

	No. de Muestra	Localidad	Tipo de Muestra	Espesor (m)	Au g/t	Ag g/t	Cu %	Pb %	Zn %	Sn %	Sb %	Fe %	S %	Noticias
136	2NS087	La Poma	V.	0.50	0.01	16.90	0.10	0.94	0.09	0.05	0.06	4.86	0.09	
137	2NS088	La Poma	V.	0.70	0.01	40.80	0.19	3.70	0.09	0.04	0.06	7.02	0.08	
138	2NS089	La Poma	Dacita al.	1.50	0.00	0.90	0.08	0.17	0.07	0.04	0.06	6.30	0.08	
139	2NS090	La Poma	Dacita al.	1.50	0.00	0.50	0.07	0.14	0.07	0.05	0.06	3.49	0.09	
140	2NS091	La Poma	Dacita al.	3.00	0.00	0.70	0.06	0.29	0.10	0.03	0.06	4.91	0.08	
141	2NS092	La Poma	V.	0.70	0.01	51.00	0.08	2.03	0.18	0.04	0.05	3.15	0.72	
142	2NS093	La Poma	Dacita al.	3.00	0.00	0.30	0.08	0.16	0.06	0.05	0.07	3.39	0.11	
143	2NS094	La Poma	V.	0.40	0.01	91.90	1.84	1.39	0.09	0.06	0.10	7.55	0.11	Cobre verde
144	2NS095	La Poma	Dacita	1.00	0.00	1.90	0.09	0.20	0.08	0.06	0.07	7.30	0.13	
145	2NS096	La Poma	V.	0.20	0.03	53.00	0.63	0.51	0.09	0.07	0.09	6.16	0.14	
146	2NS097	La Poma	Dacita al.	1.00	0.00	1.70	0.07	0.20	0.07	0.05	0.07	6.54	0.09	Limonita
147	2NS098	La Poma	Z. cizalla	1.00	0.02	13.60	0.09	0.74	0.08	0.05	0.10	4.68	0.53	
148	2NS099	La Poma	Dacita	1.00	0.00	10.70	0.15	0.26	0.30	0.06	0.08	6.71	0.10	
149	2NS100	La Poma	Dacita al.	2.00	0.00	2.10	0.08	0.23	0.38	0.06	0.08	3.59	0.12	
150	2NS101	La Poma	Dacita al.	3.00	0.00	0.60	0.07	0.16	0.37	0.05	0.07	3.83	0.13	Limonita
151	2NS102	La Poma	Dacita	2.00	0.00	3.00	0.08	0.43	0.42	0.06	0.08	4.91	0.54	
152	2NS103	La Poma	Dacita al.	5.00	0.00	5.90	0.08	0.43	0.10	0.06	0.07	5.46	0.81	
153	2NS104	La Poma	Dacita al.	2.00	0.01	37.00	0.10	1.80	0.35	0.06	0.09	5.55	0.59	
154	2NS105	La Poma	V.	0.10	0.01	451.00	0.09	30.48	0.10	0.07	0.12	4.44	7.41	Galena
155	2NS106	La Poma	Dacita al.	5.00	0.00	51.10	0.09	2.48	0.42	0.05	0.08	10.44	0.90	
156	2NS107	La Poma	Dacita al.	5.00	0.01	43.60	0.08	2.05	0.37	0.05	0.08	9.10	1.14	
157	2NS108	La Poma	Dacita al.	5.00	0.01	3.30	0.07	0.84	0.58	0.05	0.07	5.57	0.14	
158	2NS109	La Poma	Dacita al.	2.00	0.00	9.40	0.07	0.41	0.48	0.05	0.06	4.03	0.13	
159	2NS110	La Poma	Dacita al.	2.00	0.02	342.00	0.05	4.15	0.11	0.00	0.06	8.69	1.26	
160	2NS111	La Poma	Dacita al.	2.00	0.01	118.30	0.08	1.26	0.52	0.00	0.05	7.47	0.25	
161	2NS113	La Poma	Dacita al.	1.00	0.00	3.40	0.07	0.11	0.04	0.00	0.05	3.05	0.17	Pirita
162	2NS115	La Poma	Dacita al.	0.20	0.07	882.30	1.48	3.10	0.07	0.00	0.06	7.23	0.18	
163	2NS116	La Poma	Dacita al.	0.20	0.00	5.30	0.09	0.73	0.09	0.00	0.06	6.44	0.20	
164	2NS117	La Poma	Dacita al.	1.00	0.00	3.80	0.09	1.21	0.11	0.00	0.07	5.35	0.20	
165	2NS118	La Poma	Dacita	2.00	0.01	29.20	0.11	2.85	0.08	0.00	0.06	5.49	0.17	
166	2NS119	La Poma	Dacita al.	1.00	0.00	39.00	0.13	0.82	0.08	0.00	0.06	6.68	0.19	
167	2NS120	La Poma	Dacita al.	1.50	0.01	8.40	0.09	0.50	0.09	0.00	0.07	4.80	0.23	
168	2NS121	La Poma	V.	2.50	0.00	10.90	0.08	1.10	0.09	0.00	0.07	4.51	0.19	
169	2NS122	La Poma	Dacita al.	1.00	0.00	5.50	0.08	0.65	0.08	0.00	0.07	5.11	0.18	
170	2NS123	La Poma	Dacita al.	1.50	0.00	5.50	0.11	1.15	0.12	0.00	0.09	4.51	0.21	Galena
171	2NS124	La Poma	Dacita al.	1.00	0.04	511.00	0.12	17.78	0.11	0.00	0.11	4.55	1.42	
172	2NS125	La Poma	Dacita al.	3.00	0.04	50.60	0.12	4.46	0.11	0.00	0.08	5.04	0.23	
173	2NS126	La Poma	V.	3.50	0.01	8.70	0.12	1.65	0.13	0.00	0.08	5.16	0.21	
174	2NS127	La Poma	V.	0.70	0.05	173.00	0.20	6.55	0.09	0.00	0.12	10.10	0.69	
175	2NS128	La Poma	V.	0.20	0.07	170.80	1.51	24.31	0.34	0.00	0.19	6.46	0.23	
176	2NS129	La Poma	V.	0.50	0.01	103.50	0.17	3.28	0.07	0.09	0.10	3.92	0.87	
177	2NS130	La Poma	Dacita al.	1.00	0.00	6.10	0.09	0.73	0.09	0.00	0.09	6.28	0.31	
178	2NS132	La Poma	V.	0.30	0.01	220.00	0.62	4.94	0.11	0.00	0.15	6.15	0.23	
179	2NS133	La Poma	V.	0.30	0.01	444.00	1.04	13.58	0.09	0.00	0.20	9.45	0.23	
180	2NS134	La Poma	Dacita al.	0.50	0.01	23.40	0.13	1.03	0.13	0.01	0.09	6.33	0.20	

	No. de Muestra	Localidad	Tipo de Muestra	Espesor (m)	Au g/t	Ag g/t	Cu %	Pb %	Zn %	Sn %	Sb %	Fe %	S %	Noticias
181	2NS135	La Poma	Dacita	1.00	0.01	2.50	0.10	0.58	0.13	0.02	0.09	4.60	0.23	
182	2NS136	La Poma	V.	0.20	0.03	2651.00	2.18	12.28	0.50	0.00	0.66	7.50	0.29	
183	2NS137	La Poma	V.	0.10	0.00	26.20	0.17	1.25	0.09	0.00	0.09	7.43	0.20	
184	2NS138	La Poma	V.	0.20	0.05	517.00	0.22	9.05	0.08	0.00	0.13	8.98	0.25	
185	2NS139	La Poma	V.	0.20	0.04	766.00	0.73	3.51	0.07	0.00	0.11	5.92	0.24	
186	2NS140	La Poma	Dacita	0.20	0.00	2.80	0.08	0.65	0.11	0.09	0.08	5.41	0.21	
187	2NS141	La Poma	V.	0.20	0.05	1590.00	1.01	34.22	0.10	0.02	0.17	7.02	0.28	Cobre verde
188	2NS142	La Poma	Dacita al.	0.20	0.01	122.70	0.23	5.98	0.09	0.09	0.11	7.80	0.23	
189	2NS143	La Poma	V.	0.50	0.00	6.30	0.10	1.03	0.13	0.01	0.07	7.91	0.20	
190	2NS144	La Poma	V.	0.70	0.05	198.00	0.24	7.70	0.10	0.02	0.11	5.93	0.21	
191	2NS145	La Poma	V.	0.50	0.12	529.00	0.60	10.81	0.32	0.08	0.12	7.39	0.78	
192	2NS146	La Poma	V.	1.00	0.06	60.10	0.15	1.49	0.34	0.01	0.09	8.69	0.24	
193	2NS147	La Poma	V.	0.60	0.06	226.00	0.68	11.14	0.37	0.01	0.10	6.58	0.23	Galena
194	2NS148	La Poma	V.	0.90	0.04	1146.00	1.25	11.49	0.35	0.01	0.30	9.29	0.76	Galena
195	2NS149	La Poma	V.	0.20	0.01	12.00	0.16	4.03	0.34	0.09	0.10	7.92	0.28	Galena
196	2NS150	La Poma	V.	0.20	0.02	164.70	0.78	2.38	0.37	0.01	0.13	8.25	0.69	Cobre verde
197	2NS151	La Poma	V.	0.10	0.13	1445.00	1.38	12.37	0.09	0.02	0.27	8.90	0.71	Limonita
198	2NS152	La Poma	V.	0.40	0.06	199.50	0.69	3.15	0.12	0.00	0.13	6.55	0.28	Cobre verde
199	2NS154	Concordia	V.	1.00	0.30	593.00	1.59	2.19	0.46	0.00	0.40	4.66	3.73	Galena, Cu
200	2NS155	Concordia	Dacita br.	3.00	0.00	2.10	0.08	0.46	0.31	0.00	0.08	4.40	0.27	
201	2NS156	Concordia	Dacita br.	3.00	0.00	1.70	0.10	0.55	0.37	0.09	0.09	3.47	1.03	
202	2NS157	Concordia	Dacita br.	2.00	0.00	14.20	0.09	0.52	0.09	0.01	0.07	3.77	1.59	
203	2NS158	Concordia	V.	0.70	0.00	1.40	0.08	0.46	0.07	0.01	0.08	4.05	4.44	Pirita
204	2NS159	Concordia	Dacita br.	1.00	0.01	3.60	0.09	0.54	0.50	0.01	0.08	3.86	4.80	
205	2NS160	Concordia	V.	1.60	0.05	14.00	0.09	0.86	1.07	0.08	0.08	6.20	7.72	
206	2NS161	Concordia	Dacita br.	3.00	0.01	18.00	0.10	0.58	0.69	0.01	0.07	2.63	3.99	
207	2NS162	Concordia	Dacita br.	4.00	0.00	0.30	0.09	0.46	0.36	0.01	0.07	2.63	3.33	
208	2NS163	Concordia	V.	2.00	0.11	7.20	0.10	0.67	0.38	0.08	0.07	3.81	2.17	
209	2NS164	Concordia	Dacita br.	3.00	0.02	1.60	0.06	0.05	0.10	0.00	0.00	2.82	1.64	
210	2NS165	Concordia	V.	0.80	0.04	6.00	0.02	0.75	0.00	0.00	0.01	4.78	1.75	
211	2NS166	Concordia	V.	0.60	0.22	33.80	0.04	2.24	0.00	0.02	0.03	7.23	2.60	
212	2NS167	Concordia	V.	0.70	0.09	76.60	0.08	2.36	0.12	0.01	0.05	3.52	2.02	Pirita, Galena
213	2NS168	Concordia	V.	0.30	0.10	45.90	0.04	2.30	2.02	0.02	0.05	3.13	4.86	Pirita, Galena
214	2NS169	Concordia	V.	0.40	0.13	34.60	0.04	2.15	0.50	0.00	0.03	3.73	3.73	Pirita, Galena
215	2NS170	Concordia	V.	0.20	0.05	5.60	0.03	0.16	0.10	0.00	0.02	2.45	2.46	Pirita
216	2NS171	Concordia	V.	0.30	0.01	11.20	0.04	0.30	0.00	0.02	0.02	3.18	2.91	Pirita
217	2NS172	Concordia	V.	0.10	0.00	4.10	0.03	0.21	0.26	0.02	0.01	3.42	3.15	Pirita
218	2NS173	Concordia	V.	0.30	0.17	10.30	0.04	0.32	0.14	0.02	0.02	4.92	1.84	Pirita
219	2NS174	Concordia	V.	0.20	0.08	15.10	0.04	0.59	0.58	0.02	0.02	3.60	3.00	Limonita
220	2NS175	Concordia	V.	0.20	0.04	6.20	0.04	0.19	0.16	0.02	0.03	4.76	0.74	Limonita
221	2NS176	Concordia	V. cuarzo	0.10	0.00	0.30	0.05	0.18	0.00	0.02	0.04	10.87	0.61	
222	2NS177	Concordia	V.	0.50	0.08	11.00	0.04	0.76	0.81	0.02	0.03	5.45	4.32	Pirita
223	2NS178	Concordia	V.	0.20	0.04	20.90	0.04	1.23	0.80	0.02	0.03	7.19	6.30	Pirita
224	2NS179	Concordia	V.	0.60	0.05	5.30	0.04	0.37	0.13	0.02	0.03	6.02	2.19	Pirita
225	2NS180	Concordia	V.	1.20	0.03	7.40	0.05	0.26	0.09	0.02	0.03	6.72	2.68	Pirita

	No. de Muestra	Localidad	Tipo de Muestra	Espesor (m)	Au g/t	Ag g/t	Cu %	Pb %	Zn %	Sn %	Sb %	Fe %	S %	Noticias
226	2NS181	Concordia	V.	1.20	0.01	3.80	0.04	0.44	0.09	0.03	0.02	2.47	1.39	Pirita
227	2NS182	Concordia	V.	0.50	0.02	3.50	0.04	0.13	0.00	0.02	0.03	2.01	1.45	Pirita
228	2NS183	Concordia	V.	1.20	0.01	5.70	0.04	0.29	0.09	0.02	0.03	2.95	1.51	Pirita
229	2NS184	Concordia	V.	0.80	0.02	4.60	0.04	0.16	0.16	0.02	0.04	2.57	2.10	Galena
230	2NS185	Concordia	Dacita br.	1.20	0.04	6.20	0.04	0.22	0.22	0.03	0.04	2.58	1.88	
231	2NS186	Concordia	Dacita br.	1.20	0.01	3.80	0.05	0.13	0.00	0.03	0.03	1.88	1.01	
232	2NS187	Concordia	Dacita br.	1.00	0.02	19.60	0.04	1.19	0.53	0.02	0.04	2.13	2.12	Pirita
233	2NS188	Concordia	Dacita br.	1.00	0.11	152.60	0.07	9.35	1.27	0.02	0.16	6.45	9.01	Pirita
234	2NS189	Concordia	Dacita br.	1.50	0.11	423.00	0.16	21.29	1.02	0.04	0.34	6.38	11.00	Pirita
235	2NS190	Concordia	Dacita br.	1.50	0.06	13.40	0.03	0.54	0.28	0.02	0.04	1.97	1.55	Pirita
236	2NS191	Concordia	Dacita br.	1.20	0.04	72.40	0.07	5.74	1.79	0.04	0.09	10.30	12.79	
237	2NS192	Concordia	Dacita br.	0.80	0.13	16.70	0.05	1.04	0.28	0.03	0.05	1.02	0.96	
238	2NS193	Concordia	V.	0.50	0.84	6.50	0.05	0.41	0.42	0.03	0.04	3.76	3.94	Pirita, Galena
239	2NS194	Concordia	Dacita br.	0.70	0.21	22.40	0.06	1.15	0.24	0.02	0.08	1.51	1.54	
240	2NS195	Concordia	Dacita br.	0.70	0.24	16.30	0.06	1.01	0.20	0.03	0.04	1.44	1.13	
241	2NS196	Concordia	Dacita br.	0.80	0.05	19.30	0.05	1.05	0.52	0.03	0.05	3.49	3.75	
242	2NS197	Concordia	Dacita	0.80	0.03	4.30	0.05	0.20	0.36	0.03	0.03	4.83	4.43	
243	2NS198	Concordia	V.	0.70	0.01	1.10	0.06	0.13	0.00	0.03	0.05	2.04	0.58	Pirita
244	2NS199	Concordia	Dacita br.	1.00	0.01	2.60	0.05	0.29	0.00	0.03	0.04	6.11	1.95	
245	2NS201	Incachule	V.	0.50	0.12	2.60	0.05	0.06	0.00	0.03	0.69	0.98	1.08	Pirita
246	2NS202	Incachule	V.	1.00	0.01	0.30	0.05	0.18	0.00	0.03	0.83	0.94	0.84	Estabina
247	2NS203	Incachule	V.	0.50	0.01	0.60	0.04	0.05	0.00	0.02	6.64	0.71	3.07	Estabina
248	2NS204	Incachule	V.	0.30	0.01	2.20	0.09	0.46	0.00	0.03	0.30	3.18	0.97	Estabina
249	2YS003	Incachule	Dacita al.		0.01	0.00	0.05	0.11	0.00	0.04	0.04	3.11	0.13	Suelo
250	2YS004	Incachule	Dacita		0.00	0.10	0.05	0.15	0.00	0.04	0.04	3.15	0.13	Macizo

Apéndice F RESULTADOS DE LOS ANALISIS QUIMICOS
(ROCA, LA RIOJA)

	No. de Muestra	SiO2 %	TiO2 %	Al2O3 %	Fe2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %	P2O5 %	LOI %	TOTAL %
1	2FL031	75.00	0.12	12.93	1.59	0.33	0.03	0.22	0.66	2.76	5.44	0.11	0.97	100.16
2	2FL046	62.49	0.69	15.67	3.93	2.74	0.13	2.78	5.01	2.43	2.51	0.20	1.61	100.19
3	2FL047	64.49	0.61	15.34	3.57	2.22	0.15	2.24	4.34	2.48	2.94	0.22	1.89	100.49
4	2FL048	66.93	0.60	15.70	2.33	2.79	0.08	1.95	3.74	2.92	2.62	0.13	1.19	100.98
5	2FL049	62.08	0.77	15.92	3.77	2.75	0.16	2.78	4.95	2.79	2.23	0.23	1.62	100.05
6	2FL072	77.00	0.11	12.90	0.70	0.16	0.03	0.10	0.65	2.98	5.74	0.09	0.48	100.94
7	2FL106	75.50	0.18	13.06	0.95	0.28	0.08	0.13	1.47	3.21	4.85	0.11	1.74	101.56
8	2FL107	77.00	0.08	12.98	0.63	0.27	0.02	0.10	0.68	3.41	5.09	0.08	0.56	100.90
9	2FL108	75.50	0.18	13.25	1.12	0.27	0.06	0.25	1.20	3.20	4.96	0.12	0.66	100.77
10	2FL109	75.00	0.18	13.80	0.94	0.47	0.08	0.30	1.60	3.30	4.77	0.11	0.67	101.22
11	2FL110	54.76	1.10	16.43	4.22	4.55	0.16	4.17	7.18	2.70	1.99	0.36	1.96	99.58
12	2FL128	70.50	0.47	14.60	2.75	1.20	0.10	1.38	3.19	3.05	2.90	0.18	1.31	101.63
13	2FL130	78.00	0.09	12.85	0.67	0.23	0.02	0.16	0.60	3.08	5.34	0.13	0.56	101.73
14	2NL017	65.09	0.62	15.38	2.59	3.32	0.12	2.48	4.55	2.45	2.96	0.20	1.20	100.96
15	2NL018	75.19	0.39	11.53	1.32	2.08	0.05	1.20	3.01	2.28	1.63	0.20	0.78	99.66
16	2NL020	70.09	0.41	14.59	1.72	1.87	0.09	1.33	3.11	2.74	3.90	0.16	1.12	101.13
17	2NL147	68.53	0.59	15.01	3.02	1.66	0.15	1.70	3.46	3.41	2.29	0.23	1.31	101.36
18	2YL007	65.87	0.70	15.54	2.27	3.03	0.12	1.91	4.78	2.95	2.41	0.23	1.07	100.88
19	2YL008	75.80	0.24	12.70	1.33	0.66	0.05	0.58	1.90	2.32	4.63	0.13	1.06	101.40
20	2YL009	64.53	0.65	15.34	2.50	3.38	0.13	2.52	4.81	2.56	2.55	0.20	1.16	100.33

Apéndice F RESULTADOS DE LOS ANALISIS QUIMICOS
(ROCA, SALTA)

	No. de Muestra	SiO2 %	TiO2 %	Al2O3 %	Fe2O3 %	FeO %	MnO %	MgO %	CaO %	Na2O %	K2O %	P2O5 %	LOI %	Total %
1	2FS001	61.75	0.65	16.22	3.43	1.17	0.07	2.71	3.85	2.75	3.49	0.30	3.99	100.38
2	2FS009	68.12	0.62	14.88	3.78	0.57	0.08	1.62	1.29	2.56	4.33	0.28	1.48	99.61
3	2FS036	72.42	<0.01	13.81	0.71	0.33	0.15	0.23	0.76	3.47	4.67	0.15	4.44	101.14
4	2FS040	54.04	1.36	12.83	2.92	3.62	0.12	8.50	5.50	2.52	5.60	1.01	0.64	98.66
5	2FS044	71.39	0.56	14.07	1.56	2.15	0.09	1.01	1.58	3.08	4.64	0.26	0.78	101.17
6	2FS045	70.45	0.58	14.47	1.71	2.38	0.08	1.51	1.25	2.57	4.53	0.26	1.30	101.09
7	2FS046	55.67	0.92	14.86	3.70	2.62	0.10	5.18	6.83	2.98	2.94	0.37	3.59	99.76
8	2FS047	61.21	0.72	15.86	2.36	1.14	0.06	1.38	6.26	2.75	3.74	0.27	4.84	100.59
9	2FS048	62.28	0.69	15.35	3.56	1.29	0.06	2.52	3.98	2.61	4.15	0.27	3.55	100.31
10	2FS050	64.47	0.67	15.61	4.18	0.48	0.06	1.62	3.92	3.09	3.87	0.31	1.99	100.27
11	2FS051	70.40	0.58	14.56	1.70	2.26	0.07	1.50	1.21	2.69	4.41	0.28	1.40	101.06
12	2FS052	69.74	0.52	14.74	1.61	2.08	0.06	1.39	1.56	3.03	4.36	0.28	1.07	100.44
13	2FS053	69.12	0.67	14.60	1.93	2.74	0.07	1.79	1.57	3.17	4.01	0.28	1.39	101.34
14	2FS054	62.22	0.61	16.60	3.26	2.62	0.19	2.27	4.62	2.92	3.35	0.30	2.01	100.97
15	2FS055	71.72	0.54	14.15	1.54	2.05	0.06	1.11	0.91	2.54	3.88	0.25	2.28	101.03
16	2FS056	70.63	0.63	14.73	2.02	2.98	0.06	1.43	0.98	2.73	4.22	0.27	1.68	101.46
17	2FS057	69.80	0.76	14.25	2.15	2.64	0.07	0.85	2.09	3.45	3.61	0.30	0.95	100.92
18	2FS094	73.17	0.56	16.39	0.57	0.36	0.02	0.90	0.15	0.29	5.60	0.18	3.15	101.34
19	2NS005	63.34	0.84	18.19	2.60	0.41	0.03	1.04	1.46	1.23	6.16	0.23	5.54	101.13
20	2NS008	74.40	0.56	13.10	1.13	0.28	0.02	0.63	0.22	0.29	7.88	0.20	2.44	101.15
21	2NS012	69.57	0.64	15.71	2.60	0.51	0.03	1.15	0.40	0.34	5.76	0.31	4.46	101.48
22	2NS014	62.46	0.89	15.70	2.82	1.90	0.06	2.35	3.73	2.48	3.78	0.28	4.22	100.47
23	2NS016	62.61	0.71	15.87	3.90	0.82	0.07	2.19	4.01	2.69	3.90	0.29	3.00	100.06
24	2NS053	66.81	0.70	15.79	1.44	0.54	0.02	1.21	0.49	0.50	7.09	0.32	6.00	100.81
25	2NS067	61.59	0.68	15.61	2.66	1.87	0.07	3.20	2.98	2.16	4.47	0.27	4.42	99.98
26	2NS086	55.06	0.58	12.88	6.39	7.73	0.31	2.41	0.38	0.25	4.01	0.29	5.00	95.29
27	2NS114	64.25	0.72	16.16	4.64	0.20	0.07	1.55	3.71	2.90	3.79	0.24	2.07	100.30
28	2NS153	57.26	1.29	15.45	2.67	3.77	0.10	4.66	6.00	3.00	4.04	0.53	0.77	99.54
29	2YS001	47.72	1.76	14.11	3.77	7.73	0.21	6.97	9.59	1.63	1.33	0.25	2.07	97.15
30	2YS002	67.53	0.65	16.29	1.75	1.38	0.03	1.86	0.43	0.35	5.98	0.29	4.14	100.68

Apéndice F RESULTADOS DE LOS ANALISIS QUIMICOS

(SUELO , LA RIOJA)

No. 1

	No. de Muestra	C O N T E N I D O							MEMORANDUM
		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	
1	GC01	0	0.00	24	37	96	80	4	
2	GC02	0	0.18	18	34	109	152	3	
3	GC03	0	0.01	22	32	98	337	6	
4	GC04	3	0.02	20	31	86	379	0	
5	GC05	0	0.00	21	40	102	218	8	
6	GC06	4	0.01	19	26	89	422	0	
7	GC07	5	0.12	16	24	91	191	49	
8	GC08	2	0.11	21	22	87	168	0	
9	GC09	0	0.06	19	19	82	68	0	
10	GC10	11	0.09	23	31	95	634	0	
11	GC11	0	0.03	23	27	79	103	0	
12	GC12	1	0.00	18	20	77	14	0	
13	GC13	1	0.14	19	20	79	55	0	
14	GC14	0	0.00	21	24	80	68	0	
15	GC15	0	0.04	18	16	66	0	0	
16	GC16	0	0.04	25	46	98	146	13	
17	GC17	1	0.04	27	59	126	352	38	
18	GC18	0	0.01	22	32	101	49	9	
19	GC19	3	0.05	25	38	97	53	28	
20	GC20	1	0.04	25	33	97	81	38	
21	GC21	0	0.00	18	18	79	0	16	
22	GC22	0	0.00	15	18	20	246	0	
23	GC23	0	0.01	20	25	81	4	0	
24	GC24	0	0.00	17	15	74	0	0	
25	GC25	1	0.08	22	34	91	127	4	
26	GC26	1	0.00	17	25	83	119	0	
27	GC27	0	0.11	14	14	73	120	0	
28	GC28	0	0.02	18	23	81	71	0	
29	GC29	0	0.03	22	33	91	186	0	
30	GC30	3	0.11	17	32	84	280	0	
31	GC31	1	0.03	16	21	82	142	0	
32	GC32	6	0.11	23	31	100	739	53	
33	GC33	3	0.05	19	26	97	525	0	
34	GC34	0	0.11	27	25	98	1327	0	
35	GC35	6	0.00	26	53	115	1173	43	
36	GC36	2	0.16	22	31	90	75	0	
37	GC37	0	0.00	24	37	89	219	2	
38	GC38	0	0.00	20	30	95	139	3	
39	GC39	0	0.04	25	40	94	61	0	
40	GC40	0	0.05	23	36	92	37	0	

	No. de Muestra	C O N T E N I D O							MEMORANDUM
		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	
41	GC42	0	0.12	26	51	118	169	24	
42	GC43	0	0.00	29	53	119	197	36	
43	GC44	0	0.00	28	51	117	146	20	
44	GC45	0	0.09	27	43	135	235	28	
45	GC46	1	0.15	24	38	113	88	5	
46	GC47	0	0.00	30	59	121	415	38	
47	GC48	1	0.00	34	78	132	342	46	
48	GC49	1	0.04	19	13	80	392	0	
49	GC50	1	0.00	21	36	89	289	9	
50	GC51	1	0.00	26	49	101	289	12	
51	GC52	0	0.00	31	47	126	249	14	
52	GC54	0	0.00	15	12	72	0	0	
53	GC55	0	0.10	17	18	74	0	0	
54	GC56	0	0.00	16	23	83	38	0	
55	GC57	0	0.00	16	26	79	84	0	
56	GC58	0	0.00	15	13	74	0	0	
57	GC59	1	0.13	10	3	73	0	0	
58	GC60	0	0.16	21	28	97	386	37	
59	GC61	1	0.07	17	16	129	337	0	
60	GC62	0	0.01	14	13	88	6	0	
61	GC63	2	0.00	22	44	119	204	12	
62	GC64	0	0.00	15	11	77	151	0	
63	GC65	18	0.03	16	15	101	668	49	
64	GC66	0	0.00	12	0	67	56	0	
65	GC67	2	0.07	15	23	87	236	0	
66	GC68	0	0.00	20	26	105	84	0	
67	GC69	0	0.03	18	22	108	116	30	
68	GC70	0	0.00	19	19	106	149	0	
69	GC71	0	0.00	19	30	91	33	0	
70	GC72	0	0.08	13	11	83	0	0	
71	GC73	0	0.00	16	23	92	24	0	
72	GC74	1	0.11	19	39	126	164	14	
73	GC75	1	0.00	17	24	84	73	0	
74	GC78	1	0.06	11	6	86	87	2	
75	GC79	1	0.04	22	26	112	60	0	
76	GC80	0	0.09	27	50	131	120	12	
77	GC81	0	0.00	19	58	125	108	8	
78	GC82	1	0.02	16	18	77	0	0	
79	GC83	0	0.00	20	30	87	21	0	
80	GC84	0	0.03	22	24	107	514	0	
81	GC85	1	0.00	21	37	144	71	0	

資料 G X 線回析試驗結果

Apéndice G RESULTADOS DE DIFRACCION RAYO X (LA RIOJA)

No.	No. de muestra	Localidad	Tipo de muestra	Mineral															
				Mineral de arcilla	Sericita	Biotita	Muscovita	Ceolita	Cuarzo	Tridimita	Neferina	Plagioclas	K-feldespató	Amibol	Calcita	Yeso	Hemalita	Goethita	Malaquita
1	2FL003	El Arbolito	Z. cizalla	•△															
2	2FL009	El Arbolito	Granodirita alterada	△•○															
3	2FL014	El Espinillo I	Z. cizalla	•○															
4	2FL067	Rio Noquis	Z. brecha	•△															
5	2FL073	S. Isidro Norte	V. cuarzo	○															
6	2FL100	F. Oriental	Granodirita alterada	•○															
7	2FL105	San Rafael	Diorita alterada		△														
8	2FL117	La Florida	V. cuarzo	△○															
9	2FL122	La Pirca	Z. arcilla	○○															
10	2NL029	Callana V	Tonalita alterada		○														
11	2NL047	Callana III	Migmatita alterada	•○△															
12	2NL049	Callana III	Migmatita alterada	○△△															
13	2NL061	Callana VI	Migmatita alterada	△○○															
14	2NL086	Callana IV	Tonalita alterada	•△○															
15	2NL089	Callana IV	Tonalita alterada	•○△															
16	2NL100	Callana VII	Tonalita	○△															
17	2NL106	Callana VII	Tonalita	•○															
18	2NL114	S. Isidro Sur	Granito alterado	○○															
19	2NL176	Cerco Quemada	Z. alterada	△○															
20	2NL183	T. Colorada	Tonalita alterada	○															
21	2YL001	La Marta	V. cuarzo																
22	2YL002	San Antonio	V. cuarzo	△○															
23	2YL003	San Antonio	V. cuarzo	•															
24	2YL013	Callana VII	V. cuarzo	•○															
25	2YL018	Callana VII	Tonalita alterada	•○															
26	2YL020	Callana VII	V. cuarzo	○															
27	2YL021	Callana VII	Tonalita alterada	•○															
28	2YL022	Callana VII	Tonalita alterada	○△○															
29	2YL038	La Pirca	Tonalita alterada	•															
30	2YL041	El Cerco	Tonalita alterada	•○△															

Cantidad: ○:Abundante ○:Medio △:Poco •:Escaso

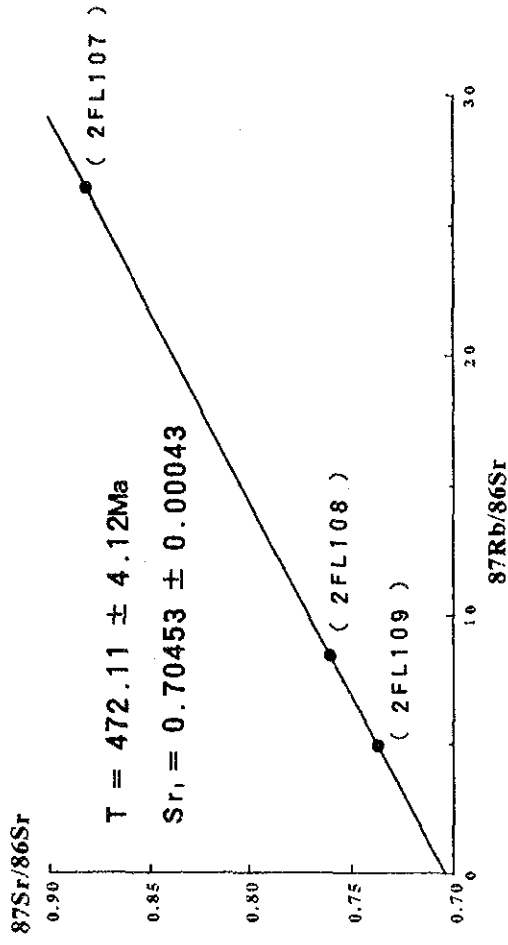
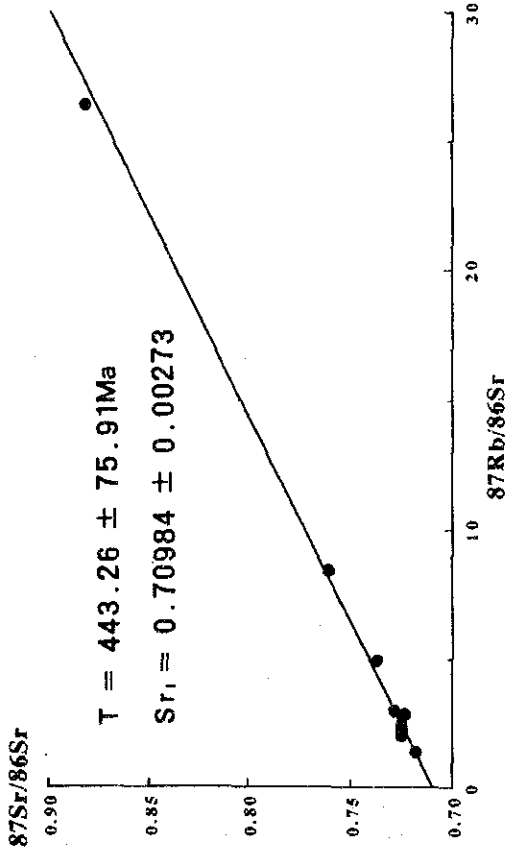
Apéndice G RESULTADOS DE DIFRACCION RAYO X (SALTA)

No.	No. de muestra	Localidad	Tipo de muestra	Mineral																		
				Mineral de arcilla	Sericita	Riolita	Ceolita	Cuarzo	Tridimita	Plagioclas	K-feldespat	Amfibol	Fluorita	Baritina	Hematita	Coethita	Pirita	Jarosita	Malaguila	Calcosina	Cerusita	Plumbogummita
1	2FS015	Acarzoque	V. fluorita																			
2	2FS058	Vicuna	Roca alterada	○																		
3	2FS061	S. Concordia	Brecha de dacita	•	△																	
4	2FS063	S. Concordia	Roca alterada	○																		
5	2FS070	E. Concordia	Roca alterada	△																		
6	2FS077	La Concordia	Dacita alterada	•	△																	
7	2FS079	La Concordia	Z. cizalla	△																		
8	2FS084	Matilde	Dacita alterada	△																		
9	2FS086	Polvorillas	Dacita alterada	•	•																	
10	2FS091	El Recuerdo	V. cuarzo	△																		
11	2FS093	N. Concordia	Dacita alterada	○																		
12	2FS094	N. Concordia	Riolita alterada	○																		
13	2FS097	Matilde	Z. cizalla	○																		
14	2FS102	El Recuerdo	Z. cizalla	•	△																	
15	2FS106	Flamarion	Z. cizalla	△																		
16	2NS005	Incachule	Dacita alterada	△	○	○																
17	2NS006	Incachule	V. cuarzo	○	○																	
18	2NS008	Incachule	Dacita	•	○	○																
19	2NS012	Incachule	Riolita	○	○	○																
20	2NS019	Incachule	Dacita alterada	△	△	○																
21	2NS031	Incachule	Dacita alterada	•	△	○																
22	2NS053	Incachule	Riolita	•	○	○																
23	2NS067	Incachule	Dacita	△	○	○																
24	2NS080	La Poma	Dacita	○	○	○																
25	2NS086	La Poma	Dacita	△	△	○																
26	2NS100	La Poma	Dacita alterada	△	△	○																
27	2NS112	La Poma	Dacita	△	○	○																
28	2NS126	La Poma	Z. cizalla	△		○																
29	2NS134	La Poma	Dacita alterada	•	•	○																○
30	2YS002	Incachule	Riolita alterada	△	○	○																

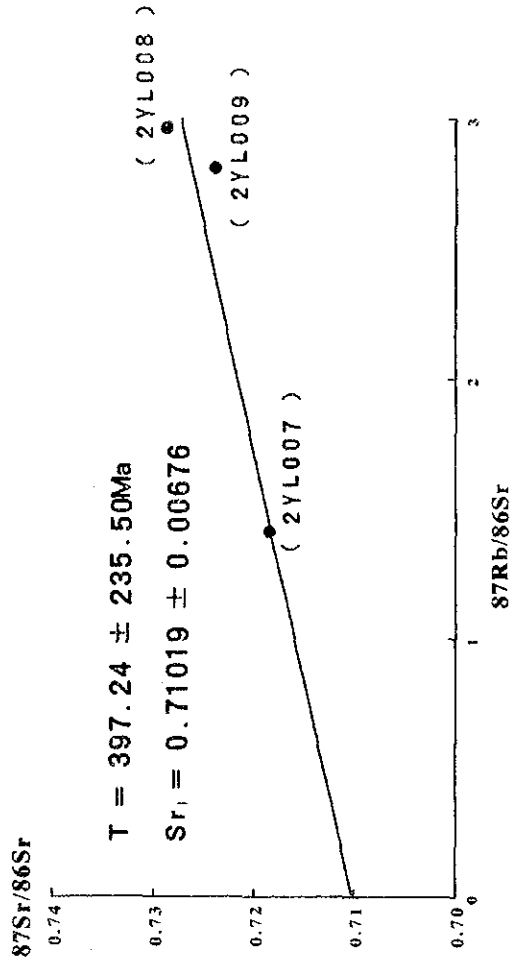
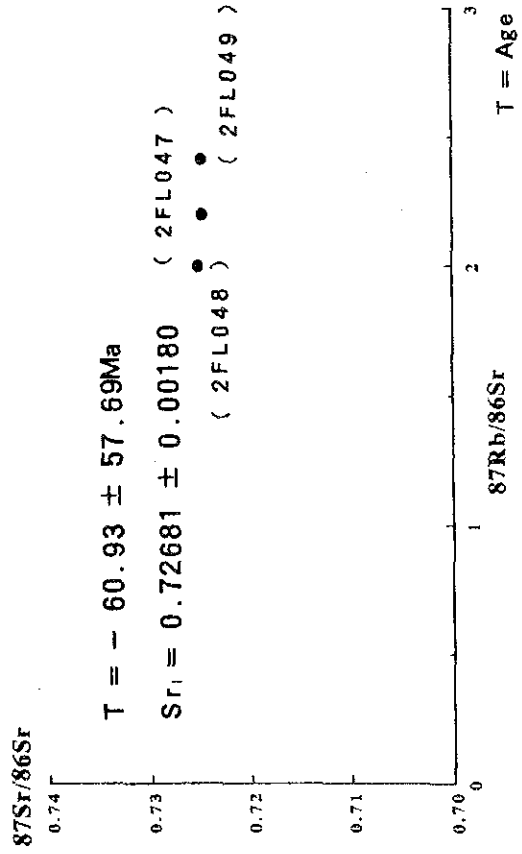
Cantidad: ○:Abundante ○:Medio △:Poco •:Escaso

資料 H 同位体年代測定 (R b - S r 法) 結果

Apéndice H RESULTADOS DE LOS ESTUDIOS DE LAS DATACIONES ISOTOPICA (LA RIOJA)

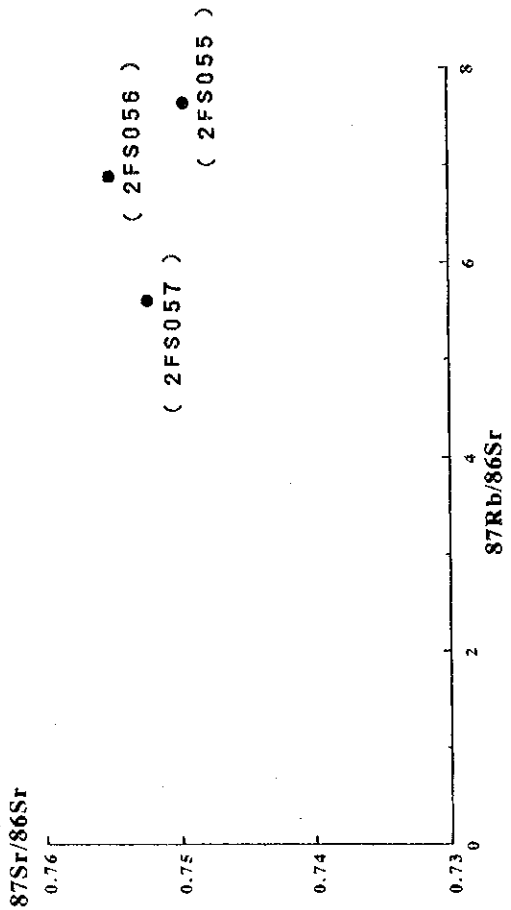
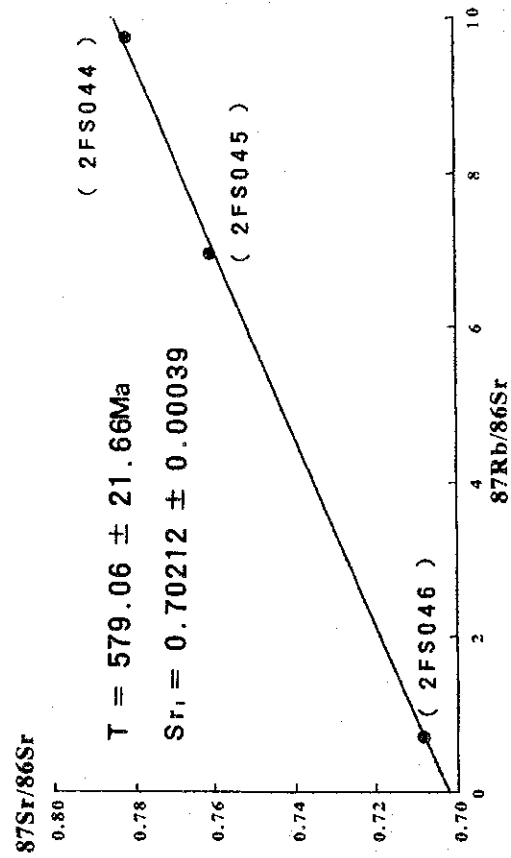
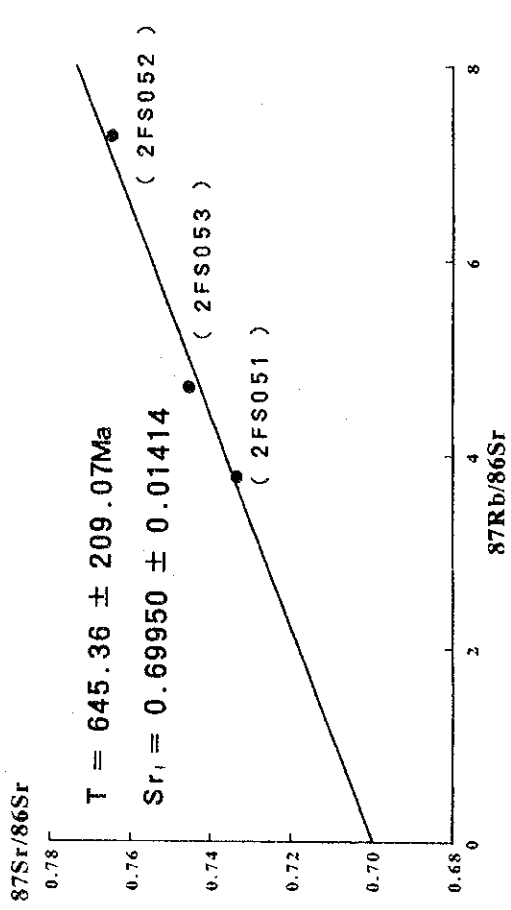
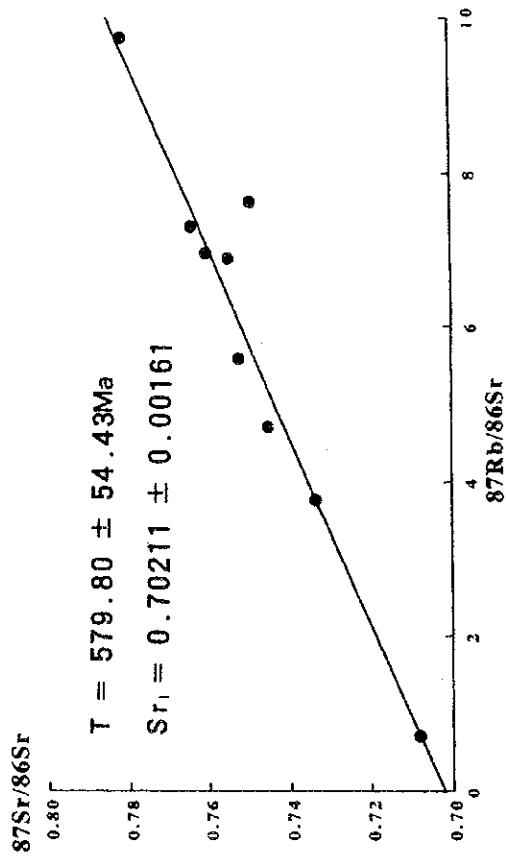


H-1



T = Age
 Sr₁ = Initial ratio of ⁸⁷Sr to ⁸⁶Sr

Apéndice H RESULTADOS DE LOS ESTUDIOS DE LAS DATACIONES ISOTOPICA (SALTA)



Analytical results of Rb and Sr concentrations, and $^{87}\text{Rb}/^{86}\text{Sr}$
and $^{87}\text{Sr}/^{86}\text{Sr}$ ratio (La Rioja)

Sample	Rb (ppm)	Sr (ppm)	$^{87}\text{Rb}/^{86}\text{Sr}$	$^{87}\text{Sr}/^{86}\text{Sr}$
2FL047	121	159	2.205	0.724812
2FL048	113	164	2.000	0.725086
2FL049	136	163	2.418	0.724802
2FL107	251	28	26.377	0.881677
2FL108	207	72	8.361	0.760939
2FL109	182	111	4.900	0.737439
2YL007	99	203	1.412	0.718404
2YL008	129	126	2.968	0.728556
2YL009	128	170	2.811	0.723775

Analytical results of Rb and Sr concentrations, and $^{87}\text{Rb}/^{86}\text{Sr}$
and $^{87}\text{Sr}/^{86}\text{Sr}$ ratio (Salta)

Sample	Rb (ppm)	Sr (ppm)	$^{87}\text{Rb}/^{86}\text{Sr}$	$^{87}\text{Sr}/^{86}\text{Sr}$
2FS044	224	67	9.742	0.781193
2FS045	215	90	6.947	0.760449
2FS046	125	506	0.715	0.708018
2FS051	153	118	3.761	0.733197
2FS052	243	97	7.288	0.764321
2FS053	191	118	4.700	0.745164
2FS055	155	59	7.632	0.749547
2FS056	185	96	5.600	0.752475
2FS057	175	74	6.874	0.755131

資料 I フィッシュントラック法年代測定結果

Apéndice I RESULTADOS DE LOS ESTUDIOS DE LAS DATACIONES
 POR TRAZAS FISION (SALTA)

Sample code	Ns t/cm ² (x10 ⁶)	Ni t/cm ² (x10 ⁶)	Φ n/cm ² (x10 ¹⁴)	Ns/Ni	T (Ma)	E (Ma)	N	η s	U (%) (ppm)
2FS048	2.43(7441)	3.50(10543)	3.74(4084)	0.72	10.0	0.2	32	87	468
2FS054	2.75(7286)	2.80(7367)	3.75(4084)	1.01	13.9	0.2	34	87	374

Ns : Total number of spontaneous fission tracks
 t/cm² : Density of spontaneous fission tracks
 Ni : Total number of induced fission tracks
 t/cm² : Density of induced fission tracks
 Φ : Total number of induced fission tracks on neutron fluence monitor
 n/cm² : Density of induced fission tracks on neutron fluence monitor
 Ns/Ni : Ratio of density of spontaneous fission tracks to density of
 induced fission tracks
 η s : Counting efficiency of spontaneous fission track
 U : Uranium content

RESULT OF FISSION TRACK DATING

SAMPLE CODE = 2FS048

[SAMPLE DATA]

SPECIMENS	Ns		Ni		AREA		U	AGE
	ns	Ns/cm ²	ni	Ni/cm ²	Z	cm ²	ppm	Ma.
1	127	2.18D+06	177	3.04D+06	56	5.83D-05	406	9.98
2	171	2.38D+06	274	3.82D+06	69	7.18D-05	510	8.63
3	651	4.01D+06	834	5.14D+06	156	16.23D-05	687	10.42
4	186	2.29D+06	264	3.25D+06	78	8.12D-05	435	9.77
5	219	2.15D+06	365	3.58D+06	98	10.20D-05	479	8.36
6	294	2.05D+06	406	2.83D+06	138	14.36D-05	378	10.12
7	302	2.87D+06	329	3.13D+06	101	10.51D-05	419	12.53
8	190	2.69D+06	251	3.55D+06	68	7.07D-05	474	10.38
9	108	2.31D+06	156	3.33D+06	45	4.68D-05	445	9.59
10	391	2.49D+06	415	2.64D+06	151	15.71D-05	353	12.99
11	316	2.34D+06	445	3.29D+06	130	13.53D-05	440	9.83
12	198	1.98D+06	288	2.88D+06	96	9.99D-05	385	9.63
13	123	1.36D+06	239	2.64D+06	87	9.05D-05	353	7.40
14	219	1.64D+06	320	2.40D+06	128	13.32D-05	321	9.71
15	249	2.78D+06	298	3.33D+06	86	8.95D-05	445	11.43
16	252	3.19D+06	276	3.49D+06	76	7.91D-05	467	12.38
17	187	2.30D+06	253	3.12D+06	78	8.12D-05	417	10.24
18	290	3.82D+06	471	6.20D+06	73	7.59D-05	829	8.24
19	92	1.34D+06	147	2.14D+06	66	6.87D-05	286	9.01
20	134	3.39D+06	168	4.25D+06	38	3.95D-05	568	10.77
21	524	3.90D+06	580	4.32D+06	129	13.42D-05	578	12.08
22	79	1.38D+06	128	2.24D+06	55	5.72D-05	299	8.87
23	202	2.26D+06	302	3.38D+06	86	8.95D-05	451	9.28
24	164	2.72D+06	228	3.78D+06	58	6.03D-05	505	9.86
25	230	2.99D+06	408	5.30D+06	74	7.70D-05	708	7.67
26	184	1.64D+06	294	2.62D+06	108	11.24D-05	350	8.88
27	172	2.54D+06	292	4.32D+06	65	6.76D-05	577	8.11
28	271	1.89D+06	381	2.65D+06	138	14.36D-05	355	10.00
29	271	1.86D+06	411	2.82D+06	140	14.57D-05	377	9.28
30	283	3.58D+06	496	6.27D+06	76	7.91D-05	839	7.67
31	162	1.69D+06	282	2.95D+06	92	9.57D-05	394	8.14
32	200	1.81D+06	365	3.31D+06	106	11.03D-05	442	7.72

=====
TOTAL 7441 2.43D+06 10543 3.50D+06 2945 30.64D-04 468 9.75

PHAI = 3.74D+14 (NEUTRONS/cm²)

Ns/Ni = 0.71 0.72 0.72 0.78

B = -26.03

R = 0.935

ANISOTROPY = 87 (%)

URANIUM CONTENT = 468 ppm

NUMBER OR GRAIN = 32

T = 9.74 10.00 9.91 10.84 (Ma.)

SIGMA = 0.18 0.18 0.18 0.19

ERROR RANGE = 0.15 0.16 0.16 0.17 (+, - Ma.)

T : Measured age corresponding to respective Ns/Ni value
SIGMA : Standard deviation
ERROR RANGE : Error range of measured age obtained from track number

RESULT OF FISSION TRACK DATING

SAMPLE CODE = 2FS054

[SAMPLE DATA]

SPECIMENS	Ns		Ni		AREA		U	AGE
	ns	Ns/cm ²	ni	Ni/cm ²	Z	cm ²	ppm	Ma.
1	199	3.04D+06	161	2.46D+06	63	6.55D-05	328	16.84
2	154	2.39D+06	272	4.22D+06	62	6.45D-05	563	7.84
3	112	1.74D+06	150	2.33D+06	62	6.45D-05	310	10.57
4	234	2.27D+06	248	2.41D+06	99	10.30D-05	321	13.11
5	200	2.32D+06	232	2.69D+06	83	8.64D-05	359	11.96
6	184	2.39D+06	202	2.62D+06	74	7.70D-05	350	12.61
7	143	3.12D+06	131	2.86D+06	44	4.58D-05	382	14.84
8	229	1.97D+06	253	2.17D+06	112	11.65D-05	290	12.71
9	191	2.78D+06	229	3.33D+06	66	6.87D-05	445	11.43
10	242	3.14D+06	236	3.07D+06	74	7.70D-05	409	13.94
11	204	2.39D+06	185	2.17D+06	82	8.53D-05	289	15.27
12	148	2.50D+06	156	2.63D+06	57	5.93D-05	351	13.10
13	280	1.90D+06	282	1.91D+06	142	14.77D-05	255	13.97
14	251	2.21D+06	245	2.16D+06	109	11.34D-05	288	14.26
15	161	2.92D+06	140	2.54D+06	53	5.51D-05	339	15.71
16	304	2.98D+06	287	2.81D+06	98	10.20D-05	376	14.45
17	92	2.27D+06	91	2.24D+06	39	4.06D-05	299	14.05
18	256	3.28D+06	332	4.25D+06	75	7.80D-05	568	10.45
19	174	2.79D+06	217	3.48D+06	60	6.24D-05	464	10.99
20	316	4.34D+06	220	3.02D+06	70	7.28D-05	403	19.10
21	327	3.70D+06	271	3.06D+06	85	8.84D-05	409	16.22
22	106	1.89D+06	118	2.10D+06	54	5.62D-05	280	12.65
23	210	2.62D+06	201	2.51D+06	77	8.01D-05	335	14.38
24	363	5.54D+06	329	5.02D+06	63	6.55D-05	670	14.44
25	179	3.02D+06	213	3.59D+06	57	5.93D-05	479	11.45
26	349	2.54D+06	310	2.26D+06	132	13.73D-05	301	15.53
27	174	1.86D+06	183	1.95D+06	90	9.36D-05	261	13.40
28	75	2.77D+06	100	3.70D+06	26	2.71D-05	493	10.28
29	146	1.24D+06	234	1.99D+06	113	11.76D-05	266	9.05
30	292	3.23D+06	296	3.27D+06	87	9.05D-05	436	13.38
31	432	3.52D+06	354	2.88D+06	118	12.28D-05	385	16.46
32	213	2.25D+06	210	2.22D+06	91	9.47D-05	296	14.11
33	192	3.03D+06	146	2.30D+06	61	6.35D-05	307	17.92
34	154	3.44D+06	133	2.97D+06	43	4.47D-05	397	15.64
=====								
TOTAL	7286	2.75D+06	7367	2.80D+06	2621	27.27D-04	374	13.59

PHAI = 3.75D+14 (NEUTRONS/cm²)

Ns/Ni = 0.99 1.01 0.99 1.00

B = -3.24

R = 0.847

ANISOTROPY = 87 (%)

URANIUM CONTENT = 374 ppm

NUMBER OR GRAIN = 34

T = 13.58 13.86 13.61 13.80(Ma.)

SIGMA = 0.20 0.20 0.20 0.20

ERROR RANGE = 0.23 0.24 0.23 0.24(+, - Ma.)

T : Measured age corresponding to respective Ns/Ni value
 SIGMA : Standard deviation
 ERROR RANGE : Error range of measured age obtained from track number

資料 J E P M A 試 驗 結 果

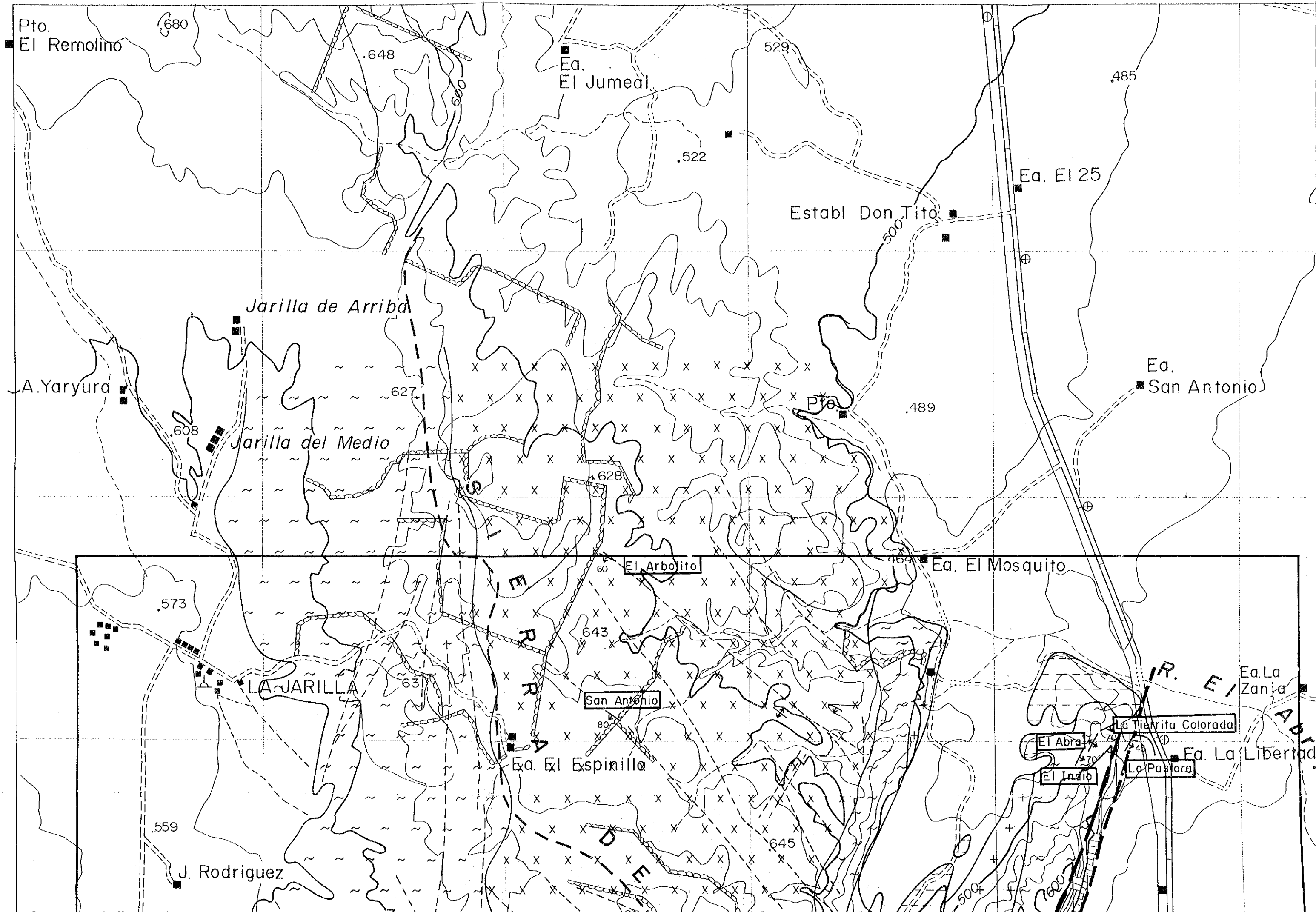
Apéndice J RESULTADOS DE LOS ESTUDIOS DEL E.P.M.A

No. de muestra (Mineral) Elemento (wt%) \ Ubicacion	2FL002 (Electrum) El Arbolito	2FL002 (Electrum) El Arbolito	2FL002 (Cobre nativo) El Arbolito	2FL116 (Goethita) La Florida	2FL121 (Electrum) La Pirca	2FL121 (Electrum) La Pirca	2FL121 (Bi-mineral) La Pirca	2FL121 (Bi-Cu-oro) La Pirca	2FL121 (Calcopirita) La Pirca	2ML063 (Goethita) Callana VI
Au	76.4273	75.9217	0.258		64.1181	86.3031	1.338	96.987		
Ag	23.5727	24.0783			35.8819	13.6969	0.234	0.536	0.009	
Fe			4.382	95.748			0.236	0.059	30.823	99.263
S			0.095	1.036			0.053		34.370	
As				0.052			0.086		0.038	0.332
Sb			0.552							0.401
Pb				3.164						0.004
Sn									0.022	
Cu			92.517				11.254	0.744	34.550	
Te			0.012				0.545	0.006		
Bi			1.578				85.965	1.546	0.098	
Ni			0.030					0.031		
Zn								0.021		
Se								0.004	0.013	
Cd			0.534				0.122	0.067	0.052	
Mn			0.042				0.038			
Co									0.014	
Total	100	100	100	100	100	100	100.001	100.001	99.999	100

(SALTA)

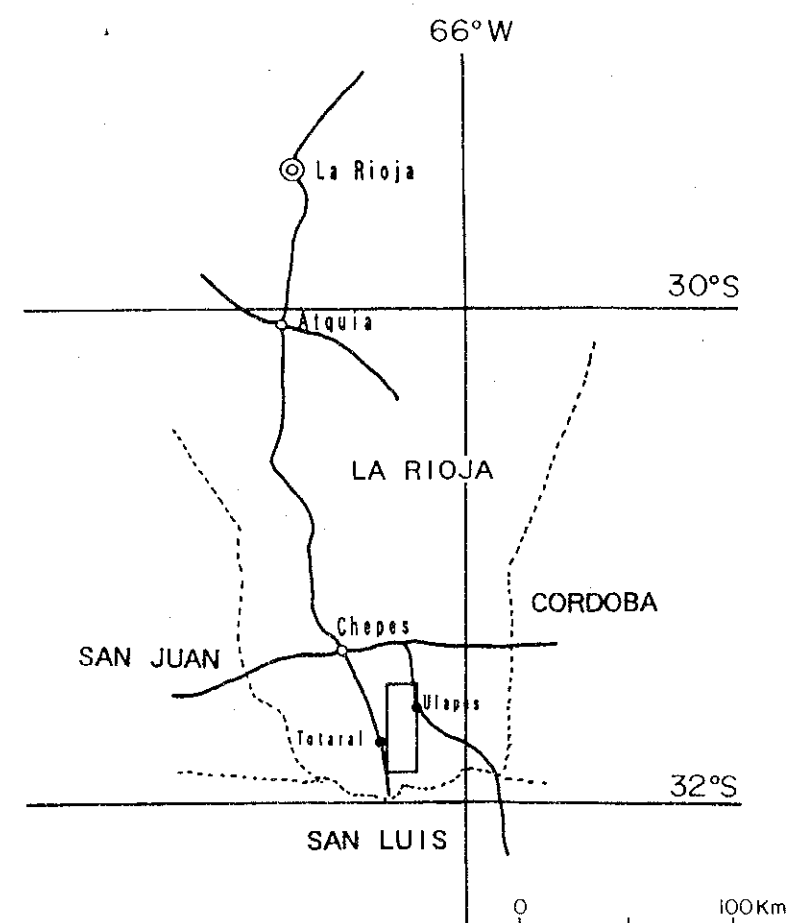
Apéndice J RESULTADIS DE LOS ESTUDIOS DEL E. P. M. A

Elemento (wt%)	2NS003 (Antimonita)		2NS022 (Antimonita)		2NS022 (Berthierita)		2NS124 (Argentita)		2NS124 (Cerusita)		2NS124 (Sb-tetraedrita)		2NS167 (Sb-tetraedrita)		2NS167 (Galena)	
	No. de muestra (Mineral)	Ubicacion	Incachule	Incachule	Incachule	Incachule	La Poma	La Poma	La Poma	La Poma	La Concordia	La Concordia	La Concordia	La Concordia	La Concordia	La Concordia
Ag			0.041				85.037									
Pb			0.161		0.120		0.107		99.720					2.236		0.100
Zn																
Cu									0.034					6.040		5.836
Sb			70.361		70.132		55.874							37.445		37.850
As			1.407		1.223		1.300		14.963					25.132		23.630
Fe			0.001		0.014		12.805		0.024					2.607		3.535
Te									0.133					1.310		1.518
Mn									0.010							
S			28.029		28.490		29.914							25.229		25.423
Co									0.037							
Cd									0.042							
Total			100		99.999		100		100					99.999		100
																12.405



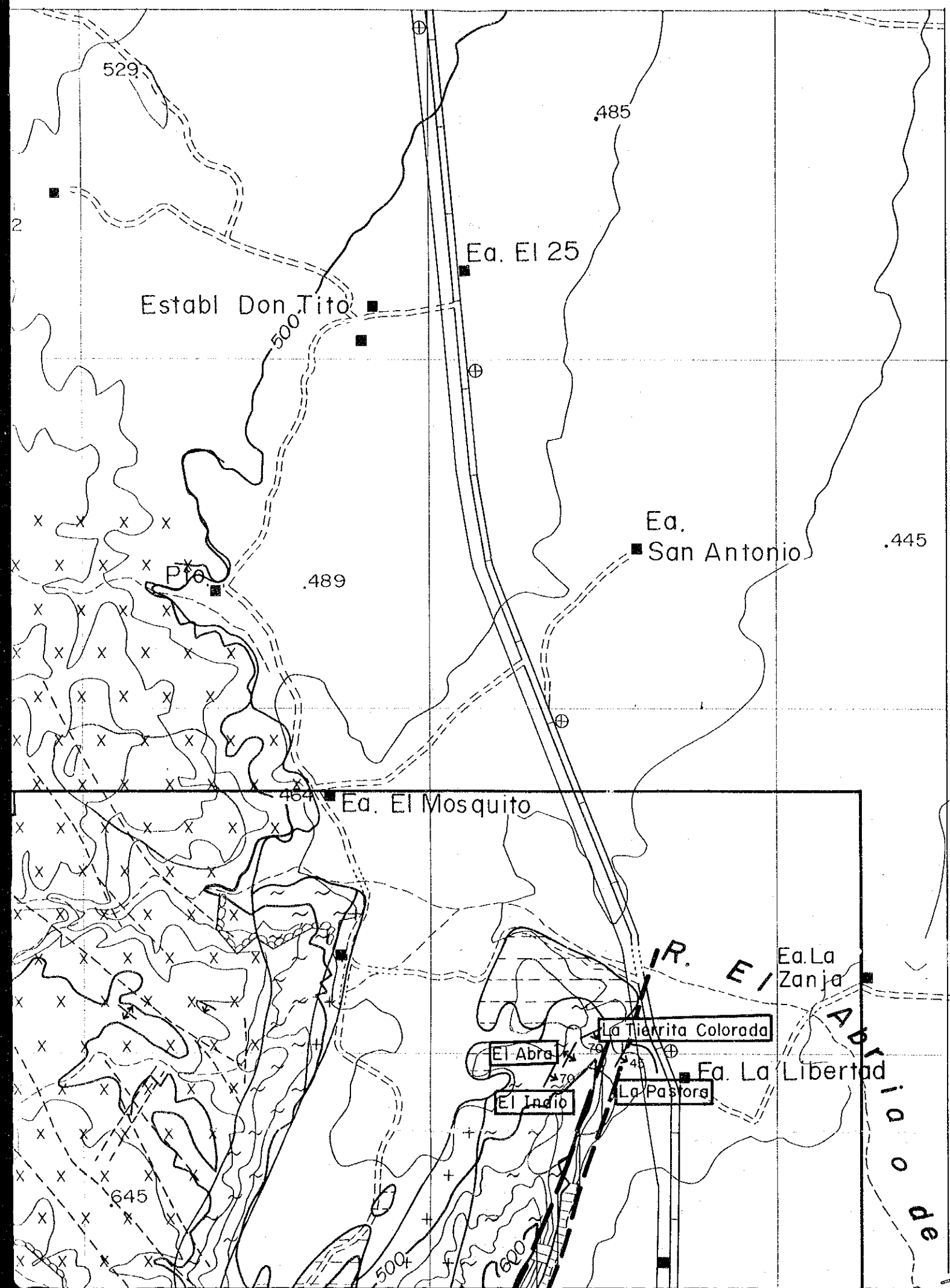
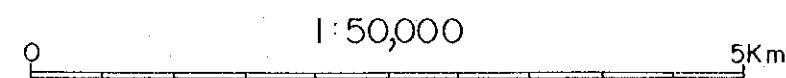
LA EXPLORACION DE MINERALES
EN
EL AREA OEST DE LA REPUBLICA ARGENTINA
(FASE I)

CARTA GEOLOGICA
(LA RIOJA)



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

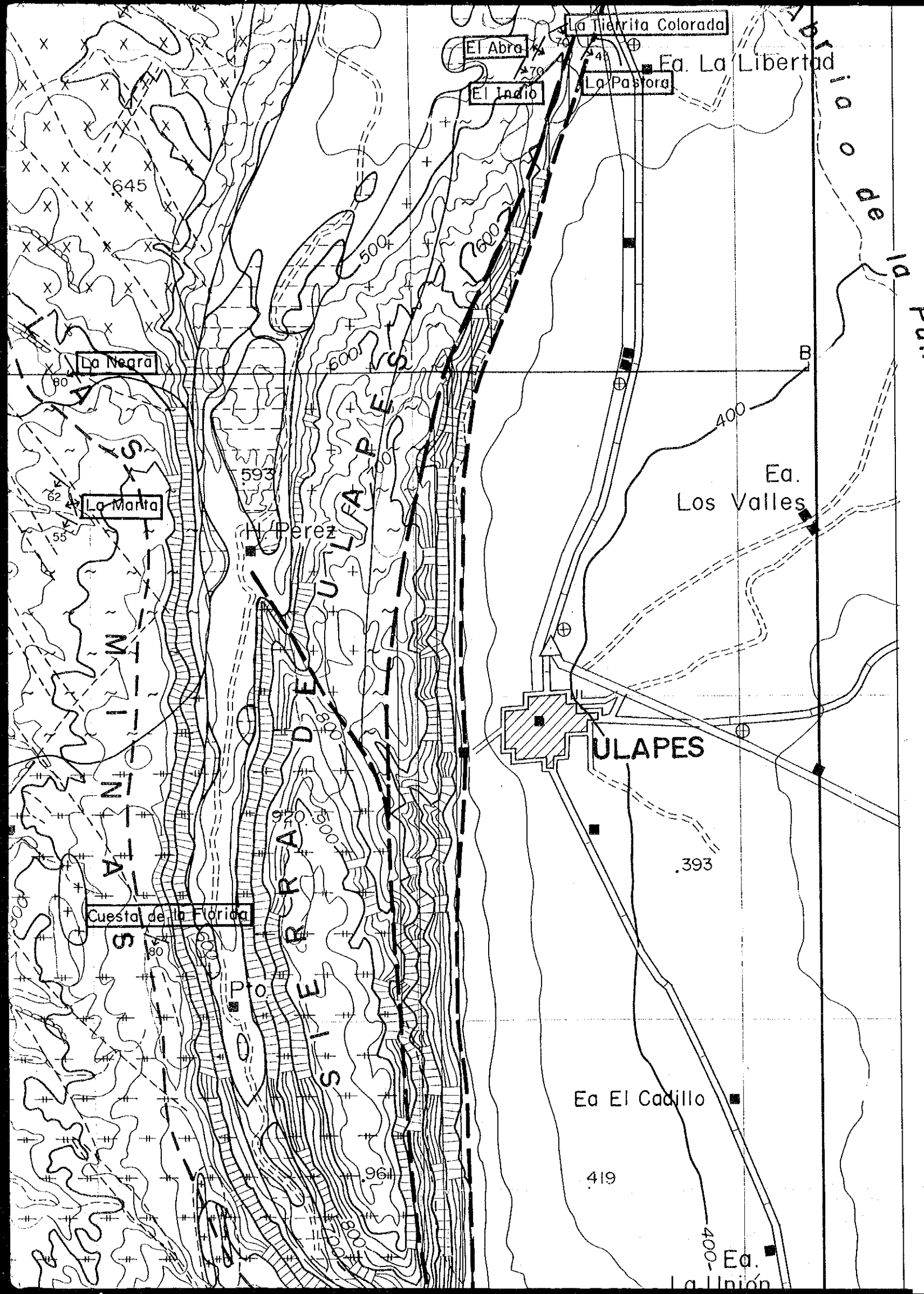
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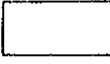
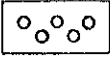
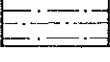
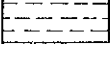

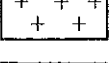
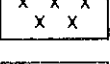
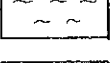
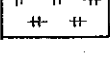



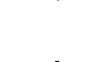



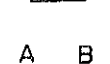

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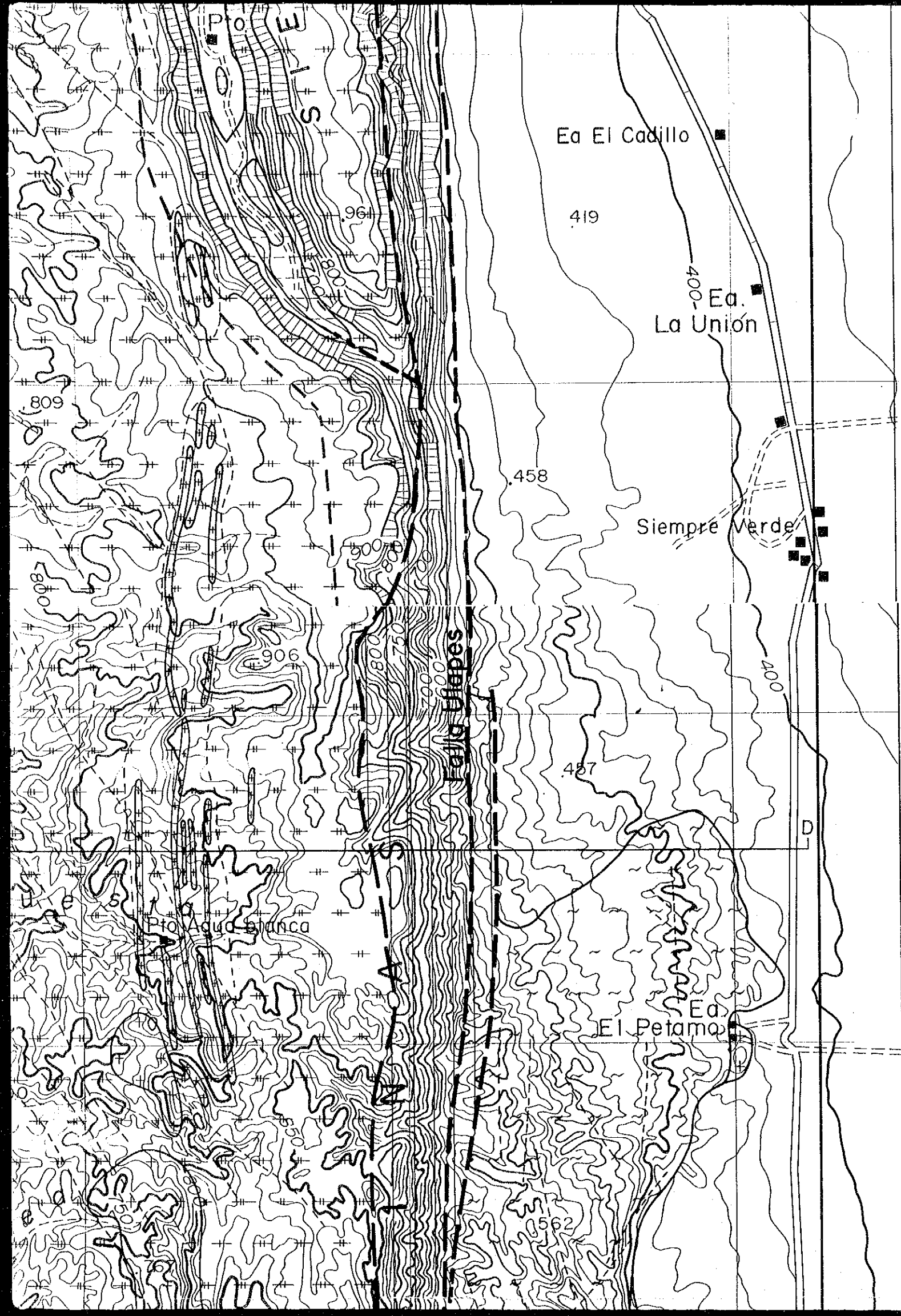
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
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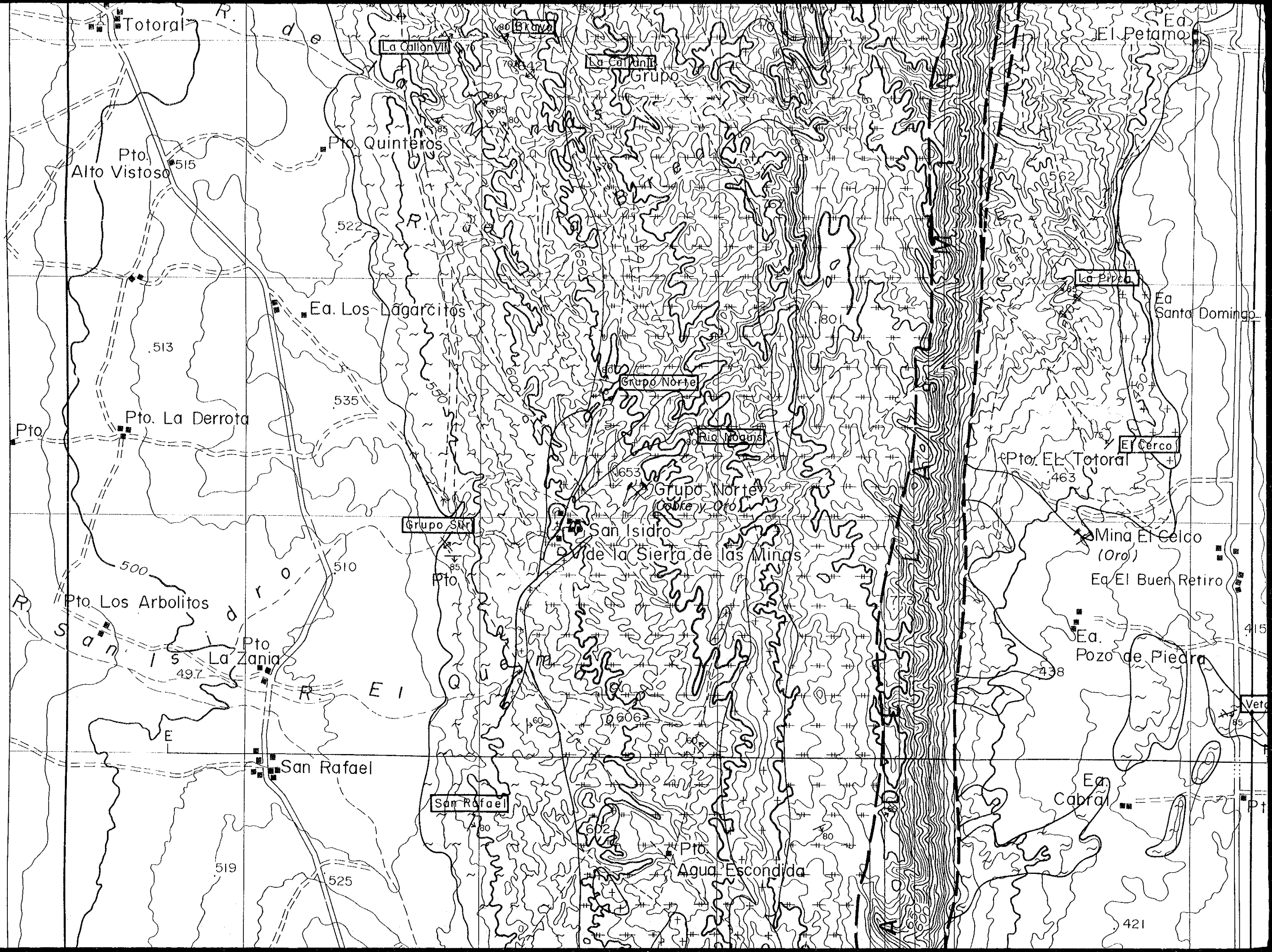


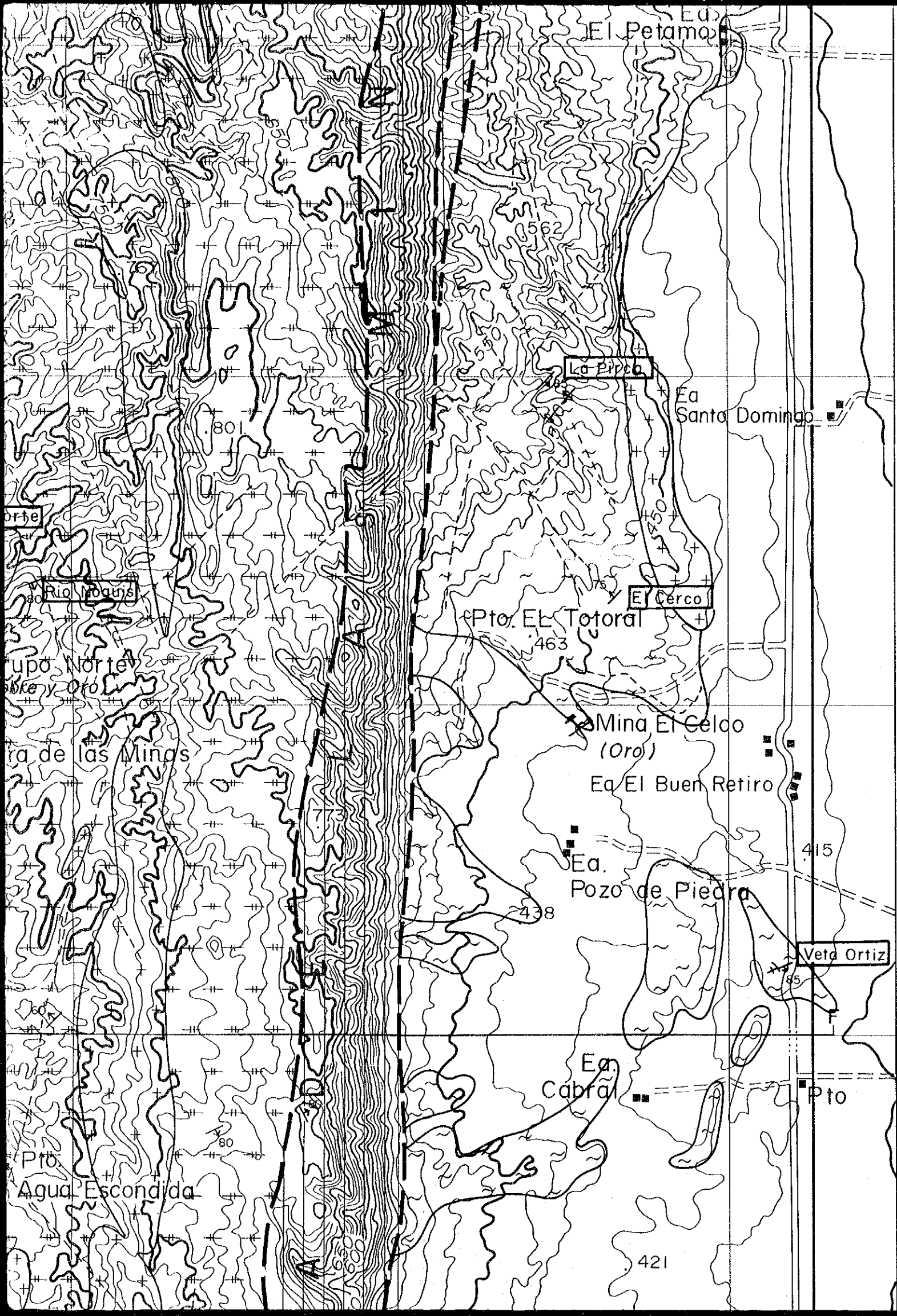
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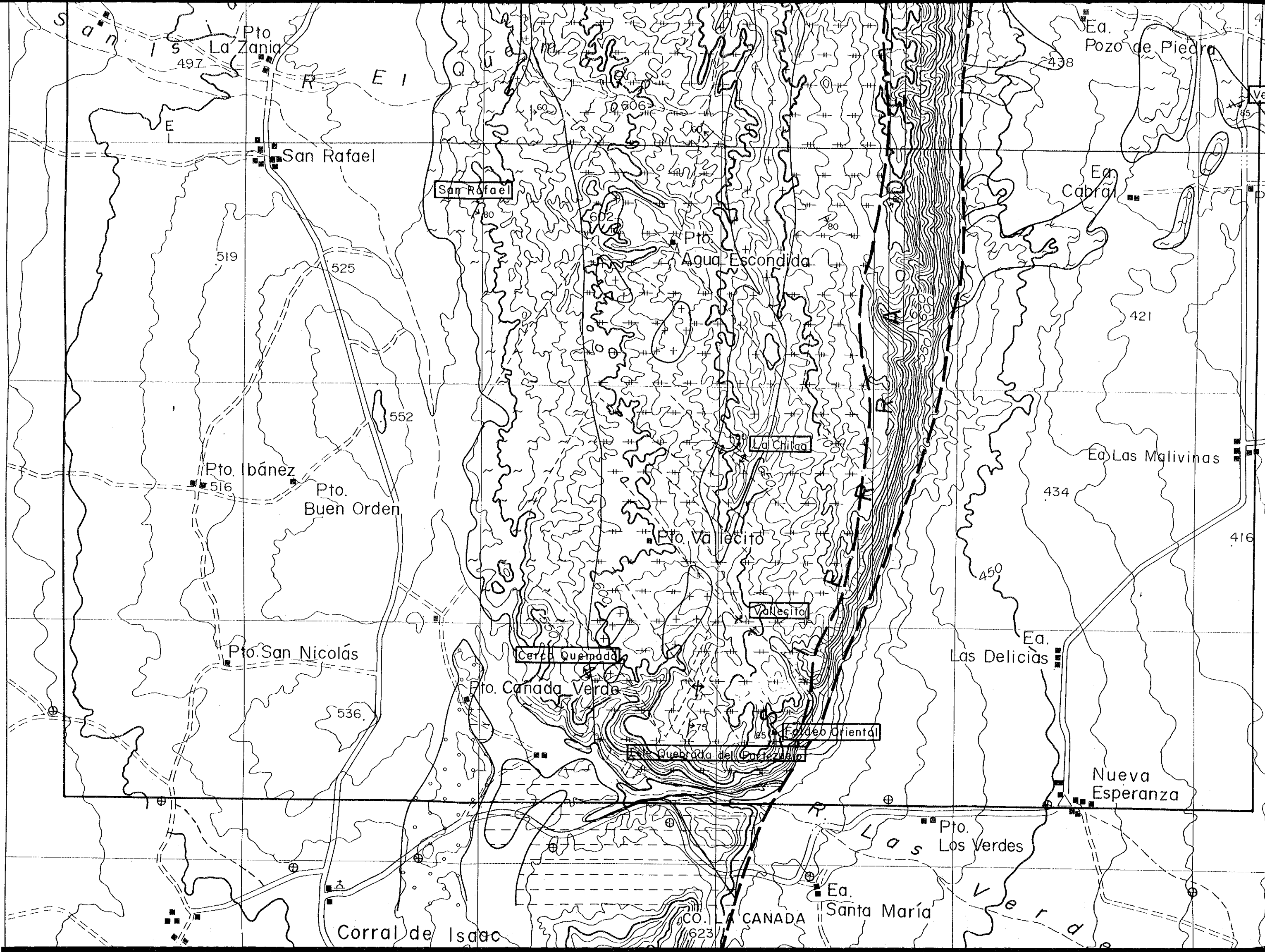
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	Conglomerados y Areniscas Rojizas	Formación La Colina	Pérmico	
	Conglomerados, Lutitas y Areniscas Grisáceas	Formación Malanzán	Carbónico	PALEOZOICO
	Migmatitas Graníticas y Esquistos Lit-part-lit	Migmatitas Ulapes		PALEOZ. inf. a PRECAMBRICO
	Granitos Leucocráticos	Granito Asperezas		
	Fracies Porfiroblástica	Formación Chepes (Tonalitas y Granodioritas)		
	Fracies Migmatítica			
	Fracies Normal			
	Contacto Neto			
	Contacto Transicional			
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	Rumbo e Inclinación de la Foliación			
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	Lineamiento			
	Veta			
	Manifestación			
	Perfil			

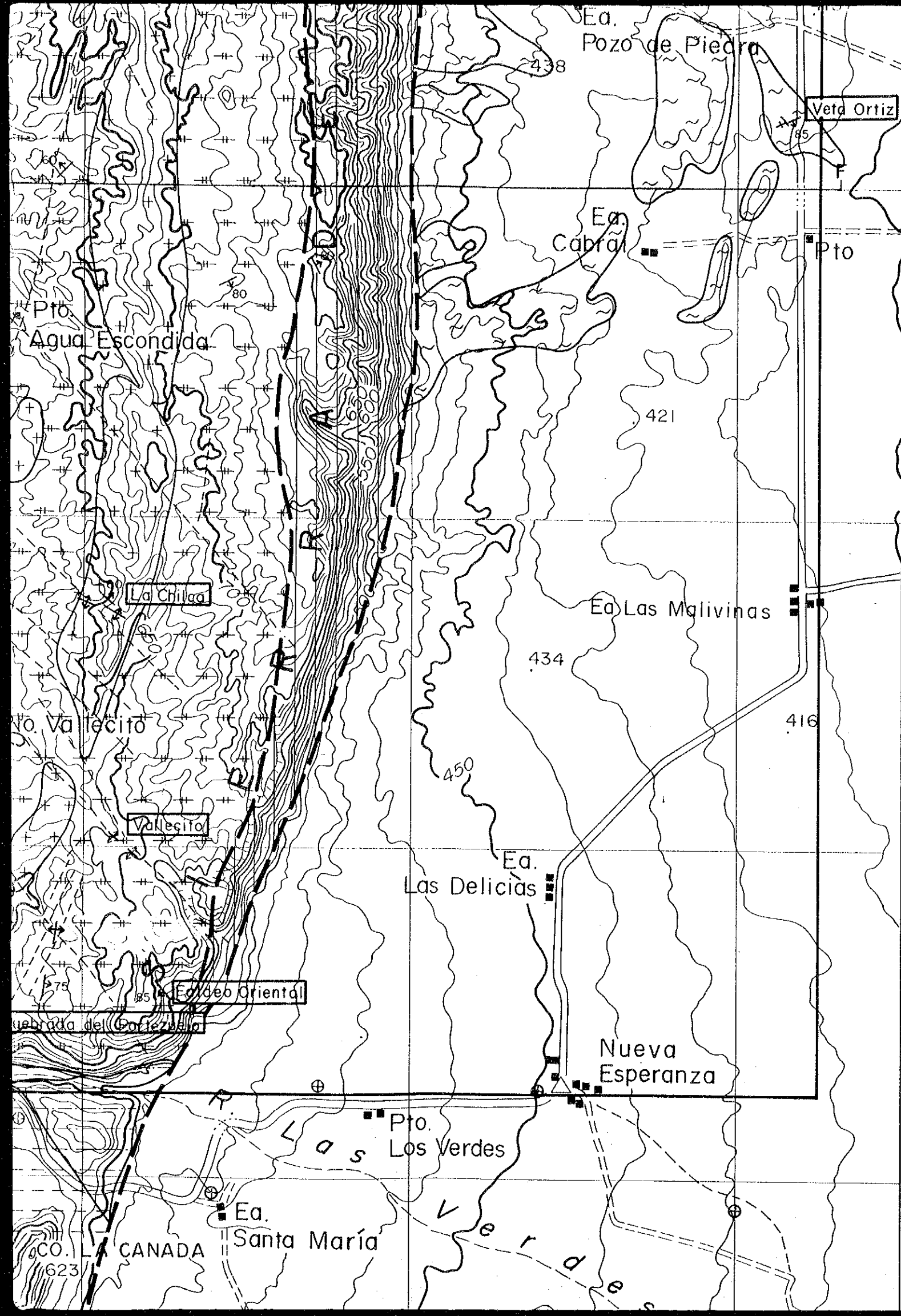


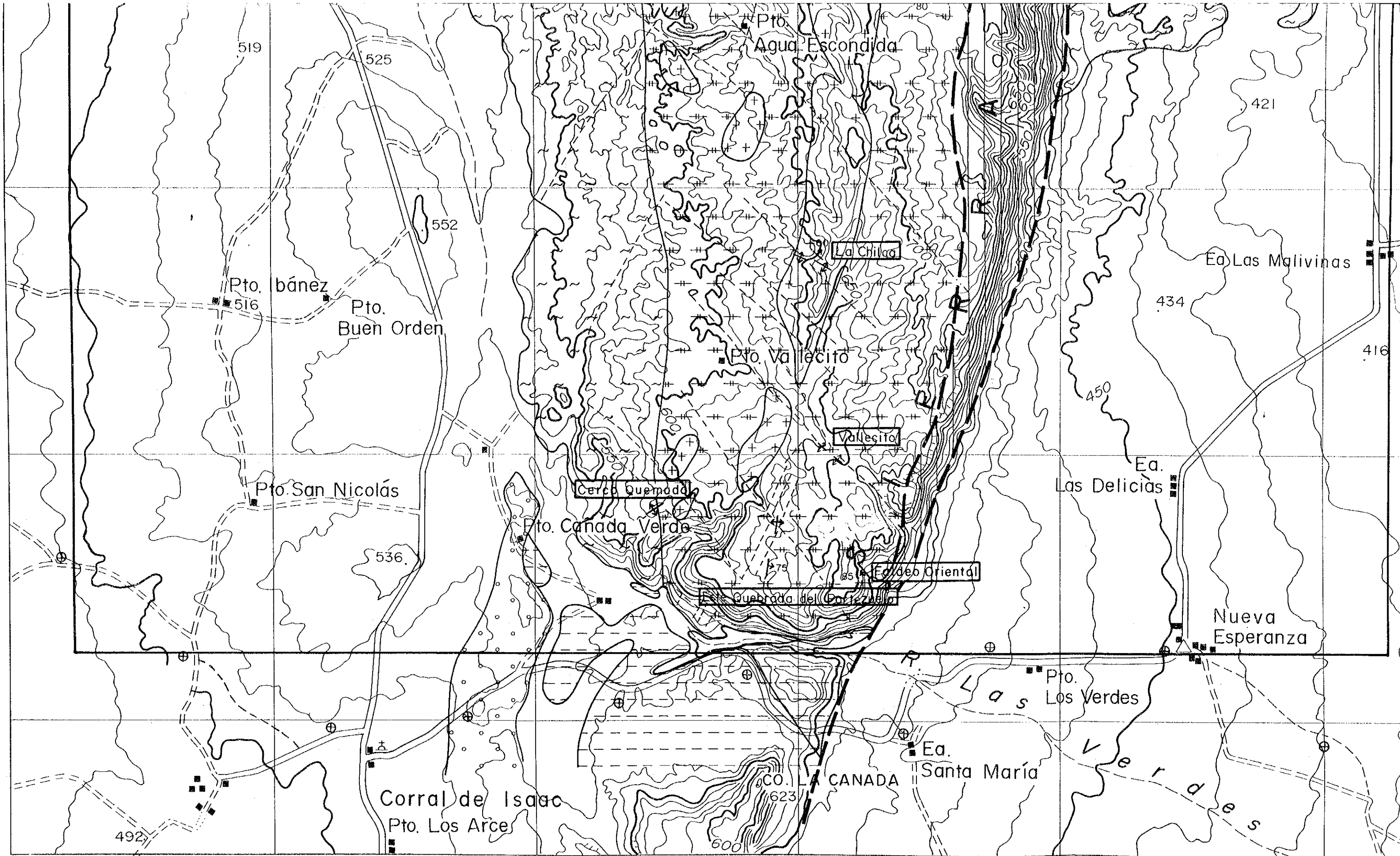
-  Veta
-  Manifestación
-  Perfil

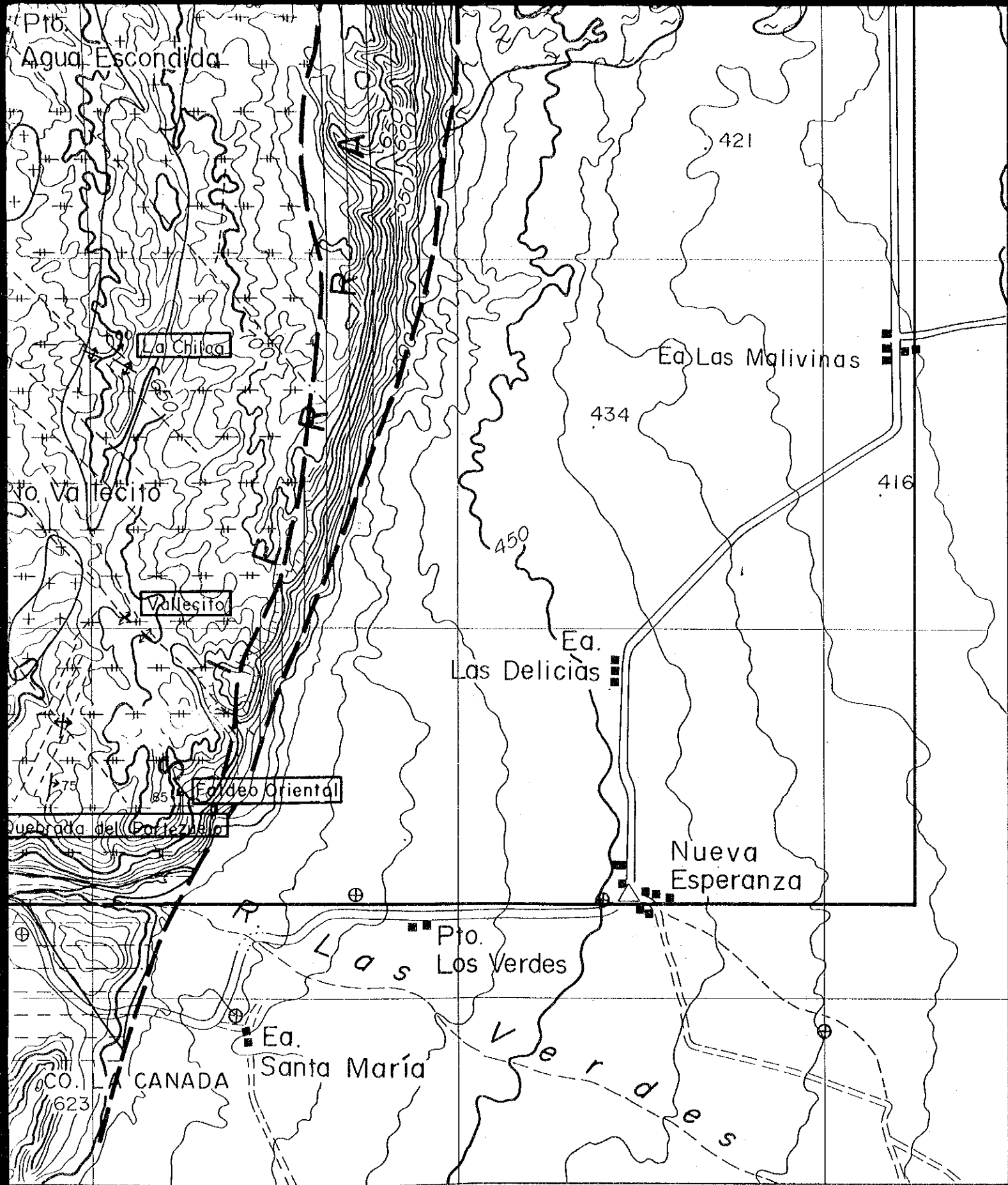


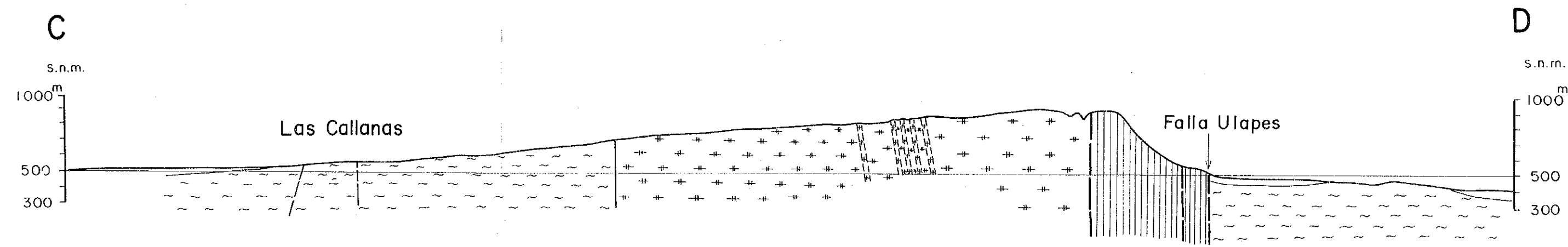
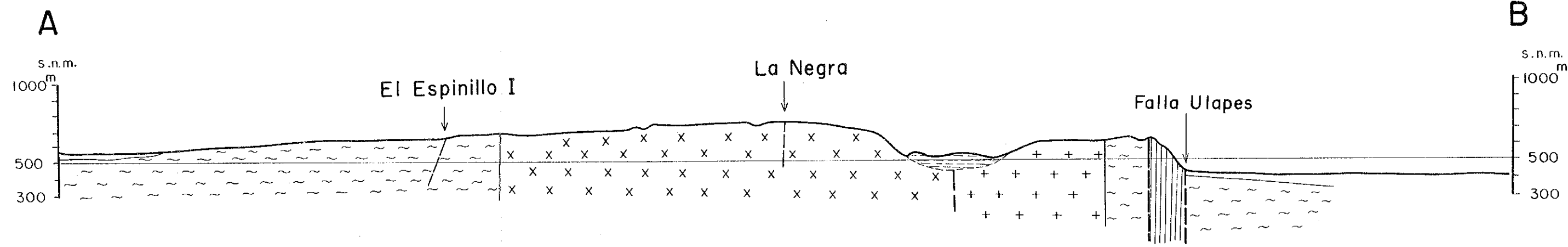










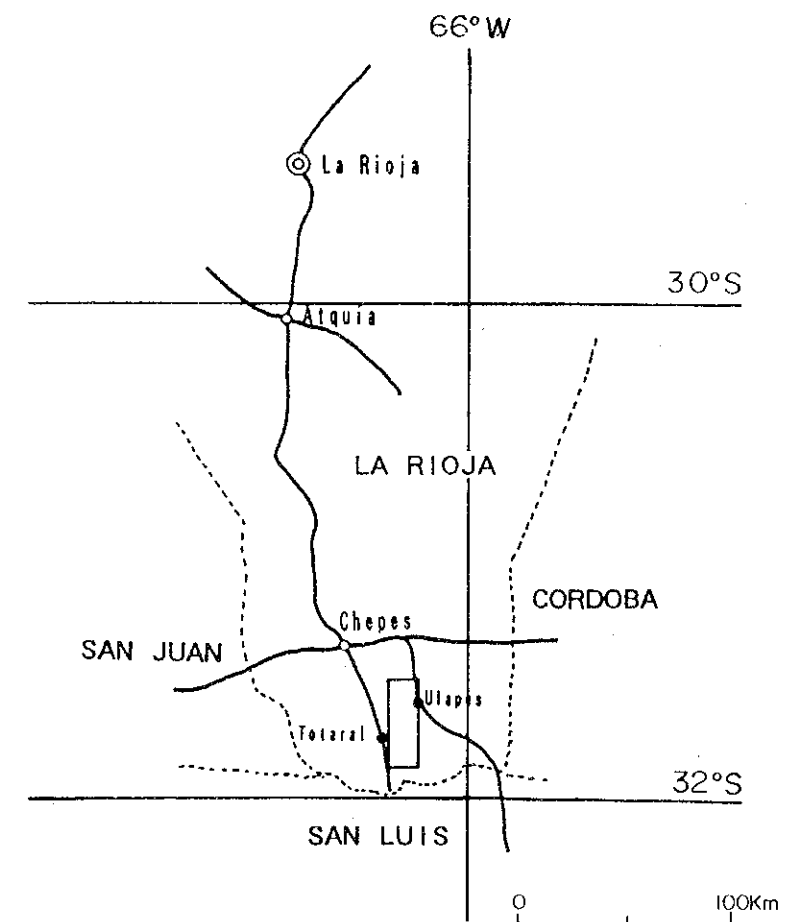
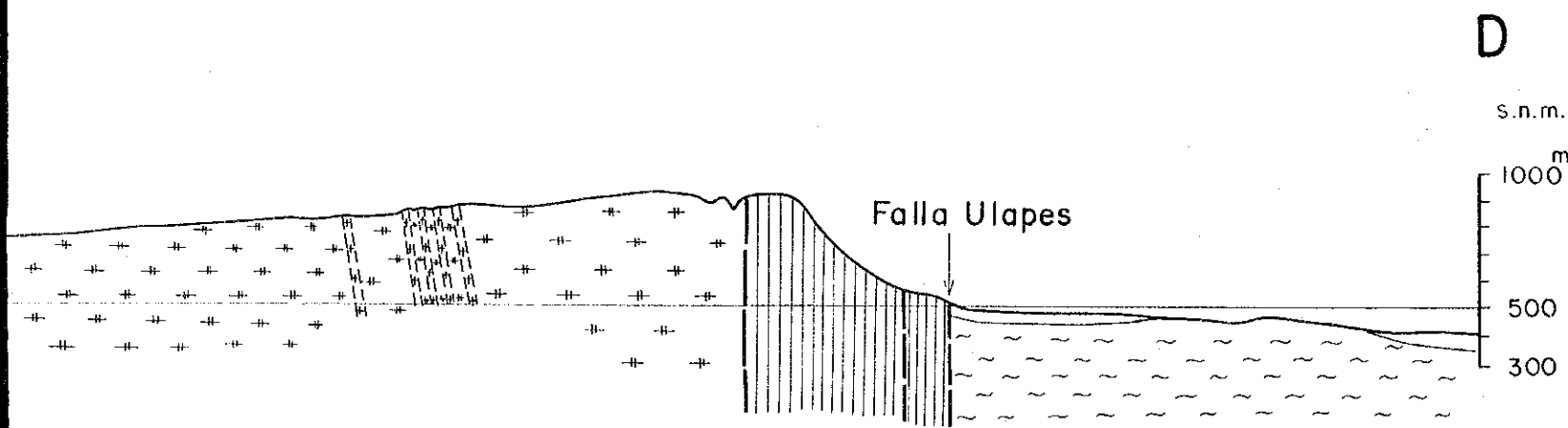
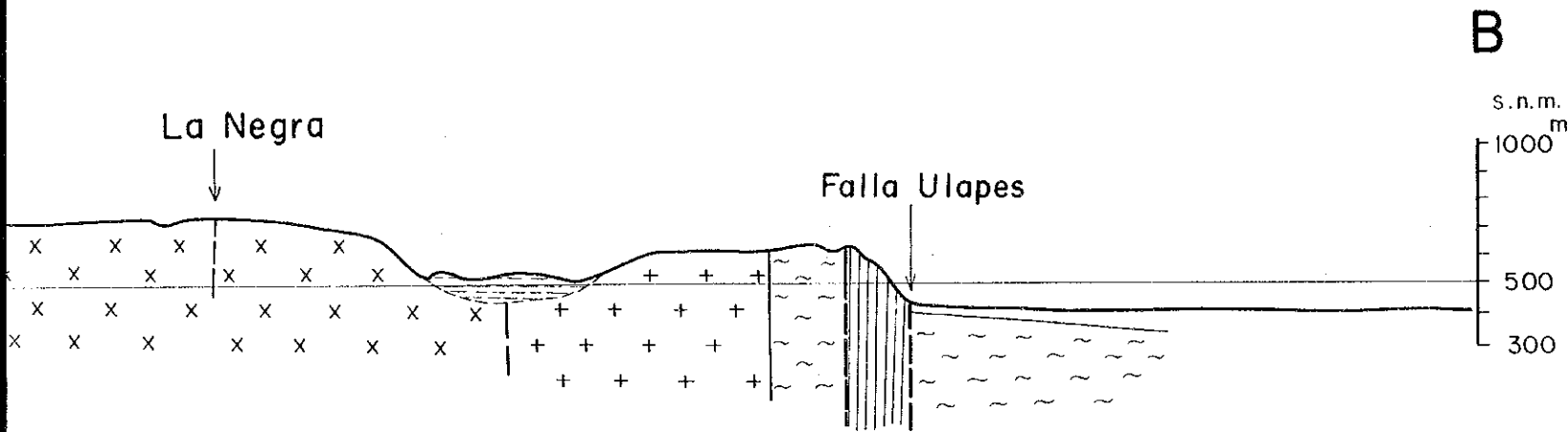


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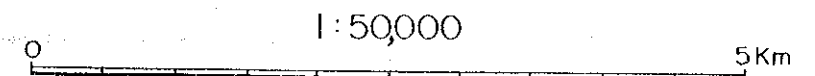
LA EXPLORACION DE MINERALES
EN
EL AREA OEST DE LA REPUBLICA ARGENTINA
(FASE I)

PERFIL GEOLOGICO (O-E)
(LA RIOJA)

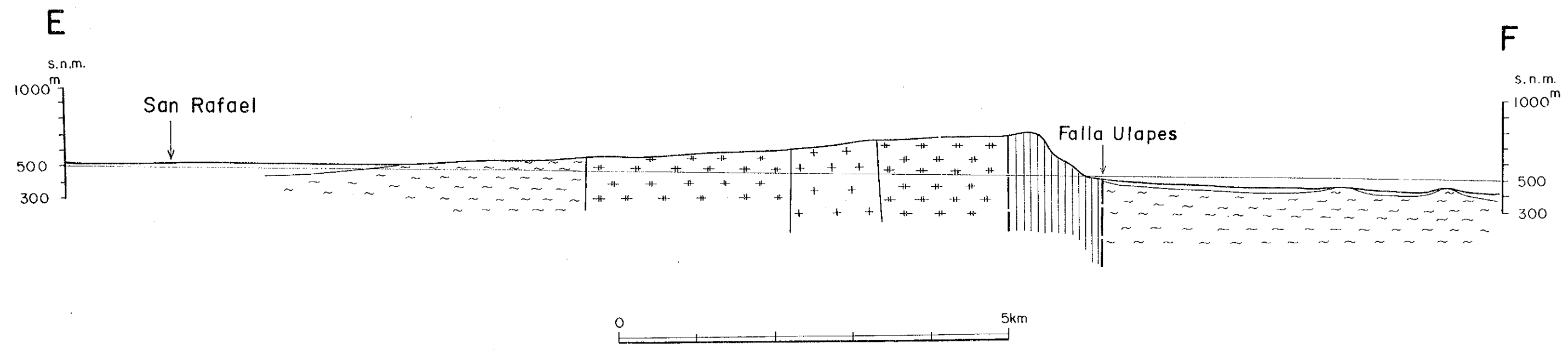


JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

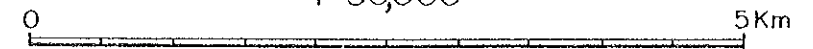
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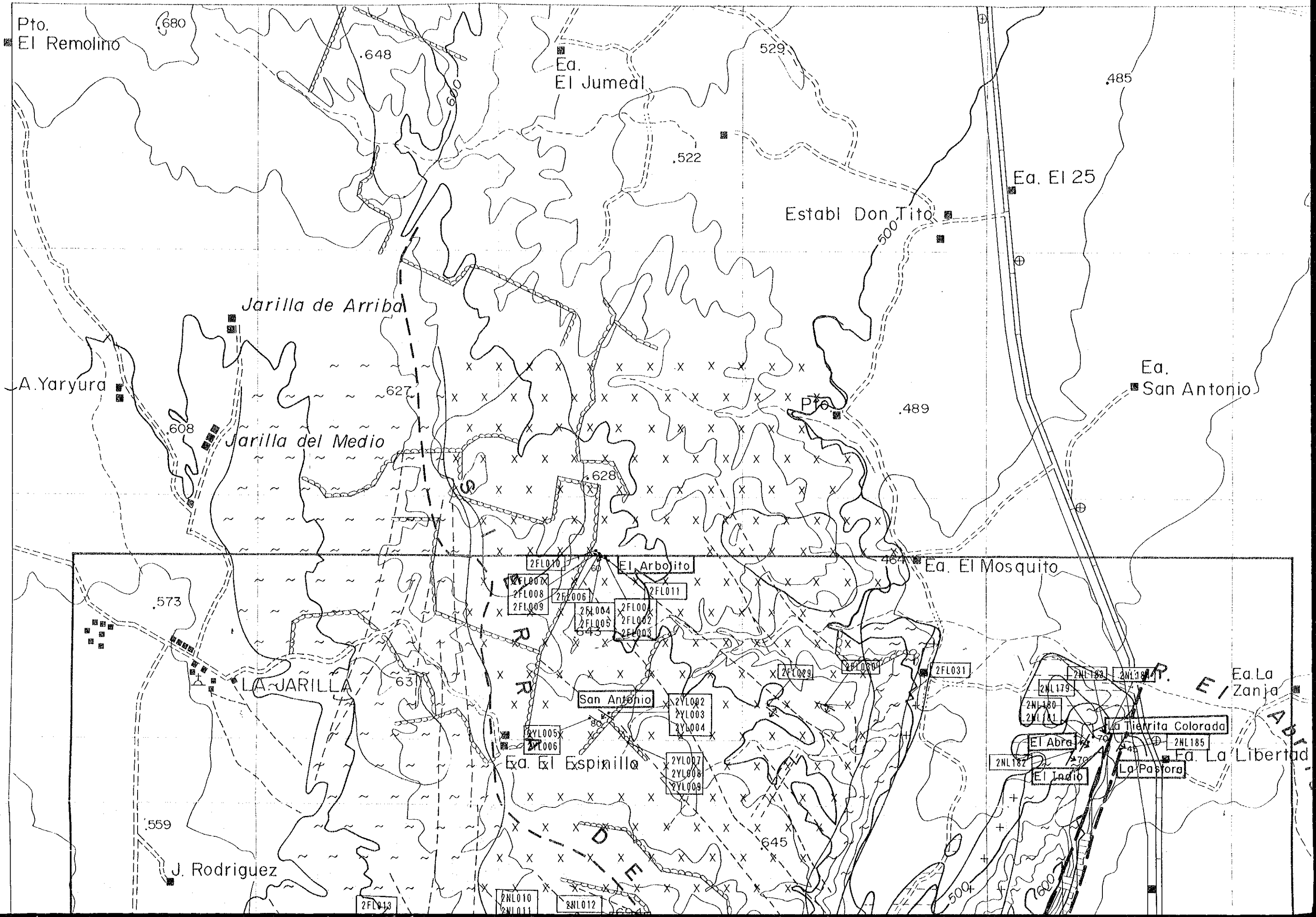
s. n. m.
1000^m
500
300

Falla Ulapes

5km

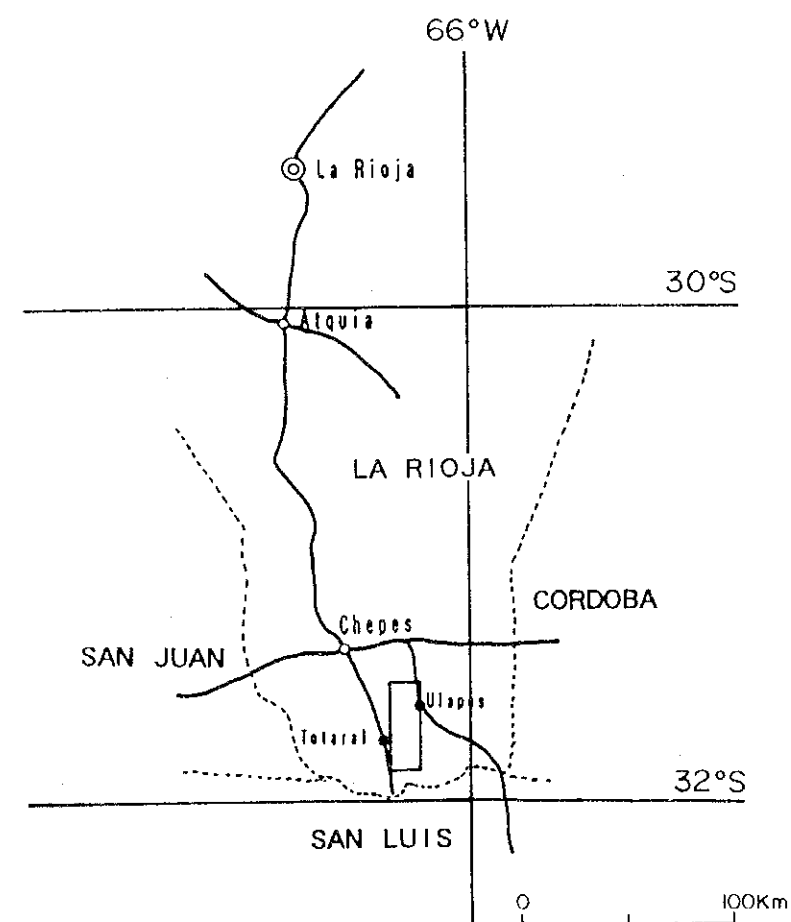
REFERENCIAS

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	Conglomerados y Areniscas Rojizas] Formación La Colina] Pérmico] PALEOZOICO
	Conglomerados, Lutitas y Areniscas Grisáceas] Formación Malanzán] Carbónico	
	Migmatitas Graníticas y Esquistos Lit-part-lit] Migmatitas Ulapes] PALEOZ. inf. a PRECAMBRICO
	Granitos Leucocráticos] Granito Asperezas		
	Fracies Porfiroblástica] Formación Chepes (Tonalitas y Granodioritas)		
	Fracies Normal			
	Contacto Neto			
	Contacto Transicional			
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	Rumbo e Inclinación de la Foliación			
	Foliación Vertical			
	Lineamiento			
	Veta			
	Manifestación			
	A B	Perfil		



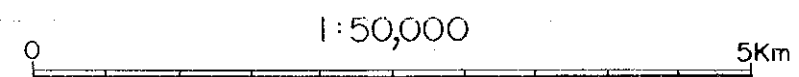
LA EXPLORACION DE MINERALES
EN
EL AREA OEST DE LA REPUBLICA ARGENTINA
(FASE I)

UBICACION DE LAS MUESTRAS
(LA RIOJA)

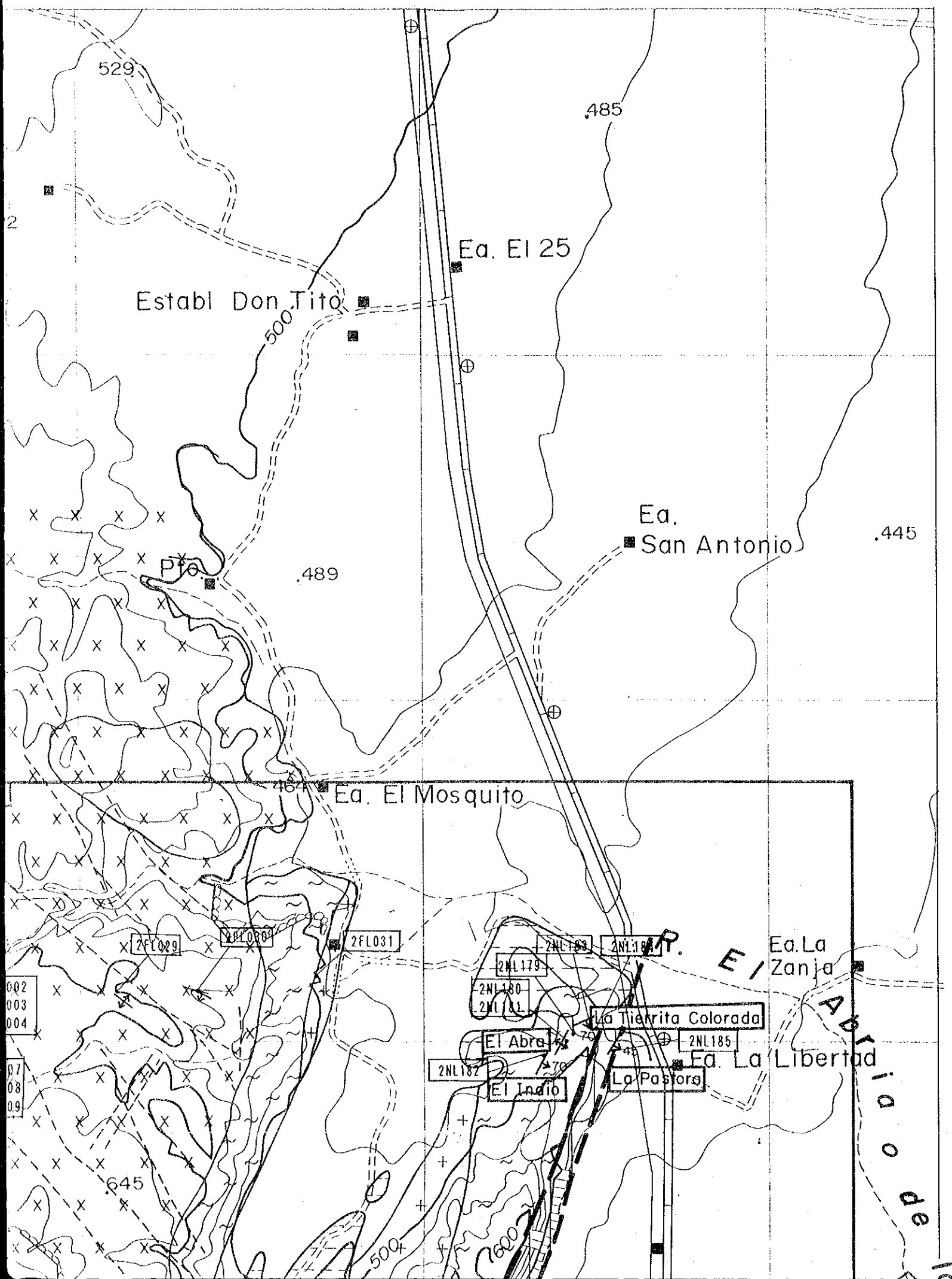


JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN

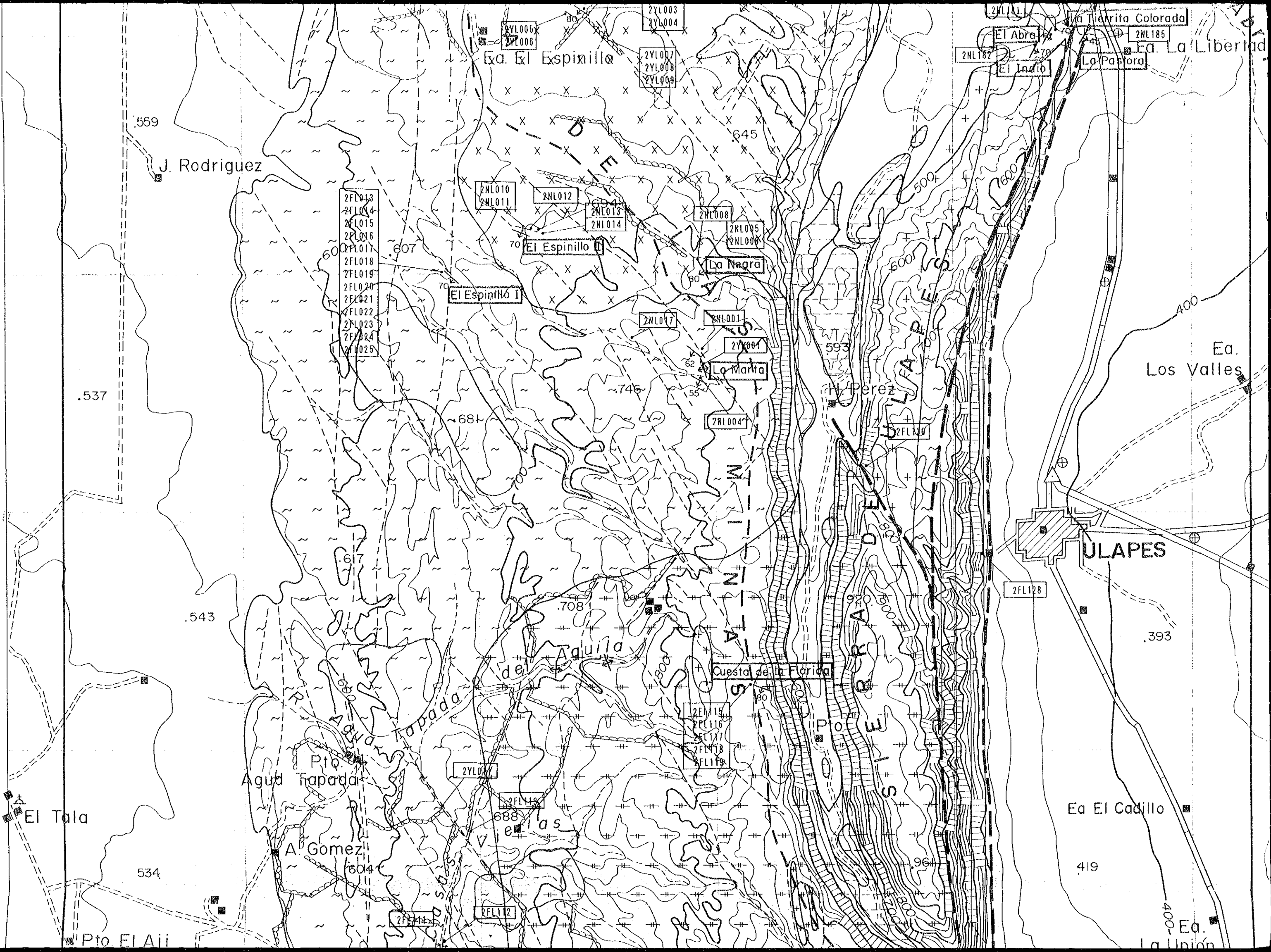
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REFERENCIAS



Arenas Limos.



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J. Rodriguez

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- 2FL014
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- 2FL017
- 2FL018
- 2FL019
- 2FL020
- 2FL021
- 2FL022
- 2FL023
- 2FL024
- 2FL025

2YL005
2YL006

2YL003
2YL004

2YL007
2YL008
2YL009

Exa. El Espinillo

2NL010
2NL011

2NL012

2NL013
2NL014

El Espinillo II

El Espinillo I

2NL008

2NL005
2NL006

La Negra

2NL007

2NL001

2YL004

La Marta

2NL004

.537

.543

.708

del Aguila

Cuesta de la Florida

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2FL116
2FL117
2FL118
2FL119

2YL002

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Las Viejas

2FL112

2NL181
El Abra

2NL182
El Indio

La Tierrita Colorada

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ULAPES

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Ea El Cadillo

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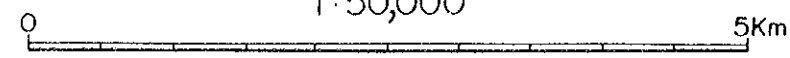
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A Gomez

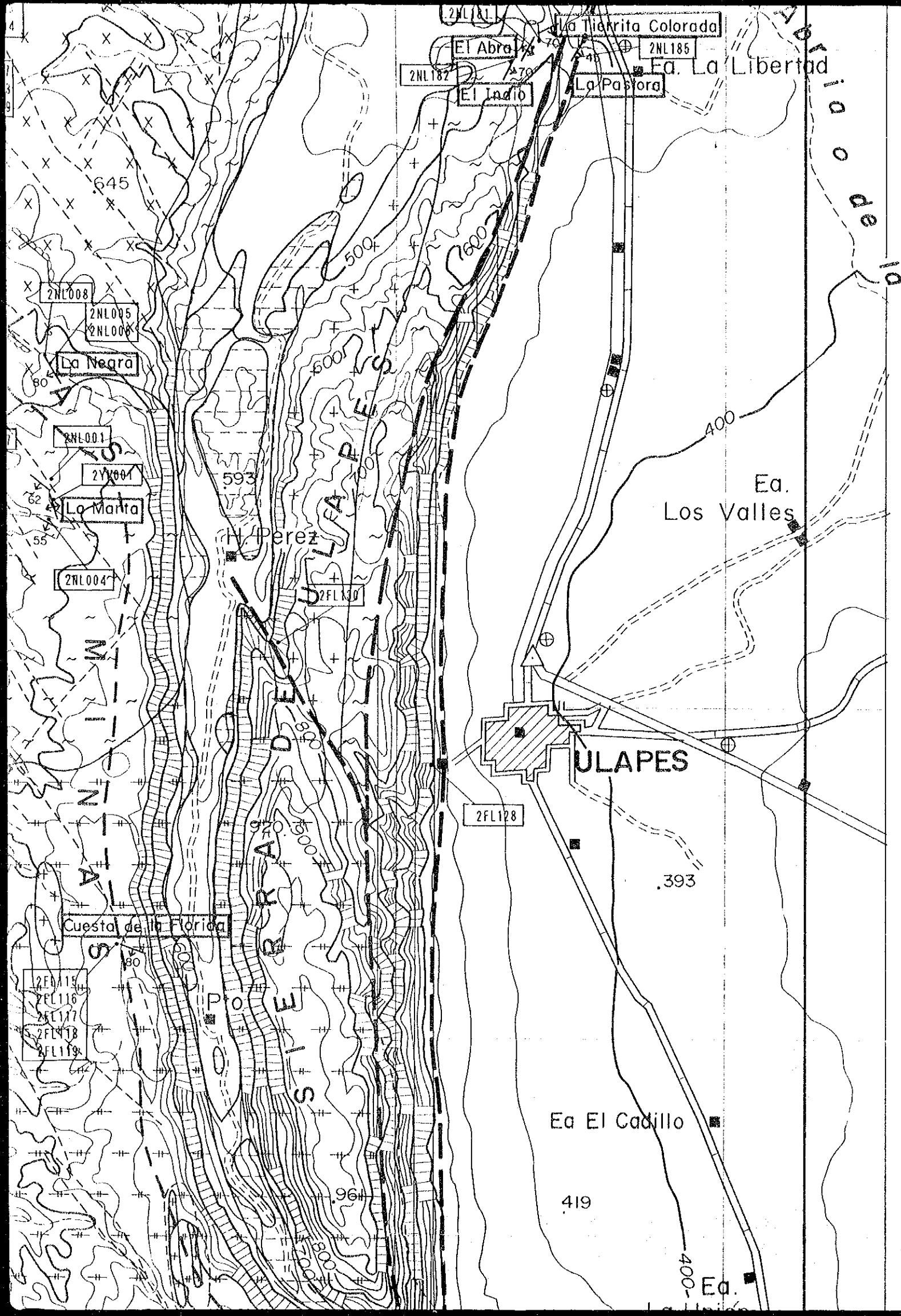
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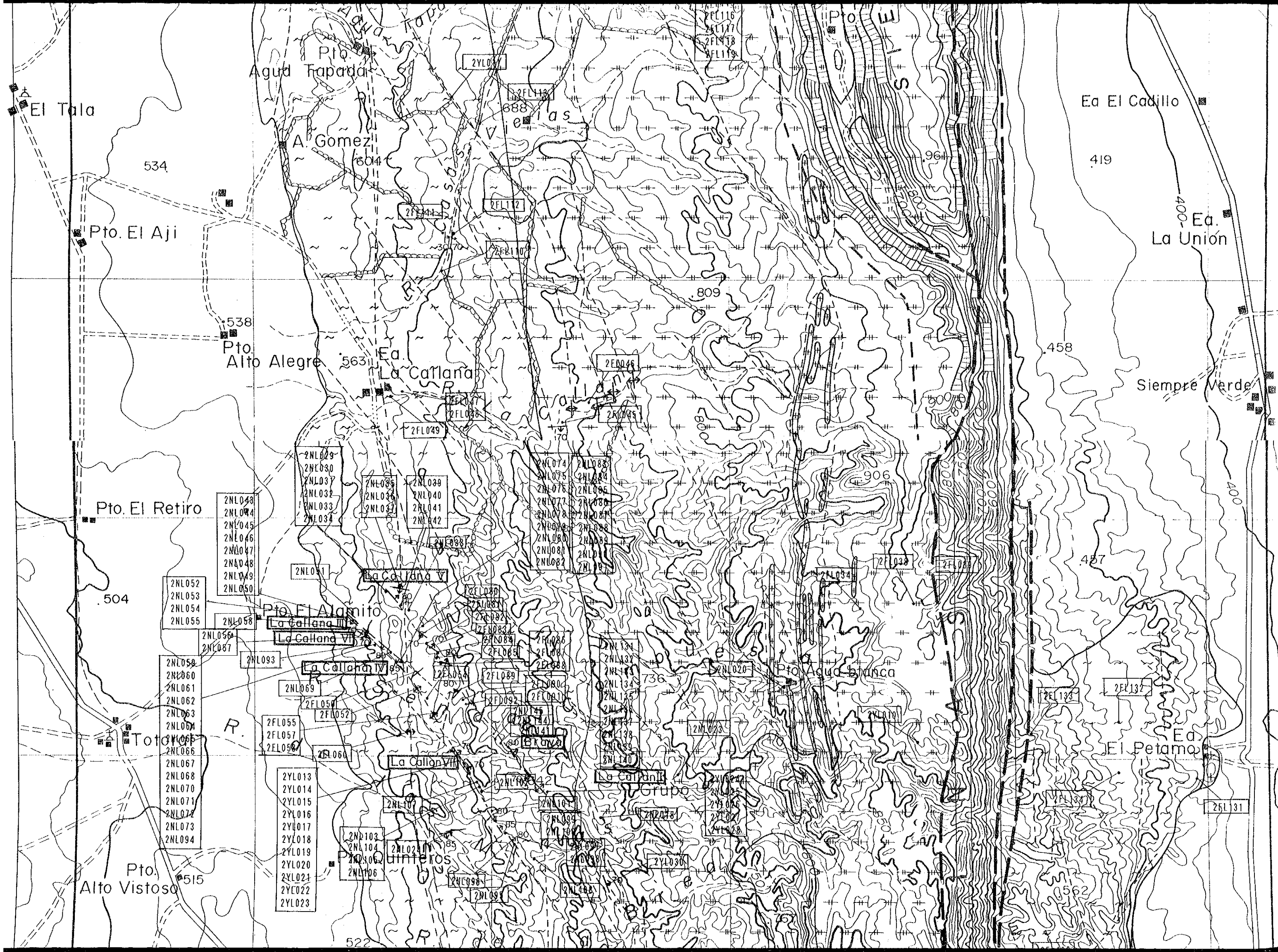


REFERENCIAS

- Arenas, Limos, Loes, Rodados
- Conglomerados y Areniscas Blanquecinas } Formación Los Llanos } Plioceno
- Conglomerados y Areniscas Rojizas } Formación La Colina } Pérmico
- Conglomerados, Lutitas y Areniscas Grisáceas } Formación Malanzán } Carbónico
- Migmatitas Graníticas y Esquistos Lit-part-lit } Migmatitas Ulapes
- Granitos Leucocráticos } Granito Asperezas
- Fracías Porfiroblástica } Fracías Migmatítica } Formación Chepes (Tonalitas y Granodioritas)
- Fracías Normal }
- Contacto Neto
- Contacto Transicional
- Falla
- Rumbo e Inclinación de la Foliación
- Foliación Vertical
- Lineamiento
- Veta
- Manifestación
- Perfil



No. de Muestra	Tipo de Muestra	1	2	3	4	5	6	7	8	No. de Muestra	Tipo de Muestra	1	2	3	4	5	6	7	8	No. de Muestra	Tipo de Muestra	1	2	3	4	5	6	7	8
2FL001	V. cuarzo									2FL070	V. cuarzo									2FL123	V. cuarzo								
2FL002	V. cuarzo									2FL071	V. cuarzo									2FL124	V. cuarzo								
2FL003	Z. cizalla									2FL072	Granito									2FL125	V. cuarzo								
2FL004	V. cuarzo									2FL073	V. cuarzo									2FL126	V. cuarzo								
2FL005	V. cuarzo									2FL074	V. cuarzo									2FL127	V. cuarzo								
2FL006	V. cuarzo									2FL075	V. cuarzo									2FL128	Gr-diolita								
2FL007	V. cuarzo									2FL076	V. cuarzo									2FL129	V. cuarzo								



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2NLO72
2NLO73
2NLO94

2YLO13
2YLO14
2YLO15
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2YLO21
2YLO22
2YLO23

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2NLO131
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2NLO130

2FL133

2FL132

2FL131

