

POTENCIAL TEORICO DEL RIO URUBAMBA

3/29/79

I	L	H	Q	AFQ	OL	OH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE EXIS											
53	27.0	2950.0	0.1	0.0	27.0	1173.0	4.34	3.17	36.53	1.35	0.00
54	0.0	1777.0	6.2	0.0							36.53
SUBTOTAL					27.0	1173.0			36.53	1.35	
=====											
AFLUENTE LACO											
55	40.0	3280.0	0.2	0.0	40.0	1628.0	4.07	2.76	44.11	1.10	0.00
56	0.0	1652.0	5.3	0.0							44.11
SUBTOTAL					40.0	1628.0			44.11	1.10	
=====											
AFLUENTE YAVERO SUP											
57	317.0	4850.0	0.1	0.0	23.0	850.0	3.70	1.28	10.71	0.47	0.00
58	294.0	4000.0	2.5	0.0	10.0	225.0	2.25	2.88	6.36	0.64	10.71
59	284.0	3775.0	3.3	1.4	4.0	115.0	2.87	4.79	5.41	1.35	17.06
60	280.0	3660.0	4.9	1.1	2.0	69.0	3.45	6.03	4.08	2.04	22.47
61	278.0	3591.0	6.1	1.1	15.0	241.0	1.61	7.59	17.94	1.20	26.55
62	263.0	3350.0	8.0	1.4	5.0	102.0	2.04	9.48	9.49	1.90	44.50
63	258.0	3248.0	9.6	2.1	24.0	243.0	1.01	13.01	31.02	1.29	53.99
64	234.0	3005.0	14.4	1.6	3.0	33.0	1.10	16.14	5.23	1.74	85.01
65	231.0	2972.0	16.3	0.0							90.24
SUBTOTAL					86.0	1878.0			90.24	1.05	
=====											
AFLUENTE YAVERO INF											
65	231.0	2972.0	16.3	0.0	6.0	62.0	1.03	16.54	10.06	1.68	0.00
66	225.0	2910.0	16.8	1.0	3.0	30.0	1.00	17.81	5.24	1.75	10.06
67	222.0	2880.0	17.8	1.6	56.0	502.0	0.90	22.47	110.68	1.98	15.30
68	166.0	2378.0	25.5	0.0	50.0	601.0	1.20	34.23	201.83	4.04	125.97
69	116.0	1777.0	43.0	6.2	18.0	125.0	0.69	51.68	65.58	3.52	327.80
70	98.0	1652.0	54.1	5.3	48.0	556.0	1.16	65.69	358.30	7.46	391.18
71	50.0	1096.0	71.9	0.0	50.0	538.0	1.08	74.52	393.29	7.87	749.48
72	0.0	558.0	77.1	0.0							1142.76
SUBTOTAL					231.0	2414.0			1142.76	4.95	
=====											
AFLUENTE TICUMPIÑA											
73	70.0	2200.0	0.2	0.0	70.0	1659.0	2.37	10.21	166.11	2.37	0.00
74	0.0	541.0	20.2	0.0							166.11
SUBTOTAL					70.0	1659.0			166.11	2.37	
=====											
AFLUENTE TIMPIA											
75	77.0	2240.0	0.3	0.0	77.0	1714.0	2.23	6.98	117.30	1.52	0.00
76	0.0	526.0	13.7	0.0							117.30
SUBTOTAL					77.0	1714.0			117.30	1.52	
=====											

POTENCIAL TEORICO DEL RIO URUBAMBA

3/29/79

I	L	H	Q	AFQ	DL	DH	PE	OC	POT	ESP	CUM
=====											
AFLUENTE CASHIRIANE											
77	64.0	1920.0	0.1	0.0							0.00
78	0.0	750.0	11.5	0.0	64.0	1170.0	1.83	5.78	66.33	1.04	66.33
SUBTOTAL					64.0	1170.0			66.33	1.04	
=====											
AFLUENTE CAMISEA											
79	98.0	1940.0	0.0	0.0							0.00
80	35.0	750.0	15.5	11.5	53.0	1190.0	1.89	7.79	90.90	1.44	90.90
81	0.0	494.0	34.1	0.0	35.0	256.0	0.73	30.55	76.72	2.19	167.63
SUBTOTAL					98.0	1446.0			167.63	1.71	
=====											
AFLUENTE PAROTONI											
82	41.0	3050.0	0.0	0.0							0.00
83	0.0	850.0	5.5	0.0	41.0	2200.0	5.37	2.79	60.22	1.47	60.22
SUBTOTAL					41.0	2200.0			60.22	1.47	
=====											
AFLUENTE ROMANA											
84	72.0	3200.0	0.0	0.0							0.00
85	0.0	730.0	13.5	0.0	72.0	2470.0	3.43	6.76	163.91	2.28	163.91
SUBTOTAL					72.0	2470.0			163.91	2.28	
=====											
AFLUENTE PAGORANI											
86	50.0	3000.0	0.1	0.0							0.00
87	0.0	472.0	13.1	0.0	50.0	2528.0	5.06	6.58	163.24	3.26	163.24
SUBTOTAL					50.0	2528.0			163.24	3.26	
=====											
AFLUENTE PICHA											
88	95.0	3210.0	0.0	0.0							0.00
89	52.0	850.0	11.2	5.5	43.0	2360.0	5.49	5.60	129.59	3.01	129.59
90	43.0	730.0	22.2	13.5	9.0	120.0	1.33	19.46	22.91	2.55	152.50
91	3.0	472.0	45.5	13.1	40.0	258.0	0.64	40.58	102.71	2.57	255.20
92	0.0	467.0	58.6	0.0	3.0	5.0	0.17	58.59	2.87	0.96	258.08
SUBTOTAL					95.0	2743.0			258.08	2.72	
=====											
AFLUENTE HUIPAYA											
93	67.0	2250.0	0.3	0.0							0.00
94	0.0	460.0	22.1	0.0	67.0	1790.0	2.67	11.20	196.73	2.94	196.73
SUBTOTAL					67.0	1790.0			196.73	2.94	
=====											
AFLUENTE HUIRITIRICAY											
95	26.0	1000.0	0.0	0.0							0.00
96	0.0	453.0	6.7	0.0	26.0	547.0	2.10	3.37	18.08	0.70	18.08
SUBTOTAL					26.0	547.0			18.08	0.70	
=====											

I	L	n	o	AF	DL	DLH	PE	LC	POT	ESP	CUM
=====											
AFLUENTE PAQUIRIA											
97	57.0	485.0	0.2	0.0							0.00
98	0.0	438.0	23.7	0.0	57.0	47.0	0.08	11.97	5.52	0.10	5.52
SUBTOTAL					57.0	47.0			5.52	0.10	
=====											
AFLUENTE SANCHA											
99	52.0	1400.0	0.0	0.0							0.00
100	0.0	429.0	13.9	0.0	52.0	971.0	1.87	6.97	66.41	1.28	66.41
SUBTOTAL					52.0	971.0			66.41	1.28	
=====											
AFLUENTE MIARIA											
101	39.0	1100.0	0.2	0.0							0.00
102	0.0	420.0	5.0	0.0	39.0	680.0	1.74	2.62	17.45	0.45	17.45
SUBTOTAL					39.0	680.0			17.45	0.45	
=====											
AFLUENTE SERJALI											
103	67.0	1980.0	0.0	0.0							0.00
104	0.0	470.0	28.9	0.0	67.0	1510.0	2.25	14.49	214.67	3.20	214.67
SUBTOTAL					67.0	1510.0			214.67	3.20	
=====											
AFLUENTE ANASISA											
105	75.0	520.0	0.3	0.0							0.00
106	0.0	425.0	21.2	0.0	75.0	95.0	0.13	10.76	10.02	0.13	10.02
SUBTOTAL					75.0	95.0			10.02	0.13	
=====											
AFLUENTE MISHAGUA											
107	140.0	495.0	0.4	0.0							0.00
108	90.0	470.0	44.4	28.9	50.0	25.0	0.05	22.43	5.50	0.11	5.50
109	41.0	425.0	94.2	21.2	49.0	45.0	0.09	83.76	36.98	0.75	42.48
110	0.0	407.0	126.1	0.0	41.0	18.0	0.04	120.74	21.32	0.52	63.79
SUBTOTAL					140.0	88.0			63.79	0.46	
=====											
AFLUENTE SHEHA											
111	59.0	485.0	0.7	0.0							0.00
112	0.0	435.0	25.2	0.0	59.0	50.0	0.08	12.94	6.35	0.11	6.35
SUBTOTAL					59.0	50.0			6.35	0.11	
=====											
AFLUENTE SHEPAHUA											
113	170.0	480.0	0.1	0.0							0.00
114	47.0	435.0	50.9	0.0	123.0	45.0	0.04	25.53	11.27	0.09	11.27
115	0.0	398.0	73.3	0.0	47.0	37.0	0.08	62.13	22.55	0.48	33.82
SUBTOTAL					170.0	82.0			33.82	0.20	
=====											
AFLUENTE PINRIA											
116	45.0	402.0	0.5	0.0							0.00
117	0.0	357.0	24.0	0.0	45.0	45.0	0.10	12.27	5.42	0.12	5.42
SUBTOTAL					45.0	45.0			5.42	0.12	
=====											

POTENCIAL TEORICO DEL RIO URUBAMBA 3/29/79

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE SEPA											
118	89.0	1240.0	0.1	0.0							0.00
119	0.0	334.0	33.7	0.0	89.0	906.0	1.02	16.89	150.08	1.69	150.08
SUBTOTAL					89.0	906.0			150.08	1.69	
=====											
AFLUENTE MAPALIA											
120	42.0	410.0	0.2	0.0							0.00
121	0.0	325.0	12.3	0.0	42.0	85.0	0.20	6.26	5.22	0.12	5.22
SUBTOTAL					42.0	85.0			5.22	0.12	
=====											
AFLUENTE MISHANSHA											
122	102.0	480.0	0.6	0.0							0.00
123	0.0	402.0	44.0	0.0	102.0	78.0	0.08	22.27	17.04	0.17	17.04
SUBTOTAL					102.0	78.0			17.04	0.17	
=====											
AFLUENTE INUGA											
124	163.0	484.0	0.3	0.0							0.00
125	59.0	402.0	67.0	44.0	104.0	82.0	0.08	33.63	27.06	0.26	27.06
126	0.0	307.0	153.2	0.0	59.0	95.0	0.16	132.10	123.11	2.09	150.17
SUBTOTAL					163.0	177.0			150.17	0.92	
=====											
AFLUENTE URUBAMBA											
127	610.0	2971.0	112.3	0.0							0.00
128	590.0	2926.0	119.6	0.0	20.0	45.0	0.23	115.95	51.19	2.56	51.19
129	557.0	2587.0	126.0	4.9	33.0	339.0	1.03	122.80	408.37	12.37	459.56
130	504.0	1745.0	141.9	7.9	53.0	842.0	1.59	136.43	1126.92	21.26	1586.48
131	490.0	1500.0	151.8	14.1	14.0	245.0	1.75	150.82	362.49	25.89	1948.97
132	469.0	1495.0	165.9	5.0	1.0	5.0	0.50	165.87	8.14	8.14	1957.11
133	441.0	705.0	187.7	43.2	48.0	790.0	1.65	179.28	1389.39	28.95	3346.50
134	403.0	642.0	244.5	9.1	38.0	63.0	0.17	237.71	146.91	3.87	3493.41
135	377.0	618.0	270.3	19.6	26.0	24.0	0.09	261.94	61.67	2.37	3555.08
136	310.0	558.0	324.4	77.1	67.0	60.0	0.09	307.15	180.79	2.70	3735.87
137	291.0	541.0	419.2	20.2	19.0	17.0	0.09	410.34	68.43	3.60	3804.30
138	276.0	526.0	454.3	13.7	15.0	15.0	0.10	446.86	65.76	4.38	3870.06
139	240.0	494.0	490.5	34.1	36.0	32.0	0.09	479.26	150.45	4.18	4020.51
140	209.0	467.0	536.6	58.6	31.0	27.0	0.09	530.58	140.53	4.53	4161.04
141	201.0	460.0	597.7	22.1	8.0	7.0	0.09	596.45	40.96	5.12	4202.00
142	193.0	453.0	622.7	6.7	8.0	7.0	0.09	621.27	42.66	5.33	4244.66
143	177.0	438.0	635.9	23.7	16.0	15.0	0.09	632.64	93.09	5.82	4337.76
144	168.0	429.0	662.4	13.9	9.0	9.0	0.10	661.00	58.36	6.48	4396.12
145	158.0	420.0	679.0	5.0	10.0	9.0	0.09	677.63	59.83	5.98	4455.95
146	149.0	407.0	687.1	126.1	9.0	13.0	0.14	685.54	87.43	9.71	4543.37
147	141.0	398.0	815.5	73.3	8.0	9.0	0.11	814.35	71.90	8.99	4615.27
148	95.0	357.0	920.0	24.0	46.0	41.0	0.09	904.37	363.75	7.91	4979.02
149	69.0	334.0	955.0	33.7	26.0	23.0	0.09	949.52	214.24	8.24	5193.26
150	59.0	325.0	1000.0	12.3	10.0	9.0	0.09	994.33	87.79	8.78	5281.05
151	39.0	307.0	1023.3	153.2	20.0	18.0	0.09	1017.78	179.72	8.99	5460.77
152	0.0	272.0	1194.0	0.0	39.0	35.0	0.09	1185.24	406.95	10.43	5867.71
SUBTOTAL					610.0	2699.0			5867.71	9.62	
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 \* EL POTENCIAL TEORICO TOTAL DEL RIO VILCANOTA ES DE 1265.3 MW \*  
 \* Y TIENE UNA LONGITUD ACUMULADA DE 682.0 KM \*  
 \* Y UN POTENCIAL ESPECIFICO DE 1.86 MW/KM \*  
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POTENCIAL TEORICO DEL RIO VILCANOTA 3/29/79

I	L	H	Q	AFQ	DL	DH	PE	OC	PGT	ESP	CUM
=====											
AFLUENTE COLLINCHA											
1	32.0	5150.0	1.1	0.0	18.0	456.0	2.43	2.56	10.98	0.61	0.00
2	14.0	4712.0	4.0	0.0	14.0	207.0	1.48	5.60	11.57	0.81	10.98
3	0.0	4505.0	7.2	0.0							22.35
					SUBTOTAL	32.0	645.0		22.35	0.70	
=====											
AFLUENTE HUAICABE											
4	27.0	5260.0	1.1	0.0	27.0	639.0	3.11	3.64	30.00	1.11	0.00
5	0.0	4441.0	6.2	0.0							30.00
					SUBTOTAL	27.0	639.0		30.00	1.11	
=====											
AFLUENTE PUHANUTA											
6	22.0	5025.0	1.8	0.0	22.0	755.0	3.43	3.04	22.81	1.04	0.00
7	0.0	4270.0	4.3	0.0							22.81
					SUBTOTAL	22.0	755.0		22.81	1.04	
=====											
AFLUENTE COLLINCHA											
8	25.0	4925.0	0.0	0.0	15.0	711.0	4.74	1.07	7.47	0.50	0.00
9	10.0	4214.0	2.1	0.0	10.0	249.0	2.49	3.05	7.46	0.75	7.47
10	0.0	3965.0	4.0	0.0							14.93
					SUBTOTAL	25.0	960.0		14.93	0.60	
=====											
AFLUENTE AUCACA											
11	24.0	4975.0	0.1	0.0	24.0	780.0	3.25	1.50	11.46	0.48	0.00
12	0.0	4195.0	2.9	0.0							11.46
					SUBTOTAL	24.0	780.0		11.46	0.48	
=====											
AFLUENTE ACCO											
13	50.0	5014.0	0.2	0.0	25.0	819.0	2.82	3.58	28.80	0.99	0.00
14	21.0	4195.0	6.9	2.9	11.0	201.0	1.83	10.48	20.66	1.88	28.80
15	10.0	3994.0	11.1	0.0	10.0	82.0	0.82	11.32	9.11	0.91	49.46
16	0.0	3912.0	11.5	0.0							58.57
					SUBTOTAL	50.0	1102.0		58.57	1.17	
=====											
AFLUENTE HERCA											
17	63.0	4692.0	0.0	0.0	14.0	617.0	4.41	0.52	3.17	0.23	0.00
18	49.0	4075.0	1.0	0.0	10.0	123.0	1.23	1.55	1.87	0.19	3.17
19	39.0	3952.0	2.0	0.0	15.0	0.0	0.00	4.27	4.00	0.00	5.04
20	24.0	3952.0	6.5	0.0	11.0	52.0	0.47	6.96	3.55	0.32	5.04
21	13.0	3900.0	7.4	0.0	13.0	330.0	2.54	7.99	25.87	1.99	8.59
22	0.0	3570.0	8.5	0.0							34.46
					SUBTOTAL	63.0	1122.0		34.46	0.55	
=====											

POTENCIAL TEORICO DEL RIO VILCANUTA

3/24/79

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE VILCANUTA											
23	78.0	4325.0	0.0	0.0	16.0	34.0	0.21	1.20	0.40	0.03	0.00
24	62.0	4291.0	2.4	0.0	10.0	601.0	6.01	3.17	18.66	1.87	0.4
25	52.0	3690.0	3.9	0.0	10.0	120.0	1.20	5.22	6.14	0.61	19.07
26	42.0	3570.0	6.5	8.5	12.0	72.0	0.60	16.04	11.33	0.94	25.21
27	30.0	3498.0	17.0	0.0	10.0	19.0	0.19	17.97	3.35	0.33	36.54
28	20.0	3479.0	18.9	0.0	10.0	18.0	0.18	19.64	3.47	0.35	39.89
29	10.0	3461.0	20.4	0.0	10.0	14.0	0.14	20.70	2.84	0.28	43.35
30	0.0	3447.0	21.0	0.0							46.20
SUBTOTAL					78.0	878.0			46.20	0.59	
=====											
AFLUENTE YANAMAYU											
31	27.0	4915.0	0.5	0.0	7.0	189.0	2.70	0.79	1.47	0.21	0.00
32	20.0	4726.0	1.1	0.0	10.0	372.0	3.72	1.62	5.90	0.59	1.47
33	10.0	4534.0	2.2	0.0	10.0	356.0	3.56	2.88	10.05	1.00	7.37
34	0.0	3998.0	3.6	0.0							17.42
SUBTOTAL					27.0	917.0			17.42	0.65	
=====											
AFLUENTE PITUMARCA											
35	54.0	4997.0	0.6	0.0	11.0	567.0	5.15	1.33	7.38	0.67	0.00
36	43.0	4430.0	2.1	0.0	10.0	195.0	1.95	3.30	6.31	0.63	7.38
37	33.0	4235.0	4.5	0.0	10.0	237.0	2.37	5.18	12.05	1.20	13.69
38	23.0	3998.0	5.8	3.6	13.0	372.0	2.86	10.33	37.69	2.90	25.74
39	10.0	3626.0	11.2	0.0	10.0	220.0	2.20	11.78	25.43	2.54	63.43
40	0.0	3406.0	12.3	0.0							88.86
SUBTOTAL					54.0	1591.0			88.86	1.65	
=====											
AFLUENTE TIGRE											
41	24.0	4743.0	0.0	0.0	14.0	953.0	6.81	0.84	7.85	0.56	0.00
42	10.0	3790.0	1.6	0.0	10.0	526.0	5.26	2.03	10.46	1.05	7.85
43	0.0	3264.0	2.4	0.0							18.31
SUBTOTAL					24.0	1479.0			18.31	0.76	
=====											
AFLUENTE CHUIMAYU											
44	21.0	4590.0	0.0	0.0	11.0	905.0	8.23	0.31	2.73	0.25	0.00
45	10.0	3685.0	0.6	0.0	10.0	489.0	4.89	1.03	4.96	0.50	2.73
46	0.0	3196.0	1.5	0.0							7.69
SUBTOTAL					21.0	1394.0			7.69	0.37	

POTENCIAL TEORICO DEL RIO VILCAHOTA

3/29/79

I	L	H	W	AFG	DL	DH	PE	QC	POT	ESP	CUM
AFLUENTE HUATANAY											
47	42.0	4422.0	0.0	0.0							0.00
48	30.0	3298.0	1.2	0.0	12.0	1124.0	9.37	0.62	6.68	0.57	6.88
49	20.0	3192.0	2.8	0.0	10.0	106.0	1.06	2.03	2.11	0.21	8.99
50	10.0	3096.0	3.5	0.0	10.0	96.0	0.96	3.15	2.97	0.30	11.95
51	0.0	3054.0	5.4	0.0	10.0	42.0	0.42	4.45	1.63	0.16	13.79
SUBTOTAL					42.0	1368.0			13.79	0.33	
AFLUENTE VILCAHOTA											
52	193.0	4934.0	2.0	0.0							0.00
53	190.0	4934.0	4.0	0.0	3.0	0.0	0.00	3.01	0.00	0.00	0.00
54	166.0	4505.0	9.3	7.2	24.0	429.0	1.79	6.68	28.11	1.17	28.11
55	162.0	4411.0	17.7	5.2	4.0	64.0	1.60	17.08	10.73	2.68	38.83
56	152.0	4270.0	26.2	4.3	10.0	171.0	1.71	25.05	42.01	4.20	80.85
57	148.0	4203.0	30.7	0.0	4.0	67.0	1.68	30.65	20.14	5.04	100.99
58	133.0	3965.0	33.1	4.0	15.0	238.0	1.59	31.91	74.50	4.97	175.49
59	127.0	3912.0	37.4	11.5	6.0	53.0	0.88	37.25	19.36	3.23	194.85
60	117.0	3740.0	50.5	0.0	10.0	172.0	1.72	49.74	63.93	8.39	278.79
61	107.0	3521.0	52.2	0.0	10.0	219.0	2.19	51.39	110.40	11.04	389.19
62	97.0	3447.0	53.2	21.0	10.0	74.0	0.74	52.72	38.27	3.83	427.46
63	88.0	3406.0	75.1	12.3	9.0	41.0	0.46	74.68	30.04	3.34	457.50
64	80.0	3376.0	91.1	0.0	8.0	30.0	0.37	89.29	26.28	3.28	483.78
65	70.0	3264.0	92.0	2.4	10.0	112.0	1.12	91.56	100.59	10.06	584.37
66	56.0	3196.0	95.9	1.5	14.0	68.0	0.49	95.13	63.46	4.53	647.83
67	43.0	3125.0	100.8	0.0	13.0	71.0	0.55	99.06	69.00	5.31	716.83
68	33.0	3094.0	103.0	0.0	10.0	31.0	0.31	101.90	30.99	3.10	747.82
69	23.0	3054.0	103.9	5.4	10.0	40.0	0.40	103.47	40.60	4.06	788.42
70	13.0	3015.0	110.3	0.0	10.0	39.0	0.39	109.82	42.01	4.20	830.43
71	0.0	2971.0	112.3	0.0	13.0	44.0	0.34	111.29	48.04	3.70	878.47
SUBTOTAL					193.0	1963.0			878.47	4.55	

\*\*\*\*\*  
 \* EL POTENCIAL TEORICO TOTAL DEL RIO APURIMAC SUP ES DE 1883.7 MW \*  
 \* Y TIENE UNA LONGITUD ACUMULADA DE 1522.0 KM \*  
 \* Y UN POTENCIAL ESPECIFICO DE 1.24 MW/KM \*  
 \*\*\*\*\*

POTENCIAL TEORICO DEL RIO APURIMAC SUP 2/13/79

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE HUARHUARCO											
1	45.0	5000.0	0.0	0.0							0.00
2	20.0	4339.0	2.7	0.0	25.0	661.0	2.64	1.33	8.63	0.35	8.63
3	0.0	4142.0	6.3	0.0	20.0	197.0	0.99	4.47	8.63	0.43	17.26
					SUBTOTAL	45.0	858.0			17.26	0.38
=====											
AFLUENTE CAYUMANI											
4	52.0	4950.0	0.0	0.0							0.00
5	20.0	4398.0	0.4	0.0	12.0	552.0	4.60	0.20	1.06	0.09	1.06
6	0.0	3988.0	1.9	0.0	20.0	410.0	2.05	1.15	4.63	0.23	5.69
					SUBTOTAL	32.0	962.0			5.69	0.18
=====											
AFLUENTE ICHUCANA											
7	17.0	4600.0	0.0	0.0							0.00
8	0.0	4375.0	1.4	0.0	17.0	225.0	1.32	0.68	1.50	0.09	1.50
					SUBTOTAL	17.0	225.0			1.50	0.09
=====											
AFLUENTE SANU											
9	59.0	4810.0	0.0	0.0							0.00
10	41.0	4375.0	1.3	1.4	18.0	455.0	2.42	0.63	2.68	0.15	2.68
11	20.0	4102.0	0.0	0.0	21.0	273.0	1.30	3.48	9.33	0.44	12.01
12	0.0	3927.0	5.8	0.0	20.0	175.0	0.87	5.08	8.73	0.44	20.74
					SUBTOTAL	59.0	883.0			20.74	0.35
=====											
AFLUENTE HUAYLLUMAYO											
13	30.0	4650.0	0.0	0.0							0.00
14	20.0	4120.0	0.4	0.0	10.0	530.0	5.30	0.23	1.19	0.12	0.12
15	0.0	3870.0	1.6	0.0	20.0	250.0	1.25	1.04	2.55	0.13	3.74
					SUBTOTAL	30.0	780.0			3.74	0.12
=====											
AFLUENTE JARO MAYO											
16	22.0	4600.0	0.0	0.0							0.00
17	0.0	3910.0	1.3	0.0	22.0	690.0	3.14	0.66	4.50	0.20	4.50
					SUBTOTAL	22.0	690.0			4.50	0.20
=====											
AFLUENTE JAPO MAYO											
18	28.0	4640.0	0.0	0.0							0.00
19	22.0	4246.0	0.2	0.0	6.0	394.0	6.57	0.11	0.43	0.07	0.43
20	2.0	3910.0	2.8	1.3	20.0	336.0	1.68	1.51	4.97	0.25	5.40
21	0.0	3895.0	4.3	0.0	2.0	15.0	0.75	4.19	0.62	0.31	6.01
					SUBTOTAL	28.0	745.0			6.01	0.21
=====											
AFLUENTE QUERO											
22	52.0	4680.0	0.0	0.0							0.00
23	30.0	4050.0	1.6	0.0	22.0	630.0	2.86	0.78	4.84	0.22	4.84
24	10.0	3895.0	4.7	4.3	20.0	155.0	0.77	3.12	4.75	0.24	9.59
25	0.0	3845.0	9.9	0.0	10.0	50.0	0.50	9.43	4.62	0.46	14.21
					SUBTOTAL	52.0	835.0			14.21	0.27
=====											
AFLUENTE CASILLO											
26	23.0	4600.0	0.0	0.0							0.00
27	13.0	4155.0	0.2	0.0	10.0	445.0	4.45	0.11	0.49	0.05	0.49
28	0.0	4045.0	0.7	0.0	13.0	110.0	0.85	0.46	0.49	0.04	0.98
					SUBTOTAL	23.0	555.0			0.98	0.04
=====											



POTENCIAL TEORICO DEL RIO APURIMAC SUP 2/13/79

I	L	H	Q	AFQ	DL	DH	PE	DC	POT	ESP	CUM
=====											
AFLUENTE CHAQUIMAYO											
29	51.0	4841.0	0.0	0.0							0.00
30	40.0	4350.0	0.4	0.0	11.0	491.0	4.46	0.21	1.00	0.09	1.00
31	20.0	4070.0	2.3	0.0	20.0	280.0	1.40	1.33	3.65	0.18	4.65
32	0.0	3948.0	3.5	0.0	20.0	122.0	0.61	2.87	3.44	0.17	8.09
SUBTOTAL					51.0	893.0			8.09	0.16	
=====											
AFLUENTE PALLPATAMAYO											
33	41.0	4625.0	0.0	0.0							0.00
34	20.0	4012.0	1.5	0.0	21.0	613.0	2.92	0.75	4.48	0.21	4.48
35	0.0	3929.0	4.2	0.0	20.0	83.0	0.42	2.84	2.32	0.12	6.80
SUBTOTAL					41.0	696.0			6.80	0.17	
=====											
AFLUENTE HUICHUMA											
36	34.0	4515.0	0.0	0.0							0.00
37	20.0	4037.0	0.9	0.0	14.0	478.0	3.41	0.46	2.16	0.15	2.16
38	0.0	3902.0	3.0	0.0	20.0	135.0	0.68	1.93	2.55	0.13	4.71
SUBTOTAL					34.0	613.0			4.71	0.14	
=====											
AFLUENTE CANIPIA											
39	46.0	4580.0	0.0	0.0							0.00
40	20.0	4359.0	2.8	0.0	26.0	221.0	0.85	1.42	3.07	0.12	3.07
41	0.0	3825.0	4.1	0.0	20.0	534.0	2.67	3.43	17.98	0.90	21.05
SUBTOTAL					46.0	755.0			21.05	0.46	
=====											
AFLUENTE SALADO											
42	120.0	4839.0	0.0	0.0							0.00
43	97.0	4152.0	1.3	0.0	23.0	687.0	2.99	0.67	4.54	0.20	4.54
44	77.0	4045.0	3.5	0.7	20.0	107.0	0.54	2.44	2.56	0.13	7.10
45	49.0	3948.0	5.8	3.5	28.0	97.0	0.35	5.03	4.79	0.17	11.89
46	42.0	3929.0	10.0	4.2	7.0	19.0	0.27	9.68	1.80	0.26	13.69
47	34.0	3902.0	14.9	3.0	8.0	27.0	0.34	14.57	3.86	0.48	17.55
48	7.0	3825.0	20.9	4.1	27.0	77.0	0.29	19.39	14.65	0.54	32.19
49	0.0	3823.0	26.2	0.0	7.0	2.0	0.03	25.60	0.50	0.07	32.70
SUBTOTAL					120.0	1016.0			32.70	0.27	
=====											
AFLUENTE TACCA											
50	28.0	4680.0	0.0	0.0							0.00
51	20.0	4150.0	0.2	0.0	8.0	530.0	6.62	0.11	0.59	0.07	0.59
52	0.0	3820.0	2.0	0.0	20.0	330.0	1.65	1.12	3.64	0.18	4.23
SUBTOTAL					28.0	860.0			4.23	0.15	
=====											
AFLUENTE PICHIGUA											
53	38.0	4625.0	0.0	0.0							0.00
54	20.0	3955.0	1.0	0.0	18.0	670.0	3.72	0.52	3.41	0.19	3.41
55	0.0	3817.0	2.7	0.0	20.0	138.0	0.69	1.85	2.50	0.13	5.92
SUBTOTAL					38.0	808.0			5.92	0.16	
=====											
AFLUENTE TACUMAYO											
56	38.0	4580.0	0.0	0.0							0.00
57	20.0	3930.0	1.5	0.0	18.0	650.0	3.61	0.77	4.90	0.27	4.90
58	0.0	3733.0	2.8	0.0	20.0	197.0	0.99	2.15	4.16	0.21	9.06
SUBTOTAL					38.0	847.0			9.06	0.24	
=====											
AFLUENTE CANINCORA											
59	23.0	4610.0	0.0	0.0							0.00
60	0.0	3667.0	1.6	0.0	23.0	943.0	4.10	0.82	7.63	0.33	7.63
SUBTOTAL					23.0	943.0			7.63	0.33	

\*\*\*\*\*  
 \* EL POTENCIAL TEORICO TOTAL DEL RIO SANTO TOMAS ES DE 593.0 MW \*  
 \* Y TIENE UNA LONGITUD ACUMULADA DE 372.0 KM \*  
 \* Y UN POTENCIAL ESPECIFICO DE 1.59 MW/KM \*  
 \*\*\*\*\*

POTENCIAL TEORICO DEL RIO SANTO TOMAS 2/13/79

I	L	H	Q	AFQ	DL	DM	PE	QC	PGT	ESP	CUM
=====											
AFLUENTE TIKANE											
1	14.0	4975.0	0.0	0.0	14.0	757.0	5.41	0.76	5.64	0.40	0.00
2	0.0	4218.0	1.5	0.0							5.64
SUBTOTAL					14.0	757.0			5.64	0.40	
=====											
AFLUENTE HARAPATA											
3	36.0	5015.0	0.0	0.0	20.0	797.0	3.98	1.22	9.54	0.48	0.00
4	16.0	4218.0	2.4	1.5	16.0	558.0	3.49	4.69	25.65	1.60	9.54
5	0.0	3660.0	5.4	0.0							35.15
SUBTOTAL					36.0	1355.0			35.19	0.98	
=====											
AFLUENTE CHALLHUANE											
6	37.0	4975.0	0.0	0.0	15.0	766.0	5.11	1.17	8.79	0.59	0.00
7	22.0	4209.0	2.3	0.0	10.0	94.0	0.94	3.48	3.21	0.32	8.79
8	12.0	4115.0	4.6	0.0	12.0	455.0	3.79	5.64	25.16	2.10	11.94
9	0.0	3660.0	6.6	0.0							37.15
SUBTOTAL					37.0	1315.0			37.15	1.00	
=====											
AFLUENTE HUARAJO											
10	37.0	4900.0	0.0	0.0	17.0	830.0	4.88	0.98	7.97	0.47	0.00
11	20.0	4070.0	2.0	0.0	10.0	240.0	2.40	3.74	8.80	0.88	7.97
12	10.0	3830.0	5.5	0.0	10.0	304.0	3.04	6.15	18.33	1.83	16.77
13	0.0	3526.0	6.8	0.0							35.11
SUBTOTAL					37.0	1374.0			35.10	0.95	
=====											
AFLUENTE CONTUNYA											
14	28.0	4645.0	0.0	0.0	18.0	710.0	3.94	0.87	6.04	0.34	0.00
15	10.0	3935.0	1.7	0.0	10.0	457.0	4.57	3.04	13.65	1.36	6.00
16	0.0	3478.0	4.4	0.0							19.66
SUBTOTAL					28.0	1167.0			19.69	0.70	
=====											
AFLUENTE CHIHUACALLA											
17	36.0	4620.0	0.0	0.0	26.0	1040.0	4.00	1.30	13.23	0.51	0.00
18	10.0	3580.0	2.6	0.0	10.0	489.0	4.89	3.73	17.91	1.79	13.23
19	0.0	3091.0	4.9	0.0							31.11
SUBTOTAL					36.0	1529.0			31.14	0.87	
=====											

POTENCIAL TEORICO DEL RIO SANTO TOMAS 2/13/79

I	L	H	Q	AFO	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE CHALLAMAYO											
20	25.0	4250.0	0.0	0.0							
					15.0	600.0	4.00	0.94	5.51	0.37	0.00
21	10.0	3650.0	1.8	0.0	10.0	730.0	7.30	2.59	18.52	1.85	5.51
22	0.0	2920.0	3.3	0.0							24.03
SUBTOTAL					25.0	1330.0			24.03	0.96	
=====											
AFLUENTE COCHA											
23	40.0	4510.0	0.0	0.0							
					20.0	868.0	4.34	0.93	7.93	0.40	0.00
24	20.0	3642.0	1.8	0.0	10.0	442.0	4.42	3.88	16.80	1.68	7.93
25	10.0	3200.0	5.9	0.0	10.0	295.0	2.95	6.65	19.26	1.93	24.73
26	0.0	2905.0	7.4	0.0							43.99
SUBTOTAL					40.0	1605.0			43.99	1.10	
=====											
AFLUENTE SANTO TOMAS											
27	119.0	4890.0	0.0	0.0							
					11.0	412.0	3.75	1.27	5.12	0.47	0.00
28	108.0	4478.0	2.5	0.0	10.0	256.0	2.56	3.21	8.05	0.81	5.12
29	98.0	4222.0	3.9	0.0	19.0	552.0	2.91	5.03	27.25	1.43	13.17
30	79.0	3670.0	6.2	0.0	1.0	10.0	1.00	6.18	0.61	0.61	40.42
31	78.0	3660.0	6.2	5.4	7.0	134.0	1.91	11.96	15.72	2.25	41.03
32	71.0	3526.0	12.3	6.8	2.0	48.0	2.40	19.11	9.00	4.50	56.75
33	69.0	3478.0	19.1	4.4	12.0	186.0	1.55	24.61	44.91	3.74	65.75
34	57.0	3292.0	25.7	0.0	10.0	117.0	1.17	26.89	30.86	3.09	110.65
35	47.0	3175.0	28.1	0.0	10.0	84.0	0.84	28.66	23.61	2.36	141.51
36	37.0	3091.0	29.3	4.9	12.0	171.0	1.43	36.08	60.52	5.04	165.13
37	25.0	2920.0	38.0	3.3	2.0	15.0	0.75	41.39	6.09	3.05	225.65
38	23.0	2905.0	41.4	7.4	13.0	143.0	1.10	49.96	70.09	5.39	231.74
39	10.0	2762.0	51.1	0.0	10.0	117.0	1.17	51.64	59.27	5.93	301.82
40	0.0	2645.0	52.2	0.0							361.09
SUBTOTAL					119.0	2245.0			361.09	3.03	
=====											

POTENCIAL TEORICO DEL RIO APURIMAC SUP 2/13/79

I	L	H	Q	AFD	DL	OH	PE	GC	POT	ESP	CUM
=====											
AFLUENTE LIVITACA											
61	58.0	4400.0	0.0	0.0							0.00
62	40.0	3880.0	1.1	0.0	18.0	720.0	4.00	0.57	4.02	0.22	4.02
63	30.0	3694.0	1.7	0.0	10.0	186.0	1.86	1.43	2.60	0.26	5.03
64	20.0	3545.0	5.1	0.0	10.0	149.0	1.49	3.41	4.98	0.50	11.61
65	10.0	3390.0	6.4	0.0	10.0	155.0	1.55	5.75	8.75	0.87	20.36
66	0.0	2998.0	8.3	0.0	10.0	392.0	3.92	7.34	28.24	2.82	48.60
SUBTOTAL					58.0	1602.0			48.60	0.84	
=====											
AFLUENTE PARURO											
67	24.0	4215.0	0.0	0.0							0.00
68	0.0	2720.0	1.8	0.0	24.0	1495.0	6.23	0.90	13.18	0.55	13.18
SUBTOTAL					24.0	1495.0			13.18	0.55	
=====											
AFLUENTE CALQUEMAYO											
69	27.0	4775.0	0.0	0.0							0.00
70	0.0	4315.0	1.8	0.0	27.0	460.0	1.70	0.92	4.17	0.15	4.17
SUBTOTAL					27.0	460.0			4.17	0.15	
=====											
AFLUENTE CACANSAMAYO											
71	43.0	4770.0	0.0	0.0							0.00
72	15.0	4315.0	2.0	1.8	28.0	455.0	1.62	0.99	4.44	0.16	4.44
73	0.0	4152.0	5.7	0.0	15.0	163.0	1.09	4.76	7.60	0.51	12.04
SUBTOTAL					43.0	618.0			12.04	0.28	
=====											
AFLUENTE QUINICATA											
74	25.0	4740.0	0.0	0.0							0.00
75	0.0	3875.0	1.6	0.0	25.0	865.0	3.46	0.80	6.80	0.27	6.80
SUBTOTAL					25.0	865.0			6.80	0.27	
=====											
AFLUENTE CAYCHAPAMPA											
76	30.0	4592.0	0.0	0.0							0.00
77	20.0	4199.0	0.7	0.0	10.0	393.0	3.93	0.35	1.36	0.14	1.36
78	0.0	3730.0	2.4	0.0	20.0	469.0	2.35	1.57	7.20	0.36	8.56
SUBTOTAL					30.0	862.0			8.56	0.29	
=====											
AFLUENTE SAINATA											
79	24.0	4475.0	0.0	0.0							0.00
80	0.0	3492.0	1.7	0.0	24.0	983.0	4.10	0.86	8.30	0.35	8.30
SUBTOTAL					24.0	983.0			8.30	0.35	
=====											
AFLUENTE CHILLOROLLA											
81	45.0	4636.0	0.0	0.0							0.00
82	30.0	4070.0	0.5	0.0	15.0	566.0	3.77	0.27	1.50	0.10	1.50
83	20.0	3855.0	1.6	0.0	10.0	215.0	2.15	1.05	2.21	0.22	3.71
84	10.0	3710.0	2.4	0.0	10.0	145.0	1.45	1.98	2.82	0.28	6.52
85	0.0	3390.0	3.4	0.0	10.0	320.0	3.20	2.92	9.15	0.92	15.67
SUBTOTAL					45.0	1246.0			15.67	0.35	
=====											
AFLUENTE LIMAMAYO											
86	26.0	4520.0	0.0	0.0							0.00
87	0.0	3295.0	1.5	0.0	26.0	1225.0	4.71	0.76	9.13	0.35	9.13
SUBTOTAL					26.0	1225.0			9.13	0.35	
=====											
AFLUENTE UCUCHA											
88	30.0	4398.0	0.0	0.0							0.00
89	20.0	4122.0	0.3	0.0	10.0	276.0	2.76	0.17	0.46	0.05	0.46
90	10.0	3548.0	1.3	0.0	10.0	574.0	5.74	0.83	4.65	0.46	5.10
91	0.0	2640.0	2.1	0.0	10.0	908.0	9.08	1.71	15.26	1.53	20.36
SUBTOTAL					30.0	1758.0			20.36	0.68	

POTENCIAL TEORICO DEL RIO APURIMAC SUP 2/13/79

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
AFLUENTE VELILLE											
92	183.0	4925.0	0.0	0.0	24.0	515.0	2.15	0.56	2.85	0.12	0.00
93	159.0	4410.0	1.1	0.0	20.0	258.0	1.29	1.64	4.16	0.21	2.85
94	139.0	4152.0	2.2	5.7	14.0	170.0	1.21	8.65	14.43	1.03	7.01
95	125.0	3982.0	9.4	0.0	10.0	107.0	1.07	9.77	10.25	1.03	21.44
96	115.0	3875.0	10.1	1.6	12.0	90.0	0.75	12.98	11.46	0.96	31.69
97	103.0	3785.0	14.2	0.0	10.0	55.0	0.55	14.85	8.01	0.80	43.15
98	93.0	3730.0	15.5	2.4	11.0	128.0	1.16	19.13	24.02	2.18	51.16
99	82.0	3602.0	20.4	0.0	10.0	110.0	1.10	20.63	22.26	2.23	75.18
100	72.0	3492.0	20.9	1.7	9.0	102.0	1.13	22.85	22.87	2.54	97.44
101	63.0	3390.0	23.1	3.4	10.0	95.0	0.95	27.17	25.32	2.53	120.31
102	53.0	3295.0	27.8	1.5	6.0	85.0	1.42	29.77	24.82	4.14	145.63
103	47.0	3210.0	30.2	0.0	10.0	160.0	1.60	31.00	48.66	4.87	170.45
104	37.0	3050.0	31.8	0.0	10.0	125.0	1.25	32.59	39.97	4.00	219.10
105	27.0	2925.0	33.4	0.0	10.0	145.0	1.45	34.12	48.53	4.85	259.07
106	17.0	2780.0	34.8	0.0	10.0	140.0	1.40	35.23	48.38	4.84	307.60
107	7.0	2640.0	35.6	2.1	7.0	93.0	1.33	37.98	34.65	4.95	355.98
108	0.0	2547.0	38.3	0.0							390.63
SUBTOTAL					183.0	2378.0			390.63	2.13	
AFLUENTE APURIMAC 1											
109	280.0	5145.0	0.0	0.0	18.0	533.0	2.96	0.67	3.52	0.20	0.00
110	262.0	4612.0	1.3	0.0	20.0	242.0	1.21	2.51	5.95	0.30	3.52
111	242.0	4370.0	5.7	0.0	20.0	228.0	1.14	4.58	10.25	0.51	9.48
112	222.0	4142.0	5.5	6.3	1.0	5.0	0.50	11.79	0.58	0.58	19.73
113	221.0	4137.0	11.8	0.0							20.31
SUBTOTAL					59.0	1008.0			20.31	0.34	
AFLUENTE APURIMAC 2											
114	221.0	4137.0	11.8	0.0	11.0	67.0	0.61	12.29	8.08	0.73	0.00
115	210.0	4070.0	12.8	0.0	20.0	82.0	0.41	14.02	11.28	0.56	8.08
116	190.0	3988.0	15.3	1.9	10.0	61.0	0.61	17.73	10.61	1.06	19.35
117	180.0	3927.0	18.3	5.8	15.0	57.0	0.38	24.93	13.94	0.93	29.96
118	165.0	3870.0	25.8	1.6	7.0	25.0	0.35	27.46	6.73	0.96	43.91
119	158.0	3845.0	27.5	9.9	7.0	22.0	0.31	37.55	8.10	1.16	50.64
120	151.0	3825.0	37.7	26.2	2.0	3.0	0.15	63.93	1.88	0.94	58.74
121	149.0	3820.0	64.0	2.0	2.0	3.0	0.15	66.02	1.94	0.97	60.63
122	147.0	3817.0	66.0	2.7	10.0	39.0	0.39	69.53	26.60	2.66	62.57
123	137.0	3778.0	70.4	0.0	10.0	39.0	0.39	69.53	26.60	2.66	89.17
124	127.0	3733.0	71.3	2.8	10.0	45.0	0.45	70.85	31.28	3.13	120.45
125	117.0	3667.0	76.0	1.6	10.0	66.0	0.66	75.03	48.58	4.86	169.03
126	108.0	3610.0	78.7	0.0	9.0	57.0	0.63	78.15	43.70	4.86	212.73
127	98.0	3541.0	80.2	0.0	10.0	69.0	0.69	79.43	53.76	5.38	266.49
128	88.0	3475.0	81.5	0.0	10.0	66.0	0.66	80.85	52.35	5.23	318.84
129	78.0	3295.0	82.7	0.0	10.0	180.0	1.80	82.11	144.99	14.50	463.83
130	68.0	3149.0	84.1	0.0	10.0	146.0	1.46	83.41	119.46	11.95	583.29
131	58.0	2998.0	85.4	8.3	10.0	151.0	1.51	84.75	125.54	12.55	708.82
132	45.0	2840.0	95.5	0.0	13.0	158.0	1.22	94.56	146.56	11.27	855.39
133	35.0	2815.0	98.9	0.0	10.0	25.0	0.25	97.19	23.84	2.38	879.22
134	25.0	2790.0	99.7	0.0	10.0	25.0	0.25	99.31	24.36	2.44	903.58
135	15.0	2720.0	102.5	1.8	10.0	70.0	0.70	101.10	69.42	6.94	973.00
136	0.0	2547.0	105.7	38.3	15.0	173.0	1.15	104.97	178.15	11.88	1151.15
SUBTOTAL					221.0	1590.0			1151.15	5.21	

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*****
* EL POTENCIAL TEORICO TOTAL DEL RIO PUNANQUI ES DE 98.8 MW *
* Y TIENE UNA LONGITUD ACUMULADA DE 79.0 KM *
* Y UN POTENCIAL ESPECIFICO DE 1.25 MW/KM *
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POTENCIAL TEORICO DEL RIO PUNANQUI 2/14/79

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
AFLUENTE TAMBOLLAMAYO											
1	23.0	4516.0	0.0	0.0	23.0	772.0	3.36	1.45	10.96	0.48	0.00
2	0.0	3746.0	2.9	0.0							10.96
SUBTOTAL					23.0	772.0			10.96	0.48	
AFLUENTE PUNANQUI											
3	56.0	4590.0	0.0	0.0	17.0	615.0	3.62	1.21	7.32	0.43	0.00
4	39.0	3975.0	2.4	0.0	10.0	229.0	2.29	3.52	7.91	0.79	7.32
5	29.0	3746.0	4.6	2.9	9.0	83.0	0.92	8.47	6.90	0.77	15.23
6	20.0	3663.0	9.4	0.0	10.0	93.0	0.93	11.43	10.43	1.04	22.13
7	10.0	3570.0	13.4	0.0	10.0	395.0	3.95	14.27	55.30	5.53	32.55
8	0.0	3175.0	15.1	0.0							87.86
SUBTOTAL					56.0	1415.0			87.86	1.57	

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 \* EL POTENCIAL TEORICO TOTAL DEL RIO VILCABAMBA ES DE 568.3 MA \*  
 \* Y TIENE UNA LONGITUD ACUMULADA DE 227.0 KM \*  
 \* Y UN POTENCIAL ESPECIFICO DE 2.50 MA/KM \*  
 \*\*\*\*\*

POTENCIAL TEORICO DEL RIO VILCABAMBA 2/14/79

I	L	H	Q	AFO	DL	DH	PE	UC	POT	ESP	CUM
=====											
AFLUENTE ANCAHUAYU											
1	59.0	4900.0	0.0	0.0	19.0	747.0	3.93	3.06	22.46	1.18	0.00
2	20.0	4153.0	6.1	0.0	10.0	394.0	3.94	8.85	34.12	3.41	22.46
3	10.0	3759.0	11.5	0.0	10.0	429.0	4.29	12.61	53.06	5.31	56.57
4	0.0	3330.0	13.7	0.0							109.63
SUBTOTAL					39.0	1570.0			109.63	2.81	
=====											
AFLUENTE PARAJAY											
5	25.0	4720.0	0.0	0.0	25.0	1730.0	6.92	1.68	26.48	1.14	0.00
6	0.0	2990.0	3.4	0.0							28.48
SUBTOTAL					25.0	1730.0			28.48	1.14	
=====											
AFLUENTE CHUQUIBAMBIL											
7	39.0	4610.0	0.0	0.0	9.0	754.0	8.38	0.78	5.74	0.64	0.00
8	30.0	3856.0	1.5	0.0	10.0	566.0	5.66	2.77	15.39	1.54	5.74
9	20.0	3290.0	4.0	0.0	10.0	287.0	2.87	6.45	18.15	1.82	21.12
10	10.0	3003.0	8.9	0.0	10.0	273.0	2.73	9.60	25.72	2.57	39.28
11	0.0	2750.0	10.3	0.0							65.00
SUBTOTAL					39.0	1880.0			65.00	1.67	
=====											
AFLUENTE YAURIQUILLA											
12	25.0	4450.0	0.1	0.0	15.0	1145.0	7.63	1.18	13.24	0.88	0.00
13	10.0	3305.0	2.3	0.0	10.0	675.0	6.75	3.52	23.32	2.33	13.24
14	0.0	2630.0	4.8	0.0							36.56
SUBTOTAL					25.0	1820.0			36.56	1.46	
=====											
AFLUENTE VILCABAMBA											
15	99.0	4760.0	0.2	0.0	18.0	460.0	2.56	2.46	11.10	0.62	0.00
16	81.0	4300.0	4.7	0.0	10.0	205.0	2.05	5.71	11.48	1.15	11.10
17	71.0	4095.0	6.7	0.0	10.0	280.0	2.80	8.24	22.65	2.26	22.58
18	61.0	3815.0	9.8	0.0	20.0	485.0	2.43	11.26	53.58	2.68	45.22
19	41.0	3330.0	12.7	13.7	10.0	182.0	1.82	27.77	49.58	4.96	98.81
20	31.0	3148.0	29.1	0.0	10.0	158.0	1.58	29.72	46.07	4.61	148.38
21	21.0	2990.0	30.3	3.4	11.0	260.0	2.36	34.75	88.63	8.06	194.45
22	10.0	2730.0	35.8	10.3	10.0	100.0	1.00	46.43	45.55	4.55	283.08
23	0.0	2630.0	46.7	4.8							328.63
SUBTOTAL					99.0	2130.0			328.63	3.32	
=====											

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 \* EL POTENCIAL TEORICO TOTAL DEL RIO PACHACHACA ES DE 1346.6 MW \*  
 \* Y TIENE UNA LONGITUD ACUMULADA DE 4 .0 KM \*  
 \* Y UN POTENCIAL ESPECIFICO DE 3.15 MW/KM \*  
 \*\*\*\*\*

POTENCIAL TEORICO DEL RIO PACHACHACA 2/14/79

I	L	H	Q	AFQ	DL	DH	PE	GC	POT	ESP	M
=====											
AFLUENTE CONDORCARGA											
1	35.0	4455.0	0.0	0.0							0.00
2	10.0	3846.0	5.4	0.0	25.0	609.0	2.44	2.69	16.09	0.64	16.09
3	0.0	3530.0	8.0	0.0	10.0	316.0	3.16	6.71	20.81	2.08	36.90
SUBTOTAL					35.0	925.0			36.90	1.05	
=====											
AFLUENTE CARAYBAMBA											
4	34.0	4650.0	0.0	0.0							0.00
5	20.0	4196.0	2.9	0.0	14.0	454.0	3.24	1.44	6.41	0.46	6.41
6	10.0	3540.0	5.6	0.0	10.0	656.0	6.56	4.23	27.21	2.72	33.62
7	0.0	3100.0	7.4	0.0	10.0	440.0	4.40	6.52	28.13	2.81	61.75
SUBTOTAL					34.0	1550.0			61.75	1.82	
=====											
AFLUENTE HUACASA											
8	14.0	4325.0		0.0							0.00
9	0.0	2553.0	0.8	0.0	14.0	1772.0	12.66	0.42	7.31	0.52	7.31
SUBTOTAL					14.0	1772.0			7.31	0.52	
=====											
AFLUENTE CARAYA											
10	10.0	4325.0	0.0	0.0							0.00
11	0.0	2551.0	0.6	0.0	10.0	1774.0	17.74	0.30	5.24	0.52	5.24
SUBTOTAL					10.0	1774.0			5.24	0.52	
=====											
AFLUENTE SEGUINA											
12	28.0	4890.0	0.0	0.0							0.00
13	10.0	4030.0	3.0	0.0	18.0	860.0	4.78	1.49	12.58	0.70	12.58
14	0.0	3475.0	4.1	0.0	10.0	555.0	5.55	3.51	19.12	1.91	31.00
SUBTOTAL					28.0	1415.0			31.70	1.13	
=====											
AFLUENTE JAJANTIA											
15	54.0	4800.0	0.0	0.0							0.00
16	40.0	4203.0	2.7	0.0	14.0	597.0	4.26	1.38	8.06	0.58	8.06
17	30.0	3795.0	5.3	0.0	10.0	408.0	4.08	4.00	16.03	1.60	24.09
18	20.0	3494.0	7.7	0.0	10.0	301.0	3.01	6.52	19.27	1.93	43.36
19	10.0	3115.0	18.9	0.0	10.0	379.0	3.79	13.33	49.57	4.96	92.9
20	0.0	2960.0	20.2	0.0	10.0	155.0	1.55	19.55	29.73	2.97	122.65
SUBTOTAL					54.0	1840.0			122.65	2.27	
=====											



POTENCIAL TEORICO DEL RIO PACHACHACA 2/14/79

I	L	H	Q	AFO	DL	DH	PE	QC	POT	LSP	CUM
AFLUENTE ANTABAMBA											
21	113.0	4980.0	0.0	0.0	11.0	391.0	3.55	0.58	1.45	0.13	0.00
22	102.0	4589.0	0.7	0.0	10.0	240.0	2.40	1.49	3.50	0.35	1.45
23	92.0	4349.0	2.2	0.0	10.0	309.0	3.09	3.41	10.34	1.03	4.94
24	82.0	4040.0	4.6	0.0	11.0	565.0	5.14	5.15	28.53	2.59	15.29
25	71.0	3475.0	5.7	4.1	9.0	327.0	3.63	10.69	34.29	3.81	43.81
26	62.0	3148.0	11.6	0.0	10.0	188.0	1.88	12.68	23.38	2.34	78.10
27	52.0	2960.0	13.7	20.2	12.0	217.0	1.81	36.37	77.42	6.45	101.48
28	40.0	2743.0	38.8	0.0	10.0	125.0	1.25	40.59	49.77	4.98	178.90
29	30.0	2618.0	42.4	0.0	10.0	127.0	1.27	43.61	54.33	5.43	228.67
30	20.0	2491.0	44.9	0.0	10.0	118.0	1.18	46.50	53.83	5.38	283.00
31	10.0	2373.0	48.1	0.0	10.0	98.0	0.98	48.46	46.59	4.66	336.83
32	0.0	2275.0	48.8	0.0							383.41
SUBTOTAL					113.0	2705.0			383.41	3.59	
AFLUENTE PACHACHACA											
33	139.0	4740.0	0.0	0.0	18.0	580.0	3.22	1.21	6.89	0.38	0.00
34	121.0	4160.0	2.4	0.0	10.0	378.0	3.78	6.40	21.72	2.37	6.89
35	111.0	3782.0	10.4	0.0	10.0	252.0	2.52	11.28	27.90	2.79	30.61
36	101.0	3530.0	12.2	8.0	17.0	430.0	2.53	23.10	97.43	5.73	58.51
37	84.0	3100.0	25.9	7.4	9.0	185.0	2.06	34.40	62.43	6.94	155.94
38	75.0	2915.0	35.4	0.0	10.0	110.0	1.10	36.75	39.66	3.97	218.37
39	65.0	2805.0	38.1	0.0	10.0	95.0	0.95	39.20	36.54	3.65	258.03
40	55.0	2710.0	40.3	0.0	9.0	157.0	1.74	41.51	63.63	7.07	294.56
41	46.0	2553.0	42.3	0.8	2.0	2.0	0.10	43.16	0.85	0.42	358.19
42	44.0	2551.0	43.2	0.6	9.0	151.0	1.68	44.31	65.64	7.29	359.04
43	35.0	2400.0	44.9	0.0	10.0	125.0	1.25	46.73	57.31	5.73	424.69
44	25.0	2275.0	48.6	48.8	15.0	120.0	0.80	101.16	119.08	7.94	481.99
45	10.0	2155.0	104.9	0.0	10.0	93.0	0.93	105.87	96.59	9.66	601.07
46	0.0	2062.0	106.8	0.0							697.66
SUBTOTAL					139.0	2678.0			697.66	5.02	

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 \* EL POTENCIAL TEORICO TOTAL DEL RIO APURIMAC INF ES DE 12644.8 MW \*  
 \* Y TIENE UNA LONGITUD ACUMULADA DE 1057.0 KM \*  
 \* Y UN POTENCIAL ESPECIFICO DE 11.96 MW/KM \*  
 \*\*\*\*\*

POTENCIAL TEORICO DEL RIO APURIMAC INF 2/14/79

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE PUNANQUI											
1	14.0	3175.0	15.1	0.0							0.00
					14.0	787.0	5.62	17.50	135.07	9.65	135.07
2	0.0	2388.0	19.9	0.0							135.07
SUBTOTAL					14.0	787.0			135.07	9.65	
=====											
AFLUENTE STO TOMAS											
3	27.0	2645.0	52.2	0.0							0.00
					16.0	257.0	1.61	53.66	135.28	8.46	135.28
4	11.0	2388.0	55.1	19.9							135.28
					11.0	177.0	1.61	75.84	131.69	11.97	266.98
5	0.0	2211.0	76.7	0.0							266.98
SUBTOTAL					27.0	434.0			266.98	9.89	
=====											
AFLUENTE TRAPICHE											
6	25.0	4274.0	0.0	0.0							0.00
					25.0	2174.0	8.70	0.92	19.55	0.78	19.55
7	0.0	2100.0	1.8	0.0							19.55
SUBTOTAL					25.0	2174.0			19.55	0.78	
=====											
AFLUENTE PAMPUTA											
8	31.0	4480.0	0.0	0.0							0.00
					31.0	2101.0	6.78	2.21	45.51	1.47	45.51
9	0.0	2379.0	4.4	0.0							45.51
SUBTOTAL					31.0	2101.0			45.51	1.47	
=====											
AFLUENTE VILCABAMBA											
10	47.0	2630.0	51.5	0.0							0.00
					21.0	251.0	1.20	55.11	135.70	6.46	135.70
11	26.0	2379.0	58.7	4.4							135.70
					6.0	72.0	1.20	66.28	46.82	7.80	182.51
12	20.0	2307.0	69.4	0.0							182.51
					20.0	419.0	2.10	70.97	291.72	14.59	474.23
13	0.0	1888.0	72.5	0.0							474.23
SUBTOTAL					47.0	742.0			474.23	10.09	
=====											
AFLUENTE PACHACHACA											
14	77.0	2062.0	106.8	0.0							0.00
					34.0	237.0	0.70	117.94	274.22	8.07	274.22
15	43.0	1825.0	129.1	0.0							274.22
					18.0	125.0	0.69	132.09	161.98	9.00	436.19
16	25.0	1700.0	135.1	0.0							436.19
					25.0	781.0	3.12	137.70	1054.98	42.20	1491.18
17	0.0	919.0	140.3	0.0							1491.18
SUBTOTAL					77.0	1143.0			1491.18	19.37	
=====											
AFLUENTE MOPILO											
18	31.0	4800.0	0.0	0.0							0.00
					31.0	3946.0	12.73	3.09	119.46	3.85	119.46
19	0.0	854.0	6.2	0.0							119.46
SUBTOTAL					31.0	3946.0			119.46	3.85	
=====											

POTENCIAL TEORICO DEL RIO APURIMAC INF 2/14/79

I	L	H	Q	AFQ	DL	DH	PE	QC	POT	ESP	CUM
=====											
AFLUENTE PACAYBAMBAS											
20	23.0	4700.0	0.0	0.0							0.00
21	0.0	1546.0	3.1	0.0	23.0	3154.0	13.71	1.56	48.13	2.09	48.13
SUBTOTAL					23.0	3154.0			48.13	2.09	
=====											
AFLUENTE PAMPACONAS											
22	53.0	4841.0	0.0	0.0							0.00
23	15.0	1546.0	7.9	3.1	58.0	3295.0	8.67	3.94	127.47	3.35	127.47
24	0.0	763.0	18.2	0.0	15.0	783.0	5.22	14.62	112.27	7.48	239.74
SUBTOTAL					53.0	4078.0			239.74	4.52	
=====											
AFLUENTE APUR1											
25	28.0	2200.0	0.0	0.0							0.00
26	0.0	678.0	7.6	0.0	28.0	1522.0	5.44	3.81	56.92	2.03	56.92
SUBTOTAL					28.0	1522.0			56.92	2.03	
=====											
AFLUENTE APUR2											
27	15.0	2200.0	0.0	0.0							0.00
28	0.0	654.0	2.4	0.0	15.0	1546.0	10.31	1.19	18.03	1.20	18.03
SUBTOTAL					15.0	1546.0			18.03	1.20	
=====											
AFLUENTE CHIRUMPIARI											
29	10.0	2900.0	0.0	0.0							0.00
30	0.0	628.0	1.3	0.0	10.0	2272.0	22.72	0.64	14.26	1.43	14.26
SUBTOTAL					10.0	2272.0			14.26	1.43	
=====											
AFLUENTE SACHABAMBA											
31	32.0	4334.0	0.1	0.0							0.00
32	0.0	1530.0	10.6	0.0	32.0	2804.0	8.76	5.40	148.40	4.64	148.40
SUBTOTAL					32.0	2804.0			148.40	4.64	
=====											
AFLUENTE APARITABUMCO											
33	42.0	4205.0	0.1	0.0							0.00
34	9.0	1530.0	8.9	10.6	53.0	2675.0	8.11	4.51	118.32	3.59	118.32
35	0.0	626.0	21.8	0.0	9.0	904.0	10.04	20.67	163.30	20.37	301.62
SUBTOTAL					42.0	3579.0			301.62	7.18	
=====											
AFLUENTE SAMOGAN											
36	23.0	3000.0	0.0	0.0							0.00
37	0.0	572.0	2.4	0.0	23.0	2428.0	10.56	1.20	28.53	1.24	28.53
SUBTOTAL					23.0	2428.0			28.53	1.24	
=====											
AFLUENTE SAMANIATADO											
38	13.0	3000.0	0.0	0.0							0.00
39	0.0	566.0	2.7	0.0	13.0	2434.0	18.72	1.37	32.80	2.52	32.80
SUBTOTAL					13.0	2434.0			32.80	2.52	
=====											
AFLUENTE SANTAROSA											
40	29.0	3000.0	0.2	0.0							0.00
41	15.0	1000.0	2.2	0.0	14.0	2000.0	14.29	1.19	23.28	1.66	23.28
42	0.0	562.0	9.0	0.0	15.0	438.0	2.92	5.58	23.98	1.60	47.26
SUBTOTAL					29.0	2438.0			47.26	1.63	
=====											
AFLUENTE CHURITARIU											
43	10.0	2100.0	0.0	0.0							0.00
44	0.0	519.0	0.8	0.0	10.0	1581.0	15.81	0.41	6.35	0.64	6.35
SUBTOTAL					10.0	1581.0			6.35	0.64	
=====											
AFLUENTE PIENE											
45	70.0	4200.0	0.0	0.0							0.00
46	40.0	2613.0	7.8	0.0	30.0	1587.0	5.29	3.89	60.61	2.02	60.61
47	0.0	510.0	23.9	0.0	40.0	2103.0	5.26	15.84	326.71	8.17	387.32
SUBTOTAL					70.0	3690.0			387.32	5.53	

POTENCIAL TEORICO DEL RIO APURIMAC INF 2/14/79

I	L	M	Q	AFO	DL	DH	PE	GC	POT	ESP	CUM
=====											
AFLUENTE PICHARI											
48	37.0	3500.0	0.0	0.0							0.00
49	0.0	508.0	9.9	0.0	37.0	2992.0	8.09	4.95	14.41	5.93	145.41
SUBTOTAL					37.0	2992.0			145.41	5.93	
=====											
AFLUENTE ACUM											
50	34.0	4000.0	0.1	0.0							0.00
51	15.0	2600.0	5.6	0.0	19.0	1400.0	7.37	2.81	38.66	2.05	38.66
52	0.0	477.0	8.8	0.0	15.0	2123.0	14.15	7.19	149.76	9.98	188.42
SUBTOTAL					34.0	3523.0			188.42	5.54	
=====											
AFLUENTE QUISTO											
53	10.0	3000.0	0.0	0.0							0.00
54	0.0	456.0	1.9	0.0	10.0	2544.0	25.44	0.94	23.39	2.34	23.39
SUBTOTAL					10.0	2544.0			23.39	2.34	
=====											
AFLUENTE APURIMAC											
55	376.0	2547.0	143.9	0.0							0.00
56	366.0	2362.0	149.7	0.0	10.0	185.0	1.85	146.79	266.41	26.64	266.41
57	348.0	2211.0	152.6	76.7	16.0	151.0	0.84	151.15	223.90	12.44	490.31
58	335.0	2100.0	232.4	1.8	13.0	111.0	0.85	230.83	251.35	19.33	741.66
59	310.0	1888.0	244.3	72.5	25.0	212.0	0.85	239.25	497.58	19.90	1239.23
60	297.0	1777.0	319.4	0.0	13.0	111.0	0.85	316.12	346.41	26.65	1585.64
61	272.0	1565.0	334.4	0.0	25.0	212.0	0.85	326.92	679.90	27.20	2265.54
62	241.0	1303.0	339.8	0.0	31.0	262.0	0.85	337.11	866.44	27.95	3131.98
63	226.0	1175.0	346.5	0.0	15.0	128.0	0.85	343.14	430.88	26.73	3562.86
64	196.0	919.0	353.9	140.3	30.0	256.0	0.85	350.17	879.40	29.31	4442.26
65	194.0	902.0	736.0	0.0	2.0	17.0	0.85	615.08	102.56	51.29	4544.84
66	174.0	854.0	742.4	6.2	20.0	48.0	0.24	739.21	348.08	17.40	4892.92
67	144.0	763.0	759.7	18.2	30.0	91.0	0.30	754.13	673.22	22.44	5566.14
68	109.0	678.0	790.0	7.6	35.0	85.0	0.24	783.96	653.70	16.68	6219.84
69	99.0	654.0	799.5	2.4	10.0	24.0	0.24	798.53	188.01	18.80	6407.85
70	88.0	628.0	804.6	1.3	11.0	26.0	0.24	803.20	204.87	18.62	6612.71
71	87.0	626.0	806.0	21.8	1.0	2.0	0.20	805.90	15.81	15.81	6628.52
72	71.0	572.0	837.5	2.4	16.0	54.0	0.34	832.60	441.06	27.57	7069.59
73	68.0	566.0	840.1	2.7	3.0	6.0	0.20	839.97	49.44	16.48	7119.03
74	66.0	562.0	843.2	9.0	2.0	4.0	0.20	843.03	33.08	16.54	7152.11
75	51.0	530.0	862.7	0.0	15.0	52.0	0.21	857.46	269.17	17.94	7421.28
76	46.0	519.0	864.3	0.8	5.0	11.0	0.22	863.51	93.18	18.64	7514.46
77	42.0	510.0	866.0	23.9	4.0	9.0	0.23	865.59	76.42	19.11	7590.89
78	41.0	508.0	890.1	9.9	1.0	2.0	0.20	890.00	17.46	17.46	7608.35
79	27.0	477.0	904.6	8.8	14.0	31.0	0.22	902.29	274.39	19.60	7882.74
80	17.0	456.0	918.3	1.9	10.0	21.0	0.21	915.85	188.68	18.87	8071.42
81	0.0	419.0	924.9	0.0	17.0	37.0	0.22	922.50	334.84	19.70	8406.26
SUBTOTAL					376.0	2128.0			8406.26	22.36	
=====											