Tabla.05-001 PRODUCCION DE RAJOS

Año / Veta	-2	-1	0	1	2	3	4	5	6	7	8	9	Total
	t												t
Farallon Negro	40,000	25,000	25,000	15,000									105,000
Laboreo,portezuelo	35,000	35,000	35,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	510,000
Esperanza	15,000	45,000	60,000	75,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	915,000
Subniveles	(10,000)	(20,000)	(20,000)	(30,000)	(35,000)	(35,000)	(35,000)	(35,000)	(35,000)	(35,000)	(35,000)	(35,000)	(360,000)
corte y relleno	(5,000)	(25,000)	(40,000)	(45,000)	(55,000)	(55,000)	(55,000)	(55,000)	(55,000)	(55,000)	(55,000)	(55,000)	(555,000)
Total	90,000	105,000	120,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	1,530,000

Tabla 05—002 RESERVA DE MINERAL ARRANCADO ALTO DE LA BLENDA

Nombre de Veta	NO	Rajo	Tipo	Nivel	Bloque	Reserva de Mineral					Reserva de Mineral explotable								
						Mineral	Ley		Fino		Recupe-	Res.	Dilu-	Res.	Ley		Fino		
						(Tn)	Au (g/t)	Ag (g/t)	Au (Kg)	Ag (Kg)	racion	Mineral(Tn)	cion	extaida(Tn)	Au (g/t)	Ag (g/t)	Au (Kg)	Ag (Kg)	Au+Ag/150
LABOREO	1	RAJO 1	1	-33	(1)	3020.0	9.01	266.90	27.2	806.0	100	3020.0	25	4026.7	7.17	212.76	28.9	856.7	8.59
	2	PILOTO	1	-33	(1)	17172.0	5.80	116.46	99.6	1999.9	100	17172.0	25	22896.0	4.76	99.93	109.1	2288.0	5.43
	3	B XV	2		(1)	23760.0	6.76	161.60	160.6	3839.6	100	23760.0	25	31680.0	5.48	133.79	173.7	4238.3	6.37
	4	RAJO 2	1	0	(1)	7200.0	6.93	150.38	49.9	1082.7	100	7200.0	25	9600.0	5.61	125.37	53.9	1203.6	6.45
	5	RAJO 3,4,5	1	0	(1)	39282.0	7.62	155.44	299.3	6106.0	100	39282.0	25	52376.0	6.13	129.17	321.0	6765.2	6.99
	6	RAJO 3,4,5	1	-33	(2)	70334.0	7.23	126.58	508.8	8902.9	100	70334.0	25	93778.7	5.84	107.52	547.5	10083.2	6.56
	7	FAR.SUPERF	1		(1)	7873.0	8.50	250.00	66.9	1968.3	100	7873.0	25	10497.3	6.79	200.09	71.3	2100.4	8.12
	8	B IV	2		(1)	6495.0	8.50	136.17	55.2	1623.8	100	6495.0	25	8660.0	6.79	200.09	58.8	1732.8	8.12
	9	B VI	2		(1)	10846.0	5.83	125.41	63.2	1360.2	100	10846.0	25	14461.3	4.79	106.64	69.2	1542.2	5.50
	10	RAJO 6	1	+46	(1)	6124.0	8.50	250.00	52.1	1531.0	100	6124.0	25	8165.3	6.79	200.09	55.4	1633.8	8.12
	11	R6	2		(1)	9852.0	7.61	180.28	75.0	1776.1	100	9852.0	25	13136.0	6.12	147.80	80.4	1941.4	7.11
	12	RAJO 6	1	-33	(2)	18589.0	6.81	139.02	126.5	2584.2	100	18589.0	25	24785.3	5.52	116.85	136.8	2896.2	6.30
	13	RAJO 7	1	0	(2)	14137.0	7.06	182.54	99.8	2580.6	100	14137.0	25	18849.3	5.71	149.49	107.6	2817.8	6.70
	14	RAJO 7	1	-33	(1)	12192.0	6.00	115.84	73.2	1412.3	100	12192.0	25	16256.0	4.92	99.47	79.9	1616.9	5.58
	15	B XIV	2		(1)	16330.0	6.91	136.17	112.8	2223.7	100	16330.0	25	21773.3	5.60	114.71	121.8	2497.7	6.36
		Total				263206.0	7.11	151.20	1870.1	39797.1	100	263206.0	25	350941.3	5.74	125.99	2015.2	44214.3	6.58
PORTEZUELO	2	L12 y L13	1	-33	(1)	22875.0	8.67	121.81	198.3	2786.4	95	21731.3	22	27860.6	7.13	106.09	198.5	2955.7	7.83
	3	L12 y L13	2		(1)	11434.0	8.67	121.81	99.1	1392.8	95	10862.3	22	13926.0	7.13	106.09	99.2	1477.4	7.83
	4	RAJO 8	1	0	(1)	15980.0	7.12	152.53	113.8	2437.4	95	15181.0	22	19462.8	5.92	130.05	115.2	2531.1	6.78
	5	RAJO 8	1	-33	(2)	9250.0	8.03	149.08	74.2	1379.0	95	8787.5	22	11266.0	6.62	127.36	74.6	1434.8	7.47
	6	RAJO 8	1	-108	(3)	7497.0	7.67	145.02	57.5	1087.2	95	7122.2	22	9131.0	6.35	124.19	57.9	1134.0	7.17
	8	RAJO 9	1	0	(1)	10799.0	5.42	138.51	58.5	1495.8	95	10259.1	22	13152.6	4.59	108.45	60.4	1426.4	5.31
	9	RAJO 9	2		(1)	16061.0	5.69	135.39	91.4	2174.5	95	15258.0	22	19561.5	4.80	116.68	93.9	2282.4	5.58
	10	B V	2		(1)	5307.0	8.26	117.39	43.8	623.0	95	5041.7	22	6463.7	6.81	102.64	44.0	663.4	7.49
	11	RAJO 9	1	-33	(2)	7047.0	6.10	130.61	43.0	920.4	95	6694.7	22	8582.9	5.12	112.95	44.0	969.4	5.87
	12	RAJO 9	1	-108	(3)	7047.0	6.10	130.61	43.0	920.4	95	6694.7	22	8582.9	5.12	112.95	44.0	969.4	5.87
	13	BLOQUE XVI	2		(1)	14544.0	6.91	138.04	100.5	2007.7	95	13816.8	22	17713.8	5.75	118.75	101.9	2103.5	6.54
	14	BLOQUE 4	1	-33	(1)	23166.0	8.26	117.39	191.4	2719.5	95	22007.7	22	28215.0	6.81	102.64	192.0	2896.0	7.49
	15	B XIII	2		(1)	11583.0	8.26	117.39	95.7	1359.7	95	11003.9	22	14107.5	6.81	102.64	96.0	1448.0	7.49
		Total				162590.0	7.44	131.03	1210.2	21303.6	95	154460.5	22	198026.3	6.17	112.57	1221.7	22291.5	6.92
ESPERANZA	1	Z - 1(16%)	1	+52	(1)-1	2109.9	4.72	267.09	10.0	563.5	95	2004.4	20	2505.5	4.15	225.00	10.4	563.7	5.65
	2	Z - 1	3	+52	(1)-3	15161.6	5.05	213.41	76.6	3235.6	95	14403.5	20	18004.4	4.41	182.05	79.5	3277.8	5.63
	3	Z - 1	1	+52	(1)-2	15692.4	5.38	159.93	84.4	2509.7	95	14907.8	20	18634.7	4.67	139.27	87.1	2595.3	5.60
	4	Z - 1	1	-33	(2)-1	15886.8	5.40	124.98	85.8	1985.5	95	15092.5	20	18865.6	4.69	111.31	88.5	2099.9	5.43
	5	Z - 1	2	-33	(2)-3	37638.0	5.02	95.19	188.9	3582.8	95	35756.1	20	44695.1	4.39	87.48	196.1	3910.0	4.97
		Sub.T.				86488.7	5.15	137.33	445.7	11877.1	95	82164.3	20	102705.3	4.49	121.19	461.6	12446.7	5.30
	11	Z - 2	3	+52	(1)	14460.7	7.43	183.42	107.4	2652.4	95	13737.7	20	17172.1	6.31	158.07	108.4	2714.3	7.37
	12	Z - 2	1	-33	(2)-1	21222.0	7.06	165.66	149.8	3515.6	95	20160.9	20	25201.1	6.02	143.85	151.7	3625.3	6.98
	13	Z - 2	3	-33	(2)-3	97371.7	6.14	121.56	597.9	11836.5	95	92503.1	20	115628.9	5.28	108.58	611.0	12554.5	6.01
	14	Z - 2	1	-33	(2)-2	74282.4	5.48	90.14	407.1	6695.8	95	70568.3	20	88210.4	4.76	83.44	419.6	7360.3	5.31
	15	Z - 2	1	-108	(3)-1	77554.8	5.82	93.53	451.4	7253.7	90	69799.3	20	87249.2	5.03	86.15	438.7	7516.7	5.60
	16	Z - 2	3	-108	(3)-3	99784.5	7.40	133.91	738.4	13362.1	90	89806.1	20	112257.6	6.29	118.46	706.3	13297.5	7.08
	17	Z - 2	1	-108	(3)-2	56014.2	9.13	177.92	511.4	9966.0	90	50412.8	20	63016.0	7.68	153.66	483.7	9683.2	8.70
	18	Z - 2	3	-138	(4)	37840.5	9.79	194.78	370.5	7370.6	95	35948.5	20	44935.6	8.20	167.15	368.7	7511.1	9.32
		Sub.T.				478530.8	6.97	130.93	3333.9	62652.7	93	442936.6	20	553670.7	5.94	116.07	3288.1	64263.0	6.71
	24	A - 1	3	+52	(1)	6750.0	9.24	138.81	62.4	937.0	100	6750.0	25	9000.0	7.31	115.44	65.7	1039.0	8.07
	25	A - 1	1	-33	(2)-1	9331.2	8.60	132.17	80.2	1233.3	100	9331.2	25	12441.6	6.82	110.46	84.8	1374.2	7.55
	26	A - 1	2	-33	(2)-3	35722.9	6.91	114.57	246.8	4092.8	100	35722.9	25	47630.5	5.55	97.26	264.5	4632.4	6.20
	27	A - 1	1	-33	(2)-2	25936.2	5.66	101.59	146.8	2634.9	100	25936.2	25	34581.6	4.62	87.52	159.7	3026.6	5.20
	28	A - 1	1	-108	(3)-1	25928.1	5.91	94.79	153.2	2457.7	100	25928.1	25	34570.8	4.80	82.42	166.1	2849.3	5.35
	29	A - 1	3	-108	(3)-3	32561.5	7.74	88.99	252.0	2897.6	100	32561.5	25	43415.3	6.18	78.07	268.2	3389.4	6.70
	30	A - 1	1	-108	(3)-2	12387.6	9.92	82.09	122.9	1016.9	100	12387.6	25	16516.8	7.81	72.90	129.0	1204.0	8.30
	31	A - 1	3	-138	(4)	1979.1	10.83	79.20	21.4	156.7	100	1979.1	25	2638.8	8.48	70.71	22.4	186.6	8.95
		Sub.T.				150596.6	7.21	102.44	1085.7	15426.9	100	150596.6	25	200795.5	5.78	88.16	1160.4	17701.5	6.37
	34	A - 3	3	-33	(1)	2559.6	6.48	110.82	16.6	283.7	100	2559.6	30	3656.6	4.91	88.91	18.0	325.1	5.50
	35	A - 3	3	-108	(2)	321.3	6.48	110.82	2.1	35.6	100	321.3	30	459.0	4.95	88.89	2.3	40.8	5.54
		Sub.T.				2880.9	6.48	110.82	18.7	319.3	100	2880.9	30	4115.6	4.92	88.91	20.2	365.9	5.51
	42	B - 4	3	+52	(1)	432.0	7.18	197.92	3.1	85.5	100	432.0	50	864.0	4.83	136.72	4.2	118.1	5.74
		Sub.T.				432.0	7.18	197.92	3.1	85.5	100	432.0	50	864.0	4.83	136.72	4.2	118.1	5.74
	44	C - 1	2	-33	(1)	21546.0	7.73	121.32	166.6	2614.0	100	21546.0	20	26932.5	6.43	104.61	173.3	2817.4	7.13
	45	C - 1	3	-108	(2)	21478.5	7.73	121.32	166.0	2605.8	100	21478.5	20	26848.1	6.43	104.61	172.7	2808.6	7.13
		Sub.T.				43024.5	7.73	121.32	332.6	5219.8	100	43024.5	20	53780.6	6.43	104.61	345.9	5626.0	7.13
		Total				761953.5	6.85	125.44	5219.7	95581.3	95	722034.9	21	915931.7	5.77	109.75	5280.4	100521.2	6.50

FARALLON NEGRO

Nombre de Veta	NO	Rajo	Tipo	Nivel	Bloque	Reserva de Mineral					Reserva de Mineral explotable								
						Mineral (Tn)	Lay		Finos		Recupe-racion	Res. Mineral(Tn)	Dilu-cion	Res. extaida(Tn)	Lay		Finos		Au+Ag/150
							Au (g/t)	Ag (g/t)	Au (Kg)	Ag (Kg)					Au (g/t)	Ag (g/t)	Au (Kg)	Ag (Kg)	
NEGRO	11	BLOQUE 31	2	-173		8424.0	5.23	108.09	44.1	910.6	90	7581.6	15	8919.5	4.44	91.88	39.6	819.5	5.06
	18	RAJO 2	1	-60		2600.0	5.94	98.60	15.4	256.4	90	2340.0	15	2752.9	5.05	83.81	13.9	230.7	5.61
	20	RAJO 3	1	-30		9270.0	5.69	83.51	52.7	774.1	90	8343.0	15	9815.3	4.84	70.98	47.5	696.7	5.31
	25	BLOQUE 52	2	-143		15280.0	10.22	176.55	156.2	2697.7	90	13752.0	15	16178.8	8.69	150.07	140.5	2427.9	9.69
	26	BLOQUE L	1	-173		24460.0	7.30	130.89	178.6	3201.6	90	22014.0	15	25898.8	6.20	111.26	160.7	2881.4	6.95
	29	BLOQUE L	1	-223		22300.0	7.30	130.89	162.8	2918.8	90	20070.0	15	23611.8	6.21	111.26	146.5	2627.0	6.95
	31	RAJO 11N	1	-90		7089.0	6.61	92.17	46.9	653.4	90	6380.1	15	7506.0	5.62	78.34	42.2	588.1	6.14
	33	RAJO 6	1	-223		13499.0	5.13	103.32	69.2	1394.7	90	12149.1	15	14293.1	4.36	87.82	62.3	1255.2	4.95
	34	RAJO 4	1	-223		4462.0	7.28	154.97	32.5	691.5	90	4015.8	15	4724.5	6.19	131.72	29.2	622.3	7.07
	36	RAJO 1	1	-223		3937.0	10.09	130.00	39.7	511.8	90	3543.3	15	4168.6	8.58	110.50	35.7	460.6	9.31
	38	RAJO 3	1	-223		8334.0	5.68	106.36	47.3	886.4	90	7500.6	15	8824.2	4.83	90.41	42.6	797.8	5.43
	39	RAJO 5	1	-223		6020.0	6.97	99.75	42.0	600.5	90	5418.0	15	6374.1	5.92	84.79	37.8	540.4	6.49
		Total				125675.0	7.06	123.31	887.3	15497.4	90	113107.5	15	133067.6	6.00	104.82	798.6	13947.7	6.70

Nombre de Veta	Reserva de Mineral					Reserva de Mineral explotable									
	Mineral (Tn)	Lay		Finos		Recupe-racion	Res. Mineral(Tn)	Dilu-cion	Res. extaida(Tn)	Lay		Finos		Au+Ag/150
		Au (g/t)	Ag (g/t)	Au (Kg)	Ag (Kg)					Au (g/t)	Ag (g/t)	Au (Kg)	Ag (Kg)	
LABOREO	263206.0	7.11	151.20	1870.1	39797.1	100	263206.0	25	350941.3	5.74	125.99	2015.2	44214.3	6.58
PORTEZUELO	162590.0	7.44	131.03	1210.2	21303.6	95	154460.5	22	198026.3	6.17	112.57	1221.7	22291.5	6.92
ESPERANZA	761953.5	6.85	125.44	5219.7	95581.3	95	722034.9	21	915931.7	5.77	109.75	5280.4	100521.2	6.50
Sub.T.	1187749.5	6.99	131.92	8300.0	156682.0	96	1139701.4	22	1464899.3	5.81	114.02	8517.3	167027.0	6.57
NEGRO	125675.0	7.06	123.31	887.3	15497.4	90	113107.5	15	133067.6	6.00	104.82	798.6	13947.7	6.70
Total	1313424.5	6.99	131.09	9187.3	172179.4	95	1252808.9	22	1597966.9	5.83	113.25	9315.9	180974.7	6.58

Tabla. 05-003 Costo direct de explotacion

	−2	−1	0	1	2	3	4	5	6	7	8	9	Total
1. Prep. operativa (m)	900	1.050	1.200	1.350	1.350	1.350	1.350	1.350	1.350	1.350	1.350	650	14.600
Suma ($)	350.000	404.000	466.000	520.000	524.000	524.000	524.000	524.000	524.000	524.000	524.000	252.000	5.660.000
Costo ($/t)	3.89	3.85	3.88	3.85	3.88	3.88	3.88	3.88	3.88	3.88	3.88	1.87	
2. Explota. int. Mina 内													
Produccion (t)	90.000	105.000	120.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	135.000	1.530.000
1) Material ($)	550.230	629.780	671.080	741.640	741.600	741.600	772.910	772.910	772.910	772.910	772.910	741.850	8.682.330
2) Mano ob. ($)	642.430	609.550	583.460	494.040	485.540	485.540	506.040	506.040	506.040	506.040	506.040	542.020	6.372.780
3) Gastos ($)	562.040	664.080	662.840	759.980	713.820	713.820	743.960	743.960	743.960	743.960	743.960	713.110	8.509.490
Sub total	1.754.700	1.903.410	1.917.380	1.995.660	1.940.960	1.940.960	2.022.910	2.022.910	2.022.910	2.022.910	2.022.910	1.996.980	23.564.600
Costo ($/t)	19.50	18.13	15.98	14.69	14.38	14.38	14.98	14.98	14.38	14.38	14.38	14.79	
Cost. dire. inte. Mina ($)	2.104.700	2.307.410	2.383.380	2.515.660	2.464.960	2.464.960	2.546.910	2.546.910	2.546.910	2.546.910	2.546.910	2.248.980	29.224.600
Costo ($/t)	23.39	21.98	19.86	18.63	18.26	18.26	18.87	18.87	18.26	18.26	18.26	16.66	
3. Playa de Lixi.													
Produccion (t)	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	46.483	541.483
Suma ($)	182.250	182.250	182.250	182.250	182.250	182.250	182.250	182.250	182.250	182.250	182.250	188.250	2.193.000
Costo ($/t)	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	
Total	2.286.950	2.489.660	2.565.630	2.697.910	2.647.210	2.647.210	2.729.160	2.729.160	2.729.160	2.729.160	2.729.160	2.437.230	31.417.600

Tabla. 05-004 Numero de personas

año / articulo	-2				-1				0				1				2~3				4~8				9			
	Cant.	rend.	Personal año	Personal dia	Cant.	rend.	Personal año	Personal dia	Cant.	rend.	Personal año	Personal dia	Cant.	rend.	Personal año	Personal dia	Cant.	rend.	Personal año	Personal dia	Cant.	rend.	Personal año	Personal dia	Cant.	rend.	Personal año	Personal dia
1. Preparacion (m)	900	0.25	3.600	15.0	1.050	0.30	3.500	14.5	1.200	0.30	4.000	16.7	1.350	0.30	4.500	18.8	1.350	0.30	4.500	18.8	1.350	0.30	4.500	18.8	650	0.30	2.167	9.0
2. Explotacion (t)																												
1) Sub nivel	2.000	20	100	0.4	12.000	25	480	2.0	12.000	25	480	2.0	23.000	25	920	3.8	34.000	25	1.360	5.7	34.000	25	1.360	5.7	35.000	25	1.400	5.9
2) Corte y relle.	71.756	15	4.783	20.1	75.958	15	5.064	21.2	91.085	15	6.072	25.5	91.627	18	5.090	21.3	86.781	18	4.821	20.2	91.881	18	5.105	21.4	95.607	18	5.312	22.3
3. Extraccion (t)																												
1) Sub nivel	2.000	50	40	0.2	12.000	50	240	1.0	12.000	50	240	1.0	23.000	50	460	1.9	34.000	50	680	2.8	34.000	50	680	2.8	35.000	50	700	2.9
2) Corte y relle.	71.750	15	4.783	20.0	75.958	15	5.063	21.2	91.085	18	5.060	21.2	91.627	20	4.581	19.2	86.781	20	4.339	18.2	91.881	20	4.594	19.3	95.607	20	4.780	20.0
4. Relleno sup. (m³)	5.000	100	50	0.2	7.000	100	70	0.3	13.000	100	130	0.5	17.000	100	170	0.7	22.000	100	220	0.9	31.000	100	310	1.3	24.000	100	240	1.0
5. Relleno rajo	27.000	15	1.800	7.5	28.000	15	1.867	7.8	34.000	15	2.267	9.4	34.000	20	1.700	7.1	32.000	20	1.600	6.7	34.000	20	1.700	7.1	26.000	20	1.300	5.5
6. Extrac. mineral (t)	90.000	30	3.000	12.5	105.000	30	3.500	14.5	45.500	30	1.517	6.3	27.400	30	913	3.8	26.000	30	867	3.6	27.500	30	917	3.8	23.500	30	953	4.9
7. Extrac. esteril																												
1) Superficie	5.000	50	100	0.4	7.000	50	140	0.6	13.000	50	260	1.1	17.000	50	340	1.4	22.000	50	440	1.8	31.000	50	620	2.6	26.000	50	520	2.2
2) Interior mina	5.000	30	167	0.7	7.000	30	233	1.0	13.000	30	433	1.8	17.000	30	567	2.4	22.000	30	733	3.1	31.000	30	1.033	4.3	26.000	30	867	3.6
8. Extrac. hasta sup																												
F. N. pique	40.000	30	1.333	5.6	25.000	30	833	3.5	25.000	30	833	3.5	15.000	30	500	2.1												
A. B. Rampa	15.000	80	188	0.8	45.000	80	563	2.3	60.000	80	750	3.1	120.000	80	1.500	6.3	135.000	80	1.688	7	135.000	80	1.688	7	135.000	80	1.688	7
9. Mov. esteril (m³)	13.000	50	260	1.1	5.500	50	110	0.5																				
				85				91				92				89				89				94				84
10. Serv. apoyo			54%	72			59%	66			59%	63			62%	54			62%	55			64%	54			64%	48
11. Perf. diamant.				3				3				3				2				2				2				1
12. Jefe de Turno				14				14				14				12				10				10				10
13. Administ.				3				3				3				3				3				3				3
Total				177				175				175				150				159				163				146

Dias efect. 265
Present. 90%

Tabla.05-005 CANTIDAD DE PREPARACION Y PREPARACION OPERATIVA

AÑO	-2	-1	0	1	2	3	4	5	6	7	8	9	Total
Rampa (LHD)	m	m	m	m	m	m	m	m	m	m	m	m	m
Centro de Esperanza, inferior -108m	50	50											100
Centro de Esperanza	300	250	200	150									900
Conec. Esperanze y Laboreo	200												200
Conec. Laboreo -108m y -33m			250	175									425
Conec. Laboreo y Portezuelo		250	100	125									475
Total	(550)	(550)	(550)	(450)									(2,100)
Horizontal (LHD)													
Galeria extraccion de Rajo sub nivel	100	100											200
Total	(100)	(100)											(200)
Galeria (con pala mecanica)													
Nivel -108m	400												400
Nivel -70m	200	300											500
Nivel -33m		300											300
Nivel 0m			400										400
Nivel +52m				200									200
Total	(600)	(600)	(400)	(200)									(1,800)
Chimenea (mineral)													
Esperanza, centro		100		50									150
Esperanza, este			100	50									150
Portazuelo, Laboreo				150									150
Chimenea (esteril)													
Portazuelo, Laboreo	100			50									150
Esperanza, centro			100	100									200
Chimenea (Ventiacion)													
Esperanza, este	100			50									150
Laboreo		100											100
Total	(200)	(200)	(200)	(450)									(1,050)
Galeria piloto (LHD)													
Nivel -108m	100	100											
Nivel -33m			200										
Nivel +52m				200									
Total	(100)	(100)	(200)	(200)									(600)
Total preparacion	1,550	1,550	1,350	1,300									5,750
Preparacion operativa	900	1,050	1,200	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	650	14,600
Glan Total	29450	2,600	2,550	2,650	1,350	1,350	1,350	1,350	1,350	1,350	1,350	650	20,350

Tabla.05-006 COST INVERSION

1.PREPARACION (Laboreo Minero)

Año	-2	-1	0	1	Total
Galeria,Chimeniea	1,550	1,550	1,350	1,300	5,750
Suma $	1,202,000	1,202,000	1,019,000	906,000	4,329,000

2.MAQUINARIAS,RENOVACION

Año	-2	-1	0	1	2	3	4	5	6	7	8	Total
Nueva $	489,000	145,000	1,627,000	329,000		48,000						2,638,000
Renovacion $						110,000	110,000	319,000	95,000	-	128,000	762,000
Total	489,000	145,000	1,627,000	329,000	-	158,000	110,000	319,000	95,000	-	128,000	3,400,000

3.IMPREVISTOS

Año	-2	-1	0	1	2	3	4	5	6	7	8	Total
Imprevistos $	23,000	7,000	79,000	16,000	-	8,000	6,000	16,000	5,000	-	6,000	166,000

4.COST TOTAL DE INVERSION

Año	-2	-1	0	1	2	3	4	5	6	7	8	Total
Gran total	1,715,000	1,354,000	2,725,000	1,251,000	-	166,000	116,000	335,000	100,000	-	134,000	7,896,000

Tabla 05-007 PROGRAMA DE COMPRA MAQUINARIAS PARA MINA INTERIOR

($)

Maquinas \ Año	-2	-1	0	1	2	3	4	5	6	7	8	9	Numero compra	Precio unidad	Suma
HST Num. Com. (Posesion) CAVO 310 Suma $	N1 (1) 91.000	(1)	N5 (6) 455.000	N1 (7) 91.000	(7)	(7) 30.000 M	(7)	(7) 150.000 M	(7) 30.000 M	(7)	(7) 30.000 M	(7)	7	91.000	877.000
LHD F6L 413FW 〃	N1 (1) 206.000	(1)	(1)	(1)	(1)	(1) 50.000 M	(1)	(1)	(1)	(1)	(1) 50.000 M	(1)	1	206.000	306.000
Jumbo (2 brazo) 〃	N1 (1) 192.000	(1)	(1)	(1)	(1)	(1) 30.000 B	(1)	(1)	(1)	(1)	(1)	(1)	1	192.000	222.000
Jumbo (1 brazo) 〃			N1 (1) 174.000	N1 (2) 174.000	(2)	(2)	(2)	(2) 15.000 B	(2) 15.000 B	(2)	(2)	(2)	2	174.000	378.000
Crawler drill 〃			N1 (1) 279.000	(1)	(1)	(1)	(1)	R1 (1) 15.000 B	(1)	(1)	(1)	(1)	1	279.000	294.000
Perforadora BBC-17 〃	(18)	N5 (19) 30.000	N5 (14) 30.000	(13)	(13)	N3 (13) 17.000	R5 (13) 29.000	R5 (13) 29.000	(13)	(13)	R3 (13) 17.000	(13)	26	5.800	152.000
Camion FORD 7000 8t 〃	(1)	N1 (2) 64.000	N1 (2) 64.000	N1 (3) 64.000	(3)	(3)	(3) 50.000 M	(3) 50.000 M	(3) 50.000 M	(3)	(3)	(3)	3	64.000	342.000
Jeep 〃	(1)	N1 (2) 31.000	(2)	(2)	(2)	N1 (2) 31.000	R1 (2) 31.000	(2)	(2)	(2)	R1 (2) 31.000	(2)	4	31.000	124.000
Cargadora con cubierta 930T 〃	(1)	(1)	N1 (1) 289.000	(1)	(1)	(1)	(1)	(1) 30.000 M	(1)	(1)	(1)	(1)	1	289.000	319.000
Topadora Cata. D7 G. 〃	(1)	(1)	N1 (1) 290.000	(1)	(1)	(1)	(1)	(1) 30.000 M	(1)	(1)	(1)	(1)	1	299.000	320.000
Ventiladora (5 kw) 〃	(5)	N5 (10) 20.000	N5 (15) 20.000	(15)	(15)	(15)	(15)	(15)	(15)	(15)	(15)	(15)	10	4.000	40.000
Maquina perf. Diamantina 〃	(1)	(1)	N1 (2) 26.000	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	1	26.000	26.000
Nueva	489.000	145.000	1.627.000	329.000	—	48.000	—	—	—	—	—	—			2.638.009
Renovacion	—	—	—	—	—	110.000	110.000	319.000	95.000	—	128.000	—			762.000
T o t a	489.000	145.000	1.627.000	329.000		158.000	110.000	319.000	95.000	—	128.000	—			3.400.000

*N…… Nueva, R…… Renovacion, M…… Motor, B…… Brazo

Tabla.05-008 GASTO DE PREPARACION OPERATIVA

Año	-2	-1	0	1	2 - 8	9	Total	observacion
LHD (m)	225	250	300	325	337	163	3,622	@ 455$/m Mano ob. 186$/m Material 269$/m
Gasto ($)	102,000	114,000	136,000	148,000	153,000	74,000	1,645,000	
Pala mecanica (m)	225	250	300	325	338	162	3,628	@ 519$/m Mano ob. 214$/m Material 305$/m
Gasto ($)	117,000	130,000	156,000	169,000	175,000	84,000	1,881,000	
Chimenea (m)	450	550	600	700	675	325	7,350	@ 290$/m Mano ob. 127$/m Material 163$/m
Gasto ($)	131,000	160,000	174,000	203,000	196,000	94,000	2,134,000	
Total	900	1,050	1,200	1,350	1,350	650	14,600	
	350,000	404,000	466,000	520,000	524,000	252,000	5,660,000	

Resultadas de las Pruebas de Concentración (1)

Tabla 06-001

No.	Prueba	Muestra	Peso %	Ley Mn %	Ley Ag g/t	Ley Au g/t	Distribución (%) Mn	Distribución (%) Ag	Distribución (%) Au	Condición de Prueba		Tipe de Flowsheet
1	Magnetia Seca	Cabeza	100.0	8.2	104		100.0	100.0		Mineral blanco	Malla -18～+100 Mesh	1
		Mag-1	17.7	20.3	111		43.5	19.1			Mag. Sepa con 5000 G	
		Mag-2	48.4	9.0	122		52.8	57.2			〃 con 10,000 G	
		Non-Mag	33.9	0.9	72		3.7	23.7				Tabla 06-013
2	Magnetia Seca	Cabeza	100.0	15.3	117		100.0	100.0		Mineral negro	Idem	1
		Mag-1	12.1	43.1	244		34.2	25.0				
		Mag-2	50.6	17.5	131		58.0	56.3				
		Non-Mag	37.3	3.2	59		7.8	18.7				Tabla 06-013
3	Flotación	Cabeza	100.0	8.5	96		100.0	100.0		Mineral blanco	Malla -48～+100 Mesh	2
		Decantación	0.3	10.3	122		0.4	0.4		Limo		
		F1	23.3	12.6	216		34.7	52.5		Molino:Malla-65	CO_3Na_2, SiO_3Na_2, Pino, K.A.X	
		F2	12.4	11.3	122		16.5	15.8				
		F3	2.7	13.1	71		4.1	2.0			Pino, Acido Graso	
		F4	2.8	12.5	65		4.2	1.9				
		Relave	58.6	5.8	45		40.1	27.5				Tabla 06-013
4	Flotación	Cabeza	100.0	17.3	118		100.0	100.0		Mineral negro	Malla -48～+100	2
		Decantación	4.4	19.1	130		4.8	4.8			CO_3Na_2, SiO_3Na_2, Pino	
		F1	0.5	20.4	1424		0.5	5.4			Pino, Acido Graso, K.A.X	
		F2	5.0	24.8	184		7.1	7.7				
		F3	6.5	24.9	164		9.4	9.0				
		F4	4.9	23.4	167		6.7	7.0			Pino, Acido Graso	
		F5	4.5	22.8	164		5.9	6.2				
		Relave	74.3	15.3	95		65.6	59.8				Tabla 06-013
5	Lixivación Por NaCN	Cabeza	100.0	6.3	105		100.0	100.0		Mineral blanco	Malla -200, Sólido 50%	3
		Fluido de extr.	125.0	<0.01	0.26		<0.01	0.3			NaCN 0.1%, pH 11, 48 Hr	
		Residuo	99.9	6.3	105		100.0	99.7				Tabla 06-013
6	Lixivación Por NaCN	Cabeza	100.0	14.1	108		100.0	100.0		Mineral negro	idem	3
		Fluido de extr.	125.0	<0.01	0.18		<0.01	0.2				
		Residuo	98.7	14.1	109		100.0	99.5				Tabla 06-013
7	Tostación Clorurante y Lixivación Por NaCN	Cabeza	100.0	7.6	92		100.0	100.0		Mineral blanco	Malla -48	4
		Fluido de extr.	125.0	<0.01	0.68		<0.01	0.9		Tostación	NaCl 5%, 600℃, 30 min	
		Residuo	80.3	9.5	113		100.0	99.1		Lixivación	Malla -200, NaCN 0.1%	
											pH 11, 48 Hr	Tabla 06-013
8	Tostación Clorurante y Lixivación Por NaCN	Cabeza	100.0	15.8	9.8		100.0	100.0		Mineral Negro	idem	4
		Fluido de extr.	125.0	<0.01	0.18		<0.01	0.2		Tostación		
		Residuo	79.9	19.8	121		100.0	99.8		Lixivación		
												Tabla 06-013

Resultadas de las Pruebas de Concentración (2)

Tabla 06-002

No.	Prueba	Muestra	Peso %	Ley Mn %	Ley Ag g/t	Ley Au g/t	Distribución (%) Mn	Distribución (%) Ag	Distribución (%) Au	Condición de Prueba		Tipe de Flowsheet
9	Tostación Desoxidante	Cabeza	100.0	8.4	99		100.0	100.0		Mineral blanco	Malla -48	4
	y	Fluido de extr.	125.0	<0.01	0.06		<0.01	0.1		Tostación	CoKes 10%, 800℃, 30 min	
	Lixivación	Residuo	83.7	10.1	11.9		100.0	99.9		Lixivación	Separación de CoKe, Malla -200	
	Por NaCN										NaCN 0.1%, pH 11, 48 Hr	Table 06-013
10	Tostación Desoxidante	Cabeza	100.0	14.5	96		100.0	100.0		Mineral Negro		4
	y	Fluido de extr.	125.0	<0.01	0.20		<0.01	0.3		Tostación		
	Lixivación	Residuo	80.3	18.1	120		100.0	99.7		Lixivación		
	Por NaCN											Table 06-013
11	Segregación	Cabeza	100.0	7.8	90		100.0	100.0		Mineral blanco	Malla -48	4
	y	Fluido de extr.	125.0	<0.01	31.2		<0.01	43.3		Segregación	Malla +28, CoKe 3%, NaCl 0.5%, 800 ℃, 30 min,	
	Lixivación	Residuo	79.8	10.1	64		100.0	56.7			Separación de CoKe por Malla de 48,	
	Por NaCN									Lixivación	Malla -200, NaCN 0.1%, pH 11, 48 Hr	Table 06-013
12	Segregación	Cabeza	100.0	14.8	93		100.0	100.0		Mineral negro	Malla -48	4
	y	Fluido de extr.	125.0	<0.01	65.1		<0.01	87.2		Segregación	Malla +28, CoKe 3%, NaCl 0.5%, 800 ℃, 30 min,	
	Lixivación	Residuo	79.6	18.5	20		100.0	12.8			Separación de CoKe por Malla de 48,	
	Por NaCN									Lixivación	Malla -200, NaCN 0.1%, pH 11, 48 Hr	Table 06-013
13	Segregación	Cabeza	100.0	13.8	120		100.0	100.0		Mineral blanco y negro mixdo	Malla-48	5
	y	Segregado	91.4	15.1	131		100.0	100.0		Segregación	CoKe 30 %, NaCl 0.5%, 800 ℃, 30 min	
	Flotación	F1	3.7	7.6	2430		2.0	75.1		Flotación	Solido 28 %, Pino, KAX, Kerosine, 10 min	
		Relave	87.7	15.4	34		98.0	24.9				Table 06-014
14	Magnetica	Cabeza	100.0	10.7	111.3		100.0	100.0		Muestra #2	Malla -28～+100	6
	y	Mag-1	4.5	28.8	111.5		12.1	4.4			Magetica Separación con 3,000 G	
	Lixivación	Mag-2	14.8	19.5	121.8		26.8	16.1			Magetica Separación con 5,000 G	
	Por NaCN	Mag-3	30.2	10.4	120.2		29.2	32.4			Magetica Separación con 10,000 G	
		Non-Mag	50.5	6.8	104.6		31.9	47.1				Table 06-014
		Mag-1	100.0	31.4	111.5		100.0	100.0		Lixivación	Malla -200	3
		Fluido de extr.	(400)	<0.01	9.4		<0.01	33.7			Solido 25%	
		Residuo	98.4	31.9	75.1		100.0	66.4			NaCN 0.4%, pH 11, 24 Hr	Table 06-013
		Mag-2	100.0	21.5	121.8		100.0	100.0		Lixivación	Malla -200	3
		Fluido de extr.	(400)	<0.01	13.3		<0.01	43.7			Solido 25%	
		Residuo	99.0	21.7	69.3		100.0	56.3			NaCN 0.4%, pH 11, 24 Hr	Table 06-013
		Mag-3	100.0	10.4	120.2		100.0	100.0		Lixivación	Malla -200	3
		Fluido de extr.	(400)	<0.01	16.9		<0.01	56.3			Solido 25%	
		Residuo	99.2	10.5	53.0		100.0	43.7			NaCN 0.4%, pH 11, 24 Hr	Table 06-013
		Non-Mag	100.0	6.8	104.6		100.0	100.0		Lixivación	Malla -200	3
		Fluido de extr.	(400)	<0.01	19.1		<0.01	73.1			Solido 25%	
		Residuo	98.5	6.9	28.6		100.0	26.9			NaCN 0.4%, pH 11, 24 Hr	Table 06-013

Resultadas de las Pruebas de Concentración (3)

Tabla 06-003

No.	Prueba	Muestra	Peso %	Ley Mn %	Ley Ag g/t	Ley Au g/t	Distribución (%) Mn	Distribución (%) Ag	Distribución (%) Au	Condición de Prueba					Tipe de Flowsheet
15	Lixivación Por NaCN	Cabeza	100.0	10.7	131		100.0	100.0		Malla -200	AcAcetatio de plomo	NaCN	Tiempo		3
		Fluido de extr.	166.6	<0.01	2.58		<0.01	3.3		90%	0 g/t	0.2 %	24 Hr		
		Residuo	98.9	10.7	128		100.0	96.7							Tabla 06-013
		Cabeza	100.0	11.9	139		100.0	100.0							3
		Fluido de extr.	166.6	<0.01	2.62		<0.01	3.2		100	100	0.2	24		
		Residuo	99.3	12.0	135		100.0	96.8							
		Cabeza	100.0	11.7	129		100.0	100.0							3
		Fluido de extr.	166.6	<0.01	0.21		<0.01	0.3		90	100	0.2	48		
		Residuo	99.0	11.8	130		100.0	99.7							
		Cabeza	100.0	10.7	130		100.0	100.0							3
		Fluido de extr.	166.6	<0.01	0.30		<0.01	0.4		100	0	0.2	48		
		Residuo	99.0	10.8	131		100.0	99.6							
		Cabeza	100.0	12.1	131		100.0	100.0							3
		Fluido de extr.	166.6	<0.01	52.59		<0.01	66.7		90	100	0.4	24		
		Residuo	99.3	12.2	44		100.0	33.3							
		Cabeza	100.0	12.1	128		100.0	100.0							3
		Fluido de extr.	166.6	<0.01	47.0		<0.01	61.3		100	0	0.4	24		
		Residuo	99.1	12.2	50		100.0	38.7							
		Cabeza	100.0	12.3	129		100.0	100.0							3
		Fluido de extr.	166.0	<0.01	52.0		<0.01	67.1		90	0	0.4	48		
		Residuo	99.1	12.4	43		100.0	32.9							
		Cabeza	100.0	12.5	132		100.0	100.0							3
		Fluido de extr.	166.0	<0.01	53.4		<0.01	67.6		100	100	0.4	48		
		Residuo	99.2	12.6	43		100.0	32.4							
16	Lixivación Por NaCN	Cabeza 0.1%	100.0	11.67	139.8		100.0	100.0	81.3	Concentración de NaCN(%)		Consumo de NaCN		pH Final	3
		Fluido de extr.	200.0	<0.01	0.2		<0.01	0.3		0.10		1.89		8.9	
		Residuo	99.3	11.75	140.9		100.0	99.7							
		Cabeza 0.2%	100.0	11.56	138.7		100.0	100.0	88.9	0.20		3.80		9.2	3
		Fluido de extr.	200.0	<0.01	3.7		<0.01	5.3							
		Residuo	99.2	11.65	132.4		100.0	94.7							
		Cabeza 0.25%	100.0	11.49	141.3		100.0	100.0	93.2	0.25		4.72		9.8	3
		Fluido de extr.	200.0	<0.01	40.7		<0.01	57.6							
		Residuo	99.3	11.57	60.3		100.0	42.4							
		Cabeza 0.3%	100.0	11.72	139.3		100.0	100.0	93.1	0.30		5.61		9.9	3
		Fluido de extr.	200.0	<0.01	50.1		<0.01	71.9							
		Residuo	99.0	11.84	39.5		100.0	28.1							
		Cabeza 0.4%	100.0	11.57	137.7		100.0	100.0	93.5	0.40		6.64		10.1	3
		Fluido de extr.	200.0	<0.01	50.2		<0.01	72.9		(Condición Comun:Solido 50 %, Inicial pH 11, 24 Hr)					
		Residuo	98.9	11.70	37.7		100.0	27.1		(*:Tifulación por nitrato de plata)					

Resultadas de las Pruebas de Concentración (4)

Tabla 06-004

No.	Prueba	Muestra	Peso %	Ley Mn %	Ley Ag g/t	Ley Au g/t	Distribución (%) Mn	Distribución (%) Ag	Distribución (%) Au	Condición de Prueba					Tipe de Flowsheet
17-1	Flotación y Lixivación Por NaCN	Cabeza	100.0	12.3	138		100.0	100.0		Malla -200	pH	Acido oileico	Aceite Pino		7
		F1	12.5	12.5	780		12.7	70.7		100%	8.0	0 g/t	75g/t		
		Relave (R1)	87.5	12.3	46		87.3	29.3							Tabla 06-014
		Cabeza	100.0	12.1	135		100.0	100.0		90	10.0	0	75		7
		F2	10.2	13.4	860		11.3	64.8							
		Relave (R2)	89.8	12.0	53		88.7	35.2							
		Cabeza	100.0	12.1	132		100.0	100.0		100	10.0	0	38		7
		F3	7.2	12.2	1,263		7.3	69.0							
		Relave (R3)	92.8	12.1	44		92.7	31.0							
		Cabeza	100.0	12.3	128		100.0	100.0		90	8.0	0	38		7
		F4	6.9	13.0	1,280		7.3	68.8							
		Relave (R4)	93.1	12.2	43		92.7	31.2							
		Cabeza	100.0	12.4	134		100.0	100.0		100	8.0	50	75		7
		F5	10.7	13.6	971		11.7	77.4							
		Relave (R5)	89.3	12.3	34		88.3	22.6							
		Cabeza	100.0	12.0	130		100.0	100.0		90	10.0	50	75		7
		F6	6.2	13.2	1,319		6.8	63.1							
		Relave (R6)	93.8	11.9	51		93.2	36.9							
		Cabeza	100.0	12.3	136		100.0	100.0		100	10.0	50	38		7
		F7	7.3	13.1	1,300		7.8	69.9							
		Relave (R7)	92.7	12.2	44		92.2	30.1							
		Cabeza	100.0	12.5	132		100.0	100.0		90	8.0	50	38		7
		F8	5.9	15.3	1,492		7.2	66.6							
		Relave (R8)	94.1	12.3	47		92.8	33.3		(Condición comun:Tiempo 15 mi, AF 208.30g/t, KAX 200 g/t)					
17-2	Lixivación para Producto de Flotación	Cabeza	100.0	12.8	1,048		100.0	100.0		Solido 40 %, NaCN 0.4%, 24 Hr					7
		(F1+F3)	200.0	<0.01	309		<0.01	59.0							
		Fuluido de Ex. Reciduo	99.4	12.9	433		100.0	41.0							
		Cabeza	100.0	12.2	42		100.0	100.0		Solido 40 %, NaCN 0.4%, 24 Hr					7
		Relave de (F1+F3)	200.0	<0.01	8.3		<0.01	39.2							
		Fuluido de Ex. Reciduo	99.2	12.3	26		100.0	60.8							
18	Flotación para Residuo de Lixivación	Cabeza	100.0	10.45	42.4		100.0	100.0		AF 50 %, KAX 200g/t, Pino 50 g/t, 10 min					8
		F1	3.8	12.14	102.0		4.4	9.2							
		Relave	96.2	10.39	40.0		95.6	90.8							Tabla 06-015
		Cabeza	100.0	10.57	40.7		100.0	100.0		$CuSO_4$ 200 g/t, Pino 100 g/t, 15 min					8
		F2	8.7	11.80	109.0		9.7	23.3							
		Relave	91.3	10.45	34.2		90.3	76.7							

Resultadas de las Pruebas de Concentración (5)

Tabla 06-005

No.	Prueba	Muestra	Peso %	Ley Mn %	Ley Ag g/t	Ley Au g/t	Distribución (%) Mn	Distribución (%) Ag	Distribución (%) Au	Condición de Prueba	Tipe de Flowsheet
19	Autoclave y Lixivación	Cabeza	100.0	17.8	155		100.0	100.0		Malla -28, 5,000G Mag, Molino : Malla -200	9
		Fluido de Ex.	400.0	<.01	21.8		<0.01	56.3		Autoclave : Sin Autoclave (Blanco)	
		Residuo	100.0	17.8	67.8		100.0	43.7		Condición Comun : NaCN 0.4%, pH 11, 24Hr	
										(Condición Comun de Autoclave : Solido 30 %, 200 ℃, 18～20 kg／cmf)	Tabla 06-015
		Cabeza	100.0	17.7	154		100.0	100.0		Autoclave : Sin Aditivo	9
		Fluido de Ex.	400.9	<0.01	25.6		0.1	66.5			
		Residuo	98.6	17.9	52.3		99.9	33.5			
		Cabeza	100.0	18.2	159		100.0	100.0		Autoclave : Con $NaHSO_3$ 1%	9
		Fluido de Ex.	400.0	<0.01	23.5		0.1	59.0			
		Residuo	99.6	18.3	65.6		99.9	41.0			
		Cabeza	100.0	17.7	152		100.0	100.0		Autoclave : Con NaOCl 1%	9
		Fluido de Ex.	400.0	<0.01	29.2		<0.01	76.8			
		Residuo	98.8	17.9	35.8		100.0	23.2			
		Cabeza	100.0	17.5	152		100.0	100.0		Autoclave : NaCN 0.2%	9
		Fluido de Ex.	400.0	<0.01	2.1		<0.01	5.4			
		Residuo	97.8	17.9	147		100.0	94.6			
20	Oxidación en Fluido y Lixivación	Cabeza	100.0	18.04	140.0		100.0	100.0		Malla -28, 5,000G Mag, Molino:Malla -200	10
		Fluido de Ex.	200.0	<0.01	38.0		<0.01	54.3		Oxidación en Fluido : Blanco	
		Residuo	49.9	18.08	64.1		100.0	45.7		Condición Comun : Solido 30 %, NaCN 0.4%, 24 Hr	Tabla 06-015
		Cabeza	100.0	18.29	138.1		100.0	100.0		Oxidación en Fluido : NaOCl 1 %, 24 Hr, Filter , H_2O Cleaning	10
		Fluido de Ex.	200.0	<0.01	48.3		<0.01	70.0			
		Residuo	49.7	18.40	41.7		100.0	30.0			
		Cabeza	100.0	18.24	133.5		100.0	100.0		Oxidación en Fluido : Chlovinated Lime 1%, 24 Hr, Filter , H_2O Cleaning	10
		Fluido de Ex.	200.0	<0.01	42.3		<0.01	63.8			
		Residuo	99.8	18.28	49.0		100.0	36.2			
		Cabeza	100.0	19.22	138.1		100.0	100.0		Oxidación en Fluido : Na_2O_2 1 %, 24 Hr, Filter , H_2O Cleaning	10
		Fluido de Ex.	200.0	<0.01	39.5		<0.01	57.3			
		Residuo	99.6	19.36	59.6		100.0	42.7			
		Cabeza	100.0	18.55	141.1		100.0	100.0		Oxidación en Fluido : Na_2SO_3 1 %, 24 Hr, Filter , H_2O Cleaning	10
		Fluido de Ex.	200.0	<0.01	36.6		<0.01	51.9			
		Residuo	99.6	18.62	68.2		100.0	48.1			
		Cabeza	100.0	18.09	135.0		100.0	100.0		Oxidación en Fluido : $NaBH_4$ 1 %, 24 Hr, Filter , H_2O Cleaning	10
		Fluido de Ex.	200.0	0.01	46.5		<0.01	68.9			
		Residuo	99.4	18.18	42.2		100.0	31.1			

Resultadas de las Pruebas de Concentración (6)

Tabla 06-006

No.	Prueba	Muestra	Peso %	Ley Mn %	Ley Ag g/t	Ley Au g/t	Distribución (%) Mn	Distribución (%) Ag	Distribución (%) Au	Condición de Prueba	Tipe de Flowsheet
21	Oxidación en Fluido y Lixivación	Cabeza	100.0	18.01	139.7		100.0	100.0		Malla -28.5.000G Mag, Malla -200	10
		Fluido de Ex.	200.0	<0.01	48.7		<0.01	69.7		Oxidación en FLluido : NaOCl 0.5%, 2 Hr, Filtro, H_2O Cleaning	
		Residuo	98.7	18.25	42.7		100.0	30.3		Lixivación : NaCN 0.4 %, 2Hr	Table 06-015
		Cabeza	100.0	17.34	136.0		100.0	100.0		Oxidación en FLluido : NaOCl 0.25%	10
		Fluido de Ex.	200.0	<0.01	48.5		<0.01	67.4		Lixivación : NaCN 0.4%	
		Residuo	97.3	17.92	45.6		100.0	32.6			
		Cabeza	100.0	17.72	148.0		100.0	100.0		Oxidación en FLluido : NaOCl 0.5 %	10
		Fluido de Ex.	200.0	<0.01	37.8		<0.01	51.1		Lixivación : NaCN 0.25 %	
		Residuo	98.3	18.03	73.7		100.0	48.9			
		Cabeza	100.0	10.2	130.6		100.0	100.0		Oxidación en FLluido : NaOCl 0.5 %	10
		Fluido de Ex.	200.0	<0.01	50.4		<0.01	77.2		Lixivación : NaCN 0.4%	
		Residuo	98.8	10.3	30.2		100.0	22.8			
		Cabeza	100.0	9.9	128.0		100.0	100.0		Oxidación en FLluido : NaOCl 0.25%	10
		Fluido de Ex.	200.0	<0.01	46.1		<0.01	72.0		Lixivación : NaCN 0.4%	
		Residuo	98.7	100.0	36.3		100.0	28.0			
22	Tostación y Lixivación	Cabaza	100.0	19.77	134.1		100.0	100.0		Malla -28, 5.000 G Mag, Malla -200	4
		Tostado	(88.2)	(22.41)	(152.6)		(100.0)	(100.0)		Tostación : Clorurante : NaCl 1%, 600 ℃, 30 min	
		Fluido de Ex.	200.0	<0.01	40.7		<0.01	60.7		Lixivación : Malla -200, NaCN 0.4 %, 24 Hr	
		Residuo	88.2	22.41	59.7		100.0	39.3			Table 06-013
		Cabaza	100.0	19.15	138.3		100.0	100.0		Tostación : Oxidación : Con Aire, 800 ℃, 30 min	4
		Tostado	(86.4)	(22.16)	(160.0)		(100.0)	(100.0)		Lixivación : Malla -200, NaCN 0.4 %, 24 Hr	
		Fluido de Ex.	200.0	<0.01	4.6		<0.01	6.6			
		Residuo	86.4	22.16	149.4		100.0	93.4			
		Cabaza	100.0	19.56	132.2		100.0	100.0		Tostación : Segregación : NaCl 0.5%, Coke 3%, 800 ℃, 30 min	4
		Tostado	(86.4)	(22.64)	(153.0)		(100.0)	(100.0)		Lixivación : Malla -200, NaCN 0.4 %, 24 Hr	
		Fluido de Ex.	200.0	<0.01	53.5		<0.01	81.0			
		Residuo	86.4	22.64	29.0		100.0	19.0			
		Cabaza	100.0	18.35	132.2		100.0	100.0		Tostación : Reducción : Coke 5%, 800 ℃, 30 min	4
		Tostado	(87.0)	(21.09)	(152.0)		(100.0)	(100.0)		Lixivación : Malla -200, NaCN 0.4 %, 24 Hr	
		Fluido de Ex.	200.0	<0.01	51.2		<0.01	77.5			
		Residuo	87.0	21.09	34.2		100.0	22.5			
		Cabaza	100.0	17.60	132.8		100.0	100.0		Tostación : Reducción : Coke 10 %, 800 ℃, 30 min	4
		Tostado	(88.1)	(19.98)	(150.7)		(100.0)	(100.0)		Lixivación : Malla -200, NaCN 0.4 %, 24 Hr	
		Fluido de Ex.	200.0	<0.01	50.6		<0.01	76.2			
		Residuo	88.1	19.98	35.9		100.0	23.8			

Resultadas de las Pruebas de Concentración (7)

Tabla 06-007

No.	Prueba	Muestra	Peso %	Ley Mn %	Ley Ag g/t	Ley Au g/t	Distribución (%) Mn	Distribución (%) Ag	Distribución (%) Au	Condición de Prueba		Tipe de Flowsheet
23	Flotación y Segregación y Lixivación	Cabeza	100.0	12.1	103.0		100.0	100.0		Malla -200 :	Concentración de Flotación	11
		Segregado	88.4	13.7	113.5		100.0	100.0		Segregación :	Coke 3%, NaCL 0.5%, 800 ℃, 30 min,	
		Fluido de Ex.	167.8	<0.01	41.9		<0.01	70.1		Lixivación :	Solido 40 %, NaCN 0.4 %, 24 Hr	
		Reciduo	88.0	13.7	34.1		100.0	29.9				Tabla 06-016
23-1	Flotación y Mag. Separación y Lixivación	Cabeza	100.0	10.7	40.5		100.0	100.0		Malla -200 :	Relave de Flotación	11
		Mag-1	22.8	14.2	45.8		30.2	25.8			Mag. Sepa. con 3,000 G.	
		Non Mag	77.2	9.7	38.9		69.8	64.2		Segregado de Mag-1.	con Coke 3 %, NaCl 0.5%, 800 ℃, 30 min	
		Segregado	20.1	16.1	52.0		30.2	25.8		Lixivación :	Solido 40 %, NaCN 0.4 %, 24 Hr	11
		Fluido de Ex.	40.2	<0.01	18.0		<0.01	17.9				
		Reciduo	20.0	16.0	16.1		30.2	7.9				
24	Oxidación en Fluido y Lixivación	Cabeza	100.0	11.9	131.4	5.2	100.0	100.0	100.0	Malla -200	Sin Oxidación	12
		Fluido de Ex.	250 ml	<0.01	0.94	1.7	—	1.8	81.1		NaCN 0.1%, pH 11, 24 Hr	
		Reciduo	99.3	11.8	130.0	1.0	100.0	98.2	18.9			Tabla 06-016
		Cabeza	100.0	12.1	131.3	5.1	100.0	100.0	100.0	Malla -200		12
		Fluido de Ex.	250 ml	<0.01	11.72	1.7	—	22.3	82.6		Oxidación en Fluido : NaOCl 0.2 %, 24 Hr	
		Reciduo	98.6	11.9	130.0	0.9	100.0	77.7	17.4		NaCN 0.1%, pH 11, 24 Hr	
25	Lixivación y Mag. Separación y Lixivación	Cabeza	100.0	11.6	142.2	6.4	100.0	100.0	100.0			Ref. 6.1.6 (1)
		Fluido de Ex. (1)	150 ml	<0.01	67.1	4.1	—	70.8	96.1		Consumo de NaCN 3,720 g/t	
		Reciduo	99.2	11.7	41.9	0.25	100.0	79.2	3.9			Fig. 6-2
		Mag-1	24.6	12.6	63.7	0.25	26.6	11.0	1.0		3,000G de Mag. Sepa.	
		Fluido de Ex. (2)	36.9ml	<0.01	23.9	0.1	—	6.2	0.6		Consumo de NaCN 498 g/t	
		Reciduo	24.6	12.6	27.8	0.1	26.6	4.8	0.4			
		Non Mag	74.6	11.5	34.8	0.25	73.4	18.2	2.9			
		Fluido de Ex. (3)	111.9ml	<0.01	4.5	0.1	—	3.5	1.7		Consumo de NaCN 2,366 g/t	
		Reciduo	74.6	11.5	28.0	0.1	73.4	14.7	1.2			
	(Fluido deEx. (1)+(2)+(3))							80.5	98.4		Total Consumo 6,584 g/t	
26	Lixivación y Lixivación	Cabeza	100.0	11.8	144.5	6.4	100.0	100.0	100.0			Ref. 6.1.6 (2)
		Fluido de Ex. (1)	150.0ml	<0.01	67.8	4.1	—	70.4	96.1		Consumo de NaCN 3,712 g/t	
		Reciduo	99.5	11.9	43.0	0.25	100.0	29.6	3.9			Fig. 6-3
		Fluido de Ex. (2)	150.0ml	<0.01	6.2	0.1	—	6.4	2.3		Consumo de NaCN 3,225 g/t	
		Reciduo	99.5	11.9	33.7	0.1	100.0	23.2	1.6			
	(Fluido deEx. (1)+(2))							76.8	98.4		Total Consumo 6,937 g/t	

Resultadas de las Pruebas de Concentración (8)

Tabla 06-008

No.	Prueba	Muestra	Peso %	Ley Mn %	Ley Ag g/t	Ley Au g/t	Distribución (%) Mn	Distribución (%) Ag	Distribución (%) Au	Condición de Prueba	Tipe de Flowsheet
27	Mag. Sepa.	Cabeza	100.0	12.4	132.9	6.1	100.0	100.0	100.0		Ref. 6.1.6 (3)
	y	Mag-1	6.7	22.5	127.0	10.8	12.2	6.4	12.4	3,000 G de Mag. Sepa.	
	Lixivación	Non-Mag	93.3	11.6	133.0	5.7	87.8	93.6	87.6		Fig. 6-4
	y	Mag-1	6.7	22.5	127.0	10.8	12.2	6.4	12.4		
	Flotación	Fluido de Ex. (1)	20.1 ml	0.05	23.0	3.6	0.1	3.5	11.9	Consumo de NaCN 380 g/t Lixivación	
	y	Residuo	6.7	22.4	58.0	0.5	12.1	2.9	0.5		
	Lixivación	Non-Mag	93.3	11.6	133.0	5.7	87.8	93.6	87.6		
		Conc.	6.8	12.9	906.3	16.0	7.1	46.1	17.9	Flotación	
		NRelave	86.5	11.5	73.7	4.9	80.7	47.5	69.7		
		Conc.	6.8	12.9	906.3	16.0	7.1	46.1	17.9		
		Fluido de Ex. (2)	20.4 ml	0.02	107.0	4.6	0.1	16.4	15.4	363 g/t Lixivación	
		Residuo	6.8	12.8	580.0	2.2	7.0	29.7	2.5		
		Relave	86.5	11.5	73.6	4.9	80.7	45.7	69.7		
		Fluido de Ex. (3)	259.5 ml	0.01	16.0	1.6	0.2	31.2	68.3	3,512 g/t Lixivación	
		Residuo	86.5	11.5	25.0	0.1	80.5	16.3	1.4		
	(Fluido de Ex. (1)+(2)+(3)							51.1	95.6	Total Consumo de NaCN 4,255 g/t	

Resultadas de las Pruebas de Concentración (9)

Tabla 06-009

No.	Prueba	Muestra	Peso (gr) / Volumen (ml)	Ag Ley (g/t)	Ag Continido Interior	Ag Contenido Exterior	Ag Contenido Total	Ag Recuperación (%)	Au Ley (g/t)	Au Continido	Au Recuperación (%)	Condición
28-1	Auto Clave	Cabeza	49.93	106.92			5,338.42		6.10	304.57	100.00	Plueba blanca
		Cake	49.93	28.00			1,398.04	26.19	0.20	9.99	3.28	Malla :
		2 Hr. Filtrado	150.00	13.00	1,950.00		1,950.00	36.53				Temp. :
		4 Hr. Filtrado	140.00	16.00	2,240.00	130.00	2,370.00	44.40				Presión :
		7 Hr. Filtrado	130.00	18.00	2,340.00	160.00	2,630.00	49.27				Tiempo :
		24 Hr. Filtrado	120.00	23.00	2,760.00	180.00	3,230.00	60.50				Presión Initial :
		30 Hr. Filtrado	110.00	24.00	2,640.00	230.00	3,340.00	62.57				
		48 Hr. Filtrado	237.00	12.00	2,844.00	240.00	3,784.00	70.88				
		Agua en Cake	13.03	12.00	156.38		3,940.38	73.81		294.59	96.72	Condiciónes Comun
		Humedad Cake	0.26									NaCN 0.4%, 48 Hr
28-2		Cabeza	47.75	98.31			4,694.27		6.10	291.28	100.00	Malla : -200
		Cake	47.75	25.00			1,193.75	25.43	0.10	4.78	1.64	Temp. : 212
		2 Hr. Filtrado	150.00	13.00	1,950.00		1,950.00	41.54				Presión : 19.4
		4 Hr. Filtrado	140.00	15.00	2,100.00	130.00	2,230.00	47.50				Tiempo : 30
		7 Hr. Filtrado	130.00	17.00	2,210.00	150.00	2,490.00	53.04				Presión Initial : Aire 1.1
		24 Hr. Filtrado	120.00	20.00	2,400.00	170.00	2,850.00	60.71				
		30 Hr. Filtrado	110.00	21.00	2,310.00	200.00	2,960.00	63.06				
		48 Hr. Filtrado	226.20	11.00	2,488.20	210.20	3,348.20	71.33				
		Agua en Cake	13.85	11.00	152.32		3,500.52	74.57		286.50	98.36	
		Humedad Cake	0.29									
28-3		Cabeza	48.47	99.55			4,825.30		6.10	295.67	100.00	Malla : -200
		Cake	48.47	23.00			1,114.81	23.10	0.10	4.85	1.64	Temp. : 211
		2 Hr. Filtrado	150.00	12.00	1,800.00		1,800.00	37.30				Presión : 19.1
		4 Hr. Filtrado	140.00	14.00	1,960.00	120.00	2,080.00	43.11				Tiempo : 15
		7 Hr. Filtrado	130.00	16.00	2,080.00	140.00	2,340.00	48.49				Presión Initial : —
		24 Hr. Filtrado	120.00	20.00	2,400.00	160.00	2,820.00	58.44				
		30 Hr. Filtrado	110.00	21.00	2,310.00	200.00	2,930.00	60.72				
		48 Hr. Filtrado	225.50	12.00	2,706.00	210.00	3,536.00	73.28				
		Agua en Cake	14.54	12.00	174.49		3,710.49	76.90		290.82	98.36	Condiciónes Comun
		Humedad Cake	0.30									NaCN 0.4%, 48 Hr

Resultadas de las Pruebas de Concentración (10)

Tabla 06-010

No.	Prueba	Muestra	Peso (gr) / Volumen (ml)	Ag Ley (g/t)	Ag Continido Interior	Ag Contenido Exterior	Ag Contenido Total	Ag Recuperación (%)	Au Ley (g/t)	Au Continido	Au Recuperación (%)	Condición
28-4	Auto Clave	Cabeza	47.73	103.56			4,943.12		6.10	291.15	100.00	Malla : -200
		Cake	47.73	25.00			1,193.25	24.14	0.20	9.55	3.28	Temp. : 213
		2 Hr. Filtrado	150.00	17.00	2,550.00		2,550.00	51.59				Presión : 19.1
		4 Hr. Filtrado	140.00	18.00	2,520.00	170.00	2,690.00	54.42				Tiempo : 60
		7 Hr. Filtrado	130.00	19.00	2,470.00	180.00	2,820.00	57.05				Presión Initial : —
		24 Hr. Filtrado	120.00	22.00	2,640.00	190.00	3,180.00	64.33				
		30 Hr. Filtrado	110.00	23.00	2,530.00	220.00	3,290.00	66.56				
		48 Hr. Filtrado	218.20	12.00	2,618.40	230.00	3,608.40	73.00				
		Agua en Cake	11.79	12.00	141.47		3,749.87	75.86		281.61	96.72	
		Humedad Cake	0.25									Flujo de Prueba : 6.1.6(4)
28-5		Cabeza	48.54	104.88			5,090.99		6.10	296.09	100.00	Malla : -200
		Cake	48.54	27.00			1,310.58	25.74	0.20	9.71	3.28	Temp. : 182
		2 Hr. Filtrado	150.00	14.00	2,100.00		2,100.00	41.25				Presión : 9.8
		4 Hr. Filtrado	140.00	15.00	2,100.00	140.00	2,240.00	44.00				Tiempo : 30
		7 Hr. Filtrado	130.00	17.00	2,210.00	150.00	2,500.00	49.11				Presión Initial : —
		24 Hr. Filtrado	120.00	21.00	2,520.00	170.00	2,980.00	58.53				
		30 Hr. Filtrado	110.00	23.00	2,530.00	210.00	3,200.00	62.86				
		48 Hr. Filtrado	226.20	12.00	2,714.40	230.00	3,614.40	71.00				
		Agua en Cake	13.83	12.00	166.01		3,780.41	74.26		286.39	96.72	Condicións Comun NaCN 0.4%, 48 Hr
		Humedad Cake	0.29									
28-6		Cabeza	44.50	118.00			5,251.12		6.10	271.45	100.00	Malla : -200
		Cake	44.50	27.00			1,201.50	22.88	0.10	4.45	1.64	Temp. : 206
		2 Hr. Filtrado	150.00	18.00	2,700.00		2,700.00	51.42				Presión : 18.1
		4 Hr. Filtrado	140.00	19.00	2,660.00	180.00	2,840.00	54.08				Tiempo : 30
		7 Hr. Filtrado	130.00	21.00	2,730.00	190.00	3,190.00	59.04				Presión Initial : O_2 5.3
		24 Hr. Filtrado	120.00	24.00	2,880.00	210.00	3,460.00	65.89				
		30 Hr. Filtrado	110.00	24.00	2,640.00	240.00	3,460.00	65.89				
		48 Hr. Filtrado	218.00	13.00	2,834.00	240.00	3,894.00	74.16				
		Agua en Cake	11.97	13.00	155.62		4,049.62	77.12		267.00	98.36	
		Humedad Cake	0.27									

Resultadas de las Pruebas de Concentración (11)

Tabla 06-011

No.	Prueba	Muestra	Peso (gr) / Volumen (ml)	Ag Ley (g/t)	Ag Continido Interior	Ag Contenido Exterior	Ag Contenido Total	Ag Recuperación (%)	Au Ley (g/t)	Au Continido	Au Recuperación (%)	Condición
28-7	Auto Clave	Cabeza	47.18	109.10			5,147.14		6.10	287.80	100.00	Malla : -200
		Cake	47.18	26.00			1,226.68	23.83	0.20	9.44	3.28	Temp. : 211
		2 Hr. Filtrado	150.00	16.00	2,400.00		2,400.00	46.63				Presión : 23.6
		4 Hr. Filtrado	140.00	18.00	2,520.00	160.00	2,680.00	52.07				Tiempo : 30
		7 Hr. Filtrado	130.00	20.00	2,600.00	180.00	2,940.00	57.12				Presión Initial : Aire 1.2
		24 Hr. Filtrado	120.00	25.00	3,000.00	200.00	3,540.00	68.78				
		30 Hr. Filtrado	110.00	25.00	2,750.00	250.00	3,540.00	68.78				
		48 Hr. Filtrado	227.30	12.00	2,727.60	250.00	3,767.60	73.20				
		Agua en Cake	12.74	12.00	152.86		3,920.46	76.17		278.36	96.72	Condiciónes Comun
		Humedad Cake	0.27									NaCN 0.4%, 48 Hr
28-8		Cabeza	48.12	113.38			5,455.87		6.10	293.53	100.00	Malla : -200
		Cake	48.12	29.00			1,395.48	25.58	0.10	4.81	1.64	Temp. : 211
		2 Hr. Filtrado	150.00	18.00	2,700.00		2,700.00	49.49				Presión : 24.8
		4 Hr. Filtrado	140.00	19.00	2,660.00	180.00	2,840.00	52.05				Tiempo : 30
		7 Hr. Filtrado	130.00	21.00	2,730.00	190.00	3,100.00	56.82				Presión Initial : O_2 5.2
		24 Hr. Filtrado	120.00	24.00	2,880.00	210.00	3,460.00	63.42				
		30 Hr. Filtrado	110.00	25.00	2,750.00	240.00	3,570.00	65.43				
		48 Hr. Filtrado	218.00	13.00	2,834.00	250.00	3,904.00	71.56				
		Agua en Cake	12.03	13.00	156.39		4,060.39	74.42		288.72	98.36	
		Humedad Cake	0.25									
28-9		Cabeza	47.99	114.64			5,501.47		6.10	292.74	100.00	Malla : -200
		Cake	47.99	29.00			1,391.71	25.30	0.20	9.60	3.28	Temp. : 206
		2 Hr. Filtrado	150.00	20.00	3,000.00		3,000.00	54.53				Presión : 33.1
		4 Hr. Filtrado	140.00	21.00	2,940.00	200.00	3,140.00	57.08				Tiempo : 30
		7 Hr. Filtrado	130.00	22.00	2,860.00	210.00	3,270.00	59.44				Presión Initial : O_2 10.1
		24 Hr. Filtrado	120.00	24.00	2,880.00	220.00	3,510.00	63.80				
		30 Hr. Filtrado	110.00	25.00	2,750.00	240.00	3,620.00	65.80				
		48 Hr. Filtrado	218.80	13.00	2,844.40	250.00	3,964.40	72.06				
		Agua en Cake	11.18	13.00	145.36		4,109.76	74.70		283.14	96.72	Condiciónes Comun
		Humedad Cake	0.23									NaCN 0.4%, 48 Hr

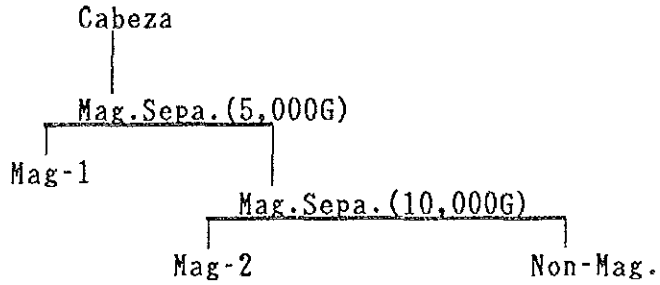
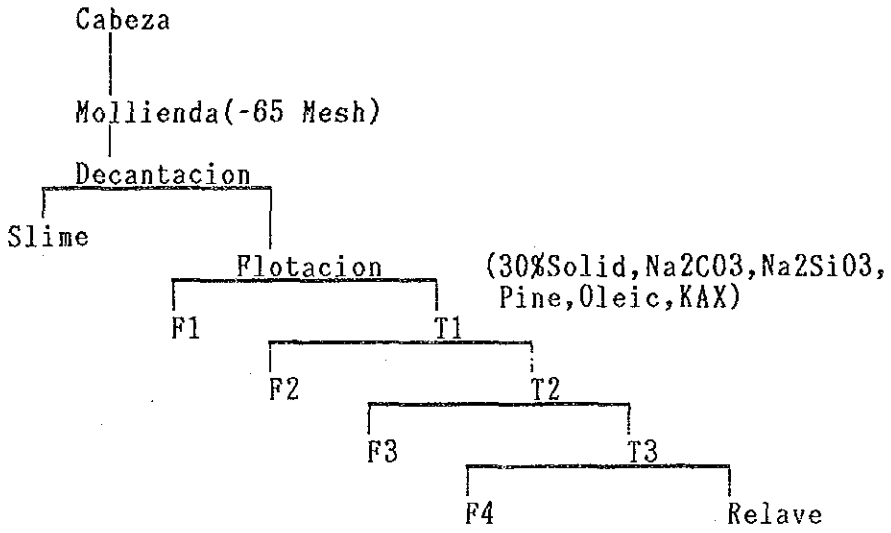
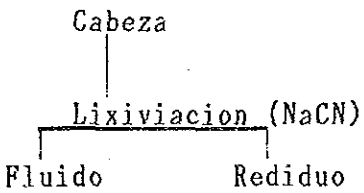
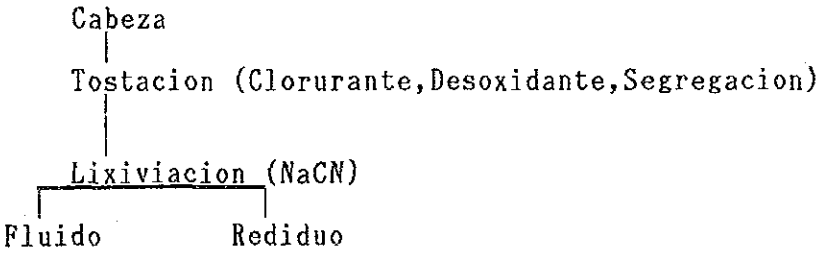
Resultadas de las Pruebas de Concentración (12)

Tabla 06-012

No.	Prueba	Muestra	Peso (gr) / Volumen (ml)	Ag Ley (g/t)	Ag Continido Interior	Ag Contenido Exterior	Ag Contenido Total	Ag Recuperación (%)	Au Ley (g/t)	Au Continido	Au Recuperación (%)	Condición
28-10	Auto Clave	Cabeza	48.79	124.13			6,056.16		6.10	297.62	100.00	Malla : -28
		Cake	48.79	28.00			1,366.12	22.56	0.10	4.88	1.64	Temp. : 211
		2 Hr. Filtrado	150.00	14.00	2,100.00		2,100.00	34.68				Presión : 19.5
		4 Hr. Filtrado	140.00	17.00	2,380.00	140.00	2,520.00	41.61				Tiempo : 30
		7 Hr. Filtrado	130.00	21.00	2,730.00	170.00	3,040.00	50.20				Presión Initial : —
		24 Hr. Filtrado	120.00	28.00	3,360.00	210.00	3,880.00	64.07				
		30 Hr. Filtrado	110.00	29.00	3,190.00	280.00	3,990.00	65.88				
		48 Hr. Filtrado	228.00	15.00	3,420.00	290.00	4,510.00	74.47				
		Agua en Cake	12.00	15.00	180.04		4,690.04	77.44		292.74	98.36	
		Humedad Cake	0.25									
28-11		Cabeza	47.84	105.90			5,066.47		6.10	291.82	100.00	Malla : -28
		Cake	47.84	14.00			669.76	13.22	0.10	4.78	1.64	Temp. : 210
		2 Hr. Filtrado	150.00	19.00	2,850.00		2,850.00	56.25				Presión : 24.1
		4 Hr. Filtrado	140.00	21.00	2,940.00	190.00	3,130.00	61.78				Tiempo : 30
		7 Hr. Filtrado	130.00	23.00	2,990.00	210.00	3,390.00	66.91				Presión Initial : O_2 5.1
		24 Hr. Filtrado	120.00	28.00	3,360.00	230.00	3,990.00	78.75				
		30 Hr. Filtrado	110.00	28.00	3,080.00	280.00	3,990.00	78.75				
		48 Hr. Filtrado	218.00	14.00	3,052.00	280.00	4,242.00	83.73				
		Agua en Cake	10.05	14.00	154.71		4,396.71	86.78		287.04	98.36	Condiciónes Comun
		Humedad Cake	0.23									NaCN 0.4%, 48 Hr

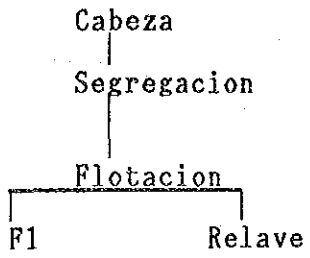
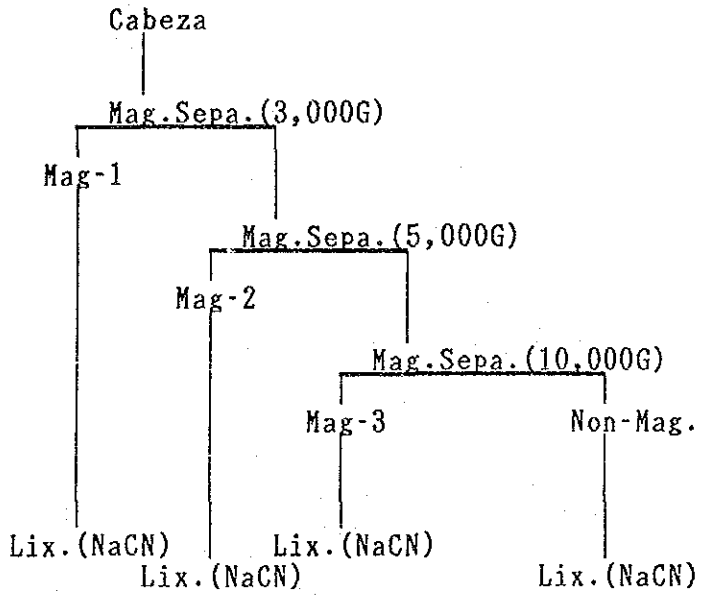
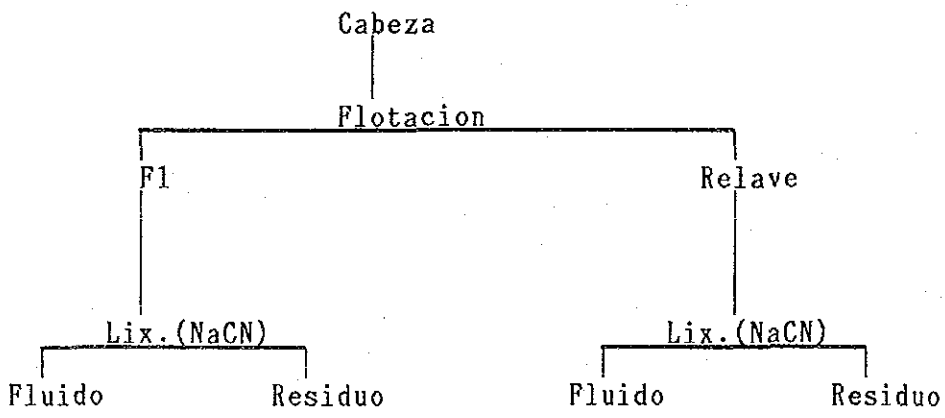
Flujo de Prueba (1)

Tabla 6-13

Tipo	Prueba
01	
02	
03	
04	

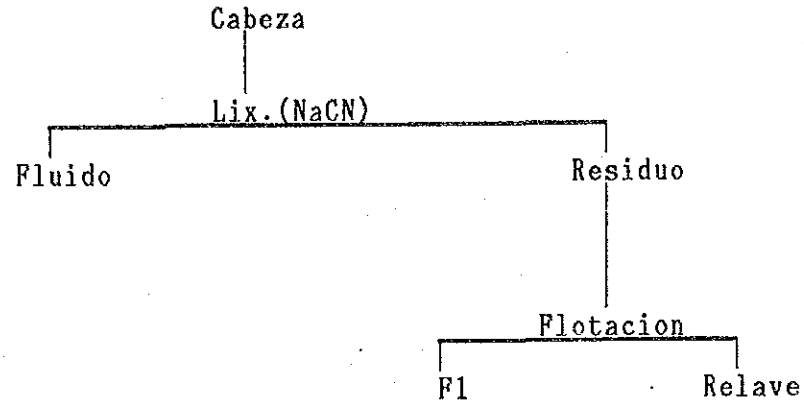
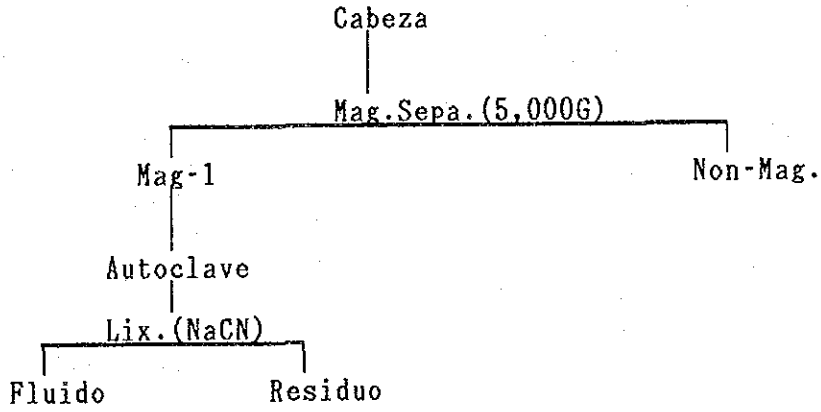
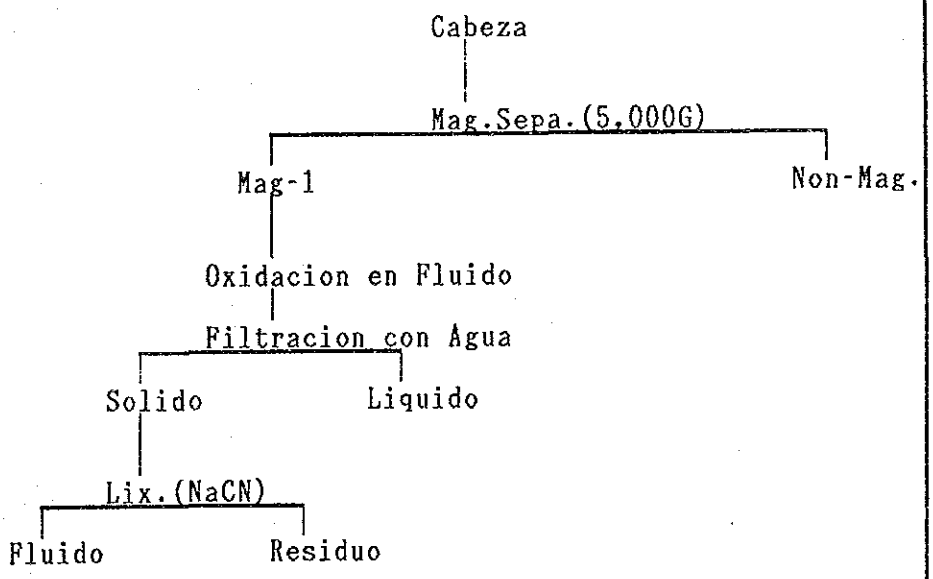
Flujo de Prueba (2)

Tabla 6-14

Tipo	Prueba
05	
06	
07	

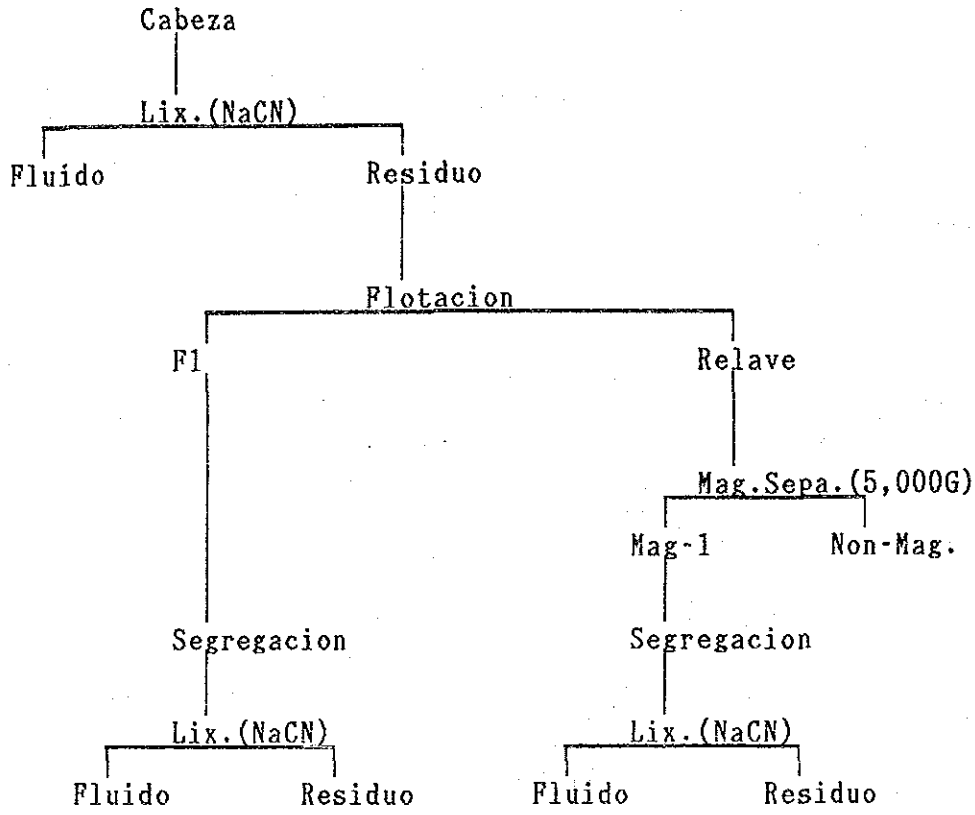
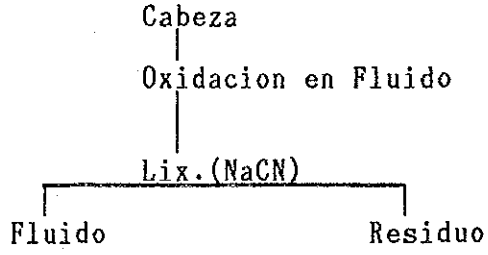
Flujo de Prueba (3)

Tabla 6-15

Tipo	Prueba
08	
09	
10	

Flujo de Prueba (4)

Tabla 6-16

Tipo	Prueba
11	
12	

Especificacion de los Equipos de La Planta

Tabla 06-017

No	Equipo	Cantidad	Especificacion	Motor	Nota
	Seccion Trituracion				
1	Silo I	1	5m ϕ×8m, 250Tn Cap , Grilla de 300 ×300mm		
2	Alimentadora Alternativa	1	40′ ×40′ Movimiento reciproco, 380V, 11.1Amp	10 HP	
3	Cinta Transportadora	1	40′ ×9.3mL , Inclinada 5 ° , Con Electroiman 380V, 2.4Amp	10 HP	
4	Parrilla Fija	1	40′ ×2.5m , Inclinada 30 ° , 2′ parrilla		
5	Trituradora de Mamdibulas	1	17′ ×25′, apertura 50m/m, Ferroni (ARG) Duracion de Liner : 3meses/Unided (200kg) 380V, 21Amp (Load 11.2kw)	40 HP	
6	Cinta Intermedia	1	16′ ×12.3m, Inclinada 18 ° 380V 6.8Amp	7.5 HP	
7	Zaranda vibratoria de Doble Piso	1	1.2m ×3.0m Apertura 1/2′ y 3/8′, Ferroni (ARG) Duracion de Zaranda : 4meses, 380V, 7.8Amp	7.5 HP	
8	Trituradora de Cono	1	3′ Faco (Brazil), 380V, 62Amp Duracion de Mantle/Concave Liner :1.5/3.0 meses	60 HP	
9	Cinta Retorno #1	1	16′ ×16m, Inclinade 20 ° 380V 5.2Amp	7.5 HP	
10	〃 #2	1	16′ × 4m, 380V 3.9Amp	2 HP	
11	Cinta Inferior	1	16′ ×30m, Inclinade 20 ° 380V 15.8Amp	10 HP	
	Seccion Molienda				
12	Silo II	1	9.60 ϕ×18.45mH, 1000Tn Cap		
13	Cinta transportadora	1	16′ ×20m Ferroni	10 HP	
14	Molino de bolas	1	7′ ×7′ Ferroni , 380V, 224Amp Duracion : Placas cilindricas 9 meses 〃 laterales 8 meses bolas : 13 ton(1kg/Ball ……60m/m) Consumo de bola : 0.94kg/t, NaCN 1.2kg/t, Ca (OH)$_2$ 3.1Kg/t, Agua desde el circuito de lavado	225 kw	
15	Hidrociclon	3	12′ Dorr Oliver Duracion de Liner Vortex-12, Apex-1, Inner-5meses		
16	Bomba de Arena	2	4′ ×5′ FACO SRL-C, 380V, 18.1Amp Consume de Liner : 0.0042kg/t Dnracion de Impellar : 1,800Hr	25 HP	

Seccion Trituracion ('89 Realizado)
Mineral para Planta : (1,4655 •Hr/Ano) ×(59.34t/Hr) =86,962t/Ano
Mineral para Heap : (854.2Hr/Ans) ×(50.71t/Hr) =43,316t/Ans
Operacion : 6Hr/Turno ×3 Turno/Dia, 2 personales/Turno

Analisis Granulometrico 9.525m/m 6.35m/m

Tamano	3′	2′	1′	3/4′	1/2′	3/8′	1/4′	-1/4′		Total
Silo I	56.4	6.4	7.1	2.9	3.3	2.4	3.7	17.8		100%
Cabeza de Zaranda	-	9.7	13.7	1.6	2.4	4.0	28.2	40.3		100%
							-3/8′			
Cabeza de Cono	-	13.6	25.3	8.2	10.3	10.8	31.9			100%
								-1/4′		
Cinta Retorno	-	-	-	-	-	4.5	36.3	59.2		100%
								4#	-4#	
Cinta Inferior	-	-	-	-	-	0.3	22.4	7.5	69.8	100%

(80% pass 7m/m)

Carga Circulante del Cinta Retorno : aproximadamente 100%

Oparacion {6,824.5Hr/(24 ×365=8,700)= } =284.4dias/Ano (1989)

Mineral tratado : (86,955.8ton/Ano) ÷(6,824.5Hr) =12.74t/Hr
o : (86,955.9ton/Ano) ÷(284.4dias) =305.8t/dia
Analisis de granulometrco
Cabeza : +1/4′ --10.0, +1m/m--44.0, -1m/m--46% ∴ F_{80}=4,000μm
Producto : +65# --1.5, +325#--48.5, -325#--50.0% P_{80}=120μm

$$Wio = \{(\sqrt{3})(380)(224)(0.9)(0.9)/(12.74)/(1.1)\} / \left\{\frac{100}{\sqrt{120}} - \frac{10}{\sqrt{4000}}\right\} = 13.7 \text{kwH/st}$$

Desnidad de Pulpa : Feed 40, O-flow 25, U-flow 73% Solidos.
Presion de Feed 0.8kg/cm2
100m³/Hr, S′ =1.35, 40% SOlid, d_{50}=0.4mm, 6.1m/sec.
Actual Head 5m, Pipe Loss 2.2m, Total Headloss= 5+7.2+8= 20.2m

No.	Equipo	Cantidad	Espocificaci9n	Motor	Nota
	Seccion de Cianuracion				
17	Espesador #1	1	50′ ϕ×10′	3.5HP	Densidad de Pulpa : U-flow 54, O-flow 0% Solid, pH 11.5, CN 900ppm Pulpa desde Molino : 1075m³/Dia, Pulpa a Clalificador : 690m³/Dia Ensayo : U-flow : Au2.0 /Ag70-g/m³, O-flow Au2.5 /Ag14g/m³
18	Clarificador de Solucion	1	50′ ϕ×10′		Concentracion Au 2.5ppm, Ag 12ppm, pH 11.5, CN 900ppm Solucion Rica : 690m³/Dia, (Au, Rec≒75%)
19	Bomba de Succion	5	Tipo Dorco, (Denver Diaphragm) Duracion de Diaphragm : 5 meses 380V, 4～6Amp	4 HP	385/408/408/408/385m³/Dia, Densidad de Pulpa 50～55% Solido. 2′ Reguiable
20	Bomba de Solucion rica	1	3′ ×2′ Warthington, 380V, 10.7Amp	10 HP	690～960 m³/Dia (40m³/Hr)
21	Agitador	3	30′ ϕ×25′ Dorr, Cap. 500m³/Unidad 3 r.p.m, 380V, 5～5.5Amp Con Aire Comprimido 3kg／cm², 5 m³/min	5 HP	594m³/Dia (de Clarificador 385, de Deposito de Sol, molienda 209 m³/Dia) Tiempo de Retencion : (500×3)/(594)=2.5Dias. Concentracion de O-flow : Au/Ag/CN=4/28/(900～700)ppm, 40% Solidos Relaciones entre Tiempo de Retencion y Disolucion de Au, Ag
22	Espesador #2	1	10′ ϕ×50′ 380V, 2.9Amp	3.5HP	Densidad de Pulpa : U-flow 52, O-flow-% solidos Pulpa desde : Agitador 594, Deposito de Sol, Esteril 16, Espesador #968m³/Dia Pulpa a : Deposito de Sol, Molienda 1170, Espesador #3 408 m³/Dia
23	Espesador #3	1	10′ ϕ×50′	3.5HP	Densidad de Pulpa : U-flow 52, O-flow-% solidos Pulpa desde : Espesador #2 408, Espesador #4 780, Filtro Disco 188 m³/Dia Pulpa a : Espesader #2 968, Espesador #4 408 m³/Dia
24	Espesador #4	1	10′ ϕ×50′	3.5HP	Densidad de Pulpa : U-flow 52, O-flow-% solidos Pulpa desde : Espesador #3 408, Deposito de Sol Esteril 690, Deposito de Agua 90, Esperador #5, (278) m³/Dia Pulpa a : Espesader #3 780, Espesador #5 408 m³/Dia
25	Espesador #5	1	10′ ϕ×50′	3.5HP	Densidad de Pulpa : U-flow 54, O-flow-% solidos Pulpa desde : Espesador #4 408, Deposito de Agua (272) m³/Dia Pulpa a : Relave (385m³), (Normal 130m³/Dia) Espesador #4 (278) m³/Dia
26	Filtro de disco	1 2	10′ ϕ×5discos, 380V 4 Amp Con 20 HP de Bomba de Vacio, y 4HP de Soplador 16′ Cinta transportadora (10m) 380V, 4.2/5.0 Amp	4 HP 24 HP 5 HP	Normalmente 2/3 de total relave es tratado por el Filtro y el Resto por la espesadra #5 Densidad de Pulpa : Cake 75%, O-flow-% Solidos Pulpa desde : Espesador #4 Max 408 m³/Dia Pulpa a : Relave Max 220 m³/Dia (Normal 150m³/Dia)
27	Bomba de Solucion Molienda	2	4′ ×3′ Warthington, 380V, 20Amp	20 HP	1170 m³/Dia, pH 11, Ensayo : Au 1.7, Ag 7g/m³, Acutual Head 45m

Relaciones entre Tiempo de Retencion y Disolucion de Au, Ag

Tiempo (Hr)			0	5	10	15	20	25	30	35	40
Ensayo (ppm)	Liquido	Ag	24.5	28.2	31.1	31.5	32.9	33.2	〃	〃	〃
		Au	3.21	3.55	3.69	3.76	3.84	3.86	3.87	3.89	3.91
	solido	Ag	85.2	79.8	75.3	74.5	71.9	〃	〃	〃	〃
		Au	1.54	1.01	0.81	0.71	0.58	0.55	0.56	0.51	0.49

No.	Equipo	Cantidad	Espocificaci9n	Motor	Nota
28	Deposito de Solucion Molienda	1	7.5m ϕ×8mH Cap. 240 m³	HP	Liquido desde : Espesador #2, y Lixiviacion de Playa Liquido a : Molino de Bolas y Agitadoras
29	Deposito de Solucion Rica	1	〃		Liquido desde : Clarificadora Liquido a : Precipitacion
30	Deposito de Solucion Esteril	1	〃		Liquido desde : Cajas de precipitaciones Liquido a : Espesadora #2, #3, #4
31	Deposito de Agua	3	100m³×3, Cap. 200m³		Agua Fresco : 90 (272) m³/Dia, para Cianuracion, Total 470 m³/Dia (650×0.72)
	Seccion de Precipitacion				
32	Filtros de arena	3	Cap 50 m³×1 unided, Cap 30m³×2 Unidades		Cambio de Arena : 1 Ano
33	Tanque de Oxigenador	1	1.25mϕ×4.5mH, Merrill Crowe Tower con 20 HP de Bomba de Vacio 500mmHg 380V, 17.5 Amp y 2 HP de Blower	 20 HP 2 HP	Oxigeno en Liquido : 5 ppm
34	Cinc mezclador	1	2′ ×4′ 10′ Cinta transportadora	10 HP 2 HP	Zn : Au, Ag=4 : 1, Consumo 60kg/Dia, 92% Zn (400# 90%)
35	Bomba de Extraccion	1	3′ ×2′ Wathington, 380V, 6.9Amp	10 HP	
36	Cajas de Precipitado	4	4′ ×5′ ×6′ 35m³/hr/unidad 12 cmϕ×0.9mL Bolsa ×232 Unidades		Cake : 90% Solidos, Au 6%, Ag 34%, Zn 40%, Ensayo de Filtrado : Au 0.1, Ag 0.2g/m³ Consecha : 15 Dias
37	Bomba de Solucion Esteril	2	3′ ×2′ Warthington, 380V	10 HP	50 m³/Hr, 30m Head
38	Estufa de precipitado	1			
39	Fundente				
40	Horno	4		(4kw)	
41	Bullion				
	Seccion de Heap Leaching				
42	Bomba de Alimentacion	1	3′ ×2′ Warthington, Con 10mϕ×2.8mH Tanque	10 HP	
43	Tanque Aglomerador	1	5′ ×13′, 25t/Hr. Con Cinta tronsportadora Agitader NaCN Alimentador Cal	15 HP 9.5HP 10 HP 1 HP	2.4～2.6g/t de Au, 60～70g/t de Ag, -3/8′, 10～12% Humedad Con 3.0kg/t de $Ca(OH)_2$ y 0.5kg/t de NaCN (Concentracion de 9,000) 20t/Hr Total 43,312.6ton/′89, 45,828.7ton/′88 de Mineral tratado, Operacion 2,327 Hr/′89, 3,055Hr/′88, (18.6/15.0t/Hr) Tecnicos 1, operarios 14, Au Rec 70%, Ag Rec 35%
44	Playa de lixiviacion	1	1000 t/Sector×11 Sectores		43 dias/sector (Cianuracion 35, Lavado 6 dias, Desagua 1 dia, Transporte 1 dia)
45	Pileta de Solucion Lixiviante	2	Cap 200m³, Con 2′ ×2′ Warthington	12 HP	1 Pileta : Para Agua Fresco (40m³/Dia)
46	Pileta de Solucion Rica	1	Cap 600m³, Con 4′ ×3′ Warthington	20 HP	

COSTO DE PRODUCCION (SECCION SERVICIOS, INDERECTOS y GENERALES)

補助・管理部門コスト

	Seccion	Item		部門	項目
SERVICIOS			補助部門		
1	Acueducto y Usina		1	用水・発電	
	Mano de Obra	Fera/Convenio		労務費	非組合員
		Convenio			組合員
	Insumos y material			資機材他	
		Sub-Total			小計
2	Taller Mecanico		2	機械工場	
	Mano de Obra	Fera/Convenio		労務費	非組合員
		Convenio			組合員
	Insumos y material			資機材他	
		Sub-Total			小計
3	Sector Transporte		3	輸送	
	Mano de Obra	Fera/Convenio		労務費	非組合員
		Convenio			組合員
	Insumos y material			資機材他	
		Sub-Total			小計
4	Obras Civiles		4	土木	
	Mano de Obra	Fera/Convenio		労務費	非組合員
		Convenio			組合員
	Insumos y material			資機材他	
		Sub-Total			小計
5	Administracion de Personal		5	人事	
	Mano de Obra	Fera/Convenio		労務費	非組合員
		Convenio			組合員
	Insumos y material			資機材他	
		Sub-Total			小計
6	Seguridad Industrial		6	保安	
	Mano de Obra	Fera/Convenio		労務費	非組合員
		Convenio			組合員
	Insumos y material			資機材他	
		Sub-Total			小計
7	Geologia y Topografia		7	地質測量	
	Mano de Obra	Fera/Convenio		労務費	非組合員
		Convenio			組合員
	Insumos y material			資機材他	
		Sub-Total			小計
8	Laboratorio Quimico		8	分析・試験	
	Mano de Obra	Fera/Convenio		労務費	非組合員
		Convenio			組合員
	Insumos y material			資機材他	
		Sub-Total			小計
9	Servicio Medico		9	病院	
	Mano de Obra	Fera/Convenio		労務費	非組合員
		Convenio			組合員
	Insumos y material			資機材他	
		Sub-Total			小計
10	Intendencia		10	山元総務	
	Mano de Obra	Fera/Convenio		労務費	非組合員
		Convenio			組合員
	Insumos y material			資機材他	
		Sub-Total			小計
		Total-1			計-1
GASTO INDERECTOS y GENERALES			管理部門		
11	Gerencia Economica Financiera		11	経理	
	Salarios	Fera/Convenio		給料	非組合員
		Convenio			組合員
	Materiales			資材	
	Gastos Varios de Produccion			生産諸経費	
	Gastos Varios de Administracion			管理諸経費	
		Sub-Total			小計
12	Relaciones Industriales		12	生産管理	
	Salarios	Fera/Convenio		給料	非組合員
		Convenio			組合員
	Materiales			資材	
	Gastos Varios de Produccion			生産諸経費	
	Gastos Varios de Administracion			管理諸経費	
		Sub-Total			小計
13	Gastos Generales		13	一般管理	
	Salarios	Fera/Convenio		給料	非組合員
		Convenio			組合員
	Gastos Varios de Administracion			管理諸経費	
		Sub-Total			小計
		Total-2			計-2
		Gran Total			合計

COSTO DE PRODUCCION (SECCION SERVICIOS, INDERECTOS y GENERALES)

Tabla 08-001

	Seccion	Item	Base de Calculo (Fin de 1991) Perso-nales	Perso-nales Costo	-2	-1	0	1	2	3	4	5	6	7	8	9	0 Total
					90,000	105,000	120,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	1,530,000
					45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	46,483	541,483
					135,000	150,000	165,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	181,483	2,071,483
				US$/ano	US$/ano	US$/ano	US$/ano	US$/ano	US$/ano	US$/ano	US$/ano	US$/ano	US$/ano	US$/ano	US$/ano	US$/ano	US$/ano
SERVICIOS																	
1	Acueducto y Usina																
	Mano de Obra	Fera/Convenio	11	53,043	11 53,043	10 48,221	10 48,221	10 48,221	10 48,221	10 48,221	10 48,221	10 48,221	10 48,221	10 48,221	10 48,221	10 48,221	583,473
		Convenio	10	29,279	10 29,279	10 29,279	10 29,279	10 29,279	10 29,279	10 29,279	10 29,279	10 29,279	10 29,279	10 29,279	10 29,279	10 29,279	351,348
	Insumos y material			9,120	9,120	8,068	8,068	8,068	8,068	8,068	8,068	8,068	8,068	8,068	8,068	8,068	97,847
		Sub-Total	21	91,442	21 91,442	20 85,568	20 85,568	20 85,568	20 85,568	20 85,568	20 85,568	20 85,568	20 85,568	20 85,568	20 85,568	20 85,568	1,032,668
2	Taller Mecanico																
	Mano de Obra	Fera/Convenio	4	20,867	4 20,867	3 15,650	3 15,650	2 10,434	2 10,434	2 10,434	2 10,434	2 10,434	2 10,434	2 10,434	2 10,434	2 10,434	146,069
		Convenio	2	5,800	2 5,800	3 8,700	3 8,700	4 11,600	4 11,600	4 11,600	4 11,600	4 11,600	4 11,600	4 11,600	4 11,600	4 11,600	127,600
	Insumos y material			23,205	23,205	17,831	17,831	16,419	16,419	16,419	16,419	16,419	16,419	16,419	16,419	16,419	206,639
		Sub-Total	6	49,872	6 49,872	6 42,181	6 42,181	6 38,453	6 38,453	6 38,453	6 38,453	6 38,453	6 38,453	6 38,453	6 38,453	6 38,453	480,308
3	Sector Transporte																
	Mano de Obra	Fera/Convenio	3	13,455	3 13,455	3 13,455	3 13,455	2 8,970	2 8,970	2 8,970	2 8,970	2 8,970	2 8,970	2 8,970	2 8,970	2 8,970	121,095
		Convenio	12	35,071	12 35,071	12 35,071	12 35,071	12 35,071	12 35,071	12 35,071	12 35,071	12 35,071	12 35,071	12 35,071	12 35,071	12 35,071	420,852
	Insumos y material			76,600	76,600	76,600	76,600	72,876	72,876	72,876	72,876	72,876	72,876	72,876	72,876	72,876	885,690
		Sub-Total	15	125,126	15 125,126	15 125,126	15 125,126	14 116,917	14 116,917	14 116,917	14 116,917	14 116,917	14 116,917	14 116,917	14 116,917	14 116,917	1,427,627
4	Obras Civiles																
	Mano de Obra	Fera/Convenio	1	4,787	1 4,787	1 4,787	1 4,787	1 4,787	1 4,787	1 4,787	1 4,787	1 4,787	1 4,787	1 4,787	1 4,787	1 4,787	57,444
		Convenio	6	17,811	6 17,811	6 17,811	6 17,811	6 17,811	6 17,811	6 17,811	6 17,811	6 17,811	6 17,811	6 17,811	6 17,811	6 17,811	213,732
	Insumos y material			5,550	5,550	5,550	5,550	5,550	5,550	5,550	5,550	5,550	5,550	5,550	5,550	5,550	66,600
		Sub-Total	7	28,148	7 28,148	7 28,148	7 28,148	7 28,148	7 28,148	7 28,148	7 28,148	7 28,148	7 28,148	7 28,148	7 28,148	7 28,148	337,776
5	Administracion de Personal																
	Mano de Obra	Fera/Convenio	10	65,658	10 65,658	7 45,961	4 26,283	2 13,132	2 13,132	2 13,132	2 13,132	2 13,132	2 13,132	2 13,132	2 13,132	2 13,132	256,066
		Convenio	7	20,235	7 20,235	6 17,344	6 17,344	5 14,454	5 14,454	5 14,454	5 14,454	5 14,454	5 14,454	5 14,454	5 14,454	5 14,454	185,006
	Insumos y material			6,130	6,130	3,270	1,606	757	757	757	757	757	757	757	757	757	17,816
		Sub-Total	17	92,023	17 92,023	13 66,575	10 45,213	7 28,342	7 28,342	7 28,342	7 28,342	7 28,342	7 28,342	7 28,342	7 28,342	7 28,342	458,888
6	Seguridad Industrial																
	Mano de Obra	Fera/Convenio	4	21,404	4 21,404	4 21,404	4 21,404	4 21,404	4 21,404	4 21,404	4 21,404	4 21,404	4 21,404	4 21,404	4 21,404	4 21,404	256,848
		Convenio	2	5,938	2 5,939	2 5,939	2 5,939	2 5,939	2 5,939	2 5,939	2 5,939	2 5,939	2 5,939	2 5,939	2 5,939	2 5,939	71,269
	Insumos y material			73,675	73,675	73,675	73,675	73,675	73,675	73,675	73,675	73,675	73,675	73,675	73,675	73,675	884,100
		Sub-Total	6	101,018	6 101,018	6 101,018	6 101,018	6 101,018	6 101,018	6 101,018	6 101,018	6 101,018	6 101,018	6 101,018	6 101,018	6 101,018	1,212,216
7	Geologia y Topografia																
	Mano de Obra	Fera/Convenio	3	13,455	3 13,455	3 13,455	3 13,455	2 8,970	2 8,970	2 8,970	2 8,970	2 8,970	2 8,970	2 8,970	2 8,970	2 8,970	121,095
		Convenio	4	11,533	4 11,533	4 11,533	4 11,533	4 11,533	4 11,533	4 11,533	4 11,533	4 11,533	4 11,533	4 11,533	4 11,533	4 11,533	138,396
	Insumos y material			9,145	9,145	9,145	9,145	6,774	6,774	6,774	6,774	6,774	6,774	6,774	6,774	6,774	88,402
		Sub-Total	7	34,133	7 34,133	7 34,133	7 34,133	6 27,277	6 27,277	6 27,277	6 27,277	6 27,277	6 27,277	6 27,277	6 27,277	6 27,277	347,893
8	Laboratorio Quimico																
	Mano de Obra	Fera/Convenio	2	10,627	2 10,627	1 5,314	1 5,314	1 5,314	1 5,314	1 5,314	1 5,314	1 5,314	1 5,314	1 5,314	1 5,314	1 5,314	69,076
		Convenio	7	20,106	7 20,106	6 17,234	5 14,361	5 14,361	5 14,361	5 14,361	5 14,361	5 14,361	5 14,361	5 14,361	5 14,361	5 14,361	180,954
	Insumos y material			17,990	17,990	12,073	8,564	8,564	8,564	8,564	8,564	8,564	8,564	8,564	8,564	8,564	115,707
		Sub-Total	9	48,723	9 48,723	7 34,620	6 28,239	6 28,239	6 28,239	6 28,239	6 28,239	6 28,239	6 28,239	6 28,239	6 28,239	6 28,239	365,737
9	Servicio Medico																
	Mano de Obra	Fera/Convenio	1	6,874	1 6,874	1 6,874	1 6,874	1 6,874	1 6,874	1 6,874	1 6,874	1 6,874	1 6,874	1 6,874	1 6,874	1 6,874	82,488
		Convenio	5	14,432	5 14,432	5 14,432	5 14,432	5 14,432	5 14,432	5 14,432	5 14,432	5 14,432	5 14,432	5 14,432	5 14,432	5 14,432	173,184
	Insumos y material			102,260	102,260	102,260	102,260	102,260	102,260	102,260	102,260	102,260	102,260	102,260	102,260	102,260	1,227,120
		Sub-Total	6	123,566	6 123,566	6 123,566	6 123,566	6 123,566	6 123,566	6 123,566	6 123,566	6 123,566	6 123,566	6 123,566	6 123,566	6 123,566	1,482,792
10	Intendencia																
	Mano de Obra	Fera/Convenio	2	8,219	2 8,219	2 8,219	2 8,219	2 8,219	2 8,219	2 8,219	2 8,219	2 8,219	2 8,219	2 8,219	2 8,219	2 8,219	98,628
		Convenio	32	92,251	32 92,251	28 80,720	25 72,071	21 60,540	21 60,540	21 60,540	21 60,540	21 60,540	21 60,540	21 60,540	21 60,540	21 60,540	789,899
	Insumos y material			48,920	48,920	37,518	29,964	21,222	21,222	21,222	21,222	21,222	21,222	21,222	21,222	21,222	307,403
		Sub-Total	34	149,390	34 149,390	30 126,456	27 110,254	23 89,981	23 89,981	23 89,981	23 89,981	23 89,981	23 89,981	23 89,981	23 89,981	23 89,981	1,195,930
		Total-1	128	843,441	128 843,441	117 767,390	110 723,445	101 667,506	101 667,506	101 667,506	101 667,506	101 667,506	101 667,506	101 667,506	101 667,506	101 667,506	0 8,341,834
GASTO INDERECTOS y GENERALES																	
11	Gerencia Economica Financiera																
	Salarios	Fera/Convenio	32	175,009	32 175,009	22 120,319	6 32,814	10 54,690	10 54,690	10 54,690	10 54,690	10 54,690	10 54,690	10 54,690	10 54,690	10 54,690	820,355
		Convenio	24	70,440	24 70,440	20 58,700	18 52,830	15 44,025	15 44,025	15 44,025	15 44,025	15 44,025	15 44,025	15 44,025	15 44,025	15 44,025	578,195
	Materiales			7,392	7,392	3,874	1,164	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,224	23,446
	Gastos Varios de Produccion			58,308	58,308	64,787	71,265	77,744	77,744	77,744	77,744	77,744	77,744	77,744	77,744	78,385	894,697
	Gastos Varios de Administracion			85,392	85,392	70,557	59,340	54,275	54,275	54,275	54,275	54,275	54,275	54,275	54,275	54,275	703,760
		Sub-Total	56	396,541	56 396,541	42 318,235	24 217,413	25 231,958	25 231,958	25 231,958	25 231,958	25 231,958	25 231,958	25 231,958	25 231,958	25 232,598	3,020,453
12	Relaciones Industriales																
	Salarios	Fera/Convenio	11	60,112	11 60,112	8 32,788	4 21,859	2 10,929	2 10,929	2 10,929	2 10,929	2 10,929	2 10,929	2 10,929	2 10,929	2 10,929	213,124
		Convenio	17	49,036	17 49,036	8 23,076	6 17,307	4 11,538	4 11,538	4 11,538	4 11,538	4 11,538	4 11,538	4 11,538	4 11,538	4 11,538	193,260
	Materiales			3,024	3,024	771	387	138	138	138	138	138	138	138	138	138	5,421
	Gastos Varios de Produccion			128,268	128,268	142,520	156,772	171,024	171,024	171,024	171,024	171,024	171,024	171,024	171,024	172,433	1,968,185
	Gastos Varios de Administracion			158,580	158,580	131,030	110,200	100,792	100,792	100,792	100,792	100,792	100,792	100,792	100,792	100,792	1,306,941
		Sub-Total	28	399,020	28 399,020	14 330,186	10 306,524	6 294,421	6 294,421	6 294,421	6 294,421	6 294,421	6 294,421	6 294,421	6 294,421	6 295,830	3,686,931
13	Gastos Generales																
	Salarios	Fera/Convenio	16	128,198	16 128,198	14 112,173	13 104,161	12 96,149	12 96,149	12 96,149	12 96,149	12 96,149	12 96,149	12 96,149	12 96,149	12 96,149	1,209,869
		Convenio	8	21,668	8 21,668	6 21,668	7 18,960	6 16,251	6 16,251	6 16,251	6 16,251	6 16,251	6 16,251	6 16,251	6 16,251	6 16,251	209,555
	Gastos Varios de Administracion			146,868	146,868	115,128	98,163	82,613	82,613	82,613	82,613	82,613	82,613	82,613	82,613	82,613	1,103,678
		Sub-Total	24	296,734	24 296,734	22 248,969	20 221,283	18 195,013	18 195,013	18 195,013	18 195,013	18 195,013	18 195,013	18 195,013	18 195,013	18 195,013	2,522,101
		Total-2	108	1,092,295	108 1,092,295	78 897,391	54 745,221	49 721,392	49 721,392	49 721,392	49 721,392	49 721,392	49 721,392	49 721,392	49 721,392	49 723,442	0 9,229,485
		Gran Total	236	1,935,736	236 1,935,736	195 1,664,781	164 1,469,666	150 1,388,898	150 1,388,898	150 1,388,898	150 1,388,898	150 1,388,898	150 1,388,898	150 1,388,898	150 1,388,898	150 1,390,948	0 17,571,318



CALCULO de VENTA　　売上計算

Ano	年
Cabeza para Planta T/dia	選鉱処理量 (t/日)
Mineral tratado (T/Ano)	処理鉱量 (t/年)
Sub-Total : (2)+(3)+(4)	小計 : (2)+(3)+(4)
* (1).Open Pit	* (1).露天掘鉱
* (2).Farrallon	* (2).ファラジョン鉱
* (3).Port. y Labo.	* (3).ポルテスエロ,ラボレオ鉱
* (4).Esperanza	* (4).エスペランサ鉱
Leyes (Au g/t)	品位 (Au g/t)
Sub-Total : (2)+(3)+(4)	小計 : (2)+(3)+(4)
* (1).Open Pit	* (1).露天掘鉱
* (2).Farrallon	* (2).ファラジョン鉱
* (3).Port. y Labo.	* (3).ポルテスエロ,ラボレオ鉱
* (4).Esperanza	* (4).エスペランサ鉱
Contenido (Au g/ano)	金属量 (Au g/年)
Sub-Total : (2)+(3)+(4)	小計 : (2)+(3)+(4)
* (1).Open Pit	* (1).露天掘鉱
(2).Farrallon	(2).ファラジョン鉱
(3).Port. y Labo.	(3).ポルテスエロ,ラボレオ鉱
(4).Esperanza	(4).エスペランサ鉱
Leyes (Ag g/t)	品位 (Ag g/t)
Sub-Total : (2)+(3)+(4)	小計 : (2)+(3)+(4)
* (1).Open Pit	* (1).露天掘鉱
* (2).Farrallon	* (2).ファラジョン鉱
* (3).Port. y Labo.	* (3).ポルテスエロ,ラボレオ鉱
* (4).Esperanza	* (4).エスペランサ鉱
Contenido (Ag g/ano)	金属量 (Ag g/年)
Sub-Total : (2)+(3)+(4)	小計 : (2)+(3)+(4)
* (1).Open Pit	* (1).露天掘鉱
(2).Farrallon	(2).ファラジョン鉱
(3).Port. y Labo.	(3).ポルテスエロ,ラボレオ鉱
(4).Esperanza	(4).エスペランサ鉱
Recuperacion (Au %)	採収率 (Au %)
* (1).Open Pit	* (1).露天掘(ﾚｰﾌﾟﾘｰﾁﾝｸﾞ)
* (2).Planta	* (2).青化工場
Recuperacion (Ag %)	採収率 (Ag %)
* (1).Open Pit	* (1).露天掘(ﾚｰﾌﾟﾘｰﾁﾝｸﾞ)
* (2).Planta	* (2).青化工場
Contenido (Au g/ano)	金属量 (Au g/年)
* (1).Open Pit	* (1).露天掘(ﾚｰﾌﾟﾘｰﾁﾝｸﾞ)
(2).Planta	(2).青化工場
Contenido (Ag g/ano)	金属量 (Ag g/年)
* (1).Open Pit	* (1).露天掘(ﾚｰﾌﾟﾘｰﾁﾝｸﾞ)
(2).Planta	(2).青化工場
Cotizacion (US$/Tr.oz)	金属価格 (US$/Tr.oz)
* (1).Au	* (1).Au
* (1).Ag	* (1).Ag
Valor de Produccion	生産金額
Total(US$/ano) : (1)+(2)	合計(US$/年) : (1)+(2)
(1).Au	(1).Au
(2).Ag	(2).Ag
Recuperacion de Refineria (%)	精錬採収率 (%)
* (1).Au	* (1).Au
* (1).Ag	* (1).Ag
R/C (US$/gr.)	R/C (US$/gr.)
* (1).Au	* (1).Au
* (1).Ag	* (1).Ag
Venta	売上総額(US$/年) : (1)+(2)
Total(US$/ano) : (1)+(2)	
(1).Au	(1).Au
(2).Ag	(2).Ag

CALCULO DE VENTA (135,000 TON/ANO, SIN AUTCLAVE)

Tabla 08-002

Ano	-2	-1	0	1	2	3	4	5	6	7	8	9	Total
Cabeza para Planta T/dia	300	350	400	450	450	450	450	450	450	450	450	450	
Mineral tratado (T/Ano)													
Sub-Total : (2)+(3)+(4)	90,000	105,000	120,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	1,530,000
* (1).Open Pit	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	46,483	541,483
* (2).Farrallon	40,000	25,000	25,000	15,000									105,000
* (3).Port. y Labo.	35,000	35,000	35,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	510,000
* (4).Esperanza	15,000	45,000	60,000	75,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	915,000
Leyes (Au g/t)													
Sub-Total : (2)+(3)+(4)	6.14	6.11	6.14	6.19	6.17	6.07	6.00	5.77	5.60	5.51	5.60	5.51	5.89
* (1).Open Pit	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33
* (2).Farrallon	6.19	6.19	6.13	6.13									6.17
* (3).Port. y Labo.	6.40	6.40	6.60	6.70	6.50	6.40	6.20	5.80	5.53	5.53	5.53	5.53	6.07
* (4).Esperanza	5.39	5.85	5.88	5.90	6.00	5.90	5.90	5.75	5.63	5.50	5.63	5.50	5.75
Contenido (Au g/ano)													
Sub-Total : (2)+(3)+(4)	552,450	642,000	737,050	835,950	832,500	819,000	810,000	778,500	755,550	743,850	755,550	743,850	9,006,250
* (1).Open Pit	104,850	104,850	104,850	104,850	104,850	104,850	104,850	104,850	104,850	104,850	104,850	108,305	1,261,655
(2).Farrallon	247,600	154,750	153,250	91,950	0	0	0	0	0	0	0	0	647,550
(3).Port. y Labo.	224,000	224,000	231,000	301,500	292,500	288,000	279,000	261,000	248,850	248,850	248,850	248,850	3,096,400
(4).Esperanza	80,850	263,250	352,800	442,500	540,000	531,000	531,000	517,500	506,700	495,000	506,700	495,000	5,262,300
Leyes (Ag g/t)													
Sub-Total : (2)+(3)+(4)	112.00	111.00	112.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.32
* (1).Open Pit	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00
* (2).Farrallon	105.00	105.00	105.00	105.00									105.00
* (3).Port. y Labo.	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00
* (4).Esperanza	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00
Contenido (Ag g/ano)													
Sub-Total : (2)+(3)+(4)	10,085,000	11,810,000	13,460,000	15,270,000	15,345,000	15,345,000	15,345,000	15,345,000	15,345,000	15,345,000	15,345,000	15,345,000	173,385,000
* (1).Open Pit	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,952,286	22,742,286
(2).Farrallon	4,200,000	2,625,000	2,625,000	1,575,000	0	0	0	0	0	0	0	0	11,025,000
(3).Port. y Labo.	4,235,000	4,235,000	4,235,000	5,445,000	5,445,000	5,445,000	5,445,000	5,445,000	5,445,000	5,445,000	5,445,000	5,445,000	61,710,000
(4).Esperanza	1,650,000	4,950,000	6,600,000	8,250,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	100,650,000
Recuperacion (Au %)													
* (1).Open Pit	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	
* (2).Planta	93.29	93.29	93.29	94.29	94.29	94.29	94.29	94.29	94.29	94.29	94.29	94.29	
Recuperacion (Ag %)													
* (1).Open Pit	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	
* (2).Planta	42.06	42.06	42.06	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	
Contenido (Au g/ano)	591,698	675,236	763,905	864,525	861,273	848,544	840,058	810,358	788,719	777,687	788,719	780,203	9,390,926
* (1).Open Pit	76,336	76,336	76,336	76,336	76,336	76,336	76,336	76,336	76,336	76,336	76,336	78,852	918,548
(2).Planta	515,362	598,900	687,569	788,189	784,937	772,208	763,722	734,022	712,383	701,351	712,383	701,351	8,472,378
Contenido (Ag g/ano)	4,896,636	5,622,171	6,316,161	9,816,885	9,861,885	9,861,885	9,861,885	9,861,885	9,861,885	9,861,885	9,861,885	9,883,467	105,568,515
* (1).Open Pit	654,885	654,885	654,885	654,885	654,885	654,885	654,885	654,885	654,885	654,885	654,885	676,467	7,880,202
(2).Planta	4,241,751	4,967,286	5,661,276	9,162,000	9,207,000	9,207,000	9,207,000	9,207,000	9,207,000	9,207,000	9,207,000	9,207,000	97,688,313
Cotizacion (US$/Tr.oz)													
* (1).Au	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	
* (1).Ag	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Valor de Produccion													
Total(US$/ano) : (1)+(2)	7,700,779	8,792,624	9,941,250	11,611,104	11,578,481	11,427,046	11,326,090	10,972,742	10,715,303	10,584,060	10,715,303	10,616,904	125,981,686
(1).Au	7,039,497	8,033,360	9,088,264	10,285,351	10,246,651	10,095,216	9,994,260	9,640,912	9,383,473	9,252,230	9,383,473	9,282,159	111,724,845
(2).Ag	661,282	759,264	852,986	1,325,753	1,331,830	1,331,830	1,331,830	1,331,830	1,331,830	1,331,830	1,331,830	1,334,745	14,256,841
Recuperacion de Refineria (%)													
* (1).Au	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	
* (1).Ag	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	
R/C (US$/gr.)													
* (1).Au	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	
* (1).Ag	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Venta													
Total(US$/ano) : (1)+(2)	7,491,540	8,553,821	9,671,119	11,303,589	11,272,068	11,125,064	11,027,061	10,684,050	10,434,142	10,306,738	10,434,142	10,338,692	122,642,026
(1).Au	6,833,565	7,798,353	8,822,398	9,984,465	9,946,897	9,799,893	9,701,890	9,358,879	9,108,971	8,981,567	9,108,971	9,010,621	108,456,469
(2).Ag	657,976	755,468	848,721	1,319,124	1,325,171	1,325,171	1,325,171	1,325,171	1,325,171	1,325,171	1,325,171	1,328,071	14,185,557

CALCULO DE VENTA (135,000 TON/ANO, P'LANTA : CON AUTOCLAVE)

Tabla 08-003

Ano	-2	-1	0	1	2	3	4	5	6	7	8	9	Total
Cabeza para Planta T/dia (* : Input Manual)	300	350	400	450	450	450	450	450	450	450	450	450	
Mineral tratado (T/Ano)													
Sub-Total : (2)+(3)+(4)	90,000	105,000	120,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	1,530,000
* (1).Open Pit	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	46,483	541,483
* (2).Farrallon	40,000	25,000	25,000	15,000									105,000
* (3).Port. y Labo.	35,000	35,000	35,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	510,000
* (4).Esperanza	15,000	45,000	60,000	75,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	915,000
Leyes (Au g/t)													
Sub-Total : (2)+(3)+(4)	6.14	6.11	6.14	6.19	6.17	6.07	6.00	5.77	5.60	5.51	5.60	5.51	5.89
* (1).Open Pit	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33
* (2).Farrallon	6.19	6.19	6.13	6.13									6.17
* (3).Port. y Labo.	6.40	6.40	6.60	6.70	6.50	6.40	6.20	5.80	5.53	5.53	5.53	5.53	6.07
* (4).Esperanza	5.39	5.85	5.88	5.90	6.00	5.90	5.90	5.75	5.63	5.50	5.63	5.50	5.75
Contenido (Au g/ano)													
Sub-Total : (2)+(3)+(4)	552,450	642,000	737,050	835,950	832,500	819,000	810,000	778,500	755,550	743,850	755,550	743,850	9,006,250
* (1).Open Pit	104,850	104,850	104,850	104,850	104,850	104,850	104,850	104,850	104,850	104,850	104,850	108,305	1,261,655
(2).Farrallon	247,600	154,750	153,250	91,950	0	0	0	0	0	0	0	0	647,550
(3).Port. y Labo.	224,000	224,000	231,000	301,500	292,500	288,000	279,000	261,000	248,850	248,850	248,850	248,850	3,096,400
(4).Esperanza	80,850	263,250	352,800	442,500	540,000	531,000	531,000	517,500	506,700	495,000	506,700	495,000	5,262,300
Leyes (Ag g/t)													
Sub-Total : (2)+(3)+(4)	112.00	111.00	112.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.32
* (1).Open Pit	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00
* (2).Farrallon	105.00	105.00	105.00	105.00									105.00
* (3).Port. y Labo.	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00
* (4).Esperanza	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00
Contenido (Ag g/ano)													
Sub-Total : (2)+(3)+(4)	10,085,000	11,810,000	13,460,000	15,270,000	15,345,000	15,345,000	15,345,000	15,345,000	15,345,000	15,345,000	15,345,000	15,345,000	173,385,000
* (1).Open Pit	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,952,286	22,742,286
(2).Farrallon	4,200,000	2,625,000	2,625,000	1,575,000	0	0	0	0	0	0	0	0	11,025,000
(3).Port. y Labo.	4,235,000	4,235,000	4,235,000	5,445,000	5,445,000	5,445,000	5,445,000	5,445,000	5,445,000	5,445,000	5,445,000	5,445,000	61,710,000
(4).Esperanza	1,650,000	4,950,000	6,600,000	8,250,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	100,650,000
Recuperacion (Au %)													
* (1).Open Pit	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	
* (2).Planta	93.29	93.29	93.29	97.00	97.00	97.00	97.00	97.00	97.00	97.00	97.00	97.00	
Recuperacion (Ag %)													
* (1).Open Pit	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	
* (2).Planta	60.00	60.00	60.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	80.00	
Contenido (Au g/ano)	591,698	675,236	763,905	887,208	883,861	870,766	862,036	831,481	809,220	797,871	809,220	800,386	9,582,888
* (1).Open Pit	76,336	76,336	76,336	76,336	76,336	76,336	76,336	76,336	76,336	76,336	76,336	78,852	918,548
(2).Planta	515,362	598,900	687,569	810,872	807,525	794,430	785,700	755,145	732,884	721,535	732,884	721,535	8,664,339
Contenido (Ag g/ano)	6,705,885	7,740,885	8,730,885	12,870,885	12,930,885	12,930,885	12,930,885	12,930,885	12,930,885	12,930,885	12,930,885	12,952,467	139,517,202
* (1).Open Pit	654,885	654,885	654,885	654,885	654,885	654,885	654,885	654,885	654,885	654,885	654,885	676,467	7,880,202
(2).Planta	6,051,000	7,086,000	8,076,000	12,216,000	12,276,000	12,276,000	12,276,000	12,276,000	12,276,000	12,276,000	12,276,000	12,276,000	131,637,000
Cotizacion (US$/Tr.oz)													
* (1).Au	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	
* (1).Ag	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Valor de Produccion													
Total(US$/ano) : (1)+(2)	7,945,115	9,078,752	10,267,354	12,293,393	12,261,682	12,105,869	12,002,027	11,638,511	11,373,664	11,238,644	11,373,664	11,271,488	132,850,183
(1).Au	7,039,497	8,033,360	9,088,264	10,555,202	10,515,389	10,359,596	10,255,734	9,892,218	9,627,371	9,492,351	9,627,371	9,522,280	114,008,631
(2).Ag	905,618	1,045,393	1,179,091	1,738,190	1,746,293	1,746,293	1,746,293	1,746,293	1,746,293	1,746,293	1,746,293	1,749,208	18,841,551
Recuperacion de Refineria (%)													
* (1).Au	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	
* (1).Ag	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	
R/C (US$/gr.)													
* (1).Au	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	
* (1).Ag	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Venta													
Total(US$/ano) : (1)+(2)	7,734,664	8,838,519	9,995,593	11,975,922	11,945,335	11,794,100	11,693,277	11,340,395	11,083,295	10,952,225	11,083,295	10,984,179	129,420,790
(1).Au	6,833,565	7,798,353	8,822,398	10,246,423	10,207,774	10,056,538	9,955,715	9,602,833	9,345,734	9,214,663	9,345,734	9,243,717	110,673,446
(2).Ag	901,090	1,040,166	1,173,195	1,729,499	1,737,562	1,737,562	1,737,562	1,737,562	1,737,562	1,737,562	1,737,562	1,740,462	18,747,344

CALCULO DE VENTA (90,000 TON/ANO)

Tabla 08-004

Ano	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
Cabeza para Planta T/dia	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	
(* : Input Manual)																		
Mineral tratado (T/Ano)																		
Sub-Total : (2)+(3)+(4)	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	1,530,000
* (1).Open Pit	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	46,483						541,483
* (2).Farrallon	40,000	25,000	25,000	15,000														105,000
* (3).Port. y Labo.	50,000	65,000	65,000	75,000	90,000	90,000	80,000											515,000
* (4).Esperanza							10,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	910,000
Leyes (Au g/t)																		
Sub-Total : (2)+(3)+(4)	6.09	6.06	6.04	6.03	6.01	6.01	5.98	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.88
* (1).Open Pit	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33						2.33
* (2).Farrallon	6.19	6.19	6.13	6.13														6.17
* (3).Port. y Labo.	6.01	6.01	6.01	6.01	6.01	6.01	6.01											6.01
* (4).Esperanza							5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78	5.78
Contenido (Au g/ano)																		
Sub-Total : (2)+(3)+(4)	548,100	545,400	543,900	542,700	540,900	540,900	538,600	520,200	520,200	520,200	520,200	520,200	520,200	520,200	520,200	520,200	520,200	9,002,500
* (1).Open Pit	104,850	104,850	104,850	104,850	104,850	104,850	104,850	104,850	104,850	104,850	104,850	108,305	0	0	0	0	0	1,261,655
(2).Farrallon	247,600	154,750	153,250	91,950	0	0	0	0	0	0	0	0	0	0	0	0	0	647,550
(3).Port. y Labo.	300,500	390,650	390,650	450,750	540,900	540,900	480,800	0	0	0	0	0	0	0	0	0	0	3,095,150
(4).Esperanza	0	0	0	0	0	0	57,800	520,200	520,200	520,200	520,200	520,200	520,200	520,200	520,200	520,200	520,200	5,259,800
Leyes (Ag g/t)																		
Sub-Total : (2)+(3)+(4)	112.00	111.00	112.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.00	113.36
* (1).Open Pit	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00
* (2).Farrallon	105.00	105.00	105.00	105.00														105.00
* (3).Port. y Labo.	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00	121.00
* (4).Esperanza	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00	110.00
Contenido (Ag g/ano)																		
Sub-Total : (2)+(3)+(4)	10,250,000	10,490,000	10,490,000	10,650,000	10,890,000	10,890,000	10,780,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	173,440,000
* (1).Open Pit	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,890,000	1,952,286	0	0	0	0	0	22,742,286
(2).Farrallon	4,200,000	2,625,000	2,625,000	1,575,000	0	0	0	0	0	0	0	0	0	0	0	0	0	11,025,000
(3).Port. y Labo.	6,050,000	7,865,000	7,865,000	9,075,000	10,890,000	10,890,000	9,680,000	0	0	0	0	0	0	0	0	0	0	62,315,000
(4).Esperanza	0	0	0	0	0	0	1,100,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	9,900,000	100,100,000
Recuperacion (Au %)																		
* (1).Open Pit	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	72.81	
* (2).Planta	93.29	93.29	93.29	93.29	93.29	93.29	93.29	93.29	93.29	93.29	93.29	93.29	93.29	93.29	93.29	93.29	93.29	
Recuperacion (Ag %)																		
* (1).Open Pit	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	34.65	
* (2).Planta	42.06	42.06	42.06	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	
Contenido (Au g/ano)	587,640	585,122	583,722	582,603	580,924	580,924	578,778	561,613	561,613	561,613	561,613	564,129	485,277	485,277	485,277	485,277	485,277	9,316,680
* (1).Open Pit	76,336	76,336	76,336	76,336	76,336	76,336	76,336	76,336	76,336	76,336	76,336	78,852	0	0	0	0	0	918,548
(2).Planta	511,304	508,785	507,386	506,267	504,588	504,588	502,442	485,277	485,277	485,277	485,277	485,277	485,277	485,277	485,277	485,277	485,277	8,398,132
Contenido (Ag g/ano)	4,966,035	5,066,979	5,066,979	7,044,885	7,188,885	7,188,885	7,122,885	6,594,885	6,594,885	6,594,885	6,594,885	6,616,467	5,940,000	5,940,000	5,940,000	5,940,000	5,940,000	106,341,540
* (1).Open Pit	654,885	654,885	654,885	654,885	654,885	654,885	654,885	654,885	654,885	654,885	654,885	676,467	0	0	0	0	0	7,880,202
(2).Planta	4,311,150	4,412,094	4,412,094	6,390,000	6,534,000	6,534,000	6,468,000	5,940,000	5,940,000	5,940,000	5,940,000	5,940,000	5,940,000	5,940,000	5,940,000	5,940,000	5,940,000	98,461,338
Cotizacion (US$/Tr.oz)																		
* (1).Au	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	370.0	
* (1).Ag	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Valor de Produccion																		
Total(US$/ano) : (1)+(2)	7,661,873	7,645,539	7,628,892	7,882,686	7,882,156	7,882,156	7,847,717	7,572,200	7,572,200	7,572,200	7,572,200	7,605,045	6,575,581	6,575,581	6,575,581	6,575,581	6,575,581	125,202,772
(1).Au	6,991,219	6,961,253	6,944,605	6,931,287	6,911,310	6,911,310	6,885,784	6,681,573	6,681,573	6,681,573	6,681,573	6,711,502	5,773,395	5,773,395	5,773,395	5,773,395	5,773,395	110,841,535
(2).Ag	670,654	684,287	684,287	951,399	970,846	970,846	961,933	890,628	890,628	890,628	890,628	893,542	802,186	802,186	802,186	802,186	802,186	14,361,237
Recuperacion de Refineria (%)																		
* (1).Au	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	
* (1).Ag	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	
R/C (US$/gr.)																		
* (1).Au	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	
* (1).Ag	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Venta																		
Total(US$/ano) : (1)+(2)	7,454,000	7,438,475	7,422,314	7,675,163	7,675,120	7,675,120	7,641,472	7,372,286	7,372,286	7,372,286	7,372,286	7,404,240	6,402,677	6,402,677	6,402,677	6,402,677	6,402,677	121,888,430
(1).Au	6,786,699	6,757,610	6,741,449	6,728,521	6,709,128	6,709,128	6,684,348	6,486,111	6,486,111	6,486,111	6,486,111	6,515,165	5,604,501	5,604,501	5,604,501	5,604,501	5,604,501	107,598,999
(2).Ag	667,301	680,865	680,865	946,642	965,992	965,992	957,123	886,174	886,174	886,174	886,174	889,074	798,176	798,176	798,176	798,176	798,176	14,289,431

		Ano			年
Playa de Lixi.	(Ton/Ano)		ヒープリーチング	(Ton/年)	
Ton Proyecto	(Ton/Ano)		肯化工場	(Ton/年)	
EXPLOTACION		Ton/Ano	採鉱		Ton/年
	Mano Ob.			労務費	
	Material			資材	
	Gastos			諸経費	
	Sub-t	US$/Ano		小計	US$/年
Playa de Lixi.		US$/Ton	ヒープリーチング		US$/Ton
		US$/Ano			US$/年
Prep.Operativa		Ton/Ano	操業開坑		Ton/年
	Mano Ob.			労務費	
	Material			資材	
	Gastos			諸経費	
	Sub-t	US$/Ano		小計	US$/年
Maquina			機械設備		
	Total	US$/Ano		計	US$/年
	Para Expl.			開坑用	
COSTO TOTAL de EXPLOTACION sin Maquina			採掘費計（除、機械）		
COSTO TOTAL de EXPLOTACION		US$/Ano	採掘費計		US$/年
(US$/Ton sin Maquina)				(US$/Ton …除、機械)	
PREPARACION		US$/Ano	開坑		US$/年
	Mano Ob.			労務費	
	Material			資材	
	Gastos			諸経費	
	Sub-t	US$/Ano		小計	US$/年
Maquina para Preparacion		US$/Ano	開坑用機械		US$/年
COSTO TOTAL de INVERSION			投資総額		
COSTO TOTAL de PREPARACION		US$/Ano	開坑用投資計		US$/年
		Cum.			積算
		US$/Pes.			金額/工数
Mano de Obra			労務費		
Explotacion		4451.0	採掘		4451.0
Preparacion		8902.0	開坑		8902.0
Total de Personal.			総人員		
		Ano			年
Preparacion Operativa			操業開坑		
		Costo			コスト
	82012.50	US$/m		82012.50	US$/m
(1).LHD	Total		(1).LHD	計	
	Mano Ob.	186.0		労務費	186.0
	Material	384.0		資材他	384.0
(2).Pala	Total		(2).ローダー	計	
	Mano Ob.	214.0		労務費	214.0
	Material	436.0		資材他	436.0
(3).Chim(1)	Total		(3).アリマック切上り	計	
	Mano Ob.	0.0		労務費	0.0
	Material	0.0		資材他	0.0
(4).Chim(2)	Total		(4).仮足場切上り	計	
	Mano Ob.	127.0		労務費	127.0
	Material	233.0		資材他	233.0
		Ano			年
Preparacion			開坑		
(5).LHD(1)	Total		(5).LHD(大)	計	
	Mano Ob.	214.0		労務費	214.0
	Material	546.0		資材他	546.0
(6).LHD(2)	Total		(6).LHD(小)	計	
	Mano Ob.	186.0		労務費	186.0
	Material	484.0		資材他	484.0
(7).Pala	Total		(7).ローダー	計	
	Mano Ob.	214.0		労務費	214.0
	Material	656.0		資材他	656.0
(8).Chim(A)	Total		(8).アリマック切上り	計	
	Mano Ob.	255.0		労務費	255.0
	Material	589.0		資材他	589.0
(9).Chim(B)	Total		(9).仮足場切上り	計	
	Mano Ob.	128.0		労務費	128.0
	Material	297.0		資材他	297.0

COSTO TOTAL DE MINA (135,000 Ton/Ano CON MECANIZACION)

Tabla 08-005

		Ano	-2		-1		0		1		2		3		4		5		6		7		8		9		TOTAL
Playa de Lixi.	(Ton/Ano)		45,000		45,000		45,000		45,000		45,000		45,000		45,000		45,000		45,000		45,000		45,000		46,483		541,483
Ton Proyecto	(Ton/Ano)		90,000		105,000		120,000		135,000		135,000		135,000		135,000		135,000		135,000		135,000		135,000		135,000		1,530,000
EXPLOTACION		Ton/Ano	73,768		87,958		103,085		114,627		120,781		120,781		126,881		126,881		126,881		126,881		126,881		130,607		1,381,000
	Mano Ob.		8.71	642	6.93	810	5.66	563	4.31	494	4.02	486	4.02	486	4.02	506	4.02	506	4.02	506	4.02	506	4.02	506	4.15	542	
	Material		7.46	550	7.18	630	6.51	671	6.47	742	6.14	742	6.14	742	6.14	773	6.14	773	6.14	773	6.14	773	6.14	773	5.68	742	
	Gastos		7.62	562	7.55	664	6.43	663	6.03	760	5.91	714	5.91	714	5.91	744	5.91	744	5.91	744	5.91	744	5.91	744	5.46	713	
	Sub-t	US$/Ano		1,755		1,903		1,917		1,996		1,941		1,941		2,023		2,023		2,023		2,023		2,023		1,997	23,565
																										(US$/T=)	17.06
Playa de Lixi.		US$/Ton	4.05		4.05		4.05		4.05		4.05		4.05		4.05		4.05		4.05		4.05		4.05		4.05		
		US$/Ano		182		182		182		182		182		182		182		182		182		182		182		188	2,193
Prep.Operativa		Ton/Ano	18,244		17,042		18,916		20,373		14,219		14,219		9,119		9,119		9,119		9,119		9,119		4,393		149,000
	Mano Ob.			147		170		196		219		221		221		221		221		221		221		221		106	2,384
	Material			203		233		270		301		304		304		304		304		304		304		304		146	3,280
	Gastos			0		0		0		0		0		0		0		0		0		0		0		0	0
	Sub-t	US$/Ano		350		403		466		520		525		525		525		525		525		525		525		253	5,663
																										(US$/T=)	38.01
Maquina			HDx2,Jumbx1		L.Sx5,Dumpx1		HDx5,Jumbx1		HDx1,Jumbx1				Enginex2		Legx5,Dumpx1		HSTx3,Legx5		HSTx1,Jumbx1				HSTx2,Legx3				
							Dumpx1,Payx1		Dumpx1				Jumbx1		Jeepx1		Jumbx1,Dumpx1		Dumpx1				Jeepx1,				
					Jeepx1,Fanx6,		C.Drillx1,Legx5						Legx3,Jeepx1				C.Drillx1										
	Total	US$/Ano	439		145		1,827		323				158		110		319		95		0		128		0		3,399
	Para Expl			230		89		1,062		227		0		158		110		319		95		0		128		0	2,476
	Imprevistos			24		7		81		16		0		8		6		16		5		0		6			373
COSTO TOTAL de EXPLOTACION sin Maquina				2,287		2,489		2,566		2,698		2,648		2,648		2,730		2,730		2,730		2,730		2,730		2,438	31,421
COSTO TOTAL de EXPLOTACION		US$/Ano		2,576		2,577		3,628		2,924		2,648		2,806		2,839		3,049		2,825		2,730		2,856		2,438	33,897
(US$/Ton sin Maquina)			25.41		23.70		21.38		19.98		19.61		19.61		20.22		20.22		20.22		20.22		20.22		18.06	(US$/T=)	20.54
PREPARACION		US$/Ano																									
	Mano Ob.			322		322		276		263		0		0		0		0		0		0		0		0	1,173
	Material			881		881		743		652		0		0		0		0		0		0		0		0	3,157
	Gastos			0		0		0		0		0		0		0		0		0		0		0		0	0
	Sub-t	US$/Ano		1,202		1,202		1,019		916		0		0		0		0		0		0		0		0	4,329
Maquina para Preparacion		US$/Ano		199		66		565		103		0		0		0		0		0		0		0		0	922
COSTO TOTAL de INVERSION				1,715		1,354		2,727		1,251		0		166		115		335		100		0		134		0	7,898
COSTO TOTAL de PREPARACION		US$/Ano		1,401		1,268		1,684		1,008		0		0		0		0		0		0		0		0	5,251
		Cua.		1,401		2,669		4,243		5,251		5,251		5,251		5,251		5,251		5,251		5,251		5,251		5,251	
		US$/Pes	Person.	US$/Ano	Person.	US$/Ano	Person.	US$/Ano	Person.	US$/Ano	Person.	US$/Ano	Person.	US$/Ano	Person.	US$/Ano	Person.	US$/Ano	Person.	US$/Ano	Person.	US$/Ano	Person.	US$/Ano	Person.	US$/Ano	
Mano de Obra																											
Explotacion		4451.0	177	790	175	779	175	780	160	713	159	706	159	706	163	727	163	727	163	727	163	727	163	727	146	648	
Preparacion		8902.0	36	322	36	322	31	276	28	253	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total de Personal.			214	1,111	211	1,101	206	1,056	189	966	159	706	159	706	163	727	163	727	163	727	163	727	163	727	146	649	

		Ano	-2		-1		0		1		2		3		4		5		6		7		8		9		
Preparacion Operativa				Costo		Costo		Costo		Costo		Costo		Costo		Costo		Costo		Costo		Costo		Costo		Costo	
		Costo		US$/Ano		US$/Ano		US$/Ano		US$/Ano		US$/Ano		US$/Ano		US$/Ano		US$/Ano		US$/Ano		US$/Ano		US$/Ano		US$/Ano	
		82012.50	US$/m																								
(1).LHD	Total		225.00 m	102	250.00 m	114	300.00 m	136	325.00 m	148	337.00 m	153	337.00 m	153	337.00 m	153	337.00 m	153	337.00 m	153	337.00 m	153	337.00 m	153	163.00 m	74	
	Mano Ob.	186.0		42		47		56		60		63		63		63		63		63		63		63		30	
	Material	384.0		60		67		81		87		91		91		91		91		91		91		91		44	
(2).Pala	Total		225.00 m	117	250.00 m	130	300.00 m	156	325.00 m	169	338.00 m	175	338.00 m	175	338.00 m	175	338.00 m	175	338.00 m	175	338.00 m	175	338.00 m	175	162.00 m	84	
	Mano Ob.	214.0		48		54		64		70		72		72		72		72		72		72		72		35	
	Material	436.0		69		76		92		99		103		103		103		103		103		103		103		49	
(3).Chim(1)	Total		0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	
	Mano Ob.	0.0		0		0		0		0		0		0		0		0		0		0		0		0	
	Material	0.0		0		0		0		0		0		0		0		0		0		0		0		0	
(4).Chim(2)	Total		450.00 m	131	550.00 m	160	600.00 m	174	700.00 m	203	675.00 m	196	675.00 m	196	675.00 m	196	675.00 m	196	675.00 m	196	675.00 m	196	675.00 m	196	325.00 m	94	
	Mano Ob.	127.0		67		70		76		89		86		86		86		86		86		86		86		41	
	Material	233.0		73		90		98		114		110		110		110		110		110		110		110		53	

		Ano	-2		-1		0		1		2		3		4		5		6		7		8		9		
Preparacion																											
(5).LHD(1)	Total		100.00 m	76	100.00 m	76	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	
	Mano Ob.	214.0		21		21	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	
	Material	648.0		55		55		0		0		0		0		0		0		0		0		0		0	
(6).LHD(2)	Total		650.00 m	438	650.00 m	436	750.00 m	603	650.00 m	436	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	
	Mano Ob.	186.0		121		121		140		121		0		0		0		0		0		0		0		0	
	Material	484.0		315		315		363		315		0		0		0		0		0		0		0		0	
(7).Pala	Total		600.00 m	522	600.00 m	522	400.00 m	349	200.00 m	174	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	
	Mano Ob.	214.0		128		128		86		43		0		0		0		0		0		0		0		0	
	Material	656.0		394		394		262		131		0		0		0		0		0		0		0		0	
(8).Chim(A)	Total		200.00 m	169	200.00 m	169	200.00 m	169	250.00 m	211	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	
	Mano Ob.	255.0		51		51		51		64		0		0		0		0		0		0		0		0	
	Material	589.0		118		118		118		147		0		0		0		0		0		0		0		0	
(9).Chim(B)	Total		0.00 m	0	0.00 m	0	0.00 m	0	200.00 m	85	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	0.00 m	0	
	Mano Ob.	128.0		0		0		0		26		0		0		0		0		0		0		0		0	
	Material	297.0		0		0		0		59		0		0		0		0		0		0		0		0	
			1550.00		1550.00		1350.00		1300.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		6,750

COSTO TOTAL DE MINA (135,000 T/AÑO, SIN MECANIZACION)

Tabla 06-006

Año		-2	-1	0	1	2	3	4	5	6	7	8	9	TOTAL
Playa de Lixi. (Ton/Año)		45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	46,483	541,483
Ton Proyecto (Ton/Año)		90,000	105,000	120,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	1,530,000
EXPLOTACION	Ton/Año	73,756	87,958	103,085	114,627	120,781	120,781	125,881	125,881	125,881	125,881	125,881	130,607	1,381,000
Mano Ob.		8.71 642	8.71 768	8.71 898	8.71 998	8.71 1,052	8.71 1,052	8.71 1,096	8.71 1,096	8.71 1,096	8.71 1,096	8.71 1,096	8.71 1,138	
Material		7.46 550	7.46 656	7.46 769	7.46 855	7.46 901	7.46 901	7.46 939	7.46 939	7.46 939	7.46 939	7.46 939	7.46 974	
Gastos		7.62 562	7.62 670	7.62 786	7.62 873	7.62 920	7.62 920	7.62 959	7.62 959	7.62 959	7.62 959	7.62 959	7.62 995	
Sub-t	US$/Año	1,755	2,093	2,452	2,727	2,873	2,873	2,995	2,995	2,995	2,995	2,995	3,107	32,854
													(US$/T=)	23.79
Playa de Lixi.	US$/Ton	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	
	US$/Año	182	182	182	182	182	182	182	182	182	182	182	188	2,193
Prep.Operativa	Ton/Año	16,244	17,042	16,915	20,373	14,219	14,219	9,119	9,119	9,119	9,119	9,119	4,303	149,000
Mano Ob.		153	177	205	228	230	230	230	230	230	230	230	111	2,495
Material		211	242	281	313	316	316	316	316	316	316	316	152	3,411
Gastos		0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-t	US$/Año	364	419	486	541	546	546	546	546	546	546	546	263	5,898
													(US$/T=)	39.57
Maquina			L,Sx6,Dumpx1	Payx1 Legx6	Dumpx1,Legx6			Legx6,Dumpx1	Payx1,Legx6 Topex1	Legx1				
Total	US$/Año		99	613	99			85	95	85				1,076
Para Expl	US$/Año	0	60	415	72	0	0	85	95	85	0	0	0	812
COSTO TOTAL de EXPLOTACION sin Maquina		2,301	2,694	3,120	3,450	3,602	3,602	3,723	3,723	3,723	3,723	3,723	3,558	40,943
COSTO TOTAL de EXPLOTACION	US$/Año	2,301	2,754	3,535	3,522	3,602	3,602	3,808	3,818	3,808	3,723	3,723	3,558	41,756
(US$/Ton sin Maquina)		25.57	25.66	26.00	25.55	26.68	26.69	27.58	27.58	27.58	27.58	27.58	28.38 (US$/T=)	26.76
PREPARACION	US$/Año													
Mano Ob.		340	340	297	271	0	0	0	0	0	0	0	0	1,248
Material		1,003	1,003	872	764	0	0	0	0	0	0	0	0	3,643
Gastos		0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-t	US$/Año	1,343	1,343	1,169	1,036	0	0	0	0	0	0	0	0	4,891
Maquina para Prep.	US$/Año	0	39	198	27	0	0	0	0	0	0	0	0	264
COSTO TOTAL de INVERSION(Con Maqui.)		1,343	1,442	1,782	1,135	0	0	85	95	85	0	0	0	5,967
COSTO TOTAL de PREPARACION	US$/Año	1,343	1,382	1,367	1,063	0	0	0	0	0	0	0	0	5,155
	Cum.	1,343	2,725	4,093	5,155	5,155	5,155	5,155	5,155	5,155	5,155	5,155	5,155	
	US$/Pes	Person. US$/Año	Person. US$/Año	Person. US$/Año	Person. US$/Año	Person. US$/Año	Person. US$/Año	Person. US$/Año	Person. US$/Año	Person. US$/Año	Person. US$/Año	Person. US$/Año	Person. US$/Año	
Mano de Obra														
Explotacion	4451.0	177 796	210 943	246 1,102	274 1,226	286 1,282	286 1,282	296 1,327	296 1,327	296 1,327	296 1,327	296 1,327	278 1,248	
Preparacion	8902.0	38 340	38 340	33 297	30 271	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
Total de Personal		215 1,136	248 1,283	279 1,400	304 1,498	286 1,282	286 1,282	296 1,327	296 1,327	296 1,327	296 1,327	296 1,327	278 1,248	

Preparacion Operativa	Año	-2	-1	0	1	2	3	4	5	6	7	8	9	
	Costo US$/m	US$/Año	US$/Año	US$/Año	US$/Año	US$/Año	US$/Año	US$/Año	US$/Año	US$/Año	US$/Año	US$/Año	US$/Año	
(1).LHD	Total	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	
	Mano Ob. 186.0	0	0	0	0	0	0	0	0	0	0	0	0	
	Material 384.0	0	0	0	0	0	0	0	0	0	0	0	0	
(2).Pala	Total	450.00 m 234	500.00 m 260	600.00 m 312	650.00 m 337	675.00 m 350	675.00 m 350	675.00 m 350	675.00 m 350	675.00 m 350	675.00 m 350	675.00 m 350	325.00 m 169	
	Mano Ob. 214.0	96	107	128	139	144	144	144	144	144	144	144	70	
	Material 436.0	137	153	183	198	206	206	206	206	206	206	206	99	
(3).Chim(1)	Total	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	
	Mano Ob. 0.0	0	0	0	0	0	0	0	0	0	0	0	0	
	Material 0.0	0	0	0	0	0	0	0	0	0	0	0	0	
(4).Chim(2)	Total	450.00 m 131	550.00 m 160	600.00 m 174	700.00 m 203	675.00 m 196	675.00 m 196	675.00 m 196	675.00 m 196	675.00 m 196	675.00 m 196	675.00 m 196	325.00 m 94	
	Mano Ob. 127.0	57	70	76	88	86	86	86	86	86	86	86	41	
	Material 233.0	73	90	98	114	110	110	110	110	110	110	110	53	

Preparacion	Año	-2	-1	0	1	2	3	4	5	6	7	8	9	
(5).LHD(1)	Total	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	
	Mano Ob. 214.0	0	0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	0.00 0	
	Material 546.0	0	0	0	0	0	0	0	0	0	0	0	0	
(6).LHD(2)	Total	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	
	Mano Ob. 166.0	0	0	0	0	0	0	0	0	0	0	0	0	
	Material 484.0	0	0	0	0	0	0	0	0	0	0	0	0	
(7).Pala	Total	1350.00 m 1,175	1350.00 m 1,175	1150.00 m 1,001	850.00 m 740	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	
	Mano Ob. 214.0	289	289	246	182	0	0	0	0	0	0	0	0	
	Material 656.0	886	886	754	558	0	0	0	0	0	0	0	0	
(8).Chim(A)	Total	200.00 m 169	200.00 m 169	200.00 m 169	250.00 m 211	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	
	Mano Ob. 255.0	51	51	51	64	0	0	0	0	0	0	0	0	
	Material 589.0	118	118	118	147	0	0	0	0	0	0	0	0	
(9).Chim(B)	Total	0.00 m 0	0.00 m 0	0.00 m 0	200.00 m 85	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	
	Mano Ob. 128.0	0	0	0	26	0	0	0	0	0	0	0	0	
	Material 297.0	0	0	0	59	0	0	0	0	0	0	0	0	
		1550.00	1550.00	1350.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,750

COSTO TOTAL DE MINA (9,000 TON/ANO, SIN MECANIZACION)

Tabla 08-007

Ano	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	TOTAL
Playa de Lixi. (Ton/Ano)	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	46,483						641,483
Ton Proyecto (Tce/Ano)	99,000	99,000	99,000	99,000	99,000	99,000	99,000	99,000	99,000	99,000	99,000	99,000	99,000	99,000	99,000	99,000	99,000	1,530,000
EXPLOTACION Ton/Ano	73,756	73,756	73,756	73,756	73,756	73,756	73,756	73,756	73,756	73,756	73,756	73,766	73,756	73,756	73,756	73,756	73,756	1,253,852
Mano Ob.	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	8.71 642	
Material	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	7.46 550	
Gastos	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	7.62 562	
Sub-t US$/Ano	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	29,829
																		23.79
Playa de Lixi. US$/Ton	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	
US$/Ano	182	182	182	182	182	182	182	182	182	182	182	188	0	0	0	0	0	2,193
Prep.Operativa Ton/Ano	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	16,244	276,148
Mano Ob.	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	2,609
Material	211	211	211	211	211	211	211	211	211	211	211	211	211	211	211	211	211	3,582
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-t US$/Ano	364	364	364	364	364	364	364	364	364	364	364	364	364	364	364	364	364	6,191
																		22.42
Maquina																		
Total US$/Ano	0	64	578	64	35	41	50	60	60	35	91	50		50				1,167
Para Expl	0	48	431	48	27	31	41	49	50	35	91	50	0	50	0	0	0	949
COSTO TOTAL de EXPLOTACION sin Maquina	2,301	2,301	2,301	2,301	2,301	2,301	2,301	2,301	2,301	2,301	2,301	2,307	2,119	2,119	2,119	2,119	2,119	38,213
COSTO TOTAL de EXPLOTACION US$/Ano	2,301	2,349	2,732	2,349	2,328	2,333	2,342	2,350	2,351	2,336	2,392	2,357	2,119	2,169	2,119	2,119	2,119	39,162
(US$/Ton sin Maquina)	25.57	25.57	25.57	25.57	25.57	25.57	25.57	25.57	25.57	25.57	25.57	25.63	23.54	23.54	23.54	23.54	23.54	24.98
PREPARACION US$/Ano																		
Mano Ob.	161	161	161	161	138	138	114	114	0	0	0	0	0	0	0	0	0	1,147
Material	440	440	440	440	372	372	297	297	0	0	0	0	0	0	0	0	0	3,097
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub-t US$/Ano	601	601	601	601	510	510	410	410	0	0	0	0	0	0	0	0	0	4,244
Maquina para Prep. US$/Ano	0	16	147	18	8	9	9	11	0	0	0	0	0	0	0	0	0	218
COSTO TOTAL de INVERSION	601	665	1,179	665	544	550	460	470	50	35	91	50	0	50	0	0	0	5,411
COSTO TOTAL de PREPARACION US$/Ano	601	617	749	617	517	519	420	422	0	0	0	0	0	0	0	0	0	4,462
Cum.	601	1,219	749	1,366	517	1,036	420	841	0	0	0	0	0	0	0	0	0	
US$/Pers	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	Person. US$/Ano	
Mano de Obra																		
Explotacion 4451.0	179 796	179 796	179 796	179 796	179 796	179 796	179 796	179 796	179 796	179 796	179 796	179 796	179 796	179 796	179 796	179 796	179 796	
Preparacion 8902.0	18 161	18 161	18 161	18 161	16 138	16 138	13 114	13 114	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
Total de Personal.	197 957	197 957	197 957	197 957	194 934	194 934	192 910	192 910	179 796	179 796	179 796	179 796	179 796	179 798	179 796	179 796	179 798	

Preparacion Operativa	Ano	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	TOTAL
	Costo US$/m	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	Costo US$/Ano	
	82012.50 US$/m																		
(1).LHD Total		0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	
Mano Ob.	186.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Material	384.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(2).Pala Total		450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	450.00 m 234	
Mano Ob.	214.0	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	
Material	435.0	137	137	137	137	137	137	137	137	137	137	137	137	137	137	137	137	137	
(3).Chim(1) Total		0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	
Mano Ob.	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Material	0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
(4).Chim(2) Total		450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	450.00 m 131	
Mano Ob.	127.0	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	
Material	233.0	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	

Preparacion	Ano	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	TOTAL
(6).LHD(1) Total		50.00 m 38	50.00 m 38	50.00 m 38	50.00 m 38	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	m 0	m 0	m 0	m 0	m 0	m 0	m 0	m 0	m 0	
Mano Ob.	214.0	11	11	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	
Material	546.0	27	27	27	27	0	0	0	0	0	0	0	0	0	0	0	0	0	
(6).LHD(2) Total		325.00 m 218	325.00 m 218	325.00 m 218	325.00 m 218	375.00 m 251	375.00 m 251	325.00 m 218	325.00 m 218	m 0	m 0	m 0	m 0	m 0	m 0	m 0	m 0	m 0	
Mano Ob.	186.0	60	60	60	60	70	70	60	60	0	0	0	0	0	0	0	0	0	
Material	484.0	157	157	157	157	182	182	157	157	0	0	0	0	0	0	0	0	0	
(7).Pala Total		300.00 m 261	300.00 m 261	300.00 m 261	300.00 m 261	200.00 m 174	200.00 m 174	100.00 m 87	100.00 m 87	m 0	m 0	m 0	m 0	m 0	m 0	m 0	m 0	m 0	
Mano Ob.	214.0	64	64	64	64	43	43	21	21	0	0	0	0	0	0	0	0	0	
Material	658.0	197	197	197	197	131	131	66	66	0	0	0	0	0	0	0	0	0	
(8).Chim(A) Total		100.00 m 84	100.00 m 84	100.00 m 84	100.00 m 84	100.00 m 84	100.00 m 84	125.00 m 106	125.00 m 106	m 0	m 0	m 0	m 0	m 0	m 0	m 0	m 0	m 0	
Mano Ob.	255.0	26	26	26	26	26	26	32	32	0	0	0	0	0	0	0	0	0	
Material	589.0	59	59	59	59	59	59	74	74	0	0	0	0	0	0	0	0	0	
(9).Chim(B) Total		0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	0.00 m 0	m 0	m 0	m 0	m 0	m 0	m 0	m 0	
Mano Ob.	128.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Material	297.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		775.00	775.00	775.00	775.00	675.00	675.00	550.00	550.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	5,550

Categoria	Item	分類	項目
Mano de Obra	Fera Convenio	労務費	非組合員
	Convenio		組合員
	Sub-Total		小計
Aceros	Boras	鉄鋼	ﾎﾞｰﾙﾛｯﾄﾞ
	Rodillo	2次品	ﾛｯﾄﾞ
	R.M. Liner		ﾛｯﾄﾞﾐﾙ･ﾗｲﾅｰ
	Blaker Liner		ﾌﾞﾚｰｶｰ･ﾗｲﾅｰ
	C.C. Liner		ｺｰﾝｸﾗｯｼｬ･ﾗｲﾅｰ
	B.M. Cell Liner		ﾎﾞｰﾙﾐﾙ･ｾﾙﾗｲﾅｰ
	B.M. End Liner		ﾎﾞｰﾙﾐﾙ･ｴﾝﾄﾞﾗｲﾅｰ
	Screen		網
	Otros		その他
	Sub-Total		小計
Reactivos	NaCN	試薬	NaCN
	Zn Dust		亜鉛末
	Ca(OH)2		石灰
	Floculant		凝集剤
	Borax		硼砂
	NaNO3,NaCO3		NaNO3,NaCO3
	Sub-Total		小計
Otros Insumos		その他消耗品	
Mantenimiento	Convencional	保全	従来工場分
	Autoclave		オートクレーブ
	Sub-Total		小計
Energia Electrica	Convencional	電力	従来工場分
	Parte Ampliacion		増設分
	Autoclave		オートクレーブ
	Sub-Total		小計
Agua	Convencional	用水	従来工場分
	Autoclave		オートクレーブ
	Otros		その他
	Sub-Total		小計
Trans. de Colas		廃さい輸送	
Fusion		溶融	
	Total (1)		計 (1)
Amortizacion	Convencional	減価償却	従来工場分
	Autoclave		オートクレーブ
	Otros		その他
	Sub-Total		小計
Lixi. Pilas		ﾋｰﾌﾟﾘｰﾁﾝｸﾞ	
	Gran Total		総計

COSTO DE PRODUCCION DE PLANTA (135,000 TON/ANO, SIN AUTOCLAVE)

Tabla 08-008

Categoria	Item	Costo	Base de Calculo	Ano	-2	-1	0	1	2	3	4	5	6	7	8	9	Total
				Planta Tn/ano	90,000	105,000	120,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	1,530,000
				Lixi. Tn/ano	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	46,483	541,483
		US$/T		Sub-T	135,000	150,000	165,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	181,483	2,071,483
				Inversion	Molino	Tituracion	Filtro Usina										
		US$/Pers./ano															
Mano de Obra	Pera Convenio	9420.97	=(52,356,244/9970/10)*(1.495)*12		10	9	8	6	6	6	6	6	6	6	6	6	
	Convenio	4323.99	=(134,569,259/9970/56)*(1.495)*12		56	50	46	42	42	42	42	42	42	42	42	42	
					* (4*10+13+3+10)=66				* (4*7+12+2+6)=48								
	Sub-Total	3.74	=(224,986US$/Y*1.495)/(90,000)		336,353	300,988	274,272	238,134	238,134	238,134	238,134	238,134	238,134	238,134	238,134	238,134	3,054,816
					3.74			1.76									
Aceros	Boras	0.87	=(0.94Kg/t*1.55US$/Kg)*(0.6)		131,130	91,791	104,904	118,017	118,017	118,017	118,017	118,017	118,017	118,017	118,017	118,017	1,389,978
	Rodillo	0.58	=(0.94Kg/t*1.55US$/Kg)*(0.4)		0	61,194	69,936	78,678	78,678	78,678	78,678	78,678	78,678	78,678	78,678	78,678	839,232
	R.M. Liner	0.14	=(12/9)*(16,000$)/(90000)(0.5)		12,800	14,933	17,067	19,200	19,200	19,200	19,200	19,200	19,200	19,200	19,200	19,200	217,600
	Blaker Liner	0.07	=(12/3)(1.20)(1,300US$)/(90,000)		6,240	7,280	8,320	9,360	9,360	9,360	9,360	9,360	9,360	9,360	9,360	9,360	106,080
	C.C. Liner	0.10	=((12/2.0)(800$)+(12/3)(1,000$))/(90,000)		8,800	10,267	11,733	13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200	149,600
	B.M. Cell Liner	0.24	=(12/9)*(16,000$)/(90000)		21,333	24,889	28,444	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	362,667
	B.M. End Liner	0.27	=(12/8)*(16,000$)/(90000)		24,000	28,000	32,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	408,000
	Screen	0.02	=(12/4)*(2)*(230$)/(90000)		1,380	1,610	1,840	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	23,460
	Otros	0.05	=(2,700$)/(90,000)		4,500	5,250	6,000	6,750	6,750	6,750	6,750	6,750	6,750	6,750	6,750	6,750	76,500
	Sub-Total	2.34			210,183	245,214	280,244	315,275	315,275	315,275	315,275	315,275	315,275	315,275	315,275	315,275	3,573,117
Reactivos	NaCN	3.06	=(1.2Kg/t*1.70US$)*(1.5)		183,600	214,200	244,800	413,100	413,100	413,100	413,100	413,100	413,100	413,100	413,100	413,100	4,360,500
	Zn Dust	0.68	=(2.35$/Kg)*(60Kg/D)*(28*12)/(90000)*(1.3)		47,376	55,272	63,168	92,383	92,383	92,383	92,383	92,383	92,383	92,383	92,383	92,383	997,265
	Ca(OH)2	0.56	=(3.1Kg/t*0.18$/Kg)		50,220	58,590	66,960	75,330	75,330	75,330	75,330	75,330	75,330	75,330	75,330	75,330	853,740
	Floculant	0.22	=(19,800$)/(90,000)		19,800	23,100	26,400	29,700	29,700	29,700	29,700	29,700	29,700	29,700	29,700	29,700	336,600
	Borax	0.06	=(5,400$)/(90,000)		5,400	6,300	7,200	8,100	8,100	8,100	8,100	8,100	8,100	8,100	8,100	8,100	91,800
	NaNO3,NaCO3	0.08	=(7,200$)/(90,000)		7,200	8,400	9,600	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	122,400
	Sub-Total	4.66			313,596	365,862	418,128	629,413	629,413	629,413	629,413	629,413	629,413	629,413	629,413	629,413	6,762,305
Otros Insumos		0.64	=(57,600$/90,000)		57,600	67,200	76,800	86,400	86,400	86,400	86,400	86,400	86,400	86,400	86,400	86,400	979,200
Mantenimiento	Convencional	0.24	=(21,810$/90,000)		21,810	25,445	29,080	32,715	32,715	32,715	32,715	32,715	32,715	32,715	32,715	32,715	370,770
	Autoclave	0.00															0
	Sub-Total	0.24			21,810	25,445	29,080	32,715	32,715	32,715	32,715	32,715	32,715	32,715	32,715	32,715	370,770
Energia Electrica	Convencional	3.15	=(2' 576,640Kwh/y)*(0.11US$/Kw)/(90,000)		283,430	390,185	461,490	547,542	547,542	547,542	547,542	547,542	547,542	547,542	547,542	547,542	6,062,983
	Parte Ampliacion		=(71)+(227.5)+(82.5+10) Hp (US$/t)		(3.15)	(3.72)	(3.85)	(4.06)									0
	Autoclave																0
	Sub-Total	3.15	Cru..15%,Grind..45%,CN..20%,Etc..20%=100%		283,430	390,185	461,490	547,542	547,542	547,542	547,542	547,542	547,542	547,542	547,542	547,542	6,062,983
Agua	Convencional	0.99	=(1' 389,928Kwh/y*.58)*(0.11US$/Kw)/(90,000		88,677	103,457	118,237	103,457	103,457	103,457	103,457	103,457	103,457	103,457	103,457	103,457	1,241,484
	Autoclave																0
	Otros	0.44	=(39,600$/90,000)		39,600	46,200	52,800	59,400	59,400	59,400	59,400	59,400	59,400	59,400	59,400	59,400	673,200
	Sub-Total	1.43	=(192,360$)/(90,000)		128,277	149,657	171,037	162,857	162,857	162,857	162,857	162,857	162,857	162,857	162,857	162,857	1,914,684
Trans. de Colas		0.93	=(83,700$)/(90,000)		83,700	97,650	111,600	179,357	179,357	179,357	179,357	179,357	179,357	179,357	179,357	179,357	1,907,164
Fusion		0.26	=(23,490$)/(90,000)		23,490	27,405	31,320	35,235	35,235	35,235	35,235	35,235	35,235	35,235	35,235	35,235	399,330
	Total (1)	17.38			1,458,441	1,669,606	1,853,971	2,226,928	2,226,928	2,226,928	2,226,928	2,226,928	2,226,928	2,226,928	2,226,928	2,226,928	25,024,369
Amortizacion	Convencional	0.00	=(220,915$)/(90,000)		0	0	0	0	0	0	0	0	0	0	0	0	0
	Autoclave				0	0	0	0	0	0	0	0	0	0	0	0	0
	Otros				0	0	0	0	0	0	0	0	0	0	0	0	0
	Sub-Total	0.00			0	0	0	0	0	0	0	0	0	0	0	0	0
Lixi. Pilas		3.52	=(170,720$)/(48,500t)		158,400	158,400	158,400	158,400	158,400	158,400	158,400	158,400	158,400	158,400	158,400	163,620	1,906,020
	Gran Total	20.90			1,616,841	1,828,006	2,012,371	2,385,328	2,385,328	2,385,328	2,385,328	2,385,328	2,385,328	2,385,328	2,385,328	2,390,548	26,930,389
				Costo Total	17.96	17.41	16.77	17.67	17.67	17.67	17.67	17.67	17.67	17.67	17.67	17.71	17.60

COSTO DE PRODUCCION DE PLANTA (135,000 TON/ANO, CON AUTOCLAVE)

Tabla 08-009

Categoria	Item	Costo	Base de Calculo	Ano	-2	-1	0	1	2	3	4	5	6	7	8	9	Total
				Planta Tn/ano	90,000	105,000	120,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	1,530,000
				Lixi. Tn/ano	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	46,483	641,483
		US$/T		Sub-T	135,000	150,000	165,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	181,483	2,071,483
			Inversion		Molino	Tituracion	Filtro										
		US$/Pers./ano					Usina										
Mano de Obra	Fera Convenio	9420.97	=(52,356,244/9970/10)*(1.495)*12		10	9	8	6	6	6	6	6	6	6	6	6	
	Convenio	4323.99	=(134,569,258/9970/56)*(1.495)*12		56	50	46	42	42	42	42	42	42	42	42	42	
					* (4*10+13+3+10)=66				* (4*7+12+2+6)=48								
	Sub-Total	3.74	=(224,986US$/Y*1.495)/(90,000)		336,353	300,988	274,272	238,134	238,134	238,134	238,134	238,134	238,134	238,134	238,134	238,134	3,054,816
					3.74			1.76									
Aceros	Boras	0.87	=(0.94Kg/t*1.55US$/Kg)*(0.6)		131,130	91,791	104,904	118,017	118,017	118,017	118,017	118,017	118,017	118,017	118,017	118,017	1,389,978
	Rodillo	0.58	=(0.94Kg/t*1.55US$/Kg)*(0.4)		0	61,194	69,936	78,678	78,678	78,678	78,678	78,678	78,678	78,678	78,678	78,678	839,232
	R.M. Liner	0.14	=(12/9)*(16,000$)/(90000)(0.5)		12,800	14,933	17,067	19,200	19,200	19,200	19,200	19,200	19,200	19,200	19,200	19,200	217,600
	Blaker Liner	0.07	=(12/3)(1.20)(1,300US$)/(90,000)		6,240	7,280	8,320	9,360	9,360	9,360	9,360	9,360	9,360	9,360	9,360	9,360	106,080
	C.C. Liner	0.10	=((12/2.0)(800$)+(12/3)(1,000$))/(90,000)		8,800	10,267	11,733	13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200	13,200	149,600
	B.M. Cell Liner	0.24	=(12/9)*(16,000$)/(90000)		21,333	24,889	28,444	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	362,667
	B.M. End Liner	0.27	=(12/8)*(16,000$)/(90000)		24,000	28,000	32,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	408,000
	Screen	0.02	=(12/4)*(2)*(230$)/(90000)		1,380	1,610	1,840	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	2,070	23,460
	Otros	0.05	=(2,700$)/(90,000)		4,500	5,250	6,000	6,750	6,750	6,750	6,750	6,750	6,750	6,750	6,750	6,750	76,500
	Sub-Total	2.34			210,183	245,214	280,244	315,275	315,275	315,275	315,275	315,275	315,275	315,275	315,275	315,275	3,573,117
Reactivos	NaCN	2.04	=(1.2Kg/t*1.70US$)		275,400	321,300	367,200	275,400	275,400	275,400	275,400	275,400	275,400	275,400	275,400	275,400	3,442,500
	Zn Dust	0.53	=(2.35$/Kg)*(60Kg/D)*(28*12)/(90000)*(1.3)		61,589	71,854	82,118	71,064	71,064	71,064	71,064	71,064	71,064	71,064	71,064	71,064	855,137
	Ca(OH)2	0.56	=(3.1Kg/t*0.18$/Kg)		50,220	58,590	66,960	75,330	75,330	75,330	75,330	75,330	75,330	75,330	75,330	75,330	853,740
	Floculant	0.22	=(19,800$)/(90,000)		19,800	23,100	26,400	29,700	29,700	29,700	29,700	29,700	29,700	29,700	29,700	29,700	336,600
	Borax	0.06	=(5,400$)/(90,000)		5,400	6,300	7,200	8,100	8,100	8,100	8,100	8,100	8,100	8,100	8,100	8,100	91,800
	NaNO3,NaCO3	0.08	=(7,200$)/(90,000)		7,200	8,400	9,600	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	122,400
	Sub-Total	3.48			419,609	489,544	559,478	470,394	470,394	470,394	470,394	470,394	470,394	470,394	470,394	470,394	5,702,177
Otros Insumos		0.64	=(57,600$/90,000)		57,600	67,200	76,800	86,400	86,400	86,400	86,400	86,400	86,400	86,400	86,400	86,400	979,200
Mantenimiento	Convencional	0.24	=(21,810$/90,000)		21,810	25,445	29,080	32,715	32,715	32,715	32,715	32,715	32,715	32,715	32,715	32,715	370,770
	Autoclave	0.10						13,500	13,500	13,500	13,500	13,500	13,500	13,500	13,500	13,500	121,500
	Sub-Total	0.34			21,810	25,445	29,080	46,215	46,215	46,215	46,215	46,215	46,215	46,215	46,215	46,215	492,270
Energia Electrica	Convencional	3.15	=(2' 576,640Kwh/y)*(0.11US$/Kw)/(90,000)		283,430	390,185	461,490	547,542	547,542	547,542	547,542	547,542	547,542	547,542	547,542	547,542	6,062,983
	Parte Ampliacion		=(71)+(227.5)+(82.5+10) Hp (US$/t)		(3.15)	(3.72)	(3.85)	(4.06)									0
	Autoclave	2.37	=(Fuel oil:11.1Kg/T,0.16US$/Kg./.75)					319,680	319,680	319,680	319,680	319,680	319,680	319,680	319,680	319,680	2,877,120
	Sub-Total	5.52	Cru..15%,Grind..45%,CN..20%,Etc..20%=100%		283,430	390,185	461,490	867,222	867,222	867,222	867,222	867,222	867,222	867,222	867,222	867,222	8,940,103
Agua	Convencional	0.99	=(1' 389,928Kwh/y*.58)*(0.11US$/Kw)/(90,000		88,677	103,457	118,237	103,457	103,457	103,457	103,457	103,457	103,457	103,457	103,457	103,457	1,241,484
	Autoclave	0.08						10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	94,499
	Otros	0.44	=(39,600$/90,000)		39,600	46,200	52,800	59,400	59,400	59,400	59,400	59,400	59,400	59,400	59,400	59,400	673,200
	Sub-Total	1.50	=(192,360$)/(90,000)		128,277	149,657	171,037	173,357	173,357	173,357	173,357	173,357	173,357	173,357	173,357	173,357	2,009,183
Trans. de Colas		0.93	=(83,700$)/(90,000)		83,700	97,650	111,600	179,357	179,357	179,357	179,357	179,357	179,357	179,357	179,357	179,357	1,907,164
Fusion		0.26	=(23,490$)/(90,000)		23,490	27,405	31,320	35,235	35,235	35,235	35,235	35,235	35,235	35,235	35,235	35,235	399,330
	Total (1)	18.75			1,564,453	1,793,288	1,995,321	2,411,589	2,411,589	2,411,589	2,411,589	2,411,589	2,411,589	2,411,589	2,411,589	2,411,589	27,057,360
Amortizacion	Convencional	0.00	=(220,915$)/(90,000)		0	0	0	0	0	0	0	0	0	0	0	0	0
	Autoclave				0	0	0	0	0	0	0	0	0	0	0	0	0
	Otros				0	0	0	0	0	0	0	0	0	0	0	0	0
	Sub-Total	0.00			0	0	0	0	0	0	0	0	0	0	0	0	0
Lixi. Pilas		3.52	=(170,720$)/(48,500t)		158,400	158,400	158,400	158,400	158,400	158,400	158,400	158,400	158,400	158,400	158,400	163,620	1,906,020
	Gran Total	22.27			1,722,853	1,951,688	2,153,721	2,569,989	2,569,989	2,569,989	2,569,989	2,569,989	2,569,989	2,569,989	2,569,989	2,575,209	28,963,380
				Costo Total	19.14	18.59	17.95	19.04	19.04	19.04	19.04	19.04	19.04	19.04	19.04	19.08	18.93