

**LEYENDA**

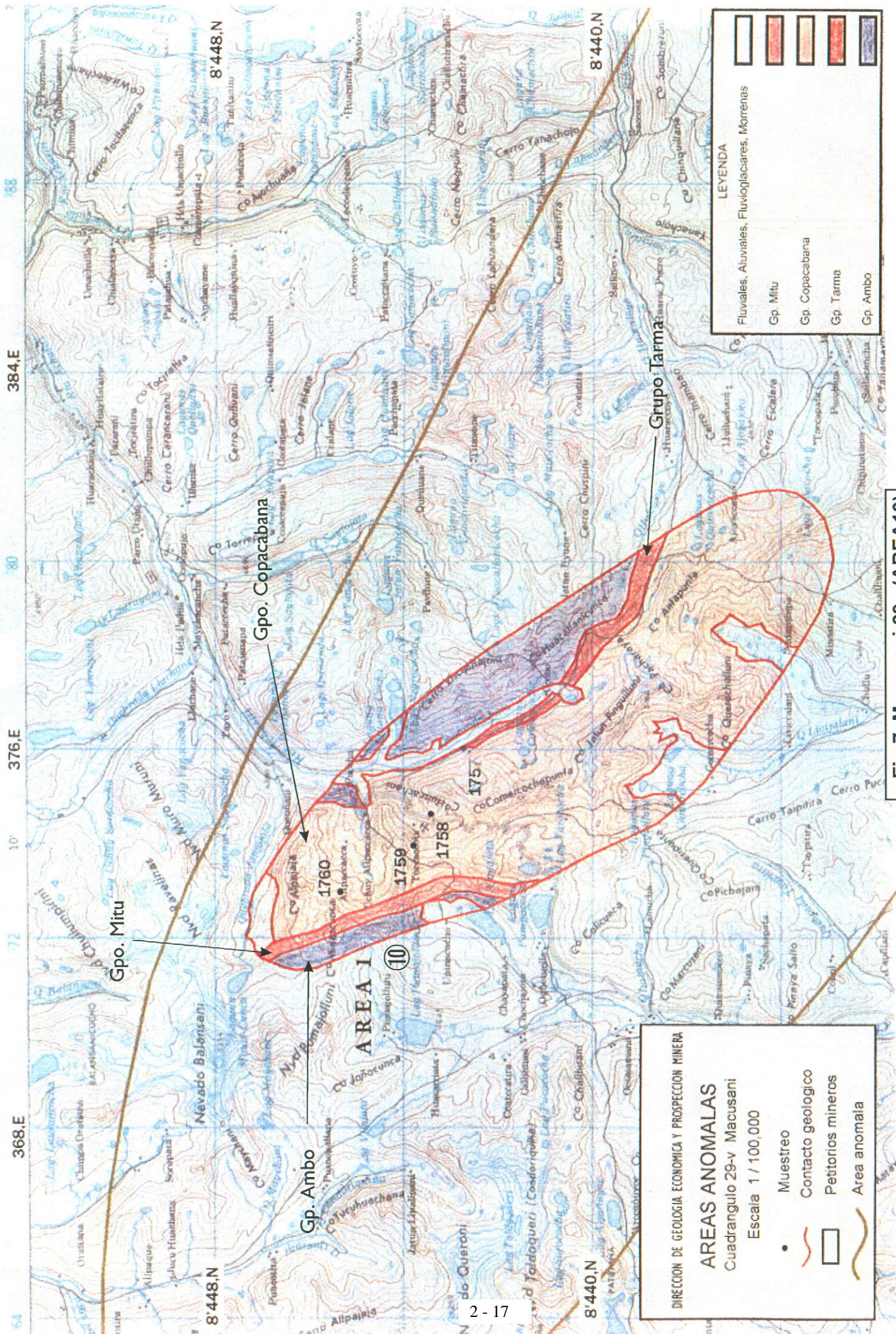
- Fluviales, Aluviales, Fluvio-glaciares, Morenas
- Gp. Puno
- Gp. Copacabana
- Gp. Tarma
- Gp. Ambo

**DIRECCION DE GEOLOGIA ECONOMICA Y PROSPECCION MINERA**

**AREAS ANOMALAS**  
Cuadrangulo - 29-v Macusani  
Escala 1 / 100.000

- Muestreo
- Contacto geológico
- Petitorios mineros
- Area anomala

**Fig 6 Macusani 29v (AREA9)**



**DIRECCION DE GEOLOGIA ECONOMICA Y PROSPECCION MINERA**

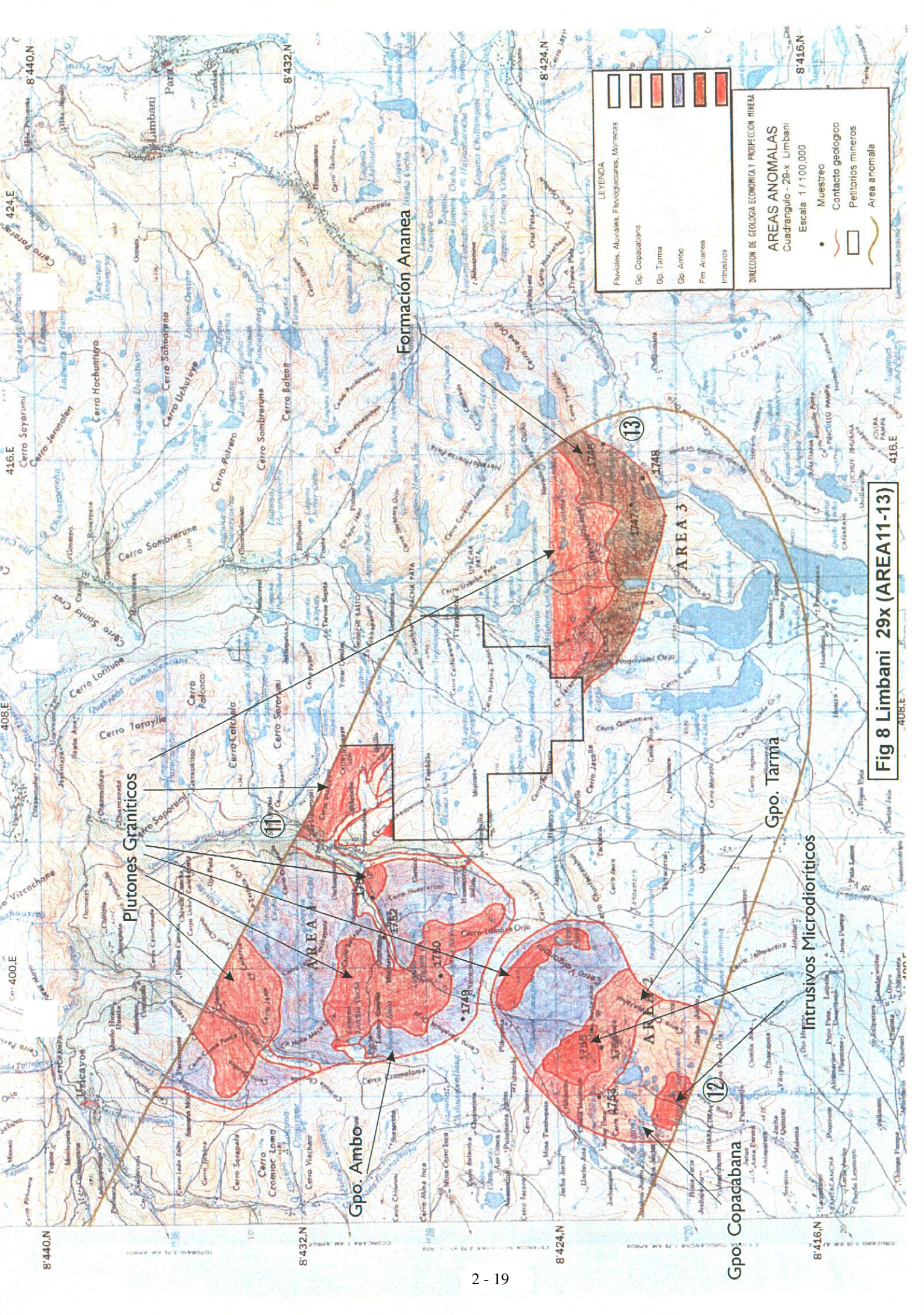
**AREAS ANOMALAS**  
Cuadrangulo 29-v Macusani  
Escala 1 / 100,000

- Muestreo
- Contacto geologico
- Pettorios mineros
- Area anomala

**LEYENDA**

- Fluviales, Aluviales, Fluvioglaciares, Morenas
- Gp. Mitu
- Gp. Copacabana
- Gp. Tarma
- Gp. Ambo

**Fig 7 Macusani 29v (AREA10)**



LEYENDA

[Symbol]	Fluviales, Aluviales, Fluvioaluviales, Morenas
[Symbol]	Gp. Copacabana
[Symbol]	Gp. Tarma
[Symbol]	Gp. Ambo
[Symbol]	Fm. Ananea
[Symbol]	Intrusivos

DIRECCION DE GEOLOGIA ECONOMICA Y PROSPECCION MINERA

**AREAS ANOMALAS**  
Cuadrangulo - 29x- Limbani

Escala 1/100.000

• Muestreo  
 --- Contacto geológico  
 □ Petitorios mineros  
 ~ Area anomala

**Fig 8 Limbani 29x (AREA 11-13)**

Formación Ananea

Plutones Graníticos

Gpo. Ambo

Gpo. Copacabana

Gpo. Tarma

Intrusivos Microdioríticos

AREA 3

AREA 11

AREA 12

AREA 13

# AREAS ANOMALAS

Cuadrangulo - 32-v Puno

Escala 1 / 100,000

- Muestreo
- Contacto geológico
- Petitorios mineros
- Area anomala

LEYENDA	
Fluviales, Aluviales, Fluvioglaciales, Morrenas	
Volc. Tacaza	
Fm. Ayavacas	
Intrusivos	

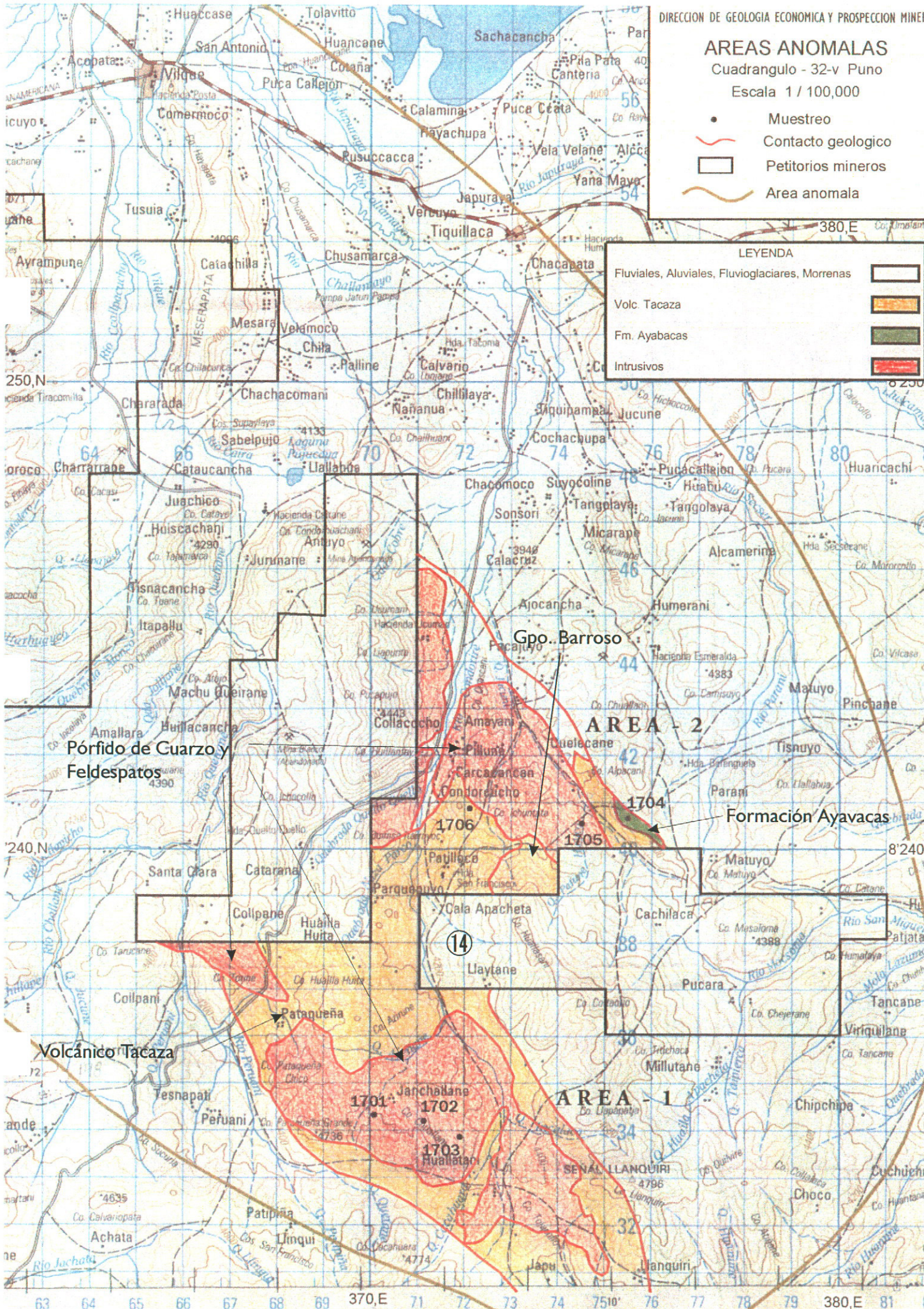


Fig 9 Puno 32v (AREA14)

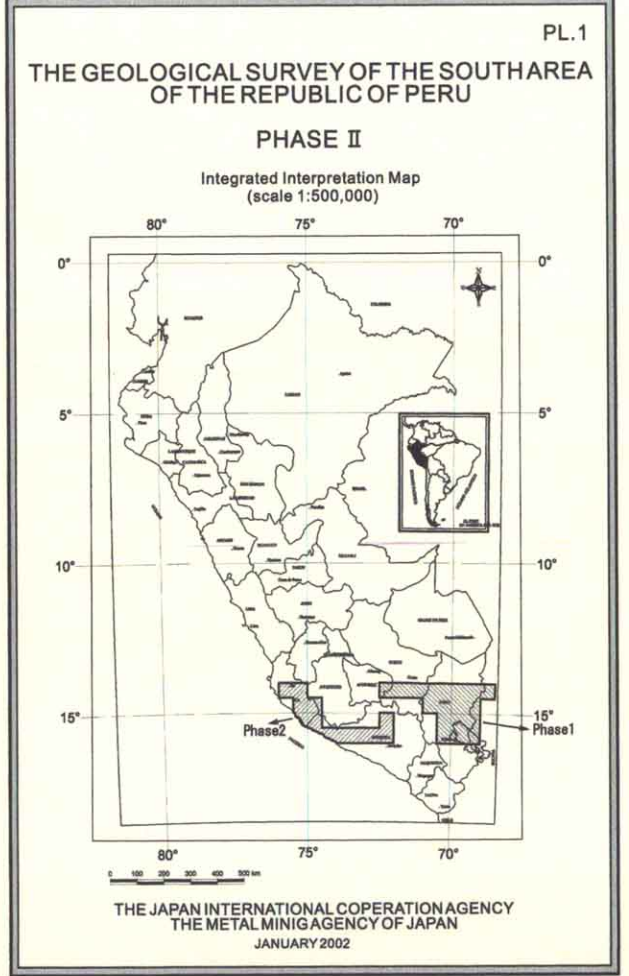
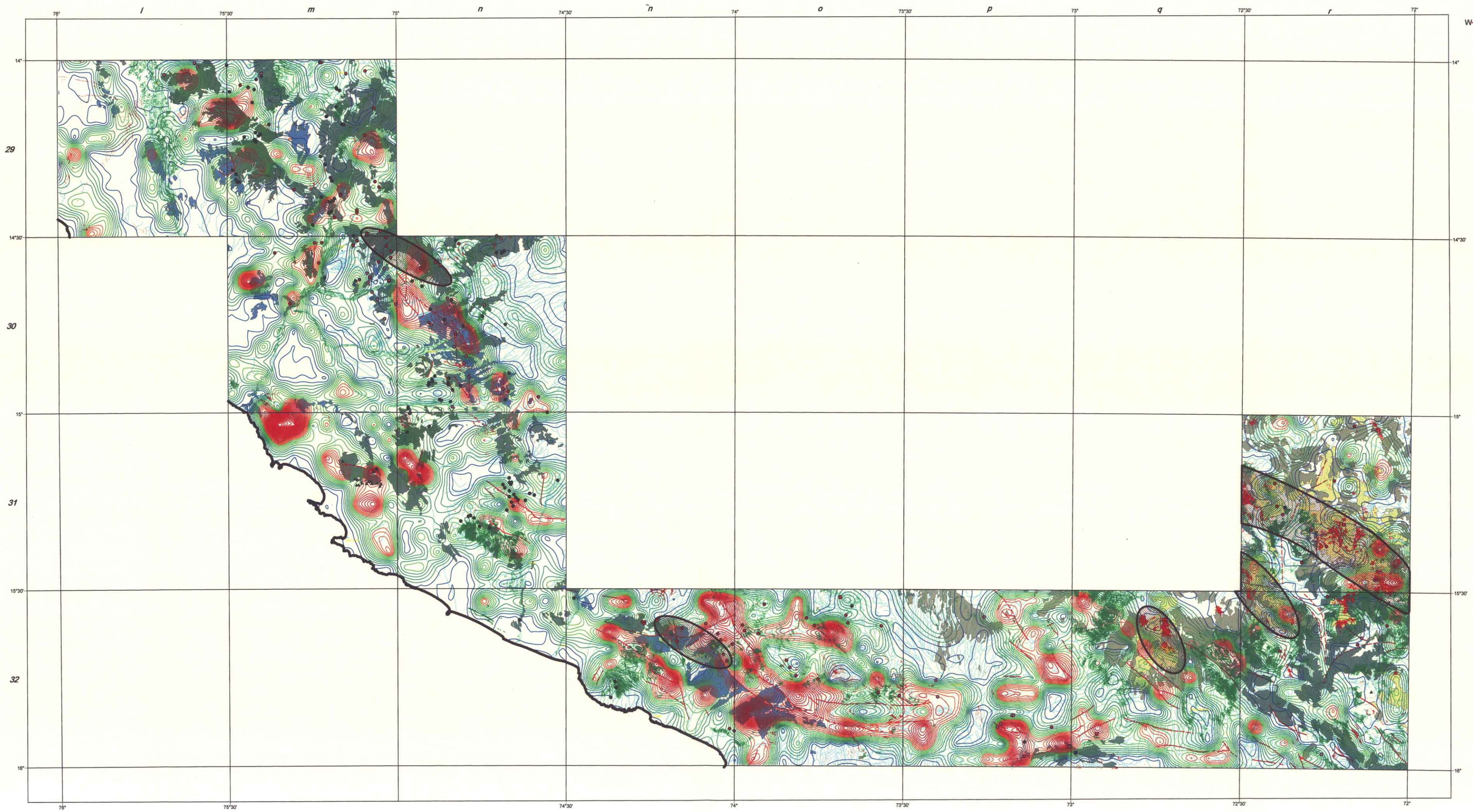


Table 1 RESULTADOS GEOQUIMICOS DEL AREA DEL CONVENIO INGEMMET - JICA

Elemento	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	K	La	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Sb	Sc	Sn	Sr	Ti	Tl	V	W	Y	Zn	Zr	
Unidad	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Metodo	30_5	PREC	CPREC	CPREC	CPREC	CPREC	CPREC	CPREC	PREC	PREC	PREC	CPREC	CPREC	PREC	CPREC	CPREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC	PREC
Limite Detec	5	0.2	0.01	3	1	0.5	5	0.01	1	1	1	0.5	0.01	10	0.01	0.5	0.01	2	1	0.01	1	1	0.01	2	5	0.5	10	0.5	0.01	2	2	10	0.5	0.5	0.5	
1701	17	2.6	0.45	152	730	-0.5	11	0.05	-1	3	30	47	10.24	-10	0.4	73.8	0.01	2796	4	0.01	-1	5	0.19	51	49	2.9	-10	53.7	-0.01	5	40	-10	7.3	43.1	2.8	
1702	5	0.3	0.43	4	189	-0.5	-5	0.03	-1	-1	45	13.9	0.73	-10	0.24	11.8	0.01	50	3	0.03	-1	6	0.01	15	9	-0.5	-10	15.3	-0.01	-2	2	-10	1.9	17.5	3.4	
1703	5	-0.2	0.74	7	1008	-0.5	-5	0.06	-1	1	28	22.2	3.56	-10	0.11	20.5	0.02	74	2	0.01	-1	3	0.06	17	-5	3.2	-10	13.8	-0.01	-2	19	-10	4.6	22.2	1.8	
1704	8	0.6	0.05	-3	32	-0.5	-5	>15.0	-1	-1	4	13.6	0.23	-10	0.03	1.8	0.27	224	-1	0.01	-1	2	0.01	32	11	-0.5	-10	205.5	-0.01	7	3	-10	2	32.7	0.8	
1705	5	-0.2	0.67	19	104	-0.5	-5	0.25	-1	-1	22	20.9	8.51	-10	0.12	10	0.03	90	4	0.05	-1	3	0.02	17	-5	0.7	-10	20.6	0.01	5	9	20	3.7	34.4	16.9	
1706	7	-0.2	1.68	3	99	-0.5	-5	1.17	-1	10	25	6.1	4.33	-10	0.21	32.3	0.17	545	1	0.27	-1	5	0.17	20	-5	8.5	-10	131.2	0.05	5	105	-10	18	99	39.8	
1707	5	-0.2	0.36	-3	57	-0.5	-5	0.14	-1	4	255	18.7	1.55	-10	0.09	11.1	0.03	225	7	0.03	-1	19	0.02	7	9	1.3	-10	11.2	0.01	-2	24	14	2	16.8	3.1	
1708	5	-0.2	0.56	6	124	-0.5	-5	0.14	-1	1	80	9.7	0.98	-10	0.25	6.5	0.02	62	2	0.1	-1	8	0.05	10	6	1.1	-10	10.1	-0.01	-2	13	-10	2.1	12.9	1.2	
1709	9	0.5	0.03	3	56	-0.5	-5	>15.0	-1	-1	4	6	0.22	-10	0.03	3.8	0.63	365	-1	0.02	-1	3	0.01	47	-5	-0.5	-10	221.8	-0.01	7	5	-10	1.9	86.6	0.7	
1710	8	-0.2	0.08	4	28	-0.5	-5	>15.0	-1	-1	3	7.4	0.22	-10	0.05	1	0.3	294	-1	0.01	-1	2	0.02	26	-5	-0.5	-10	1108.3	-0.01	-2	4	-10	1.4	33.9	2.2	
1711	20	1.2	0.41	144	105	-0.5	21	0.35	-1	5	12	47.2	>15.0	-10	0.12	-0.5	0.19	614	-1	0.06	7	5	0.01	69	37	-0.5	-10	20.8	0.01	-2	33	-10	-0.5	59.5	15.3	
1712	14	0.6	0.44	96	109	0.5	23	0.24	-1	81	18	730	>15.0	14	0.06	1.8	0.08	1126	24	0.06	7	30	0.03	60	47	-0.5	-10	17.2	0.01	-2	50	-10	0.7	128	15.9	
1713	7	-0.2	0.69	4	20	-0.5	-5	1.23	-1	9	39	246	2.43	-10	0.05	14.3	0.07	711	-1	0.12	-1	6	0.11	2	-5	7.2	-10	24.7	0.08	-2	34	-10	20.2	42	15.5	
1714	7	-0.2	1.16	-3	23	-0.5	-5	3.26	-1	4	33	41	3.34	-10	0.08	8.7	0.27	563	-1	0.26	-1	5	0.08	27	-5	2.2	-10	35.1	0.08	3	35	-10	16.6	71.7	31.7	
1715	6	-0.2	2.8	6	66	-0.5	-5	1.98	-1	10	34	28.7	3.41	-10	0.35	9	0.61	400	1	0.34	-1	6	0.08	23	7	2.7	-10	96	0.11	3	80	-10	6.5	95.4	4.6	
1716	8	0.3	0.33	-3	104	-0.5	-5	>15.0	-1	1	15	0.7	0.7	-10	0.14	4.2	0.99	4811	-1	0.01	-1	4	0.02	76	11	-0.5	-10	170.5	-0.01	5	7	-10	2.8	203	1.7	
1717	10	2.8	0.25	153	105	-0.5	14	0.34	-1	40	26	151	>15.0	13	0.08	2.3	0.15	1234	-1	0.02	6	12	0.04	181	46	-0.5	-10	12	0.02	-2	174	-10	1	210	16.6	
1718	10	0.3	1.61	6	24	-0.5	-5	1.79	-1	4	23	62.5	2.29	-10	0.08	8.8	0.42	618	-1	0.75	2	6	0.04	21	5	2.5	-10	31.4	0.08	-2	46	-10	15.6	100	29.4	
1719	127	2.2	0.26	19	95	-0.5	19	0.05	-1	45	23	523	>15.0	30	0.05	0.7	0.11	665	-1	0.01	-1	121	0.02	112	45	-0.5	-10	3	0.04	-2	789	-10	-0.5	144	17	
1720	5	93.5	0.2	160	5184	-0.5	-5	0.05	-1	2	151	56	1.54	-10	0.07	2	0.01	105	5	0.01	-1	11	0.04	936	165	0.8	-10	131.8	-0.01	-2	10	-10	0.5	101	3.5	
1721	9	19.2	0.31	198	>1%	1	14	0.19	3	22	30	209	>15.0	-10	0.11	22.4	0.07	>1%	-1	0.01	-1	12	0.1	367	118	2.9	-10	80.8	-0.01	29	82	-10	33.8	1018	11.1	
1722	12	1.6	0.32	123	195	-0.5	20	0.1	-1	95	24	633	>15.0	-10	0.06	8.5	0.13	1743	-1	0.01	7	26	0.13	88	52	-0.5	-10	17.9	0.02	-2	259	-10	1	355	16	
1723	39	1	0.23	92	126	-0.5	27	0.09	1	42	18	547	>15.0	29	0.03	2	0.01	663	-1	0.01	4	53	0.11	151	42	-0.5	-10	7.5	0.03	-2	605	-10	1.1	312	16.8	
1724	5	-0.2	1.07	14	64	-0.5	-5	1.31	-1	3	27	56.9	1.72	-10	0.15	7.7	0.13	257	2	0.16	-1	3	0.07	23	-5	2.2	-10	47.9	0.11	3	32	-10	13.1	69	18.2	
1725	5	0.2	0.11	42	33	-0.5	-5	>15.0	-1	1	4	16.5	0.4	-10	0.05	5.1	0.15	690	-1	0.01	-1	4	0.04	60	7	0.5	-10	264	-0.01	2	6	-10	3.5	67.9	1.7	
1726	7	0.2	0.07	5	11	-0.5	-5	>15.0	-1	1	4	24.4	0.26	-10	0.06	1.6	0.37	155	2	0.01	-1	3	0.09	28	8	-0.5	-10	200.4	-0.01	3	5	-10	1	72.1	1.5	
1727	9	-0.2	0.2	9	107	-0.5	17	0.17	-1	23	11	176	>15.0	41	0.02	2.7	-0.01	477	-1	0.01	6	76	0.08	78	44	-0.5	-10	6	0.01	-2	512	-10	0.7	66.7	20.4	
1728	10	0.6	0.52	13	98	1	6	5.55	-1	37	6	39	>15.0	-10	0.06	10.9	1.88	640	-1	0.04	-1	112	0.04	69	32	-0.5	-10	151.7	0.02	-2	276	-10	2.9	112	16	
1729	20	0.9	0.32	23	199	0.6	8	0.62	-1	35	26	360	>15.0	-10	0.08	2.1	0.17	525	-1	0.05	5	26	0.03	97	36	-0.5	-10	21.6	0.02	-2	58	-10	0.5	136	15.5	
1730	-5	-0.2	0.85	-3	428	-0.5	-5	1.27	-1	7	71	9.1	2.56	-10	0.36	15.4	0.64	122	1	0.11	-1	16	0.11	5	-5	3.5	-10	36.1	0.07	3	71	-10	5.2	28.8	5.8	
1731	7	-0.2	0.05	-3	24	-0.5	-5	>15.0	-1	-1	1	7.4	0.75	-10	0.03	1.6	0.36	259	-1	0.01	-1	2	0.01	27	-5	-0.5	-10	206.6	-0.01	-2	6	-10	1.2	29.9	0.8	
1732	-5	-0.2	0.41	-3	44	-0.5	-5	0.92	-1	2	48	20.3	0.72	-10	0.09	9.6	0.32	59	1	0.13	-1	6	0.1	18	-5	1.9	-10	42.6	0.11	-2	40	-10	5.2	18.8	26.8	
1733	12	-0.2	0.07	7	16	-0.5	-5	>15.0	-1	-1	3	11.7	0.33	-10	0.02	2.1	0.54	161	1	0.01	-1	3	0.05	28	-5	-0.5	-10	230.4	-0.01	2	6	-10	1.5	41.7	1.3	
1734	6	-0.2	2.93	-3	302	-0.5	-5	1.49	-1	6	90	6	2.84	-10	0.83	8.9	0.61	556	3	0.46	-1	6	0.08	17	-5	2.4	-10	98.8	0.15	4	41	-10	6	69.3	2.5	
1735	5	-0.2	0.07	-3	8	-0.5	-5	>15.0	-1	-1	5	8.6	0.33	-10	0.04	1.9	3.37	123	-1	0.01	-1	3	0.06	27	9	-0.5	-10	455.6	-0.01	3	3	-10	1.8	73.3	2.4	
1736	-5	-0.2	0.04	-3	20	-0.5	-5	0.23	-1	-1	192	8.4	0.75	-10	0.01	2.5	0.02	49	3	0.01	-1	13	0.01	-2	11	-0.5	-10	4.1	-0.01	-2	3	-10	-0.5	4.4	1	
1737	-5	0.3	0.15	-3	46	-0.5	-5	0.18	-1	-1	117	14.7	0.5	-10	0.02	12.6	0.03	77	7	0.01	-1	12	0.01	6	7	-0.5	-10	3.1	-0.01	2	-2	-10	13.9	15.4	-0.5	
1738	9	-0.2	2.02	-3	224	-0.5	-5	1.09	-1	5	83	14.5	2.88	-10	0.62	6.4	0.58	589	2	0.3	-1	8	0.08	7	-5	2.1	-10	57.4	0.13	4	49	-10	6.3	58.4	2.6	
1739	7	-0.2	1.19	-3	175	-0.5	-5	0.64	-1	6	74	17.4	2.79	-10	0.47	6.5	0.51	479	5	0.15	-1	11	0.07	16	-5	1.5	-10	30.3	0.12	-2	53	-10	4.1	56.8	2.3	
1740	5	0.4	0.59	71	143	3	-5	0.41	-1	2	71	48.8	3.91	-10	0.24	8	0.28	545	2	0.01	-1	9	0.17	127	24	1.1	-10	10.6	-0.01	3	7	-10	7.5	255	3	
1741	16	1.5	0.02	237	137	-0.5	-5	0.04	-1	-1	190	40.9	4.62																							

Table 2 Coverage Ratios of Field Survey Areas Visas Recommended Areas

Recommended Areas	Coverage 1 (km2)	Survey Areas	Coverage 2 (km2)	Coverage 3 (km2)	Coverage 3 / Coverage 1 (%)
CALHUAHUACHO	840.94	1	41.39	125.64	14.94%
		2	22.54		
		3	61.72		
LIVITACA	670.51	(4)	(81.10)	68.39	10.20%
		5	68.39		
MACUSANI	2008.70	6	13.37	127.70	6.36%
		7	8.05		
		8	59.17		
		9	47.11		
		10	58.21		
USICAYOS	810.23	11	65.45	191.55	23.64%
		12	31.37		
		13	36.51		
VILQUE	634.79	14	61.29	67.23	10.59%
		15 (15)	5.94 (5.68)		
Total	4965.18		655.68	580.52	11.69%



Important area for future survey

**LANDSAT TM Ratio Anomaly**  
 R21 (iron oxide index)  
 R57 (clay mineral index)  
 R21 + R57

**Lineament Density Index**  
 0.000000 - 0.037500  
 0.037500 - 0.137500  
 0.137500 - 0.237500  
 0.237500 - 0.337500  
 0.337500 - 0.975000

**Geologic units related with mineralization**  
 NQ\_ba  
 PN\_ta  
 KJ\_ca  
 JK\_yu  
 Js\_gu

**Known Mines / Prospects**  
 • Vetifrome Au  
 • Vetifrome Au-Cu  
 • Vetifrome Cu  
 • Vetifrome Fe,Ba  
 ▲ Mantifrome  
 ■ Diseminado  
 ■ Stk.work

— Drainage

SCALE 1:500,000