		27.71	1.11	
=====											
AFLUENTE TABLACHACA A											
105	95.0	4075.0	0.2	0.0							0.00
					10.0	675.0	6.75	0.61	4.03	0.40	
106	85.0	3400.0	1.0	0.0							4.03
					10.0	1250.0	12.50	2.82	34.55	3.46	
107	75.0	2150.0	4.6	5.7							38.58
					5.0	170.0	3.40	10.38	17.30	3.46	
108	70.0	1980.0	10.4	3.7							55.88
					18.0	430.0	2.39	14.57	61.47	3.42	
109	52.0	1550.0	15.0	1.8							117.35
					3.0	100.0	3.33	16.84	16.52	5.51	
110	49.0	1450.0	16.8	6.7							133.87
					9.0	175.0	1.94	23.82	40.89	4.54	
111	40.0	1275.0	24.1	2.7							174.76
					6.0	115.0	1.92	26.92	30.37	5.06	
112	34.0	1160.0	27.0	0.0							205.13
					10.0	135.0	1.35	26.49	35.08	3.51	
113	24.0	1025.0	25.9	1.8							240.21
					12.0	260.0	2.17	26.90	68.60	5.72	
114	12.0	765.0	26.1	0.0							308.81
					11.0	275.0	2.50	26.19	70.64	6.42	
115	1.0	490.0	26.3	0.0							379.46
					SUBTOTAL	94.0	3585.0		379.46	4.04	
=====											
AFLUENTE TABLACHACA B											
115	1.0	490.0	26.3	0.0							0.00
					1.0	7.0	0.70	26.30	1.81	1.81	
116	0.0	483.0	26.3	0.0							1.81
					SUBTOTAL	1.0	7.0		1.81	1.81	
=====											

POTENCIAL TEORICO DEL RIO SANTA

2/21/79

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE SANTA-A											
117	320.0	4300.0	-0.4	0.0							0.00
					12.0	290.0	2.42	-0.20	-0.57	-0.05	
118	308.0	4010.0	0.0	2.7							-0.57
					11.0	101.0	0.92	2.98	2.95	0.27	
119	297.0	3909.0	3.2	0.0							2.39
SUBTOTAL					23.0	391.0			2.39	0.10	
=====											
AFLUENTE SANTA-B											
119	297.0	3909.0	3.2	0.0							0.00
					15.0	101.0	0.67	4.80	4.76	0.32	
120	282.0	3808.0	6.4	0.0							4.76
					10.0	156.0	1.56	7.13	10.92	1.09	
121	272.0	3652.0	7.9	4.6							15.67
					8.0	177.0	2.21	13.22	22.96	2.87	
122	264.0	3475.0	14.0	6.2							38.64
					12.0	155.0	1.29	21.80	33.15	2.76	
123	252.0	3320.0	23.4	6.9							71.79
					11.0	200.0	1.82	31.89	62.56	5.69	
124	241.0	3120.0	33.5	2.0							134.35
					7.0	110.0	1.57	36.36	39.24	5.61	
125	234.0	3010.0	37.2	6.8							173.57
					15.0	208.0	1.39	46.40	94.69	6.31	
126	219.0	2802.0	48.8	0.0							268.28
					10.0	112.0	1.12	49.38	54.26	5.43	
127	209.0	2690.0	50.0	7.9							322.53
					12.0	130.0	1.08	59.81	76.27	6.36	
128	197.0	2560.0	61.7	3.1							398.80
					14.0	150.0	1.07	65.95	97.04	6.93	
129	183.0	2410.0	67.0	4.3							495.85
					9.0	129.0	1.43	71.73	90.78	10.09	
130	174.0	2281.0	72.2	0.0							586.62
					10.0	101.0	1.01	72.97	72.30	7.23	
131	164.0	2180.0	73.8	2.8							658.92
					8.5	95.0	1.12	77.08	71.84	8.45	
132	155.5	2085.0	77.5	0.0							730.75
					8.0	105.0	1.31	77.95	80.29	10.04	
133	147.5	1980.0	78.3	5.4							811.05
					5.0	40.0	0.80	83.22	32.66	6.53	
134	142.5	1940.0	82.7	0.0							843.70
SUBTOTAL					154.5	1969.0			843.70	5.46	
=====											
AFLUENTE SANTA-C											
134	142.5	1940.0	82.7	0.0							0.00
					2.5	90.0	3.60	83.09	73.36	29.34	
135	140.0	1850.0	83.5	3.2							73.36
					8.0	450.0	5.62	87.14	384.67	48.08	
136	132.0	1400.0	87.6	12.2							458.03
					13.0	293.0	2.25	102.87	295.69	22.75	
137	119.0	1107.0	106.0	0.0							753.72
					10.0	127.0	1.27	107.67	134.14	13.41	
138	109.0	980.0	109.4	14.7							887.86
					13.0	190.0	1.46	125.37	233.68	17.98	
139	96.0	790.0	126.6	0.0							1121.54
					10.0	150.0	1.50	126.81	186.60	18.66	
140	86.0	640.0	127.0	5.8							1308.14
					14.0	157.0	1.12	132.93	204.73	14.62	
141	72.0	483.0	133.1	26.3							1512.87
					2.0	8.0	0.40	154.69	12.14	6.07	
142	70.0	475.0	150.0	0.0							1525.01
SUBTOTAL					72.5	1465.0			1525.01	21.03	
=====											
AFLUENTE SANTA-D											
142	70.0	475.0	150.0	0.0							0.00
					16.5	135.0	0.82	150.05	198.72	12.04	
143	53.5	340.0	150.1	0.0							198.72
					10.0	77.0	0.77	149.64	113.03	11.30	
144	43.5	263.0	149.2	0.0							311.75
					20.0	138.0	0.69	148.84	201.49	10.07	
145	23.5	125.0	148.5	0.0							513.25
					20.0	111.0	0.56	148.03	161.19	8.06	
146	3.5	14.0	147.6	0.0							674.43
					3.5	14.0	0.40	147.56	20.27	5.79	
147	0.0	0.0	147.6	0.0							694.70
SUBTOTAL					70.0	475.0			694.70	9.92	

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* EL POTENCIAL TEORICO TOTAL DEL RIO LACRAMARCA ES DE 8.8 MW *
* Y TIENE UNA LONGITUD ACUMULADA DE 71.0 KM *
* Y UN POTENCIAL ESPECIFICO DE 0.12 MW/KM *
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POTENCIAL TEORICO DEL RIO LACRAMARCA 12/17/78

I	L	H	Q	AFO	DL	DH	PE	QC	POT	ESP	CUM
AFLUENTE TANTARAN											
1	25.0	3900.0	0.0	0.0							0.00
2	20.0	2425.0	0.0	0.0	5.0	1475.0	29.50	0.02	0.33	0.07	0.33
3	10.0	1200.0	0.2	0.0	10.0	1225.0	12.25	0.14	1.69	0.17	2.02
4	0.0	745.0	0.3	0.0	10.0	455.0	4.55	0.26	1.14	0.11	3.16
SUBTOTAL					25.0	3155.0			3.16	0.13	
AFLUENTE LACRAMARCA											
5	46.0	4050.0	0.0	0.0							0.00
6	33.0	1350.0	0.1	0.0	13.0	2700.0	20.77	0.07	1.74	0.13	1.74
7	23.0	745.0	0.2	0.3	10.0	605.0	6.05	0.17	1.04	0.10	2.77
8	10.0	300.0	0.6	0.0	13.0	445.0	3.42	0.55	2.40	0.18	5.18
9	0.0	150.0	0.1	0.0	10.0	150.0	1.50	0.33	0.48	0.05	5.66
SUBTOTAL					46.0	3900.0			5.66	0.12	

 * EL POTENCIAL TEORICO TOTAL DEL RIO NEPENA ES DE 86.6 MW *
 * Y TIENE UNA LONGITUD ACUMULADA DE 266.0 KM *
 * Y UN POTENCIAL ESPECIFICO DE 0.33 MW/KM *

POTENCIAL TEORICO DEL RIO NEPENA 12/17/78

I	L	H	Q	AFQ	DL	DM	PE	QC	POT	ESP	CUM
=====											
AFLUENTE RIO GRANDE											
1	19.0	4600.0	0.0	0.0	9.0	1850.0	20.56	0.13	2.30	0.26	0.00
2	10.0	2750.0	0.2	0.0	10.0	1150.0	11.50	0.41	4.64	0.46	2.30
3	0.0	1600.0	0.6	0.0							6.95
					SUBTOTAL	19.0	3000.0		6.95	0.37	
=====											
AFLUENTE RIO COSMA											
4	17.0	3400.0	0.0	0.0	7.0	1425.0	20.36	0.04	0.56	0.08	0.00
5	10.0	1975.0	0.1	0.0	10.0	950.0	9.50	0.10	0.91	0.09	0.56
6	0.0	1025.0	0.1	0.0							1.46
					SUBTOTAL	17.0	2375.0		1.46	0.09	
=====											
AFLUENTE RIO LAMPANIN											
7	17.0	3000.0	0.0	0.0	7.0	1350.0	19.29	0.05	0.70	0.10	0.00
8	10.0	1650.0	0.1	0.0	10.0	700.0	7.00	0.13	0.84	0.09	0.70
9	0.0	950.0	0.2	0.0							1.59
					SUBTOTAL	17.0	2050.0		1.59	0.09	
=====											
AFLUENTE RIO CHUNYA											
10	18.0	4500.0	0.0	0.0	8.0	1900.0	23.75	0.08	1.51	0.19	0.00
11	10.0	2600.0	0.2	0.0	10.0	1280.0	12.80	0.21	2.58	0.26	1.51
12	0.0	1320.0	0.3	0.0							4.09
					SUBTOTAL	18.0	3180.0		4.09	0.23	
=====											
AFLUENTE UCHUPACANCHA											
13	19.0	4450.0	0.0	0.0	9.0	1900.0	21.11	0.13	2.40	0.27	0.00
14	10.0	2550.0	0.3	0.0	10.0	1200.0	12.00	0.32	3.71	0.37	2.40
15	0.0	1350.0	0.4	0.0							6.11
					SUBTOTAL	19.0	3100.0		6.11	0.32	
=====											
AFLUENTE RIO CHUMBE											
16	49.0	4560.0	0.0	0.0	9.0	660.0	7.33	0.09	0.56	0.06	0.00
17	40.0	3900.0	0.2	0.0	10.0	1300.0	13.00	0.32	4.09	0.41	0.56
18	30.0	2600.0	0.5	0.0	18.0	1250.0	6.94	0.50	6.10	0.34	4.66
19	12.0	1350.0	0.5	0.3	0.2	30.0	15.00	0.76	0.22	1.12	10.76
20	11.8	1320.0	0.8	0.4	11.8	730.0	6.19	1.17	8.41	0.71	10.98
21	0.0	590.0	1.2	0.0							19.39
					SUBTOTAL	49.0	3970.0		19.39	0.40	
=====											

POTENCIAL TEORICO DEL RIO NEPENA

12/17/78

I	L	H	Q	AFQ	DL	DM	PE	QC	POT	ESP	CUM	
=====												
AFLUENTE RIO LOCO												
22	49.0	4500.0	0.0	0.0	9.0	1070.0	11.89	0.17	1.73	0.19	0.00	
23	40.0	3430.0	0.3	0.0	10.0	1330.0	13.30	0.46	5.98	0.60	1.73	
24	30.0	2100.0	0.6	0.0	10.0	1050.0	10.50	0.67	6.91	0.69	7.71	
25	20.0	1050.0	0.8	0.0	10.0	550.0	5.50	0.78	4.19	0.42	14.62	
26	10.0	500.0	0.8	0.0	10.0	255.0	2.55	0.70	1.75	0.18	18.81	
27	0.0	245.0	0.6	0.0							20.56	
=====												
SUBTOTAL					49.0	4255.0			20.56	0.42		
=====												
AFLUENTE NEPENA SUP												
28	78.0	4425.0	0.0	0.0	10.0	1475.0	14.75	0.11	1.54	0.15	0.00	
29	68.0	2950.0	0.2	0.0	10.0	1350.0	13.50	0.28	3.69	0.37	1.54	
30	58.0	1600.0	0.4	0.6	6.0	575.0	9.58	0.95	5.35	0.89	5.23	
31	52.0	1025.0	1.0	0.1	1.0	75.0	7.50	1.09	0.81	0.81	10.58	
32	51.0	950.0	1.1	0.2	7.0	360.0	5.14	1.14	4.03	0.58	11.38	
33	44.0	590.0	1.0	1.2	12.0	300.0	2.50	2.06	6.06	0.51	15.41	
34	32.0	290.0	1.9	0.6	2.0	45.0	2.25	2.33	1.03	0.51	21.48	
35	30.0	245.0	2.2	0.0							22.50	
=====												
SUBTOTAL					48.0	4180.0			22.50	0.47		
=====												
AFLUENTE NEPENA INF												
35	30.0	245.0	2.2	0.0	10.0	115.0	1.15	1.93	2.18	0.22	0.00	
36	20.0	130.0	1.7	0.0	10.0	85.0	0.85	1.47	1.23	0.12	2.18	
37	10.0	45.0	1.2	0.0	10.0	45.0	0.45	1.25	0.55	0.06	3.41	
38	0.0	0.0	1.3	0.0							3.96	
=====												
SUBTOTAL					30.0	245.0			3.96	0.13		

 * EL POTENCIAL TEORICO TOTAL DEL RIO CASMA ES DE 207.1 MW *
 * Y TIENE UNA LONGITUD ACUMULADA DE 305.3 KM *
 * Y UN POTENCIAL ESPECIFICO DE 0.68 MW/KM *

POTENCIAL TEORICO DEL RIO CASMA 12/17/78

I	L	H	Q	AFO	DL	DH	PE	UC	POT	ESP	CUM
AFLUENTE PALLCA											
1	12.0	4500.0	0.0	0.0	12.0	1300.0	10.83	0.33	4.22	0.35	0.00
2	0.0	3200.0	0.7	0.0							4.22
SUBTOTAL					12.0	1300.0			4.22	0.35	
AFLUENTE CHACHAN											
3	18.0	4490.0	0.0	0.0	10.0	1290.0	12.90	0.15	1.84	0.18	0.00
4	8.0	3200.0	0.3	0.7	8.0	1050.0	13.12	1.10	11.34	1.42	1.84
5	0.0	2150.0	1.3	0.0							13.17
SUBTOTAL					18.0	2340.0			13.17	0.73	
AFLUENTE PIRA											
6	20.0	4080.0	0.0	0.0	8.0	905.0	11.31	0.35	3.09	0.39	0.00
7	12.0	3175.0	-0.7	0.0	10.0	1025.0	10.25	0.93	9.32	0.93	3.09
8	2.0	2150.0	1.2	1.3	2.0	160.0	8.00	2.45	3.85	1.92	12.42
9	0.0	1990.0	2.5	0.0							16.27
SUBTOTAL					20.0	2090.0			16.27	0.81	
AFLUENTE AKRUN											
10	19.0	4250.0	0.0	0.0	19.0	3035.0	15.97	0.16	4.71	0.25	0.00
11	0.0	1215.0	0.3	0.0							4.71
SUBTOTAL					19.0	3035.0			4.71	0.25	
AFLUENTE VICTORIA											
12	17.0	4200.0	0.0	0.0	17.0	3010.0	17.71	0.19	5.50	0.32	0.00
13	0.0	1190.0	0.3	0.0							5.50
SUBTOTAL					17.0	3010.0			5.50	0.32	
AFLUENTE PUTACA											
14	15.0	4530.0	0.0	0.0	15.0	2435.0	16.23	0.19	4.52	0.30	0.00
15	0.0	2095.0	0.4	0.0							4.52
SUBTOTAL					15.0	2435.0			4.52	0.30	
AFLUENTE YAUTAN											
16	40.0	4500.0	0.0	0.0	18.0	2405.0	13.36	0.46	10.74	0.60	0.00
17	22.0	2095.0	0.9	0.4	12.0	1085.0	9.04	1.34	14.29	1.19	10.74
18	10.0	1010.0	1.4	0.0	10.0	570.0	5.70	1.46	8.15	0.82	25.04
19	0.0	440.0	1.5	0.0							33.19
SUBTOTAL					40.0	4060.0			33.19	0.83	

POTENCIAL TEORICO DEL RIO CASMA

12/17/78

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE SECHIN A											
20	63.0	3325.0	0.0	0.0							
21	50.0	2800.0	0.6	0.0	13.0	525.0	4.04	0.30	1.55	0.12	0.00
22	40.0	1430.0	0.8	0.0	10.0	1370.0	13.70	0.71	9.50	0.95	1.55
23	30.0	860.0	0.7	0.0	10.0	570.0	5.70	0.78	4.38	0.44	11.06
24	20.0	410.0	0.8	0.0	10.0	450.0	4.50	0.76	3.38	0.34	15.43
25	10.0	170.0	0.4	0.0	10.0	240.0	2.40	0.61	1.43	0.14	18.81
											20.24
					SUBTOTAL	53.0	3155.0		20.24	0.38	
=====											
AFLUENTE SECHIN B											
25	10.0	170.0	0.4	0.0							
26	0.0	40.0	0.5	0.0	10.0	130.0	1.30	0.45	0.57	0.06	0.00
					SUBTOTAL	10.0	130.0		0.57	0.06	
=====											
AFLUENTE CASMA A											
27	101.3	4500.0	0.0	0.0							
28	86.3	2830.0	0.9	0.0	15.0	1670.0	11.13	0.47	7.74	0.52	0.00
29	76.3	1990.0	1.3	2.5	10.0	840.0	8.40	1.12	9.25	0.92	7.74
30	63.3	1215.0	4.0	0.3	13.0	775.0	5.96	3.86	29.35	2.26	16.98
31	62.5	1190.0	4.2	0.3	0.8	25.0	3.12	4.25	1.04	1.30	46.34
32	52.5	700.0	4.7	0.0	10.0	490.0	4.90	4.67	22.44	2.24	47.58
33	44.0	496.0	4.3	0.0	8.5	204.0	2.40	4.52	9.05	1.06	69.82
					SUBTOTAL	57.3	4004.0		78.87	1.38	78.87
=====											
AFLUENTE CASMA B											
33	44.0	496.0	4.3	0.0							
34	43.5	440.0	4.3	1.5	0.5	56.0	11.20	4.30	2.36	4.73	0.00
35	32.5	225.0	5.8	0.0	11.0	215.0	1.95	5.80	12.23	1.11	2.36
36	22.5	140.0	5.4	0.0	10.0	85.0	0.85	5.60	4.67	0.47	14.60
37	13.5	71.0	4.9	0.0	9.0	69.0	0.77	5.15	3.48	0.39	19.26
					SUBTOTAL	30.5	425.0		22.75	0.75	22.75
=====											
AFLUENTE CASMA C											
37	13.5	71.0	4.9	0.0							
38	10.0	40.0	3.9	0.5	3.5	31.0	0.89	4.40	1.34	0.38	0.00
39	0.0	0.0	4.4	0.0	10.0	40.0	0.40	4.37	1.72	0.17	1.34
					SUBTOTAL	13.5	71.0		3.06	0.23	3.06
=====											

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*
* EL POTENCIAL TEORICO TOTAL DEL RIO CULEBRAS ES DE 16.3 MW
*
* Y TIENE UNA LONGITUD ACUMULADA DE 105.5 KM
*
* Y UN POTENCIAL ESPECIFICO DE 0.15 MW/KM
*
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POTENCIAL TEORICO DEL RIO CULEBRAS 12/17/78

I	L	H	Q	AFQ	DL	DH	PE	GC	POT	ESP	CUM
=====											
AFLUENTE COTA PUQUIO											
1	19.0	3650.0	0.0	0.0	9.0	2215.0	24.61	0.04	0.95	0.11	0.00
2	10.0	1435.0	0.1	0.0	10.0	685.0	6.85	0.11	0.73	0.07	0.95
3	0.0	750.0	0.1	0.0							1.68
SUBTOTAL					19.0	2900.0			1.68	0.09	
=====											
AFLUENTE ACRAY											
4	20.5	3550.0	0.0	0.0	10.5	2495.0	23.76	0.03	0.70	0.07	0.00
5	10.0	1055.0	0.1	0.0	10.0	480.0	4.80	0.08	0.37	0.04	0.70
6	0.0	575.0	0.1	0.0							1.07
SUBTOTAL					20.5	2975.0			1.07	0.05	
=====											
AFLUENTE CULEBRAS											
7	66.0	4430.0	0.0	0.0	7.0	1230.0	17.57	0.09	1.05	0.15	0.00
8	59.0	3200.0	0.2	0.0	10.0	1705.0	17.05	0.34	5.64	0.56	1.05
9	49.0	1495.0	0.5	0.0	10.0	745.0	7.45	0.54	3.97	0.40	6.69
10	39.0	750.0	0.6	0.1	4.5	175.0	3.89	0.70	1.21	0.27	10.66
11	34.5	575.0	0.7	0.1	4.5	138.0	3.07	0.66	0.89	0.20	11.87
12	30.0	437.0	0.5	0.0	10.0	202.0	2.02	0.37	0.73	0.07	12.76
13	20.0	235.0	0.2	0.0	10.0	137.0	1.37	0.07	0.09	0.01	13.49
14	10.0	98.0	-0.1	0.0	10.0	98.0	0.98	-0.08	-0.08	-0.01	13.59
15	0.0	0.0	-0.1	0.0							13.51
SUBTOTAL					66.0	4430.0			13.51	0.20	
=====											

 * EL POTENCIAL TEORICO TOTAL DEL RIO HUARMEY ES DE 169.2 MW *
 * Y TIENE UNA LONGITUD ACUMULADA DE 191.0 KM *
 * Y UN POTENCIAL ESPECIFICO DE 0.89 MW/KM *

POTENCIAL TEORICO DEL RIO HUARMEY 12/17/78

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE LA MERCED											
1	16.0	4325.0	0.1	0.0							0.00
2	10.0	3650.0	0.1	0.0	6.0	675.0	11.25	0.08	0.55	0.09	0.55
3	0.0	2775.0	1.4	0.0	10.0	875.0	8.75	0.75	6.40	0.64	6.95
SUBTOTAL					16.0	1550.0			6.95	0.43	
=====											
AFLUENTE COTAPARACO											
4	42.0	4375.0	0.0	0.0							0.00
5	30.0	3300.0	0.8	0.0	12.0	1075.0	8.96	0.39	4.14	0.35	4.14
6	20.0	2450.0	1.2	0.0	10.0	850.0	8.50	0.97	8.08	0.81	12.22
7	10.0	1600.0	1.3	0.0	10.0	850.0	8.50	1.26	10.53	1.05	22.75
8	0.0	850.0	1.4	0.0	10.0	750.0	7.50	1.39	10.24	1.02	32.99
SUBTOTAL					42.0	3525.0			32.99	0.79	
=====											
AFLUENTE MALVAS											
9	35.0	4350.0	0.0	0.0							0.00
10	29.0	3300.0	0.2	0.0	6.0	1050.0	17.50	0.11	1.14	0.19	1.14
11	19.0	1820.0	0.5	0.0	10.0	1480.0	14.80	0.34	4.93	0.49	6.07
12	9.0	850.0	0.7	1.4	10.0	970.0	9.70	0.57	5.47	0.55	11.54
13	0.0	480.0	2.2	0.0	9.0	370.0	4.11	2.15	7.80	0.87	19.34
SUBTOTAL					35.0	3870.0			19.34	0.55	
=====											
AFLUENTE HUARMEY SUP											
14	98.0	4000.0	0.0	0.0							0.00
15	88.0	3650.0	0.5	0.0	10.0	350.0	3.50	0.28	0.95	0.09	0.95
16	78.0	2775.0	0.7	1.4	10.0	875.0	8.75	0.61	5.27	0.53	6.21
17	65.0	1800.0	3.6	0.0	13.0	975.0	7.50	2.84	27.20	2.09	33.42
18	55.0	1200.0	4.0	0.0	10.0	600.0	6.00	3.78	22.23	2.22	55.65
19	45.0	480.0	4.0	0.0	10.0	720.0	7.20	3.98	28.12	2.81	83.77
20	45.0	480.0	4.0	2.2	0.0	0.0	0.00	4.01	0.00	0.00	83.77
21	37.0	300.0	5.7	0.0	8.0	180.0	2.25	5.97	10.54	1.32	83.77
22	27.0	150.0	5.4	0.0	10.0	150.0	1.50	5.58	8.21	0.82	94.31
23	17.0	100.0	5.1	0.0	10.0	50.0	0.50	5.25	2.58	0.26	102.52
24	4.0	30.0	4.8	0.0	13.0	70.0	0.54	4.94	3.39	0.26	105.09
SUBTOTAL					94.0	3970.0			108.49	1.15	
=====											
AFLUENTE HUARMEY											
24	4.0	30.0	4.8	0.0							0.00
25	0.0	0.0	4.8	0.0	4.0	30.0	0.75	4.80	1.41	0.35	1.41
SUBTOTAL					4.0	30.0			1.41	0.35	
=====											