

Appendix 2

Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
El Potos				
El Potos	ASM212	qz. vein	coarse grained vuggy qz. vein, w/ kaolinized dacite including qz. stockwork veinlet of 1mm width	OF
El Potos	ASM213	silicified porphyry	py. disseminated intensely silicified porphyry w/ qz. veinlet	O
El Potos	ASM214	qz. vein	gray coarse grained qz. vein of 2cm width, w/o sulfide	OF
El Potos	ASM215	silicified diorite	green Cu stained silicified fine grained diorite	O
El Potos	ASM216	qz. vein	gray coarse grained qz. vein of 4cm width	F
El Potos	ATH228	granite	biot. granite, very coarse grained, Choyof group, float	T
El Potos	ATH229	granite	fine - medium grained granite, sericite - kaolinite alteration, silicified, float	GX
El Potos	ATH230	silicified granite	silicified fine - medium grained granite, stockwork fracture w/ silicified halo, kaolinite alteration, jarosite stain	GX
El Potos	ATH231	silicified granite	silicified fine - medium grained granite, w/ qz. stockwork veinlet, jarosite stain	GXF
El Potos	ATH232	granite	reddish color, fine - medium grained granite, potassic alteration, sericite alteration (?), magnetite (replaced by hematite) disseminates along crack	GXDT
El Potos	ATH233	granite	silicified fine - medium grained granite, w/ qz. stockwork veinlet, jarosite stain, kaolinite alteration	GX
El Potos	ATH234	qz. vein	qz. vein in fine to medium grained granite, float	G
El Potos	ATH235	silicified rhyolite	strongly silicified, w/ qz. stockwork veinlet, jarosite	GT
El Potos	ATH236	altered granite	fine to medium grained, w/ qz. stockwork veinlet, white clay - kaolinite (? originally sericite)	GT
El Potos	ATH237	dacite	intrusive (?), qz. phenocryst, silicified, w/ qz. stockwork veinlet, jarosite stain	GT
El Potos	ATH238	granite	fine to medium grained, w/ qz. stockwork veinlet, K-silicate alteration (K-feld-spr), sericite overprinting	GTF
El Potos	ATH239	porphyry	qz. - K-feld-spr stockwork veinlet, w/ secondary biot., K-silicate alteration	GXT
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El Potos	ATH240	Cu-Oxide	malachite (?) stained on fine to medium grained granite which altered to K-silicate	OX
El Potos	ATH241	granite	fine to medium grained granite, K-silicate alteration overprinted by qz. + sericite, molybdenite within qz. vein	GXP
El Potos	ATH242	granite	very coarse grained Choyof group granite, white clay alteration, sericite overprint, py. dissemination, hematite	GX
El Potos	ATH243	granite	fine to medium grained granite, reddish color K-feld-spr, pale greenish white color altered phenocryst (K-feld-spr ?), pale greenish white color vein, float	XT
El Potos	ATH244	granite	propylitic alteration (epidote, chlorite) w/ some remaining biot., pinkish Kf (?)	WDT
Criollita				
Criollita	AKY350	Qz vein? chert?	N40E90, with breccia within limestone, 6m in width of Qz-breccia zone	G
Criollita	AKY351	Mag-Epi skarn		GP
Criollita	ATH409	skarn	granite garnet? or epidote?	T
Criollita	ATH410	skarnized schist	oxide green Cu minerals stained, with magnetite	GP
Criollita	ATH411	magnetite skarn	massive magnetite with oxide Cu minerals	G
Criollita	ATH412	monzonite?	Hb? chlorite, Bt monzonite?, Pl > Kfs-Qtz, medium grained, magnetite series.	WT
Criollita (2nd site)	ASM365	magnetite-epidote skarn	green Cu diss, heavy, from old adit	OX
Criollita (2nd site)	ASM366	granite	qz-Kf-pl-biot, biot very partly replaced by chl, float	DT
Criollita (2nd site)	ASM367	silicified limestone	white to light gray, w/o sulfides visible, float	G
Criollita (2nd site)	ASM368	qz. vein	subtle limonite diss along fracture, N30E 40E, w/o sulfides visible, white to light gray	G
Criollita (2nd site)	ASM369	brecciated silicified limestone	intensely silicified, ledge of 1.5m wd N20E, matrix porous, limo stained	G
Criollita (first site)	ASM361	meta calcareous mudstone (MCM)	finely banded, white to dark gray, green Cu stained, float	G
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Criollita (first site)	ASM362	hematite enriched horizon in MCM	reddish, hematitized part in ASM364, from old working, calcite veinlet common	GX
Criollita (first site)	ASM363	epitaxial skarn	green Cu stained, float	G
Criollita (first site)	ASM364	meta calcareous mudstone	dark gray, fine grained micaceous, subtle green Cu stained	XT
Rio Blanco				
Rio Blanco	ASM217	ryhodalite	qz - sericite altered reddish rhyodalite, w/o sulfide	X
Rio Blanco	ASM218	silicified rock	intensely silicified andesite (possibly), consists of 90% + coarse grained qz., w/ jarosite - hematite stain, float	O
Rio Blanco	ASM219	qz. vein	white coarse grained qz. vein in intensely silicified rock, float	OF
Rio Blanco	ASM220	qz. vein	dark gray qz. vein of 2-3cm width, in intensely silicified andesite (possibly), w/o sulfide	OF
Rio Blanco	ATH245	pyroclastic rock (?)	weakly silicified, kaolinitic alteration	GX
Rio Blanco	ATH246	welded tuff	weakly silicified, kaolinitic alteration	GX
Rio Blanco	ATH247	silicified vein	50-100 cm width, NSOE trend	GX
Rio Blanco	ATH248	welded tuff	weakly silicified, kaolinite + smectite (?) alteration	GXT
Rio Blanco	ATH249	dacite	weakly kaolinitic alteration, w/ remaining primary biot.	XC
La Vicuña				
La Vicuña	ASM209	argillized andesite	greenish sericitized andesite	X
La Vicuña	ASM210	argillized silicified andesite	gray white weak silicified, possibly sericitized andesite	X
La Vicuña	ASM211	dacitic tuff	qz - sericite altered tuff including 1cm rounded siliceous fragment	XT
La Vicuña	ATH219	andesite	propylitic altered, mafic minerals break down to epidote + chlorite	XWT

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La Vicuña	ATH220	qz. vein	within the ATH219 andesite w/ oxidized Cu minerals of brochantite and azurite	O
La Vicuña	ATH221	silicified dacite	medium - strongly silicified, plagioclase phenocryst breaks down to kaolinite, intrusive	GX
La Vicuña	ATH222	dacite	weak smectite and kaolinite alteration, distinguishing mafic phenocryst	GX
La Vicuña	ATH223	tuff - lapilli tuff	pale green propylitic alteration, smectite chlorite (?)	X
La Vicuña	ATH224	dacite	intrusive, mediumly silicified, sericite	G
La Vicuña	ATH225	pyroclastics	mediumly - strongly silicified white clay (sericite)	G
La Vicuña	ATH226	greibite	developped within the boundary between dacite and pyroclastics, w/o Cu showing	GX
La Vicuña	ATH227	pyroclastics	strongly silicified, partly vuggy, w/ sericite	GX
La Ollita				
La Ollita	ASM201	qz. vein	coarse grained qz. v., 2cm width, sheared	O
La Ollita	ASM202	argillized andesite	gray arg. and. w/ limo. qz. network	O
La Ollita	ASM203	argillized andesite	kaolinitized andesite	X
La Ollita	ASM204	qz - limo. vein	qz - limonite veinlet, 2cm width	O
La Ollita	ASM205	argillized andesite	intensely kaolinitized andesite	X
La Ollita	ASM206	qz. vein	blackish limonite thickly stained coarse grained qz. vein, float	O
La Ollita	ASM207	qz. vein	coarse grained qz. vein, porous, sheared, float	O
La Ollita	ATH201	aluminium sulfate hydrate	white, vein like form, 2cm, powdery, supergene product	R
La Ollita	ATH202	silicified rock	originally dacite (?), medium silicified, white - yellowish color, jarosite stained kaolinite - alunite alteration	GX

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Survey area / locality	sample	rock type	description	analyses
La Ollita	ATH203	silicified rock	originally dacite (?), w/ medium - strong silicified fragment	GX
La Ollita	ATH204	silicified rock	float	G
La Ollita	ATH205	altered dacite	fine grained dacite, w/ kaolinite, jarosite	GAT
La Ollita	ATH206	goethite vein	2-3cm width, N70E dipping 42N, supergene goethite	GX
La Ollita	ATH207	pyroclastic rock	tuff breccia - lapilli tuff, pale green color, propylitic alteration, w/ chlorite smectite and epidote	X
La Ollita	ATH208	qz. vein	3cm width, coarse grained, jarosite stained, float	GF
La Ollita	ATH209	qz. vein	jarosite stained qz. vein of 3-5 cm width, within dacite	G
La Ollita	ATH210	altered andesite	py. disseminated, pale green gray, jarosite stained	GXP
La Ollita	ATH211	altered dacite	white colored altered, plagioclase phenocryst altered to alunite (?)	GX
La Ollita	ATH212	qz. vein clast	qz. vein clast within a gouge of thrust (shear zone)	GF
Las Tamberías				
Las Tamberías	ASM208	clay vein	kaolinite clay vein, 50 cm w.d., N30E dipping 65E	O
Las Tamberías	ATH213	altered dacite	white - yellowish brown colored alteration, kaolinite + smectite (?), jarosite stained	GX
Las Tamberías	ATH214	silicified rock	weakly silicified, kaolinite alteration, jarosite stained, forming like a ledge	GX
Las Tamberías	ATH215	hornblende biotite dacite	Hb altered, Biot: weakly altered to greenish color, host rock of alteration	I
Las Tamberías	ATH216	qz. vein	2cm width, jarosite stained, float	G
Las Tamberías	ATH217	stibnite vein	vein like form supergene alunite (?), within least altered Hb-Biot dacite	R
Las Tamberías	ATH218	silicified rock	ledge continued from ATH214, jarosite + qz. veinlet network	GX

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Survey area / locality	sample	rock type	description	analyses
Pastos Largos				
Pastos Largos	AKY354	Qtz stockworked silicified rock	including brecciated fragment of Qtz-Cal vein, Qtz etc, from beside of Cal vein in N22W63W, 20cm in width	G
Pastos Largos	AKY355	Qtz stockworked granite	silicified and Kfs altered, 2m apart from AKY354	G
Pastos Largos	AKY356	Qtz-Spe vein	chaotic and multiple networked, with Chl clot	G
Pastos Largos	ASM374	qz.- calcite breccia	silica clast supported by calcite, float	G
Pastos Largos	ASM375	qz. vein	fine grained granite w/ qz. vein of 2cm wd., qz: coarse grained, drusy, clear, w/o sulfides, no limon. stain, float	G
Pastos Largos	ASM376	calcite vein	fine grained granite w/ cc vein, cc: coarse grained, w/o sulfides, float	G
Pastos Largos	ASM377	qz. vein	granite w/ qz. vein, Hb impregnation as 5mm aggregate, qz: e.g., drusy, clear to white, float	G
Pastos Largos	ASM378	qz. vein	outcrop, 1.2m wd., N-S -90, qz: e.g., drusy, partly comb texture	G
Pastos Largos	ATH419	porphyry	dike, w=6m, N30W trend, the same as the porphyry at Ranchillos	I
Pastos Largos	ATH420	quartz-calcite vein	float, quartz + calcite vein, partly brecciated	GF
Pastos Largos	ATH421	quartz vein	in aplite granite (ATH422), w=1.5-2cm, with chalcopyrite, N60W trend	GF
Pastos Largos	ATH422	aplitic rock	host rock of Qtz vein (ATH421), fine grained, pinkish color	I
Ranchillos				
Ranchillos	AKY352a	Qtz veinlet	0.5cm in width, floating rock	F
Ranchillos	AKY352b	altered hornfelsite with Qtz-Lim vein	2cm in width of Qtz-Lim vein within white grey colored altered hornfelsite, floating rock	G
Ranchillos	AKY352c	altered hornfelsite with Lim vein	0.2cm in width of Lim vein within white grey colored altered hornfelsite, floating rock	G
Ranchillos	AKY353a	altered granite porphyry	light grey colored Qtz-Ser altered granite porphyry	I

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Survey area / locality	sample	rock type	description	analyses
Ranchillos	AKY333b	Fe-Qtz vein	2cm in width, brownish colored Fe fills Qtz grain	GFF
Ranchillos	ASM370	limonitized sulfide vein	slightly silicified and sericitized sandstone (1/2 hornfels) w/ densely limonitized vein, network, heavy	G
Ranchillos	ASM371	altered granite	granodiorite?, silicified, sericitized	G
Ranchillos	ASM372	altered granite	intensely silicified and sericitized, porous (pl leached cavity)	DT
Ranchillos	ASM373	altered sandstone	(1/2 hornfels), sericitized w/ limonitized sulfide vein and dense limonite (garnitic) stain	G
Ranchillos	ATH413	altered hornfels	cordierite? hornfels, sericite alteration? coarse grained white mica, products of contact metamorphism?	GXT
Ranchillos	ATH414	granitic rock	dk. mafic minerals? chlorite alt?	T
Ranchillos	ATH415	granitic rock	white clay alteration: sericite alteration	X
Ranchillos	ATH416	monzonite?	no alteration, Qtz poor, monzonite? fine grained. Tertiary intrusion?	WDT
Ranchillos	ATH417	porphyry	feat. sericite alteration, Qtz, Fd phytic.	XT
Ranchillos	ATH418	granodiorite?	Bt/Hbl granodiorite? medium-coarse grained. Bt max L=8mm, magnetite series	WDT
Laguna de las Huaycas				
Laguna de las Huaycas	ASM382	altered rhyolitic tuff + silicified limestone (?)	rhyolitic tuff + densely silicified vuggy quartz w/ graphical cavity; rhy: qz pc 1mm, gray; sil r. dense limo stain, probably pyroclastic leached cavity (silicified limestone)	GX
Laguna de las Huaycas	ASM383	qz diorite	gray greenish, qz Hb bearing, including blackish sedimentary fragments, least altered	T
Laguna de las Huaycas	AKY361	Qtz vein	N40E-40NW, less than 1cm in width, lenticular, mosaic of different colored Qtz grains (white and clear) within rhyolite	GF
North of Laguna de las Huaycas	ATH430	porphyry	Qtz, Fd phytic, same as ATH428, porphyry intrudes into rhyolite (ATH429)	
North of Laguna de las Huaycas	ATH431	rhyolite?	white color veinlet, low temperature silica or alunite vein? if alunite, the alunite could be supergene	GX
North of Laguna de las Huaycas	ATH432	welded tuff	white color veinlet, low temperature silica vein? but not harder than a butter knife.	GXT

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Survey area / locality	sample	rock type	description	analyses
North of Laguna de las Huaycas	ATH433	pseudomorph of minerals	columnar - acicular shape, monoclinic? sulfate or carbonate?	X
North of Laguna de las Huaycas	ATH434	hematite veinlet	hematite veinlet in silicified welded tuff	G
North of Laguna de las Huaycas	ATH435	zirconite?	adjacent to ATH436, soft and fine crystalline veiniform minerals, no bubbling with HCl, clinoptilolite?	X
North of Laguna de las Huaycas	ATH436	silicified welded tuff	black color band, hematite N30E	GX
Las Aguaditas				
Aguaditas	ATH401	tourmaline rock	vein or dike?	T
Aguaditas	ATH402	tourmaline rock	feldspar, quartz associate, feldspar altered to sericite.	X
Aguaditas	ATH403	tourmaline + quartz vein	tourmaline with sugary grained quartz	
Aguaditas	ATH404	altered rock	white color: sericite alteration? kaolinite vein in crack, kaolinite seems to be supergene products.	GX
Aguaditas	ATH405	diorite	fine grained, Bt/Hbl diorite, constitutes Cerro Negro, host rock of tourmaline vein/dike	WT
Aguaditas	ATH406	tourmaline rock	floats.	
Las Aguaditas	ASM356	altered granodiorite	gd altered to tourmaline-biot-qz rock, fine grained, slightly porous, massive, black appearance, ledge elongating N60W parallel to joint	GXT
Las Aguaditas	ASM357	limonite-qtz vein	N60W 90, 10cm+; w.d., parallel to ledge, porous (pyrite leached cavity)	G
Las Aguaditas	AKY339	Bt-Qtz-Tn breccia	N70E to N80E in strike, dip vertical, several meters in width	GF
Helvecia				
Helvecia	TH07	marmatite-barite ore (replaced)	taken from underground, Sp-Gn, Sp has greenish and yellowish color, dark gray colored brecciated limestone is replaced by Sp w/ Bt matrix	ONP
Helvecia	TH08	barite-marmatite ore (vein)	taken from underground, Bt vein has Sp	R
Helvecia	TH09	limestone	taken from underground, massive, no brecciation, very fine grained Py disseminates	G

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Survey area / locality	sample	rock type	description	analyses
Helvecia	TH10	brecciated limestone	taken from underground, yellowish Sp in replaced limestone breccia in part	R
Helvecia	TH11	brecciated limestone	taken from underground, black dark gray colored limestone breccia w/ very fine grained Py	G
Helvecia	TH12	oxidized ore	sampled on the surface, Co-Cerussite? white colored Pb-Zn oxide?, w/ Br	OP
Las Sapias				
Las Sapias	SM02	altered andesite	argillitic altered, reddish white	GX
Las Sapias	SM03	altered mudstone	argillitic altered, pale green	GX
La Flecha				
La Flecha	ATH437	diatitic rock?	altitude=4540m. silicified, bleaching, shearing, N75E trend. within propylitic andesite, intercalated with andesite? or dike?	GX
La Flecha	ATH438	pyroclastic rock	altitude=4565m. white color rounded clasts, replaced by alunite? distribution trend: EW	GXDT
La Flecha	ATH439	silicified rock	altitude=4690m. highly silicified, brecciated, pyrite dissemination	GXF
La Flecha	ATH440	silicified rock	altitude=4735m. bleached, alunite? jarosite stained	GX
La Flecha	ATH441	pyroclastic rock	silicified, alunite alteration: white color rounded clasts are replaced by alunite. altitude=4730m	GXD
La Flecha	ATH442	vuggy silica	altitude=4730m. secular black minerals, very fine gr. black minerals assemblages	GP
La Flecha	ATH443	silicified rock	altitude=4750m. highly silicified, vuggy, alunite? secondary kaolinite	GX
La Flecha	ATH444	secondary clay	include oxide Cu minerals	GX
La Flecha	ATH445	pyrophyllite or gypsum?	very soft, silky shine, fibrous, radiational, tastes sour and salty.	X
La Flecha	ATH446	native sulfur	secondary products	
Rio la Flecha	AKY362	silica vein	N30E80W to 80W, less than 5cm in width, white colored within 60cm in width of shear zone in propylitic altered (T ₁) andesite, Gyp showing	G

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Rio la Flecha	AKY363	silicified breccia	EW74N, white colored argillic fragments in silicified matrix, matrix supported, after tuff breccia(?) hydrothermal(?) supergene Gyp-Alu overprint	GT
Rio la Flecha	AKY364	silicified breccia	white colored argillic (Alu?) patch in silicified matrix, Py diss 2%	GX
Rio la Flecha	AKY365	andesite	silicified, fine grained Py diss 10%	G
Rio la Flecha	AKY366	silicified breccia	highly silicified breccia with Py diss 10% within propylitic altered andesite	GR
Rio la Flecha	AKY367	silicified breccia	N30W45N, after tuff breccia(?) or hydrothermal breccia(?), 5m thickness, occurrence of native sulfur	GR
Rio la Flecha	AKY368	silica vein	N45W75NE, 7cm in width of silica layer within breccia, 3m width of thickness	GR
Rio la Flecha	ASM384	andesitic volcanic breccia	pl:pc abundant, propylite alt., pl partly replaced by epidote	R
Rio la Flecha	ASM385	altered tuff breccia	intensely silicified, ledge of 50cm wd., original texture unknown, sparsely pyrite diss., supergene gypsum	GX
Rio la Flecha	ASM386	altered tuff breccia	silicified, limonitization along fracture, py leached cavity, subtle py remaining, very fg alunite, gypsum rich	GX
Rio la Flecha	ASM387	altered tuff breccia + qz vein	silicified, porous, qz: e.g., gray	GX
Rio la Flecha	ASM388	silicified rock	intensely leached sil. r., fb clast totally leached, vuggy	GXR
Rio la Flecha	ASM389	silicified argillized rock	ledge, N80E 75N, densely alunitized (very fine grained), pinkish to white appearance,	GX
Rio la Flecha	ASM390	qz vein	1cm wd., qz: e.g. clear, w/o sulfides, porous, float	G
Bordo Atravezado				
Bordo Atravezado	ASM221	silicified rock	gray white silicified rock (possibly andesite)	O
Bordo Atravezado	ASM222	limonite vein	massive limonite vein of 20cm width, consists of goethite + jarosite	O
Bordo Atravezado	ASM223	silicified sandstone	intensely silicified aronite, w/ qz. veins of 0.5mm width, limonite stain, possibly accompanying alunite.	X
Bordo Atravezado	ASM224a	silicified rock	very intensely silicified rock, massive silica appearance, w/ jarosite - hematite fissure filling	O

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Survey area / locality	sample	rock type	description	analyses
Bordo Atravesado	ATH251	dacitic pyroclastics	weak - moderate silicification, kaolinite alteration, float, outer zone of Bordo Atravesado	GX
Bordo Atravesado	ATH252	dacite	intruded into weak silicified Carboniferous sediments, kaolinite alteration	GX
Bordo Atravesado	ATH253	dacite	moderately to strongly silicification, w/ qz. veinlet stockwork (1mm < width), intruded into Carboniferous sediments	GX
Bordo Atravesado	ATH254	hydrothermal breccia	strongly silicified clasts of 0.2mm to 10cm, coated by jarosite-goethite stain	GX
Bordo Atravesado	ATH255	?	dyke, reddish brown, hematite alteration, fine grained, N30W trend	GT
Bordo Atravesado	ATH256	dacite	strongly silicified, fracture stockwork w/ silicified halo of 5 to 10mm width, white clay: kaolinite (?) pinkish: alunite	GX
Bordo Atravesado	ATH257	drilling sludge	pale green drilling sludge by Minera Macho muerto, abundant py. and qz.	GX
Bordo Atravesado East	AKY370	hydrothermal breccia	Gt cements silicified fragments after dacite or andesite(?), with occurrence of Bar(?) - Jar - Hem (indigenous) - Qtz clst	GX
Bordo Atravesado East	ASM391	brecciated dacite	silicified and sericitized dacite, breccia matrix cemented by Hm + qz, heavy	G
Bordo Atravesado West	AKY369	silicified rhyolite	intensely silicified, very fine grained Mag diss, Epi Chl Pmp alteration, host body of Qtz rhyo-dacite dike	GT
South of Bordo Atravesado	ATH449	silicified rock	Qtz-sericite alteration, goethite stained, Qtz veinlet stockwork	GXF
South of Bordo Atravesado	ATH450	silicified rock	along crack, secondary alunite?	X
West of Bordo Atravesado	ATH447	silicified rock	dacite - rhyolite rock, mafic - chlorite alteration?	GX
West of Bordo Atravesado	ATH448	silicified rock	Qtz phytic, dacite - rhyolite, leaching silicified, secondary kaolinite.	GX
Margarita				
Margarita	AKY357	hydrothermal breccia	Tor-Qtz vein, silicified angular fragments in Jar-Hem cement matrix, indigenous Hem after primary Cu-sulphide (?) in places	G
Margarita	AKY358	Qtz vein	5cm in width, intersects Tor-Qtz breccia to stockwork, Ma-Cyanotrichite stain occurs in brecciated rim of Qtz vein	GFR
Margarita	ASM379	tourmaline breccia	silica clast of 2-3cm supported by f.g. tourmaline	GT

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Margarita	ATH423	tourmaline breccia	tourmaline replaced sediments?	
Margarita	ATH424	oxide Cu stained tourmaline breccia	tourmaline breccia, Qtz vein with oxide Cu minerals brecciantic?	G
West of camp of Cajon de la Brea	ATH456	pyrolytic	with calcite-gypsum? vein, gypsum?: softer than nail but tabular, transparent, mafic minerals: chlorite-epidote alteration	GX
West of camp of Cajon de la Brea	ATH457	kaolinite vein?	drain back products? along crack of ATH456	X
Los Magotes				
Los Magotes	ASM228	altered tuff breccia	qz. - sericite - pyrite altered tuff breccia, w/ py. dissemination, float	O
Los Magotes	ASM229	silicified breccia	2 - 5cm silicified fragment cemented by coarse grained qz. and native sulfur, w/ black limonite stain	O
Los Magotes	ASM230	qz. vein (Mo ore)	dark gray coarse grained qz. vein, w/ molybdenite impregnation, float	F
Los Magotes	ATH267	qz. veinlet	dacite (or granodiorite?), qz. veinlet stockwork w/ py., molybdenite(?)	OXF
Los Magotes	ATH268	andesite or granodiorite	plagioclase phenocryst recrystallize to fine grained alunite, w/ py. dissemination, qz. veinlet stockwork	GXF
Los Magotes	ATH269	qz. vein	6 - 40cm width, N45W dipping 65W, coarse grained high-T qz., alunite abundant along the contact to host, native sulfur occurs in porous part.	GF
Los Magotes	ATH270	alunite	adjacent portion to qz. vein, white to cream cuboidal powdery sericite, a few gypsum, alunite	D
Los Magotes	ATH271	granodiorite (?)	bist. - hb. granite	WT
Los Magotes	ATH272	alunite vein	veining in the ATH271 granodiorite	GX
Los Magotes	ATH273	altered granite	alunite- kaolinite alteration halo of the ATH272 alunite vein	GX
Los Magotes	ATH274	dacite (?)	moderately silicified, hematite (originally jarosite) stained, white clay: kaolinite + alunite	GX
Los Magotes	ATH275	dacite (?)	qz. veinlet stockwork, moderately - strongly silicification, qz.-alunite alteration	GX
Los Magotes	ATH276	dacitic pyroclastics	silicified, py. crystal in vug, qz. - sericite alteration	GXT

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Los Magos	ATH277	dacite (?)	qtz veinlet stockwork, plagioclase phenocryst alters to albite + kaolinite	GNT
Los Magos	ATH278	dacite	biot-hb dacite, relatively fresh, hb partly chloritized	XWDT
Los Magos	ATH279	ryholite	dike (?), float, K-feldspar phenocryst, silica epidote alteration, Mn oxide stained	XT
Los Magos	ATH280	andesite	dike (?), float, w/ epidote	XT
Cordon de la Inca				
Cordon de la Inca	AKY371	andesite	pale gray colored moderately silicified andesite, Qt stain in places	
Cordon de la Inca	AKY372	Qtz vein	N30W80W, more than 20cm width, Qtz brecciate Qtz-Qtz stockwork within andesite like AKY371	G
Cordon de la Inca	AKY373	silicified rock	white colored silicified rock after andesite(?) with Qtz stockwork without sulfide	G
Cordon de la Inca	ASM392	silicified rock	gray, intensely silicified rock, w/o sulfides, porous, float	GX
Cordon de la Inca	ASM393	altered dacite	silicified, limonitized along fracture, gypsum covered	G
Cordon de la Inca	ASM394	qtz vein	brecciated tex, qz: fg, milky, w/o sulfides, 1.5cm wd., float	G
Cordon de la Inca	ASM395	hydrothermal breccia	breccia including qz vein fragments, silica clast, w/ limo. abundant matrix	GX
Easternmost of Cordon de la Inca	ATH451	silicified rock	bleached rhyolite-dacite. Pd pale pinkish-white color, albite alteration, hypogene albite.	GXDT
Easternmost of Cordon de la Inca	ATH452	silicified rock	highly silicified, grayish color, near peak.	GX
Easternmost of Cordon de la Inca	ATH453	argillized rock	bleached, hematite stained, pyroclastics, near peak.	GX
Easternmost of Cordon de la Inca	ATH454	silicified rock	at the peak, reddish brown in color, highly silicified, altitude=4440m.	G
Easternmost of Cordon de la Inca	ATH455	kaolinite vein	supergene kaolinite vein, w=3-15cm	X

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Abundancia				
Abundancia	KY36	Qtz-diorite	Hbl-Bt Qtz diorite w/ ambiguous Qtz network showing	G
Abundancia	KY37	Qtz-diorite	Hbl-Bt Qtz diorite w/ ambiguous Mag-Qtz network showing	G
Abundancia	KY38	crystalline limestone	blakish grey massive medium grained crystalline limestone w/ white colored ambiguous minor layer, taken from waste dump	G
Abundancia	KY39	wastes	skarn	R
Abundancia	SM35	dacite porphyry	dacite porphyry w/Qtz-Py-Mag veinlet	O
Abundancia	SM36	skarn	Msc-Ep-Chl skarn, float	O
Abundancia	SM37	mudstone	black mudstone w/ white Qtz vein in 5mm width, fine grained Py disc, float	O
Abundancia	SM38	mudstone	black to dark grey calcic mudstone, float	O
Abundancia	SM39	Cu-ore	grey white marble w/ Ma disc, float	O
Abundancia	SM49	Cu-ore	grey white silica vein w/ Cns disc, float	O
Abundancia	TH53	Qtz vein	in granodiorite porphyry, 3cm in width, N55W in strike, 78S in dip	G
Abundancia	TH54	granodiorite porphyry	Hbl-Bt granodiorite porphyry, mafic: Hbl-Bt, feldic: Pl-Qtz Kfs, Qtz: 4 to 10mm in diameter, round to subrounded shape	WDT
Abundancia	TH55	granodiorite porphyry	(Bt)-Hbl granodiorite porphyry	WT
Abundancia	TH56	garnet skarn	reddish brown garnet skarn, in old adit	T
Abundancia	TH57	garnet skarn	reddish brown garnet skarn, Qtz veinlet	GP
Abundancia	TH58	green Cu	green Cu minerals w/ Mag ore	O
Abundancia	TH59	magnetite	banded Mag ore	P

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Abundancia	TH06	Qtz-Py-Horn ore	2 to 5mm in diameter Py w/ Qtz vein	G
Guachi				
Guachi	KY31	diorite	propylitic altered diorite, Chl from Hbl, Py veinlet showing, contains gabbroic inclusion	GT
Guachi	KY32	dioritic igneous breccia	dioritic matrix igneous breccia w/ 1% of Py-diss, gabbro as breccia	G
Guachi	KY33	silicified rock	pale white colored strong silicified rock w/ Py-diss and Qtz-Py-network 1 to 0.2 cm in width and less than 5cm in spacing, dike-like (N44W in strike)	G
Guachi	KY34	silicified argillic rock	pale white strong silicified argillic rock w/ 20% of Py-diss and layered white Qtz vein network 2 to 3cm in width	GF
Guachi	KY35	andesite (dike)	weak dark grey colored phaneritic andesite (dike?) w/ fine grained Py-diss in groundmass	GT
Guachi	SM32	vein	Py-Qtz vein 4cm width, fault in Chl Hbl gabbro	O
Guachi	SM33	vein	Qtz-Py-vein 5cm width, coarse grained, rim of SM34	O
Guachi	SM34	vein (Pb-Zn-Cu-Au ore)	Gn-Sp-(Cpy)-Py-Qtz vein in 15cm width, ore grade	OL
Guachi	TH48	Py vein	Py-white Clay (Kln?) vein, 30cm in width, N42W in strike, 80N in dip, with in a fault	GX
Guachi	TH49	silicified rock	originary feldic dyke, Py dissemination, M-silicification	OX
Guachi	TH50	Qtz vein	10cm in width, N42W trending, contains Cp-Sp Py	OLF
Guachi	TH51	Qtz-Py vein	3 to 20 cm in width, N45E in strike, 80N in dip	O
Guachi	TH52	silicified rock	float?, Bro?-Cp, silicified andesite?	OP
El Fierro Bajo				
El Fierro Bajo	KY22	actinolite-borders	pale grey least altered, N65E in strike and 80SW in dip of foliation	T
El Fierro Bajo	KY23	Sp-Qtz vein (ore)	massive Sp-Qtz vein	R

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
El Fierro Bajo	SM27	vein (Pb-Zn ore)	massive Sp-Gn ore, coarse grained, float	L
El Fierro Bajo	TH07	granite porphyry	Pl 2 to 3 cm in diameter, Qtz 2 to 3mm in diameter, Bt 1 to 3mm in diameter, Pl-phyric porphyry, dyke or stock occurrence, no alteration, Tertiary	WDT
El Fierro Bajo	TH08	granite	coarse grained, Pl-Qtz-Kfs-Bt granite, no alteration, Permian?	WDT
El Fierro Bajo	TH09	Sp ore	host rock: Carboniferous metasediments, black colored	R
El Fierro alteration				
El Fierro alteration	KY24	argillic altered granite	pale white argillic altered granite, Qtz vein 0.5mm in width w/ clay-halo showing	GX
El Fierro alteration	KY25	argillic altered granite	pale white argillic altered granite, Qtz vein 0.5mm in width w/ clay-halo and Tor-Qtz vein showing	G
El Fierro alteration	KY26	Tor-Qtz breccia	argillic or silicified rock as fragment in Qtz-Tor matrix	R
El Fierro alteration	KY27	silicified rock (granite?)	weak purplish colored strong silicified rock (granite?) w/ 3 to 5% of Py-diss	G
El Fierro alteration	KY28	Tor-breccia	argillic or silicified rock (most likely granite) as fragment in fine grained (Qtz?) Tor matrix	GP
El Fierro alteration	KY29	sandstone	weak bluish green argillic altered fine grained sandstone w/ fine grained Py-diss weak	GX
El Fierro alteration	KY30	silicified granite	pale grey moderately silicified granite w/ less than 1% of Py, immediately above limonitized breccia zone	G
El Fierro alteration	SM28	silicified rock	grey white silicified rock w/ Qtz veinlet (2mm in width), Chl-Msc-Tor spot	O
El Fierro alteration	SM29	altered granite	grey white granite w/ Tor-veinlet 4mm in width, host leached out	O
El Fierro alteration	SM30	altered granite	grey white granite w/ Tor, host leached out, w/ Qtz vein 5mm in width by 2	OT
El Fierro alteration	SM31	limonitized fault breccia	intensely limonitized fault breccia w/ silicified granite fragment	O
El Fierro alteration	TH10	granite	coarse grained, Qtz vein network, Qtz-Ser alteration, Msc along Qtz vein	GXT
El Fierro alteration	TH41	Qtz-Tor? Vein	1 to 1.5 cm in width, Py exist in the contour of vein	G

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
El Fierro alteration	TH42	porphyry	Qtz veinlet network, less than 1mm in width, Qtz-Ser alteration, Lim stained	G
El Fierro alteration	TH43	porphyry	Qtz El pyrite porphyry, Jar-Qt stained	G
El Fierro alteration	TH44	granite	joint surface: Sp, Hbn, primary Bt altered to Chl	G
El Fierro alteration	TH45	granite	medium to coarse grained granite, mafics altered to Chl	G
El Fierro alteration	TH46	granite	Qtz-Ser altered, mafic minerals are disappeared	GX
Cerro Amarillo				
Cerro Amarillo	ASM224b	altered welded tuff	qz - sericite - pyrite altered tuff breccia, float	X
Cerro Amarillo	ASM225	residue silica	originally tuff breccia, porous, low density, w/ black limonite stain	OX
Cerro Amarillo	ASM226	residue silica	originally tuff breccia, porous, low density, w/ jarosite - hematite stain	X
Cerro Amarillo	ASM227	residue silica	originally tuff breccia, porous, low density, w/ kaolinite + alunite filling.	OX
Cerro Amarillo	ATH258	dacitic pyroclastics	same location as LF97-1 (drill hole of Minera Macho Muerto), sericite alteration	GNT
Cerro Amarillo	ATH259	dacite	qz - alunite alteration, plagioclase phenocryst breaks down to pinkish coarse grained hypogene alunite, float	GT
Cerro Amarillo	ATH260	basaltic andesite	least alteration, post-mineralization dyke or flow (?), w/ bit., float	WT
Cerro Amarillo	ATH261	dacite	float (3cm) probably from the peak of Cerro Amarillo, qz - alunite alteration, plagioclase phenocryst alters to pinkish alunite.	GX
Cerro Amarillo	ATH262	lapilli tuff - tuff breccia	andesitic pyroclastics taken from ledge outcropping, pale greenish propylitic alteration of epidote, chlorite, and smectite	XT
Cerro Amarillo	ATH263	dacitic pyroclastics	from ledge, tuff breccia - lapilli tuff or pyroclastic flow (?), vuggy, leached, moderately silicified, kaolinite + alunite alteration	GX
Cerro Amarillo	ATH264	lapilli tuff - tuff breccia	from ledge, andesitic pyroclastics, pale greenish propylitic alteration of epidote, chlorite, and smectite	X
Cerro Amarillo	ATH265	dacitic pyroclastics	from ledge, tuff breccia - lapilli tuff or pyroclastic flow, vuggy, moderate - strong silicification, qz - alunite alteration	GNDI

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Cerro Amarillo	ATH266	welded tuff	weak alteration, eutaxitic structure, N25W dipping 40E	XT
Cerro Amarillo Norte	ASM231	silicified dacite	silicified dacite, w/ native sulfur of 5mm diameter, alunite, float	OX
Cerro Amarillo Norte	ASM232	silicified rock	intensely silicified alunitized rock, origin unknown, w/ black limonite stain, float	OX
Cerro Amarillo Norte	ASM233	silicified lapilli tuff	dacitic tuff breccia - lapilli tuff, w/ gray silicified rock fragment, implined silicification and alunization	OX
Cerro Amarillo Norte	ATH281	welded tuff	pale greenish color: smectite alteration, including silicified clast	GX
Cerro Amarillo Norte	ATH282	welded tuff	dacitic welded tuff, including silicified clasts, smectite + kaolinite alteration (?)	GX
Cerro Amarillo Norte	ATH283	welded tuff	from Ledge, N80E trend, strongly silicified, native sulfur, kaolinite alteration (?)	GX
Cerro Amarillo Norte	ATH284	welded tuff	from Ledge, weak to moderate silicification, plagioclase phenocryst alters to alunite.	GX
Cerro Amarillo Norte	ATH285	welded tuff	from Ledge, moderate to strong silicification, qz + alunite alteration, jarosite, kaolinite	GX
Cerro Amarillo Norte	ATH286	dacite	dacite dome (?), plagioclase phenocryst alters to pink alunite.	GX
Cerro Amarillo Norte	ATH287	andesitic pyroclastics	lapilli tuff - tuff breccia, monofibrolitic: unbrecciated lava (?), chlorite + epidote: propylitic alteration, float	XT
Cerro Amarillo Norte	ATH288	andesite	dyke (?), chlorite: propylitic alteration, float	T

Despoblados

Despoblados	AKY400	silicified argillite rock	pale grey colored silicified argillite altered rock after andesite tuff breccia(?) w/ Qtz Py veinlets, weakly Jar stain, float	GXF
Despoblados	AKY401	silicified argillite rock	pale grey colored Kln-Qtz-Ser argillite altered silicified rock w/ white Qtz thin veinlets, supergene Ah(?) patched	GX
Despoblados	AKY402a	argillite altered tuff breccia	Kln-Qtz-Ser argillite altered dacitic tuff breccia (Bt-Hbl-Qtz), Jar stained and small drop	X
Despoblados	AKY402b	Lim-Qtz vein	Lim (mainly Jar) stained weakly porous (leached vug) Qtz vein, strikes N75W dips 74S, 8cm width	GF
Despoblados	AKY403	altered tuff breccia	dark green colored propylitic altered Hbl-Bt bearing tuff breccia, supergene Kln patch	X

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Eastern Andes Area sample list (Phase I and Phase II)

Survey Area / Locality	sample	rock type	description	analyses
Despoblados	AKY404	argillic altered tuff breccia	with Qtz-Jar stockwork, the zone strikes N85E dips vertical, 2m width	G
Despoblados	ASM419	altered andesitic tuff	gray to light gray, qz sericite-py (subtle) alteration, qz veinlet of 1mm	GX
Despoblados	ASM420A	qz vein	5mm w.d., qz: gray, f.m.g., few sulfides	O
Despoblados	ASM420B	altered tuff breccia	greenish, chl - sericite small aggregate replacing mafic, pl kaolinized	X
Despoblados	ASM421	qz vein	5cm w.d., qz: eg, clear, few sulfides, limonite stained	G
Despoblados	ATH503	tuff breccia	buff color clay: smectite? W-sil. kaolinite clay is observed in the same outcrop: supergene?	X
Despoblados	ATH506	tuff?	kaolinite alt. with silica vein: w=2-3mm	GX
Despoblados	ATH507	lapilli tuff?	kaolinite alt. (by poegene?) matrix: very weak sil	X
Despoblados	ATH508	ryholite	W-M sil. fd phenocryst: white clay: kaolinite. steam heated alteration? Br: silky white clay	GX
Despoblados	ATH509	silicified vein	w=5cm, N40E trend: this trend is the same as ridge trend	G
Guanaco Zonzo				
Guanaco Zonzo	AKY385	silicified welded tuff	weakly vuggy, with Bot, Jar stain	GX
Guanaco Zonzo	AKY386	argillic welded tuff	yellowish brown, dark green, light grey, reddish brown colored argillic altered welded tuff, Smc argillic(?)	GX
Guanaco Zonzo	ASM406	altered tuff	silicified, very weakly py disseminated,	GX
Guanaco Zonzo	ASM407	altered welded tuff	light gray, intensely silicified, very weakly py disseminated, welding lense totally leached	G
Guanaco Zonzo	ATH474	silicified rock	original rock: ignimbrite. s-sil. with kaolinite alt. goethite, native sulfur. steam heated acid alteration? pumice altered to kaolinite	GX
Guanaco Zonzo	ATH475	silicified rock	original rock: ignimbrite. s-sil. vuggy. pumice altered to kaolinite	G
Guanaco Zonzo	ATH476	silicified rock	original rock: ignimbrite. s sil. pumice: silicification. no vuggy. transparent rod tubular crystals: barite?	X

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / Locality	sample	rock type	description	analyses
Guanaco Zonzo	ATH477	ignimbrite	greenish. pumice: "greenish clay (smectite or Chl/Smc mixed layer?) white clay (ill/Smc mixed layer clay?)	X
Guanaco Zonzo	ATH478	ignimbrite	Br rhyolitic ignimbrite. pumice: "welding texture. Br: fresh. Fm Dona Ana. host rock of alteration	W
Veladero Norte				
Veladero Norte	AKY384	silicified breccia	light grey colored strongly silicified fragments with argillic siliceous vuggy matrix, Horn drop in vug	GXP
Veladero Norte	ASM402	silicified rock	intensely silicified w/ dense limonite coat, first drilling site in Veladero Norte	G
Veladero Norte	ASM403	silicified breccia	"effaceous breccia" by Argentina Gold, w/o sulfide visible	G
Veladero Norte	ASM404	silicified breccia	"transitional breccia", w/o sulfide visible	G
Veladero Norte	ASM405	silicified breccia	"breccia freatica", w/o sulfide visible	G
Veladero Norte	ATH472	silicified rock	Sect. w Agustina breccia pipe. vuggy silica, jarosite stain	G
Veladero Norte	ATH473	silicified rock	hydrothermal breccia. vuggy silica ilicification (silica deposition) overprint with smectite?	GX
Veladero Sur				
Veladero Sur	AKY387a	argillic silicified rock	grey colored silicified rock with ivory colored veinlets (Qtz-Kln?), yellowish brown colored stain (Jar), white very small patch (Kln?), supergene overprint	GX
Veladero Sur	AKY387b	caly-Qtz veinlets	ivory colored, little bit hard	X
Veladero Sur	AKY388	silicified breccia	grey colored weakly vuggy silicified-siliceous breccia with yellowish colored clay-Qtz stockwork, reddish colored stain	GX
Veladero Sur	AKY389	andesite	dark grey colored propylitic altered andesite, Chl-Py, Mag rich	T
Veladero Sur	AKY390	silicified argillic rock w/ Qtz vein	white grey colored weak silicified and argillic altered and Jar stained dacitic tuff w/ Qtz vein, less than 1cm width. Horn in vug	GXF
Veladero Sur	ASM408	altered andesite	gray greenish, aphanitic, py disseminated, gypsum along fracture	G
Veladero Sur	ASM409	silicified rock	original texture unknown, partly brecciated, qz clast + dense limonite, probably in-situ	G

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Veladero Sur	ATH479	quartz vein	in m sil rock, w=1mm-1.5cm, low temperature quartz, white clay, kaolinite?	GX
Veladero Sur	ATH480	silicified rock	fault brecciated, m sil	GX
Veladero Sur	ATH481	argillized rock	white clay, kaolinite	X
Veladero Sur	ATH482	breccia	breccia, l ² =5mm-1cm, white clay kaolinite? matrix: dark grey chaledonic silica	GX
Veladero Sur	ATH483	silicified rock	white colored silica and dark grey colored silica, very fine transparent and tabular crystals	XT
Veladero Sur	ATH484	quartz vein	Sector Mula Tuorta, w=5mm, N12W, 70W dip, host rock: m sil, white clay, mixed layer or sericite?	GXF
Veladero Sur	ATH485	quartz vein	Sector Mula Tuorta, w=70cm, N15W, vertical, partly silicified vein	G
Veladero Sur (southern qz vein)	ASM410A	altered dacite	gray white, silicified, host of ASM410B	X
Veladero Sur (southern qz vein)	ASM410B	qz vein	70cm wd, N30W 55W, qz: clear, m-e.g., very little sulfides	G
Rio Frio				
Rio Frio	AKY395	silicified argillie rock	light grey colored moderately silicified and Kln argillie rock after dacitic tuff w/ chaledonic Qtz stockwork, Qtz-Kln veinlets	GX
Rio Frio	AKY396	siliceous rock	Jar Hem stained siliceous rock after tuff(?), supergene altered, Alu(?)-Cyp	GX
Rio Frio	AKY397	altered dacite	white patched pale grey colored Kln-Ser-Qtz argillie altered porphyritic dacite (Qtz bg, Bt-Hbl), float	X
Rio Frio	AKY398	silicified rock	highly silicified, small vug many w/ crystalline Qtz and minor S crystal in cluse	GF
Rio Frio	AKY399	silicified argillie rock	white to light grey colored silicified and moderately argillie altered rock after tuff breccia, Kln-Ser-Qtz argillie(?)	GX
Rio Frio	ASM414	limonite rock	massive limonite (red hematite) w/ qz fragment of <2mm	G
Rio Frio	ASM415	silicified tuff breccia	intensely silicified, light gray, ledge of 5m width, trending NW, pl leached cavity	G
Rio Frio	ASM416	silicified tuff breccia	intensely silicified, porous (tuffaceous clast leached), ledge extending N78W	GX

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Rio Frio	ASM417	altered dacite	phenocryst: qz-biot-pl, biot replaced sericite, silicification dominant, very few pyrite	XDT
Rio Frio	ATH494	silicified rock	fine grain part of pyroclastic rock? w=5cm, highly silicified	G
Rio Frio	ATH495	silicified rock	pyroclastics, M 'S sil, jarosite>gnetite stained	X
Rio Frio	ATH496	silicified vein	w=10cm, N40W, vertical, white colored phenocryst, kaolinite?	G
Rio Frio	ATH497	welded tuff	M sil, pumice and Pl phenocryst, white clay kaolinite?	X
Rio Frio	ATH498	quartz vein	float	G
Rio Frio	ATH499	silicified rock	highly silicified, original rock: welded tuff, transparent and tabular, triangle shape crystal: gypsum?	GX
Rio Frio	ATH500	silicified rock	Altitude 4810m, peak of altered mountain (yellow color) highly silicified.	G
Rio Frio	ATH501	welded tuff	peak of altered mountain (yellow color) M 'S sil, white clay kaolinite?	X
Rio Frio	ATH502	pyroclastic rock	exist between propylitic andesite, M sil, jarosite stained	X
Rio Frio	ATH503	quartz vein	exist in ATH502 pyroclastic rock, low temperature quartz, w=4cm	G
Rio Frio	ATH504	andesite	propylitic alteration, epidote and chlorite	X

Zancaron

Zancaron	AKY391	silicified argillie welded tuff	light grey colored weak silicified and white argillie altered rock after Qtz bg welded tuff w/ chaledonic Qtz veinlets	G
Zancaron	AKY392	welded tuff	light grey colored weak silicified altered welded tuff, w/ Py-Crs(?) diss. and chaledonic Qtz veinlet	GX
Zancaron	AKY393	Ena Qtz vein(?)	See stain, Ena in vug	G
Zancaron	AKY394	silicified rock	See stained silicified and siliceous rock, See in vug of siliceous portion	G
Zancaron	ASM411	silicified rock	densely limonitized, original texture unknown, qz veinlet, from old trench	G

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Zancaron	ASM412	qz vein (silica layer?)	curved occurrence, qz: clear to dark gray, fine to medium grained, very few sulfides, w/ highly silicified host rock (original texture unknown)	G
Zancaron	ASM413	silicified rock	dark gray, intensely silicified, fine grained py streaks, pl replaced compact porcelain kaolinite	G
Zancaron	ATH486	quartz alunite? vein	w/ km, N18E trend, same direction as fractures and ridge direction	GX
Zancaron	ATH487	silicified rock	highly silicified	G
Zancaron	ATH488	silicified with alunite rock	original rock: welded tuff, pumice and fd phenocryst changed to alunite (by pegmat)	XT
Zancaron	ATH489	alunite?	fine grained, white color, occurrence shows secondary like talus fine	X
Zancaron	ATH490	alunite vein?	vein like form alunite, coarse grain, pale green clay on the alunite? Smc or scorodite?	X
Zancaron	ATH491	energite	in vug of vuggy silica	
Zancaron	ATH492	alunite	massive alunite quartz rock, alunite grow as like cocarde texture around silicified breccia core.	XDPIS
Zancaron	ATH493	energite	energite with scorodite in vug of vuggy silica	GP
El Salado				
El Salado	ASM346	basemental ore	gn-sph-py-barite vein, fine grained, barite rich, from old adit	OP
El Salado	ASM347	altered apite dyke	dyke adjacent to ore, highly argillized, weakly cohesive, mafic unidentified, barite rich, from old adit	T
Mina El Salado	ATH383	ore	barite siderite? galena minor chalcopyrite, chlorargente in black minerals?	GP
Mina El Salado	ATH384	dike rock	andesitic dike, adjacent to the vein, pale green, mafic phenocrysts chlorite alt. fd albite alt?, propylitic alteration	WT
Mina El Salado	ATH385	ore	quartz, barite, black color minerals siderite?	F
Mina El Salado	ATH386	sphite dike	w=7.8m, white color mineral phenocryst, chloritized phenocryst, rarely Qtz phenocryst	T

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Las Opeñas				
Las Opeñas	AKY338	Qtz vein	2cm in width, non-equiaxial Qtz aggregation with Py dissemination around core portion, Hem or Hem-Gt stain	EF
Las Opeñas	ASM354	limonite-qz vein	core: gray, porous, intensely silicified; rim: jansite dominant limonite shell, hosted in silicified granite	O
Las Opeñas	ASM355	altered granite	host replaced by white mica, host of 354, originally qz-K-fd-pl-biot	DT
Las Opeñas	ATH398	quartz vein	with pyrite, arsenopyrite, secondary scorodite, N80E	GF
Las Opeñas	ATH399	quartz vein	Miranda vein, arsenopyrite, replacement? EW trend, scorodite.	GX
Las Opeñas	ATH400	muscovite granite	host rock of Las Opeñas vein system, S type granite?	WT
Las Opeñas West	AKY337	Qtz vein	2cm in width, comb texture and coarse grained crystalline, thick powder Hem after Py in core portion, Gt-Sp in places	GF
San Pedro	AKY336	silicified breccia	with Qtz veinlets, Ser(?) argillic	GX
San Pedro (larger)	ASM353A	qz vein	py diss, py: medium grained, qz: coarse grained, comb tex., from stockpile	O
San Pedro (larger)	ASM353B	altered dacite	light greenish, possibly sericite alt, weakly silicified, host of 353A, float	X
El Carrizal				
El Carrizal	SM25	vein	white clear coarse grained Qtz vein, 3cm in width, Em diss	O
El Carrizal	SM26	vein	white coarse grained Qtz-Cal vein, 3cm in width, Cpy diss	O
Cannon Norte				
Cannon Norte	AKY374	altered andesite	plac grey colored altered andesite, Mag rich	GXT
Cannon Norte	AKY375	siliceous breccia	weakly vuggy w/ native sulfur and chalcocite Qtz veinlets, float	G
Cannon Norte	AKY376	argillic andesite	grey colored argillic altered andesite or dacite, small Qtz as phenocryst, Al(OH) ₃ Kfs as supergene alteration mineral(?), very fine grained Py dissemination 3%, float	GX

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Carmen Norte	AKY377	altered andesite	dark grey colored least propylitic altered andesite, minor Py diss.	GT
Carmen Norte	AKY378	least altered andesite	weakly porphyritic, float	R
Carmen Norte	AKY379	altered andesite	light grey colored argillic and silicified altered Qtz hg andesite, Kln after Pl phenocryst, silicified groundmass	GX
Carmen Norte	AKY380a	Qtz vein	white colored massive Qtz vein w/ abundant tabular angular silicified clasts, N35E90, 60cm width, stockwork in silicified rock(?) w/ native sulfur	G
Carmen Norte	AKY380b	Qtz vein	N80E90, 0.5mm width, drive from AKY380a	GF
Carmen Norte	AKY380c	banded silica	banded or platy jointed silicified zone, 10cm width, contact with AKY380a	G
Carmen Norte	AKY381	argillic siliceous breccia	stringy argillic and weak silicified (siliceous) breccia w/ native sulfur, Gyp patch, the breccia zone strikes NS, dips vertical, 12cm width	GXR
Carmen Norte	AKY382a	Qtz veinlet	N25W20E, less than 1cm width, jar stained and weakly vuggy (leached), in AKY382b	GF
Carmen Norte	AKY382b	argillic rock	yellowish white colored argillic rock after andesite, jar stain, from beside AKY382a	X
Carmen Norte	AKY382c	altered andesite	white patched grey colored argillic altered Qtz hg 1Rd-Bt andesite (dacite?), Hem diss.	T
Carmen Norte	AKY383	silicified rock	weakly vuggy silicified rock with chalcedonic Qtz vein, sulfur in vug, float in ledge	G
Carmen Norte	ASM396	altered andesite	silicified, less continuous ledge extending NE, py diss, py m g.	G
Carmen Norte	ASM397	altered andesite	silicified, light gray, subtle py diss, clear qz aggregate (late stage, euhedral), biot replaced by sericite?	X
Carmen Norte	ASM398	silicified breccia	hydrothermally brecciated silicified rock, matrix cemented by limonite (jarosite dominant)	GX
Carmen Norte	ASM399	silicified rock	vuggy qz, ledge of 20m width, trending NE - NNE, dense limonite coating	GX
Carmen Norte	ASM400	altered andesite	light gray, weakly silicified, py diss, gypsum rich, very subtle limonite stain	GX
Carmen Norte	ASM401	silicified argillized rock	white to light gray, silica + kaolinite pervasive alteration, py diss	G

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Carmen Norte	ATH458	Ignimbrite	pale grayish-pale green color, w-sil py-disscon, pale greenish color is due to smectite?	GX
Carmen Norte	ATH459	silicified rock	s-sil, vuggy silica with alunite, Lupili tuff or dacite? Altitude: 4610m	GXT
Carmen Norte	ATH460	alunite vein	vein like form alunite in silicified ATH459 rock, w=5cm-40cm, coarse grain alunite, Altitude: 4670m	XDPIS
Carmen Norte	ATH461	silicified rock?	Altitude: 4680m, Qtz+alunite, forming ledge	GX
Carmen Norte	ATH462	native sulfur	float in vug of silicified rock, hypogene sulfur?	S
Carmen Norte	ATH463	silicified rock	Altitude: 4755m, forming ledge, N55W trend	G
Carmen Norte	ATH464	hydrothermal breccia	Altitude: 4800m, M sil, Py dissemination	GX
Carmen Norte	ATH465	silicified rock	Altitude: 4890m, bleaching, s-sil, Qtz-Alu alt, gypsum overprint, white color phenocryst altered to alunite, original rock: pyroclastics	GX
Carmen Norte	ATH466	quartz vein	In s sil rock, w=5cm, chalcedonic, N10W, 70S dip	G
Carmen Norte	ATH467	quartz vein	in s sil rock, w=2,3mm-1cm, chalcedonic, N23E, 74W dip, with pyrite	PF
Carmen Norte	ATH468	hydrothermal breccia	Altitude: 4950m, pipe form, jarosite stained, Qtz+Alu alt.	GX
Carmen Norte	ATH469	hydrothermal breccia	Altitude: 5010m, pipe form with chalcedonic veinlet, breccia dacitic rock	GXT
Carmen Norte	ATH470	hydrothermal breccia	Altitude: 5100m, near peak s sil with chalcedonic Qtz veinlet, Qtz partly black colored, due to very fine sulfite? opalline crack	GX
Carmen Norte	ATH471	pyroclastic rock	Altitude: 5120m peak of Carmen Norte, pyroclastic flow? w sil, partly chalcedonic silicification and breccia included	G
Contrada de Chita				
Chita	ATH377	quartz-sericite+Py altered rock	Qtz veinlet stockwork, green Cu minerals stained, "D vein" stockwork zone, original rock: porphyry or andesite?	DT
Chita (Au old adit Au)	ASM342	qz vein	qz: medium to coarse grained, asp diss., N70W 70N, from old adit	GXF
Chita (porphyry)	ASM341	altered dacite	white to light greenish, sericite sample for dating	

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
near Chita	ATH378	quartz vein	float. Py dissemination. Barite crystals vein trend N75W in Trocta Granodiorite	GF
Quebrada de Chita	KY14	monzonite porphyry	float of Cu oxidized stained monzonite porphyry, secondary Bt and Qtz copper oxidized veinlet occur	R
Quebrada de Chita	KY15	argillie altered breccia	white argillie altered breccia, supergene Alu occur	X
Quebrada de Chita	KY16	siliceous argillie rock	white siliceous argillie rock w/ Qtz veinlet, brecciation in part	GX
Quebrada de Chita	KY17	monzonite porphyry	fine grained, white colored, secondary(?) Bt appears	R
Quebrada de Chita	KY18	monzonite porphyry	white argillie altered monzonite porphyry w/ very few Cu oxidized stain in fracture or Qtz stockwork less than 1cm in width and 2 to 20cm in spacing	R
Quebrada de Chita	KY19	monzonite porphyry	white argillie-siliceous altered monzonite porphyry w/ Qtz veinlet, Ser argillie(?)	GX
Quebrada de Chita	KY20	monzonite porphyry	pale white argillie altered monzonite porphyry w/ Qtz (from Py) discs, most likely supergene overprinted in Qtz-Sericite argillie	GX
Quebrada de Chita	KY21	Qtz-Silica vein	coarse grained clear to smoky white, 8 to 30cm in width, N65E in strike and 85NW in dip, formed in monzonite porphyry as part of Qtz stockwork	G
Quebrada de Chita	SM17	vein	dark grey Qtz vein, 7cm in width, w/ green Cu disc	O
Quebrada de Chita	SM18	altered monzonite	Ironitized, silicified-(Ser) argillie altered monzonite, green Cu disc	OX
Quebrada de Chita	SM19	altered monzonite	Silicified-Ser monzonite, green Cu disc	OX
Quebrada de Chita	SM20	altered monzonite	Silicified-Ser monzonite, green Cu disc	OX
Quebrada de Chita	SM21	altered monzonite	Silicified-Ser monzonite, leached	O
Quebrada de Chita	SM22	altered sandstone	Intensely silicified grey sandstone	O
Quebrada de Chita	SM23	altered rhyolite	argillie (Ser) rhyolite, w/o sulfides	O
Quebrada de Chita	SM24	altered monzonite	silicified Ser monzonite, leached	O

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Quebrada de Chita	TH25	Qtz-Pi porphyry	potassic alteration, hydrothermal Bt, indigenous Hem form Cc	O
Quebrada de Chita	TH26	Qtz-Pi porphyry	Qtz-Ser alteration overprinted potassic alteration, indigenous Hem	G
Quebrada de Chita	TH27	granodiorite	equigranular homogeneous, secondary Bt, potassic alteration	OX
Quebrada de Chita	TH28	green Cu vein	2 to 3cm in width, green Cu (Ma-Crs?) Qtz vein	O
Quebrada de Chita	TH29	Qtz-Pi porphyry	Qtz veinlet network, green Cu, Qtz-Ser alteration	GX
Quebrada de Chita	TH30	Qtz-Pi porphyry	Qtz veinlet network, leached zone, Qtz-Ser alteration	G
Quebrada de Chita	TH31	Qtz-Pi porphyry	Qtz veinlet network, green Cu, Py relict	O
Quebrada de Chita	TH32	Qtz-Pi porphyry	silicification, indigenous Hem dissemination, green Cu mineralization, Qtz-Ser alteration	O
Quebrada de Chita	TH33	Qtz-Pi porphyry	green Cu mineralization, Qtz-Ser alteration	O
Quebrada de Chita	TH34	breccia	bank shaped breccia, Qtz-Ser alteration, silicification, white colored	G
Quebrada de Chita	TH35	porphyry?	white colored, green Cu mineralization, indigenous Hem.	G
Quebrada de Chita	TH36	porphyry?	white colored, Qtz-Ser alteration	GT

Trocota District

2.5km W of Dos Amigos	ATH373	breccia ore	Qtz breccia, matrix consists of fine arsenopyrite+tourmaline?	G
2.5km W of Dos Amigos	ATH374	hydrothermal breccia	Qtz breccia, matrix consists of tourmaline	G
2.5km W of Dos Amigos	ATH375	tourmaline+quartz vein	with arsenopyrite, N25W trend, secondary scorodite	G
2.5km W of Dos Amigos	ATH376	ore	tourmaline+arsenopyrite vein, w=2-3cm, N50W trend, white-pale green halo, white ?sericite? pale green ?scorodite?	GP
Cobocoto	AKY333	silicified rock	N40W70SE, brecciated highly silicified rock, Gt stain and veinlets, silicified fragments after sandstone, medium grained hypogene Alu(?)	GX

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Colocolo	AKY332	silicified rock	preserved Py (or other sulfides) are visible	G
Des Amigos	ATH371	quartz vein	with oxide Cu minerals stained. EW trend w=3.5cm.	F
Des Amigos	ATH372	tourmaline vein	float. tourmaline vein has quartz-rich halo K-feldspar halo	P
Kirner	AKY333	andesite porphyry	fine grained Bt in groundmass, due to contact metamorphism or K-silicate alteration, Apy discs.	OPR
Mina Colocolo, Toota	ATH358	kaolinite vein	w=1cm. in Tertiary ignimbrite. veins have iron stained halo. supergene kaolinite?	X
Mina Colocolo, Toota	ATH359	tourmaline vein	float. tourmaline vein w=1.5cm. vein has pinkish reddish feldspar halo K-feldspar?	T
Mina Colocolo, Toota	ATH360	tourmaline rock	float. massive tourmaline rock. radial texture	
Mina Colocolo, Toota	ATH361	ore	tourmaline with arsenopyrite and scorodite. scorodite is supergene products of arsenopyrite. with quartz vein	GPF
Mina Colocolo, Toota	ATH362	sandstone	host rock of ATH361. alunite alteration or sericite?	XDI
Mina Colocolo, Toota	ATH363	andesitic - dacitic volcanics	white color. weak flow banding. glassy. phenocryst Pl, Bt, BtM, Mt. tourmaline rock inclusions.	T
Mina Colocolo, Toota	ATH364	granodiorite	Toota granodiorite. fine to medium grained. Bt granodiorite	WT
Mina Kirner, Toota	ATH365	gangue minerals	float. K-feldspar, scorodite, quartz	ATF
Mina Kirner, Toota	ATH366	ore	outcrop to old adit. tourmaline + quartz with arsenopyrite	X
Mina Kirner, Toota	ATH367	siltstone hornfels	host rock of tourmaline + quartz vein. has been contact metamorphosed.	T
Mina Kirner, Toota	ATH368	silicified hornfels	silicified rock of ATH367	XT
Mina Kirner, Toota	ATH369	andesite	intrude into ATH367, 368 rocks. has also been contact meta. matrix fine Bt. Pl. bluish gray color minerals.	T
Mina Kirner, Toota	ATH370	andesite	same rock of ATH369. at the crack. micropegmatite (Kfs/Bt) vein	

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Toota (Colocolo)	ASM335	hydrothermal breccia	ledge elongated N60W, densely silicified and brecciated sandstone, qz: gray to dark gray, silica fragment includes subtle asp	GX
Toota (Colocolo)	ASM336	sandstone	gray white, massive, including tourmaline, qz veinlet	GX
Toota (Colocolo)	ASM337	As - Au ore	tourmaline-qz-asp vein, very fine grained powdery sulfides (probably asp), black, taken from old adit	GXT
Toota (Colocolo)	ASM338	granodiorite	including tourmaline veinlet with pinkish selvage	T
Toota (Kirner)	ASM339	As - Au ore	altered sandstone with secondary tour-qz-K-feld assembl., malachite-crysocolla selectively disseminated in tour enriched part, from ore stock pile	GXT
Toota (no name)	ASM340	hydrothermal breccia	smallish ledge, silicified sandstone w/ tour disc, sulfides disc (py dominant), from old trench	GX
San Francisco				
San Francisco	KY07	breccia pipe	float of Tour-Qtz vein	O
San Francisco	SM13	Cu oxide ore	Cu oxide ore	O
San Francisco	TH19	breccia pipe	brecciation, breccia is silicified host rock of sedimentary rock, matrix is To-Qtz	R
San Francisco	TH20	oxide copper ore	Ma-Crs-Azu	R
El Retamal				
El Retamal	KY08	Cu-oxide mineralized granodiorite	medium grained granodiorite w/ (Cpy?) Py-disc and Cu-oxide stain, Qtz- or Py-Qtz veinlet occur	R
El Retamal	KY09	silicified sandstone	grey colored medium silicified very fine grained sandstone w/ minor Py-disc and To? clay patch	G
El Retamal	KY10	silicified breccia	silicified of breccia Sora in width contains silicified sandstone as fragment, very minor Py-disc	G
El Retamal	KY11	Qtz-porphyry	white colored medium argillie-weak silicified (Qtz-Sor argillie?) Qtz porphyry w/ supergene alteration overprinted, minor Qtz veinlet occurs	X
El Retamal	KY12	argillie porphyry to granodiorite	very weak pale grey argillie altered (Sor?) Pl porphyry to granodiorite	GX
El Retamal	KY13	granodiorite	compact medium grained least altered granodiorite, same as KY12	GT

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
El Retamal	SM14	silicified rock	Qtz-Ser altered brecciated rock	OX
El Retamal	SM15	silicified rock	Qtz-Py-Ser altered silt stone	OX
El Retamal	TH21	granodiorite	oxide copper (Ma?) halo, w/ Py-Cp? Dissemination, Qtz vein network (2mm in width)	G
El Retamal	TH22	dike	fine grained micro diorite, least alteration, post mineralization?, N30W trend	DT
El Retamal	TH23	Bt-Pi porphyry	Bt-Pi phenocryst, Py dissemination in matrix, intrude into granodiorite?	GT
Viscachas				
Viscachas	ATH325	silicified rock	white color, highly silicified, Py dissemination, original rock rhyolite	GXF
Viscachas	ATH326	rhyolite	magnetite clots dissemination, propylitic alteration? or K silicate alteration? float	F
Viscachas	ATH327	brecciated quartz vein	in rhyolite (propylitic alteration?), float	G
Viscachas	ATH328	magnetite veinlet in rhyolite	w=4mm, fine grained magnetite veinlet in K-silicate alt. or propylitic alt.	G
Viscachas	AKY311	silicified rock	light grey colored, Ser-Qtz veinlets with fine grained-Mag halo, Qtz-Kfs-Mag veinlet with alteration halo and Qtz-Mag patch with Kfs halo	GP
Viscachas	ASM335B	alt. rhy	silt. rhy., subtle py (leached out)	GX
Castano Viejo District				
Animas	ASM309	alt. dc.	mafic out, tourmaline rich	GXT
Animas	ASM310	alt. bc. dc.	gray white, intensely sil., py dis, qz veinlet of 0.5mm	GX
Castano Viejo	ATH310	quartz vein	w=1-15cm, vein zone w=50cm, high temperature quartz, adjacent to vein is sericite alteration.	GF
Condor	ASM307	basement ore	qz-py-sph-gn vein at old pit, sph: greenish transparent	OP
Mina Animas	ATH312	quartz silicified vein	brecciation, highly silicified and quartz vein zone w=2m, direction EW	G

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Mina Animas	ATH313	greenish gypsum?+Qtz vein	greenish color vein (gypsum?) + quartz vein	GX
Mina Animas	ATH314	quartz vein	almost 50cm above ATH313, brecciation, highly silicified, epithermal vein? direction N75-80W.	GF
Mina Animas	ATH315	intrusive rock	fine grained, Pl altered to sericite or mixed layer clay, fine grained tourmaline disseminated.	XDI
Mina Toro	ATH311	sphalerite, galena ore	brecciated sphalerite and galena in quartz vein, the color of Sp is greenish.	
San Nicholas	ASM308	basement ore	qz-cop-gs-sph vein at ore stockpile	OP
Cuatro Amigos				
Cuatro amigos	AKY307	silicified breccia	Sp-Gn fragments, Py-Qtz veinlets	O
Cuatro amigos	AKY308a	brecciated ore	Qtz-Py-Sp-Gn vein clasts in Calcite matrix with Ge-Qtz comb rim, rim portion	PF
Cuatro amigos	AKY308b	brecciated ore	Qtz-Py-Sp-Gn vein clasts in Calcite matrix with Ge-Qtz comb rim, clasts portion	F
Cuatro Amigos	ASM311	basement ore	qz-cop-gs-sph vein, sph: light brown	P
Cuatro Amigos	ATH316	sphalerite, galena ore	sphalerite->galena, chalcopyrite, Qtz high temperature quartz.	PF
Cuatro Amigos	ATH317	quartz vein with sphalerite	about 30-50m above the ATH316, vein trend N80W	O
Avestruces				
Avestruces	ATH329	silicified rock	highly silicified, original rock: dacite, white clay kaolinite?	GX
Avestruces	ATH330	silicified rock	highly silicified, veinlike form, N12E trend	G
Avestruces	ATH331	silicified-argillized rock	original rock dacite, Pl "white clay, kaolinite"	XT
Avestruces	ATH332	silicified argillized rock	Pl phenocryst "white colored clay: kaolinite or alunite?"	GX
Avestruces	ATH333	silicified rock	chaquedonic quartz: opaline crack	

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Avestruces	ATH331	alunite vein	along the face of crack, white color, supergene alunite?	X
Avestruces	ATH333	silicified rock	along structure of andesite, highly silicified layer w/30cm, white clay kaolinite	G
Avestruces	ATH336	quartz vein	Qtz veinlet stockwork, Qtz veinlet w/0.5-3cm, in M silicified basaltic altered rock	GF
Avestruces	ATH337	silicified rock	M-S silicified, Pl kaolinite or alunite?	GX
Avestruces	ATH338	silicified rock	original rock: andesitic pyroclastics, Py dissemination	G
Avestruces	ATH341	silicified rock	highly silicified, original rock: lapilli tuff, tuff breccia, white clay, sericite?	GX
Avestruces	ATH342	silicified rock	M sil, original rock: rhyolite? flow banding, white clay, sericite	GAT
Avestruces	ATH343	silicified rock	original rock: dacitic, andesitic? Pl altered to sericite, jarosite stained	GXD
Avestruces	ATH344	andesite	Intrusives? one of the host rocks of Avestruces alt. zone, Hbl andesite, dacite, Hbl fresh, inclusions of dacite.	WDT
Avestruces (south)	ASM322	silicified rock	ledge, white, intensely silicified, original texture vague but probably lava origin	GX
Avestruces (south)	ASM323	densely silicified rock	ledge, massive silica, qz: white-clear-dark gray: chabazitic, fine grained py diss.	G
Avestruces (south)	ASM324	argillized rock	depression of ledge, pervasive kaolinite alteration, originally sericite (?), original texture vague	GX
Avestruces (south)	ASM325	silicified argillized rock	ledge, silica enriched equivalent of ASM324, white to light gray	GX
Avestruces-north	AKY312a	argillie rock	light grey colored weak silicified moderately argillie rock with Kln patch after phenocryst of porphyritic andesite	GX
Avestruces-north	AKY312b	Qtz vein	N70E82N, N50W50N, N55W83N, 2cm in width, drusy in places, within AKY312a	GF
Avestruces-north	AKY313	silicified rock	highly silicified rock, compact	GT
Avestruces-north	AKY314	argillie rock	pale light grey colored argillie rock after tuff(?)	GX

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Avestruces-north	AKY315a	silicified argillie rock	light grey colored, after porphyritic andesite	X
Avestruces-north	AKY315b	silica vein	N37E72S, 1 to 2cm in width, within AKY315a	G
Avestruces-north	AKY316	argillie rock	greyish white colored argillie rock after porphyritic andesite, strike extension area for AKY312 vein zone	GX
Avestruces-south	AKY317	silicified rock	strongly silicified rock, Hem(?) veinlet network	GP
Avestruces-south	AKY318	silicified rock	fine grained white clay (Alu?) patch, due to supergene?	X
Avestruces-south	AKY319	porphyritic andesite	porphyritic andesite, porphyritic altered, Hbl as phenocryst relict	T
Avestruces-south	AKY320	argillie silicified rock	light grey colored argillie silicified rock after porphyritic andesite, Kln patch after phenocryst, preserved Py(?) diss.	GX
Avestruces	ASM316	alt. dc	intensely sil., white, py diss (leached out)	GX
Avestruces	ASM317	alt. ab	silicified ledge surrounded by less silicified andesite tuff breccia, originally qz-ser alt (prob), supergene kaolinite, py diss (leached out)	GX
Avestruces	ASM318	altered andesite	sil. arg. (kaol, ser), gray white	GX
Avestruces	ASM319	silicified rock	ledge, py leached out	GX
Avestruces	ASM320	altered andesite	weak - moderately silicified, py in sil. part, partly kaolinitized	GX
Avestruces	ASM321	silicified argillized rock	ledge, possibly andesite, but replaced by ser	XDT
near Avestruces	ATH339	dioritic intrusion	fine-medium grained, porphyritic alteration, Pl "pinkish color albite" Hbl "chlorite"	T
near Avestruces	ATH340	quartz vein	brecciation, exist around the contact between Chojoi andesite and ATH339 dioritic intrusion, w/20-40cm vein zone w/Im, N10W, vertical dipping.	GF
near Avestruces	ATH345	monzonitic	Bt-Hbl monzonite, Pl=Kfs>Qtz, intrude into Chojoi andesite	WDT
Manrique				
Manrique	AKY321a	argillie rock	Kln-Ser(?) argillie altered andesite tuff breccia	X

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Manrique	AKY321b	silica ltn vein	N70E90, less than 1cm in width, within AKY321a	G
Manrique	AKY322	silica vein	N00E90, 3cm in width, white colored angular fragments in dark grey colored matrix, strike extension area for AKY321b	G
Manrique	AKY323	silica vein	N74E70S, 4cm in width, grey colored	G
Manrique	AKY324a	argillic rock	greyish white colored argillic rock after andesite or tuff	X
Manrique	AKY324b	Qtz silica ltn vein	N40W55NE, 6cm in width, very minor diss. of Py, Qtz crystal in rim portion	GF
Manrique	AKY325	Qtz ltn vein	N22E76W, 5 to 8cm in width, white and grey banding, within altered andesite(?) near dacite intrusive body	GF
Manrique	AKY326	argillic rock	white colored weak porous, limonitic network	X
Manrique	AKY327	Qtz-Gt vein	N10E90, 1.5cm in width, within white argillic andesitic tuff breccia	G
Manrique	AKY328	silicified breccia	highly silicified and brecciate portion within white argillic rock after andesite(?), no preferred orientation	GX
Manrique	AKY329	silica vein	N6SE90, 4cm in width, ltn stained, along with fault	G
Manrique	AKY330	greenish clay(?) mineral	Kln? within AKY328	X
Manrique	ASM326	altered dacite	silicified and argillized, greenish clay, pyrite pseudomorph (cavity) after leach	GX
Manrique	ASM327	silicified argillized rock	qtz kaolinite-alunite alteration, alu-kaol supergene?, originally sericite?	GX
Manrique	ASM328	rhynolite dyke	slightly silicified?, 3cm wd., N55W 60S, py leached cavity	G
Manrique	ASM329A	altered andesite	argillized, silicified, kaolinite rich	GX
Manrique	ASM329B	qtz vein	dark gray to black, N50W 90, parallel to elongation of Manrique sh, 5mm wd, qz medium grained	GF
Manrique	ASM330	altered dacite	light greenish, qz-pl-biot, biot replaced by white mica	XDT

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Manrique	ASM331	qtz vein	gray to dark gray banding, 2.5cm wd., N80E 90, pyrite diss (remaining)	G
Manrique	ATH346	volcaniclastics	Choiyoi group, one of the host rock of Manrique alteration, propylitic alteration	T
Manrique	ATH347	volcaniclastics	sericite alteration? Pl remain as albite?	X
Manrique	ATH348	silicified rock	w=15-30cm, N30E, brecciation, sericite alteration	GX
Manrique	ATH349	quartz vein	w=2-10cm, N85W, N55W, limonite stained, quartz is chalcodonic?	GF
Manrique	ATH350	quartz vein	w=2-3mm, coarse grained quartz, high temperature?	GF
Manrique	ATH351	dacite	intrusive? host rock of Qtz veinlet stockwork, Pl - pinkish color alunite or albite?	GX
Manrique	ATH352	quartz vein	w=2-3cm, N60W, N80W, kaolinite alteration	GX
Manrique	ATH353	dacite	host rock of Qtz veinlet stockwork, intrusive	X
Manrique	ATH354	dacite	sericite alteration, Qtz phenocryst remain, Bt altered to sericite, jarosite stained	XDT
Manrique	ATH355	hydrothermal breccia vein	many clastics are included, w=10cm, EW trend, vertical, jarosite stained	G
Manrique	ATH356	rhynolite	silicified, kaolinite alteration, flow banding	GXT
Manrique	ATH357	welded tuff	weak silicified, white colored clastic, kaolinites smectite alteration?	GX
Manrique (north)	ASM332	altered dacite	white to light green, qz-ser (py) sh., py leached out	GX
Manrique (north)	ASM333	altered limestone	densely silicified rock, carbonates replaced by silica totally, py leached out, N70E 15N,	G
Manrique (north)	ASM334	altered limestone	densely silicified rock, carbonates replaced by silica totally, py leached out, N20E 45N, qz veinlet of 2mm wd.	G
Casiano Nuevo				
Casiano Nuevo	SM16	altered diorite (?)	silicified acidic to intermediate pluton w/ Py diss	OXT

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Eastern Andes Area sample list (Phase I and Phase II)

Survey Area / Locality	sample	rock type	description	analyses
Castano Nueva	TH24	silicified rock	Qtz-Azu alteration, original rock: granodiorite, Py dissemination, high sulfidation style mineralization	GX
Leoncito				
Leoncito	KY34	argillic dacite	weak argillic dacite, purplish grey colored ground mass and pale grey clay as phenocryst from Pl	GX
Leoncito	TH90	welded tuff	dacite welded tuff, 1 to 3cm indiameter pumiceous fragment, weak eutaxitic texture	T
Leoncito	TH91	monodiorite	Hbl- partly chloritized, partly yellowish-white color altered	WDT
Leoncito	TH92	dacite	weak argillic, white to yellowish brown colored, Kln alt?, weak to medium silicified	GXT
Leoncito	TH93	altered welded tuff	white color altered, Kln-Sms?, 1m in crack, 20m in width of alteration zone	GX
Leoncito	TH94	monodiorite?	Hbl-fresh, partly Pl-phitic porphyry texture, same as TH91	WDT
Alcaparosa				
Alcaparosa	KY06	meta-sandstone (hornfels)	very weak reddish dark grey colored altered meta sandstone, Py disc, w/ Qtz vein w/ Chl-Bt halo 2mm, 1.5mm in width, near contact with porphyry	GT
Alcaparosa	SM12	mineralized dacite porphyry	Qtz-Pl-Hbl-Bt dacite w/ Cp-Py dissemination	P
Alcaparosa	TH17	dacite porphyry	light grey color, Pl-phitic, Bt phenocryst, Py dissemination	T
Alcaparosa	TH18	basalt	host rock of TH17, dark green colored, porphyritic alteration, Py dissemination	R
San Jorge				
San Jorge	SM16	dacite porphyry	Qtz-porphyry, Tor-Kfs-Ser alteration, original potassic(?) alteration	OXT
San Jorge	SM47	sandstone (ore)	silicified arenitic sandstone w/ green Cu-dissemination	O
San Jorge	TH26	sandstone	silicified, contain Qtz-veinlet, Qtz-vein has alteration halo	T
San Jorge	TH77	breccia	Tor-breccia, 50cm to 1m in width, Qtz-vein cut the breccia, green-Cu stain	OP

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Eastern Andes Area sample list (Phase I and Phase II)

Survey Area / Locality	sample	rock type	description	analyses
San Jorge	TH78	porphyry	Qtz-veinlet does not alteration halo, contain Tor-Qtz-vein, 1mm to 5cm in width, green-Cu	T
San Jorge	TH79	porphyry	Bt-primary?	GWDT
Yalguaraz				
Yalguaraz	KY46	granite porphyry	pale grey Bt-Qtz-granite porphyry w/ Cp disseminate 0.5% vol	O
Yalguaraz	KY47	granite porphyry	pale grey Bt-Qtz-granite porphyry w/ Mn-Cp-Qtz-veinlets	R
Yalguaraz	KY48	silicified breccia	grey colored strong silicified breccia w/ Apy-Tor, leached Py and Jar stain	O
Yalguaraz	KY49	silicified sandstone	white colored strong silicified massive sandstone, same as fragment of breccia of KY48	R
Yalguaraz	SM48	dacite porphyry ore	Qtz-porphyry w/ Py-Cp dissemination and Qtz-veinlet	OMP
Yalguaraz	SM49	Tor-breccia	Tor-breccia w/ Qtz-vein-class, Apy-Py(=Po?) dissemination	OP
Yalguaraz	TH80	sandstone	contain Qtz-veinlet-network, Qtz-veinlet does not have alteration halo	T
Yalguaraz	TH81	porphyry	dike into silicified sediments, Bt-primary?	WDT
Yalguaraz	TH82	sediments?	brecciation zone, strong silicified, Py-Po dissemination	P
Yalguaraz	TH83	Qtz vein	in brecciation zone, 3 to 6cm in width, N12W33E, coarse grained Qtz, Jar-stain, Tor	O
Yalguaraz	TH84	porphyry	dike, matrix least altered, Pl-Bt-phitic, groundmass stage fine grained Bt	WDT
Yalguaraz	TH85	diorite	fine grained, Hbl->Chl, partly Ep altered, propylitic alteration	WT
Yalguaraz	TH86	diorite/porphyry	contact showing between Bt porphyry and Hbl diorite	R
Paramillos Sur				
Paramillos Sur	SM58	altered sandstone	sericitized silicified arenite	XT

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Paramillos Sur	SM59	silicified andesite	silicified andesite w/ Qtz-Lm veinlet up to 2mm in width	O
Paramillos Sur	SM60	silicified sandstone	intens silicified arenite w/ Qtz veinlet	T
Paramillos Sur	SM61	silicified andesite	intens silicified andesite w/ Qtz veinlet 5mm in width	TF
Paramillos Sur	SM63	silicified sandstone ore	intens silicified arenite w/ Qtz veinlet, Crs stain	TF
Paramillos Sur	TH110	Ge-vein	boxwork texture	R
Paramillos Sur	TH111	Ge-vein	white color ah, Qtz-Ser ah? Au exist?	X
Paramillos Sur	TH112	Qtz veinlet	2cm in width, host-rock: strong silicified porphyry, coarse-grained Qtz w/ Ge	F
Paramillos Sur	TH113	sediments	contains many Qtz-veinlets, medium silicified	GXT
Paramillos Sur	TH114	porphyry	contact with TH113 sediments, Pl-pbyrite, mafic: Hbl? Qtz veinlet	T
Paramillos Norte				
Paramillos Norte	SM56	dacite porphyry ore	dacite(?) w/ green-Cu dissemination along Qtz-Lm veinlet	O
Paramillos Norte	SM57	breccia chimney	angular dacite(?) fragment cemented by fine grained Hem	OP
Paramillos Norte	TH100	andesite dyke	black color, no alteration, post-mineral dyke?, N62W, very fine grained secondary-Ba	R
Paramillos Norte	TH101	porphyry	medium-silicified, very fine grained black minerals (Hem) disseminated	F
Paramillos Norte	TH102	Sp-Qtz vein	N85W in strike, 80S in dip	G
Paramillos Norte	TH107	hydrothermal breccia	a part of matrix of hydrothermal breccia, Mag->Hem	P
Paramillos Norte	TH95	monzonite	fine grained, dark grey colored, fine grained secondary-Ba, many Mag	DT
Paramillos Norte	TH96	monzonite?	light grey colored, mafic: Hbl->Chl-Ep ah, propyritic ah	T

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Paramillos Norte	TH97	sandstone	benfels, fine grained Ba, Ep	T
Paramillos Norte	TH98	tuff breccia	white to yellowish colored alteration, strong silicified, Jar stain	G
Paramillos Norte	TH99	lapilli tuff	weak to medium silicified-argillized, very fine black cubic minerals disseminated (scrack Hem), Jar-stain	GXP
Paramillos Centro				
Paramillos Centro	KY61	diorite	medium grained diorite w/ Mag-Chl veinlets	GWT
Paramillos Centro	SM63	altered breccia	Chl-Ser breccia cemented by Qtz-Lm, clasts are Qtz-diorite?	O
Paramillos Centro	TH115	andesite porphyry?	Ge-enating, Hbl->Chl altered	GX
Paramillos Centro	TH116	Ge-vein	fluvial	G
Paramillos Centro	TH117	Qtz-diorite	top of the hill, breccia in brecciation zone, mafic: Hbl->partly Chl, same as TH115	R
Paramillos Centro	TH118	Chl? Mag-matrix	matrix of the brecciation zone, fibrous green colored mineral (possibly Chl)-Mag	XT
Grupo Oro del Sur				
Grupo Oro del Sur	KY62	mudstone	strong silicified mudstone w/ Qtz-Silica stockwork	O
Grupo Oro del Sur	KY63	limonite ore	limonite ore w/ Lm-Qtz-veinlets	O
Grupo Oro del Sur	KY64	Qtz-Lm vein (ore)	Qtz<<Lm vein (ore), 4cm in width	O
Grupo Oro del Sur	KY65	Lm-Qtz vein (ore)	Qtz vein w/ Lm showing in rim, 4.5cm in width	O
Grupo Oro del Sur	SM64	brecciated sandstone	brecciated arenite cemented by Qtz-Lm Mag	O
Grupo Oro del Sur	SM65	brecciated sandstone	brecciated arenite cemented by white Qtz	O
Grupo Oro del Sur	TH119	porphyry	Hbl: few, Bt: primary? Pl-Kln-ah? Qtz-veinlet	GT

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Grupo Oro del Sur	TH130	porphyry	strong silicified, many Qtz veinlets, very fine grained black minerals (Horn) disseminated	R
La Negrita				
La Negrita	KY42	andesitic porphyry	weak greenish colored Mag-Bt-hg-Hbl-Pt porphyry, mafic change into Chls>Fp	Gf
La Negrita	KY43	andesitic porphyry	reddish colored altered aphyric andesite porphyry in rim of KY42 or as possibly dke	Gf
La Negrita	SM42	Fe-Mn-oxide vein	Fe-Mn oxide vein, 50cm in width w/ Qtz veinlet in andesite	O
La Negrita	SM43	serpentinite	sheared serpentinite, light green	T
La Negrita	SM44	Fe-Mn-oxide vein	Fe-Mn oxide vein, 50cm in width w/ Qtz veinlet in andesite	O
La Negrita	TH108	Qtz-Sp-On-vein	2cm in width, On is in the central of Qtz, Sp is in the both side of Qtz	F
La Negrita	TH109	Sp-On-associated vein		R
La Negrita	TH64	carbonate-Ge-vein	Cal-Sd(?) Ge-vein, green-Cu, Mn-oxide?	OX
La Negrita	TH65	carbonate-Ge-vein	Sd-Ge-vein, green-Cu	F
La Negrita	TH66	carbonate-Ge-vein	Sd-Ge-vein	F
La Negrita	TH67	porphyry	Hbl-Pt-aphytic porphyry, Mag	WDT
La Negrita	TH68	limestone	recrystallized, Cal-vein, Lm-stain	G
La Negrita	TH69	porphyry	adjacent to the carbonate-Ge-vein, secondary-Bt?	T
La Negrita	TH70	serpentinite		R
San Benicio				
San Benicio	KY44	siliceous rock	white colored siliceous rock as leached granite porphyry w/ Qtz veinlets	GXF

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
San Benicio	KY45	silicified granite porphyry	whitish light grey colored silicified granite porphyry w/ Ep, minor Mag, Qtz-veinlets showing	GX
San Benicio	KY56	granite porphyry	moderate silicified granite porphyry w/ white Qtz-network	O
San Benicio	KY57	granite porphyry	white colored weakly leached granite porphyry w/ Hln-Ge stain I small vugg and Jar stain in fracture surface	G
San Benicio	KY58	leached breccia	leached breccia zone (N28E76W) w/ minor green-Cu, silicified breccia rim	GX
San Benicio	SB01			G
San Benicio	SB02			GX
San Benicio	SB03			O
San Benicio	SB04			GX
San Benicio	SB05			GX
San Benicio	SB06			GWDT
San Benicio	SB07			G
San Benicio	SB08			G
San Benicio	SB09			GX
San Benicio	SB10			GX
San Benicio	SB11			G
San Benicio	SB12			T
San Benicio	SB13			G

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
San Benicio	SB14			GF
San Benicio	SB15			G
San Benicio	SB16			G
San Benicio	SB17			G
San Benicio	SB18			G
San Benicio	SB19			G
San Benicio	SB20			O
San Benicio	SB21			G
San Benicio	SB22			WDT
San Benicio	SB23			X
San Benicio	SB24			GX
San Benicio	SB25			GX
San Benicio	SB26			G
San Benicio	SB27			G
San Benicio	SB28			GT
San Benicio	SB29			GX
San Benicio	SB30			WT

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
San Benicio	SB31			G
San Benicio	SB32			GX
San Benicio	SB33			GX
San Benicio	SB34			G
San Benicio	SM45	silicified dacite	silicified dacite lava w/ clear coarse grained Qtz-veinlet	O
San Benicio	SM55	silicified dacite	silicified dacite w/ Qtz-veinlet, similar to SM45	G
San Benicio	TH71	porphyry?	strong silicified, Jar-stain, Qtz-veinlet network, green-Cu-stain	GT
San Benicio	TH72	Qtz vein	coarse grained, high temperature Qtz, flat	G
San Benicio	TH73	Qtz vein	in breccia zone, more or less 10cm in width, irregular, high temperature Qtz	GF
San Benicio	TH74	Qtz vein	in silicified sediments	G
San Benicio	TH75	andesite dyke	white colored alteration, 30m in width, in silicified sediments	GT
Pampa Fria				
Pampa Fria	KY40	silicified rock	moderately silicified rock (probably shall) w/ crystalline Qtz vein or -spot and Crs stain	R
Pampa Fria	KY41	silicified breccia	moderately silicified breccia w/ Qtz-veinlet and green-Cu stain, NSE90	O
Pampa Fria	KY55	sandstone	dark grey silicified sandstone w/ very few amount of Py and Crs in place	O
Pampa Fria	PF-A1	composite sample		O
Pampa Fria	PF-A2	composite sample		O
Pampa Fria	PF-A3	composite sample		O

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Pampa Fria	PF-A1	composite sample		0
Pampa Fria	PF-B1	composite sample		0
Pampa Fria	PF-B2	composite sample		0
Pampa Fria	PF-B3	composite sample		0
Pampa Fria	PF-B4	composite sample		0
Pampa Fria	PF-B5	composite sample		0
Pampa Fria	PF-B6	composite sample		0
Pampa Fria	PF-C2	composite sample		0
Pampa Fria	PF-C3	composite sample		0
Pampa Fria	PF-C4	composite sample		0
Pampa Fria	PF-D1	composite sample		0
Pampa Fria	PF-D2	composite sample		0
Pampa Fria	PF-D3	composite sample		0
Pampa Fria	PF-D4	composite sample		0
Pampa Fria	PF-E1	composite sample		0
Pampa Fria	PF-E10	composite sample		0
Pampa Fria	PF-E2	composite sample		0

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Pampa Fria	PF-E3	composite sample		0
Pampa Fria	PF-E35	composite sample		0
Pampa Fria	PF-E4	composite sample		0
Pampa Fria	PF-E5	composite sample		0
Pampa Fria	PF-E6	composite sample		0
Pampa Fria	PF-E7	composite sample		0
Pampa Fria	PF-E8	composite sample		0
Pampa Fria	PF-E9	composite sample		0
Pampa Fria	PF-F1	composite sample		0
Pampa Fria	PF-F2	composite sample		0
Pampa Fria	PF-F3	composite sample		0
Pampa Fria	PF-F4	composite sample		0
Pampa Fria	PF-F5	composite sample		0
Pampa Fria	PF-G2	composite sample		0
Pampa Fria	PF-G3	composite sample		0
Pampa Fria	PF-G4	composite sample		0
Pampa Fria	PF-H1	composite sample		0

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Eastern Andes Area sample list (Phase I and Phase II)

Survey Area / locality	sample	rock type	description	analyses
Pampa Fria	PF12	composite sample		O
Pampa Fria	PF13	composite sample		O
Pampa Fria	PF14	composite sample		O
Pampa Fria	PF11	composite sample		O
Pampa Fria	PF12	composite sample		O
Pampa Fria	PF13	composite sample		O
Pampa Fria	PF14	composite sample		O
Pampa Fria	PF15	composite sample		O
Pampa Fria	PF19	composite sample		O
Pampa Fria	PF11	composite sample		O
Pampa Fria	PF12	composite sample		O
Pampa Fria	PF13	composite sample		O
Pampa Fria	PF14	composite sample		O
Pampa Fria	SM41	limestone	limestone w/ green-Cu dissemination from contact to serpentinite	XT
Pampa Fria	SM51	silicified serpentinite	silicified serpentinite bearing with Qtz-Lm vein, 2.5m in width	O
Pampa Fria	SM52	Lm-Qtz vein	clear white coarse grained Lm-Qtz vein, same location of SM51	O
Pampa Fria	SM53	silicified serpentinite	silicified serpentinite, less Qtz-veinlets than SM51	T

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Eastern Andes Area sample list (Phase I and Phase II)

Survey Area / locality	sample	rock type	description	analyses
Pampa Fria	SM54	Qtz-vein	gray Qtz-vein, Lm dissemination, w/ 1mm clear Qtz veinlet	OTF
Pampa Fria	TH61	serpentinite	serpentinite enclase in limestone	T
Pampa Fria	TH62	Qtz-vein	N20W, 80cm in width, contain Jar-Ge-breccia, green-Cu	G
Pampa Fria	TH63	grossan	Ge, Qtz-vein, green-Cu in beside, 50m west of TH61	G
Corral				
Corral	KY04	altered limestone	wholly white colored but black pinching 4cm by 1cm, medium altered, w/ Cal veinlets, near contact for porphyry intrusive	G
Corral	SM07	vein	unobhesive powder Cal, 5cm in width	O
Corral	SM08	vein	compact Cal, 5cm in width	O
Corral	SM09	vein	compact Cal w/ dark gray rim, 7cm in width	O
Corral	SM10	sheared limestone	fragment is less than 3cm in diameter, fault clay dominant	O
Corral	TH13	silicified limestone	yellowish to light gray colored, sheared, hardly silicified, Jar stained	G
Corral	TH14	oxide vein	black to brown colored, 10 to 15 cm in width, in silicified limestone, Mn-Cp, supergene oxide	OX
Corral	TH15	dacite porphyry	pale greenish grey colored, Pl-Qtz as phenocryst, euhedral to sub-hedral, Chl-Ep (from Hb) as mafic, propylitic alteration	WT
Corral	TH16	limestone xenolith	>40cm in diameter, completely altered limestone xenolith in dacite porphyry, Ge-Cp-Jar-white clay as supergene products	GX
Creston Amarillo				
Creston Amarillo	KY59	siliceous rock	white and yellowish brown colored argillic rock w/ grey silica white Qtz veinlet	O
Creston Amarillo	KY60	silicified breccia	white and grey colored silicified breccia (N45W90, 1m in width) w/ Qtz-Silica network and Jar stain in siliceous andesite	OXF
Creston Amarillo	TH103	altered andesite	strong argillic, white to yellowish white altered, Qtz-Ser alteration, Ala?	X

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Cerro Amarillo	TH104	unknown mineral	exists with in TH103, pale blue black color, coexist with Qtz	X
Cerro Amarillo	TH105	altered andesite	strong argillic, white colored alteration, Qtz-Ser alteration, very fine grained bluish mineral (Mo?)	XP
Cerro Amarillo	TH106	andesite?	medium silicified argillic, Py dissemination, Py coexist with CH	G
Cerro Blanco				
Cerro Blanco	KV50	silicified rock	silicified rock, lens brecciate w/ Py dissemination and Qtz vein (N50W74SW, 4mm in width)	O
Cerro Blanco	KV51	granite porphyry	light grey colored Qtz-Ser argillic Pt Qtz-granite porphyry	GX
Cerro Blanco	KV52	andesite	100 andesite brecciated lava, lens altered	GI
Cerro Blanco	KV53	argillic altered andesite	white colored Qtz-Ser? argillic rock (probably same as KV52)	GXT
Cerro Blanco	SM50	altered dacite	silicified dacite w/ Py dissemination	O
Cerro Blanco	TH97	altered andesite	white colored alteration, weak silicified, Ce stain, Kfs alt?	GX
Cerro Blanco	TH88	altered andesite	white colored alteration, Kfs, weak silicified, Op-vein 0.2 to 0.5cm in width	G
Cerro Blanco	TH89	porphyry dyke	white colored alteration, weak to medium silicified, 10m in width, N-S trend	O
Cerro Venezuela				
Cerro Venezuela	ATH301	quartz vein	brecciated Qtz vein: w=20cm, N75E, Qtz vein w=2-5mm, veinlet stockwork, adjacent to the vein is sericite alteration	GF
Cerro Venezuela	ATH302	hydrothermal breccia	breccia f=1-8cm, breccia zone w=10cm, matrix Qtz+Goe, breccia is altered to sericite	GXD
Cerro Venezuela	ATH303	altered rock	sericite alteration, weak silicification, original rock tuff?, partly supergene kaolinite alteration.	X
Cerro Venezuela	ATH304	highly silicified rock	float, highly silicified hydrothermal breccia, limonite stained, manganese oxide stained, breccia f=1-8cm	G
Cerro Venezuela	ATH305	highly silicified rock	vuggy silica, alunite in vugs, hypogene blebed alunite.	GXD

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Cerro Venezuela	ATH306	weak silicified rock	weak - medium silicified, Pl phenocryst altered to kaolinite	GX
Cerro Venezuela	ATH307	silicified rock	weak - medium silicified, at ledge, kaolinite veinlet, goethite stained	GX
Cerro Venezuela	ATH308	silicified rock	weak - medium silicified, at ledge, kaolinite alteration	GX
Near Cerro Venezuela	ATH309	quartz vein	w=30cm, high temperature quartz, N75W, almost vertical in dipping.	G
Venezuela	AKY301	silicified breccia	brecciated silicified andesite to dacite fragments in Kao argillic matrix, Gt stained, hydrothermal origine	GX
Venezuela	AKY302	argillic andesite to dacite	very weak bluish white grey colored argillic altered andesite to dacite	GX
Venezuela	AKY303	argillic rock	pale white grey colored weak silicified argillic (Ser?) altered rock with Qtz+/- white clay veinlets	GXF
Venezuela	AKY304	silicified rock	highly silicified brecciated rock after tuff breccia(?), Jar-Horn stain	GX
Venezuela	AKY305	silicified rock	yellowish brown colored argillic fragment (Alu?) in grey highly silicified matrix	X
Venezuela	AKY306	Im-Qtz vein	N55W78NE, 3cm in width, 20m +/- in length along strike, within propylite	G
Venezuela	ASM301	sil. breccia	wk. sil. fault breccia, green, N40E-90.	GX
Venezuela	ASM302	alt. and.	wk. sil. arg., white, probably qz-ser-(py) alt, py leached out	GX
Venezuela	ASM303	sil. r.	vein-like occurrence, pale green, smooth, ebonoidal fracture, w/ very fine grained py diss., 15-20cm wd., N60W-90.	GX
Venezuela	ASM304	alt. and.	probably qz-ser-(py) alt., w/ limo. - qz veinlet	GX
Venezuela	ASM305	sil. r.	vein-like occurrence of Im wd., ledge extending N40W-90, dense py-qz, py fine grained, dk gray, brecciated, w/qz veinlet up to 1cm	GX
Venezuela	ASM306A	qz. v	hosted in andesitic pyroclastics, N45W-90	GF
Venezuela	ASM306B	alt. rb	andesitic, probably qz-ser alt	DT

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Pedruzco de Amarillo				
Pedruzco de Amarillo	ATH30	white clay altered rock	W-M silicified, white clay sericite or kaolinite?	GX
Pedruzco de Amarillo	ATH31	brecciated silicified vein	w=10-30cm, N40W trend, corresponds to ridge elongation, white clay breccia sericite or alunite alteration?	GX
Pedruzco de Amarillo	ATH318	silicified vein	highly silicified vein w=10-30cm, trend N6W, original rock lapilli tuff	GX
Pedruzco de Amarillo	ATH319	silicified vein	highly silicified vein w=2-10cm, trend N45E-65SW dipping	O
Pedruzco Amarillo	AKY309	Py-silica vein	N15E65E, 2 to 5 cm in width, 1 to 2% dissemination of Py in dark greenish grey colored altered andesitic lapilli tuff	O
Pedruzco Amarillo	AKY310	argillic rock	greenish light grey colored argillic rock after tuff(?), 1 to 2% diss. of Py, weak sapergene altered	GX
Pedruzco de Amarillo	ASM312	alt. and	pl phenoc, rich, mafic out, py diss, qz veinlet	GX
Potrillo				
Potrillo	ATH322	silicified white clay altered rock	sericite or kaolinite alteration? W-M silicified, Py weak dissemination.	GXD
Potrigeno	ASM313	rhyolite	dyke, black, very fine grained, aphanitic, N60E, -90	G
Potrigeno	ASM314	alt. dc.	lava dome, qz pl-biot-bh, biot replaced by ser	XDT
Sarrosa				
Sarrosa	ASM315A	rhyolite	lava dome, w/ flow band	
Sarrosa	ATH323	rhyolite	flow structure developed, silicified?	T
Sarrosa	ATH324	quartz vein	float, w=2cm, Qtz banding < 1mm	G
Vicuña (El Salado)				
Vicuña	AKY334	argillic rock	white colored acidic argillic altered dacite porphyry to granite porphyry	GX

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Vicuña	AKY335	andesite to dacite porphyry	grey colored, minor Qtz phenocryst, Bt-Hem as alteration mineral	TR
Vicuña (El Salado)	ATH387	Qtz porphyry?	ridge, sericite alteration, jansite stained.	GX
Vicuña (El Salado)	ATH388	Bt-Fd porphyry	Bt, Pl, Hbl phytic porphyry, very few Qtz phenocryst, this is quite different from the porphyry that is host rock of K-silicate alteration. Bt fresh, Hbl smooth alt? Pl fresh.	WDT
Vicuña (El Salado)	ATH389	Qtz-Fd porphyry	Qtz, Fd, Bt phytic porphyry, very coarse gr. Qtz, Bt fresh, crack face: very fine gr. hematite + hydrothermal Bt.	T
Vicuña (El Salado)	ATH390	Qtz vein with Qtz porphyry	Qtz vein has alteration halo, w=2cm	GX
Vicuña (El Salado)	ATH391	Qtz porphyry	K-silicate alteration, with fine gr. hematite, "A vein", fine grained greenish biotite, green Cu oxide stained	GXT
Vicuña (El Salado)	ATH392	neotectite	in K-silicate alt. porphyry.	
Vicuña (El Salado)	ATH393	quartz vein	"A vein"? coarse grained Qtz vein, in K-silicate alteration with Cu oxides	GF
Vicuña (El Salado)	ATH394	K-silicate alt. Qtz porphyry	Qtz veinlet stockwork, high density of Qtz veinlet with magnetite dissemination, in K-silicate alteration.	GXDT
Vicuña (El Salado)	ATH395	magnetite-Qtz vein	w=5cm, N80E	GPF
Vicuña (El Salado)	ATH396	hydrothermal breccia	matrix part: grexite, biotite, breccia: subangular porphyry	G
Vicuña (El Salado)	ATH397	drift outcrops	Bt Qtz porphyry, K-silicate alteration, magnetite dissemination, weak dissemination of chalcopyrite and bornite.	GP
Vicuña alteration	ASM348	altered dacite	light gray to white, qz ser-(ps) alt., py leached out, qz phenoc: 3-10mm, porphyritic tex, original assem: qz-pt-biot, pl collapse to clay	GXDT
Vicuña alteration	ASM349A	qz vein	1.5cm wd., including f.g. greenish transparent biot, green Cu staining, qz: e.g. clear	O
Vicuña alteration	ASM349B	altered dacite	host of 349B, 2ndary greenish fine grained biot, potassic alt, K-sper 1, lacking mgf	GXT
Vicuña alteration	ASM350	altered dacite	w/ qz veinlet, 4mm wd. network, possibly phyllic overprints to potassic	GX
Vicuña alteration	ASM351A	altered dacite	slightly silicified, possibly phyllic overprints to potassic, host of 351B	GXT

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analysis
Vicuña alteration	ASM351B	qz. vein	1.5-2cm wd., N50E 90, qz. e.g., comb texture, limonite stained	G
Vicuña alteration	ASM352	altered dacite	qz ser py alt, py remaining, qz veinlet of 1cm wd., originally qz pl biot, biot partially replaced by white mica	GX
Pastran				
Pastran	AKY344	silicified fault(?) breccia	silicified fragments of sandstone in limonitic matrix in contact between sandstone and granite	G
Pastran (W)	ASM360	schistite ore	schelite stringer in mudstone, N30W 90, from stockpile	OX
Andesita ledge				
Andesite ledge	SM01	vein	Cal-Bt Qtz-vein, comb texture, 10cm in width	O
Cerro Negro				
Cerro Negro	KY01	sandstone	white colored, medium grained, quartz arenitic, weak altered, Lm (Jar Ham) veinlets 2mm in width	R
Cerro Negro	KY02	sandstone	reddish colored, very fine grained w/ Cal-Qtz veinlet, N20W strike, 90 dip	G
Cerro Negro	KY02a	calcite quartz veinlet	Cal-Qtz veinlet within sandstone, KY02	O
Cerro Negro	KY03	propyrite or low grade skarn	dark green colored, coarse sized Cd-Ep, in calcinosa very fine grained sandstone interbed in sandstone (KY01)	GT
Cerro Negro	SM04	vein	coarse grained reddish Qtz-vein, 5cm in width w/ Cal-veinlet	O
Cerro Negro	SM05	andesite	propyrite alteration	T
Cerro Negro	TH01	Calcite vein	3 to 2.5mm in width, N10E strike, 40E dip, incl. host rock breccia, matrix; Sd-Cal, host; propyrite altered andesite dyke	G
Cerro Negro	TH02	Quartz vein	2.5cm in width, float in aplitic dyke, Sd-Cal in druse	G
Cerro Negro	TH03	Cal-Silica vein	7cm in width, N15E strike, 90 dip, host rock; propyrite altered andesite dyke	G
Cerro Negro	TH04	Cal vein	45cm in width, N10E strike, host rock; Devonian sandstone, continue more than 100m	O

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Granite				
Granite	SM06	sand stone	weathered, pale reddish - greenish white	XT
Granite	TH05	amphibolite schist	black schist, silicified by contact metamorphosed by granite, amphibolite change into Bt. Pre-Cambrian?	T
Granite	TH06	Hbl-Bt granite	medium to coarse grained granite, mafic; Bt>Hbl, feldic; Kfs-Pl-Qtz, Kfs; anhedral >1cm in diameter, include host rock schist	WDI
Alumbra de Bajo				
tertiary intrusive near Los Opacos	TH47	granite	Tertiary intrusive, fine to medium grained Bt granite, no alteration	WT
camp location				
camp location	ATH250	Cu-oxide	brochantite and alunite	XT
La Alumbra de Bajo	KY05	granodiorite	float of granodiorite w/ clear white thin layered Qtz-vein, possibly Tertiary plutonic rock	G
La Alumbra de Bajo	SM11	Lm-silicified rock	dark reddish Lm rock w/ silica veinlet	O
Quebrada de Conconta				
Conconta	ASM343	granite	qz-K-fd-pl-biot, weathered, pinkish, identified as h. alteration on image	XT
Quebrada de Conconta	ATH379	granite	coarse grained, Kf pinkish, large Qtz grain, weak weathering, Conconta Granite	XT
Quebrada de Conconta	ATH380	dacite dike	white - pinkish color, Qtz phenocryst, float.	X
Quebrada de Potreritos de Pancha				
Pancha	ASM344	granite	qz-K-fd-pl-biot, weathered, pinkish, identified as h. alteration on image	XT
Pancha	ASM345	fault gouge + qz. vein	qz veining in fault, qz vein: clear drusy-very coarse grained, unidentified greenish clay in gouge	X
Quebrada de Los Potreritos de Pancha	ATH381	granite	fine grained Bt granite, fd phytic, later stage of Conconta Granite?	WT
Quebrada de Los Potreritos de Pancha	ATH382	shale	hornfels, contact between Conconta Gr. and Carboniferous sediments, Bt hornfels.	T

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Leonardo				
Leonardo	ATH407	magnetite+epidote vein	in granite, vein exists in contact between magnetite vein and granite	
Leonardo	ATH408	magnetite vein	massive, many gas cavities.	
Leonard (Fe)	ASM358	granite	biot replaced by white mica, originally qz, Ksp+pl-biot, including mg± veinlet with epidote schvage	T
Leonard (Fe)	ASM359	magnetite ore	fine grained massive ore, vein trending N30W 90, of 1.5m wd., from mining site	C
Leonardo	AKY340	Mg vein	fine grained Py dissemination layer in places(?)	GR
Southeast of Margarita				
4650m alteration zone	ATH425	rhyodacite	dike rock? Fd, Qtz phytic, pale greenish gray, mafic minerals, chlorite alt.	WT
4651m alteration zone	ATH426	rhyodacite	same rock as ATH425, silicified alt.	GX
4652m alteration zone	ATH427	porphyry	dike rock? Fd, Qtz phytic, sericite alteration	GXD
4653m alteration zone	ATH428	porphyry	relatively fresh, Qtz, Fd phytic porphyry, same as the porphyry at Ranchillos and Pastos Largos	T
4654m alteration zone	ATH429	rhyolite	pale green color, propylitic alteration? flow banding	X
Silicification beside Margarita	AKY359a	altered dacite porphyry	silicified and weak argillic altered dacite porphyry (marginal portion of porphyry intrusive?)	X
Silicification beside Margarita	AKY359b	Qtz vein	part of Qtz stockwork in rhyolite or dacite porphyry, 1cm in width	GF
Silicification beside Margarita	AKY360	Cal-Qtz vein	Qt stained, occurrence of lattice Qtz habit	G
silicification beside Margarita	ASM380	altered sandstone ?	granular silica, altered rhyolite ?	T
silicification beside Margarita	ASM381	altered rhyolite	brecciated, silicified rhy clast of 2-3cm cemented by qz and cc, w/ subtle lime stain	G

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Eastern Andes Area sample list (Phase I and Phase II)

Survey area / locality	sample	rock type	description	analyses
Banos del Gollete				
Banos del Gollete	ASM418	siliceous sinter	from mound w/ diameter of 30m, clear to dark gray layer laminated	G

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Geochemical grade assay result

sample	Au_ppb	Ag_ppm	AL%	As_ppm	Ba_ppm	Be_ppm	Bism_ppm	Ca%	Cd_ppm	Co_ppm	Cr_ppm	Cu_ppm	Fe%	Ga_ppm	Hg_ppm	K%	La_ppm	Mg%	Nb_ppm	Ni_ppm
Las Tamboritas																				
ATW213	41	0.4	0.39	12	10	<0.5	<2	0.65	<0.8	<1	46	7	0.91	<10	<1	0.15	<10	0.05	10	<1
ATW214	30	0.6	0.40	10	42	<0.5	<2	0.10	<0.8	<1	35	14	1.72	<10	<1	0.14	<10	0.09	30	<1
ATW215	2,110	107.0	0.73	48	170	<0.5	2	0.12	<0.8	<1	224	46	2.95	<10	<1	0.51	<10	0.01	110	6
ATW216	43	0.2	0.43	24	214	<0.5	<2	0.01	<0.5	<1	76	4	2.01	<10	<1	0.14	<10	0.06	15	<1
Pastos Largos																				
ARY354	<5	1.2	0.44	22	10	<0.5	<2	0.14	<0.5	4	93	9	1.14	<10	<1	0.11	20	0.11	275	<1
ARY355	<5	<0.2	1.57	4	<10	<0.5	<2	1.05	<0.5	7	143	8	2.24	<10	<1	0.08	20	1.07	120	<1
ARY356	30	1.2	0.70	60	00	<0.5	<2	0.19	<0.5	2	161	4,110	0.00	<10	<1	0.04	<10	0.22	450	25
ASW374	<5	0.4	0.04	4	<10	<0.5	2	315.00	<0.5	<1	46	4	0.15	<10	<1	0.03	<10	0.01	915	<1
ASW375	<5	<0.2	0.90	34	30	<0.5	<2	0.18	<0.5	8	110	328	2.02	<10	<1	0.12	10	0.49	750	2
ASW376	<5	0.0	0.20	6	<10	<0.5	2	13.50	<0.5	3	20	14	0.65	<10	<1	0.07	<10	0.14	665	<1
ASW377	<5	<0.2	0.37	15	40	<0.5	<2	0.21	<0.5	3	140	202	1.07	<10	<1	0.11	<10	0.14	205	1
ASW378	20	1.0	0.01	14	20	0.5	4	2.50	0.5	8	140	250	9.57	<10	<1	0.03	<10	0.04	185	17
ATW420	<5	0.4	0.00	0	10	<0.5	2	315.00	2.0	<1	50	26	0.15	<10	<1	0.01	<10	0.04	830	<1
ATW421	<5	2.0	0.07	22	60	0.5	2	0.24	<0.5	3	151	1,015	1.55	<10	<1	0.19	10	0.17	240	1
Ranchillos																				
ARY352b	10	2.0	1.00	1,150	200	1.5	<2	0.22	<0.5	<1	30	30	0.91	<10	<1	0.40	10	0.15	85	1
ARY352c	50	0.0	0.00	792	114	<0.5	<2	0.10	<0.5	1	82	35	5.94	<10	<1	0.27	20	0.14	125	1
ARY353b	<5	0.2	0.56	1,010	70	<0.5	<2	0.04	<0.5	<1	192	4	0.73	<10	<1	0.92	<10	0.09	25	1
ASW370	95	<0.2	0.92	1,410	150	0.5	<2	0.19	0.5	<1	22	34	115.00	<10	<1	0.74	<10	0.08	160	<1
ASW371	60	<0.2	1.51	44	114	0.5	<2	0.16	<0.5	4	77	35	1.04	<10	<1	0.72	10	0.04	325	<1
ASW372	15	<0.2	1.24	1,415	80	0.5	<2	0.04	<0.5	<1	45	141	115.00	<10	<1	0.16	<10	0.09	85	<1
ATW413	85	<0.2	1.42	450	140	0.5	<2	0.12	0.5	<1	65	85	1.00	<10	<1	0.50	40	0.12	50	3
Laguna de las Huaycas																				
ARY361	<5	<0.1	0.91	14	40	<0.5	<2	0.05	<0.5	<1	3	3	1.34	<10	<1	0.01	<10	0.01	5	1
ASW382	20	<0.2	0.50	831	30	2.0	<2	0.04	0.0	5	246	49	0.72	<10	<1	0.01	<10	0.01	250	16
ATW411	<5	<0.2	1.20	60	20	<0.5	<2	0.06	<0.5	<1	87	11	1.10	<10	<1	0.14	<10	0.01	5	0
ATW412	<5	<0.2	1.16	26	20	<0.5	<2	0.05	<0.5	<1	49	19	0.20	<10	<1	0.43	<10	0.01	15	<1
ATW414	<5	<0.2	0.10	10	<10	<0.5	<2	0.01	<0.5	1	318	11	1.32	<10	<1	0.01	<10	0.01	25	3
ATW416	<5	0.2	0.74	40	30	<0.5	<2	0.05	<0.5	<1	140	15	4.33	<10	<1	0.15	<10	0.01	10	6
Las Aguaditas																				
ARY339	50	17.4	0.18	4	<10	<0.5	<2	0.19	<0.5	1	164	7	0.00	<10	<1	0.01	<10	0.04	20	1
ASW356	25	<0.2	0.20	10	50	<0.5	<2	0.24	<0.5	<1	100	29	0.16	<10	<1	0.05	<10	0.04	65	<1
ATW404	80	0.2	1.51	240	50	<0.5	<2	0.56	<0.5	<1	74	20	2.44	<10	<1	0.09	<10	0.05	15	9
Habocia																				
TH09	20	0.6	0.60	12	30	<0.5	<2	0.32	73.0	9	4	4	2.34	<10	<1	0.25	10	0.13	455	1
TH11	<5	1.4	0.11	14	<10	<0.5	<2	315.00	2.5	<1	12	49	0.06	<10	<1	0.05	<10	0.19	390	1
Las Sapitos																				
SH02	<5	<0.2	0.50	94	200	<0.5	2	0.25	<0.5	<1	43	24	5.44	<10	<1	0.05	10	0.10	35	1
SH03	<5	<0.2	0.81	0	40	0.5	<2	0.07	<0.5	3	72	44	2.43	<10	<1	0.25	<10	0.05	180	1
La Flecha																				
ARY362	10	<0.2	0.43	10	<10	<0.5	<2	1.40	<0.5	<1	80	6	0.21	<10	<1	0.05	<10	0.01	10	1
ARY363	<5	<0.2	0.44	14	<10	<0.5	<2	1.03	<0.5	<1	82	5	0.26	<10	<1	0.07	<10	0.01	5	1
ARY364	<5	<0.2	0.24	0	10	<0.5	<2	0.09	<0.5	5	43	4	1.07	<10	<1	0.02	<10	0.01	5	<1
ARY365	<5	<0.2	2.72	30	10	0.5	<2	0.71	<0.5	14	25	41	5.00	<10	<1	0.05	<10	2.00	1,035	<1

Geochemical grade assay result

sample	Na%	Ni_ppm	P_ppm	Pb_ppm	Se_ppm	Si_ppm	Sn_ppm	Ti%	Tl_ppm	U_ppm	V_ppm	W_ppm	Zn_ppm
Las Tamboritas													
ATW213	0.10	1	80	18	<2	<1	25	0.05	<10	<10	2	<10	10
ATW214	0.11	1	114	22	1	1	19	0.02	<10	<10	10	<10	14
ATW216	0.03	4	610	3,310	<1	<1	19	<0.01	<10	<10	12	<10	10
ATW218	0.04	1	140	56	<2	1	17	<0.01	<10	<10	10	<10	0
Pastos Largos													
ARY354	0.02	7	250	24	<2	2	20	<0.01	<10	<10	14	<10	34
ARY355	0.03	14	350	14	<2	3	52	0.12	<10	<10	39	<10	140
ARY356	<0.01	1	20	148	<2	<1	7	<0.01	<10	50	35	30	40
ASW374	0.01	1	30	69	<2	<1	20	<0.01	<10	<10	4	<10	<2
ASW375	<0.01	5	150	18	<2	<1	12	<0.01	<10	<10	14	<10	102
ASW376	0.01	3	870	08	<2	<1	43	0.01	<10	<10	12	<10	14
ASW377	<0.01	3	50	10	<2	<1	4	<0.01	<10	<10	0	10	14
ASW378	<0.01	3	79	1,450	4	41	6	<0.01	<10	20	50	<10	200
ATW420	0.02	1	90	94	<2	<1	56	<0.01	<10	<10	13	10	544
ATW421	0.01	2	50	140	<2	<1	13	<0.01	<10	<10	19	<10	50
Ranchillos													
ARY352b	0.03	1	470	14	4	3	14	<0.01	<10	<10	22	<10	102
ARY352c	0.01	1	310	14	0	0	10	<0.01	<10	<10	13	<10	124
ARY353b	0.02	1	210	10	4	<1	7	0.01	<10	<10	3	<10	0
ASW370	<0.01	4	410	44	0	1	12	<0.01	<10	<10	24	<10	<10
ASW371	0.03	24	450	20	2	2	27	0.01	<10	<10	30	<10	150
ASW372	<0.01	3	1,070	10	2	4	1	0.03	<10	<10	14	<10	144
ATW413	<0.01	1	140	30	4	1	14	<0.01	<10	<10	13	<10	16
Laguna de las Huaycas													
ARY361	<0.01	<1	100	<2	<2	3	75	<0.01	<10	<10	48	<10	<2
ASW382	<0.01	9	590	4	10	19	9	<0.01	<10	<10	141	<10	74
ATW411	0.04	<1	100	4	<2	1	111	<0.01	<10	<10	107	<10	<2
ATW412	0.09	<1	80	4	<2	1	75	<0.01	<10	<10	21	<10	<2
ATW414	<0.01	3	<10	2	<2	1	4	<0.01	<10	<10	66	<10	<2
ATW416	0.05	<1	70	4	<2	3	74	0.01	<10	<10	120	<10	<2
Las Aguaditas													
ARY339	0.03	1	320	4	10	<1	25	<0.01	<10	<10	5	<10	12
ASW356	0.01	2	700	2	<2	<1	61	<0.01					

Geochemical grade assay result

Sample	As_ppm	Ag_ppm	Al_%	As_ppm	Ba_ppm	Be_ppm	Bism_ppm	Ca_%	Cl_ppm	Co_ppm	Cu_ppm	Cu_ppm	Fe_%	Ca_ppm	Hg_ppm	K_%	La_ppm	Mg_%	Mn_ppm	Mo_ppm
AR1366	<5	<0.2	0.24	0	10	<0.5	<2	0.85	<0.5	11	57	0	1.15	<10	<1	0.05	<10	0.01	10	1
AR1367	<5	<0.2	0.43	0	<10	<0.5	<2	0.20	<0.5	41	72	7	0.30	<10	<1	0.00	<10	<0.01	15	1
AR1368	<5	<0.2	0.55	4	<10	<0.5	<2	0.24	<0.5	41	47	1	0.31	<10	<1	0.00	<10	<0.01	<5	1
AS1369	<5	<0.2	0.34	50	30	<0.5	<2	0.20	<0.5	45	57	2	0.28	<10	<1	0.04	<10	<0.01	10	<1
AS1385	35	0.4	0.14	8	<10	<0.5	2	2.66	<0.5	<1	22	1	0.39	<10	<1	0.01	<10	0.03	15	<1
AS1387	10	0.0	0.17	34	50	<0.5	2	0.19	<0.5	6	65	15	3.57	<10	<1	0.13	<10	0.02	10	4
AC1388	<1	0.2	0.49	24	20	<0.5	2	0.49	<0.5	3	64	74	2.05	<10	<1	0.23	<10	0.00	50	<1
AS1389	10	0.1	1.43	10	<10	<0.5	<2	0.91	<0.5	<1	3	<1	0.50	<10	<1	0.19	<10	<0.01	<5	<1
AM1390	10	<0.2	0.59	6	20	<0.5	<2	0.22	<0.5	<1	102	3	0.45	<10	<1	0.11	<10	0.03	15	3
AT1417	10	<0.2	0.42	30	20	<0.5	<2	0.76	<0.5	<1	92	7	0.23	<10	<1	0.10	<10	<0.01	5	1
AT1418	375	0.2	0.09	526	<10	<0.5	<2	0.72	<0.5	0	106	27	0.97	<10	<1	0.16	<10	0.03	30	1
AT1419	<5	<0.2	0.70	16	20	<0.5	<2	1.13	<0.5	1	104	17	0.89	<10	<1	0.07	<10	<0.01	20	2
AT1419	10	<0.2	0.74	20	30	<0.5	<2	0.20	<0.5	<1	62	15	2.18	<10	<1	0.14	<10	0.04	35	3
AT1411	10	<0.2	0.82	54	18	<0.5	<2	0.69	<0.5	3	89	20	0.84	<10	<1	0.10	<10	0.01	35	4
AT1442	<5	<0.2	0.18	32	<10	<0.5	<2	0.92	<0.5	1	204	7	0.36	<10	<1	0.04	<10	<0.01	50	2
AT1443	45	0.2	0.71	168	<10	<0.5	<2	0.24	<0.5	<1	110	20	0.64	<10	<1	0.19	<10	<0.01	20	<1
AT1444	<5	<0.2	2.49	50	40	<0.5	<2	0.47	1.0	33	0	2.120	3.05	<10	<1	0.33	<10	0.12	115	<1

Bordo Alavezado

AR1369	<5	<0.2	0.55	0	50	<0.5	<2	0.27	<0.5	<1	95	7	1.46	<10	<1	0.08	40	0.10	345	1
AR1370	140	0.2	0.73	0	70	<0.5	<2	0.05	<0.5	<1	00	126	12.95	10	<1	0.16	<10	0.01	5	<1
AS1391	20	<0.2	0.40	22	40	<0.5	2	0.87	<0.5	<1	31	5	6.06	<10	<1	0.24	<10	0.01	5	2
AT1451	1	0.2	0.45	32	20	<0.5	<2	0.82	<0.5	<1	20	1	0.39	<10	<1	0.10	<10	0.03	40	<1
AT1452	245	1.0	0.39	90	70	<0.5	2	0.20	<0.5	<1	101	15	0.40	<10	<1	0.52	50	0.03	15	1
AT1453	2	0.0	0.39	20	60	<0.5	<2	0.03	<0.5	<1	62	14	1.20	<10	<1	0.30	50	0.04	10	11
AT1454	10	0.6	0.39	14	30	<0.5	<2	0.05	<0.5	<1	67	142	3.01	<10	<1	0.21	10	0.01	20	<1
AT1455	2	0.0	0.25	20	50	<0.5	4	0.12	<0.5	<1	49	135	5.34	<10	<1	0.25	<10	0.01	15	5
AT1456	17	0.7	0.62	04	100	<0.5	<2	0.20	<0.5	<1	39	29	1.25	<10	<1	0.33	16	0.05	5	3
AT1457	47	1.6	0.51	20	30	<0.5	10	0.15	<0.5	0	95	950	5.03	<10	<1	0.10	10	0.05	40	0
AT1447	<5	<0.2	0.33	10	20	<0.5	<2	0.15	<0.5	<1	172	49	0.54	<10	<1	0.15	20	0.01	25	1
AT1449	<5	0.6	0.62	6	30	<0.5	<2	0.03	<0.5	<1	102	23	0.29	<10	<1	0.21	40	0.01	20	<1
AT1449	10	<0.2	0.30	20	40	<0.5	<2	0.03	<0.5	<1	415	150	4.11	<10	<1	0.04	<10	<0.01	5	1

Margaña

AR1357	70	1.4	0.72	3,545	60	3.5	24	0.73	<0.5	21	436	3,070	10.90	<10	<1	0.08	<10	0.03	45	390
AR1358	<5	<0.2	0.01	594	40	4.5	IntE*	0.17	0.5	30	92	45,100	9.47	<10	<1	0.11	<10	0.01	15	130
AS1379	<5	<0.2	0.18	14	<10	<0.5	<2	0.03	<0.5	1	700	5	0.37	<10	<1	<0.01	<10	0.01	45	3
AT1424	<5	<0.2	0.00	404	50	2.5	IntE*	0.17	<0.5	26	104	40,200	0.21	<10	<1	0.07	<10	0.01	20	166
AT1458	<5	<0.2	2.49	24	30	<0.5	<2	2.04	<0.5	10	0	0	3.52	<10	<1	0.10	30	0.72	510	<1

Los Mogotes

AT1420	16	0.4	0.29	0	190	<0.5	<2	0.63	<0.5	1	110	77	0.45	<10	<1	0.20	<10	0.01	15	20
AT1421	1	<0.2	0.11	42	60	<0.5	<2	0.08	<0.5	<1	248	67	0.34	<10	<1	0.07	<10	0.01	30	20
AT1422	<1	2.0	0.25	0	60	<0.5	8	15.00	<0.5	<1	32	83	0.30	<10	2	0.16	<10	0.06	15	2
AT1423	4	<0.2	0.49	0	70	<0.5	<2	0.75	<0.5	<1	112	29	0.64	<10	<1	0.25	<10	0.07	20	15
AT1424	4	0.2	0.35	04	700	<0.5	<2	0.13	<0.5	<1	104	72	0.20	<10	<1	0.22	<10	<0.01	5	10
AT1425	1	0.2	0.31	10	470	<0.5	<2	0.65	<0.5	<1	147	24	0.26	<10	<1	0.18	<10	0.01	10	41
AT1426	<1	0.2	0.59	10	170	<0.5	<2	1.27	<0.5	<1	67	71	0.07	<10	<1	0.23	10	0.11	20	3
AT1427	16	0.2	0.22	6	110	<0.5	<2	1.51	<0.5	<1	69	85	0.44	<10	<1	0.20	<10	0.01	5	2

Cordon de la Inca

AR1372	25	<0.2	0.31	20	130	<0.5	2	0.12	<0.5	<1	176	0	2.72	<10	<1	0.21	10	0.04	25	0
AR1373	100	<0.2	0.30	292	70	<0.5	6	0.24	<0.5	<1	136	2	0.97	<10	<1	0.30	10	0.03	10	5

Geochemical grade assay result

Sample	Na_%	Ni_ppm	P_ppm	Pb_ppm	Sb_ppm	Se_ppm	Si_ppm	Ti_%	Ti_ppm	U_ppm	V_ppm	W_ppm	Zn_ppm
AR1366	0.01	5	50	14	<2	<1	119	<0.01	<10	<10	4	<10	2
AR1367	0.07	<1	30	24	<2	<1	47	<0.01	<10	<10	3	<10	<2
AR1368	0.11	<1	70	12	<2	<1	84	<0.01	<10	<10	6	<10	<2
AS1385	0.07	<1	80	0	<2	<1	67	<0.01	<10	<10	3	<10	2
AS1386	0.04	<1	10	74	<2	<1	61	<0.01	<10	<10	3	<10	<2
AS1387	0.10	<1	120	26	<2	<1	157	<0.01	<10	<10	0	<10	2
AS1388	0.09	1	80	24	<2	1	25	<0.01	<10	<10	0	<10	20
AS1389	0.27	<1	20	18	<2	<1	102	<0.01	<10	<10	5	<10	<2
AS1390	0.09	3	30	60	<2	<1	58	<0.01	<10	<10	0	<10	6
AT1417	0.10	1	70	10	<2	<1	110	<0.01	<10	<10	11	<10	<2
AT1418	0.15	1	190	44	<2	1	49	<0.01	<10	<10	10	<10	10
AT1419	0.16	1	140	40	<2	<1	94	<0.01	<10	<10	0	<10	12
AT1440	0.22	<1	50	19	<2	<1	12	<0.01	<10	<10	10	<10	4
AT1441	0.11	1	90	18	<2	<1	40	<0.01	<10	<10	11	<10	0
AT1442	0.03	3	30	6	<2	<1	20	<0.01	<10	<10	2	<10	2
AT1443	0.12	1	70	80	110	1	45	<0.01	30	<10	0	<10	<2
AT1444	0.38	6	310	22	6	9	31	<0.01	<10	<10	14	<10	114

Bordo Alavezado

AR1369	0.00	<1	100	6	<2	4	31	<0.01	<10	<10	0	<10	30
AR1370	<0.01	<1	310	20	<2	1	437	<0.01	<10	<10	40	<10	10
AS1391	<0.01	<1	140	10	<2	<1	10	<0.01	<10	<10	0	<10	<2
AT1451	0.05	<1	40	10	2	1	0	<0.01	<10	<10	4	<10	54
AT1452	0.04	<1	50	62	2	<1	87	<0.01	<10	<10	3	<10	6
AT1453	0.02	<1	10	14	<2	<1	38	<0.01	<10	<10	3	<10	0
AT1454	0.01	<1	130	0	2	<1	18	<0.01	<10	<10	0	<10	10
AT1455	0.03	1	310	42	<2	<1	59	<0.01	<10	<10	16	<10	<2
AT1456	0.05	<1	50	14	<2	<1	29	<0.01	<10	<10	2	<10	<2
AT1457	0.04	7	540	20	2	1	11	<0.01	<10	<10	4	<10	20
AT1447	0.06	1	50	78	<2	1	0	<0.01	<10	<10	3	<10	6

Geochemical grade assay result

sample	As_ppb	Ag_ppm	Al_%	As_ppm	Ba_ppm	Be_ppm	Bi_ppm	Cu_%	Cd_ppm	Co_ppm	Cr_ppm	Cu_ppm	Fe_%	Ca_ppm	Hg_ppm	K_%	Li_ppm	Mg_%	Mn_ppm	Mo_ppm
ASH392	<5	<0.2	0.64	10	110	<0.5	<2	0.35	<0.5	<1	212	2	0.36	<10	<1	<0.01	<10	<0.01	20	4
ASH393	<5	<0.2	0.60	20	30	<0.5	2	1.36	<0.5	<1	54	8	0.63	<10	<1	0.03	<10	0.01	5	4
ASH394	<5	<0.2	0.30	6	50	<0.5	<2	0.38	<0.5	<1	100	4	1.50	<10	<1	0.05	<10	0.02	25	1
ASH395	<5	<0.2	0.30	82	1,400	0.5	4	0.33	<0.5	<1	111	19	0.07	<10	<1	0.10	<10	0.04	20	<1
ATH451	15	0.2	0.74	16	38	<0.5	<2	1.17	<0.5	<1	113	22	0.24	<10	<1	0.14	<10	0.03	260	<1
ATH452	5	0.6	0.03	12	30	<0.5	2	0.18	<0.5	<1	252	47	0.34	<10	<1	<0.01	<10	<0.01	20	3
ATH453	<5	<0.2	0.92	102	50	<0.5	<2	0.15	<0.5	<1	60	5	1.74	<10	<1	0.02	<10	<0.01	5	3
ATH454	<5	0.2	0.14	0	22	<0.5	2	0.04	<0.5	<1	159	4	0.25	<10	<1	<0.01	<10	<0.01	20	1
Abundancia																				
EY34	<5	<0.2	0.41	<2	20	<0.5	<2	0.47	<0.5	<1	33	5	1.21	<10	<1	0.10	<10	0.25	270	<1
EY35	<5	<0.2	0.41	2	80	<0.5	<2	0.20	<0.5	1	15	6	1.54	<10	<1	0.07	<10	0.31	260	3
EY36	<5	<0.2	0.09	2	<10	<0.5	<2	215.00	<0.5	<1	<1	1	0.03	<10	3	0.09	<10	0.25	50	5
TH57	<5	<0.2	0.08	<2	<10	<0.5	<2	0.12	<0.5	<1	244	30	1.54	<10	<1	0.03	<10	0.30	45	5
TH57	85	<0.2	0.24	14	<10	<0.8	<2	10.55	<0.5	<1	24	1	12.05	20	1	0.05	<10	0.13	2,200	15
TH60	125	<0.2	0.01	58	<10	0.5	2	0.35	<0.5	<1	40	24	9.40	<10	1	0.01	<10	0.03	145	4
Quachi																				
EY31	<5	<0.2	0.03	<2	20	<0.5	<2	0.45	<0.5	17	17	20	0.93	10	1	0.05	<10	0.03	265	1
EY32	10	<0.2	1.09	<2	10	<0.5	<2	0.79	<0.5	10	10	10	2.70	<10	<1	0.05	<10	0.50	218	<1
EY33	10	<0.2	1.13	<2	10	<0.5	<2	0.17	<0.5	25	20	98	4.13	<10	<1	0.24	<10	0.75	95	1
EY34	220	0.4	0.34	24	10	<0.5	2	0.10	0.5	5	42	495	4.17	<10	<1	0.24	<10	0.04	185	2
EY35	80	<0.2	1.10	<2	20	<0.5	<2	1.16	<0.5	7	28	1,430	2.50	<10	<1	0.14	<10	0.97	260	30
TH40	410	24.4	0.21	220	<10	<0.5	20	0.41	<0.5	45	42	255	215.00	<10	1	0.08	<10	0.03	105	2
El Fierro alteration																				
EY24	<5	0.2	0.24	<2	20	<0.5	<2	0.07	<0.5	<1	18	11	0.44	<10	<1	0.18	20	0.01	20	1
EY25	<5	<0.2	0.17	2	10	<0.5	<2	0.02	<0.5	<1	31	19	0.39	<10	<1	0.20	20	0.02	25	1
EY27	<5	<0.2	0.11	14	10	<0.8	<2	0.04	<0.5	3	37	4	2.76	<10	<1	0.33	<10	0.01	5	2
EY28	5	<0.2	0.10	8	50	<0.8	<2	0.05	<0.5	<1	54	5	2.33	<10	<1	0.17	<10	0.02	15	2
EY29	<5	<0.2	2.00	184	140	<0.8	<2	0.07	<0.5	2	50	12	4.05	<10	<1	0.50	10	0.02	650	<1
EY30	<5	0.2	0.33	11	40	<0.5	<2	0.04	<0.5	1	39	17	1.41	<10	<1	0.10	<10	0.07	35	3
TH40	<5	<0.2	0.26	2	60	<0.5	<2	0.15	<0.5	0	150	81	2.00	<10	<1	0.27	<10	0.07	55	0
TH41	<5	<0.2	0.24	4	10	<0.5	<2	0.10	<0.5	<1	100	5	0.50	<10	<1	0.15	<10	0.02	15	1
TH42	<5	<0.2	0.40	<2	40	<0.5	<2	0.04	<0.5	<1	34	20	1.95	<10	<1	0.29	60	0.02	50	1
TH43	<5	<0.2	0.31	<2	30	<0.5	<2	0.03	<0.5	<1	32	4	0.40	<10	<1	0.14	30	0.04	20	1
TH44	<5	<0.2	0.50	0	30	<0.5	<2	0.07	<0.5	<1	31	8	0.84	<10	<1	0.10	50	0.03	15	1
TH45	<5	<0.2	0.10	12	20	<0.5	<2	0.04	<0.5	<1	104	3	1.49	<10	<1	0.17	50	0.05	95	1
TH46	<5	0.2	0.24	<2	10	<0.5	<2	0.05	<0.5	<1	82	47	0.41	<10	<1	0.19	<10	<0.01	25	<1
Cerro Amarillo																				
ATH258	1	0.2	0.32	130	80	<0.5	6	0.04	<0.5	<1	110	14	0.03	<10	<1	0.55	30	<0.01	30	4
ATH259	2	0.2	0.54	10	10	<0.5	<2	0.03	<0.5	<1	170	20	0.21	<10	<1	0.12	<10	0.02	40	<1
ATH261	85	0.6	0.70	26	80	<0.8	<2	0.01	<0.5	<1	159	1	0.53	<10	<1	0.20	<10	<0.03	45	4
ATH263	<1	<0.2	0.55	10	100	<0.5	<2	0.03	0.5	<1	84	4	1.29	<10	<1	0.30	<10	0.13	90	<1
ATH265	85	1.8	0.44	42	10	<0.5	2	0.23	<0.5	<1	142	2	0.36	<10	<1	0.14	<10	0.09	30	1
ATH281	<1	<0.2	0.00	10	40	<0.5	<2	0.50	0.5	5	63	3	1.53	<10	<1	0.00	<10	0.50	1,190	1
ATH282	<1	<0.2	0.59	40	40	<0.5	<2	0.05	<0.5	<1	98	4	0.41	<10	<1	0.13	<10	0.01	40	<1
ATH283	<1	0.4	0.27	<2	<10	<0.5	<2	0.07	<0.5	<1	120	3	0.15	<10	1	0.04	<10	<0.01	20	<2
ATH284	0	<0.2	0.41	26	80	<0.5	<2	0.31	<0.5	<1	92	18	0.43	<10	<1	0.24	30	0.04	40	2
ATH285	3	1.2	0.19	54	40	<0.5	2	0.02	<0.5	<1	173	2	1.55	<10	<1	0.14	<10	<0.01	15	1
ATH286	<1	<0.2	0.43	2	120	<0.5	<2	0.01	<0.5	<1	155	<1	0.29	<10	<1	0.12	<10	<0.01	25	1

Geochemical grade assay result

sample	Na_%	Mg_ppm	P_ppm	Pb_ppm	Se_ppm	Sc_ppm	Sr_ppm	Ti_%	Tl_ppm	U_ppm	V_ppm	W_ppm	Zn_ppm
ASH392	<0.01	4	10	144	<2	<1	8	<0.01	<10	<10	2	<10	2
ASH393	0.01	<1	510	4	<2	2	15	<0.01	<10	<10	14	<10	<2
ASH394	<0.01	3	120	4	2	<1	4	<0.01	<10	<10	11	<10	6
ASH395	<0.01	<1	1,070	0	2	2	25	<0.01	<10	<10	64	<10	6
ATH451	0.00	4	10	46	6	<1	24	<0.01	<10	<10	3	<10	4
ATH452	<0.01	4	<10	22	<1	<1	2	<0.01	<10	<10	3	<10	<2
ATH453	0.03	<1	170	2	<2	1	45	<0.01	<10	<10	14	<10	<2
ATH454	<0.01	3	<10	12	<2	<1	3	<0.01	<10	<10	1	<10	<2
Abundancia													
EY36	0.04	1	390	4	<2	1	15	0.07	<10	<10	15	<10	32
EY37	0.05	<1	510	2	<2	1	11	0.00	<10	<10	21	<10	32
EY30	0.01	1	10	<2	<2	<1	243	<0.01	<10	<10	3	<10	4
TH53	0.01	0	80	<2	<2	<1	3	<0.01	<10	<10	2	<10	50
TH57	<0.01	<1	<10	<2	<2	<1	35	<0.01	<10	<10	43	<10	10
TH60	<0.01	<1	<10	<2	<2	<1	47	<0.01	<10	<10	12	<10	32
Quachi													
EY31	0.31	17	210	<2	2	2	750	0.09	<10	<10	310	<10	20
EY32	0.10	11	350	<2	<2	3	62	0.12	<10	<10	181	<10	60
EY33	0.04	5	450	2	<2	<1	10	<0.01	<10	<10	7	<10	30
EY34	<0.01	0	70	8	<2	<1	8	<0.01	<10	<10	11	<10	100
EY35	0.04	0	780	<2	<2	1	50	<0.01	<10	<10	45	<10	40
TH40	<0.01	9	<10	24	<2	<1	2	<0.01	<10	<10	10	<10	24
El Fierro alteration													
EY24	0.05	<1	60	18	<2	<1	6	<0.01	<10	<10	<1	<10	8
EY25	0.02	1	210	16	<2	<1	9	<0.01	<10	<10	2	<10	14
EY27	0.03	<1	40	26	<2	<1	9	<0.01	<10	<10	1	<10	2
EY28	0.05	<1	120	33	<2	<1	24	<0.01	<10	<10	1	<10	2
EY29	<0.01	10	280	2	<2	3	9	0.04	<10	<10	42	<10	70
EY30	0.05	1	30	150	<2	<1	7	0.01	<10	<10	1	<10	12
TH40	0.06	4	70	52	<2	<1	10	<0.01	<10	<10	1	<10	50
TH41	0.03	1	10	12	<2	<1	3	<0.01	<10	<10	1	<10	6
TH42	0.04	1	140	60	<2	1	16	<0.01	<10	<10	1	<10	10
TH43	0.07	1	50	6	<2	1	8	<0.01	<10	<10	1	<10	12
TH44	0.07	1	110	2	<2	1	17	0.03	<10	<10	1	<10	8
TH45	0.04	1	100	20	<2	4	15	0.05	<10	<10	6	<10	20
TH46	0.01	2	20	2	<2	<1	1	<0.01	<10	<10	11		

Geochemical grade assay result

sample	Au_ppm	Ag_ppm	As_%	As_ppm	Ba_ppm	Ba_ppm	Ba_ppm	Bi_ppm	Ca_%	Ca_ppm	Co_ppm	Cr_ppm	Cu_ppm	Fe_%	Ga_ppm	Hg_ppm	K_%	La_ppm	Mg_%	Mn_ppm	Nb_ppm
Despoblados																					
AFY402	15	<0.2	0.45	4	83	<0.5	<2	0.05	<0.5	<1	79	11	0.11	<10	<1	0.17	20	0.07	28	<1	
AFY491	20	1.0	0.50	14	83	<0.5	<2	0.12	<0.5	<1	34	4	0.24	<10	<1	0.40	10	0.44	15	8	
AFY402b	10	0.4	0.15	72	63	<0.8	<2	0.04	<0.5	<1	104	3	2.20	<10	<1	0.20	10	0.08	25	4	
AFY424	140	1.0	0.63	201	80	<0.8	<2	0.04	<0.5	<1	25	25	12.55	<10	1	1.12	10	0.02	25	4	
ASH419	5	0.4	0.58	14	63	<0.5	<2	0.16	<0.5	<1	82	1	0.41	<10	<1	0.14	20	0.05	40	5	
ASH420A	10	0.7	0.42	74	200	<0.8	<2	0.04	<0.5	<1	85	0	4.91	<10	<1	0.59	10	0.03	25	20	
ASH421	30	1.4	0.54	114	30	<0.5	<2	0.11	<0.5	<1	129	11	5.49	<10	<1	0.19	20	0.02	50	20	
ATH506	20	0.2	0.94	100	90	<0.5	<2	0.03	<0.5	<1	50	11	6.50	<10	<1	1.25	40	0.05	25	<1	
ATH508	<5	0.2	0.74	16	108	<0.5	<2	0.09	<0.5	<1	82	4	0.30	<10	<1	0.24	<10	0.04	40	1	
ATH509	10	0.4	0.12	26	110	<0.5	<2	0.12	<0.5	<1	158	2	1.23	<10	<1	0.19	<10	0.09	20	14	
Guasaco Zonzo																					
AFY385	45	245.8	0.10	10	1,810	<0.5	<2	<0.01	<0.5	<1	102	4	0.16	<10	26	0.01	<10	<0.01	30	5	
AFY386	<5	0.2	0.55	114	100	<0.5	<2	0.01	<0.5	<1	32	1	0.44	<10	<1	0.20	<10	0.01	40	<1	
ASH426	20	0.2	1.04	44	80	<0.5	<2	<0.01	<0.5	<1	116	2	0.23	<10	<1	0.17	<10	<0.01	20	<1	
ASH407	10	0.2	0.15	30	2,420	<0.5	<2	<0.01	<0.5	<1	150	3	0.13	<10	7	0.02	<10	0.01	45	12	
ATH474	40	0.8	1.31	12	458	<0.5	<2	<0.01	<0.5	<1	172	1	0.20	<10	<1	0.40	<10	<0.01	14	<1	
ATH475	40	0.8	0.08	40	2,230	<0.5	<2	0.01	<0.5	<1	214	1	0.24	<10	3	0.01	<10	<0.01	45	1	
Veladero Norte																					
AFY364	25	<0.2	0.01	20	200	<0.5	<2	<0.01	<0.5	<1	268	4	0.40	<10	3	<0.01	<10	<0.01	20	1	
ASH402	2,730	45.4	0.22	352	120	<0.5	<2	0.01	<0.5	<1	189	13	3.67	10	4	0.07	<10	0.01	25	3	
ASH403	10	0.2	0.03	2	1,000	<0.5	<2	0.01	<0.5	<1	182	7	0.22	<10	<1	0.01	<10	<0.01	25	<1	
ASH404	10	<0.2	<0.01	2	300	<0.5	<2	<0.01	<0.5	<1	107	2	0.15	<10	<1	<0.01	<10	<0.01	5	<1	
ASH405	15	<0.2	<0.01	10	400	<0.5	<2	<0.01	<0.5	<1	81	4	0.11	<10	<1	<0.01	<10	<0.01	5	<1	
ATH472	3,310	45.4	0.09	124	200	<0.5	<2	<0.01	<0.5	<1	208	3	1.02	<10	33	0.07	<10	<0.01	15	<1	
ATH473	140	1.4	<0.01	6	2,850	<0.5	<2	<0.01	<0.5	<1	230	9	0.24	<10	<1	<0.01	<10	<0.01	14	1	
Veladero Sur																					
AFY387a	25	1.8	1.01	12	<10	<0.5	<2	0.13	<0.5	<1	42	6	0.57	<10	<1	0.08	<10	<0.01	10	<1	
AFY388	10	0.4	0.48	34	<10	<0.5	<2	0.02	<0.5	<1	44	4	1.52	<10	<1	0.14	<10	<0.01	35	2	
AFY390	25	<0.2	0.49	7	<10	<0.5	<2	0.09	<0.5	<1	157	7	0.11	<10	<1	0.25	<10	0.02	20	<1	
ASH408	10	0.2	2.72	80	60	<0.5	<2	2.41	<0.5	<1	30	83	5.14	<10	<1	0.16	<10	1.16	2,030	1	
ASH409	10	0.2	0.22	106	50	<0.5	<2	0.13	<0.5	<1	90	6	7.20	<10	<1	0.18	<10	0.01	30	4	
ASH410B	10	<0.2	0.14	12	60	<0.5	<2	0.07	<0.5	<1	300	10	1.63	<10	<1	0.01	<10	<0.01	45	1	
ATH479	15	1.4	0.51	14	20	<0.5	<2	0.50	<0.5	<1	33	4	0.35	<10	<1	0.15	<10	0.01	10	1	
ATH480	25	0.8	0.08	26	<10	<0.5	<2	0.01	<0.5	<1	30	0	0.66	<10	<1	0.15	<10	<0.01	5	3	
ATH482	15	2.0	0.98	42	10	<0.5	<2	0.13	<0.5	<1	32	3	1.78	<10	<1	0.19	<10	0.01	5	1	
ATH484	15	<0.2	0.02	18	30	<0.5	<2	0.10	<0.5	<1	164	13	0.70	<10	<1	0.33	10	0.03	35	4	
ATH485	<5	<0.2	0.14	22	60	<0.5	<2	0.23	<0.5	<1	203	4	0.81	<10	<1	0.03	<10	0.02	60	1	
Rio Frío																					
AFY395	<5	<0.2	1.04	32	50	<0.5	<2	0.02	<0.5	<1	48	60	0.42	<10	<1	0.32	10	0.03	60	<1	
AFY396	480	0.2	0.27	400	220	<0.5	<2	0.13	<0.5	<1	56	61	3.75	<10	<1	0.03	<10	0.02	15	<1	
AFY398	15	0.8	0.04	24	10	<0.5	<2	0.15	<0.5	<1	259	0	0.35	<10	<1	0.24	<10	<0.01	25	1	
AFY399	5	0.2	0.58	18	110	<0.5	<2	0.07	<0.5	<1	18	5	0.72	<10	<1	0.20	<10	0.01	5	<1	
ASH414	9,830	5.4	0.18	6,150	120	<0.5	<2	0.09	<0.5	<1	18	14	>75.00	<10	<1	0.70	<10	<0.01	15	<1	
ASH415	170	5.2	0.33	2,110	480	<0.5	<2	0.07	<0.5	<1	149	86	3.27	<10	1	0.03	<10	<0.01	20	<1	
ASH416	10	0.4	0.94	16	40	<0.5	<2	0.14	<0.5	<1	97	4	0.70	<10	<1	0.25	<10	<0.01	60	1	
ATH494	80	0.4	0.04	1,340	20	<0.5	<2	0.06	<0.5	<1	214	24	0.79	<10	<1	0.04	<10	<0.01	45	2	
ATH496	105	1.4	0.56	74	20	<0.5	<2	0.01	<0.5	<1	159	37	0.76	<10	<1	0.14	<10	<0.01	15	4	

Geochemical grade assay result

sample	Na_%	Mn_ppm	P_ppm	Pb_ppm	Se_ppm	Sc_ppm	Si_ppm	Ti_%	Tl_ppm	U_ppm	V_ppm	W_ppm	Zn_ppm
Despoblados													
AFY400	0.05	<1	220	5	<2	<1	21	<0.01	<10	<10	8	<10	2
AFY401	0.01	<1	170	8	<2	<1	27	<0.01	<10	<10	1	<10	2
AFY402b	0.07	2	930	27	2	<1	35	<0.01	<10	<10	10	<10	8
AFY404	0.47	<1	1,410	17	8	2	68	<0.01	<10	<10	39	<10	<2
ASH419	0.01	<1	110	12	<2	<1	82	<0.01	<10	<10	4	<10	<2
ASH420A	0.19	<1	1,090	34	<2	<1	47	<0.01	<10	<10	12	<10	2
ASH421	0.40	1	1,010	14	2	1	53	<0.01	<10	<10	15	<10	2
ATH506	0.17	<1	1,200	100	4	1	54	<0.01	<10	<10	19	<10	<2
ATH508	0.02	<1	390	104	<2	<1	5	<0.01	<10	<10	61	<10	2
ATH509	0.05	2	180	32	2	<1	150	<0.01	<10	<10	4	<10	2
Guasaco Zonzo													
AFY385	<0.01	3	<10	80	312	<1	7	<0.01	<10	<10	2	<10	4
AFY386	0.04	<1	<10	20	10	<1	5	<0.01	<10	<10	61	<10	12
ASH406	0.01	3	<10	180	28	1	25	<0.01	<10	<10	3	<10	4
ASH407	<0.01	3	<10	160	104	<1	15	<0.01	<10	<10	2	<10	6
ATH474	0.07	3	60	36	8	<1	22	<0.01	<10	<10	9	<10	2
ATH475	<0.01	1	30	207	32	<1	26	<0.01	<10	<10	2	<10	<2
Veladero Norte													
AFY364	<0.01	3	<10	14	<2	<1	4	<0.01	<10	<10	1	<10	2
ASH402	0.04	1	160	1,495	<2	<1	178	0.01	<10	<10	18	<10	2
ASH403	<0.01	2	<10	70	<2	<1	9	<0.01	<10	<10	61	<10	<2
ASH404	<0.01	4	<10	10	<2	<1	5	<0.01	<10	<10	61	<10	<2
ASH405	<0.01	4	<10	10	2	<1	1	<0.01	<10	<10	61	<10	<2
ATH472													

Geochemical grade assay result

Sample	As ppm	Ag ppm	Al %	Au ppm	Ba ppm	Be ppm	B ppm	Ca %	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	Li ppm	Mg %	Mn ppm	Mo ppm	
ATW453	87	0.6	0.10	768	10	<0.5	42	0.17	<0.5	1	176	15	0.41	<10	<1	0.08	<10	<0.01	75	1
ATW459	26	0.2	0.12	14	120	<0.5	42	0.58	<0.5	1	122	8	0.48	<10	<1	0.22	<10	<0.01	80	7
ATW450	10	0.6	0.00	18	10	<0.5	2	0.13	<0.5	1	201	6	0.43	<10	<1	0.01	<10	<0.01	50	1
ATW452	105	1.4	0.17	218	250	<0.5	143	0.21	0.5	<1	159	72	1.41	<10	<1	0.05	<10	0.03	35	6
Zacaton																				
ARF351	45	<0.2	1.06	78	80	<0.5	<1	<0.01	<0.5	<1	31	81	2.13	<10	<1	0.76	10	0.03	20	41
ARF352	45	1.8	0.83	118	110	<0.5	<1	<0.01	3.0	1	112	424	1.28	<10	6	0.29	<10	<0.03	30	48
ARF354	70	0.6	0.51	870	70	<0.5	<1	<0.01	<0.5	<1	111	342	0.98	<10	<1	0.17	<10	<0.01	35	46
ASW411	20	1.8	0.41	438	110	<0.5	<1	<0.01	<0.5	<1	72	311	11.50	<10	10	0.15	<10	<0.01	20	5
ASW412	65	0.0	0.31	58	750	<0.5	8	<0.01	<0.5	<1	264	30	0.44	<10	4	0.08	<10	<0.01	20	<1
ASW413	45	<0.2	1.18	54	250	<0.5	<1	<0.01	<0.5	1	103	89	0.94	<10	<1	0.13	<10	<0.01	30	<1
ATW456	30	0.6	1.05	210	30	<0.5	23	0.20	<0.5	<1	17	22	1.51	20	2	0.58	<10	0.08	30	1
ATW457	15	7.2	0.81	34	20	<0.5	<1	<0.01	<0.5	<1	141	3	0.43	<10	<1	0.11	<10	<0.01	15	<1
ATW459	0.480	49.0	0.31	11000	20	<0.5	INFL	<0.01	<0.5	<1	197	16,400	0.71	<10	7	0.10	<10	<0.01	15	4
El Salado																				
ATW383	10	744.0	0.05	1,285	470	<0.5	<1	0.29	19.5	9	42	564	6.81	<10	<1	0.01	<10	0.09	10000	1
Las Opeñas																				
ARF335	155	4.4	0.39	260	40	<0.5	<1	0.50	<0.5	1	123	8	1.91	<10	<1	0.25	10	0.04	125	5
ARF337	18,110	12,876.5	0.12	145	110	<0.5	<1	0.41	24.5	1	202	170	2.04	<10	1	0.10	<10	<0.01	110	24
ATW398	25,450	41.2	0.25	11000	40	<0.5	44	0.04	0.5	1	161	246	4.00	<10	<1	0.17	30	0.01	30	1
ATW399	8,790	32.0	0.42	11000	300	<0.5	<1	0.02	10.0	1	114	565	5.66	<10	<1	0.24	<10	0.01	25	1
Carmen Norte																				
ARF374	5	<0.2	2.40	22	440	0.5	<1	1.20	<0.5	14	67	8	3.15	<10	<1	0.25	20	1.84	1,490	<1
ARF375	485	7.8	0.04	61	10	<0.5	8	0.21	<0.5	<1	258	4	0.89	<10	1	0.04	<10	0.01	78	1
ARF376	15	<0.2	1.73	42	50	<0.5	<1	0.05	<0.5	12	30	14	2.98	<10	<1	0.09	<10	0.43	105	<1
ARF377	45	<0.2	1.14	22	20	<0.5	<1	0.74	<0.5	14	63	11	3.10	<10	<1	0.04	<10	1.73	568	1
ARF378	370	0.8	0.72	40	<10	<0.5	2	0.01	<0.5	<1	48	11	1.14	<10	<1	0.06	<10	0.03	20	1
ARF380a	165	<0.2	0.61	15	<10	<0.5	<1	0.42	<0.5	<1	106	1	0.22	<10	<1	<0.01	<10	<0.01	20	1
ARF380b	1,445	<0.2	0.97	12	70	<0.5	<1	1.12	<0.5	<1	219	4	0.68	<10	<1	0.09	<10	0.01	35	1
ARF380c	40	<0.2	0.91	30	<10	<0.5	<1	0.31	<0.5	<1	204	5	0.30	<10	<1	<0.01	<10	<0.01	25	<1
ARF381	1,050	0.2	0.27	6	40	<0.5	2	0.07	<0.5	<1	316	4	0.59	<10	<1	0.07	<10	0.01	20	1
ARF382a	18	<0.2	1.34	196	70	<0.5	<1	0.09	<0.5	<1	124	41	7.26	<10	<1	0.70	<10	0.02	20	<1
ARF383	2,280	0.4	0.03	24	<10	<0.5	12	0.26	<0.5	1	307	4	0.67	<10	1	0.05	<10	0.01	25	1
ASW396	10	<0.2	0.97	41	60	<0.5	2	1.73	<0.5	14	64	70	4.83	<10	<1	0.25	10	0.08	415	0
ASW398	75	0.8	0.91	1,750	150	<0.5	2	0.01	<0.5	<1	16	162	115.00	<10	<1	0.42	<10	0.04	43	1
ASW399	50	2.0	0.14	346	1,400	<0.5	4	0.09	<0.5	<1	170	8	5.44	<10	<1	0.04	<10	0.01	45	11
ASW420	45	<0.2	2.43	48	40	<0.5	<1	0.22	<0.5	7	50	58	3.82	<10	<1	0.07	10	0.06	210	<1
ASW421	25	<0.2	1.06	50	70	<0.5	<1	0.88	<0.5	4	39	13	1.36	<10	<1	0.25	10	0.17	35	<1
ATW454	5	<0.2	2.09	40	280	0.5	<1	3.03	<0.5	10	41	13	3.19	<10	<1	0.24	20	1.05	550	3
ATW455	25	0.4	1.51	38	50	<0.5	<1	0.33	<0.5	<1	75	8	0.31	<10	<1	0.20	<10	0.01	20	3
ATW461	1,155	0.6	0.39	34	10	<0.5	2	0.02	<0.5	<1	152	4	4.45	<10	5	0.19	<10	0.01	15	1
ATW463	30	<0.2	0.57	34	10	<0.5	<1	0.13	<0.5	<1	214	3	3.00	<10	<1	0.05	<10	0.01	15	0
ATW464	10	<0.2	0.78	30	<10	<0.5	2	3.12	<0.5	11	27	17	3.12	<10	<1	0.08	<10	0.01	5	3
ATW465	45	<0.2	0.72	2	20	<0.5	<1	1.54	<0.5	<1	44	1	0.24	<10	<1	0.14	<10	0.01	<1	1
ATW466	15	<0.2	0.20	34	70	<0.5	2	0.21	<0.5	<1	124	6	7.04	<10	<1	0.20	<10	0.01	20	24
ATW468	45	<0.2	0.51	30	170	<0.5	<1	0.32	<0.5	<1	93	1	4.79	<10	<1	0.07	<10	0.01	30	5
ATW469	45	<0.2	0.06	22	20	<0.5	<1	0.29	<0.5	<1	214	1	0.29	<10	<1	0.01	<10	0.01	25	1
ATW470	45	<0.2	0.03	2	10	<0.5	<1	0.22	<0.5	1	728	3	0.35	<10	<1	0.01	<10	0.01	30	1
ATW471	45	<0.2	0.06	4	370	<0.5	<1	0.32	<0.5	1	198	4	0.34	<10	<1	0.02	<10	0.05	35	1

Geochemical grade assay result

sample	Na %	ML ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Si ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
ATW470	0.01	4	30	4,370	104	<1	25	<0.01	50	<10	2	<10	52
ATW469	0.06	1	80	95	6	<1	54	<0.01	<10	<10	5	<10	2
ATW500	0.03	4	30	86	4	<1	11	<0.01	<10	<10	1	<10	42
ATW501	0.05	7	180	1,510	116	<1	125	<0.01	<10	<10	6	<10	74
Zacaton													
ARF351	0.08	<1	<10	6	<1	<1	15	<0.01	<10	<10	4	<10	14
ARF352	0.01	1	<10	174	<1	<1	4	<0.01	<10	<10	3	<10	784
ARF354	0.02	1	<10	28	48	<1	20	<0.01	<10	<10	3	<10	6
ASW411	0.17	<1	318	32	42	<1	19	<0.01	<10	<10	14	<10	40
ASW412	0.02	1	<10	30	14	<1	11	<0.01	<10	<10	1	<10	2
ASW413	0.01	1	<10	10	<1	<1	12	<0.01	<10	<10	4	<10	0
ATW456	0.08	1	40	108	4	1	5	<0.01	<10	<10	15	<10	10
ATW457	0.04	1	10	16	9	<1	12	<0.01	<10	<10	2	<10	4
ATW459	0.01	2	TrE+	22	074	<1	17	<0.01	<10	<10	1	<10	2
El Salado													
ATW383	<0.01	<1	20	16,700	12	<1	400	<0.01	<10	10	3	<10	3,540
Las Opeñas													
ARF334	<0.01	3	300	200	<1	<1	11	<0.01	<10	<10	8	<10	54
ARF337	0.02	7	50	2,230	1,985	<1	1	<0.01	<10	<10	1	<10	7,850
ATW398	<0.03	<1	110	1,485	24	<1	19	<0.01	<10	<10	4	>10	104
ATW399	<0.03	<1	40	64,200	44	6	19	<0.01	<10	<10	3	<10	1,755
Carmen Norte													
ARF374	0.05	17	710	42	<1	3							

Geochemical grade assay result

sample	As_ppm	Ag_ppm	Al_%	Al2O3_ppm	Bi_ppm	Ba_ppm	B_ppm	Ca_%	CaO_ppm	Co_ppm	Cu_ppm	Cu2O_ppm	Fe_%	FeO_ppm	Hg_ppm	K_%	Li_ppm	Mg_%	MgO_ppm	Mn_ppm	
Quebrada de Chila																					
ASW342	100	0.2	0.29	324	10	<0.5	<2	0.05	19.5	7	17	17	0.51	<10	<1	0.14	10	<0.01	175	<1	
ATW370	2,450	146.0	0.04	324	10	<0.5	<2	0.03	4.0	8	241	1,920	11.75	<10	<1	0.02	<10	<0.01	30	11	
EV16	120	1.2	0.35	30	50	<0.5	<2	0.13	<0.5	<1	11	35	1.75	<10	<1	0.20	<10	0.02	5	89	
EV19	10	1.4	0.35	14	40	<0.5	<2	0.13	<0.8	<1	14	17	0.94	<10	<1	0.31	<10	0.02	20	14	
EV20	<5	<0.2	0.50	<2	30	<0.5	<2	0.03	<0.5	<1	14	17	1.52	<10	<1	0.24	<10	0.04	16	<1	
EV21	100	1100/1	0.32	114	40	<0.5	<2	0.10	<0.5	<1	43	102	0.49	<10	<1	0.11	<10	0.01	40	15	
EV24	110	1.4	0.95	34	70	<0.5	<2	0.07	<0.5	<1	10	151	0.46	<10	<1	0.20	<10	0.03	20	124	
EV29	10	0.2	0.95	30	143	<0.5	<2	0.15	<0.5	<1	27	42	2.55	<10	<1	0.50	<10	0.03	10	17	
EV30	95	0.0	0.90	14	170	<0.5	<2	0.06	<0.5	<1	19	48	2.72	<10	<1	0.05	<10	0.05	20	17	
EV34	40	2.4	0.54	8	293	<0.5	<2	0.05	<0.5	<1	49	18	2.25	<10	<1	0.45	<10	0.02	5	10	
EV35	25	<0.2	1.37	<2	100	<0.5	<2	0.09	<0.5	<1	20	87	1.41	<10	1	0.13	<10	0.04	35	7	
EV36	<5	<0.2	0.47	<2	40	<0.5	<2	0.02	<0.5	<1	32	24	0.65	<10	<1	0.22	<10	0.02	5	14	
Toocla District																					
AFW331	<5	<0.2	0.70	34	130	0.5	<2	0.04	<0.5	1	143	21	2.71	<10	<1	0.33	<10	0.07	40	2	
AFW332	20	0.2	0.35	254	350	<0.5	<2	0.04	<0.5	8	248	306	3.06	<10	<1	0.16	<10	0.02	105	4	
AFW333	<5	<0.2	2.20	120	350	<0.5	<2	0.76	<0.5	13	53	101	4.21	<10	<1	1.33	<10	1.19	275	<1	
ASW335	35	0.2	0.20	282	200	<0.5	<2	0.02	0.5	13	210	210	3.64	<10	<1	0.34	<10	0.02	25	5	
ASW336	<5	<0.2	0.64	240	30	<0.5	<2	0.09	<0.5	<1	166	40	0.73	<10	<1	0.23	<10	0.07	15	1	
ASW337	10	<0.2	0.15	>10000	20	<0.5	<2	0.07	<0.5	10	110	15	0.96	<10	<1	0.03	<10	0.01	55	<1	
ASW340	35	1.2	0.32	1,495	120	<0.5	<2	0.17	<0.5	65	151	102	3.21	<10	<1	0.01	<10	0.01	505	2	
ATW361	9,400	1.0	0.05	>10000	<10	<0.5	146	<0.01	<0.5	431	27	89	12.10	<10	<1	0.02	<10	<0.01	3	2	
ATW371	20	0.4	0.14	730	30	<0.5	<2	0.07	<0.5	22	224	10	1.43	<10	<1	0.01	<10	0.01	30	1	
ATW374	205	0.4	0.05	1,200	<10	<0.5	10	0.04	<0.5	10	273	14	0.05	<10	<1	<0.01	<10	<0.01	25	2	
ATW375	400	1.4	0.10	>10000	20	<0.5	24	0.01	<0.5	10	217	114	3.14	<10	<1	0.01	<10	0.01	25	1	
ATW376	435	0.4	0.04	>10000	70	<0.5	66	<0.01	<0.5	975	17	100	10.45	<10	<1	<0.01	<10	<0.01	5	1	
El Retamal																					
EV09	<5	<0.2	0.45	8	110	<0.5	<2	0.01	<0.5	5	17	1	2.68	<10	<1	0.51	<10	0.02	5	<1	
EV10	<5	<0.2	0.20	2	20	<0.5	<2	0.01	<0.5	1	48	2	0.68	<10	<1	0.13	<10	0.02	5	2	
EV12	<5	<0.2	0.40	8	10	<0.5	<2	0.50	<0.5	<1	24	3	0.29	<10	<1	0.72	<10	0.02	5	4	
EV13	<5	<0.2	0.34	4	50	<0.5	<2	0.07	<0.5	<1	20	4	2.47	<10	<1	0.49	<10	0.05	5	11	
EV21	105	0.2	0.91	42	20	<0.5	<2	1.43	<0.5	8	36	1,340	1.41	<10	<1	0.17	<10	0.02	170	21	
EV23	20	<0.2	1.44	24	60	<0.5	<2	0.25	<0.5	7	12	17	2.22	<10	1	0.38	<10	1.20	45	5	
Vizcachas																					
AFW311	<5	<0.2	0.34	4	30	<0.5	<2	0.15	<0.5	<1	63	4	2.16	<10	<1	0.16	<10	0.05	115	<1	
ASW335B	<5	<0.2	0.24	44	30	<0.5	<2	0.01	<0.5	<1	71	5	0.92	<10	<1	0.11	<10	0.01	15	3	
ATW325	<5	<0.2	0.34	12	40	<0.5	<2	0.07	<0.5	<1	70	2	0.57	<10	<1	0.25	<10	0.06	20	1	
ATW327	10	<0.2	1.10	34	80	0.5	<2	0.13	<0.5	1	111	1	2.30	<10	<1	0.12	<10	0.44	145	4	
ATW328	10	<0.2	1.10	34	80	0.5	<2	0.13	<0.5	1	111	1	2.30	<10	<1	0.12	<10	0.44	145	4	
Castano Viejo District																					
ASW309	40	0.4	0.35	14	730	<0.5	<2	0.10	<0.5	<1	70	4	0.40	<10	<1	0.06	<10	<0.01	5	2	
ASW310	<5	<0.2	0.30	8	50	<0.5	<2	0.14	<0.5	4	74	5	2.02	<10	<1	0.14	<10	0.01	5	<1	
ATW310	95	10.0	0.35	170	30	<0.5	<2	0.06	1.0	<1	78	14	1.40	<10	<1	0.27	<10	0.01	20	17	
ATW311	15	0.0	0.30	34	40	<0.5	<2	0.56	<0.5	9	61	21	3.06	<10	<1	0.36	<10	0.06	70	7	
ATW313	20	20.4	0.01	10	40	<0.5	<2	12.05	5.0	1	42	60	1.50	<10	0	0.34	<10	0.09	45	<1	
ATW314	20	0.2	0.25	10	30	<0.5	<2	0.47	<0.5	<1	201	12	1.43	<10	<1	0.13	<10	0.02	15	5	
Avestruces																					

Geochemical grade assay result

sample	Na_%	Na2O_ppm	P_ppm	Pb_ppm	Sr_ppm	Sc_ppm	Sr2O_ppm	Ti_%	TiO2_ppm	U_ppm	V_ppm	W_ppm	Zn_ppm
Quebrada de Chila													
ASW342	<0.01	3	45	452	2	<1	47	<0.01	<10	<10	3	<10	2,050
ATW376	<0.01	4	10	544	4	<1	17	<0.01	<10	<10	3	<10	1,280
EV16	0.05	<1	530	8	<2	<1	20	<0.01	<10	<10	3	<10	2
EV18	0.05	<1	300	14	<2	<1	19	<0.01	<10	<10	3	<10	4
EV20	0.03	<1	110	6	<2	<1	21	<0.01	<10	<10	3	<10	<2
EV21	<0.02	1	1,340	3,930	50	<1	57	<0.01	<10	<10	5	<10	10
EV24	0.06	<1	300	8	<2	1	31	<0.01	<10	<10	14	<10	23
EV29	0.02	<1	140	2	<2	<1	9	<0.01	<10	<10	6	<10	8
EV30	0.04	<1	610	6	<2	<1	59	<0.01	<10	<10	4	<10	14
EV34	0.01	<1	160	14	<2	<1	18	<0.01	<10	<10	4	<10	30
EV35	0.07	<1	140	6	<2	<1	115	<0.01	<10	<10	20	<10	14
EV36	0.04	<1	250	20	<2	<1	30	<0.01	<10	<10	8	<10	17
Toocla District													
AFW331	<0.01	5	340	12	<2	1	15	<0.01	<10	<10	20	<10	56
AFW332	<0.01	11	130	10	<2	<1	51	<0.01	<10	<10	7	<10	45
AFW333	0.09	8	1,420	8	<2	4	57	0.22	<10	<10	94	<10	32
ASW335	<0.01	10	80	6	<2	<1	17	<0.01	<10	<10	30	<10	46
ASW336	0.02	3	130	6	<2	1	11	<0.01	<10	<10	7	<10	14
ASW337	<0.01	3	260	2	<2	<1	57	<0.01	<10	<10	1	<10	10
ASW340	<0.01	14	900	120	6	<1	7	<0.01	<10	<10	10	<10	112
ATW361	<0.01	51	90	20	450	<1	2	<0.01	<10	<10	2	<10	14
ATW371	<0.01	4	100	14	6	1	8	<0.01	<10	<10	8	<10	24
ATW374	<0.01	4	160	4	24	<1	2	<0.01	<10	<10	4	<10	6
ATW375	<0.01	3	110	110	27	1	8	<0.01	<10	<10	9	<10	26
ATW376	<0.01	46	50	30	470	<1	1	<0.01	<10	<10	2	<10	20
El Retamal													
EV09	0.01	4											

Geochemical grade assay result

sample	As_ppm	Ag_ppm	Al_N	As_ppm	Ba_ppm	Be_ppm	Bismuth	Ca_N	Cd_ppm	Co_ppm	Cu_ppm	Pb_ppm	Fe_N	Ca_ppm	Hg_ppm	K_N	La_ppm	Mg_N	Mn_ppm	Mo_ppm
AFY312a	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod
AFY312b	<5	<0.2	0.44	10	100	<0.5	<2	0.13	<0.5	1	142	3	2.17	<10	<1	0.48	20	0.08	10	3
AFY313	<5	<0.2	0.10	52	110	<0.5	<2	0.34	<0.5	1	179	4	3.64	<10	<1	0.43	<10	<0.01	55	25
AFY314	<5	<0.2	1.07	24	410	<0.5	<2	0.26	<0.5	<2	41	<1	1.07	<10	<1	0.43	<10	<0.08	5	<1
AFY315a	<5	<0.2	0.20	112	40	<0.5	<2	0.66	<0.5	<1	50	<1	>15.00	30	1	0.28	<10	<0.01	8	<1
AFY315b	<5	<0.2	1.84	42	50	<0.5	<2	0.07	<0.5	<1	27	8	1.91	<10	<1	0.26	20	0.38	25	<1
AFY317	<5	<0.2	1.33	18	40	<0.5	<2	0.01	<0.5	1	43	5	3.11	<10	<1	0.62	<10	<0.01	20	<1
AFY320	<5	<0.2	0.73	30	110	<0.5	14	0.04	<0.5	<1	55	<1	0.89	<10	<1	0.41	30	0.04	5	<1
AGW316	<5	<0.2	0.93	<2	<10	<0.5	<2	0.23	<0.5	<1	142	2	0.19	<10	<1	<0.01	<10	<0.01	20	<1
AGW317	<5	<0.2	0.48	46	50	<0.5	<2	0.14	<0.5	1	78	11	3.13	<10	<1	0.03	<10	0.02	5	1
AGW318	<5	<0.2	0.40	14	20	<0.5	<2	0.04	<0.5	1	60	4	0.32	<10	<1	0.10	<10	<0.01	5	<1
AGW319	5	<0.2	0.04	50	30	<0.5	<2	0.74	<0.5	1	214	5	1.20	<10	<1	0.01	<10	<0.01	45	6
AGW320	<5	<0.2	0.57	22	30	<0.5	<2	<0.01	<0.5	<2	45	19	4.93	<10	<1	0.07	<10	<0.01	5	2
AGW322	5	<0.2	0.07	60	50	<0.5	<2	0.01	<0.5	1	99	48	2.31	<10	<1	0.01	<10	<0.01	5	<1
AGW323	<5	<0.2	0.43	41	470	<0.5	<2	0.01	<0.5	1	145	4	0.47	<10	<1	<0.01	<10	<0.01	10	2
AGW324	5	<0.2	2.48	51	30	<0.5	33	0.10	<0.5	<1	43	5	1.71	<10	<1	<0.09	10	1.45	150	<1
AGW325	5	<0.2	0.73	24	100	<0.5	3	0.01	<0.5	<1	31	<1	0.32	<10	<1	0.34	50	0.05	<5	1
AGW325a	<5	<0.2	0.17	49	60	<0.5	<2	0.05	<0.5	1	191	9	2.84	<10	<1	0.01	<10	<0.01	25	30
AGW330	<5	<0.2	0.02	2	<10	<0.5	<2	0.12	<0.5	<1	252	<1	0.35	<10	<1	<0.01	<10	<0.01	30	3
AGW332	<5	<0.2	0.95	154	210	<0.5	<2	0.18	<0.5	<1	22	2	1.93	<10	<1	0.59	14	0.06	5	<1
AGW335	<5	<0.2	0.14	43	<10	<0.5	7	0.07	<0.5	1	455	3	1.01	<10	<1	0.04	<10	<0.01	10	6
AGW336	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod
AGW337	<5	<0.2	0.07	36	34	<0.5	6	0.01	<0.5	<1	46	3	0.17	<10	<1	0.03	<10	<0.01	15	<1
AGW338	<5	<0.2	0.72	118	84	<0.5	4	0.05	<0.5	9	48	13	3.46	<10	<1	0.39	<10	0.02	<5	3
AGW340	<5	0.6	0.21	14	30	<0.5	<2	0.02	<0.5	1	100	63	0.45	<10	<1	0.12	<10	0.02	25	3
AGW341	<5	<0.2	0.01	10	50	<0.5	<2	0.03	<0.5	<1	43	<1	0.53	<10	<1	0.30	<10	0.10	70	<1
AGW342	5	<0.2	0.78	12	130	<0.5	2	0.06	<0.5	<1	66	3	0.15	<10	<1	0.35	<10	0.04	15	<1
AGW343	<5	<0.2	1.54	14	130	<0.5	8	0.37	<0.5	<1	36	<1	0.18	<10	<1	0.20	50	0.13	15	<1

Manrique

AFY321b	<5	<0.2	0.73	38	280	<0.5	16	0.05	<0.5	<1	42	77	0.99	<10	<1	0.14	<10	0.05	20	<1
AFY322	<5	<0.2	0.57	29	70	<0.5	<2	0.04	<0.5	<1	111	33	2.74	<10	<1	0.17	<10	0.05	25	2
AFY323	<5	<0.2	0.50	40	120	<0.5	4	0.03	<0.5	<1	51	7	2.94	<10	<1	0.44	10	0.02	30	8
AFY324b	<5	<0.2	0.33	38	40	<0.5	2	0.03	<0.5	1	184	51	2.91	<10	<1	0.51	10	0.01	20	3
AFY325	20	<0.2	0.68	23	60	<0.5	<2	0.03	<0.5	3	103	47	4.37	<10	<1	0.17	20	0.14	60	11
AFY327	<5	<0.2	0.53	58	39	<0.5	4	0.07	<0.5	<1	44	52	0.36	<10	<1	0.17	<10	0.01	5	8
AFY328	10	<0.2	0.41	20	30	<0.5	<2	0.04	<0.5	<1	35	24	3.84	<10	<1	0.14	<10	0.03	5	3
AFY329	200	0.4	0.26	214	30	<0.5	<2	0.17	<0.5	3	203	44	1.71	<10	1	0.41	<10	0.04	1,380	22
AGW324	<5	<0.2	1.01	28	80	<0.5	8	0.08	<0.5	<1	37	23	4.36	<10	<1	0.15	30	0.13	25	<1
AGW327	<5	<0.2	1.00	42	110	<0.5	2	0.17	<0.5	<1	85	8	3.73	<10	<1	0.57	30	0.10	40	<1
AGW328	5	<0.2	0.08	36	40	<0.5	8	0.02	<0.5	<1	72	3	1.40	<10	<1	0.23	<10	0.04	15	6
AGW329a	15	<0.2	0.62	24	70	<0.5	2	0.05	<0.5	<1	49	22	3.50	<10	<1	0.32	30	0.05	15	5
AGW329b	25	<0.2	0.75	22	30	<0.5	4	0.04	<0.5	<1	124	37	2.41	<10	<1	0.13	10	0.10	45	36
AGW331	10	1.0	0.38	20	150	<0.5	4	0.04	<0.5	1	227	2	3.79	<10	<1	0.12	<10	0.04	25	14
AGW332	<5	<0.2	0.78	30	45	<0.5	<2	0.08	<0.5	<1	64	6	2.69	<10	<1	0.10	30	0.07	20	<1
AGW333	20	0.6	0.30	78	10	<0.5	<2	0.02	<0.5	2	154	28	2.91	<10	<1	0.08	<10	0.04	40	5
AGW334	10	0.2	0.25	4	30	<0.5	<2	0.07	<0.5	<1	118	<1	0.27	<10	<1	0.10	<10	0.02	20	8
AGW340	<5	<0.2	0.08	10	50	<0.5	<2	0.08	<0.5	<1	260	3	1.45	<10	<1	0.12	10	0.10	35	<1
AGW341	<5	<0.2	0.45	14	10	<0.5	<2	0.01	<0.5	1	142	2	1.25	<10	<1	0.05	<10	0.01	15	214
AGW350	<5	<0.2	0.54	9	50	<0.5	2	0.02	<0.5	<1	48	1	0.40	<10	<1	0.28	10	0.04	5	4
AGW351	<5	<0.2	0.58	9	40	<0.5	<2	0.03	<0.5	<1	81	3	1.13	<10	<1	0.36	<10	0.03	15	3
AGW352	5	<0.2	0.44	10	50	<0.5	<2	0.01	<0.5	<1	215	2	0.13	<10	<1	0.09	20	0.01	25	95

Geochemical grade assay result

sample	Na_N	Mg_ppm	P_ppm	Fe_ppm	SO_ppm	Sc_ppm	Sr_ppm	Ti_N	Zn_ppm	U_ppm	V_ppm	W_ppm	Zn_ppm
AFY312a	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod
AFY312b	0.01	2	190	10	<2	1	24	<0.01	<10	<10	0	<10	<2
AFY313	0.01	1	530	50	<2	4	65	<0.01	<10	<10	0	<10	<2
AFY314	0.01	<1	30	10	<2	2	25	<0.01	<10	<10	15	<10	<2
AFY315a	0.12	<1	330	18	<2	1	114	<0.01	<10	<10	36	<10	<2
AFY315b	<0.01	<1	126	22	<2	4	3	<0.01	<10	<10	24	<10	6
AFY317	<0.01	<1	110	4	<2	4	69	<0.01	<10	<10	43	<10	<2
AFY320	0.01	<1	70	20	<2	1	11	<0.01	<10	<10	8	<10	<2
AGW326	0.01	3	30	<2	<2	<1	2	<0.01	<10	<10	1	<10	<2
AGW327	0.02	1	50	8	<2	<1	10	<0.01	<10	<10	12	<10	<2
AGW328	0.01	1	30	6	<2	1	3	<0.01	<10	<10	9	<10	<2
AGW329	0.01	2	80	48	6	<1	10	<0.01	<10	<10	6	<10	<2
AGW329b	0.01	<1	145	6	<2	<1	24	<0.01	<10	<10	48	<10	<2
AGW322	0.01	3	140	8	<2	4	101	<0.01	<10	<10	21	<10	2
AGW323	0.02	4	410	4	<2	<1	14	<0.01	<10	<10	5	<10	<2
AGW324	0.01	<1	320	168	<2	7	4	<0.01	<10	<10	49	<10	6
AGW325	0.01	<1	490	14	<2	9	18	<0.01	<10	<10	4	<10	<2
AGW329	0.01	2	280	14	2	1	81	<0.01	<10	<10	4	<10	<2
AGW330	0.01	4	15	<2	<2	<1	4	<0.01	<10	<10	1	<10	<2
AGW331	0.01	<1	110	36	<2	2	14	<0.01	<10	<10	13	<10	<2
AGW335	0.01	2	160	4	<2	3	12	<0.01	<10	<10	5	<10	<2
AGW336	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod	NotRod
AGW337	<0.01	<1	10	6	<2	2	12	<0.01	<10	<10	19	<10	<2
AGW338	0.01	9	20	20	<2	1	6	<0.0					

Geochemical grade assay result

sample	As_ppb	Ag_ppm	Al_%	As_ppm	Ba_ppm	Be_ppm	Bppm	Ca_%	Ca_ppm	Co_ppm	Cu_ppm	Cu2ppm	Pb_%	Ga_ppm	Hg_ppm	K_%	La_ppm	Mg_%	Ni_ppm	Mg_ppm
ATH355	<5	<0.2	0.25	10	30	<0.5	4	<0.01	<0.5	<1	196	4	1.13	<10	<1	0.05	<10	0.01	15	3
ATH356	<5	<0.2	0.70	120	41	<0.5	<2	0.03	<0.5	<1	105	3	0.32	<10	<1	0.35	10	0.01	15	3
ATH357	<5	<0.2	0.55	6	30	<0.5	4	0.03	<0.5	<1	73	1	0.01	<10	<1	0.35	<10	0.05	10	<1
Castano Nuevo																				
TH24	110	<0.2	0.58	70	70	<0.5	4	0.20	<0.5	7	42	35	5.03	<10	<1	0.42	30	0.05	10	14
Leoncito																				
EY54	<5	<0.2	0.66	<2	310	<0.5	<2	0.35	<0.5	<1	50	9	0.73	<10	<1	0.30	20	0.03	45	<1
TH92	<5	0.2	0.16	100	100	<0.5	<2	0.18	<0.5	<1	75	26	1.39	<10	<1	0.04	<10	<0.01	34	4
TH93	<5	<0.2	0.55	12	30	<0.5	<2	0.21	<0.5	<1	113	3	0.56	<10	<1	0.27	30	0.03	55	1
Acaparosa																				
EY05	<5	<0.2	1.53	42	60	<0.5	<2	0.37	<0.5	0	96	72	1.49	<10	<1	0.51	10	0.05	95	1
San Jorge																				
TH79	10	1.0	1.41	74	80	<0.5	12	0.04	<0.5	1	37	9,240	1.98	<10	<1	0.19	30	0.97	130	1
Yaguaz																				
TH83	310	15.0	0.49	660	80	<0.5	2	0.04	<0.5	1	251	62	1.35	<10	<1	0.26	10	0.05	50	5
Paramillos Sur																				
TH133	25	<0.2	1.10	2	70	<0.5	<2	0.04	<0.5	1	329	50	0.76	<10	<1	0.57	40	0.40	105	13
Paramillos Norte																				
TH102	18,140	0.4	0.73	60	270	2.0	14	0.43	<0.5	59	4	230	115.00	<10	<1	0.20	10	0.05	70	40
TH98	10	<0.2	0.45	<2	40	<0.5	<2	0.16	<0.5	1	24	7	2.08	<10	<1	0.20	80	0.05	35	1
TH99	<5	<0.2	0.33	<2	110	<0.5	<2	0.50	<0.5	<1	24	26	1.83	<10	<1	0.31	10	0.09	35	1
Paramillos Centro																				
EY41	<5	<0.2	0.70	<2	20	<0.5	<2	1.07	<0.5	1	55	12	1.53	<10	<1	0.08	<10	0.25	265	1
TH115	5	<0.2	2.01	<2	70	<0.5	<2	0.57	1.0	5	30	7	5.02	<10	<1	0.10	10	1.06	1,020	1
TH116	10	3.6	0.65	150	330	1.5	<2	0.47	1.5	15	<1	791	115.00	<10	<1	0.09	<10	0.04	335	10
Grupo Oro del Sur																				
TH119	80	<0.2	1.73	3	90	<0.5	<2	0.29	<0.5	1	83	70	2.66	<10	<1	0.21	<10	0.33	75	12
La Negra																				
EY42	<5	5.0	1.05	<2	60	<0.5	<2	1.73	3.0	5	34	8	2.57	<10	1	0.14	10	0.50	965	1
EY43	<5	0.2	1.17	<2	200	<0.5	<2	3.66	<0.5	7	32	4	3.39	<10	<1	0.23	10	0.59	1,490	<1
TH68	<5	<0.2	0.07	2	<10	<0.5	2	19.00	<0.5	11	249	9	1.06	<10	<1	<0.03	<10	0.56	490	<1
San Benicio																				
EY44	<5	<0.2	0.39	<2	60	<0.5	<2	0.08	<0.5	<1	116	194	0.85	<10	<1	0.16	<10	0.01	15	20
EY45	>10	<0.2	0.60	<2	10	<0.5	<2	0.39	<0.5	0	47	286	1.56	<10	<1	0.07	<10	0.06	35	5
EY57	60	1.4	0.29	<2	70	<0.5	<2	0.40	<0.5	<1	59	72	1.48	<10	<1	0.31	<10	0.05	30	3
EY58	35	<0.2	0.27	2	10	<0.5	<2	0.46	<0.5	<1	95	29	0.97	<10	<1	0.08	<10	0.05	5	6
SB01	45	0.1	0.48	4	130	<0.5	2	0.02	<0.5	<1	46	207	2.30	<10	<1	0.70	<10	0.03	15	37
SB02	45	<0.2	0.21	<2	40	<0.5	<2	0.04	<0.5	<1	138	71	2.23	<10	<1	0.27	<10	0.01	15	104
SB03	20	0.0	0.94	8	130	<0.5	2	0.21	<0.5	<1	69	451	6.78	<10	<1	1.27	20	0.03	5	4
SB04	10	<0.2	0.51	<2	20	<0.5	<2	0.25	<0.5	2	59	97	1.25	<10	<1	0.11	10	0.06	45	2
SB05	10	<0.2	0.54	<2	20	<0.5	<2	0.15	<0.5	1	117	170	1.11	<10	<1	0.45	<10	0.01	5	5
SB06	10	<0.2	0.62	2	30	<0.5	<2	0.19	<0.5	0	72	570	2.11	<10	<1	0.25	10	0.30	110	4
SB07	<5	<0.2	0.60	<2	30	<0.5	<2	0.17	<0.5	0	125	103	1.75	<10	<1	0.49	10	0.56	90	1
SB08	<5	0.2	1.63	6	40	<0.5	<2	0.18	<0.5	0	121	87	1.77	10	<1	1.08	10	0.04	125	11

Geochemical grade assay result

sample	Na_%	Ni_ppm	P_ppm	Pb_ppm	Sb_ppm	Se_ppm	Sr_ppm	Ti_%	Ti_ppm	U_ppm	V_ppm	W_ppm	Zn_ppm
ATH355	0.01	1	30	10	<2	<1	3	<0.01	<10	<10	5	<10	<2
ATH356	0.01	1	30	50	<2	<1	8	<0.01	<10	<10	8	<10	<2
ATH357	<0.01	<1	40	0	<2	1	5	<0.01	<10	<10	5	<10	<2
Castano Nuevo													
TH24	0.05	4	350	102	<2	2	60	0.08	<10	<10	16	<10	12
Leoncito													
EY54	0.05	1	270	4	<2	1	19	<0.01	<10	<10	5	<10	80
TH92	<0.01	1	310	14	<2	<1	34	<0.01	<10	<10	3	<10	63
TH93	0.05	2	360	22	<2	1	10	<0.01	<10	<10	8	<10	56
Acaparosa													
EY05	0.11	19	340	<2	<2	8	24	0.05	<10	<10	97	<10	24
San Jorge													
TH79	<0.01	3	600	8	<2	3	7	<0.01	<10	<10	28	<10	10
Yaguaz													
TH83	0.02	5	240	42	10	<1	10	<0.01	<10	<10	5	420	20
Paramillos Sur													
TH133	<0.01	3	140	2	<2	4	41	0.05	<10	<10	30	<10	16
Paramillos Norte													
TH102	0.05	11	4,610	10	<2	9	440	<0.01	<10	20	43	260	96
TH98	0.08	<1	340	2	<2	2	73	0.06	<10	<10	23	<10	16
TH99	0.04	<1	290	4	<2	1	47	<0.01	<10	<10	14	<10	8
Paramillos Centro													
EY41	0.12	1	920	6	<2	<1	64	0.08	<10	<10	13	<10	52
TH115	0.45	1	1,360	<2	<2	6	20	0.08	<10	<10	43	<10	1,395
TH116	0.42	<1	470	1,415	46	<1	50	<0.01	10	30	6	10	9,450
Grupo Oro del Sur													
TH119	0.05	3	400	10	<2	5	38	0.06	<10	<10	30	<10	278
La Negra													
EY42	0.04	3	445	14	<2	3	56	0.03	<10	<10	50	<10	209
EY43	0.06	3	8,200	6	<2	4	120	0.04	<10	<10	72	<10	56
TH68	<0.01	244	170	8	<2	1	321	<0.01	<10	<10	4	<10	<2
San Benicio													
EY44	0.06	3	60	2	<2	48	23	<0.01	<10	<10	7	<10	2
EY45	0.11	4	240	<2	<2	5	214	0.07	<10	<10	64	<10	12
EY57	0.04	1	160	4	<2	8	27	<0.01	<10	<10	2	<10	4
EY58	0.37	3	130	<2	<1	35	<0.01	<10	<10	8	<10	2	
SB01	0.06	3	580	20	<2	2	47	<0.01	<10	<10	13	<10	76
SB02	0.03	3	90	2	<2	1	56	0.01	<10	<10	6	<10	4
SB03	0.24	3	470	<2	<2	5	231	<0.01	<10	<10	26	<10	8
SB04	0.05	2	230	<2	<2	1	209	0.12	<10	<10	39	<10	6
SB05	0.17	3	110	4	<2	1	73	0.01	<10	<10	20	<10	4
SB06	0.06	6	720	<2	<2	3	31	0.11	<10	<10	63	<10	14
SB07	0.01	12	350	<2	<2	4	32	0.06	<10	<10	49	<10	19
SB08	0.04	6	290	<2	<2	10	15	0.14	<10	<10	43	<10	14

Geochemical grade assay result

Sample	As ppm	Ag ppm	Al %	Au ppm	Fe ppm	Ba ppm	Bk ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm
SB09	<5	<0.2	0.44	4	50	<0.5	<2	0.58	<0.5	3	37	30	1.13	<10	<1	0.11	10	0.09	115	<1
SB20	<5	<0.2	0.45	10	10	<0.5	<2	0.76	<0.5	3	17	46	1.51	<10	<1	0.15	10	0.12	205	1
SB11	<5	<0.2	0.54	2	80	<0.5	2	0.58	<0.8	4	15	82	2.37	<10	<1	0.14	10	0.23	425	<1
SB13	65	<0.2	0.41	<2	50	<0.5	3	0.70	<0.5	3	48	177	1.45	<10	<1	0.27	10	0.23	45	16
SB14	10	0.4	0.44	14	19	<0.5	4	0.17	<0.5	4	170	430	2.21	<10	<1	0.25	10	0.20	55	2
SB15	70	0.2	0.30	4	20	<0.5	2	0.09	<0.5	46	185	432	2.43	<10	<1	0.14	<10	0.28	145	2
SB16	20	0.2	0.71	4	20	<0.5	<2	0.17	<0.5	7	67	265	2.10	<10	<1	0.15	<10	0.14	30	21
SB17	10	<0.2	1.61	8	43	<0.5	<2	0.10	<0.5	4	135	64	3.48	<10	<1	0.77	10	0.40	95	<1
SB18	<5	<0.2	0.42	<2	50	<0.5	<2	0.14	<0.5	<1	25	131	2.62	<10	<1	0.27	<10	0.02	13	2
SB19	170	1.0	0.37	<2	20	<0.5	<2	0.15	<0.5	3	80	84	0.47	<10	<1	0.51	<10	0.15	29	10
SB20	20	0.2	0.36	<1	50	<0.5	<2	0.17	<0.5	<1	51	79	1.74	<10	<1	0.39	<10	0.05	24	11
SB21	20	0.2	0.27	<2	30	<0.5	2	0.03	<0.5	<1	50	104	1.59	<10	<1	0.15	<10	0.02	5	2
SB24	<5	<0.2	0.33	<2	240	<0.5	<1	1.48	<0.5	1	17	4	0.41	<10	<1	0.24	10	0.03	45	1
SB25	<5	<0.2	0.24	<2	40	<0.5	<2	0.31	<0.5	<2	25	14	0.19	<10	<1	0.17	<10	0.01	30	3
SB26	130	0.2	0.50	4	40	<0.5	2	0.10	<0.5	8	69	74	1.45	<10	<1	0.12	10	0.03	5	12
SB27	90	0.6	0.31	4	20	<0.5	<2	0.07	<0.5	1	179	211	2.00	<10	<1	0.21	<10	0.10	30	11
SB28	<5	<0.2	0.33	4	30	<0.5	2	0.18	<0.5	<1	23	80	1.33	<10	<1	0.10	<10	0.03	<5	1
SB29	20	0.2	0.44	8	110	<0.5	<2	0.09	<0.5	<1	50	130	2.72	<10	<1	0.33	<10	0.03	20	8
SB31	70	0.6	0.32	2	110	<0.5	2	0.08	<0.5	<1	30	94	4.75	<10	<1	1.08	<10	0.02	15	23
SB32	80	0.6	0.16	10	110	<0.5	2	0.21	<0.5	<1	77	67	1.43	<10	<1	0.44	<10	0.01	25	1
SB33	35	0.2	0.27	4	10	<0.5	<2	0.15	<0.5	<1	20	15	0.71	<10	<1	0.10	<10	0.06	<5	1
SB34	20	<0.2	0.44	8	10	<0.5	<2	0.17	<0.5	7	119	405	1.06	<10	<1	0.45	10	0.09	75	2
SB35	20	<0.2	0.43	2	60	<0.5	4	0.13	<0.5	<1	53	73	1.18	<10	<1	0.29	<10	0.01	3	39
TH71	<5	0.2	0.41	4	60	<0.5	<2	0.15	<0.5	1	118	246	2.10	<10	<1	0.51	<10	0.02	70	43
TH72	20	0.2	0.18	<2	30	<0.5	2	0.03	<0.5	<1	201	309	0.84	<10	<1	0.15	<10	0.01	20	35
TH73	70	<0.2	0.18	<2	30	<0.5	<2	0.03	<0.5	1	218	104	2.08	<10	<1	0.23	<10	0.03	20	33
TH74	30	1.4	0.43	<2	70	<0.5	<2	0.07	<0.5	1	164	174	1.47	<10	<1	0.02	10	0.17	45	101
TH75	15	1.4	0.36	<2	110	<0.5	0	0.08	<0.5	<2	16	63	1.56	<10	<1	0.38	<10	0.03	5	2

Pampa Fria

TH62	<5	<0.2	0.09	500	<10	<0.5	<2	0.10	<0.5	12	103	35	3.95	<10	<1	0.03	<10	0.03	80	17
TH63	<5	<0.2	0.06	580	20	<0.5	<2	0.14	<0.3	28	455	1,520	15.00	<10	2	0.04	<10	0.13	25	9

Coral

TH14	<5	<0.2	0.07	<2	10	<0.5	<2	11.25	<0.5	<1	8	1	0.14	<10	<1	<0.01	<10	1.07	1,115	3
TH13	280	2.0	0.35	64	70	<0.5	<2	0.92	<0.5	<1	24	6	2.55	<10	<1	0.08	10	0.03	10	1
TH16	not/ass	0.8	0.55	<2	20	1.3	<2	9.21	1.0	22	6	74	2.54	<10	1	0.01	<10	0.55	5,290	1

Creston Amarillo

TH104	20	<0.2	1.19	<2	40	<0.5	<2	0.43	<0.5	11	24	5	4.14	<10	<1	0.24	<10	0.40	130	9
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Cerro Blanco

RY51	<5	0.2	0.45	14	880	<0.5	<2	0.07	<0.5	<1	64	8	0.43	<10	<1	0.14	40	0.47	75	1
RY52	<5	<0.2	0.59	2	90	<0.5	<2	1.23	<0.5	4	83	20	2.25	<10	<1	0.10	<10	0.31	680	<1
RY53	<5	0.2	0.54	<2	110	<0.5	<2	0.14	<0.5	<1	40	4	1.20	<10	<1	0.23	20	0.05	45	<1
TH67	<5	<0.2	0.07	6	150	<0.5	<2	0.14	<0.5	<1	53	17	0.95	<10	<1	0.25	10	0.12	45	1
TH68	40	<0.2	0.43	<2	70	<0.5	<2	0.17	<0.5	<1	38	4	3.65	<10	<1	0.21	<10	0.09	20	2
TH69	10	0.6	0.46	10	40	<0.5	<2	0.04	<0.5	<1	106	21	0.52	<10	<1	0.24	30	0.01	30	2

Cerro Venezuela

AFY301	<5	<0.2	1.00	12	600	<0.5	<2	0.04	<0.5	<3	70	12	1.00	<10	<1	<0.01	<10	0.01	5	<1
AFY302	5	0.2	0.58	14	20	<0.5	<2	0.16	<0.5	<3	47	4	0.25	<10	<1	0.53	40	0.07	10	1
AFY303	<5	0.2	0.19	21	50	<0.5	4	0.10	<0.5	<1	31	1	1.47	<10	<1	0.78	<10	0.03	5	1

Geochemical grade assay result

Sample	Na %	Mg ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Si ppm	Ta %	Tb ppm	U ppm	V ppm	W ppm	Zn ppm
SB09	0.08	4	340	6	<2	<1	45	0.07	<10	<10	24	<10	24
SB10	0.07	13	610	8	<2	<1	33	<0.01	<10	<10	63	<10	32
SB11	0.08	1	820	<2	<2	1	53	0.09	<10	<10	89	<10	16
SB13	0.07	2	340	2	<2	3	147	0.09	<10	<10	40	<10	14
SB14	0.02	14	450	<2	<2	1	11	<0.01	<10	<10	23	<10	14
SB15	0.01	29	250	<2	<2	1	7	<0.01	<10	<10	27	<10	10
SB16	0.05	4	320	2	<2	<1	38	<0.01	<10	<10	23	<10	12
SB17	0.05	8	210	2	<2	9	24	0.12	<10	<10	49	<10	12
SB18	0.06	1	260	<2	<2	1	42	<0.01	<10	<10	74	<10	4
SB19	0.04	1	210	<2	<2	5	113	0.03	<10	<10	24	<10	6
SB20	0.06	<1	310	2	<2	1	69	<0.01	<10	<10	24	<10	4
SB21	0.09	2	150	<2	<2	<1	29	<0.01	<10	<10	9	<10	4
SB24	0.06	<1	360	<2	<2	<1	31	<0.01	<10	<10	12	<10	8
SB25	0.07	<1	60	2	<2	<1	72	<0.01	<10	<10	7	<10	2
SB26	0.08	1	290	<2	<2	7	109	0.02	<10	<10	21	<10	2
SB27	0.05	3	290	2	<2	3	65	0.01	<10	<10	23	<10	10
SB28	0.08	<1	50	<2	<2	<1	34	<0.01	<10	<10	11	<10	2
SB29	0.07	<1	290	<2	<2	2	57	<0.01	<10	<10	15	<10	2
SB33	0.05	<1	320	2	<2	1	82	<0.01	<10	<10	19	<10	6
SB32	0.02	<1	210	<2	<2	<1	42	<0.01	<10	<10	5	<10	4
SB33	0.13	<1	210	<2	<2	<1	30	<0.01	<10	<10	5	<10	6
SB34	0.03	14	410	<2	<2	7	15	0.06	<10	<10	62	<10	30
SH55	0.02	1	160	14	<2	<1	85	<0.01	<10	<10	4	<10	2
TH71	0.03	12	450	2	<2	9	28	0.05	<10	<10	31	<10	8
TH72	0.02	5	30	2	<2	<1	12	<0.01	<10	<10	4	<10	2
TH73	0.03	4	70	2	<2	1	28	<0.01	<10	<10	20	<10	2
TH74	0.43	6	110	4	<2	6	125	0.05	<10	<10	56	<10	6
TH75	0.04	1	80	<2	<2	<1	52	<0.01	<10	<10	18	<10	<2

Pampa Fria

TH62	<0.01	145	60	<2	34	1	8	<0.01	<10	<10	8	<10	64
TH63	0.01	<10	300	<2	104	1	27	<0.01	<10	<10	31	<10	98

Coral

TH04	0.06	1	10	20	<2	<1	182	<0.01	<10	<10	7	<10	80
TH13	<0.01	1	500	20	2	1							

Geochemical grade assay result

sample	As ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Cd %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Fe ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm	Ni ppm	
AFY104	<5	<0.2	0.51	224	30	<0.5	2	0.10	<0.5	<1	74	3	1.54	<10	<1	0.23	<10	0.01	20	<1	
AFY105	<5	<0.2	0.44	200	170	<0.5	0	0.05	<0.5	<1	56	20	11.70	<10	<1	0.42	50	0.01	20	<1	
AFY101	<5	<0.2	0.45	50	30	<0.5	24	0.36	<0.5	5	99	12	1.59	<10	<1	0.41	<10	0.11	20	<1	
AFY102	<5	<0.2	0.40	24	40	<0.5	2	0.09	<0.5	<1	39	2	0.98	<10	<1	0.30	<10	0.05	5	1	
AFY103	<5	<0.2	0.12	34	<10	<0.5	0	0.03	<0.5	<1	79	30	1.43	<10	<1	0.10	<10	0.02	5	1	
AFY104	<5	<0.2	0.35	2	50	<0.5	0	0.24	<0.5	<1	45	4	0.71	<10	<1	0.19	<10	0.05	20	10	
AFY105	<5	<0.2	0.19	6	<10	<0.5	0	0.23	<0.5	<1	52	5	0.91	<10	<1	0.41	<10	0.01	15	<1	
AFY106	<5	<0.2	0.32	16	70	<0.5	2	0.04	<0.5	<1	50	5	0.97	<10	<1	0.27	<10	0.01	5	<1	
AFY107	<5	<0.2	0.39	10	100	<0.5	4	1.14	<0.5	3	105	7	1.21	<10	<1	0.11	<10	0.09	42	1	
AFY108	15	0.7	0.76	64	50	<0.5	12	0.30	<0.5	4	27	10	3.30	<10	<1	0.24	<10	0.06	55	<1	
AFY109	<5	<0.2	0.33	45	50	<0.5	32	0.43	<0.5	3	58	0	2.05	<10	<1	0.47	<10	0.01	90	1	
AFY110	<5	<0.2	0.48	14	80	<0.5	0	0.23	<0.5	<1	43	1	0.42	<10	<1	0.47	<10	0.01	15	<1	
AFY111	30	<0.2	0.42	14	60	<0.5	10	0.30	<0.5	<1	21	2	1.39	<10	<1	0.30	<10	0.04	5	<1	
AFY112	<5	<0.2	0.74	160	140	<0.5	2	0.03	<0.5	<1	10	24	4.47	<10	<1	0.01	<10	0.01	<5	<1	
AFY113	<5	<0.2	0.56	14	200	<0.5	0	0.00	<0.5	<1	24	0	0.91	<10	<1	0.05	<10	<0.01	5	1	
AFY114	45	1.6	0.13	24	1,290	<0.5	0	0.00	0.5	<1	113	0	0.46	<10	<1	0.04	<10	0.01	65	<1	
Portezuela de Amarillo																					
AFY115	<5	<0.2	0.16	20	30	<0.5	0	0.02	<0.5	2	141	13	2.35	<10	<1	0.04	<10	0.03	15	56	
AFY116	<5	<0.2	2.05	14	10	<0.5	0	0.34	<0.5	0	50	2	2.95	<10	<1	0.14	<10	1.05	170	<1	
AFY117	<5	<0.2	2.11	56	70	0.6	2	1.81	<0.5	12	49	24	4.19	<10	<1	0.11	30	1.53	1,320	<1	
AFY118	<5	0.6	0.47	20	160	<0.5	0	0.41	<0.5	3	150	15	1.40	<10	<1	0.07	<10	0.06	43	10	
AFY119	<5	3.2	1.11	22	80	<0.5	4	0.04	<0.5	<1	59	19	3.01	<10	<1	0.27	30	0.18	25	1	
AFY120	<5	2.6	1.04	34	130	<0.5	4	0.09	<0.5	<1	23	25	3.19	<10	<1	0.42	20	0.08	20	<1	
AFY121	<5	<0.2	0.61	24	50	<0.5	2	0.06	<0.5	1	83	15	2.05	<10	<1	0.14	10	0.07	20	20	
Potrillo																					
AFY122	<5	<0.2	0.09	30	80	<0.5	0	0.04	<0.5	2	208	10	1.73	<10	1	0.05	<10	<0.01	20	6	
AFY123	<5	<0.2	1.00	2	120	<0.5	0	0.04	<0.5	<1	24	6	0.27	<10	<1	0.40	<10	0.06	5	<1	
Samano																					
AFY124	<5	<0.2	0.42	0	30	<0.5	0	0.03	<0.5	<1	81	3	1.05	<10	<1	0.20	30	0.01	145	1	
Ycuña (El Salado)																					
AFY125	15	<0.2	1.07	0	40	<0.5	0	0.10	<0.5	<1	74	10	3.23	<10	<1	0.32	20	0.26	20	10	
AFY126	<5	<0.2	0.57	14	290	<0.5	0	0.21	<0.5	1	35	12	3.30	<10	<1	0.23	<10	0.11	70	<1	
AFY127	115	<0.2	2.02	6	320	0.5	0	0.44	<0.5	3	104	600	3.69	<10	<1	0.78	20	0.95	40	5	
AFY128	130	0.2	2.24	6	100	0.8	0	0.07	<0.5	2	97	636	0.93	<10	<1	0.47	30	0.40	35	10	
AFY129	80	<0.2	1.00	2	120	<0.5	0	0.15	<0.5	6	97	1,090	0.96	<10	<1	0.65	10	0.93	115	<1	
AFY130	1,570	5.6	0.25	10	10	<0.5	0	0.01	<0.5	3	261	2,670	3.25	<10	<1	0.04	<10	0.05	55	10	
AFY131	85	<0.2	1.58	6	450	<0.5	0	0.11	<0.5	<1	63	197	3.75	<10	<1	0.25	30	0.15	10	10	
AFY132	30	1.4	0.64	36	320	<0.5	0	0.25	<0.5	<1	102	0	3.40	<10	<1	0.29	10	0.06	130	2	
AFY133	160	1.4	1.07	196	1,130	0.5	0	0.00	<0.5	1	137	634	3.47	<10	<1	0.40	20	0.29	60	20	
AFY134	155	0.2	2.91	24	170	<0.5	0	0.00	<0.5	1	74	645	0.35	<10	<1	0.54	20	0.59	30	30	
AFY135	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
AFY136	350	0.4	1.19	10	120	0.5	0	0.14	<0.5	6	104	4,090	5.29	<10	<1	0.51	10	0.73	125	1	
AFY137	515	0.4	0.64	0	50	<0.5	2	0.04	<0.5	0	40	4,690	315.00	<10	<1	0.12	<10	0.24	335	1	
AFY138	55	<0.2	1.39	24	310	3.5	2	0.32	0.0	20	45	7,820	>15.00	30	<1	0.19	<10	0.50	235	59	
AFY139	195	0.6	1.10	22	100	<0.5	0	0.12	1.0	4	97	2,790	0.53	<10	<1	0.56	30	0.75	90	12	
Pastran																					
AFY140	15	10.2	0.55	126	140	2.5	0	0.11	<0.5	24	55	28	5.76	<10	<1	0.13	30	0.05	2,260	7	

Geochemical grade assay result

sample	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Se ppm	Si ppm	Ti %	Ti ppm	U ppm	V ppm	W ppm	Zn ppm
AFY141	0.10	<1	110	6	<1	<1	52	<0.01	<10	<10	19	<10	<2
AFY142	0.10	<1	3,360	100	0	0	597	<0.01	<10	<10	103	<10	14
AFY143	0.02	2	343	20	2	1	81	<0.01	<10	<10	7	<10	4
AFY144	0.01	<1	100	6	<2	1	4	<0.01	<10	<10	0	<10	<2
AFY145	0.09	<1	470	6	<2	<1	9	<0.01	<10	<10	10	<10	<2
AFY146	0.02	<1	10	10	2	<1	0	<0.01	<10	<10	5	<10	<2
AFY147	<0.01	<1	40	0	<2	<1	14	<0.01	<10	<10	3	<10	<2
AFY148	0.03	<1	40	4	<2	<1	13	<0.01	<10	<10	3	<10	<2
AFY149	0.04	3	70	0	<2	<1	6	<0.01	<10	<10	7	<10	4
AFY150	0.04	1	510	10	<2	1	18	<0.01	<10	<10	21	<10	14
AFY151	0.11	1	130	10	2	1	75	<0.01	<10	<10	7	<10	<2
AFY152	0.09	1	120	6	2	1	19	<0.01	<10	<10	12	<10	<2
AFY153	0.01	<1	130	12	2	3	24	<0.01	<10	<10	11	<10	<2
AFY154	<0.01	<1	30	6	4	<1	20	<0.01	<10	<10	49	<10	<2
AFY155	<0.01	<1	30	2	<2	3	14	<0.01	<10	<10	14	<10	<2
AFY156	<0.01	3	42	51	2	<1	33	<0.02	<10	<10	3	<10	77
Portezuela de Amarillo													
AFY157	0.01	4	150	4	<2	<1	41	<0.01	<10	<10	5	<10	2
AFY158	0.07	12	250	12	<2	2	10	<0.04	<10	<10	34	<10	10
AFY159	0.01	10	600	17	<2	1	37	<0.01	<10	<10	25	<10	80
AFY160	0.03	5	130	636	<2	<1	27	<0.04	<10	<10	5	<10	22
AFY161	0.03	<1	490	0	4	1	51	<0.04	<10	<10	11	<10	6
AFY162	0.03	<1	310	10	6	1	37	<0.01	<10	<10	13	<10	10
AFY163	0.02	1	460	14	<2	1	20	<0.01	<10	<10	7	<10	10
Potrillo													
AFY164	0.02	4	150	20	<2	1	7	<0.01	<10	<10	20	<10	6
AFY165	0.05	<1	410	12	2	1	13	<0.01	<10	<10	11	<10	2
Samano													
AFY166	0.04	1	130	12	<2	<1	7	<0.01	<10	<10	<1	<10	0
Ycuña (El Salado)													
AFY167	0.10	1	980	14	<2	1	283	<0.02	<10	<10	9	<10	22
AFY168	0.08	<1	160	10	<2	<1	33	<0.02	<10	<10	4	<10	16
AFY169	0.04	4	630	34	<2	5	218	0.15	<10	<10	59	<10	62
AFY170	0.08	1	100	64	<2	3	60	0.05	<10	<10	30	<10	30
AFY171	0.04	7	460	14	<2	5	91	0.13	<10	<10	66	<10	88
AFY172	0.02	3	260	30	<2	<1	30	<0.01	<10	<10	39	<10	34
AFY173	0.02	<1	80	10	<2	2	40	0.01	<10	<10	20	<10	14
AFY174	0.09	1	1,260	30	<2	<1	76	<0.04	<10	<10	5	<10	20
AFY175	0.03	2	930	190	<2	3	326	0.03	<10	<10	25	<10	34
AFY176	0.03	3	240	64	<2								

Geochemical grade assay result

Sample	As_ppm	Ag_ppm	Al_%	As_ppm	Ba_ppm	Ba_ppm	Ba_ppm	Ba_ppm	Ca_%	Co_ppm	Co_ppm	Cr_ppm	Cr_ppm	Fe_%	Co_ppm	Ng_ppm	K_%	Li_ppm	Mg_%	Mn_ppm	Mo_ppm
Cerro Negro																					
EV22	<5	<0.2	0.40	26	610	<0.5	<2	5.90	<0.5	21	332	20	3.33	<10	<1	0.04	<10	1.98	1.019	2	
EV22a	15	<0.2	2.28	2	100	1.0	<2	3.94	<0.2	32	169	44	4.55	<10	3	0.26	30	3.28	843	2	
EV23	<5	<0.2	3.03	<2	230	0.5	<2	1.75	<0.5	24	153	29	0.62	30	<2	0.08	30	3.99	800	<3	
TH01	<5	<0.2	0.30	18	120	<0.5	<2	>15.00	<0.5	7	26	172	3.47	<10	16	0.05	<10	0.34	2.040	2	
TH02	<5	<0.2	0.01	20	170	<0.5	<2	21.25	<0.5	7	16	84	5.31	<10	3	<0.01	<10	4.31	4.660	1	
TH03	<5	<0.2	0.18	8	200	<0.5	<2	13.55	<0.5	5	22	55	3.31	<10	12	0.01	<10	5.11	1.035	1	
TH04	<5	<0.2	0.04	<2	70	<0.5	<2	18.93	<0.5	2	<1	1	2.75	<10	2	<0.01	<10	8.18	375	<1	
camp location																					
EV05	<5	<0.2	3.57	2	20	<0.5	<2	0.87	<0.5	10	61	5	2.21	<10	<1	0.08	<10	1.72	510	<1	
Leonardo																					
APY349	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
Southeast of Margarita																					
APY350	<5	0.4	0.34	8	10	<0.5	<2	0.01	<0.5	<3	145	45	0.27	<10	<1	0.17	<10	<0.01	25	0.3	
APY360	<5	1.5	0.51	14	70	0.5	<2	0.03	0.5	10	157	89	0.53	<10	<1	0.15	10	0.02	3,425	8	
ASR281	<5	<0.2	0.30	9	30	0.5	<2	0.05	<0.5	3	136	8	0.59	<10	<1	0.14	<10	<0.01	305	3	
AT0424	<5	<0.2	0.75	26	30	<0.5	<2	0.05	<0.5	<3	115	75	0.22	<10	<1	0.21	<10	<0.01	20	1	
AT0427	10	<0.2	1.78	456	150	<0.5	<2	0.05	<0.5	<3	61	110	0.47	<10	<1	0.32	20	0.04	15	<3	
Banos del Gollela																					
ASR218	<5	<0.2	0.02	4,820	220	0.5	<2	>15.00	<0.5	11	3	<3	0.51	<10	<1	0.07	<10	0.37	5,200	3	

Geochemical grade assay result

Sample	Na_%	Na_ppm	P_ppm	Pb_ppm	Sb_ppm	Sc_ppm	Si_ppm	Ti_%	Ti_ppm	U_ppm	V_ppm	W_ppm	Zn_ppm
Cerro Negro													
EV22	0.04	51	1,130	8	10	14	56	0.03	<10	<10	95	<10	52
EV22a	0.03	145	990	<2	2	18	44	<0.01	<10	<10	59	<10	82
EV23	0.23	79	3,270	<2	<2	10	49	0.14	<10	<10	110	<10	74
TH01	<0.01	11	150	<2	32	4	82	<0.01	<10	<10	85	<10	28
TH02	<0.01	2	30	<2	24	7	100	<0.01	<10	<10	50	<10	74
TH03	<0.01	11	40	<2	16	2	327	<0.01	<10	<10	38	<10	32
TH04	<0.01	5	30	2	<2	<1	137	<0.01	<10	<10	2	<10	26
camp location													
EV05	0.02	13	510	12	<2	4	76	0.11	<10	<10	29	<10	82
Leonardo													
APY349	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed	NotRed
Southeast of Margarita													
APY350	0.03	2	60	82	<2	<1	2	<0.04	<10	<10	<1	<10	14
APY360	<0.01	4	70	34	<2	<1	8	<0.04	<10	<10	3	<10	176
ASR281	0.03	3	<10	39	<2	<1	3	<0.01	<10	<10	<1	<10	54
AT0424	0.09	2	36	42	<2	1	37	<0.01	<10	<10	<1	<10	8
AT0427	0.54	<1	240	20	2	2	43	0.07	<10	<10	19	<10	16
Banos del Gollela													
ASR218	0.24	1	30	0	46	<1	3,270	<0.01	40	<10	<1	20	56

Ore grade assay result

Sample	As_ppm	Ag_ppm	Al_%	Ba_ppm	Ba_ppm	Ba_ppm	Ca_%	Ca_ppm	Ca_ppm	Cr_ppm	Cr_ppm	Fe_%	K_%	Mg_%	Mn_ppm	Mn_ppm	Ni_%	Ni_ppm
El Pato																		
ASH212	<5	<1	4.90	100	<10	<20	0.05	<10	<10	180	10	1.15	2.1	0.15	20	20	0.20	<10
ASH213	14	<1	7.45	200	<10	<20	0.35	<10	<10	100	10	0.75	1.2	0.20	10	<10	0.10	<10
ASH214	10	<1	4.75	300	<10	<20	0.05	<10	<10	270	10	0.80	2.5	0.20	20	40	0.15	<10
ASH215	55	<1	0.14	400	<10	<20	0.25	<10	<10	95	220	0.45	2.1	0.10	10	110	1.55	<10
ATH210	550	<1	0.50	500	<10	<20	0.55	<10	<10	140	3,150	0.60	3.3	0.15	40	80	2.55	<10
Cócolita																		
ASH265	40	3	0.10	<100	<10	<20	2.25	<10	20	50	2,300	20.40	<0.1	0.95	2,300	<10	0.05	<10
Rio Blanco																		
ASH218	<5	<1	3.20	200	<10	<20	0.10	<10	<10	200	10	0.50	1.1	0.05	40	<10	0.05	<10
ASH219	135	<1	1.30	800	<10	<20	0.10	<10	<10	240	10	0.55	<0.1	<0.05	10	<10	0.05	<10
ASH220	20	<1	2.70	<100	<10	<20	0.05	<10	<10	200	50	0.40	1.2	0.05	10	<10	0.05	<10
La Vicuña																		
ATH220	6,400	110	3.30	100	<10	20	0.55	<10	<10	130	12,400	6.60	1.2	0.45	2,170	<10	<0.05	<10
La Olla																		
ASH201	125	4	4.45	200	<10	<20	0.05	<10	<10	200	150	10.00	1.9	0.25	210	<10	0.25	10
ASH202	125	<1	0.95	400	<10	<20	0.10	<10	<10	40	240	9.95	2.5	0.40	140	<10	0.40	10
ASH204	105	<1	2.35	700	<10	<20	0.05	<10	<10	50	370	0.50	2.1	0.50	120	<10	0.30	<10
ASH206	10	1	0.50	400	<10	<20	0.30	<10	10	60	40	0.30	0.3	<0.05	2,080	<10	0.05	<10
ASH207	200	4	0.45	<100	<10	<20	0.15	<10	<10	200	30	0.55	0.2	<0.05	260	<10	<0.05	<10
Las Tamberías																		
ASH208	10	<1	7.60	1,000	<10	<20	0.15	<10	<10	30	10	3.20	1.9	0.20	140	<10	2.15	<10
Las Aguaditas																		
ASH257	3,470	22	2.20	100	<10	100	1.75	<10	40	90	230	28.30	0.7	0.40	540	20	0.70	20
Halvacia																		
TH07	30	25	0.40	1,500	<10	<20	3.50	500	<10	60	410	0.30	<0.1	0.10	90	<10	0.05	<10
TH12	1,345	260	0.55	1,200	<10	<20	0.15	2,430	10	<10	3,310	0.50	0.1	0.05	10	50	0.05	10
Bordo Atravezado																		
ASH221	<5	<1	6.60	700	<10	<20	0.05	<10	<10	70	30	1.85	2.0	0.10	20	<10	0.20	<10
ASH222	405	1	1.40	300	<10	<20	0.45	<10	<10	60	810	24.60	0.4	0.05	90	30	0.20	<10
ASH224	10	<1	0.95	500	<10	<20	0.10	<10	<10	50	10	1.00	2.2	0.15	30	<10	0.25	<10
Los Mogotes																		
ASH228	5	<1	7.70	500	<10	<20	0.25	<10	<10	80	100	4.10	1.3	0.05	10	<10	0.30	<10
ASH229	<5	<1	6.05	900	<10	<20	0.15	<10	<10	170	40	0.75	2.1	0.10	10	10	0.25	<10
ATH267	10	<1	5.50	800	<10	<20	0.50	<10	<10	120	90	0.45	2.4	0.05	10	590	0.15	<10
Abundancia																		
SH25	10	2	6.45	1,100	<10	<20	1.15	<10	20	140	140	5.05	5.3	0.05	40	130	1.55	<10
SH26	<5	3	6.15	100	<10	<20	15.25	<10	<10	30	<10	3.45	2.1	7.30	3,210	<10	0.10	<10
SH27	80	<1	0.45	<100	<10	<20	16.30	<10	<10	10	10	0.20	<0.1	1.65	190	<10	<0.05	<10
SH28	<5	1	0.70	<100	<10	<20	23.20	<10	<10	10	10	0.60	0.3	31.65	270	10	<0.05	<10
SH29	<5	3	0.25	<100	<10	<20	22.70	<10	<10	10	840	0.20	0.1	32.55	720	<10	<0.05	<10
SH40	5	2	0.10	<100	<10	<20	13.40	30	<10	<10	840	0.75	<0.1	35.20	1,270	10	0.05	<10
TH50	1,340	6	3.25	<100	<10	120	0.15	<10	16,740	110	10,700	12.85	1.0	1.00	240	<10	<0.05	50

Ore grade assay result

Sample	Pb_ppm	Sr_ppm	Ti_%	V_ppm	Zn_ppm
El Pato					
ASH212	<0.001	20	0.05	<10	20
ASH213	<0.001	10	0.10	10	<10
ASH214	<0.001	<10	0.05	10	<10
ASH215	<0.001	120	0.05	20	<10
ATH210	<0.001	70	<0.05	10	10
Cócolita					
ASH265	0.005	30	<0.05	<10	220
Rio Blanco					
ASH218	<0.001	20	<0.05	<10	20
ASH219	<0.001	40	<0.05	<10	<10
ASH220	0.004	<10	0.05	<10	20
La Vicuña					
ATH220	0.162	30	0.10	50	1,920
La Olla					
ASH201	0.018	70	0.05	70	80
ASH202	0.004	110	0.15	100	80
ASH204	0.014	80	0.20	130	50
ASH206	0.002	50	<0.05	10	40
ASH207	0.008	40	<0.05	<10	40
Las Tamberías					
ASH208	<0.001	210	0.10	80	20
Las Aguaditas					
ASH257	0.034	640	<0.05	60	400
Halvacia					
TH07	0.038	2,030	<0.05	30	80,700
TH12	07.000	230	<0.05	30	2,920
Bordo Atravezado					
ASH221	0.002	30	0.05	<10	20
ASH222	0.004	150	<0.05	140	60
ASH224	<0.001	120	0.05	<10	<10
Los Mogotes					
ASH228	<0.001	30	0.05	10	20
ASH229	0.001	90	0.05	20	<10
ATH267	0.001	50	<0.05	<10	20
Abundancia					
SH25	0.012	540	0.10	10	160
SH26	0.005	50	0.15	20	160
SH27	0.012	200	<0.05	10	200
SH28	0.003	220	<0.05	10	60
SH29	0.005	170	<0.05	<10	700
SH40	0.004	<10	<0.05	<10	6,800
TH50	0.001	<10	0.10	20	40

Ore grade assay result

Sample	Au_ppm	Ag_ppm	AL%	Ba_ppm	Ba_ppm	Ba_ppm	Ca%	Ca_ppm	Ca_ppm	Ca_ppm	Ca_ppm	Ca%	Ca%	Ca%	Ca_ppm	Ca_ppm	Ca%	Ca%	
Guachi																			
SM2	424	1	3.45	<100	<10	<20	1.75	<10	30	110	410	22.70	1.1	0.15	70	<10	0.15	30	
SM3	7,290	0	2.15	<100	<10	<20	0.35	<10	70	160	270	958.0	1.0	0.15	30	<10	0.05	30	
SM4	22,400	70	1.10	>150	<10	<20	2.80	1,000	70	120	1,420	9.45	1.4	0.25	1,330	<10	0.05	<10	
TH47	50	7	4.25	<100	<10	<20	0.25	<10	270	110	2,500	<1.10	1.0	1.05	120	<10	<0.05	<10	
TH50	160	1	3.20	100	<10	<20	0.50	<10	10,200	170	8,460	9.05	1.1	0.60	160	<10	<0.05	92	
TH51	490	3	1.80	100	<10	<20	0.05	<10	8,470	170	13,530	11.50	1.5	0.65	220	<10	0.05	20	
TH52	50	5	4.15	<100	<10	<20	0.45	<10	10,410	160	35,010	13.55	0.8	1.35	845	<10	<0.05	70	
El Fierro alteration																			
SM8	<5	1	4.45	200	<10	<20	0.45	<10	<10	40	10	0.55	2.2	0.25	30	<10	0.15	<10	
SM9	<5	1	5.45	100	<10	<20	0.10	<10	<10	150	20	2.00	2.4	0.40	30	<10	0.75	<10	
SM10	<5	<1	7.10	500	<10	<20	0.20	<10	<10	110	20	0.75	3.5	0.15	30	<10	2.60	<10	
SM11	<5	1	6.70	100	<10	<20	0.15	<10	<10	90	150	10.45	2.4	0.05	210	<10	1.30	<10	
Cerro Amadillo																			
ASM225	<5	<1	7.45	100	<10	<20	0.15	<10	10	10	20	1.25	0.1	<0.05	2,660	<10	0.15	<10	
ASM227	5	<1	7.55	1,100	<10	<20	0.10	<10	<10	100	10	0.45	1.7	0.20	90	<10	0.15	<10	
ASM231	<5	<1	0.15	100	<10	<20	0.10	<10	<10	100	10	0.15	0.8	<0.05	20	<10	1.10	<10	
ASM232	<5	<1	0.05	970	<10	<20	0.15	<10	<10	130	10	1.90	1.5	<0.05	10	<10	1.60	<10	
ASM233	<5	<1	0.10	800	<10	<20	0.70	<10	<10	80	40	0.45	3.2	0.20	210	<10	2.50	<10	
Zancaron																			
AFY293	6,380	145	2.00	600	<10	<10	0.05	<10	<10	160	41,200	2.40	0.8	<0.05	50	<10	0.15	<10	
El Salado																			
ASH344	45	573	1.15	10,620	<10	<10	0.45	260	10	110	1,050	12.00	0.1	<0.05	50,100	<10	<0.05	<10	
Las Opeñas																			
ASH354	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd	
ASH355A	550	465	2.20	100	<10	<20	0.05	<10	10	<10	300	120	1.70	1.0	0.05	520	10	0.05	<10
El Carrizal																			
SM5	<5	<1	1.00	200	<10	<20	3.55	<10	<10	170	80	2.95	0.1	1.00	830	<10	0.55	10	
SM6	60	2	4.05	100	<10	<20	0.05	<10	70	110	1,060	0.20	0.4	2.25	2,420	<10	0.05	100	
Quebrada de Chita																			
SM7	15	<1	0.50	<100	<10	<20	0.05	<10	<10	270	490	0.45	<0.1	<0.05	30	50	0.05	<10	
SM14	15	<1	10.20	1,500	<10	<20	0.20	<10	<10	70	470	1.10	5.1	0.20	80	120	2.35	<10	
SM19	15	3	10.15	600	<10	<20	0.15	<10	<10	40	600	2.45	3.9	0.20	80	200	2.65	<10	
SM20	30	1	10.00	400	<10	<20	0.10	<10	<10	40	300	3.20	2.0	0.30	30	30	1.50	<10	
SM21	60	2	3.15	100	<10	<20	0.25	<10	<10	60	30	0.85	3.6	0.20	100	40	0.30	<10	
SM22	55	4	4.40	500	<10	<20	0.10	<10	<10	110	150	1.75	2.2	0.25	60	<10	0.15	<10	
SM23	45	1	0.60	700	<10	<20	0.25	<10	<10	70	20	1.15	3.7	0.10	20	<10	0.40	<10	
SM24	<5	<1	0.40	300	<10	<20	0.20	<10	<10	40	70	0.90	2.1	0.45	50	20	3.00	<10	
TH25	20	1	0.60	900	<10	<20	0.40	<10	<10	60	800	1.50	2.1	0.40	200	240	4.55	<10	
TH27	35	6	3.47	1,000	<10	<20	1.03	80	<10	50	450	1.70	1.9	0.25	70	<10	3.45	<10	
TH28	125	5	5.35	400	<10	<20	1.15	<10	300	220	9,170	20.10	0.8	2.90	1,000	<10	1.55	13,270	
TH31	70	2	1.30	900	<10	<20	1.23	<10	<10	10	1,060	1.50	2.7	0.35	170	570	2.45	20	
TH32	25	4	1.85	<100	<10	<20	2.45	<10	<10	10	810	3.75	0.3	<0.05	700	1100	0.05	<10	
TH33	15	5	0.25	<100	<10	<20	0.45	<10	0,060	100	16,170	22.00	0.7	5.50	830	10	0.05	90	
Tocota District																			

Ore grade assay result

Sample	Pb_ppm	Sr_ppm	Pt_%	V_ppm	Zn_ppm
Guachi					
SM2	0.001	70	0.15	170	60
SM3	0.027	10	0.20	160	160
SM4	5.900	30	0.15	40	>100000
TH49	0.002	<10	0.20	80	40
TH50	0.001	10	0.10	20	20
TH51	0.002	<10	0.10	20	20
TH52	0.001	10	0.15	30	60
El Fierro alteration					
SM8	0.003	10	<0.05	20	<20
SM9	0.004	10	<0.05	<10	20
SM10	0.001	60	<0.05	<10	20
SM11	0.009	40	0.05	20	240
Cerro Amadillo					
ASM225	0.011	1,470	0.05	10	140
ASM227	0.002	160	0.15	30	20
ASM231	0.016	290	0.05	10	<10
ASM232	0.020	760	0.20	90	<10
ASM233	0.011	240	0.20	30	100
Zancaron					
AFY293	0.015	310	0.30	10	20
El Salado					
ASH344	15,450	540	0.05	40	52,900
Las Opeñas					
ASH354	NotRecd	NotRecd	NotRecd	NotRecd	NotRecd
ASH355A	0.246	<10	<0.05	<10	6,740
El Carrizal					
SM5	0.002	80	0.10	70	60
SM6	0.001	70	<0.05	30	100
Quebrada de Chita					
SM7	0.002	10	<0.05	<10	60
SM14	0.006	420	0.15	80	120
SM19	0.004	110	0.20	80	80
SM20	0.002	140	0.20	80	80
SM21	0.002	50	0.15	80	20
SM22	0.001	40	0.10	70	70
SM23	<0.001	50	0.10	60	<10
SM24	0.001	350	0.15	50	<10
TH25	0.020	670	0.25	60	490
TH27	0.101	760	0.30	80	0,800
TH28	0.010	230	0.30	120	260
TH31	0.093	650	0.10	50	40
TH32	0.047	10	<0.05	<10	3,560
TH33	0.002	<10	0.45	70	100
Tocota District					

Ore grade assay result

sample	Au_ppm	Ag_ppm	Al%	Ba_ppm	Ba2ppm	B_ppm	Ca%	Ca_ppm	Co_ppm	Cr_ppm	Cu_ppm	Fe%	K%	Mg%	Mn_ppm	Mo_ppm	Na%	Ni_ppm
San Francisco																		
RY07	215	51	0.00	<100	<10	645	0.45	<10	30	170	210	4.50	0.7	1.15	170	50	0.55	30
SH13	90	45	2.90	<100	<10	2014	0.40	<10	40	70	>100,000	2.40	0.1	0.50	220	10	0.20	30
El Retamal																		
SH14	<5	<1	0.15	<100	<10	<20	0.10	<10	110	140	230	0.55	1.0	1.05	60	<10	0.45	<10
SH15	<5	<1	0.30	500	<10	<20	0.50	<10	30	70	40	3.75	2.0	0.30	50	<10	2.10	20
Castano Viejo District																		
ASH007	520	117	2.60	<100	<10	<20	0.05	150	<10	230	1,360	1.95	0.0	0.10	240	<10	0.05	10
ASH008	4,100	397	0.35	<100	<10	120	13.90	70	<10	83	5,430	0.75	<0.1	1.30	52,600	60	<0.05	10
Cuatro Amigos																		
AY007	185	33	2.15	500	<10	80	13.05	20	<10	70	1,730	4.10	0.5	3.40	12,330	20	0.05	<10
AY017	215	29	0.95	<100	<10	<20	2.25	160	<10	250	300	2.40	0.4	0.05	1,320	<10	0.05	<10
Castano Nuevo																		
SH14	20	<1	0.45	500	<10	<20	1.30	<10	10	130	0,070	3.00	2.0	0.50	130	30	0.55	10
San Jorge																		
SH46	390	8	0.55	1,000	<10	20	0.15	<10	<10	130	6,930	1.15	6.0	0.50	340	<10	0.25	<10
SH47	275	2	5.55	100	<10	60	0.05	<10	<10	170	950	0.45	2.0	0.45	230	<10	0.15	<10
SH77	4,300	8	1.14	<100	<10	<20	0.25	<10	50	1,170	20	5.00	0.4	5.00	40,020	<10	0.05	600
Yaguajay																		
RY44	<5	<1	7.30	600	<10	<20	1.75	<10	<10	330	450	2.35	0.2	0.90	190	10	1.95	10
RY40	30	<1	4.60	800	<10	<20	0.40	<10	<10	210	70	1.70	3.5	0.55	60	<10	0.25	<10
SH40	20	1	4.90	400	<10	<20	1.30	<10	<10	200	750	2.35	3.0	0.70	190	<10	2.05	10
SH49	2,120	14	4.15	1,700	<10	140	0.20	<10	760	190	0,150	0.45	4.2	0.40	120	<10	0.25	120
Paramillos Sur																		
SH59	45	1	7.90	1,000	<10	<10	0.50	<10	<10	60	120	2.45	7.7	0.70	70	130	0.40	<10
Paramillos Norte																		
SH56	135	<1	0.60	900	<10	<20	0.55	<10	<10	30	950	2.90	4.4	0.15	70	70	2.05	10
SH57	60	<1	10.05	1,000	<10	<20	0.45	<10	<10	40	510	4.55	7.1	0.10	40	<10	2.00	30
Paramillos Centro																		
SH53	45	<1	0.75	1,700	<10	<20	0.30	<10	<10	40	80	4.55	6.3	0.45	1,220	<10	2.10	<10
Grupo Oro del Sur																		
RY42	45	<1	0.15	1,200	<10	<20	0.50	<10	<10	120	30	0.40	1.1	0.40	170	70	2.35	<10
RY43	4,080	28	0.80	100	<10	<20	0.10	<10	<10	70	1,010	0.70	3.1	0.35	110	10	0.20	<10
RY44	0,980	9	2.30	<100	<10	20	0.20	<10	40	30	7,050	>>0.8	0.9	0.15	160	<10	0.05	10
RY45	10,590	200	1.05	<100	<10	17,940	0.15	<10	<10	200	0,430	3.15	0.4	0.05	540	60	0.05	<10
SH46	280	1	2.40	700	<10	<20	0.35	<10	<10	50	80	19.05	2.3	0.05	110	<10	1.05	<10
SH45	30	1	0.50	1,100	<10	<20	0.30	<10	<10	80	40	1.15	5.1	0.20	700	<10	2.60	<10
La Negra																		
SH42	0,120	170	0.05	<100	<10	60	2.15	210	<10	20	1,590	1.40	0.4	0.75	>100000	<10	0.15	330
SH44	0,000	244	0.15	1,500	<10	80	0.30	70	<10	50	70	2.50	4.5	0.35	>100000	<10	0.25	10
TH44	50	<1	3.80	100	<10	<20	0.20	<10	<10	270	3,210	1.55	0.7	0.75	110	<10	0.30	<10

Ore grade assay result

sample	Pb_ppm	Sn_ppm	Ti%	V_ppm	Zn_ppm
San Francisco					
RY07	0.350	110	0.25	140	120
SH13	0.140	70	0.05	40	220
El Retamal					
SH14	0.005	10	0.15	60	20
SH15	0.001	50	0.15	70	<20
Castano Viejo District					
ASH007	2,000	30	0.05	40	26,000
ASH008	2,700	70	<0.05	<10	0,900
Cuatro Amigos					
AY007	0.247	60	0.05	30	1,430
AY017	0.100	10	<0.05	10	72,400
Castano Nuevo					
SH14	0.007	200	0.40	60	60
San Jorge					
SH46	0.002	70	0.20	60	<20
SH47	0.001	20	0.20	60	<20
SH77	0.005	490	<0.05	60	300
Yaguajay					
RY44	0.001	200	0.30	60	43
RY45	0.005	50	0.40	110	<20
SH40	0.001	290	0.25	60	60
SH49	0.012	70	0.30	90	120
Paramillos Sur					
SH59	<0.001	210	0.10	50	<20
Paramillos Norte					
SH56	<0.001	930	0.20	50	<20
SH57	<0.001	630	0.20	62	<20
Paramillos Centro					
SH53	<0.001	350	0.25	50	100
Grupo Oro del Sur					
RY42	0.002	160	0.10	<10	40
RY43	0.019	50	0.20	50	80
RY44	0.010	20	0.05	50	760
RY45	0.105	30	<0.05	10	200
SH46	<0.001	330	0.25	30	220
SH45	<0.001	600	0.20	30	160
La Negra					
SH42	1.005	3,200	<0.05	<10	18,300
SH44	0.032	1,000	0.30	80	2,000
TH44	<0.001	60	0.15	70	<20

Ore grade assay result

Sample	Au_ppm	Ag_ppm	AL%	Ba_ppm	Ba_ppm	Ba_ppm	Ca%	Ca_ppm	Ca_ppm	Cr_ppm	Cr_ppm	Fe%	K%	Mg%	Mn_ppm	Mn_ppm	Na%	Ni_ppm
San Benito																		
SH4	10	2	0.10	800	<10	<20	0.15	<10	<10	100	140	1.05	6.4	0.20	50	90	0.80	10
SH5	15	2	0.15	1,000	<10	<20	0.15	<10	<10	150	30	0.05	7.1	0.10	210	50	0.70	<10
Pampa Fria																		
PF-01	<5	<1	0.05	300	<10	<20	15.45	<10	30	950	10	2.00	0.1	9.30	470	<10	0.05	300
PF-02	<5	<1	0.05	4000	<10	<20	0.95	<10	40	850	10	2.10	<0.1	5.30	463	<10	<0.05	1,210
PF-03	10	<1	0.25	150	<10	<20	30.70	<10	250	760	350	4.15	0.1	0.40	820	<10	<0.05	1,410
PF-04	<5	<1	0.45	<100	<10	<20	15.45	<10	50	1,350	20	3.55	<0.1	9.75	710	<10	<0.05	1,250
PF-05	<5	1	0.35	300	<10	<20	0.95	<10	80	1,850	10	3.05	<0.1	10.20	730	<10	<0.05	1,760
PF-06	<5	<1	0.50	100	<10	<20	17.10	<10	43	1,050	10	3.00	<0.1	10.00	1,180	<10	<0.05	930
PF-07	<5	<1	0.30	<100	<10	<20	16.40	<10	40	760	<10	2.90	0.1	0.40	660	<10	<0.05	860
PF-08	<5	<1	0.35	<100	<10	<20	17.00	<10	40	1,000	10	2.95	0.1	9.10	720	<10	<0.05	500
PF-09	<5	<1	0.50	<100	<10	<20	15.55	<10	43	1,050	10	3.10	0.1	0.70	440	<10	<0.05	1,050
PF-10	<5	<1	0.45	<100	<10	<20	15.25	<10	43	960	10	2.80	0.1	0.95	440	<10	<0.05	740
PF-11	<5	<1	0.60	200	<10	<20	12.05	<10	60	1,580	10	2.70	0.1	6.45	520	<10	<0.05	1,090
PF-12	<5	<1	0.60	<100	<10	<20	19.55	<10	30	1,790	10	3.35	0.1	10.30	750	<10	<0.05	660
PF-13	<5	<1	0.50	300	<10	<20	16.40	<10	30	950	10	3.05	<0.1	10.45	860	<10	<0.05	400
PF-14	<5	<1	0.15	<100	<10	<20	23.70	<10	43	870	10	2.35	<0.1	12.05	1,090	<10	<0.05	570
PF-15	<5	<1	0.50	200	<10	<20	19.40	<10	20	850	10	2.70	0.2	10.50	780	<10	<0.05	450
PF-16	<5	<1	0.45	300	<10	<20	17.00	<10	30	790	10	2.60	0.1	0.25	480	<10	<0.05	630
PF-17	<5	<1	0.30	<100	<10	<20	16.20	<10	30	920	10	2.50	0.1	0.50	640	<10	<0.05	570
PF-18	<5	<1	0.50	<100	<10	<20	16.45	<10	43	1,170	10	2.95	0.2	0.20	430	<10	<0.05	670
PF-19	<5	<1	0.50	100	<10	<20	16.45	<10	40	1,060	10	2.90	0.1	0.10	430	<10	<0.05	640
PF-20	<5	<1	0.55	200	<10	<20	19.55	<10	50	1,370	<10	3.10	<0.1	11.20	710	<10	<0.05	960
PF-21	<5	<1	0.25	<100	<10	<20	15.70	<10	40	890	10	3.10	0.1	0.55	730	<10	<0.05	700
PF-22	<5	<1	0.30	<100	<10	<20	30.00	<10	30	1,310	<10	2.45	0.1	10.55	810	<10	<0.05	410
PF-23	<5	<1	0.50	<100	<10	<20	21.30	<10	190	1,310	2,360	4.95	0.2	1.25	820	<10	<0.05	790
PF-24	<5	<1	0.25	<100	<10	<20	21.00	<10	10	800	<10	2.25	0.1	10.75	640	<10	<0.05	140
PF-25	10	<1	0.75	100	<10	<20	0.35	<10	50	1,370	30	3.45	0.2	0.40	820	<10	<0.05	950
PF-26	<5	<1	0.20	100	<10	<20	21.30	<10	20	580	30	2.95	0.1	12.00	1,160	<10	<0.05	420
PF-27	<5	<1	0.45	300	<10	<20	10.70	<10	50	640	10	5.50	0.1	4.65	590	<10	<0.05	1,240
PF-28	<5	<1	0.05	<100	<10	<20	10.90	<10	20	640	<10	2.35	<0.1	10.50	550	<10	<0.05	520
PF-29	<5	<1	0.40	<100	<10	<20	17.85	<10	80	820	<10	2.80	0.2	9.70	580	<10	<0.05	870
PF-30	<5	<1	0.15	300	<10	<20	16.40	<10	30	800	10	2.65	<0.1	0.50	500	<10	<0.05	430
PF-31	<5	<1	0.40	100	<10	<20	16.05	<10	40	650	10	3.15	0.1	0.45	720	<10	<0.05	850
PF-32	15	<1	0.55	300	<10	<20	14.95	<10	80	1,210	20	3.05	0.2	7.75	630	<10	<0.05	840
PF-33	<5	<1	0.50	<100	<10	<20	13.75	<10	30	1,310	10	2.35	0.2	7.30	540	<10	<0.05	350
PF-34	10	<1	0.50	<100	<10	<20	16.35	<10	40	1,030	10	3.10	0.2	6.70	740	<10	<0.05	1,040
PF-35	<5	<1	0.90	<100	<10	<20	15.75	<10	90	1,370	10	3.60	0.4	5.00	570	<10	<0.05	1,200
PF-36	<5	<1	0.75	300	<10	<20	10.90	<10	50	630	100	3.35	0.1	6.55	790	<10	<0.05	850
PF-37	<5	<1	0.75	<100	<10	<20	22.90	<10	90	660	340	4.15	0.1	3.40	1,140	<10	<0.05	1,100
PF-38	<5	<1	0.10	100	<10	<20	10.55	<10	30	510	<10	2.35	<0.1	10.10	710	<10	<0.05	540
PF-39	<5	<1	0.75	300	<10	<20	14.40	<10	90	890	10	2.85	0.1	6.50	600	<10	<0.05	700
PF-40	<5	<1	0.15	100	<10	<20	17.85	<10	40	900	<10	2.70	0.1	10.65	870	<10	<0.05	820
PF-41	<5	<1	0.45	100	<10	<20	10.40	<10	40	1,060	<10	2.70	0.1	11.70	890	<10	<0.05	960
PF-42	<5	<1	0.45	300	<10	<20	16.50	<10	40	1,290	10	3.25	0.2	11.20	860	<10	<0.05	980
PF-43	<5	<1	0.15	100	<10	<20	16.45	<10	30	850	10	2.55	0.1	9.00	550	<10	<0.05	400
PF-44	<5	<1	0.45	200	<10	<20	11.05	<10	40	1,550	10	3.55	0.4	7.50	670	<10	<0.05	750
PF-45	<5	<1	0.25	1,300	<10	<20	14.20	<10	40	1,090	<10	3.25	0.1	7.55	840	<10	<0.05	860
PF-46	<5	<1	0.10	<100	<10	<20	15.65	<10	50	640	10	3.00	<0.1	0.45	760	<10	<0.05	700

Ore grade assay result

Sample	Pt_ppm	Se_ppm	Ti%	V_ppm	Zn_ppm
San Benito					
SH4	0.001	200	0.05	70	<20
SH5	0.001	200	0.10	50	<20
Pampa Fria					
PF-01	0.001	1,150	<0.05	20	30
PF-02	<0.001	320	<0.05	20	20
PF-03	0.001	360	<0.05	10	20
PF-04	0.001	470	<0.05	30	20
PF-05	<0.001	190	<0.05	10	40
PF-06	0.001	810	<0.05	30	20
PF-07	0.002	480	<0.05	20	20
PF-08	0.003	410	<0.05	20	20
PF-09	0.003	400	<0.05	30	20
PF-10	0.002	370	<0.05	30	20
PF-11	0.003	440	<0.05	20	40
PF-12	0.003	360	<0.05	40	20
PF-13	0.002	860	<0.05	30	60
PF-14	0.003	450	<0.05	10	20
PF-15	0.003	560	<0.05	30	<20
PF-16	0.002	400	<0.05	30	20
PF-17	0.003	430	<0.05	10	20
PF-18	0.003	450	<0.05	30	20
PF-19	0.001	450	<0.05	20	60
PF-20	0.003	580	<0.05	20	20
PF-21	0.003	440	<0.05	30	20
PF-22	0.003	410	<0.05	20	20
PF-23	0.003	360	<0.05	20	60
PF-24	0.001	410	<0.05	20	20
PF-25	0.001	40	<0.05	30	20
PF-26	0.001	1,170	<0.05	10	20
PF-27	0.002	220	<0.05	10	<20
PF-28	0.003	510	<0.05	<10	20
PF-29	0.003	350	<0.05	10	<20
PF-30	0.002	500	<0.05	10	20
PF-31	0.002	430	<0.05	30	60
PF-32	0.003	470	<0.05	40	40
PF-33	0.003	790	<0.05	20	30
PF-34	0.003	190	<0.05	20	30
PF-35	0.004	400	<0.05	60	20
PF-36	0.003	400	<0.05	30	30
PF-37	0.004	300	<0.05	10	40
PF-38	0.002	560	<0.05	30	20
PF-39</					

Ore grade assay result

sample	As_ppm	Ag_ppm	Al_%	Ba_ppm	Ba_ppm	Ba_ppm	Ca_%	Co_ppm	Co_ppm	Cr_ppm	Cr_ppm	Fe_%	K_%	Mg_%	Mn_ppm	Mn_ppm	Na_%	Ni_ppm
PE-15	5	1	0.45	230	<10	<20	10.20	<10	40	1,700	<10	2.85	0.2	9.90	300	<10	<0.05	791
PE-20	5	<1	0.25	190	<10	<20	14.35	<10	80	970	<10	3.40	<0.1	10.00	930	<10	<0.05	1,370
PE-31	10	<1	0.25	250	<10	<20	10.20	<10	50	410	<10	3.95	0.1	7.60	1,040	<10	<0.05	950
PE-32	5	<1	0.35	200	<10	<20	5.45	<10	10	170	10	1.25	0.4	3.20	240	<10	<0.05	130
PE-33	8	<1	0.35	<100	<10	<20	17.05	<10	30	1,610	10	3.10	0.1	8.60	620	<10	<0.05	560
PE-34	45	<1	0.40	100	<10	<20	14.90	<10	45	1,030	<10	3.65	0.1	4.75	530	<10	<0.05	370
SM5	45	1	0.45	100	<10	<20	12.40	<10	50	1,700	10	3.15	<0.1	12.20	800	<10	<0.05	1,050
SM9	10	<1	0.45	100	<10	<20	10.80	<10	10	670	20	1.85	0.1	3.45	430	<10	0.05	1,060
SM54	45	<1	0.30	150	<10	<20	12.90	<10	<10	350	20	1.80	0.1	7.70	450	<10	0.05	200
Corral																		
SM07	145	<1	4.55	400	<10	<20	2.05	<10	<10	100	40	1.80	5.4	3.10	190	<10	0.50	10
SM08	80	<1	0.50	100	<10	<20	14.30	<10	<10	10	10	0.55	0.6	0.85	1,020	<10	0.05	<10
SM09	210	<1	2.20	1,300	<10	<20	21.70	20	50	10	70	0.80	2.4	0.55	4,530	<10	0.05	60
SM10	5	<1	0.25	100	<10	<10	21.30	<10	<10	10	10	0.20	0.1	12.05	210	<10	0.05	<10
TM14	2,140	20	2.65	400	<10	<20	0.05	550	10	60	3,720	2.05	3.1	2.25	0,440	10	0.15	40
Creslon Amarillo																		
RT59	<10	1	11.00	700	<10	<20	0.30	<10	<10	30	10	2.25	5.0	0.35	40	<10	1.35	<10
RT60	<10	<1	11.20	900	<10	<20	0.45	<10	<10	30	60	2.00	5.0	0.75	40	<10	0.60	<10
Cerro Blanco																		
RT50	115	1	7.50	300	<10	<20	0.60	<10	<10	100	20	1.95	3.1	0.60	100	<10	2.80	<10
SM50	25	3	0.85	1,300	<10	<20	0.50	<10	<10	80	40	2.60	2.1	0.15	140	<10	0.05	<10
Vicunja (El Salado)																		
ASH049A	130	<1	1.50	700	<10	<20	0.25	<10	<10	330	510	1.45	2.0	0.20	60	70	1.30	<10
Pastran																		
ASH040	10	<1	0.75	600	<10	<20	0.45	<10	<10	160	80	3.50	3.5	0.85	490	<10	0.80	40
Andesita ledge																		
SM01	5	<1	2.15	2,100	<10	<20	13.90	<10	<10	50	10	3.90	<0.1	6.30	1,670	<10	0.40	30
Cerro Negro																		
SM04	15	<1	0.45	900	<10	<20	17.85	<10	10	60	30	4.65	<0.1	0.65	1,470	<10	<0.05	30
camp location																		
SM11	15	<1	2.00	1,300	<10	<20	0.75	<10	<10	80	50	13.35	0.6	0.15	50	<10	0.50	<10
Leonardo																		
ASH054	20	1	0.45	<100	10	<20	0.30	<10	10	30	<10	330.0	49.1	49.05	930	<10	0.05	<10

Ore grade assay result

sample	Pb_ppm	Sr_ppm	Fl_%	V_ppm	Zn_ppm
PE-15	0.003	630	<0.05	20	20
PE-20	0.003	670	<0.05	20	20
PE-31	0.003	300	<0.05	20	20
PE-32	0.002	100	<0.05	40	60
PE-33	0.003	450	<0.05	20	20
PE-34	0.003	450	<0.05	20	20
SM51	<0.001	530	<0.05	40	330
SM52	0.001	190	<0.05	20	20
SM54	0.001	570	<0.05	20	420
Corral					
SM07	0.030	100	0.20	40	900
SM08	0.005	320	<0.05	10	80
SM09	0.002	250	0.05	30	1,200
SM10	0.002	110	<0.05	<10	500
TM14	0.240	20	0.20	50	54,100
Creslon Amarillo					
RT59	<0.001	200	0.45	120	<20
RT60	<0.001	70	0.40	140	<20
Cerro Blanco					
RT50	<0.001	110	0.35	80	<20
SM50	0.011	470	0.20	20	<20
Vicunja (El Salado)					
ASH049A	0.410	340	0.05	30	300
Pastran					
ASH040	0.004	80	0.50	160	100
Andesita ledge					
SM01	0.004	1,140	0.05	50	60
Cerro Negro					
SM04	0.001	370	0.05	60	100
camp location					
SM11	0.003	1,500	0.25	110	20
Leonardo					
ASH054	0.150	<10	<0.05	<10	700

X-ray diffraction analyses

sucre/lugar / locality	sample	assemblage
El Peto	ATH29	Oz,Pl,Se>>>Ni
El Peto	ATH200	Oz,Pl,Se>>>Ni
El Peto	ATH231	Oz,Se>>>Ni
El Peto	ATH232	Oz,Pl,Ki>>>S/S
El Peto	ATH233	Oz,Se>>>Ni
El Peto	ATH239	Oz,Pl,Ki,S/S>>>C/S
El Peto	ATH240	Oz,Pl,Ki,Se>>>Gyp
El Peto	ATH241	Oz,Pl,Ki>>>S/S>Alu
El Peto	ATH242	Oz,Ki,Se>>>P>
El Peto	ATH243	Oz,Pl,Ki>>>Ser
Croilita		
Croilita (2nd site)	ASM945	Hem, L>>>
Croilita (first site)	ASM962	Oz>Cal,Doi,Hem>>S/S,Rt
Croilita (first site)	ASM984	Hb>>Pl>S/S,C/S
Rio Blanco		
Rio Blanco	ASM217	Oz,Kao>>>Ser,Gyp
Rio Blanco	ATH245	Oz,Py>>Kao>>Ni
Rio Blanco	ATH246	Oz,Py>>Kao>
Rio Blanco	ATH247	Oz>>>Gyp,Ant
Rio Blanco	ATH248	Oz,Pl>>K>>Ser
Rio Blanco	ATH249	Pl>>Oz>S/S>K
La Vicuña		
La Vicuña	ASM209	Pl>>Oz,Ki,S/Sm>>Ser>
La Vicuña	ASM210	Alb>>Oz,Se>>>S/S
La Vicuña	ASM211	Oz,Se>>>Alu,Gyp
La Vicuña	ATH219	Pl>Kl,Ch>>Oz,Jer>
La Vicuña	ATH221	Oz,S/S>>Pl>
La Vicuña	ATH222	Oz,Alb>S/S>>
La Vicuña	ATH223	Oz,Ch>>Alb>S>Jar>
La Vicuña	ATH226	>>>Oz>
La Vicuña	ATH227	Oz,Se>>>Ni
La Ollita		
La Ollita	ASM203	Oz>Kao>S/S>Ni
La Ollita	ASM205	Oz,Se>>>Rt>
La Ollita	ATH202	Alb>>Oz,Se>>Kao,Nib>Sm>Alu
La Ollita	ATH203	Alb>>Oz>S/S,Nib>Alu
La Ollita	ATH205	Oz,Kao,Py>>Dr,Rt>>Alu,Gyp
La Ollita	ATH206	>Oz,Pl>S/S,Nib>
La Ollita	ATH207	Alb>>Oz,Jer>S/S,C/S>Hem
La Ollita	ATH210	Py>>Oz,Pl,Ch>Gyp>Sm>
La Ollita	ATH211	Oz,Py>>Dr>Kao>Gyp
Las Tamboritas		
Las Tamboritas	ATH213	Oz,Alb>S/S>>Gyp
Las Tamboritas	ATH214	Oz,Alb>>S/S>Gyp
Las Tamboritas	ATH218	>Ni>>Oz,Pl>S/S>Alu

X-ray diffraction analyses

sucre/lugar / locality	sample	assemblage
Ranchillos		
Ranchillos	ATH413	Oz,Se>>>Rt>
Ranchillos	ATH415	Oz,Se>>>Kis>Pl,Ni>
Ranchillos	ATH417	Oz,Se>>>Gp>
Laguna de las Huias		
Laguna de las Huias	ASM982	Oz>>Hem>Rt>
North of Laguna de las Huias	ATH431	Alu>>Kt>>
North of Laguna de las Huias	ATH432	Oz>Alu>>Kt>Hem>
North of Laguna de las Huias	ATH433	Oz>>>Kt>Hem>Rt>
North of Laguna de las Huias	ATH435	Oz>Kt>Alu>>>Hem>
North of Laguna de las Huias	ATH436	Oz>Alu>Hem>>Kt>
Las Aguaditas		
Aguaditas	ATH402	Oz,Dr>>>Ser>Jar>
Aguaditas	ATH404	Oz>>Pl>>H>S/S>
Las Aguaditas	ASM956	Oz,Dr>>>>
Helvecia		
Helvecia	TH07	Sr>>>Oz,Bar>Cp>
Helvecia	TH11	Oz,Pl,Ki>Se>>H>
Las Sagittas		
Las Sagittas	SM02	Oz>>Kj,Se>>>Pl>H>Jar>
Las Sagittas	SM03	Oz,Se>>>>H>
La Flecha		
La Flecha	ATH437	Oz,Nib>>>Kt>Jar>Gp>
La Flecha	ATH438	Oz>Alu>>Kt>>Gp>Rt>
La Flecha	ATH439	Oz,Gp>Nib>>>
La Flecha	ATH440	Oz>>S/S>Alu>Gp>Rt>Ni>
La Flecha	ATH441	Oz>>>Kt>Alu>Pl>S/S>Rt>
La Flecha	ATH443	Oz>>Alu>Jar>Gp>
La Flecha	ATH444	>Oz>S/S>Alu>Gp>Ni>
La Flecha	ATH445	>>>Oz>S/S>Kt>
La Flecha	AKY364	Oz,Nib>>Gp>Sub>Kt>Rt>
Rio la Flecha	ASM985	Oz,Nib>>>>Rt>
Rio la Flecha	ASM986	Oz>Gp>Nib>Pl>Kt>
Rio la Flecha	ASM987	>Oz,Nib>Ni>>Kt>Gp>Rt>
Rio la Flecha	ASM988	Oz>>Pl>>S/S>Alu>Gp>Ni>
Rio la Flecha	ASM989	Nib>>>Kt>Jar>Gp>Rt>
Bordo Atravesado		
Bordo Atravesado	ASM229	Oz,Se>>>Ni>>>Gyp>
Bordo Atravesado	ATH251	Oz,Pl,Ki>>>S/S,C/S
Bordo Atravesado	ATH252	Oz,Se>>>>Gyp>
Bordo Atravesado	ATH253	Oz,Se>>>>
Bordo Atravesado	ATH254	Oz,Se>>>>
Bordo Atravesado	ATH256	Oz>Ser>Kao>Kt>Nib>Gyp>
Bordo Atravesado	ATH257	Oz,Se>>Py>>Kt>Kao>
Bordo Atravesado East	AKY370	Oz>>>Alu>Oep>
South of Bordo Atravesado	ATH449	Oz>>>Ser>Pl>Alu>

X-ray diffraction analyses

subcélula / locality	sample	ensamblaje
South of Bord Atravesado	ATH460	Oz, Kfs, Alu, Ser
West of Bord Atravesado	ATH447	Oz, Pl, Kfs
West of Bord Atravesado	ATH448	Oz, Kfs, Pl, Kfs, Ser
Mangaita		
West of camp of Cañon de la Brea	ATH456	Stb, Cbz, Pl, Hemo, Kfs, S/S
West of camp of Cañon de la Brea	ATH457	Stb, Cal, Cbz, Pl, S/S
Las Mogotes		
Los Mogotes	ATH267	Oz, Ser, Gyp
Los Mogotes	ATH268	Oz, Ser, Gyp
Los Mogotes	ATH272	Gyp, Oz, Ser, Rut
Los Mogotes	ATH273	Oz, Ser, Gyp, Pl
Los Mogotes	ATH274	Oz, Ser, Rut
Los Mogotes	ATH275	Oz, Ser, Gyp
Los Mogotes	ATH276	Pl, Kfs, Oz, Gyp, S/S, C/S
Los Mogotes	ATH277	Oz, Ser, Gyp
Los Mogotes	ATH278	Oz, Pl, Kfs, Chb, S/S, Jar
Los Mogotes	ATH279	Oz, Pl, Kfs, Chb, S/S, Jar
Los Mogotes	ATH280	Pl, Chb, Oz, Jar, Sme
Cordón de la Inca		
Cordón del Inca	ASM392	Oz, Gp, Rt
Cordón del Inca	ASM395	Oz, S/S, Br
Easternmost of Cordón de la Inca	ATH451	Oz, Alu, Cal
Easternmost of Cordón de la Inca	ATH452	Oz, Rt
Easternmost of Cordón de la Inca	ATH453	Oz, Deb, Prl
Easternmost of Cordón de la Inca	ATH455	S/S, Pl, S/S, C/S, Jar, Dep, Br
Guacchi		
Guachi	TH48	Py, Ser, Gyp
Guachi	TH49	Pl, Oz, Kfs, S/S
El Fierro alterado		
El Fierro alterado	KY24	Oz, Pl, Ser, Kfs, Jar
El Fierro alterado	KY29	Oz, Ser, Chb, Mas
El Fierro alterado	TH40	Oz, Alu, Ser
El Fierro alterado	TH46	Oz, Ser, Jar
Cerro Amadillo		
Cerro Amadillo	ASM224b	Oz, Kfs, Ser, Nal
Cerro Amadillo	ASM225	Oz, Kfs, Gyp, Alu, Ant
Cerro Amadillo	ASM226	Oz, Bar, Kfs, Rub
Cerro Amadillo	ASM227	Oz, Kfs, S/S
Cerro Amadillo	ATH258	Oz, Pl, Kfs, S/S
Cerro Amadillo	ATH261	Oz, Bar, Rut
Cerro Amadillo	ATH262	Pl, Chb, Oz, Py, S/S, Cip
Cerro Amadillo	ATH263	Oz, S/S, Gyp
Cerro Amadillo	ATH264	Oz, Alu, S/S, C/S
Cerro Amadillo	ATH265	Oz, Alu, Kfs, Jar, Gyp
Cerro Amadillo	ATH266	Oz, Pl, Kfs, Chb, Jar, S/S
Cerro Amadillo Norte	ASM231	Oz, Bar

X-ray diffraction analyses

subcélula / locality	sample	ensamblaje
Cerro Amadillo Norte	ASH232	Oz, Bar, Rub, Hemo
Cerro Amadillo Norte	ASM233	Oz, Pl, Kfs, S/S, C/S
Cerro Amadillo Norte	ATH281	Oz, Pl, Kfs, Chb, S/S, Jar
Cerro Amadillo Norte	ATH282	Oz, Pl, Kfs, S/S, C/S, Rh
Cerro Amadillo Norte	ATH283	Oz, Bar, Rut
Cerro Amadillo Norte	ATH284	Oz, Pl, Kfs, S/S, Gyp
Cerro Amadillo Norte	ATH285	Oz, Bar
Cerro Amadillo Norte	ATH286	Oz, Bar
Cerro Amadillo Norte	ATH287	Pl, Jar, C/S, Oz, Cip
Despoblados		
Despoblado	AKY400	Oz, S/S, Pl, S/S, Jar
Despoblado	AKY401	Oz, Ser, Jar
Despoblado	AKY402a	Oz, Ser, Pl, Kfs, Jar
Despoblado	AKY403	Oz, S/S, C/S, Pl, Kfs
Despoblado	ASM419	Oz, Ser, Gp
Despoblado	ASM420B	Oz, C/S, S/S, Kfs
Despoblado	ATH505	Kfs, Oz, Pl, S/S, Jar
Despoblado	ATH506	Alu, Oz, S/S, Jar
Despoblado	ATH507	Oz, Pl, S/S, Jar
Despoblado	ATH508	Oz, Ser
Guanaeco Zonzo		
Guanaeco Zonzo	AKY385	Oz, Ser, Br
Guanaeco Zonzo	AKY386	Oz, Kfs, Kfs, S/S
Guanaeco Zonzo	ASM406	Oz, Alu
Guanaeco Zonzo	ATH474	Oz, Nal
Guanaeco Zonzo	ATH476	Oz, Alu
Guanaeco Zonzo	ATH477	Oz, Kfs, Kfs, S/S
Veladero Norte		
Veladero Norte	AKY384	Oz, Ser, Rt
Veladero Norte	ATH473	Oz, Pl, Ser
Veladero Sur		
Veladero Sur	AKY387a	Oz, Nal, Kfs, Kfs, Pl, Dep, Br
Veladero Sur	AKY387b	Oz, Nal, Kfs, Kfs, Gp, Rt
Veladero Sur	AKY388	Oz, Nal, Kfs, Kfs, Pl, Nja
Veladero Sur	AKY390	Oz, S/S
Veladero Sur	ATH479	Oz, Nal, Kfs, S/S, Gp, Rt
Veladero Sur	ATH480	Oz, Nal, Kfs, Dm, Rt
Veladero Sur	ATH481	Kfs, Oz, Alu, S/S, Rt
Veladero Sur	ATH482	Oz, Nal, Kfs, Jar
Veladero Sur	ATH483	Oz, Nal, Kfs, S/S, Pl, S/S, Nja
Veladero Sur	ATH484	Oz, S/S, Gp
Veladero Sur (southern qz vein)	ASM410A	Oz, Deb
Rio Frio		
Rio Frio	AKY395	Oz, Kfs, Alu, S/S
Rio Frio	AKY396	Oz, Kfs, Nal
Rio Frio	AKY397	Oz, S/S, Hpl, Pl, Nal

X-ray diffraction analyses

subid/LatLon	locality	sample	assemblage
Rio Frio		AKY399	Qtz>Ser>Kln,Alu
Rio Frio		ASM116	Qtz,Alu>>Gp,Rt
Rio Frio		ASM117	Qtz,Ab>>S/S,Au,Jar
Rio Frio		ATH495	Qtz,Db>>Alu>
Rio Frio		ATH497	Qtz>Pl>Alu>>Dsp
Rio Frio		ATH499	Qtz,Nal>>Gp,Rt
Rio Frio		ATH501	Qtz>Kln>>Dsp,Alu,Gp
Rio Frio		ATH502	Qtz,Kln>>Rt,Nal
Rio Frio		ATH504	>Pl>Qtz>Kln,C/S,Cal
Zapcarroo			
Zapcarroon		AKY392	Qtz,Alu>>Kln
Zapcarroon		ATH485	Qtz>Alu>>Kln,S/S,Jar
Zapcarroon		ATH488	Qtz,Alu>>Soo
Zapcarroon		ATH489	Alu>>Soo
Zapcarroon		ATH490	Qtz,Alu>>Jar,Soo
Zapcarroon		ATH492	Alu>Qtz>Jar,Soo
Las Obitotas			
Las Obitotas		ATH399	Qtz>Alu>Ser,Jar
San Pedro		AKY396	Qtz>Ser>>
San Pedro (larger)		ASH360B	Qtz>Ser>>>
Caumon_Norda			
Carmen Norte		AKY374	Pl>Qtz>C/S>S/S,Cal,Py
Carmen Norte		AKY376	Ab>Qtz>S/S,C/S,Gp,Py
Carmen Norte		AKY379	Qtz,Kln>Alu>>Rt,Nja
Carmen Norte		AKY381	Qtz>Alu,Gp>Rt,Sul,Nja
Carmen Norte		AKY382b	>Qtz,Pl>Kln>S/S,Jar
Carmen Norte		AS4037	Qtz>Ab>>S/S
Carmen Norte		ASH398	>Qtz>S/S,Alu,Jar,Gt
Carmen Norte		ASH399	Qtz>>Jar,Op,Hem,Rt
Carmen Norte		ASH400	>Qtz,Pl>Kln,Gp,Rt
Carmen Norte		ATH458	Ab>Qtz,Chl,Cal>>S/S,Gp
Carmen Norte		ATH459	Qtz,Nal>>Gp,Rt
Carmen Norte		ATH460	Alu>>Nja>Qtz
Carmen Norte		ATH461	Qtz>Alu>Rt,Nja
Carmen Norte		ATH464	Qtz>Kln,Alu,Gp>>Py,Rt
Carmen Norte		ATH465	Qtz>Alu>>Gp
Carmen Norte		ATH468	Qtz>Alu>Jar>Gp,Rt
Carmen Norte		ATH469	Qtz>>>Rt
Carmen Norte		ATH470	Qtz>>>Gp
Quebrada de Chila			
Chila (Au old adit Au)		ASH342	Qtz>Ser>>Py
Quebrada de Chila		KY15	Qtz>Ser>>>Rt
Quebrada de Chila		KY16	Qtz>Ser>>>Jar,Rt
Quebrada de Chila		KY19	Qtz>Ser>>>Jar,Rt
Quebrada de Chila		KY20	Qtz,Ab, Ser>>>
Quebrada de Chila		SM18	Pl,Kln>Qtz>Ser>Hal

X-ray diffraction analyses

subid/LatLon	locality	sample	assemblage
Quebrada de Chila		SM19	>Qtz,Pl,Kln, Ser>>Hal
Quebrada de Chila		SM20	Qtz, Ser>Ab>>Hal
Quebrada de Chila		TH27	Pl>Qtz,Kln>Ser>Hal,Hem
Quebrada de Chila		TH29	Qtz, Ser>>>Py,Rt
Tocota District			
Cocololo		AKY331	Qtz>>Ser>Kln
Mina Cocololo, Tocota		ATH358	>Gp>Pl>Qtz,S/S
Mina Cocololo, Tocota		ATH362	Qtz, Ser>>>Rt,Soo
Mina Kimer, Tocota		ATH365	Soo>Kln>Qtz>
Mina Kimer, Tocota		ATH366	Soo>Dv,Arg>Qtz>
Mina Kimer, Tocota		ATH368	Qtz>Pl>Ser>Kln
Tocota (Cocololo)		ASH335	Qtz>Ser>>Py,Rt
Tocota (Cocololo)		ASH336	Qtz, Ser>Pl>>Kln
Tocota (Cocololo)		ASH337	Dv>Qtz>>Soo
Tocota (Kimer)		ASH339	Kln, Soo>>>
Tocota (no name)		ASH340	Qtz>Dv>>>
El Retamal			
El Retamal		KY11	Qtz, Ser>Dr, Jar>>Rt
El Retamal		KY12	Qtz, Ser>>>Dr, Gp, Rt
El Retamal		SM14	Qtz, Dr>Ser>Rt>Hal
El Retamal		SM15	Qtz>Ser, Dr>Pl>Hal, Gp
Vizcachas			
Vizcachas		ATH325	Qtz, Kln>Pl>Ser>
Vizcachas		ASH358	Qtz, Pl>Kln>>Ser
Castano_Viejo_Dist			
Animas		ASH399	Qtz>Pl>Dv>Gp
Animas		ASH310	Qtz>Ser>Jar, Gp, Rt
Mina Animas		ATH313	Gp, Pl>>Qtz>Gn
Mina Animas		ATH315	Qtz>>S/S>Kln, Gp, Rt
Avestruces			
Avestruces		ATH329	Qtz>>>
Avestruces		ATH331	Qtz>>S/S>Jar
Avestruces		ATH332	Qtz>>S/S>
Avestruces		ATH334	Qtz, Db>>>S/S
Avestruces		ATH337	Qtz, Db>>>
Avestruces		ATH341	Qtz>>Ser>Dv, Jar, Gp
Avestruces		ATH342	Qtz>Kln, S/m>>S/S, Rt
Avestruces		ATH343	Qtz, Kln>>>Gp
Avestruces (south)		ASH322	Qtz>>S/S>Rt
Avestruces (south)		ASH325	Qtz>>S/S>
Avestruces (south)		AKY312a	Qtz>>S/S>
Avestruces-north		AKY314	Qtz>>S/S>
Avestruces-north		AKY315a	Qtz>>S/S>Rt
Avestruces-north		AKY316	Qtz>>S/S>Rt
Avestruces-south		AKY318	Qtz, Db>>>Gp

X-ray diffraction analyses

subcort./area	locality	sample	ensamblaje
Aveztzuces-south			
Aveztzuces		AKY020	Oz>>Ser>Rt
Aveztzuces		ASM016	Oz>>>Rt
Aveztzuces		ASM017	Oz, Dob>>>S/S
Aveztzuces		ASM018	Oz>>Kln>S/S
Aveztzuces		ASM019	Oz>>>Jar, Gp, Rt
Aveztzuces		ASM020	Oz, Deb>>>
Aveztzuces		ASM021	Oz>>S/S>
Mandagua			
Mannique		AKY021a	Oz>>S/S, Dm>Rt
Mannique		AKY024b	Oz>>P/S/S>
Mannique		AKY026	Oz>Pl>>S/S
Mannique		AKY028	Oz>>>S/S
Mannique		AKY030	Oz>>>S/S
Mannique		ASM026	>Oz, Pl>>>S/S
Mannique		ASM027	>Oz, Pl>>>S/S, Jar
Mannique		ASM029A	Oz, Ab>>>S/S>
Mannique		ASM030	Pl>Oz>Kln>S/S, C/S
Mannique		ATH047	Oz>Pl>S/S>
Mannique		ATH048	Oz>Ser>>>
Mannique		ATH051	Oz>>>Ser>
Mannique		ATH052	Oz>Ab>>Kln, S/S
Mannique		ATH053	Oz, Ab>>>S/S
Mannique		ATH054	>Oz, Ab>>S/S>
Mannique		ATH056	Oz>>>S/S
Mannique		ATH057	Oz>Ser>Dm>Jar, Rt
Mannique (north)		ASM032	Oz, Ab>>>S/S>
Castano, Nuevo		SM16	Pl>Oz>Kl, Gyp>Sme, Lau, Mar
Castano, Nuevo		TH24	Oz>Pl, Py>Kl, Mar>S/S
Leoncillo			
Leoncillo		KY64	Oz, Pl>Kln>S/S, C/S, Mar
Leoncillo		TH82	Oz, Py>Alu>>
Leoncillo		TH93	Oz, Pl>Kln>S/S
San Jorge		SM46	Oz, Kl, Dp>Ch>Ser
Yaguataz		SM48	Oz, Pl, Ser>Kl, Ch>>Cal, Py
Paramillos Sur			
Paramillos Sur		SM58	Oz, Ser>>>Jar
Paramillos Sur		TH111	Ser>Jar>>>Kf
Paramillos Norte		TH113	Oz, Kl, Bt>>>
Paramillos Norte		TH99	Pl, Kl>>>S/S
Paramillos Centro		TH115	Pl, Ch>Oz>Ser>
Paramillos Centro		TH118	Hb>>Oz, Pl>S/S, C/S

X-ray diffraction analyses

subcort./area	locality	sample	ensamblaje
La Negra			
La Negra		TH64	Oz>Dob>Lau, Cal
San Benito			
San Benito		KY44	Oz, Kl>>Pl>Ser
San Benito		KY45	Pl, Kl>>Oz>Sme, Gyp
San Benito		KY56	Alb>Oz>>S/S, Gyp
San Benito		SB02	Oz, Kl>>>Pl, Ser
San Benito		SB04	Pl>Oz, Kl>>S/S
San Benito		SB05	Pl, Kl>Oz>>S/S
San Benito		SB09	Pl, Kl>>Oz>
San Benito		SB10	Pl, Kl>>S/S>C/S, Cal
San Benito		SB23	Pl, Kl>>Oz>Hb, Gyp
San Benito		SB24	Pl, Kl>>Oz>Ser, Cal>
San Benito		SB25	Pl, Kl>>>Ser
San Benito		SB29	Pl, Kl>Oz>S/S>
San Benito		SB32	Kln>Oz>Jar>Ser
San Benito		SB33	Alb>>>Oz, Kl, S/S>Gyp, Jar
Pampa, Eja			
Pampa Fra		SM41	Dob>Oz>>Cal
Sotral			
Central		TH14	Gyp, Sme>Kl, Dob>Oz>Hb
Central		TH16	Gyp>Dob>Rho>
Cristo, Acondillo			
Cristo, Amanillo		KY60	Oz, Sme>>>Pl, Gyp
Cristo, Amanillo		TH103	Oz, Sme>Py>Kao, Rut
Cristo, Amanillo		TH104	Oz, Cor>>Ser, Dib>
Cristo, Amanillo		TH105	Oz, Ser>>>Rut
Cerro, Blanco			
Cerro Blanco		KY51	Pl, Kl>Oz, C/S>S/S>
Cerro Blanco		KY53	Oz, Ab>>>S/S>
Cerro Blanco		TH67	Oz, Ab>>>S/S>
Cerro, Yaguataz			
Cerro, Yaguataz		ATH302	Oz>>>S/S, Dm>Gp, Rt
Cerro, Yaguataz		ATH303	Oz>>>S/S>Dm, Rt
Cerro, Yaguataz		ATH305	Oz>>Alu>>
Cerro, Yaguataz		ATH306	Oz>>>S/S>Rt
Cerro, Yaguataz		ATH307	Oz, Deb>>>Goy, Hem
Cerro, Yaguataz		ATH308	Oz, Deb>>>
Venezuela		AKY001	Oz, Deb>>>Goy
Venezuela		AKY002	Oz, Ser>>>
Venezuela		AKY003	Oz>>>Dm>S/S, Gp
Venezuela		AKY004	Oz>>Alu>>
Venezuela		AKY005	Oz>>Alu>>Kln, Jar, Rt
Venezuela		ASM001	Oz>Dm>>Gp
Venezuela		ASM002	Oz>>>S/S, Dm>Gp
Venezuela		ASM003	Oz>>Dm>>Jar, Rt

X-ray diffraction analyses

sample	locality	assemblage
ASM004	Venezuela	Oz>Dv>>S/S, Jar, Rt
ASM005	Venezuela	Oz, Dv>>>Rt
ATH020	Porcelueto de Amarillo	Oz>>S/S>
ATH021	Porcelueto de Amarillo	Oz>>Dv>S/S
ATH018	Porcelueto de Amarillos	Oz>Dv>>Jar
AKY010	Porcelueto Amarillo	~Oz, Ab>Ch>S/S, Gp
ASM012	Porcelueto de Amarillo	Oz>>Pl, Ch, Cal>S/S
ATH022	Porcelueto	Oz>>S/S>Pl
ASM014	Potreringous	Oz>>>Pl, S/S>
AKY034	Vicuña	Oz, Ab, Ser>>>
ATH087	Vicuña (El Salado)	Oz, Ser>>Pl>
ATH090	Vicuña (El Salado)	Oz>Kfs>Pl, Ser>Hbl
ATH091	Vicuña (El Salado)	Oz>Pl, Kfs, Ser>Hbl
ATH094	Vicuña (El Salado)	Oz, Bt>Pl, Kfs>>Kin
ASM048	Vicuña alteration	Oz, Ser>>>Gp, Rt
ASM049B	Vicuña alteration	Oz>Pl, Kfs, Ser>>Gp
ASM050	Vicuña alteration	Oz>Pl, Ser>Kfs>Kfs
ASM051A	Vicuña alteration	Oz>Pl, Kfs, Bt>>Kin
ASM052	Vicuña alteration	Oz>Pl, Kfs, Ser>>CS
ASM060	Pastiran (W)	Oz>Ch>Pl, Ser>
SM06	Granite	Oz, Kfs>Kfs, Ser>>Ana
ATH026	camp location	Oz, Bt>>>
ASM043	Quebrada de Coate	Oz, Pl>>Kfs>Kin, S/S
ATH079	Conceña	Oz, Pl>>Kfs>Ser, Kin
ATH080	Quebrada de Conceña	Oz, Kfs, Kin>>Ser>
ASM044	Quebrada de Entol	Oz, Pl>Kfs>>Ser, Kin
ASM045	Pencha	Oz, Ser>>>
ATH025	Southwest of Maica	Oz>Pl, Kfs>>Cal
ATH027	4651m alteration zone	Oz>Ab>S/S>
ATH029	4652m alteration zone	Oz>Kfs>S/S>Cal
AKY050a	4654m alteration zone	Oz>Pl, Kfs>>Ser
	Silicification beside Margueta	

Fluid Inclusion Thermometrics

Regional area / locality	sample	Th avg dc	Th max dc	Th min dc	Th dev	NaCl avg wt%	boiling note
El Potrô							
El Potrô	ASN212	304.4	334	264	19.8	25.59	0 bimodal NaCl 33.62/16.204
El Potrô	ASN214	305.1	336	267	16.3	50.96	1
El Potrô	ASN216	256.9	274	232	13.3	2.13	1
El Potrô	ATH231	262.2	289	241	14.5	2.33	0
El Potrô	ATH238	256.5	288	225	17.3	47.84	1
Rio Blanco							
Rio Blanco	ASN219	244.3	272	214	13.6	1.65	1
Rio Blanco	ASN220	255.7	282	230	14.1	3.27	0
La Ollita							
La Ollita	ATH208	191.7	214	161	14.6	7.26	0 bimodal NaCl 4.11/10.034
La Ollita	ATH212	234.5	260	198	20.5	14.02	0
Pastos Largos							
Pastos Largos	ATH420	174.3	204	140	19.1	5.56	0
Pastos Largos	ATH421	183.8	198	171	8.2	11.41	1

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Fluid Inclusion Thermometrics

Regional area / locality	sample	Th avg dc	Th max dc	Th min dc	Th dev	NaCl avg wt%	boiling note
Ranchillos							
Ranchillos	AKY352a	245	281	215	17.6	3.74	0
Ranchillos	AKY353b	231.4	261	207	15.8	1.71	0
Laguna de las Huaycas							
Laguna de las Huaycas	AKY361	147.8	162	135	9	2.65	0
La Flecha							
La Flecha	ATH439	211.5	241	181	14.7	7.21	0
Borde Atravesado							
South of Bord Atravesado	ATH449	372.3	401	351	13.4	15.68	1
Margarita							
Margarita	AKY358	164.5	194	141	14.8	4.17	0
Los Mogotes							
Los Mogotes	ASN230	347.3	369	315	14.2	20.11	1
Los Mogotes	ATH269	336.5	362	306	17.5	7.14	1
Guachi							
Guachi	KY34	206.9	237	182	14.4	29.9	0 liquid phase
Guachi	TH50	303.1	317	284	9.2	2.7	0 liquid phase

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Fluid Inclusion Thermometrics

regional area / locality	sample	Th avg dc	Th max dc	Th min dc	Th dev	NaCl avg wt%	boiling note
Despoblados							
Despoblados	AKY400	235.1	261	198	16	3.18	0
Despoblados	AKY402b	252.2	287	221	18.9	1.48	0
Veladero Sur							
Veladero Sur	AKY390	242.3	284	211	22	4.38	0
Veladero Sur	ATH484	197.7	233	170	19.1	4.18	0
Rio Frio							
Rio Frio	AKY398	251.3	277	221	16.6	1.94	0
El Salado							
Mina El Salado	ATH385	256.5	298	223	18.4	3.39	0
Las Opeñas							
Las Opeñas	AKY336	260.4	271	252	5.2	0	1
Las Opeñas	ATH398	319	351	294	15	3.05	0
Las Opeñas West	AKY337	250.3	269	239	7.1	0.25	1

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Fluid Inclusion Thermometrics

regional area / locality	sample	Th avg dc	Th max dc	Th min dc	Th dev	NaCl avg wt%	boiling note
Carmen Norte							
Carmen Norte	AKY380b	166.1	191	145	15	0.81	0
Carmen Norte	AKY382a	251.5	282	225	19	3.78	0
Carmen Norte	ATH467	177.5	198	162	10.4	-1	0
Quebrada de Chita							
Chita (Au old adit Au)	ASN342	228.4	253	208	14.2	0.97	0
near Chita	ATH378	235.5	256	197	15.8	1.18	0
Tocota District							
Dos Amigos	ATH371	213	243	175	20	8.43	0
Mina Colocolo, Tocota	ATH361	189.6	227	157	17.3	7.48	0
Mina Kirmer, Tocota	ATH365	185.4	212	165	13.9	10.76	0
Castano Viejo District							
Castano Viejo	ATH310	186.2	197	161	7.8	0.56	1
Mina Animas	ATH314	261.9	291	239	15.4	11.09	0

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Fluid Inclusion Thermometrics

Regional area / locality	sample	Th avg dc	Th max dc	Th min dc	Th dev	NaCl avg wt%	boiling note
Cuatro Amigos							
Cuatro Amigos	AKY308a	209.9	241	175	19.3	1.31	0 Gta
Cuatro Amigos	AKY308b	204.3	231	173	16.5	3.48	0 Sp
Cuatro Amigos	ATH316	177.6	212	157	17.9	9.92	0
Avestruces							
Avestruces	ATH336	194.7	221	164	14.6	0.29	0
Avestruces-north	AKF312b	160.6	181	137	13.5	-1	0
near Avestruces	ATH340	153.1	184	131	13.4	0.16	0
Manrique							
Manrique	AKY324b	170.1	203	142	16.8	0.04	0
Manrique	AKY325	147.1	164	133	9.6	0.05	0
Manrique	ASH329B	200.4	232	172	17.7	0.29	0
Manrique	ATH349	171.2	192	144	15.7	0.27	0
Manrique	ATH350	176.2	198	162	11.3	0.31	0

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Fluid Inclusion Thermometrics

Regional area / locality	sample	Th avg dc	Th max dc	Th min dc	Th dev	NaCl avg wt%	boiling note
Paramillos Sur							
Paramillos Sur	SM61	341.3	372	294	19.7	36.7	1 boiling, gas phase
Paramillos Sur	SM62	356.2	372	323	12.5	38.9	1 boiling
Paramillos Sur	TH112	337.7	367	308	19.4	32.5	0 many secondary inclusion
La Negrita							
La Negrita	TH108	160	188	138	14.6	4.3	0 liquid phase, necking down
San Benicio							
San Benicio	KY44	341.5	369	304	19.6	31.8	1 boiling
San Benicio	SB14	346.4	365	323	12.7	29.4	0 gas phase
San Benicio	TH73	333.4	368	303	18.6	40.4	0 gas phase, many secondary inclusion
Pampa Fria							
Pampa Fria	SM54	121.3	133	106	9.5	0.6	0 liquid phase, many secondary inclusion
Creston Amarillo							
Creston Amarillo	KY60	177.9	206	146	16	2.8	0 liquid phase

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Fluid Inclusion Thermometrics

Regional Area / Locality	sample	Th avg do	Th max do	Th min do	Th dev	NaCl avg wt%	boiling	note
Cerro Veneguera								
Cerro Veneguera	ATH301	150.3	173	126	11.2	0.02	0	
Venezuera	AKV303	168.1	194	147	13.9	4.15	0	
Venezuera	ASH306A	235.8	263	217	12.8	14.54	0	
Vicunita (El Salado)								
Vicunita (El Salado)	ATH393	441.2	481	401	22.7	62.4	0	
Vicunita (El Salado)	ATH395	600	600	600	74	74	0	Th > 600°C, NaCl > 74%
Southwest of Margarita								
Silicification beside Margarita	AKV359b	162.1	194	141	15	1.93	0	

K-Ar dating result

<u>Survey Area /locality</u>	<u>sample</u>	<u>rock type</u>	<u>remark</u>	<u>age (Ma)</u>	<u>error (Ma)</u>
<u>El Potro</u>					
El Potro	ATH232	granite	K-fel, sericite	73.7	1.2
El Potro	ATH244	granite	prim. biot	88.9	1.4
<u>Los Mogotes</u>					
Los Mogotes	ATH270	alunite	sericite	17.1	0.4
Los Mogotes	ATH278	dacite	hb,biot	15.3	0.2
<u>Abundancia</u>					
Abundancia	TH54	granodiorite porphyry	Bt	6.9	0.1
<u>El Fierro Bajo</u>					
El Fierro Bajo	TH37	granite porphyry		245	3.5
El Fierro Bajo	TH38	granite		188	3.5
<u>Cerro Amarillo</u>					
Cerro Amarillo	ATH265	dacitic pyroclastics	alunite	23.1	0.6
<u>El Retamal</u>					
El Retamal	TH22	dyke		374.5	6.2
<u>Leoncito</u>					
Leoncito	TH91	monzodiorite		14.8	0.4
Leoncito	TH94	monzodiorite?		13.1	0.3
<u>San Jorge</u>					
San Jorge	TH79	porphyry	Bt	185	4.2
<u>Yalguaraz</u>					
Yalguaraz	TH81	porphyry	Bt	269	4.2
Yalguaraz	TH84	porphyry	Bt	257	3.7
<u>Paramillos Norte</u>					
Paramillos Norte	TH95	monzodiorite		18.3	0.4
<u>La Negrita</u>					
La Negrita	TH67	porphyry		20.6	0.4
<u>San Benicio</u>					
San Benicio	SB06		E7	16.1	0.3
San Benicio	SB22		E23,Bt-Hbl	12.5	0.3
<u>Granite</u>					
Granite	TH06	Hbl-Bt-ganite		319	5.3

K-Ar dating result

Survey Area /locality	sample	rock type	remark	age (Ma)	error (Ma)
<u>El Potro</u>					
El Potro	ATH232	granite	D:Kfs, Ser	73.7	1.2
El Potro	ATH244	granite	D:prim.Bt	88.9	1.4
<u>Criollita</u>					
Criollita (2nd site)	ASM366	granite	D:Bt	296.0	15.0
<u>Ranchillos</u>					
Ranchillos	ASM372	altered granite	Ser dominant	246.0	12.0
Ranchillos	ATH416	monzonite?	D:whole rock	217.0	11.0
Ranchillos	ATH418	granodiorite?	D:Bt	235.0	12.0
<u>La Flecha</u>					
La Flecha	ATH438	pyroclastic rock	D:Alu	19.7	1.4
<u>Los Mogotes</u>					
Los Mogotes	ATH270	alunite	D:Ser	17.1	0.4
Los Mogotes	ATH278	dacite	D:Hbl, Bt	15.3	0.2
<u>Cordon de la Inca</u>					
Easternmost of Cordon de la Inca	ATH451	silicified rock	D:Alu	20.6	2.0
<u>Abundancia</u>					
Abundancia	TH54	granodiorite porphyry	D:Bt	6.9	0.1
<u>El Fierro Bajo</u>					
El Fierro Bajo	TH37	granite porphyry		245.0	3.5
El Fierro Bajo	TH38	granite		188.0	3.5
<u>Cerro Amarillo</u>					
Cerro Amarillo	ATH265	dacitic pyroclastics	D:Alu	23.1	0.6
<u>Rio Frio</u>					
Rio Frio	ASM417	altered dacite	Ser dominant	13.5	0.8
<u>Zancarron</u>					
Zancarron	ATH492	alunite	D:Alu, dS, sO	9.6	1.2
<u>Las Openas</u>					
Las Openas	ASM355	altered granite	D:White Mica	172.0	9.0
<u>Carmen Norte</u>					
Carmen Norte	ATH460	alunite vein	D:Alu, dS, dO	14.3	1.2

K-Ar dating result

Survey Area /locality	sample	rock type	remark	age (Ma)	error (Ma)
<u>Quebrada de Chita</u>					
Chita	ATH377	quartz+sericite+Py altered rock	D:Ser	7.6	0.5
<u>Tocota District</u>					
Mina Colocolo, Tocota	ATH362	sandstone		243.0	12.0
<u>El Retamal</u>					
El Retamal	TH22	dyke		374.5	6.2
<u>Castano Viejo District</u>					
Mina Animas	ATH315	intrusive rock		237.0	12.0
<u>Avestruces</u>					
Avestruces	ATH343	silicified rock	D:Ser	225.0	11.0
Avestruces	ATH344	andesite	D:Hbl	253.0	13.0
Avestruces	ASM321	silicified argillized rock	Ser dominant	202.0	10.0
near Avestruces	ATH345	monzonite		221.0	11.0
<u>Manrique</u>					
Manrique	ATH354	dacite		263.0	13.0
<u>Leoncito</u>					
Leoncito	TH91	monzodiorite		14.8	0.4
Leoncito	TH94	monzodiorite?		13.1	0.3
<u>San Jorge</u>					
San Jorge	TH79	porphyry	O:Bt	185.0	4.2
<u>Yalguaraz</u>					
Yalguaraz	TH81	porphyry	D:Bt	269.0	4.2
Yalguaraz	TH84	porphyry	D:Bt	257.0	3.7
<u>Paramillos Norte</u>					
Paramillos Norte	TH95	monzodiorite		18.3	0.4
<u>La Negrita</u>					
La Negrita	TH67	porphyry		20.6	0.4
<u>San Benicio</u>					
San Benicio	SB06		E7	16.1	0.3
San Benicio	SB22		E23,D:Bt-Hbl	12.5	0.3

K-Ar dating result

Survey Area /locality	sample	rock type	remark	age (Ma)	error (Ma)
<u>Cerro Venezuela</u>					
Cerro Venezuela	ATH302	hydrothermal breccia	D:Ser	209.0	10.0
Cerro Venezuela	ATH305	highly silicified rock	D:Alu	248.0	12.0
<u>Potrerrillos</u>					
Potrerrillos	ATH322	silicified white clay altered rock	D:Ser	179.0	9.0
<u>Vicunita (El Salado)</u>					
Vicunita (El Salado)	ATH388	Bt Fd porphyry	D:Bt	13.5	0.7
Vicunita (El Salado)	ATH394	K-silicate alt. Qtz porphyry	D:hydrothermal Bt	13.2	0.7
Vicunita alteration	ASM348	altered dacite	Ser dominant	13.3	0.7
<u>Granite</u>					
Granite	TH06	Hbl-Bt-granite		319.0	5.3
<u>Southwest of Margarita</u>					
4652m alteration zone	ATH427	porphyry	D:Ser	215.0	11.0

Appendix 3

Contents of CD-ROM attached to the final report

Contents

- ```
=====
1. Copyright
2. Data stored on CD-ROM
3. How to use and notes
4. Composition of directory
5. Address and telephone number where you can get further in
 formation
=====
```

#### 1. Copyright

The copyright for the contents of CD-ROM attached to this report belongs to Japan International Cooperation Agency (JICA) and Metal Mining Agency of Japan (MMAJ). This copyright is protected by the International Law. It is allowed to redistribute the copies of CD-ROM with its contents unmodified on condition that the redistribution is reported to the copyright holder. On the other hand, an end user can freely modify data, but the distribution of modified data to a third party is prohibited. Use of modified data is confined to the user only.

#### 2. Data stored on CD-ROM

| Contents                     | File format | Application software |
|------------------------------|-------------|----------------------|
| GIS data set                 | Binary/text | ArcView3.0a          |
| Summary of survey result     | Binary/text | Major HTML browsers  |
| Laboratory test results, etc | Binary      | MS-EXCEL             |

#### 3. How to use and notes

##### (a) GIS data set

Related documents are stored in the gis\_data folder of the root. A project file of ArcView is the one with apr extensions and is stored immediately below the gis\_data folder.

##### (b) HTML document

The related documents are stored in the html\_doc folder of the root. The root (home page) of each link is index.htm. It is designed for a frame element readable HTML browser. If you want to retrieve it with a frame element unreadable browser, use result\_f2.htm under html\_doc. For the survey results of each area, use result.htm in each folder. The home page has a built-in search form. This is realized by a cgi script. The script is stored in the cgi\_bin folder of the root. The contents need to be retrieve from a WWW server with a function properly added or set so that the search function works properly. Specialized knowledge is required to make a setting. The contents will be made available on the web site (<http://www.mmaj.go.jp/>) of the Metal Mining Agency of Japan.

#### 4. Composition of directory

```
└─gis_data Arc View related document storing folder
 │├─
 │└─
 └─html_doc HTML document storing folder
 │├─* Survey result of the * area
 │├─result_f.htm root of the documents
 │├─...
 │├─images image files
 │├─index.htm Home
 │├─...
 └─...
└─apps Application software, etc.
└─cgi_bin cgi script, etc.
```

|readme\_j.txt        readme file in Japanese  
|readme\_e.txt        readme file in English  
...

**5. Address and telephone number where you can get further information**

For the contents of this CD-ROM, contact the following.

Yoshitaka Hosoi

Geological Survey Department

Japan Mining Engineering Center for International Cooperation

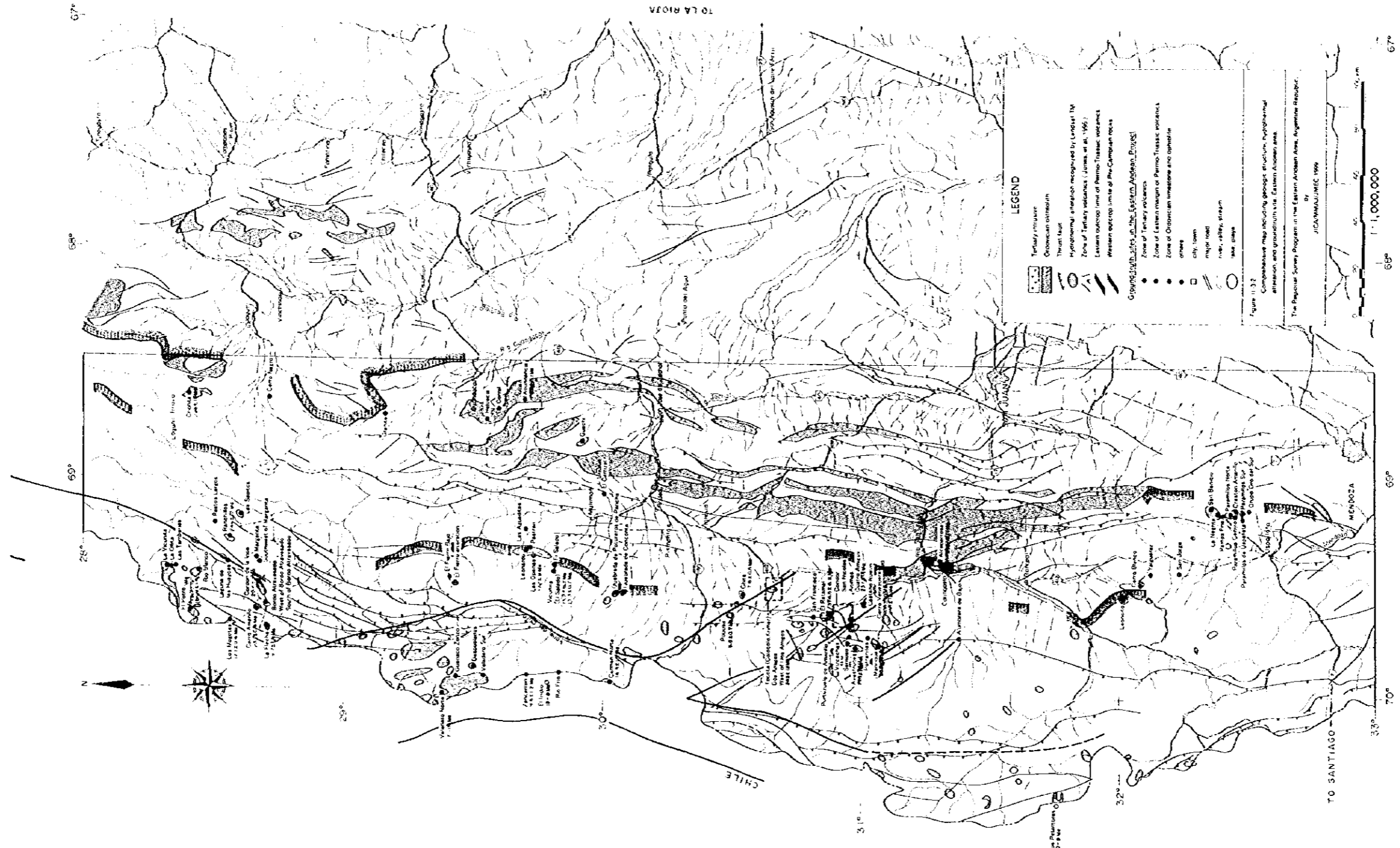
(E-mail: hosoi@jmec.or.jp)

Address: 105-0001 14th floor of the 17th Mori-Bldg., 1-26-5, Toranomon, Minato-ku,  
Tokyo, Japan

Telephone: 03-3503-5222

FAX: 03-3503-5221





**LEGEND**

- Tertiary intrusion
- Onionian unconformity
- Thrust fault
- Hydrothermal alteration recognized by Leckert (1964)
- Zone of Tertiary volcanics (Lima et al. 1965)
- Eastern outcrop limit of Permian-Triassic volcanics
- Western outcrop limit of Rio Campanario rocks

**Geological Structures of the Eastern Andean Area**

- Zone of Tertiary volcanics
- Zone of Eastern margin of Permian-Triassic volcanics
- Zone of Onionian intrusions and related dikes
- city, town
- major road
- river, valley, stream
- sea, lake

Figure 11-32  
 Comprehensive map including geologic structure, hydrogeologic  
 alteration, and ground-water in the Eastern Andean area.  
 The Regional Survey Program in the Eastern Andean Area, Argentine Republic.  
 By J. C. WILSON and J. M. C. 1969

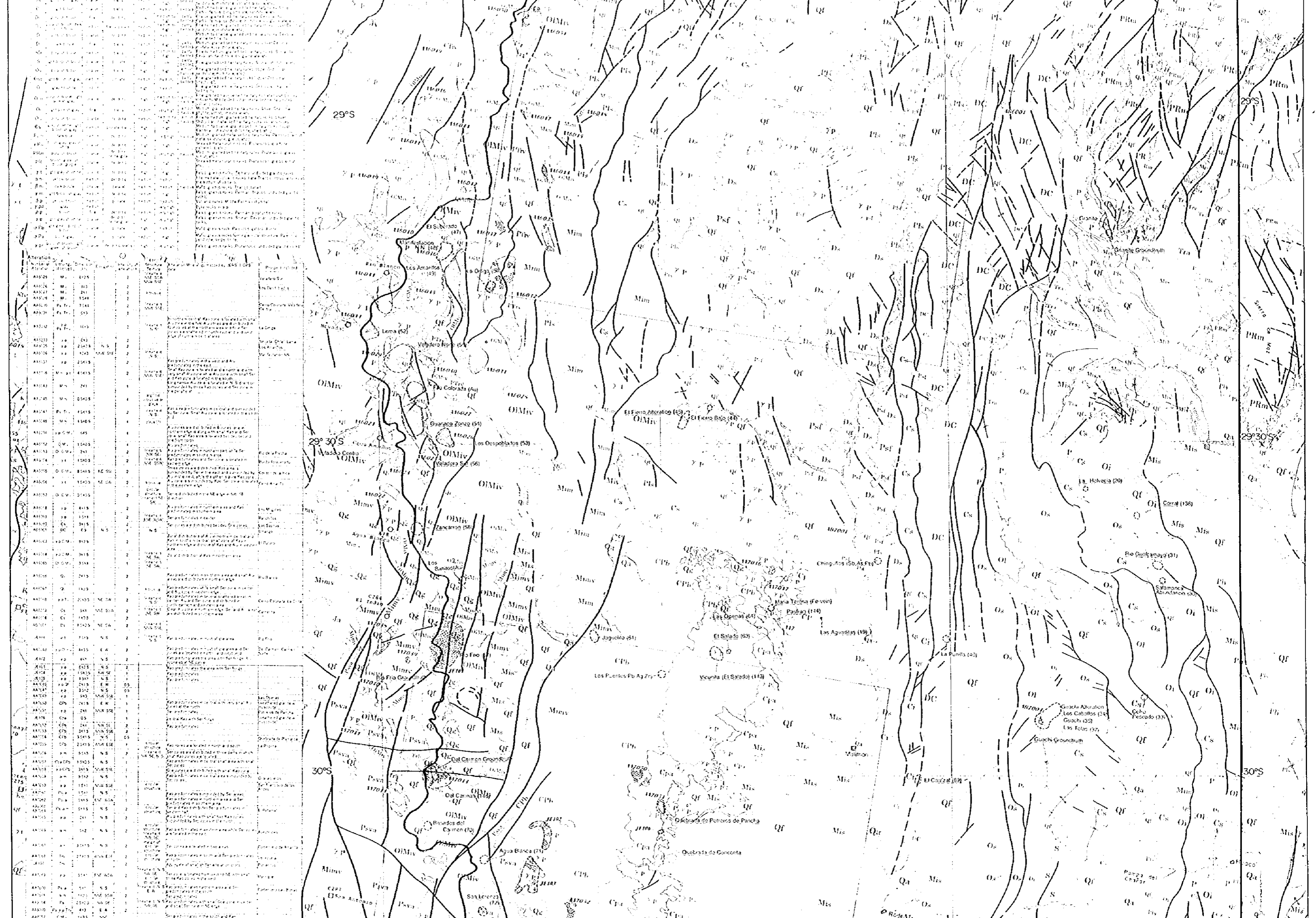




Table with 4 columns: Code, Name, Elevation, and Description. The table lists various geological features and their characteristics.

| Code | Name      | Elevation | Description |
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| Q1   | Quartzite | High      | Quartzite   |
| Q2   | Quartzite | High      | Quartzite   |
| Q3   | Quartzite | High      | Quartzite   |
| Q4   | Quartzite | High      | Quartzite   |
| Q5   | Quartzite | High      | Quartzite   |
| Q6   | Quartzite | High      | Quartzite   |
| Q7   | Quartzite | High      | Quartzite   |
| Q8   | Quartzite | High      | Quartzite   |
| Q9   | Quartzite | High      | Quartzite   |
| Q10  | Quartzite | High      | Quartzite   |
| Q11  | Quartzite | High      | Quartzite   |
| Q12  | Quartzite | High      | Quartzite   |
| Q13  | Quartzite | High      | Quartzite   |
| Q14  | Quartzite | High      | Quartzite   |
| Q15  | Quartzite | High      | Quartzite   |
| Q16  | Quartzite | High      | Quartzite   |
| Q17  | Quartzite | High      | Quartzite   |
| Q18  | Quartzite | High      | Quartzite   |
| Q19  | Quartzite | High      | Quartzite   |
| Q20  | Quartzite | High      | Quartzite   |
| Q21  | Quartzite | High      | Quartzite   |
| Q22  | Quartzite | High      | Quartzite   |
| Q23  | Quartzite | High      | Quartzite   |
| Q24  | Quartzite | High      | Quartzite   |
| Q25  | Quartzite | High      | Quartzite   |
| Q26  | Quartzite | High      | Quartzite   |
| Q27  | Quartzite | High      | Quartzite   |
| Q28  | Quartzite | High      | Quartzite   |
| Q29  | Quartzite | High      | Quartzite   |
| Q30  | Quartzite | High      | Quartzite   |
| Q31  | Quartzite | High      | Quartzite   |
| Q32  | Quartzite | High      | Quartzite   |
| Q33  | Quartzite | High      | Quartzite   |
| Q34  | Quartzite | High      | Quartzite   |
| Q35  | Quartzite | High      | Quartzite   |
| Q36  | Quartzite | High      | Quartzite   |
| Q37  | Quartzite | High      | Quartzite   |
| Q38  | Quartzite | High      | Quartzite   |
| Q39  | Quartzite | High      | Quartzite   |
| Q40  | Quartzite | High      | Quartzite   |
| Q41  | Quartzite | High      | Quartzite   |
| Q42  | Quartzite | High      | Quartzite   |
| Q43  | Quartzite | High      | Quartzite   |
| Q44  | Quartzite | High      | Quartzite   |
| Q45  | Quartzite | High      | Quartzite   |
| Q46  | Quartzite | High      | Quartzite   |
| Q47  | Quartzite | High      | Quartzite   |
| Q48  | Quartzite | High      | Quartzite   |
| Q49  | Quartzite | High      | Quartzite   |
| Q50  | Quartzite | High      | Quartzite   |
| Q51  | Quartzite | High      | Quartzite   |
| Q52  | Quartzite | High      | Quartzite   |
| Q53  | Quartzite | High      | Quartzite   |
| Q54  | Quartzite | High      | Quartzite   |
| Q55  | Quartzite | High      | Quartzite   |
| Q56  | Quartzite | High      | Quartzite   |
| Q57  | Quartzite | High      | Quartzite   |
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| Q59  | Quartzite | High      | Quartzite   |
| Q60  | Quartzite | High      | Quartzite   |
| Q61  | Quartzite | High      | Quartzite   |
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| Q64  | Quartzite | High      | Quartzite   |
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| Q66  | Quartzite | High      | Quartzite   |
| Q67  | Quartzite | High      | Quartzite   |
| Q68  | Quartzite | High      | Quartzite   |
| Q69  | Quartzite | High      | Quartzite   |
| Q70  | Quartzite | High      | Quartzite   |
| Q71  | Quartzite | High      | Quartzite   |
| Q72  | Quartzite | High      | Quartzite   |
| Q73  | Quartzite | High      | Quartzite   |
| Q74  | Quartzite | High      | Quartzite   |
| Q75  | Quartzite | High      | Quartzite   |
| Q76  | Quartzite | High      | Quartzite   |
| Q77  | Quartzite | High      | Quartzite   |
| Q78  | Quartzite | High      | Quartzite   |
| Q79  | Quartzite | High      | Quartzite   |
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| Q81  | Quartzite | High      | Quartzite   |
| Q82  | Quartzite | High      | Quartzite   |
| Q83  | Quartzite | High      | Quartzite   |
| Q84  | Quartzite | High      | Quartzite   |
| Q85  | Quartzite | High      | Quartzite   |
| Q86  | Quartzite | High      | Quartzite   |
| Q87  | Quartzite | High      | Quartzite   |
| Q88  | Quartzite | High      | Quartzite   |
| Q89  | Quartzite | High      | Quartzite   |
| Q90  | Quartzite | High      | Quartzite   |
| Q91  | Quartzite | High      | Quartzite   |
| Q92  | Quartzite | High      | Quartzite   |
| Q93  | Quartzite | High      | Quartzite   |
| Q94  | Quartzite | High      | Quartzite   |
| Q95  | Quartzite | High      | Quartzite   |
| Q96  | Quartzite | High      | Quartzite   |
| Q97  | Quartzite | High      | Quartzite   |
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| Q99  | Quartzite | High      | Quartzite   |
| Q100 | Quartzite | High      | Quartzite   |



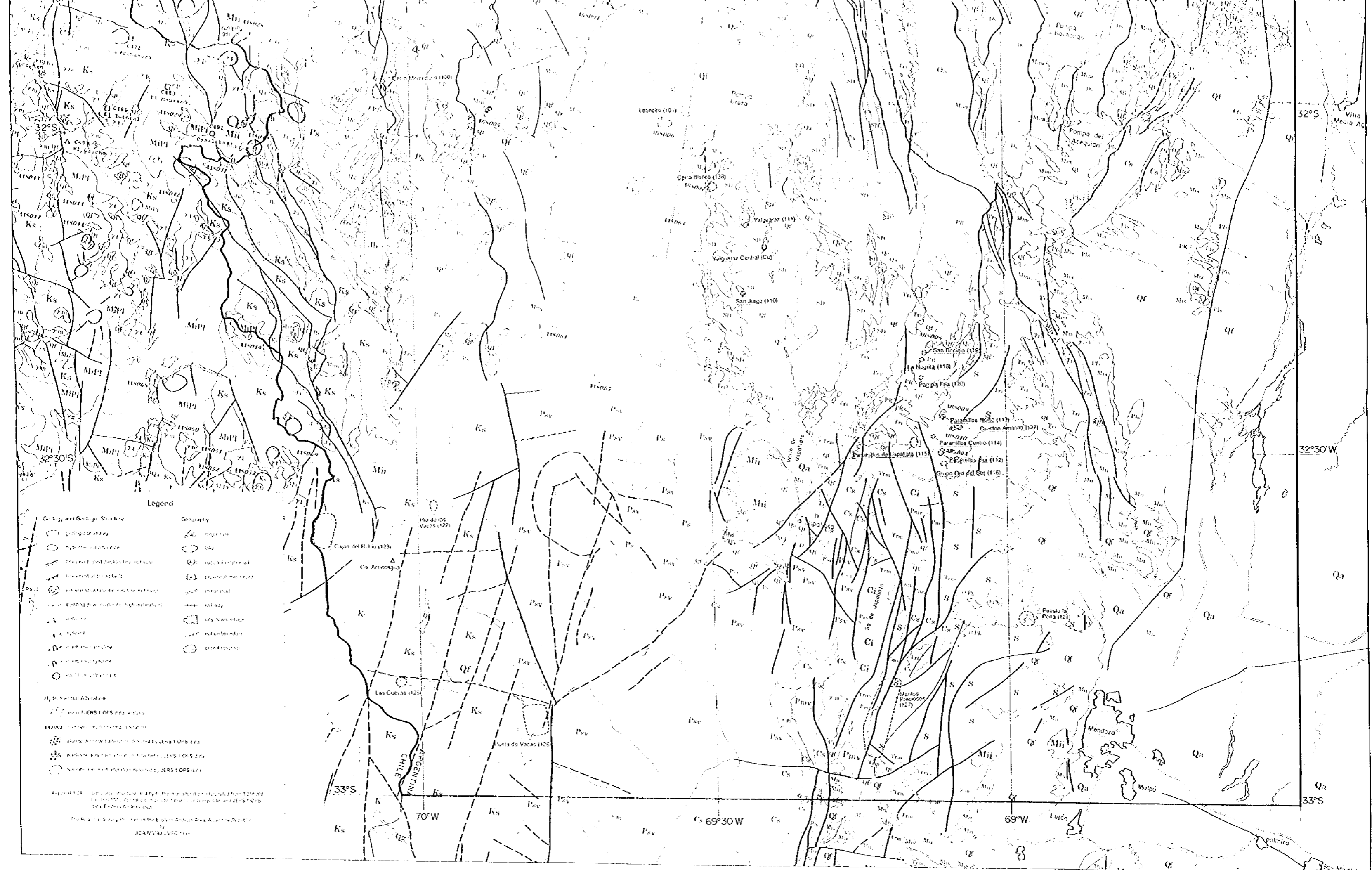


| Alteration | Code | Symbol | Color | Scale | Description |
|------------|------|--------|-------|-------|-------------|
| AA525      | M    | 103    | 2     | Verde | Verde       |
| AA526      | M    | 201    | 2     | Verde | Verde       |
| AA527      | M    | 201    | 2     | Verde | Verde       |
| AA528      | M    | 1504   | 2     | Verde | Verde       |
| AA529      | P    | 1504   | 2     | Verde | Verde       |
| AA530      | P    | 1504   | 2     | Verde | Verde       |
| AA531      | P    | 1504   | 2     | Verde | Verde       |
| AA532      | P    | 1504   | 2     | Verde | Verde       |
| AA533      | P    | 1504   | 2     | Verde | Verde       |
| AA534      | P    | 1504   | 2     | Verde | Verde       |
| AA535      | P    | 1504   | 2     | Verde | Verde       |
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| AA549      | P    | 1504   | 2     | Verde | Verde       |
| AA550      | P    | 1504   | 2     | Verde | Verde       |
| AA551      | P    | 1504   | 2     | Verde | Verde       |
| AA552      | P    | 1504   | 2     | Verde | Verde       |
| AA553      | P    | 1504   | 2     | Verde | Verde       |
| AA554      | P    | 1504   | 2     | Verde | Verde       |
| AA555      | P    | 1504   | 2     | Verde | Verde       |
| AA556      | P    | 1504   | 2     | Verde | Verde       |
| AA557      | P    | 1504   | 2     | Verde | Verde       |
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| AA559      | P    | 1504   | 2     | Verde | Verde       |
| AA560      | P    | 1504   | 2     | Verde | Verde       |
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| AA562      | P    | 1504   | 2     | Verde | Verde       |
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| AA564      | P    | 1504   | 2     | Verde | Verde       |
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| AA567      | P    | 1504   | 2     | Verde | Verde       |
| AA568      | P    | 1504   | 2     | Verde | Verde       |
| AA569      | P    | 1504   | 2     | Verde | Verde       |
| AA570      | P    | 1504   | 2     | Verde | Verde       |
| AA571      | P    | 1504   | 2     | Verde | Verde       |
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| AA578      | P    | 1504   | 2     | Verde | Verde       |
| AA579      | P    | 1504   | 2     | Verde | Verde       |
| AA580      | P    | 1504   | 2     | Verde | Verde       |
| AA581      | P    | 1504   | 2     | Verde | Verde       |
| AA582      | P    | 1504   | 2     | Verde | Verde       |
| AA583      | P    | 1504   | 2     | Verde | Verde       |
| AA584      | P    | 1504   | 2     | Verde | Verde       |
| AA585      | P    | 1504   | 2     | Verde | Verde       |
| AA586      | P    | 1504   | 2     | Verde | Verde       |
| AA587      | P    | 1504   | 2     | Verde | Verde       |
| AA588      | P    | 1504   | 2     | Verde | Verde       |
| AA589      | P    | 1504   | 2     | Verde | Verde       |
| AA590      | P    | 1504   | 2     | Verde | Verde       |
| AA591      | P    | 1504   | 2     | Verde | Verde       |
| AA592      | P    | 1504   | 2     | Verde | Verde       |
| AA593      | P    | 1504   | 2     | Verde | Verde       |
| AA594      | P    | 1504   | 2     | Verde | Verde       |
| AA595      | P    | 1504   | 2     | Verde | Verde       |
| AA596      | P    | 1504   | 2     | Verde | Verde       |
| AA597      | P    | 1504   | 2     | Verde | Verde       |
| AA598      | P    | 1504   | 2     | Verde | Verde       |
| AA599      | P    | 1504   | 2     | Verde | Verde       |
| AA600      | P    | 1504   | 2     | Verde | Verde       |









Legend

- |                                             |                        |
|---------------------------------------------|------------------------|
| <b>Geology and Geologic Structure</b>       | <b>Geography</b>       |
| geological boundary                         | magnum                 |
| hydrothermal feature                        | lake                   |
| thrust fault (includes line not shown)      | natural impoundment    |
| normal fault (includes line not shown)      | psynclinal impoundment |
| strike-slip fault (includes line not shown) | river channel          |
| fold (includes line not shown)              | railway                |
| anticline                                   | city town village      |
| syncline                                    | nation boundary        |
| overturned anticline                        | cover coverage         |
| overturned syncline                         |                        |
| fault zone                                  |                        |
| <b>Hydrothermal Activities</b>              |                        |
| fumarole (JERS 1 OPS data only)             |                        |
| geyser (JERS 1 OPS data only)               |                        |
| fumarole field (JERS 1 OPS data only)       |                        |
| fumarole field (JERS 1 OPS data only)       |                        |
| fumarole field (JERS 1 OPS data only)       |                        |

Figure 1.24. Tectonic structure and hydrothermal activity in the southern Andes, Chile and Argentina. The map shows the location of the study area in the southern Andes, Chile and Argentina. The map is based on data from the JERS 1 OPS data and the JERS 1 OPS data.

