

APENDICE



A-1 Lista de analisis quimico de los minerales

No	Número de muestra	Ubicación de muestra	Ancho de muestra (cm)	Au g/t	Ag g/t	Pb %	Zn %	Sn %	No	Número de muestra	Ubicación de muestra	Ancho de muestra (cm)	Au g/t	Ag g/t	Pb %	Zn %	Sn %
1	CH-23	interior		<1	100	0.19	0.61	0.01	35	PH-3	interior		<1	260	1.23	0.81	0.05
2	KH-8	"		"	60	0.47	0.71	"	36	"-4	"		"	590	21.10	0.91	"
3	"-10	"		"	120	0.43	0.66	"	37	"-5	"		"	600	0.56	"	0.10
4	"-13	"		"	90	0.88	0.61	"	38	"-6	"		"	230	1.26	0.61	"
5	"-14	"		"	40	0.46	0.66	"	39	"-7	"		"	480	1.13	0.76	"
6	"-21	"		"	60	0.18	0.61	0.15	40	"-8	"		"	260	1.04	"	0.05
7	"-22	"		"	230	0.60	0.66	0.10	41	"-9	"		"	120	0.49	0.66	0.10
8	"-23	"		"	180	0.75	0.55	0.05	42	"-10	"		"	60	0.41	0.61	0.05
9	"-28	"		"	260	0.33	0.76	0.10	43	"-11	"		"	160	0.68	0.66	0.10
10	"-31	"		"	320	0.03	0.86	"	44	"-12	"		"	230	1.07	1.16	0.05
11	"-32	"		"	140	0.59	0.76	"	45	"-13	"		"	190	0.57	0.61	0.10
12	"-33	"		"	130	0.58	0.55	"	46	"-14	"		"	440	1.40	0.76	"
13	"-34	"		"	120	0.75	0.61	"	47	"-15	"		"	20	0.06	0.71	0.05
14	"-36	"		"	620	2.39	0.71	"	48	"-16	"		"	290	1.42	0.76	0.10
15	"-39	"		1.4	440	0.71	0.61	"	49	"-17	"		"	160	1.02	0.91	0.05
16	"-44	"		1.0	120	0.56	0.71	0.05	50	T-31	4-E		"	90	0.11	0.55	0.10
17	"-45	"		<1	70	0.49	0.81	0.15	51	"-32	"		"	300	0.17	0.91	"
18	"-46	"		1.5	420	0.80	0.71	0.10	52	"-33	"		"	110	1.46	0.61	0.05
19	"-48	"		<1	50	0.09	0.86	"	53	"-35	"		"	120	0.12	0.66	"
20	"-50	"		"	220	0.40	0.66	"	54	BC-1	MJB-1 16.6~16.8m	2	"	4	0.09	0.18	<0.01
21	"-56	"		1.2	260	0.96	0.61	"	55	"-2	16.4~16.6	2	1.1	8	0.36	0.10	"
22	"-63	"		1.2	20	0.10	0.66	"	56	"-3	26.5	5	<1	6	0.51	0.07	"
23	"-68	"		"	30	0.43	1.97	"	57	"-4	26.8~27.0	4	"	16	0.27	0.13	"
24	"-73	"		"	50	1.91	1.31	"	58	"-5	37.1	5	"	13	0.40	0.17	"
25	"-76	"		"	200	2.72	2.52	"	59	"-6	57.8~58.0	10	"	211	0.39	0.16	"
26	"-77	"		1.8	100	2.41	35.40	"	60	"-7	96.5~96.6	5	"	8	0.11	0.21	"
27	"-81	"		<1	150	1.90	1.06	"	61	"-8	100.2~100.3	10	"	22	0.14	0.11	"
28	"-82	"		1.5	1,150	2.08	2.47	0.05	62	"-9	100.3~101.4	30	1.9	5	0.02	0.06	"
29	"-83	"		<1	5,330	7.04	4.95	0.10	63	"-10	101.4~102.7	20	4.1	804	0.66	0.12	"
30	"-84	"		"	180	7.85	9.89	"	64	"-11	102.7~103.8	50	<1	31	0.65	0.06	"
31	NW-85	interior		1.9	1,470	4.47	3.38	0.10	65	BC-12	MJB-1 103.8~104.8	30	1.4	136	1.22	0.13	<0.01
32	"-91	"		5.0	120	1.05	0.81	"	66	"-13	138.0~140.5	20	<1	6	0.17	0.07	"
33	PN-1	"		<1	320	0.56	0.55	0.05	67	"-14	150.3~152.4	30	"	60	0.06	0.02	"
34	"-2	"		"	140	0.38	0.66	0.10	68	"-15	158.0~159.1	50	"	1	0.03	0.01	"

No	Número de muestra	Ubicación de muestra	Ancho de muestra (cm)	Au g/t	Ag g/t	Pb %	Zn %	Sn %	No	Número de muestra	Ubicación de muestra	Ancho de muestra (cm)	Au g/t	Ag g/t	Pb %	Zn %	Sn %
69	BC-16	NJB-1 184.1m	50	<1	2	0.10	0.01	<0.01	88	BC-35	NJB-2 169.7-172.0m	130	1	2	<0.01	0.06	0.01
70	" -17	" 189.0-189.6	50	"	"	0.13	0.02	0.01	89	" -36	" 172.0-173.7	140	"	3	0.06	0.18	"
71	" -18	" 141.1-141.5	20	"	3	0.02	0.06	<0.01	90	" -37	" 173.7-174.6	90	"	1	0.01	0.03	"
72	" -19	" 234.2-234.8	30	"	7	0.95	0.15	"	91	" -38	" 174.6-175.6	60	"	2	"	"	<0.01
73	" -20	NJB-2 153.1-154.1	30	"	3	0.04	0.01	"	92	" -39	" 175.6-177.1	100	"	1	"	"	"
74	" -21	" 154.1-155.2	110	"	41	0.34	0.22	"	93	" -40	" 177.1-182.5	60	"	3	0.22	0.24	0.01
75	" -22	" 155.2-155.9	70	"	8	0.07	0.32	"	94	" -41	NJB-3 5.3-5.9	"	"	1.36	0.45	0.35	"
76	" -23	" 155.9-156.9	"	"	16	1.28	0.90	"	95	" -42	" 6.0-6.7	70	"	128	1.06	0.14	"
77	" -24	" 156.9-157.4	40	"	45	0.79	0.85	"	96	" -43	" 12.6-12.7	10	"	41	1.31	0.17	"
78	" -25	" 157.4-159.2	70	"	8	0.31	0.50	"	97	" -44	" 13.4-13.5	10	"	26	0.29	0.13	<0.01
79	" -26	" 159.2-159.8	60	"	11	0.86	0.38	"	98	" -45	" 25.8-26.0	20	"	25	0.86	3.36	"
80	" -27	" 159.8-160.9	100	"	14	2.81	0.50	"	99	" -46	" 42.7	10	"	47	0.54	0.12	"
81	" -28	" 160.9-161.9	50	"	19	0.68	0.24	"	100	" -47	" 43.7	"	"	69	0.27	0.11	"
82	" -29	" 161.9-162.8	15	"	12	0.58	0.37	"	101	" -48	" 78.8	"	"	61	1.68	1.89	"
83	" -30	" 162.8-165.8	100	"	3	0.04	0.06	"	102	" -49	" 72.7	"	"	13	0.79	0.27	0.01
84	" -31	" 165.8-166.7	50	"	"	<0.01	0.02	"	103	" -50	" 143.2-145.3	30	"	39	1.25	0.52	"
85	" -32	" 166.7-167.5	60	"	2	0.01	0.03	"	104	" -51	" 145.3-148.3	"	"	156	0.32	0.05	<0.01
86	" -33	" 167.5-168.5	"	"	18	0.02	0.04	0.01	105	" -52	" 179.8	10	"	21	0.43	0.13	0.01
87	" -34	" 168.5-169.7	130	"	1	<0.01	0.03	"	106	" -53	" 284.0-284.3	10	"	"	"	"	"
109	BC-54	NJB-3 284.0 284.3	40	15	21	0.16	0.38	0.01	107	KM-96	interior	"	"	119	0.93	0.68	<0.01
									108	" -98	"	"	"	364	0.74	1.43	"



A-2 Lista de analisis quimico de rocas

No.	Número de muestra	Ubicación de muestra	SiO ₂ %	Al ₂ O ₃	Fe ₂ O ₃ %	TiO ₂ %	MgO %	CaO %	Na ₂ O %	K ₂ O %	P ₂ O ₅ %	LOI %	FeO %	MnO %	H ₂ O- %	H ₂ O+ %	Total	Ag ppm	As ppm
1	CM-9	interior	66.12	17.43	1.07	0.58	0.11	0.07	0.13	8.14	0.10	3.99	1.01	0.01	0.35	2.46	98.77	3.1	95
2	CM-10	"	73.05	13.03	1.62	0.62	0.08	0.22	0.22	6.94	0.16	2.63	0.72	0.01	0.37	1.61	99.01	72.0	270
3	CM-11	"	66.44	14.16	5.34	0.55	0.46	0.21	0.57	7.60	0.26	3.47	0.58	0.05	0.74	1.96	99.59	4.0	180
4	CM-12	"	65.06	16.62	3.60	0.60	0.33	0.30	0.36	8.30	0.12	3.07	1.22	0.03	0.48	1.89	99.71	2.8	95
5	CM-13	"	68.10	15.70	2.89	0.54	0.35	0.11	0.36	7.97	0.07	2.89	0.65	0.02	0.43	1.82	99.66	1.7	15
6	CM-14	"	66.11	15.93	3.06	0.58	0.36	0.09	0.28	8.76	0.07	2.20	0.94	0.01	0.35	1.17	98.42	0.8	5
7	CM-15	"	65.75	15.54	3.18	0.58	0.41	0.10	0.49	10.17	0.12	1.77	1.15	0.02	0.21	1.10	99.29	1.8	90
8	CM-16	"	65.85	16.57	3.46	0.62	0.22	0.10	0.35	9.39	0.07	2.44	0.58	0.02	0.35	1.70	99.67	2.1	85
9	CM-17	"	63.89	16.26	5.28	0.60	0.21	0.12	0.46	8.59	0.22	2.91	1.15	0.02	0.22	1.47	100.06	1.1	210
10	CM-18	"	66.87	15.05	4.73	0.57	0.13	0.09	0.39	9.34	0.27	1.96	1.15	0.03	0.17	1.38	99.92	1.2	135
11	CM-19	"	65.71	14.67	5.61	0.57	0.13	0.09	0.39	9.34	0.27	1.96	1.15	0.03	0.17	1.38	99.92	1.2	45
12	CM-20	"	63.88	16.43	3.69	0.64	0.13	0.09	0.44	10.05	0.16	2.90	1.01	0.02	0.24	1.76	99.45	2.7	515
13	CM-24	"	65.68	14.79	4.87	0.52	0.25	0.09	0.63	7.65	0.26	3.07	1.37	0.03	0.37	1.69	99.23	3.0	530
14	CM-26	"	68.50	11.03	6.74	0.42	0.30	0.11	0.21	6.07	0.17	3.36	1.58	0.08	0.29	2.35	99.71	2.1	210
15	CM-27	"	65.17	15.59	4.91	0.61	0.27	0.16	0.25	10.10	0.14	2.16	0.72	0.04	0.17	1.52	100.15	1.1	45
16	CM-28	"	67.40	14.91	2.97	0.60	0.22	0.10	0.49	9.62	0.04	1.33	1.58	0.03	0.12	0.97	99.29	1.1	200
17	CM-32	"	63.91	15.81	3.70	0.60	0.62	0.12	1.23	8.47	0.06	2.06	2.45	0.06	0.27	1.45	99.10	1.5	23
18	CM-34	"	62.65	15.51	6.73	0.52	0.03	0.13	0.40	6.05	0.20	4.99	1.58	0.02	0.50	3.23	98.82	2.8	225
19	CM-35	"	66.15	14.90	3.76	0.58	0.24	0.15	0.58	8.25	0.18	2.92	1.44	0.04	0.34	1.78	98.60	2.8	2300
20	CM-36	"	66.76	15.29	2.79	0.58	0.37	0.16	0.72	8.51	0.04	2.48	1.15	0.04	0.35	1.57	98.92	1.7	165
21	CM-38	"	62.71	16.06	3.81	0.62	1.79	0.08	0.48	9.35	0.16	4.16	1.44	0.01	0.38	2.15	98.99	8.9	430
22	K-4	7-H	64.37	14.76	3.23	0.62	1.79	0.29	2.10	7.65	0.19	4.71	0.86	0.04	0.64	2.62	99.46	0.7	6
23	K-6	"	64.03	14.59	3.48	0.62	1.53	2.14	1.36	3.85	0.19	5.84	1.15	0.12	0.94	3.05	98.91	5.7	17
24	K-8	7-G	69.94	13.70	2.38	0.46	0.46	0.28	0.08	4.82	0.07	6.33	0.45	0.03	0.77	3.31	99.14	1.2	25
25	K-10	"	63.93	14.64	1.94	0.58	2.15	2.99	1.96	3.55	0.18	5.47	1.58	0.05	0.62	3.17	99.03	1.4	14
26	K-12	7-F	66.87	15.73	3.22	0.64	1.07	0.19	2.02	4.06	0.18	5.09	0.58	0.03	1.28	2.67	99.70	2.5	11
27	K-13	6-F	68.96	14.85	2.66	0.65	0.91	0.22	1.70	3.59	0.18	4.51	1.30	0.02	1.12	2.14	99.56	2.9	7
28	K-14	7-C	65.49	15.31	3.23	0.60	1.41	3.14	2.91	3.67	0.19	2.26	1.15	0.04	1.00	1.10	99.41	0.3	6
29	K-15	7-B	66.16	15.41	3.53	0.62	1.11	2.86	2.82	3.97	0.19	2.13	1.01	0.06	0.78	1.18	99.88	0.8	5
30	KM-27	interior	65.07	13.07	6.15	0.57	0.01	0.10	0.15	9.35	0.29	3.34	1.30	0.09	0.20	1.72	99.49	8.3	70
31	KM-41	"	68.69	15.40	0.53	0.58	0.07	0.09	0.30	8.24	0.14	3.01	1.66	0.01	0.35	2.01	98.74	16.2	135
32	KM-54	"	71.28	13.24	2.81	0.50	0.01	0.07	0.07	6.49	0.26	3.77	0.79	0.01	0.43	2.37	99.31	2.5	790
33	KM-57	"	63.85	14.72	3.61	0.63	1.35	2.40	1.20	4.32	0.21	6.57	0.50	0.04	1.27	2.86	100.18	0.9	24
34	KM-58	"	70.39	13.85	2.80	0.58	0.79	0.58	0.58	7.09	0.24	5.26	0.72	0.01	1.06	2.82	99.80	0.9	46
35	KM-59	"	64.53	17.66	1.90	0.66	0.78	0.36	0.58	7.09	0.24	5.26	0.72	0.01	1.06	2.82	99.80	0.9	46
36	KM-60	"	67.12	15.62	1.20	0.62	0.94	0.32	0.67	7.01	0.19	4.26	1.37	0.02	0.86	2.30	99.36	2.0	65
37	KM-64	"	69.87	15.85	0.38	0.61	1.38	0.16	0.24	7.94	0.17	3.13	0.94	0.01	0.38	1.91	99.69	0.9	350
38	KM-65	"	66.35	15.70	2.52	0.66	1.16	0.66	1.16	5.07	0.19	5.60	0.72	0.04	1.25	3.20	99.96	2.5	19
39	KM-66	"	68.28	18.16	0.50	0.68	0.38	0.24	0.33	5.36	0.02	5.83	0.29	0.01	0.99	3.73	100.09	1.1	9
40	KM-69	"	63.79	16.86	3.37	0.66	1.34	0.51	0.64	6.23	0.14	4.97	0.29	0.01	0.81	2.31	99.75	1.5	465
41	KM-70	"	67.62	16.10	1.78	0.63	0.87	0.29	0.21	6.90	0.06	4.97	0.29	0.01	0.81	2.31	99.75	1.5	465
42	KM-71	"	69.40	15.32	1.11	0.63	0.31	0.18	0.52	7.07	0.08	3.70	0.72	0.02	0.45	1.50	99.06	4.3	115
43	KM-75	"	68.54	15.07	1.68	0.57	3.01	0.19	0.27	3.80	0.14	6.35	0.94	0.21	0.57	3.76	99.63	2.1	75
44	KM-79	"	66.41	14.10	2.47	0.61	0.51	0.20	0.31	6.79	0.16	4.04	2.45	0.04	0.38	1.91	98.10	7.7	280
45	KM-88	"	59.40	14.33	3.64	0.54	2.03	0.11	0.16	5.59	0.11	5.05	6.55	0.20	0.49	3.51	97.73	13.0	48
46	KM-89	"	64.99	14.43	4.24	0.54	0.12	0.15	0.14	5.55	0.18	6.29	0.50	0.02	0.56	3.68	97.16	13.0	48
47	KM-90	"	64.18	16.06	2.38	0.62	0.04	0.09	0.29	7.37	0.17	5.48	0.94	0.01	0.36	3.06	97.64	46.0	820
48	KM-92	"	68.47	16.00	1.35	0.56	0.18	0.10	0.74	8.52	0.10	2.83	0.72	0.07	0.30	1.93	99.65	0.8	120
49	P-1	6-D	67.61	13.50	3.38	0.55	1.49	1.83	0.75	3.35	0.16	4.74	0.79	0.01	1.48	2.82	99.21	0.7	12
50	P-2	6-D	67.08	15.98	1.20	0.66	0.91	2.02	2.60	3.80	0.20	2.86	1.80	0.03	0.70	1.83	99.16	0.7	14
51	P-3	"	71.82	13.05	1.42	0.61	0.76	0.12	0.19	4.92	0.15	5.34	0.99	0.01	1.35	2.61	99.40	0.4	29
52	P-5	"	64.62	14.25	3.28	0.65	1.73	2.68	2.22	3.81	0.19	3.50	1.94	0.12	0.91	1.93	99.00	0.8	14
53	P-6	"	65.82	15.22	2.93	0.62	1.56	2.33	2.60	3.99	0.19	2.37	2.02	0.05	0.81	1.48	99.72	0.2	6
54	P-7	"	65.73	14.25	3.20	0.62	1.72	1.79	1.78	4.65	0.18	4.63	0.94	0.03	1.11	2.21	99.53	0.6	17
55	P-9	6-C	65.55	15.84	3.28	0.64	0.81	2.65	2.66	3.91	0.19	3.08	1.44	0.04	0.61	1.92	99.43	0.1	5
56	P-11	7-C	65.03	15.20	3.06	0.63	1.37	3.39	2.84	3.72	0.18	1.90	1.44	0.04	0.61	1.92	99.43	0.1	5
57	P-14	7-D	65.93	15.56	2.89	0.62	1.36	3.11	3.11	3.68	0.17	1.96	1.44	0.04	0.61	1.92	99.43	0.1	5
58	P-15	8-F	63.45	14.75	1.53	0.60	2.10	3.34	2.24	3.83	0.17	4.72	2.36	0.14	1.28	2.18	99.26	1.6	14
59	P-16	8-G	73.76	15.76	1.22	0.61	0.21	0.21	0.15	10.10	0.18	6.86	0.36	0.01	0.32	2.00	99.25	0.3	120
60	P-26	6-E	69.93	14.34	1.95	0.64	0.69	0.17	2.68	3.97	0.14	3.49	1.51	0.01	0.76	1.62	99.53	0.2	11
61	P-28	7-F	63.68	15.25	1.07	0.60	1.47	3.32	2.79	3.60	0.18	4.41	2.52	0.05	0.46	1.71	98.95	0.6	5
62	P-29	6-E	70.40	12.27	1.31	0.56	1.17	2.14	1.56	3.55	0.17	3.17	2.52	0.05	0.50	1.55	98.89	0.2	7
63	P-32	"	67.33	15.11	3.25	0.73	0.67	0.19	2.79	3.99	0.19	4.98	0.43	0.01	1.00	2.40	99.28	0.1	14
64	P-33	"	69.33	12.85	2.95	0.56	0.25	0.48	2.57	5.01	0.15	4.21	1.30	0.02	1.21	2.21	99.68	0.7	45
65	P-48	8-B	63.44	16.10	4.40	0.72	1.31	3.35	2.81	3.36	0.22	3.48	0.43	0.05	1.34	2.06	99.67	0.1	5
66	P-49	8-A	63.38	19.93	1.04	0.63	0.21	0.34	0.76	3.36	0.28	9.29	0.29	0.01	0.85	3.51	99.53	0.3	12
67	P-61	7-A	64.60	15.81	3.07	0.61	1.09	2.79	2.79	3.93	0.21	3.85	0.94	0.02	0.55	1.73	99.71	0.2	5
68	PM-6	interior	67.19</																



A- 4 Resultados de observaciones microscópicas de secciones
de pulidas y delgadas, y sus fotografías

simbolos de secciones pulisadas y delgadas

Ga	: Galena	Qz	: Cuarzo
Sp	: Esfalerita	Ba	: Baritita
Pi	: Pirita	Fel	: Feldespato
Mar	: Marcscita	Bi	: Biotina
Hem	: Hematita	Ser	: Sericita
Mag	: Magnetita	Chl	: Clorita
Sid	: Siderita	Kao	: Caolinita
Goe	: Goetita	In	: Minerales indistigible
Ilm	: Ilumenita	IH	: Minerales de hierro
Cp	: Calcopirita	Gr	: Vidrio
Td	: Tetraedrita	Por	: Porfiritico
Cv	: Covellina		
Ag	: Plata nativa		
Arg	: Argentita		condición de prueba de EPMA
Poly	: Polibasita		Modelo SHIMAZU ARL-2
Pyr	: Piragirita		Vollaje acelerado 20kV
Aik	: Aiquinita		Corriente eléctrica varios
Gr	: Greenockita		

Resultado de observación microscópica de secciones pulisadas

No	Número de muestra	Ubicación de muestra	Nombre de roca	Fenocristo	Matriz	Alteración		Texturo	Nota
						Minerales	Intensidad		
1	KM-11	Interior	Dacita con biotita	Pl. Qz. Bi	Id	Chl. Ser. Qz. Kao. I. H.	fuerte	Por	
2	" -25	"	"	"	Gr. Pl	Chl. Ser. Qz. Kao	debil	"	
3	" -55	"	"	"	Id	"	fuerte	"	
4	" -62	"	"	"	"	I. H.	"	"	
5	" -72	"	"	"	"	Chl. Ser. Qz. I. H.	"	"	Chl. dominante
6	" -79	"	"	"	"	Chl. Ser. Qz. Kao. I. H.	"	"	"
7	" -88	"	"	"	"	Chl. Ser. Qz. Kao. I. H.	"	"	"
8	CH-18	"	"	"	"	Chl. Ser. Qz. I. H.	"	"	"
9	" -35	"	"	"	"	"	"	"	"
10	T-2	8-G	"	"	Gr. Pl. Oz. Id	Chl. Ser. In	debil	"	"
11	T-23	2-D	"	"	Id	Chl. Ser. Qz. Kao. I. H.	media, fuerte	Por-clástica	
12	T-24	3-D	"	"	Gr. Pl. Qz. Bi. Id.	Chl. Ser. Qz. I. H.	debil	"	
13	T-25	"	"	Pl. Bio	Gr. Pl. Id	Chl. Qz. I. H.	fuerte.	Por.	
14	T-44	6-D	Andesita	Pl. Qz. Bio. Hyp. Amp	Gr. Pl. Id	"	fresco	"	Chl. dominante
15	K-16	7-B	Dacita con biotita	Pl. Qz. Bio.	Gr. Id	I. H.	debil	"	Horrena
16	K-35	3-F	"	"	"	Chl. Ser. Kao. Cab.	"	"	
17	P-7	6-D	"	"	Gr. In	Chl. Ser. Qz. Bio. I. H.	debil	Por	
18	P-15	8-F	"	"	Gr. Pl. Qz. Id.	Ser. Qz. I. H.	"	"	vetilla de Qz
19	P-20	2-F	"	"	"	Chl. Ser. I. H.	media, fuerte	"	matriz: fluida
20	P-32	6-E	"	"	Id	Chl. Ser. Qz. Kao. I. H.	fuerte	"	
21	P-37	10-C	"	"	Gr. Pl. Qz. Id	Chl. Ser. Qz. I. H.	debil	"	
22	P-40	9-C	"	Pl. Qz. Bio. Amp	Gr. Pl. Hys. Id	Chl. Qz. I. H.	"	Por. fluida	matriz: fluida
23	BS-1	NJB-2 10 ^m	"	Pl. Qz. Bio	Id	Chl. Ser. Qz. Kao. I. H.	fuerte	Por.	
24	BS-2	" 155	"	"	"	"	"	"	silicificación fuerte
25	BS-3	" 250	Limolita	"	"	"	"	estrificada	
26	BS-4	" 280	Yeso	"	"	"	"	lámina	
27	BS-5	NJB-1 172	Dacita con biotita	Pl. Qz. Bio	Id	Chl. Ser. Qz. Kao. I. H.	fuerte	clástica	
28	BS-6	" 194	"	"	"	"	"	"	
29	BS-7	" 218	"	"	"	"	"	Por.	
30	BS-8	NJB-3 48	"	"	Gr.	Chl. Ser. Qz	media	"	Chl. dominante
31	BS-9	NJB-3 65	Dacita con biotita	Pl. Qz. Bio	Id.	Chl. Ser. I. H.	fuerte	Por.	Chl. dominante
32	BS-10	" 250	"	"	"	Chl. Ser. Qz. I. H.	"	clástica	"
33	PM-6	Interior	"	"	"	Chl. Ser. Qz. Kao. I. H.	"	Por.	"

Resultado de observación macroscópica de secciones delgadas

No	número de muestra	ubicación de muestra	nombre de muestra	minerales principales	minerales accesorios	etapa de mineralización	ocurrencia de minerales de plata
1	KM-10	Veta No II	Hem	Qz; Hem, Ba		etapa II	
2	"-13	"	"	Qz, Ba	Hem, Py	"	
3	"-14	"	"	"	Hem	"	
4	"-22	"	Hem. Sp	Qz. Hem. Ba	Sp. Py	" I	
5	"-23	"	"	Qz. Ba. Goe		" II	
6	"-28	"	Hem	Qz. Hem. Ba	Py	" I	
7	"-33	"	"	Qz. Hem	Arg. Plata nativa	"	Arg y Ag nativa con Hem
8	"-34	"	"	Qz. Ba		" II	
9	"-46	"	Hem. Sp	Qz. Hem	Py. Sp. Mar	" I	
10	"-50	"	Ga. Sp	Qz	Ga. Sp. Py. Hem; Aik	"	
11	"-73	Veta No I	"	Qz. Ga. Sp	Py. Mar. Hem	"	
12	"-76	"	"	Qz	Hem. Ga. Sp	"	
13	"-77	"	Sp. Ga	Sp. Ga. Qz	Py. Cp	"	
14	"-81	"	Hem	Qz. Goe	Py. Hem	"	
15	"-82	"	"	"	"	"	
16	"-83	"	Ga. Sp. Ag	Ga. Sp. Qz	Py. Cp. Arg. Pol. Td Ag nativo	"	Ag nativa entre Qz, Arg, Ga, Arg, Poly y Td con Ga
17	"-84	"	Ga. Sp	Qz. Ga. Sp	Py. Mar. Hem	"	
18	"-85	"	Ga. Sp. Ag	Ga. Py. Sp. Qz. Ba	Td. Pyr. Poly. Cp. Mar	"	Td. Pyr g Pol con Ga Pol con Td
19	"-98	Veta No IV	Sp. Qz. Ba	Sp. Qz. Ba	Ga. Py. Mar. Hem. Cp. Td. Pol	" II	
20	PM- 1	"	Sp	Qz	Py. Mar. Sp. Cv	" I	
21	"- 4	"	Ga	Qz. Ga. Sid	Py. Cp. Cv	"	
22	"- 9	"	Hem	Qz	Py. Hem	"	
23	"-10	"	"	Hem. Qz	Py. Sp	"	
24	"-15	"	Cp	Qz. Ba	Cp. Py. Hem	" II	
25	T -31	(4-E)	Hem	Hem. Qz		"	
26	"-32	"	"	Qz. Ba	Hem. Py	"	
27	"-35	"	"	Qz. Goe	"	" I	
28	K -34	(3-E)	"	Qz. Hem	Mag. Il	"	
29	"-39	(3-G)	Hem	Qz. Ba. Goe	Hem	" II	
30	BP- 1	MJB-2 155.0m	Sp	Qz. Ba. Sid	Sp. Mar. Ga. Py	"	
31	"- 2	" 160.5	Ga	Ga. Sp. Qz. Sid	Py. Mar	"	
32	"- 3	" 155.8	"	Qz. Sid	Ga. Py. Sp. Mar. Td	" I	Td entre Ga
33	"- 4	" 160.3	"	"	Py. Ga. Sp. Mar. Td	" I	Td entre Sp y Py
34	"- 5	" 170.7	Py	"	Mar. Py. Mag	" II	
35	"- 6	MJB-1 101.0	Hem	Qz	Hem	" I	
36	"- 7	" 103.0	"	"	"	"	
37	"- 8	" 104.0	"	"	Hem. Py	"	
38	"- 9	MJB-2 174.0	Qz. Sid	Qz	Mag. Mar	" II	
39	"-10	MJB-3 7.0	Hem	Qz	Hem. Py	" IV	
40	"-11	" "	"	"	"	"	
41	"-12	" 12.7	"	Qz. Goe	"	"	
42	"-13	" 17.4	"	Qz	"	"	
43	"-14	" 25.9	Ga. Cp	"	Sp. Hem. Py. Ga. Cp	"	
44	"-15	" 26.4	Sp. Ga	"	Hem. Sp. Py. Ga	"	
45	"-16	" 42.7	Hem	Qz. Ba	Hem. Py	" II	
46	"-17	" 60.6	Ga	"	Ga. Cv	" I	
47	"-18	" 78.8	Ga. Sp	Qz. Gre	Ga. Py. Sp	"	
48	"-19	" 179.8	"	Qz	Il. Mag. Hem	" II	
49	"-20	MJB-2 156.0	Ga. Sp	Qz. Ba	Ga. Sp. Py	"	
50	"-21	MJB-3 156.0	Cp	Qz	Cp. Ga. Py. Hem. Td. Aik Cv	"	Td entre Cp



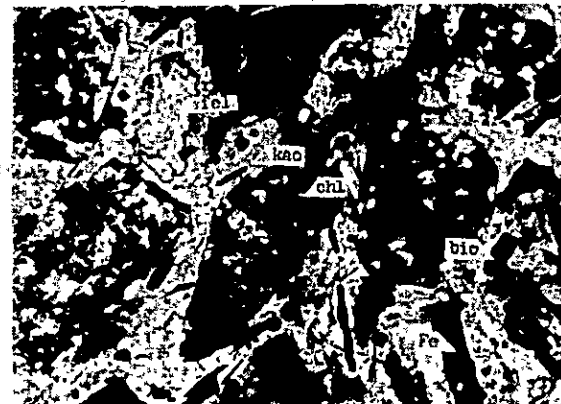
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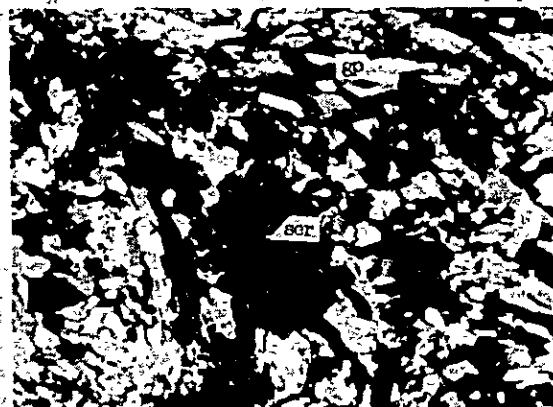
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Dacita X



Num. de muestra : KM-72
Dacita //



Num. de muestra : KM-88
Dacita //

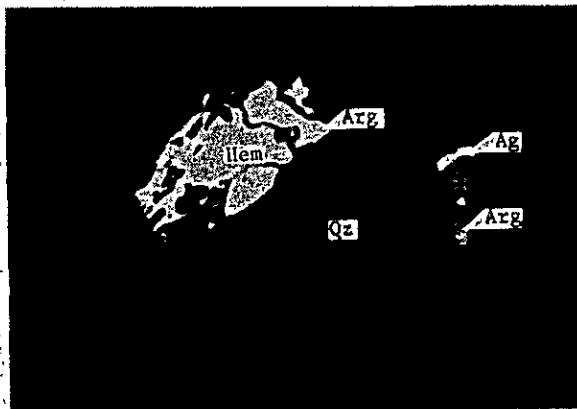


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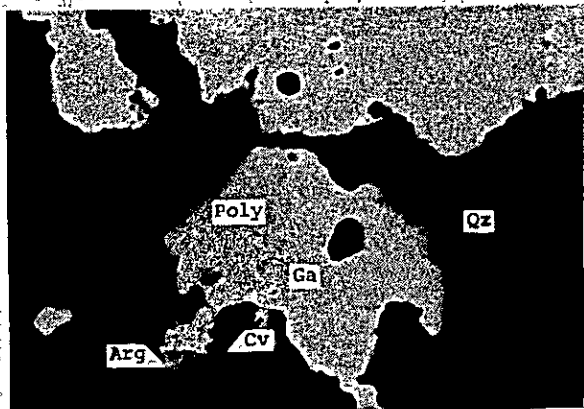


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Limolita X

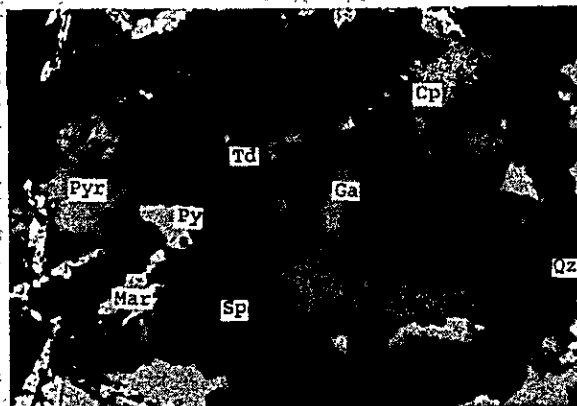
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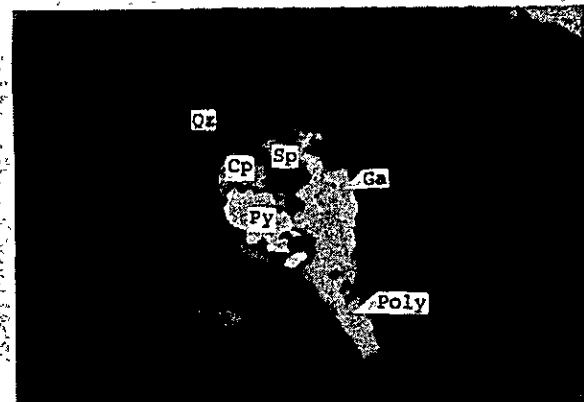
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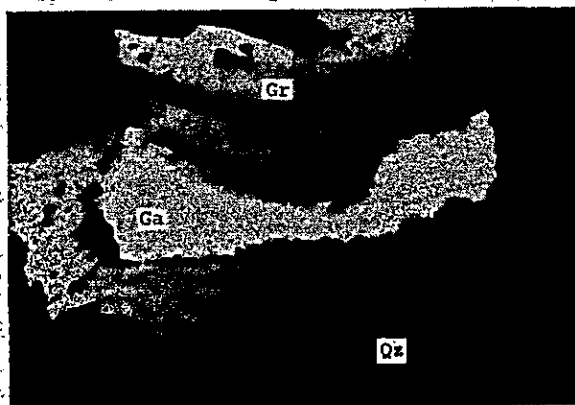
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 Ubicación de muestra : Veta No II



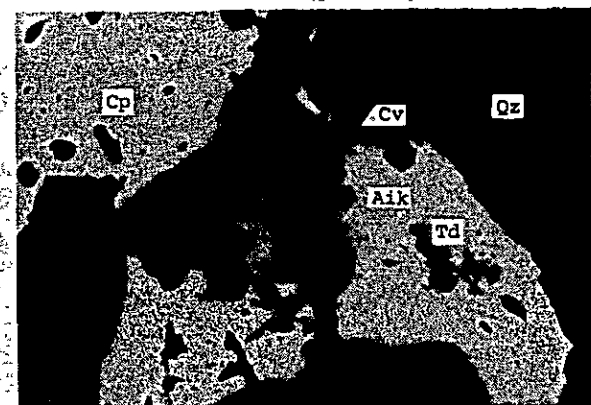
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 Ubicación de muestra : Veta No II



Num. de muestra : KM-98
 Ubicación de muestra : Veta No IV



Num. de muestra : BP-18
 Ubicación de muestra : MJB-3 (78.8m)



Num. de muestra : BP-21
 Ubicación de muestra : MJB-3 (284.0m)

0.1mm

Num. de muestra : KM-50
Ubicacion de muestra : VETA No II

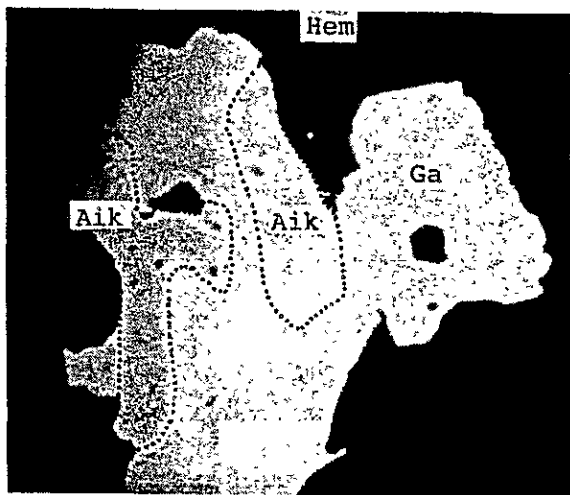


Foto. de absorción



Cu



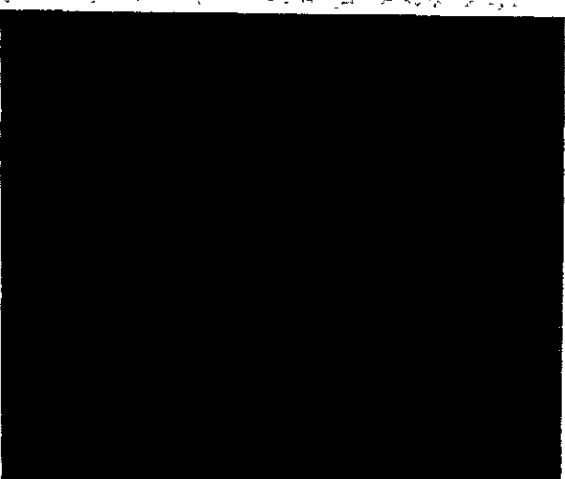
Fe



Pb



Bi



S

0.1mm

A - 12

Num. de muestra : KM-83
Ubicación de muestra : Veta No I

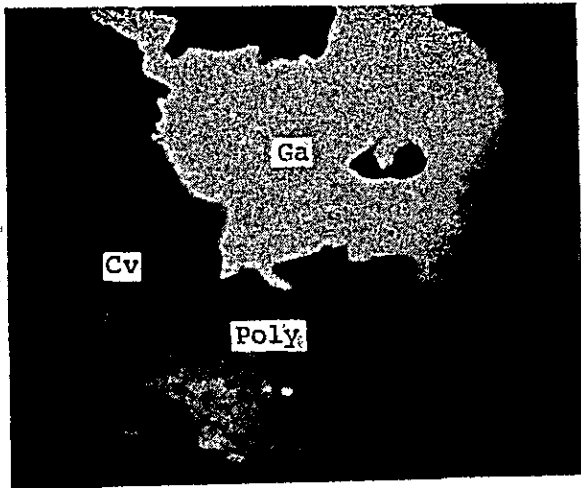
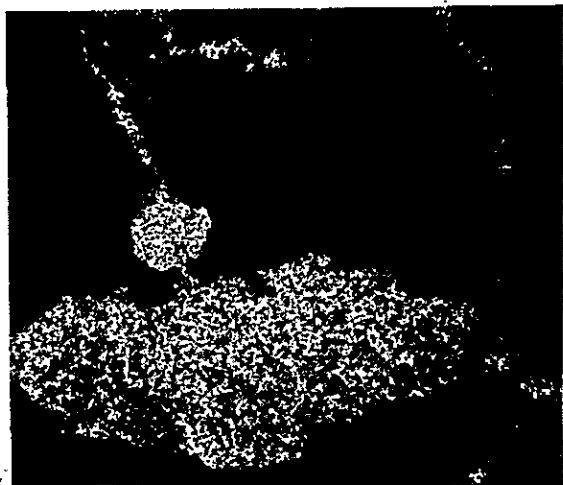


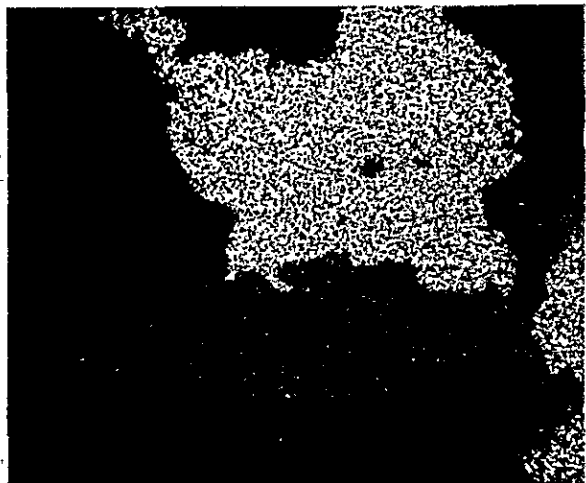
Foto. de absorcion



Cu



Ag



Pb, As



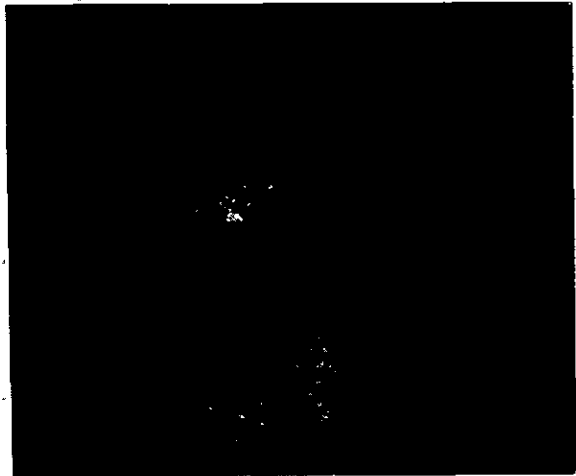
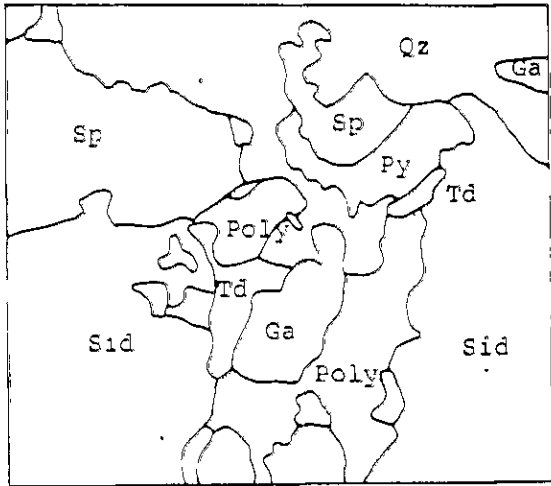
Sb



S

0.1mm

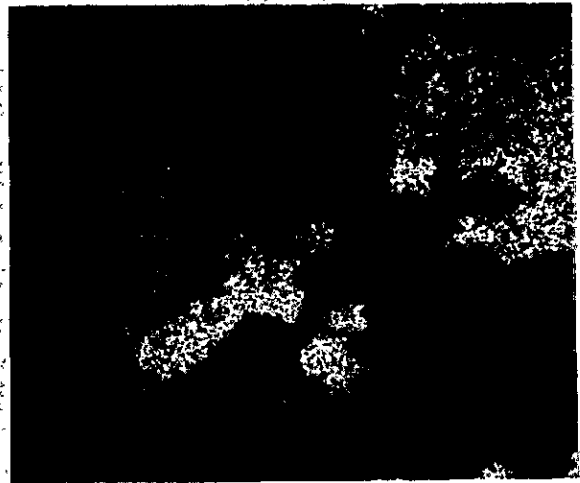
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Ubicación de muestra : Veta IV



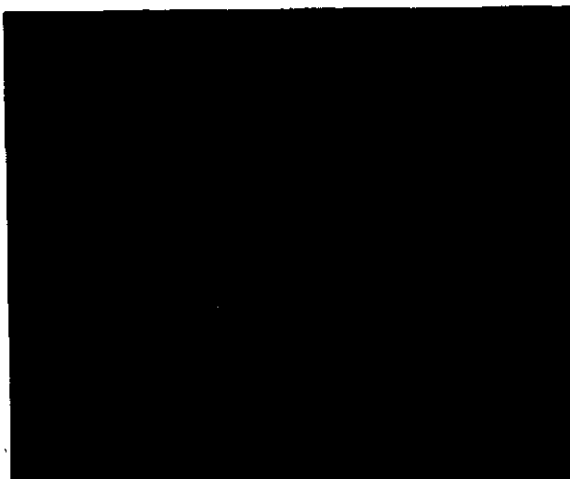
Ag



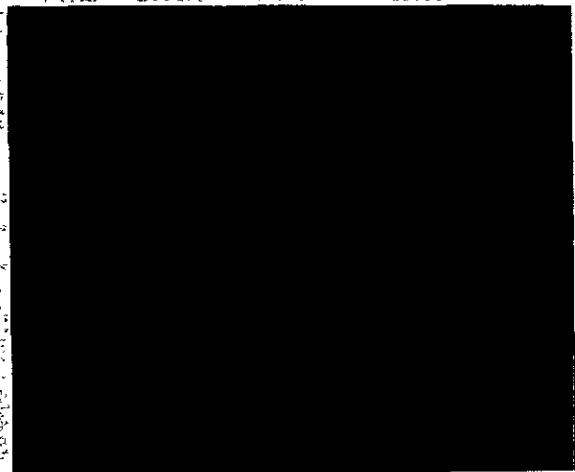
Cu



Fe



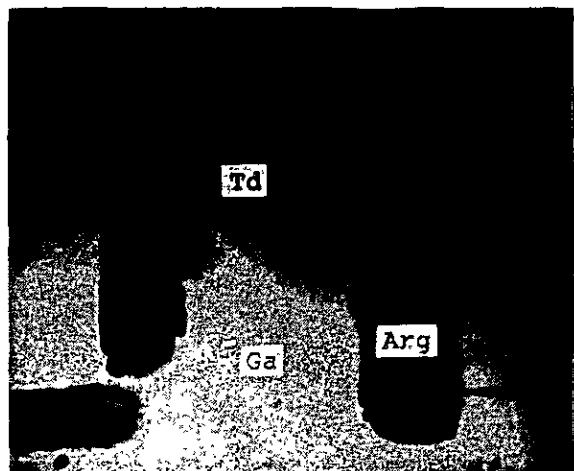
Ag



Pb

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Num. de muestra KM-83
Ubicación muestra Veta No I



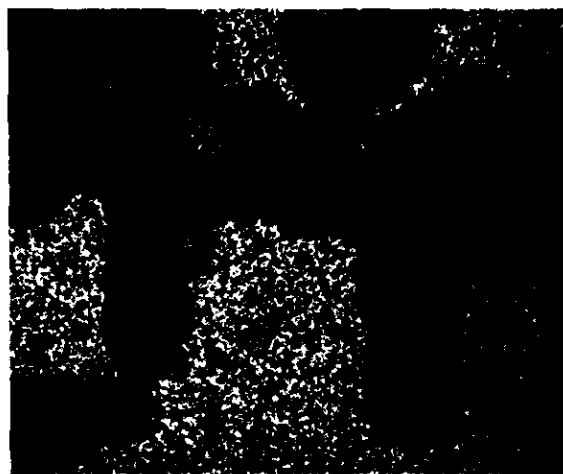
Num. de muestra



Cu



Ag



Pb

0.1mm

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The text notes that without reliable records, it would be difficult to track the flow of funds and identify any irregularities.

2. The second part of the document outlines the various methods used to collect and analyze data. It describes the process of gathering information from different sources and how this data is then processed to identify trends and patterns. The text highlights the need for a systematic approach to data collection and analysis to ensure that the results are accurate and meaningful.

3.

4.

5.

6.

A- 5 Analisis de rayos-X y sus cartas

Condiciones de Análisis

Objeto	Cu
Filtro	Ni
Voltaje	30 KV
Corriente	15 mA
Factor de escala	400 c/s
Constante de tiempo	1/sec.
Velocidad de excuadrinado	2°/min.
Velocidad de registro	20 mm/min.
Divergencia	1°
Ramura receptora	0.3 mm
Descubridor	S.C.

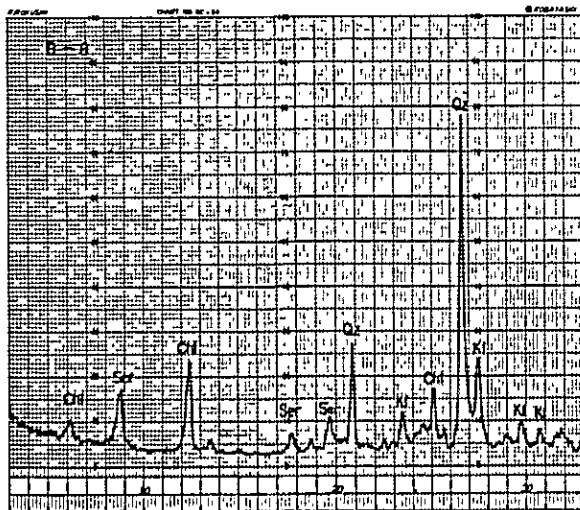
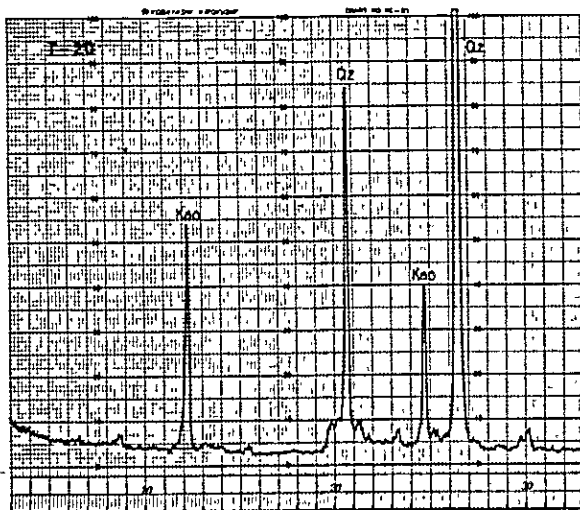
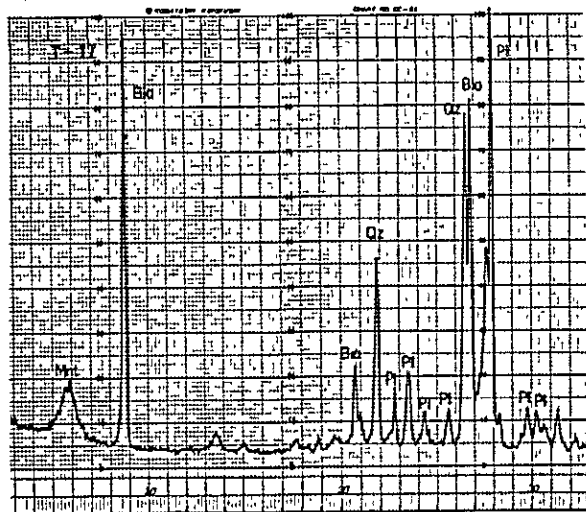
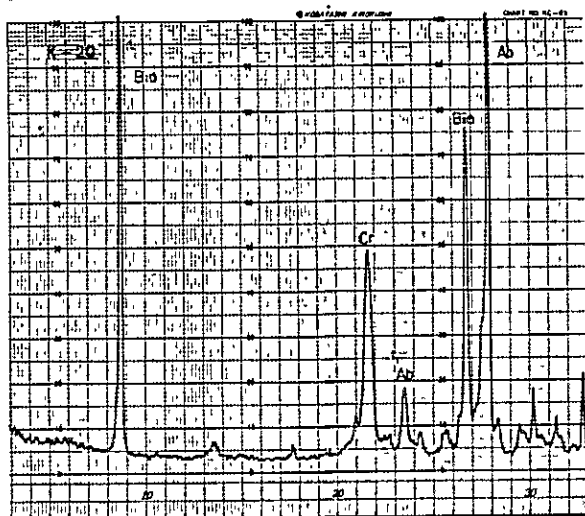
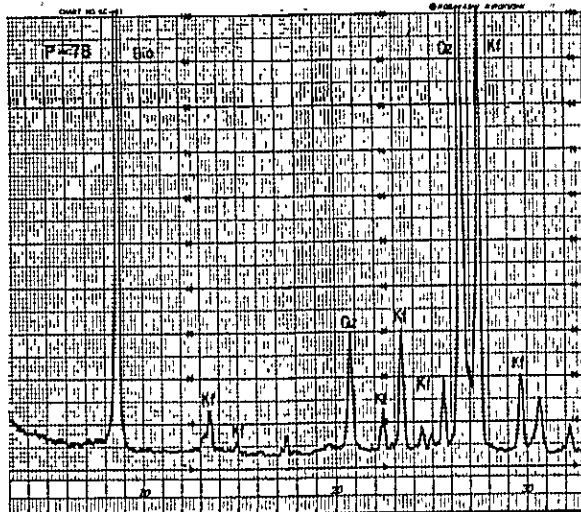
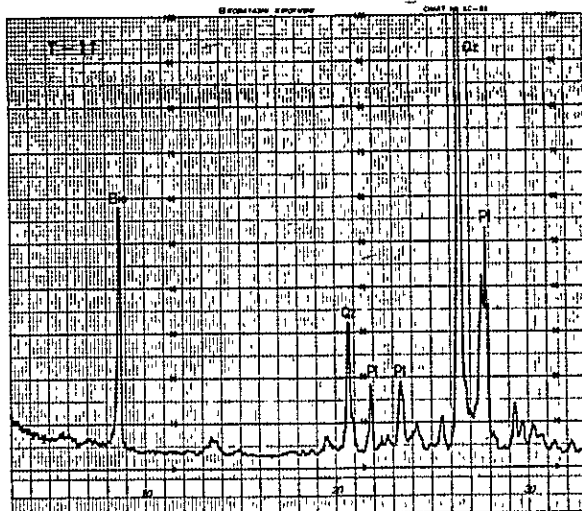
Símbolos de minerales	Picos usados para calculo de indicio de intensidad (2θ)
Qz : Cuarzo	Qz : 26.7, 20.8
Cr : Cristobalita	Cr : 21.9
Pl : Plagioclasa	Pl : 27.8
Ab : Albita	Ab : 27.8
Kf : Feldespado potásico	Kf : 27.5
Bio : Biotita	Bi : 26.4, 8.9
Mnt : Montomorillonita	Mot : 6.0
Ser : Sericita	Ser : 8.7
Chl : Clorita	Chl : 12.3, 18.6
Cao : Caolínita	Cao : 12.0, 24.8
Aln : Alunita	Aln : 29.8
Car : Carbonita	Car : 11.6
Ba : Baritita	Ba : 25.8

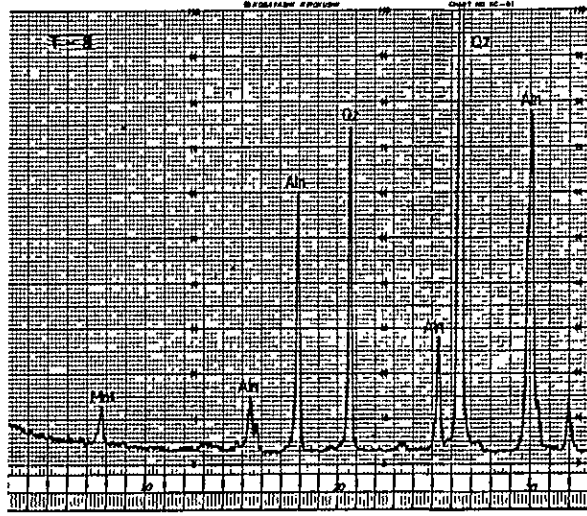
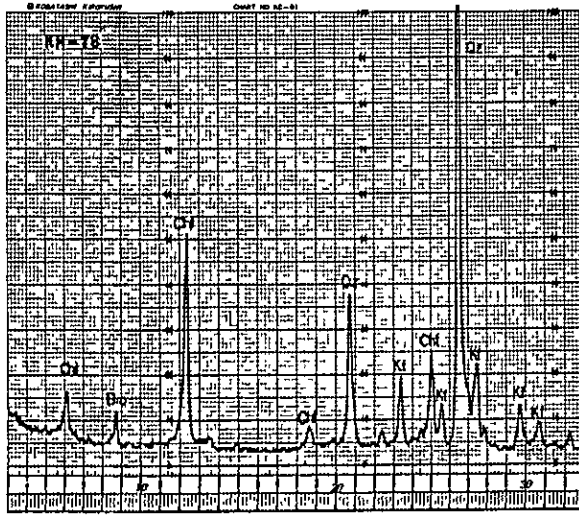
No.	Nombre de muestra	Ubicación de muestra	Nombre de roca	Minerales																
				Qz	Cr	Pl	Ab	Kf	Bio	Mnt	Ser	Chl	Kao	Aln	Cab	Gp	Ba	X		
1	T-2	8-G	Dacita	7.6		26.3			59.6	5.4		1.1								
2	"-5	8-H	"	23.3					68.1		4.5	4.2								
3	"-7	8-G	"	46.0									10.2	43.9						
4	"-8	8-G	"	52.3						4.8				42.9						
5	"-9	8-F	"	4.5		70.2			15.6	9.7										
6	"-10	"	"	12.8		53.1			19.6	14.5										
7	"-11	7-E	"	18.6		44.0			37.4											
8	"-12	"	"	26.1				13.1	47.2	5.7								7.9		
9	"-13	5-D	"	20.4				21.8	32.3	8.8								16.8		
10	"-15	6-G	"	23.6		38.0			13.7	24.7										
11	"-16	6-H	"			58.0			34.7	7.3										
12	"-17	"	"	12.8		38.5			40.7	8.0										
13	"-18	5-H	"	7.7		52.3			34.8	5.2										
14	"-19	5-G	"	47.4				38.50	14.2											
15	"-20	3-E	"	28.1				33.20	38.7				57.1							
16	"-21	3-D	"	41.9							1.00									
17	"-22	2-B	"	15.1				31.6	53.2											
18	"-23	"	"					35.7	64.3											
19	"-24	3-D	"	17.1				33.5	49.4											
20	"-25	"	"	54.7				35.9	9.4											
21	"-26	3-E	"	51.1				45.9			3.0									
22	"-34	4-E	"					90.2			9.8									
23	"-41	5-D	"	35.3				63.3	1.4											
24	"-42	4-G	"	9.00		24.1			58.6	8.3										
25	"-43	"	"	43.1				51.0	5.9											
26	K- 3	7-G	"	23.8			25.6		34.7	3.5								12.4		
27	"- 4	7-H	"	27.4		36.6			14.6	7.0								14.4		
28	"- 6	"	"	38.9		39.0			22.1											
29	"- 7	"	"	20.6		51.3			22.7	5.4										
30	"- 8	7-G	"	55.1				19.2			25.7									
31	"- 9	"	"	25.3		35.3			11.8	13.6								14.0		
32	"-10	"	"	31.1			43.4		2.8	8.4			1.7					12.7		
33	"-11	"	"	17.2			53.6		17.8	3.6			7.7							
34	"-12	7-F	"	22.6			47.5		26.2				3.7							
35	"-13	6-F	"	18.9			41.8		18.3	4.1	16.9									
36	"-14	7-C	"	3.3	34.2	34.1			13.0	15.4										
37	"-15	7-B	"	1.3	39.6	42.7			13.5	3.0										
38	"-16	"	"		43.5	49.0			3.3	4.2										
39	"-20	7-A	"		24.0		27.9		48.1											
40	"-48	4-G	"	30.9				63.9	5.1											
41	P- 1	6-D	"	20.3		45.1			11.6	22.9										
42	"- 2	"	"	8.8		32.0			55.6	2.2		1.3								
43	"- 3	"	"	51.6				19.4	16.1	10.1		2.8								
44	"- 5	"	"	26.1		48.4			12.7	9.5		3.6								
45	"- 6	"	"	11.1		36.7			45.3	6.9										
46	"- 7	"	"	21.8		34.8			25.6	11.0								6.8		
47	"- 9	6-C	"	3.7	22.8	46.6			14.6	12.4										
48	"-10	7-C	"	3.9	14.9	35.3			36.4	9.5										
49	"-11	"	"	3.8	29.6	47.8			14.8	4.0										
50	"-13	8-E	"	15.8			45.2		11.7	7.4		4.8						15.0		

No.	Nombre de muestra	Ubicación de muestra	Nombre de roca	Minerales														
				Qz	Cr	Pl	Ab	Kf	Bio	Mnt	Ser	Chi	Kao	Aln	Cab	Gp	Ba	X
51	P-14	7-D	Dacita	2.9	21.2	39.6			28.8	7.6								
52	P-15	8-F	"	22.2		32.9			17.2	21.3			6.4					
53	"-16	8-G	"	41.0									59.0					
54	"-17	10-G	"	54.7				36.5			11.0	29.9			22.6			
55	"-19	"	"	31.1			22.1				10.0	20.3			16.5			
56	"-20	2-F	"	20.0				60.8	19.3									
57	"-21	"	"	18.2				63.8	17.9									
58	"-23	1-A	"	25.7	45.1								29.2					
59	"-24	1-B	"	20.6					79.4									
60	"-25	1-D	"	16.2				20.1	62.1				1.7					
61	"-26	6-E	"	26.1			45.7			9.0	19.3							
62	"-28	7-F	"	17.5			25.8		43.9		3.1				9.6			
63	"-29	6-E	"	16.5			13.2		30.7	4.8	2.4		9.9		22.5			
64	"-32	"	"	32.1			45.2			16.4	3.3		3.0					
65	"-33	"	"	25.7		56.0			4.2	12.8			1.3					
66	"-34	10-C	"	29.9		59.9			6.0				4.2					
67	"-36	"	"	22.7		37.1			28.7				3.5		8.0			
68	"-38	"	"	32.4			52.7		6.3		4.3		4.3					
69	"-42	9-C	"	15.9			20.5		56.2	6.2			1.3					
70	"-45	9-A	"	1.6	19.8	32.0			40.0	6.6								
71	"-46	9-B	"	26.2		24.8			49.0									
72	"-48	8-B	"	22.3		43.6			27.3	6.9								
73	"-49	8-A	"	20.4	32.3			25.8		3.5			18.0					
74	"-51	10-B	"	16.0				25.7	26.5	29.0			2.8					
75	"-52	9-B	"	42.2				37.7		7.3			12.7					
76	"-53	10-B	"	41.7				39.1	3.6				15.7					
77	"-54	10-A	"	25.5		32.4			38.7	3.5								
78	"-58	9-A	"	27.4		53.4				19.2								
79	"-61	7-A	"	25.5		38.5			32.2	3.8								
80	"-62	3-F	"	14.3			29.2		56.6									
81	"-63	3-G	"	33.6		64.4			2.0									
82	"-64	3-F	"	15.1				26.1	58.8									
83	"-66	3-G	"	48.2				50.4	1.5									
84	"-68	3-H	"	4.0		34.9			44.4	4.6					12.1			
85	"-72	2-H	"	15.5				21.9	62.6									
86	"-74	2-C	"	20.8				31.5	47.6									
87	"-75	1-G	"	9.8		58.5			31.7									
88	"-77	2-G	"	26.6	30.8				1.2				41.4					
89	"-78	2-F	"	11.5				36.1	52.5									
90	KM-4	interior	"	59.7				34.6					5.7					
91	"-5	"	"	30.6				57.5					12.0					
92	"-6	"	"	38.2				37.7	24.2									
93	"-9	"	"	10.8				17.6	65.9		1.7		4.1					
94	"-11	"	"	27.8				41.6	18.2				12.4					
95	"-12	"	"	33.6				60.7			3.2		2.6					
96	"-16	"	"	13.6				34.6	51.8									
97	"-17	"	"	51.9				34.3					13.8					
98	"-18	"	"	13.0				26.7	56.4		1.9		2.0					
99	"-20	"	"	23.2				54.6	21.1				1.1					
100	"-25	"	"	11.5				29.1	56.0		1.3		2.3					

No.	Nombre de muestra	Ubicación de muestra	Nombre de roca	Minerales															
				Qz	Cr	Pl	Ab	Kf	Bio	Hnt	Ser	Chl	Kao	Aln	Cab	Gp	Ba	X	
101	KM-26	interior	Dacita	32.4				54.3	13.3										
102	"-27	"	"	40.3				48.3				3.6	7.8						
103	"-30	"	"	50.9				45.1					4.0						
104	"-37	"	"	35.1				59.3					5.6						
105	"-38	"	"	24.8				52.5		2.6	4.2		16.0						
106	"-40	"	"	21.5				55.5		3.3			19.7						
107	"-41	"	"	40.1				45.8			1.9		12.2						
108	"-42	"	"	30.7				59.0					10.3						
109	"-53	"	Arcilla	41.3				15.1			13.6	30.0							
110	"-54	"	Dacita	64.6				29.5			3.0		3.0						
111	"-55	"	"	28.6			42.7		14.2				14.6						
112	"-57	"	"	22.8			11.4	23.3	12.6	11.8			1.5		16.7				
113	"-58	"	"	26.8				21.3	12.6	11.2			28.1						
114	"-59	"	"	26.6				37.3	25.1				11.0						
115	"-60	"	"	34.4				37.4	25.8				2.3						
116	"-62	"	"	21.8				22.6	18.1	19.3			18.3						
117	"-64	"	"	29.3				40.8	17.8				12.1						
118	"-65	"	"	23.8				22.6	9.9	33.3			10.4						
119	"-66	"	"	36.6				34.6	6.7				22.2						
120	"-67	"	"	23.3				38.8	19.3	10.9			7.7						
121	"-69	"	"	36.3				38.3	7.8	11.9			5.7						
122	"-70	"	"	43.5				41.7					14.9						
123	"-71	"	"	45.9				31.1	10.2		4.3		8.6						
124	"-72	"	"	16.5			8.7	22.6	18.4			33.8							
125	"-74	"	Arcilla	15.3								38.5						46.2	
126	"-75	"	Dacita	13.6				8.8	8.8			68.8							
127	"-78	"	"	23.1				14.8	6.4			55.8							
128	"-79	"	"	41.4				39.7	6.3				12.7						
129	"-86	"	"	34.8				44.3	13.6				7.3						
130	"-87	"	"	54.5				36.2					9.3						
131	"-88	"	"	25.0				21.4	2.6			51.0							
132	"-89	"	"	50.8				42.3	4.8				2.0						
133	"-90	"	"	47.2				47.2			3.1		2.5						
134	"-92	"	"	46.5				47.5	6.1										
135	"-94	"	"																
136	"-96	"	"	8.8				59.1									32.1		
137	"-97	"	"	36.7				52.6	10.7										
138	"-99	"	Arcilla	43.2						25.5			31.3						
139	CH- 1	"	Dacita	25.3				39.0	28.9		1.7		5.0						
140	"- 2	"	"	17.3				57.9	19.9		1.9		3.0						
141	"- 5	"	"	19.8				31.3	42.8				6.1						
142	"- 9	"	"	39.1				39.0			13.7		8.2						
143	"-10	"	"	60.6				31.8			4.5		3.1						
144	"-11	"	"	49.8				37.6			7.5		5.1						
145	"-12	"	"	39.1				40.2	11.1				9.6						
146	"-13	"	"	43.7				33.0	13.3		4.8		5.2						
147	"-14	"	"	36.3				34.3	22.6		3.4		3.4						
148	"-15	"	"	32.9				42.6	24.5										
149	"-16	"	"	39.1				49.1	4.3		2.4		5.1						
150	"-17	"	"	41.7				41.6			10.3		6.4						

No.	Nombre de muestra	Ubicación de muestra	Nombre de roca	Minerales														
				Qz	Cr	Pl	Ab	Kf	Bio	Mnt	Ser	Chi	Kao	Aln	Cab	Gp	Ba	X
151	CM-18	interior	Dacita	38.5				51.4				2.8		7.3				
152	"-19	"	"	32.1				49.4				8.4		10.0				
153	"-20	"	"	34.8				54.8				2.4		8.1				
154	"-24	"	"	33.1				54.5	9.7					2.6				
155	"-26	"	"	59.1				37.5						3.4				
156	"-27	"	"	30.0				61.0				5.8		3.2				
157	"-28	"	"	38.8				51.5	4.7			2.0		3.0				
158	"-29	"	"	33.1		48.4				16.4		2.0						
159	"-32	"	"	25.5		54.5				14.6		1.6		4.0				
160	"-34	"	"	45.2				45.5	1.9					7.4				
161	"-35	"	"	40.4				53.3	3.2					3.2				
162	"-36	"	"	35.9				47.7	16.4									
163	"-37	"	"	36.3				46.3	17.4									
164	"-38	"	"	41.7				58.3										
165	PM- 6	pique-5	"	45.2				54.8										
166	"- 9	"	"	42.3				53.8						3.9				
167	"-10	"	"	100.0														
168	"-11	"	"	31.9				62.8	2.3					3.1				
169	"-12	"	"	35.6				59.3						5.0				
170	B - 1	MJB-2,25 ^m	"	33.7				43.4	16.3			2.9		3.7				
171	"- 2	" 50	"	29.0				38.2	19.0			2.9		10.8				
172	"- 3	" 75	"	8.3			10.2	11.7	66.3			1.4		2.2				
173	"- 4	" 100	"	30.6				45.8				3.1		20.5				
174	"- 5	" 125	"	19.2				49.5				21.8		9.5				
175	"- 6	" 150	"	32.4				25.7				19.9		22.0				
176	"- 7	" 175	"	32.3				23.5				19.5		24.8				
177	"- 8	" 200	Limolita	20.2				26.2				20.0	33.6					
178	"- 9	" 225	"	17.0			42.5					13.0	27.5					
179	"-10	" 250	Arenisea	2.4								1.3	3.6				92.7	
180	"-11	" 275	Limolita	9.4			10.5	8.2				7.9	20.8				43.3	
181	"-12	" 300	Caliza	9.8			18.9					9.9	6.2				55.2	
182	"-13	MJB-2,25	Dacita	26.7				25.8	40.3			3.5		3.7				
183	"-14	" 50	"	24.2				31.0	44.8									
184	"-15	" 75	"	17.1				31.8	25.3			6.1		19.6				
185	"-16	" 100	"	30.2										67.1				
186	"-17	" 125	"	30.7				65.0						4.3				
187	"-18	" 150	"	30.7				60.6						8.7				
188	"-19	" 175	"	27.5				59.1				3.0		10.5				
189	"-20	" 200	"	31.0				38.6				6.7	23.8					
190	"-21	" 225	"	29.6				25.3	12.7			14.2	18.3					
191	"-22	" 250	"	31.8				33.2	16.8			18.2						
192	"-23	MJB-1,25	"	25.2				30.3	9.4				35.0					
193	"-24	" 50	"	7.1		18.4			70.2			0.8		3.5				
194	"-25	" 75	"	10.2		23.9			64.5			1.4						
195	"-26	" 100	"	11.6				72.4	9.6			3.7		2.8				
196	"-27	MJB-1,125 ^m	"	25.6		62.3						8.7		3.5				
197	"-28	" 150	"	31.5				61.7				1.9		5.0				
198	"-29	" 175	"	15.3				54.6				6.9	23.2					
199	"-30	" 200	"	35.8				41.0				10.1		13.2				
200	"-31	" 225	"	39.6				51.7				4.0		4.7				
201	"-32	" 250	"	39.5				51.8						8.6				
202	"-33	" 275	"	39.3				41.2						19.5				



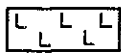


A-6 Columna Geológica de Taladros

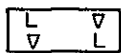
Ubicación de pozos

No.	Dirección	Inclinación	Profundidad	Fecha
MJB-1	330°	-50°	250.8 ^m	Nov. 1982
" 2	0°	-75°	301.5 ^m	" "
" 3	350°	-30°	302.0 ^m	Dic. "

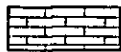
Leyendas



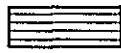
dacita



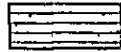
dacita brechada
y. triburada



yeso



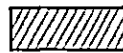
limonita



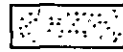
arenisca



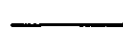
vetilla



veta



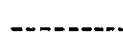
diseminación



alteración fuerte



" media



" débil

Por : porfirítico

Fen : fenocristo

Pl : plagioclasa

B : biotita

Qz : cuarzo

dis : diseminación

Ba : baritina

Lim : limonita

Py : pirita

Sp : esfalerita

Gn : galena

Muestras

B : X-rayos y analisis de roca

BC : analisis de mineral

BS : sección delgada

BP : " pulida

BFI : inclusión fluida

PROFUNDIDAD (m)	COLUMNA GEOLOGICA	NOMBRE DE ROCA	DESCRIPCION	VETA (cm)	ALTER ARCLLA SILICIFI	BLANQUEA PIRITAZA	NUMERO DE MUESTRAS	PROFUNDIDAD DE MUESTREO (cm)	LARGO DE MUESTRA (cm)	RESULTADO DE ANALISIS						
										Cu (%)	Pb (%)	Zn (%)	Sr (%)	Ag (g/l)	Au (g/l)	
0	L L	Dacita	alterada fuertemente. Por-porosa. gris bastante Lim. en grietas Fen Oz Bio, Pl alterada, blanca													
10	L L															
117	L L		Lim veta $\angle 40^\circ$	2												
134	L L		Lim-Oz veta drusa	20												
	L L		Lim-Oz veta paralela porosa	3			BC-2 BC-1	16.4 16.6	2 2	0.36 0.09	0.10 0.18	<0.01 "	8 4	11 <1		
20	L L		Lime vetilla dominante													
233	L L		Lim veta	3			B-13	25 0								
266	L L		Lim-Oz vetilla paralela	1			BC-3 BC-4	26 5 26 8	5 5	0.51 0.27	0.07 0.13	<0.01 "	6 16	<1 "		
30	L L															
37.0	L L		Lim-Oz veta $\angle 30^\circ$. Lim-pericla dominante en grietas	2			BC-5	37.1	5	0.40	0.17	<0.01	13	<1		
40	L L															
408	L L		triturada Lim-vetilla dominante													
50	L L						B-14	50 0								
54.4	L L		falla, arcilla roja													
56.0	L L		gris por triturada													
57.9	L L		vetilla irregular Lim máximo 2 ^{cm}				BC-6	57 8	10	0.39	0.16	<0.01	21	<1		
60	L L															
64.2	L L		arcilla de falla gris-roja													
70	L L		compacta PJ-blanca dominante													
72.9	L L		Por plan de desplazamiento													
74.6	L L						B-15	75 0								
80	L L															
86	L L		arcilla de falla, ancho = 10 ^{cm} $\angle 60^\circ$													
84.3	L L		autobrechada tamaño < 5 ^{cm}													
	L L		brecha dacita roja, gris y blanca varios colores													
89.7	AAAA		zona triturada ancho = 10 ^{cm}													
90	L L															
95.8	L L		triturado y arcillado				BC-7	96 5	5	0.11	0.21	<0.01	8	<1		
97.9	L L															
27	L L															

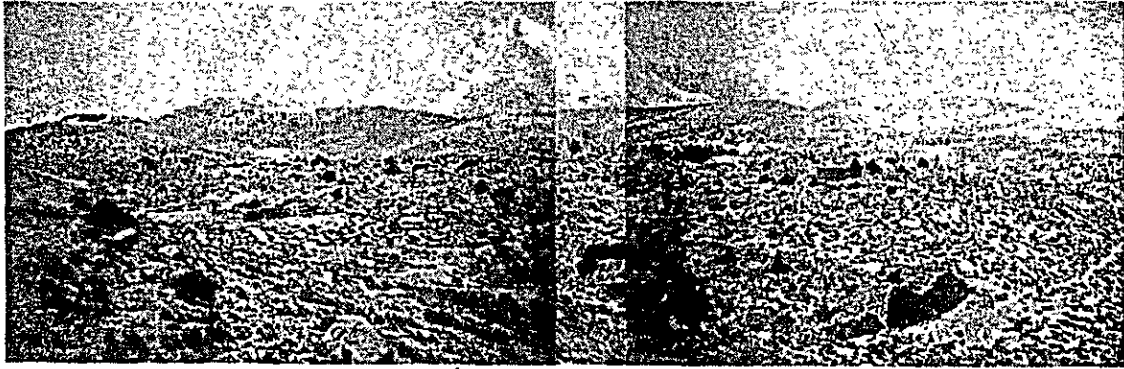
PROFUNDIDAD (m)	COLUMNA GEOLOGICA	NOMBRE DE ROCA	DESCRIPCION	VETA	ALTERACION SILICIFICA	BLANQUEO	PIRITAZA	NUMERO DE MUESTRAS	PROFUNDIDAD DE MUESTREO (m)	LARGO DE MUESTRA (cm)	RESULTADO DE ANALISIS					
											Cu (%)	Pb (%)	Zn (%)	Sn (%)	Ag (g/t)	Au (g/t)
1003		veta	veta de Ba y Qz Gn - dis poco textura brechada claramente, drusa	BP-6, 1010m BF1-2 1010 BP-7 1030 BP-8 1040				BC-11 1002 BC-12 1014 BC-13 1027 BC-14 1038 BF1-1 1040	100.2 100.3 101.4 102.7 103.8 104.0	30	0.14 0.02 0.66 0.65 1.22	0.11 0.06 0.01 0.05	<0.01 "	22.5 80.4 3.1 136	<1 1.9 4.1 14	
1027																
1038																
1048			blanca gris, gulobrechada													
1063		Dacita		muestras y sus profundidades												
1069			arcilla de falla parada													
1073																
110			Lim-vestilla 220°	1												
1114			Lim-vestilla dominante, meteorizada arcillada													
1139																
1170			PI-alterada fuertemente blanca muy porosa													
120																
1210			Lim-veta	2												
1256			Lim vestilla	1				B-17	1250							
130																
1390			arcillada blanca poco Py-dis y red alveolar					BC-13	1380	20	0.17	0.07	<0.01	6	<1	
140																
1428								BC-18	1411	20	0.02	0.06	"	3	"	
1483			poco Py-dis y red alveolar silicificada fuertemente					B-18	1500							
150								BC-14	1503	30	0.06	0.02	<0.01	60	<1	
1545																
1575			Py-dis y red alveolar arcillada y silicificada					BC-15	1580	50	0.03	0.01	<0.01	1	<1	
1591																
160																
1695			fragmentada devilmente													
170								BS-5	1720							
1742			red alveolar de Py					B-19	1750							
1770			zona de red alveolar, ancho 20cm													
180																
1838			blanca, alterada, Py-dis red alveolar					BC-16	1840	50	0.10	0.01	<0.01	2	<1	
1894																
190								BC-17	1890	50	0.13	0.02	0.01	2	<1	
1970			poco verde, zona de falla, arcilla verde dominante incluso bracho de dacita					BS-6	1940							
200								B-20	200							

PROFUNDIDAD (m)	COLUMNA GEOLOGICA	NOMBRE DE ROCA	DESCRIPCION	VETA	ALTER ARCILLA	SILICIFI	BLANQUEA	PIRITAZA	NUMERO DE MUESTRAS	PROFUNDIDAD DE MUESTREO	LARGO DE MUESTRA (cm)	RESULTADO DE ANALISIS						
												Cu (%)	Pb (%)	Zn (%)	Sn (%)	Ag (g/t)	Au (g/t)	
0	L L	Dacita	parada por Fen: Pl < 2 ^{mm} , Bto < 0.1 ^{mm} , Qz-fresco < 2 ^{mm} matriz: arcillada, porosa Lim. en grietas bastante															
10	L L		gris, compacta, masiva															
125	L L		fragmento de pizarra blanca, muy alterada, Lim. vetilla en silicificada fuertemente grieta					Bs-1		100								
153	L L		Zona triturada, falla 280°															
163	L L		Pl. blanca, arcillada															
182	L L		poca gris, muy alterada, Lim. dominante															
20	L L		silicificación, arcillación media Lim-vetilla dominante, drusa															
	L L		gradualmente gris, mucho grieta					B-1		250								
30	L L		gradualmente compacta															
399	L L		muy triturada, con muchas Lim															
451	L L		falla con arcilla, fragmentos de dacita															
486	L L		muy triturada, con Lim vetillas															
50	L L							B-2		500								
633	L L		arcilla de falla															
664	L L		arcilla blanca de falla															
757	L L		arcilla parada de de falla															
808	L L		arcilla de falla															
850	L L		Zona de falla, arcilla gris-rojo															
900	L L																	
950	L L																	
1000	L L							B-4		1000								

PROFUNDIDAD EM	COLUMNA GEOLOGICA	NOMBRE DE ROCA	DESCRIPCION	VETA	ALTER ARILLA SILICIFI BLANCO BLANCO PIRITA	NUMERO DE MUESTRAS	PROFUNDIDAD DE MUESTRO	LARGO DE MUESTRA (cm)	RESULTADO DE ANALISIS											
									Cu (%)	Pb (%)	Zn (%)	Sn (%)	Ag (g/t)	Au (g/t)						
			fragmentos de arenisca y limolita gris en arcilla																	
210																				
225																				
230						B-9	2250													
240																				
244.5		Arenisca Limolita y Yeso	arenisca fina y gris, estratificada finamente $\angle 50^\circ$																	
248.2			yeso impuro			B5-3	2500													
250			limolita roja, estratificada $\angle 30^\circ$			B-10														
254			arenisca fina estratificada $\angle 30^\circ$																	
253.3			con lamina																	
260																				
263.2			limolita con yeso gris veta de yeso																	
2660			triturada gris-chocolate $\angle 30^\circ$ con red alveolar de yeso dominante																	
267.2																				
270			con yeso			B-11	2750													
2790			poco color de chocolate																	
280			yeso negro			B5-4	2800													
280.3																				
282.8			yeso impuro, gris $\angle 10^\circ$ estratificado																	
288.3																				
288.0			plazza gris, fina, con vetilla de yeso																	
290.3																				
290																				
290.4																				
294.0			yeso negro, impuro, estratificado																	
300			arenisca fina, gris			B-12	3000													
301.5m																				

PROFUNDIDAD (m)	COLUMNA GEOLOGICA	NOMBRE DE ROCA	DESCRIPCION	VETA	ALTER ARZILLA SILICIFI	BLANQUEA	PIRITAZA	NUMERO DE MUESTRAS	PROFUNDIDAD DE MUESTRO	LARGO DE MUESTRA (m)	RESULTADO DE ANALISIS							
											Cu (%)	Pb (%)	Zn (%)	Sn (%)	Ag (g/t)	Au (g/t)		
0		Dacita	poco rojo~porado, Por compacto, masivo Fm Pl blanca alterada, Bio, Qz Lim. en grieta															
5.3			red alveolar de Qz-Ba, brechada															
8.7			veta de Qz	8				BC-41 BC-42 BP-10 "-11	5.3 6.0 7.0 "	60 70		0.45 1.06	0.35 0.14	0.01 "	136 128	<1 "		
10			veta paralela de Qz $\angle 40^\circ$					BC-43 BP-12 BC-44	12.6 12.7 13.4	10 10		1.31 0.29	0.17 0.13	" "	41 26	" "		
12.6			veta drusa de Qz-Ba	7														
13.3			" " " " $\angle 20^\circ$	2														
17.4			" " " " "	3				BP-13	17.4									
20																		
24.9			veta de Qz-Ba-Sp	3														
25.6			veta de segregación de Qz-Ba, drusa máximo 20cm					B-23 BC-45 BP-14 BP-15	25.0 26.0 25.9 26.4	20		0.86	3.36	0.01	25	<1		
26.3																		
30																		
40																		
42.7			veta brechada de Qz-Ba, porosa y drusa	2				BP-16 BC-46 BC-47	42.7 " 43.7	10 10		0.54 0.27	0.12 0.11	<0.01 "	47 69	<1 "		
43.5			" " " " "															
50								B5-8 B-24	48.0 50.0									
60																		
60.5			vetilla de Qz-Ba, drusa, 2 matriz curva	1				BP-17	60.6									
65.9			arcilla de falla, triturada, blanca					BS-9	65.5									
68.2			culobrechada, alterada, blanca															
69.2																		
70																		
71.0			vetilla drusa de Qz-Lim. $\angle 40^\circ$	1				BC-49	72.2	10		0.79	0.27	0.01	13	<1		
72.2			veta de Lim	2				B-25	75.0									
72.4			gris, suelta, Por. Pl, blanca arcillada															
78.9			gradualmente o poco verde veta de Bg-Qz-Py	2-3				BC-48 BP-18	78.8 "	10		1.68	1.89	0.01	61	<1		
80			arcillada, Pl, Bio blanqueada, blanca					BPI-5	"									
90																		
90			arcillada fuertemente															
90																		
90			arcilla parada					B-26	100.00									

FOTOGRAFIAS



Vista panorámica de Cerro López y Pueblo Fan Tasma



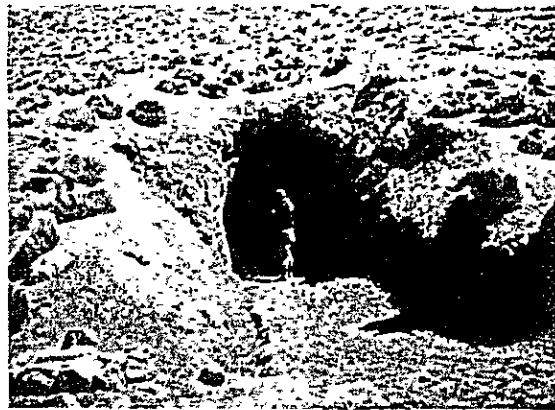
Servicio geológico



Servicio geológico



Trabajo de apeo de socavón



Servicio geológico de socavón



Distribución de morrena



Estria glacial



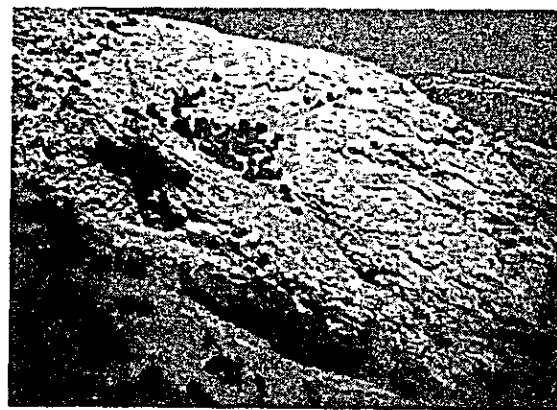
Servicio geológico
en interior mina



Trabajo de sacar muestras
en interior mina



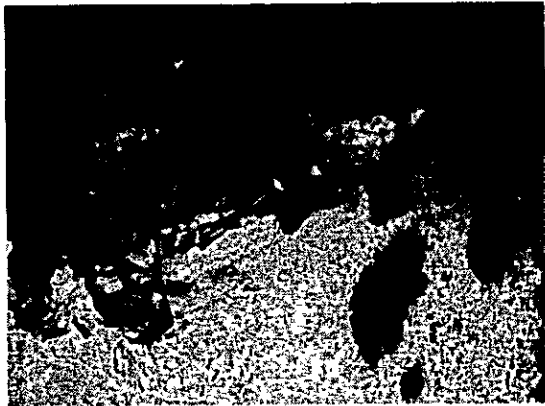
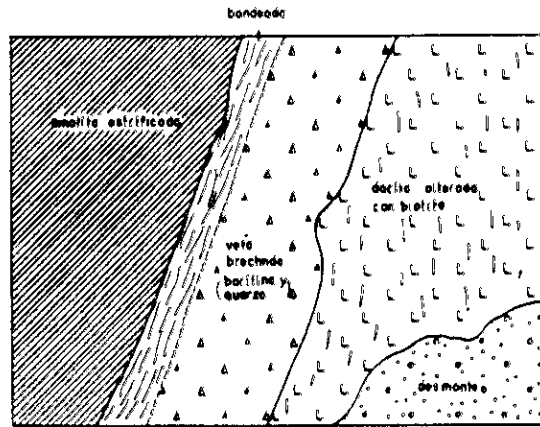
Dacita fluidal o estratificada



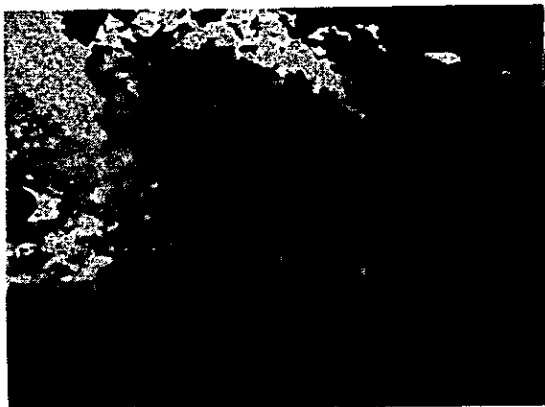
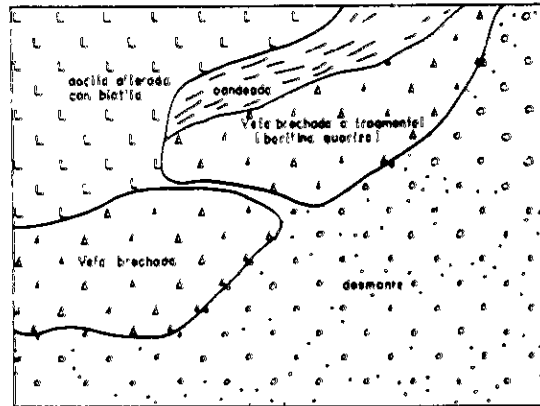
Dacita brechada



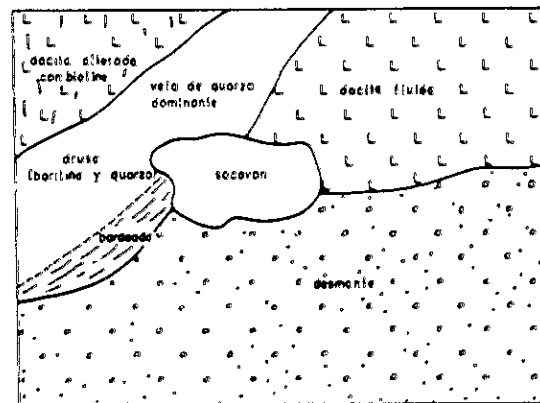
Afloramiento de Veta No III



Afloramiento de Veta No III



Afloramiento de Veta No I

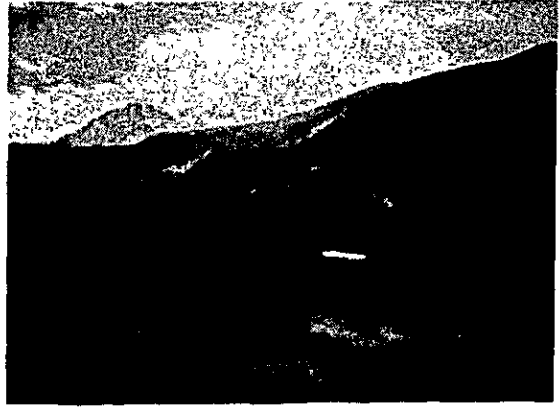


0.1mm

0 100 cm



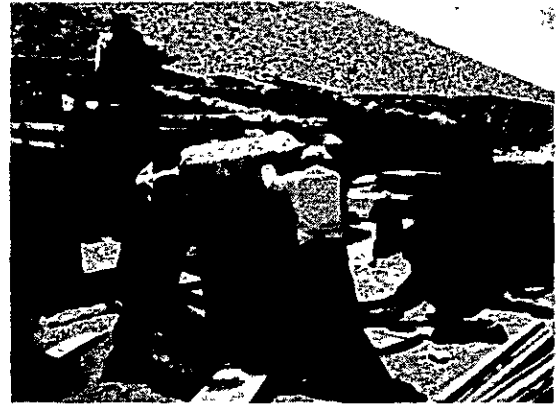
Trabajo de cargar materiales



Llegada de maquinarias



Trabajo de descargar generador



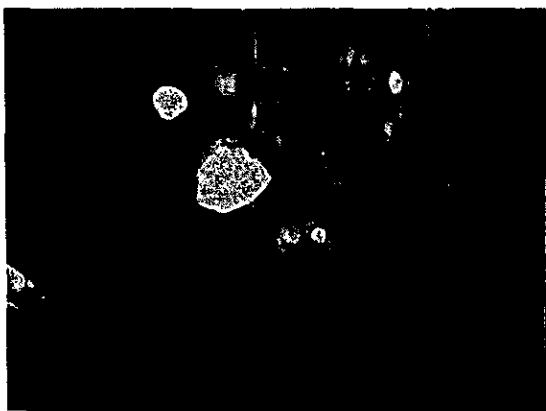
Trabajo de descargar transformador



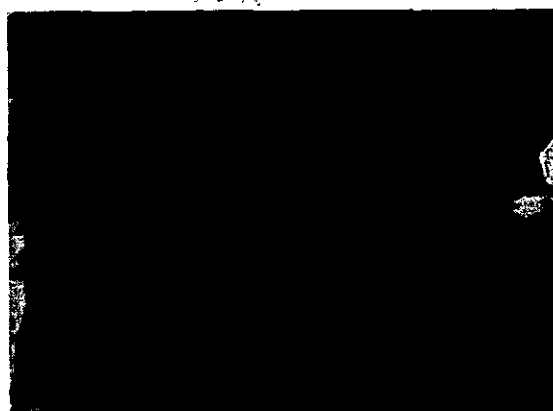
Trabajo de desarme de maquinarias



Trabajo de composición de maquinarias en interior mina



Trabajo de perforación



Trabajo de sacar testigo



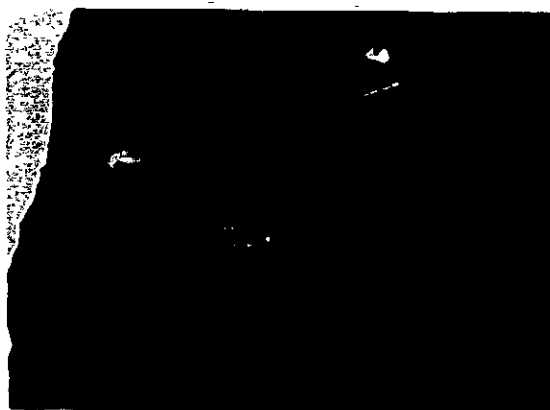
Instalación de revestimiento



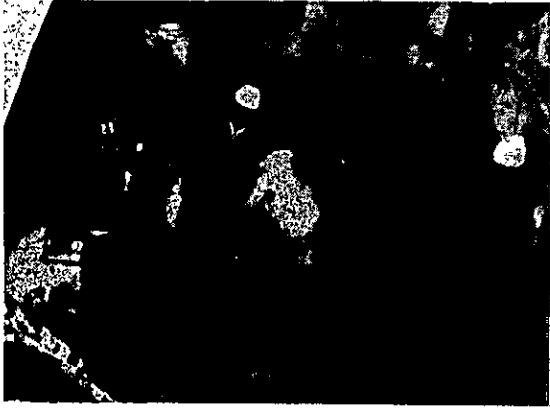
Inspección de pozo de MJB-1



Inspección de pozo de MJB-2



Inspección de pozo de MJB-3



Trabajo de desarme de tubo



Merdia de curva de pozo



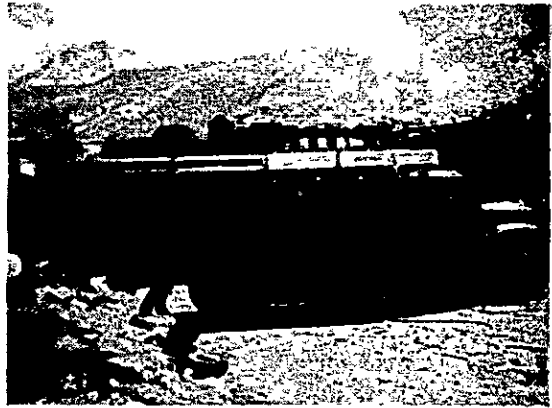
Sacando los fotos de testigo



cortando testigo



Ovservación de testigo



Trabajo de cargar maquirarias

Vertical text on the right edge of the page, likely bleed-through from the reverse side. The characters are difficult to decipher but appear to be in a traditional East Asian script.

JICA
702
61
HN
BRARY