A Report Summarizing Geological Investigations on the

FOREMORE PROPERTY

June – August 2005

More Creek Area
Liard Mining Division
NTS 104G/2, 3; 104B/14,15
57° 03' N Latitude
130° 55' W Longitude

Operator:

ROCA Mines Inc.
500 – 1045 Howe Street
Vancouver, BC, V6Z 2A9

Owner:
L.B. Warren

August, 2005

Prepared by:
Sandy Sears, P.Geo.

SUMMARY

Exploration work during 2005 on the Foremore Property consisted of diamond drilling, detail geological mapping, soil sampling, prospecting and airborne geophysics, primarily focused on the North Zone volcanogenic massive sulphide ('VMS') mineralization and its proposed extensions. One drill hole was collared at the Horizon showing, a gold rich skarn target.

Three holes totalling 2033m were drilled along the North Zone near the Ryder showing, intersecting significant intervals of low grade sphalerite and chalcopyrite mineralization that include intervals of <1.0m of semi-massive to massive pyrite and lesser chalcopyrite and sphalerite. During the drilling phase, the More Creek Rhyolite (main host for the North Zone mineralization) was mapped outcropping extensively in More Creek valley. The potential exists for over 7km of strike length that is favourable for containing VMS mineralization.

Soil sampling and prospecting centred on the proposed folded extension of the More Creek Rhyolite north of More Creek (north of camp) and on the possible extension northeast of the Ryder area.

Airborne geophysics (magnetics and electro-magnetics) was flown covering the present extents of the North Zone, as well as other mineralized areas. A total of 700 line kms were flown. The airborne was intended to help define the structure and stratigraphy of the North Zone while locating drill targets.

One drill hole (160m) was drilled undercutting the Horizon gold-copper skarn showing (18.7g/t over 3m). The hole intersected skarn mineralization but no gold-copper mineralization.

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Geology and Drill Hole Locations

AIRBORNE GEOPHYSICAL MAPS

Digital Elevation Model
Radar Altimeter
Magnetics- 1st Vertical Derivation
Magnetics- 2nd Vertical Derivation
TMI- Reduced to the Pole
TMI- Analytic Signal
Coplanar 880Hz 2 PPM/mm
Coplanar 6606Hz 16 PPM/mm
6606Hz Coplanar Apparent Resistivity
Coplanar 34133Hz 20 PPM/mm
Coaxial 980Hz 8 PPM/mm
Coaxial 7001Hz 4.0 PPM/mm

1.0 INTRODUCTION

The Foremore Property (Figure 1) covers a newly found volcanogenic massive sulphide mineralized suite of felsic volcanic rocks belonging to the Paleozoic Stikine Assemblage. The property is centred in northern British Columbia, roughly 55 km NNW of the Eskay Creek mine and 40km east of the Galore Creek project. The area has been actively and aggressively explored by Roca Mines Inc since 2002.

The 2005 work program consisted of diamond drilling, regional and detail mapping, prospecting and soil sampling. The drilling was focused on exploring the downdip and along strike extensions of the mineralised More Creek Rhyolite. The More Creek Rhyolite is variably mineralised along its extension and is known as the 'North Zone'. Regional and detail mapping was performed in order to define the regional extent of the North Zone and to understand its stratigraphy and structure. Prospecting and soil sampling was focused on the postulated folded extension of the North Zone north of More Creek.

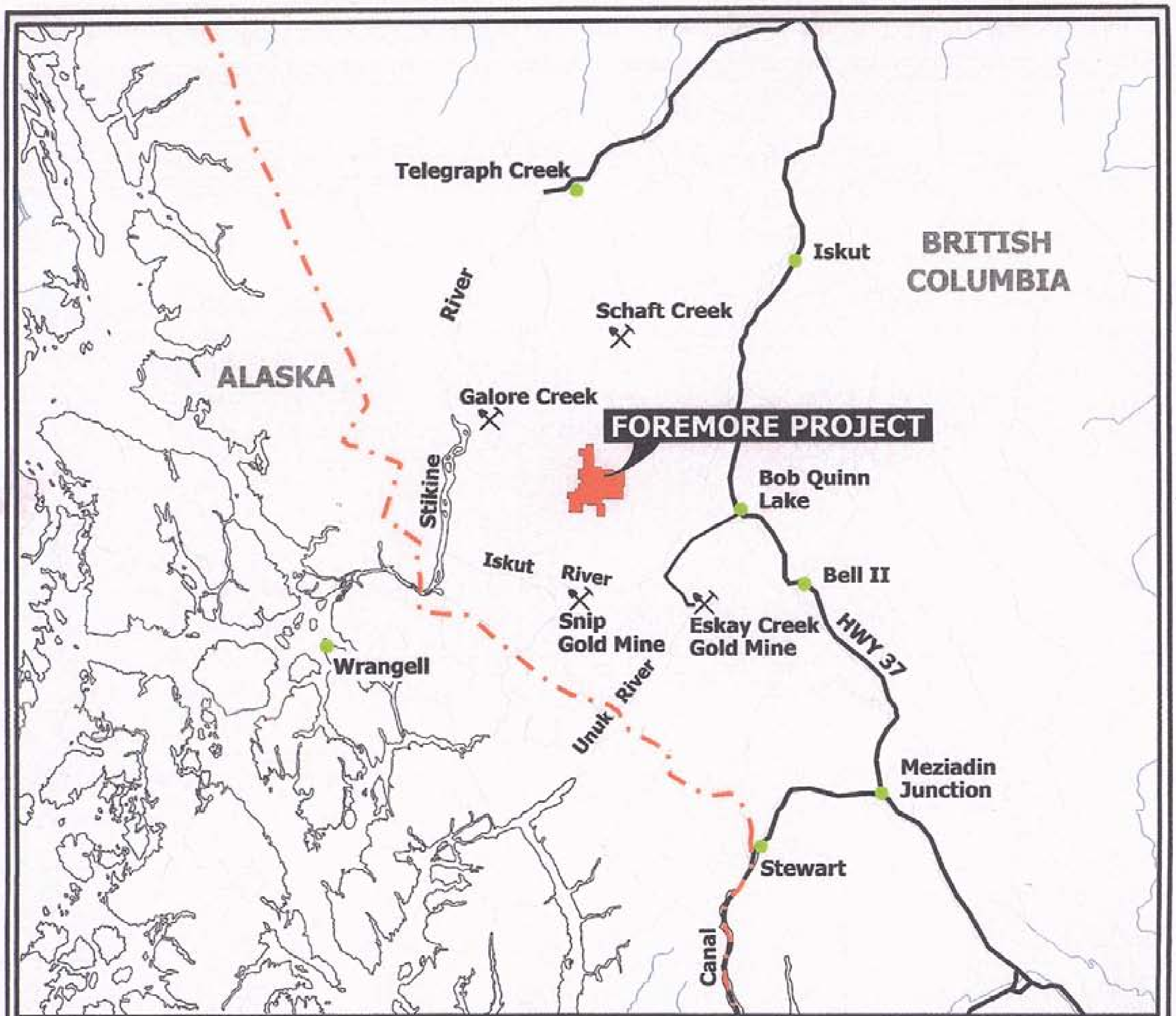
2.0 PROPERTY TITLE

The Foremore property is contained within NTS map sheets 104G/2 and G/3 and 104B/14 and B/15 and consists of 979 units covering approximately 260 km^2 in the Liard Mining Division (Figure 2). The mineral claims are 100% held by Roca Mines Inc., subject to underlying agreements with owner Lorne B. Warren.

Table 1. Foremore claim status.

Tenure	Claim Name	NTS	Work Recorded To	Units
374763	FORE 1	104G006	2006.08.05	20
374764	FORE 2	104G006	2006.08.05	20
374765	FORE 3	104G006	2006.08.05	12
374766	MORE 1	104G006	2006.08.05	12
374767	MORE 2	104G006	2006.08.05	20
374768	MORE 3	104G006	2006.08.05	20
374769	MORE 4	104G006	2006.08.05	18
374770	MORE 5	104G006	2006.08.05	20
380863	FM 1	104G006	2006.08.05	1
380864	FM 2	104G006	2006.08.05	1
380865	FM 3	104G006	2006.08.05	1
380866	FM 4	104G006	2006.08.05	1
392631	FORE 4	104G006	2006.08.05	18
392632	FORE 5	104G006	2006.08.05	9
392641	FORE 6	104G006	2006.08.05	16
392642	FORE 7	104G006	2006.08.05	18
392643	FORE 8	104G006	2006.08.05	6
392644	FORE 10	104G006	2006.08.05	20
392645	FORE 9	104G006	2006.08.05	16
392646	FORE 11	104G006	2006.08.05	16
392647	FORE 12	104G006	2006.08.05	20
392648	FORE 13	104G006	2006.08.05	20

Tenure	Claim Name	NTS	Work Recorded To	Units
392649	EBF1	104G006	2006.08.05	20
392650	EBF2	104G006	2006.08.05	20
392651	EBF3	104G006	2006.08.05	20
392652	EBF4	104G006	2006.08.05	20
392655	MORE 6	104G006	2006.08.05	20
392656	MORE 7	104G005	2006.08.05	20
392657	MORE 8	104G005	2006.08.05	12
392658	MORE 9	104G005	2006.08.05	16
392659	MORE 10	104G005	2006.08.05	20
392660	MORE 11	104G005	2006.08.05	20
393458	ANT 1	104G017	2006.08.05	20
393459	ANT 2	104G017	2006.08.05	20
393460	ANT 3	104G017	2006.08.05	20
393461	ANT 4	104G017	2006.08.05	20
395889	MOR 1	104G005	2006.08.05	4
395890	MOR 2	104G005	2006.08.05	2
395891	MOR 3	104G005	2006.08.05	3
400284	ROKS 1	104G006	2006.08.05	6
400285	ROKS 2	104G006	2006.08.05	20
400286	ROKS 3	104G006	2006.08.05	16
400287	ROKS 4	104G016	2006.08.05	15
400288	ROKS 5	104G016	2006.08.05	18
400289	ROKS 6	104G006	2006.08.05	9
400294	ROC 8	104G016	2006.08.05	20
400295	ROC 9	104G016	2006.08.05	15
400296	ROC 10	104G016	2006.08.05	15
400297	ROC 11	104G016	2006.08.05	20
400298	ROC 12	104G016	2006.08.05	20
400299	ROC 13	104G016	2006.08.05	9
400300	ROC 14	104G016	2006.08.05	16
406128	DICE 1	104G016	2006.08.05	20
406129	DICE 2	104G016	2006.08.05	15
406130	RHINO	104G016	2005.10.18	10
406131	ROK 43	104G006	2005.10.17	20
406132	ROK 46	104G006	2005.10.17	20
406339	KIDLET 1	104G005	2005.10.16	1
406340	KIDLET 2	104G005	2005.10.16	1
406341	KIDLET 3	104G005	2005.10.16	1
406342	KIDLET 4	104G005	2005.10.16	1
413609	FLAT 1	104G016	2005.08.28	20
413610	FLAT 2	104G016	2005.08.28	20
413611	FLAT 3	104G016	2005.10.18	20
413612	FLAT 4	104G016	2005.08.28	9
413613	FLAT 5	104G016	2005.08.28	20
413614	FLAT 6	104G016	2005.08.28	20



SCALE 1:2,000,000

40 0 40 80 120

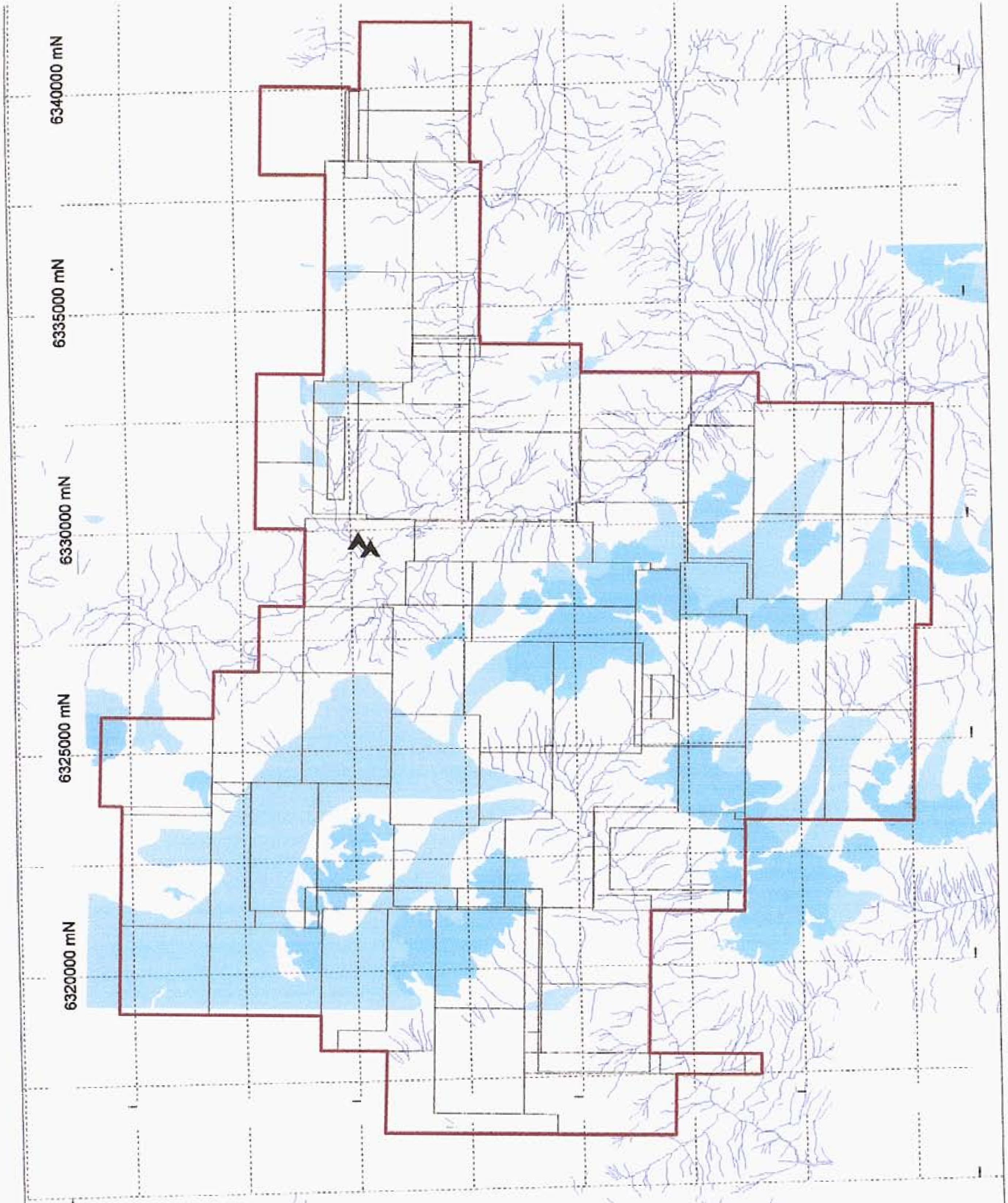
KILOMETERS

N

0327-002-01 FOREMORE Location.cdr

Roca Mines Inc.
ROK TSX.V
rocamines.com

PROJECT	**FOREMORE PROPERTY**		
TITLE	LOCATION MAP		
DATE NOVEMBER 2004	SCALE 1:2,000,000		DRAWN WKL
PROJECT No. 0327-002-01	FIGURE. No. 1		REV. 0



2.5km 0 2.5km 5km 7.5km

SCALE = 1:125,000

Roca Mines Inc.
ROK TSX.V
rocamines.com

100m ELEVATION CONTOURS - NAD83 UTM ZONE 9N

PROJECT	FOREMORE PROJECT
TITLE	CLAIM BOUNDARIES
DATE	APRIL 2005
SCALE	1:125,000
DRAWN	WKL
PROJECT No.	0327-002-01
FIGURE No.	2
REV.	0

3.0 LOCATION, ACCESS AND GEOGRAPHY

The Foremore property is located 46 km west-northwest of the Bob Quinn airstrip and is accessible by helicopter. The airstrip, located along Highway 37 is suitable for fixed wing aircraft up to and including small passenger and cargo jets, such as a Hercules. Bob Quinn is approximately 410 kilometres by road north from Smithers, B.C., where there is commercial jet airliners service twice daily from Vancouver. The Eskay Creek Mine access road lies approximately 40 kilometres to the southeast of the property.

The Foremore property is located in the headwaters of More Creek, is largely above treeline, and is approximately 50% covered by glaciers and permanent snowfields. Elevations range from 910m on More Creek to 2100m at the western margin of the property.

Vegetation consists mainly of spruce and alder on the slopes of More Creek and in the lower reaches of the Hanging Valley, with alpine vegetation at higher altitudes. Non-vegetated glacial morainal material covers much of the property.

4.0 PROPERTY HISTORY

In 1987, during helicopter reconnaissance in the headwaters of a south-flowing tributary of More Creek and Mess Creek, Cominco Ltd. personnel identified sulphide and gold rich mineralized boulders representing a variety of mineralized types.

Between 1987 and 1992, and in 1996, Cominco spent over $2 million on geophysical, geochemical, geological and diamond drilling programs. Due to the location of many mineralized boulders at the north and south termini of the More Glacier, Cominco focussed their attention on searching up-ice (i.e. underneath the ice). Cominco allowed the property to lapse in 1999 and it was subsequently staked by Lorne Warren. Mr. Warren completed a program of prospecting and silt sampling in 2000.

Roca Mines Inc. optioned the Foremore property in May 2002 and between that time and the end of 2004, has spent nearly $3 million on helicopter supported programs including diamond drilling, ground geophysical surveys, prospecting, geological mapping, and rock/soil/silt sampling.

5.0 PROPERTY GEOLOGY

The Foremore property is predominantly underlain by the Devono-Mississippian Stikine Assemblage, a suite of variably foliated mafic to felsic flows and volcaniclastics, interbedded limestone, and fine clastic sediments (Figure 3). Unconformably overlying these rocks and of limited aerial extent is arc volcanics and sedimentary rocks of the Upper Triassic Stuhini Group. The eastern portion of the property is dominated by the early Mississippian More Creek Pluton, coeval with and likely feeder to the Devono-Mississippian volcanics.

The Stikine assemblage consists of lowermost penetratively foliated phyllitic to lesser schistose rocks in the area centered on More Creek. These rocks comprise a variety of phyllites and schists derived from a mainly bimodal suite of volcanic and volcaniclastics rocks and encompasses the VMS mineralized North Zone. Lithologies range from quartz sericite schists and phyllites with local quartz eyes through argillaceous and cherty carbonaceous phyllites, to hematitic and chloritic phyllites representing original mafic volcaniclastics. Fossiliferous limestones containing probable Devonian Favosites fossils have also been mapped sporadically within this package outside of the North Zone.

A probable younger sequence of Mississippian volcanic arc and related rocks has been differentiated from the above assemblage on the basis of a lesser degree of deformation, being predominantly weakly to moderately foliated. This sequence is dominated by dark green-grey thick-bedded mafic volcaniclastics and mafic to intermediate flows and flow breccias. This thick sequence contains lesser but significant sericite altered rhyolite, felsic ash and lapilli tuffs, chert pebble conglomerate, and fossiliferous carbonates including micritic grey limestones and whitish dolomitic carbonates. Sericite altered rhyolite is the host for massive sulphide mineralization at the SG showing.

An unconformity separates the Stuhini Group from the underlying Stikine rocks. Stuhini lithologies consist of thin-bedded ash to lapilli tuffs, massive crystal and dacitic tuffs and volcanic conglomerates that outcrop predominantly on a few of the higher peaks on the property.

The eastern portion of the property consists of medium- to coarse-grained quartz-porphyritic biotite granite of the More Creek Pluton. The contact zone with the coeval Stikine Assemblage volcanics locally contains less quartz rich phases mixed with aplites and mafic schlieren (volcanic inclusions). Elsewhere, a series of post-Triassic intrusions cut the volcanic arc packages. They are comprised primarily of granodiorite and diorite intrusions, dykes, sills and plugs of syenodiorite to monzodiorite. These intrusions are locally pegmatitic and heavily epidotized. Basalt and lamprophyre dykes have also been mapped on the property.

6.0 2005 EXPLORATION PROGRAM AND RESULTS

The 2005 field season consisted of diamond drilling, airborne geophysics, regional mapping, prospecting, and rock and soil sampling.

Diamond Drilling

Diamond drilling at the North Zone during 2004 demonstrated that it is underlain by a thick (300m plus) sequence of highly altered and mineralized rhyolitic lithologies in the area around the Ryder showing. Drilling during 2005 was designed to further delineate the area or areas of mineralization near the Ryder showing (3 holes totalling 2033.2m – Figure 3) with one hole drilled at the Horizon showing (160.1m) testing Au-Cu skarn mineralization.

Table 2. 2005 Diamond drill hole information.

Hole ID	Area	Orientation	Easting	Northing	Elevation	Length (m)
FM05-38	Horizon	-47/120N	384911	6321255	1239	160.1
FM05-39	Ryder	vertical	382986	6329169	1362	844.2
FM05-40	Ryder	vertical	382816	6329244	1312	624.7
FM05-41	Ryder	vertical	382770	6329374	1231	564.3

Results from the three holes drilled in the Ryder area helped refine and expand the extent and thickness of the favourable rhyolite (More Creek Rhyolite).

Drill hole FM05-39 cored through approximately 440m of argillite, graphitic argillite, felsic lapillistone and lesser basalt near the end of the 440m. From approximately 440m to 630m, the rock is predominantly chlorite and hematite altered basalt with a lesser felsic tuff component. From 630m to the end of the hole at 844m, the majority of the rock cored is rhyolite and associated tuffs (More Creek Rhyolite) with significant amounts of interlayered altered basalts. Within this bimodal package is a cohesive unit of quartz sericite and pyrite rhyolite from 786 – 832m. It is moderately to strongly pyritic (up to 10%) and contains minor amounts of disseminated and foliation parallel sphalerite and chalcopyrite (locally up to 0.5% combined).

Hole FM05-40 was collared west of FM05-39 and intersected the typical hangingwall sequence of argillites and lapillistones (0 – 277m) and a thinner than normal interval of altered basalt (277 – 297) before drilling through the More Creek Rhyolite (quartz sericite pyrite altered rhyolite, associated felsic rocks and lesser altered basalt to the end of the hole (625m). Within the thick section of More Creek Rhyolite are three thin intervals (0.3m, 0.5m, and 0.85m) of mostly semi-massive to massive pyrite with lesser chalcopyrite and sphalerite. The hole ended in unmineralized altered rhyolite.

The third hole drilled into the More Creek Rhyolite near the Ryder showing; hole FM05-41, cored through 75m of interbedded argillite and lapillistone then intersected chlorite and hematite altered basalt to 166m. From 166m to 418m, the core is mostly altered rhyolite that becomes mineralized from 383m to 418m. Within this mineralized zone are several thin zones that contain semi-massive to massive pyrite and chalcopyrite and lesser sphalerite. The most significant is a crudely banded 1.0m section from 403.8m to 404.8m. Below 418m the rock is highly faulted felsic tuff and lesser argillite giving way to a thick sequence of interbedded argillites and lapillistones (the typical hangingwall sequence).

Overall, the alteration and mineralization intersected within the rhyolite is of similar style, tenor and thickness of base metal mineralization as intersected during 2004 (Sears and Watkins, 2005).

Hole FM05-38 (Figure 3) was drilled at the Horizon showing, a gold-copper mineralised skarn hosted in mafic volcanics interbedded with limestone adjacent to a mafic intrusive. It was collared northwest of the main showing (18.7 g/t Au, 0.52% Cu over 3.0m) and was designed to test the mineralised zone at depth. Minor pyrite associated with limited skarn mineralization was intersected, associated with mafic volcanics and limestone.

A total of 339 sawn core samples were submitted for analyses and fire assay. Included were seven unmineralized limestone 'blank' samples and 14 standards of known composition. Assays are pending.

All drill core is stored, cross-stacked, on the property.

Mapping/Prospecting
Mapping was focused on covering the surface extension of the More Creek Rhyolite (Figure 3). Several mandays were spent mapping outcrops present in the More Creek flats in the area defined as the extension of the More Creek Rhyolite. Abundant quartz sericite pyrite altered rhyolite was mapped and was deemed to be equivalent with More Creek Rhyolite seen in drill core. Several samples were taken for ICP and whole rock analyses.

A few mandays were also spent north of the Ryder showing on the hillside north of More Creek. Previous mapping had depicted rhyolite occurring on this slope and it was unknown if the rocks here were an extension of the North Zone rock package. A thin interval of rhyolite was mapped in the area and outcrop samples were taken for ICP and whole rock analyses in order to typify the rock type.

Prospecting was centred on the proposed north limb extension of the More Creek Rhyolite; thought to occupy the lower slopes north of camp. Holbeck (1988) has similar lithologies mapped in this area as seen in the North Zone, making it an excellent area to prospect. Several mandays were spent collecting rock samples (Figure 4).

A total of 120 rock samples were taken for ICP multi-element analyses and/or fire assaying; select samples were sent for whole rock analyses. Analyses are pending.

Soil Sampling/Silt Sampling
A total of 132 reconnaissance soil samples were taken in the area peripheral to the More Creek Rhyolite. In the area north of the Ryder showing, north of More Creek four 1km lines, spaced 500m apart were established perpendicular to the slope (Figure 4). The lines were designed to locate mineralised horizons that are postulated to occur in the areas. Contour and perpendicular-to-slope soil samples were also taken north of More Creek north of the Ryder showing, also to cover prospective stratigraphy.

Samples were taken at 50m stations and B-or C-horizons soils were taken. Where possible, GPS coordinates were taken at every station. Samples were submitted to ACME Labs in Vancouver where they were analysed using a complete digestion multi-element ICP analyses. Analyses have not yet been received.

Two silt samples were taken in the area of Fe-rich water seeps on the More Creek flats 1km northwest of the Ryder showing. The Fe-rich mineral seeps are in an area where the mineralised More Creek rhyolite seen in drill core is postulated to daylight at surface beneath the glacial-fluvial cover.

Airborne Geophysics
Approximately 700 line kilometres of airborne magnetics and electromagnetics was flown across a select area of the property. The 700 line kilometres were centred over the mineralised North Zone and its projected extensions. A complete report from McPhar Geosurveys Ltd. is attached as an appendix.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The Foremore property is host to numerous mineral showings covering a variety of mineralization types. Of most economic importance is the aerially extensive North Zone volcanogenic massive sulphide mineralization within a thick (>300m), broad (>5km) package of quartz sericite pyrite altered rhyolite/rhyolite tuffs (More Creek Rhyolite). Drilling to date has not yet defined the extents to which the mineralization may occur. The North Zone is open along strike and down-dip.

Future work should focus on systematically drilling the More Creek Rhyolite, searching for thicker intervals of VMS mineralization. A secondary target is the Horizon showing, a high grade gold mineralised skarn. Several additional drill holes are needed to adequately test the mineralization exposed by trenching.

AUTHORS CERTIFICATE

W.A. (Sandy) Sears, P.Geo.
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I, W.A. (Sandy) Sears, P.Geo., do certify that:

- I am a Consulting Geologist residing at 1 – 732 O Street, Anchorage, AK, 99501.
- I am a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of British Columbia (registration # 28227), as well as a Qualified Person as defined by the NI 43-101.
- I graduated from both Saint Francis Xavier University (B.Sc. Honours Geology 1987) and Memorial University of Newfoundland (M.Sc. Economic Geology 1991).
- I have practiced my profession as a geologist in Canada, Africa, Australia, and the United States since 1986. For most of my work, I have been involved in an active supervisory role. This work includes supervising geological, geophysical and geochemical exploration programs for a variety of mineral deposit types in a variety of geological terrains.
- I own common shares and have been granted stock options in Roca Mines Inc.

Dated at RocaTown, British Columbia, this XX day of August, 2005.

"W.A. (Sandy) Sears"

W.A. (Sandy) Sears, P.Geo.

Itemized Cost Statement

Foremore Project June - August, 2005

Item	Description	Cost
Drilling	all drilling costs for 2193m in four holes	$255,839
	(drilling costs; consumables; mobe/demobe)	
Helicopter	all drilling and geophysical support (camp mob/demob; drill support)	
	Interior Helicopters JetRanger – 150.0 hrs	$158,000
	VIH Sikorsky 61 – 8.0 hrs	$45,360
	Lakelse 500D – 2.2 hrs	$2400
Airborne Geophysical Surveying	700 line km @ $130/km; mob/demob	$100,000
	Consultant	$7,000
On Site Personnel	S. Sears P.Geo. (Project supervision - $350/day for 60 days)	$21,000
	J Watkins P.Geo (Consultant - $400/day for 50 days)	$20,000
	D Melling P.Geo (Consultant - $450/day for 35 days)	$15,750
	P Stacey (MapInfo computer expert - $425/day for 18 days)	$7,650
	M Middleton (Geological Technician- $325/day for 40 days)	$13,000
	2 student geologists ($180/day for 50 days)	$18,000
	core cutter ($200/day for 40 days)	$8,000
	cook ($400/day for 45 days)	$18,000
	cooks helper/cook (45 days at $200/day)	$9,000
	camp maintenance man/drill pad builder ($450/day for 40 days)	$18,000
Office/Field Supervision	Canam Mining (1 Man @ $350/day for 22 days + expenses(	$31,000
	John Baker (Geological Advisor)	$4,500
General		
generator rentals	2 13Kv generators ($2000/month each)	$8,000
supplies	camp, exploration	$10,000
food	Food	$17,000
fuel	77 drums diesel; 77 drums Jet A	$34,650
airfares	Vancouver-Smithers return (12 trips)	$10,000
transportation/trucks	company van (maintenance, fuel, etc...)	$3,000
	car/truck rentals	$3,000
workers compensation		$4,000
communications	satellite phone, internet	$8,000
		Total: **$840,149**

REFERENCES

Holbeck, P.M. (1988): Geology and Mineralization of the Stikine Assemblage, Mess Creek area, Northwestern BC. University of British Columbia, M.Sc. Thesis.

Sears, W.A, and Watkins, J. (2005): NI 43-101 Progress Report of Mineral Exploration on the Foremore Property. Liard Mining Division, Northwestern BC. For Roca Mines Inc.

Appendix A

Drill Logs
Holes FM05-38 –FM05-41

Drill Hole ID: **FM05-38**

Location: 384911E, 6321255N, 1239m El *
Dip / Azimuth / Length: -47° / 120° / 160.0 m
Date Started: June 15, 2005
Date Finished: June 18, 2005
Logged By: JJ Watkins, P.Geo.
Date Logged: June 19, 20, 2005
Drill Contractor: HY-TECH Drilling Ltd.
Core Size: NQ2
Casing left in hole: 00m
Comments:
Drilled under Horizon skarn prospect.
* Survey location by hand held GPS
No in hole surveys.

		DESCRIPTION	LITHO	STRUCTURE						ALTERATION						Analytical Type					
From	To			broken	veins	banding	shears	So	contacts	calcite	epidote	sericite	chlorite	% pyrite	Sample ID	Assay	ICP	WR	From	To	Width
0.00	3.00	Overburden																			
3.00	6.80	Pyroxene porphyry. 2-3mm altered pyx phenos in a light-med grey fine bx gdmss.	PyxP	30°	20°					1.0				0.5							
		-badly broken																			
		- <1% Py as diss and fine veinlets at 20°																			
		LC broken.																			
6.80	8.20	Mafic dyke: light grey grn., fairly msv, fg, vaguely amygd	M dy						25°	1.0											
		- cc altered																			
		LC broken at 25°.																			
8.20	11.30	Pyroxene porphyry: 2-3mm altered pyx phenos in a light-med grey fine bx gdmss	PyxP	30°					25°												
		-badly broken																			
		-LC lost.																			
11.30	12.00	Mafic dyke: light grey grn., fairly msv, fg, vaguely amygd	M dy		50°				40°	0.5	2.0										
		- as before																			
		LC sharp tight shear at 40°																			
12.00	16.50	Ep vn'd PyxP. as before w 5% Ep filled seams at 40°-60°			50°				70°	0.5	2.0										
		- bl'd gdmss w vague fine bx'd texture																			
		-no sulphides																			
		LC broken at 70°.																			
16.50	16.80	Mafic dyke: light grey grn., fairly msv, fg, vaguely amygd	M dy						65°												
		LC broken sharp at 65°.																			
16.80	21.80	Ep vn'd PyxP. as before. scatt alt'd pyx megaxls to 2cm decreasing w depth	EpVn'd PyxP		40°				45°	1.0	2.0										
		-Ep seams, some to 1cm, vuggy most at 40°																			
		LC sharp tight shear at 45°.																			
21.80	23.10	Bl'd py PyxP breccia: primary textures masked by pervasive wk ser, vague frags	PyxP Bx				45°			0.5	1.0	1.0		4.0	[illegible]		[illegible]		21.80	[illegible]	[illegible]
		-3-5% patchy Py.																			
		At 22.80: sing Ep(Q) vuggy shear at 45° over 5cm																			
		- ser and Py content decreasing with depth																			

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						Analytical Type					
				broken	veins	banding	shears	So	contacts	calcite	epidote	sericite	chlorite	% pyrite	Sample ID	Assay	ICP	WR	From	To	Width
		LC grades quickly.																			
23.10	27.70	Bk'n chl/cc sh'd Ep alt'd PyxP	EpVn'd PyxP	30°	40°		30°		40°	1.0	3.0		1.0	0.5							
		- badly brk'n on chl+cc+(Q) shears over 10-20cm at 30°																			
		- scatt Ep seams most at 40°.																			
		- tr Py																			
		LC good chill into next unit at 40° and masked by Ep.																			
27.70	29.00	Feldspar porphyry dyke, uniform, msv, med grey w ghost fds phenos <1mm	FP dy		30°					1.0											
		- Q(cc) vnlets at 30°																			
		LC vague but quick																			
29.00	32.00	Ep alt'd PyxP w mod perv gdmss Ep thru. 5% Ep vn most at 45°			45°						4.0										
		- ghost pyx phenos																			
		- ghost bx																			
32.00	37.00	(Ep) vn'd FP: dk grey green, msv v fine gdmss w ghost fds.	FP		30°				70°		2.0										
		- 5 to local 10% vuggy Ep(Q)(cc) vn'd most at 30°.																			
		LC sharp chill into next unit at 70°																			
37.00	40.20	FP dyke w some fds megacrysts, spotted patches of chl in part pseudomor amygd?	FP dy						30°	1.0	3.0		1.0								
		LC bound by strong 5cm Ep(Q)(cc) vuggy sh at 30°																			
40.20	48.25	Ep vn'd PyxP. 20% Ep stwk best at 30°, spotted chl on pyx. wk set in gdmss.	EpVn'd PyxP		30°						3.0										
48.25	50.10	Msv mafic dyke, med grn. spotted thru w chl on pyx. msv	M dy						20°				1.0								
		LC marked by bk'n vuggy shear at 20°																			
50.10	54.40	Crse hetrolithic bx, angular-subrd clasts. some 10cm. floating in chl alt'd gdmss.	Hetro Bx						85°	1.0			1.0	0.5							
		-clast types PyxP, FP, alt'd mafic, sil'd? clasts													9017		X		53.00	54.10	1.10
		-inpart x-cut by chl+cc+(py) seems. total Py tr.																			
		LC bk'n good chill into next unit at 85°.																			
54.40	58.95	Several x-cutting mafic dykes w good chilled contacts	M dy						80°		1.0		0.5								
		-spotted thru w chl, ep																			
		-intervals of cg e/p mottled FP over 1m																			
		LC good chill at 80°.																			
58.95	61.90	Hetrolithic bx as before	Hetro Bx																		
		- no chl in gdmss.																			
		LC bk'n																			
61.90	70.00	Chl, ep spotted bl'd mafic, amygdules?	Alt'd PyxP?								1.0		1.0								
		-to 5% Ep vnlets best to LC																			
		LC bk'n.																			
70.00	78.50	Bl'd, (py) intermediate composition, med-lght grey, f fds phyric?, fg, msv.	FP?		35°				60°	3.0			2.0	1.0	9018		X		76.00	77.00	1.00
		- perv cc alt'd, cc tension gashes thru at 35°.																			
		-Py as diss and w chl-rich seams thru,																			

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						Analytical Type					
				broken	veins	banding	shears	So	contacts	calcite	epidote	sericite	chlorite	% pyrite	Sample ID	Assay	ICP	WR	From	To	Width
		At 72.05 and 72.8: 10cm chl alt'd mafic fg dykes at 60°																			
		LC vague.																			
78.50	82 15	Alt'd hetro bx, as before, clasts less obvious, 1%Py in rare seams most @ 10°-20°.	Hetro Bx		15°				60°			1.0	0.5								
		-v wk ser (chl).																			
		LC sharp at 60°.																			
82.15	83.00	Cc alt'd FP dyke as before. minor cc vnlets.							60°	3 0											
		LC sharp tight shear at 60°.																			
83.00	92.00	Alt'd hetro bx, as before.	Hetro Bx						40°			1.0	0 5		9019		X		87.50	89 00	1 50
		LC distinct at 40°.																			
92.00	101.30	Ser (cc) alt'd PyxP volcanic?, crmy grey grn, fg ghost mafic patches after pyx.	Alt'd PyxP?		30°					2.0		2.0	1.0	2.0	9020		X		96 70	97.50	0 80
		- 5% irregular cc vnlets-stwk w assoc patches of chl.													9021		X		97 50	98.00	0.50
		- 1-3% Py diss and as fine vnlets at 30°													9022		X		98.00	99 00	1.00
		LC grades																			
101 30	108.00	Ep vn'd FP?, med grey grn, fg w intervals of vague ghost fds phenos to 2mm.	FP?		30°						2.0										
		- 15% decreasing to 5% w depth Ep seams to 5mm																			
		LC vague																			
108.00	118.80	And lapilli tuff, fg, med grn, uniform w vague lapilli, some alt'd mafic, sil variols?	And LT																		
		- badly bk'n intervals																			
		LC lost.																			
118.00	121 80	Bedded tuff bl'd light grey, fine bedded at 60°	And T					60°	60°	3.0											
		-scatt interval of And LT																			
		- mod perv cc																			
		LC marked by 20 cm od And LT at 60°																			
121.80	122.00	Ep +Py bedded andesite tuff as before but w increase in Py, Ep, CC	And T					60°	60°	4.0	3 0			3.0	9023		X		121.80	122.90	1 10
		LC bk'n sharp at 60°.																			
122.00	128.00	Limestone, light crmy grey w dk gray intervals.	Lst					60°	90°	5.0	0.5										
		- exsolution bands at 60°, minor Ep																			
		LC sharp at 90°.																			
128.00	128.80	Lst Ep-Py skarn, in part ep-py banded w large pt-ep patches	Ep-Py Skarn			60°			60°	4.0	4 0			7 0	9024		X		128.00	128.80	0.80
		- banded at 60° and 30°																			
		LC bk'n sharp at 60°.																			
128.80	129.70	PyxP volcanic? w distincy pyx phenos to 1mm in a fg granular gdmss.	PyxP											3.0	9025		X		128 80	129 70	0 90
		- 3% diss Py																			
		- no cc																			
		- possible coarse primary bx at LC																			
		LC lost.																			
129.70	131 20	Lst, crmy grey grn, nsv w patchy Ep	Lst		45°					5.0	1 0				9027		X		129.70	131.20	1 50

From	To	DESCRIPTION	LITHO	STRUCTURE: broken	veins	banding	shears	So	contacts	ALTERATION: calcite	epidote	sericite	chlorite	% pyrite	Sample ID	Analytical Type: Assay	ICP	WR	From	To	Width
		At 130.1': 10cm Ep-rich vein at 45°																			
		LC grades.																			
131.20	132.90	Py-(Ep) Lst, badly bk'n, lst/ep bx? w 5% diss Py.	Py-(Ep) Lst							5.0	1.0			5.0	9028		X		131.20	132.90	1.70
		LC lost.																			
132.90	135.20	Alt'd PyxP Vc?, wk ser +cc gdmss, tr Py, mod bk'n.	Alt'd PyxP?							2.0		1.0	1.0	0.5							
		LC grades																			
135.20	136.20	Alt'd bk'n PyxP, as before but crsly bk'n thru and probably following chl seams	Alt'd PyxP	20°						2.0	2.0	3.0	2.0								
		- perv gdmss ser w cc, 3% Py following chl, xl'n Ep patches thru.																			
		LC grades																			
136.20	142.00	Alt'd PyxP , as abefore, wk gdmss ser, chl-cc-((py)) seams	Alt'd PyxP		20°					2.0		1.0		0.5							
		-tension gashes at 20°.																			
		LC grades quickly																			
142.00	151.90	Ser alt'd PyxP, light grn w strg perv ser thru gdmss	Alt'd PyxP		40°				30°	3.0		3.0		1.0	9029		X		145.30	146.00	0.70
		- remnant phenos now chl or Q filled.																			
		- mod (strg) perv cc w x-cutting cc(q) tension veins at 40°																			
		LC sharp at 30°.																			
151.90	156.20	Lst msv, patchy chl in gdmss, coral forms evident, So at 60°.	Lst					60°	60°	5.0			0.5								
		LC strg sh at 60°																			
156.20	156.75	Alt'd PyxP dike?, as before	Alt'd PyxP						70°	3.0		1.0	0.5								
		LC dsharp @ 70°.																			
156.75	159.20	Lst as before, scatt chl shears to 1cm at 30°	Lst	30°		45°			45°	5.0			0.5								
		-20cm of strg banded lst at 45° at top contact																			
		LC bound by 2cm gouge at 45°.																			
159.20	160.00	Alt'd PyxP dyke, as before.	Alt'd pyxP							3.0		1.0	0.5								
	160.00	EOH																			

Drill Hole ID FM05-39

- Location 362986E, 6329169N, 1362m El
  - Dip / Azimuth / Length. -90° / 360° / 844 m
  - Date Started June 19 2005
  - Date Finished July 1, 2005
  - Logged By JJ Walkins, P Geo
  - Date Logged June 19 to July, 2005
  - Drill Contractor, HY-TECH Drilling Ltd
  - Core Size: NQ2
  - Casing left in hole 11 3m
  - Comments
- Survey location by hand held GPS

In hole survey	Depth	Dip	Azimuth	Magnet	Temp
Reflex	112.5	-89.6	137.9	5744	16.1
Reflex	622.7	-77.7	345.8	4276	16.9
Reflex	844.0	-77.0	289.5	5741	28.2

Note Magnetic declination @ -23.5°

Alteration ranges from '1' very weak to '5' very strong

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
0.00	11.00	Overburden																									
11.00	18.20	Sil'd mafic dy, med grey fg 15% irreg Q seams @70°	Sil'd M dy					70	80		1		4			0.5					9030		X		11.00	11.90	0.90
		-local 5% blk chl in irregular seams.																									
		LC bk'n sharp @ 80°																									
18.20	24.60	Graphitic arg, bkm So variable most @70°	G Arg		70								1	1	4	3					9031		X		18.20	19.20	1.00
		-strg graphitic slips minor med grey less graph beds																									
		-5% Qcc vn'd																									
		-3% Py following So and as irregular patches.																									
		LC bkn																									
24.60	26.50	Qtz vn'd 80% bull Q w blk graph arg.	Q Vn'd					40					5		1	0.5											
		-vn'd @ 40°																									
		LC bkn																									
26.50	30.90	Qtz vn'd graph arg. 40-50% irreg Q(cc) vn'd, contorted	Q Vn'd G Arg										3		2	2					9032		X		29.00	30.00	1.00
		-2% Py as patches																									
		LC bk'n																									
30.90	43.60	(Graphitic) arg as before, less graphitic, some colored	G Arg		80			80	65				2	1	1	3											
		-5-10% Q(cc) vnlts, 3% patchy Py																									
		LC distinct @ 85°																									
43.60	51.40	bd'd argillite w (tuff), dk-med grey, wel bd'd w depth	Arg (T)		80								0.5	1		2											
		-So @ 80°, tops up hole																									
		-fg tuffaceous component increases w depth																									
		- scatt cc(Q) vnlts, 2% Py.																									
		LC marked at first seen coarser hetro tuff (lapst) bed																									
51.40	52.50	Mixed crs hetrolithic T / arg	cg T / arg		75			40					0.5	0.5		1											
		-50% crs hetro T beds to 20cm thick in f tuffaceous arg																									
		-So @ 75°, 5% Q(cc) vnlts most @ 40°																									
52.50	82.40	Thick bd'd v fg T w narrow crse T intervals, minor arg.			80				80				0.5	0.5		1											
		- minor cc(Q) vn'd, 1% Py																									
		LC sharp bkn @ 80°																									
82.40	82.70	Sil'd mafic dy, crmy grey inpart sil'om 10% Qcc vns, pats.	M dy				60		80				2	1		3				0.5							
		-wkly sil'd @ 80°, patchy fg Py, tr Aspy?																									

Alteration ranges from '1' very weak to '5' very strong.

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
		LC sh'd @ 80°																									
82 70	83 40	Arg contorted w graphitic slips 10% Q(cc).	G Arg				50		85				1	1	1	1											
		LC sh'd @ 85°																									
83 40	84 10	Bl'd mafic dy	M dy				80		85				2	1		3					9033		X		83 4	84 1	0 70
		-as before																									
		LC sh'd @ 85°																									
84 10	84 50	Arg contorted w graphitic slips. 10% Q(cc)	G Arg						40				1	1	1	1											
		LC sh'd @ 40°																									
84.50	84 70	Bl'd mafic dy	M dy				70		40				2	1		4											
		-as before																									
84.70	85 95	Contorted sil blk arg	Arg						70				3	1		2											
		LC sharp ragged intrusive @ 70°																									
85 95	87.00	Bl'd mafic dy w sil'd intervals	M dy					40	70				1	3		4					9034		X		85 95	87 00	1 05
		-10-15% Q(cc) stwk vns most @ 40° mod perv cc																									
		-Py as crse patches, discontiuous vnlets																									
87 00	87 60	Mx'd bl'd FP?, in part sh'd sil arg	Arg				85		85				1	0 5		0 5											
		Contacts sh'd @ 85°																									
87 60	89 65	Contorted blk arg w graph slips	G Arg										2	1	1	3											
		- Py as nodulesm seams, diss																									
89 85	90 90	Bl'd mafic dy, as before	M dy					70					1	1		3					9035		X		89 85	90 90	1.05
		LC bkn																									
90.90	96 40	Blk si arg, contorted, as before	Arg						85				2	2		1											
		LC sharp intrusive @ 65°																									
96.40	96.75	Bl'd mafic dy, finely speckled tan	M dy						60					t													
		- possibly less alt'd mafic dykes																									
		Lc sarp @ 80°																									
96.75	97 30	Blk si arg, contorted as before	Arg						80				1	1		1											
		LC sharp @ 80°																									
97 30	97.55	Bl'd mafic dy, as before	M dy				80		80				0 5	0.5													
		LC sh'd 80°																									
97 55	103 25	Bl'd contorted bd'd arg, py-rich bed/bands to 2cm	Arg										1	1		3											
		- scatt Q(cc) vn'd intervals																									
		LC lost																									
103.25	103 50	Fault, gouged blk graph arg w (bl'd) mafic dy	FLT				70								2												
103 50	118.60	Contorted blk arg, as before.	Arg										2	2		4											
		LC bkn																									
118 60	119 00	Fault, bkn @ 25°	FLT				25																				
119 00	133 10	bd'd blk arg, thin to 1cm arg w few So @ 80°	Arg		80										1	2											
		LC bkn																									

Alteration ranges from '1' very weak to '5' very strong

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
133.10	134.35	Sh'd mafic? dy? grey cherty w 10% white Q stwk.	M dy						80				5			1					9036		X		133.10	134.35	1.25
		- similar to sil'd mafic dykes																									
		LC sharp @ 60°																									
134.35	155.70	Blk bd'd arg in part contorted So @ 80° 10% Q vn'd	Arg		80		80	80					2	1		4											
		-locally sh'd @ 80°, 10% Q(cc) vnlts @ 80°																									
		- minor crse hetro tuff beds to 2cm tops up hole																									
		At 152.0: 10cm badly bk'n																									
		LC lost																									
155.70	159.90	Hetro lapst / bd'd arg redom lapst bdng @ 70°	Hetro lapst		70		70			1						0.5											
		- intercal beds of blk-dk grey arg, wk perv ser?																									
		LC lost																									
159.90	160.90	Fault, graphite, ground w much lost core of arg +white Q	FLT				30		50				2		5	0.5											
		-sh'd @ 30°																									
		LC bkn @ 50°.																									
160.90	163.00	Sh'd bkn dk grey arg sh'd thru @ 40°	Arg	40			40								3	1											
		-soft graphitic sections																									
		LC bkn																									
163.00	170.00	Badly bkn increasing w depth, sh'd, gouge, blk-grey	FLT?	30			30		35				1		3	1											
		- graphtic arg w sections of bull Q																									
		LC sharp bound by Q+arg gouge @ 35°																									
170.00	172.60	dk grey arg w grey bands @ 45°	Arg		45								1		1	0.5											
172.60	173.40	Sh'd arg w 20% Q(cc) @ 20°	Arg	20		20							2	1	2	0.5											
173.40	179.50	med grey arg contorted. Q(cc) ptgmatic vnlets and vns	Arg		40								1	1	1	0.5											
179.50	180.50	Fault badly bkn @ 45°	FLT	45											1	0.5											
		LC grades																									
180.50	181.50	med grey arg as before	Arg						35					1		0.5											
		LC sharp against arg gouge @ 35°																									
181.50	182.60	Fault badly bkn w graphitic arg gouge	FLT											2													
182.60	207.70	blk dk grey arg as before, inpart contorted	Arg				60		40							0.5											
		-rare cgT/LT to 2cm																									
		-wkly sh'd @ 60°																									
		-10% cc(Q) vnlts some ptegmatic, <15 diss Py																									
		LC sharp sh @ 40°																									
207.70	209.00	Fault in part badly broken blk arg	FLT						30				1		0.5												
		LC markby arg-Q gouge @ 30°																									
209.00	215.80	grey arg as before, greyer So contorted	Arg				45		80				2	2	0.5	2											
		-15% Qcc shear/stringer @ 45°																									
		-patchy bd'd Py																									
		LC sharp 5mm Qcc sh @ 80°.																									

Alteration ranges from '1' very weak to '5' very strong

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
215.80	218.50	Grey arg/hetro lapst. as before w 20% bd'd lapst to 10cm	Arg / lapst		40		45	45					1	2		0.3											
		-SO@ 40°																									
		-local cc(Q) filled shs @ 45°																									
		LC bxn																									
218.50	218.60	Fault arg +fg Q gouge @ 40°?	FLT				40		40				2														
218.60	222.50	dk grey arg bd'd/sh'd @ 60°	Arg		60	60	50																				
		-scatt Bull Q vns @ 50°																									
		LC irregular																									
222.50	234.00	Thick bd'd hetro lapst bl'd med grey	Hetro lapst		60		45	80																			
		rare irreg bed to 50cm w local shears @ 45°																									
		-So @ 60°																									
		-scatt Q(cc) vnlts @ 60°																									
		LC sharp @ 45° and appears to x-cut So																									
234.00	234.90	Two bl'd mafic dykes cut lapst(arg) w sharp sh'd cts @60°	M dy				60		50																		
234.90	237.00	Thick bd'd lapst as before	Hetro lapst		45		30																				
		-wkly sh'd So@30°, So ranges 60° tp 30° (av45°																									
		LC grades																									
237.00	250.25	Hetro lapst / bd'd arg. thick bd'd lapst w equal bd'd arg	Hetro lapst		40		35		35							2											
		-So @ 40°																									
		-10% Qcc																									
		-rare lapilli of fg mav py.																									
		LC sh'd @ 35°																									
250.25	265.40	Dk grey bd'd w minor 20cm of f lapst	Arg										0.5	1													
		- so ranges 0°- 60°																									
		-15% cc(Q) vnlts																									
		-some py-rich clasts in narrow lapst beds																									
		-some patch diss in bdng.																									
265.40	265.60	Bl'd mafic dy. possible basalt T	M. dy							1			1			0.5											
		-wk ser-Q alt'd 1% diss Py clasts?																									
265.60	279.20	Dk grey bd'd w minor 20cm of f lapst	Arg										0.5	1													
279.20	291.40	Mx'd thick bd'd fg-cg lapst w intercal fgT (arg)	Hetro lapst / T		45				45							0.1											
		-So fairly persistant @ 45°.																									
		-1% diss + f py-rich clasts																									
		LC sharp @ 60°																									
291.40	303.00	Mx'd thick bd'd hetro cg LT w 10-20% bd'd arg	Hetro LT		40				40							1											
		-10% cc(Q) vnlts @ 60°																									
		-rare large patch py-rich some diss																									
		LC dgrades																									
303.00	318.40	Mx'd v cg hetro lapst w 30-% med grey arg	Hetro lapst / arg		50			50	30				1	1		1											

Alteration ranges from '1' very weak to '5' very strong

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
		-So ranges 60° -40°																									
		-10-20% cc(Q) vnlts in part ptigmatic most @ 50°																									
		LC distinct @ 30°																									
316 40	322 30	Fg msv granular bl'd densely packed felsic tuff	Fel T						70	1						1											
		-wk pervasive ser																									
		-1% diss Py																									
		-minor arg																									
		LC sharp @ 70°																									
322 30	324 10	Alt'd bl'd mafic porphyritic dyke.	M dy					80	70																		
		-phenos Ep alt'd																									
		-contacts narrow chl's @ 70°																									
		<5% Qcc vnlts @ 80°																									
324 10	327 20	fg msv granular felsic tuff, same as above	Fel T						85																		
		LC marked by Qvn @ 85°																									
327 20	333 00	Sh'd shear zone, predom pervasive sh'd	Sh Zone				30	80					3			0 2											
		-sh'd w wk-mod ser seams sh'd @ 30°																									
		-minor mafic dyke as above																									
		-scatt bull Q vns @ 80°																									
		-possible some sh'd tan basalt toward LC																									
333 00	335 20	Q vn'd and patchy Q in tan ser alt'd Bas?	Q vn'd					80		2			3	1													
		-40%Q vn'd																									
		LC bkn																									
335 20	336 00	Fault badly bkn @ 45°	FLT	45			45			3			2														
		-first 10cm marked by Q+ser gouge																									
		-followed by sh'd bkn host that is possible alt'd Bas																									
		LC bkn																									
336 00	340 20	Bkn mafic dyke in part strg sil'd stwk +patchy diss xl'n Py	M dy					60	80				4			5					9037		X		336 70	337 65	0 95
		- remnant fresh mafic dyke																									
		-5% cg patchy diss, seams following se.																			9038		X		339 30	340 20	0 90
		LC bkn @ 80°																									
340 20	341 00	Bkn bl'd arg. So @ 0°, 1% Py in seams @ 35°	Arg	5	0			35								1											
		LC grades quickly																									
341 00	345.60	Med grey wkly sil'd arg	Arg		35		45			0 5			3			0 5											
		-10% Q(cc) vn'd																									
		-So @ 35°																									
		-becomes bkn sh'd w depth @ 45°																									
		LC grades																									
345 60	346 90	Sh'd graphitic arg @ 45°, contorted to 0°	G arg	45			45		60				2		3												
		-patchy Q flooding																									

Alteration ranges from '1' very weak to '5' very strong

				STRUCTURE						ALTERATION						MINERALIZATION						ANALYSIS					
From	To	DESCRIPTION	LITHO	Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS		Sample ID	Assay	ICP	WR	From	To	Width
		LC bkn @ 60°																									
348.90	351.20	Sh'd mafic dyke as before, tan w perv ser	M dy					30	60	1			4			0.2											
		-20% white Q stwk																									
		-tr Py																									
		LC sh'd @ 60°																									
351.20	351.60	Sh'd graphitic arg as befoe	G arg	45			45		60				2		3												
		LC grades																									
351.60	359.40	Med grey sil'd arg, contorted w most So @ 45°	Arg		45			70					2														
		-So masked in part by alt'n																									
		-scatt Qvns @ 70°																									
359.40	366.30	Bl'd mx'd hetro lapst / arg	Hetro lapst		35	20	70		50	0.5			1			0.5											
		-So @ 45°, wk local mod patchy ser																									
		-scatt bull Q vns to 1m @ 45°																									
		-local hl'd shs @ 20°																									
		LC sharp tight @ 50°																									
366.30	371.30	Hetro lapst, in part bl'd mg-fg lapst to c/se T, thick bd'd	Hetro lapst		55				25	0.5						0.2											
		LC sharp @ 25°																									
371.30	372.90	Msv Bull Q							25				5														
		LC sharp @ 25°.																									
372.50	378.00	Hetro lapst as above	Hetro lapst																								
		-minor chty T beds																									
		LC bkn @ 85°																									
378.00	385.30	Chty bl'd arg, sil'd med-light grey contorted	Chty arg					85		0.5			4			0.2											
		-25% Bull Q vning more w depth most @ 85°																									
		LC grades																									
385.30	388.30	Bl'd arg lite grey So @45°, wk-mod sil'd,	Arg		45					2			1			0.2											
		-local mod perv ser																									
		-scatt xl'n py																									
		LC grades																									
388.30	390.80	Dk grey bd'd arg some mafic T beds to 1cm, minor graphite	Arg		40		20		20						0.5	0.5											
		-So 40°																									
		LC sharp sh'd @ 20°																									
390.80	391.00	Fault arg (graph) gouge @ 20°	FLT				20						1		0.5												
		LC bkn																									
391.00	394.70	Bl'd bd'd arg w minor maf T beds to 2cm, So 45° in part chty	Arg		45			80	80	1			2			0.2											
		-rare Q vn @80° to 10cm.																									
		-wk local ser																									
		LC marked at Q vn @ 80°																									
394.70	396.00	Sh'd, Q vn'd alt'd contorted arg, local ser, in part chty	Arg					80	80	2			3														

Alteration ranges from '1' very weak to '5' very strong

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
		-40% Q(cc) vn'd @ 80° some vuggy																									
		LC grades																									
398 00	397 80	Tan alt'd Bas, 15% Q vn'd @ 80° (sch) @ 80°	Tan Bas			80	80		80	3			2														
		LC bkr @ 80°																									
397 80	399 20	Mafic dy, mottled med/light grey, mav w no fabric	M dy						45					2													
		-10% cc tension vnlts @ 80°																									
		LC sharpo @ 45°																									
399 20	410 40	Bl'd med-lite grey bd'd arg, scatt mafic T, some chty	Arg		60			80	80	1			3	1													
		-local wk ser following some beds																									
		-So @ 60°																									
		-10% Qvn'd most @ 80°																									
		From 403 6 -404.2, contorted w 30% Q flooding																									
		LC bkn sharp@ 80°																									
410.20	413 60	Q(cc) vn'd contorted w 20% chty arg (ser), (sh'd) @70°	Q(cc) vn'd				70	45	70				4	2													
		LC sh'd @ 70°																									
413 90	419 60	Tan alt'd Bas, contorted, flooded by 30% Qcc vns @ 80°	Tan Bas					80	50	3	1					1											
		- minor blk chl seams, mod local strg ser																									
		- some fg wke																									
		LC sharp @ 50°																									
419 60	425 60	Bl'd chty arg w scatt mafic T beds w wk ser	Chty arg		40				80	1			2			0 5					9039		X		419 25	419 60	0 35
		-more chty w depth So 40°																									
		LC sharp @ 80°																									
425 60	427.10	Mafic dy as before but w blk chl+cc in tension vns @30°	M dy					30	80	0 5	1					0 5											
		- some Q vns w xl'n py and wk ser haloes																									
		LC sharp @ 80°																									
427 10	431 10	Bkn, sh'd, kinked chty arg, sh'd @ 45°, So @ 45°	Chty arg	45	45		45		80	0 5			2			0 2											
		-less sh'd w depth																									
		LC sharp @ 80°																									
431 10	431 80	Tan alt'd bas w 10 cm of chty arg	Tan Bas			45			45	2	1		1	0.5		0 5											
		-10% Qcc vn'd																									
		-minor chl seams																									
		LC bkn sharp @ 45°																									
431 80	433 10	Chty bl'd arg, primary textures masked by alt'n	Chty arg		60				80	2			4			1											
		- So @ 60°																									
		-strg perv sil, 1% diss py, whispy ser																									
		LC vague @ 80°																									
433 10	434 65	Mafic dy as before, 20% cc(Q) vnlts, patches	M dy					30	80		1		1	2													
		-blk chl filled tension vnlts																									
		LC sh'd @ 80°																									

Alteration ranges from '1' very weak to '3' very strong

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION						ANALYSIS					
				Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS		Sample ID	Assay	ICP	WR	From	To	Width
434.65	437.90	Bl'd sil arg. as before. So vague @ 45°	Arg					85	80	1			2			1					9040		X		434.65	435.10	0.45
		-wk whispy ser. wk sil'd																									
		At 435.05 3cm SMS py-rich band @ 65°																									
		LC bkn sharp @ 65°																									
437.90	438.60	Tan Bas sh'd @ 80°	Tan Bas					80		2	1		0.5	1		0.2											
		-diss x'n py. cc(Q) vnlts @ 80°																									
		LC grades quickly																									
438.60	453.60	Chl hem basalt, in part sch 50°-70° w kinks. amygd	chl hem Bas			60		70			4			3													
		-remnant flox textures.																									
		-15% cc in amygd and contorted intervals																									
		-scatt ank vns?																									
		LC grades quickly																									
453.60	456.90	Predom. Tan bas, 50% mod ser w remnant chl bas	Tan Bas/chl Bas			75		75		3	1		2	3													
		- ser assoc w Qank? Vning																									
		-5% cc																									
		wk sch 70° -80°																									
		LC grades quickly																									
456.90	464.10	Dk / lite grn chl hem Bas, as before	Chl hem Bas			60				1	3			2													
		-wk local ser																									
		LC grades quickly																									
464.10	464.50	Tan bas as before w sil'd bn'ds @ 80°	Tan Bas			60			80	3			2														
		-wk sch, kinked																									
		LC sharp @ 80°																									
464.50	465.50	Diabase dyke. strgly magnetic. fresh	Db dy					80	80					4													
		-strg perv cc w cc filled vnlts @ 80°																									
		LC sharp 80°																									
465.50	471.60	Tan basalt as before in part w blk chl	Tan Bas			80	45	70		3	1		2	2		0.5											
		-rare sh @ 50°																									
		-patchy augen sil'd chrt?																									
		-10% cc(Q) vn'd most @ 70°																									
		-wk sch w kinks @ 80°																									
		LC grades quickly																									
471.60	476.10	Chl hem basalt as before, local wk ser	Chl hem Bas			50				0.5	4		1	2													
		-15% cc(Q) vnlts																									
		-wk sch @50°																									
		LC grades quickly																									
476.10	480.30	Tan / chl hem basalt predom. tan bas as above	Tan Bas/chl Bas			70				3	2			3													
		-wk intervals of wk ser																									
		-strong ser interval have hydrothermal blk chl																									

Alteration ranges from '1' very weak to '5' very strong

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
		-strg cc folding w strg ser alt'n																									
		-v wk sch @ 70°																									
		LC distinct @ 50°																									
480.30	480.70	V strg ser+Q alt'd Bas w 5% cg Py, contorted sch							80	5			3			5					9041		X		480.30	480.70	0.40
		LC sharp @ 80°																									
480.70	497.80	Tan basalt, strg ser (Q) alt'd, wk sch @ 80°	Tan Bas			80		80	70	4			2	2		0.5					9042		X		480.70	481.70	1.00
		-10% Qcc vns to 10cm most < 1cm @ 85°																									
		-some chty intervals																									
		-minor diss py																									
		LC sharp bkn @ 70°																									
497.80	497.95	Alt'd rhyolite tuff, strg perv ser, fg granular, Q eyes	RT						40	4						0.5					9043		X		497.80	499.45	1.65
		LC sh'd 40°																									
497.95	499.95	Chty arg, med grey, hard, vague So @ 75°	Chty arg		75				80		1		4			0.5											
		-more py w depth																									
		LC sharp @ 80°																									
499.95	503.40	Alt'd rhy tuff, as before, strg perv ser, vfg py	RT						85	4						1					9044		X		501.00	501.50	0.50
		-scatt Qvn to 10cm @ 80°																							501.50	502.50	1.00
		LC sharp @ 85°																									
503.40	504.85	Chty arg, exhalite?, ghost So @ 80°, 2% py in beds	Chty arg		80				70				4			2					9046		X		503.90	504.85	0.95
		LC sharp sh'd @ 70°																									
504.85	511.95	Tan basalt, as before, v wk sch @ 80°, minor blk chl	Tan Bas			80		80	80	3	1					0.5											
		-scatt Qvns @ 80° to 10cm																									
		- minor py a large xls																									
		LC sharp sh @ 80°																									
511.95	512.70	chty tuff, si exhalite?, minor Bas bed to 2cm @ 80°	Chty T		80				80	1			4			1					9047		X		511.95	512.70	0.75
		-lt grey grn, wk whispy ser, scatt fg py seams in So																									
		LC distinct @ 80°																									
512.70	513.65	M dyke, typical	M dy											2													
		LC lost																									
513.65	514.40	Chty T as before, So part masked by si, wk ser as seams	Chty T																		9048		X		513.65	514.40	0.75
		-So @ 75°																									
		-rare msv py clasts to 1cm, scatt vfg py seams																									
		LC distinct @ 80°												2													
514.40	517.40	M dyke, typical	M dy																								
		LC bkn																									
517.40	519.50	Tan basalt, as before, v wk sch @ 60°, minor blk chl	Tan Bas			65		80		3	1		1														
		-10% Qcc vns to 10cm @ 80°																									
		LC grades quickly																									
519.50	521.10	Bl'd and chty T (arg?), 20% Q flooded, si'd thru w ser seams	Chty T		70	70				2	1		3	1		3					9049		X		519.15	520.55	1.40

Alteration ranges from '1' very weak to '5' very strong

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
		-sch (So) @ 70°																									
		-2% py in msv fg py-rich patches, frags??, beds?																									
		LC grades																									
521 10	524 10	Qtz flooded tan basalt 50% Q vn'd @ 45°	Tan Bas					45		3			4			2					9050		x		522 60	523 35	0 75
		- sil flooded into ty[pical tan bas, some chty arg																									
		- patchy msv vfg py to 1cm in strg sil flooded intervals																									
		LC grades																									
524 10	528 45	Tan bas as before w minor blk chl	Tan Bas					60	90	3	1		1														
		-10% Qvns to 10cm @ 80°																									
		LC sharp @ 90°																									
528 45	528 90	Pyritic tuff, fg lite grey, contorted, 5% vfg py	Py T					85		2		1				5			1		9054		X		528 40	528.95	0 55
		-40% Q vn'd @ 85°																									
		LC vague																									
528 90	533 90	Tan basalt as before	Tan Bas			85			85	2	2										9055		X	X	532 20	532 75	0 55
		-w intervals msv hydrothermal chl from 532 0 to 532 75																									
		-wk sch @ 85°																									
		LC grades quickly																									
533 90	535 40	Py tuff as before, 5% vfg py (sph?)	Py T			85			90	2						5			1		9056		X		533 90	534 70	0 80
		-10% tan bas, wk sch @ 85°																									
		-After 334 8 bl'o sil'd grey																									
		LC vague																									
535 40	538 60	M dyke, typical	M dy						40					2													
		LC sharp @ 40°																									
538 60	539.50	Tan basalt as before	Tan Bas			85				3				1		0 2											
		LC grades																									
539 50	543 00	Chty tuff, (arg?), med-lite grey bn'd	Chty T																								
		-20% tan basalt beds thru																									
		-10% Qvn'd most @ 80°																									
		LC grades																									
543 00	550 95	Tan basalt / (py) tuff	Tan Bas/Py T			85				3	1			1		1			1		9057		X		547 00	548 70	1 70
		- intercalated tan bas w 40% lite grey pyritic fg T as before																									
		-wk sch @ 85°																									
		LC grades																									
550.95	554 60	Chty arg (tuff?) as before, chty bn'd @ 85°, whispy chl	Chty Arg			85		85			2		4			0 5											
		-10% Q vn'd @ 85°																									
		-minor tan bas																									
		LC vague																									
554 60	554 90	Mafic dyke?, typical, lite grey fairly massive	M dy						85				2														
		-wk perv cc																									

Alteration ranges from '1' very weak to '5' very strong

		DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION						ANALYSIS					
From	To			Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS		Sample ID	Assay	ICP	WR	From	To	Width
		LC @ 85°																									
554 90	557 20	Sr'd tuff (arg?), vague bn'd @ 80° w irregular chl seams	Chty T (arg?)		80						1		3			2											
		- diss py following bbedding																									
		LC grades																									
557 20	559 20	Tan basalt, bl'd in part by silfn	Tan Bas			85		80		3			2			0 2											
		-wk fd'd sch @ 85° in part contorted																									
		-minor Q vn'd @ 80°																									
		LC grades																									
559.20	566 60	Sr'd tuff (arg?), partly Q flooded w minor fg bn'd py	Chty T (arg?)	80	80	80				2			4	1		2					9058		X		563 00	564 00	1 00
		-less tan bas as ser-rich seams																									
		-becomes bkn w depth @ 80°																									
		- So (sch) @ 80°, locally variable																									
		LC bkn																									
566 60	566 70	Fault, bkn @ 80°	FLT				80		70																		
		LC sharp @ 70°																									
566 70	579 00	Tan basalt typical, wk sch @75° local bl'd by si w cg py	Tan Bas		75	75		80		3	0 5		2	1		0 5											
		-local contorted w Qcc																									
		-minor Q vn'd @ 80°																									
		LC grades quickly																									
579 00	587 90	Bl'd fg tuff w minor tan bas, vague S0 @ 80°, in part contorted	T		80	80				2				2		2					9059		X		585 00	586 00	1 00
		-wk local sil'd, 10% irregular cc(Q)																									
		-whispy py seams some probable boudined py beds to 5mm																									
		LC sharp @ 80° w contorted Q-rich to typical tan bas																									
587 90	600 40	Tan basalt, typical	Tan Bas			80		70	50	3	1		2	1													
		-intervals to 1m of contorted sil(cc) flooded, sch @ 80°																									
		-scatt Q(cc) vnlts @ 70°																									
		-cg cubic py toward LC																									
		LC sharp hl'd sh @ 50°																									
600 40	600 70	Contorted bn'd Q+ser+cc	RT?						85	2			3	2													
		LC sharp hl'd sh @ 85°																									
600.70	604.40	Banded (So) @ 75° w rhy? Bands clasts?	RT?		75	75			75	2			3	1		3			0.5		9060		X		602 00	603.00	1 00
		-vague narrow chl bn'ds																									
		-some different mafic T beds																									
		-narrow py bn'ds scatt thru																									
		-locally contorted																									
		LC grades quickly																									
604 40	611 80	Bl'd bd'd T arg? w sil bn'ds	T arg?		70	70							3	1		3					9061		X		604.40	605 90	1 50
		-scatt py-rich beds thru																					9062		X		605 90	607 40	1.50
		- narrow intervals of bas T																					9063		X		607 40	608 90	1 50

Alteration ranges from '1' very weak to '5' very strong

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
		-So 70° contorted																									
		LC grades																									
611.80	612.50	Tan basalt, typical wk-mod sch, kinked	Tan Bas		85	65			85	3			1	1		1											
		LC grades quickly																									
612.50	625.40	Bfo tuff, arg? as above w si bn'ds (R?)	T. arg?		85	65			40				3	1		1											
		-scatt py-rich beds to 3mm																									
		-wk-mod sch contorted 85°																									
		-So @ 85°, contorted																									
		LC sharp 40°																									
625.40	625.90	Bull qtz vn	Q vn						60				5														
		LC sharp @ 60°																									
625.90	628.50	Bxn predom tan bas, contorted, sh'd @50°	Tan Bas	50			50			3																	
628.50	631.00	Bxn contorted, sa'd	RT arg?			40	40			2			4			3					9064		X		629.00	630.00	1.00
		-RT or sil'd arg																									
		-minor tan bas																									
		-scatt py bds to 3mm, sh'd @40° w bkn gouge intervals																									
		LC lost																									
631.00	637.30	Tan bas typical contorted w 20% sil bn'ds	Tan Bas				45		35	3			2	1		2											
		-10% irregular Qvns sh'd local @ 45°																									
		LC sharp sh @ 45°																									
637.30	641.50	Fault sh'd, bkn w gouge blk arg w ser bn'ds	FLT				45		30	2																	
		-sh'd @ 30°																									
		LC sharp w 1cmgouge @ 30°																									
641.50	662.90	Sh'd partly bkn strg ser w sil bn'ds clasts? of rhyolite	R				45			5			3	1		0.5					9065		X		647.00	648.00	1.00
		wk-mod sch @ 45° but varies, lite med grn.																									
		-py diss trace, Qvn'd @ 80°																			9066		X		655.50	656.50	1.00
		-from 657.2 to 657.4, 658.1 to 658.35 carb alt'd lamp? dy@ 30°																									
		LC sharp against Qvn @ 80°																									
662.90	664.10	Qtz vn, 85% bull qtz w 10% strg ser sch patches	Q vn							3	1		5														
		- 5% patches of msv blk chl																									
		LC irregular																									
664.10	675.40	Strg ser alt'd R.	R_T			80		75		4			3			0.5											
		-dk apple grn become yellow grn w depth																									
		-prob LT w 10-20cm intervals of strg yellow ser sch, contorted																									
		most @ 80°																									
		- scatt Qvns to 20cm @75°																									
		LC grades																									
675.40	676.10	Strg ser alt'd R w 10% py as distinct deformed clasts @75°	R			75				5			3	1		10			1		9067		X		675.40	676.10	0.70
		LC grades																									

Alteration ranges from '1' very weak to '5' very strong.

		DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION						ANALYSIS					
From	To			Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS		Sample ID	Assay	ICP	WR	From	To	Width
676.10	682.45	Good rhy bx w sil-rich clasts packed w strg ser thru gdmss	Rbx			85	50			4			4			0.5					9068		X		680.00	681.00	1.00
		@ 85° minor fg patchy py																									
		LC lost and followed by cave																									
682.45	690.50	Bkn ser alt'd R w 10-15% scat Qvns to 30cm@ 75°	R	75			40	75		3	1		3			0.5					9069		X		688.00	689.00	1.00
		-scat narrow ser-rich gouge shs @ 40°																									
		-possible mafic T w tan-like ser																									
		-to 5% irregular seams of blk chl																									
		LC marked follwing 30cm Qvn @ 90°																									
690.50	691.00	Fault, bkn thru w ser-rich gouge	FLT	80						4			2														
		-10% Qvn'd now bkn																									
691.00	708.40	Bkn ser alt'd w sil-rich sections w mafic T component?	R(M)T	75			45		65	3	1		3			0.2					9070		x		694.00	695.00	1.00
		-local strgly foliated and kink bn'd																									
		-local narrow ser gouge sh seams @ 45°																			9071		X		699.00	700.00	1.00
		LC grades quickly @ 80° and is conformable																									
708.40	711.80	med/dk grey chl w blk chl seams thru @ 80°	Ch	80							2		4			1					9072		X		708.40	709.40	1.00
		-bkn thru @ 80°																									
		-10% irregular Qvns, 1% diss py w chl seams																									
		LC bkn sharp @ 85°, conformable?																									
711.80	717.20	Mx'd rhy/basalt LT, thick bd'd w yelow-grn ser alt'd B bn'ds &	RBLT	85	85					3				1		0.2	0.2										
		flattened shards @ 85° (So?)																									
		-packed tight predom felsic clasts to 1mm, some 5mm																									
		-ser alt'n increases w depth & sh'd out toward LC																									
		-tr diss py, tr cpy near LC																									
		LC bkn, marked @ fabric change from 85° to ~0°																									
717.20	722.00	Fault zone of mx'd lithos all sh'd @10°-20°	FLT	30		10	30		85	2	1		2		1												
		From 717.2 to 718.5, strg sh'd 0°-10° ser alt'd w frgnt gouge																									
		seams @ 30°, possible mafic dyke																									
		From 718.5 to 718.75: blk chty graphitic gouge @ 30°																									
		From 718.75 to 719.2: blk/dk grey chl w 20% irreg Q vning																									
		From 719.2 tpo 722.0: sh'd mafic dy? @ 30° w sh decreasing																									
		LC bkn sharp @ 85°																									
722.00	722.75	Med/dk grey chl w blk chl seams thru @ 85°	Ch		85				80				4														
		LC contorted, bkn																									
722.75	723.00	Fault gouge, graphitic arg	FLT				45		45						2												
		LC sh'd sharp @ 45°																									
723.00	724.30	Med/dk grey chl w blk chl seams thru @ 85°, as above	Ch		85				90				4														
		-minor MT																									
		LC distinct @ 90°																									
724.30	729.50	Bas tuff, fg clastic w blk chl shards to 1mm	BT		80			73	85	2	1		1	1													

Alteration ranges from '1' very weak to '5' very strong

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
		-minor chty bn'ds to 10cm @ 80°																									
		-narrow sections of mext unit																									
		-5% cc in narrow vnlets @70°																									
		-tr diss py																									
		-wk ser-Q alt'd. 1% diss Py clasts?																									
		LC distinct @ 85°																									
729.50	731.70	Rhy (bas) cg tuff, predom felsic shards to 3mm	R(B)T		85			85	85	1	2			2													
		-w rare blk chl clasts, some MT bn'ds																									
		-10% cc(Q) vn'd @ 85°																									
		-scat blk chl seams to 1mm																									
		-So @ 85°																									
		LC grades																									
731.70	734.80	Bas tuff, fine mottled ser alt'd clasts, chl alt'd clasts	BT		85	85		80		2	2			3		0.5					9073		X		733.00	734.00	1.00
		-intervals of strg yellow-grn ser now mod sch@ 85°																									
		-mod perv cc, 10% cc vnlets @ 80°																			9074		X		736.00	737.00	1.00
		-LC vague																									
734.80	754.15	Rhy (bas) cg tuff as before, to RLT. fine Q eyes. blk chl shards	R(B)T			85	85	85		2	2			3		0.5					9075		X		752.00	753.00	1.00
		-grades to RLT w depth																									
		-local wk sch @80°, minor tan bas to 20cm @80°																									
		- mod perv cc to 737.0m																									
		-scat ser shs @ 80°																									
		-scatt irreg cc patches, 5% scatt cc vnlts @ 85°																									
		-cc vnlets @ 80°																									
		LC grades																									
754.15	756.10	Tan bas. typical w Qcc knots and augen	Tan B			85				3			2	2													
		-hl'd mod sch @ 85°																									
		LC grades																									
756.10	758.70	Chl bas, typical dk grn w 10% cc(Q) augen	B			90					4																
		-wk sch @ 90°																									
		LC grades quickly																									
758.70	763.10	Tan bas. typical grades to to crmy tan w strg sch bn'd @ 90°	Tan B			90				3																	
		LC blkn lost																									
763.10	763.20	Fault clay gouge @ 30°?	FLT																								
		LC vague																									
763.20	768.20	Tan bas typical w possible minor R	Tan B			90				3			1	2													
		-wk-mod bl'd sch @ 90°. in part variable																									
		-scatt Q vns to 20cm @ 60° w patches of blk chl																									
		LC grades quickly																									
768.20	769.70	Chl bas, typical dk grn. fairly mav. fg. ccQ filled ammyd	B			85					4			1							9076		X		768.20	768.80	0.60

From	To	DESCRIPTION	LITHO	Broken	So	Sch	Shears	Veins	Contacts
		-v wk sch @ 85°							
		LC grades							
769.70	786.30	Tan bas, typical, well foliated @80°-90°	Tan B			85			
		-10-20 % Qtz augen, knots, scatt Qvns to 10cm w blk ch							
		-at 776.[illegible] 1cm splash cpy in host against 20cm qtz vn							
		LC grades quickly							
786.32	832.00	Qtz ser (talc?) py schist, lt grey B [illegible] (flat clasts) in ser gdmss	B			85			
		-sch @ 85°-90°							
		-locally to 10% patchy py, So over 10cm							
		- scatt Qvns to 10cm @80°							
		-w depth possible increase in mat T, talcous							
		From 823.9 to 825.0 - 15% vfg py (schy) tr cpy							
		After 825.0 grades to fine bdd ?? @ 85°							
		LC grades and marked at last py-rich seam bed							

Alteration ranges from '1' very weak to '5' very strong

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS	
832 00	844 00	Well foliated , predom dk grn chl bas w tan intervals	B																	
		10-15% cc(Q) vns @ 80°, patches, augens																		
	844 00	EOH																		

Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
9114		x		823 00	823 90	[illegible]
9115		x		823 90	825 00	[illegible]
9116		x		825 00	826 00	[illegible]
9117		x		826 00	827 00	[illegible]
9118		x		827 00	828 00	[illegible]
9119		x		828 00	920 00	[illegible]
9120		x		829 00	830 00	[illegible]
9121		x		830 00	831 00	[illegible]
9122		x		831 00	832 00	[illegible]

Drill Hole ID FM05-40

- Location 352816E, 6329244N, ±312m El
  Dip / Azimuth / Length -90° / 360° / 524.4m
  Date Started July 1, 2005
  Date Finished July 8, 2005
  Logged By JJ Watkins, P.Geo
  Date Logged July 2 - July 9 , 2005
  Drill Contractor: HY-TECH Drilling Ltd.
  Core Size: NQ2
  Casing left in hole, 6.70m (22 feet)
  Comments
- Survey location by hand held GPS

In hole	Depth	Dip	Azimuth	Magnet	Temp
Reflex	91.4	-86.6	290.1	5766	12.5
Reflex	344.1	-83.3	275.8	5764	18.0
Reflex	631.2	-82.7	289.1	5761	18.6

Note. Magnetic declination @ -23.5°

Alteration ranges from 1: very weak to 5: very strong

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	S1	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		ANALYSIS: Sample ID	Assay	ICP	WR	From	To	Width
0.00	5.50	Overburden																									
5.50	12.20	Bkn blk blk/dk grey arg, bkn @ 80°	Arg	80				80					1	0.5													
		-5% scatt Q(cc) vnlts most @ 80°																									
		LC bkn																									
12.20	40.90	Thin/thick bd'd dk grey (blk) arg w scatt fg wke bd'ds	Arg					80	40				1	0.5		0.5											
		-bedding highly variable 10° - 50°																									
		- 10% scatt cc(Q) vnlts, some stgly contorted, most 80°																									
		-0.5% py as mav patches, diss on selected beds																									
		LC grades quickly @ 40°																									
40.90	42.00	40% contorted Q(cc) vn'd grey arg	Arg				70		70				2	1		0.5											
		-hl'd shs @ 70°																									
		LC grades quickly @ 70°																									
42.00	56.25	Med grey thin/thick bd'd arg as before	Arg				80	80					1	0.5		0.5											
		-w scatt sh'd intervals w Qcc vnlts @ 80°																									
		-10% Qcc vnlts some ptigmatic, most @ 80°																									
		-scatt py-rich beds to 1cm																									
		LC bkn																									
56.25	57.90	Badly bkn, bl'd, amygd mafic dyke, no pen fabric	M dy				40		40					3													
		-mod perv cc																									
		LC bkn, probably bound by 40° sh																									
57.90	64.80	Predom thick bd'd, med grey, in part mav arg	Arg		45		60		80				0.5	0.5		0.5											
		- becomes wkly bl'd w depth																									
		- So varies most @ 45°																									
		-<5% scatt ccQ vnlts most @ 45° to 90° w depth																									
		-minor bd'd py less w depth																									
		LC bound by 1cm sh @ 60°																									
64.80	67.60	Bl'd thick bd'd arg, vague So @ 60°-90°	Arg		60		30		60					3													
		-mod perv cc																									
		-After 67.0m 10% irreg Q(cc) vn'd																									
		-hl'd scatt shs @ 30°																									
		LC tight hl'd sh @ 60°																									
67.60	75.70	Hetrolithic lapilli agglomerate (STRAT MARKER?)	Lap aggl		45											1.0					9123		X		70.00	71.00	1.00
		-clast supported large lap to 1cm w R agglom clasts																									
		to 5cm w qtz eyes?																									
		- clasts in part flattened @ 45°																									
		- unsorted, thick bd'd																									

		DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					ANALYSIS						
From	To			Broken	So	S1	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS		Sample ID	Assay	ICP	WR	From	To	Width
		-most clasts are si'd R w 1½ fg py thru clasts																									
		-other prom clasts are mafic? w fdsp phenos that																									
		could be felsic pumice																									
		-rarelg py-rich clasts																									
		LC grades quickly																									
75.70	100.20	Mx'd bd'd arg +hetro lapst	Lapst				45		80				3			1.0											
		-So variable																									
		-intervals sil'd w qtz stwk																									
		-1% diss py																									
		LC marked following 1.2m thick bd of hetro lapst @80°																									
100.20	103.50	Q(cc) vn'd chty (sil'd) arg, blk-dk grey, strgly contorted	Arg					40					3								9124		X		103.50	105.00	1.50
		-25% Qvn'd & stwk w thicker vns @ 40°																									
		LC grades quickly																									
103.50	123.30	Predom thick bd'd blk-dk grey arg, cont'd So most @80°	Arg		85								1	1	1	2.0											
		-5% scatt Qcc vnlts most @85°																									
		-graphitic slips more w depth																									
		-2% diss SMS bds to 5mm following some bds																									
		LC grades quickly																									
123.30	126.20	Qtz stwk vn'd, dk grey strgly cont'd arg	Arg				40						3	1	1	2.0					9125		X		123.30	125.00	1.70
		-w 20% irreg & stwk Q(cc) vnlts thru																									
		-2% patchy py scatt shs @ 40°, minor graph slips																									
		LC grades quickly																									
126.20	131.10	Finely bd'd blk/dk grey arg, graph slips more w depth	Arg		80		60	80					2	1	1	2.0											
		-So persistant @ 80°																									
		-scatt shs some w parallel Q(cc) vnlts @ 60°																									
		-5% Qcc vnlts @ 80°																									
		-scatt py-rich beds to 1cm																									
		LC bkn																									
131.10	132.60	Fault zone, badly bkn w graph slips, bl arg	FLT	80					60					1	3												
		- graphitic gouge from 131.9 -132.5																									
		LC bkn @ 60°																									
132.60	139.30	Bd'd grey/med grey arg, in part cont'd, chty	Arg		80				80							0.5											
		w fine lite grey clastic bds to 1cm																									
		-2% py in selected bds																									
		-5% Qcc vnlts most @ 80°																									
		-So most @ 80°																									
		-minor graph slips																									
		LC marked at thick lapst bed @75°																									
139.30	146.70	Predom thick/thin bd'd hetro lapst /dk grey bd'd arg	Lapst		80				80							0.5											
		-So @80°, locally variable																									
		- minor diss bd'd py																									
		LC marked at last thick bd of lapst @80°																									
146.70	153.10	Dk grey thick/thin bd'd arg, So @75°	Arg		75			80					1	1	1	0.5											
		10% Qcc vnlts most @80°																									
		-minor graph slips																									

		DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					ANALYSIS						
From	To			Broken	So	S1	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS		Sample ID	Assay	ICP	WR	From	To	Width
		LC bkn																									
153 10	155 30	Fault zone, strg sh'd @25°, bkn w lost core	FLT	25		25							2	1	3												
		-1m interval of undeformed s/d Qvn'd arg																									
153 30	162 30	Blk - dk grey arg w scatt lapst over 10cm	Arg	60			30		30				1		2	2 0											
		-So varies most @80°																									
		-scatt tight shs @30°, graph slips more w depth																									
		-5-10% cc(Q) vn'd, more w depth																									
		-2% patchy, bd'd py																									
		-after 160 9 becomes bkn @60°																									
		LC sharp w Qvn against gouge @30°																									
162 30	163 30	Fault zone pred blk graph gouge w 30% bkn Qvns @30°	FLT	30			30	30					3		4												
		LC bkn																									
163 30	166 20	Predom dk grey bd'd arg w minor narrow lapst So @80°	Lapst		80										0.5	1 0											
		- w 20cm of s/d + Q stwk vn'd arg, minor graph slips																									
		LC grades to bkn core																									
166 20	168 70	Bkn chty + Qcc vn'd arg, graph shs @30°	Arg	75			30	75							1	1 0											
		-bkn @75°																									
		-25% Qvn'd most bkn @75°																									
		-minor gouge																									
		LC bkn																									
168 70	176.95	Predom one thick bd of unsorted hetro lapst	Lapst		85		75		75																		
		-rare subrd R clast to 2cm																									
		- minor arg/wke bds, So @85°																									
		LC sh'd? @75°																									
176 95	187 90	Predom med/lite grey well bd'd arg/wke/(lapst)	Arg		80		40	80	40				1			1 0											
		-20% lapst some w diss py following So @ 80°																									
		-5% clustered Qcc vnlts most @80°																									
		LC sharp tight gouge sh @ 40°																									
187 90	192 60	Predom cg/fg thick bd'd hetro lapst w grey arg(wke)	Lapst		85		30		90				1			0.2											
		-scatt shs @ 30°, So @85°																									
		-5% cc(Q) vnlts most 90°																									
		LC tight sh @90°																									
192.60	197 60	Predom bl'd mod grey arg w wke bd's scatt thru	Arg		75		35		45																		
		-in part cont'd w cc(Q) vns to 5cm most @75°																									
		-scatt shs @35° So @75°																									
		LC sharp @45°																									
197 60	217 50	Predom thick bd'd lapst w rare SMS py clasts to 1cm	Lapst				80		30	0 5						0 5					9126		X		205.00	206 00	1 00
		-some R clasts w vfg diss py thru																									
		-scatt intervals to 1m of cont'd b/'d arg																									
		-scatt Qvns to 20cm @80°																									
		-scatt shs @80°																									
		-v wkperv ser																									
217 50	218 60	Fault, strgly sh'd chty +Qvn'd arg +gougy lapst @30°	FLT				30								1												
		-minor grap slips																									
		LC grades quickly																									

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Si	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		ANALYSIS: Sample ID	Assay	ICP	WR	From	To	Width
218.80	222.00	Bkn, Qvn'd, sh'd w gouge	Lapst				80	80		0.5			4														
		-50% Qvn'd to 50cm mx'd w sh'd lapst @ 80°																									
		-wk ser in lapst																									
		LC grades w less Qvning																									
222.00	266.30	Predom thick bd'd lapst as before	Lapst		80					0.5						0.5											
		-20% dk/med grey bd'd arg intervals to 2m thick																									
		-So fairly persistant @ 80°																									
		-lapst v wk perv ser																									
		-minor vfg py thru w rare mav py clasts <2mm																									
		LC marked at last lapst bed @90°																									
266.30	276.75	Med grey sl arg bd'd @90°	Arg		90	70			55				3														
		-wk local shs @70°																									
		-minor graph slips																									
		LC sharp tight sh bound @ 55°																									
276.75	277.10	Fault? Si'd frags, clasts supported in tight ser gdmss	FLT?							2			3			0.2											
		-fault bx? tr diss py																									
		LC grades into si'd basalt																									
277.10	281.70	Tan basalt bx possible fbx	Tan Bas						45	3						2.0											
		-grades to strg ser w depth																									
		-2% py as large porphyroblasts																									
		-cc rich gdmss to 280.5																									
		LC sharp against gouge fault @45°																									
281.70	281.80	Fault bx bound by sharp tight shs @45°	FLT						45		3			4													
		-prob ank (Q) frags in cc +chl gouge																									
281.80	288.50	Sh'd tan basalt w qtz f'd intervals	Tan Bas	45			45			3			3														
		-locally strgly sh'd @45°																									
		-+0-30%Qcc patches																									
		LC grades																									
288.50	292.20	Mx'd bn'd crmy grey R w intervals of tan basalt	R Vc S		85		45			3			3			10.0			1		9127		X		288.50	289.50	1.00
		-10% py most as SMS seams, beds or clasts																			9128		X		289.50	290.50	1.00
		- So @ 85°-90°, in part sh'd @ 45°																			9129		X		290.50	291.50	1.00
		LC grades																			9130		X		291.50	292.20	0.70
292.20	297.15	Predom tan basalt grading to dk grn bas w depth	Tan Bas			80			45	3	3		2	2		0.5											
		-local strg cc(Q) as con'd vns																									
		-wk-mod sch @80°																									
		Lcsharp tight sh bound @45°																									
297.15	298.80	Sh'd chl sit'd R w strg ser seams	R				45		45	2	3		2	2		0.5											
		-blk chl as gdmss to med grey R clasts (bands)																									
		-mod-strg sh'd thru @ 45°, minor ser gouge seams																									
		-20% Qcc most as sh bound frags																									
		-<1% py																									
		LC distinct sh @45°																									
298.80	334.00	apple grn to med grey R (prob rhyodacite)	Rd			70		45		2	3		1	1		0.2					9131		X	X	300.00	301.00	1.00
		-wk blk chl scatt thru as seams																									
		-wk-mod perv ser																			9132		X		311.00	312.00	1.00

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					ANALYSIS						
				Broken	So	S1	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS		Sample ID	Assay	ICP	WR	From	To	Width
		-spotted thru w fine Q eyes less obvious w depth																									
		-5-10% patchy cc(Q) + vnlts to 1cm @60°																			9133		X		327.00	328.00	1.00
		-wk S1 @ 60°																									
		LC v gradational w increase in perv chl																									
334.00	337.20	Sh'd chl alt'd R mod strg S1 @60°-80°	R		70		70	45		2	3		1	1		0.2					9134		X		334.00	335.00	1.00
		-grey & ser alt'd R clasts sh'd bound w 20% dk chl																									
		-scatt Qvn'd @45°																									
		LC grades quickly																									
337.20	348.20	Apple grn Rd mod perv ser thru	Rd			45				3			2			0.2											
		-possible mx'd RT +BT																									
		-S1 wk thru @ 45°																									
		-intervals to 1m od v strg perv ser																			9135	Au	X		344.60	345.20	0.60
		- minor local py																			9136	Au	X		345.20	346.10	0.90
		LC grades quick w appearance of sulphides																			9137	Au	X		346.10	347.10	1.00
348.20	356.40	Grey sil-rich R rammed thru w S1 ser @60°	R			60				3			3			10.0	1	0.2	?	0.2	9138	Au	X		347.10	348.20	1.10
		-strg sil-rich R clasts w gdmss of ser																			9139	Au	X		348.20	349.20	1.00
		-10% overall py as diss patches, py-rich bnds to1cm																			9140	Au	X		349.20	350.00	0.80
		-py content more w depth																			9141	Au	X		350.00	351.00	1.00
		-minor local ser gouge @60°																			9142	Au	X		351.00	352.00	1.00
		-1% scatt cpy w minor bornite haloes																			9143	Au	X		352.00	353.00	1.00
		LC grades quickly																			9144	Au	X		353.00	354.00	1.00
																					9145	Au	X		354.00	355.00	1.00
																					9146	Au	X		355.00	356.40	1.40
356.40	365.50	Bright yellow grn ser-rich, 20% Q	R	60		60		60		5			3			2.0					9147	Au	X		356.40	358.00	1.60
		-S1 mod (strg) @45°-80°																			9148	Au	X		358.00	359.00	1.00
		-2% py as scatt seams @40°																			9149	Au	X		359.00	360.00	1.00
		-scatt bkn Qvns @80°																			9150	Au	X		360.00	360.60	0.60
		LC lost																									
365.50	365.75	White clay guge w bkn Q	FLT																								
365.75	368.20	Badly bkn w Q-rich +sh'd R intervals to 20cm	R				30			3			4			15.0	0.5		?		9154	Au	X		365.75	367.00	1.25
		- strg ser +py +Q gouge + fault bx																			9155	Au	X		367.00	368.20	1.20
		-strg sh'd intervals @30°																									
		LC bkn																									
368.20	370.05	Sh'd R to 20cm mx'd w strg ser +25% py over 20cm	R Vc S				60			3			4			10.0	0.2				9156	Au	X		368.20	369.35	1.15
		- in part sh'd w tight gouge @ 60°																			9157	Au	X		369.35	370.05	0.70
		LC distinct																									
370.05	371.80	Q +ser +cc knots alt'd basalt?	B			60				2			1	1		1.0					9159	Au	X		370.05	371.80	1.75
		-tan ser thru																									
		-S1 @ 60°, 1% py as cg cubes																									
		-LC grades quickly																									
371.80	380.00	Q +ser +py alt'd R Vc	R Vc S			70			70	4	1		3			10.0	0.5				9159	Au	X		371.80	373.00	1.20
		-distinct R clasts to 2cm in gdmss of ser w minor chl																			9160	Au	X		373.00	374.00	1.00
		-xln py-rich seams, bands diss w local patch cpy																			9161	Au	X		374.00	375.00	1.00
		At 375.05, 5cm bed? SMS of vfg py w Q																			9162	Au	X		375.00	376.00	1.00
		-py content decreases w depth																			9163	Au	X		376.00	377.00	1.00

		DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					ANALYSIS						
From	To			Broken	So	S1	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS		Sample ID	Assay	ICP	WR	From	To	Width
		LC sharp w bght sh @ 70°																			9164	Au	X		377 00	378.00	1 00
																					9165	Au	X		378 00	379.00	1 00
																					9166	Au	X		379 00	380 00	1 00
380 00	414.45	Msv basalt, fg, med grn, no pen fabric, lx spotted	B						90		2			3							9167	Au	X		380 00	381 00	1 00
		-non-magnetic, wk-mod perv cc, <10% cc(Q) vn'd																									
		LC sharp @90°																			9168	Au	X		409 00	410 00	1 00
414 45	437.00	Q +ser +py R Vc w lapilli clasts to 1cm flattened thru	R Vc S			85	45			5		?	3			10 0	1	0 2	2?		9169	Au	X		414 45	416 00	1 55
		-heterolithic w clasts of MS, ser alt'd, R ranging to 5cm																			9170	Au	X		416.00	417 00	1 00
		-S1 mod to strg @80°-90°																			9171	Au	X		417 00	418 00	1.00
		-overal py content at 10% as diss. SMS xl'n py patches.																			9172	Au	X		418 00	419 00	1 00
		bands to 5cm																			9173	Au	X		419 00	420 00	1 00
		-scatt diss cpy not uniform thru, tr Bo?																			9174	Au	X		420 00	421 00	1 00
		-1-2mm, in part cont'd seams (bds?) sph + py																			9175	Au	X		421 00	422 00	1 00
		-v strg yellow grn ser ramified thru in R clast gdmss																			9176	Au	X		422 00	423 00	1 00
		At 436.9: 2cm msv sph bnd (bd?) @ 80°																			9177	Au	X		423.00	424 00	1 00
		-scatt shs @ 45°																			9178	Au	X		424 00	425 00	1 00
		LC marked w increase in py as SMS bds																			9179	Au	X		425 00	426 20	1 20
																					9180	Au	X		426 20	427.00	0 80
																					9181	Au	X		427.00	428 00	1 00
																					9182	Au	X		428.00	429 00	1 00
																					9183	Au	X		429 00	430 00	1 00
																					9184	Au	X		430 00	431 00	1.00
																					9185	Au	X		431 00	432 00	1 00
																					9186	Au	X		432.00	433 00	1 00
																					9187	Au	X		433 00	434 00	1 00
																					9188	Au	X		434 00	435.00	1 00
																					9189	Au	X		435 00	435 50	0 50
																					9190	Au	X		435 50	436 00	0 50
																					9191	Au	X		436 00	437 00	1 00
437 00	457 60	As above but w marked increase in py as beds & clasts	R Vc S			80				5		?	3			25 0	1	1	3		9192	Au	X		437 00	438.00	1 00
		-yellow grn ser-rich clasts																			9193	Au	X		438 00	439.00	1.00
		-439.2 to 439.4. MS py-rich w 20% sil gdmss																			9194	Au	X		439 00	439 60	0 60
		-numerous py-rich beds and/or clasts to 5cm																			9195	Au	X		439 60	440.65	1.05
		-overall py content @ 25 to 30%																			9196	Au	X		440 65	441.50	0 85
		S1 strg @ 80°																			9197	Au	X		441 50	442 50	1 00
		LC grades																			9198	Au	X		442 50	443.50	1 00
																					9199	Au	X		443 50	444.50	1.00
																					9200	Au	X		444 50	445 50	1.00
																					9204	Au	X		445 50	446.00	0 50
																					9205	Au	X		446 00	447.50	1 50
																					9206	Au	X		447 50	449.00	1.50
																					9207	Au	X		449.00	450 00	1 00
																					9208	Au	X		450 00	451.00	1 00
																					9209	Au	X		451 00	452.00	1 00

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					ANALYSIS						
				Broken	So	S1	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS		Sample ID	Assay	ICP	WR	From	To	Width
																					9210	Au	X		452 00	453 00	1 00
																					9211	Au	X		453 00	454 00	1 00
																					9212	Au	X		454 00	454 50	0 50
																					9213	Au	X		454 50	455 20	0 70
																					9214	Au	X		455 20	456 00	0 80
																					9215	Au	X		456 00	457 00	1.00
																					9216	Au	X		457 00	457 60	0 60
457 60	468 80	Q +ser +py sch as above	R Vc S			80	45			5		?	4			15 0	1	0 5	5		9217	Au	X		457.60	459 00	1 40
		-15% py w sph, minor cpy as bnds, beds, vns																			9218	Au	X		459 00	460 00	1.00
		- possible sph stringer zone																			9219	Au	X		460 00	461 00	1 00
		-S1 strg @ 80°																			9220	Au	X		461.00	462 00	1 00
		-scatt shs w crushed qtz +ser gouge @45°																			9221	Au	X		462 00	463.00	1 00
		After 465 unit becomes more siliceous																			9222	Au	X		463.00	464.00	1.00
		LC marked at 10cm but qtz vm @90°																			9223	Au	X		464 00	465 00	1 00
																					9224	Au	X		465.00	466 00	1 00
																					9225	Au	X		466 00	467 00	1 00
																					9226	Au	X		467 00	468.00	1 00
																					9227	Au	X		468 00	468 80	0 80
468 80	475 35	Bkn cc vn'd apple grn B w interflow B/RT to 20cm w wk py	B	45					90							2 0			1								
		LC sharp @90°																									
475 35	475 60	Fg grey sulphidic mud stone w 20% patchy bnds qtz	Mudst		80				90	2			2			20 0			2		9228	Au	X		475 35	475 60	0 25
		-So, S1 @ 80°																									
		LC sharp @90°																									
475 60	476 40	Cc vn'd basalt as before	B																		9229	Au	X		475 60	476.40	0 80
		LC bkn																									
476 40	482 00	Hetrolithic Vc as before w sph, yellow grn ser R clasts	R Vc S		80		30		90	5		?	3			15 0	1	0 5	3		9230	Au	X		476 40	477 00	0 60
		- sch zones of ser +py																			9231	Au	X		477 00	478.00	1 00
		-scatt cpy +sph +py vn to 2cm most @90°																			9232	Au	X		478 00	479.00	1 00
		-scatt shs @ 30°, some w qtz+ser gouge																			9233	Au	X		479 00	480 00	1 00
		LC sharp @90°																			9234	Au	X		480 00	481 00	1 00
																					9235	Au	X		481 00	482 00	1 00
482 00	483 10	Qtz vn w 10% qtz +ser+(py) country rock	Q vn						70	1			5			1 0											
		LC @ 70°																									
483.10	495 80	Rhy agglomerate? possible sh fract'd msv R	R	70						3			3			0.5											
		-light crmy grey R clasts to 7cm tight packed w ser																			9236		X	X	487 00	488.00	1 00
		rammed thru																									
		-mod bkn thru @70°																									
		-minor py as cree pblasts																									
		LC very grad																									
495 80	500 50	Dk grn bas sch, S1 wk-mod @75°	B			75					3	2		1													
		-vague bas frags, Fbx?, spotted thru w cc(Q) after amygd																									
		-chl-rich, talcous																									
		LC vague, bkn																									
500 50	503 55	Rhy agglomerate? As before w dk grn chl patches	R	70			80		80	3	2					0 5											
		LC sh'd @ 80°																									

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	S1	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		ANALYSIS: Sample ID	Assay	ICP	WR	From	To	Width
503.55	507.40	Chl (talc) alt'd R, predom dk grn chl rich w curdy R bnds	R		80					1	3	2	2														
		-From 504.5 -505.1 ser alt'd R So?at 90°																									
507.40	517.80	Chl -talc alt'd bas, chl -talc sch S1 varies S2 as kinks	B	80				70		0.5	4	3	1	2							9237		X	X	509.00	510.00	1.00
		-most S1 @80°, 10-15%ccQ spotted thru #amygd																									
		-10% Q-rich vns scatt thru to 20cm @70°																									
		LC bkn lost																									
517.80	520.70	Faulty zone predom ser +Q gouge w Qvn frags to 10cm	FLT	45			45			3			4			3.0			Y								
		-sh'd @45°																									
		After 520.0 badly bkn and w mineralized R frags																									
		LC bkn																			9238	Au	X		520.00	521.00	1.00
520.70	528.90	Q -ser -py sch, S1 strg and variable	R Vc S							5		2	3			15.0	0.5				9239	Au	X		521.00	522.00	1.00
		- scatt ser gouge interval, crushed																			9240	Au	X		522.00	523.00	1.00
		-py as diss and 1-2cm cont'd seams following S1 and																			9241	Au	X		523.00	524.00	1.00
		as SMS xln py-rich bands to 10cm																			9242	Au	X		524.00	525.00	1.00
		-intervals of strg yellow grn ser																			9243	Au	X		525.00	526.00	1.00
		-10% irregular Qvns																			9244	Au	X		526.00	527.00	1.00
		-overall py content @15%																			9245	Au	X		527.00	528.00	1.00
		LC grades																			9246	Au	X	-	528.00	529.00	1.00
528.90	540.65	Q -ser -py sch, strg local ser sch, cont'd	R Vc S			80				4			4			10.0	0.5		5		9247	Au	X		529.00	530.00	1.00
		-RLT possibly w bas (now yellow grn ser?)																			9248	Au	X		530.00	531.00	1.00
		-bands, flat clasts of ser R, ZnS w py																			9249	Au	X		531.00	532.00	1.00
		-scatt splashes cpyu																			9250	Au	X		532.00	533.00	1.00
		LC grades quick to MS @ 70°																			9254	Au	X		533.00	534.00	1.00
																					9255	Au	X		534.00	535.00	1.00
																					9256	Au	X		535.00	536.00	1.00
																					9257	Au	X		536.00	537.00	1.00
																					9258	Au	X		537.00	538.00	1.00
																					9259				538.00	539.00	1.00
																					9260				539.00	540.00	1.00
																					9261				540.00	540.65	0.65
540.65	541.15	Massive sulphide, py-rich w splashes of cpy	MS		65	65							4			80.0											
		- cpy w qtz vnlts @10°																			9262				540.65	541.15	0.50
		- py incased by 20% sil gdmss																									
		- So (S1?) @ 65°																									
		LC sarp @65°																									
541.15	542.20	Q -ser -py sch py-rich as before w MS bnds to 5cm	R Vc S			65				4		1	4			15.0					9263				541.15	542.20	1.05
		-crse Vc w large R clasts and large ser clasts																									
		-as before																									
		LC bkn																									
542.20	542.50	MS bed ??, lost core w large pieces of MS	MS?										3			50.0											
		-py w sph?																									
542.50	543.60	ser sch badly bkn @ 20°, after 543.0 Qvn'd	FLT	20			20		20	4			4														
		w ser bas frags																									
543.60	546.55	Amygd bas, wk sch, partly ser sh'd @80°	B			80			70	1			1														
		-after 545.4 w bu9 qtz vns																									

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	S1	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS		ANALYSIS: Sample ID	Assay	ICP	WR	From	To	Width
		LC marked after 10cm Qvn @70°																									
546.55	547.40	Q -py -(ser) sch, S1 varies	R Vc S			80		45	60	1			4			20.0	1		5		9264				546.55	547.40	0.85
		-20% x-cut by Qvns @ 45° w crse py																									
		- bnds py-sph (cpy) follows S1																									
		LC at Qvn @ 80°																									
547.40	548.15	SMS xl'n w qtz gdmss +(ser) @70°	SMS			70				3			3			50.0	0.5		3		9265				547.40	548.15	0.75
548.15	551.30	Q -py -ser sch, SMS xl'n py bnds to 10cm																			9266				548.15	549.00	0.85
		-flat py-sph-(cpy) clasts																			9267				549.00	550.00	1.00
		after 550.8 good blackjack																			9268				550.00	550.90	0.90
		LC grdaes quick																			9269				550.90	551.30	0.40
551.30	551.95	msv xl'n py w 10% f sil gdmss. sph?	MS							1			4			90.0			5		9270				551.30	551.95	0.65
		LC sharp @ 90°																									
551.95	561.70	py -ser -Q sch. 20% py-rich clasts	R Vc S		85	85			85	4			4			30.0	1		7		9271				551.95	552.30	0.35
		-bd'd py in ser-qtz sch w some primary fg Vc S textures																			9272				552.30	553.00	0.70
		-rare 10cm sulphide mudst																			9273				553.00	554.00	1.00
		-at 553.6 -554.0 MT																			9274				554.00	555.00	1.00
		sph increases w depth																			9275				555.00	556.00	1.00
		LC grades quickly																			9276				556.00	557.00	1.00
																					9277				557.00	558.00	1.00
																					9278				558.00	559.00	1.00
																					9279				559.00	560.00	1.00
																					9280				560.00	560.75	0.75
																					9281				560.75	561.70	0.95
561.70	563.50	strg ser alt'd sch @80° crmy grey	RT			80				5																	
		-fg RT																									
		LC sharp 5cm cont'd Qvn																									
563.50	571.50	ser sh'd R, remnant lite grn ser	R Vc0			80				3			4														
		] sh'D @80°																									
		LC grades quickly																									
571.50	572.50	ser alt'd R aggl. 60% lite grn aggl of R perv ser				80			90	3			4														
		-after 573.5 strg sch @80°																									
		LC distnct @ 90°																									
572.50	582.25	Q -ser -py sch sil-rich w ser sch	R Vc S			80	30	60	30	4			4			20.0	1		1								
		-possioble B w depth																			9282				574.00	575.00	1.00
		-bn'd supha thru following S1 @ 80°																			9283				575.00	576.00	1.00
		-scatt shs @ 30°																			9284				576.00	577.00	1.00
		LC sharp @ 30°																			9285				577.00	578.00	1.00
																					9286				578.00	579.00	1.00
																					9287				579.00	580.00	1.00
																					9288				580.00	581.00	1.00
																					9289				581.00	582.00	1.00
582.25	582.90	ser -Q -py sh'd w gouge	R Vc S				45		30	4			4			10.0			7		9290				582.00	583.00	1.00
		LC @ 30°																									
582.90	585.60	Q -ser -py sch as before but w sph? Clasats	R Vc S			80				4			5			15.0			7								
		-10% xl'n py seams, vns w Q gdmss																			9291				583.00	584.00	1.00

		DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					ANALYSIS						
From	To			Broken	So	S1	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS		Sample ID	Assay	ICP	WR	From	To	Width
		-more sil w depth																			9292				584.00	585.00	1.00
		LC grades																									
585.90	586.65	basalt T. wk sch @ 60°. wk perv cc. 20% cc vn'd @45°	BT			60		45	70	1			3	3							9293				585.00	586.00	1.00
		LC sharp @ 70°																									
586.65	587.10	R clasts in wk ser gdmss	RLT							2			2								9294				589.65	589.90	0.25
587.10	588.10	BT (RT) as before	BT			65			85																		
		LC sharp @ 65°																									
588.10	588.40	chty sil exhalite, minor ser as seams @80°	Cht			80		70	80	1			5														
		-10% x-cutting Q(cc) vn's @ 70°																									
588.40	589.65	BT ((RT)) as before	BT			65			85																		
589.65	589.90	interflow chert w clasts of MS. patchy cpy	Cht						70	2			3			7.0	2		10								
		-20% Qvn'd, 10% cc patches																									
		LC distinct @ 70°																									
589.90	592.45	msv basalt flow	B					40	90		2																
		-no (v wk) pen fabric																									
		-15 % ccQ vn'd most @ 40°																									
		LC distinct @ 90°																									
592.45	594.90	bd'd cht / py / (sph)(Cpy) exhalite, So @ 90°	Cht S		90	90			90	1			5			20.0	1		7		9295				592.45	593.50	1.05
		LC distinct 90°																			9296				593.50	594.50	1.00
594.90	608.25	Q -ser -tc -py -sch	R Vc S		90	60			30	5		2	3			15.0			5		9297				594.50	595.50	1.00
		-transposed hetrolithic felsic Vc as before but w distinct																			9298				595.50	596.50	1.00
		talc-rich clasts																			9299				596.50	597.50	1.00
		-S1 fabric changes from 90° to 30° w depth																			9300				597.50	598.50	1.00
		-scatt shs @ 60°																			9304				598.50	599.50	1.00
		-sph increases w depth																			9305				599.50	600.50	1.00
																					9306				600.50	601.50	1.00
																					9307				601.50	602.50	1.00
																					9308				602.50	603.50	1.00
																					9309				603.50	604.50	1.00
																					9310				604.50	605.50	1.00
																					9311				605.50	606.50	1.00
																					9312				606.50	607.50	1.00
																					9313				607.50	608.25	0.75
608.25	609.10	SMS sh'd py-rich	SMS			30	30		30	1				3					10		9314				608.25	609.10	0.85
		sh'd @ +/- 30°, hl'd by 30% sc																									
		LC bkn against gouge																									
609.10	609.20	tc -ser -Q gouge	FLT																		9315				609.20	610.00	0.80
609.20	610.55	Fault. sh'd Q-ser-py sch, strg fabric hl'd @30°	FLT													3.0											
610.55	611.15	sh'd remnant of mg mafic . cc(Q) stwk	M dy								3	3		3													
		-tal -chl alt'd																									
		LC lost																									
611.15	616.10	sh'd Q-ser- (tc) sch, sh'd 10° -30°	R Vc	10		20			10	3		3	2														
		-badly bkn from 611.7 to 612.8																									
		- sh'd R lap in gdmss of tc =ser																									

		DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					ANALYSIS						
From	To			Broken	So	S1	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS		Sample ID	Assay	ICP	WR	From	To	Width
		LC distinct @ 10°																									
618.10	618.70	sh'd mafic unit as before					5																				
		LC @ 5°																									
618.70	623.30	sh'd hf'd R Vc primary s/i R clasts in ser gdmss	R Vc							2			4			0.5					9316				621.50	622.50	1.00
		-S1 ranges from 0° to 80° w depth																									
		-hf'd x-cutting shs @ 40°																									
		-minor diss py																									
		LC grades																									
623.30	624.40	sh'd mafic	M dy				70	45		1	2		3														
		- prob same unit as above in fasult																									
		-med dk grn chl																									
		-20% Qcc vn'd most @ 45°																									
		-S1 wk following wk ser @ 70°																									
	624.40	EOH																									

Drill Hole ID: FM05-41

- Location: 382770E 6329374N 1231 m El
  Dip / Azimuth / Length: -90 / 360° / 584.3m
  Date Started: July 8 2005
  Date Finished: July 14, 2005
  Logged By: M Middleton
  Date Logged: July 9-15, 2005
  Drill Contractor: HY-TECH Drilling Ltd
  Core Size: NQ2
  Casing left in hole: ***m
  Comments
- Survey location by hand held GPS

In hole survey	Depth	Dip	Azimuth	Magnet	Temp
Reflex					
Reflex					
Reflex					

Note: Magnetic declination @ -23 5°.

Alteration ranges from 1 very weak to 5 very strong

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts
0.00	9.10	Overburden							
9.10	16.95	Blk-dk grey arg w strg graphitic slips contorted	Arg		80	70		80	
		So @ 80°, locally sh'd @ 70°							
		7% Qcc vn'd, 3% Py following So and as irregular patches							
		LC distinct @ 70°							
16.95	20.53	Bd d Graphitic arg w/ small beds of fg T	G Arg			70		70	70
		4% Qcc vn'd contorted 3% Py in Qtz vn's in arg							
		and diss'm in T Strg graphite slips							
		LC lost							
20.53	21.70	Graphitic arg. 5% Q(cc) vn'd @85°	G Arg		80	80		85	
		So @80° 5cm mg T bd @ 70°							
		minor chl alt'n. 1% Py along So							
		LC lost							
21.70	24.08	Lap T w/ bd'd contorted arg.	L T/arg		55	60			
		1% py along bds and diss'm in T							
		Intermingled dk grey-blk T bd's							
24.08	27.47	Graphitic arg w/ contorted Qtz veins	G Arg	60	80			90	60
		and intermingled dk grey-light grey arg bd's							
		1% diss'm Py and irregular patches							
		10% Q(cc) veins @ 90°							
		LC sharp @ 60°							
27.47	28.19	Mg T w/ wispy arg. Beds	Arg		70				70
		minor ser Alt'n							
		trace diss'm Py							
		LC sharp @ 70°							
28.19	34.49	Interbd'd arg/T w/ contorted Qcc vn's @ 60° to 90°	Arg/T	90	70				80
		2% diss'm Py and irregular patches							
		So @ 70°							
		LC sharp @ 80°							

From	To	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS	% Aspy	Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
0.00	9.10																		
9.10	16.95				1	1	3	3											
16.95	20.53				1	1	2	3											
20.53	21.70		0.5		0.5	0.5	3	1											
21.70	24.08							1											
24.08	27.47				2		3	1											
27.47	28.19	1			1		1	0.5											
28.19	34.49				1		1	2											

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS	% Aspy	Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
34.49	38.27	Lt grey Lithic T w/ bd'd dk-grey arg.	L T/arg		60			60	50				1	1	1												
		Qcc vn'd @ 60°																									
		LC sharp @ 50°																									
38.27	40.21	Flt. Badly bk'n arg W/ Qtz	Flt										2		1	1											
		locally graphitic																									
		trace Py along Qtz contacts																									
		LC vague																									
40.21	41.39	Bd'd blk-grey arg bd'd @ 60° w/ graphitic sections		70	60			60	70				1		1	2											
		2% py along bd and in Qtz clasts																									
		S0 @ 60°																									
		LC sharp @ 70°																									
41.39	42.08	Bd'd dk grey arg and T	Arg/T	60	60			60	60		1		1	1		0.5											
		minor chl alt'n in T minor Qcc vn'd @ 60°																									
		Small R clasts in tuff?																									
		So @ 60°																									
42.08	43.77	Flt Bk'n blk argin part graphitic	Flt		60			60					0.5	0.5	2												
		5% Qcc vn'd @ 60°																									
		So @ 60°																									
		LC broken																									
43.77	44.30	Mg grey T	T																								
		Trace Py diss'm								1			1			0.5											
		LC grades																									
44.30	44.90	Blk arg w/ minor Qcc vn'd @ 90°	Arg		80		70	90	70				0.5	0.5		0.5											
		Trace Py along bd and as irregular patches																									
		So @ 80° locally sh'd @ 70°																									
		LC sharp @ 70°																									
44.90	45.51	Mg T	T						80							0.5											
		Trace Py diss'm																									
		LC sharp @ 80°																									
45.51	46.04	Arg W/ 3% Qcc vn'd @ 90°	Arg	45	90			90	45							0.5											
		Graphitic slips trace Py diss'm																									
		So @ 90°																									
		LC sharp @ 45°																									

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					Sample ID	ANALYSIS					
				Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS	% Aspy		Assay	ICP	WR	From	To	Width
46.04	46.96	Arg/T intermingled bd'd w/ 4% Qcc vn'd @ 80°	Arg/T					80					2	2	1	1											
		minor graphitic sections																									
		trace diss'm Py																									
		So @ 80°																									
		LC vague																									
46.96	48.15	Qcc vn'd w/ sections of ser alt'd arg	Qcc vn					60		1			2	2	1	0.5											
		minor graphitic slips, trace Py in small Qtz vn @ 60°																									
		LC vague																									
48.15	50.88	Lapilli stone w/ elongated clasts	Lapst						80		1					0.5											
		minor chl alt'n																									
		1% vfg Py diss'm and small irregular patches																									
		LC sharp @ 90°																									
50.88	51.50	Arg w/ cc(Q) stringers	Arg					80	90		0.5		1	1		0.5											
		1% diss'm Py, v minor chl alt'n																									
		LC sharp @ 90°																									
51.50	52.17	Ser alt'd arg w/ 5% cc(q) vn'd @ 80°	Arg	80	90		80	80		2			1	1		0.5	0.1										
		0.5% diss'm Py and trace cpy																									
		So @ 90°																									
		LC vague																									
52.17	53.94	mg T w/ 0.5% cc(Q) vn'd @ 70°	T					70		0.5			0.5	0.5		0.3											
		0.5% diss'm Py																									
		minor ser. Alt'n																									
		LC grades																									
53.94	55.75	bd'd dk grey / lt grey arg. W. 3% cc(Q) vn'd @ 75°	Arg		85		80	75					0.5	0.5		0.5											
		0.5% Py diss'm and along Qtz salvages																									
		So @ 85°																									
		LC grades																									
55.75	56.31	cc(Q) vn'd w/ mod ser alt'n	cc(Q) vn							2			4	4													
		LC grades																									
56.31	58.33	layered arg/ lapilli stone	Arg/lapst	85	70		85	80					1	1													
		1-2% Qcc vn'd @ 80°																									
		So @ 70°																									
		LC grades																									
58.33	62.37	Hetro lapst w/ cc/ser. Alt'd elongated clasts	hetro lapst		70																						
		lineation trends @ 70°																									
62.37	63.52	Hetro lapst as above w/ small distinct zones of chl alt'n	hetro lapst		70						2																
		So @ 70°																									
63.52	64.79	Hetro lapst grading to lapilli T	hetro lapst						50																		
		LC sharp @ 50°																									
64.79	66.06	Hetro lapst w/ cc/ser. Alt'd elongated clasts	hetro lapst	50					50																		
		localized chl. Alt'n																									
		LC sharp @ 50°																									

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					Sample ID	ANALYSIS					
				Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS	% Aspy		Assay	ICP	WR	From	To	Width
66.06	74.49	Mixed hetro T/ Arg	Arg/ T		65			65					1	1		1											
		30% T in tuffaceous arg																									
		15% Qcc vnlt's																									
		1% Py diss'm and along vn's																									
		So @ 65°																									
		LC grades																									
74.49	85.06	Tan Bsl / Chert	Tan Bas/		80			80	80	1	1					1					9317		X		76.82	77.53	0.71
		Msv fg py localized	Chert																								
		5% irregular Qtz vn'd																									
		So @ 80°																									
		LC sharp @ 80°																									
85.06	83.37	Fbx bslt clasts to 5cm	Bas FBx					70	80		2		0.5	0.5													
		2% Qcc vn'd @ 70°																									
		LC sharp @ 80°																									
83.37	113.76	Amygd. Pillow bas	Bas				70	70		1			1	1		1											
		zones of chilled margins																									
		1% msv fg py localized																									
		5% Qcc vn'd @ 60° and cc filled amygd																									
		localized ser alt'n																									
		LC broken																									
113.76	119.50	Flt sh'd bk'n w/ gouge	Flt						80		2																
		Amygd pillow Bas and tan Bas																									
		90cm gouge																									
		Flt bk'n @ 80°																									
		LC bk'n																									
119.50	123.70	dk grey Bas contorted	Bas		60	60		60			1																
		sch'd @ 60° w/ 5% silica bnd's																									
		small maroon augens																									
		So @ 60°																									
		LC grades																									
123.70	126.72	Tan Bslt / Chert	Tan Bas/	60	50			50	60	1	1					1					9318		X		124.66	125.66	1.00
		slight Bx, infilled w/ silica	Chert																								
		1% vfg msv Py																									
		So @ 50°																									
		LC grades																									
126.72	135.18	Tan Bas grading to amygd maroon Bas	Tan Bas					85			2																
		Top of unit bk'n																									
		cc(Q) vnlt's @ 85°																									
		LC sharp @ 70°																									
135.18	135.40	Qcc vn'd @ 70°	Qcc vn					70	85				55	40													
		LC sharp @ 85°																									
135.40	139.85	Tan Bas grading to maroon Bas	Tan Bas		70	80		45																			

		DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION						ANALYSIS					
From	To			Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS	% Aspy	Sample ID	Assay	ICP	WR	From	To	Width
		w/ clasts and bd'd tan Bas																									
		lightly sch'd @ 60°																									
		So @ 70° LC cut by Q vn @ 45°																									
139 85	154.55	Maroon Bas w/ bd'd tan Bas? w/ felsic frags	Bas			85		60		1	1										9319		X		150.00	151.00	1.00
		Textures vary from amygd. To massive																									
		5% Qcc vn'd @ 60°																									
		LC vague																									
154 55	161 05	Chl sch w/ R clasts to 2cm	Chl sch/R		50	50		50			2	2		1													
		30% Qcc vn'd to 20cm. Chl and tc alt'n mod.																									
		Qcc vn'd @ 50° So @ 50°																									
		LC grades																									
161 05	163.82	Chl and talc sch w/ R clasts sch'd @ 60°	Chl sch/R			60	60	80			3	3															
		40% R clasts in highly alt'd ground mass																									
		2% Qcc vn'd @ 80° and Qcc clasts																									
		LC grades																									
163 82	166.06	Frag'd R in chl and tc alt'd sch @ 70	Chl sch/R			70					2	2															
		R clasts subangular																									
166 06	172.11	Light grey R mod alt'd	R		50	50		60		1	2	2															
		gr and maroon (hem) alt'n sch @ 50°																									
		1% Qcc vn'd @ 60°																									
		So @ 50°																									
		LC grades																									
172 11	177 44	Chl alt'd lt grey R	Chl sch/R	60	80	80		55		1	2	2															
		bnd's of intense chl along sch @ 80°																									
		3% Qcc vn'd @ 65° and irregular patches																									
		locally intense chl sch																									
		So @ 80°																									
		LC grades																									
177 44	178.56	Siliceous chl/ser alt'd R	R		70	70		20		2	2		1	1		1											
		localized lt gr chl alt'n along So																									
		5% Q(cc) vn'd @ 20°																									
		So @ 70°																									
178 56	183.20	Chl alt'd R	R		70	70					3	1															
		lt green to pale yellow chl sch @ 60°																									
		5% Qcc vn'd @ 50° and along sch																									
		181 22-181 32 -ser sch w/ 1% diss'm py																									
		So @ 70°																									
		LC grades																									
183 20	186 20	Chl/tc alt'd R	R		50	85		50			3	1															
		R angular to flat clasts in chl groundmass																									
		sch'd @ 85°																									
		3% Qcc vn'd @ 50° and irregular patches																									

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					Sample ID	ANALYSIS			From	To	Width
				Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS	% Aspy		Assay	ICP	WR			
		So @ 50°																									
		LC grades																									
186 20	191 77	Chl R sch'd @ 75°	R	80		80		80			2																
		Lt grey flat R clasts in chl alt'd groundmass																									
		segments of bx R																									
		localized intense alt'n along So																									
		Scattered Qcc vn'd @ 80°																									
		LC vague																									
191 77	204.21	R fragments to 5cm in chl alt'd groundmass	R	70	70	60					3	1															
		intense alt'd zones along Sch'd @ 60°																									
		200.33 5cm Flt	Flt																								
		201 13 -204 21 -flat R clasts in chl alt'd groundmass																									
		So @ 70°																									
		LC vague																									
204 21	207 05	Intense chl/tc alt'n w/ 25% lt grey, flat R clasts	R					85			4	2															
		3% Qcc vn'd @ 85° and irregular patches																									
207 05	214.48	Chl sch w/ siliceous bd's and flat R clasts	Chl sch/R	85	70	80		80			2	2	1	1													
		sch'd @ 80°																									
		alt'n Lt to dk green w/ maroon bd's (hematite)																									
		So @ 80°																									
		LC bk'n by Flt																									
214 48	215.30	Flt bd'l bk'n unit as above	Flt																								
		w/ 5cm section gouge																									
		LC broken																									
215 30	218 18	Chl sch w/ sil bd's and R clasts	Chl sch/R		70	70		70			2	2	1	1													
		sch'd @ 70°																									
		So @ 70°																									
218 18	231 38	Siliceous chl alt'd sch w/ felsic clasts	Chl sch	80		80	75	40			3										9321		X		220 11	220 96	0.85
		wk -mod sch'd @ 80°																									
		2% Qtz vn'd @ 40°																									
		ser alt'd zone around shear @ 75°																									
		LC sharp																									
231 38	238.75	Siliceous chl/tc sch w/ felsic clasts	Chl/tc sch		75	85			85		3	3															
		localized zones of intense chl alt'n																									
		2% siliceous vnlt's																									
		Qcc irregular patches to 8cm																									
		So @ 75°																									
		LC sharp by sch																									
238.75	244 60	mod chl alt'd sch w/ siliceous bd's	Chl sch		80			60		2	3		1	1													
		localized zones of intense ser alt'n to 20cm																									
		sch'd @ 80°																									
		LC sharp by Qtz vein @ 60°																									

		DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION						ANALYSIS					
From	To			Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS	% Aspy	Sample ID	Assay	ICP	WR	From	To	Width
244 60	255 07	siliceous ser sch w/ chl alt'd R	Ser sch/R		80	80				2	2					3					9322		X		251.05	251.93	0.88
		3% fg py bands along sch and in siliceous veins to 2 5cm																			9323		X		252.85	253.82	0.87
		siliceous veins to 10% py and trace cpy																									
		So @ 80°																									
		LC vague																									
255 07	258 37	Intense chl/tc sch w/ felsic clasts	Chl/tc sch			70			80	1	4	1															
		localized ser alt'n along sch																									
		sch'd @ 70°																									
		LC sharp @ 80°																									
258.37	261 58	Grey to dk grey chl sch w/ larger R clasts	Chl sch/R	85		85		40			2	1															
		Maroon to Lt green chl sch w/ Qcc irregular patches																									
		sch'd @ 85°																									
		LC sharp by Qcc vnn @ 40°																									
261 58	272 22	Maroon (hem) chl sch'd @ 80° to 90°	Chl sch	80	70			70			2																
		localized sections of Lt green to pale yellow alt'n																									
		35% flat R clasts																									
		264 90 to 265.83 - sm Qcc and R? augens in bk'n																									
		maroon and green chl sch																									
		266 70 to 272 22 - increased Qcc vnlt's in maroon chl sch																									
		Qcc vn'd @ 70°																									
		So @ 70°																									
		LC grades																									
272 22	273 97	Chl sch w/ pale yellow chl alt'n along sch	Chl sch		80			90		1	3	1															
		Grades to maroon sch																									
		2% Qcc vn'd @ 90° and as irregular patches																									
		So @ 80°																									
		LC grades																									
273 97	288 16	Bk'n chl sch w/ 15% irregular R clasts	Chl sch/R		70	80			85		2	2															
		tc alt'n along sch @ 80°																									
		286 84 to 286 94 - vfg py vn's																									
		2% Qcc irregular vn'd and as patches																									
288.16	289 13	Msv chl alt'd siliceous groundmass	Chl sch			85				1	4	1									9324		X	X	288 16	289 06	0 90
		irregular patches of Qcc																									
		So @ 85°																									
		LC grades																									
289 13	298 03	R w/ chl alt'd sch	R	90	80	80										2					9325		X		293 16	293 83	0 67
		67cm 20% msv sulphides in R																									
		297.39 - 41cm bk'n fault w/ 18cm gouge																									
		sch'd @ 80°																									
		So @ 80°																									
298.03	299 33	R w/ minor chl alt'n	R		60	70					1					5	0 5				9326		X		298 24	299 33	1 09
		5% mg to vfg msv sulphides																									

From	To	DESCRIPTION	LITHO	STRUCTURE: Broken	So	Sch	Shears	Veins	Contacts	ALTERATION: Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION: % Py	% Cpy	% PbS	% ZnS	% Aspy	Sample ID	ANALYSIS: Assay	ICP	WR	From	To	Width
		trace cpy																									
		weakly sch'd @ 70°																									
		So @ 80°																									
		LC grades																									
299 33	301 70	Chl sch w/ rounded R clasts to 4 cm	Chl sch/R		70	50		70			2	1				0 5											
		Qcc vn'd @ 70° and irregular patches																									
		299 72 - 5cm msv sulphide bnd																									
		sch'd @ 50°																									
		So @ 70°																									
301 70	306 80	Chl sch w/ R clasts and bnds	Chl sch/R	40	40	50					2	1	1	1		10	0 5				9327		X		301 70	302 70	1 00
		5% Qcc clasts and bands																			9328		X		302 70	303 70	1 00
		10% vfg - fg msv Py																			9329		X		303.70	304 70	1 00
		trace cpy																			9330		X		304 70	305 70	1 00
		siliceous bd's to 10cm w/ 40% sulphides																			9331		X		505 70	306 80	1 10
		localized zones of pale yellow chl along sch																									
		So @ 40°																									
		LC grades																									
306 80	309 72	lt green to pale yellow chl/tc sch @ 50°	Chl/tc sch		70	50			70		3	2															
		30% flat R clasts																									
		2% Qcc vn'd and irregular patches																									
		So @ 70°																									
		LC sharp by Qtz vein @ 70°																									
309.72	310 86	Siliceous chl sch'd @ 75°	Chl sch		70	75			60	2	2	1	1	1		3					9332		X		309 72	310 72	1 00
		3% vfg msv sulphide vn's																									
		5% R clasts																									
		So @ 70°																									
		LC sharp @ 70°																									
310.86	316.30	Siliceous R sch w/ chl alt'n	R		80		90	5	85		2		1	1		2	0 5				9333		X		315 52	316.02	0 50
		15% Qcc vn's and patches																									
		2% vfg py and trace cpy																									
		intense pale yellow chl alt'n localized along sch																									
		So @ 60°																									
		LC sharp @ 85°																									
316 30	323.26	Siliceous chl sch'd @ 70°	Chl sch	70		70		50	50		2					2					9334		X		317 10	318 10	1 00
		10% R clasts																			9335		X		319.27	320.27	1 00
		5% Qcc vn'd @ 50°																									
		localized highly chl alt'd along sch																									
		319 14- 320 28 Flt	Flt																								
323 26	325 00	Qcc vn'd @ 50°	Qcc vn					50					4	1		2					9336		X		324 05	324.55	0.50
		Vn's to 36cm																									
		fragments of chl sch to 15cm w/ 10% fg py																									
325 00	334 82	Chl sch w/ Qcc flooding and felsic clasts R?	Chl sch	80	80	80					1	1	2	2		3					9337		X		332 34	333 34	1 00

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					Sample ID	ANALYSIS			From	To	Width
				Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS	% Aspy		Assay	ICP	WR			
		localized intense chl/tc alt'n to 10cm																			9338		X		333.34	334.34	1.00
		3% diss'm and banded py																									
		sch @ 80°																									
		So @ 80°																									
		LC grades																									
334.82	341.82	Siliceous chl/tc sch w/ Qcc vn's	Chl/tc sch	60	60	70		30			2	1	2	2		1											
		Qcc vn'd @ 30°																									
		1% py in narrow siliceous bnd's to 2cm																									
		sheared @ 70°																									
		So @ 60°																									
341.82	343.06	Str chl sch w/ flat R clasts	Chl sch/R	70		70	40	35			4	1				0.5											
		342.77 4cm siliceous vn'd @ 80° w/ 5% vfg py																									
		sheared @ 40°																									
		Qcc vn'd @ 35°																									
343.06	344.91	Flt	Flt																								
		chl sch and felsic clasts to 2 cm																									
		20cm gouge																									
344.91	347.97	Dk green to pale yellow chl	Chl sch		60	80		60	80		3		1	1		0.5											
		mod sch'd @ 80°																									
		felsic clasts to 3cm																									
		10% Qcc vn'd @ 60° and patches																									
		trace cg py																									
		So @ 80°																									
		LC sharp by Qtz vn @ 60°																									
347.97	356.19	Massive Qcc vn'd @ 80°	Qcc vn					60	60		1					1	0.5				9339		X		354.00	354.50	
		sections w/ chl sch and R tuff clasts																									
		352.57-31cm R tuff bd																									
		353.26 - 26cm R tuff bd																									
		1% fg py in chl alt'd clasts																									
		LC sharp @ 60°																									
356.19	362.28	Siliceous chl sch	chl sch	70		60				1	2		1	1													
		10% felsic clasts																									
		30% Qcc vn's to 32cm																									
		358.49 - 59cm alt'd R tuff?																									
		sch'd @ 60°																									
		LC grades																									
362.28	371.85	Chl alt'd R sch'd @ 80°	R		85	80			85		2					3											
		10% Qcc vn's and patches																									
		363.95 - 14cm siliceous clasts w/ fg py bnd's																									
		368.96- 9cm siliceous bnd w/10% diss'm fg py																									
		So @ 85°																									
		LC broken by Flt																									

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					Sample ID	ANALYSIS			From	To	Width
				Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS	% Aspy		Assay	ICP	WR			
371.65	372.25	Flt gouge w/ rounded Qtz and felsic fragments	Flt						60							1											
		1% vfg sulphides in gouge																									
		LC sharp @ 60°																									
372.25	376.35	intensly ser/chl alt'd groundmass w/ R clasts	R			80		80		3	3	2				1	0.5										
		30% Qtz flooding w/ cg py cubes and trace cpy																									
		5% Qcc vn'd @ 80°																									
		mod sch'd @ 80°																									
376.35	379.35	Lt green to pale yellow chl sch	Chl sch	60		70			60		3					2					9368		X		378.30	379.80	1.50
		10% Qcc vn's and patches																									
		2% mg py in sm siliceous vnlt's and diss'm																									
		sch'd @ 70°																									
		LC sharp @ 60°																									
379.35	381.53	Chl sch, Lt green to maroon bnd's w/ fg felsic bnd's	Chl sch			85		80	60		2										9369		X		379.80	381.50	1.70
		5% Qcc vn's and patches																									
		Vn'd @ 80°																									
		sch'd @ 85°																									
		LC sharp @ 60°																									
381.53	382.40	intense chl/ser alt'n in sch'd groundmass	chl/ser sch		60	80			65	3	3					0.5					9370		X		381.50	382.75	1.25
		siliceous clasts to 5cm																									
		trace cg py																									
		sch'd @ 80°																									
		So @ 60°																									
		LC sharp @ 65°																									
382.40	383.00	chl sch w/ R bnd's	Chl sch/ R			80					2					3					9371		X		382.75	383.00	0.25
		3% diss'm cg py																									
		sch'd @ 80°																									
		LC grades																									
383.00	385.10	Siliceous chl/ser sch w/ 40% R bnd's and clasts	R			70		80	85	2			2	2		7	2				9340		X		383.00	384.00	1.00
		10% Qcc vn's and patches																			9341		X		384.00	384.60	0.60
		Vn'd @ 80°																			9342		X		384.60	385.10	0.50
		sch'd @ 70°																									
		7% vfg to fg msv py																									
		2% cpy																									
		msv sulphid bd's to 14cm																									
		localized intense chl alt'n along bnd's																									
		LC sharp @ 85°																									
385.10	385.92	R bx in chl alt'd groundmass	Rbx			75					2					2	0.5										
		2% vfg py blebs and trace cpy																									
		slightly sch'd @ 75°																									
		LC grades																									
385.92	386.72	Siliceous chl alt'd R	R						70		3		2	2		2	7		1		9364		X		385.10	385.92	0.82
		Qtz vn'd @ 70°																			9343		X		385.92	386.72	0.80

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					Sample ID	ANALYSIS					
				Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS	% Aspy		Assay	ICP	WR	From	To	Width
		2%diss'm py																									
		7% cpy diss'm and as blebs																									
		1% sph																									
		LC sharp @ 70°																									
386 72	389 43	Chl alt'd R slightly sch'd @ 80°	R			80			85		2					3					9344		X		386 72	387 72	1.00
		sm localized highly alt'd zones																			9365		X		387 72	388.72	1.00
		3% vfg py diss m and in siliceous bnd s to 1 cm																			9366		X		388 72	390 00	1 28
		LC sharp @ 85°																									
389.43	390 04	Flt as above w/ gouge and R fragments	Flt						40							0 5					9367		X		390 00	390 93	0 93
		Trace py																									
		LC sharp @ 40°																									
390 04	395 10	Chl/tc? Alt'd R	R		80						3	1				2					9345		X		390 93	391 93	1 00
		mod sch'd @ 60°																			9350		X		391 93	392 93	1 00
		localized highly alt'd bnd's																			9354		X		394 10	395 10	1.00
		2% fg diss'm py																			9346		X		395 10	396 10	1 00
		So @ 80°																									
		LC grades																									
395 10	400 75	R mod sch'd @ 80°	R		40	80	40		75	1	1	1				5					9355		X		396 10	397 10	1 00
		localized highly alt'd R bnd's																			9356		X		397.10	398.10	1 00
		weak chl/tc alt'n																			9357		X		398 10	398 95	0 85
		399.11 bx ser alt'd groundmass 15cm																			9358		X		398 95	399 75	0 80
		5% fg py in siliceous clasts and bnd's																			9359		X		399 75	400 75	1 00
		So @ 40°																			9360		X		401 15	401 65	0 50
		LC sharp @ 75° by Qtz vn																									
400 75	403.11	Bull Qtz	Qtz vn						50	2											9361		X		403 04	403 84	0 80
		401.12 - 44 cm R w/ chl alt'n																									
		401.70 - 4cm intense ser alt'd zone																									
		LC sharp @ 50°																									
403 11	403 84	Chl sch w/ flat R clasts	Chl sch/R			70					2					3											
		irregular zones of intense alt'n																									
		3% fg py bnd's and diss'm																									
		sch'd @ 70°																									
		LC grades																									
403 84	404 84	msv vfg sulphide w/ very faint bd?	Sulphides								1		1	1		60	7		1		9347		X		403 84	404 34	0 50
		7% cpy diss'm and as blebs. trace sph																			9348		X		404 34	404 84	0 50
		minor chl alt																									
		10% siliceous clasts																									
		LC grades																									
404 84	407 84	Chl sch w/ 60% flat R clasts	R			60										7					9349		X		404.84	405 84	1 00
		7% fg py along sch																			9362		X		405 84	406 84	1.00
		sch'd @ 60°																			9363		X		406 84	407 84	1.00
		LC grades																									

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION					Sample ID	ANALYSIS			From	To	Width
				Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS	% Aspy		Assay	ICP	WR			
407 84	413 31	Chl sch w/ 60% R fragments surrounded by chl alt'n	R		60			40	50		2	1				3	0.5				9372		X		407 84	408 84	1 00
		5% Qcc vn's and patches																			9373		X		408 84	409 84	1 00
		vn'd @ 40°																			9374		X		409 84	410 84	1 00
		3% fg py diss'm and in siliceous vn's																			9375		X		410.84	411 84	1 00
		trace cpy																			9376		X		411 84	413 31	1 47
		So @ 60°																									
		LC sharp @ 50° by Qtz vn																									
413 31	418 60	Flt	Flt						15	1	3					3	0.5				9379		X		414 31	415 31	1 00
		chl sch w/ 30% Qcc vn's																			9380		X		415 31	416 31	1 00
		bdl'y bk'n with 2m gouge																			9381		X		416 31	417 61	1 30
		3% fg to vfg py, trace cpy																									
		LC bk'n																									
418 60	421.80	25% R clasts in ser alt'd groundmass	R		40	40				2			1	1	1	0.5											
		419 75- 60cm silics alt'n w/ bnd's of bk phyllite																									
		trace diss'm Py																									
		sch'd @ 40°																									
		LC bk'n																									
421 80	426 25	Chl sch w 20% Qcc vn's	Chl sch			60		50			2																
		vn'd @ 50°																									
		10% R bnd's along sch																									
		clasts of bk phyllite to 5cm																									
		sch'd @ 60°																									
		LC bk'n																									
426 25	428 55	Flt	Flt						60																		
		bk'n bk phyllite																									
		50cm gouge																									
		LC sharp @ 60°																									
428 55	435 25	Chl sch w/ felsic clasts	Chl sch							1	2				1												
		429.05- 6cm bnd bk phyllite																									
		2% Qcc patches																									
		432.21- 30cm bk phyllite w/ graphic slips																									
		432 51 to 435 25 chl ser sch w/ felsic clasts																									
		LC bk'n																									
435 25	442 81	Chl sch w/ flat felsic clasts	Chl sch	70		50		40	70		2					0 5											
		5% Qcc vn's @ 40°																									
		1% siliceous clasts w/ fg py and trace cpy																									
		sch'd @ 50°																									
		LC sharp @ 70° by Qtz vn																									
442.81	443.10	Qtz vn (bull Qtz)	Qtz vn						70																		
		LC sharp @ 70°																									
443 10	454 06	Flt	Flt			50			70	2	2																
		Ser/chl sch'd @ 50° w/ felsic clasts																									

From	To	DESCRIPTION	LITHO	STRUCTURE Broken	So	Sch	Shears	Veins	Contacts	ALTERATION Ser	Chl	Talc	Qtz	Carb	Graphite	MINERALIZATION % Py	% Cpy	% PbS	% ZnS	% Aspy	Sample ID	ANALYSIS Assay	ICP	WR	From	To	Width
		443.82- 44cm bull Qtz vn'd @ 70°																									
		444.00 badly bk'n ser sch																									
		2.5m missing core																									
		sch'd @ 50°																									
		LC grades																									
454.06	461.14	Bk phyllite w/ angular to flat clasts	Arg	40						2					1	1	0.5				9382		X		456.62	457.62	1.00
		455.20 to 456.60 ser sch w/ bdn's of bk phyllite																									
		456.60 bk phyllite w/ 5% Qcc vnlt's																									
		sm vnlt's and bnd's of vfg sulphides to 5mm																									
		siliceous clasts/augens w/ 20% fg py and trace cpy																									
		numerous graphic slides																									
		sch'd @ 40°																									
		LC grades																									
461.14	464.18	Lt green to pale yellow chl sch'd @ 60°	Chl sch			60		70					2	2		1											
		20% Qcc flooding and vn'd @ 70°																									
		462.66 ser sch and Qcc flooding																									
		trace py vn's and blebs in Qcc																									
		LC bk'n by Flt																									
464.18	468.00	Flt gouge	Flt																								
		grading from grey/white to dk grey to chl rich																									
		LC bk'n																									
468.00	469.30	Competent chl sch	Chl sch			10		80	60		2	1															
		Sch'd @ 10°																									
		5% Qcc vn'd @ 80°																									
		LC sharp @ 60° by Qtz vn																									
469.30	473.00	Bull Qtz vn	Flt						50																		
		competent at top of unit, badly bk'n from 470.20																									
		472.44 Flt gouge																									
		LC sharp @ 50°																									
473.00	476.21	Flt gouge lt grey top bk	Flt			50																					
		ser sch'd @ 60°																									
		felsic clasts in gouge																									
		LC bk'n																									
476.21	482.88	Graphitic Arg w/ sections of lapst	Arg		70				90						2												
		bd'd @ 70°																									
		graphic slips																									
		LC sharp @ 90°																									
482.88	490.12	Green to tan lapst	Lapst					80		1	1																
		cg-fg lapst																									
		1% Qcc vn'd @ 80°																									
		LC grades																									
490.12	499.69	Graphitic Arg and lapst interbedded	Arg/Lapst						50	1	1																

From	To	DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION						ANALYSIS					
				Broken	So	Sch	Shears	Veins	Contacts	Ser	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS	% Aspy	Sample ID	Assay	ICP	WR	From	To	Width
		lapst mg-fg w/ minor ser/chl alt'n																									
		LC sharp @ 50°																									
499 69	503 60	fg lapst	Lapst						70	2																	
		increasing ser alt'n towards bottom of unit																									
		LC sharp @ 70°																									
503 60	519 33	Dk grey bd'd Arg	Arg		50											0 5											
		10% Qcc vnlt's																									
		some py rich clasts in narrow bd's																									
		511 15 - 517.80 badly bk'n																									
		So ranges between 70° to 30°																									
519 33	526 53	Med to lt grey Arg	Arg					80	80							0 5											
		7% Qcc vn's following bd's																									
		bd'd @ 80° to 90°																									
		.5% pmg py in Qcc vn's																									
		LC bk'n																									
526.53	527 91	Flt	Flt																								
		badly bk'n bk arg																									
		graphic shps																									
		LC bk'n																									
527 91	532.62	Lt. grey lapst w/ bd's of bk arg to 25cm	Lapst					80	80																		
		minor Qcc vn'd @ 80°																									
		LC sharp @ 80°																									
532 62	535 61	Bk arg w/ bands of light grey arg	Arg					80	80							0 5											
		20% Qcc vnlt's and patches																									
		minor py in Qcc vnlt's																									
		bd'd @ 80°																									
		LC sharp @ 80°																									
535.61	543 60	Lapst fg w/ bd's of bk arg to 12cm	Lapst						80																		
		minor Qcc vnlt's and patches																									
		LC sharp @ 80°																									
543 60	548.56	Siliceous lt grey Arg	Arg				30		80		2																
		mod chl alt'n																									
		bd'd @ 80°																									
		545 82 - 546 61 fg lt grey lapst																									
		LC sharp @ 80°																									
548 56	551 08	Flt arg	Flt						80																		
		5cm sections of gouge																									
		LC sharp @ 80°																									
551.08	560.85	bk to lt grey Arg	Arg																								
		siliceous augen's to 2cm																									
		sm bd's lapst to 5cm																									
		LC sharp @ 80°																									

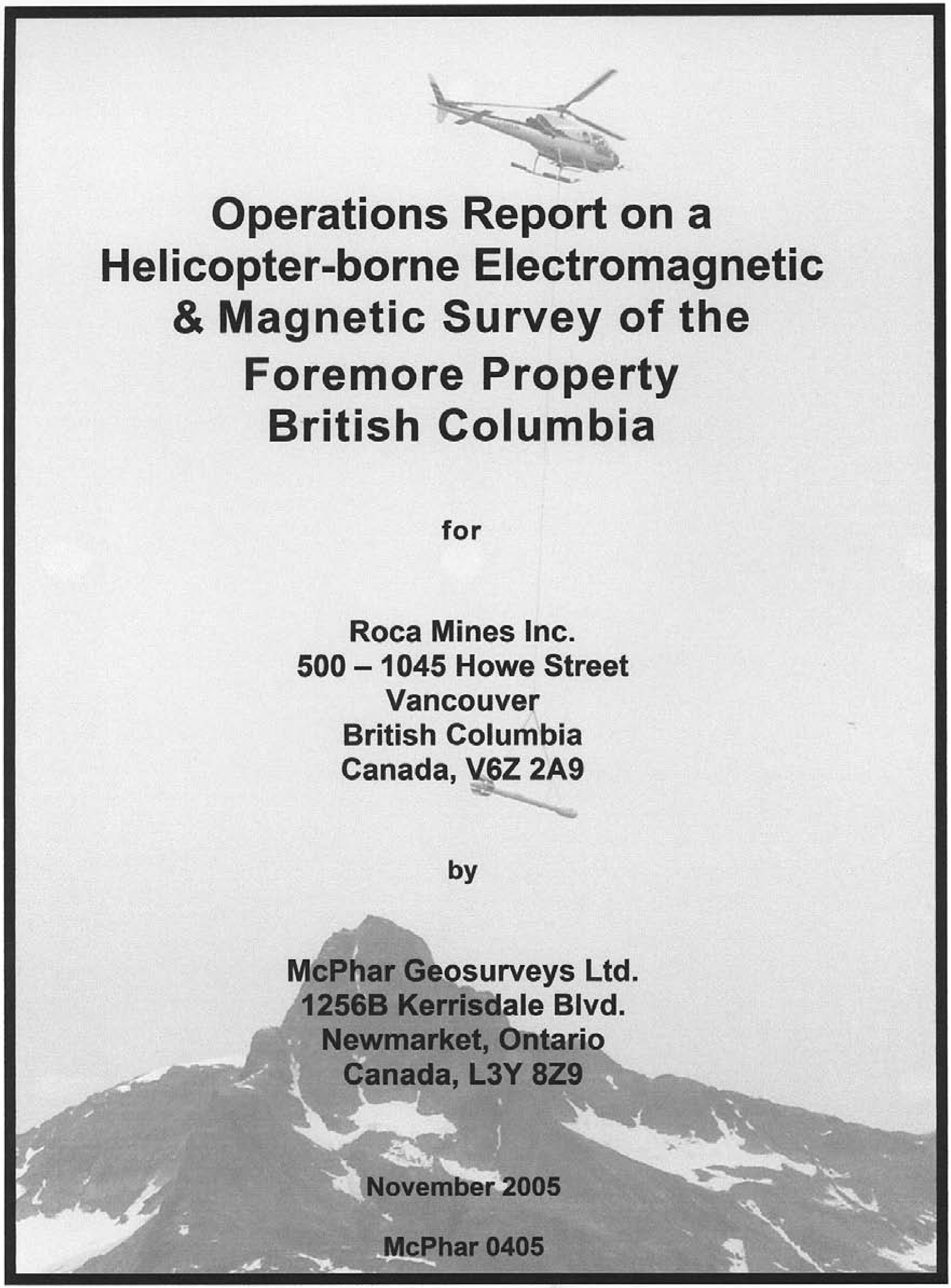
		DESCRIPTION	LITHO	STRUCTURE						ALTERATION						MINERALIZATION						ANALYSIS					
From	To			Broken	So	Sch	Shears	Veins	Contacts	Sw	Chl	Talc	Qtz	Carb	Graphite	% Py	% Cpy	% PbS	% ZnS	% Aspy	Sample ID	Assay	ICP	WR	From	To	Width
560 85	564 18	Lapst grading to bk arg	Lapst/ Arg																								
		lower 1 12m very bk'n bk Arg																									
		ECH																									

APPENDIX B

Airborne Geophysical Report

Foremore Project

November, 2005.



Operations Report on a Helicopter-borne Electromagnetic & Magnetic Survey of the Foremore Property British Columbia

for

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McPhar 0405

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SUMMARY

An airborne geophysical survey program was completed on the Foremore Property which is located in the More Creek Area, Liard Mining Division, north-western British Columbia, and situated approximately 120 kms north-northwest of Stewart, B.C., under contract to Roca Mines Inc., signed June 11, 2004 and revised on July 29, 2005. This project consisted of a Helicopter-borne Electromagnetic and Magnetic survey.

Data acquisition was initiated on August 11, 2005 and was completed on August 13, 2005. A total of 755.99 line-kilometres were flown, covering an area of approximately 100 square kilometres.

1. INTRODUCTION

This report describes a helicopter-borne geophysical survey carried out during August 2005 on behalf of Roca Mines Inc. by McPhar Geosurveys Ltd. over an area known as the Foremore Property which is located in the More Creek Area, Liard Mining Division, north-western British Columbia.

The purpose of this survey was to acquire electromagnetic (EM) and magnetic data to possibly map and delineate the rock formations.

Mobilization of the helicopter, equipment and personnel to the Roca exploration camp at Foremore was completed on August 10, 2005 and all of the production flights were completed by August 13, 2005.

All field operations were based out of the town of Roca exploration camp at the Foremore Property.

The principal geophysical sensors included a 5-frequency, light-weight, digital electromagnetic system and a high sensitivity cesium vapour magnetometer. Ancillary equipment included a GPS navigation system with GPS base station, a radar altimeter, and a base station magnetometer.

This report describes the survey, the data processing and the data presentation.

Figure 1: Survey helicopter acquiring data near the Foremore camp

2. SURVEY AREA

The survey area is shown in Figures 2 & 3. Topography is mountainous with steep mountain ranges throughout the survey block. Details of the survey block are included in Survey Plan.XLS

Figure 2: Map showing location of the Foremore Property

The following UTM coordinates, in NAD27 coordinate system, define the survey area:

Table 1: Coordinates of Foremore Survey Area

Foremore Property		
Corner #	**Easting**	**Northing**
1	384513	6319377
2	379412	6324653
3	377589	6324552
4	375886	6326249
5	379011	6329206
6	378457	6331183
7	379528	6331918
8	381134	6331263
9	381889	6332018
10	387638	6332031
11	389000	6330649
12	389007	6329601
13	387491	6328319
14	387478	6327411
15	388846	6326015
16	388840	6325461
17	386382	6323317
18	387224	6321288

The traverse lines were flown in an South East- NorthWest direction with a lines spacing of 150 metres and 200 metres, as detailed in Table 1 below. The tie-lines were flown perpendicular to the traverse lines with a spacing of 1,525 metres.

The survey area is approximately 100 km^2 in extent. A total of 755.99 line-kilometers were flown (including tie-lines).

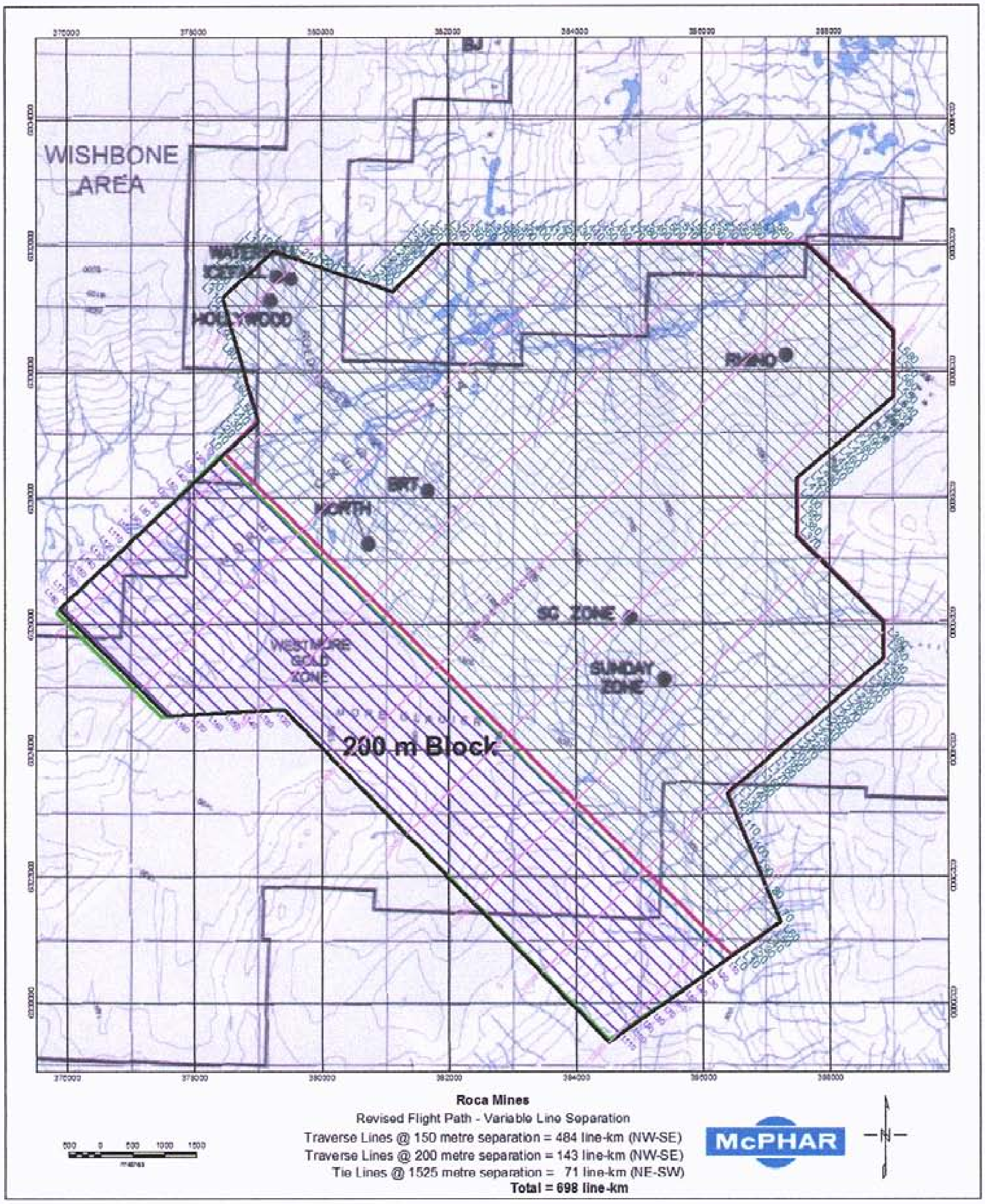

Figure3: Map showing pre-planned flight lines of the Foremore Property

3. Survey Operations

3.1 Operations Base

The Foremore survey camp was the base of the operations. The magnetometer and GPS base stations were positioned in the bush (50m away) from the camp.

Figure 4: Office facilities at Foremore camp

Figure 5: Survey helicopter at Foremore camp

3.2 Navigation

The nominal data acquisition speed was approximately 110 kilometres per hour. Scan rates for magnetic and electromagnetic data acquisition was 0.1 second, 1.0 second for the radar and barometric altimeters, and 1.0 second for the GPS navigation/positioning system. Therefore, a magnetic/electromagnetic value was recorded approximately every 3.0 meters and a position fix each 30 meters along the flight track.

Navigation was assisted by a GPS receiver system that reports GPS co-ordinates as WGS-84 latitude and longitude and directs the pilot over the pre-programmed two-dimensional (2-D) survey grid. The x-y position of the helicopter as reported by the DGPS system is recorded together with the terrain clearance as reported by the radar altimeter. For surveying purposes, the coordinates of the survey area were transformed from NAD27 to WGS84 (World) coordinates system.

Vertical navigation along flight lines was established using the radar altimeter. The optimum terrain clearance during normal survey flying was 60 metres for the helicopter, 30 metres for the towed-bird EM system and magnetometer. However, due to the rugged terrain throughout the survey area, and the pilot's judgment of safe flying conditions in these areas, these terrain clearances were not possible 100% of the time.

The final vertical and horizontal survey positions were differentially corrected post flight, computed using the data from a base station GPS receiver, to a precision of approximately +/- 2 metres.

3.3 Survey Statistics and Project Diary

The electromagnetic survey entailed a total of 17 flights; of which 8 were ferry-freight flights; 1 was a test and/or calibration flight; and 8 were production flights. The first production flight was Flt# 07 on August 11, 2005, and the last production flight was Flt# 14 on August 14, 2005.

Table 2: Project Diary

Date	Flt #	Hours Flown	Line-Km	Comments
05 Aug	-	-	-	McKinnon (operator) arrives Prince George, B.C.
06 Aug	-	-	-	System Installation / ground tests
07 Aug	-	-	-	System Installation / ground tests – Rob Hearst arrives at Prince George
08 Aug	1	0.6	-	System installation / ground tests / flight test
09 Aug	2	2.1	-	Ferry from Prince George to Smithers
	3	2.5	-	Ferry Smithers to Bob Quinn
10 Aug	4, 5, 6	2.6	-	Ferry personnel & supplies to Foremore camp, set up equipment and base stations
11 Aug	7	1.8	68.95	System Testing / Calibration / production flight, acquire tie lines

Date	Flt #	Hours Flown	Line-Km	Comments
12 Aug	8	2.8	158.37	Production flight
	9	3.0	180.30	Production flight
	10	2.3	124.84	Production flight
13 Aug	11	2.4	104.68	Production flight
	12	2.0	51.92	Production flight
14 Aug	13	1.1	66.93	Heading, lag and radar alt tests, some production
	14	1.3	-	Reflights
	15, 16, 17	5.6	-	Ferry flights to Bob Quinn and Smithers to Prince George
15 Aug	-	-	-	Demobilization
		30.1	755.99	

Figure 6: View of the survey area terrain from within the survey helicopter

4. HELICOPTER AND SURVEY INSTRUMENTS

4.1 The Helicopter

An Eurocopter AS-350BA A-Star helicopter; registration number C-GPWK, owned and operated by Pacific Western Helicopters Inc. (PWH) of Prince George, British Columbia was used for the survey. Installation of the geophysical and ancillary equipment was undertaken by McPhar's personnel at the PWH hangar at Prince George airport.

Figure 7: Survey helicopter at Foremore camp

The survey helicopter was flown at a nominal terrain clearance of 60 m (200ft). Normal helicopter airspeed was approximately 110 km/hr. The magnetometer and Hummingbird EM system were sampled at a rate of ten times per second (10 Hz) and the radar altimeter and GPS were sampled at a rate of once per second (Table 3).

Table 3: Survey Speeds

SURVEY SPEED (km/hour)	SURVEY SPEED (metres/sec)	SAMPLING INTERVAL (0.1 second)	SAMPLING INTERVAL (1 second)
110	30	3 meters	30 metres

4.1.1 Terrain Clearances

Optimum terrain clearances for the helicopter and instrumentation during this survey were:

Helicopter	-	60 metres
Hummingbird™ EM sensor & Magnetometer	-	30 metres

However, it was not possible to maintain the optimum terrain clearance throughout the survey due to the steep mountainous terrain throughout the survey area.

4.2 Survey Instruments

A HUMMINGBIRD™ Multi-Sensor System complete with the following instruments was utilized:

- HUMMINGBIRD™ EM 5-frequency system, 880Hz, 980 Hz, 6.6 kHz, 7 kHz and 34 kHz frequencies
- Geometric G822A high-sensitivity cesium magnetometer. 0.001 nT/10 Hz resolution
- A GPS Navigation System, comprising a NovAtel Millennium dual-frequency GPS receiver, and a PNAV 2100 GPS computer/pilot steering indicator (PSI)
- A Geotech GDAS data acquisition system
- A Terra TRA-3000 radar altimeter
- A Geo-iMAGe-Lite colour digital video imaging system

Ground support equipment and base stations comprised:

- Scintrex ENVI proton magnetometer base station
- NovAtel Millennium dual frequency GPS Base Station
- FWS Field Workstation

Figure 8: HUMMINGBIRD™ system console installed in the A-Star helicopter

4.2.1 The Helicopter-borne HUMMINGBIRD™ Digital Electromagnetic System

The electromagnetic system was a Geotech ***HUMMINGBIRD™*** 5-frequency system. Two vertical coaxial coil pairs were operated at 980 Hz and 7,001 Hz, and three horizontal coplanar coil pairs were operated at 880 Hz, 6,630 Hz and 34,133 Hz. Inphase and quadrature signals were measured simultaneously for the 5 frequencies with a time constant of 0.1 seconds. The ***HUMMINGBIRD™*** sensor was towed 30 m below the helicopter.

The basic HUMMINGBIRD™ electromagnetic system consists of a towed-bird airfoil for the EM sensors, and a Pentium-PC based data acquisition system with numerous plug-in boards (magnetometer Larmor processor, GPSCard, analog processor card, serial card, video overlay card, etc.). The data acquisition system records data on a removable PCMCIA hard disk, and displays data on a LCD display as traces (simulating an analog chart recorder). The signals from the EM sensors are processed in the airfoil, and sent to the data acquisition console in the helicopter for recording and display via an RS-232 cable. HUMMINGBIRD™ is fully digital and may be operated in a fully automated mode when necessary.

The 5-frequency HUMMINGBIRD™ system features the following frequencies and coil configurations:

Table 4: HUMMINGBIRD™ EM system details

COIL FREQUENCY	COIL ORIENTATION	COIL SEPARATION	CHANNELS
880 Hz	Coplanar	6.0 meters (19.5ft)	I, Q
980 Hz	Coaxial	6.0 meters (19.5ft)	I, Q
6.6 kHz	Coplanar	6.3meters (20.5ft)	I, Q
7 kHz	Coaxial	6.3meters (20.5ft)	I, Q
34 kHz	Coplanar	4.9 meters (16ft)	I, Q

I = In-phase Q = Quadrature

Figure 9: HUMMINGBIRD™ Electromagnetic Sensor

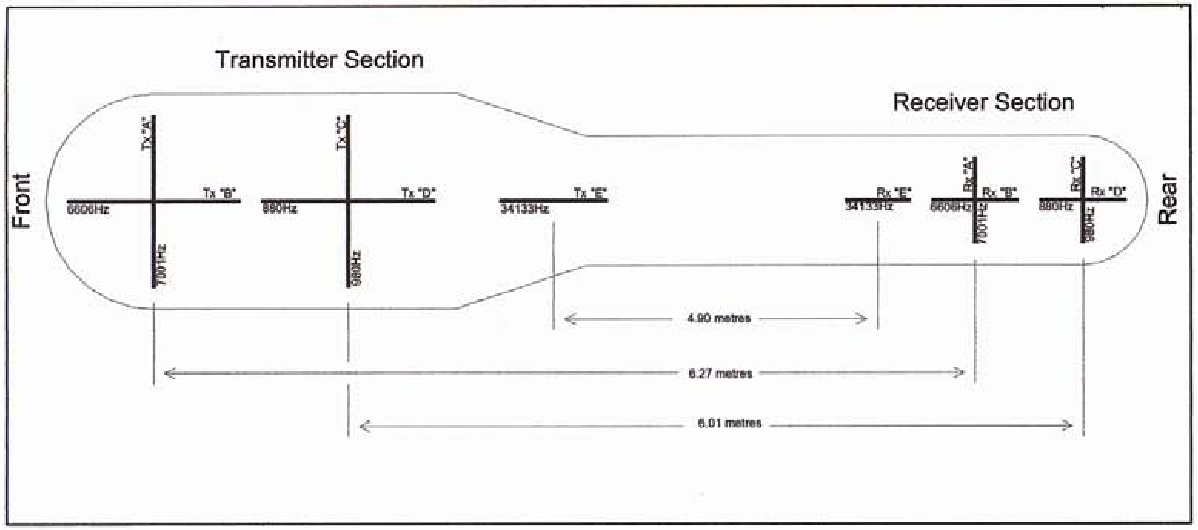

Figure 10: HUMMINGBIRD™ electromagnetic sensor coils information

The HUMMINGBIRD™ EM System is described in more detail in Appendix.

4.2.2 Airborne Magnetometer

A Geometrics G822A cesium split beam total-field magnetometer was used on this survey, and was installed inside the *HUMMINGBIRD™* airfoil. Sampling rate was ten times per second (10Hz) with an in-flight sensitivity of 0.01 nT. Aerodynamic magnetometer noise did not exceed 0.25 nT. The resolution of the magnetometer is 0.001nT at a 0.1 second sampling rate.

Figure 11: G822A Airborne Cesium Magnetometer

4.2.3 Altimeter

A Terra TRA-3000 radar altimeter was used to record terrain clearance to an accuracy of about 1 ft (30 cm), over a range of 40ft to 2,500ft. The antenna was mounted beneath the helicopter cockpit on the skid stand. The recorded value of terrain clearance was adjusted to give bird height above ground.

The altimeter was interfaced to the data acquisition system with an output repetition rate of 1 second, and was digitally recorded.

4.2.4 GPS Navigation System

A NovAtel Millennium dual-frequency (12-channels) GPS receiver and a Picodas PNAV-2100 navigation computer and pilot steering indicator (PSI) provided in-flight navigation control. This navigation system operated on 12-channels. A pilot steering indicator (PSI) provided steering and cross-track guidance to the pilot. The system works with a predetermined "grid-flight-path" or "record-as-you-go" flight path.

This navigation system, in any event, yielded a real-time positional accuracy of better than +/-1.5 metres.

Survey co-ordinates were set-up prior to survey and the information was fed into the airborne navigation system. The co-ordinate system employed in the survey design and digital recording was WGS-84 projected X,Y coordinates. The GPS positional data was recorded at one-second intervals and used with the base station data to calculate differentially corrected locations.

4.2.5 Digital Data Acquisition System

A Geotech Hummingbird™ GDAS digital data acquisition system recorded the digital survey data on an internal hard disk drive. Data is displayed on an LCD screen as traces to allow the operator to monitor the integrity of the system. The DAS provides for the:

- System control and monitoring
- Data acquisition recording
- Real-time data processing
- Navigation processing, and
- Post flight data playback and analysis

All data collection routines, checking and verification, buffering, and recording are software controlled for maximum flexibility both during and after the survey flight.

Table 5: Sampling rates of digital data

SYSTEM/No. of CHANNELS	SAMPLING RATES/SEC.
Total Field Magnetometer (1 channel)	0.1 sec
E.M. - 880 Hz (2 channels) Coplanar	0.1 sec
E.M. – 980 Hz (2 channels) Coaxial	0.1 sec
E.M. – 6.6kHz (2 channels) Coplanar	0.1 sec
E.M. – 7 kHz (2 channels) Coaxial	0.1 sec
E.M. – 34 kHz (2 channels) Coplanar	0.1 sec
Barometric Altimeter (1 channel)	1.0 sec
Radar Altimeter (1 channel)	1.0 sec
GPS Navigation	1.0 sec

4.2.6 Base Station Magnetometer

To monitor and record diurnal variations of the earth's magnetic field a Scintrex ENVI proton magnetometer base station was utilized. It was set up close (50 metres into the bush) to the operation base at Foremore. Every effort was made to ensure that the magnetometer sensor was placed in a location with a low magnetic gradient and sited away from electric transmission lines and moving ferrous objects.

4.2.7 GPS Base Station

A NovAtel Millennium 12-channel dual-frequency GPS Base Station was set-up near the Foremore camp to provide post-survey differential corrections for the airborne system. Data from a known geodetic point close to operation base was not available, therefore the GPS system itself was used, over a period of several hours, to calculate the average coordinates of the base station.

4.2.8 FWS Field Workstation

A Data Processing Field Workstation (FWS) comprised of a dedicated PC-based notebook computer for use at the technical base in the field, was used on this project. The FWS is designed for use with Geosoft OASIS/Montaj Data Processing Software. The FWS has a data replot capability, and may be used to produce pseudo-analogue charts from the recorded digital data within less than 12 hours after the completion of a survey flight, if this is necessary. It is also capable of processing and imaging all the geophysical and navigation data acquired during the survey, producing semi-final, preliminary-levelled maps.

The FWS was used to accomplish the following:

- **Quality Control/Digital Data Verification** - flight data quality and completeness were assured by both statistical and graphical means on a daily basis
- **Flight Path Plots** - flight path plots were generated from the GPS satellite data to verify the completeness and accuracy of each day's flying
- **Preliminary Maps** - the Geosoft software system permitted preliminary maps to be quickly and efficiently created for noise and coherency checks.

The Montaj software is designed for airborne data editing, compilation, processing and plotting. The software reads the portable data media from the airborne system checks them for gaps, spikes or other defects and permits the data to be edited where necessary. The base station GPS/magnetometer data is checked, edited, processed and then merged with the airborne data. GPS flight path plots are created and plotted for both flight planning and flight path verification.

4.2.9 Spares

A normal compliment of spare parts, tools, back-up software, and necessary test instrumentation was available in the office at the airport.

5. DATA ACQUISITION AND DATA QUALITY CONTROL

5.1 Instrument Checks, Tests and Calibrations

5.1.1 HEM Tests and Calibrations

The ***HUMMINGBIRD***[5] EM system was:

- calibrated at the start of survey on the ground, using a ferrite rod and calibration coil
- an internal Q-coil calibrations was performed by the onboard technician at the beginning of each flight
- at the beginning and end of each flight, and periodically during a flight, the helicopter climbed to high-altitude to allow the onboard technician to perform background and drift checks.

5.1.2. Magnetic Heading Effect

The magnetic heading effect was determined by flying a portion of a survey line and a tie line in both (nominal and reverse) directions periodically throughout the survey. The above mentioned procedures enabled sufficient statistical information to be obtained to estimate the heading error. No modifications or additions to the helicopter or the installed equipment were made during the survey.

5.1.3. Lag Tests

Lag tests were performed to ascertain the time difference between the instrument readings and the operation of the GPS System. To determine the lag a test line was flown in two directions at survey altitude on flight 13 on August 14.

5.1.4. GPS Tests

The GPS system itself was used, over a period of time, to calculate the coordinates of the landing pad where the helicopter landed every day. The measured and averaged coordinates were compared on daily basis. Care was also taken to ensure that the base station GPS had a maximum field-of-view to the GPS satellites.

5.1.5. Altimeter Calibration Checks

Checks of the radar altimeter calibration during the survey. The calibration was determined by comparing the radar altitude with a suitable reading from the GPS system during a radar "stack" over the landing spot of the helicopter where the ellipsoidal height of the ground is accurately known. A vertical flight over a flat area was carried out on flight 13 on August 14.

5.1.6 Overall Data Acquisition and QC Procedures

Navigation was assisted by a GPS receiver and a data acquisition system that reports GPS co-ordinates as WGS-84 latitude/longitude and directs the pilot over a pre-programmed survey grid. The x-y-z position of the helicopter, as reported by the GPS, was recorded along with terrain clearance, as reported by the radar altimeter, at one second intervals.

High-level calibration flights, mentioned in section 5.1.1, were flown outside of ground effects, i.e. above 300 m, to record electromagnetic zero levels periodically during a survey flight and at the start and end of each flight.

A test line was flown in both directions to determine and check the heading and lag effect; and to check the data quality of all the airborne geophysical sensors and the navigation equipment. The radar altimeter calibration was checked on a daily basis during vertical test flights carried out during landing and taking off.

A GPS base station was set up near the Foremore base. Care was taken to ensure that the base station GPS had a maximum field-of-view to the GPS satellites. The GPS base station recorded static GPS positions for later differential correction of the airborne GPS data. A magnetometer base station was also set up near the Foremore base. The magnetometer base station was used to monitor and record the diurnal magnetic variation (maximum allowed gradient of 25 nT per 5 minutes chord).

The operator was responsible for ensuring that all instruments were properly warmed up prior to departure for survey. He also maintained a detailed flight log during the survey, noting the times of the flight as well as any unusual geophysical or topographic features.

On return of the aircrew to the base the survey data was transferred to a portable hard drive (PCMCIA).

All data collected in the air and on the ground were controlled and pre-processed by the field geophysicist on a daily basis as follows:

- heading and lag effect were checked
- EM system and radar calibration were checked
- all data collected on the test line were checked
- magnetometer and EM system noise were checked
- EM system drift was checked and calculated
- GPS and magnetic base station data were checked and processed
- GPS data were differentially corrected using Waypoint GrafNAV software
- GPS and radar altimetry data were processed to obtain the DTM (DEM) grid of the surveyed areas, which was compared to the topographic maps received from the client
- Magnetic data were corrected for diurnal variations of the total magnetic field as recorded by the magnetometer base station
- EM data were noise filtered and drift corrected
- Grids/Maps of all EM drift corrected channels were produced and compiled

6. PERSONNEL

The following personnel were involved in the project:

Field Operations:

Robert Hearst, M.Sc.	Project Manager/QC/Data Processor
Daniel McKinnon	Technician/Operator

Newmarket Office:

Robert Hearst, M.Sc.	Data Processing Manager
Tonia Bojkova, M.Sc.	Data Processor/Geophysicist
Asif Mirza, M.Sc.	Data Processor/Geophysicist

The survey pilot was Rick Klassem. He was supported by Bruce, a helicopter engineer. Both are employees of Pacific Western Helicopters.

Overall management of the survey was carried out from the Newmarket office of McPhar Geosurveys Inc. by Timothy R. Bodger, President.

7. DATA QUALITY CONTROL & PROCESSING

7.1 Flight Path/GPS Data Processing

The flight path was derived from differentially corrected GPS positions using the airborne/rover and static GPS data collected at the GPS base station discussed previously. Differential GPS data processing was accomplished using the GrafNAV GPS processing system as developed by WayPoint Navigation, Inc. A position was calculated each 1.0 second to an accuracy of better than +/- 1 meter. The differentially corrected GPS data were then merged into the GDB database.

The GPS GDB files include the following channels:

GPStmH	-	GPS time in hours/min/sec of day
GPStmsec	-	GPS time in seconds of day
x,y	-	differentially corrected position - WGS84/UTM zone 34N projection
Hell	-	WGS84 Ellipsoidal height
SDHoriz	-	position SD in the east and north axes calculated by GrafNAV
SDHeigh	-	vertical SD of ellipsoidal height calculated by GrafNAV
NS	-	number of satellites incorporated for differential processing of GravNAV
PDOP	-	position dilution of precision

From the GPS database the flight path was merged into a master GPS_Flight_Path.MAP file on a daily basis.

The following GPS parameters were checked:

- Number of satellites
- PDOP (position dilution of precision)
- Flight Path Deviation – evaluated by Geosoft Airborne QC software package

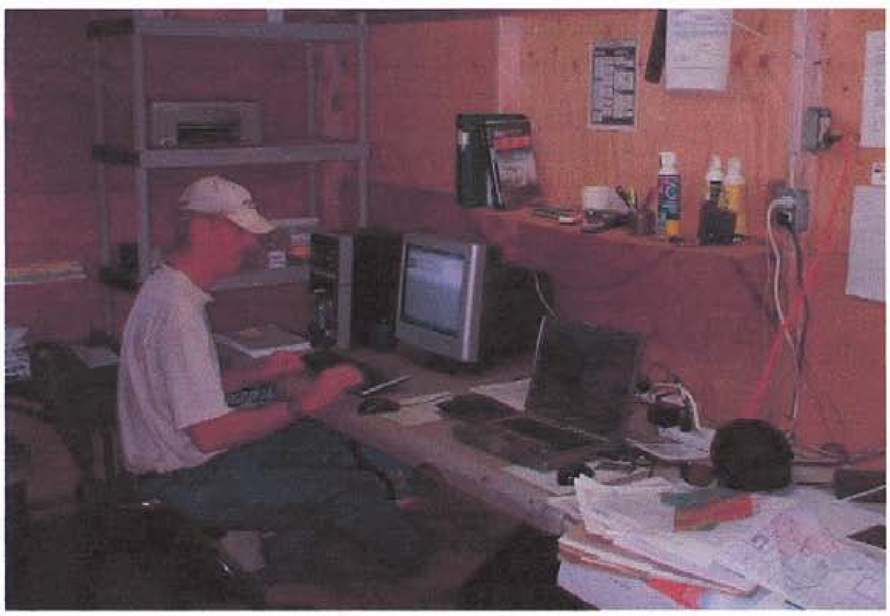

Figure 12: QC work underway at the Foremore camp

7.2 Base Station Magnetic Data

The base station magnetometer data was edited and merged into the GDB database.

From the database, a TMF chart was created and stored.

The data QC procedure to verify the TMF recorded on the magnetic base station included the following parameters:

- maximum noise of the TMF record
- Average noise defined by SD of the noise channel
- Maximum magnetic gradient in a straight line chord over 5 minutes

7.3 Corrections to the Magnetic Data

The processing of the data involved correcting for diurnal variations by using the digitally recorded ground base station magnetic values. Network adjustments were made using the flight-line and tie-line information to level the survey data set. Finally microlevelling was applied in order to remove the remaining level errors. This corrected data set was used for further processing and analysis.

The following grids then were calculated using this leveled Total Magnetic Field grid; Analytic Signal, Reduction to the Pole, Calculated 1st and 2nd Vertical Derivatives.

7.4 Electromagnetic Data

A two stage digital filtering process was used to reject major sferic events and to reduce system noise.

Local sferic activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with geological phenomena. To avoid this possibility, a computer algorithm searches out and rejects the major sferic events. The filter used was a 0.5 sec non-linear filter.

Following the filtering process, a base level correction was made using EM zero levels determined during the high altitude calibration sequences. The correction applied is a linear function of time that ensures the corrected amplitude of the various in-phase and quadrature components is zero when no conductive or permeable source is present. Where necessary, finer level adjustments were made, in order to yield the final EM channels of the filtered and leveled data that were used in the determination of apparent resistivity. For anomaly picking another nonlinear filter of 2 seconds wavelength was applied in order to avoid picking anomalies within noise levels. Manually picked zero-levels were also used during the intervening period between high-level calibrations.

7.5 Gridding

The corrected magnetic line data from each survey was interpolated between survey lines using a random point gridding method to yield x-y grid values for a standard grid cell size of 1/5th of the nominal line spacing. A smaller grid cell size would yield to increased aliasing in the grid. Generally the Minimum Curvature algorithm (MINC) is used to interpolate values onto a regular spaced grid.

7.6 Magnetic Filter Derivatives

The total field magnetic data were subjected to a variety of filtering transformation techniques to yield contour colour images of the following:

- first vertical derivative
- second vertical derivative
- Analytic Signal
- reduction to the pole

All of these spatial transformation filtering techniques can assist in the recognition of magnetic features or bodies, particularly in the sedimentary sequence above the crystalline basement

7.6.1 Reduction to the Pole

To compensate for the shift of the true anomaly position over the causative source, due to the magnetic inclination, the magnetic data can be recomputed so that the magnetic map will appear as it would at vertical inclination and the magnetic "high" anomalies will be located over the bodies that cause them. This computation is referred to as "reduction-to-the-pole". The reduction-to-the-pole is computed using a FFT (Fast Fourier Transform) operator.

The RTP not only shifts the anomalies to their correct position with respect to the causative magnetic bodies, but assist in the direct correlation and comparison of magnetic anomalies, trends, structural axis, and discontinuities with mapped geological surface expressions, under the assumption that no remnant magnetization is present.

7.6.2 First Vertical Derivative

Vertical derivatives compute the rate of change of the field as it drops off when measured vertically over the same point (upward continuation). Potential field data obeys Laplace's equation, which allows for the computation, through the FFT package, to take advantage of this symmetry and sole for the vertical or "z" component of the field. The First Vertical Derivative has the effect of sharpening anomalies, which allows for better spatial location of source axes and boundaries.

7.6.3 Second Vertical Derivative

To enhance local anomalies in the map and to help outline the edges of anomalous bodies from the data, a second vertical derivative map is routinely computed from the data. A second vertical derivative map is a powerful interpretive tool and can be used to assist in the delineation of causative bodies and accurate location of changes in the potential field's gradients. Better definition of discontinuities and their relation to geology can be gained from the use of this tool. A Second Vertical Derivative map will show steep gradients over faults and positive closures over the "upthrown" blocks.

7.6.4. Analytic Signal

The analytic signal is the square root of the sum of the squares of the derivatives in the x, y, and z directions:

asig = sqrt (dx*dx + dy*dy + dz*dz)

The analytic signal is useful in locating the edges of magnetic source bodies, particularly where remanence and/or low magnetic latitude complicates interpretation.

7.7 Apparent Resistivity

The apparent resistivity is calculated by assuming a uniform resistive half-space model. The computer program determines the resistivity by the inversion of the recorded in-phase and quadrature response amplitudes at the selected frequency.

7.8 EM Anomaly Selection and Analysis

The main purpose of EM anomaly selection is to identify possible near-vertical or dipping thin sheet bedrock conductors. If the source of conductance is not large, such anomalies may not register on the apparent resistivity maps as a distinctive resistivity low.

The response type expected from a vertical thin sheet conductor is a positive anomaly in the coaxial EM channels with a coincident low in the coplanar channels of the same frequency.

In some cases a negative in-phase anomaly will be accompanied by a positive quadrature response which suggests a source which is both conductive and magnetic (or conductors and magnetic sources which are very close). In rare instances, the coaxial in-phase trace shows a small positive peak superimposed on larger negative responses in both coaxial and coplanar channels. Such anomalies are often of special exploration interest.

EM anomalies were automatically picked from the offset profiles using Geosoft's HEM software. Each anomaly had to have a response in the 7,000 Hz coaxial channel. The coaxial channel is more sensitive to vertical thin conductors typified by sulphide mineralization. Once the anomalies were picked on the corresponding 7,000Hz coaxial channels, an apparent conductance (conductivity*thickness) was calculated for those points, and the anomalies were classified according to their apparent conductance values. The anomalies were then identified by a letter label and the apparent conductance values were posted.

The anomaly picks are included in the delivered digital database in Appendix 6.

8. DELIVERABLE PRODUCTS

The survey data are presented as a set of stacked profiles and coloured contour maps on paper, produced at a scale of 1:20,000. A set of report-sized colour contour images, on paper, is also provided as appendices to this report. All digital data are also presented on CD-ROM in ASCII format

8.1 Colour Maps

The maps were produced at a scale of 1:20,000. For reference the latitude and longitude are also noted on the maps. All the maps show the flight path trace with time reference fiducials marked at appropriate intervals.

The following maps are delivered to the client in two (2) paper copies:

1) Apparent Resistivity colour contours map, with superimposed flight path and anomaly symbols and values for the 6606 Hz Coplanar coil.
2) Offset profile maps of the inphase and quadrature responses of the coplanar 880 Hz coils, with superimposed flight path and anomaly symbols.
3) Offset profile maps of the inphase and quadrature responses of the coaxial 980 Hz coils, with superimposed flight path and anomaly symbols.
4) Offset profile map of the inphase and quadrature responses of the coplanar 6606 Hz coils with superimposed flight path and anomaly symbols.
5) Offset profile map of the inphase and quadrature responses of the coaxial coils at 7001 Hz coils with superimposed flight path and anomaly symbols.
6) Total Magnetic Field contour maps
7) Total Magnetic Field Reduction to the Pole contour maps
8) Total Magnetic Field Calculated 1st Vertical Derivative contour maps
9) Total Magnetic Field calculated 2nd Vertical Derivative contour maps
10) Total Magnetic Field Analytic Signal contour maps

8.2. Multi-channel Stacked Profiles

One set of multi-channel stacked profiles with all final EM channels and the magnetometer and radar altimeter profiles, was produced for each individual flight line.

8.3 Digital Data

The edited field digital data, recorded in flight and at the base stations, are delivered in two copies, in ASCII code, on CD-ROM. The final processed line and grid data, in GEOSOFT format, are also delivered in two copies on CD-ROM. Full descriptions of the digital data formats are included in this final report (see below) and as text files on each CD-ROM. Each CD-ROM has a README.TXT file describing the contents and the file formats.

8.4 Digital Video Images

The video system failed to record clear images due to the extreme difference in light and reflectance between the snow capped areas and the steep rock faces. Therefore no video images are provided.

8.5 Final Report

Three (3) copies of a survey report are delivered, complete with final prints of report size maps. This report provides information about the acquisition, processing and presentation of the survey data.

McPhar Geosurveys Ltd.

Robert Hearst
General Manager - Operations

APPENDICES

TABLE OF CONTENTS

Robert Bruce Hearst
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E-mail: rhearst@mgssurveys.com

Statement of Qualifications

I, Robert Bruce Hearst, P.Geoph. do hereby certify that:

1. I am currently employed as General Manager-operations by:

   McPhar Geosurveys Ltd.
   1256B Kerrisdale Blvd.
   Newmarket, Ontario
   Canada, L3Y 8Z9

2. I graduated with a H.Bsc. degree in Geophysics, Geology and Geophysics option from the University of Western Ontario in 1983. In addition, I have obtained a M.Sc. Geology and Geophysics from McMaster University in 1996.

3. I am a member of the CIM (Toronto and National Branches), KEGS (Canadian Exploration Geophysical Society, Past President), SEG (Society of Exploration Geophysicists), EEGS (Environmental and Engineering Geophysicists Society), PDAC (Prospectors and Developers Association of Canada) and a Licensee of NAPEGG (Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories).

4. I have worked as a geophysicist for a total of 21 years since graduation from the University of Western Ontario.

5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined by NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

6. I am responsible for the preparation of the *Final Report on a Helicopter-borne Electromagnetic and Magnetic Survey, Foremore Property, British Columbia, Canada* dated Nov. 2005 (THE "Technical Report") relating to the Foremore Property, British Columbia, Canada. I have visited the property.

7. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

8. I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101.

9. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 21st day of November, 2005

Robert Bruce Hearst

Project #: Roca Mines	Daily Field Production Report

Report Date:	Aug 5th 2005	Aircraft:	A-Star AS-350BA	SURVEY PERSONNEL	
Report Number:	1	Ops Base:	Roca Camp	Pilot	Rick
Client:	Roca Mines Inc.	Country:	Canada	AME:	Jason

Survey Type:	Helicopter EM and Magnetics Survey							
Survey Areas:	Roca Mines					Totals	Operator	Daniel McKinnon
Project Km:							Systems Engineer:	
Km flown today:							Field Data QC:	Rob Hearst
Accumulated km:								
Percent Completed:								
Lines flown:								

Flight #	Take off Time	First line start	Last line end	Land Time	Hours Flown

Weather: Sunny most of the day		Hours Flown Today: 0
Accum. Standby: 0	Accumulated Survey Days: 0	Accumulated Project Hours:

COMMENTS

Travelled from Toronto to Prince George. Met with PWH personnal and organized the system in order to get a good start tomorrow morning

CONTROL	Flight #:		Flight date:
POST FLIGHT	Accepted km	Rejected km	Reasons for Rejection

REFLIGHTS		Observations	Lines Reflown
Rejected km			
Kms today			
Accumulated km			
Percent Completed			

Operations Personnel

President	Tim Bodger	(905)830-8880	tbodger@mgssurveys.com
Project Manager:	Tim Bodger	(905)830-880	tbodger@mgssurveys.com
Systems Engineer			
HSE Manager	Victor Oetka	(905)830-8880	vho@mgssurveys.com
Lodging	Roca Camp Satellite Phone	(613)988-9256	

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*Please note that kilometres flown are estimates.
*Exact kilometres will be calculated upon completion of survey, and will be based on GPS measurements & contractual bounderies

Project #: Roca Mines	*Daily Field Production Report*			
Report Date:	Aug 6th 2005	*Aircraft:*	A-Star AS-350BA	
Report Number:	2	*Ops Base:*	Roca Camp	
Client:	Roca Mines Inc.	*Country:*	Canada	

SURVEY PERSONNEL	
Pilot	Rick
AME:	Jason
Operator	Daniel McKinnon
Systems Engineer:	
Field Data QC:	Rob Hearst

Survey Type:	**Helicopter EM and Magnetics Survey**					
Survey Areas:	**Roca Mines**					**Totals**
Project Km:						
Km flown today:						
Accumulated km:						
Percent Completed:						
Lines flown:						

Flight #		Take off Time	First line start		Last line end	Land Time		Hours Flown

Weather: Sunny with periods of rain throughout the day

Accum. Standby: 0	*Accumulated Survey Days: 0*	*Hours Flown Today: 0*
		Accumulated Project Hours:

COMMENTS

This morning we completed the Helicopter Installation and Hummingbird Ground Tests. Operated Hummingbird for a period of 2 hours in order to check out the system for its proper operation. System Calibrations and Phazing were excellent and tomorrow we will proceed for base station testing and final assembly.

CONTROL	*Flight #:*		*Flight date:*
POST FLIGHT	*Accepted km*	*Rejected km*	*Reasons for Rejection*

REFLIGHTS		Observations	Lines Reflown
Rejected km			
Kms today			
Accumulated km			
Percent Completed			

Operations Personnel				
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MCPHAR

**Please note that kilometres flown are estimates.*
**Exact kilometres will be calculated upon completion of survey, and will be based on GPS measurements & contractual boundaries*

Project #: Roca Mines	***Daily Field Production Report***						
Report Date:	Aug 7th 2005	***Aircraft:***	A-Star AS-350BA		SURVEY PERSONNEL		
Report Number:	3	***Ops Base:***	Roca Camp		***Pilot***	Rick	
Client:	Roca Mines Inc.	***Country:***	Canada		***AME:***	Jason	
Survey Type:	**Helicopter EM and Magnetics Survey**						
Survey Areas:	**Roca Mines**				**Totals**	***Operator***	Daniel McKinnon
Project Km:						***Systems Engineer:***	
Km flown today:						***Field Data QC:***	Rob Hearst
Accumulated km:							
Percent Completed:							
Lines flown:							

Flight #		Take off Time	First line start		Last line end	Land Time		Hours Flown

Weather: Sunny and about 25 all day		***Hours Flown Today: 0***	
Accum. Standby: 0	***Accumulated Survey Days: 0***	***Accumulated Project Hours:***	

COMMENTS

This morning we started up the Hummingbird system and ran it throughout the day. Made a few modifications to the Helicopter installation and are preparing for a test flight tomorrow afternoon.
Tested field base stations throughout the day to make sure they were all working well.

CONTROL	***Flight # :***		***Flight date:***
POST FLIGHT	***Accepted km***	***Rejected km***	***Reasons for Rejection***

REFLIGHTS		Observations	Lines Reflown
Rejected km			
Kms today			
Accumulated km			
Percent Completed			

Operations Personnel

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Systems Engineer				
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****Please note that kilometres flown are estimates.***
****Exact kilometres will be calculated upon completion of survey, and will be based on GPS measurements & contractual boundaries***

Project #: Roca Mines

Daily Field Production Report

Report Date:	Aug 8th 2005	***Aircraft:***	A-Star AS-350BA	**SURVEY PERSONNEL**	
Report Number:	4	***Ops Base:***	Roca Camp	***Pilot***	Rick
Client:	Roca Mines Inc.	***Country:***	Canada	***AME:***	Jason
Survey Type:	**Helicopter EM and Magnetics Survey**				
Survey Areas:	**Roca Mines**		**Totals**	***Operator***	Daniel McKinnon
Project Km:				***Systems Engineer:***	
Km flown today:				***Field Data QC:***	Rob Hearst
Accumulated km:					
Percent Completed:					
Lines flown:					

Flight #		**Take off Time**	**First line start**		**Last line end**	**Land Time**		**Hours Flown**
	1	20:30				21:10		0.6

Weather: Sunny and about 25 all day

Hours Flown Today: *0.6*

Accum. Standby: *0* | ***Accumulated Survey Days:*** *0* | ***Accumulated Project Hours:*** 0.6

COMMENTS

Final assembly and testing of the Hummingbird System

Got up at the end of the day today for a test flight and all looks very well and we are checking the all data tonight. Will confirm in the morning for our time of departure for the camp.

CONTROL	***Flight #:***		***Flight date:***
POST FLIGHT	***Accepted km***	***Rejected km***	***Reasons for Rejection***

REFLIGHTS		**Observations**	**Lines Reflown**
Rejected km			
Kms today			
Accumulated km			
Percent Completed			

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Please note that kilometres flown are estimates.

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Project #: Roca Mines		Daily Field Production Report							
Report Date:	Aug 9th 2005	Aircraft:	A-Star AS-350BA				SURVEY PERSONNEL		
Report Number:	5	Ops Base:	Roca Camp				Pilot		Rick
Client:	Roca Mines Inc.	Country:	Canada				AME:		Jason
Survey Type:		Helicopter EM and Magnetics Survey							
Survey Areas:		Roca Mines				Totals	Operator		Daniel McKinnon
Project Km:							Systems Engineer:		
Km flown today:							Field Data QC:		Rob Hearst
Accumulated km:									
Percent Completed:									
Lines flown:									
Flight #		Take off Time	First line start			Last line end	Land Time		Hours Flown
	2	14:50	Ferry from Prince George to Smithers			16:55			2.1
	3	17:19	Ferry from Smithers to Bob Quin			19:47			2.5
Weather: Overcast with showers throughout or travels to the North West.							Hours Flown Today: 4.6		
Accum. Standby: 0		Accumulated Survey Days: 0					Accumulated Project Hours:		5.2

COMMENTS

Packed up this morning and left at noon
Did not make it too Bob Quinn today but will proceed tomorrow morning Will be arriving at Bob Quinn at 9am. Will be in contact with the camp from there to coordinate travel into the camp from there
Helicopter and AME are scheduled this evening to arrive into the camp. The Left Prince George today at around 2pm.

CONTROL	Flight #:		Flight date:
POST FLIGHT	Accepted km	Rejected km	Reasons for Rejection

REFLIGHTS		Observations	Lines Reflown
Rejected km			
Kms today			
Accumulated km			
Percent Completed			

Operations Personnel

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*Please note that kilometres flown are estimates.
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Project #: Roca Mines	Daily Field Production Report							
Report Date:	Aug 10th 2005	Aircraft:	A-Star AS-350BA				SURVEY PERSONNEL	
Report Number:	6	Ops Base:	Roca Camp				Pilot	Rick
Client:	Roca Mines Inc.	Country:	Canada				AME:	Jason
Survey Type:	Helicopter EM and Magnetics Survey							
Survey Areas:	Roca Mines					Totals	Operator	Daniel McKinnon
Project Km:							Systems Engineer:	
Km flown today:							Field Data QC:	Rob Hearst
Accumulated km:								
Percent Completed:								
Lines flown:								

Flight #		Take off Time	First line start	Last line end	Land Time		Hours Flown
	4	8:30	Ferry of supplies into the Roca Camp	17:30			2.6
	5		Ferry of supplies into the Roca Camp				2.6
	6		Ferry of supplies into the Roca Camp				2.6

Weather: Sunny and 20 to 25 throughout the day		Hours Flown Today: 2.6	
Accum. Standby: 0	Accumulated Survey Days: 1	Accumulated Project Hours:	7.8

COMMENTS

Arrived into the Roca Mines Camp. Helicopter making trips in and out to bring the supplies into the camp.
Set up Hummingbird system
Set up camp and base stations.

CONTROL	Flight #:		Flight date:
POST FLIGHT	Accepted km	Rejected km	Reasons for Rejection

REFLIGHTS		Observations	Lines Reflown
Rejected km			
Kms today			
Accumulated km			
Percent Completed			

Operations Personnel				
President	Tim Bodger		(905)830-6880	tbodger@mgssurveys.com
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MCPHAR

*Please note that kilometres flown are estimates.
*Exact kilometres will be calculated upon completion of survey, and will be based on GPS measurements & contractual boundaries

Project #: Roca Mines	Daily Field Production Report						
Report Date:	Aug 11th 2005	**Aircraft:**	A-Star AS-350BA			**SURVEY PERSONNEL**	
Report Number:	7	**Ops Base:**	Roca Camp			**Pilot**	Rick
Client:	Roca Mines Inc.	**Country:**	Canada			**AME:**	Bruce
Survey Type:	**Helicopter EM and Magnetics Survey**						
Survey Areas:	**Roca Mines**				**Totals**	**Operator**	Daniel McKinnon
Project Km:					699.00	**Systems Engineer:**	
Km flown today:						**Field Data QC:**	Rob Hearst
Accumulated km:							
Percent Completed:							
Lines flown:							

Flight #		**Take off Time**	**First line start**	**Last line end**	**Land Time**		**Hours Flown**
	7	13:30	T-10010	T-10070	15:16		1.8

Weather: Sunny and about 25		**Hours Flown Today:** 1.8
Accum. Standby: 0	**Accumulated Survey Days:** 2	**Accumulated Project Hours:** 9.6

COMMENTS

Prepared the Hummingbird system and got up in the afternoon for a flight. Completed the T-lines in the Survey area

CONTROL	**Flight #:**		**Flight date:**
POST FLIGHT	**Accepted km**	**Rejected km**	**Reasons for Rejection**

REFLIGHTS		**Observations**	**Lines Reflown**
Rejected km			
Kms today			
Accumulated km			
Percent Completed			

Operations Personnel

President	Tim Bodger		(905)830-6880	tbodger@mgssurveys.com
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***Please note that kilometres flown are estimates.**
***Exact kilometres will be calculated upon completion of survey, and will be based on GPS measurements & contractual bounderies**

Daily Field Production Report

Project #: Roca Mines

Report Date:	Aug 12th 2005	**Aircraft:**	A-Star AS-350BA	**SURVEY PERSONNEL**	
Report Number:	8	**Ops Base:**	Roca Camp	**Pilot**	Rick
Client:	Roca Mines Inc.	**Country:**	Canada	**AME:**	Bruce
				Operator	Daniel McKinnon
				Systems Engineer:	
				Field Data QC:	Rob Hearst

Survey Type: Helicopter EM and Magnetics Survey

Survey Areas:	Roca Mines					Totals
Project Km:						899.00
Km flown today:						
Accumulated km:						
Percent Completed:						
Lines flown:						

Flight #	Take off Time	First line start	Last line end	Land Time	Hours Flown
8	8:44			11:29	2.8
9	12:51			15:50	3.0
10	16:11			18:28	2.3

Weather: Sunny and about 25

Hours Flown Today: 8.1

Accum. Standby: 0

Accumulated Survey Days: 3

Accumulated Project Hours: 17.7

COMMENTS

Full day of Production

CONTROL	Flight #:	Flight date:	
POST FLIGHT	Accepted km	Rejected km	Reasons for Rejection

REFLIGHTS		Observations	Lines Reflown
Rejected km			
Kms today			
Accumulated km			
Percent Completed			

Operations Personnel

President	Tim Bodger	(905)830-6880	tbodger@mgssurveys.com
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Systems Engineer			
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**Please note that kilometres flown are estimates.*

**Exact kilometres will be calculated upon completion of survey, and will be based on GPS measurements & contractual boundaries*

Daily Field Production Report

Project #: Roca Mines								
Report Date:	Aug 13th 2005	***Aircraft:***	A-Star AS-350BA				**SURVEY PERSONNEL**	
Report Number:	9	***Ops Base:***	Roca Camp				***Pilot***	Rick
Client:	Roca Mines Inc.	***Country:***	Canada				***AME:***	Bruce
Survey Type:	**Helicopter EM and Magnetics Survey**							
Survey Areas:	**Roca Mines**					**Totals**	***Operator***	Daniel McKinnon
Project Km:						699.00	***Systems Engineer:***	
Km flown today:							***Field Data QC:***	Rob Hearst
Accumulated km:						699.00		
Percent Completed:						100%		
Lines flown:								

Flight #		Take off Time	First line start		Last line end	Land Time		Hours Flown
	11	9:22				11:47		2.4
	12	12:06				14:03		2.0

Weather: Sunny and about 25

Hours Flown Today: 4.4

Accum. Standby: 0 | ***Accumulated Survey Days:*** 4 | ***Accumulated Project Hours:*** 22.1

COMMENTS

Full day of Production and completion of the Survey Area

CONTROL	Flight #:		Flight date:	
POST FLIGHT	Accepted km	Rejected km	Reasons for Rejection	

REFLIGHTS		Observations	Lines Reflown
Rejected km			
Kms today			
Accumulated km			
Percent Completed			

Operations Personnel

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MCPHAR

****Please note that kilometres flown are estimates.***

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Project #: Roca Mines	Daily Field Production Report							
Report Date:	Aug 14th 2005	Aircraft:	A-Star AS-350BA		SURVEY PERSONNEL			
Report Number:	10	Ops Base:	Roca Camp		Pilot	Rick		
Client:	Roca Mines Inc.	Country:	Canada		AME:	Bruce		
Survey Type:	Helicopter EM and Magnetics Survey							
Survey Areas:	Roca Mines			Totals	Operator	Daniel McKinnon		
Project Km:				699.00	Systems Engineer:			
Km flown today:					Field Data QC:	Rob Hearst		
Accumulated km:				699.00				
Percent Completed:				100%				
Lines flown:								

Flight #		Take off Time	First line start		Last line end	Land Time		Hours Flown
	13		Heading, Lag and Radar Tests					1.1
	14		Reflights					1.3
	15		Back and Forth demobing Camp					1.2
	16			To Smithers				2.3
	17			To Prince George				2.1

Weather: Sunny and about 25 — Hours Flown Today: 8

Accum. Standby: 0 — Accumulated Survey Days: 5 — Accumulated Project Hours: 30.1

COMMENTS

Flew tests in the morning, and proceeded to fly reflights in the survey area.
Tests and Reflights were successful and we demobed to Smithers late afternoon
Helicopter Returned to Prince George.

CONTROL	Flight #:		Flight date:
POST FLIGHT	Accepted km	Rejected km	Reasons for Rejection

REFLIGHTS		Observations	Lines Reflown
Rejected km			
Kms today			
Accumulated km			
Percent Completed			

Operations Personnel

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*Please note that kilometres flown are estimates.
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Daily Field Production Report

Project #: Roca Mines							
Report Date:	Aug 15th 2005	**Aircraft:**	A-Star AS-350BA			**SURVEY PERSONNEL**	
Report Number:	11	**Ops Base:**	Roca Camp			**Pilot**	Rick
Client:	Roca Mines Inc.	**Country:**	Canada			**AME:**	Bruce
Survey Type:	**Helicopter EM and Magnetics Survey**						
Survey Areas:	**Roca Mines**				**Totals**	**Operator**	Daniel McKinnon
Project Km:					699.00	**Systems Engineer:**	
Km flown today:						**Field Data QC:**	Rob Hearst
Accumulated km:					699.00		
Percent Completed:					100%		
Lines flown:							

Flight #	Take off Time	First line start		Last line end	Land Time		Hours Flown

Weather: Sunny and about 25

Hours Flown Today: 8

Accum. Standby: 0 | *Accumulated Survey Days:* 5 | *Accumulated Project Hours:* 30.1

COMMENTS

Mobilization is compeleted

CONTROL	Flight #:		Flight date:
POST FLIGHT	**Accepted km**	**Rejected km**	**Reasons for Rejection**

REFLIGHTS		Observations	Lines Reflown
Rejected km			
Kms today			
Accumulated km			
Percent Completed			

Operations Personnel

President	Tim Bodger		(905)830-6880	tbodger@mgssurveys.com
Project Manager:	Tim Bodger		(905)830-680	tbodger@mgssurveys.com
Systems Engineer				
HSE Manager	Victor Oetke		(905)830-6880	vho@mgssurveys.com
Lodging	Roca Camp	Satellite Phone	(613)968-9256	

McPhar Geosurveys Ltd.
[illegible] Boulevard, Newmarket, Ontario, Canada L3Y 8Z9
Tel: [illegible], Fax: [illegible], E-mail: [illegible]

**Please note that kilometres flown are estimates.*
**Exact kilometres will be calculated upon completion of survey, and will be based on GPS measurements & contractual boundaries*

McPHAR AIRBORNE GEOPHYSICAL FLIGHT LOG McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 1 Date (08/08/05): / / OPERATOR: Daniel McKinnon

PILOT: Rick Klassen O.A.T.: / A/C REG: C-GPWK

DEPART TIME: 20:30 RETURN TIME: 21:10 TOTAL FLIGHT TIME: 0:40

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day1 Base\Roc1 Rover

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
				Testing of the Hummingbird System

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

Postsurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

McPHAR AIRBORNE GEOPHYSICAL FLIGHT LOG McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 2 Date (09/08/05): _/_/_ OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: ___/___ A/C REG: C-GPWK

DEPART TIME: 14:50 RETURN TIME: 16:55 TOTAL FLIGHT TIME: 2:05

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day1 Base\Roc1 Rover

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
				Ferry from Prince George to Smithers

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan: ______

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name: ______

Postsurvey Spec Calibration

Cs137 Peak Chan: ______

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name: ______

GROUND HEM CALIBRATIONS AND TEST

McPHAR AIRBORNE GEOPHYSICAL FLIGHT LOG **McPHAR**

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 3 Date (09/08/05): / / OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: / A/C REG: C-GPWK

DEPART TIME: 17:19 RETURN TIME: 19:47 TOTAL FLIGHT TIME: 2:28

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day1 Base\Roc1 Rover

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
				Ferry from Smithers to Bob Quin.

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

Postsurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

McPHAR AIRBORNE GEOPHYSICAL FLIGHT LOG McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 4 Date (10/08/05): __/__/__ OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: ______/______ A/C REG: C-GPWK

DEPART TIME: 8:30 RETURN TIME: TOTAL FLIGHT TIME:

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day1 Base\Roc1 Rover

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
				Ferry of supplies into the Roca Camp

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

Postsurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

McPHAR AIRBORNE GEOPHYSICAL FLIGHT LOG McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #:: 5 Date (10/08/05): / / OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: / A/C REG: C-GPWK

DEPART TIME: RETURN TIME: TOTAL FLIGHT TIME:

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day1 Base\Roc1 Rover

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL		BINARY FILE NAME	COMMENTS
	START	END		
				Ferry of supplies into the Roca Camp

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

Postsurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

AIRBORNE GEOPHYSICAL FLIGHT LOG

McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 6 Date (10/08/05): / / OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: / A/C REG: C-GPWK

DEPART TIME: RETURN TIME: 17:30 TOTAL FLIGHT TIME:

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day1 Base\Roc1 Rover

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
				Ferry of supplies into the Roca Camp

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

Postsurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

McPHAR **AIRBORNE GEOPHYSICAL FLIGHT LOG** McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 7 Date (11/08/05): / / OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: 25 / A/C REG: C-GPWK

DEPART TIME: 13:30 RETURN TIME: 15:16 TOTAL FLIGHT TIME: 1:36

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day1 Base\Roc1 Rover

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
Ical	3100	3145	08120555.hum	
Nul	3170			Nul 34k separate after Null all
Ical	3270	3340		
T-10020	3485	3805		
T-10030	3940	4335		
Cal	4395	4495		
T-10010	4785	5105		
Cal	5210	5295		Camp 4980
T-10040	5375	5888		
T-10050	????	6597		
Cal	6660	6760		
T-10060	7060	7361		
T-10070	7500	7885		
Cal	7930	8030		

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

Postsurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

McPHAR AIRBORNE GEOPHYSICAL FLIGHT LOG McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 2

FLT #: 8 Date (12/08/05): __/__/__ OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: 25 ____/____ A/C REG: C-GPWK

DEPART TIME: 8:44 RETURN TIME: 11:29 TOTAL FLIGHT TIME: 2:55

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day1 Base\Roc1 Rover

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 860 F5: Coplanar 34133

LINE	FIDUCAL		BINARY FILE NAME	COMMENTS
	START	END		
Ical	1016	1055	08120820.hum	
ICAL	0	100	08120841.hum	New Humm File
10	345	715		Line Start time:15:50 GPS
20	740	1150		
30	1230	1590		
40	1640	2014		
50	2070	2450		Camp 4980
ICAL	2475	2585		
60	2700	3110		
70	3170	3540		
80	????	3970		
90	4000	4438		
100	4460	4915		
110	5010	5475		
ICAL	5510	5620		
120	5850	6013		
130	6060	6230		
140	6300?	6415		
150	6460	6620		
160	6663	6789		

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan: ______

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name: ______

Postsurvey Spec Calibration

Cs137 Peak Chan: ______

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name: ______

GROUND HEM CALIBRATIONS AND TEST

McPHAR **AIRBORNE GEOPHYSICAL FLIGHT LOG** McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 2 of 2

FLT #: 8 Date (12/08/05): __/__/__ OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: 25 / A/C REG: C-GPWK

DEPART TIME: RETURN TIME: TOTAL FLIGHT TIME:

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day1 Base\Roc1 Rover

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
170	6850	7013	08120841.Hum	
180	7065	7190		
Cal	7250	7275		
T-10000	7675			
T-10001		7995		
Cal	8030	8190		
860	8475	8910		
Cal	8950	9040		

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

Postsurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

McPHAR **AIRBORNE GEOPHYSICAL FLIGHT LOG** McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 9 Date (12/08/05): / / OPERATOR: Daniel McKinnon

PILOT: Rick Klassen O.A.T.: 25 / A/C REG: C-GPWK

DEPART TIME: 12:51 RETURN TIME: 15:50 TOTAL FLIGHT TIME: 2:59

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day1 Base\Roc1 Rover

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
Ical	175	290	08121242.hum	
850	480	845		1263. Core Boxes
840	922	1335		
830	1362	1792		
820	1830	2274		
810	2315	2785		
800	2875	3295		
Cal	3320	3430		6K little noisy, Temperature possible but
790	3570	4043		lots of Mechanical Turbulence
780	????	4580		
770	????	????		
760	????	5640		
Cal	5710	5860		
750	5935	????		
cal	6400			
nul				
nul				Nul Spec B
cal		6662		
740	6845	7255		Camp at 7222
730	7284	7705		

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

Postsurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

McPHAR AIRBORNE GEOPHYSICAL FLIGHT LOG McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 2 of 2

FLT #:: 9 Date (12/08/05): __/__/__ OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: 25 / A/C REG: C-GPWK

DEPART TIME: 12:51 RETURN TIME: 15:50 TOTAL FLIGHT TIME: 2:59

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day1 Base\Roc1 Rover

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL		BINARY FILE NAME	COMMENTS
	START	END		
720	7740	8220	08120555.hum	
710	8237	8447		
700	8720	9120		
690	9175	9618		
680	9720	10156		
Cal	10185	10305		

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan: ______

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name: ______

Postsurvey Spec Calibration

Cs137 Peak Chan: ______

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name: ______

GROUND HEM CALIBRATIONS AND TEST

McPHAR AIRBORNE GEOPHYSICAL FLIGHT LOG McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 10 Date (12/08/05): __/__/__ OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: 25 / ____ A/C REG: C-GPWK

DEPART TIME: 16:11 RETURN TIME: 18:28 TOTAL FLIGHT TIME: 2:17

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day 2 Base / Rover Roc3

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
Cal	150	270	08121600.Hum	
670	450	900		
660	975	1500		
650	1540	2033		
640	2075	2635		
630	2663	3175		
620	3199	3787		
610	3805	4300		
Cal	4325	4430		
600	????	5155		
590	5200	????		
580	????	6164		
570	6290	6605		
560	6634	7100		
550	????	7585		
Cal	7600	7700		

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name: ____________

Postsurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name: ____________

GROUND HEM CALIBRATIONS AND TEST

McPHAR **AIRBORNE GEOPHYSICAL FLIGHT LOG** McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 11 Date (13/08/05): / / OPERATOR: Daniel McKinnon

PILOT: Rick Klassen O.A.T.: 25 / A/C REG: C-GPWK

DEPART TIME: 9:23 RETURN TIME: 11:47 Total Time 2:24

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Day 4 Base / Rover Roc 5

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL		BINARY FILE NAME	COMMENTS
	START	END		
Cal	520	630	08130906.Hum	
540	800?	1253		Start Time 16:20 GPS
530	1275	1685		
520	1750	2155		
510	2180	2660		
500	2717	????		
490	3255	3588		
480	????	3990		
470	4060?	4382		
Cal	4400	4495		
460	4660	4998		
450	????	5368		
440	5445	5740		
430	5790?	6111		
420	6250	????		
410	????	6895		
Cal	6920	7030		
400	7175	7970		
390	7543	7970		
380	????	????		
370	8230	8577		
Cal	8605	8730		

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

	Cs137 Peak Chan:		
	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

Postsurvey Spec Calibration

	Cs137 Peak Chan:		
	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

McPHAR AIRBORNE GEOPHYSICAL FLIGHT LOG McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 12 Date (13/08/05): __/__/__ OPERATOR: Daniel McKinnon

PILOT: Rick Klassen O.A.T.: 25 / ______ A/C REG: C-GPWK

DEPART TIME: 12:06 RETURN TIME: 14:03 TOTAL FLIGHT TIME: 1:57

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Same as 5

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
Cal	485	580	08131149.Hum	
360	775	????		
350	????	1394		
340	1427	1795		
330	????	2100		
320	????	2415		
310	2470	2745		
300	????	3120		
290	????	3420		
280	????	3690		
270	3705	????		
260	????	????		
Cal	4020	4130		Lost my Pen so don't know the numbers
250	4500	????		

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name: ____________

Postsurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name: ____________

GROUND HEM CALIBRATIONS AND TEST

McPHAR **AIRBORNE GEOPHYSICAL FLIGHT LOG** McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 13 Date (14/08/05): __/__/__ OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: 20 / A/C REG: C-GPWK

DEPART TIME: RETURN TIME: TOTAL FLIGHT TIME:

SURVEY HEIGHT: 200' BASE MAG/GPS FILES: Base Day 5 / Rover Roc 6

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
Lag	1015	1068	08140836.Hum	200'
Lag	1115	1150	Complete	
200	1230	1260		Radar Test Hovering
250	1310	1340		
300	1375	1405		
400	1445	1495		
500	1545	1575	Complete	
135	3420	3495		Heading Error Test 5000'
315	3620	3700		
45	3848	3930		
225	4040	4112	Complete	
Lag	4375	4410		Lag at 150' for stronger signal
Lag	4465	4510		

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

Postsurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

McPHAR AIRBORNE GEOPHYSICAL FLIGHT LOG McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 14 Date (14/08/05): __/__/__ OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: 25 / A/C REG: C-GPWK

DEPART TIME: RETURN TIME: TOTAL FLIGHT TIME:

SURVEY HEIGHT: 200' BASE MAG/GPS FILES:

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
			08141117.Hum	
Cal	0	50		
Nul	60	90		
Cal	100	180		
T-10080	370	830		
T-10090	960	1480		
Cal	1490	1590		
830	1658	2138		
800	2259	2818		
790	2870	3340		
780	3474	3940		
Cal	3985	4070		

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan: ______

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name: ______

Postsurvey Spec Calibration

Cs137 Peak Chan: ______

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name: ______

GROUND HEM CALIBRATIONS AND TEST

AIRBORNE GEOPHYSICAL FLIGHT LOG

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 15 Date (14/08/05): / / OPERATOR: Daniel McKinnon

PILOT: Rick Klassen O.A.T.: 25 / A/C REG: C-GPWK

DEPART TIME: RETURN TIME: TOTAL FLIGHT TIME:

SURVEY HEIGHT: 200' BASE MAG/GPS FILES:

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL		BINARY FILE NAME	COMMENTS
	START	END		
				Back and forth demod Camp.

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

	Presurvey Spec Calibration		
	Cs137 Peak Chan:		
	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

	Postsurvey Spec Calibration		
	Cs137 Peak Chan:		
	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

McPHAR **AIRBORNE GEOPHYSICAL FLIGHT LOG** McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 16 Date (14/08/05): / / OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: 25 / A/C REG: C-GPWK

DEPART TIME: RETURN TIME: TOTAL FLIGHT TIME:

SURVEY HEIGHT: 200' BASE MAG/GPS FILES:

EM FREQ F1: Coax 7001 F2: Coplanar 6606 F3: Coax 980 F4: Coplanar 880 F5: Coplanar 34133

LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
				Fly to Smithers

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

Postsurvey Spec Calibration

Cs137 Peak Chan:

	Start	End	Comments
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

McPHAR AIRBORNE GEOPHYSICAL FLIGHT LOG McPHAR

CLIENT: ROCA MINES INC.	BLOCK # : ROCA	JOB: 405	PAGE 1 of 1

FLT #: 17 Date (14/08/05): / / OPERATOR: Daniel McKinnon

PILOT: Rick Klassem O.A.T.: 25 / A/C REG: C-GFWK

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LINE	FIDUCAL START	FIDUCAL END	BINARY FILE NAME	COMMENTS
				Fly to Prince George

ANY LINE REFLOWN SHOULD HAVE THE LINE NUMBER INCREMENTED BY 1 EACH TIME

SPECTROMETER SAMPLE CALIBRATION CHECKS

Presurvey Spec Calibration

	Start	End	Comments
Cs137 Peak Chan:			
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

Postsurvey Spec Calibration

	Start	End	Comments
Cs137 Peak Chan:			
BKG			
Cs 137			
U			
Th			
BKG			

Binary File Name:

GROUND HEM CALIBRATIONS AND TEST

McPhar Geosurveys Ltd.
1256B Kerrisdale Blvd., Newmarket
Ontario, Canada L3Y 8Z9
Tel: (905) 830-6880, Fax: (905) 898-0336
E-Mail: info@mgssurveys.com
WebSite: www.mgssurveys.com

RÉSUMÉ

NAME: **Robert Hearst**

PROFESSION: Geophysicist

EDUCATION:

1996 M.Sc., Geophysics and Geology, McMaster University
1983 B.Sc. (Honours), Geophysics and Geology, University of Western Ontario

WORK EXPERIENCE:

2004 - **McPhar Geosurveys Ltd., Senior Geophysicist/General Manager Operations** – Responsible for supervising McPhar's Data Processing Dept., responsible for processing data acquired by ground and airborne (installed in either rotary- or fixed-wing aircraft) electromagnetic, magnetic, radiometric, or other geophysical survey systems at the company's Data Processing Centre in Newmarket, using OASIS, MONTAJ, INTREPID and other software; quality control (QC) of acquired geophysical data; geophysical interpretations; operational logistics

2002 – 2004 **Consulting Geophysicist, Toronto -** servicing various international and local clients. Quality Control / Quality Assurance for Saudi Aramco on the World's largest multiple gradient airborne magnetic survey (approx. 1.7 million line-kms of data acquisition). Supervision and field quality control of data acquired by multiple aircraft on a daily basis including the acceptability and necessary re-flights / modifications required to meet contract specifications. Evaluation and specification of all final deliverable products including acceptability of final products and processing steps. Design, Quality Control / Quality Assurance and Interpretation of several smaller airborne and ground geophysical surveys completed in Canada and Venezuela for several Junior Mining Companies.

1997 - 2002 **Stratagex Ltd., Geophysical Consulting, Toronto, Senior Geophysicist** - Survey design, management, interpretation and client liaison for numerous mining companies involved in geophysical exploration for diamonds, gold and base metals in Canada, Central America, South America and Africa. Including the selection of contractor(s), writing of survey specifications, review of contracts, quality control (QC)/quality assurance (QA) activities for ground and airborne data sets and interaction with project geologists.

1995 - 1997 **Guaniamo Mining Company Limited, C/O Toco Mining Company Limited, Fort Lauderdale, Florida, USA, Chief Geophysicist and Project Manager** - Design and management of an integrated geological and geophysical grassroots exploration program for hard rock and alluvial gold and diamonds in the Guyana Shield of Venezuela. Responsibilities included the assembly of a balanced geological and geophysical exploration team; selection of contractors and consultants (international and local); planning and execution of ground follow-up areas for geological, geochemical and geophysical surveying; analysis of results; selection of drill sites, selection of bulk sampling sites; selection of possible alluvial plant sites; preparation of exploration budgets. Selection of appropriate geological and geophysical methodologies for the follow-up of high resolution aeromagnetic and radiometric surveys on the concessions. Analysis of country-wide and concession-scale aeromagnetic, radiometric, and satellite databases with selection of prospective areas for gold and diamond potential.

1983 – 1995 **Paterson, Grant & Watson Limited, Consulting Geophysicists, Toronto - Senior Staff Geophysicist (1987-1995) Staff Geophysicist (1983-1987)** - Development of new client base; responsible for the design, implementation, acquisition, compilation, processing, interpretation and presentation of geophysical and geological exploration and development surveys for precious metals, diamonds, base metals and petroleum. Management of government contracts. Assembly and coordination of field work crews (worldwide) and data processing teams. Geophysical data processing and interpretation; organization, supervision, coordination and participation in geophysical data processing projects conducted by teams of three to four individuals. Responsible for scheduling assigned projects, team selection, quality control of the product and presentation and delivery of final products to the clients.

ACADEMIC AWARDS:

- McMaster University Department of Geology Graduate Scholarship 1991 - 1992, 1992 - 1993.
- Canadian Society of Exploration Geophysicists Trust Fund Scholarship, donated by Chevron Standard Limited, 1982.

PROFESSIONAL AFFILIATIONS:

- Society of Exploration Geophysicists (SEG).
- Past President, Canadian Exploration Geophysicists Society (KEGS).
- Environmental and Engineering Geophysicists Society (EEGS)
- Canadian Institute of Mining and Metallurgy (CIM) (National and Toronto Branch).
- Prospectors and Developers Association of Canada (PDAC).
- Registered Professional Geophysicist, NAPEGG.

PROFESSIONAL EXPERIENCE:

- 22 years of continuous experience in the geophysical survey industry
- Good management skills
- Extensive international experience
- Extensive experience processing and interpreting airborne magnetic and/or magnetics/ radiometric data
- Excellent computer skills, experienced programmer

TECHNICAL PUBLICATIONS:

More than 15 technical publications between 1983 and 2003, list available on request.

LANGUAGES: English, working knowledge of French and Spanish

McPhar Geosurveys Ltd.
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Ontario, Canada L3Y 8Z9
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E-Mail: info@mgssurveys.com
WebSite: www.mgssurveys.com

RÉSUMÉ

NAME: Daniel McKinnon

PROFESSION: Operator / Technician

EDUCATION:

1999 Atlantic Transport Training Academy, Miramichi, New Brunswick
- Heavy Equipment Operator Certificate
- Alcohol and Drug Testing: Training and Awareness for Supervisors and
- Employees Certificate
- Highway Signalers Course Certificate

1995 New Brunswick Community College, St. Andrews, New Brunswick
- Electronics Diploma
- Block 1 Apprenticeship - Electrical

WORK EXPERIENCE:

2003 - **McPhar Geosurveys Ltd., Newmarket, Ontario, Canada, Technician/Operator** - responsible for installing, maintaining and operating airborne geophysical systems in the field. Experienced in operating both helicopter-borne FEM & TDEM systems and HeliMAG systems. Worked in Canada, USA and Czech Republic.

2000 - 2002 Compressario Corporation, Newmarket, Ontario, Canada
- Production Manager / North American Service Representative (2001-2003)
- Assembly/Electronics Technician (1999 – 2001)

1996 – 1999 Noranda – Heath Steele Mines, Miramichi, New Brunswick, Canada
- Heavy Equipment Operator – Production/Development Miner

HUGHLIGHTS:

- Good electronics and computer skills
- Extensive knowledge in the Manufacturing Industry
- Experience in mining operations, security, general labour, carpentry, electrical, electronics, plumbing, fabricating, and welding
- Excellent communication skills when dealing with customers, co-workers and managers
- Proven capacity to identify problems and develop effective solutions
- Honest, reliable, and hardworking with strong interpersonal skills
- Bilingual in French and English, both written and verbal

LANGUAGES: English and French

HUMMINGBIRD

Helicopter-borne Digital Electromagnetic System

Undoubtedly, helicopter-borne electromagnetics (EM), combined with total field magnetics and often gamma-ray spectrometry, have been one of the most productive and useful of airborne system developments to date, and have accounted for the discovery of billions of dollars worth of mineral resources, tapped into numerous ground water reservoirs and provided immense volumes of data for environmental site evaluations. These systems are ideally suited for working in rugged, mountainous terrain, or over small claim block-sized properties.

Currently, electromagnetics (EM) combined with a high-sensitivity magnetometer are the techniques of choice for most mining companies worldwide, to locate and define kimberlite pipes and base and precious metal deposits.

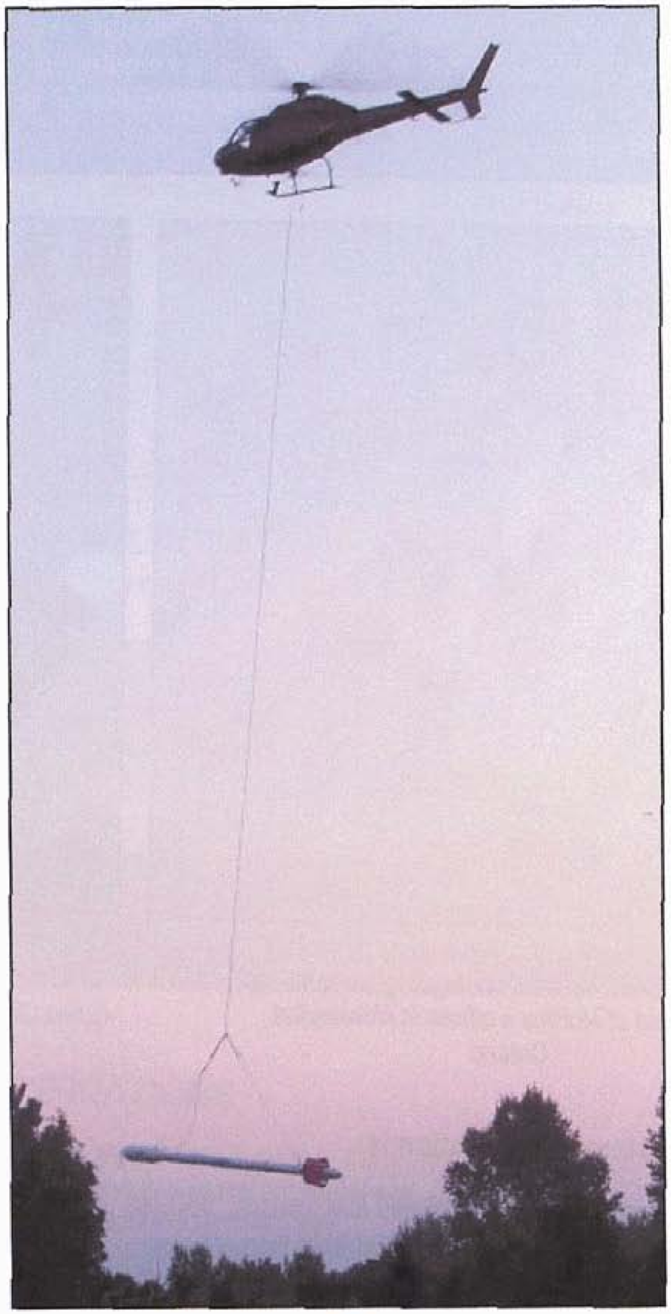
McPhar's electromagnetic survey systems are integrated around the HUMMINGBIRD EM sensor, which are available in either 4- or 5-frequency configurations.

The HUMMINGBIRD EM sensor, which is the heart of this system, can be simply described as a multi-frequency, multi-coil electromagnetic system, which measures the in phase and quadrature responses from a number of coil-pairs installed in a tubular bird, towed beneath a helicopter.

All components of the HEM instrumentation are digitally controlled. The HUMMINGBIRD is currently the only operating HEM system that is 100% digital from front to back. All digital samples generated by the instrumentation are supplied as in phase and quadrature measurements.

Data is telemetered on a lightweight serial cable to the data acquisition console onboard the helicopter, where it is displayed on a LCD colour screen and recorded on a removable PCMCIA hard disk.

Pilot guidance and DGPS navigation systems are integrated into the package together with a gammaray spectrometer (optional). Other flight control instruments include radar or laser altimeters and a barometric altimeter and a digital colour video imaging system.



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WebSite: www.mgssurveys.com

The depth in the earth to which a single frequency can penetrate is a function of the frequency and the conductivity of the earth. [Skin Depth » 503 / (frequency x conductivity)$^{1/2}$] Lower frequencies penetrate deeper into the earth than higher frequencies. The higher frequencies are more sensitive to weakly conductive geology, and to subtle changes in the conductivity of the ground.

A HUMMINGBIRD system measures the in phase "I" and quadrature "Q" (sometimes called out-of-phase) components of the total EM field. The amplitude of these components is always given as a value that is relative to the transmitted primary. The ratio of in phase to quadrature (I/Q) depends mostly on the conductivity of the geology and the operating frequency; the amplitude depends mostly on the depth of the conductor below the sensor. (While this description of the relationship is only an approximation, it is a good start from which to understand changes in I and Q measurements.)

Two 5-frequency and a 4-frequency (in yellow) HUMMINGBIRD sensors undergoing preparations for the field at McPhar's offices in Newmarket, Ontario

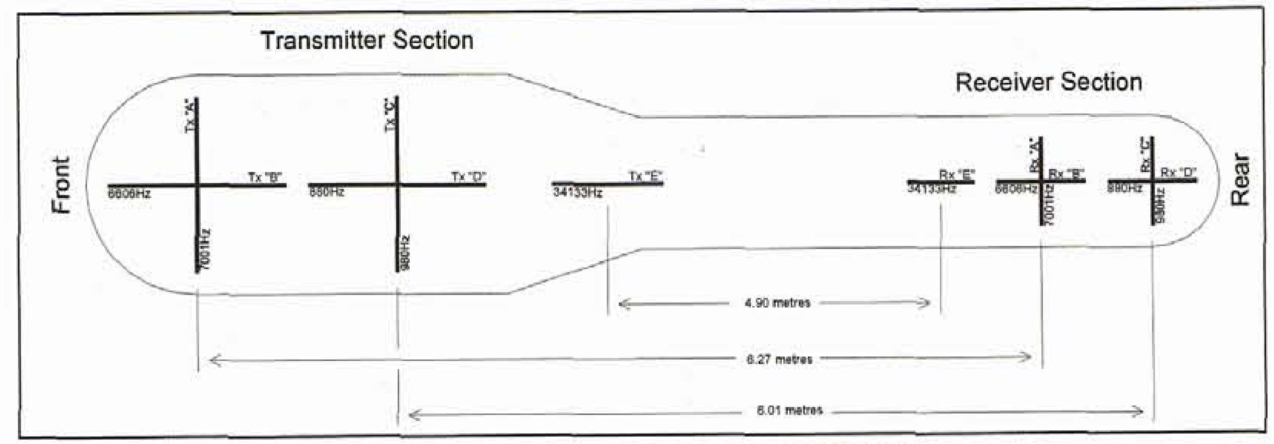
Operator's screen/keyboard assembly – HUMMINGBIRD system

Typical system configuration is:

- 5-frequency HUMMINGBIRD EM sensor, 880 Hz, 980 Hz, 6.6 kHz, 7 kHz and 34 kHz frequencies
- high-sensitivity cesium magnetometer, 0.001 nT/10 Hz resolution
- 12-channel real-time differential GPS navigation system
- PC-based data acquisition system
- radar (*optional* laser) & barometric altimeters
- colour digital video imaging system
- *optional* gammaray spectrometer and 16.8/4.2 litres sensor

Cockpit displays for the pilot – HUMMINGBIRD system

COIL FREQUENCY	COIL ORIENTATION	COIL SEPARATION	CHANNELS
880 Hz	Coplanar	6.0 meters (19.5ft)	I, Q
980 Hz	Coaxial	6.0 meters (19.5ft)	I, Q
6.6 kHz	Coplanar	6.3 meters (20.5ft)	I, Q
7 kHz	Coaxial	6.3 meters (20.5ft)	I, Q
34 kHz	Coplanar	4.9 meters (16ft)	I, Q



Layout and dimensions of the transmitter and receiver coils in the HUMMINGBIRD

Vertical view of the 5-frequency HUMMINGBIRD sensor

SPECIFICATIONS

Frequency Range:	5 frequencies, 880 Hz, 980 Hz, 6.6 kHz, 7 kHz, 35 kHz
Coil Orientations:	Horizontal coplanar and vertical coaxial coil-sets
Output:	Inphase and Quadrature samples (ppm)
Sampling Rate:	10 Hz
Noise Levels:	2 –4 ppm under ideal conditions
Time Constant:	0.1 second
Filters:	50/60 Hz power line, spheric rejection, 4th order digital, 15 Hz 2nd order analogue and 5 Hz Low Pass 6th order digital
Data Recording:	On removable PCMCIA hard disk or flash card
Data Acquisition:	Pentium-PC based
Display:	Sunlight visible colour TFT back-lit LCD
Power Requirements:	12-36 VDC, maximum 30 Amps
Temperature Range:	-40°C to +40°C
Bird/Cable Weight:	Approx. 180 kg (400 lb) including tow-cable
Bird Length:	7.5 meters (3 joined sections each of approx. 2.5 metres)

Specifications may be subject to change without notice

DATA PROCESSING

McPhar is dedicated to processing geophysical data in the field.

For this purpose all our airborne systems are sent to the field with a geophysicist and a PC-based data processing system to support them. The Field Data Verification Workstation (FWS), as this system is known, can process airborne magnetic, radiometric and EM data, and produce plots and maps in full-color of the survey data, often within hours of the survey flight ending.

The FWS software, which is the core of this system, permits our field geophysicists to differentially correct the GPS navigation data; carry out flight path recovery; perform magnetic compensation and leveling; undertake radiometric corrections and preliminary processing; electromagnetic processing; and generally to perform filtering, gridding and contouring of data, imaging of selected data and plotting to any map scale and layout.

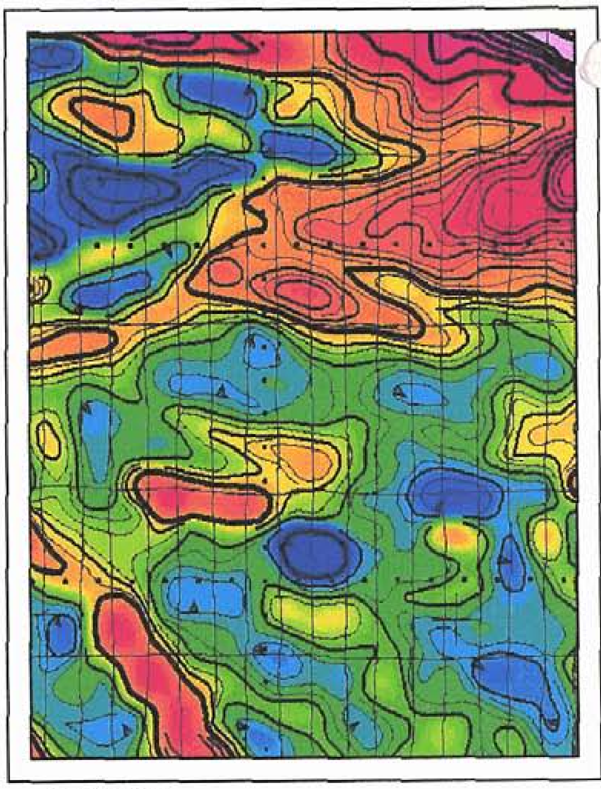
INTERPRETATION

The interpretation of geophysical results into meaningful geological parameters is the prime function of any of our interpreters.

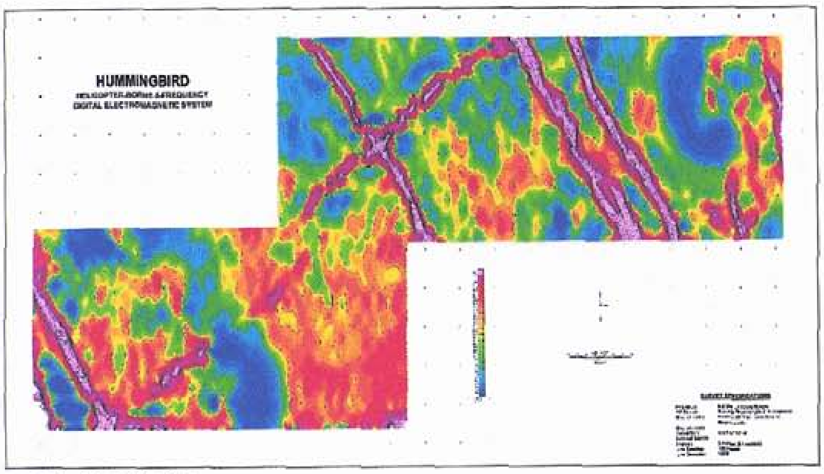
The many highly qualified geophysicists and technicians on our staff share a strong geological back-ground. The manipulation of geophysical data is only a means to an end, and the final product of the interpretation is the compilation of a series of maps showing interpreted geological parameters. The data processing routines and mathematical operators applied to the data are not the end product of the interpretation; they help delineate geologic and economic targets to be discussed in the final report.

We bring many techniques to bear on an interpretation project in order to determine depths to causative sources, to delineate discontinuities and boundaries, and to draw conclusions regarding geological structure beneath the survey.

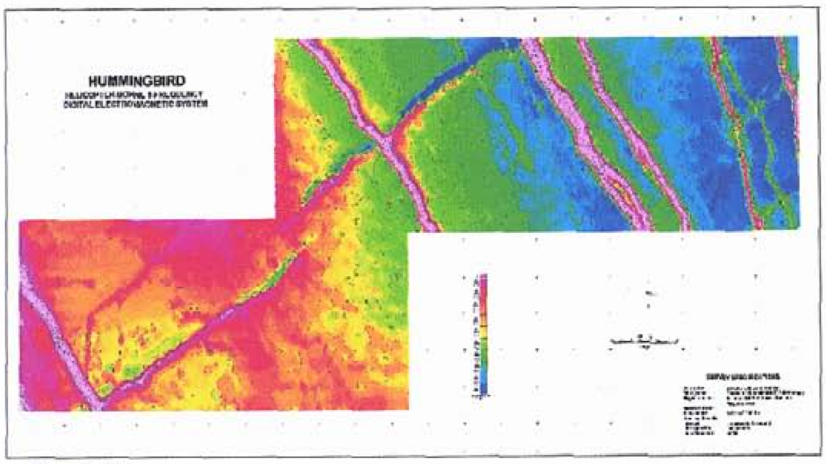
A wide variety of contour and interpretation maps, profiles, cross-sections and models, and a written report are the result of the interpretation.



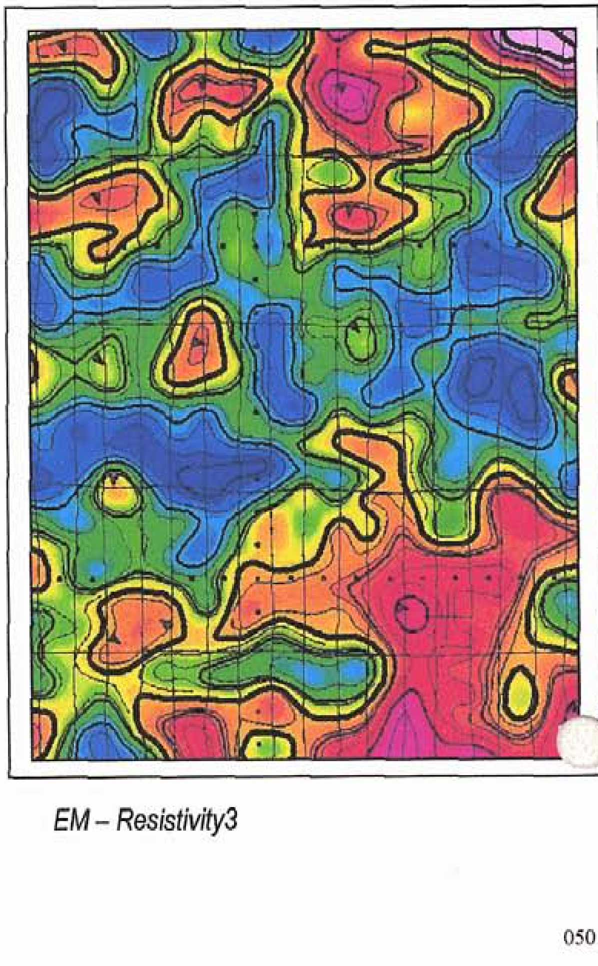
Magnetics



EM - Resistivity



Magnetics

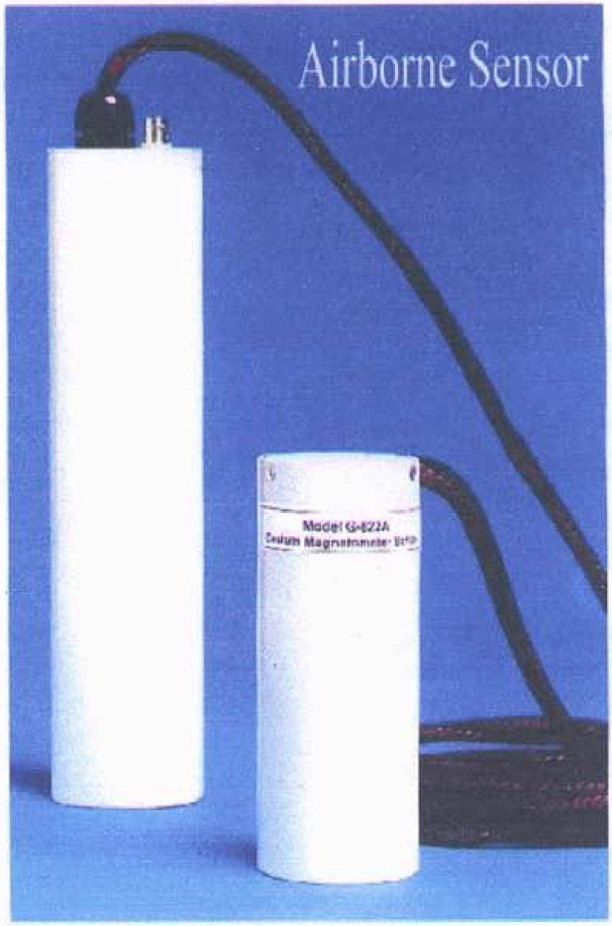


EM – Resistivity3

GEOMETRICS

G-822A CESIUM MAGNETOMETER

- ***Airborne and Vehicle Applications with Multi-Sensor Array Capability***
- ***Automatic Hemisphere Switching***
- ***Highest Sensitivity ___ 0.0005 nT/√Hz RMS with the G-822A Super-Counter***
- ***Highest Versatility ___ Full Aircraft Compensation with RMS AADCII or Button-on Towed Bird system with CM-201 Internal Mini-Counter, with 6 Channel 12 bit A to D converters***
- ***Superior resolution of the Cesium Larmor signal, tracking earth's field variation rates exceeding thousands of nT (γ) over 0.01second periods when using the G-822A Super-Counter***
- ***Gradiometer arrays offering simultaneous operation of up to four separate sensors with the RMS Instruments AADCII , Geometrics' G-822A Super-Counter or CM-201 Internal Mini-counter (See 823A Data Sheet)***
- ***Geometrics offers complete turnkey systems including Birds, Stingers, Wingtip installation accessories as well as Digital Data Acquisition Systems, Flight Path Recovery, GPS Navigation, Gamma Ray Spectrometers, VLF EM , Post Acquisition Data Processing Software and Training***



The G-822A is designed for all airborne or mobile applications where the unique combination of high sensitivity and very rapid sampling of the earth's magnetic field are required. Applications include mapping geologic structure for mining, oil and gas exploration, and the detection and delineation of target bodies in environmental or military type surveys. The unit consists of a high performance low heading error cesium vapor sensor with its associated cables and driver electronics package.

The G-822A sensor uses a precise well-proven design, carefully selected and tested components to insure the very best specifications in sensitivity, noise, heading error and absolute accuracy. A proven record of stable and reliable operation over long periods is the hallmark of the industry standard G-822A. A single coaxial cable of up to 50 meters length supplies both 28 VDC power and Larmor signal transmission from the sensor driver electronics to the 822A Super-Counter or the RMS Instruments' AADCII Automatic Aeromagnetic Digital Compensator. Internal or external signal/power filter-decoupler assemblies are available to provide extremely low noise operation.

The interconnect cable from the driver/electronics to the sensor may be supplied in lengths of 82 and 136 inches. Tuning throughout the earth's field range is fully automatic, and includes automatic hemisphere switching for equatorial surveys.

The sensor/electronics package is watertight, temperature controlled, and delivers full performance under extreme operating conditions. Accessories include special mounting clamps and orientation platforms for installation into a variety of vehicle or aircraft mounting configurations, as well as Birds, Stingers and Wing Tip fairings.

MODEL G-822A AIRBORNE CESIUM MAGNETOMETER SENSOR SPECIFICATIONS

OPERATING PRINCIPLE:	Self-oscillating split-beam Cesium Vapor (non-radioactive)
OPERATING RANGE:	20,000 to 100,000 nT
OPERATING ZONES:	The earth's field vector should be at an angle greater than 6 from the sensor's equator and greater than 6° away from the sensor's long axis Automatic hemisphere switching.
SENSITIVITY:	<0.0005 nT/√Hz rms Typically 0.003 nT P-P at a 0 1 second sample rate (90% of all readings falling within the P-P envelope) using 822A Supercounter, 0 02nT P-P for CM-201
HEADING ERROR:	±0.25 nT (over entire 360° spin and tumble)
ABSOLUTE ACCURACY:	<3 nT throughout range
OUTPUT:	Cycle of Larmor frequency = 3.498572 Hz/nT. 2V P-P coupled through the sensor power input
MECHANICAL:	
Sensor:	2.375" (60.32 mm) dia., 6.25" (158.75 mm) long. 12 oz (339 g) - any orientation in 7" dia. stinger
Sensor Electronics:	2 5" (63.5 mm) dia., 11" (279 4 mm) long, 22 oz (623 g)
Cables:	
Sensor to electronics:	70" (1 78 m) or additional 40" (1 1 m) increments with quick disconnect on electronic end. Longer lengths available - Up to 19 5 ft (6 1 m)
Sensor Electronics to Counter:	Up to 220 ft (70 m)
OPERATING TEMPERATURE:	-30°F to +122°F (-35°C to +50°C)
STORAGE TEMPERATURE:	-48°F to +158°F (-45°C to +70°C)
ALTITUDE:	Up to 30,000 ft (9,000 m)
WATER TIGHT:	Sealed for up to 2 ft (0 9 m) depth
POWER:	24 to 32 VDC, 0.75 amp at turn-on and 0.5 amp thereafter
ACCESSORIES:	
Standard:	Power/Larmor coaxial cable (electronics to counter), lengths to be specified, spare O rings, operation manual and carrying case
Optional:	
Signal/Power Decoupler:	Separates the Larmor signal from the power (28 V) to enable connection to RMS Instruments' AADCII Automatic Aeromagnetic Compensator or Customer supplied counter
Internal Decoupler:	P/N 27504 - up to two sensor installation
External Decoupler:	P/N 27560 - three and four sensor installation
Internal CM-201 Counter	See G-823 A Data Sheet
Stinger, Wingtip, Bird	Contact Factory for complete system integration information
Base Station Accessories	Non-magnetic Tripod, clamps cables

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE 1/98

GEOMETRICS, INC. 2190 Fortune Drive, San Jose, California 95131
408-954 0522 • Fax 408-954-0902 • Internet sales@mail geomtrics com

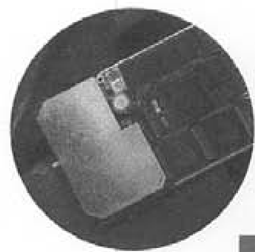
GEOMETRICS Europe Manor Farm Cottage, Galley Lane Great Brickhill, Bucks, England MK179AB • 44 1525-261874 • Fax 44-1525-261867

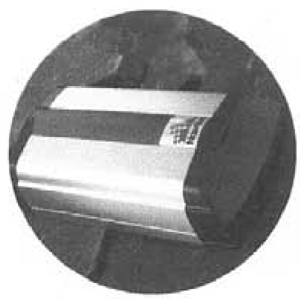
GEOMETRICS

GEOMETRICS China Laurel Industrial Co Inc - Beijing Office, Room 2509-2511, Full Link Plaza #18 Chaoyangmenwai Dajie, Chaoyang District, Beijing, China 100020
10 6588-1126 (1127 1130), 10-6588-1132 • Fax 010-6588 1162

Look into NovAtel's MiLLennium®

It's a state of the art dual frequency GPS receiver that features pseudorange and full wavelength carrier phase measurements on both L1 and L2 frequencies.





ADVANTAGES

- 24 channel "all in view" parallel tracking
- L1-C/A code and L2-P-code measurements
- L1 and L2 full wave carrier measurements
- Narrow Correlator® technology
- P-code tracking through Antispoofing (AS)
- cm level real-time accuracy
- mm level post-processed accuracy
- High data output rates
- Low data latency
- High dynamics
- Ease of use
- OEM or standalone configurations
- Flexible integration
- Field-upgradable
- CMR compatible

NovAtel

MiLLenium

MiLLennium®

NovAtel's MiLLennium GPSCard provides unparalleled dual frequency GPS performance. Featuring Narrow Correlator and P-code Delayed Correlation technologies, the MiLLennium receiver outputs pseudorange and full wavelength carrier phase observations for both the L1 and L2 frequencies – even in the presence of Antispoofing (AS). High data output rates, low data latency, and fast signal acquisition algorithms round out the MiLLennium advantage and make it the ideal choice for your high dynamic, high precision GPS applications.

T[illegible]dress your integration requirements, N[illegible]nnium's multiple hardware configurations provide you with the flexibility you need. Available modules include a single card OEM platform for embedded systems, and PowerPak™ II or ProPak® II enclosures for standalone applications. The MiLLennium hardware platform supports several different firmware models; offering a comprehensive and affordable upgrade path beyond that available on a single frequency-only hardware platform.

Features

- mm level post-processed accuracy
- L1-C/A code and carrier tracking
- L2-P-code and full wavelength carrier tracking
- 24 channel "all in view" parallel tracking
- Fast reacquisition
- Patented Narrow Correlator technology
- 5 or 10 MHz external oscillator input
- 10 Hz position output rate
- 10 Hz raw data output rate
- 1 PPS output
- Event marker
- RTCM SC104 v 2.1/2.2
- RTCA SC159
- RINEX v 2.0
- NMEA 0183 v 2.01
- GPSolution™ – Windows® compatible graphical user interface
- [illegible]nsmit
- [illegible]rt CMR v 3.0
- Receive CMR v 1.0, 2.0 or 3.0 (except 3151 model)
- WAAS differential capability

Windows is a registered trademark of Microsoft Corporation

Specifications[1]

• position accuracy[2]	
standalone	
SA off	15 m CEP
SA on	40 m CEP
differential	
code (L1,C/A)[3]	0.75 m
• post-processed (MiLLennium STD & RT-2)	±5mm +1ppm
• time to first fix	
cold start	70 s (typical)
• reacquisition	
warm start	1 s L1, 10 s L2 (typical)
• data rates	
measurements	10 Hz
position	10 Hz
• time accuracy[4]	
SA off	50 ns RMS
SA on	250 ns RMS
• velocity accuracy	
standalone	0.20 m/s RMS
differential	0.03 m/s RMS
• measurement precision	
C/A code	10 cm RMS
L2 P code	40 cm RMS
L1 carrier phase	
single channel	3 mm RMS
differential channel	0.75 mm RMS
L2 carrier phase	
single channel	5 mm RMS
differential channel	4 mm RMS
• dynamics	
acceleration	6 g
velocity[5]	515 m/s max.

1. Performance specifications are subject to GPS system characteristics & U.S. DOD operational degradation
2. Accuracy is dependent upon ionospheric and tropospheric conditions, satellite geometry, baseline length and multipath effects.
3. Requires use of choke ring with antenna
4. Time does not include biases due to antenna cables or RF delay
5. Export licensing restricts operation to 60,000 feet maximum and 1,000 nautical miles/hour maximum

OEMCard MiLLennium

• physical (Eurocard)	
size	17.9 cm x 10.0 cm x 1.8 cm
weight	175 g
• temperature	
operating	-40°C to +85°C
storage	-45°C to +95°C
• humidity	95% non-condensing
• interface	
dual RS232	300 to 115,200 bps
strobes I/O	5 signals, TTL level
external clock	5 or 10 MHz
• connector type	
edge	64 pin 0.1" DIN 41612 type B
antenna	SMB male
external clock	SMB male
• input voltage	+5 VDC
• power consumption (typical)	7 watts

PowerPak II MiLLennium

• physical	
size	21.0 cm x 11.1 cm x 4.7 cm
weight	980 g
• temperature	
operating	-40°C to +60°C
storage	-40°C to +85°C
• humidity	95% non-condensing
• interface	
dual RS232	300 to 115,200 bps
strobes I/O	TTL level
external clock	5 or 10 MHz
• connector type	
communications	DE9P
strobes I/O	DE9S
antenna	TNC female
power	2.1 mm threaded plug
external clock input	SMB male
• input voltage	10-36 VDC
• power consumption	11 watts
• included accessories	
RS232 "Y" type null modem cable	
automotive power adaptor	
• optional accessories	
110/220 Volt AC adapter	

ProPak II MiLLennium

• physical	
size	25.1 cm x 13.0 cm x 6.2 cm
weight	1.3 kg
• temperature	
operating	-40°C to +55°C
storage	-40°C to +85°C
• humidity	95% non-condensing
• interface	
dual RS232	300 to 115,200 bps
strobes I/O	TTL level
• connector type	
communications	10 pin LEMO
strobes I/O	8 pin LEMO
antenna	TNC female
power	4 pin LEMO
• input voltage	10-36 VDC
• power consumption	12 watts
• included accessories	
RS232 null and straight modem cable	
automotive power adaptor	
• optional accessories	
110/220 Volt AC adapter	

Version 980825 • Printed in Canada

For detailed product technical specifications, please call:

1-800-NovAtel

in U.S. or Canada or +1-403-295-4900
email: sales@novatel.ca
internet: www.novatel.ca

NovAtel Inc.
1120-68th Avenue NE
Calgary, Alberta, Canada, T2E 8S5

NovAtel

Now, what's tomorrow's challenge?

PNAV 2100

Real-Time GPS/DGPS Navigation System for Airborne Surveys

PICODAS GROUP INC.

The PNAV 2100 is a real-time GPS/DGPS airborne navigation system designed for grid and waypoint surveys for use in helicopters or fixed wing aircraft.

Picodas have developed navigation software programs that provide real-time presentation of complex positioning information from various types of GPS receivers to the pilot in a transparent and simple format. Designed specifically for low level flying, the PNAV 2100 has become the indispensable tool in airborne geophysical operations, photogrammetry and other aerial survey applications.

PNAV system consists of a 19 inch rack-mount console, high resolution Moving Map Display with keypad for all system controls and Pilot Indicator display for cross-track guidance.

The Moving Map Display and Pilot Indicator can be operated up to 5 m (15 ft.) away from the PNAV console mounted in the operator's or pilot's best view and access. The on-going flight path with overlay of the survey area, flight lines, locked (surveyed) line and waypoints, ground speed, heading, cross-track information and distance-to-go are calculated and displayed in real time on the Moving Map Display, the Pilot Indicator displays all essential navigation and cross-track information.

The basic PNAV system consists of a rack-mount console with computer for data processing, recording and storing, a high resolution monochrome LCD Moving Map Display providing real-time viewing of navigation information in variable formats including zooming and auto-centering, and a two line Pilot Indicator providing critical navigation data for the pilot. A compact keyboard on sliding tray is provided for editing, to carry out diagnostic checks, pre and post flight preparations and printing. Positioning data can be stored on the hard disk or transferred via an RS-232 port to other devices.

The PNAV 2100 can be operated with internally mounted GPS receivers, presently with the NovAtel 3100/3900 OEM card series or Ashtech GG24 OEM card (others to follow) and with a wide range of external GPS receivers (refer to list on other side). The use of the Ashtech GG24 Receiver with the capability to simultaneously receive both GPS and GLONASS satellite networks have increased the primary uncorrected accuracies of the prime GPS data to a sufficient range for most airborne geophysical surveys, thus eliminating the need for DGPS corrections.

Enhanced navigation accuracies can be achieved by using differential GPS corrections in real time or in post flight mode. The PNAV console uses a variety of differential GPS methods depending on the geographical area of operation. The most practical and efficient method is using satellite DGPS receivers such as the Racal LandStar that provide continuous real time differential GPS corrections down to one meter accuracy, where DGPS satellite coverage is available. Other DGPS real time corrections include the Coast Guard network, FM Radio Stations and other ground based DGPS stations using UHF radio modems. Post flight corrections can be processed using a ground GPS recording station and GPS correction software.

The PNAV system can communicate via an RS-232 port with any external receiver that provides Lat/Lon, X/Y or Range-Range information (see list of supported receivers on reverse side).

The PNAV system can also be provided in a PC plug-in board level, to be used with any IBM PC, or Picodas PDAS 1000 rack-mount, P101 portable and P111 environmental consoles. The PNAV software supports a variety of GPS/DGPS receivers, is easily customized and the built-in editor allows for user modifications.

FEATURES:

- REAL-TIME VIEW OF OPERATIONS
- CROSS-TRACK INFORMATION
- FLY PATTERN SELECTION
- AREA GENERATION FROM FILE OR "ON-THE-GO"
- AUTOMATIC GRID-LINES ROTATION
- AUTOMATIC LINE GENERATION
- AUTOMATIC "TIME AND DISTANCE-TO-GO" CALCULATION
- ZOOM-IN/OUT AND AUTO-CENTERING
- DATA RECORDING OR TRANSFER VIA RS-232
- PRE-FLIGHT TRAINING AND PLANNING
- POST-FLIGHT DATA REVIEW AND PRINT-OUT
- SEVERAL DIFFERENT CO-ORDINATE SYSTEMS
- DIFFERENTIAL CORRECTIONS OPTIONS
- SIMULATION SOFTWARE FOR TRAINING

PNAV 2100 Real-time GPS/DGPS Navigation System for Airborne Surveys

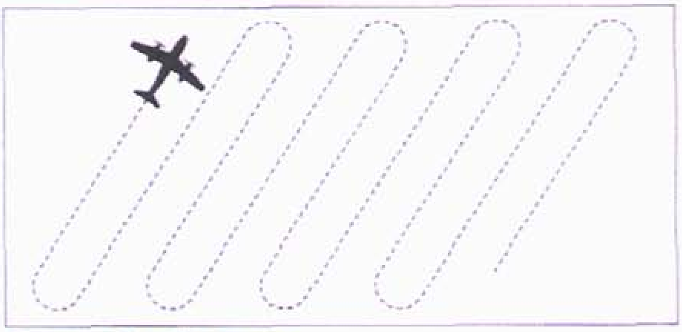
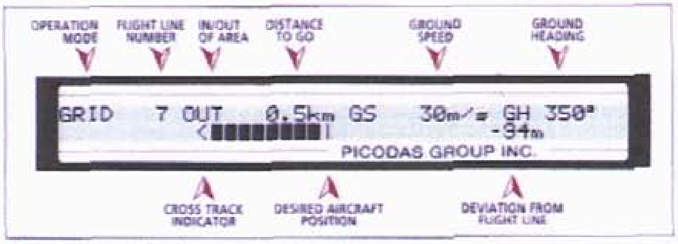
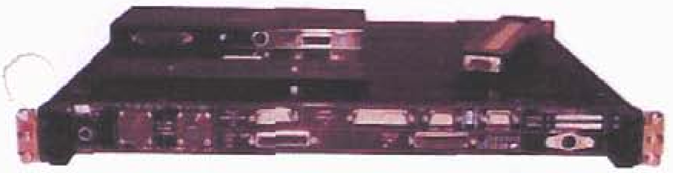


Illustration of grid flying pattern.



Pilot indicator display graphics detail.



PNAV 2100 chassis back view showing input/output ports to all peripherals including Pilot Indicator and Moving Map Display

SUPPORTED RECEIVERS:

- NovAtel GPS card receivers
- Trimble TANS GPS receiver
- Ashtech M XII and RANGER GPS receiver
- Magnavox MX 4802 & 4200 GPS receiver
- SEL Globus LN 2000 GPS receiver
- Motorola Eagle VIII GPS receiver
- Motorola Mini-Ranger receiver
- Falcon 484 Range-Range system
- Del Norte 542 and 547 Range-Range systems
- II Morrow Apollo Loran-C receiver
- Trimble TNL2000 GPS receiver
- Syledis MR3-Aerodata format
- NMEA 0183 data formats, GPGGA, GPGLL, GPGXP and GPRMC packets, as used by Trimble 4000 RL
- Morrow Flybuddy 820 GPS receiver

** Picodas will support any navigation device with a suitable range X/Y or Lat/Lon output.*

Picodas PDAS 1000 rack-mount

Picodas P101 portable light-weight

TECHNICAL SPECIFICATIONS:

- CPU Card 486/66MHz/4M (or higher)
- Internal 1.2GB HDD/1.44MB FDD or data transfer via RS-232
- Internal NovAtel 3100R/3900R series GPS Receiver, 12 channel, 10Hz or Ashtech GG24 GPS/GLONASS Receiver, 24 channel, 5Hz
- Remote VGA monochrome screen with 15x11.5 cm (6"x4.5") LCD display 640x480, up to 5 m (15 ft.) cable, keypad with 18 function control keys including On/Off power, contrast & brightness control, display connector, PS2 keyboard connector
- Pilot Indicator 2-line x 40 character LCD with backlight, up to 5m (15 ft.) cable
- Interface Board for display/keyboard and other peripherals
- Dual RS-232 ports for I/O communication
- Keyboard on a slide-out tray
- Input Voltage: 10-30V DC, 40W
- Working temperatures: -20°C to +60°C

SOFTWARE:

NAVTRAIN- pilot training, flight preparations, print-out set-up
NAVIGATE- real-time navigation program with Map, Grid, Line and Waypoints basic modes

MODEL	DIMENSIONS (WxHxD)		WEIGHT	
PNAV 2100 Console	48x4.5x43 cm	19"x1.75"x17"	6 kg	13 lb
Display Screen-Mono	21.5x15x4 cm	8.5"x6"x1.5"	1kg	2.2 lb
Pilot Indicator	22x4x3 cm	8.5"x1.5"x1"	0.3 kg	0.7 lb
Keyboard/Slide-out tray	48x4.5x28 cm	19"x1.75"x11"	1 kg	2 lb

OPTIONS:

- Differential GPS corrections: LandStar satellite DGPS receiver, UHF data link for commercial stations or Picodas portable base station, FM radio or Coast-Guard radio
- Guidance aids: standard or programmable light-bars (model dependent)

PICODAS GENERAL LINE OF PRODUCTS:

- Data Acquisition Systems, Airborne, Marine, Ground
- High Resolution Airborne Magnetometers & Gradiometers
- Automatic Digital Aeromagnetic Compensators
- Gamma Ray Spectrometers and Crystal Detector Packages
- GPS and DGPS Airborne Navigation Systems
- Environmental Radiation Monitoring Systems
- Multisensor Airborne Geophysical Survey Systems
- Ground and Mobile Recording Magnetometers
- Ruggedised Field Computers and Processing PC Boards
- Software for Systems Operation and Data Processing

McPHAR

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Ontario, Canada L3Y 8Z9
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E-Mail: info@mgssurveys.com
WebSite: www.mgssurveys.com

TERRA TRA-3000 / TRI-30 Radar Altimeter

The Terra TRA-3000 Radar Altimeter unit provides AGL (Above Ground Level) altitude information from 40 feet (12.3 m) up to 2,500 feet (769 m). The system consists of a single TRA-3000 receiver/transmitter/antenna unit and a TRI-30 indicator.

SPECIFICATIONS

TRA-3000 Unit

Type:	Single antenna, FMCW
Altitude Range:	40 to 2,500 ft
System Accuracy:	
• **40 to 100 ft**	+/- 5 ft
• **100 to 500 ft**	+/- 5%
• **500 to 2,500 ft**	+/- 7%
Frequency Range:	100 MHz sweep within 4,200 to 4,400 GHz range
Input Voltage:	Approx. 20 VDC from indicator
Input Current:	600 ma
Altitude Output:	Digital
Self-Test:	Ground or flight, initiated at indicator
Transmitter/Receiver/Antenna:	All solid-state, microstrip antenna,
Physical:	Size - 1" H x 5" W x 7.625" L, Weight - 1.5 lb.
Environment:	-40° C to + 70° C
Unlock display:	Altitude – 45,000 ft

TRI-30 Indicator

Power Supply:	Input voltage – 27.5 VDC +/- 20%
Environment:	Power – 16 watts nominal (includes power to T/R/A unit
Physical:	Size – 3.25" H x 3.25" W x 4" L, Weight – 1 lb.
Mounting:	Front panel mounting; requires a 3" ATI mounting space
Altitude range:	40 ft. to 2,500 ft (linear); 40 – 500 ft (enlarged linear)
Analog display:	Servo; pointer and dial type Needle will go off scale on the high-end
Decision height:	Bug, continuous setting from 40 to 2,500 ft.
Display update rate:	continuous
Analog output:	2.5 mv/ft., 100 mv = 40 ft.
Display disable:	One strut switch input, ground to enable
Altitude accuracy:	
• **40 to 100 ft**	+/- 5 ft
• **100 to 500 ft**	+/- 5%
• **500 to 2,500 ft**	+/- 7%
Aural Decision Height alert:	1 KHz tone for 2 sec. (500 ohms) adjustable audio level
Self-test:	Indicates 40 ft., DH operates normally
Visual alert:	Amber lamp with automatic adjustable intensity; internal LED standard; external lamp operation available.

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Geo-iMAGe Lite Colour Digital Imaging System

The airborne geophysical survey industry has traditionally acquired flight path imagery to document the position of the aircraft and sensor array with respect to the ground. The technology has progressed from 35 mm continuous-strip or frame film camera to videotape and VCR's, usually in the VHS - NTSC format. Current technology overlays the acquired video imagery with GPS position data as well as information from the geophysical data acquisition system, permitting correlation of the video imagery to the ground surface.

This technology has not progressed much since the early 1970's, and although digital camera systems have been available for some time, the industry has not utilized them for many reasons, mainly the inability to store the large volumes of video data in real time. Due to advances in the computer technology industry, this limitation has been overcome. Now that more versatile computer systems are available for use in the aircraft and the capacity to store large volumes of data quickly has become readily and affordably available, digital video has taken on a far more attractive role in airborne geophysics.

The older videotape systems generated imagery that was usually of poor quality, and there was no way to quickly find any given ground location on the tape without playing the entire tape. The video data was good for little more than proving that the aircraft had passed over a given point on a flight line. Certainly it was not of any use in creating any kind of map or photo-mosaic.

Today, however, we can acquire and record high-resolution video images in a format that can be read on any standard PC type computer. These images, combined with suitable information (GPS position, time, height above ground, height above sea level, pitch and roll axis tilt) will now permit the generation of digital 3D terrain models that can be integrated into the geophysical data set.

Most of the areas currently being explored for minerals or hydrocarbons have, at best, very poor topographical information. In many areas no useable information is available at all. Satellite imagery while available, is very costly and usually takes many months to acquire and process, and yields imagery with typically ten meters (or worse) pixel resolution.

Our goal is to provide simultaneously, with the acquisition of the geophysical data, medium to high resolution digital video frames (sub 3-meter pixels) with sufficient horizontal and vertical overlap to allow generation of video stereo pairs, and with the addition of the GPS and altimeter information to create a 3D terrain model.

The basic Geo-iMAGe Lite module comprises a stand-alone rack-mountable console that contains a powerful micro-computer, hard disk drive

comprises the following:

- Stand alone, "small footprint" computer system, c/w Pentium III, 1.2 GHz clock speed (or faster) processor, 256 MB RAM memory, 60 GB HDD, RS-232 serial port, 1 x IEEE 1394 firewire port, 3 x USB ports, 2 x Ps/2 ports, and CD-RW drive
- Windows 2000 Professional Operating System software
- Proprietary video image and GPS data acquisition software to enable acquisition of JPEG, TIF, BMP or PNG format video frames with a resolutionof 640 x 480, 320 x 240 or 160 x 120 pixel resolutions, user selectable.
- User selectable video frame and GPS data acquisition rate - from 1 frame per second to 1 frame every 10 seconds – synchronized with GPS time
- Sony digital video camera with 1/3 inch CCD video element
- 5.64 to 64.8 mm focal length lens with wide angle adapter (0.6 X increase in view angle)

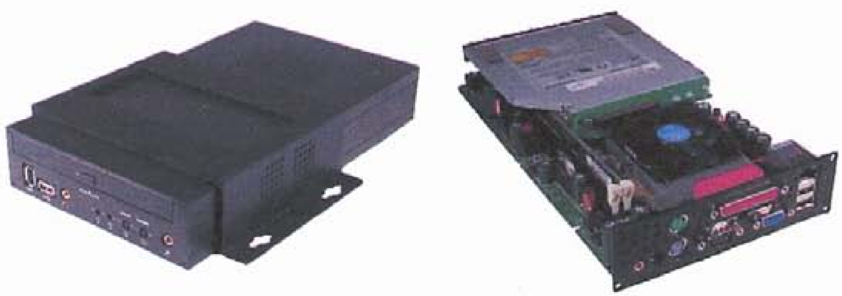
Optional modules for use with Geo-iMAGe Lite include:

Geo-iMAGe GPS module

- Comprises a NovAtel OEM-4 GPSCard receiver, 12-channel, L1 code, imbedded in the Geo-iMAGe console.
- Novatel 511 aircraft certified active GPS antenna or Novatel 521 land vehicle active antenna, and cabling

Geo-iMAGe Screen/Keyboard module

Comprises a 19", 1 "U" high, rack-mount drawer containing a folding 15" LCD TFT (1024 x 768 pixel resolution) screen, keyboard and touchpad "mouse" pointing device.



Figures 2 & 3: "mini-footprint" Pentium III computer module

***Figure 4:** Geo-iMAGe Screen/Keyboard module comprising a 19", 1 "U" high, rack-mount drawer containing a folding 15" LCD TFT (1024 x 768 pixel resolution) screen, keyboard and touchpad "mouse" pointing device.*

BASIC SYSTEM OVERVIEW

Typical video frame acquisition rate is in the order of 1 frame per second but may be user selected from a range of 1 frame/second to 1 frame every 10 seconds, in increments of 1.0 second. This will allow for variations in flight height above ground, aircraft ground speed and the viewing angle of the camera. Cameras typically used have 47° to 96° angle-of-view.

The system will import a serial data string from a GPS receiver (NEMA format GPGGA string). Rather than overlay the data string on the border of each image frame, a separate GPS data file is created with the same file name as the video frame but with the file extension GEO. The GPS data is available at rates of up to 10 HZ. The GPS receiver has several RS-232 serial ports available to transmit data strings to other equipment should the user so desire.

The video frames are stored on a large capacity hard disk. A naming convention for each frame has been developed utilizing GPS time as the reference. The frames are numbered in the format YYYYMMDDHHMMSSS.XXX where YYYY represents the year, MM the month, DD the day, HH the hour, MM, the minutes, SSS the seconds and decimal seconds of GPS time when the frame was captured. The system includes a CD-RW writer and appropriate software to allow storage of the imagery on CD media for long-term archival purposes.

The primary focus of this product is to replace the traditional "VCR" with a digital picture recording mechanism. Any standard image display software may be used to view the frame or frames of choice on a computer.

Figures 6 & 7: Digital images acquired over farmland in South America

Figures 8 & 9: Digital images acquired over desert village in North Africa

System Specifications:

OPERATING SYSTEM & DEDICATED SOFTWARE	
Operating System:	Microsoft Windows 2000 PRO or ME
Video Acquisition Software:	GEOIMAGE LITE
POWER REQUIREMENTS:	24 –32 Volts DC at 50 watts power consumption 12 VDC or 115 / 230 VAC optionally available
GEO-iMAGe LITE:	
Frame capture rate:	frame / second to 1 frame every 60 seconds, software selectable
Video format:	JPG, TIF, BMP, PNG, user selectable (JPG recommended)
GPS data:	internal dedicated GPS receiver, Novatel OEM-4, 12 channel L1 - NMEA 0183 GPGGA data string GPS data collected at same rate as video frame data User selectable baud rate for GPS data
File naming:	
Video file:	YYYYMMDDHHMMSSS.XXX, where: YYYY= Year MM= Month DD= Day HH= Hour MM= Minute SSS= seconds.tenths of seconds XXX= video extension, JPG, BMP, PNG etc (automatic)
GPS data:	same as above except file extension automatically selected as GEO
Digital Camera:	
Model:	Sony DFW-V500 or equivalent
Interface Format:	IEEE 1394
Data format:	640x480 YUV (4.2.2) 640x480 YUV(4.1.1) 320x240 YUV(4.2.2) 160x120 YUV(4.4.4) all formats user selectable
Image Device:	CCD
White Balance:	Automatic or Manual
Hue:	variable
Saturation:	variable
Lens focal length:	5.64 to 64.8 mm, F:1.18
Wide angle adapter:	VCL-0637H (0.6 X increase in view angle)
Zoom:	12X range, manual, user selectable
Focus:	manual, user selectable
CCD Iris:	ON/OFF selectable
Shutter Speed:	1/30 to 1/100000 sec
Gain:	Automatic or manual
Power:	8-30 VDC (supplied through 1394 cable)
Power Consumption:	4 watts
Operating Temp:	-20 to +50 DEG C
Dimensions:	60 x 61 x 118 mm (w/h/d)
Mass:	335 grams
LCD display and keyboard	
	Full keyboard function SynapticsTouchpad Microsoft Mouse compatible with PS/2 mouse interface 15.1" high brightness TFT LCD display

Resolution :	1024 x 768 (36-bit colors)
Brightness :	200 cd/m2
LCD MTBF :	50,000 hrs
On Screen Display:	built-in OSD for user adjustment, including H/V position, Color, size, etc.
Power Supply :	Built-in universal AC input adapter (LKM-926x / 9265x) -48VDC (LKM-926xT / 9265xT)
Operating Temp:	0° ~ 50°C

Up to five VGA / Keyboard / Mouse / Audio inputs (5 PCs)
Built-in Manual or Auto Scan function

CPU Processor and Peripherals:

CPU :	Socket-370 base support CeleronTM / Pentium® III up to 1.33GHz FSB
System Memory :	One 168-pin DIMM socket up to 512MB SDRAM / VCM
System Chipset :	SiS 630
Video Controller :	up to 1600 x 1200, 16 bits colors, resolution 1394: Fully supports provisions of IEEE 1394-1995 standard for high performance serial bus and the P1394a supplement. Two P1394a fully compliant cable ports at 100/200/400 Mbps
Super I/O :	3 x RS-232 and one RS-232/422/485 (auto-direction RS-485) One parallel port Floppy Disk Controller
USB Ports :	Two ports meets USB ver.1 standard by pin header
Digital I/O :	4 DI and 4 DO
Ethernet :	Dual 10/100Mbps LANS with one integrated in Support ATX function PC/104 expansion by LPC to ISA controller Support one PCI slot
SSD :	Support CompactFlash Type II socket
IDE :	ATA66 interface by one 40-pin connector
Power:	6.5A/5V, 170mA/12V (PIII-933MHz and 256MB SDRAM)
Operating temp:	0 ~ 60°C (CPU needs cooler)

CD-WRITER:	HP 8200 CD-RW
MEDIA:	20 GB, 2.5 INCH DRIVE Optional 250 MB IOMEGA ZIP DRIVE

NovAtel OEM-4 GPSCard:

position accuracy - single point	
SA off:	11 m CEP 3
SA on:	48 m CEP 4
DGPS:	(L1, C/A)5 0.45 m CEP
measurement precision	
L1 C/A code:	6 cm RMS
L1 carrier phase:	0.75 mm RMS (differential channel)
data rates	
measurements:	10 Hz
position:	10 Hz
time to first fix - cold start:	60 seconds (typical)
signal re-acquisition:	0.5 s (typical)
time accuracy:	
SA off:	102 ns RMS 3
SA on:	173 ns RMS
Size:	85 mm x 125 mm x 16 mm
Weight:	120 g
Input Voltage:	6.0 -18.0 VDC
Power Consumption:	2.7 W typical, 3.2 W max

SCINTREX

ENVI GEOPHYSICAL SYSTEM

The Scintrex ENVI System gives you the flexibility to find the increasingly more elusive anomalous targets. A complete ENVI system is low cost, lightweight, portable proton precession magnetometer/gradiometer with VLF capabilities which enables you to survey large areas quickly and accurately. Whether it is for Magnetic surveys, VLF electromagnetic surveys or a combination of these techniques, the ENVI system can be designed to suit your own unique requirements. This customized approach gives you the ability to select the following options for your instrument:

- **Portable Field and Base Station Magnetometer**
- **True Simultaneous Gradiometer**
- **VLF Electromagnetic Receiver**
- **VLF Resistivity Option**

BENEFITS

Customize Your System

At the heart of the ENVI system is a lightweight console with a large screen alphanumeric display and high capacity memory which is common to all configurations. Included with each system are the appropriate sensors, sensor staff and/or backpack, a rechargeable battery, battery charger, an RS-232 cable and a transit case.

Increase Productivity

For magnetic surveys you can select sampling rates of 0.5 second, 1 second and 2 seconds.

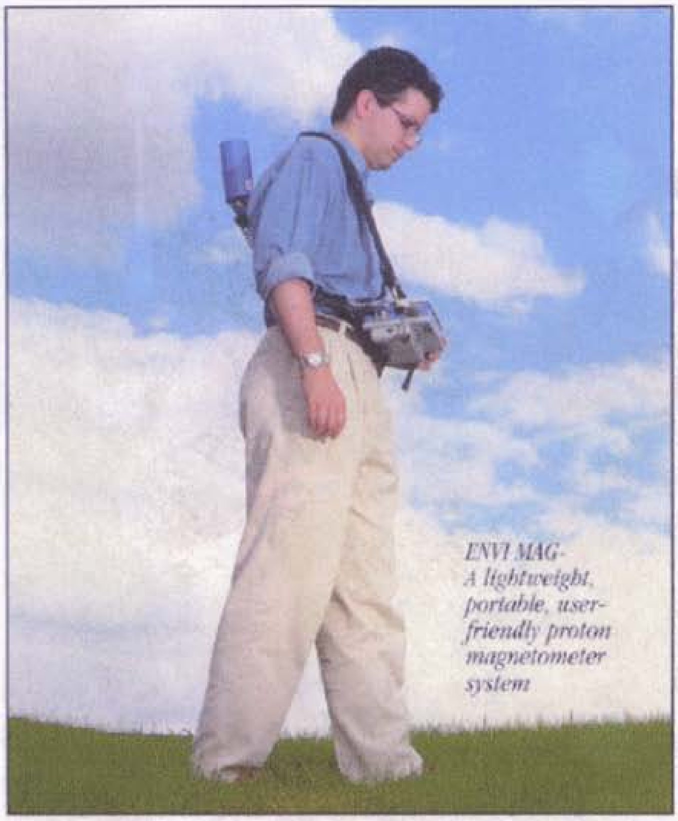
Rapidly Recall Data

For quality of data and for rapid analysis of the magnetic characteristics of the survey line, several modes of review are possible. These include the measurements at the last four stations, the ability to scroll through any or all previous readings in memory and a graphic display of the previous data as profiles, line by line.

Simplify Fieldwork

The ENVI makes surveys easier to conduct as the system:

- provides simple operator menus
- presents the data both numerically and graphically on the large LCD screen
- eliminates the need to write down field data as it simultaneously stores time, field measurements and grid coordinates
- clears unwanted last readings if selected
- calculates statistical error for each measurement
- automatically calculates the difference between the current reading and the previous one (base station)
- provides the ability to remove the coarse magnetic field value or data from the field data to simplify plotting of the field results
- automatically calculates diurnal corrections
- allows for hands free operation with the backpack sensor option



ENVI MAG- A lightweight, portable, user-friendly proton magnetometer system

Saves You Time

Only one instrument is needed for magnetometer, gradiometer, VLF and VLF resistivity surveying. A complete ENVI System can calculate and record 4 VLF magnetic field parameters from 3 different transmitters, a magnetic total field reading and a simultaneous magnetic gradient reading. It can also measure and record 2 VLF electric field parameters from 3 different transmitters with the VLF Resistivity option.

Upgrade Your Unit at any Time

The ENVI is based on a modular design, you can upgrade your system at any time. This built-in flexibility allows you to purchase an ENVI system with only the surveying equipment that you need for now but does not limit you to one application. When your surveying needs grow, so can your ENVI system. Existing users of OMNI systems can also upgrade their consoles.

SYSTEM CONFIGURATIONS

- ENVI MAG
- ENVI MAG/VLF
- ENVI GRAD
- ENVI GRAD/VLF
- ENVI VLF

ENVI MAG

The ENVI system when configured as a total field magnetometer is referred to as the ENVI MAG. In this set up the ENVI system can be operated a traditional stop and measure mode, thus providing the full sensitivity obtainable with a proton magnetometer, ideally suited for mineral exploration. Alternatively the ENVI MAG can be operated in the "WALKMAG" mode, where readings may be made continuously at a user selectable rate of up to 2 readings per second. Although this reduces the accuracy marginally, it does allow the user to collect increased volumes of data and cover more area in a shorter period of time. This is particularly important for large signal near surface targets as typically found in environmental surveys. This makes the ENVI a very cost effective tool for environmental surveys. The ENVI MAG provides the following information:

- Total Magnetic Field
- Time/Date of Reading
- Co-ordinates of Reading
- Statistical Error of the Reading
- Signal Strength and Decay Rate of the Reading

As a magnetic base station instrument the ENVI can be set up to record variations of the earth's magnetic field. Using this information from a stationary ENVI MAG the total field readings obtained with other roving magnetometers can be corrected for these fluctuations thus improving the accuracy of your magnetic data. All ENVI MAG systems can be operated as either field of base station instruments. The optional base station accessories kit is recommended for base station applications.

ENVI GRAD

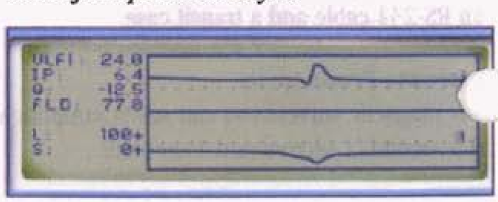
The ENVI System configured as an ENVI GRAD enables true simultaneous gradiometer measurements to be obtained.

The ENVI GRAD provides you with an accurate means of measuring both the total field and the gradient of the total field. It reads the measurements of both sensors simultaneously to calculate the true gradient measurement.

In the gradient mode, the ENVI sharply defines the magnetic responses determined by total field data. It individually delineates closely spaced anomalies rather than collectively identifying them under one broad magnetic response. The ENVI GRAD is well suited for geotechnical and archaeological surveys where small near surface magnetic targets are the object of the survey. In addition to what the ENVI MAG provides the ENVI GRAD also provides the gradient of the total magnetic field.

Left: Application oriented menus provide the user with the utmost flexibility

Below: Large screen graphics capability allows for rapid data analysis.



ENVI VLF is the ideal groundwater exploration tool.

With the gradiometer option there is no lost survey time as the ENVI enables you to conduct gradient surveys during magnetic storms. The technique of simultaneously measuring the two sensors cancels the effects of diurnal magnetic variations.

VI VLF

The ENVI VLF is ideal for environmental, geotechnical and mineral/water exploration application.

The ENVI VLF unit allows you to read the vertical in-phase, vertical quadrature, total field strength, dip angle, primary field direction, apparent resistivity, phase angle, time, grid coordinates, direction of travel along grid lines and natural and cultural features. The ability to obtain data from as many as 3 VLF transmitting stations provides complete coverage of an anomaly regardless of the orientation of the survey grid of of the anomaly itself.

The unique, 3-coil sensor does not require orientation of the VLF sensor head toward the transmitter station. This simplifies VLF field procedures and saves considerable survey time.

The ENVI VLF can measure up to three VLF frequencies. The display indicates the signal to noise ratio which provides you with an immediate indication of how usable a frequency is. The ENVI also enables you to automatically scan the entire VLF spectrum for the most usable stations between 15 kHz to 30 kHz. Using up to three frequencies optimizes conductor coupling even in the most complex geological environments. The ENVI VLF system's ability to obtain repeatable readings from weak signals offers a number of benefits:

- xtends the use of VLF to countries where its use was reviously marginal
- increases the number of frequencies with which you can operate

VLF Resistivity Option

The ENVI also offers a non-orientation VLF resistivity option.

ENVI MAG/VLF

The ENVI MAG/VLF has the features of both the ENVI MAG and ENVI VLF combined in one instrument.

ENVI GRAD/VLF

The ENVI GRAD/VLF has the features of both the ENVI GRAD and ENVI VLF combined in one instrument.

ENVI MAP Software

Supplied with the ENVI MAG and ENVI GRAD and custom designed for this purpose, is an easy to use, menu-driven data processing and mapping software for magnetic data called ENVI MAP. The software enables you to:

- read the ENVI MAG/GRAD data and reformat it into a standard, compatible with the ENVI MAP software
- grid the data into a standard grid format
- create a vector file of posted values with line and baseline identification that allows the user to add some title information and build a suitable map surround
- contour the grided data
- autoscale the combined results of the posting/surround step and the contouring step to fit on a standard 8.5 inch wide dot-matrix printer
- rasterize and output the results of the autoscaling to the printer

The ENVI MAP software is fully compatible with Geosoft programs. More advanced data processing, modeling and interpretation software is also available.

The ENVI MAG/VLF with backpack option is a highly productive and efficient geophysical system.

Total Field Operating Range
20,000 to 100,000 nT (gammas)

Total Field Absolute Accuracy:
±1 nT

Sensitivity:
0.1 nT at 2 second sampling rate

Tuning
Fully solid state. Manual or automatic, keyboard selectable

Cycling (Reading) Rates
0.5, 1 or 2 seconds

Gradiometer Option
Includes a second sensor, 1/2m (20 inch) staff extender and processor module.

VLF Option
Includes a VLF sensor and harness assembly

'WALKMAG' Mode
continuous reading, cycling as fast as 0.5 seconds

Digital Display
LCD "Super Twist", 240 x 64 dots graphics, 8 line x 40 characters alphanumerics

Display Heater
Thermostatically controlled, for cold weather operations

Keyboard Input
17 keys, dual function, membrane type

Notebook Function
32 characters, 5 user-defined MACRO's for quick entry

Standard Memory
Total Field Measurements: 28,000 readings
Gradiometer Measurements: 21,000 readings
Base Station Measurements: 151,000 readings
VLF Measurements: 4,500 readings for 3 frequencies

Expanded Memory
Total Field Measurements: 140,000 readings
Gradiometer Measurements: 109,000 readings
Base Station Measurements: 750,000 readings
VLF Measurements: 24,000 readings for 3 frequencies

Real-Time Clock
Records full date, hours, minutes and seconds with 1 second resolution, ±1 second stability over 24 hours

Digital Data Output
RS-232C interface, 600 to 57,600 Baud, 7 or 8 data bits, 1 start, 1 stop bit, no parity format. Selectable carriage return delay (0-999 ms) to accommodate slow peripherals. Handshaking is done by X-on/X-off. High speed Binary Dump. Selectable formats for easy interfacing to commercial software packages.

Analog Output
0-999 mV full scale output voltage with keyboard selectable range of 1, 10, 100, 1000 or 10,000 full scale

Power Supply
Rechargeable 'Camcorder' type, 2.3 Ah, Lead-acid battery
12 Volts at 0.65 Amp for magnetometer, 1.2 Amp for gradiometer
External 12 Volt input for base station operations
Optional external battery pouch for cold weather operations

Battery Charger
110 Volt-230 Volt, 50/60 Hz

Operating Temperature Range
Standard: -40° to 60°C

Dimensions & Weight

Console:	250mm x 152mm x 55mm (10" x 6" x 2.25") 2.45 kg (5.4 lbs) with rechargeable battery
Magnetic Sensor:	70mm x 175mm (2.75"d x 7") 1 kg (2.2 lbs)
Gradiometer Sensor: (with staff extender)	70mm x 675mm (2.75"d x 26.5") 1.15 kg (2.5 lbs)
Sensor Staff:	25mm x 2m (1"d x 76") .8 kg (1.75 lbs)
VLF Sensor Head:	140mm x 130mm (5.5"d x 5.1") .9 kg (2 lbs)
VLF Sensor:	280mm x 190mm x 75mm (11" x 7.5" x 3") 1.7 kg (3.7 lbs)

Options
Base Station Accessories Kit
GPS
Software Packages
Training Programs

SCINTREX

SCINTREX

HEAD OFFICE
222 Snidercroft Road, Concord, Ontario L4K 1B5
Telephone: (905) 669-2280 Fax: (905) 669-6403
e-mail: scintrex@scintrexltd.com
website: www.scintrexltd.com

IN THE U.S.A.
900 Woodrow Lane, Suite 100, Denton, Texas 76205
Telephone: (940) 591-7755 Fax: (940) 591-1968
e-mail: richardi@scintrexusa.com

IN S.E. ASIA
P.O. Box 125 Summer Park, 83 Jijaws Street, Brisbane
Telephone: + 61-7-3376-5188 Fax: +61-7-3376-6626
E-mail: auslog@auslog.com.au
Website: www.auslog.com.au

ISO 9001

McPhar Geosurveys Ltd.
1256B Kerrisdale Blvd., Newmarket
Ontario, Canada L3Y 8Z9
Tel: (905) 830-6880, Fax: (905) 898-0336
E-Mail: info@mgssurveys.com
WebSite: www.mgssurveys.com

FIELD DATA PROCESSING WORKSTATIONS

Our Field Data Processing Workstations (FWS) are dedicated PC-based microcomputer systems for use at the technical base in the field. The workstations are designed for use with Geosoft OASIS, MPS and MONTAJ, ENCOM, and other data processing software, as well as in-house developed software and utilities.

The FWS has a data replot capability, and may be used to produce pseudo analog charts from the recorded digital data within less than 12 hours after the completion of a survey flight, if this is necessary. It is also capable of processing and imaging all the geophysical and navigation data acquired during the survey, producing semi-final, preliminary-levelled maps in either black-line contours on Mylar or full colour contours on paper.

FWS FEATURES

- **Portability** - the workstations can be packaged and transported to the field with a minimum of effort
- **Digital Data Verification** - flight data quality and completeness can be assured by both statistical and graphical means
- **Flight Path Plots** - flight path plots can be quickly generated from the GPS satellite data to verify the completeness and accuracy of a day's flying
- **Versatility** - the FWS can be used in both the field and the office. Data pre-processed in the field can be up-loaded to the computers at the Data Processing Centre to speed data turnaround.
- **QC and Preliminary Maps** - the software will permit preliminary maps of the magnetic and gamma-ray spectrometer data to be quickly and efficiently created in the field, providing a quick and efficient method to undertake QC Verification of newly acquired data.

THE HARDWARE

The workstations are PC-compatible PENTIUM microcomputers with a 2GHz or faster processor, 512 MB of memory, a large capacity hard disk drive, an extended VGA graphics card with VGA monitor and a colour inkjet plotter for generating maps and/or profiles, and ZIP, JAZZ and writeable CD-ROM drives to backup data.

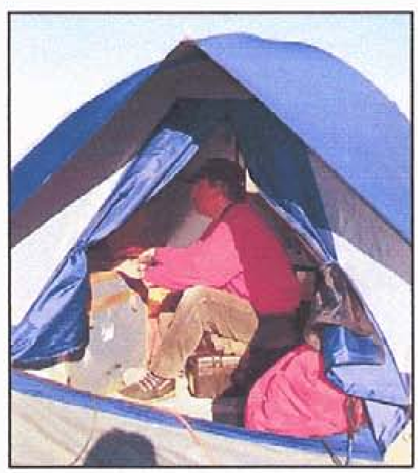
THE SOFTWARE

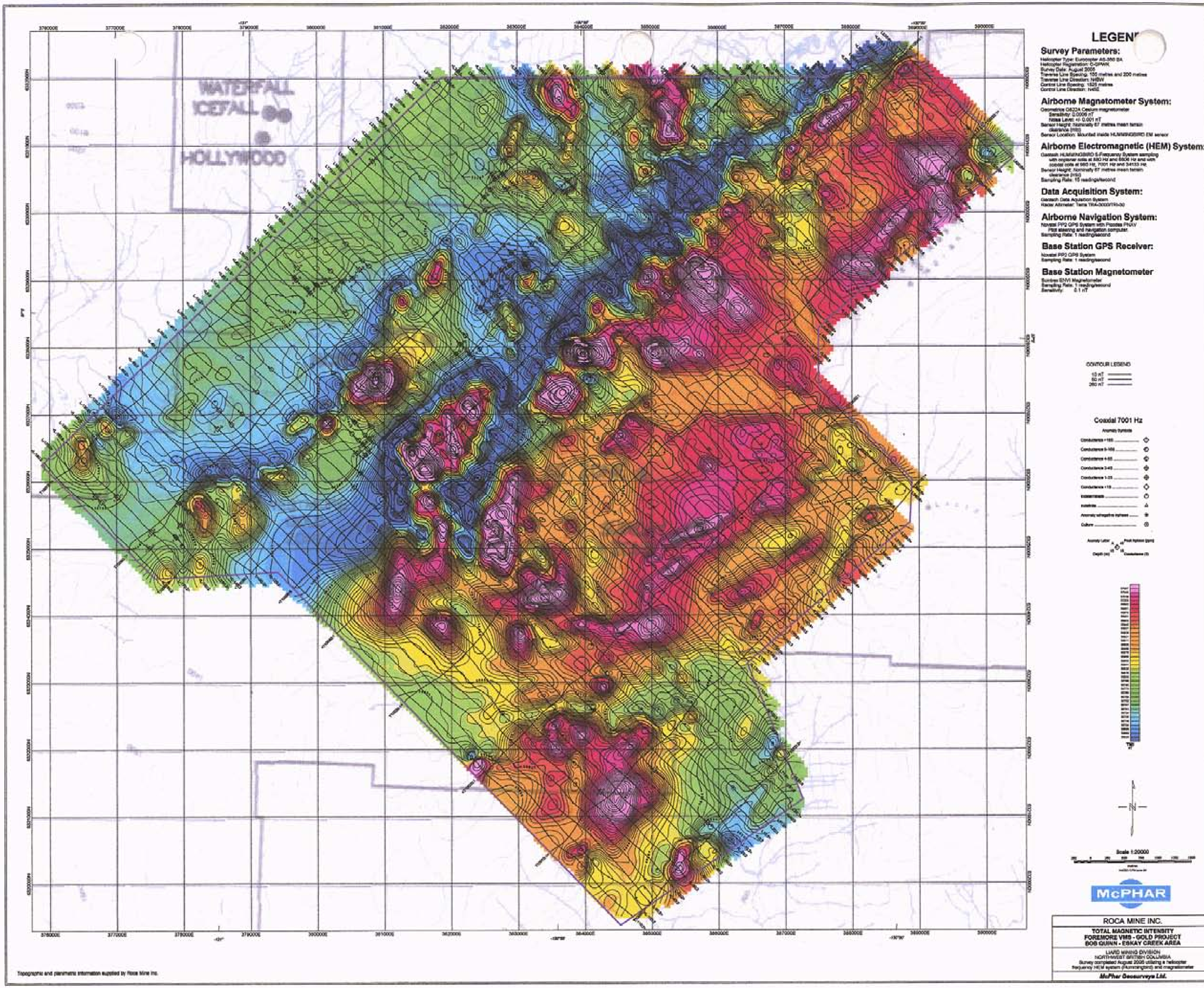
The FWS software enables the user to read the FLASH cards, ZIP cartridges or PCMCIA removable hard disks from the airborne system, check the data for gaps, spikes or other defects and permits editing where necessary.

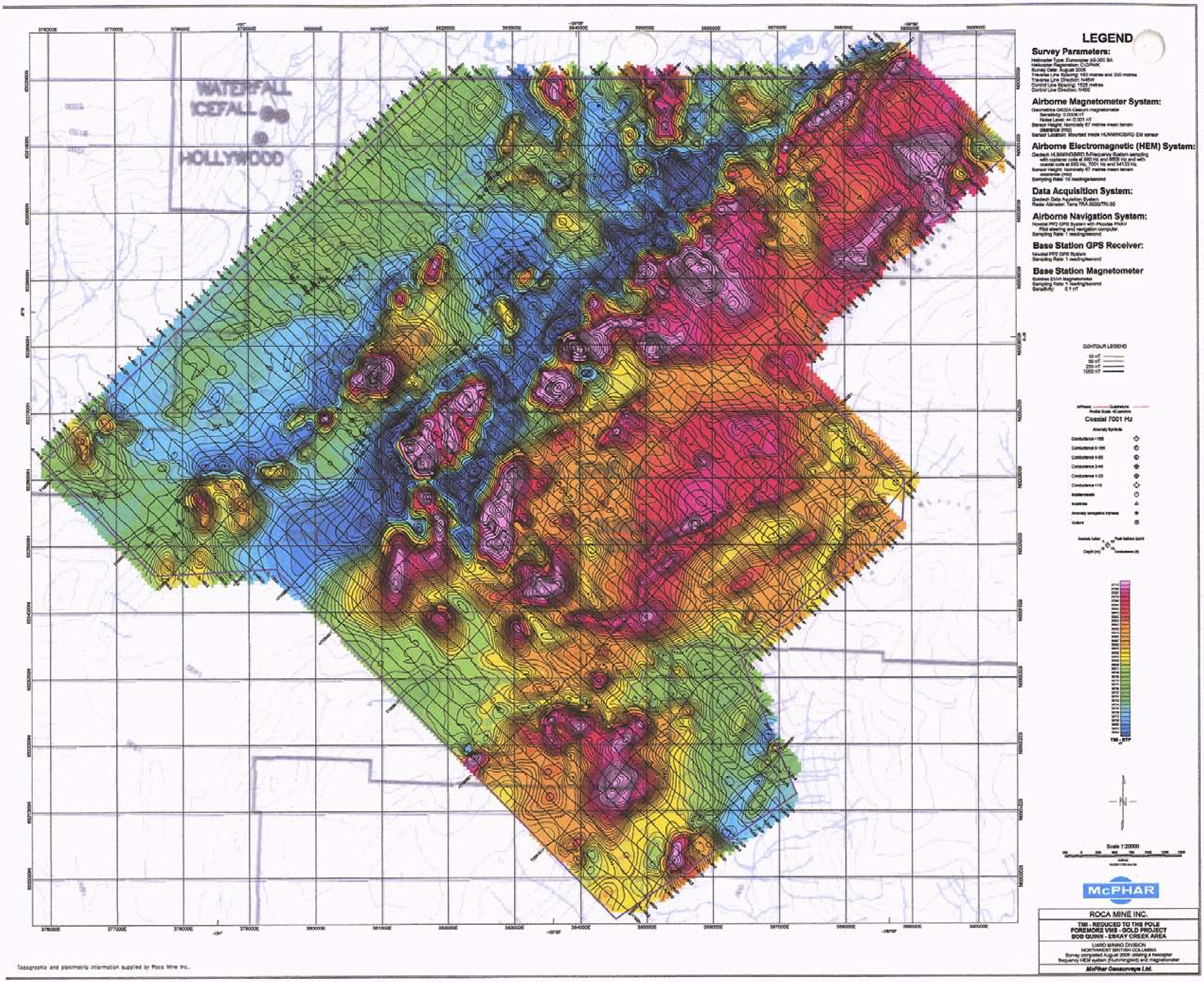
The base station GPS/magnetometer data is checked and edited, and where necessary merged with the airborne data. Post-survey differential GPS corrections are made using either C^{3}NAV and/or WAYPOINT software. GPS flight path plots may be created and plotted. Multi-channel stacked profiles of the recorded and edited data may be produced on the dot-matrix printer.

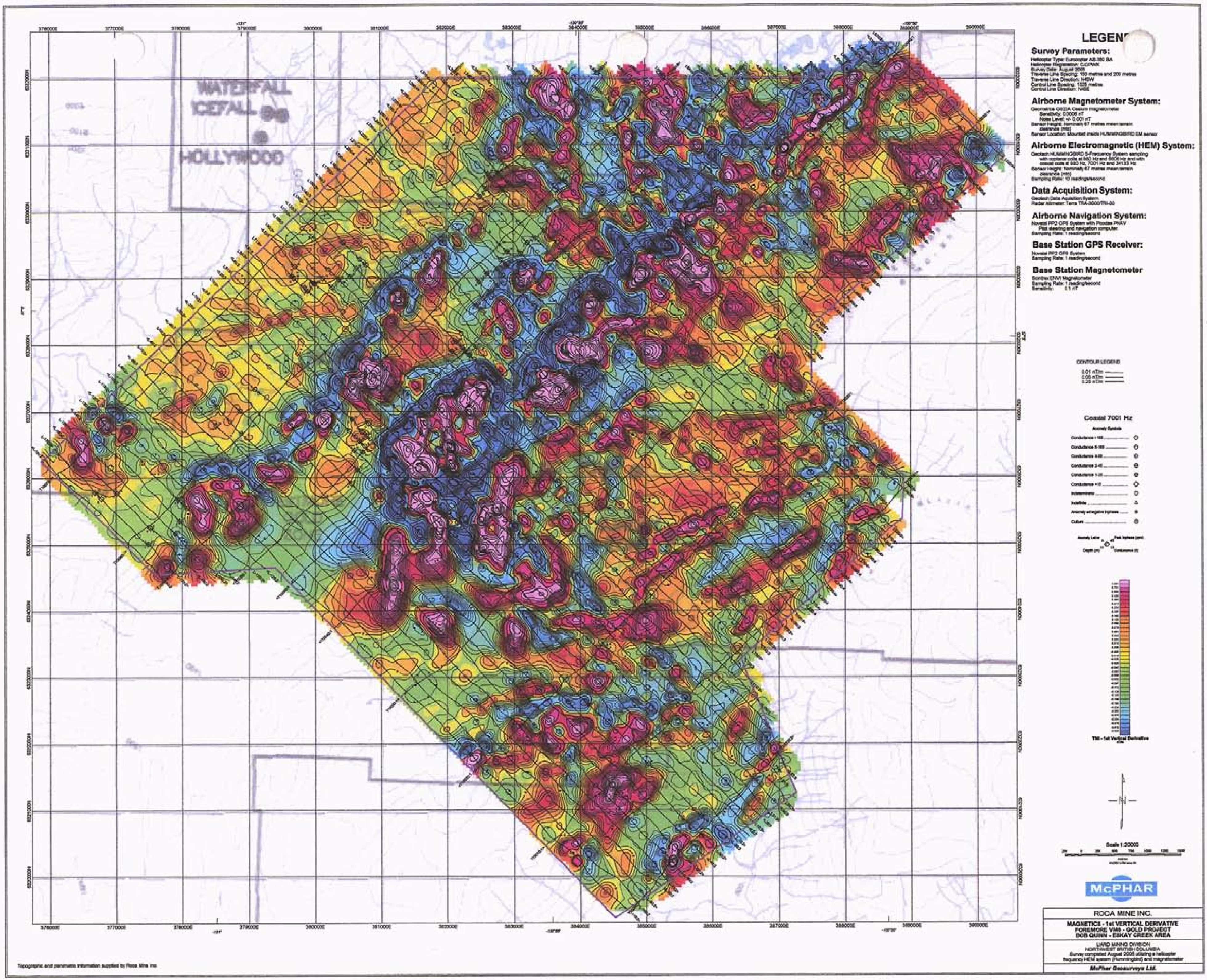
The Software includes:

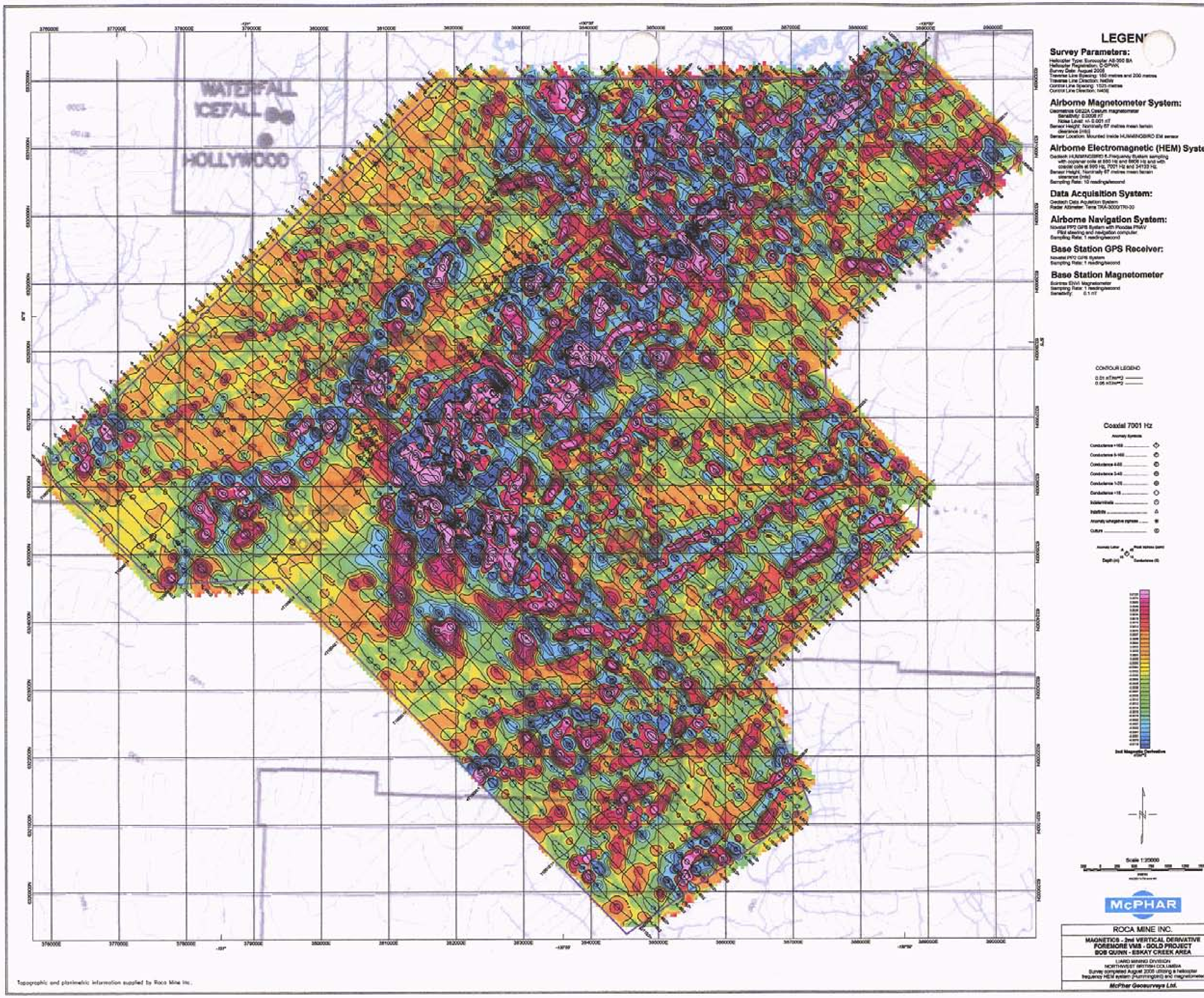
- Geosoft OASIS/Montaj Airborne Processing Software
- PC-based airborne data compilation and binary database system for in-field processing and compilation of large volumes of time or fiducial based airborne data
- Proprietary data for processing HEM data
- GrafNAV GPS processing/differential GPS correction software
- McPhar's proprietary software and utilities
- General Utility software (WINDOWS 200 PRO, Norton Utilities, Norton Anti-virus, Xtree Gold, LapLink, etc.)

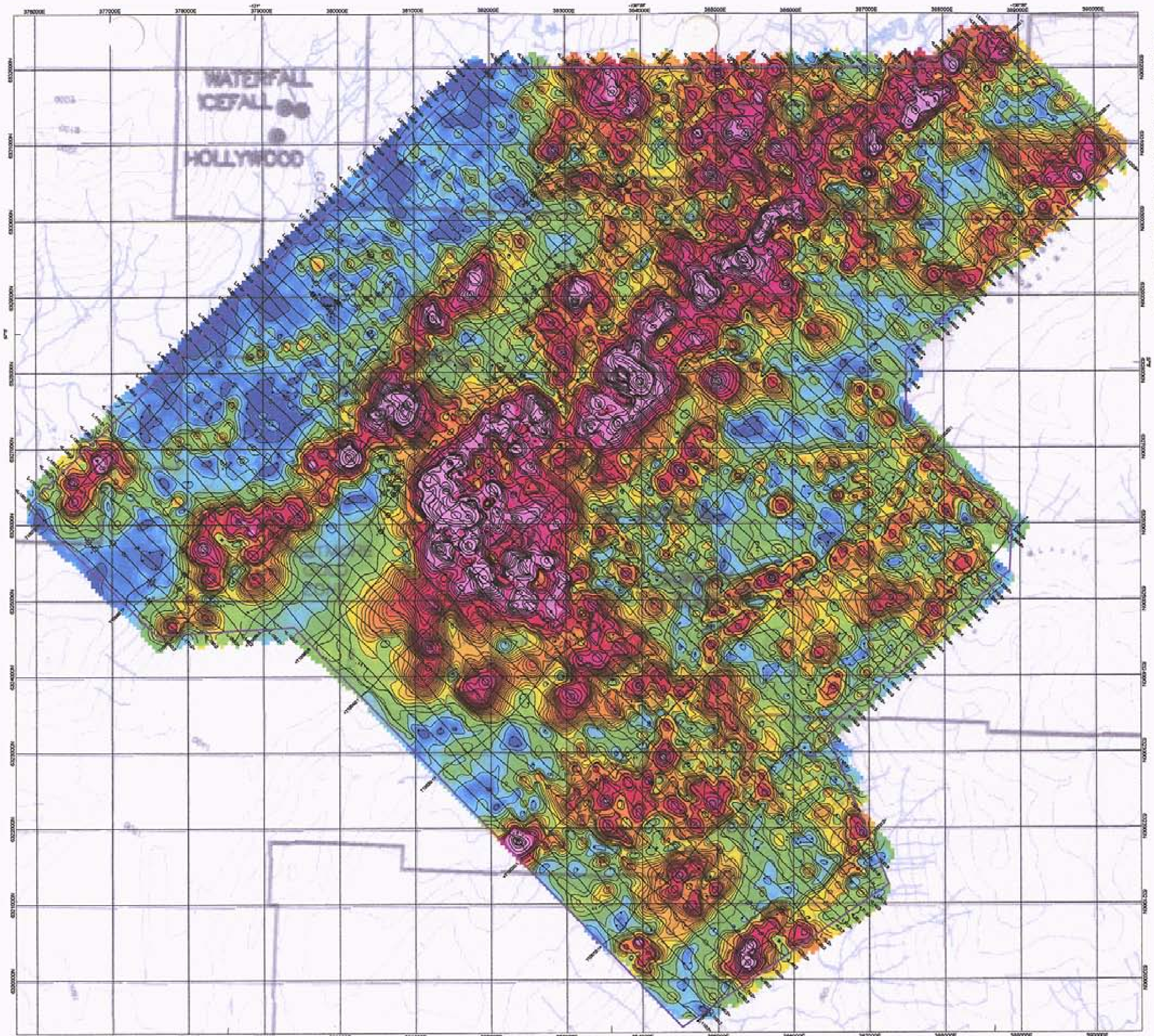



WATERFALL
ICEFALL
HOLLYWOOD
LEGEN
Survey Parameters:
Airborne Magnetometer System:
Airborne Electromagnetic (HEM) System:
Data Acquisition System:
Airborne Navigation System:
Base Station GPS Receiver:
Base Station Magnetometer
CONTOUR LEGEND
Coaxial 7001 Hz
Scale 1:20000
McPHAR
ROCA MINE INC.
TOTAL MAGNETIC INTENSITY
FOREMORE VMS - GOLD PROJECT
BOB QUINN - ESKAY CREEK AREA
LIARD MINING DIVISION
NORTHWEST BRITISH COLUMBIA
McPhar Geosurveys Ltd.


WATERFALL
ICEFALL
HOLLYWOOD
LEGEND
Survey Parameters:
Survey Date: August 2005
Airborne Magnetometer System:
Airborne Electromagnetic (HEM) System:
Data Acquisition System:
Airborne Navigation System:
Base Station GPS Receiver:
Base Station Magnetometer
CONTOUR LEGEND
Coaxial 7001 Hz
Scale 1:20000
McPHAR
ROCA MINE INC.
TMI - REDUCED TO THE POLE
FOREMORE VMS - GOLD PROJECT
BOB QUINN - ESKAY CREEK AREA
LIARD MINING DIVISION
NORTHWEST BRITISH COLUMBIA
McPhar Geosurveys Ltd.
Topographic and planimetric information supplied by Roca Mine Inc.


WATERFALL
ICEFALL
HOLLYWOOD
LEGEND
Survey Parameters:
Helicopter Type: Eurocopter AS-350 BA
Survey Date: August 2005
Traverse Line Spacing: 150 metres and 200 metres
Traverse Line Direction: N45W
Control Line Spacing: 1525 metres
Control Line Direction: N45E
Airborne Magnetometer System:
Geometrics G822A Cesium magnetometer
Sensitivity: 0.0005 nT
Noise Level: +/- 0.001 nT
Sensor Height: Nominally 67 metres mean terrain clearance (mtc)
Sensor Location: Mounted inside HUMMINGBIRD EM sensor
Airborne Electromagnetic (HEM) System:
Geotech HUMMINGBIRD 5-Frequency System sampling with coplanar coils at 880 Hz and 6606 Hz and with coaxial coils at 980 Hz, 7001 Hz and 34133 Hz
Sensor Height: Nominally 67 metres mean terrain clearance (mtc)
Sampling Rate: 10 readings/second
Data Acquisition System:
Geotech Data Acquisition System
Airborne Navigation System:
Pilot steering and navigation computer
Sampling Rate: 1 reading/second
Base Station GPS Receiver:
Novatel PP2 GPS System
Sampling Rate: 1 reading/second
Base Station Magnetometer
Sampling Rate: 1 reading/second
Sensitivity: 0.1 nT
CONTOUR LEGEND
Coaxial 7001 Hz
Anomaly Symbols
TMI - 1st Vertical Derivative
Scale 1:20000
McPHAR
ROCA MINE INC.
MAGNETICS - 1st VERTICAL DERIVATIVE
FOREMORE VMS - GOLD PROJECT
BOB QUINN - ESKAY CREEK AREA
LIARD MINING DIVISION
NORTHWEST BRITISH COLUMBIA
Survey completed August 2005 utilizing a helicopter frequency HEM system (Hummingbird) and magnetometer
McPhar Geosurveys Ltd.
Topographic and planimetric information supplied by Roca Mine Inc.


WATERFALL
ICEFALL
HOLLYWOOD
LEGEND
Survey Parameters:
Airborne Magnetometer System:
Airborne Electromagnetic (HEM) System:
Data Acquisition System:
Airborne Navigation System:
Base Station GPS Receiver:
Base Station Magnetometer
CONTOUR LEGEND
Coaxial 7001 Hz
Scale 1:20000
McPHAR
ROCA MINE INC.
MAGNETICS - 2nd VERTICAL DERIVATIVE
FOREMORE VMS - GOLD PROJECT
BOB QUINN - ESKAY CREEK AREA
McPhar Geosurveys Ltd.
Topographic and planimetric information supplied by Roca Mine Inc.



LEGEND

Survey Parameters:

Helicopter Type: Eurocopter AS-350 BA
Helicopter Registration: C-GTWK
Survey Date: August 2005
Traverse Line Spacing: 100 metres and 200 metres
Traverse Line Direction: N45W
Control Line Spacing: 1525 metres
Control Line Direction: N45E

Airborne Magnetometer System:

Geometrics G822A Cesium magnetometer
Sensitivity: 0.0005 nT
Noise Level: +/- 0.001 nT
Sensor Height: Nominally 67 metres mean terrain clearance (mtc)
Sensor Location: Mounted inside HUMMINGBIRD EM sensor

Airborne Electromagnetic (HEM) System:

Geotech HUMMINGBIRD 5-Frequency System sampling with coplanar coils at 880 Hz and 6606 Hz and with coaxial coils at 980 Hz, 7001 Hz and 34133 Hz
Sensor Height: Nominally 67 metres mean terrain clearance (mtc)
Sampling Rate: 10 readings/second

Data Acquisition System:

Geotech Data Acquisition System
Radar Altimeter: Terra TRA-3000/TRI-30

Airborne Navigation System:

Novatel PP2 GPS System with Picodas PNAV Pilot steering and navigation computer.
Sampling Rate: 1 reading/second

Base Station GPS Receiver:

Novatel PP2 GPS System
Sampling Rate: 1 reading/second

Base Station Magnetometer

Scintrex ENVI Magnetometer
Sampling Rate: 1 reading/second
Sensitivity: 0.1 nT

CONTOUR LEGEND
0.1 nT
0.5 nT

Coaxial 7001 Hz

TMI - Analytic Signal

Scale 1:20000

McPHAR

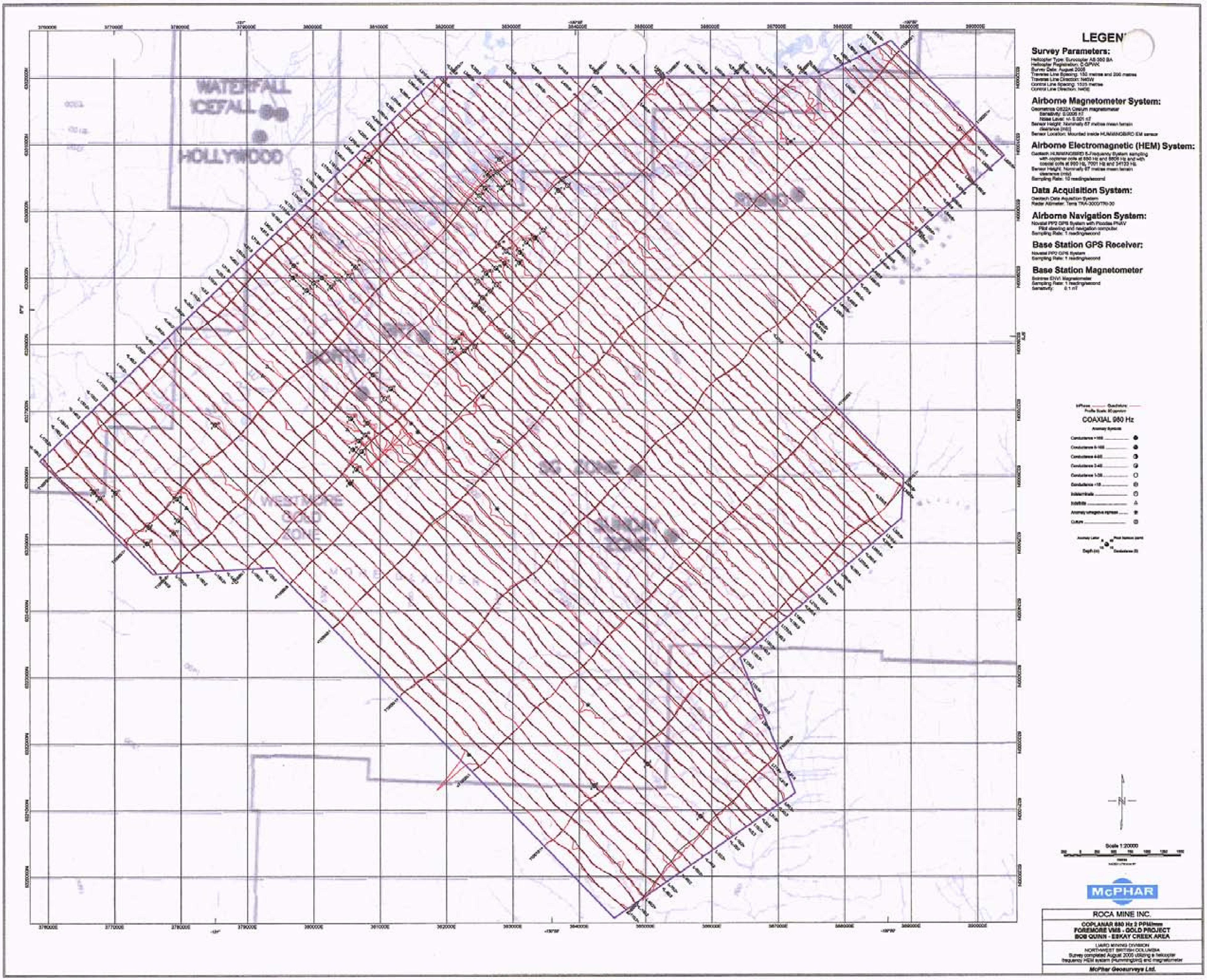
ROCA MINE INC.

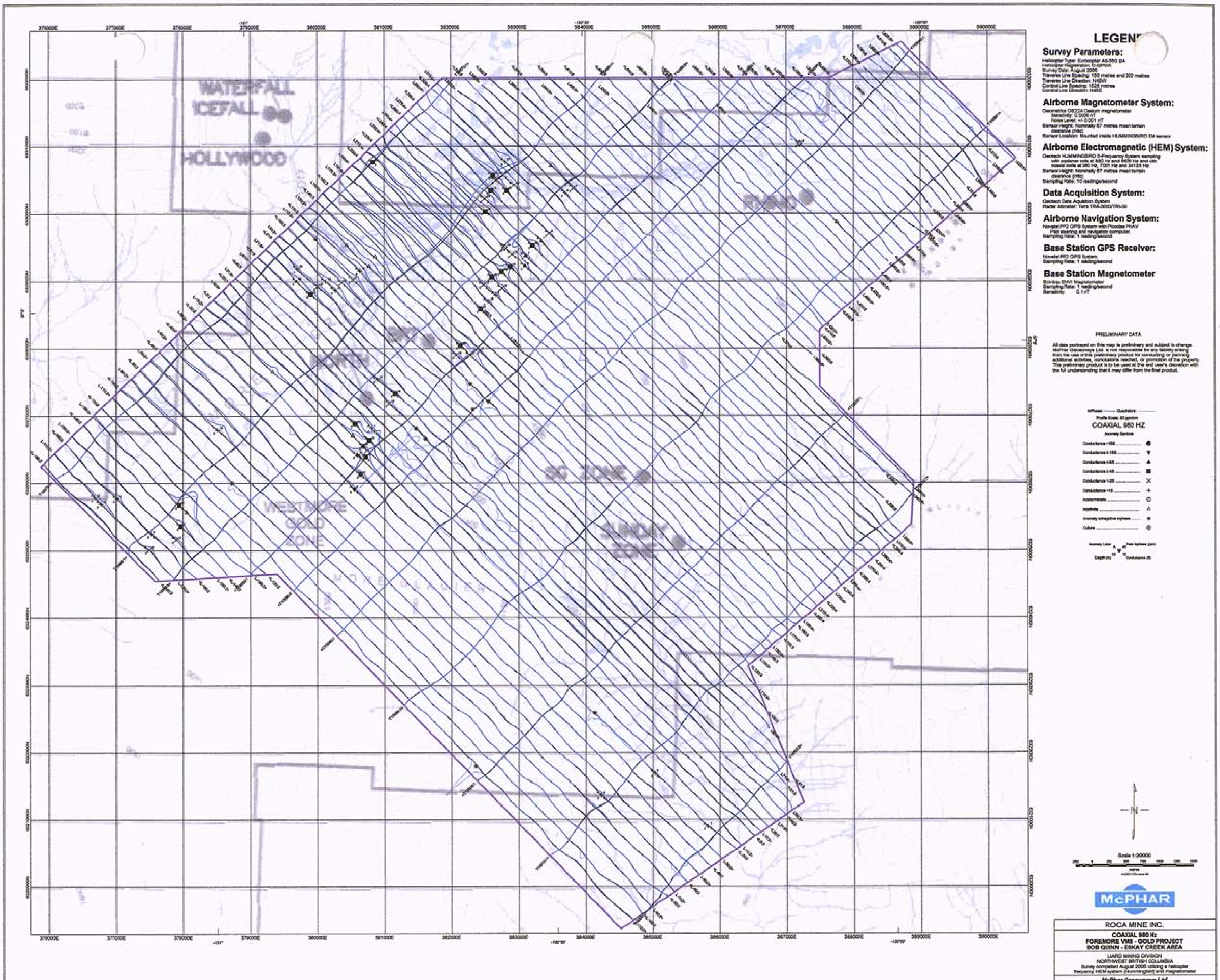
TMI - ANALYTIC SIGNAL
FOREMORE VMS - GOLD PROJECT
BOB QUINN - ESKAY CREEK AREA

LIARD MINING DIVISION
NORTHWEST BRITISH COLUMBIA
Survey completed August 2005 utilizing a helicopter frequency HEM system (Hummingbird) and magnetometer

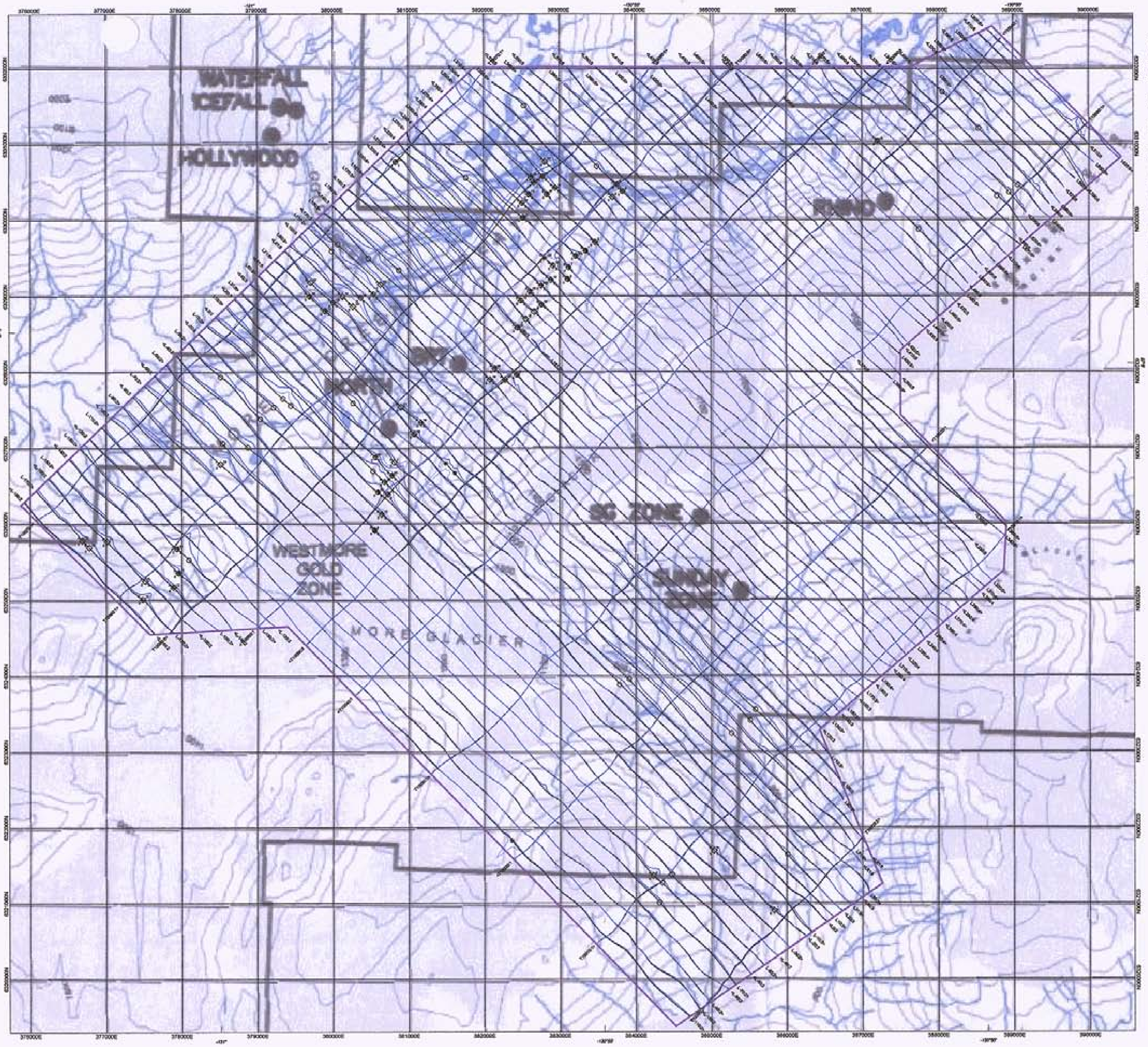
McPhar Geosurveys Ltd.

Topographic and planimetric information supplied by Roca Mine Inc.


WATERFALL
ICEFALL
HOLLYWOOD
NORTH
SG ZONE
WESTMORE
GOLD
ZONE
SUNDAY
ZONE
LEGEND
Survey Parameters:
Helicopter Type: Eurocopter AS-350 BA
Helicopter Registration: C-GPWK
Survey Date: August 2005
Traverse Line Spacing: 150 metres and 200 metres
Traverse Line Direction: N40W
Control Line Spacing: 1025 metres
Control Line Direction: N40E
Airborne Magnetometer System:
Geometrics G822A Cesium magnetometer
Sensitivity: 0.0005 nT
Noise Level: +/- 0.001 nT
Sensor Height: Nominally 67 metres mean terrain clearance (mtc)
Sensor Location: Mounted inside HUMMINGBIRD EM sensor
Airborne Electromagnetic (HEM) System:
Geotech HUMMINGBIRD 5-Frequency System sampling with coplanar coils at 880 Hz and 6606 Hz and with coaxial coils at 980 Hz, 7001 Hz and 34133 Hz
Sensor Height: Nominally 67 metres mean terrain clearance (mtc)
Sampling Rate: 10 readings/second
Data Acquisition System:
Geotech Data Acquisition System
Radar Altimeter: Terra TRA-3000/TRI-30
Airborne Navigation System:
Novatel PP2 GPS System with Picodas PNAV
Pilot steering and navigation computer
Sampling Rate: 1 reading/second
Base Station GPS Receiver:
Novatel PP2 GPS System
Sampling Rate: 1 reading/second
Base Station Magnetometer
Scintrex ENVI Magnetometer
Sampling Rate: 1 reading/second
Sensitivity: 0.1 nT
COAXIAL 980 Hz
Scale 1:20000
McPHAR
ROCA MINE INC.
COPLANAR 880 Hz 2 PPM/mm
FOREMORE VMS - GOLD PROJECT
BOB QUINN - ESKAY CREEK AREA
LIARD MINING DIVISION
NORTHWEST BRITISH COLUMBIA
Survey completed August 2005 utilizing a helicopter frequency HEM system (Hummingbird) and magnetometer
McPhar Geosurveys Ltd.



WATERFALL
ICEFALL
HOLLYWOOD
RHINO
NORTH
3G ZONE
WESTMORE
GOLD
ZONE
SUNDAY
ZONE
LEGEND
Survey Parameters:
Airborne Magnetometer System:
Airborne Electromagnetic (HEM) System:
Data Acquisition System:
Airborne Navigation System:
Base Station GPS Receiver:
Base Station Magnetometer
PRELIMINARY DATA
COAXIAL 980 HZ
Scale 1:20000
McPHAR
ROCA MINE INC.
COAXIAL 980 Hz
FOREMORE VMS - GOLD PROJECT
BOB QUINN - ESKAY CREEK AREA
LIARD MINING DIVISION
NORTHWEST BRITISH COLUMBIA
McPhar Geosurveys Ltd.



LEGEND

Survey Parameters:
Helicopter Type: Eurocopter AS-350 BA
Helicopter Registration: C-GPWK
Survey Date: August 2006
Traverse Line Spacing: 150 metres and 200 metres
Traverse Line Direction: N45W
Control Line Spacing: 1525 metres
Control Line Direction: N45E

Airborne Magnetometer System:
Geometrics G822A Cesium magnetometer
Sensitivity: 0.0005 nT
Noise Level: +/- 0.001 nT
Sensor Height: Nominally 67 metres mean terrain clearance (mtc)
Sensor Location: Mounted inside HUMMINGBIRD EM sensor

Airborne Electromagnetic (HEM) System:
Geotech HUMMINGBIRD 5-Frequency System sampling with coplaner coils at 880 Hz and 6606 Hz and with coaxial coils at 980 Hz, 7001 Hz and 34133 Hz
Sensor Height: Nominally 67 metres mean terrain clearance (mtc)
Sampling Rate: 10 readings/second

Data Acquisition System:
Geotech Data Acquisition System
Radar Altimeter: Terra TRA-3000/TRI-30

Airborne Navigation System:
Novatel PP2 GPS System with Picodas PNAV
Pilot steering and navigation computer
Sampling Rate: 1 reading/second

Base Station GPS Receiver:
Novatel PP2 GPS System
Sampling Rate: 1 reading/second

Base Station Magnetometer
Scintrex ENVI Magnetometer
Sampling Rate: 1 reading/second
Sensitivity: 0.1 nT

Scale 1:20000

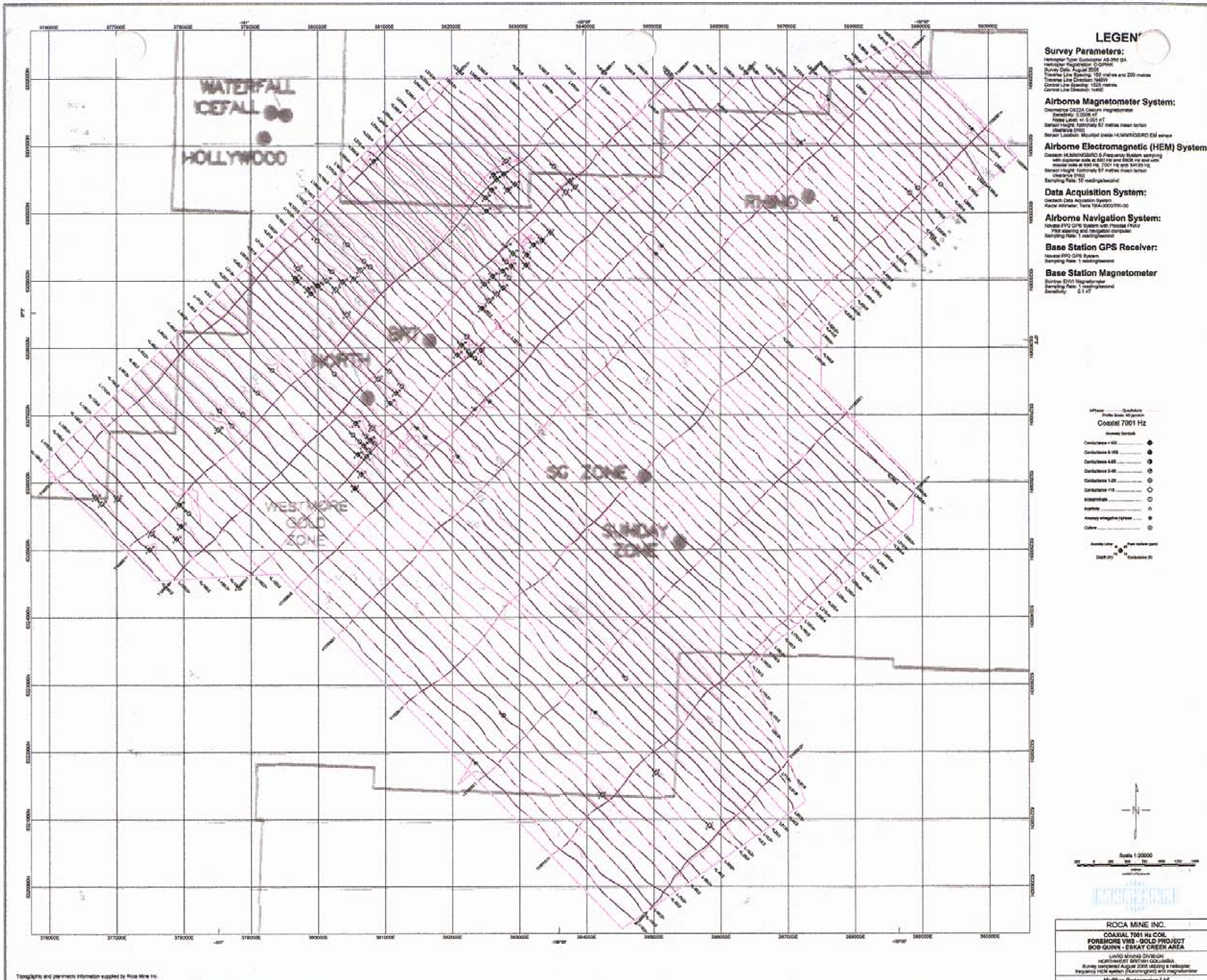
McPHAR

ROCA MINE INC.

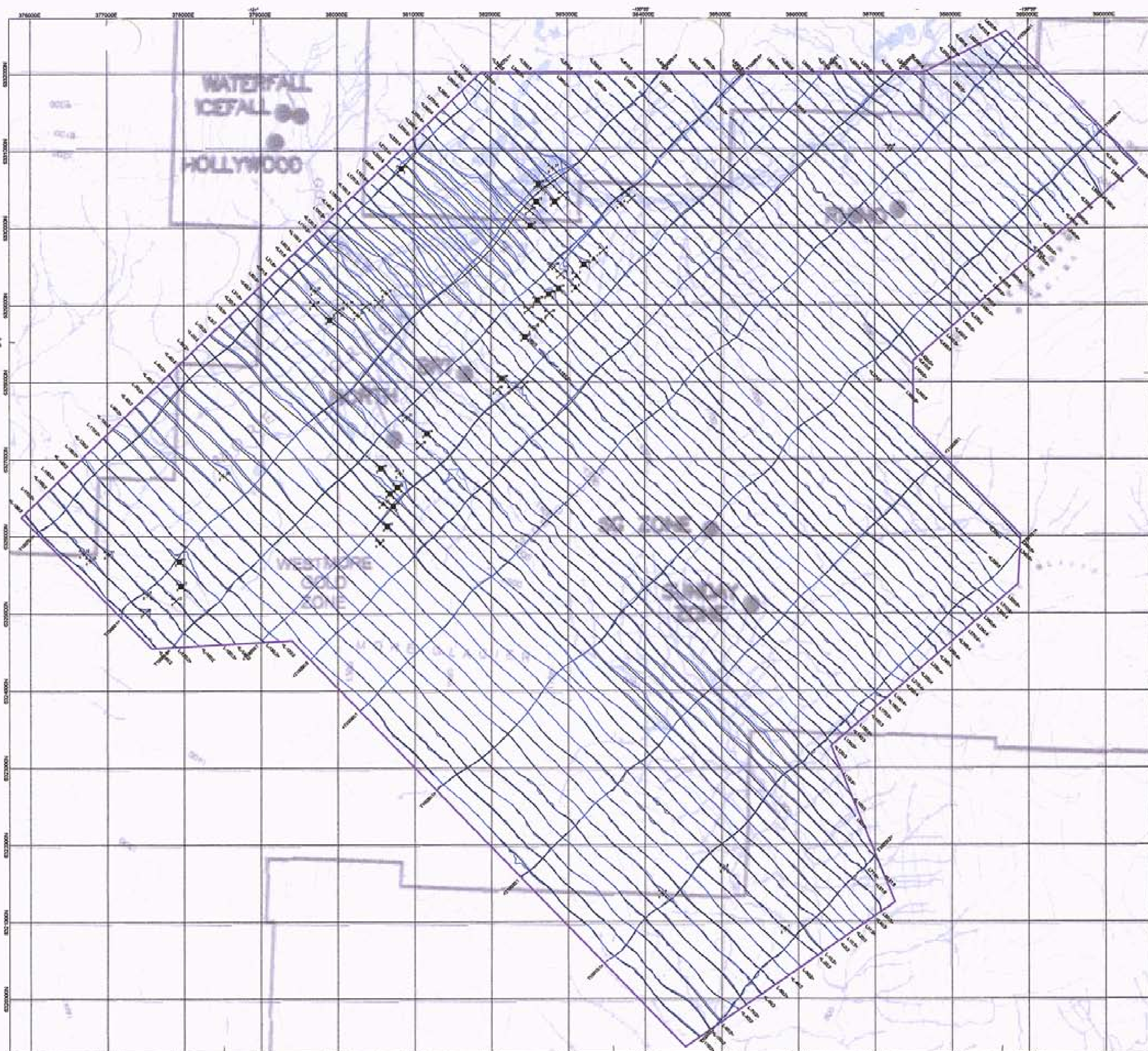
COPLANAR 6606 Hz 16 PPM/mm
FOREMORE VMS - GOLD PROJECT
BOB QUINN - ESKAY CREEK AREA

LAIRD MINING DIVISION
NORTHWEST BRITISH COLUMBIA
Survey completed August 2006 utilizing a helicopter frequency HEM system (Hummingbird) and magnetometer

McPhar Geosurveys Ltd.



WATERFALL
ICEFALL
HOLLYWOOD
RHINO
BRT
NORTH
SG ZONE
WEST MORE GOLD ZONE
SUNDAY ZONE
LEGEND
Survey Parameters:
Airborne Magnetometer System:
Airborne Electromagnetic (HEM) System:
Data Acquisition System:
Airborne Navigation System:
Base Station GPS Receiver:
Base Station Magnetometer
Coaxial 7001 Hz
Scale 1:20000
ROCA MINE INC.
COAXIAL 7001 Hz COIL
FOREMORE VMS - GOLD PROJECT
BOB QUINN - ESKAY CREEK AREA
LIARD MINING DIVISION
NORTHWEST BRITISH COLUMBIA
McPhar Geosurveys Ltd.
Topographic and planimetric information supplied by Roca Mine Inc.



LEGEN

Survey Parameters:
Helicopter Type: Eurocopter AS-350 BA
Helicopter Registration: C-GPWK
Survey Date: August 2005
Traverse Line Spacing: 150 metres and 200 metres
Traverse Line Direction: N45W
Control Line Spacing: 1525 metres
Control Line Direction: N45E

Airborne Magnetometer System:
Geometrics G822A Cesium magnetometer
Sensitivity: 0.0006 nT
Noise Level: +/- 0.001 nT
Sensor Height: Nominally 67 metres mean terrain clearance (mtc)
Sensor Location: Mounted inside HUMMINGBIRD EM sensor

Airborne Electromagnetic (HEM) System:
Geotech HUMMINGBIRD 5-Frequency System sampling with coplanar coils at 880 Hz and 6606 Hz and with coaxial coils at 980 Hz, 7001 Hz and 34133 Hz.
Sensor Height: Nominally 67 metres mean terrain clearance (mtc)
Sampling Rate: 10 readings/second

Data Acquisition System:
Geotech Data Acquisition System
Radar Altimeter: Terra TRA-3000/TRI-30

Airborne Navigation System:
Novatel PP2 GPS System with Picodas PNAV
Pilot steering and navigation computer.
Sampling Rate: 1 reading/second

Base Station GPS Receiver:
Novatel PP2 GPS System
Sampling Rate: 1 reading/second

Base Station Magnetometer
Scintrex ENVI Magnetometer
Sampling Rate: 1 reading/second
Sensitivity: 0.1 nT

COAXIAL 34 kHz

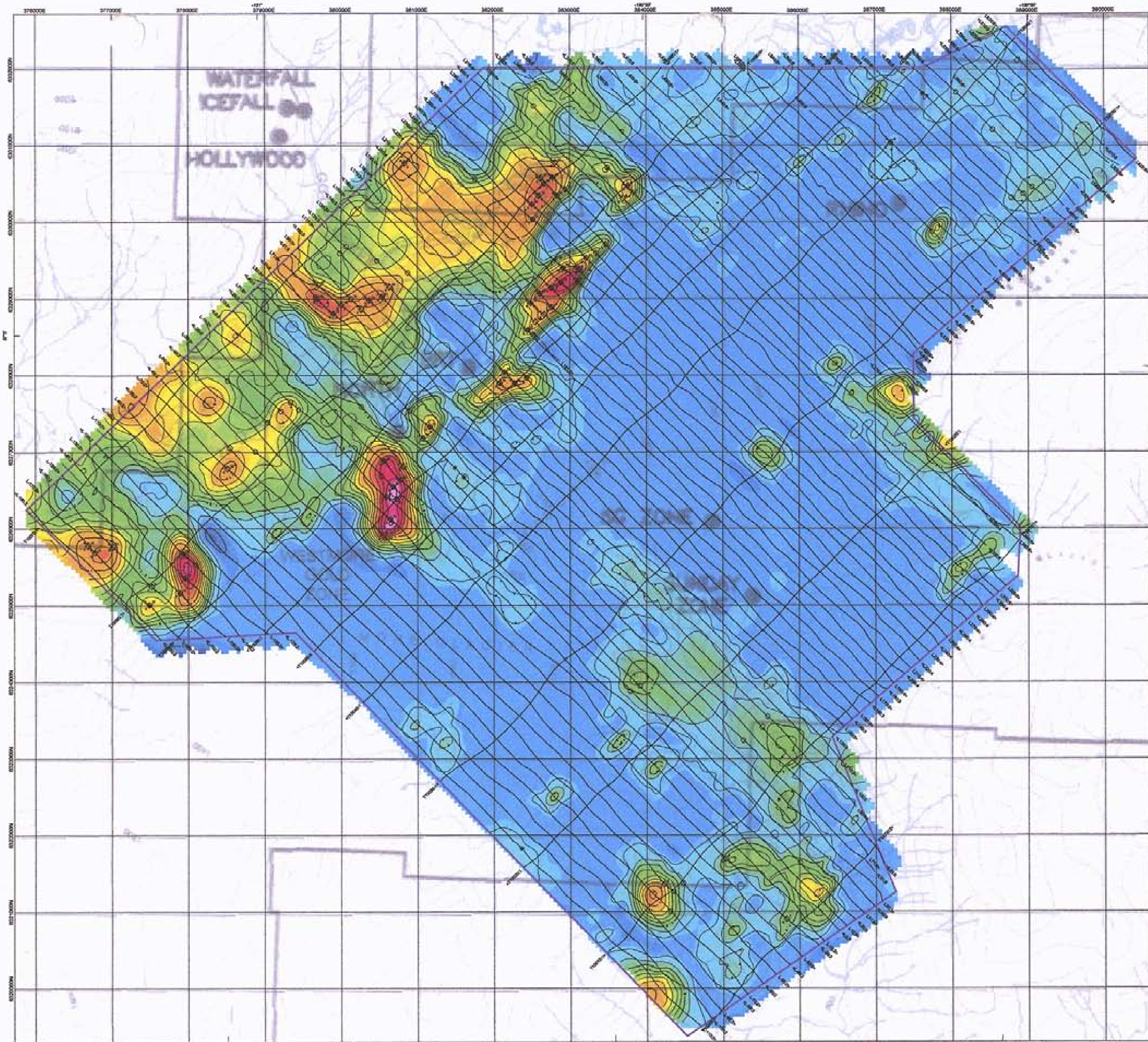
Scale 1:20000

ROCA MINE INC.

COAXIAL 34133 Hz
FOREMORE VMS - GOLD PROJECT
BOB QUINN - ESKAY CREEK AREA

LIARD MINING DIVISION
NORTHWEST BRITISH COLUMBIA
Survey completed August 2005 utilizing a helicopter frequency HEM system (Hummingbird) and magnetometer

McPhar Geosurveys Ltd.



LEGEND

Survey Parameters:

Helicopter Type: Eurocopter AS-350 BA
Helicopter Registration: C-GPWK
Survey Date: August 2005
Traverse Line Spacing: 150 metres and 200 metres
Traverse Line Direction: N45W
Control Line Spacing: 1525 metres
Control Line Direction: N45E

Airborne Magnetometer System:

Geometrics G822A Cesium magnetometer
Sensitivity: 0.0005 nT
Noise Level: +/- 0.001 nT
Sensor Height: Nominally 67 metres mean terrain clearance (mtc)
Sensor Location: Mounted inside HUMMINGBIRD EM sensor

Airborne Electromagnetic (HEM) System:

Geotech HUMMINGBIRD 5-Frequency System sampling with coplanar coils at 880 Hz and 6606 Hz and with coaxial coils at 980 Hz, 7001 Hz and 34133 Hz
Sensor Height: Nominally 67 metres mean terrain clearance (mtc)
Sampling Rate: 10 readings/second

Data Acquisition System:

Geotech Data Acquisition System
Radar Altimeter: Terra TRA-3000/TRI-30

Airborne Navigation System:

Novatel PP2 GPS System with Picodas PNAV
Pilot steering and navigation computer.
Sampling Rate: 1 reading/second

Base Station GPS Receiver:

Novatel PP2 GPS System
Sampling Rate: 1 reading/second

Base Station Magnetometer

Scintrex ENVI Magnetometer
Sampling Rate: 1 reading/second
Sensitivity: 0.1 nT

CONTOUR LEGEND

COPLANAR 6606 HZ

Scale 1:20000

McPHAR

ROCA MINE INC.

6606Hz COPLANAR APPARENT RESISTIVITY
FOREMORE VMS - GOLD PROJECT
BOB QUINN - ESKAY CREEK AREA

LIARD MINING DIVISION
NORTHWEST BRITISH COLUMBIA
Survey completed August 2005 utilizing a helicopter frequency HEM system (Hummingbird) and magnetometer

McPhar Geosurveys Ltd.

Appendix C

Assay Results

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9001 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Roca Mines Inc. PROJECT FOREMORE File # A503629 Page 1

500 - 1045 Howe St., Vancouver BC V6Z 2A9 Submitted by: John Mirko

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
A153819	2	12.2	2.4	95	.1	3.0	6	858	2.92	1	1.2	<.1	3.1	167	.1	.3	.1	62	1.16	.099	11.6	5.0	1.65	1304	.342	6.85	1.995	2.34	.7	28.3	26	1.5	30.2	3.2	.3	1	16	15.7	<.1	40.3	1.0
A153820	4	15.9	5.9	111	.2	6.3	10	1632	4.53	9	8	<.1	2.1	377	.1	.4	.1	96	2.14	.073	13.1	13.3	1.66	1774	.507	6.99	2.209	1.73	1.6	13.1	25	1.7	31.4	3.5	.2	1	21	22.5	<.1	31.4	.9
A153821	2	33.0	7.5	90	.2	7.5	4	494	3.57	1	4	<.1	2.7	72	.1	.1	.1	61	1.03	.020	14.3	5.4	1.78	1085	.177	6.59	1.252	1.68	.4	20.1	35	1.3	14.2	2.4	.2	1	12	22.9	<.1	66.0	1.0
A153822	1.6	79.8	15.3	25	.5	45.7	17	778	4.02	24	3	<.1	9	358	.2	.8	.2	89	3.30	.093	9.9	50.5	1.30	170	.128	3.62	1.660	.70	4.9	8.7	22	.5	11.3	1.4	<.1	1	13	15.2	.3	32.6	.3
A153823	4	18.5	10.7	22	.6	79.2	32	2737	5.62	40	4.3	<.1	6	432	.1	3.4	1.1	233	11.62	.050	3.4	330.9	4.45	195	.348	4.75	.253	1.96	39.4	12.1	9	1.2	36.4	1.0	.1	2	22	7.7	3.0	45.2	.6
A153824	2.1	2.6	4.3	52	<.1	.8	<1	640	3.90	15	3.3	<.1	10.5	124	.1	.2	<.1	<1	.36	.219	56.0	4.8	.06	299	.077	10.30	4.226	4.70	1.5	43.6	182	6.4	17.9	151.7	11.3	5	<1	5.8	<.1	55.3	1.4
A153825	4.7	37.1	14.9	48	.5	12.7	7	240	2.50	16	6	<.1	1.1	35	<.1	1.9	.1	86	.10	.033	7.3	13.6	.69	361	.164	3.86	1.502	.81	.5	25.9	14	.6	4.6	2.2	.2	<1	9	12.4	.2	13.8	.9
A153826	5	20.3	5.6	54	.3	13.1	4	239	2.69	5	1.3	<.1	2.7	33	.2	.5	<.1	55	.12	.034	11.0	4.9	1.19	3442	.274	5.60	.305	2.78	1.2	46.0	22	1.2	8.4	3.6	.5	<1	13	26.2	<.1	46.1	2.0
A153827	6	23.6	5.3	55	.2	32.5	4	270	2.25	5	5	<.1	9	25	.1	.4	.1	92	.19	.019	2.3	12.5	1.04	1444	.124	2.85	.366	.75	.2	20.6	4	.4	2.9	.8	.1	<1	6	17.4	<.1	16.2	.5
A153828	9	6.6	1.4	57	<.1	8.4	7	354	2.66	5	2	<.1	7	13	<.1	.1	<.1	61	.37	.014	5.6	6.9	1.07	493	.120	2.42	.017	1.02	1.3	5.8	10	.3	4.3	.9	<.1	1	7	16.9	<.1	15.1	.2
RE A153828	1.1	9.2	1.4	56	.1	8.7	7	351	2.58	5	2	<.1	7	13	.1	.1	<.1	52	.38	.015	5.6	6.9	1.06	497	.125	2.84	.016	.97	1.7	6.4	10	.3	4.4	.9	<.1	<1	7	17.8	<.1	15.9	.2
A153829	1	7.8	2.2	36	.1	7.9	11	381	2.91	6	2	<.1	1.4	33	<.1	.2	.1	124	.63	.093	7.4	8.1	.75	868	.196	5.88	1.468	1.96	.4	14.1	15	.5	3.8	1.4	.1	1	15	11.7	.1	20.5	.6
A153830	2.1	9	7	15	<.1	6.4	4	358	1.72	3	2	<.1	2.0	60	.1	.1	<.1	47	.64	.049	18.3	7.0	.32	681	.057	4.38	2.042	1.11	1.7	29.9	34	.3	9.6	1.1	.1	1	3	9.9	<.1	17.1	.9
A153831	2.5	14.0	5.4	26	.3	8.3	14	1000	3.76	1	2	<.1	6	93	.1	1	.7	33	3.37	.031	8.9	20.0	1.22	198	.033	1.70	.026	.59	.1	8.0	16	.5	7.0	.3	<.1	<1	7	9.6	.9	9.4	.3
A153960	4	9.6	4.4	71	.1	7.9	5	245	2.15	3	1.5	<.1	3.9	54	.3	.2	.1	63	1.02	.044	16.2	14.7	1.35	3376	.240	7.41	2.240	2.10	1.7	67.2	31	1.5	13.4	4.7	.4	2	11	15.1	<.1	42.3	2.5
A153961	7	53.1	3.5	123	.2	15.6	34	1157	8.76	3	3	<.1	1.0	323	.1	.9	<.1	414	3.75	.197	12.5	53.3	4.36	227	1.768	7.62	3.012	.36	.2	20.5	29	1.2	23.6	6.2	.7	2	38	23.1	<.1	4.3	1.0
A153962	7	52.1	3.7	136	.1	15.1	31	1661	9.09	3	2	<.1	.7	195	.1	.4	<.1	462	3.77	.223	11.5	34.4	3.70	398	1.807	7.43	3.061	.35	.4	20.9	27	1.3	29.8	7.5	.7	1	36	37.1	.1	4.6	1.1
A153963	2.6	24.8	5.2	61	.2	6.2	12	849	4.42	3	3	<.1	1.6	74	.1	.5	.1	246	2.70	.102	13.1	14.4	.52	145	.728	6.77	.395	2.64	.8	13.9	33	1.4	11.6	4.8	.5	2	24	9.5	1.0	43.0	.5
A153964	9	8.6	4.2	79	.1	14.6	9	608	3.07	5	1.1	<.1	5.3	89	.1	.3	<.1	72	1.76	.097	15.9	22.9	1.49	625	.507	7.12	2.072	1.29	1.4	26.1	32	1.3	14.9	6.3	.5	1	11	36.7	<.1	33.1	.9
A153965	5	5.7	2.0	70	.1	7.7	6	195	2.05	3	1.4	<.1	3.8	58	<.1	.2	.1	54	.31	.042	13.6	11.6	1.54	953	.256	7.63	2.146	2.39	.7	31.2	29	1.5	14.0	4.5	.6	1	10	24.4	<.1	45.7	1.4
A153966	5	12.9	4.4	97	.1	16.2	13	273	3.68	3	2.8	<.1	3.6	172	.2	.2	<.1	96	1.64	.134	26.0	24.1	2.55	349	.470	7.51	1.507	2.00	1.1	102.0	45	1.6	30.7	7.1	.7	2	17	65.8	<.1	19.5	3.3
A153967	4	19.9	1.6	127	.1	22.3	22	1714	8.93	2	3	<.1	7	216	.2	.2	<.1	421	3.81	.181	9.5	68.8	3.96	764	1.714	7.49	2.867	.34	.2	26.6	21	1.9	26.5	6.4	.6	1	36	19.7	<.1	4.4	.9
A153968	5.5	26.3	12.4	89	.5	55.7	7	101	1.49	26	11.7	<.1	1.1	80	.4	4.7	.1	51	.56	.134	6.4	35.1	.37	164	.055	1.74	.296	.66	3.4	22.0	12	.3	10.6	.9	.1	<1	4	6.9	6	16.3	.7
A153969	.2	9.1	6.1	74	.1	3.1	2	258	2.25	1	1.1	<.1	4.0	245	.1	.5	<.1	59	.97	.025	16.0	2.9	1.19	1207	.232	6.39	1.599	1.40	.3	13.4	35	1.9	45.5	4.1	.3	2	11	30.5	<.1	29.5	.6
A153970	7.7	25.1	11.9	61	2.2	34.1	3	141	1.65	24	6.0	<.1	5	85	.2	6.9	.1	46	.45	.045	3.6	52.3	.55	759	.046	1.76	.463	.25	3.9	20.2	7	.4	4.8	.6	<.1	<1	4	15.4	5	6.4	.5
A153971	.4	1232.8	12.5	28	2.8	63.1	33	573	17.68	22	2	<.1	.7	93	.1	8	4.1	16	.60	.023	.9	10.1	.39	6	.010	1.37	.214	.25	.2	5.5	3	.2	3.2	.3	<.1	<1	4	6.7	>10	4.9	.2
A153972	27.7	12.6	8.1	44	.2	17.6	1	74	1.12	12	25.2	<.1	4	131	<.1	3.2	.1	39	1.23	.605	20.5	71.5	.15	761	.027	.91	.162	.16	7.8	12.3	25	.3	28.5	.4	<.1	<1	3	6.2	.1	4.1	.2
A153973	4	16.9	1.9	89	.2	3.1	6	528	3.39	2	1	<.1	2.5	105	.1	.6	.1	40	.15	.052	12.3	4.6	.99	1280	.235	6.75	2.641	1.48	.2	25.2	29	1.3	14.2	2.5	.2	<1	15	14.1	<.1	27.1	1.1
A153974	1.5	13.3	12.7	69	.2	7.7	5	1366	4.09	3	4	<.1	9	323	.1	.3	.3	51	2.47	.345	4.6	14.7	1.46	452	.145	3.95	1.039	.84	5.2	5.9	11	.4	9.4	.7	.1	<1	12	12.5	<.1	14.0	.5
A153975	3	19.0	1.4	97	.1	1.9	5	515	3.22	1	6	<.1	2.5	182	.1	.2	.1	26	.55	.051	12.5	4.5	.75	397	.261	6.79	2.778	1.30	.5	11.0	29	1.4	12.5	2.9	.3	2	13	14.1	<.1	22.0	.4
A153976	1.2	53.2	1.4	34	.1	12.0	5	466	2.60	1	2	<.1	1.1	79	<.1	.4	.1	47	.69	.005	3.7	17.0	.50	1598	.375	2.34	.143	.59	3.9	6.7	6	.5	2.2	1.1	.1	<1	6	20.4	<.1	11.6	.2
A153977	5	3.8	1.8	52	.2	2.6	5	545	3.34	2	5	4	2.6	162	.1	.3	.2	56	.09	.025	12.5	4.2	.26	879	.214	7.05	2.474	1.01	2.9	22.1	26	1.5	10.0	2.5	.2	1	16	10.1	.2	20.4	.5
A153978	2.6	16.3	4.4	69	.2	17.3	4	275	2.86	2	4	<.1	2.1	59	.1	.5	.1	52	.58	.024	11.7	5.6	1.69	1051	.060	5.26	1.918	1.01	1.5	22.8	25	1.3	5.1	1.3	.1	1	10	43.3	<.1	17.7	1.6
A153979	2	4.7	7	74	<.1	8.1	6	214	2.34	3	2	<.1	1.1	33	.2	.2	<.1	35	.22	.156	5.6	3.2	2.08	2381	.165	6.76	.064	1.75	.6	17.2	13	.6	5.6	1.0	.1	1	14	23.9	<.1	28.6	.5
STANDARD DST4	17.4	125.0	34.3	175	.4	25.6	13	926	5.53	25	7.7	<.1	7.2	302	5	5.5	4.3	119	2.17	.093	25.7	260.8	1.05	694	.407	6.66	1.557	1.42	8.0	49.4	52	6.5	15.4	8.4	.8	4	11	24.7	<.1	59.5	2.3

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HCLO4-HNO3-HCL-HF TO 10 ML. (>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY. FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-MS.
- SAMPLE TYPE: ROCK R150 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data h FA ____ DATE RECEIVED: JUL 20 2005 DATE REPORT MAILED: Aug 4/05

BRITISH COLUMBIA CERTIFIED ASSAYER
Clarence Leong

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm
A163980	3.1	2.1	2.7	110	.1	6	16	1090	6.65	3	2	<.1	1.7	304	.1	.3	<.1	137	3.85	.071	41.4	3.7	2.80	1057	.569	6.93	2.938	.32	1.3	11.7	93	.5	23.0	10.6	1.0	<1	10	25.6	.1	6	.3
A163981	.9	5.5	2.4	106	<.1	.7	.8	994	2.31	4	3	<.1	2.8	227	.1	.5	<.1	46	.52	.372	60.5	1.7	3.51	249	.769	9.92	4.580	.05	.3	40.3	121	1.2	21.3	28.1	2.3	1	5	18.9	.1	6	1.0
A163984	.8	37.7	3.3	9	.3	4.1	.7	58	1.97	2	5	<.1	1.2	9	.1	.2	.1	32	.35	.012	12.2	5.6	.61	77	.145	5.04	.137	3.15	2.8	35.5	27	1.2	7.5	1.6	.1	1	10	15.3	1.1	51.4	1.3
STANDARD DST6	12.4	127.2	36.1	135	.4	29.5	13	962	2.95	25	7.7	<.1	7.2	304	5.5	5.5	5.0	130	2.30	.095	26.5	250.2	1.03	693	.431	6.72	1.561	1.44	2.1	49.7	59	6.6	15.9	8.5	.7	3	10	25.0	<.1	65.7	1.9

Sample type: ROCK R150 60C.

Data FA

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Wednesday, August 17, 2005

Date Rec. : 08 August 2005
LR Report : **CA09463-AUG05**
Client Ref : A503630-Roca Mines Inc.

CERTIFICATE OF ANALYSIS
Final Report

Sample ID	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
1: A153822	68.1	6.88	5.54	1.91	4.62	2.15	0.81	0.45	0.21	0.08	0.01	< 0.01	7.11	97.9
2: A153960	68.8	14.8	3.02	2.26	1.41	3.03	2.62	0.41	0.11	0.03	< 0.01	< 0.01	3.08	99.6
3: A153961	49.1	15.0	12.8	7.12	5.20	4.01	0.43	2.45	0.44	0.15	0.02	0.06	3.35	100.1
4: A153962	46.5	14.8	13.2	6.01	5.33	3.96	0.42	2.51	0.54	0.23	< 0.01	0.07	5.71	99.3
5: A153964	66.2	14.3	4.28	2.37	2.48	2.84	1.47	0.47	0.22	0.08	< 0.01	0.02	3.93	98.6
6: A153965	69.2	15.1	2.91	2.59	0.42	2.80	2.78	0.41	0.10	0.02	< 0.01	0.01	2.72	99.0
7: A153966	61.8	16.3	5.42	3.99	2.33	2.48	1.29	0.75	0.32	0.03	0.01	0.01	4.56	99.3
8: A153967	48.0	15.8	13.6	6.88	5.61	4.15	0.44	2.43	0.45	0.22	0.02	0.07	3.48	101.1
9: A153969	72.3	13.0	3.29	2.44	1.35	2.18	1.79	0.34	0.05	0.03	0.01	< 0.01	2.26	99.0
10: A153973	72.1	13.7	4.40	1.71	0.19	3.69	1.90	0.40	0.14	0.07	< 0.01	< 0.01	2.09	100.4
11: A153975	71.8	12.1	4.36	1.24	0.68	3.75	1.55	0.38	0.09	0.10	< 0.01	< 0.01	2.42	98.4
12: A153976	85.5	4.24	3.19	0.79	0.96	0.15	0.67	0.15	0.02	0.06	0.01	< 0.01	3.42	99.1
13: A153977	71.7	13.1	4.48	0.38	0.10	4.48	1.40	0.44	0.06	0.12	< 0.01	< 0.01	2.41	98.7
14: A153978	77.2	10.00	3.79	2.76	0.10	1.31	1.20	0.28	0.05	0.03	< 0.01	< 0.01	2.32	99.1
15: A153979	74.2	11.4	4.49	3.19	0.27	0.09	2.29	0.52	0.14	0.02	< 0.01	< 0.01	2.96	99.6
16: A153980	46.5	13.9	12.5	4.90	5.53	4.15	0.03	3.26	1.59	0.24	< 0.01	0.02	6.79	99.5
17: A153981	52.8	17.7	10.5	4.15	1.25	6.66	0.05	2.17	0.89	0.12	0.02	< 0.01	3.11	99.3

Debbie Waldon
Project Coordinator,
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GEOCHEMICAL ANALYSIS CERTIFICATE

Roca Mines Inc. PROJECT FOREMORE File # A503631

500 - 1045 Howe St., Vancouver BC V6Z 2A9 Submitted by: John Mirko

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm
G-1	9	2.2	20.0	54	<.1	5.5	4	740	2.27	3	3.3	<.1	6.9	774	<.1	<.1	.1	46	2.19	.074	75.1
6001	3.6	22.7	8.3	99	.3	13.7	10	578	4.61	12	1.7	<.1	4.6	181	.3	1.2	.1	123	1.25	.143	35.6
6002	4.2	21.3	7.3	104	.1	17.6	15	2176	5.40	15	2.0	<.1	6.0	178	.4	1.2	<.1	101	3.11	.159	59.2
6003	3.5	16.2	6.7	94	<.1	14.5	13	857	5.39	14	1.5	<.1	5.6	130	.2	1.0	<.1	95	.72	.134	57.0
6004	4.4	9.5	5.5	92	<.1	6.4	6	538	5.97	15	1.9	<.1	8.4	76	.2	.9	.1	59	.79	.098	71.3
6005	5.6	13.4	7.5	54	.1	11.2	8	484	5.61	18	1.9	<.1	7.2	126	.3	.9	<.1	97	.53	.096	60.1
6006	4.9	9.8	6.7	68	.1	9.0	8	562	4.67	15	1.8	<.1	6.8	102	.3	.5	<.1	81	.50	.106	56.5
6007	4.2	15.9	6.3	103	.1	12.8	12	766	5.72	15	1.5	<.1	5.4	139	.2	1.1	<.1	101	.54	.148	50.9
6008	2.6	7.6	8.0	86	<.1	6.7	6	506	3.94	12	1.5	<.1	5.1	145	.2	1.1	<.1	91	.90	.124	41.3
RE 6008	2.5	9.1	8.6	91	<.1	7.8	6	559	4.10	13	1.5	<.1	5.6	151	.2	1.2	<.1	97	1.01	.135	45.5
6009	3.2	14.2	6.8	104	<.1	15.9	8	744	5.27	15	1.9	<.1	6.6	127	.3	1.0	<.1	91	.75	.139	55.1
6010	3.4	31.9	6.3	118	<.1	14.3	16	2119	5.64	14	1.5	<.1	6.1	127	.4	1.3	<.1	95	.79	.125	63.2
6011	8.9	19.3	7.6	117	.1	13.7	14	1411	6.03	13	1.5	<.1	5.4	127	.4	1.0	.1	136	.81	.142	47.7
6012	6.8	11.1	9.0	67	<.1	8.7	7	514	5.20	15	1.9	<.1	6.7	104	.4	.6	<.1	99	.34	.098	41.5
6013	4.3	14.3	8.9	97	.1	5.6	8	669	5.10	14	1.8	<.1	6.1	138	.3	.9	.1	109	.82	.124	59.1
6014	6.7	13.0	14.3	123	.1	5.0	3	645	5.63	19	2.2	<.1	8.2	110	.4	.6	.4	51	1.03	.171	53.6
6015	4.6	19.0	7.5	94	<.1	15.5	13	503	5.51	12	1.0	<.1	4.7	159	.2	1.1	<.1	137	1.03	.084	47.9
6016	7.4	12.3	7.9	84	<.1	10.9	9	532	5.25	13	1.6	<.1	4.7	146	.2	1.2	.1	108	1.59	.108	36.9
6017	3.5	14.9	7.7	83	<.1	11.5	11	657	5.40	12	1.7	<.1	5.4	151	.2	1.0	<.1	113	1.20	.119	35.4
6018	7.5	13.2	7.2	97	<.1	14.5	12	792	5.31	12	1.3	<.1	5.1	161	.1	1.0	<.1	105	1.58	.094	46.0
STANDARD DST6	12.6	130.2	34.9	181	.4	29.9	13	965	4.08	26	7.6	<.1	7.2	259	5.6	5.6	4.9	116	2.12	.098	25.4

SAMPLE#	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm
G-1	79.5	.62	967	.238	7.21	2.459	2.71	.1	7.4	60	1.5	15.0	22.1	1.9	3	5	37.7	<.1	124.5	.7
6001	49.7	.96	354	.404	7.40	2.053	1.30	.8	137.4	64	2.5	17.3	46.1	3.5	3	12	13.4	<.1	50.1	4.5
6002	37.1	1.37	450	.748	7.47	2.435	2.05	1.0	144.5	110	3.6	23.4	63.6	6.3	4	5	15.4	<.1	39.7	4.5
6003	36.2	1.02	358	.568	7.55	2.474	1.82	.7	173.0	125	3.3	16.5	77.5	5.7	3	7	15.1	<.1	39.9	3.4
6004	21.9	.78	231	.438	8.35	2.433	1.67	.9	182.5	136	4.5	17.7	114.4	7.8	4	5	10.9	<.1	56.6	5.2
6005	35.9	.89	344	.722	8.55	2.777	1.91	1.1	179.3	115	4.4	18.7	101.2	7.8	3	7	16.4	<.1	54.6	5.2
6006	24.6	.50	301	.628	8.45	3.082	2.14	1.0	193.9	127	4.4	17.5	107.4	7.6	3	6	13.0	<.1	60.6	5.7
6007	35.6	1.04	342	.665	8.80	2.571	1.91	.8	154.3	112	3.6	18.6	91.0	6.7	5	8	16.3	<.1	45.2	4.5
6008	33.9	.72	346	.701	8.47	2.921	1.92	1.1	157.6	77	3.8	14.8	82.0	6.1	3	8	11.0	<.1	62.2	4.7
RE 6008	35.9	.74	359	.758	9.16	3.267	2.08	1.4	162.4	85	4.0	16.2	88.4	6.7	2	9	10.6	<.1	64.8	4.9
6009	30.5	.92	380	.659	9.06	2.795	1.84	1.0	157.9	102	4.0	16.5	92.4	5.7	2	8	13.4	<.1	56.6	4.5
6010	37.8	1.06	414	.605	9.65	2.521	2.31	.9	141.4	109	3.3	28.5	80.1	5.8	4	11	15.2	<.1	44.5	3.7
6011	39.6	1.05	378	.712	9.63	2.342	1.67	.8	170.7	95	3.3	17.4	68.7	5.2	2	10	20.4	<.1	45.6	4.0
6012	33.0	.72	226	.547	7.89	2.375	1.96	1.4	289.0	80	5.4	17.7	101.3	7.0	3	7	14.8	<.1	54.6	8.2
6013	37.7	.85	322	.746	9.49	2.602	1.69	1.3	173.1	58	4.5	22.3	69.3	6.6	3	10	15.9	<.1	66.9	5.2
6014	22.9	.34	197	.436	8.92	2.915	2.41	1.7	421.1	65	11.7	31.6	157.2	12.1	4	6	16.4	<.1	55.7	11.7
6015	30.5	1.11	417	.813	9.42	2.460	1.73	.7	118.9	96	3.5	18.7	65.8	4.9	3	11	19.6	<.1	45.1	3.5
6016	37.6	.87	268	.695	8.05	2.706	1.61	.9	147.6	71	3.5	15.4	74.3	5.5	3	9	14.6	<.1	47.8	4.3
6017	47.3	.95	303	.684	8.42	2.685	1.35	1.0	172.1	75	3.5	17.2	65.5	4.9	2	11	16.3	<.1	37.6	4.8
6018	42.3	1.12	344	.695	8.58	2.666	1.54	.9	120.9	65	3.1	17.1	72.4	5.3	3	10	14.6	<.1	47.0	3.6
STANDARD DST6	268.3	1.03	650	.416	6.90	1.617	1.47	7.9	51.2	53	6.6	35.7	9.0	7	4	11	24.0	<.1	57.1	1.9

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HCLO4-HNO3-HCL-HF TO 10 ML. (>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY. FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-MS.
- SAMPLE TYPE: SOIL SS80 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data FS FA _____ DATE RECEIVED: JUL 20 2005 DATE REPORT MAILED: Aug. 4/05

BRITISH COLUMBIA CERTIFIED ASSAYER
Clarence Leong

ACME A TICAL LABORATORIES LTD.   852 E. HASTINGS ST.   COUVER BC V6A 1R6   PHONE(604)253-3158 FAX(60 253-1716
(ISO 9001 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Roca Mines Inc. PROJECT FOREMORE File # A503632

500 - 1045 Howe St., Vancouver BC V6Z 2A9   Submitted by: John Mirko

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm
G-1	1.4	2.8	21.3	58	<.1	5.5	4	777	2.44	3	4.3	<.1	7.6	757	<.1	<.1	.1	55	2.55	.095	29.2
A153982	.2	11.0	1.7	20	.1	16.8	25	9835	11.99	42	2	<.1	4	289	.1	.9	<.1	13	25.21	.029	3.0
A153983	.7	71.1	13.7	109	.5	38.1	31	3837	10.82	35	1.0	<.1	3.2	206	.4	3.4	.1	126	2.31	.166	21.6
STANDARD DST6	12.8	130.2	34.9	121	.4	29.8	13	909	4.08	26	7.6	<.1	7.2	292	5.6	5.5	4.5	116	2.22	.098	26.4

SAMPLE#	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm
G-1	74.7	.67	958	.249	8.40	2.756	3.13	2	7.5	50	1.4	16.1	27.2	1.9	3	6	39.6	<.1	122.9	3
A153982	6.6	.55	1726	.050	.79	.183	.22	.1	5.4	6	.1	2.9	.5	.1	<1	2	3.1	.2	4.5	.2
A153983	55.8	1.49	1345	.309	5.05	1.032	1.38	.9	30.9	42	.6	15.7	3.8	.3	1	19	21.0	.5	26.5	1.3
STANDARD DST6	268.3	1.03	660	.416	6.95	1.617	1.47	7.9	51.2	53	6.6	15.7	9.6	.7	4	11	24.0	<.1	57.1	1.9

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HCLO4-HNO3-HCL-HF TO 10 ML. (>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY. FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-MS.
- SAMPLE TYPE: SILT SS80 60C

Data FA ____   DATE RECEIVED: JUL 20 2005   DATE REPORT MAILED: Aug. 4/05

BRITISH COLUMBIA CERTIFIED ASSAYER
Clarence Leong

ACME [illegible]TICAL LABORATORIES LTD. 852 E. HASTINGS ST. [illegible]COUVER BC V6A 1R6 PHONE(604)253-3158 FAX(60[illegible])253-1716
(I[illegible] [illegible]001 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Roca Mines Inc. File # A503279 Page 1
500 - 1045 Howe St., Vancouver BC V6Z 2A9 Submitted by: John Mirko

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
9001	3	5.4	1.6	125	<.1	182.4	45	1643	7.07	1	<.1	<.1	6	121	.1	1.1	.1	134	2.25	.040	4.2	296	5.3	01	550	.288	8.14	.199	3.05	3.1	7	12	5	4.6	5	1	1	35	24.7	[illegible]	48.1	<.1
9002	1	4.8	1.7	45	.7	5.7	1	132	1.86	<1	7	<.1	4.6	41	<.1	9	1	20	.37	.074	72.4	2.4	.49	1171	.205	6.90	.404	7.48	1.3	22.3	48	1.5	4.5	5.7	5	1	5	5.6	[illegible]	51.6	1.5
9003	1.2	28.6	4.2	58	.1	4.5	4	850	2.63	<1	2	<.1	2.4	95	.1	.1	.1	42	1.54	.079	8.6	7.6	1.00	1059	.148	5.82	.285	2.07	.5	17.2	22	.9	4.6	1.1	.1	1	12	6.5	.1	19.6	.7
9004	.7	1.7	3.4	23	<.1	2.9	5	471	3.07	<1	2	<.1	2.8	107	<.1	.5	.1	77	.49	.045	10.5	4.9	1.59	1129	.152	6.86	.398	2.11	1.3	18.6	31	1.2	3.5	1.5	.1	1	14	10.1	.1	30.3	.7
9005	4.0	36.5	4.7	53	.2	60.1	33	1537	4.46	13	1.7	<.1	1.5	131	.2	.2	.1	155	3.98	.067	6.1	92.8	3.22	1013	.150	5.57	.263	1.40	1.2	38.4	14	.6	7.5	1.1	.1	1	23	32.7	.1	71.4	1.4
9006	3	16.9	3.3	102	.1	4.3	7	520	4.11	<1	1	<.1	2.5	138	.1	.5	.1	60	.98	.049	11.6	6.6	2.09	1624	.138	6.54	.275	2.40	.3	30.4	26	.9	3.8	1.3	.1	1	18	25.7	.1	36.2	.4
9007	.4	6.6	2.8	79	<.1	2.2	6	1127	4.56	<1	1	<.1	1.5	163	.1	.4	<.1	92	2.04	.042	7.0	5.7	2.43	725	.159	5.07	.992	2.27	1.2	30.5	18	.7	4.0	.6	.1	1	29	9.4	.1	36.1	.5
9008	.2	11.0	2.6	81	<.1	2.3	3	378	3.12	1	.6	<.1	7.6	35	.1	.7	.1	30	.20	.019	30.5	2.5	1.22	575	.089	5.51	.431	1.35	.2	34.7	24	.9	4.5	.5	.1	1	12	20.1	<.1	19.0	1.4
9009	.3	24.9	2.7	91	<.1	83.5	40	1343	7.32	1	.1	<.1	.7	154	.1	2.2	<.1	317	3.20	.093	5.4	205	5.60	73	.572	6.27	2.756	.11	.1	9.3	13	.5	13.6	2.6	.2	<1	37	64.3	.1	2.3	.7
9010	2.2	30.7	7.1	62	.6	27.5	4	527	2.65	9	1.1	<.1	1.9	222	.1	2.1	.1	85	1.94	.075	10.1	16.6	1.47	108	.130	5.85	.145	1.57	3.5	33.7	19	.6	8.2	1.5	.1	1	11	17.9	.6	19.6	1.1
9011	.1	12.6	6.7	51	.1	6.2	7	676	2.71	8	1.2	<.1	4.5	120	.2	.5	.1	53	2.67	.103	19.1	12.8	2.01	3534	.223	7.68	.059	3.51	.2	76.5	39	1.9	14.8	4.3	.5	2	11	20.7	1.42	9.2	.7
9012	.5	15.0	4.9	65	.1	10.8	6	570	3.43	6	1.2	<.1	4.9	108	.2	.7	.1	52	1.56	.056	10.6	19.3	2.55	2651	.221	7.74	.455	2.85	.5	65.9	56	1.7	13.2	4.5	.4	2	10	25.3	2.42	0.2	.3
9013	2.3	30.9	3.6	59	.2	12.5	7	668	3.20	17	.9	<.1	4.3	84	.2	.8	.1	46	1.16	.020	13.2	12.7	2.54	1224	.184	6.80	1.347	1.73	2.3	51.2	25	1.4	8.3	2.9	.3	1	8	37.9	5.26	2.1	.7
9014	5.2	8.5	4.6	549	<.1	.7	25	1163	10.23	9	.5	<.1	2.6	471	.1	2.2	<.1	515	5.46	1.038	55.8	.8	2.86	175	2.392	8.04	3.447	.60	.3	25.1	119	1.5	53.9	23.4	3.0	3	15	22.5	.6	.9	1.0
9015	.9	14.9	2.1	104	.1	14.9	11	994	4.24	6	1.6	<.1	3.9	90	.1	.5	.1	65	1.14	.046	17.7	19.5	2.97	3708	.425	8.20	.896	2.91	.4	86.7	38	1.8	15.2	5.1	.5	2	18	40.6	1.43	5.3	.1
9016	.7	55.3	6.4	116	.1	6.5	12	1162	4.69	2	1	<.1	2.1	365	.1	.6	.2	150	3.61	.066	7.3	9.4	1.60	656	.377	9.54	2.198	2.84	1.2	19.3	16	.6	15.1	1.9	.1	1	14	8.1	1.32	61.1	.5
9017	.3	20.4	3.9	105	<.1	7.4	14	1311	4.69	10	.7	<.1	2.2	203	.1	.5	.1	172	4.55	.076	12.3	12.8	2.57	209	.460	7.36	2.696	1.30	.5	34.2	26	.9	17.5	2.9	.2	1	10	10.2	.4	34.7	1.3
9018	.6	38.8	7.3	60	.1	.3	8	565	4.15	5	2.2	<.1	5.4	138	.1	.3	.1	75	2.22	.185	25.4	2.3	.60	493	.535	8.85	4.067	2.50	1.0	95.0	55	1.3	21.5	4.5	.5	1	7	3.7	.5	38.6	5.1
9019	3.2	111.0	3.5	91	<.1	.5	21	932	4.62	2	1.8	<.1	5.0	173	.1	.5	.1	119	2.93	.194	25.6	1.5	1.50	214	.528	8.94	3.580	2.27	1.5	72.5	53	1.6	21.1	4.4	.3	1	8	7.5	1.0	39.5	2.5
9020	5.0	68.5	1.6	53	<.1	.1	8	662	4.09	2	.3	<.1	1.5	111	<.1	.1	.1	57	1.88	.073	13.6	1.7	1.19	279	.251	6.42	2.622	3.22	.5	19.1	20	.5	14.0	2.1	.2	1	6	4.1	.9	63.6	.7
9021	7.7	59.3	13.2	54	.3	.1	33	540	8.49	3	.2	.1	1.0	133	.1	.3	.6	47	1.20	.056	9.2	2.3	.80	15	.230	7.22	2.460	3.10	.5	14.5	19	.4	11.6	1.6	.1	1	5	4.0	7.2	63.0	.6
9022	1.3	17.6	1.7	66	<.1	.8	7	755	2.85	1	.7	<.1	1.4	154	<.1	.4	<.1	32	1.76	.077	11.5	2.0	1.21	245	.254	3.29	3.664	2.61	.5	22.6	24	.5	14.8	2.1	.1	1	6	4.9	4	53.3	.9
9023	1.0	102.5	3.9	83	.4	7.9	10	4302	7.67	7	3.0	<.1	5.0	296	.2	.9	.5	67	15.17	.052	16.9	12.0	3.76	163	.362	6.18	.772	1.71	5.0	77.6	35	5.0	17.1	4.7	.4	1	8	9.6	1.7	26.5	2.9
9024	.6	150.7	5.4	96	.1	7.2	11	2319	4.63	6	.6	<.1	1.2	222	.1	.5	.3	53	23.54	.537	6.7	4.5	2.86	36	.193	4.30	.011	.24	2.1	29.4	14	1.1	9.1	1.2	.1	1	6	11.6	1.1	3.0	1.2
9025	.6	101.7	5.4	60	.1	3.3	16	1245	5.51	5	.8	<.1	1.5	386	.1	.7	.2	177	12.45	.105	9.6	4.4	3.06	478	.399	7.26	1.144	2.45	1.0	23.3	15	.8	14.2	1.8	.1	1	16	9.5	2.2	43.2	1.1
RE 9025	.9	109.9	5.7	70	.2	3.7	15	1288	5.72	7	.6	<.1	1.5	410	.1	.7	.2	183	12.78	.076	9.4	4.6	3.28	505	.413	7.39	1.207	2.29	1.2	25.8	19	.9	15.0	2.0	.1	1	17	10.1	2.2	42.6	1.1
RRE 9025	.6	114.6	6.2	68	.1	3.4	15	1292	5.64	5	.9	<.1	1.7	403	.1	.6	.1	185	13.63	.077	8.7	3.5	3.37	494	.434	7.44	1.159	2.41	.6	25.3	20	.9	14.6	2.1	.1	1	16	10.1	2.1	42.9	1.1
9027	7.3	24.5	11.5	73	.1	6.4	4	962	3.44	6	1.8	<.1	1.9	231	.1	.4	.1	39	24.11	.121	7.5	4.2	3.38	26	.115	2.61	.034	.56	.5	40.2	16	.5	8.1	2.1	.3	1	4	17.6	6.1	3.1	1.5
9028	1.9	99.1	7.1	64	.1	6.3	15	1645	3.39	10	1.1	<.1	1.8	274	.2	.8	.2	133	25.75	.030	7.3	5.9	3.94	49	.326	5.37	.057	.12	1.2	26.2	16	.5	11.1	1.5	.1	1	12	11.9	1.6	1.6	1.3
9029	.2	7.2	2.5	67	<.1	1.0	1	1150	2.31	3	.7	<.1	1.6	192	.1	.4	.1	100	5.94	.045	11.0	1.7	1.85	250	.346	8.31	4.261	1.37	.5	20.6	73	7.14	.1	2.4	.2	1	10	11.2	2	26.9	1.3
9030	25.6	7.2	30.6	925	.7	.7	<1	789	3.16	46	7.7	<.1	23.7	115	3.3	.6	.1	9	1.05	.003	82.4	1.3	.42	1105	.036	10.15	6.063	1.39	.4	585.1	129	7.4	17.6	111.3	12.3	7	<1	7.5	.8	28.3	17.9
9031	18.5	41.5	13.8	309	.6	46.0	.5	759	3.31	47	1.9	<.1	5.2	152	1.5	2.9	.1	70	1.67	.161	21.4	55.1	.64	42	.148	5.44	2.633	1.19	.5	141.2	36	2.1	16.8	24.2	2.4	4	9	11.7	7.2	29.1	2.9
9032	7.7	45.7	6.5	187	1.5	44.5	.6	486	2.92	45	1.9	<.1	2.6	181	.7	4.1	.1	122	1.60	.123	10.4	49.4	.47	46	.175	4.15	.934	1.28	.5	41.6	17	1.6	11.8	1.8	.1	1	11	15.9	1.6	23.5	1.8
9033	4.8	79.5	14.3	173	.6	4.7	25	1471	7.71	44	.5	<.1	2.1	597	.1	1.6	<.1	170	6.46	.544	41.4	5.0	.61	32	1.507	7.01	3.383	.50	1.9	39.6	89	1.0	26.2	3.1	.5	2.7	1	11.22	.9	4.3	9.4
STANDARD OST6	13.0	129.1	36.7	175	.3	39.6	13	987	4.07	25	7.8	<.1	7.6	398	5.7	5.5	4.9	118	7.24	.095	26.1	156.3	1.53	706	.429	7.04	1.595	1.44	7.7	55.4	55	6.7	30.4	5.7	.8	3	12	25.0	<.1	50.2	1.8

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HCLO4-HNO3-HCL-HF TO 10 ML. (>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY. FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-MS.
- SAMPLE TYPE: DRILL CORE R150 Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data [illegible] FA _____ DATE RECEIVED: JUL 7 2005 DATE REPORT MAILED: July 23/05

BRITISH COLUMBIA CERTIFIED ASSAYER
Clarence Leong

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm
9034	2.4	51.2	4.7	455	.5	22.5	20	1551	6.77	26	6	<.1	1.1	745	1.1	.5	.1	226	10.26	.236	22.9	15	1.19	153	.577	4.09	3.315	37	.5	15.8	45	1.1	16.5	9.2	.7	1	11	15.0	2.0	7.5	.5
9035	4.3	35.5	9.7	159	.5	16.7	23	1245	6.37	23	9	<.1	1.6	552	.5	1.1	.1	254	5.55	.409	30.2	12.5	1.55	50	.513	6.35	2.755	54	1.7	25.1	65	1.0	22.0	17.6	1.4	1	12	22.0	[illegible]	6	[illegible]
9036	.5	9.0	2.7	15	.2	7.5	5	428	1.33	10	1.0	<.1	1	56	<.1	1.4	<.1	12	1.24	.006	9.0	10.1	.36	156	.113	.42	.169	.09	2	5.2	2	1	3.6	3	<.1	<1	1	5.0	.8	2.5	2
9037	7.3	35.9	4.3	75	.1	5.4	7	2579	4.02	5	1	<.1	2.7	377	.3	.4	<.1	12	4.42	.469	65.2	14	1.50	347	.122	7.24	3.435	42	1.3	54.5	42	.7	5.9	18.1	1.1	1	5	2.5	.1	7.5	1.2
9038	16.5	31.7	5.1	43	.1	3.0	3	2435	4.40	2	.8	<.1	5.4	319	.2	.4	<.1	7	4.14	.137	44.2	6.5	1.71	519	.135	8.06	6.176	58	2.3	103.3	75	1.2	15.1	10.7	2.3	2	4	2.0	[illegible]	17.3	3.4
9039	1	15.4	1.8	126	<.1	25.9	24	535	6.11	2	2	<.1	.5	56	<.1	1.0	.1	176	.43	.057	9.9	226	3.69	1514	.621	10.56	.315	4.05	.4	7.5	21	1.0	12.5	1.0	1	2	32	15.1	[illegible]	9.7	1
9040	3.5	94.3	7.4	29	.3	15.8	8	959	4.97	10	1	<.1	1.5	75	.1	.5	.3	63	2.34	.070	7.4	16.3	.84	29	.330	1.94	1.264	.54	4	52.1	16	.5	9.1	2.5	.5	3	5	6.5	[illegible]	9.22	1.2
9041	2.8	66.0	1.1	54	.1	22.6	19	649	3.63	1	2.2	<.1	3.6	83	.1	.9	<.1	105	1.45	.058	11.1	63.9	1.04	42	.285	8.45	.361	4.49	2.5	50.8	21	2.7	12.1	3.3	.2	2	20	9.1	2.7	52.4	3.2
9042	2.5	38.7	1.2	164	<.1	63.7	24	1211	5.92	5	.5	<.1	2.3	135	.1	.8	<.1	113	6.07	.173	26.8	124.5	2.45	1333	.573	5.37	.279	1.37	1.2	27.3	55	1.7	13.4	15.5	1.3	2	21	21.6	<.1	54.4	3
9043	4.5	34.7	10.1	138	.5	12.0	5	775	2.80	17	1.0	<.1	2.2	71	.1	2.8	.1	76	1.28	.021	13.1	10.9	1.20	128	.164	5.18	1.334	1.74	.7	40.7	29	1.4	8.5	4.9	.4	2	17	18.4	[illegible]	35.8	1.5
9044	.5	4.0	5.5	275	.1	1.5	1	1486	3.49	10	1.6	<.1	6.8	177	1.0	3.0	<.1	10	2.02	.293	20.3	5.8	2.66	1054	.176	5.49	1.737	3.07	.8	119.7	46	4.1	22.0	36.6	2.5	4	5	26.7	[illegible]	46.6	2.6
9045	7.2	11.7	21.5	245	.3	11.3	4	1107	2.90	19	1.0	<.1	3.2	109	1.2	2.5	.1	65	1.79	.250	22.8	12.0	1.50	142	.126	5.49	.499	2.51	.5	61.1	45	2.2	11.4	17.6	1.3	3	9	15.5	.5	53.6	2.1
9046	13.2	23.8	5.1	75	.2	12.4	5	553	3.04	10	1.2	<.1	3.5	95	.1	.4	.1	76	.95	.043	24.1	15.3	.63	341	.164	6.23	.937	2.81	.7	64.7	44	1.7	7.0	11.9	1.1	1	11	11.7	.1	55.0	2.2
9047	5.6	21.5	11.6	82	.4	12.7	6	586	3.21	15	1.1	<.1	2.8	54	.1	.6	.1	57	.95	.037	12.7	13.2	1.09	131	.180	5.60	1.665	2.35	2.3	56.1	28	1.6	8.3	2.6	2	2	12	12.1	.9	52.9	2.2
9048	18.7	25.7	6.0	42	.7	1.3	4	572	2.52	17	1.7	<.1	3.0	145	.1	.7	.1	56	1.44	.029	25.7	8.5	.77	182	.134	5.94	3.231	.77	1.2	86.2	45	1.3	11.7	13.6	.3	2	6	5.2	.1	15.5	2.4
9049	7.2	14.3	3.5	52	.1	31.1	5	748	2.57	10	.9	<.1	2.5	62	.1	.7	.1	60	1.45	.038	17.5	17.5	.81	225	.171	5.50	2.205	1.68	1.5	53.3	35	1.6	11.4	6.9	.5	1	11	6.1	.6	30.7	1.9
9050	67.9	5.4	7.9	78	.4	14.4	9	453	2.57	14	6	[illegible]	2.2	94	<.1	1.0	2	48	1.39	.021	15.5	75.8	.61	46	.170	6.32	2.977	1.58	5.6	53.1	32	1.7	8.6	3.3	.7	1	11	4.2	.1	37.3	1.5
9051(rock)	6	3.3	6.6	125	<.1	3.0	<1	3501	.29	<1	.5	<.1	.1	366	.5	.1	<.1	4	>40	.032	9	1.5	.52	14	.010	.26	.017	.03	.2	3.2	2	<.1	3.9	.1	<.1	<1	<1	1.5	.2	.8	.1
9052(pulp)	14.2	168.3	20.2	187	.8	45.9	166	4636	9.50	3804	4.8	2.4	2.3	217	.8	10.7	70.5	123	6.38	.132	45.8	30.4	1.69	600	.327	4.62	.657	.28	56.0	45.2	53	6.2	22.5	3.0	.2	2	11	39.6	7	30.0	1.6
9053(pulp)	31.7	4212.6	>10000	>10000	123.9	8.0	4	1132	2.64	287	5	2	.8	269	138.5	149.3	4.8	50	2.80	.009	5.5	48.3	.53	280	.093	4.41	.894	1.86	1.0	5.7	12	7.6	6.0	1.2	.1	1	3	9.0	1.6	17.0	.3
9054	5.5	23.6	22.4	104	.6	27.9	23	924	4.95	29	1.0	[illegible]	2.5	154	.1	3.6	.3	65	2.42	.170	15.2	37.0	1.24	61	.303	8.34	1.634	4.05	3.5	49.1	37	1.9	12.4	2.6	2	2	19	14.5	2.2	79.4	1.7
9055	.5	76.7	7.7	212	.1	50.2	32	992	8.61	7	.1	<.1	.2	127	.1	.8	<.1	269	1.17	.156	8.3	247.9	2.56	1779	.741	9.60	1.278	3.87	2.9	1.9	19	.9	7.1	1.0	.1	3	38	23.7	<.1	87.6	1
9056	3.5	40.0	32.7	106	.7	21.4	15	323	4.66	30	1.3	<.1	2.5	40	.1	4.7	.2	41	.47	.076	11.6	24.5	1.15	49	.367	9.60	1.973	4.29	1.7	60.4	33	2.2	11.6	3.0	.2	2	16	16.7	2.7	86.0	2.2
9057	1.9	45.8	3.0	141	.1	45.1	16	884	4.93	34	.5	<.1	1.6	51	<.1	4.3	.1	103	1.61	.076	10.5	93.9	2.06	695	.437	6.75	.499	2.53	1.6	24.6	22	1.0	5.4	4.8	.3	1	20	17.2	.4	48.4	.9
9058	3.6	20.4	5.7	57	.4	15.3	5	813	3.60	10	1.2	<.1	1.1	72	.1	2.6	.1	103	4.05	.042	7.5	15.9	1.57	101	.226	5.09	.044	2.50	2.6	45.6	26	1.0	9.6	2.1	.1	1	14	11.3	.9	45.0	1.9
9059	.9	19.1	5.5	125	.3	9.8	3	734	1.76	27	.4	<.1	1.7	56	.2	1.5	.1	77	1.43	.051	12.9	25.8	1.01	1501	.225	7.91	.523	2.74	1.4	32.1	30	1.5	8.9	1.0	.1	1	23	39.1	2.6	50.9	1.2
9060	.6	21.9	12.5	64	.5	11.0	5	402	2.96	9	1.0	<.1	2.6	70	.1	2.3	.1	79	1.35	.029	12.4	11.5	1.43	353	.181	5.95	.124	2.29	.6	57.3	26	1.5	7.5	5.0	.5	1	15	20.2	.1	43.3	[illegible]
9061	.6	6.0	5.3	58	.4	15.4	9	395	3.05	9	.6	<.1	3.9	29	.1	.5	.1	78	.66	.050	12.3	11.2	2.62	380	.164	6.03	.697	1.97	2.2	38.7	26	1.2	7.5	1.9	.1	1	16	30.4	.5	39.9	3.5
9062	.4	5.0	4.4	78	.3	6.2	5	346	2.66	5	.4	<.1	1.1	25	.1	1.2	.2	52	.66	.021	12.3	5.0	2.20	612	.153	6.06	.367	2.44	.5	39.5	26	1.5	6.7	1.6	.1	1	16	26.8	.5	43.6	1.1
9063	.5	26.9	6.2	77	.4	8.9	5	435	3.11	5	.7	<.1	2.2	32	.1	1.8	.3	40	.87	.033	14.1	8.2	2.70	324	.177	5.51	.750	1.55	.4	75.9	28	1.7	9.9	4.6	.4	1	14	23.1	.4	33.9	1.5
9064	.2	9.2	3.1	90	.2	8.7	2	539	3.64	4	.4	<.1	2.5	35	<.1	1.1	.1	50	1.51	.030	13.8	11.2	2.32	834	.146	6.09	.471	2.37	.1	26.3	29	1.4	7.0	1.6	.1	2	13	33.5	.3	41.2	1.8
9065	.6	2.1	1.8	45	.1	3.4	1	222	1.72	1	.1	<.1	3.8	78	.1	.4	.1	16	1.34	.096	13.9	2.5	.65	962	.090	6.60	.367	3.55	1.4	24.8	45	2.1	7.4	5.4	.5	2	5	10.5	<.1	54.3	.8
RE 9065	.5	2.7	1.2	41	<.1	3.6	1	222	1.74	1	.1	<.1	3.9	76	.1	.4	.1	14	1.34	.095	19.9	2.5	.65	925	.094	6.69	.365	3.50	.9	24.8	44	2.0	7.7	5.9	.5	1	5	10.1	<.1	57.8	.9
RRE 9065	.1	2.1	1.4	41	.1	3.6	1	219	1.71	1	.1	<.1	3.8	75	<.1	.5	.1	14	1.32	.098	19.7	1.2	.64	918	.095	6.64	.383	3.45	.7	26.6	43	1.9	7.5	5.3	.4	1	5	9.2	<.1	57.3	1.0
STANDARD DS6	12.4	126.6	27.1	183	.4	30.2	13	991	3.43	25	4.7	<.1	7.4	296	6.7	5.5	3.8	120	2.24	.137	26.9	209.0	1.53	875	.431	6.97	1.601	1.49	7.5	50.3	55	6.5	16.1	5.6	.6	5	17	25.4	<.1	69.5	1.9

Sample type: DRILL CORE R150. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data ___ FA ___

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
9066	1	6.6	6	35	<.1	2.9	2	185	1.79	1	3	<1	4.0	33	.1	.4	.1	11	.56	.079	22.2	3.9	.53	1098	.365	6.49	.031	3.45	3.6	41.0	49	2.2	11.1	5.3	4	7	5	9.2	<.1	55.1	[illegible]
9067	20.3	32.7	16.5	51	1.1	4.6	73	293	3.19	53	4.3	<1	4.1	105	2	1.1	4	63	1.83	.057	15.5	2.3	.95	75	.75	7.58	.232	2.72	7.0	139.5	36	2.1	17.0	4.6	4	3	5	14.2	1.0	52.2	5.2
9068	1.0	4.5	1.7	51	<.1	3.5	2	326	1.69	1	6	<1	4.5	95	.1	.4	<.1	14	1.26	.097	23.4	2.5	.10	1701	.193	6.61	.256	3.15	1.1	51.7	49	2.3	10.3	5.6	4	2	5	9.0	<.1	47.2	1.5
9069	2	5.1	3.0	82	<.1	2.4	1	382	2.72	1	1.1	<1	5.1	155	.2	.1	<.1	14	2.11	.074	27.3	2.4	.15	1537	.214	8.33	.435	1.99	2.8	74.1	57	2.8	16.0	6.7	5	2	7	13.7	<.1	59.9	2.7
9070	8	27.7	1.1	27	<.1	27.8	5	362	3.34	1	9	<1	4.6	94	.1	.3	<.1	49	1.72	.056	24.9	64.5	1.59	1365	.244	9.00	.174	3.53	1.6	65.5	55	2.4	13.0	4.5	3	3	13	24.3	<.1	60.1	7.3
9071	6	2.3	7.3	83	.1	5	2	561	2.61	1	6	<1	3.4	112	.2	.1	<.1	7	2.97	.054	17.2	1.9	1.21	1537	.143	5.92	.582	2.39	1.0	51.0	27	1.9	13.9	4.5	3	2	5	20.3	<.1	35.4	1.8
9072	5.7	37.5	11.0	38	.1	35.4	10	393	2.60	13	2.2	<1	1.1	54	.1	1.3	.1	79	1.79	.058	11.7	16.3	1.22	201	.144	4.52	.920	1.70	3.9	38.5	21	1.1	8.3	1.9	1	1	12	27.5	.6	18.8	1.5
9073	4	43.4	2.1	71	.1	124.6	40	1467	6.45	17	<.1	<1	.3	470	.1	.2	<.1	298	7.12	.139	7.4	229.3	5.53	99	.247	5.92	1.528	.18	.6	2.9	17	.3	9.4	1.5	1	<1	32	70.6	<.1	3.0	.3
9074	6	15.0	4.7	94	.1	9.8	11	583	4.15	4	1.1	<1	2.1	226	.2	.6	<.1	93	4.42	.159	12.9	16.0	2.24	1000	.767	6.75	.475	2.53	.4	59.1	26	1.1	10.9	1.2	2	1	18	31.0	.3	34.6	2.1
9075	2.2	37.9	16.9	105	.1	8.7	6	707	3.27	2	1.0	<1	3.7	124	.2	.6	<.1	48	1.99	.047	21.6	10.9	1.40	1193	.364	8.06	.150	3.54	2.3	95.4	45	2.1	11.6	6.0	4	2	11	23.1	<.1	54.5	2.1
RE 9075	2.4	30.3	17.3	105	.1	5.3	6	717	3.22	2	1.2	<1	4.2	135	.1	.6	.1	50	1.99	.051	22.7	10.8	1.41	1275	.365	6.20	.145	3.93	2.6	55.0	51	2.2	12.4	5.5	4	2	11	22.5	<.1	58.0	2.2
RRE 9075	2.0	29.2	13.1	116	.1	10.5	5	713	3.41	2	1.0	<1	3.8	128	.2	.5	<.1	55	1.98	.052	21.9	13.3	1.48	1202	.355	8.31	.155	3.85	1.5	59.6	45	2.1	11.5	5.2	4	2	11	20.5	<.1	55.6	1.5
9076	1	.2	1.1	95	<.1	35.0	36	782	7.11	1	<.1	<1	.5	82	<.1	1.3	<.1	220	3.39	.039	4.4	59.7	4.39	1199	.454	8.31	.793	2.81	.9	1.9	12	.7	4.5	.8	1	1	33	42.9	<.1	47.1	.1
9077	2	155.2	1.1	179	.2	31.2	24	1355	6.11	1	.1	<1	.2	95	<.1	.5	<.1	139	2.46	.036	3.9	93.3	2.55	1435	.434	6.24	.273	2.20	1.7	7.0	9	.4	5.2	.6	<1	1	34	24.4	<.1	66.6	.1
9078	15.7	1091.7	55.6	578	2.8	39.2	27	1995	6.15	17	2	<1	3.0	142	.8	2.1	1.2	183	2.85	.044	6.5	53.5	4.27	50	.137	7.64	.070	3.35	1.7	18.2	16	.7	7.1	1.1	1	1	29	43.1	3.1	65.5	.6
9079	20.6	1314.0	128.4	2159	3.4	39.6	26	1195	5.55	25	.4	<1	1.5	93	9.5	1.7	1.4	157	1.41	.065	5.5	47.3	3.55	29	.137	7.40	.073	3.14	1.1	27.6	24	.9	7.5	.8	1	1	25	51.1	4.4	61.4	1.1
9080	15.6	1098.3	172.7	2095	3.6	17.5	16	976	3.92	17	.4	<1	1.3	77	9.0	1.6	1.3	92	1.41	.032	6.6	35.5	1.51	28	.121	5.70	.065	2.95	4.1	28.1	15	1.0	6.5	1.8	1	1	15	15.7	3.2	60.2	1.2
9081	24.5	759.4	279.6	1114	1.6	4.5	4	490	3.14	12	1.2	<1	3.6	51	4.3	.9	1.4	32	.75	.026	13.9	7.7	1.46	44	.113	6.29	.068	3.05	1.6	57.1	32	2.1	7.5	2.5	2	1	7	19.1	2.2	56.6	2.4
9082	22.4	459.7	42.5	444	.9	3.5	4	444	2.39	10	1.8	<1	5.1	45	3.1	.1	.1	25	.57	.023	15.3	6.3	2.25	103	.146	7.06	.074	3.31	1.2	70.0	42	2.5	7.6	4.2	4	2	7	28.3	1.2	65.1	3.4
9083	10.5	474.6	16.3	146	.5	1.2	2	542	2.47	6	1.4	<1	4.0	53	.1	.5	.2	16	.74	.023	19.4	3.3	2.31	103	.129	6.32	.064	2.65	3.1	62.6	41	2.5	7.5	4.2	3	1	6	30.0	1.1	54.0	4.0
9084	2.0	26.6	7.7	118	.1	5	1	447	1.46	5	1.4	<1	4.9	55	.2	.4	.1	13	.55	.019	20.9	1.4	1.41	369	.139	6.60	.071	3.28	1.5	57.1	43	2.3	7.9	4.7	4	1	5	15.4	.2	62.4	3.1
9085	16.4	884.4	231.6	4042	2.6	20.7	18	827	4.71	46	1.1	<1	2.6	52	14.5	2.3	.2	74	2.28	.038	12.2	30.4	2.11	37	.119	6.61	.356	3.09	1.5	44.8	26	1.5	6.6	3.7	2	1	15	20.3	2.9	56.5	2.9
9086	1.2	90.6	17.9	180	.2	20.5	17	1214	2.19	19	.1	<1	2.5	133	.3	.5	<.1	68	3.55	.029	10.2	35.4	2.70	1499	.210	5.39	.346	2.56	2.9	35.1	23	1.1	6.8	2.7	2	1	15	25.2	.4	48.3	1.7
9087	2.9	139.7	1095.3	2231	1.5	6.3	5	463	2.29	23	1.7	<1	4.2	55	5.1	2.5	.1	45	1.15	.027	17.5	8.0	1.12	63	.119	6.68	.149	3.36	2.5	62.9	39	2.1	8.8	5.0	4	2	8	12.1	1.1	51.9	3.2
9088	7	78.6	25.4	210	.2	31.6	24	1557	4.89	22	.3	<1	1.1	233	.3	.6	<.1	123	5.60	[illegible]	9.6	39.6	1.74	1207	.397	6.67	.793	1.87	1.5	22.5	21	.8	11.2	2.4	7	1	23	35.8	.2	33.5	.9
9089	7	25.0	6.0	80	.1	36.1	17	590	3.52	15	.6	<1	1.9	153	.2	.5	.1	105	3.39	.044	13.0	48.4	2.39	1365	.317	6.59	.531	2.79	2.1	39.0	29	1.1	10.3	4.5	3	1	17	26.7	.2	40.7	1.4
9090	2.9	122.6	10.5	87	.4	27.9	15	518	3.15	37	.6	<1	1.9	105	.1	.1	.2	95	2.17	.067	11.8	29.7	1.47	231	.279	6.25	.499	2.30	1.1	38.7	25	1.2	9.1	4.4	3	1	15	22.2	.2	40.6	1.4
9091	2.2	32.3	17.4	220	.3	10.6	11	1314	3.90	15	1.1	<1	2.1	237	.3	.5	.1	92	5.24	.071	12.3	22.4	2.37	1724	.234	6.42	.231	2.25	.6	51.5	27	1.6	14.5	4.2	3	1	16	29.7	.2	39.9	1.2
9092	7.3	397.1	20.3	247	1.8	23.5	15	2156	4.62	29	.8	<1	1.6	130	.5	.6	.7	204	2.85	.060	9.9	35.3	1.92	61	.283	6.72	.167	2.64	3.4	34.1	23	1.1	10.2	2.4	2	1	19	26.3	1.7	49.3	1.3
9093	1.2	97.2	79.3	453	.7	35.8	17	1354	4.16	15	.7	<1	2.0	151	1.6	1.5	.1	115	3.72	.062	14.8	50.3	2.82	1375	.371	7.64	.329	2.67	1.5	36.6	33	1.0	10.9	5.8	3	1	19	38.3	.3	47.2	1.4
9094	1.2	82.0	58.7	514	1.1	47.1	19	1264	4.82	15	.7	<1	2.3	171	1.6	.6	.1	126	3.67	.062	13.2	66.0	3.07	1378	.369	7.77	.329	2.60	1.0	30.4	28	1.4	8.9	3.7	3	1	21	39.9	.4	45.9	1.4
9095	9	66.4	65.0	392	1.2	44.3	19	1400	4.92	34	.3	<1	1.8	207	.5	.9	.1	142	4.53	.054	11.9	82.9	3.05	1294	.391	7.54	.436	2.54	2.2	20.3	20	1.3	13.8	2.6	2	1	22	43.2	.2	41.1	.7
9096	6.4	565.5	591.9	7431	6.5	61.2	26	1260	5.57	44	.9	1	7.0	135	33.5	3.1	.1	145	2.77	.079	10.4	117.5	3.03	50	.359	7.73	.367	2.50	1.7	41.8	28	1.4	10.1	3.7	2	1	23	39.1	2.1	50.6	1.5
9097	5	41.8	15.8	169	.5	58.4	25	1295	5.63	17	.7	<1	1.3	237	.2	.3	<.1	174	4.99	.064	10.5	95.9	3.76	1021	.423	7.60	.569	1.93	1.0	19.6	23	.6	10.1	2.9	2	1	25	49.6	.2	33.9	.8
STANDARD [illegible]	12.5	127.9	35.1	174	.4	30.4	13	998	3.97	25	7.7	<1	7.5	291	5.7	5.3	4.9	126	2.21	.096	27.8	253.9	1.01	667	.419	6.95	1.588	1.49	7.7	47.7	54	5.5	15.4	8.5	6	4	11	25.0	<.1	59.1	1.8

Sample type: DRILL CORE. 5150 Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data ___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm
9098	5.6	54.2	35.6	377	.5	40.3	24	1620	4.93	20	4.1	<1	2.0	207	9	1.2	1
9099	1.7	133.6	62.1	622	1.2	39.5	17	1440	4.57	24	6	<1	2.1	174	1.9	1.2	1
9100	9	185.5	72.5	432	1.6	34.1	18	1282	4.02	16	6	<1	2.0	164	1.4	8	1
9101(trace)	3	5.5	15.2	223	.1	1.3	<1	1125	.19	1	5	<1	<1	262	9	1	<.1
9102(outcr)	107.3	156.1	85.2	144	2.6	56.8	67	4055	10.12	1094	3.6	6.0	.7	181	<.1	12.8	11.9
9103 outcr	55.1	4387.3	>10000	>10000	123.7	5.5	4	1094	2.71	453	6	3	5	279	113.1	159.3	4.5
9104	6	42.6	46.1	214	.4	15.1	4	498	2.49	4	6	<1	4.1	165	9	8	7
9105	2.7	206.8	121.0	947	1.6	30.4	16	1174	4.48	28	3	<1	2.6	156	3.6	2.2	3
9106	6	48.4	20.5	269	.4	35.9	15	2062	5.30	13	3	<1	1.7	214	9	5	1
9107	1.5	58.1	15.2	252	.3	33.0	16	1339	3.87	11	1.9	<1	2.2	121	8	6	1
9108	9	23.5	13.5	141	.2	29.3	10	615	3.27	7	7	<1	7.5	140	1	4	1
9109	9	42.0	17.6	128	.2	22.5	9	764	3.58	4	5	<1	3.5	184	3	4	1
RE 9109	8	41.4	17.0	179	.2	21.8	9	749	3.50	5	7	<1	3.2	169	3	4	1
RRE 9109	1.1	35.3	16.9	206	.2	24.0	10	816	3.79	5	8	<1	5.7	212	4	4	1
9110	1.2	23.5	4.6	111	.1	13.6	5	652	3.06	2	7	<1	4.0	153	2	1	<1
9111	1.1	10.4	4.4	95	.1	11.0	4	504	3.27	2	6	<1	4.1	142	3	4	1
9112	2.4	54.8	13.6	109	.3	30.8	11	612	3.27	10	1.6	<1	2.1	143	2	1.0	1
9113	2	60.3	6.2	195	.3	29.8	20	1410	4.39	12	5	<1	2.2	134	4	5	<1
9114	1.9	391.1	32.3	572	1.4	15.6	14	1360	4.66	16	7	<1	3.1	95	1.7	1.1	1
9115	1.3	92.5	72.7	471	.3	2.6	3	321	3.36	29	2.4	<1	5.2	49	1.3	3.2	1
9116	3.6	211.4	109.7	1134	2.2	13.7	5	428	2.79	10	1.5	<1	3.8	59	3.8	1.4	2
9117	2.3	18.9	8.0	93	.1	14.3	4	500	2.60	2	6	<1	4.0	154	1	3	1
9118	4	21.6	3.9	140	.1	24.3	10	564	4.07	5	5	<1	3.4	112	1	5	<1
9119	1.5	50.3	10.6	256	.4	32.4	15	605	4.73	12	2.3	<1	2.2	57	8	1.5	1
9120	9	30.6	4.0	103	.3	27.8	15	435	4.85	5	3.3	<1	2.1	67	1	1.3	1
9121	8	41.5	5.7	150	.3	34.9	16	704	4.93	16	2.3	<1	1.6	55	6	1.2	1
9122	1.0	46.6	5.5	163	.4	32.6	19	905	5.11	15	2.1	<1	1.4	60	3.1	1.3	1
STANDARD DST6	12.6	120.3	35.1	162	.3	30.5	13	1035	4.06	26	7.7	<1	7.5	220	5.9	5.4	4.5

SAMPLE#	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm
9098	131	4.55	.068	13.6	68.7	3.10	1100	.397	7.51	.423	2.55	9	36.1	26	1.3	21.1	3.7	2	1	22	37.0	2	43.2	1.4
9099	116	3.59	.090	15.9	48.0	1.68	1694	.414	7.92	.246	3.07	1.9	44.5	35	1.5	20.2	4.0	4	2	20	34.6	3	54.1	1.7
9100	95	3.47	.049	15.6	56.2	2.82	1434	.361	7.55	.383	1.81	9	43.9	36	1.5	12.4	4.7	4	1	16	34.5	1	47.7	1.6
9101(trace)	6	>40	.032	9	2.2	.55	19	.029	.23	.037	.09	1	1.8	2	<1	1.2	7	<1	<1	<1	1.9	1	7	1
9102(outcr)	124	1.17	.694	35.0	49.9	1.63	55	.177	4.63	.879	.92	4.1	42.7	45	5.2	19.0	7.6	2	1	13	17.8	6	25.8	1.9
9103 outcr	52	2.59	.029	6.0	15.9	.35	776	.097	4.55	.914	1.35	5	10.0	13	3.1	6.6	1.1	<1	1	4	6.0	1.8	37.5	7
9104	21	2.57	.026	23.1	12.7	1.45	1536	.746	7.46	.251	3.34	7	57.5	45	2.4	11.6	4.1	5	2	8	24.4	1	55.8	2.0
9105	102	3.37	.064	14.5	55.8	2.66	1464	.352	7.63	.335	2.59	1.7	43.4	31	1.5	13.2	4.3	3	1	19	32.7	2	51.4	1.6
9106	109	4.74	.055	10.9	56.5	2.90	1333	.330	6.70	.511	2.70	1.7	25.2	24	1.1	13.6	3.0	2	1	20	35.7	2	37.5	1.1
9107	81	2.42	.050	14.0	43.7	2.17	1680	.315	6.95	.436	2.72	1.4	61.0	31	1.4	11.2	3.7	3	1	16	29.4	1	47.9	1.9
9108	61	2.61	.049	15.9	44.9	2.30	1053	.305	7.59	.589	2.84	1.6	53.2	41	1.9	10.7	5.9	4	1	12	26.2	<.1	47.0	1.8
9109	72	3.29	.045	19.0	36.9	2.37	1719	.317	7.56	.449	3.27	1.0	53.7	42	2.2	14.1	6.0	3	2	13	30.8	<.1	52.5	1.9
RE 9109	73	3.20	.044	19.5	35.7	2.28	1644	.306	7.41	.430	2.89	1.1	52.5	40	1.6	13.7	5.1	4	1	13	27.8	<.1	47.4	1.8
RRE 9109	76	3.20	.050	20.1	45.1	2.45	1722	.325	7.92	.455	3.14	1.1	53.6	45	2.2	15.5	6.4	5	1	14	35.1	<.1	59.7	2.9
9110	40	2.26	.033	21.8	20.3	1.75	1749	.280	7.92	.358	3.39	1.9	57.0	47	2.1	11.1	6.8	5	2	10	25.0	<.1	53.4	2.0
9111	37	2.21	.030	22.3	15.2	1.52	1855	.245	7.76	.103	3.34	9	56.9	50	2.2	11.4	6.5	5	1	8	24.0	<.1	52.3	2.3
9112	78	2.31	.066	16.5	45.9	2.07	1506	.267	6.75	.265	2.65	1.0	52.7	35	1.5	10.6	4.1	3	1	13	24.5	2	42.1	1.2
9113	137	2.53	.039	12.9	49.3	3.55	1374	.375	8.35	.852	2.57	1.4	34.9	28	1.1	10.2	3.0	2	1	24	39.3	2	48.4	1.1
9114	91	1.83	.042	13.3	23.9	2.53	36	.308	7.84	.895	2.89	1.3	42.8	36	1.8	9.9	4.3	3	1	17	27.6	1.3	52.3	1.7
9115	17	.49	.022	19.7	7.2	.64	55	.179	8.32	.106	4.78	2.6	73.4	46	3.7	11.2	5.5	5	2	9	11.7	2.6	83.0	2.7
9116	30	1.25	.033	26.0	13.3	1.07	113	.283	6.64	.171	3.37	1.0	61.4	56	2.1	8.1	4.3	3	1	8	13.9	1.7	63.9	2.2
9117	36	2.62	.035	21.3	27.1	1.17	2257	.240	7.67	.071	3.52	1.1	61.3	48	2.4	10.5	5.6	4	1	10	19.0	1	57.8	1.9
9118	64	1.65	.046	21.7	39.4	2.23	2200	.320	7.97	.195	3.35	2.2	42.6	46	2.1	9.4	5.5	4	2	13	26.1	2	53.2	1.6
9119	154	1.54	.059	12.2	48.2	3.01	1602	.390	7.35	1.073	2.13	9	55.4	26	1.2	10.4	2.7	2	1	22	38.7	4	30.3	1.9
9120	152	.72	.044	12.7	35.3	1.35	965	.284	7.06	1.764	1.29	5	66.9	27	1.3	9.2	2.9	2	1	21	37.3	5	73.1	2.5
9121	178	1.16	.054	9.4	56.4	2.77	884	.347	6.59	1.142	1.16	1.5	51.9	19	1.9	9.4	1.8	1	1	22	33.8	2	25.7	2.1
9122	166	.97	.041	9.0	46.1	3.04	614	.303	6.47	1.614	.95	2	44.7	19	9	9.0	1.6	2	1	22	31.9	6	16.9	1.8
STANDARD DST6	117	2.27	.095	26.1	298	1.34	684	.437	7.16	1.685	1.52	7.6	42.5	54	6.3	15.8	6.5	6	3	12	75.5	1	59.0	1.8

Sample type: DRILL CORE R150. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data 1 FA ____

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Wednesday, August 03, 2005

Date Rec. : 21 July 2005
LR Report : **CA09835-JUL05**
Client Ref : A503280

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
1: 503280-9055	54.0	17.5	11.2	3.12	1.49	1.57	4.07	1.34	0.35	0.06	0.03	0.04	4.40	99.1
2: 503280-9075	62.6	16.1	4.57	2.49	2.72	0.20	4.41	0.58	0.11	0.09	< 0.01	0.01	5.06	98.8
3: 503280-9076	48.5	17.4	10.3	8.22	1.91	1.08	3.27	1.05	0.09	0.09	< 0.01	0.04	7.19	99.1

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GEOCHEMICAL ANALYSIS CERTIFICATE

Roca Mines Inc. File # A503745

500 - 1045 Howe St., Vancouver BC V6Z 2A9 Submitted by: John Mirko

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
6019	7.4	16.3	7.5	91	.2	10.2	10	977	4.71	10	1.7	<1	4.9	187	.2	1.0	.1	108	1.00	.145	20.7	47.2	1.01	374	.355	7.41	2.477	1.40	1.0	121.0	71	3.7	27.6	52.9	3.9	3	11	13.0	<.1	50.3	3.5
6020	5.9	12.5	7.2	90	<.1	14.2	13	935	5.00	9	1.4	<1	4.1	125	.3	1.2	.2	135	.91	.121	33.2	50.0	1.20	757	.551	6.76	2.330	1.14	.6	104.5	63	3.2	13.3	53.9	3.6	1	9	16.3	<.1	32.4	3.3
6021	4.6	10.1	9.6	76	<.1	7.7	6	543	5.59	13	1.9	<1	5.7	106	.2	1.0	.2	105	.83	.076	38.5	40.8	.79	239	.692	6.70	2.322	1.45	1.3	190.0	71	5.2	15.2	79.3	6.0	2	8	10.2	<.1	52.3	5.5
6022	2.8	13.7	10.9	73	<.1	5.5	7	450	4.28	10	2.0	<1	5.5	107	.4	.8	.2	86	.84	.068	40.9	49.5	.75	229	.659	7.15	2.903	1.89	1.8	262.4	79	6.3	19.4	83.5	6.4	2	5	15.5	<.1	50.7	7.2
6023	4.4	17.1	8.3	79	<.1	15.4	14	662	7.68	10	1.6	<1	4.3	111	.4	1.2	.1	216	.56	.121	27.0	67.4	1.43	271	1.122	6.92	1.865	1.33	1.1	129.7	59	3.8	12.6	51.1	4.1	2	12	10.7	<.1	53.2	3.6
RE 6023	4.0	16.5	7.8	86	<.1	16.0	14	658	7.55	11	1.4	<1	4.1	105	.3	1.1	.1	206	.86	.119	26.7	64.4	1.36	280	1.277	6.62	1.704	1.37	1.2	120.8	59	3.9	11.8	51.5	3.5	2	12	10.9	<.1	53.5	3.7
6024	3.2	12.1	6.8	77	<.1	8.3	6	529	5.09	15	1.4	<1	6.3	130	.2	1.0	.1	105	.97	.129	62.1	35.9	.74	194	.665	8.50	4.075	1.14	1.1	149.0	107	6.4	13.6	87.3	6.1	3	8	5.8	<.1	40.1	4.2
6025	3.3	13.3	13.2	104	<.1	14.9	12	642	6.49	14	1.9	<1	5.4	134	.3	1.2	.3	183	1.33	.126	37.5	55.8	1.30	256	1.084	7.47	2.768	1.69	1.8	207.2	72	6.6	18.9	93.3	6.3	2	12	14.8	<.1	62.8	5.7
6026	9.9	11.7	15.0	115	<.1	6.9	9	1221	6.57	16	3.6	<1	11.2	168	.7	.7	.4	62	1.64	.167	63.3	25.3	.36	175	.409	7.91	2.553	1.99	1.7	492.0	211	9.5	39.3	111.1	7.9	5	5	22.3	<.1	42.1	12.6
6027	3.2	19.9	5.9	75	.1	20.2	19	703	5.33	10	1.1	<1	3.7	89	.3	.3	.1	197	.84	.176	27.5	50.4	1.64	201	.604	7.08	1.290	.95	1.7	81.5	55	2.4	11.8	35.5	2.6	2	11	19.6	<.1	24.9	2.2
6028	10.0	11.8	7.0	107	.1	35.7	22	1535	13.25	10	1.5	<1	3.2	170	.2	.7	.1	356	.39	.204	34.4	31.1	.47	235	1.630	7.65	1.275	1.47	.5	108.5	67	3.2	15.1	42.0	3.4	3	14	37.6	<.1	44.1	3.1
6029	10.8	8.4	4.0	69	<.1	13.7	14	1127	10.19	6	.8	<1	2.9	199	.2	.6	<.1	285	.35	.198	37.2	17.3	.54	350	1.023	9.89	.545	2.56	.5	58.8	72	2.2	14.3	24.5	2.0	2	12	25.2	<.1	55.7	1.7
6030	4.5	49.5	9.5	110	.1	36.9	12	1040	7.03	12	1.6	<1	5.2	159	.2	1.4	.1	145	1.28	.070	32.0	60.9	1.37	259	.774	8.77	2.151	1.12	.9	157.4	66	3.0	16.7	48.8	3.3	2	14	29.5	<.1	30.1	4.7
6031	3.2	34.0	5.6	78	.1	27.4	12	619	5.38	11	1.5	<1	5.1	139	.3	1.2	.1	114	1.40	.107	33.2	52.9	1.36	216	.566	6.24	2.036	.97	.9	125.1	72	2.1	15.4	37.8	2.8	3	13	36.0	<.1	21.9	3.9
6032	1.4	48.8	6.3	106	<.1	31.9	19	813	5.63	10	1.4	<1	3.9	128	.2	1.1	<.1	149	.61	.082	31.6	70.9	2.14	352	.786	9.64	1.995	1.59	.5	93.3	72	1.8	13.7	29.1	2.2	2	17	25.2	<.1	33.5	2.4
6033	4.4	15.0	7.4	97	<.1	12.3	5	836	4.83	11	1.4	<1	4.6	127	.3	1.1	.1	120	.88	.091	40.6	50.9	1.12	440	.761	8.03	2.701	1.77	1.0	133.5	78	3.9	13.6	67.7	4.5	2	12	14.8	<.1	54.5	3.7
6034	5.1	12.7	6.6	59	<.1	9.4	8	1004	6.89	11	1.3	<1	4.8	140	.3	1.4	.1	134	1.36	.097	40.1	52.5	.59	315	.821	7.52	2.623	1.60	.9	115.0	81	3.8	12.8	56.3	3.9	2	11	10.2	<.1	56.1	3.1
6035	9.7	6.5	6.4	76	<.1	3.7	7	505	4.76	11	1.3	<1	5.8	67	.2	1.1	.1	39	.52	.049	31.7	19.4	.41	242	.527	8.23	3.240	2.64	.9	348.9	156	6.3	32.9	93.4	6.3	2	5	10.1	<.1	64.6	3.9
6036	6.2	17.3	9.6	90	<.1	6.7	7	621	8.85	16	1.5	<1	5.2	159	.2	1.1	.2	158	.87	.107	32.3	45.8	.80	272	.802	7.09	2.107	1.56	1.3	155.3	55	5.0	13.9	72.2	5.8	1	5	6.2	<.1	60.5	4.0
6037	6.7	20.5	6.9	73	.1	8.6	8	510	6.13	15	1.6	<1	5.4	143	.3	1.3	.1	181	1.40	.048	34.7	58.0	.65	246	.534	7.50	2.756	1.40	1.6	164.1	65	4.9	15.0	67.1	4.5	2	11	7.8	<.1	47.3	4.6
6038	1.5	43.3	5.4	76	<.1	21.6	16	1287	4.93	9	1.6	<1	3.4	209	.2	1.5	.1	147	2.05	.107	24.4	59.7	1.59	330	.723	6.19	2.630	1.09	.9	86.5	52	1.5	16.5	29.7	2.1	2	16	12.1	<.1	26.3	2.5
A153852	6.3	56.4	6.4	134	.5	25.1	17	4336	6.43	12	1.9	<1	5.2	112	.3	1.1	.1	159	.67	.157	41.6	86.4	1.45	896	.726	9.36	1.500	1.97	1.0	148.6	95	3.4	24.3	43.9	3.0	4	19	25.7	<.1	75.6	4.0
A153853	2.0	29.3	5.8	85	.1	19.4	18	976	5.06	10	1.1	<1	4.0	150	.3	1.2	.1	120	1.53	.150	24.4	59.7	1.43	330	.627	8.18	2.235	1.10	.7	86.5	52	1.5	14.8	29.6	2.1	1	14	37.8	.1	26.7	2.7
A153854	3.9	16.0	9.3	79	.2	8.4	7	756	4.80	13	1.6	<1	5.3	135	.3	1.3	.1	130	1.14	.098	35.3	49.3	.78	353	.656	7.91	2.090	1.63	1.3	199.1	67	4.6	16.7	64.4	4.7	2	12	31.8	<.1	60.2	5.2
A153855	4.2	22.5	6.7	85	.2	14.9	13	594	6.24	12	1.5	<1	4.7	210	.2	1.2	.1	140	1.41	.131	29.6	67.3	1.30	351	.814	7.60	1.937	1.19	.9	142.3	60	2.7	18.3	45.8	3.1	2	13	19.1	<.1	39.1	4.0
A153856	2.0	27.9	5.9	102	.1	31.4	20	751	5.75	10	1.5	<1	4.6	173	.4	1.6	.1	146	1.75	.087	23.3	87.0	1.72	330	.728	9.57	1.995	1.01	.8	158.1	52	1.8	20.2	26.7	1.6	2	11	16.8	<.1	22.0	4.4
A153857	2.1	56.3	8.3	140	<.1	35.0	25	990	6.97	12	1.6	<1	5.7	167	.4	1.7	.1	169	1.47	.082	27.9	93.7	1.87	446	.842	9.97	1.907	1.25	1.0	152.6	59	2.4	22.8	34.9	2.3	2	15	18.0	<.1	45.5	5.3
A153858	2.3	22.1	8.3	99	.1	17.9	13	740	5.59	12	1.5	<1	4.3	135	.2	1.3	.1	151	1.39	.105	23.3	54.8	1.31	343	.827	7.63	1.532	.99	1.0	139.8	46	2.9	14.8	39.4	2.8	2	15	16.9	<.1	37.8	4.0
A153859	3.3	19.0	9.3	101	<.1	18.3	13	701	7.22	15	1.6	<1	5.2	177	.3	1.4	.2	152	1.50	.116	26.9	66.2	1.34	290	.879	8.06	2.563	1.18	1.3	198.6	61	3.7	17.2	60.0	4.0	1	13	20.3	<.1	45.1	5.5
A153860	5.5	25.2	8.6	103	.1	14.5	13	936	4.67	15	2.3	<1	4.9	172	.3	1.1	.1	117	1.26	.138	35.4	52.6	1.00	393	.653	7.31	2.385	1.28	1.0	165.5	64	3.5	23.0	47.8	3.5	2	13	20.9	<.1	39.1	4.8
A153861	5.9	15.4	6.3	98	<.1	15.2	17	678	7.65	9	1.1	<1	3.5	119	.2	.8	.1	224	.70	.162	33.1	33.9	1.02	285	1.276	7.28	1.640	1.35	.7	97.4	68	3.3	10.4	43.8	3.3	2	12	17.9	.1	35.7	2.5
STANDARD CST6	12.9	123.2	34.9	173	.5	30.3	13	935	3.38	25	7.6	<1	7.3	302	5.5	5.3	4.8	115	2.30	.109	26.5	244.6	1.31	692	.431	6.92	1.743	1.44	7.7	47.3	50	6.2	15.1	8.2	.7	3	11	25.9	<.1	56.7	1.8

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HCLO4-HNO3-HCL-HF TO 10 ML. (>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY. FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-MS.
- SAMPLE TYPE: SOIL SS80 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data f FA ____ DATE RECEIVED: JUL 22 2005 DATE REPORT MAILED: Aug. 5/05

BRITISH COLUMBIA CERTIFIED ASSAYER
Clarence Leong

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GEOCHEMICAL ANALYSIS CERTIFICATE

Roca Mines Inc. File # A503746 Page 1
500 - 1045 Howe St., Vancouver BC V6Z 2A9 Submitted by: John Mirko

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %
A153841	1.9	17.2	4.5	34	.4	4.8	1	840	1.80	12	7.7	<.1	17.2	260	.7	.8	.1	5	.64	.012
A153842	.4	32.3	4.1	151	<.1	59.4	53	1387	10.46	3	.3	<.1	1.9	221	.1	.2	.1	320	5.81	.335
A153843	1.0	25.6	3.3	131	<.1	55.9	59	1284	8.36	6	.6	<.1	2.7	416	.3	.2	.1	311	7.56	.220
A153844	.4	3.0	3.1	55	.1	7.7	10	446	5.20	9	1.8	<.1	5.9	99	.4	.4	<.1	86	.37	.082
A153845	.3	4.7	2.3	33	<.1	4.4	2	390	2.81	6	.4	<.1	2.8	139	.2	.5	.1	13	.14	.027
A153846	.6	13.7	3.6	125	<.1	25.6	43	976	10.91	4	.5	<.1	2.0	55	.2	.2	.1	255	.86	.326
A153847	1.1	25.0	3.2	130	<.1	37.7	47	1463	9.33	5	1.9	<.1	2.3	323	.4	.2	<.1	365	5.36	.261
A153848	.5	379.4	4.7	36	.2	13.1	1	752	1.43	<1	.2	<.1	.9	170	.1	.2	.1	60	1.42	.016
A153849	.5	9.7	7.4	114	<.1	2.5	6	668	4.33	<1	.4	<.1	3.4	132	.1	.4	<.1	49	1.62	.078
A153850	.2	14.9	7.3	87	<.1	3.0	5	670	3.27	1	.7	<.1	2.5	163	.2	.3	<.1	47	2.52	.037
A153851	19.7	2.8	12.2	206	<.1	.9	<1	1700	3.46	3	8.5	<.1	24.5	76	1.2	.3	.1	3	.35	.006
A153901	1.3	40.0	15.1	67	.2	9.7	4	346	2.75	4	.4	<.1	1.2	62	.1	.3	.2	95	.30	.044
A153902	.9	32.9	13.0	46	.1	15.2	4	233	1.56	4	.5	<.1	1.6	62	.1	.4	.2	49	.35	.010
A153903	.7	29.7	8.8	25	.2	8.5	2	233	1.18	4	.3	<.1	.9	104	<.1	.6	.2	44	.65	.008
A153904	1.0	47.6	17.1	41	.1	18.1	4	276	1.32	7	.3	<.1	.8	69	.1	.5	.2	29	.40	.012
A153905	1.5	109.2	11.6	140	.3	45.2	27	1122	6.31	27	1.2	<.1	4.4	314	.1	.6	.2	241	1.86	.105
A153906	.5	6.8	25.3	53	.1	1.8	1	525	1.92	2	1.7	<.1	3.5	273	.2	.2	.1	6	1.15	.013
A153907	.5	184.6	8.0	231	.3	22.7	24	570	5.79	16	.9	<.1	3.5	34	.6	.4	<.1	263	.80	.233
A153908	.1	12.9	3.1	76	<.1	66.1	39	1176	6.44	<1	.2	<.1	.3	322	.1	.2	<.1	315	3.73	.056
A153909	.7	31.2	12.4	17	.2	6.6	2	510	1.18	<1	.2	<.1	.6	103	<.1	.2	.1	47	1.72	.009
A153910	1.0	47.7	14.4	43	.2	18.4	4	300	1.45	11	.3	<.1	.7	59	.4	.5	.2	50	.45	.025
A153911	.1	23.5	1.3	85	.1	96.0	32	949	6.94	37	<.1	<.1	.3	187	.1	.4	<.1	221	4.30	.065
A153912	5.0	19.3	16.6	52	.6	6.3	2	399	6.20	27	2.7	<.1	5.1	91	.7	2.7	.1	24	1.88	.025
RE A153912	4.7	19.5	16.7	51	.8	6.9	2	403	6.21	27	2.6	<.1	3.3	90	.2	2.6	.1	23	1.59	.020
A153913	.3	111.4	1.7	110	.1	156.7	52	1245	7.66	2	.1	<.1	.3	166	.1	.4	<.1	220	2.96	.106
A153914	.7	43.6	2.2	55	<.1	106.1	35	994	6.70	1	.1	<.1	.3	42	<.1	1.1	<.1	233	.82	.109
A153915	10.5	26.2	11.3	45	.8	32.6	6	326	3.38	33	1.4	<.1	1.8	38	.1	2.7	.1	142	.60	.079
A153916	1.5	7.5	2.7	119	<.1	1.5	20	1921	9.71	6	.3	<.1	1.7	339	.1	.3	<.1	218	4.29	.756
A153917	.2	3.2	1.6	269	<.1	63.5	39	1048	7.43	12	.2	<.1	.8	57	.1	.9	<.1	221	1.53	.055
A153918	2.1	32.1	245.8	4506	2.0	8.1	10	49	15.75	35	.7	<.1	1.1	14	379.8	5.5	5.9	10	.07	.011
A153919	3.3	78.9	324.5	3322	5.2	1.8	1	24	10.30	19	.3	.1	.3	19	71.1	24.1	3.2	3	.28	.003
A153920	3.5	67.2	134.2	7872	4.3	12.2	21	55	21.17	114	.5	<.1	.7	8	137.5	15.4	9.4	16	.02	.004
A153921	5.9	3.5	6.0	125	<.1	.4	1	2195	5.65	9	.9	<.1	5.3	49	.5	1.1	.1	1	.05	.050
A153922	8.6	8.1	6.7	39	<.1	3.8	2	2164	4.93	9	.9	<.1	5.0	44	.8	.5	.1	3	.07	.051
STANDARD DST6	12.9	131.7	38.6	179	.3	20.3	13	955	4.04	24	8.3	<.1	7.9	292	6.7	6.2	4.9	115	2.28	.102

SAMPLE#	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm
A153841	70.8	7.3	.14	63	.095	9.09	3.474	.84	4.3	667.3	122	4.0	75.5	166.5	15.8	5	<1	1.6	<.1	9.2	13.3
A153842	39.5	45.1	3.45	201	.876	9.87	1.761	1.55	.3	11.2	79	1.6	12.8	16.0	1.2	2	16	18.6	<.1	31.4	.4
A153843	28.1	24.9	2.41	213	1.565	8.87	2.381	1.18	.4	10.5	78	2.1	17.4	27.9	2.5	2	14	18.0	<.1	23.6	.6
A153844	46.4	4.3	.56	226	.427	10.58	4.176	2.15	.1	153.2	105	4.0	33.2	103.5	7.2	4	4	14.3	<.1	33.6	4.7
A153845	27.9	8.5	.14	55	.058	5.25	5.442	.50	3.6	75.9	59	3.2	5.3	60.8	4.7	5	<1	2.1	<.1	8.1	2.5
A153846	13.6	12.3	2.92	349	1.396	10.70	.912	2.77	.1	52.5	56	2.5	11.6	21.7	1.9	4	11	25.6	<.1	34.3	1.1
A153847	36.1	35.8	2.93	266	2.564	9.50	1.072	2.50	.4	65.4	75	2.2	25.8	35.0	2.5	3	18	30.4	<.1	31.7	2.7
A153848	4.9	10.2	.79	1278	.076	1.57	.165	.45	.1	11.4	8	.4	4.4	1.3	.1	1	3	11.1	.1	8.3	.4
A153849	15.5	6.1	2.14	1453	.379	8.00	.595	2.96	3.5	29.7	37	3.1	6.6	1.7	.1	2	21	70.2	<.1	55.0	1.4
A153850	31.9	4.6	1.21	509	.362	6.61	.706	1.21	.4	26.5	27	1.4	29.5	2.2	.2	1	17	60.3	<.1	24.7	1.1
A153851	175.8	2.7	.40	393	.174	11.20	2.906	>10	1.0	757.4	279	7.0	79.0	275.1	15.9	15	<1	5.0	<.1	139.9	13.8
A153901	12.5	17.9	.80	2353	.226	3.39	.391	1.29	.2	15.6	18	1.0	4.3	1.5	.1	2	12	15.8	.1	24.3	.7
A153902	8.2	9.6	.44	626	.063	2.49	1.195	.29	7.5	25.7	14	.5	3.6	7.8	.2	1	4	6.9	.1	6.1	.9
A153903	4.9	11.4	.34	843	.064	1.46	.404	.35	.3	13.4	6	.4	2.4	1.0	<.1	<1	4	5.4	.4	7.6	.4
A153904	5.5	14.4	.34	1021	.062	1.63	.599	.27	4.4	11.6	8	.4	2.9	1.1	.1	<1	4	5.1	.2	6.6	.4
A153905	20.0	76.7	2.53	7390	.551	9.74	.899	2.97	.8	42.9	44	1.5	13.7	5.1	.3	2	25	35.5	.1	62.1	1.9
A153906	17.6	6.4	.25	656	.122	5.57	4.035	.59	1.5	55.1	39	1.2	13.9	3.0	.2	<1	8	7.8	<.1	12.4	2.4
A153907	22.4	51.0	2.89	2643	.568	10.20	1.466	3.54	.9	42.9	57	1.5	10.5	7.6	.4	2	18	37.2	<.1	52.9	1.5
A153908	4.0	145.0	7.05	1382	.756	8.99	2.627	.40	.3	9.4	10	.5	14.4	1.8	.1	1	39	43.6	<.1	5.3	1.1
A153909	4.1	10.7	.43	569	.057	1.27	.410	.24	.1	10.8	5	.3	4.7	.9	<.1	<1	4	3.5	<.1	5.6	.4
A153910	4.7	19.7	.40	601	.059	1.45	.454	.17	4.6	11.4	7	.4	2.7	1.0	.1	<1	4	4.6	.4	3.9	.5
A153911	3.5	170.4	4.78	1091	.410	9.65	2.298	1.58	2.5	9	10	.4	7.0	1.0	.1	<1	34	66.7	<.1	17.5	.1
A153912	10.3	13.5	.74	32	.313	4.93	.066	2.42	4.3	97.4	23	1.2	11.9	2.4	.1	1	5	8.0	4.0	37.1	3.4
RE A153912	11.6	16.4	.75	30	.314	4.86	.088	2.40	4.6	95.6	27	1.1	12.4	2.4	.1	1	4	6.0	4.2	36.9	3.6
A153913	4.0	276.9	4.71	375	.360	9.22	2.703	.71	.9	2.4	10	.4	6.3	.9	.1	<1	37	40.8	<.1	7.5	.1
A153914	4.5	257.9	4.57	346	.456	5.66	1.047	3.12	.7	27.9	11	1.6	7.2	1.5	<.1	1	35	34.9	<.1	49.5	.4
A153915	10.6	30.9	.99	103	.256	4.29	.150	1.84	1.2	38.5	23	.8	6.3	3.7	.2	2	17	11.1	1.1	78.0	1.4
A153916	42.9	5.1	3.10	200	.635	7.94	2.752	.89	1.8	15.9	96	.4	22.8	3.8	.7	1	18	30.9	.1	1.9	.5
A153917	4.6	191.6	3.43	1023	.326	9.54	.556	3.98	2.6	7.9	13	.9	3.9	1.7	.1	1	33	30.7	<.1	33.7	.2
A153918	4.8	12.5	.20	6	.048	1.45	.078	1.05	2.7	30.7	17	1.6	6.6	1.2	.1	1	4	5.1	>10	35.0	1.1
A153919	6.1	4.3	.21	7	.033	2.63	.054	1.23	.2	34.4	17	.9	4.2	.9	.1	<1	2	4.5	5.7	74.5	.6
A153920	2.3	16.6	.20	12	.035	1.76	.066	1.19	5.2	23.5	9	1.4	4.4	.7	<.1	<1	4	4.5	>10	30.0	1.0
A153921	42.4	2.7	.29	756	.146	8.97	3.707	4.74	.4	37.5	104	4.5	9.5	73.6	4.7	5	6	3.6	<.1	45.2	1.3
A153922	61.9	4.4	.23	212	.173	8.74	3.532	4.10	1.6	56.6	132	3.9	11.8	70.8	4.6	4	6	3.7	<.1	41.0	1.7
STANDARD DST6	25.6	259.8	1.01	702	.490	7.12	1.707	1.51	8.2	51.5	53	6.1	15.9	6.9	.5	4	11	25.2	<.1	60.9	2.0

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HCLO4-HNO3-HCL-HF TO 10 ML. (>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY. FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-MS.
- SAMPLE TYPE: ROCK R150 60C <u>Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.</u>

Data FA DATE RECEIVED: JUL 22 2005 DATE REPORT MAILED: Aug. 5/05

BRITISH COLUMBIA CERTIFIED ASSAYER — Clarence Leong

Roca Mines Inc. FILE # A503746

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm
A153923	12.5	2.7	11.4	24	.1	1.0	1	614	4.08	13	3.4	<.1	3.7	38	.2	1.8	.1	4	.44	.067	27.9
A153924	22.5	12.9	13.1	19	.4	1.0	1	1419	5.14	18	2.1	<.1	4.2	44	.2	1.2	<.1	3	.52	.092	33.6
A153925	27.9	9.2	13.1	30	.1	1.7	<1	4215	5.24	60	7.2	<.1	6.6	112	.4	1.0	<.1	1	2.60	.137	67.9
A153926	10.5	6.7	10.0	54	.1	1.4	1	1454	5.27	9	1.1	<.1	4.4	56	.2	.6	.1	3	.75	.045	55.4
A153927	10.9	5.7	6.9	71	<.1	1.1	1	2020	5.27	9	.7	<.1	3.3	37	.3	1.1	<.1	3	.05	.034	21.8
A153928	10.7	4.2	3.6	54	<.1	.7	<1	3401	6.34	7	.8	<.1	4.5	99	.4	.5	.1	4	1.71	.046	60.8
A153935	2	25.3	6.2	64	.1	19.6	14	1753	5.15	1	.6	<.1	3.4	2265	.1	.1	<.1	137	10.34	.112	21.5
A153959	.6	11.1	3.2	31	.1	.8	.4	1257	1.00	2	2.0	<.1	7.3	118	.2	.2	.1	14	1.58	.050	27.0
STANDARD DST6	13.4	192.1	35.9	181	.3	33.8	13	996	4.11	75	7.5	<.1	7.5	305	5.9	5.5	5.0	128	2.30	.104	27.3

SAMPLE#	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm
A153923	3.3	.42	203	.144	6.76	4.334	4.16	1.4	181.9	63	3.5	11.3	32.8	2.7	3	4	14.8	1.3	25.0	4.9
A153924	2.6	.55	200	.141	8.14	5.630	4.66	.4	210.5	73	2.8	14.0	34.9	2.9	2	5	7.7	1.5	20.6	5.7
A153925	8.7	1.07	189	.123	8.75	5.050	3.55	1.4	413.1	131	3.4	33.7	38.2	3.0	4	7	7.3	2.0	29.3	10.0
A153926	3.0	.64	141	.131	7.43	3.207	2.99	.4	96.4	107	4.2	13.9	44.1	2.7	5	6	7.6	1.6	35.5	2.9
A153927	2.8	.38	159	.165	7.47	4.774	3.97	1.1	65.7	55	3.9	5.5	51.1	4.7	6	6	5.6	.4	24.9	2.0
A153928	2.3	.39	207	.175	8.55	5.644	2.61	.4	62.9	126	3.8	12.8	71.3	5.1	4	6	5.0	.3	23.7	2.1
A153935	47.2	4.59	644	.240	5.41	1.761	2.56	.7	45.2	37	.5	14.6	2.9	.2	1	14	5.0	<.1	46.5	1.6
A153959	3.7	.26	426	.228	6.21	5.614	.84	.6	107.2	52	.8	14.4	9.2	.6	1	6	2.3	<.1	11.6	4.4
STANDARD DST6	274.3	1.01	724	.415	7.30	1.534	1.48	7.7	52.8	54	6.7	15.4	6.5	.7	4	11	21.9	.1	58.1	1.9

Sample type: ROCK R150 60C

Data ___ FA ___

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Wednesday, August 17, 2005

Date Rec. : 08 August 2005
LR Report : **CA09464-AUG05**
Client Ref : A0503747

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
1: A 153842	39.9	15.4	14.6	5.46	7.35	2.12	1.88	3.60	0.72	0.17	< 0.01	0.04	7.48	98.7
2: A 153843	41.5	15.4	11.8	3.69	9.92	2.77	1.36	3.47	0.68	0.15	0.01	0.06	8.76	99.5
3: A 153844	58.0	19.4	8.02	1.37	0.48	5.26	2.62	1.17	0.21	0.05	< 0.01	< 0.01	2.65	99.2
4: A 153905	55.6	16.8	8.59	3.90	2.44	1.02	3.34	0.89	0.32	0.13	0.02	0.04	4.76	97.8
5: A 153906	76.9	10.3	2.60	0.44	1.47	4.44	0.62	0.17	0.03	0.07	< 0.01	< 0.01	1.88	98.9
6: A 153907	52.9	19.6	9.37	4.57	1.06	1.70	4.31	1.06	0.51	0.09	0.01	0.05	4.24	99.4
7: A 153908	44.7	15.7	9.17	11.2	4.87	3.30	0.45	1.01	0.12	0.15	0.03	0.06	8.42	99.2
8: A 153909	90.3	2.00	1.55	0.59	1.56	0.44	0.26	0.09	0.03	0.08	< 0.01	< 0.01	2.26	99.2
9: A 153911	42.8	17.7	9.90	7.58	5.64	2.70	1.84	0.98	0.15	0.11	0.03	0.05	9.93	99.4
10: A 153913	47.6	16.5	10.8	7.47	3.95	3.23	0.82	1.08	0.22	0.15	0.06	0.03	7.06	98.9
11: A 153914	51.7	16.6	9.92	7.55	1.10	1.22	4.21	1.07	0.27	0.13	0.05	0.04	4.90	98.8
12: A 153916	44.9	14.3	13.6	4.97	5.57	3.48	0.10	3.86	1.79	0.22	< 0.01	0.05	5.97	98.7
13: A 153917	47.6	19.6	10.7	5.76	2.05	0.59	4.57	1.00	0.16	0.13	0.04	0.04	7.00	99.2
14: A 153985	34.7	10.4	7.20	7.17	12.6	1.99	3.18	0.55	0.23	0.21	0.02	0.01	20.3	98.5
15: A 153986	69.8	12.8	2.76	0.41	2.45	5.80	0.91	0.42	0.13	0.18	0.01	< 0.01	3.06	98.7

Debbie Waldon
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(I[illegible] [illegible]001 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Roca Mines Inc. File # A503626 Page 1

500 - 1045 Howe St., Vancouver BC V6Z 2A9 Submitted by: John Mirko

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm	Au** gm/mt	Sample kg
9139	8.8	443.5	115.9	247	1.4	3.2	6	693	3.50	59	4.6	7	4.1	1498	9	8.7	5	18	3.01	.034	10.9	3.4	.57	46	.118	7.53	3.53	3.22	7	174.7	30	2.4	17.6	[illegible]	.5	2	6	12.3	2.1	75.5	6.2	.19	2.69
9140	21.3	906.0	116.5	495	5.4	10.7	5	440	2.89	15	2.9	<1	3.9	87	2.1	1.5	1.7	27	.69	.012	11.5	22.9	.59	44	.032	6.21	2.73	2.58	5.1	75.4	28	1.7	10.3	2.2	.2	1	6	7.5	3.7	66.4	5.0	.07	2.92
9141	21.8	426.9	116.2	306	3.1	12.4	3	323	2.69	16	1.7	<1	4.1	139	1.2	1.4	1.9	12	.59	.012	13.5	7.7	.55	45	.072	5.79	2.55	2.75	4.7	75.5	33	2.0	5.9	2.4	.2	2	4	6.7	2.7	63.4	3.2	.15	3.52
9142	4.9	966.2	58.2	609	1.6	1.7	2	325	2.42	15	2.4	<1	5.0	133	2.3	1.2	5	12	.59	.012	15.2	3.9	.61	54	.036	6.32	2.75	2.58	1.0	91.5	37	2.4	11.5	3.2	.3	1	5	8.8	2.1	69.7	4.1	.04	2.46
9143	6.4	1277.1	140.4	1111	1.5	2.7	2	481	2.81	12	2.3	<1	4.5	114	4.4	1.1	9	10	.65	.013	13.6	8.9	.72	79	.076	6.07	2.60	2.83	6.0	79.3	32	2.2	10.0	2.5	.3	1	5	9.2	2.6	64.8	3.6	.01	2.38
9144	6.0	2847.4	56.9	2077	1.6	1.9	2	483	2.54	6	2.0	<1	4.4	102	9.4	1.5	7	10	.72	.017	15.0	8.4	.67	97	.079	6.11	2.20	2.93	5.2	81.8	34	2.2	10.1	2.8	.3	1	5	11.0	2.0	62.5	3.6	.14	2.54
9145	12.2	592.6	89.7	2459	1.2	21.1	5	583	4.03	11	2.0	<1	3.7	135	5.7	1.2	1.5	76	.99	.014	11.6	12.5	.94	32	.272	6.18	2.50	2.84	7	73.3	28	2.0	9.1	1.9	.2	1	7	12.1	4.2	64.7	1.1	.04	2.56
9146	25.5	330.0	216.3	557	3.1	47.6	15	344	7.64	20	1.3	<1	1.7	69	2.6	1.4	3.2	66	.43	.029	4.1	28.2	.52	13	.051	5.72	2.04	2.74	6.5	49.4	13	1.3	6.6	1.0	.1	1	11	7.8	5.4	60.6	1.9	.10	3.66
9147	6	9.8	3.8	146	.1	4.4	9	1140	1.92	3	1.3	<1	4.7	94	.2	.4	<1	15	1.05	.024	21.8	5.7	1.23	2055	.187	7.58	1.56	3.37	4.4	84.8	46	2.6	12.4	6.2	.5	2	5	15.3	<.1	83.6	2.8	<.01	3.12
9148	9.7	320.1	853.6	2849	15.5	26.7	30	302	5.03	157	3.2	6	6	62	4.8	3.6	1	221	.53	.229	3.7	34.5	.65	43	.247	5.73	2.44	4.13	2.5	50.8	11	.7	8.5	5	1	2	31	10.5	5.5	109.1	2.1	.58	2.38
9149	2.3	687.0	205.4	4319	3.4	33.5	33	737	5.86	74	2.6	2	1.2	90	16.0	2.9	1	197	1.15	.077	4.5	67.7	1.09	47	.250	10.49	3.14	5.08	5.9	77.5	12	1.3	12.8	3.5	.1	3	36	11.9	6.7	128.3	3.0	.17	2.62
9150	2.5	243.3	174.8	566	1.0	10.3	15	2408	2.92	14	2.7	<1	3.2	326	3.7	.9	2	61	3.03	.035	16.6	17.3	1.74	107	.272	6.79	2.81	4.33	5.9	136.6	41	2.9	17.8	6.2	.5	2	17	8.3	1.8	97.5	4.9	.05	2.01
9151(rock)	3	2.7	13.4	130	.1	1.4	<1	1240	.15	5	.8	<1	1	266	.5	.2	<1	3	38.75	.001	6	6	.48	25	.006	.16	.003	.02	1	2.2	1	<1	.6	1	<.1	<1	<1	1.0	2	.5	1	<.01	2.58
9152(pulp)	12.0	156.1	18.5	153	.3	46.5	159	4490	8.36	3055	4.6	2.4	2.5	305	.9	37.0	72.3	120	15.60	.122	38.9	24.2	1.71	567	.303	4.54	.686	.55	45.1	41.1	45	6.3	19.7	2.6	.2	<1	11	18.7	6	26.2	1.6	2.22	-
9153(pulp)	48.8	4251.2	>10000	>10000	128.2	9.6	4	1178	2.69	540	6	4	5	256	103.6	141.2	4.2	51	2.87	.028	6.1	59.2	.56	194	.079	4.53	.914	1.62	1.0	5.4	11	2.9	5.6	1.1	.1	1	2	9.6	1.8	32.9	3	.21	-
9154	15.7	4572.5	488.2	9446	6.1	15.6	10	122	4.27	30	1.5	1	9	36	40.6	2.8	1.7	64	.24	.001	3.1	32.4	.29	19	.062	4.14	.093	1.64	5.4	27.1	8	7	4.5	5	<.1	1	10	7.0	4.6	43.6	1.0	.12	2.73
9155	17.4	2475.5	257.9	1265	6.6	41.8	29	153	6.56	58	5	2	4	58	5.6	2.9	2.2	181	.33	.015	2.1	74.6	.49	19	.387	7.09	.169	3.51	6.2	23.7	8	.9	4.2	.4	<.1	1	27	9.4	7.3	83.8	8	.20	3.02
9156	35.3	605.2	232.9	290	3.9	30.7	16	176	8.39	36	4	2	8	44	1.0	2.4	3.6	97	.28	.002	4.5	40.6	.39	9	.549	5.74	.122	2.56	6.2	18.4	15	1.1	4.6	5	.1	1	15	6.4	>10	62.2	7	.19	2.12
9157	10.5	1487.1	150.3	3593	1.9	34.5	13	889	4.59	25	2.0	<1	3.1	81	15.9	2.1	.6	114	1.27	.036	9.7	59.3	1.30	79	.135	7.14	1.65	3.52	1.1	71.5	24	1.5	9.0	1.7	.2	1	15	13.0	3.4	81.8	2.7	.03	1.86
9158	7	155.5	6.5	968	.1	50.0	22	2019	5.63	5	4	<1	1.8	95	.6	.7	<1	212	1.97	.055	11.2	70.4	5.11	1660	.402	10.35	1.49	3.08	.6	16.7	25	1.2	7.8	2.1	.2	1	30	57.8	.3	68.0	6	.01	3.76
9159	10.2	569.9	123.5	248	2.0	14.3	9	639	5.09	44	2.1	<1	3.5	82	1.0	2.5	8	52	1.00	.037	11.2	43.4	1.03	40	.127	8.93	2.17	4.31	6.5	112.7	29	2.4	11.4	2.3	.2	1	12	9.5	5.2	97.8	3.7	.03	2.74
9160	7.7	528.5	55.6	1543	1.5	15.3	13	1073	4.76	26	1.7	<1	4.3	72	4.6	2.0	1.0	79	1.13	.038	15.5	41.2	2.40	73	.150	8.14	1.76	3.47	1.5	67.7	38	2.1	8.5	2.5	.2	1	13	23.4	3.6	86.8	2.8	.04	1.86
9161	18.4	1367.2	46.4	391	2.6	7.5	3	207	4.77	32	2.1	<1	3.8	44	1.6	1.7	2.0	35	.25	.020	11.1	20.7	.73	26	.097	6.50	1.65	3.55	7.3	76.3	29	2.1	9.4	2.5	.2	1	7	10.7	4.4	69.8	3.4	.07	2.38
RE 9161	18.5	1351.6	54.0	395	2.6	7.3	3	202	4.68	34	2.3	<1	4.2	44	1.5	1.7	2.1	28	.24	.020	11.4	19.5	.75	27	.096	6.27	1.69	3.21	7.4	77.0	29	2.3	9.6	2.2	.2	1	7	12.2	4.5	71.8	3.2	.09	-
RRE 9161	19.1	1265.2	93.4	305	3.2	9.5	4	366	4.63	33	2.3	<1	4.2	46	1.0	1.7	2.8	33	.21	.022	12.5	19.8	.69	27	.093	6.60	1.73	3.31	6.5	78.0	22	2.2	9.6	1.9	.2	1	7	12.3	4.7	70.5	3.2	.07	
9162	20.9	1604.8	103.3	443	5.9	16.1	7	76	6.92	183	4.0	3	3.6	62	1.7	13.4	2.6	122	.13	.017	5.6	29.5	.64	18	.123	10.91	2.74	4.90	1.9	112.7	20	2.4	5.5	1.7	.2	1	12	10.6	6.5	101.3	4.3	.23	2.83
9163	26.2	2276.5	90.6	852	6.7	13.4	6	506	5.72	39	4.9	2	3.9	44	2.1	3.8	4.0	57	.65	.039	12.5	73.3	1.68	24	.115	7.08	2.78	3.03	6.3	75.8	32	2.0	10.5	2.0	.2	1	10	23.7	5.0	69.9	3.2	.19	2.51
9164	2.9	931.9	30.0	470	1.1	4.5	4	633	2.76	24	1.7	<1	5.7	51	2.0	1.5	5	17	.93	.024	17.6	11.4	1.31	52	.127	8.00	2.08	3.87	6.2	73.5	41	2.7	10.2	2.6	.4	1	6	15.8	3.1	89.5	3.4	.02	2.35
9165	.5	93.7	5.1	212	.1	9.7	6	559	3.10	2	.9	<1	9.1	96	.2	.8	<1	47	1.74	.242	20.5	5.3	2.17	2354	.265	8.12	2.75	3.26	.7	63.3	46	2.3	11.8	4.8	.5	1	9	30.5	.1	77.1	7.3	<.01	2.47
9166	10.4	3124.9	529.5	>10000	7.0	17.4	9	993	4.49	22	2.1	2	2.3	1265	77.9	3.1	2	88	3.29	.056	5.7	21.4	2.51	28	.232	6.76	1.04	2.75	4.3	71.5	21	1.5	11.3	3.0	.2	1	12	26.7	3.0	60.2	2.5	.28	2.79
9167	5	201.6	405.6	1675	1.2	26.7	9	725	4.41	9	4.6	<1	2.6	196	2.5	1.4	1	139	2.31	.147	14.6	31.7	3.57	3354	.392	5.86	1.40	2.74	4.2	135.1	33	1.2	16.7	2.9	.2	1	23	54.6	.9	63.1	3.8	.02	2.36
9168	1	49.8	3.5	165	.1	151.2	42	1252	6.98	2	.1	<1	.5	337	.1	.7	<1	307	3.34	.116	6.9	233.5	5.93	58	.711	8.42	[illegible]	.65	2	4.3	16	.7	15.6	7.8	.2	1	32	45.5	<.1	5	.3	.01	1.53
9169	10.4	916.6	133.3	5567	2.3	7.7	6	437	3.81	14	1.8	<1	3.6	114	22.1	1.1	1.2	65	.55	.031	11.3	26.0	1.40	37	.157	7.24	1.09	3.77	4.5	73.8	28	2.1	9.7	2.4	.3	1	11	15.3	3.3	99.9	3.1	.04	3.92
9170	4.1	368.5	79.3	2174	.9	7.4	7	545	2.23	11	2.9	<1	5.8	71	7.2	.8	.4	12	.64	.015	19.2	6.8	1.49	86	.118	7.38	1.33	3.69	4.7	97.4	43	2.7	10.5	3.1	.3	2	5	18.9	1.7	95.5	4.1	.02	2.39
STANDARD DS6/OXL34	12.5	129.2	37.5	383	.4	30.1	11	990	3.57	26	7.7	<1	7.5	317	5.6	5.4	5.1	117	2.36	.097	53.1	255.0	1.06	703	.425	6.90	1.65	1.50	7.8	49.7	52	6.3	16.2	9.9	.7	4	12	25.1	<.1	60.6	1.9	5.87	-

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HCLO4-HNO3-HCL-HF TO 10 ML. (>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY. FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-MS.
AU** BY FIRE ASSAY FROM 1 A.T SAMPLE.
- SAMPLE TYPE: DRILL CORE R150 Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data / FA ____ DATE RECEIVED: JUL 20 2005 DATE REPORT MAILED: Aug. 4/05

BRITISH COLUMBIA CERTIFIED ASSAYER — Clarence Leong

ACME ANALYTICAL

Roca Mines Inc. FILE # A503626

ACME ANALYTICAL

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm	Au** gm/mt	Sample kg
9171	2.8	380.2	46.4	1533	1.0	2.4	2	491	2.33	9	2.3	<.1	7.4	64	6.3	1.0	4	25	.41	.016	22.0	6.7	1.96	138	.165	9.46	1.49	5.01	5.0	109.4	50	3.9	12.4	3.0	4	2	6	25.8	2.4	129.6	4.5	.02	2.81
9172	1.6	912.5	43.3	220	1.7	11.4	8	549	2.74	34	3.6	<.1	7.2	62	.1	2.3	7	45	.57	.020	19.5	23.9	1.56	104	.161	9.06	1.41	4.77	6.3	120.9	45	3.0	13.5	4.1	3	2	9	16.8	3.7	124.8	5.0	.03	2.41
9173	5.7	461.5	933.7	4177	2.1	16.0	15	340	3.69	72	1.8	<.1	3.1	97	14.8	3.6	2	166	.31	.046	11.0	52.5	1.25	26	.196	8.32	1.26	4.27	4.6	57.7	28	1.8	9.4	2.3	2	2	19	35.0	3.1	115.3	3.4	.05	2.56
9174	1.8	821.0	9.6	453	.9	2.1	3	1069	3.53	15	1.6	<.1	5.4	51	.4	1.7	5	13	.75	.029	20.2	5.1	2.40	46	.139	7.47	1.02	3.32	.9	76.6	47	1.5	10.5	2.8	2	2	5	26.0	2.4	90.2	3.2	.01	2.28
9175	2.1	1003.9	13.1	2266	.9	2.4	2	573	3.44	7	1.5	<.1	5.2	55	9.5	1.0	5	13	.42	.024	13.4	9.0	1.31	46	.139	7.25	1.02	3.46	5.2	76.2	43	2.5	13.0	2.9	2	2	5	24.4	2.3	91.3	2.7	.01	2.46
9176	6.1	1463.4	116.3	1056	1.9	1.8	2	293	2.64	15	3.4	<.1	3.7	212	4.0	1.1	9	13	.33	.017	12.5	11.4	.92	26	.098	6.72	1.02	3.60	5.7	67.6	34	2.3	10.2	2.8	2	1	5	11.2	3.4	94.5	2.4	.03	2.72
9177	17.4	1096.5	176.9	963	2.3	2.0	1	353	5.33	39	1.7	<.1	1.2	926	3.5	.8	7.9	8	.73	.012	9.6	2.2	.95	15	.072	5.52	1.05	2.43	4	71.9	19	1.9	9.5	1.9	1	1	4	7.8	5.9	62.7	2.4	.03	2.24
9178	16.3	1507.8	121.7	650	2.7	3.7	3	113	4.98	26	1.5	<.1	2.5	270	2.5	2.6	1.1	9	.23	.110	10.3	9.0	.57	21	.090	6.19	1.07	3.36	6.4	76.2	32	2.3	10.0	2.3	1	1	5	8.0	5.2	95.5	2.5	.03	2.51
9179	5.2	348.3	70.4	544	1.0	1.6	2	535	3.15	16	1.4	<.1	3.3	51	2.4	1.4	2	6	.66	.014	15.8	9.7	.84	41	.115	6.89	1.25	3.67	5.7	82.2	41	2.6	11.2	3.0	2	1	5	9.6	2.6	96.2	1.8	.02	2.95
9180	2.9	312.0	263.1	166	2.1	2.0	3	1164	2.52	22	2.9	<.1	6.1	105	.7	1.7	8	16	1.05	.035	17.4	5.3	1.34	51	.126	7.81	1.35	4.06	1.3	139.0	40	2.7	12.5	3.2	3	1	5	9.4	1.8	105.4	4.4	.01	1.97
9181	21.1	2143.6	430.8	7168	3.7	8.8	8	990	3.37	55	2.0	<.1	4.6	66	33.3	5.7	1.4	55	1.21	.027	17.3	27.7	2.41	35	.138	8.02	1.40	4.40	6.1	72.8	41	2.5	9.8	2.9	2	2	11	12.8	3.7	115.1	3.0	.05	2.26
9182	6.2	356.8	21.3	1471	1.1	2.7	3	597	3.06	31	1.1	<.1	4.1	45	5.6	2.4	4	6	.67	.021	17.9	11.6	1.54	49	.105	7.21	1.31	3.72	7.3	65.5	41	2.5	9.4	3.3	2	1	6	16.2	2.2	88.8	2.4	.02	2.34
9183	3.0	201.9	38.8	358	.6	1.7	2	369	3.58	14	2.2	<.1	3.6	73	1.3	2.4	4	16	.69	.023	10.5	4.5	1.22	37	.093	6.72	1.63	3.30	5	124.1	34	2.3	11.8	2.3	1	1	6	12.4	7.6	83.6	4.1	.02	2.08
9184	3.8	189.9	72.1	702	.7	3.0	2	335	3.31	15	1.9	<.1	3.5	51	2.8	3.8	7	9	.51	.024	17.7	9.5	1.24	37	.087	7.22	1.27	3.64	6.2	137.0	42	2.9	12.0	1.9	1	1	6	14.7	3.0	87.8	2.6	.02	2.29
RE 9184	4.1	187.0	73.4	710	.7	3.6	3	339	3.39	16	2.3	<.1	3.9	55	2.8	3.4	8	9	.53	.025	17.5	10.4	1.27	36	.096	7.34	1.39	3.87	6.0	118.2	42	3.3	13.8	2.3	1	1	7	15.1	3.1	96.1	3.6	.02	-
RRE 9184	4.5	161.2	60.0	695	.6	2.6	2	319	3.34	12	1.9	<.1	3.3	51	2.6	3.7	7	9	.52	.021	16.5	9.7	1.20	38	.094	6.95	1.37	2.52	5.2	109.6	39	2.6	12.5	2.4	1	2	6	14.3	2.8	87.9	3.4	.02	-
9185	2.1	720.2	7.5	139	.5	.7	2	404	5.09	1	1.0	<.1	3.8	35	.1	1.1	5	6	.44	.028	15.8	4.9	1.43	25	.083	7.22	1.28	3.53	6	64.9	43	2.6	11.1	2.4	7	1	6	37.7	4.7	90.1	2.0	.01	2.55
9186	1.7	217.5	3.7	96	.1	1.9	2	442	3.41	4	1.0	<.1	3.4	52	<.1	1.2	4	3	.35	.027	19.9	9.8	1.65	52	.087	7.39	1.27	3.51	5.2	71.6	47	2.7	17.0	1.9	1	2	6	24.5	2.2	89.0	2.3	<.01	2.28
9187	1.1	77.0	3.3	188	.1	1.3	2	502	4.03	3	.7	<.1	3.5	32	.1	.9	2	3	.31	.022	22.2	9.5	2.29	104	.063	6.45	.94	2.65	5.1	54.9	50	2.2	10.9	1.6	1	2	6	37.5	1.8	69.1	1.7	.01	2.57
9188	11.4	205.4	5.5	85	.4	.5	1	266	3.14	4	.4	<.1	3.0	40	.1	.9	9	5	.34	.020	20.1	4.7	1.42	45	.087	6.75	1.14	3.27	4	52.4	45	2.2	9.3	2.3	2	1	6	21.7	2.0	83.1	1.6	.01	2.47
9189	3.4	279.0	4.7	60	.4	1.9	2	150	2.61	3	1.1	<.1	3.4	27	.1	1.2	3	4	.17	.025	20.3	8.1	1.03	87	.105	7.38	1.45	3.96	5.3	64.7	43	2.7	10.5	2.4	2	2	7	15.4	1.5	94.8	2.2	.01	1.16
9190	7.9	75.3	19.7	119	1.4	7.2	5	368	3.75	19	7.5	<.1	2.8	40	.2	1.8	2.1	26	.45	.022	12.9	16.7	1.05	36	.076	5.79	1.14	2.80	5.4	75.7	31	1.9	10.1	1.7	.1	1	7	15.3	3.3	71.5	2.5	.05	1.19
9191	6.6	179.6	13.9	74	1.0	1.1	1	181	2.72	6	1.5	<.1	3.2	28	.1	1.6	3.3	11	.25	.019	17.6	2.0	.81	50	.093	6.71	1.27	3.62	4	59.1	40	2.4	10.6	2.2	2	1	6	12.0	2.3	67.2	2.2	.02	2.41
9192	55.0	222.5	767.6	349	2.8	21.9	10	243	5.69	33	2.4	<.1	2.9	37	2.1	3.4	3.3	33	.55	.072	9.5	12.9	.94	15	.071	6.57	1.32	3.36	5.4	90.6	22	1.9	21.0	1.4	.1	1	7	14.0	8.1	79.1	3.1	.06	2.53
9193	10.7	21.2	29.4	153	.7	4.2	5	242	5.17	5	2.5	<.1	3.6	39	.5	1.2	1.1	6	.37	.020	17.4	7.2	.74	23	.072	7.92	1.46	3.56	4.9	107.3	42	2.2	14.1	1.7	1	1	6	22.0	4.7	81.1	3.3	<.01	2.68
9194	5.6	13.2	47.5	54	.5	.4	5	621	17.89	6	.9	<.1	2.3	45	.2	1.1	1.5	2	1.26	.030	13.6	6	1.55	8	.034	5.23	1.05	2.49	1	43.8	33	1.6	7.6	.8	<.1	1	4	13.0	>10	68.4	1.4	.01	1.93
9195	4.9	26.2	47.7	118	.3	3.2	3	245	5.91	6	.8	<.1	2.7	35	.2	.5	1.0	3	.41	.023	16.7	4.4	1.55	16	.058	6.55	1.05	3.01	5.2	47.9	40	1.9	8.2	1.4	1	1	6	26.4	6.3	64.0	1.5	.01	2.89
9196	3.5	21.4	12.0	128	.2	1.9	2	212	3.61	3	.8	<.1	3.1	36	.1	.8	.5	3	.33	.022	19.8	5.1	2.00	41	.084	7.35	1.64	3.24	4.0	57.3	46	2.7	6.6	2.3	1	1	6	25.6	3.0	71.1	1.9	.01	2.13
9197	6.9	41.5	55.0	115	.4	2.1	3	178	6.44	5	1.8	<.1	2.6	38	.4	1.5	1.0	1	.50	.019	17.7	1.1	1.67	16	.064	7.15	1.56	3.25	2	70.1	31	2.1	9.2	1.5	1	1	6	19.8	7.1	70.8	2.0	.01	2.62
9198	10.1	214.4	41.7	224	1.2	10.4	5	385	5.12	9	2.5	<.1	3.4	42	.5	1.0	2.0	6	.68	.021	17.2	6.3	2.15	24	.069	6.60	1.41	2.55	3.9	85.1	40	2.1	13.5	1.6	1	1	6	26.0	4.9	63.0	3.0	.02	2.35
9199	13.8	63.6	53.1	79	1.5	13.2	6	91	5.06	6	1.0	<.1	7.9	30	.4	1.0	2.1	23	.20	.023	13.7	19.4	.49	17	.083	6.62	1.03	3.49	6.0	53.5	34	2.0	9.2	1.7	1	1	7	5.8	7.7	75.9	1.9	.04	2.49
9200	13.5	75.5	55.2	102	2.6	6.6	6	81	8.67	15	.9	<.1	2.1	29	.6	.9	1.4	19	.16	.020	17.7	6.5	.43	17	.093	6.44	1.54	2.27	3	47.4	32	2.0	3.2	1.9	2	1	6	4.6	>10	72.0	1.6	.04	2.46
9201([illegible])	.3	.7	1.4	10	<.1	2.6	<1	116	.04	<1	1.2	<.1	.2	216	.4	<.1	<.1	<1	[illegible]	.003	6	2	23	9	.001	.08	.003	.03	2	7	1	<1	3.3	<1	<1	<1	<1	1	1	5	<1	<.01	2.22
9202([illegible])	124.0	195.0	84.0	139	2.4	53.0	59	3636	9.54	886	3.4	6.1	2.6	246	5.3	15.3	11.7	111	14.03	.053	53.0	49.5	1.58	81	.256	4.43	.621	.90	2.5	44.0	43	2.9	17.5	2.2	1	1	11	23.7	2.4	26.8	1.8	5.51	
STANDARD DST6/OXL34	12.3	121.3	35.8	170	.3	29.9	13	956	3.95	25	7.3	<.1	7.2	254	5.6	5.4	4.8	132	2.22	.097	26.8	251.7	1.02	673	.426	6.63	1.745	1.47	7.6	49.2	52	6.4	15.1	9.5	6	4	11	25.5	<.1	60.0	1.7	5.79	-

Sample type: DRILL CORE R150. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data FA ____

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	Au**	Sample
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	gm/mt	kg
9203(pulp)	44.4	4197.8	>10000	>10000	132.0	10.0	4	1132	2.82	250	6	2	9	251	99.6	149.8	4.2	49	2.62	.027	5.0	46.0	.52	104	.074	4.52	.517	1.73	1.0	5.0	12	2.5	5.8	.9	1	1	3	5.3	1.9	32.0	.2	21	-
9204	6.5	73.5	70.5	55	2.1	5.9	5	54	5.65	12	9	<.1	2.5	33	2	1.0	1.8	25	.24	.020	12.9	9.3	.35	16	.122	7.24	.155	3.31	.5	49.3	32	2.1	8.6	2.9	.5	1	7	4.9	6.5	74.7	1.2	.03	1.39
9205	1.5	67.7	128.9	306	2	16.2	14	2004	4.98	6	1.5	<.1	7.8	101	4	1.7	7	99	2.71	.043	15.7	22.9	2.47	1082	.271	7.49	.852	2.72	1.9	54.2	34	1.7	13.4	3.7	3	1	16	26.6	5	62.8	2.4	<.01	3.34
9206	2	4.4	4.5	66	<.1	5.1	3	662	2.56	2	6	<.1	3.7	49	1	1	<.1	17	1.66	.024	22.6	2.1	1.29	1136	.169	7.44	1.042	2.55	7	49.5	42	2.1	10.0	5.7	5	2	5	12.9	<.1	64.6	1.5	<.01	3.62
9207	6	2.6	3.5	73	<.1	8.9	3	446	2.17	2	7	<.1	4.2	63	1	7	<.1	14	1.42	.022	23.7	4.3	1.33	1307	.234	8.67	1.366	3.36	2.0	61.9	53	2.4	11.2	6.5	6	2	5	11.6	<.1	71.7	1.9	<.01	2.24
9208	1.3	86.8	4.9	124	1	12.6	3	481	2.45	1	2.6	<.1	4.5	65	1	9	1	25	1.09	.022	25.2	6.3	1.58	1247	.241	9.88	.902	3.22	4.0	72.0	54	2.6	12.2	6.7	6	1	7	18.4	3	75.2	2.3	.01	2.37
9209	2.9	375.8	11.5	58	5	1.1	1	425	3.02	16	2.2	<.1	3.2	57	2	1.1	3	26	.65	.025	17.8	3.9	.95	39	.166	7.79	.392	3.43	.7	87.6	43	2.5	13.1	4.8	4	1	6	10.5	2.6	82.4	2.8	.02	2.29
9210	2.2	72.2	11.9	74	5	8	1	622	3.07	15	6	<.1	2.8	57	1	1.3	2	11	1.05	.025	17.9	7.9	1.23	33	.175	6.89	.272	3.09	3.9	45.2	44	2.2	9.6	3.7	3	2	6	14.2	3.1	69.4	1.5	.01	2.56
9211	3.7	18.3	14.1	66	5	4.0	2	320	2.71	21	2.5	<.1	4.1	56	2	1.7	2	16	.45	.021	19.9	8.7	1.42	55	.136	8.79	.278	3.61	4.1	134.9	47	2.5	18.0	3.5	.2	2	7	16.7	2.4	95.1	4.0	.01	2.41
9212	11.7	26.4	27.0	91	5	12.4	4	591	4.43	37	7.4	<.1	5.2	101	2	3.4	9	16	1.25	.031	22.1	4.6	2.55	46	.134	9.24	.240	3.95	.5	223.7	54	2.3	23.5	3.1	3	1	8	78.9	4.6	87.8	6.3	.03	1.32
9213	7.3	16.7	15.0	75	3	6.2	6	189	4.50	17	2.1	<.1	3.6	55	1	1.9	.8	27	.29	.026	16.4	11.7	1.79	39	.117	8.76	.214	3.79	3.7	93.6	40	2.4	13.2	2.5	2	1	8	26.9	4.6	52.5	2.9	.02	1.36
9214	7.2	41.9	73.4	215	9	3.2	5	276	14.64	14	1.2	<.1	2.9	39	4	1.4	2.6	11	.45	.011	15.8	7.0	2.10	16	.070	6.52	.178	2.79	5.1	70.6	37	2.2	11.5	1.6	1	1	6	31.9	>10	63.7	2.2	.03	1.81
9215	4.3	17.7	19.6	724	2	1.1	2	251	4.56	5	9	<.1	3.2	49	1	.2	7	8	.46	.022	21.0	2.7	1.97	45	.086	7.09	.160	3.19	.3	50.4	48	2.1	9.2	2.2	.2	1	6	30.5	4.5	70.6	1.9	.03	2.74
9216	6.7	25.3	72.0	242	6	3.8	5	443	11.75	10	1.1	<.1	3.0	51	5	1.4	1.2	16	.96	.027	16.7	9.3	1.55	31	.071	6.46	.153	2.92	5.5	61.3	43	2.0	5.4	1.5	.1	1	6	20.1	>10	61.6	2.1	.03	1.63
RE 9216	7.1	25.6	82.6	249	7	4.1	5	453	11.93	9	1.1	<.1	3.3	53	5	1.5	1.3	14	1.05	.027	18.1	7.7	1.57	13	.065	6.54	.155	2.65	6.9	57.6	45	2.0	8.9	1.5	1	1	6	21.8	>10	64.9	2.0	.05	-
RRE 9216	6.6	26.9	85.0	273	8	4.5	5	466	11.79	18	1.3	<.1	3.1	57	7	1.6	1.5	12	1.05	.029	15.9	7.5	1.64	13	.078	5.87	.164	3.10	6.2	56.1	41	2.1	9.4	1.7	2	1	6	24.6	>10	72.1	2.2	.03	-
9217	7.9	445.4	19.4	94	1.7	8.5	7	80	2.40	17	2.1	<.1	4.2	44	7	2.2	9	23	.16	.011	17.5	14.0	.74	32	.175	8.18	.206	3.82	1.9	99.2	42	2.7	10.0	4.0	4	1	5	16.4	3.1	62.0	1.1	.07	3.29
9218	25.0	1343.4	1269.1	6460	5.3	2.8	2	494	1.84	8	2.5	<.1	4.9	66	48.3	5.2	1.7	12	1.11	.017	16.3	7.0	1.64	48	.125	6.01	.170	2.70	6.8	68.5	36	2.2	6.7	4.0	4	1	4	12.6	1.7	59.2	3.1	.07	2.40
9219	13.3	113.0	335.3	788	1.2	1.3	2	590	1.97	2	1.7	<.1	5.1	82	3.9	1.5	7	9	1.51	.019	16.1	6.2	1.29	75	.109	6.80	.196	3.21	5.3	70.5	35	2.2	9.3	4.6	4	1	5	13.9	1.3	68.0	3.2	.02	2.34
9220	5.7	222.4	186.9	1182	1.1	1.5	2	722	2.49	8	3.7	<.1	6.6	95	4.3	1.6	6	38	2.03	.018	22.2	2.3	1.48	56	.159	9.61	.234	4.05	1.3	101.1	49	2.5	11.9	5.2	5	2	6	10.7	2.0	94.7	4.3	.02	2.54
9221	11.8	429.7	399.5	2751	2.6	3.4	3	591	2.86	22	2.2	<.1	4.6	82	11.9	1.1	1.0	29	1.72	.024	15.7	10.5	1.17	25	.151	6.76	.212	3.17	6.2	73.0	37	2.1	9.9	3.5	4	1	6	8.5	2.7	67.3	2.1	.07	2.21
9222	10.5	1295.6	723.1	2958	2.8	4.3	8	407	3.75	16	1.1	<.1	2.3	59	12.3	2.9	1.2	40	1.44	.022	9.8	14.4	.97	29	.115	4.46	.133	1.95	6.4	45.6	22	1.1	6.6	2.1	2	1	5	5.9	3.5	42.0	1.7	.02	2.40
9223	12.7	1963.6	333.7	4402	3.1	6.4	7	693	2.43	11	2.1	<.1	4.0	103	17.0	2.7	1.4	26	2.37	.109	14.3	6.2	1.36	29	.129	6.11	.162	2.72	1.7	71.7	34	1.7	10.6	3.3	3	1	5	7.0	3.1	58.5	2.9	.25	2.31
9224	19.1	447.9	215.8	1502	1.7	2.5	3	451	1.87	12	1.9	<.1	5.1	73	6.6	1.5	.6	17	1.21	.017	17.4	6.5	1.08	65	.152	7.05	.157	3.29	5.6	83.2	39	2.2	9.6	4.4	.5	1	5	10.3	1.3	72.8	3.6	.04	2.26
9225	3.5	63.5	15.1	170	6	1.2	7	625	2.02	12	2.1	<.1	5.7	90	3	9	2	11	1.39	.072	21.6	6.8	1.33	103	.141	7.23	.197	3.36	5.5	92.3	48	2.6	11.3	4.7	.5	2	5	12.9	1.1	74.2	3.9	.01	2.33
9226	5.6	415.2	692.8	1872	2.0	2.5	3	417	2.69	11	1.5	<.1	3.7	63	6.0	1.9	7	23	1.14	.015	15.6	5.7	.59	38	.124	6.11	.157	2.79	1.5	62.2	36	2.0	6.1	3.5	4	1	5	7.8	2.2	60.4	2.5	.05	2.49
9227	1.9	920.8	4591.6	9656	3.5	3.7	3	117	1.41	2	5	<.1	1.6	28	33.9	2.3	2	13	.38	.015	7.7	1.5	.33	47	.095	4.34	.099	1.69	5.5	30.3	17	1.0	4.5	2.2	2	1	3	5.6	1.4	37.6	1.0	.01	2.01
9228	6.0	1216.4	59.0	618	7.2	36.5	22	1244	5.52	14	1.6	<.1	3.5	126	9.3	2.1	5	152	3.16	.047	13.2	59.2	2.64	49	.329	8.27	.564	3.12	5.0	76.0	30	1.6	11.3	4.4	4	2	17	19.4	2.8	60.3	2.5	.02	.78
9229	7	61.8	11.2	475	1	110.2	30	1644	6.55	2	2	<.1	6	190	3	7	<.1	250	4.35	.131	7.4	166.0	5.45	732	.456	7.04	1.492	1.33	4.1	5.7	16	.5	9.5	2.0	1	1	27	41.2	<.1	26.4	5	<.01	1.97
9230	12.0	173.7	159.3	>10000	2.6	26.4	17	1526	5.39	15	1.2	<.1	1.6	125	49.4	7.2	1.5	146	4.58	.036	6.4	33.2	2.89	26	.260	6.58	.202	2.85	7.8	47.6	17	1.0	9.4	2.3	2	1	15	10.6	4.1	53.5	1.5	.07	1.69
9231	13.1	2268.6	385.9	5447	4.7	13.5	6	506	4.17	14	3.0	<.1	3.2	69	13.0	2.5	1.2	33	2.35	.029	11.5	12.2	1.51	34	.150	6.63	.119	3.04	6.8	92.8	31	1.7	11.0	3.5	3	1	5	8.5	3.4	56.4	3.0	.15	2.64
9232	10.0	231.7	559.7	504	2.2	6.5	5	340	2.60	27	1.4	<.1	7.2	78	2.3	1.8	9	58	1.23	.041	11.7	20.6	.86	27	.158	6.37	.359	3.08	2.8	59.2	27	1.6	8.3	2.9	3	1	9	8.5	2.3	58.1	2.4	.05	2.43
9233	10.0	1399.1	292.3	>10000	2.6	9.4	6	152	3.89	22	1.0	1	2.4	38	36.0	2.2	.6	65	.56	.036	8.7	33.0	.56	17	.167	6.03	.114	2.75	5.9	44.8	22	1.7	5.3	2.0	2	1	9	9.6	3.7	54.5	1.7	.29	2.36
9234	14.9	1962.3	252.6	4070	3.5	21.7	8	739	1.79	10	1.1	<.1	2.9	52	15.0	1.2	4	66	1.27	.042	11.6	43.8	1.63	33	.175	6.35	.032	2.60	4.9	46.3	26	1.5	5.8	2.6	3	1	10	16.5	2.2	49.0	1.9	.06	2.39
STANDARD DST6/D/L34	12.4	124.6	35.9	172	9	30.2	11	578	4.01	25	7.6	<.1	7.8	314	5.6	5.3	4.6	115	2.22	.104	26.8	265.6	1.02	722	.431	6.95	1.619	1.45	7.6	55.6	57	6.5	15.1	2.8	7	3	11	25.5	<.1	59.1	1.9	5.91	-

Sample type: DRILL CORE R150. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data ___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm
9236	7.7	3123.1	514.5	1136	6.4	4.7	3	293	3.79	24	1.3	<.1	3.5	39	5.2	1.7	.9	22
9238	3.5	751.5	143.3	3376	3.1	4.4	2	387	1.92	25	2.7	<.1	2.3	44	12.7	2.4	2	47
9239	3.4	495.8	23.1	359	.9	1.5	7	266	3.74	13	1.6	<.1	3.3	43	.8	1.4	.3	20
9240	3.7	922.1	50.3	621	1.2	1.7	5	171	4.42	42	2.2	<.1	3.2	48	1.8	2.0	.2	12
RE 9240	4.1	939.5	52.4	623	1.4	1.9	6	157	4.46	43	2.2	<.1	3.1	49	1.8	2.1	.3	13
RRE 9240	4.1	930.4	57.5	561	1.3	1.9	5	176	4.54	49	3.3	<.1	3.1	43	1.4	1.5	.2	11
9241	2.8	221.5	139.8	558	1.3	1.1	5	221	4.10	20	1.9	<.1	2.7	37	1.6	1.5	.4	10
9242	3.3	357.4	45.0	355	.9	7.2	5	277	3.78	22	1.0	<.1	2.5	35	.3	1.8	.5	22
9243	3.3	129.3	60.7	356	1.0	7.7	5	357	4.96	18	1.6	<.1	2.0	40	1.9	1.6	1.8	32
9244	6.6	972.1	113.6	454	4.7	34.0	12	795	6.62	31	1.4	<.1	2.4	65	1.4	2.7	2.3	58
9245	5.4	756.1	43.4	4465	.9	13.2	10	202	4.41	21	2.3	<.1	3.0	37	16.0	3.6	.5	54
9246	5.7	864.6	33.4	3022	1.1	12.5	11	149	4.46	26	1.8	<.1	3.2	56	11.9	4.0	.5	63
9247	5.5	142.3	195.7	411	2.1	24.9	16	41	6.43	23	2.5	<.1	2.3	41	1.5	4.3	2.4	72
9248	12.6	217.0	160.5	492	1.9	16.6	13	84	5.42	20	5.5	<.1	3.0	38	1.9	5.2	1.7	49
9249	10.7	430.2	161.0	319	2.4	5.0	4	71	8.51	11	2.2	<.1	2.1	32	1.4	4.3	2.3	15
9250	9.4	2248.9	63.3	1172	3.3	7.4	4	122	7.51	9	1.5	<.1	2.0	34	4.6	8.7	1.8	22
9251(rock)	.3	10.5	2.3	23	<.1	3.5	<1	122	.11	4	1.2	<.1	.1	242	.4	.1	<.1	3
9252(culp)	31.9	149.8	19.3	157	.7	43.7	138	4151	8.42	2791	4.3	2.0	2.3	277	.6	14.5	71.4	105
9253(culp)	46.1	4155.5	9602.0	>10000	124.4	9.3	4	1090	2.50	307	6	2	9	238	97.2	127.3	4.2	49
9254	10.3	1058.9	198.9	612	7.6	22.8	10	83	11.73	16	1.9	<.1	1.5	44	2.2	3.3	2.6	44
9255	10.4	3654.0	610.6	1662	8.8	58.2	17	101	6.22	27	2.4	.1	2.0	49	6.9	3.2	.5	90
9256	4.5	1382.3	70.3	595	2.1	13.1	6	371	4.56	13	2.2	<.1	3.3	64	2.1	1.5	.1	55
9257	3.5	425.5	87.4	1657	1.1	22.5	12	1022	4.29	13	1.3	<.1	3.1	71	3.0	1.4	.3	81
9258	4.8	295.4	24.4	431	.5	26.9	30	1266	4.41	8	1.5	<.1	3.7	64	.6	1.2	.1	68
9259	4.6	1375.6	141.0	325	1.3	13.9	13	305	5.22	11	1.4	<.1	2.6	49	1.4	1.2	.2	65
9260	4.9	791.0	121.7	675	1.8	10.5	8	214	5.55	13	1.7	<.1	2.3	52	2.4	1.4	.5	44
9261	8.4	2515.7	501.1	4663	4.2	17.4	7	290	8.91	19	1.8	<.1	2.1	43	14.7	2.2	.9	36
9262	23.7	6761.6	323.8	414	13.7	26.5	8	118	29.92	96	1.1	.1	.5	21	1.3	5.3	5.4	21
9263	6.4	2276.3	304.5	4123	3.3	14.8	7	1441	7.60	16	1.7	<.1	2.3	66	16.4	2.1	1.0	34
9264	6.2	2522.5	122.2	1353	2.5	5.6	15	3253	5.29	20	1.2	<.1	2.1	154	4.8	1.4	.7	24
9265	20.5	1649.4	323.6	351	7.0	35.4	23	102	18.02	45	2.2	.2	1.7	28	1.4	3.9	4.7	21
9266	10.7	2073.4	247.9	450	5.4	41.5	15	102	6.96	113	3.9	.2	2.8	46	1.8	12.0	1.0	54
9267	16.2	2648.4	139.1	535	7.1	28.0	9	45	5.34	120	3.5	.2	3.6	55	2.3	16.5	.5	37
9268	17.4	5766.8	1095.5	6359	6.7	29.7	9	135	7.55	312	4.2	.1	2.8	84	27.4	50.0	2.1	53
STANDARD DST6/OXL34	12.4	132.6	36.0	172	.3	30.0	13	987	4.01	35	7.7	<.1	7.3	297	5.7	5.4	4.8	113

SAMPLE#	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm	Au** gm/mt	Sample kg
9236	.72	.028	14.1	10.1	.62	23	.127	6.14	.144	3.25	5.5	57.6	33	2.1	5.7	3.3	.1	1	4	7.7	3.7	47.1	2.7	.03	2.44
9238	.76	.037	11.2	6.6	.56	20	.076	4.36	.213	2.26	1.6	47.6	30	1.4	7.5	1.3	.2	1	4	14.3	4.5	39.5	1.8	.03	1.52
9239	.53	.050	17.0	11.0	.71	23	.164	5.72	.194	4.05	4.6	56.4	41	2.7	12.3	4.3	.4	2	7	11.2	4.0	74.9	2.2	.03	1.28
9240	.45	.025	16.0	7.8	.71	22	.171	9.01	.223	4.59	2.2	65.0	40	3.1	12.0	4.6	.4	2	7	11.2	4.9	79.7	2.1	.04	2.13
RE 9240	.46	.027	16.7	8.3	.72	25	.166	9.24	.212	4.29	2.2	65.5	40	3.3	12.5	4.5	.5	2	7	12.1	4.7	81.3	2.2	.03	-
RRE 9240	.46	.029	17.2	11.1	.70	25	.163	9.71	.249	4.29	4.8	64.2	42	2.5	11.3	4.2	.4	2	7	12.3	4.9	81.4	2.0	.04	-
9241	.34	.006	17.1	4.5	.65	23	.135	7.85	.177	3.83	1.7	40.5	42	2.8	7.7	3.7	.3	2	6	14.1	4.1	75.8	1.2	.05	2.65
9242	.38	.019	15.5	15.0	.93	22	.142	6.87	.150	3.32	4.0	40.4	37	2.3	8.0	3.2	.5	1	5	17.2	4.0	61.6	1.4	.03	1.19
9243	.52	.114	9.6	12.2	.73	15	.115	6.58	.151	3.23	1.3	42.6	25	2.1	7.1	2.2	.2	1	7	12.9	5.7	61.1	1.4	.03	2.57
9244	1.10	.021	6.8	44.3	1.49	13	.118	6.57	.141	2.97	4.0	53.4	16	1.5	7.8	1.9	.2	1	9	24.5	8.5	56.1	1.9	.18	2.52
9245	.32	.040	10.7	18.4	.70	38	.152	7.30	.173	3.20	1.9	77.8	28	1.5	8.8	2.5	.3	1	9	15.1	4.6	61.4	2.2	.04	2.69
9246	.26	.033	12.0	24.2	.79	21	.164	9.21	.202	3.78	4.6	75.5	30	2.3	9.4	3.1	.3	1	10	15.0	4.9	75.6	2.6	.03	2.58
9247	.38	.015	1.4	57.1	.69	25	.128	7.72	.222	4.28	1.6	66.7	19	1.9	5.7	1.7	.2	1	11	10.8	8.3	75.3	2.4	.05	2.23
9248	.19	.021	5.8	36.3	.62	15	.156	7.56	.236	3.93	3.6	112.9	24	2.3	13.4	3.1	.3	1	9	11.2	6.2	73.5	3.6	.17	2.47
9249	.34	.012	7.6	9.8	.45	12	.056	6.63	.169	2.52	1.8	74.4	23	2.2	13.5	2.1	.2	1	6	5.2	9.7	61.1	2.4	.06	2.73
9250	.22	.018	6.2	17.0	.55	10	.158	6.61	.159	2.59	1.6	60.6	18	2.0	9.5	2.6	.3	1	6	8.1	8.8	61.1	2.0	.06	2.49
9251(rock)	39.21	.005	.8	1.2	.19	15	.003	.38	.007	.03	.1	1.1	1	<.1	3.5	.1	<.1	<1	<1	3	<.1	1.0	.1	.01	2.90
9252(culp)	14.55	.105	38.1	72.6	1.55	555	.272	4.37	.507	.82	30.6	35.9	42	6.6	18.3	2.3	.2	<1	10	17.0	.4	23.0	1.3	2.12	-
9253(culp)	2.76	.027	5.4	44.5	.51	139	.173	4.35	.930	1.65	.9	8.0	12	2.6	5.5	.9	.3	1	3	9.3	1.5	31.8	.3	19	-
9254	.19	.007	2.7	45.3	.38	8	.077	6.66	.365	3.07	.5	65.1	10	1.5	6.8	1.2	.1	<1	8	7.5	>10	59.5	1.9	.09	2.45
9255	.24	.013	4.7	85.4	.45	16	.304	8.89	.458	4.01	.7	65.4	12	1.6	8.1	1.2	.1	1	13	6.2	6.5	70.8	2.4	.13	2.35
9256	.58	.027	12.5	26.2	.99	22	.219	8.99	.309	3.57	1.9	102.5	32	2.3	11.5	4.3	.4	1	9	12.9	4.3	73.7	1.4	.13	2.36
9257	1.19	.050	11.9	39.2	2.36	45	.292	8.00	.223	3.26	1.4	57.2	31	1.7	8.7	3.6	.3	1	13	27.4	2.2	59.7	1.8	.12	2.63
9258	3.15	.033	14.5	37.0	2.29	43	.270	6.38	.244	1.50	2.0	52.2	32	2.0	9.5	3.9	.4	1	12	27.9	2.5	65.4	2.1	.12	2.98
9259	.21	.031	6.0	24.8	.57	15	.191	7.53	.076	1.30	.7	55.6	22	1.7	5.0	2.9	.3	1	12	9.1	4.7	67.0	2.4	.02	2.43
9260	.45	.029	8.7	17.2	.58	15	.159	7.34	.529	3.49	3.5	56.5	23	2.1	9.7	3.3	.3	1	9	9.5	5.7	69.3	2.2	.04	2.31
9261	.40	.017	3.8	19.1	.43	9	.122	6.52	.858	2.61	1.3	67.7	12	1.6	5.5	2.4	.2	1	7	8.2	9.6	52.5	2.4	.07	1.85
9262	.15	.001	1.6	26.8	.16	3	.028	3.11	.813	.96	.8	20.3	5	1.0	3.0	.4	<.1	<1	3	3.9	>20	22.1	.8	.16	1.53
9263	1.82	.015	8.9	9.4	1.24	11	.119	5.05	.783	2.26	1.4	63.2	22	1.6	9.5	2.3	.2	1	7	7.4	7.9	47.8	2.1	.10	3.05
9264	2.60	.030	11.2	7.5	.58	17	.082	6.23	3.492	.61	1.3	42.9	25	1.1	12.8	1.9	.2	<1	7	2.8	4.1	20.6	1.1	.05	2.10
9265	.07	.004	3.2	84.6	.32	5	.089	6.59	.579	2.83	.7	67.3	13	1.9	7.7	3.1	.1	1	12	7.4	>10	55.5	2.7	.18	2.14
9266	.19	.007	6.0	34.1	.43	13	.312	6.95	.335	3.04	2.1	79.6	15	1.8	9.5	1.9	.2	1	8	9.7	7.6	66.2	1.1	.26	2.12
9267	.06	.005	7.3	21.9	.42	17	.119	7.05	.333	3.37	1.5	87.2	22	2.1	10.4	2.6	.2	1	7	10.2	5.5	69.3	2.3	.21	2.60
9268	.46	.013	4.9	35.9	.40	11	.302	7.04	1.458	2.49	2.1	70.6	14	1.7	9.4	1.7	.2	<1	8	8.3	9.3	51.3	2.6	.12	2.31
STANDARD DST6/OXL34	2.24	.067	27.7	256.5	1.02	725	.431	7.04	1.708	1.47	7.7	51.0	53	5.5	13.9	8.5	.8	3	11	25.4	<.1	55.9	1.9	5.53	-

Sample type: DRILL CORE R150. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data ___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm
9269	26.0	>10000	3251.5	>10000	>200	27.0	5	592	4.16	84	7.0	2	1.6	515	420.3	25.9	.2	67	4.57	.035	1.8	15.0
9270	14.0	1147.3	245.0	2529	2.2	27.0	10	68	28.95	46	1.1	<1	5	28	12.0	2.2	2.4	37	.18	.005	9	62.7
9271	14.2	2025.9	47.6	1062	3.1	45.1	21	455	5.65	33	1.2	<1	3.1	62	3.0	2.1	1.0	103	.42	.044	13.6	76.8
9272	4.4	405.5	387.0	1552	2.0	28.2	15	1859	4.49	16	1.7	<1	2.5	55	5.5	2.4	3	113	2.05	.039	11.3	49.4
9273	.5	303.1	5.5	301	1.5	23.3	12	1522	4.61	2	.5	<1	3.0	105	2	.5	3	154	1.80	.050	15.1	47.9
9274	3.1	244.9	196.2	418	7.5	28.2	19	664	3.52	20	2.0	<1	3.0	73	1.3	1.5	3	109	1.14	.043	13.7	34.0
9275	6.1	300.5	178.3	537	8.9	29.5	21	1054	3.09	27	1.1	<1	2.4	36	1.9	4.6	3	111	2.09	.040	9.4	33.8
9276	1.5	214.2	121.5	330	7.5	25.6	18	1173	3.26	25	1.7	<1	3.4	114	7	.3	3	104	2.21	.041	13.8	25.6
9277	2.6	210.5	350.0	1090	7.4	31.1	20	1266	3.40	36	2.6	1	2.7	104	2.2	4.8	3	118	2.70	.045	12.0	34.3
9278	5.2	265.1	282.5	2282	5.3	14.6	10	379	4.54	49	1.9	<.1	2.7	64	1.1	16.5	.2	57	.57	.020	9.1	19.2
9279	5.6	55.7	86.1	152	2.0	4.1	4	349	4.31	13	2.0	<.1	3.0	70	5	3.4	1.3	12	.58	.019	13.2	4.9
9280	5.5	169.6	16.7	97	1.3	6.0	5	261	6.64	8	1.1	<1	2.3	59	2	1.2	1.9	22	.57	.031	10.4	7.0
9281	17.4	211.6	65.2	3045	3.4	25.9	12	82	8.13	58	5.5	1	3.3	77	12.1	3.8	1.7	63	.10	.005	7.1	42.7
9282	7	185.1	239.6	295	2.2	2	2	527	1.27	2	3.5	2	4.7	470	1.5	7	1	17	.75	.020	14.3	7
9283	5.3	1231.3	247.4	9795	7.7	5.9	6	385	3.77	17	1.1	<1	1.9	73	37.2	3.3	3	33	.81	.022	9.3	7.6
9284	3.9	1004.9	85.1	345	1.9	3.3	3	723	5.30	15	.5	<.1	2.0	67	1.1	1.5	7	9	1.51	.023	10.9	1.5
9285	4.9	1175.0	34.9	1290	4.3	27.3	20	853	6.38	42	1.7	<1	1.5	65	3.2	1.6	9	175	1.19	.044	8.1	43.7
9286	4.1	79.7	29.8	119	1.0	1.6	3	60	4.00	12	1.1	<1	3.1	62	3	1.0	7	14	.21	.023	17.4	6.6
9287	4.4	2186.5	252.3	1001	5.0	15.7	8	533	4.30	17	1.4	<1	2.7	68	3.0	1.7	4	48	1.53	.021	12.6	27.9
RE 9287	4.8	2116.1	238.0	1004	4.7	15.3	6	513	4.25	17	1.4	<.1	2.6	66	3.1	1.4	5	46	1.50	.021	12.6	26.1
RRE 9287	3.9	2101.4	246.0	1167	4.9	15.6	8	503	4.15	18	1.2	<1	2.5	67	5.8	1.5	5	47	1.49	.022	11.7	26.9
9288	6.1	2398.9	760.1	6177	12.0	28.9	20	955	7.15	36	.8	1	1.1	97	21.3	4.4	2	181	1.79	.035	4.1	23.4
9289	9.4	1990.4	461	>10000	12.2	31.0	29	1178	6.92	36	1.4	1	1.6	97	34.7	7.9	1	163	1.58	.035	4.4	32.2
9290	4.5	428.7	121.6	664	2.1	56.1	26	1354	4.80	25	1.6	<1	3.3	104	3.1	2.2	5	60	1.70	.032	14.2	96.1
9291	9.4	1238.6	87.1	1575	2.9	31.0	24	695	6.54	39	2.5	<1	2.8	27	5.2	2.6	8	95	.97	.025	6.8	47.7
9292	9.0	1315.5	137.8	1866	2.7	25.7	22	755	6.28	76	1.0	<1	1.4	81	5.6	4.9	1.0	197	1.02	.040	4.8	46.6
9293	5.2	1679.9	270.4	1496	3.7	25.4	15	1085	5.16	35	.8	<1	1.4	111	5.7	2.1	9	140	1.93	.007	5.9	47.8
9294	7.5	1091.4	369.9	2642	2.4	71.5	21	1046	5.14	24	1.1	<1	2.2	270	12.7	1.5	4	121	4.34	.043	10.5	143.8
9295	35.8	>10000	1088.5	>10000	11.5	16.4	6	315	4.63	48	3.1	1	1.9	55	57.1	7.5	7.9	58	.96	.017	4.5	10.7
9296	15.4	3626.6	67.5	1290	3.5	1.7	1	67	5.40	45	.7	<1	1.2	21	6.9	2.7	2.4	10	.13	.002	5.4	5.6
9297	6.0	1253.6	87.6	655	1.6	1.5	3	234	3.73	16	.8	<1	2.0	41	2.9	1.6	1.0	30	.39	.011	10.2	2.7
9298	2.2	234.2	54.2	107	.5	1.5	2	433	3.95	15	1.9	<1	2.9	89	.3	2.0	3	4	.82	.020	17.9	3.7
9299	7.2	247.5	59.6	626	.5	6.3	4	264	2.97	14	3.0	<1	3.3	55	2.5	2.6	1	1	.35	.027	15.1	1.6
9300	1.1	532.6	6.6	63	.3	1.0	1	237	3.69	6	.6	<1	2.6	41	.1	.7	5	1	.21	.073	14.0	4.7
STANDARD DS5/OXL34	12.3	123.9	36.9	172	.4	20.2	13	597	4.06	23	7.5	<1	7.6	315	5.7	5.5	4.9	115	2.21	.097	26.5	262.2

SAMPLE#	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm	Au** gm/mt	Sample kg
9269	.49	11	.100	5.05	2.225	1.24	3.8	101.4	6	1.7	14.9	2.2	2	<1	6	4.4	>10	22.2	3.7	.20	1.83
9270	.22	3	.035	3.71	.403	1.74	4	26.6	4	1.5	4.0	6	1	<1	7	4.6	>10	36.0	.9	.12	2.38
9271	1.95	40	.318	9.21	.478	3.51	2.9	57.9	27	1.7	9.6	3.3	.3	1	17	33.1	4.4	64.2	2.2	.36	.67
9272	2.59	57	.296	7.75	.531	3.18	1.5	55.9	27	2.0	10.6	3.4	3	1	15	29.6	2.5	61.8	2.1	.03	1.76
9273	2.59	2278	.387	8.21	.413	2.96	1.7	34.7	33	1.8	9.6	3.5	3	1	20	38.8	<.1	57.9	1.2	.36	2.51
9274	1.44	53	.217	7.16	.227	3.36	.8	76.7	27	1.7	10.4	2.7	2	1	14	19.0	2.2	53.0	2.5	.06	2.20
9275	1.56	41	.206	6.69	.310	3.23	1.4	66.4	24	1.5	5.9	2.3	2	1	14	11.7	3.0	58.5	2.3	.07	2.46
9276	2.28	69	.210	9.04	.560	3.51	.9	68.4	31	2.4	13.5	4.0	3	2	13	25.6	2.0	66.9	2.6	.04	2.45
9277	2.33	49	.240	7.60	.501	3.52	1.5	91.1	29	2.2	13.4	3.5	3	1	14	27.0	2.6	60.6	3.1	.12	2.47
9278	.65	21	.178	7.16	.525	3.19	1.1	81.4	26	2.0	10.4	3.2	.3	1	10	9.1	5.0	55.1	2.7	.13	2.47
9279	.82	23	.123	7.39	.334	3.36	1.6	95.5	33	2.4	13.5	3.4	3	1	7	12.2	4.6	62.5	3.0	.05	2.72
9280	.94	15	.113	7.55	.335	2.30	.9	59.8	79	2.6	10.6	2.6	3	1	7	11.1	8.3	64.4	2.0	.53	1.91
9281	.33	13	.113	8.09	.599	2.13	2.2	90.9	23	2.0	11.5	2.0	2	1	5	9.6	5.6	56.2	3.4	.12	2.66
9282	.60	103	.160	5.79	.779	2.77	3.9	132.1	33	2.5	15.3	5.1	6	1	4	7.9	7	49.6	4.3	.06	2.65
9283	.72	22	.151	6.63	.300	3.09	1.7	45.5	26	2.2	9.7	3.3	3	1	8	10.0	4.3	59.2	1.5	.08	2.32
9284	.79	20	.178	6.51	.519	3.23	.9	39.1	30	2.6	5.9	3.6	3	1	6	8.9	5.7	63.2	1.2	.04	2.91
9285	2.24	19	.234	7.72	.344	3.35	2.7	55.5	21	1.5	9.5	2.1	2	2	21	34.5	6.1	63.7	1.7	.08	2.64
9286	.69	35	.124	5.52	.254	4.75	1.0	55.1	45	3.3	10.6	5.0	5	2	8	11.9	4.2	92.1	1.7	.03	2.13
9287	1.36	25	.160	7.10	.195	3.48	1.5	55.9	32	2.2	11.0	3.0	3	1	10	14.5	4.2	65.9	2.8	.05	3.35
RE 9287	1.15	27	.165	7.05	.178	3.52	1.9	61.8	31	2.1	11.5	3.2	3	1	10	13.3	4.1	66.0	2.0	.04	-
RRE 9287	1.03	29	.165	7.03	.180	3.60	1.1	58.9	30	2.2	11.0	3.0	3	1	10	13.4	4.2	67.3	1.8	.25	-
9288	1.53	15	.229	6.55	.235	3.45	2.1	32.0	12	1.2	6.2	1.6	1	1	21	15.7	8.5	65.9	1.1	.14	2.66
9289	1.54	16	.224	7.25	.237	3.44	2.1	52.8	14	1.3	9.8	1.8	2	1	21	11.1	7.9	67.3	1.7	.16	2.60
9290	2.56	42	.222	7.96	.234	3.37	2.0	74.7	34	2.1	12.4	3.8	4	1	13	37.3	3.1	63.6	2.3	.05	2.41
9291	1.24	15	.209	8.47	.390	4.21	1.5	97.5	19	2.2	13.6	3.3	2	1	14	14.4	6.6	77.2	3.0	.09	2.61
9292	2.04	31	.295	8.38	.164	3.65	2.6	45.2	14	1.2	7.5	2.0	2	1	25	26.4	5.6	69.8	1.6	.07	2.50
9293	2.23	26	.202	6.24	.130	2.75	1.6	53.5	19	1.1	7.7	1.8	2	1	19	95.7	4.1	53.6	1.1	.05	2.48
9294	2.46	39	.229	6.22	1.193	1.55	1.6	53.1	24	1.4	11.4	2.6	3	1	15	42.2	3.5	29.6	1.7	.04	.75
9295	.74	12	.117	6.04	.179	3.11	2.9	81.5	14	2.1	9.8	1.9	2	1	8	7.4	7.6	59.7	2.8	.17	2.46
9296	.25	13	.043	2.54	.052	1.31	1.6	24.9	14	.9	4.7	1.1	1	<1	2	4.9	6.1	26.4	.8	.05	2.21
9297	.99	24	.097	5.25	.066	2.49	1.0	42.0	25	1.6	7.5	2.6	.2	1	4	12.4	3.6	49.9	1.2	.06	2.27
9298	1.24	26	.095	6.83	.205	3.23	1.1	91.1	32	2.4	11.3	2.5	3	1	6	12.5	3.7	65.8	3.1	.07	2.26
9299	.97	34	.123	7.07	.127	3.52	[illegible]	113.0	38	2.3	13.1	3.3	3	1	6	13.9	2.7	70.9	3.5	.01	2.30
9300	2.04	27	.095	7.09	.119	3.33	1.2	45.4	35	2.3	8.4	2.6	3	1	6	15.8	3.3	67.9	1.5	.02	2.29
STANDARD DS5/OXL34	1.06	728	.430	6.83	1.726	1.49	7.5	50.6	54	6.3	15.8	8.9	8	2	12	25.8	<.1	55.0	1.9	5.98	-

Sample type: DRILL CORE R150. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data ___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppb	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm
9303?core	.1	2.0	1.2	8	<1	2.0	<1	119	.06	2	1.1	<1	<.1	223	.3	.1	<.1	1
9306?dupl.	127.5	217.7	85.6	142	2.4	57.5	62	3787	9.07	565	3.6	5.9	7.8	381	4	17.5	11.8	114
9303?dupl.	46.1	4145.1	>10000	>10000	107.0	6.3	4	1132	2.52	224	.7	2	1.5	260	108.6	145.2	4.4	45
9304	4.9	270.5	41.1	134	5	2.1	1	82	5.73	11	.5	<1	2.2	36	.4	.9	1.3	4
9305	2.4	50.3	62.2	156	4	3.5	2	229	4.72	4	.5	<1	3.1	45	.1	.7	1.5	4
9306	6.3	1624.3	37.9	165	6	4.9	3	560	3.90	6	1.3	<1	3.0	75	1.0	1.7	9	12
9307	6.8	54.3	36.0	204	7	4.1	3	159	5.72	17	2.2	<1	3.1	60	1.2	2.2	1.9	5
9308	7.0	19.2	13.5	70	4	2.7	2	73	6.59	13	1.5	<1	2.9	49	.3	1.8	2.5	5
9309	4.0	339.5	6.5	55	2	2.7	3	243	4.05	8	.9	<1	2.5	48	.1	1.2	.5	4
9310	3.5	192.5	6.7	67	2	3.4	3	139	4.77	10	.7	<1	2.4	43	.1	1.3	.5	3
9311	3.8	362.2	3.2	47	2	3.6	3	97	5.03	11	.6	<1	2.4	42	.1	1.4	.6	7
9312	4.7	348.6	9.7	57	2	2.1	3	140	5.59	11	.7	<1	2.0	46	.1	1.6	.6	7
9313	6.8	18.7	10.9	38	2	4.1	3	160	5.00	5	2.5	<1	2.8	49	.2	.9	.7	15
RE 9313	6.7	15.2	6.5	38	2	3.7	3	145	4.98	5	2.5	<1	2.9	46	.2	.8	.9	16
RRE 9313	6.4	16.8	7.6	36	2	3.1	2	135	4.71	5	2.7	<1	2.8	45	.2	.7	.7	15
9314	8.0	48.9	41.5	126	18	14.0	6	599	6.26	15	2.5	<1	2.7	70	.3	1.4	4.6	9
9315	3.5	27.3	15.7	114	2	7.9	4	470	5.77	6	.9	<1	1.3	35	.1	1.1	.5	15
STANDARD DST6/AU-1	12.3	130.5	34.2	180	4	31.8	13	989	3.58	25	7.3	<1	6.9	301	5.5	5.4	4.7	134

SAMPLE#	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm	Au** gm/mt	Sample kg
9303?core	>40	.007	1.3	5.7	.21	11	.002	.07	.008	.01	.1	.5	.1	1	7.3	<.1	<.1	<1	<1	2	.1	7	<.1	.01	2.69
9306?dupl.	15.70	.353	37.8	57.7	1.38	49	.254	4.57	.889	.89	2.1	45.0	49	3.4	18.5	2.5	2	1	12	14.9	2.2	27.6	1.9	5.74	.
9303?dupl.	2.59	.027	5.6	42.0	.51	216	.077	4.45	.925	1.79	.9	5.4	22	2.8	5.5	1.2	1	1	3	5.6	1.5	32.9	.3	22	
9304	.24	.024	11.1	5.6	.59	15	.075	7.35	.102	3.76	3.2	29.5	29	2.5	6.2	<.1	2	1	6	8.7	5.5	79.5	1.1	.03	2.51
9305	.70	.029	21.3	5.1	1.28	30	.077	6.85	.150	3.56	2.5	29.8	51	2.6	7.3	1.7	.1	2	7	19.5	4.1	93.5	1.0	.01	2.24
9306	.94	.020	15.1	3.5	1.47	25	.072	7.91	.197	3.47	2	59.0	35	2.4	13.9	1.7	1	1	6	22.1	3.3	71.3	3.3	.02	2.21
9307	.21	.019	11.2	5.6	.79	13	.074	7.40	.157	3.76	3.3	112.5	29	2.2	13.5	1.7	1	1	6	16.2	6.3	73.7	3.8	.02	2.38
9308	.13	.017	13.5	1.6	.74	11	.071	7.32	.142	3.43	3	62.6	30	2.3	9.7	1.6	1	1	6	14.0	7.5	70.9	2.4	.02	2.31
9309	.36	.027	15.8	4.0	1.03	29	.089	8.58	.141	3.73	2.6	43.2	37	2.6	8.3	2.3	2	2	7	21.5	3.5	76.4	1.9	.01	2.90
9310	.21	.026	16.3	2.2	1.14	19	.086	7.46	.131	3.68	3	35.4	40	2.3	7.8	2.2	2	1	6	23.4	4.5	73.8	1.3	.01	2.68
9311	.17	.027	14.4	3.1	.79	14	.101	7.82	.124	3.65	3.3	32.7	35	2.5	7.5	2.7	2	2	5	16.0	4.9	73.8	1.7	.02	2.43
9312	.28	.030	10.2	2.7	.92	11	.077	7.39	.132	3.37	2	35.6	25	2.1	6.7	1.9	1	1	5	16.4	6.5	68.4	1.3	.02	2.49
9313	.21	.023	17.0	5.8	.66	16	.095	6.36	.131	3.12	4.1	63.7	28	2.1	10.7	2.0	2	1	5	11.6	5.1	67.8	3.3	.01	1.91
RE 9313	.31	.020	12.5	7.0	.66	15	.093	4.09	.126	3.13	3.6	66.5	25	2.0	10.8	2.3	2	1	5	11.5	5.1	59.5	3.0	<.01	.
RRE 9313	.31	.028	11.4	2.9	.63	14	.079	6.08	.131	3.04	3	61.5	28	2.0	9.5	2.1	2	1	5	11.0	5.0	58.6	3.0	<.01	.
9314	1.29	.018	13.7	4.4	7.29	11	.055	5.29	.103	2.04	3.5	77.0	32	1.4	10.5	1.2	1	1	4	26.7	9.7	41.9	2.9	.04	1.88
9315	1.14	.027	15.9	7.4	1.71	20	.147	7.62	.152	3.49	.9	51.4	44	2.7	9.6	3.5	3	2	7	22.8	2.9	66.9	1.6	<.01	2.58
STANDARD DST6/AU-1	2.26	.103	26.3	260.2	1.03	679	.422	6.59	1.715	1.50	5.1	47.9	52	6.7	15.0	8.7	3	4	11	24.8	[illegible]	59.0	1.9	5.36	.

Sample type: DRILL CORE R150. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

 Data ___ FA ___

ACME A TICAL LABORATORIES LTD. 852 E. HASTINGS ST. COUVER BC V6A 1R6 PHONE(604)253-3158 FAX(60' '53-1716
(I.. 001 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Roca Mines Inc. File # A503627
500 - 1045 Howe St., Vancouver BC V6Z 2A9 Submitted by: John Mirko

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm
9123	.5	15.4	6.1	109	.1	10.1	7	680	3.66	5	1.2	<.1	2.7	286	.3	.8	.1	97	1.58	.107	27.3
9124	6.3	53.0	23.0	292	1.6	60.9	7	415	3.97	62	3.1	<.1	1.9	149	1.7	6.5	.2	141	1.22	.170	15.5
9125	3.9	29.7	24.1	362	1.7	38.6	8	455	3.25	41	2.0	<.1	2.4	123	1.6	4.7	.1	122	1.65	.059	14.2
9126	.9	6.4	4.3	91	<.1	3.7	3	710	3.10	12	1.6	<.1	6.8	157	.1	1.0	.1	39	.78	.135	41.0
9127	6.5	116.5	5.7	78	.4	42.8	13	1416	3.73	14	1.8	<.1	2.1	57	.2	1.0	.1	131	3.31	.178	13.6
9128	12.5	48.5	5.5	123	.4	66.3	22	2259	5.05	12	1.8	<.1	1.5	39	.3	1.0	.1	159	4.36	.142	16.2
9129	1.0	50.5	3.9	142	.1	71.3	29	2530	5.29	7	1.1	<.1	1.2	126	.3	.5	.1	351	5.61	.057	8.7
9130	4.0	29.2	5.2	90	.5	42.9	17	703	3.27	12	1.7	<.1	2.1	45	.2	1.3	.2	141	1.74	.092	14.7
9131	.4	1.6	2.9	61	<.1	.5	2	875	1.99	1	1.0	<.1	4.1	94	.1	.4	<.1	5	2.39	.024	20.0
9132	.4	4.0	4.7	59	.1	3.3	2	211	1.84	<1	.8	<.1	5.5	103	<.1	.7	<.1	17	.73	.027	24.6
9133	.3	.6	7.2	44	<.1	2.5	2	962	2.95	2	1.3	<.1	4.7	274	.1	.9	<.1	9	1.56	.020	20.5
9134	5.1	29.8	74.9	261	.4	7.5	11	891	2.07	34	3.2	<.1	5.0	564	.3	1.4	.1	38	1.59	.036	27.9
9135	1.7	12.9	33.2	110	.4	1.5	3	1564	1.64	2	3.3	<.1	6.1	165	.5	.6	.2	25	2.57	.033	24.9
9136	.4	6.3	39.1	156	.2	6.2	5	697	2.01	1	1.2	<.1	4.1	149	.3	.6	<.1	21	1.49	.027	29.0
RE 9136	.5	5.5	35.0	149	.2	6.3	6	696	2.00	2	1.3	<.1	4.5	150	.2	.8	<.1	24	1.47	.026	27.2
RRE 9136	.4	5.1	18.5	143	.1	5.2	6	624	1.90	2	1.4	<.1	3.9	124	.3	.9	<.1	25	1.27	.026	27.8
9137	.2	.8	4.1	42	<.1	2.5	2	785	2.01	2	.8	<.1	4.2	102	.1	.4	<.1	26	1.55	.023	29.1
9138	.4	5.3	15.3	234	.2	5.0	4	461	2.59	1	1.2	<.1	4.6	124	.1	1.1	<.1	74	.93	.037	52.2
9035	.5	2.9	3.0	42	.1	5.8	1	569	1.84	<1	1.2	<.1	4.6	124	.1	.9	<.1	12	3.60	.014	19.9
9037	.1	32.3	4.5	85	<.1	35.6	23	730	6.84	2	.1	<.1	.3	71	<.1	1.6	.1	74	2.64	.037	2.6
9736	.4	25.5	8.9	173	.1	26.4	9	397	3.02	2	.6	<.1	3.5	102	.2	.6	.1	47	1.75	.030	21.1
STANDARD DST6	13.2	125.1	35.4	175	.3	79.6	13	972	3.94	25	7.1	<.1	7.3	283	5.7	5.5	4.5	119	2.23	.096	26.7

SAMPLE#	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm	Sample kg
9123	45.8	2.45	1059	.316	8.59	4.277	1.51	.3	74.4	54	2.2	21.0	15.0	1.5	3	14	33.5	.4	35.1	2.4	2.49
9124	45.4	1.02	42	.130	3.92	.729	1.34	3.5	59.6	23	.8	11.3	2.1	.2	1	10	14.4	1.7	29.6	2.3	3.38
9125	22.3	1.78	53	.209	5.31	1.051	1.51	.4	50.3	24	1.1	9.0	2.2	.2	2	14	22.9	1.3	32.7	2.0	4.30
9126	5.4	2.05	875	.240	7.66	2.170	2.65	1.4	104.5	83	3.9	17.8	50.3	4.2	4	5	24.0	.4	54.5	4.7	2.35
9127	35.5	1.63	370	.297	5.33	.354	2.40	.6	62.9	23	.9	14.2	5.3	.4	<1	14	18.0	1.3	45.0	2.0	2.36
9128	61.2	2.23	457	.402	6.23	.373	2.81	1.9	62.4	25	1.9	15.9	8.5	.7	1	18	13.7	1.3	52.9	2.0	2.34
9129	89.8	2.94	455	.517	6.40	.090	2.62	.4	33.5	16	.9	13.8	3.7	.3	2	22	18.4	.4	45.1	1.1	2.46
9130	28.1	1.21	284	.275	5.16	.045	2.41	2.4	66.7	25	.9	12.5	4.6	.4	1	14	11.2	1.1	41.2	2.4	1.62
9131	2.0	.66	507	.141	6.45	1.349	2.24	.4	62.2	45	2.1	15.9	5.2	.4	<1	7	9.5	<.1	37.0	3.1	2.53
9132	4.9	.67	816	.201	7.13	1.175	2.22	2.5	64.1	49	2.0	15.6	6.8	.6	1	4	16.4	<.1	42.6	2.9	2.36
9133	1.3	1.04	1096	.177	6.75	.873	1.76	.7	49.7	40	2.2	12.7	5.4	.4	2	4	19.4	<.1	39.0	2.5	3.59
9134	4.3	.60	1672	.235	8.28	2.475	2.54	4.0	151.7	57	2.9	22.7	6.7	.7	2	6	11.5	.4	56.5	4.7	2.42
9135	2.5	1.05	2001	.206	8.05	1.927	2.90	2.1	171.7	50	2.9	22.9	7.1	.6	3	6	7.7	<.1	67.1	5.5	1.48
9136	4.8	.95	1961	.206	7.95	1.878	2.54	4.0	94.5	55	2.1	16.9	5.6	.5	1	7	13.0	<.1	57.5	2.6	2.27
RE 9136	5.8	.95	1959	.206	7.89	1.934	2.04	3.3	84.5	54	1.9	16.4	5.4	.5	2	6	13.5	<.1	59.1	2.5	-
RRE 9136	3.9	.81	1728	.213	7.82	1.841	2.73	2.1	96.5	55	1.9	16.6	5.5	.5	2	7	12.0	<.1	58.8	2.7	
9137	5.2	.45	780	.170	6.92	.212	3.31	1.3	75.9	50	1.9	11.5	6.1	.5	2	7	6.6	<.1	49.2	2.8	2.18
9138	3.0	.83	2194	.228	8.26	1.310	3.15	2.3	95.2	65	2.3	16.9	6.3	.5	2	7	13.7	<.1	67.4	3.1	2.72
9035	2.6	2.04	329	.176	5.66	.424	2.62	2.4	103.8	35	2.1	17.5	5.5	.5	2	5	15.4	<.1	42.4	3.5	1.52
9037	83.4	2.42	1169	.335	8.26	.645	3.50	.4	1.6	8	.4	6.3	.5	<.1	1	35	21.0	<.1	71.3	.1	1.78
9736	33.7	2.17	1270	.259	7.62	1.320	2.13	1.5	49.9	43	1.7	9.4	5.8	.4	2	10	34.4	<.1	39.6	1.6	2.34
STANDARD DST6	253.1	1.01	578	.416	6.84	1.677	1.45	7.5	50.5	53	6.7	15.4	8.7	.7	4	17	24.7	<.1	59.2	1.8	-

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HCLO4-HNO3-HCL-HF TO 10 ML. (>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY. FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-MS.
- SAMPLE TYPE: DRILL CORE R150 Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data FA ____ DATE RECEIVED: JUL 20 2005 DATE REPORT MAILED: Aug. 3/05

BRITISH COLUMBIA CERTIFIED ASSAYER
Clarence Leong

SGS Lakefield Research Limited
P.O. Box 4300 - 185 Concession St.
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ACME Analytical Laboratories Ltd.
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Tuesday, August 16, 2005

Date Rec. : 08 August 2005
LR Report : **CA09462-AUG05**
Client Ref : A503628-Roca Mines Inc

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
1: 9131	69.3	12.7	2.90	1.55	3.28	1.71	2.56	0.26	0.06	0.12	< 0.01	< 0.01	5.38	99.8
2: 9236	63.7	12.8	2.60	3.47	5.07	0.49	2.65	0.27	0.03	0.07	< 0.01	< 0.01	8.98	100.1
3: 9237	50.1	16.6	9.88	4.16	3.74	1.02	4.04	0.85	0.03	0.10	0.02	< 0.01	8.32	98.8

Debbie Waldon
Project Coordinator,
Minerals Services, Analytical

Online LIMS

Email: wszeto@acmelab.com

ACME A[illegible]TICAL LABORATORIES LTD. 852 E. HASTINGS ST. [illegible]COUVER BC V6A 1R6 PHONE(604)253-3158 FAX(6[illegible]53-1716
(IS[illegible]9001 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Roca Mines Inc. File # A503281

500 - 1045 Howe St., Vancouver BC V6Z 2A9 Submitted by: John Mirko

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm
A153801	6	79.7	20.8	156	.2	36.3	20	1409	5.17	14	9	<.1	3.9	405	.2	.7	.2	161	7.68	.105	26.5
A153802	3	20.9	9.3	14	.1	10.0	3	266	.93	3	1	<.1	6	170	<.1	.7	.2	46	.47	.064	4.5
A153803	2	6.6	4.2	45	.1	20.4	4	513	2.13	1	1	<.1	1.4	320	<.1	.3	.2	74	1.76	.059	9.5
A153804	6	156.9	10.5	92	.3	60.8	42	723	6.77	16	1.1	<.1	3.9	139	<.1	1.8	.1	271	3.24	.134	20.9
A153805	1	64.8	9	73	<.1	143.5	41	1347	5.78	2	1	<.1	.1	244	.2	.2	<.1	221	13.13	.061	4.1
RE A153805	1	63.5	9	72	<.1	145.4	42	1369	5.56	1	1	<.1	.2	240	.1	.4	<.1	232	13.36	.063	4.5
A153806	6	9.7	4.4	64	.1	7.0	6	574	2.39	1	3	<.1	2.6	133	[illegible]	.1	.1	35	.49	.128	9.5
A153807	1	11.6	3.1	102	.1	4.5	14	1136	4.60	2	3	<.1	1.6	215	<.1	.1	.1	101	1.49	.091	10.0
A153808	2	12.3	2.6	95	<.1	6.2	7	632	3.73	<1	3	<.1	2.2	355	<.1	.1	<.1	69	1.04	.050	12.[illegible]
A153809	2	7.1	5.2	63	.1	3.8	4	758	3.01	1	6	<.1	3.0	730	<.1	.3	.1	71	.64	.030	10.7
A153810	1	99.8	17.3	45	.2	30.1	10	968	2.34	1	1	<.1	5	280	<.1	.2	.4	97	.67	.041	8.4
A153811	8	92.6	26.9	64	.3	35.5	11	1344	2.27	11	1	<.1	1.1	188	.1	.5	.2	119	1.06	.012	7.8
A153812	6	60.0	9.5	57	.3	42.5	35	995	7.92	20	<.1	<.1	2.0	144	<.1	.4	.2	45	1.44	.042	16.0
A153813	1	2.9	1.6	94	<.1	6.5	5	599	3.39	1	4	<.1	2.6	27	<.1	.1	<.1	42	.28	.025	12.5
A153814	1	254.1	5.5	424	.2	6.8	11	2719	6.27	[illegible]	1	<.1	1.8	134	.2	.2	.2	75	2.73	.039	12.2
A153815	4	6.6	5.1	24	.1	5.9	4	992	3.11	<1	6	<.1	2.4	293	.1	.2	.1	11	1.55	.095	14.4
A153816	<.1	6.5	2.4	116	<.1	9.8	7	364	3.68	<1	2	<.1	2.0	152	.1	.3	.1	35	1.10	.026	19.9
A153817	5.1	18.5	5.[illegible]	77	.7	15.3	9	787	3.61	16	1.1	<.1	1.8	101	<.1	1.8	.1	122	.59	.106	11.7
A153818	2	17.0	2.7	101	.1	5.0	9	351	4.35	2	9	<.1	2.9	179	.1	.2	<.1	65	1.07	.037	14.5
A153951	2	15.0	5.8	82	.1	12.7	8	537	3.53	4	2.1	<.1	5.0	119	.1	.3	.1	72	1.26	.037	16.7
A153952	5.4	22.0	18.4	52	.7	11.2	2	117	2.92	41	.5	<.1	1.0	54	.1	2.2	.1	171	1.57	.026	3.6
A153953	10.0	20.4	15.7	92	.4	16.2	3	147	3.22	39	.4	<.1	1.7	36	.1	1.0	.1	93	.83	.024	6.0
A153954	5	11.7	2.5	101	.1	17.1	13	568	4.11	1	4.8	<.1	2.4	145	.1	.3	.1	84	1.15	.073	6.4
A153955	2	2.6	10.0	113	.6	29.3	11	797	4.85	1	2.4	<.1	1.1	565	.2	.5	.1	130	3.56	.150	10.3
A153956	4.0	18.7	5.2	93	.3	20.5	16	526	1.74	4	2	<.1	1.3	23	<.1	.4	1.4	233	.42	.077	4.8
A153957	2.2	390.9	24.5	65	1.3	21.9	23	694	8.60	3	.3	<.1	1.1	66	.2	.6	3.6	196	1.36	.069	12.5
A153958	7	19.4	5.4	57	3.4	4.4	2	734	2.35	<1	4.7	<.1	4.6	75	.3	.1	1	150	1.20	.035	20.9
A153959	2.3	4.0	9	46	<.1	9	11	1146	6.60	2	7	<.1	1.5	215	<.1	.1	<.1	88	1.97	.277	24.3
STANDARD DST6	12.1	123.9	35.6	173	.3	33.7	13	969	4.01	75	7.6	<.1	7.7	299	6.0	5.4	4.8	119	2.73	.095	27.0

SAMPLE#	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm
A153801	47.5	2.26	4694	.406	7.12	.638	1.37	.7	49.8	53	1.1	12.7	6.3	.4	1	17	34.3	.1	56.9	1.7
A153802	15.5	.08	332	.044	1.17	.295	.35	.1	10.8	7	.4	2.2	.8	.1	<1	3	4.9	.5	8.7	.2
A153803	21.9	.93	2599	.097	2.10	.414	.57	4.2	4.5	15	.4	6.3	1.5	.1	.1	6	10.4	.1	13.2	.2
A153804	40.6	1.62	1670	.476	8.82	1.125	3.32	.7	39.0	41	1.0	9.7	3.4	.3	1	27	24.2	.8	55.7	1.5
A153805	272.0	2.72	216	.692	6.67	2.742	.65	.1	7.7	10	.4	17.0	1.3	.1	<1	30	10.4	<.1	10.5	.5
RE A153805	265.7	3.37	225	.613	6.76	2.651	.61	.1	7.9	11	.5	17.2	1.3	.1	.1	33	20.9	<.1	10.6	.6
A153806	7.0	.75	743	.351	5.44	1.702	.69	3.0	39.5	42	1.0	9.9	1.9	.1	<1	10	13.8	<.1	14.8	.5
A153807	5.5	1.93	1135	.363	6.26	1.742	2.40	.7	14.0	12	1.2	11.8	1.6	.2	1	20	23.5	<.1	43.9	.7
A153808	7.4	1.69	1416	.297	7.10	2.645	1.76	.3	27.2	27	1.1	11.1	2.8	.2	1	16	24.7	<.1	35.7	1.2
A153809	7.2	1.00	1286	.243	6.76	2.389	2.03	1.7	21.9	31	1.7	17.0	2.7	.2	.1	17	17.6	<.1	35.6	.9
A153810	24.5	.62	626	.103	2.25	.476	.60	.3	6.7	12	.6	5.5	1.0	<.1	.1	7	7.5	.1	14.7	.2
A153811	27.8	.84	496	.103	2.15	.214	.55	.4	17.8	21	.4	4.3	1.6	.1	<1	6	11.5	.2	16.7	.5
A153812	23.7	.69	1170	.138	2.94	.024	.93	3.5	7.8	22	.6	5.9	2.4	.1	1	7	10.5	.1	23.8	.2
A153813	21.7	1.54	1179	.399	7.12	1.270	1.96	.3	32.2	29	1.4	6.8	3.4	.2	.1	14	25.7	<.1	35.4	1.1
A153814	22.6	2.72	757	.213	6.95	.627	.72	.2	13.7	28	1.6	9.1	1.2	.1	<1	19	69.6	.1	11.5	.5
A153815	12.2	.76	1708	.272	6.76	3.527	1.56	1.7	39.0	32	1.6	14.8	5.4	.2	.1	14	17.0	<.1	27.5	1.5
A153816	10.7	2.74	1002	.291	7.65	3.157	.90	.2	21.2	25	1.3	23.4	2.5	.2	.1	15	69.9	.1	15.2	.6
A153817	21.8	.93	231	.169	4.44	.968	1.08	.6	34.5	20	.7	6.6	2.5	.2	.1	11	21.0	.3	20.5	1.2
A153818	22.0	3.27	1455	.374	7.86	2.527	1.35	.9	45.8	32	1.7	21.0	3.0	.3	1	18	34.4	<.1	24.0	1.7
A153951	42.2	3.11	1063	.337	6.06	2.132	1.72	.5	52.9	34	1.7	23.8	7.1	.6	2	12	77.9	.1	34.2	1.8
A153952	26.6	1.06	1065	.139	3.98	.341	1.12	.1	25.4	7	.5	5.2	1.5	.1	.1	9	24.4	.3	24.4	1.0
A153953	22.4	1.86	899	.166	3.92	.252	.73	2.6	20.7	11	.5	7.1	1.9	.1	.1	9	56.3	.5	15.8	.9
A153954	40.1	1.67	586	.326	7.15	1.877	.84	.2	96.0	14	.8	13.5	2.4	.2	.1	15	57.8	.5	16.3	3.1
A153955	47.6	1.41	654	.503	7.91	1.879	1.00	.5	16.2	20	.8	31.6	2.7	.2	.1	24	42.2	<.1	23.9	.7
A153956	23.1	4.33	71	.332	7.16	2.711	.09	2.1	12.7	11	1.5	9.6	4.6	.3	.1	20	103.9	2.1	1.7	.4
A153957	12.7	2.72	29	.482	5.59	1.671	.59	.2	28.4	25	.7	16.2	3.1	.2	.1	18	45.1	3.5	7.6	1.9
A153958	16.9	1.43	1492	.275	7.61	1.708	2.01	.7	139.9	40	1.7	17.2	7.1	.5	1	10	24.9	<.1	37.5	4.0
A153959	9.2	1.70	152	.770	7.69	4.664	.13	1.3	46.1	55	1.5	27.3	10.4	.8	.2	14	17.9	<.1	2.3	1.6
STANDARD DST6	251.5	1.02	678	.420	6.89	1.652	1.45	7.6	49.9	53	6.3	15.3	9.4	.7	4	11	25.3	<.1	58.8	1.8

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HCLO4-HNO3-HCL-HF TO 10 ML. (>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY. FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-MS.
- SAMPLE TYPE: ROCK Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data ✓ FA ____ DATE RECEIVED: JUL 7 2005 DATE REPORT MAILED: July 25/05

BRITISH COLUMBIA CERTIFIED ASSAYER
Clarence Leong

SGS Lakefield Research Limited
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2038 FAX: 705-652-6441

ACME Analytical Laboratories Ltd.
Attn : Clarence K.M. Leong

852 East Hastings St.
Vancouver, B.C., V6A 1R6
Canada

Phone: 800-990-2263 604-253-3158
Fax:604-253-1716

Tuesday, August 02, 2005

Date Rec. : 21 July 2005
LR Report : **CA09836-JUL05**
Client Ref : A503282

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	SiO_2	Al_2O_3	Fe_2O_3	MgO	CaO	Na_2O	K_2O	TiO_2	P_2O_5	MnO	Cr_2O_3	V_2O_5	LOI	Sum
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1: A503282-153817	60.9	15.7	6.94	2.51	4.98	2.65	1.22	0.73	0.36	0.10	< 0.01	0.02	4.26	100.4
2: A503282-153951	63.6	15.3	4.73	4.95	1.63	2.66	1.90	0.45	0.08	0.06	< 0.01	< 0.01	4.30	99.7
3: A503282-153955	77.4	8.17	4.92	1.51	0.77	1.28	1.23	0.36	0.25	0.03	< 0.01	0.02	3.47	99.4
4: A503282-153958	68.6	14.8	3.19	2.43	1.69	2.34	2.68	0.42	0.08	0.03	< 0.01	0.02	3.59	99.9
5: A503282-153959	56.7	14.3	8.91	2.81	2.51	6.23	0.15	1.57	0.56	0.15	< 0.01	0.02	4.75	98.6

Debbie Waldon
Project Coordinator,
Minerals Services, Analytical

Cr-Line LIMS

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9001 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Roca Mines Inc. PROJECT FOREMORE File # A503633

500 - 1045 Howe St., Vancouver BC V62 2A9 Submitted by: John Mirko

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
A153632	1.7	13.6	5.5	40	.2	46.6	11	4495	17.30	9	1.0	<.1	.1	65	.1	.1	.1	51	7.20	.044	1.3	5.6	.77	81	.059	.60	.026	.04	4.0	5.4	2	.2	4.2	.1	<.1	<1	2	5.4	1.1	1.1	.1
A153633	.9	15.8	4.7	14	.2	6.1	3	7455	2.73	3	.4	<.1	.1	55	.1	.8	<.1	26	1.19	.007	.4	5.0	.48	134	.005	.43	.022	.06	.1	2.6	1	.1	1.4	.5	<.1	<1	1	3.8	1.7	1.4	.1
A153634	1.1	23.7	7.5	85	.6	20.7	2	421	2.56	23	1.8	<.1	1.9	64	.1	2.9	.1	90	.41	.040	10.6	29.4	.88	139	.107	4.34	.807	1.13	4.7	42.7	18	.7	5.7	1.3	.1	1	10	22.2	.4	27.6	1.4
A153635	4.3	28.6	4.3	117	.6	59.0	3	432	2.42	13	1.2	<.1	1.3	136	<.1	2.0	.1	60	1.15	.036	7.4	29.8	.60	110	.063	3.50	.657	.70	2	77.1	12	.6	7.6	1.1	<.1	1	7	15.4	.5	14.5	.9
A153636	1.3	35.2	5.9	114	.8	28.4	2	293	3.13	20	1.8	<.1	1.8	82	.2	2.6	.1	79	.43	.035	9.3	33.3	.77	97	.162	4.00	.667	.97	4.6	55.7	16	.7	5.6	1.1	.1	1	9	25.7	.5	17.9	1.3
A153637	7.7	75.9	7.5	108	1.1	25.1	2	245	2.81	24	2.3	<.1	2.1	55	.2	2.9	.1	102	.40	.013	12.4	32.8	.91	101	.109	4.55	.557	1.18	.1	51.7	19	.7	6.0	1.5	.1	1	10	22.3	.5	22.4	1.8
A153638	5.5	35.4	5.5	112	1.1	39.0	4	253	3.14	23	1.6	<.1	1.7	192	.1	2.0	.1	74	1.34	.053	6.7	29.8	.72	53	.085	3.93	.917	.69	5.8	32.9	16	.7	9.3	.8	<.1	1	9	17.2	1.4	18.0	1.1
A153639	2.9	25.9	4.1	121	.6	31.5	3	474	2.67	11	1.0	<.1	1.2	133	.1	1.4	.1	57	1.37	.039	7.4	17.6	.95	106	.066	3.10	.669	.56	.1	24.7	13	.4	4.7	.6	<.1	<1	7	18.4	.5	11.9	.7
A153640	1.0	27.4	1.2	263	.2	56.1	3	815	2.49	2	.1	<.1	.7	139	.2	.4	<.1	33	2.93	.077	5.7	10.3	1.17	604	.041	2.22	.636	.39	3.3	10.2	10	.2	4.7	.6	<.1	1	5	20.1	.3	3.5	.3
STANDARD DS?6	13.2	125.1	35.4	175	.3	29.6	12	972	3.94	25	7.7	<.1	7.3	283	5.7	5.5	4.5	119	2.23	.096	26.7	251.1	1.01	579	.416	6.94	1.577	1.45	7.5	50.5	53	1.7	15.4	8.7	.7	4	12	24.7	<.1	59.2	1.9

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HCLO4-HNO3-HCL-HF TO 10 ML. (>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY. FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-MS.
- SAMPLE TYPE: ROCK R150 60C

Data __ FA ____ DATE RECEIVED: JUL 20 2005 DATE REPORT MAILED: Aug 3/05

BRITISH COLUMBIA CERTIFIED ASSAYER
Clarence Leong

ACME A' 'TICAL LABORATORIES LTD. 852 E. HASTINGS ST. ' 'COUVER BC V6A 1R6 PHONE(604)253-3158 FAX(60' '53-1716
(I. ,001 Accredited Co.)

ASSAY CERTIFICATE

Roca Mines Inc. File # A503626R
500 - 1045 Howe St., Vancouver BC V6Z 2A9 Submitted by: John Mirko

SAMPLE#	Cu %	Zn %
9166	.294	1.55
9230	.017	1.02
9233	.139	1.06
9268	.576	.85
9269	2.557	11.25
9289	.187	1.06
9295	1.303	1.23
STANDARD R-2a	.560	4.30

GROUP 7AR - 1.000 GM SAMPLE, AQUA - REGIA (HCL-HNO3-H2O) DIGESTION TO 100 ML, ANALYSED BY ICP-ES.
- SAMPLE TYPE: Core Pulp

Data ✓ FA ____ DATE RECEIVED: AUG 9 2005 DATE REPORT MAILED: Aug 12/05

BRITISH COLUMBIA CERTIFIED ASSAYER
Clarence Leong

ACME A[illegible]TICAL LABORATORIES LTD. 852 E. HASTINGS ST. [illegible]COUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604[illegible]53-1716
(I[illegible]001 Accredited Co.)

ASSAY CERTIFICATE

Roca Mines Inc. File # A503626R2
500 - 1045 Howe St., Vancouver BC V6Z 2A9 Submitted by: John Mirko

SAMPLE#	Ag** gm/mt
9269	213
STANDARD R-2a	158

GROUP 6 - PRECIOUS METALS BY FIRE ASSAY FROM 1 A.T. SAMPLE, ANALYSIS BY ICP-ES.
- SAMPLE TYPE: Core Pulp

Data h FA ____ DATE RECEIVED: AUG 9 2005 DATE REPORT MAILED: Aug 13/05

BRITISH COLUMBIA CERTIFIED ASSAYER
Clarence Leong

ACME A TICAL LABORATORIES LTD. 852 E. HASTINGS ST. COUVER BC V6A 1R6 PHONE(604)253-3158 FAX(60 53-1716
(I. 001 Accredited Co.)

ASSAY CERTIFICATE

Roca Mines Inc. File # A503744
500 - 1045 Howe St., Vancouver BC V6Z 2A9 Submitted by: John Mirko

SAMPLE#	Mo %	Cu %	Pb %	Zn %	Ag gm/mt	Ni %	Co %	Mn %	Fe %	As %	Sr %	Cd %	Sb %	Bi %	Ca %	P %	Cr %	Mg %	Al %	Na %	K %	W %	Hg %
9340	<.001	1.032	.22	.99	159	.002	.001	.02	5.07	<.01	.004	.005	.001	<.01	.72	.010	.001	.38	.26	.02	.17	.002	.001
9341	<.001	1.624	.15	.98	51	.005	.002	.17	7.54	<.01	.011	.005	.002	<.01	2.52	.051	.005	2.77	1.75	.02	.14	.002	.001
9342	<.001	.303	.29	1.45	11	.009	.005	.22	11.15	<.01	.009	.007	.001	<.01	2.41	.073	.005	4.85	3.57	.02	.13	.002	.001
9343	.001	3.273	.44	3.13	28	.001	.001	.18	6.91	<.01	.017	.017	.002	<.01	3.33	.028	.001	1.77	.30	.03	.10	.003	.002
9344	.001	.098	<.01	.09	2	.001	.001	.01	3.08	<.01	.003	.001	.001	<.01	.26	.016	<.001	.15	.31	.02	.19	.001	<.001
9345	<.001	.011	.01	.01	<2	<.001	<.001	.01	3.09	<.01	.002	<.001	<.001	<.01	.29	.023	<.001	.16	.27	.01	.18	<.001	<.001
9346	.001	.030	.05	.14	7	<.001	.001	.02	6.79	<.01	.002	.001	.001	<.01	.31	.005	.001	.15	.26	.02	.17	.001	<.001
9347	.003	3.151	.03	.37	43	.002	<.001	.04	24.92	.01	.003	.002	.003	<.01	.70	.002	.001	.35	.19	.02	.12	<.001	<.001
9348	.001	.105	.01	.13	5	.002	.001	<.01	14.47	<.01	.001	<.001	.001	<.01	.04	.007	.001	.02	.26	.02	.17	.001	<.001
9349	.001	.135	.01	.03	3	<.001	<.001	.01	5.83	<.01	.001	<.001	<.001	<.01	.08	.001	.001	.05	.22	.02	.15	<.001	<.001
9350	.001	.187	.01	.27	4	.003	.001	.03	4.92	<.01	.006	.001	.001	<.01	.86	.025	<.001	.52	.29	.02	.19	.001	<.001
RE 9350	.001	.185	.01	.27	4	.003	.001	.03	4.93	<.01	.006	.001	<.001	<.01	.86	.026	.001	.52	.29	.02	.19	.001	<.001
9354	<.001	.061	.21	.48	6	.002	.001	.08	4.42	<.01	.004	.002	.001	<.01	.96	.021	.001	1.02	.96	.02	.19	.002	<.001
9355	<.001	.134	.19	1.40	10	.003	.002	.15	5.04	<.01	.009	.006	<.001	<.01	1.88	.025	.001	1.11	.28	.02	.16	.002	.001
9356	<.001	.045	.01	.03	5	<.001	<.001	.01	3.70	<.01	.002	<.001	.001	<.01	.11	.001	.001	.07	.24	.02	.15	.001	<.001
9357	<.001	.100	.12	.94	5	.001	.001	.42	2.19	<.01	.014	.005	.001	<.01	2.19	.002	<.001	.97	.23	.03	.13	.001	.001
9358	<.001	.564	.05	.69	101	.001	<.001	.31	1.80	.01	.022	.003	.056	<.01	2.90	.002	.001	1.43	.20	.04	.09	.001	.001
9359	<.001	.016	.01	.01	4	<.001	.001	.01	4.13	<.01	.001	<.001	.001	<.01	.15	.002	<.001	.08	.25	.02	.15	<.001	<.001
9360	<.001	.107	.06	.31	8	.001	.001	.01	7.18	<.01	.001	.001	.001	<.01	.13	.007	.001	.07	.25	.02	.16	.001	<.001
9361	.002	.100	.08	.88	6	.003	.002	.09	4.60	<.01	.005	.004	<.001	<.01	1.09	.036	<.001	.64	.34	.02	.21	.001	<.001
9362	<.001	.066	.01	.07	<2	.001	<.001	.03	3.87	<.01	.003	<.001	<.001	<.01	.62	.010	.001	.31	.24	.02	.16	.001	<.001
9363	<.001	.073	.01	.04	<2	.001	<.001	.01	3.38	<.01	.002	<.001	.001	<.01	.12	.007	.001	.07	.28	.02	.19	.001	<.001
9364	<.001	.048	.06	.62	2	.004	.002	.30	6.71	<.01	.014	.002	<.001	<.01	3.58	.081	.005	5.58	4.19	.02	.15	<.001	.001
9365	.001	.022	<.01	.02	<2	.002	.001	.02	3.47	<.01	.003	<.001	<.001	<.01	.56	.018	<.001	.39	.29	.01	.18	<.001	<.001
9366	.001	.005	<.01	.03	<2	.001	<.001	.02	3.33	<.01	.003	<.001	<.001	<.01	.39	.011	.001	.54	.32	.01	.18	<.001	<.001
9367	<.001	.003	<.01	.02	<2	.001	<.001	.01	2.50	<.01	.002	<.001	.001	<.01	.16	.017	<.001	.24	.32	.01	.20	<.001	<.001
9371	<.001	.015	.08	.03	6	.003	.001	.02	4.16	<.01	.005	<.001	.001	<.01	1.07	.009	.001	.51	.31	.03	.20	<.001	<.001
9372	.001	.031	<.01	.01	<2	.001	<.001	<.01	4.41	<.01	.001	<.001	<.001	<.01	.07	.001	.001	.06	.28	.02	.18	<.001	<.001
9373	.001	.011	<.01	.01	<2	.001	<.001	.01	5.50	<.01	.001	<.001	.001	<.01	.15	.001	<.001	.09	.24	.02	.16	<.001	<.001
9374	.001	.049	<.01	.01	<2	.001	<.001	<.01	4.68	<.01	.001	<.001	<.001	<.01	.04	.004	.001	.04	.28	.02	.19	<.001	<.001
9375	.001	.050	<.01	.01	<2	.001	<.001	.01	2.72	<.01	.001	<.001	<.001	<.01	.14	.020	.001	.07	.29	.02	.19	<.001	<.001
9376	.001	.062	.01	.05	3	.001	<.001	.01	4.88	<.01	.003	<.001	<.001	<.01	.27	.013	.001	.18	.27	.02	.16	.001	<.001
STANDARD R-2a	.047	.553	1.53	4.17	160	.365	.043	.21	22.22	.23	.164	.029	.129	<.01	2.24	.078	.069	1.69	1.38	.20	.52	.082	.175

GROUP 7AR - 1.000 GM SAMPLE, AQUA - REGIA (HCL-HNO3-H2O) DIGESTION TO 100 ML, ANALYSED BY ICP-ES.
- SAMPLE TYPE: CORE PULP Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data FA DATE RECEIVED: JUL 22 2005 DATE REPORT MAILED: Aug 1/05

BRITISH COLUMBIA CERTIFIED ASSAYER
Clarence Leong

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716
(ISO 9001 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Roca Mines Inc. File # A503743 Page 1
500 - 1045 Howe St., Vancouver BC V6Z 2A9 Submitted by: John Mirko

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm	Au** gm/mt	Sample kg
9317	3.3	16.4	13.0	56	.2	15.7	5	335	2.36	19	3.6	<.1	5.1	63	.2	1.6	.1	57	.69	.046	23.4	17.6	.58	121	.369	5.39	2.513	1.25	3.4	52.5	41	1.9	10.2	22.1	2.1	2	7	6.8	1.0	16.6	2.2	.01	1.68
9318	2.4	16.0	8.0	69	.1	7.2	5	1370	3.58	3	.8	<.1	1.0	152	.2	.5	.1	82	6.32	.049	8.3	3.4	3.97	243	.382	4.30	.043	1.33	1.4	32.1	16	.7	12.1	1.6	.1	1	15	14.7	.6	30.9	1.0	<.01	2.54
9319	.4	2.1	6.2	53	<.1	5.6	3	766	1.72	.1	1.2	<.1	5.7	341	.1	.1	<.1	8	1.57	.020	22.2	5.4	1.04	451	.233	8.29	1.603	1.17	2.0	83.4	47	2.2	15.0	6.6	.5	2	6	29.4	.1	39.4	2.6	<.01	1.19
9320	.5	3.3	6.3	25	<.1	2.1	1	229	1.44	4	1.0	<.1	5.0	111	.1	.1	.1	13	2.03	.025	19.5	1.9	.36	582	.135	6.04	1.334	2.22	1.1	57.7	40	1.5	9.7	4.2	.4	1	3	3.9	.1	31.2	2.3	.05	1.72
9321	.4	148.3	9.0	112	.2	9.6	4	273	2.56	1	1.8	<.1	6.9	327	.2	.6	.1	25	2.45	.029	23.1	3.3	1.53	455	.244	9.76	1.797	1.03	2.5	127.1	51	2.4	19.7	7.0	.7	2	7	57.3	.1	32.8	4.1	<.01	2.13
9322	3.4	395.3	456.8	6137	2.8	16.2	9	2572	3.74	49	3.2	<.1	3.7	535	39.2	4.1	1.2	59	1.62	.037	14.1	6.5	.54	34	.147	7.22	.632	2.34	2.5	105.7	44	2.3	15.1	3.5	.4	1	6	15.9	2.9	45.5	3.3	.03	2.29
9323	8.8	1129.5	164.6	2389	2.8	6.1	3	709	5.26	21	2.7	<.1	3.1	157	10.2	2.2	.7	16	.72	.015	11.8	8.5	.63	42	.353	8.77	.927	2.56	3.9	99.8	31	2.5	14.7	4.2	.3	1	7	22.0	4.9	49.8	3.0	.09	2.52
9324	.3	5.4	3.0	310	<.1	.5	1	734	5.92	1	.5	<.1	2.6	260	.1	.6	<.1	11	.30	.002	13.6	1.7	2.72	697	.120	5.03	.163	.51	.8	42.4	33	1.4	8.6	3.8	.1	<1	4	57.3	<.1	10.7	1.2	<.01	1.36
9325	15.4	327.7	259.4	140	8.1	6.4	5	256	9.82	26	3.4	<.1	7.7	115	.6	1.3	9.2	52	.58	.014	7.6	7.1	.45	38	.099	6.05	.549	3.82	4.5	58.9	20	1.7	10.1	2.2	.2	1	6	18.2	>10	33.6	1.7	.09	1.92
9326	13.6	458.0	370.9	138	10.1	13.4	5	141	7.07	17	4.9	.1	2.8	117	3.0	2.1	3.1	42	.26	.011	9.5	19.6	.42	42	.129	7.81	.573	2.70	.2	115.4	29	1.5	10.7	2.6	.2	1	8	13.4	7.1	31.7	4.4	.15	2.72
9327	11.1	973.6	210.2	232	5.9	11.0	11	205	10.05	29	1.5	<.1	1.7	93	.9	3.6	1.9	49	.27	.006	3.9	18.9	.47	36	.102	7.91	.432	3.41	3.7	76.7	13	1.9	9.6	1.5	.1	1	11	9.4	>10	58.7	2.5	.11	2.86
9328	15.5	2831.8	192.0	495	12.5	12.4	5	59	9.50	13	4.5	.1	2.9	109	2.2	2.8	3.3	16	.10	.007	6.5	3.2	.53	24	.135	10.17	.541	4.07	1.1	164.7	20	3.4	15.4	3.8	.3	1	5	12.5	>10	65.9	5.2	.14	2.90
9329	10.9	102.3	62.8	265	2.6	3.3	5	161	6.50	16	1.9	<.1	2.7	109	1.0	2.5	3.3	29	.34	.025	12.4	5.3	.62	33	.143	9.71	.432	4.23	3.9	86.6	37	2.7	13.5	3.3	.3	1	9	9.9	5.7	74.4	2.6	.06	2.49
9330	12.9	307.7	81.2	210	3.4	14.0	6	111	7.57	46	5.2	.1	2.6	66	.5	3.9	4.4	33	.21	.020	9.9	5.1	.66	28	.132	5.85	.383	4.36	.8	137.0	28	3.2	15.6	2.3	.2	1	9	10.9	8.7	71.3	4.2	.12	2.53
9331	13.6	497.0	336.5	3017	7.3	13.5	5	128	8.81	34	3.8	<.1	2.7	105	3.5	4.0	4.0	25	.29	.012	9.2	11.3	.51	24	.102	8.39	.658	3.57	4.8	116.2	25	2.3	14.5	2.0	.2	1	7	11.8	>10	59.0	3.6	.12	2.54
9332	4.6	179.3	22.0	48	.5	5.9	5	762	2.04	14	11.8	<.1	4.7	86	.1	.7	.1	88	3.23	.024	13.9	1.5	.64	325	.144	6.59	.435	2.74	1.7	80.4	32	1.8	9.6	3.9	.4	1	5	8.7	.5	44.1	3.3	.02	2.23
9333	1.4	227.1	16.6	215	.5	34.4	4	3255	3.64	6	.5	<.1	3.8	141	.4	1.9	.3	36	2.56	.026	21.8	8.4	1.55	579	.250	9.22	.212	3.69	4.9	57.1	48	2.4	11.8	6.2	.6	2	8	11.0	.5	58.2	1.6	.12	1.77
9334	8.0	613.4	55.6	510	4.6	22.3	16	1665	5.52	17	1.9	.2	3.1	52	1.2	2.0	1.9	87	1.54	.033	6.7	31.3	3.45	41	.309	8.37	.249	3.54	2.7	73.6	21	1.9	11.5	3.5	.3	2	17	12.6	4.7	54.1	2.3	.18	2.46
RE 9334	8.2	607.9	56.1	522	5.0	22.8	17	1687	6.99	17	1.8	.2	2.2	79	1.3	2.0	1.9	88	1.60	.035	7.2	31.3	1.45	99	.304	8.74	.241	3.38	2.3	65.7	22	1.8	11.5	3.4	.3	2	17	12.6	4.8	54.1	2.4	.18	-
RRE 9334	8.0	650.7	53.4	484	4.9	23.3	16	1653	6.81	19	2.0	.1	2.2	78	1.3	2.0	2.1	87	1.54	.036	7.1	32.5	1.47	40	.305	8.83	.236	3.54	5.4	74.4	20	1.9	11.0	3.5	.3	2	17	13.6	4.7	53.5	2.3	.19	-
9335	10.0	403.3	34.8	194	4.2	12.8	10	581	6.48	17	2.3	<.1	2.9	93	.2	2.5	2.1	58	1.31	.029	11.9	17.0	1.05	60	.239	8.95	.205	3.19	1.7	94.8	32	2.1	12.8	4.1	.4	2	11	26.3	5.1	51.2	2.5	.11	2.40
9336	9.3	139.7	51.8	52	4.3	11.6	13	253	7.53	5	1.8	.4	2.8	55	.2	1.0	3.1	41	1.01	.025	7.5	21.2	.66	26	.154	7.68	.646	3.10	6.0	107.6	22	2.4	12.0	3.3	.3	2	7	9.2	8.3	45.6	3.4	.56	1.44
9337	8.1	109.4	36.9	188	1.3	3.5	4	328	5.27	13	1.6	<.1	2.6	52	.9	1.5	2.2	28	.39	.029	11.9	9.2	.59	22	.178	8.38	.196	3.92	1.4	71.7	33	2.6	12.9	4.0	.3	1	7	5.0	6.7	58.7	2.1	.14	2.56
9338	6.2	101.4	23.1	65	1.0	7.1	6	125	4.30	14	1.9	<.1	3.0	54	.2	1.5	1.6	33	.35	.022	10.7	15.1	.59	29	.221	7.55	.199	3.64	4.6	64.2	35	2.1	13.6	4.6	.4	1	7	6.2	4.0	58.3	2.8	.02	2.50
9339	9.2	433.1	22.8	52	1.4	14.7	16	291	2.73	33	1.1	<.1	2.7	251	.2	1.2	.6	26	1.42	.011	10.1	11.6	.74	31	.351	6.27	4.045	.65	1.6	58.1	21	1.2	6.6	3.9	.4	1	4	3.4	3.6	13.8	2.0	.06	1.15
9340	5.6	9928.4	2184	>10000	151.7	20.9	9	208	5.75	17	2.5	.4	2.5	75	45.2	9.6	1.5	70	.77	.016	5.5	56.0	.61	20	.144	7.68	1.513	2.69	4.6	75.0	16	2.0	9.0	2.2	.2	1	10	8.7	6.0	53.6	2.7	1.69	2.49
9341	4.0	>10000	1483	>10000	70.7	30.9	21	1810	8.28	15	1.4	2.7	1.3	145	49.8	10.5	4	166	2.72	.055	6.4	43.8	2.99	51	.251	7.92	1.377	1.72	2.5	39.6	16	1.2	8.9	1.7	.2	1	22	31.4	5.8	30.7	1.6	.93	1.54
9342	3.2	3011.7	2799	>10000	9.5	53.2	46	2205	11.22	36	.5	<.1	.3	126	58.9	6.3	.6	275	2.43	.089	6.1	46.9	4.65	91	.298	8.21	1.424	1.17	4.8	20.5	21	.7	6.4	.5	<.1	<1	30	55.1	8.1	12.4	.7	.14	1.35
9343	10.7	>10000	4398	>10000	28.4	32.6	13	1550	7.13	22	2.6	.1	2.3	234	177.2	27.4	3.6	114	3.53	.034	5.6	27.6	1.81	36	.153	5.69	2.755	1.13	3.2	51.3	14	1.7	5.1	1.2	.1	1	12	4.6	5.0	22.4	2.1	.12	2.13
9344	6.5	387.3	49.5	1002	1.8	17.9	9	87	3.83	19	3.6	<.1	3.7	57	4.3	3.0	1.9	74	.27	.027	7.6	80.7	.54	55	.205	10.67	.359	4.88	3.6	114.5	23	2.3	10.4	3.3	.4	2	11	9.8	4.0	95.9	4.2	.24	2.49
9345	4.1	117.8	51.0	167	.7	3.7	3	97	3.68	6	1.0	<.1	2.4	37	.5	.5	.7	3	.29	.002	12.3	4.1	.51	34	.130	7.64	.180	3.63	.7	54.3	34	2.4	9.9	3.5	.3	1	7	6.7	3.5	76.2	1.7	.03	2.57
9346	7.4	321.3	519.0	1536	7.6	6.0	16	234	7.62	28	1.4	.2	1.7	45	5.1	2.8	2.2	15	.31	.009	5.7	7.5	.49	24	.126	5.52	1.275	2.42	4.5	68.8	22	2.0	10.9	2.9	.2	1	6	4.4	9.6	31.7	2.1	.20	2.24
9347	34.4	>10000	272.4	3684	44.0	25.6	6	359	26.28	49	5.2	.4	1.1	41	14.5	11.3	9.0	43	.70	.006	2.0	23.4	.53	35	.058	4.56	1.014	1.45	1.1	52.9	7	1.8	5.4	.9	.1	<1	5	3.3	>10	32.8	2.1	.55	1.83
9348	26.4	1030.2	91.6	3342	5.5	26.4	11	22	35.92	33	3.5	.2	1.4	33	4.6	8.6	2.6	21	.05	.010	1.7	52.8	.40	37	.137	6.92	.438	3.25	4.3	88.3	7	1.9	8.7	1.4	.1	1	13	7.6	>10	62.1	3.3	.22	1.42
STANDARD DST6/OxL34	11.4	130.3	35.0	168	.3	31.4	14	937	4.10	25	7.6	<.1	7.2	303	6.8	5.0	4.6	115	2.23	.101	26.0	263.9	.97	694	.451	6.93	1.679	1.41	7.5	48.7	54	5.9	14.9	7.8	.7	4	11	25.4	<.1	53.9	1.7	5.81	-

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HCLO4-HNO3-HCL-HF TO 10 ML. (>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY. FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-MS.
AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE.
- SAMPLE TYPE: DRILL CORE R150 Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data FA ____ DATE RECEIVED: JUL 22 2005 DATE REPORT MAILED: Aug 5/05

BRITISH COLUMBIA CERTIFIED ASSAYER — Clarence Leong

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm	Au** gm/mt	Sample kg
9349	7.3	1444.7	114.0	389	3.6	3.6	2	51	6.66	15	8	<1	3.8	31	1.5	4.4	2.2	19	.10	.003	7.5	8.0	.24	12	.057	6.16	.167	2.29	7	33.1	21	1.3	3.5	1.4	1	<1	4	6.0	9.0	44.3	3.0	.36	2.45
9350	15.5	1922.7	108.9	3072	5.4	36.2	14	369	5.81	24	4.0	1	4.7	95	5.8	2.9	8	101	.95	.052	6.4	66.2	1.11	36	.179	12.73	.784	5.77	3.1	131.0	17	2.8	13.4	2.6	3	1	16	37.1	5.9	102.6	4.9	13	2.29
9351 rock	1	14.9	3.6	19	1	4.7	<1	126	.12	<1	9	<1	<1	192	.3	1	<1	3	>40	.037	1.0	2.5	.70	25	.003	.11	.007	.04	1	1.1	1	<1	6.9	1	<1	<1	<1	3	.4	4	<.1	<.01	1.75
9352 (pulp)	120.5	201.8	65.7	138	2.2	57.6	65	3789	8.95	875	3.6	3.6	2.7	349	.3	10.7	14.2	122	15.14	.093	33.5	49.9	1.66	71	.276	4.53	.353	.89	5.3	44.2	42	2.7	18.3	2.1	2	1	12	15.5	2.6	22.6	1.9	5.69	-
9353 (pulp)	44.0	4101.6	>10000	>10000	114.3	10.2	5	1112	2.57	266	6	.2	1.2	230	94.1	120.4	3.7	51	7.57	.027	5.3	47.1	.55	241	.079	4.36	.974	1.69	.9	4.6	11	2.6	5.5	.9	1	<1	3	8.5	2.0	27.0	.3	21	
9354	5.0	925.4	2314.2	5426	6.2	20.1	14	984	5.17	11	1.3	<1	2.5	71	37.9	5.2	8	58	1.03	.024	18.0	37.5	1.30	33	.218	5.84	1.261	2.78	3.2	65.2	26	1.6	10.1	2.3	3	1	17	13.9	3.1	55.5	2.2	.87	2.29
9355	6.2	1415.6	2133.2	>10000	13.6	31.4	24	1566	5.76	19	2.5	2	2.6	101	60.8	6.7	8	141	2.07	.034	5.6	32.3	1.45	17	.255	8.75	1.415	3.03	5.6	56.7	17	1.3	9.5	1.7	2	1	19	9.7	5.5	57.1	2.2	.29	2.02
9356	5.6	472.6	155.7	420	4.7	5.2	4	844	4.46	9	9	<1	2.4	52	1.2	4.9	2.0	14	.15	.005	9.0	13.5	.28	18	.104	5.73	.917	2.14	5.3	51.9	25	2.0	7.5	2.7	3	1	5	5.9	4.4	41.9	1.5	.05	2.34
9357	3.6	1032.6	1265.2	>10000	5.6	16.8	6	4521	2.67	10	1.4	2	3.0	164	41.0	14.0	7	18	2.37	.017	10.2	5.2	1.17	37	.159	6.36	1.804	1.76	5.6	40.8	29	1.9	8.1	3.0	5	1	4	6.9	2.0	37.1	1.1	.15	2.37
9358	5.2	5586.6	525.3	7720	105.6	6.5	2	3325	2.04	34	2.7	2	3.7	284	27.3	551.3	3	12	2.04	.011	12.5	9.3	1.55	63	.160	5.70	2.004	1.05	8.5	77.3	25	2.0	10.1	5.1	4	1	5	4.7	1.4	20.6	2.4	.25	1.45
9359	7.3	159.2	121.9	101	4.6	3.4	8	57	4.81	14	1.5	1	2.7	47	.5	2.6	2.4	9	.17	.020	9.8	5.1	.34	37	.121	5.34	.897	2.60	1.3	71.9	29	2.0	9.6	3.4	3	1	5	6.9	5.2	51.3	2.2	.15	2.83
9360	6.6	1077.4	613.0	3315	6.8	8.6	5	54	7.86	18	1.1	3	2.1	41	10.2	3.2	1.8	28	.14	.013	5.2	17.4	.28	9	.107	9.62	.973	2.54	4.2	51.9	16	2.2	7.5	2.4	3	1	6	5.2	9.3	48.3	1.7	.24	1.35
9361	17.5	1037.0	892.4	9801	7.1	38.1	23	997	5.61	20	2.3	2	3.3	95	34.8	3.7	9	130	1.18	.041	10.5	36.4	1.05	24	.361	11.77	1.093	4.52	3.7	97.4	30	2.7	13.2	4.2	4	1	19	15.7	4.7	92.6	3.2	.21	2.23
9362	3.3	993.9	124.9	748	2.7	9.0	4	260	4.42	13	.9	<1	2.3	51	2.8	2.2	1.4	42	.66	.012	7.4	25.3	.58	17	.113	5.92	.183	2.79	5.0	41.9	19	1.5	6.6	2.3	2	<1	7	5.1	4.6	54.5	1.4	.08	2.36
9363	4.6	738.5	48.9	366	1.4	6.6	4	24	3.97	13	.9	<.1	2.9	40	1.4	2.1	.9	49	.14	.012	13.2	25.5	.43	23	.147	8.15	.226	3.58	1.3	44.3	33	2.4	8.2	2.8	3	1	10	6.5	4.1	73.3	1.5	.24	2.52
9364	4	496.7	666.7	7057	1.7	58.9	18	3062	6.93	5	4	<1	4	165	19.5	2.5	<1	294	3.57	.089	5.9	77.7	5.17	2013	.512	8.95	.644	1.63	7.8	13.1	13	7	7.8	7	1	1	39	63.8	1.0	32.4	.5	.01	2.00
9365	2.8	241.6	26.9	159	1.5	17.5	6	204	4.18	13	4.7	<1	4.6	53	.9	2.3	3.7	34	.61	.023	16.7	28.1	.86	30	.151	9.68	.225	4.36	.9	135.6	41	2.5	13.6	3.0	3	1	10	10.9	4.3	84.0	4.3	.24	2.50
9366	8.9	63.5	20.9	318	.6	8.1	5	165	4.12	7	2.6	<1	3.8	65	1.2	1.6	1.0	9	.43	.029	18.0	9.5	.99	27	.127	9.44	.211	4.47	2.9	97.6	43	2.9	15.5	3.0	3	2	8	15.6	4.1	85.2	3.0	.02	3.26
9367	6.6	32.0	6.7	208	.5	6.2	4	37	3.22	5	1.7	<1	3.8	59	.9	.8	.5	5	.10	.035	20.2	4.1	.68	32	.144	5.36	.210	4.25	.5	73.0	50	2.8	14.1	3.6	3	1	6	10.2	3.0	82.1	2.1	.02	.38
9368	5	20.6	3.5	59	.1	10.0	5	490	3.73	19	.5	<1	1.4	146	.1	1.5	<1	78	3.25	.472	15.5	11.0	1.39	797	.517	6.41	1.599	1.65	4.2	11.4	25	.8	18.2	2.7	2	1	13	21.9	.5	32.2	.3	.02	2.25
9369	3	54.6	3.0	125	.1	8.8	7	269	4.07	5	.7	<.1	1.5	121	.1	1.3	<1	89	7.65	.555	27.2	17.8	1.66	1160	.496	7.62	2.039	2.19	1.5	15.7	40	.9	19.3	3.1	2	2	14	31.4	.3	45.6	.4	<.01	4.30
9370	1.5	63.0	23.5	136	.9	17.2	8	192	2.69	14	1.1	<1	4.2	200	.4	1.1	.2	44	1.11	.030	17.3	32.6	1.17	157	.247	5.20	1.520	3.29	3.1	63.1	37	2.1	3.6	4.7	4	1	9	16.3	1.2	59.7	2.1	.01	2.44
9371	6.5	152.7	605.7	304	7.0	20.3	13	221	4.70	18	3.1	<1	3.6	113	1.7	2.0	1.4	57	1.13	.034	9.5	132.0	.79	24	.129	9.67	1.600	3.02	.8	60.5	23	1.8	10.7	1.7	1	1	13	7.3	4.6	53.2	3.3	.10	.56
9372	7.7	311.1	25.7	154	1.0	7.4	2	29	4.96	18	3.6	<1	3.5	42	.5	2.8	.2	19	.05	.006	15.1	7.9	.40	20	.104	6.36	.271	3.69	3.7	108.5	39	2.8	13.1	2.9	2	1	7	6.1	5.4	70.4	3.1	.03	2.61
9373	6.6	115.7	39.2	142	.8	12.8	3	50	6.04	16	5.2	<1	3.0	39	.7	3.3	.2	16	.15	.004	8.7	5.3	.41	14	.104	7.92	.243	3.52	1.0	138.7	24	2.6	16.0	2.6	2	1	5	5.9	6.8	67.9	4.2	.03	2.56
9374	6.8	537.8	35.9	139	1.0	10.2	5	32	5.38	12	6.0	<1	5.7	38	.5	2.5	.2	25	.06	.008	9.9	6.6	.40	17	.142	9.28	.257	4.03	3.2	155.5	28	3.0	15.6	3.2	3	1	7	6.0	5.8	93.0	4.6	.03	2.82
9375	7.5	504.9	54.7	60	2.2	9.6	3	54	3.24	17	2.0	<1	3.2	42	.2	2.2	1.0	14	.15	.025	10.2	7.3	.42	49	.164	7.70	.223	3.32	1.1	207.6	32	2.6	12.7	4.1	3	1	6	6.6	3.1	68.5	3.1	.05	2.41
9376	9.5	631.0	156.6	549	2.6	5.0	5	106	5.53	14	1.6	<1	2.4	57	2.1	3.9	2.0	16	.07	.015	8.7	15.0	.44	15	.123	6.63	.197	3.32	4.3	55.7	23	2.2	8.7	2.9	2	1	5	9.9	5.6	59.9	1.8	.05	3.56
9377	4	94.6	434.3	984	.5	49.0	28	3952	6.60	6	.4	<1	.5	183	2.2	2.2	<1	284	3.66	.108	5.4	57.7	3.69	2420	.645	9.87	.441	2.78	5.5	7.5	10	.6	7.9	1.2	1	1	26	31.0	.9	59.9	2	.01	3.56
9378	12.9	593.9	174.0	670	5.4	11.5	7	317	6.09	38	2.5	1	5.5	135	3.0	2.5	3.4	35	1.12	.015	12.0	34.6	.90	16	.179	8.72	.253	3.64	6.5	89.4	32	2.7	10.7	4.3	4	1	7	6.1	6.4	67.0	2.9	.11	3.23
9379	5.5	1286.5	195.8	2254	2.8	39.9	17	693	5.74	22	1.3	<1	2.4	163	7.9	2.3	.6	87	1.92	.035	7.4	94.5	2.01	25	.200	7.86	.222	3.35	1.6	54.8	25	1.9	5.0	2.6	2	1	14	21.8	4.3	54.8	2.3	.03	3.25
RE 9379	5.5	1227.1	188.4	2211	2.6	39.2	18	662	5.11	21	1.3	<1	2.4	161	7.7	2.2	.6	85	1.96	.037	9.6	60.8	1.96	26	.211	7.18	.218	3.28	2.0	68.4	27	1.5	9.0	2.9	3	1	13	22.8	4.3	56.4	2.2	.04	-
RRE 9379	5.5	1350.5	239.5	2457	2.9	39.7	18	650	5.29	24	1.4	<1	2.5	162	8.6	2.6	.6	87	1.83	.035	10.6	63.2	1.97	22	.155	7.95	.230	3.09	5.3	68.5	27	1.7	6.9	2.5	2	1	13	22.6	4.4	59.4	2.2	.06	
9380	3.4	625.1	76.0	2891	1.9	29.0	14	689	4.56	19	1.4	<1	3.0	101	7.3	2.1	.4	71	1.57	.039	10.9	49.9	2.03	39	.264	7.99	.166	3.06	2.5	61.2	26	1.8	7.7	3.4	3	1	12	23.7	3.2	54.1	1.9	.03	2.36
STANDARD DS76/OxL24	12.7	133.8	35.1	180	.4	31.9	13	992	4.00	25	7.7	<1	7.2	299	5.6	5.3	4.6	110	2.74	.098	26.7	266.7	1.07	724	.453	7.03	1.666	1.45	7.5	51.2	52	6.4	15.6	8.7	.7	4	12	25.1	.1	37.8	1.8	5.67	-

Sample type: DRILL CORE R150. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data ___ FA ___

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm
9381	14.6	1564.3	1502.2	5020	7.2	21.2	14	344	5.79	56	7.6	2	3.4	107	13.9	7.3	1.4	36	.93	.022	9.5
9382	5.3	37.3	18.7	60	1.7	43.1	6	602	3.40	20	1.7	<.1	2.7	82	.1	4.7	.2	93	1.65	.037	6.6
STANDARD DST6/AU-1	13.4	130.6	34.4	183	.4	31.2	13	1096	4.07	30	7.1	<.1	6.9	302	5.2	5.5	4.9	112	2.25	.093	25.4

SAMPLE#	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm	Au** gm/mt	Sample kg
9381	13.5	.95	34	.151	7.21	1.00	3.76	2.1	84.6	29	2.4	9.0	3.9	.4	1	7	13.5	5.2	87.8	2.4	.43	2.67
9382	37.5	1.16	44	.177	5.54	1.13	2.20	2.6	79.4	18	1.0	9.1	1.9	.5	1	14	14.0	1.2	34.5	2.1	.03	2.46
STANDARD DST6/AU-1	294	1.84	483	.424	7.14	1.306	1.40	7.4	52.4	55	5.5	15.3	9.7	.7	4	11	21.8	<.1	60.6	1.8	1.37	-

Sample type: DRILL CORE R150

All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

Data FA