



**Geological Survey Branch
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[ARIS11A]

ARIS Summary Report

Regional Geologist, Smithers

Date Approved: 2005.04.11

Off Confidential: 2005.09.09

ASSESSMENT REPORT: 27577

Mining Division(s): Skeena

Property Name: Surprise

Location: **NAD 27** Latitude: 56 12 00 Longitude: 129 37 00 **UTM:** 09 6228297 461738
NAD 83 Latitude: 56 11 59 Longitude: 129 37 07 **UTM:** 09 6228481 461618
NTS: 104A04E
BCGS: 104A022

Camp:

Claim(s): Pin 1-6, Eldorado 1-2

Operator(s): Pinnacle Mines Ltd.
 Author(s): Kruchkowski, Edward R.

Report Year: 2004

No. of Pages: 89 Pages

Commodities Searched For:

General Work Categories: GEOL, GEOC

Work Done: Geochemical
 ROCK Rock (220 sample(s);
 Elements Analyzed For: Multielement
 SILT Silt (19 sample(s);
 Elements Analyzed For: Multielement
 Geological
 GEOL Geological (9000.0 ha;) No. of maps : 1 ; Scale(s) : 1:20 000
 PETR Petrographic (4 sample(s);

Keywords: Jurassic, Mount Dilworth Formation, Salmon River Formation, Argillites, Rhyolites, Andesites, Tuffs, Quartz monzonites

Statement Nos.: 3216461

MINFILE Nos.:

Related Reports: 07576, 09618, 23935, 24996, 27290

**Assessment Report
on
Geological and Geochemical Work
On The Following Claim**

**Pin 1 405238
Pin 2 405239
Pin 3 405227
Pin 4 405233
Pin 5 405242
Pin 6 405241
Eldorado 1 405595
Eldorado 2 405596**

Statement Of Exploration #3216461

Work permit # 203-1650248-0428

**located
32 Km Northeast Of
Stewart, British Columbia
Skeena Mining Division**

**56 degrees 12 minutes latitude
129 degrees 37 minutes longitude**

N.T.S. 104A/4E

Project Period: July 15 to September 7, 2003

**On Behalf Of
Pinnacle Mines Ltd.
Vancouver, B.C.**

**Report By
E.R. Kruchkowski, B.Sc., P.Geo.**

Date: December 5, 2004

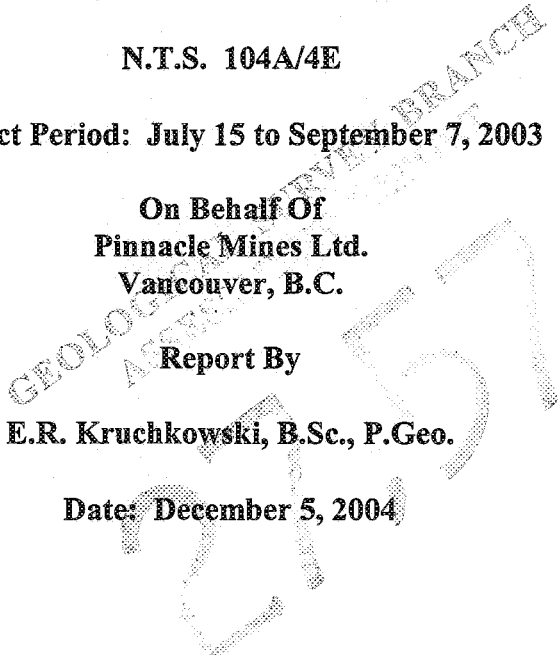


TABLE OF CONTENTS

	<u>Page</u>
SUMMARY	1
INTRODUCTION	5
Location and Access	5
Physiography and Topography	6
Personnel and Operations	6
Property Ownership	7
Previous Work	9
GEOLOGICAL SURVEYS	12
Regional Geology	12
Local Geology	13
Mineralization	15
GEOCHEMICAL	18
Introduction	18
Field Procedure and Laboratory Technique	18
Statistical Treatment	19
Anomalous Zones	20
PETROGRAPHIC STUDIES	21
CONCLUSIONS	22
RECOMMENDATIONS	23
REFERENCES	25
STATEMENT OF CERTIFICATE	26
STATEMENT OF EXPENDITURES	27

LIST OF FIGURES

		<u>After Page</u>
Figure 1	Location Map	5
Figure 2	Claim Map	7
Figure 2A	Claim Map	7
Figure 2B	Claim Map	7
Figure 2C	Claim Map	7
Figure 3	Geology Map	11
Figure 4	Geology Map	11
Figure 5	Property Geology Map	In back pocket
Figure 6	2004 Rock Geochemistry	In back pocket
Figure 6a	2004 Rock Geochemistry	After Page 19
Figure 6b	2004 Rock Geochemistry	In back pocket
Figure 6c	2004 Rock Geochemistry	After Page 19
Figure 7	Enterprise Tunnel Area- Sample Location Map	After Page 19
Figure 8	Map Showing Stibnite-Quartz Vein	After Page 19

LIST OF APPENDICES

APPENDIX I	Laboratory Methods and Specifications for Sample Analysis
APPENDIX II	Sample Description with Indicated Anomalous Values for Au, Ag, As and Cu
APPENDIX III	Analysis Results
APPENDIX IV	Petrographic Studies

SUMMARY

The Surprise property is located about 32 kilometers northeast and southeast of Stewart, British Columbia in the Skeena Mining Division. The property covers an area of Hazelton pyroclastic volcanic rocks and Bowser Lake sediments in contact with a variety of intrusive plutons associated with the main Coast Range Batholith.

The property contains approximately 16000 hectares within three separate claim groups totaling 32 Modified Grid claims.

The property lies within a belt of Jurassic volcanic rocks extending from the Kitsault area, south of Stewart, to north of the Stikine River. This belt is host to numerous gold deposits, in a variety of geological settings, including the producing Eskay Creek and formerly producing Snip and, Premier-Big Missouri mines. Reserves have been reported from a number of other properties including Red Mountain, the Brucejack Lake area and Georgia River. In addition, exploration companies, have reported numerous gold-silver showings along this belt of rocks. At least three porphyry type deposits with either Cu-Mo, Cu-Mo-Au or Cu-Au mineralization are also present.

Teuton Resource Corp and Lategra Resources Corp. have continued to drill their gold-silver discovery between the two of the above Pinnacle claim blocks. In the fall of 2002, Teuton Resources discovered high-grade gold-silver mineralization on the Del Norte Claim group, 10 kilometers south of the northern block of claims and 8 kilometers northeast of the second southern group of claims, comprising the Surprise property. Prior to the onset of winter, Teuton completed trenching and three drill holes. The results of the 2002 trenching include 10 meters of 0.179 opt Au and 8.4 opt Ag. The best drill hole - 2002-3 assayed 0.223 opt Au and 8.09 opt Ag over a drill length of 23.4 meters.

The bulk of the drilling has concentrated along the mineralized lithic tuff-mudstone contact connecting the K (Kosciuszko) zone and the LG vein areas. Including drilling completed in 2002 and 2003 and 2004, this trend has now been tested by 14 drill stations at intervals along an 1100-meter long strike length and a depth of 450 meters.

Teuton has announced drill results that show a significant mineralized system containing silver-gold bearing mineralization hosted in near-vertically dipping, quartz-sulfide/sulfosalt vein breccia, with a majority of the intersections containing gold equivalent values greater than 0.40 oz/ton.

Pinnacle Mines Ltd conducted an exploration program on the northern portion of the Surprise property consisting of reconnaissance mapping for the above Salmon River/Mt Dilworth geological contact, prospecting and geochemical sampling along the above volcanic - sediment

contact within various valleys tributary to Surprise Creek. As well, Pinnacle conducted work in order to locate the former Enterprise group located west of the northern claim holdings.

Based on the 2004 work by Pinnacle on the Surprise Creek property, the favorable volcanic-mudstone horizon being explored by Teuton is present along the west edge of the Pinnacle claims. The program also located the area of the Enterprise group but the underground workings were inaccessible due to caving.

The 2004 exploration programs on the area of the Surprise property indicated mineralization within the present claim group is as follows:

1. Pervasive, fine-grained pyrite as well as pyritic bands in the grey lapilli tuff rhyolitic rocks. This rhyolite is present along the entire western length of the northern claim block extending from the Frances 1 claim south to the Pin 6 claim, a distance of approximately 15 kilometers.
2. Massive sulfide bearing, manganese stained tuffaceous chert/rhyolite boulders possibly from the base of the Salmon River formation on the Emma 5 claim. The boulders are large and can be up to 2 meters in diameter. Sulfide content is generally in semi-massive sulfide bands from 15 cm to 20 cm in width and can form up to 10 % of the boulders. The rocks carry galena, sphalerite, and chalcopyrite with minor pyrite. Source of these boulders is likely on the south side of the glacier in the NW corner of the Emma 1 and middle of the Pin 4 claim. In the area of the boulders, minor float boulders of massive pyrite and chalcopyrite were noted.
3. Black glassy appearing rhyolites have strong very fine grained pyrite mineralization forming up to 15 % of the rock. Disseminated fine-grained galena-sphalerite have been noted in this type of rhyolite boulders in a number of different valleys located on the property. These boulders have been located over a strike length of 12 kilometers. This type of mineralized boulder may indicate the presence of Kuroko type Pb-Zn-Ag massive sulphides mineralization in the claim area.
4. Chalcopyrite in small stringer, pods and stockworks in sheared andesitic rocks on the Enterprise group.
5. Vuggy quartz float with massive galena and stibnite just west of the Enterprise tunnel.
6. A strong quartz-stibnite vein system up to 5 meters wide in the NW corner of the claim group.

A total of 220 rock samples both outcrop and float as well as 19 silt samples were collected during the exploration program. Results of the samples indicate highly anomalous values for gold, silver, lead, zinc, arsenic and copper. Sample values for gold ranged from <0.5 ppb to a high of 3.9 ppm, for silver from <0.1 to 1305 ppm, for lead from 0.2 ppm to 9.1 %, for zinc from 6 ppm to > 10,000 ppm, for arsenic from <0.5 to >10,000 ppm and copper from 0.7 ppm to 8.67 %.

Petrographic studies on 4 rocks collected during the 2003 program were completed. The study was carried out in order to determine the origin of the mineralizing events associated with these rocks. One of the samples studied indicated that the lack of any tectonically induced foliation or shearing implying that the formation of parallel bands and streaks of sulphides could have occurred during syngenetic rather than tectonic process. This fact, as well as the presence of chalcedony indicated the formation in a VMS environment.

Continued exploration has indicated the presence of favorable geology, high geochemical and assay results for a variety of elements along a geological contact that hosts deposits and mineral discoveries. It is underlain by the same stratigraphic sequence hosting the Del Norte Au-Ag discovery as well as the producing Eskay mine (reserves at the end of 2002 were 1.433 million tons of 0.998 opt Au and 44.9 opt Ag in the proven and probable reserve and 480,000 tons of 0.442 opt Au in the mineral reserve category).

An exploration program involving further prospecting, possible trenching, and further geochemical sampling is recommended for the property. Expected cost of the above programs is approximately \$250,000.

It is recommended that the following program be conducted:

1. Utilize the helicopter based in Stewart, BC to mobilize the crews to and from the property.
2. Locate any previous mineralized zones from past surveys, particularly a barite bearing felsic zone assaying 0,334 opt on the present day Pin 3 claim that was discovered in 1994 programs.
3. Sample as many of the numerous gossan zones on various parts of the property as possible. Particular attention should be paid to the Salmon River sediment/Mt Dilworth rhyolite contact, especially for massive sulphide occurrences.

4. Continued silt geochemistry of streams in the property area.
5. Trench any highly mineralized zones located.

INTRODUCTION

This report is primarily based on geological and geochemical results of an exploration program conducted by Pinnacle Mines Ltd. on the property during the period July 15 to September 7 2004. E. Kruchkowski assisted by a field crew conducted the program.

The report was prepared on data accumulated during the work program; data contained in previous assessment reports on the property as well as data obtained by the author from other surveys in the general area.

Location and Access

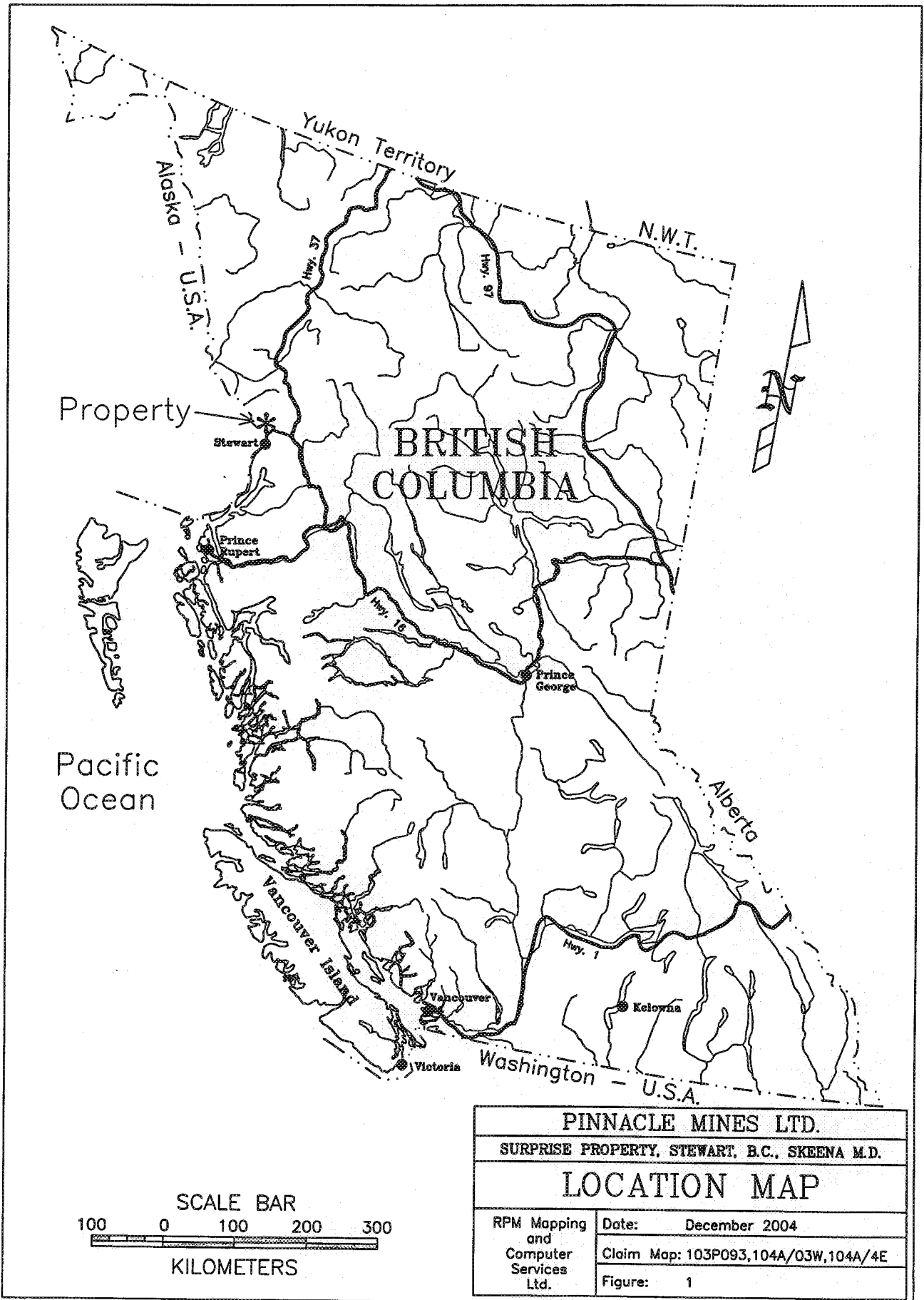
The northern claims form part of a contiguous group of 22 claims located about 32 kilometers northeast of Stewart and 15 kilometers northwest of Meziadin Lake, British Columbia. The claim area is approximately 56 degrees 12 minutes latitude and 129 degrees 37 minutes longitude on NTS sheet 104A/4E. Figure 1 shows the location of the claim area.

Access to the northern claims at the present time is by helicopter from Stewart or from the Ellsworth logging camp on Highway 37 about 30 km to the southeast. Nearest major road is the paved Highway 37 running between Stewart and Meziadin Junction, which passes within 6 kilometers of the property. Nearest road to the area is a non-maintained, former mine road running north along the west side of Surprise Creek to the former gold-silver producing Nordore mine about just west of the property.

The southern claims consist of 2 but separate contiguous group of 4 claims each located about 32 kilometers southeast of Stewart and 15 kilometers south of Meziadin Lake, British Columbia. The blocks are approximately 10 kilometers apart. The claim area is approximately 55 degrees 54 minutes latitude and 129 degrees 36 minutes longitude on NTS sheet 104A/3W 103P/14E. Figure 1 shows the location of the claim area.

Access to the southern claims at the present time is by helicopter from Stewart or from the Ellsworth logging camp on Highway 37 about 25 km to the east. Nearest major road is the paved Highway 37 running between Meziadin Junction and Kitwanga, which passes 25 kilometers east of the property.

The western Eldorado claims are located in the Bear River Pass at 56 degrees 07 minutes north latitude and 129 degrees 41 minutes west longitude on NTS 104A/4E. Access is either via paved Highway 37 A or by helicopter from Stewart, BC. An old horse trail extended from the valley



PINNACLE MINES LTD.	
SURPRISE PROPERTY, STEWART, B.C., SKEENA M.D.	
LOCATION MAP	
RPM Mapping and Computer Services Ltd.	Date: December 2004
	Claim Map: 103P093,104A/03W,104A/4E
	Figure: 1

SCALE BAR
 100 0 100 200 300
 KILOMETERS

floor to the area of the Enterprise underground workings. Condition of this trail is unknown although it is recognizable in the area of the Enterprise tunnel.

Physiography and Topography

The northern area of the Surprise property claims encompasses steep mountain slopes typical of the Coast Range region of British Columbia. The property is situated over Mount Patullo and the western headwaters of Surprise Creek. The property is at the eastern edge of the Coast Mountains and near the Interior Plateau. Topography is rugged with several easterly and northeasterly flowing glaciers transecting the area. Slopes range from moderate to precipitous. Elevations vary from about 600 m ASL in the southeastern portion of the property to about 2300 m ASL on ridges jutting out of the surrounding icefields. Just above the glaciers, thick morainal debris obscures the underlying geology. . Maximum rock exposure occurs in early October when most of the annual snowfall has melted. The surface exploration is restricted to late summer and early fall. Most of the property can be traversed safely on foot although local areas contain occasional bluffs and cliffs.

Spruce and hemlock trees as well as small patches of tag spruce are present along the lower slopes of the mountain valleys, particularly the north facing edges. Alders grow along avalanche slopes and moraines. Alpine grasses, heather and arctic willows grow in patches along the talus, moraine and outcrops in the upper regions of the property.

Permanent snow occupies most depressions and gullies.

Thick glacial moraine is primarily restricted to lower elevations and valley floors with good rock exposure along ridge tops and creek beds.

The southern area of the Surprise property claims also encompasses steep mountain slopes typical of the Coast Range region of British Columbia. The property is situated over ridges and tributary streams to the South Willoughby Creek and the Flat River. The property is at the eastern edge of the Coast Mountains and near the Interior Plateau. Elevations vary from about 800 m ASL in the southeastern portion of the property to about 2200 m ASL on ridges. Topography is rugged with several easterly and southerly flowing glaciers transecting the area.

The Eldorado claims encompass the Bear River Pass at 450 meters elevation as well as extending to 1500 meters on the northern and southern valley slopes to the Bear River Pass. Sharp cliff faces with narrow wooded rock benches are present on the north side of the claims. The old underground workings on the Enterprise group are located on one of the rock benches.

A flat upland area is present at the north edge of the Eldorado 1 claim with small tarns and numerous creeks.

Personnel and Operations

Personnel involved during the exploration program are listed below:

E. Kruchkowski	Consulting Geologist
C. Kruchkowski	Consulting Geologist
S. Kruchkowski	Geological Assistant
J. Morrison	Geological Assistant
T. Kruchkowski	Geological Assistant
R. Maynard	Geological Assistant
A. Walus	Consulting Geologist
E. Brantly	Consulting Geologist

Personnel mobilized either out of Stewart or Surprise Creek area, British Columbia to the job site utilizing a Hughes 500D helicopter, provided by Prism Helicopters, based in Stewart. The mobilization out of Surprise Creek utilized the helicopter based out of the Teuton exploration camp.

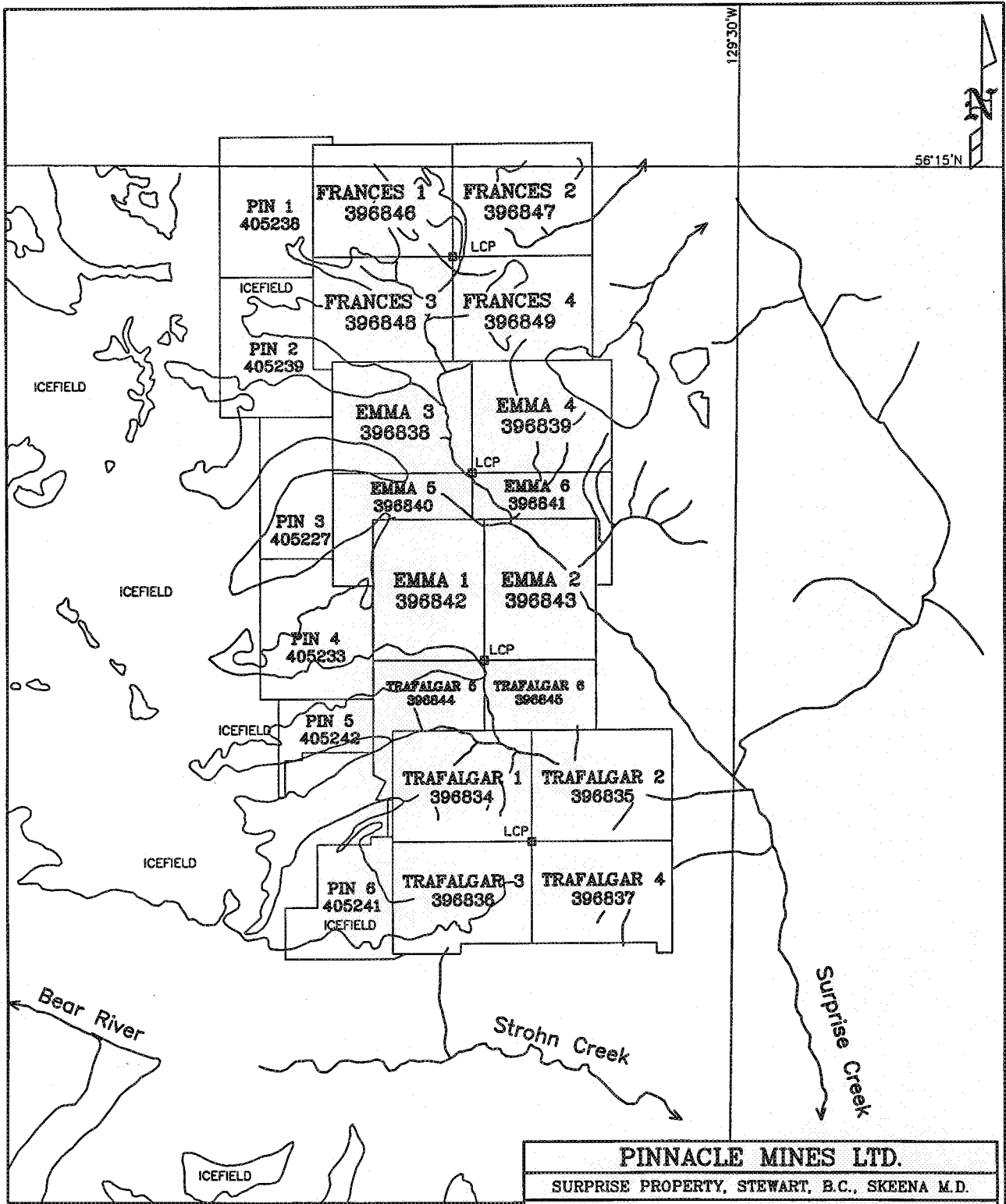
Personnel stayed in a motel in Stewart and acquired meals at local restaurants.

All samples were prepared and analyzed by Acme Analytical Laboratories and Assayers Canada in Vancouver, British Columbia.

Property Ownership

The Surprise property consists of a four separate claim groups located in the Surprise Creek area, the Willoughby Creek area and Flat River area. There are 32 claims totaling 640 units encompassing approximately 16,000 hectares. Relevant claim information with respective NTS map area is summarized below:

<u>Name</u>	<u>Tenure</u>	<u>NTS Map Area</u>	<u>No. of Units</u>	<u>Expiry Date</u>
Victory 1	396822	NTS103P083/103P093	20	September 20/2005
Victory 2	396823	NTS103P083/103P093	20	September 20/2005
Victory 3	396824	NTS103P083	20	September 20/2005
Victory 4	396825	NTS103P083	20	September 20/2005

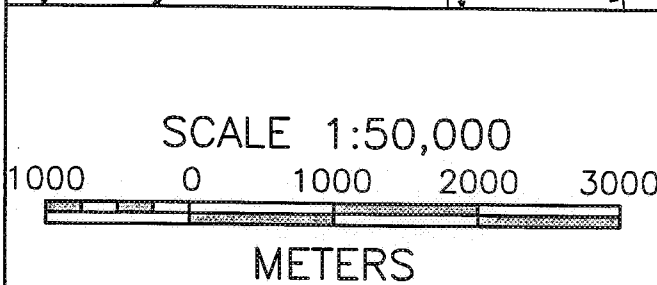
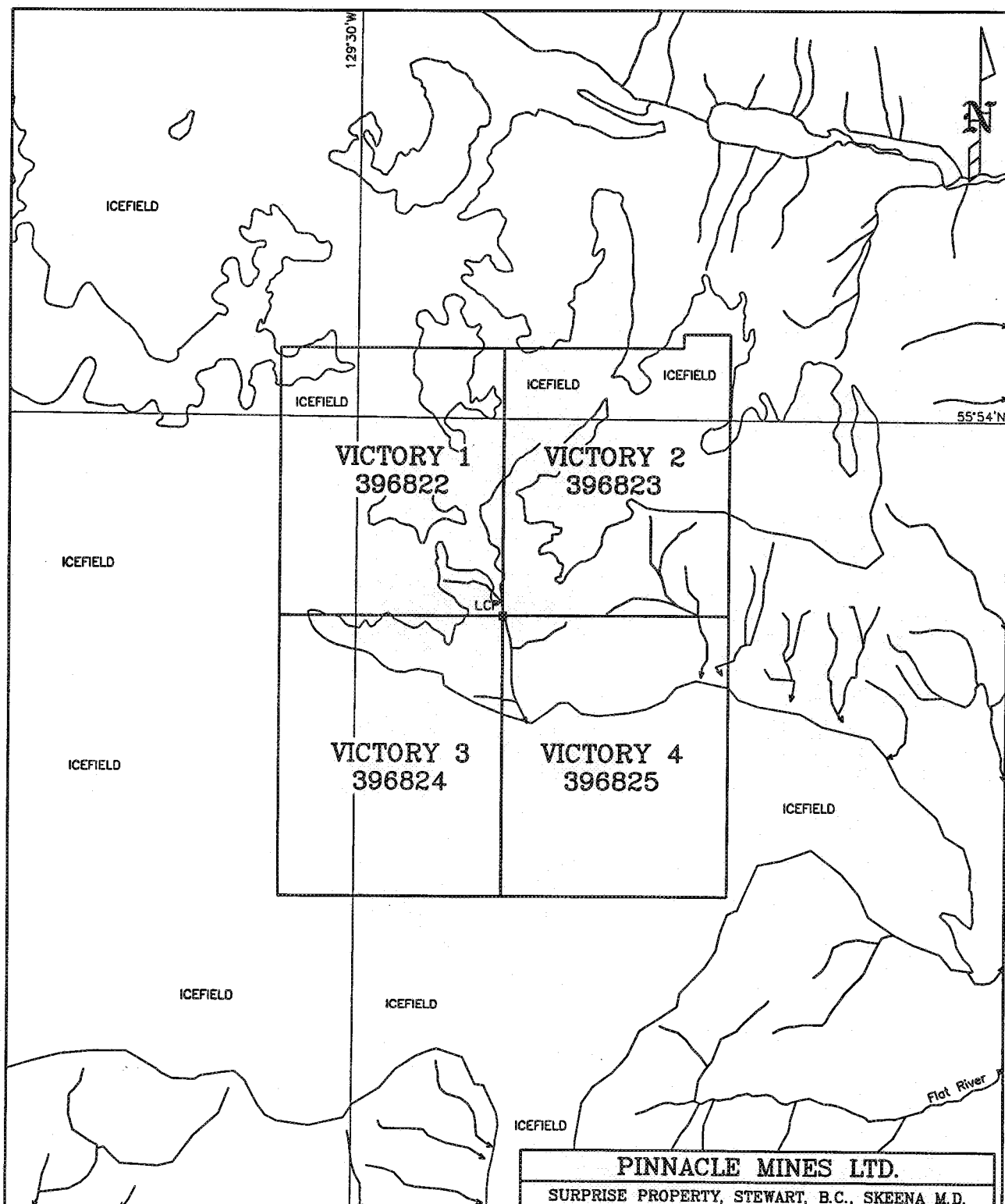


PINNACLE MINES LTD.	
SURPRISE PROPERTY, STEWART, B.C., SKEENA M.D.	
Claims Map	
RPM Mapping and Computer Services Ltd.	Date: December 2004
	Claim Map: 104A/04E
	Figure: 2

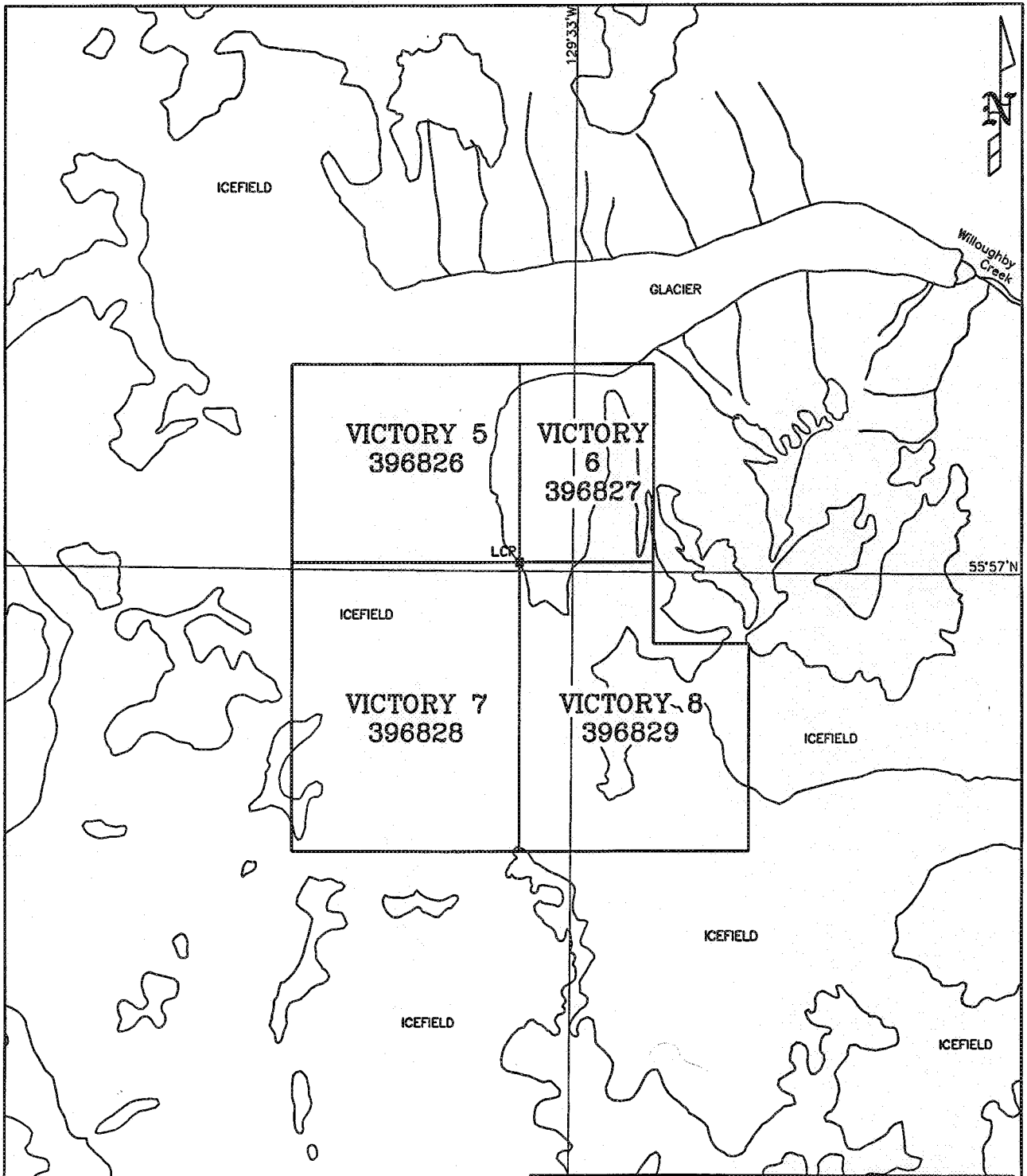
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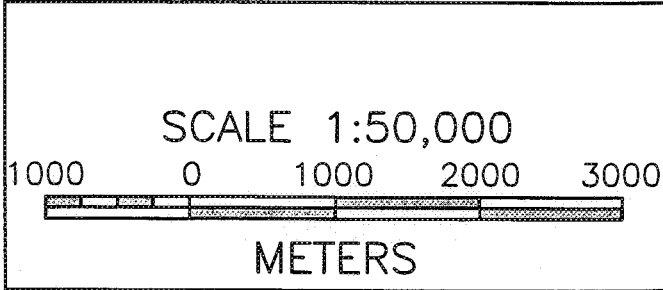
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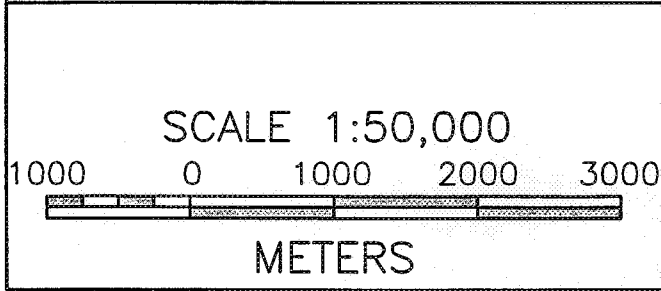
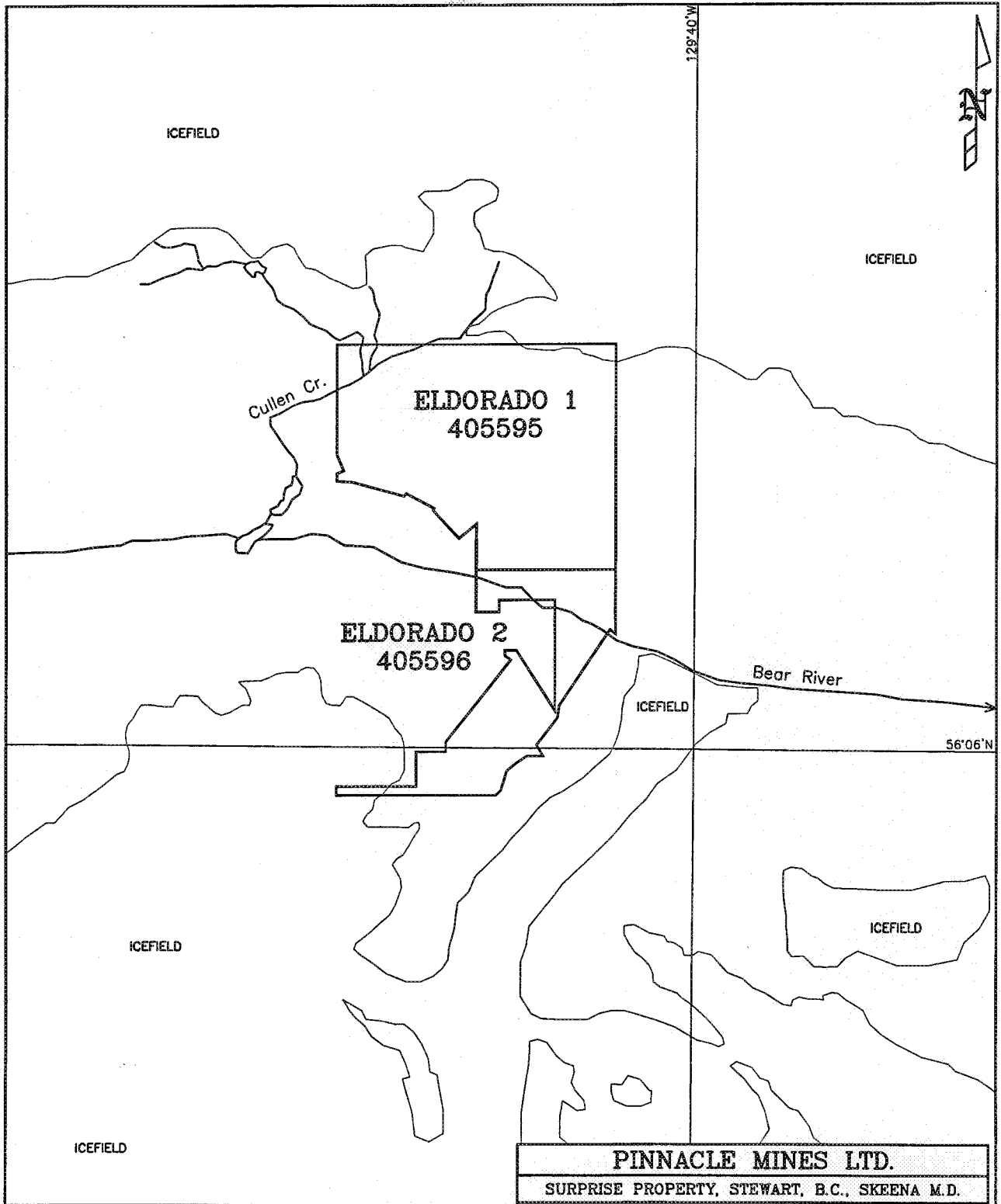


PINNACLE MINES LTD.	
SURPRISE PROPERTY, STEWART, B.C., SKEENA M.D.	
<h1>Claims Map</h1>	
RPM Mapping and Computer Services Ltd.	Date: December 2004
	Claim Map: 104A/03W,103P/14E
	Figure: 2A



PINNACLE MINES LTD.	
SURPRISE PROPERTY, STEWART, B.C., SKEENA M.D.	
Claims Map	
RPM Mapping and Computer Services Ltd.	Date: December 2004
	Claim Map: 104A/03W,103P/14E
	Figure: 2B





PINNACLE MINES LTD.	
SURPRISE PROPERTY, STEWART, B.C., SKEENA M.D.	
<h1>Claims Map</h1>	
RPM Mapping and Computer Services Ltd.	Date: December 2004
	Claim Map: 104A/03W,103P/14E
	Figure: 2C

Victory 5	396826	NTS103P093	20	September 20/2005
Victory 6	396827	NTS103P093	20	September 20/2005
Victory 7	396828	NTS103P093	20	September 20/2005
Victory 8	396829	NTS103P093	20	September 20/2005
Trafalgar 1	396834	NTS Map 104A/4E	20	September 20/2005
Trafalgar 2	396835	NTS Map 104A/4E	20	September 20/2005
Trafalgar 3	396836	NTS Map 104A/4E	20	September 20/2005
Trafalgar 4	396837	NTS Map 104A/4E	20	September 20/2005
Emma 3	396838	NTS Map 104A/4E	20	September 20/2005
Emma 4	396839	NTS Map 104A/4E	20	September 20/2005
Emma 5	396840	NTS Map 104A/4E	20	September 20/2005
Emma 6	396841	NTS Map 104A/4E	20	September 20/2005
Emma 1	396842	NTS Map 104A/4E	20	September 20/2005
Emma 2	396843	NTS Map 104A/4E	20	September 20/2005
Trafalgar 5	396844	NTS Map 104A/4E	20	September 20/2005
Trafalgar 6	396845	NTS Map 104A/4E	20	September 20/2005
Frances 1	396846	NTS Map 104A/4E	20	September 20/2005
Frances 2	396847	NTS Map 104A/4E	20	September 20/2005
Frances 3	396848	NTS Map 104A/4E	20	September 20/2005
Frances 4	396849	NTS Map 104A/4E	20	September 20/2005
Pin 1	405238	NTS Map 104A/4E	20	September 9/2005
Pin 2	405239	NTS Map 104A/4E	20	September 9/2005
Pin 3	405227	NTS Map 104A/4E	20	September 9/2005
Pin 4	405233	NTS Map 104A/4E	20	September 9/2005
Pin 5	405242	NTS Map 104A/4E	20	September 9/2005
Pin 6	405241	NTS Map 104A/4E	20	September 9/2005
Eldorado 1	405595	NTS Map 104A/4E	20	September 26/2005
Eldorado 2	405596	NTS Map 104A/4E	20	September 26/2005

Total 640 units

Claim location is illustrated on Figure 2a, 2b, 2c and 2d, copied after available government NTS maps. Ownership is presently 100 % registered with Andrew Bowering of Vancouver, British Columbia.

The author located the claim posts on behalf of Andrew Bowering and can verify the quality and accuracy of the staking. The exact location of these claims would be subject to further surveys.

Previous Work

Exploration began in the Stewart region about 1898 after the discovery of mineralized float by a party of placer miners. Sites which could be easily reached from Stewart were the first to be explored among which was the lower Marmot River area. This early phase of exploration culminated in 1910 when both Stewart and the neighboring town of Hyder, Alaska boasted a population of around 10,000 people. Another boom period began in the early 1920's after the discovery of the very rich Premier gold-silver-lead-zinc mine in the Salmon River area, northwest of Stewart.

From 1940 to 1979 there was little activity in the region due to lackluster precious metal prices. However when silver and gold prices skyrocketed in the early 1980's, many of the old properties were re-examined by both small and large exploration companies. Success by a number of exploration companies, particularly in the Unuk River has led to continued exploration in the general area. The relatively recent discovery and ongoing development of the intrusive-related gold deposits at Red Mountain located approximately 16 km east of Stewart, has again rekindled interest in the surrounding area.

The two properties that have recorded work in the late 1970's and in the immediate vicinity of the Surprise property claims are the Surprise Creek molybdenum and Goat Ridge gold-silver occurrences. The Surprise Creek property was held by Falconbridge who optioned it to RioCanex in 1981. RioCanex drilled three holes to test the larger of two rusty zones found previously by prospecting. The two identified zones measure 800 by 300 m and 1800 by 900 m and are mainly biotite hornfels with coincident anomalous fluorine values. The smaller zone is associated with an exposed porphyritic quartz monzonite stock. Geochemical sampling of the larger showed a concentric distribution of fluorine values, with the centre occupied by an icecap. The theory was that a similar quartz monzonite was responsible for the hornfels and that it was hidden below 55 to 70 m of ice. Three holes tested this hypothesis. The holes all intersected a section of quartz and feldspathic quartz arenite followed by a section of graphitic siltstone (in holes 2 and 3 these sections repeat). Mineralization consists of < 1 to 2 % combined pyrrhotite and pyrite; Molybdenum and chalcopyrite are present in quartz veinlets with pyrite and pyrrhotite plus or minus calcite with rare fluorite. No assays were reported, just that molybdenum was not that abundant with the best value being 2 m of 0.1 % MoS₂.

Report writer Downing concluded that sections cut by drill holes consist of thrust slices that have been selectively moved E-NE from the original position of hornfelsing and mineralization.

The Goat deposit is located about 34 kilometers northeast of Stewart, approximately 5 kilometers north of the Stewart highway (37A) and just south of the Goat Glacier.

Newmont Mining and Granby Mining staked the showings in 1960 as the Surprise claim group. The claims were restaked in 1963 as the Goat group. Noradco acquired the claims in 1964 and completed trenching, sampling and 3 drill holes on the property. In 1968, an agreement with Shield Minerals Corp. ensured continued underground development. In 1971, Abitibi acquired the Shield Minerals interest and incorporated Nordore Mining Co. In 1974, Nordore rehabilitated the workings now on the Ken 1-4 and Goat A-H claims. In 1974, the Remus claims were acquired as a mill site. About 1770 tonnes of ore were stockpiled. In 1976, about 295 tonnes of ore was milled from a portable concentrator. Development work on the E vein recommenced in 1979 and "some" material was put through the concentrator. In 1980, underground development continued and the mill operated for several months. The mill was destroyed by fire in 1981 and all work ceased. Bond Gold carried out a geophysical survey over the property in 1990. In 1991, Cameco conducted geochemical surveys and sampling on the Ken and Hugh claims.

Proven and probable reserves in 1979 were 8800 tonnes grading 4782.9 grams per tonne silver and 10.6 grams per tonne gold. Recorded production during the period 1975 and 1979-81 was 1,794,049 grams of silver, 5,475 grams of gold, 52,641 kilograms of zinc, 4,071 kilograms of lead and 153 kilograms of copper.

During July to October, 1994 and July 1996, Teuton Resource Corp conducted an exploration program consisting of reconnaissance geochemical rock and silt sampling in conjunction with prospecting and reconnaissance geological mapping on the property to primarily evaluate the gold potential with emphasis on any intrusive related mineralization.

The survey over only a small portion of the claims indicated numerous types of mineralization; both in outcrop and float boulders. Mineralization noted in outcrop included the following:

1. Massive pyrite veins up to several meters in width occasionally accompanied by fine-grained galena and sphalerite.
2. Pervasive, fine-grained pyrite mineralization in the rhyolitic rocks as well as pyritic bands in the sericite schists.
3. A weak but pervasive quartz-sulfide veinlet stockwork zone over a large portion of the Surp 6 claim.

4. Quartz stringers with pyrite, galena, chalcopyrite, pyrrhotite and sphalerite along fault zones on the Surp 12 claim.
5. Weak quartz stockwork with pyrite and arsenopyrite in argillites on the Surp 8 claim.
6. Banded magnetite and hematite in calcareous, maroon volcanics on the Surp 6 claim.
7. Fine-grained pyrite, pyrrhotite and traces of chalcopyrite in sericitic rocks on the southern portion of the Surp 8 claim.

Results of the geochemical program indicate highly anomalous gold, silver, copper, arsenic, lead and zinc values widespread throughout the limited areas explored. Values as high as 0.334 opt Au, 6.94 opt Ag, 1.61% Cu, 1.25% As, 4.26% Pb and 4.41% Zn were obtained from different zones within the large and only partially explored claim holdings. The area of the former Surp 6 and 8 claims are underlain by the present Emma 3 and Frances 3 claims that comprise part of the Surprise property.

In 2003 Pinnacle collected a total of 78 rock samples outcrop and float as well as 23 silt samples during an exploration program. Results of the samples indicate highly anomalous values for gold, silver, lead, zinc, arsenic and copper. Sample values for gold ranged from <1 ppb to a high of 13.02 ppm, for silver from 0.2 to 3076.8 ppm, for lead from 5.7 to >9999 ppm, for zinc from 12 to 56,866 ppm, for arsenic from 1.9 to 9999 ppm and copper from 4.4 to 28,026 ppm

The southern claims are near the Willoughby prospect, which is located on a steep nunatak south of Meziadin Lake and 26 kilometers east of Stewart between the north and central forks of the Willoughby Glacier. A mineralized zone carrying low-grade gold and silver values was investigated in this area in 1941 and the Wilby group of claims was explored in 1945.

To date 11 mineralized occurrences have been located on the Willoughby property. Mineralization consisting of pyrite, pyrrhotite along with lesser sphalerite, galena and rare visible gold occurs in veins, stockwork and fracture fillings. In addition, pyrite and pyrrhotite occur as semi massive to massive occurrences in lenses and pods. Several of the zones appear to be intrusion related. The best drill intersection averages 40.1 grams per tonne gold and 109.6 grams per tonne silver over 11.7 meters in one of the zones.

The newly acquired Eldorado claims west of the northern block on Surprise Creek cover the area of the former Enterprise property. Considerable work was reported on this group prior to 1919, including 30 meters of drifting along an adit. In the period 1928-1931, considerable tunneling

along six further adits was reported. Numerous open cuts were also excavated along favorable zones.

In 1978, Tournigan Mining Explorations carried out surface sampling on the former Enterprise group.

GEOLOGICAL SURVEYS

Regional Geology

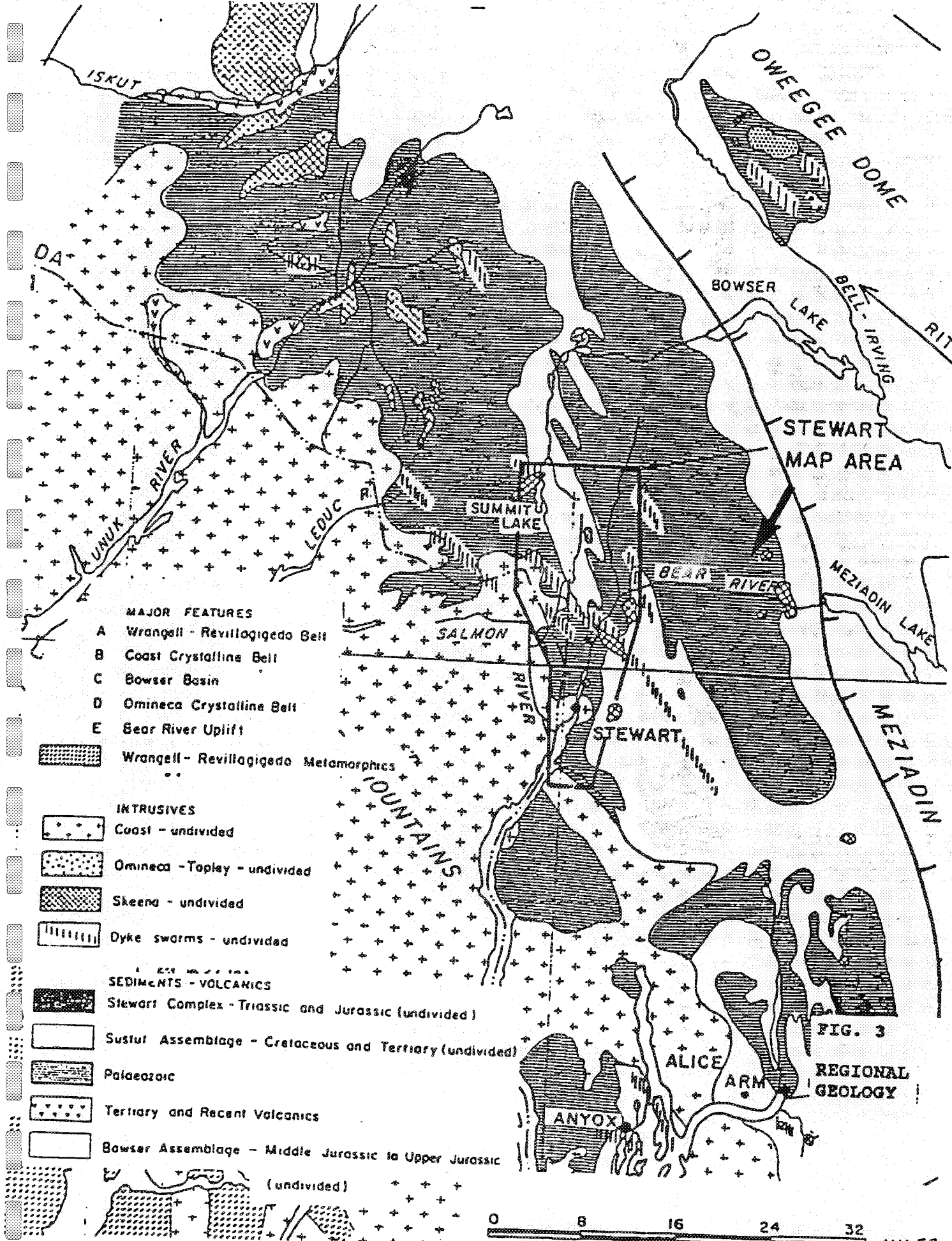
The Surprise claim blocks lie in the Stewart area, east of the Coast Crystalline Complex and within the western boundary of the Bowser Basin. Rocks in the area belong to the Mesozoic Hazelton Group and Bowser Lake Group that have been intruded by plugs of both Cenozoic and Mesozoic age.

According to C.F. Greig, in G.S.C. Open File 2931, the western portion of the claim area is underlain by Lower Jurassic volcanic rocks overlain by the Lower to Middle Jurassic Salmon River Formation at the east edge of the claims. The Salmon River formation is in turn overlain by the Upper Jurassic Bowser Lake sediments, east of the claim holdings.


At the base of the Hazelton Group is the lower Lower Jurassic Marine (submergent) and non-marine (emergent) volcanoclastic Unuk River Formation. This is overlain at steep discordant angles by a second, lithologically similar, middle Lower Jurassic volcanic cycle (Betty Creek Formation), in turn overlain by an upper Lower Jurassic tuff horizon (Mt. Dilworth Formation). Middle Jurassic non-marine sediments with minor volcanics of the Salmon River Formation unconformably overlie the above sequence.

The lower Lower Jurassic Unuk River Formation forms a north-northwesterly trending belt extending from Alice Arm to the Iskut River. It consists of green, red and purple volcanic breccia, volcanic conglomerate, sandstone and siltstone with minor crystal and lithic tuff, limestone, chert and coal. Also included in the sequence are pillow lavas and volcanic flows.





In the property area, the Unuk River Formation is unconformably overlain by middle Lower Jurassic rocks from the Betty Creek Formation. The Betty Creek Formation is another cycle of troughfilling sub-marine pillow lavas, broken pillow breccias, andesitic and basaltic flows, green, red, purple and black volcanic breccia, with self erosional conglomerate, sandstone and siltstone and minor crystal and lithic tuffs, chert, limestone and lava.



- MAJOR FEATURES**
- A Wrangell - Revillagigedo Belt
 - B Coast Crystalline Belt
 - C Bowser Basin
 - D Omineca Crystalline Belt
 - E Bear River Uplift

 Wrangell - Revillagigedo Metamorphics

INTRUSIVES

-  Coast - undivided
-  Omineca - Topley - undivided
-  Skeena - undivided
-  Dyke swarms - undivided

SEDIMENTS - VOLCANICS






-  Stewart Complex - Triassic and Jurassic (undivided)
-  Sustut Assemblage - Cretaceous and Tertiary (undivided)
-  Palaeozoic
-  Tertiary and Recent Volcanics
-  Bowser Assemblage - Middle Jurassic to Upper Jurassic (undivided)

FIG. 3

REGIONAL GEOLOGY





- JURASSIC**
- Upper Jurassic**
- BOYER LAKE GROUP**
- [UJc]** dark grey to black chert rucks; includes olive rucks and olive-grey (1-2 m) beds of massive, dark green to dark grey, fine to medium grained and laminated (possibly or possibly); otherwise commonly contains chert, iron, copper, molybdenum, and manganese.
- Lower to Middle(?) Jurassic**
- HAZELTON GROUP**
- [LMJc]** SALMON RIVER FORMATION: rusty weathering volcanic rocks; contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks; also contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks; also contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- Lower Jurassic**
- [Jd]** black and dark grey debris flow conglomerate and volcanic debris; contains and subordinate appearance, siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks; also contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jj]** massive, laminated, massive, commonly sandy or coarse.
- [Jk]** rusty weathering, pale grey to white, tabular volcanic rocks; contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks; also contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jl]** dark green to grey and purple hornblende- and biotite-bearing volcanic rocks; includes hornblende- and biotite-bearing volcanic rocks; also contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jm]** dark green pyroxene-phyric basaltic volcanic and rhyolitic rocks; includes pyroxene- and pyroxene-phyric basaltic volcanic and rhyolitic rocks; also contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jnp]** massive pyroxenitic rocks and flows; includes mafic to intermediate, coarse basalt and 10-15 m thick beds of ash and fine ash fall that commonly contain poorly crystalline rucks.
- [Jme]** massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks; also contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jm]** undivided massive to green feldspathic pyroxenitic and quartzitic rocks.
- [Jn]** massive or ductile basalt and ash fall; includes very poorly stratified dark green-grey crystal-rich basaltic volcanic rocks; also contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jc]** undivided dark grey to black, well bedded to massive, and massive volcanic rocks.
- [Jv]** undivided, mainly pyroxenitic, feldspathic volcanic rocks.
- [Jvc]** undivided volcanic and subordinate quartzitic rocks.
- [Jaf]** abundant abundance of debris flow deposits and undivided volcanic rocks.
- [Jaa]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jab]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jac]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jad]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jae]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jaf]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jag]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jah]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jai]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jaj]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jak]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jal]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jam]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jan]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jao]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jap]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jaq]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jar]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jas]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jat]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jau]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jav]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jaw]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jax]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jay]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- [Jaz]** abundant abundance of felsic volcanic rocks and coarse fine grained, massive, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- JURASSIC OR OLDER**
- STURUM GROUP**
- [Kc]** dark grey, laminated to thickly bedded siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks; also contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- TRIASSIC OR OLDER**
- STURUM ASSEMBLAGE**
- [Kp]** dark green, resistant and poorly stratified, granular, hornblende- and biotite-bearing volcanic rocks; also contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.
- PLUTONIC ROCKS**
- TRIASSIC**
- Eocene**
- [Tb]** Silver Creek pluton: quartziferous, medium grained basaltic monzonitic and perthitic quartz monzonite (Cox 1961).
- [Tn]** Nelson Glacier pluton: calcic, medium grained, quartziferous, hornblende- and biotite-bearing volcanic rocks (Cox 1961).
- [Tsc]** Strath Creek pluton: massive, medium grained, quartziferous, hornblende- and biotite-bearing volcanic rocks (Cox 1961).
- TERTIARY(?)**
- [Tf]** Cretaceous pluton: felsic porphyry (Cox 1961).
- MIDDLE OR LATE JURASSIC TO TERTIARY**
- [Jm]** Drusky Glacier pluton: dark green, biotite pyroxene quartziferous volcanic rocks (Cox 1961).
- JURASSIC OR CRETACEOUS**
- [JKp]** Deer Pass pluton: (biotite-) hornblende quartz monzonitic and granodioritic, pervasively fractured and propylitically altered, and contains common calcic-sulfate, very fine grained dark grey rucks.
- [JKf]** unroofed felsic intrusions; includes felsic dykes, sills, and sills; also contains siliceous, sulfidated, and distinctive very fine-grained, massive, micaceous, siliceous, and siliceous (possibly or possibly) rucks.

FIGURE 4 GEOLOGY MAP after G.S.C. Open File 2931

The upper Lower Jurassic Mt. Dilworth Formation consists of a thin sequence varying from black carbonaceous tuffs to siliceous massive tuffs and felsic ash flows. Minor sediments and limestone are present in the sequence. Locally pyritic varieties form strong gossans.

The Middle Jurassic Salmon River Formation is a late to post volcanic episode of banded, predominantly dark colored siltstone, greywacke, sandstone, intercalated claystone, minor limestone, argillite, conglomerate, littoral deposits, volcanic sediments and minor flows.

Overlying the above sequences are the Upper Jurassic Bowser Lake Group rocks. These rocks mark the western edge of the Bowser Basin and are also located as remnants on mountaintops in the Stewart area. These rocks consist of dark grey to black clastic rocks including silty mudstone and thick beds of massive, dark green to dark grey, fine to medium grained arkosic litharenite.

According to E.W. Grove, the majority of the rocks from the Hazelton Group were derived from the erosion of andesitic volcanoes subsequently deposited as overlapping lenticular beds varying laterally in grain size from breccia to siltstone.

D. Aldrick's work to the north of Stewart has shown several volcanic centers in the surveyed area. Lower Jurassic volcanic centers in the Unuk River Formation are located in the Big Missouri Premier area and in the Brucejack Lake area. Volcanic centers within the Lower Jurassic Betty Creek Formation are in the Mitchell Glacier and Knipple Glacier areas.

There are various intrusives in the area. The granodiorites of the Coast Plutonic Complex largely engulf the Mesozoic volcanic terrain to the west. East of these (in the property area), smaller intrusive plugs range from quartz monzonite to granite to highly felsic. Some are likely related to the late phase offshoots of the Coast plutonism, other are synvolcanic and tertiary. Double plunging, northwesterly - trending synclinal folds of the Salmon River and underlying Betty Creek Formations dominate the structural setting of the area. These folds are locally disrupted by small east-overthrusts on strikes parallel to the major fold axis, cross-axis steep wrench faults which locally turn beds, selective tectonization of tuff units and major northwest faults which turn beds. Figures 3 and 4 show the general geology of the property area.

Local Geology

The section on local geology is excerpted from a 2003 assessment report by the author:

"Prior to the start of the geochemical program, reconnaissance mapping using the helicopter was carried out. This carried out in order to identify the areas of the Mt Dilworth/Salmon River contact similar to that hosting the Eskay Creek deposit and the nearby Teuton discovery in Nelson Creek, south of the northern Surprise claim block.

The northern Surprise claim group is underlain by a sequence of Lower Jurassic clastic and volcanic rocks intruded by felsic stocks and dykes and /or sills along the western portions of the property. Along the eastern edge of the claims, Lower to Middle Jurassic and Upper Jurassic sediments are present.

Just to the west of Emma 3 claim, large gossaned areas are related to sericite alteration and subsequent infusion of quartz and sulfide mineralization. The most intensely altered zone extends from the west side of the northwest corner of the Emma 3 claim to just west of the Emma 6 claim. In these sericitic zones, it is very difficult to determine what the host rock is. This sericite alteration zone is located in a thick sequence of rhyolite breccia, which is correlated with the Mt. Dilworth formation. This sequence consists of coarse clasts forming up to 30% of the rock surrounded by grey fine-grained matrix. Individual clasts are angular, up to 15 cm in size consisting of porphyritic rhyolite. Feldspars, which are euhedral to subhedral shaped form 20 % of the material in the clasts. Within the rhyolite breccia, discontinuous lenses or blocks of massive banded hematite and magnetite are present. A regional iron formation that has been identified 10-15 kilometers to the southwest of the claim block occurs within the Bear River pass area. The massive hematite and magnetite may represent blocks of that formation that occurred in the vicinity of the rhyolite breccia and that have been incorporated into the formation.

Based on the thick sequence of the rhyolite breccia and the angular nature of the breccia clasts, it is speculated that this area of the Surprise claim group may represent a volcanic center in the Jurassic period.

North and south of the above sequence, rocks in the Mt. Dilworth formation consist of grey, fine-grained to glassy appearing rhyolites along a belt trending north across the Frances 3 claim and south along the Emma 1 and Trafalgar claims. It appears that the grey, fine-grained variety occurs along the west edge of the formation with a black glassy appearing variety in contact with the overlying Salmon River formation. The grey variety consists of small white rhyolite fragments up to 5 mm in a fine-grained ash matrix. Pyrite occurs as both fine-grained disseminations and as later veinlets filling cross cutting fractures. The black glassy variety is aphanitic with disseminated sulfides. Some varieties found in float consist of black rhyolite with banded massive pyrite forming up to 20 % of the rock. Some rocks also contain minor amounts of galena and sphalerite indicating a possible Kuroko type VMS situation containing Pb-Zn-Ag.

Just west of the above rhyolite breccia, a thick sequence of maroon andesitic rocks occurs. Observed rocks consist of poorly sorted rounded volcanic fragments up to 20-30 cm in a fine-grained groundmass. Near the east contact with the rhyolites, the fragmental volcanic contains aphanitic and very fine-grained felsic volcanic clasts. Along the contact area, it is common to observe thin lenses of maroon colored tuff horizons within the rhyolite formation. These horizons parallel the contact and appear to be restricted to within 10 meters of the contact. Extensive and pervasive carbonate alteration is very common in the maroon pyroclastics and flows.

East of the rhyolite, black argillites with minor interbedded tuffaceous chert are present. The argillites which are pyritiferous and thinly bedded tend to weather to a rusty color. On the Emma 3 claim in the northwest corner of the claim, east west fractures contain narrow discontinuous galena-sphalerite-carbonate veins that are up to 0.3 meters in width.

Along the east side of the northern Surprise claim block, thinly bedded argillites of the Bowser Lake group are present. These are locally pyritiferous weathering to a rusty color.

In the middle of the Frances 3 claim block, a medium grained grey, quartz monzonite outcrops. This intrusive extends from the valley floor to the upper slopes in the northern portion of the Frances 3 claim. Along the upper slopes, the monzonite is carbonate altered and weather into a rusty red color.

In the area of the monzonite, the argillites in the Bowser Lake formation have been hornfelsed to a light pink to dark grey rock containing fine-grained pyrrhotite."

Figure 5 shows the general geology of the Surprise claim block, particularly the Mt Dilworth/Salmon River contact as defined by reconnaissance mapping.

Mineralization

The 2004 exploration programs over parts of the Surprise property followed up on the exploration results of the 2003 program which indicated abundant and varied mineralization within the present claim group as follows: The 2004 work indicated several new styles of mineralization other than that indicated in 2003

1. Pervasive, very fine-grained pyrite as well as pyritic bands in the grey lapilli tuff rhyolitic rocks. This rhyolite is present along the entire western length of the northern claim block extending from the Frances 1 claim south to the Pin 6 claim, a distance of approximately

15 kilometers. Pyrite can locally form up to 20 % of the rock with much of the sulphide occurring as void filling around volcanic clasts.

2. Massive sulfide bearing, manganese stained tuffaceous chert boulders possibly from the base of the Salmon River formation on the Emma 5 claim were located in the 2003 work program. The boulders are large and can be up to 2 meters in diameter. Sulfide content is generally in semi-massive sulfide bands from 15 cm to 20 cm in width and can form up to 10 % of the boulders. The rocks carry galena, sphalerite, and chalcopyrite with minor pyrite. Source of these boulders is likely on the south side of the glacier in the NW corner of the Emma 1 and middle of the Pin 4 claim. In the area of the boulders, minor float boulders of massive pyrite and chalcopyrite were noted. Work during 2004 traced these boulders to the base of the above glacier.
3. In 2003, black glassy appearing rhyolites were located with strong very fine grained pyrite mineralization forming up to 15 % of the rock. Disseminated fine-grained galena-sphalerite have been noted in this type of rhyolite boulders in a number of different valleys located on the Trafalgar 1 and 5 claims. This type of mineralized boulder may indicate the presence of Kuroko type Pb-Zn-Ag massive sulphides mineralization in the claim area. These types of boulders have been observed a length extending from the Trafalgar 5 to Trafalgar 3 claims, a distance of approximately 6 kilometers. The boulders have been located at the south edge of the claim holdings during the 2004 work.
4. Chalcopyrite with pyrite in small stringer, pods and stockworks in sheared andesitic rocks on the Enterprise group. Locally the chalcopyrite-pyrite mineralization is accompanied by galena, sphalerite, chlorite, quartz and calcite. The mineralization is hosted in pyritic pyroclastic rocks that are variably chloritized. The mineralization is located within rocks that are just north of an iron formation that hosts the George Gold-Copper deposit several kilometers to the southwest. The best mineralization has been reported in the Frenchman tunnel, where a northwest striking, vertical fault gouge is well mineralized with chalcopyrite, pyrite and malachite. Above and northwest of the Enterprise tunnel, several small mineralized zones are exposed in numerous pits and tunnels.
5. Vuggy quartz float with massive galena and stibnite just west of the Enterprise tunnel. Float boulders up to 15 cm in width have been located on the talus slope at the base of a vertical cliff. This rock face is the source of this quartz-sulphide occurrence. Width and length of this mineralization is unknown at present due to inaccessibility.
6. A strong quartz-stibnite vein system up to 5 meters wide shear zone in the NW corner of the claim group. This mineralization has been traced on the ground over a strike length of

300 meters and based on aerial view extends beyond the 300 meters that was sampled. The zone consists of a 2-5 meter wide brecciated zone with quartz filling the voids between clasts. Locally the zone will be entirely quartz filled. Numerous splays to the shear zone extend the overall width of the zone up to 15 meters in several places. In these locations, veins up to 4-5 meters wide, separated by weakly brecciated argillite form the east and west walls to the zones. Locally massive stibnite and arsenopyrite form pockets and stringers of mineralization that is up to 15-20 cm wide. Pyrite is common in the brecciated argillite but is not common in the quartz. Overall, sulphide mineralization is 5-10 % of the rock.

Teuton Resource Corp has been exploring a gold-silver occurrence between the two of the above Pinnacle claim blocks. In the fall of 2002, Teuton Resources discovered high-grade gold-silver mineralization on the Del Norte Claim group, 10 kilometers south of the northern block of claims and 8 kilometers northeast of the second southern group of claims, comprising the Surprise property. Prior to the onset of winter, Teuton completed trenching and three drill holes. The results of the 2002 trenching include 10 meters of 0.179 opt Au and 8.4 opt Ag. The best drill hole - 2002-3 assayed 0.223 opt Au and 8.09 opt Ag over a drill length of 23.4 meters. Work on the LG vein in 2003 by Teuton indicates several promising mineralized areas have been defined by exploration on the Del Norte property. The most significant occurs along a 2200-meter long trend connecting the Kosciuszko Zone, the LG Vein and the LG Vein Extension. Similar mineralogy and stratigraphic location indicates that all of three of these are related structures, although talus and ice obscure continuity in places. Gold and silver bearing vein mineralization has now been found over a vertical range of 450 meters, from the upper reaches of the Kosciuszko zone to the LG Vein area. The LG Vein mineralization apparently lies along a contact between mudstones at the base of the Salmon River Formation and felsic pyroclastics believed to be of the Mt. Dilworth Formation.

In addition, Teuton has announced the discovery of narrow, massive sulfide-gold-silver mineralization along the Mt Dilworth/Salmon River formation south of the above discovery.

The bulk of this drilling was concentrated along the mineralized lithic tuff-mudstone contact connecting the K (Kosciuszko) zone and the LG vein areas. Including all drilling completed in from 2002 to 2004, this trend has now been tested by 14 drill stations at intervals along an 1100-meter long strike length.

Drill results to date show a significant mineralized system containing silver-gold bearing mineralization hosted in near-vertically dipping, quartz-sulfide/sulfosalt vein breccia, with a majority of the intersections containing gold equivalent values greater than 0.40 oz/ton.

The northern Surprise block is underlain by the same stratigraphic sequence hosting the new Teuton discovery as well as the producing Eskay mine (reserves at the end of 2002 were 1.433 million tons of 0.998 opt Au and 44.9 opt Ag in the proven and probable reserve and 480,000 tons of 0.442 opt Au in the mineral reserve category). This mine has been producing since the mid 1990's and reports suggest that there has been a new discovery associated with rhyolites in mine area.

In 1994 geochemical surveys, gold values up to 0.334 opt Au were obtained in quartz veinlets in a silicified felsic volcanic with no obvious sulfides, on the west edge of the Emma 5 claim. This occurrence was associated with abundant barite. Geochemically anomalous gold values were obtained in the surrounding area. Follow-up work in 1995 yielded gold assays up to 0.169 opt Au in this area. This mineralized zone should be sampled and evaluated in future surveys.

GEOCHEMISTRY

Introduction

Reconnaissance rock and silt geochemical samples were taken from the area of the northern Surprise claim group. The location of the samples is shown in figure 6 at a scale of 1: 5,000 in relation to the claim lines. Icefield boundaries have been taken from the most recent government topographic maps, however, these are often inaccurate: pronounced ablation in Stewart during the past years has exposed much new rock outcrop and reduced the size of snow and icefields considerably.

Altogether 220 rock samples were taken: 31 bedrock grab and 189 float. A total of 19 silt samples were collected. Locations for the all samples were located by reference to GPS locations.

Field Procedure and Laboratory Technique

Rock samples were taken in the field with a prospector's pick and collected in standard plastic sample bag. Grab samples were taken to ascertain character of mineralization at any specific locality. These samples consisted generally of three to ten representative pieces with total sample weight ranging between 0.5 to 2.0 kgs. Complete descriptions of the rock samples, in terms of type, noted mineralization and relationship to nearby features are located in Appendix III. In addition, all values for gold, silver, copper, lead, zinc and arsenic are included with any determined anomalous values (bold values) noted along with the descriptions.

All rock and silt samples marked ERK, TEK, RDM and CK were analyzed at the Acme Analytical Laboratories facilities while the samples marked A and EB were analyzed by Assayers Canada, both in Vancouver, British Columbia. Rock samples were first crushed to minus 10 mesh (70 % of sample) using jaw and cone crushers. Then 250 grams of the minus 10-mesh material was pulverized to minus 150 mesh using a ring pulverizer. A modified Aqua Regia solution is added to each sample and leached for 1 hour at greater than 95 degrees Celsius. The resulting solution was then analyzed by atomic absorption. The analytical results were then compared to prepared standards for the determination of the absolute amounts. For the determination of the remaining trace and major elements Inductively Coupled Argon Plasma (ICP) was used. In this procedure a 0.5-gram portion of the minus 140-mesh material is digested with aqua regia for 1 hour at 95 degrees Celsius and made up to a volume of 20 mls prior to the actual analysis in the plasma. Again the absolute amounts were determined by comparing the analytical results to those of prepared standards. Appendix I has the methods and specifications description as supplied by Acme Analytical Laboratories.

No further analysis was used for follow-up analysis of base metals (where values were too high for quantitative measurement by ICP). Appendix II has the complete analyses results.

Statistical Treatment

As in other small-scale geochemical surveys, a cumulative frequency plot to determine background and threshold values (greater than threshold is considered anomalous) was not deemed practical for either the rock geochemical or silt sampling program. For the rock geochemical program, gold values greater than 100 ppb gold, silver values greater than 3.2 ppm, lead values greater than 160 ppm, zinc values greater than 320 ppm, arsenic values greater than 110 ppm and copper values greater than 360 ppm were considered anomalous in the Stewart area.

The silt sampling did not reveal any obvious anomalies, even though mineralized float rocks are present in the moraines and streambeds.

Figures 6, 6a, 6b and 6c at a scale of 1:5,000 shows the location plots for all sampling conducted with the values for Au, Ag, Pb, Zn, As and Cu listed in a table for the appropriate samples in the diagram. Figure 7 shows the sampling on the quartz-stibnite vein while figure 8 shows the sampling on the Enterprise group.

Anomalous Zones

Rock geochemical sampling was principally restricted to float sampling of any identified mineralized rocks, either in float and bedrock. Sampling concentrated in the area of the projected contact of the Mt Dilworth and Salmon River formation in the area of the west portion of the northern Surprise claim block. Sampling was also carried out in order to locate the former Enterprise showings in Bear Pass.

Results of the samples indicate highly anomalous values for gold, silver, lead, zinc, arsenic and copper and antimony, particularly in the ERK 3-11 samples. Sample values for gold ranged from <0.5 ppb to a high of 3.9 ppm, for silver from <0.1 to 1305 ppm, for lead from 0.2 ppm to 9.1 %, for zinc from 6 ppm to > 10,000 ppm, for arsenic from <0.5 to >10,000 ppm and copper from 0.7 ppm to 8.67 %.

Appendix III has a complete list of the above values for the various rocks along with a brief geological description for each rock collected.

Numerous grey rhyolite boulders sampled indicated anomalous arsenic values occasionally in association with anomalous galena, silver and / or zinc values. Arsenic values in excess of 10,000 ppm have been obtained

On the Emma 3 claim, large manganese stained tuffaceous chert boulders (ERK 13, 15, 19 and 23) were anomalous in lead, zinc, copper, arsenic and silver.

Throughout the area surveyed, numerous black glassy appearing rhyolite boulders were anomalous in lead, zinc, silver and rarely copper, gold and arsenic.

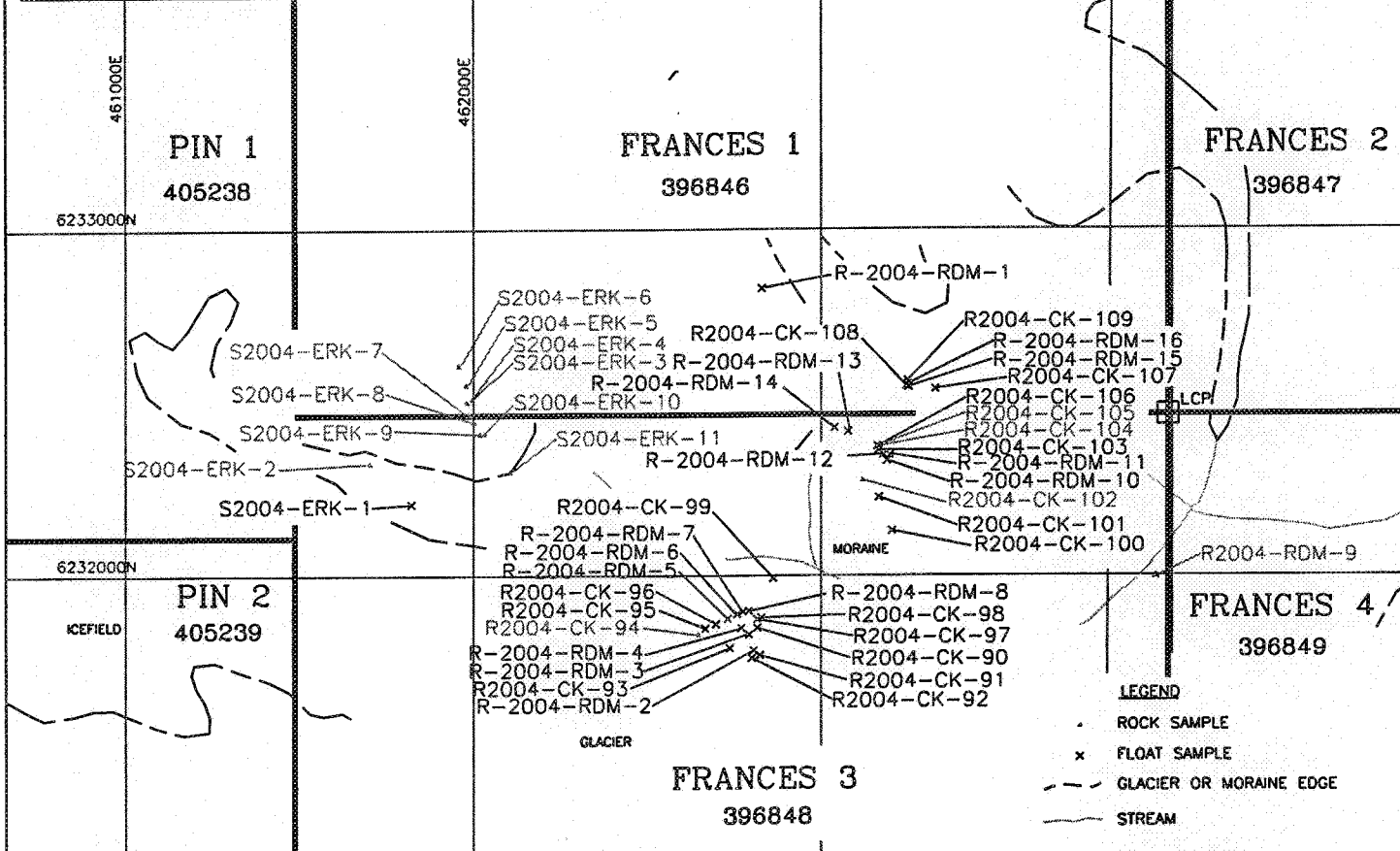
Of interest, one argillite boulder with thinly banded pyrite forming 10 % of the rock yielded 813 ppm Pb and 7974 ppm zinc on the Emma 3 claim.

Sampling of vuggy quartz float boulders with galena, tetrahedrite and stibnite on the Eldorado claims yielded up to 9.1 % Pb, 0.34 % Zn, 1305 ppm Ag and 0.67 % Cu.

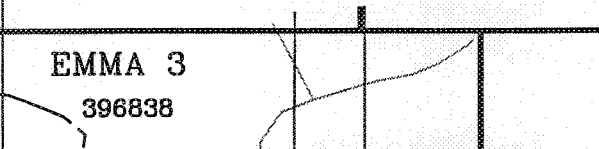
Sampling of rocks on the dump of the caved Enterprise tunnel gave 3.9 ppm Au and 8.7 % Cu.

Further geochemical surveys are recommended to locate the source of the anomalous values and extend survey area.

SAMPLE NO.	SAMPLE TYPE	AU ppb	AG ppm (oz/t)	CU ppm	PB ppm	ZN ppm
R-2004-RDM-1	FLOAT	0.6	0.4	17.4	7.1	72
R-2004-RDM-2	FLOAT	1.4	0.7	30.8	16.4	81
R-2004-RDM-3	FLOAT	<0.5	0.1	21.4	11.7	126
R-2004-RDM-4	FLOAT	1.1	0.6	38.8	5.4	556
R-2004-RDM-5	FLOAT	<0.5	0.4	19.1	10.4	100
R-2004-RDM-6	FLOAT	<0.5	0.2	31.7	2.1	82
R-2004-RDM-7	FLOAT	0.5	0.4	30.2	6.1	64
R-2004-RDM-8	FLOAT	0.5	0.1	35.7	2.2	129
R-2004-RDM-9	OUTCROP	0.8	0.4	61.7	6.7	115
R-2004-RDM-10	FLOAT	<0.5	0.4	62.2	14.6	87
R-2004-RDM-11	FLOAT	<0.5	0.3	17.4	5.7	115
R-2004-RDM-12	FLOAT	<0.5	0.8	41.8	8.5	99
R-2004-RDM-13	FLOAT	<0.5	0.7	92.8	20.2	163
R-2004-RDM-14	FLOAT	<0.5	0.2	19.7	4.3	76
R-2004-RDM-15	FLOAT	0.7	0.1	31.1	4.6	34
R-2004-RDM-16	FLOAT	0.8	0.4	71.7	17.9	102



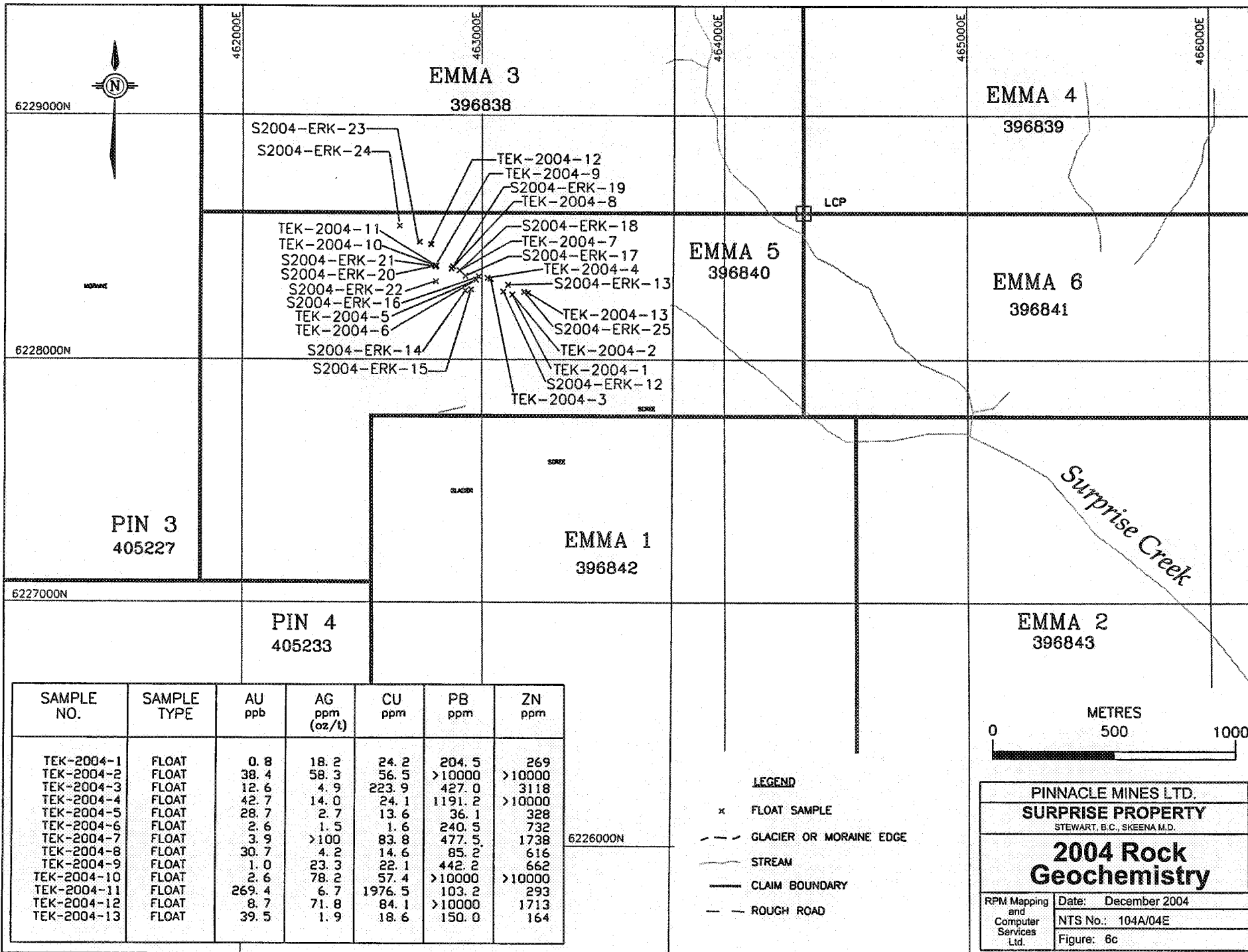
SAMPLE NO.	SAMPLE TYPE	AU ppb	AG ppm (oz/t)	CU ppm	PB ppm	ZN ppm
S2004-ERK-1	FLOAT	1.4	<0.1	23.1	5.9	111
S2004-ERK-2	OUTCROP	<0.5	0.1	5.9	8.3	96
S2004-ERK-3	OUTCROP	6.6	6.2	63.4	187.0	2087
S2004-ERK-4	OUTCROP	94.0	45.7	331.6	163.4	2127
S2004-ERK-5	OUTCROP	388.7	62.7	84.3	1065.6	105
S2004-ERK-6	OUTCROP	84.1	45.1	30.4	330.8	96
S2004-ERK-7	OUTCROP	0.7	1.7	20.3	98.3	335
S2004-ERK-8	OUTCROP	1.1	34.1	148.2	0.2	3345
S2004-ERK-9	OUTCROP	15.7	12.1	325.8	0.2	1024
S2004-ERK-10	OUTCROP	258.8	72.1	83.69	7819.0	186
S2004-ERK-11	OUTCROP	1.5	3.7	29.7	147.2	112
S2004-ERK-12	FLOAT	19.9	>100	28.3	37.4	35
S2004-ERK-13	FLOAT	5.2	12.2	35.2	3293.6	1162
S2004-ERK-14	FLOAT	1.6	58.6	16.6	215.0	123
S2004-ERK-15	FLOAT	29.7	7.8	837.3	385.6	>10000
S2004-ERK-16	FLOAT	<0.5	55.8	44.5	717.9	>10000
S2004-ERK-17	FLOAT	16.7	7.8	442.0	34.7	362
S2004-ERK-18	FLOAT	5.5	37.9	37.5	3401.0	>10000
S2004-ERK-19	FLOAT	17.7	>100	225.9	>10000	>10000
S2004-ERK-20	FLOAT	28.2	10.6	21.3	359.8	661
S2004-ERK-21	FLOAT	201.7	25.2	45.8	319.8	3163
S2004-ERK-22	FLOAT	1192.0	8.8	308.6	9.3	385
S2004-ERK-23	FLOAT	1.9	18.4	32.0	2033.2	2487
S2004-ERK-24	FLOAT	1.4	25.2	60.2	1668.7	630
S2004-ERK-25	FLOAT	3.2	2.1	8.1	813.5	7974



PINNACLE MINES LTD.
SURPRISE PROPERTY
STEWART, B.C., SKEENA M.D.

2004 Rock Geochemistry

RPM Mapping and Computer Services Ltd.	Date: December 2004
	NTS No.: 104A/04E
	Figure: 6a



SAMPLE NO.	SAMPLE TYPE	AU ppb	AG ppm (oz/t)	CU ppm	PB ppm	ZN ppm
TEK-2004-1	FLOAT	0.8	18.2	24.2	204.5	269
TEK-2004-2	FLOAT	38.4	58.3	56.5	>10000	>10000
TEK-2004-3	FLOAT	12.6	4.9	223.9	427.0	3118
TEK-2004-4	FLOAT	42.7	14.0	24.1	1191.2	>10000
TEK-2004-5	FLOAT	28.7	2.7	13.6	36.1	328
TEK-2004-6	FLOAT	2.6	1.5	1.6	240.5	732
TEK-2004-7	FLOAT	3.9	>100	83.8	477.5	1738
TEK-2004-8	FLOAT	30.7	4.2	14.6	85.2	616
TEK-2004-9	FLOAT	1.0	23.3	22.1	442.2	662
TEK-2004-10	FLOAT	2.6	78.2	57.4	>10000	>10000
TEK-2004-11	FLOAT	269.4	6.7	1976.5	103.2	293
TEK-2004-12	FLOAT	8.7	71.8	84.1	>10000	1713
TEK-2004-13	FLOAT	39.5	1.9	18.6	150.0	164

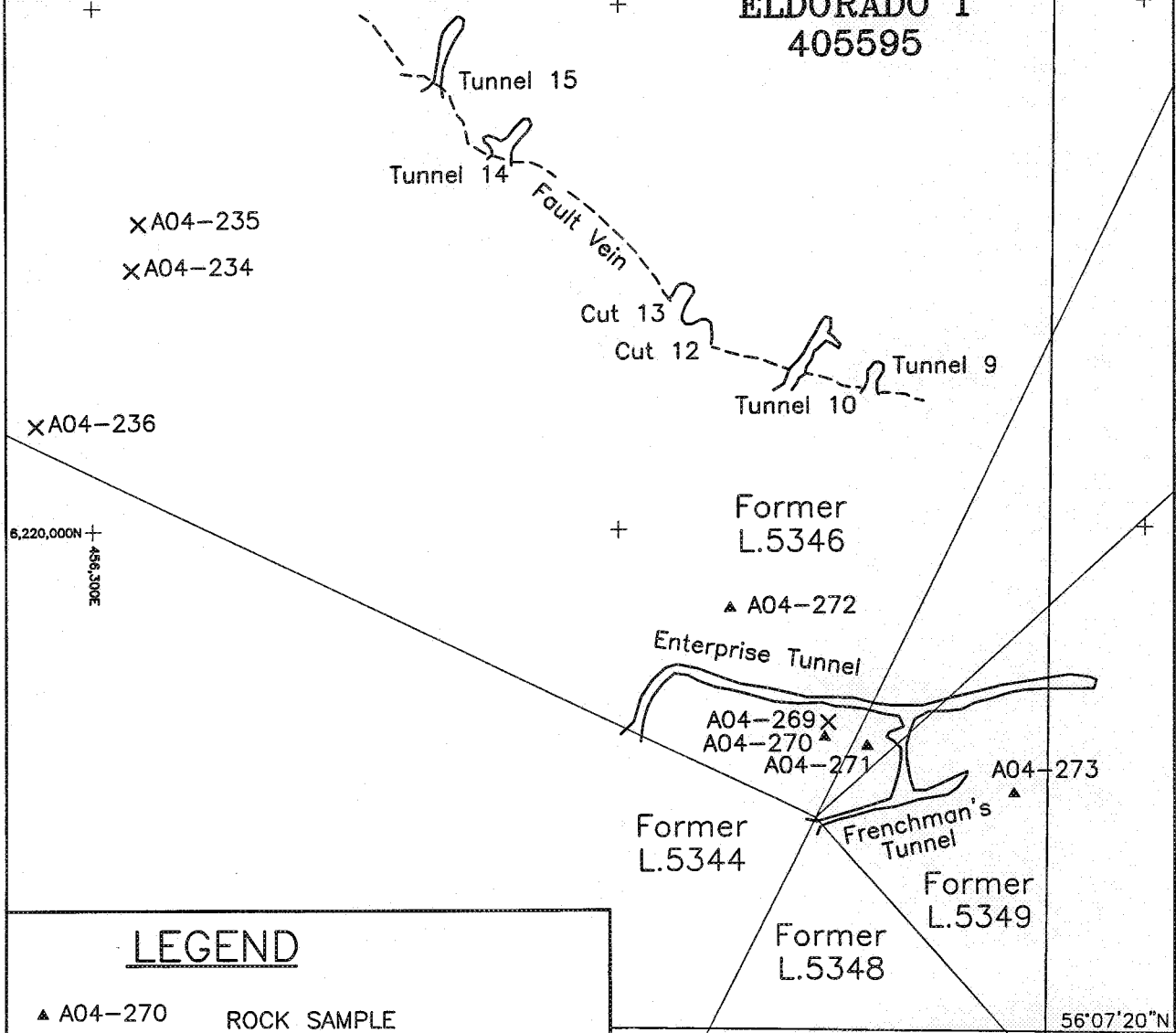
PINNACLE MINES LTD.
SURPRISE PROPERTY
STEWART, B.C., SKEENA M.D.

2004 Rock Geochemistry

RPM Mapping and Computer Services Ltd.	Date: December 2004
	NTS No.: 104A/04E
	Figure: 6c

SAMPLE NO.	SAMPLE TYPE	AU g/tonne	AG g/tonne	CU %	PB %	ZN %
EB-04-152	GRAB	0.01	4.9	0.002	0.02	0.02
EB-04-153	GRAB	0.15	1305.0	0.870	0.14	0.34
EB-04-154	GRAB	0.10	1132.0	0.745	0.14	0.14
EB-04-155	GRAB	0.11	14.1	0.005	0.03	0.01
EB-04-156	GRAB	0.12	335.0	1.190	0.19	0.08
A04-234	FLOAT	0.42	2560.0	2.310	0.39	1.79
A04-235	FLOAT	0.20	1620.0	0.462	17.60	0.13
A04-236	FLOAT	0.09	24.3	0.009	0.22	0.01
A04-269	FLOAT	3.90	115.0	8.670	0.39	0.08
A04-270	GRAB	0.16	6.9	0.104	0.11	0.02
A04-271	GRAB	0.85	13.2	0.718	0.22	0.02
A04-272	GRAB	0.05	7.0	0.175	0.11	0.03
A04-273	GRAB	0.14	6.7	0.780	0.05	0.03

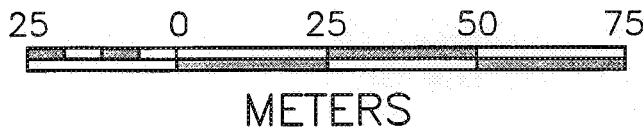
**ELDORADO 1
405595**



LEGEND

- ▲ A04-270 ROCK SAMPLE
- × A04-269 FLOAT SAMPLE
- + NAD 83 GRID (100m)
- 56°07'20"N LATITUDE/LONGITUDE

SCALE BAR



PINNACLE MINES LTD.

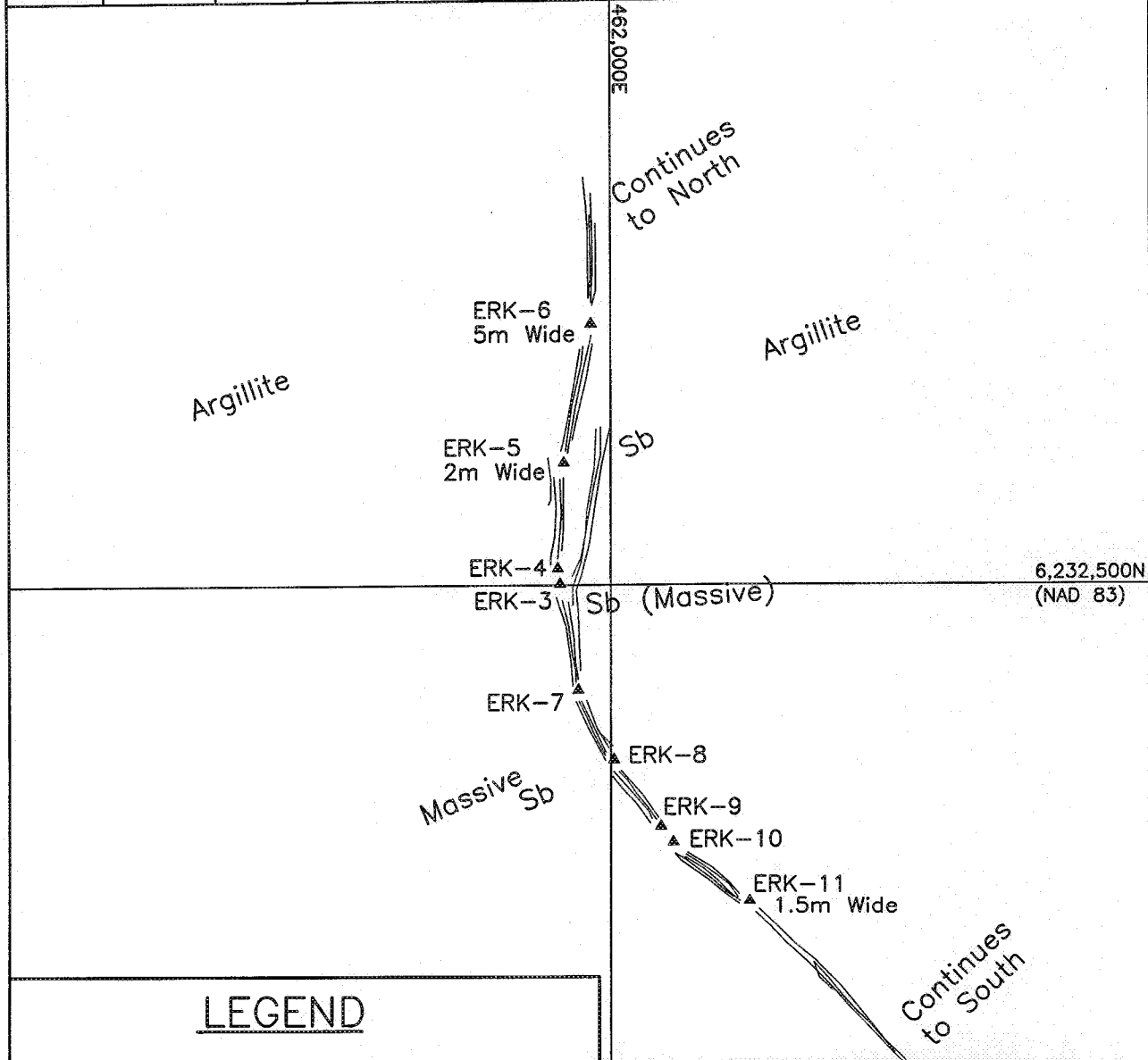
SURPRISE PROPERTY, STEWART, B.C., SKEENA M.D.

**Eldorado Group
Sample Location Map**

RPM Mapping
and
Computer
Services
Ltd.

Date: December 2004
Claim Map: 104A/04E
Figure: 7

SAMPLE NO.	SAMPLE TYPE	AU ppb	AG (g/tonne) ppm	CU ppm	ZN ppm	PB ppm	SB ppm	AS ppm
ERK-3	CHIP [5.0m]	6.6	6.2	63.4	2087	187.0	>2000	>10000
ERK-4	GRAB	94.0	(41)	338.6	2127	163.4	>2000	421.3
ERK-5	CHIP [2.0m]	388.7	(55)	84.3	105	1065.6	914.6	2826.5
ERK-6	GRAB	84.1	(42)	30.4	96	330.8	316.0	6753.9
ERK-7	GRAB	0.7	1.7	20.3	335	98.3	>2000	3016.4
ERK-8	GRAB	1.1	(32)	148.2	3345	0.2	>2000	7.6
ERK-9	GRAB	15.7	12.1	325.8	1024	0.2	>2000	39.3
ERK-10	GRAB	258.8	(65)	83.9	186	9819.0	>2000	>10000
ERK-11	CHIP [1.5m]	1.5	3.7	147.2	112	147.2	331.3	>10000



LEGEND

- ▲ ERK-6 ROCK SAMPLE
- VEIN
- Sb STIBNITE

SCALE 1:250



METERS

PINNACLE MINES LTD.

SURPRISE PROPERTY, STEWART, B.C., SKEENA M.D.

Stibnite-Quartz Vein

RPM Mapping and Computer Services Ltd.

Date: December 2004

Claim Map: 104A/04E

Figure: 8

PETROGRAPHIC STUDIES

Alex Walus studied 4 samples from the 2003 exploration program and determined that one of the samples was formed in a sub-volcanic environment while one of them was formed in a VMS environment. He states " *The sample is composed by alternating sections dominated either by quartz or carbonates. Quartz forms a mosaic of equigranular, slightly interlocking grains ranging in size from 0.01 to 0.2 mm. Quartz grains do not show so called undulatory extinction which is characteristic of quartz grains which undergone tectonic deformation. Carbonates occur as equigranular grains 0.02 to 0.2 mm in diameter. There are some minor quartz and carbonate veinlets, which in most cases are oriented perpendicular to the borders between quartz and carbonate dominated sections. Chalcedony (with a typical feathery appearance) is closely associated with sulphides. Small amount of chalcedony was replaced by carbonate. Sulphides occur as anhedral grains and small blebs ranging in size from 0.02 to 0.4 mm across. Most of them form parallel bands and streaks up to 1 mm wide, with the remainder being disseminated throughout the sample.*

The origin of the examined rock is uncertain. The rock does not display any tectonically induced foliation or shearing, that's why, the formation of parallel bands and streaks of sulphides could have occurred during syngenetic rather than tectonic process. This fact, as well as the presence of chalcedony indicate the formation in VMS environment. "

Complete descriptions of Mr. Walus's studies are found in Appendix IV

CONCLUSIONS

1. The property lies within a belt of Jurassic volcanic rocks that is host to numerous gold deposits, extends from the Kitsault area, south of Stewart, to north of the Stikine River.
2. The property contains approximately 16000 hectares within four separate claim groups totaling 32 Modified Grid claims.
3. In the period July 15 to September 8, 2004 Pinnacle Mines Ltd conducted an exploration program on the northern portion of the Surprise property consisting of reconnaissance mapping for the above Salmon River/Mt Dilworth geological contact, prospecting and geochemical sampling along the above volcanic – sediment contact within various valleys tributary to Surprise Creek. In addition work concentrated at locating the Enterprise showings on the Eldorado claims.
4. Geological observations noted indicate that the property is underlain by a sequence of altered and silicified Lower Jurassic Mt Dilworth rhyolites in contact with the overlying Salmon River sediments. This geological setting is host to the Eskay Creek deposit and the recent gold-silver discovery to the south of the northern Surprise claim block.
5. The geochemical survey indicates numerous occurrences of mineralization in outcrop and float boulders.
6. A total of 220 rock samples both outcrop and float as well as 19 silt samples were collected during the exploration program. Results of the samples indicate highly anomalous values for gold, silver, lead, zinc, arsenic and copper. . Sample values for gold ranged from <0.5 ppb to a high of 3.9 ppm, for silver from <0.1 to 1305 ppm, for lead from 0.2 ppm to 9.1 %, for zinc from 6 ppm to > 10,000 ppm, for arsenic from <0.5 to >10,000 ppm and copper from 0.7 ppm to 8.67 %
7. The presence of favorable geology, high geochemical and assay results for a variety of elements obtained in the exploration programs and apparent numerous mineral occurrences make this property an excellent exploration target.
8. Further work consisting of prospecting, geochemical sampling, geological mapping and trenching is recommended.
9. Expected cost of the program is approximately \$250,000.

RECOMMENDATIONS

The recommended program is outlined as follows:

1. **Prospecting**

Prospecting should be carried out on all obvious but un-checked gossaned zones. In addition, prospecting should be conducted along the ridge and valley slopes on the Pin 3 claim. The long alteration zone with massive pyrite on the Emma 3 should be further delineated.

2. **Geological Mapping**

The property should have a grid patterns established over mineralized areas to facilitate survey control. Geological mapping should be conducted in order to establish the extent and nature of any rhyolite-associated mineralization, outline further mineralized zones and identify potential host rocks for any possible mineral deposits.

3. **Geochemical Surveys**

Further rock geochemistry is recommended particularly rock chip sampling in areas of known anomalous metal values and/or newly discovered zones.

4. **Trenching**

Several areas require trenching including the area of high gold values along the ridge top on the Pin 3 claim outlined in 1994-1995 surveys. Trenching should test massive pyrite bearing areas with appreciable lead and zinc values

Trenching would also include any newly discovered mineralization.

Estimated Cost of the Program

Geological Survey - Maps, Reports	\$10,000.00
2 geologists @ \$700.00/day for 10 days -	\$7,000.00
2 assistants @ \$300.00/day for 10 days -	\$3,000.00

Geochemical Survey

Helicopter – 100 hours @ \$1200.00/hour- \$120,000.00
1000 Rock Samples @ \$25.00 All Inclusive-\$25,000.00
2 geologists @ \$700.00/day for 20 days -\$14,000.00
2 assistants @ \$300.00/day for 20 days - \$6,000.00
\$165,000.00

Accommodation

120 man days @ \$ 60.00/day **\$7,200.00**
Vehicle rental \$5,000.00
Mob/Demob \$6,000.00
Consumables (plastic bags, fuel, explosives, etc.) \$3,000.00
Trenching - drill, compressor rental) \$10,000.00
Filing Fees \$12,000.00
Reporting \$10,000.00
Contingency \$21,800.00

Total \$250,000.00

REFERENCES

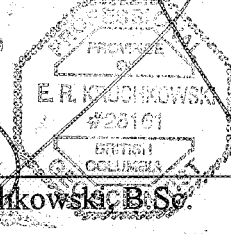
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2. ALLDRICK, D.J. (1985); "Stratigraphy and Petrology of the Stewart Mining Camp (104B/1E)", p. 316, Paper 85-1, Geological Fieldwork 1984, B.C.M.E.M.P.R.
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9. KRUCHKOWSKI, E. R. and KONKIN, K. J. Field Notes on 1994 Exploration on the Surp Claims.
10. KRUCHKOWSKI, E.R., (1995) Report on Surp Property
11. KRUCHKOWSKI, E.R., (2003) Report on Surprise Property
12. KRUCHKOWSKI, E.R., (2003) Assessment Report on Surprise Property
13. TEUTON PRESS RELEASES AND WEBSITE

CERTIFICATE

I, Edward R. Kruchkowski, geologist, residing at 23 Temple Bay, N.E., in the City of Calgary, in the Province of Alberta, hereby certify that:

1. I received a Bachelor of Science degree in Geology from the University of Alberta in 1972.
2. I have been practicing my profession continuously since graduation.
3. I am a member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
4. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia.
5. I am a consulting geologist working on behalf of Pinnacle Mines Ltd.
6. The main source of information has been the geological and sampling programs conducted by the author in 1994 and 2004 as well as involvement in the 1996 sampling programs within the area of the present claims. The author also has a general knowledge on the Stewart region gained in exploration programs in the period 1969 - 2003.
7. I am familiar with epithermal deposits having visited and worked on these types of deposits in Canada, USA and Mexico and have conducted exploration programs on these type of occurrences in the Stewart region.
8. I authorize Pinnacle Mines Ltd. to use information in this report or portions of it in its prospectus, any brochures, promotional material or company reports and consent to the placing of this report in the public file of the Canadian Venture Exchange.

Date: Dec 5 / 04


E.R. Kruchkowski, B.Sc.

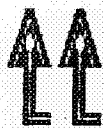
STATEMENT OF EXPENDITURES

Field Personnel---August 26 to September 18, 2003

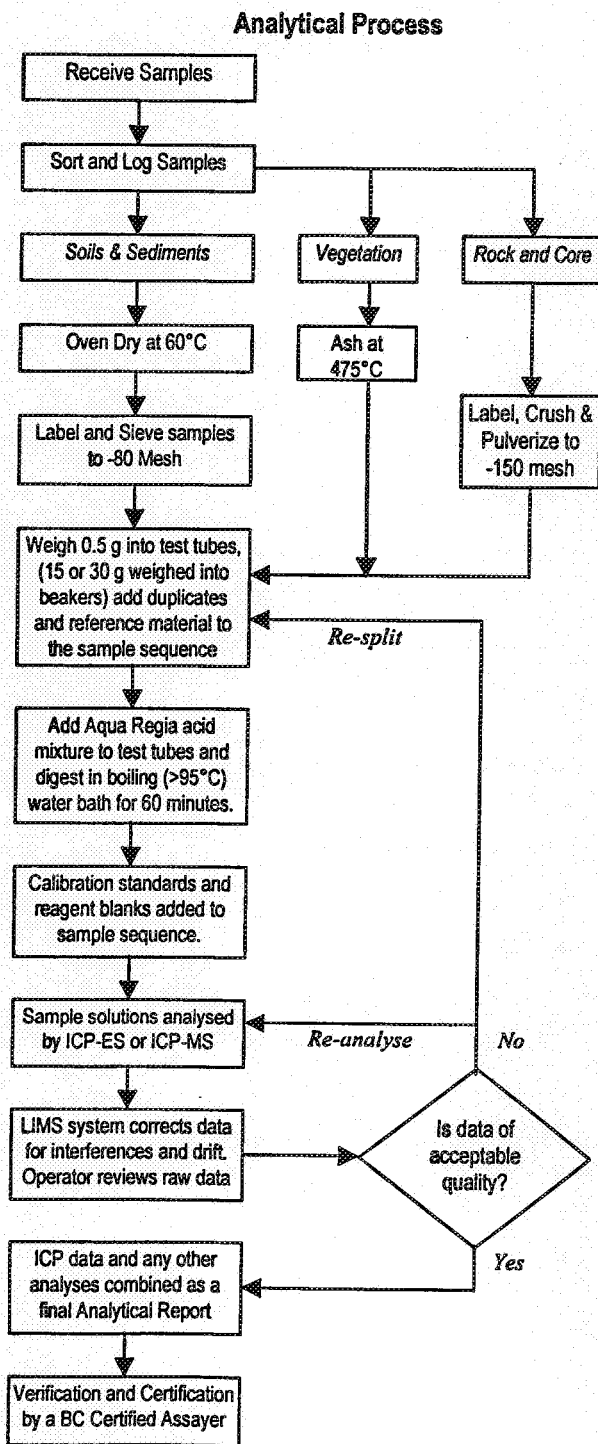
E. R. Kruchkowski, geologist 8 days at \$400.00/day	\$3,200.00
C. D. Kruchkowski, geologist Invoice for work -	\$10,977.33
S. Kruchkowski, geological assistant 16 days at \$150.00/day	\$2,400.00
J. Morrison, geological assistant Invoice for work	\$12,000.00
T. Kruchkowski, geological assistant Invoice for work -	\$4,452.70
R. Maynard, geological assistant Invoice for work -	\$7,054.69
Helicopter---Prism Helicopters based in Stewart, B.C.	
Crew drop-off/pick-ups-July 16-September 7, 2004 20.4 hours at \$1162.56/hour	\$23,716.22
Sample Analysis	\$4,455.94
Mob/Demob (home base to Stewart, return)	\$1,334.62
Vehicle Rental	\$2,500.00
Food/Accommodation 30 days @\$220/day	\$6,600.00
Report Writing, Drafting, Copying	\$5000.00
Total	<u>\$83,791.50</u>

APPENDIX I

LABORATORY METHODS AND SPECIFICATIONS FOR SAMPLE ANALYSIS



METHODS AND SPECIFICATIONS FOR ANALYTICAL PACKAGE GROUP 1D & 1DX – ICP & ICP-MS ANALYSIS – AQUA REGIA



Comments

Sample Preparation

All samples are dried at 60°C. Soil and sediment are sieved to -80 mesh (-177 µm). Moss-mats are disaggregated then sieved to yield -80 mesh sediment. Vegetation is pulverized or ashed (475°C). Rock and drill core is jaw crushed to 70% passing 10 mesh (2 mm), a 250 g riffle split is then pulverized to 95% passing 150 mesh (100 µm) in a mild-steel ring-and-puck mill. Pulp splits of 0.5 g are weighed into test tubes, 15 and 30 g splits are weighed into beakers.

Sample Digestion

A modified Aqua Regia solution of equal parts concentrated ACS grade HCl and HNO₃ and de-mineralised H₂O is added to each sample to leach for one hour in a hot water bath (>95°C). After cooling the solution is made up to final volume with 5% HCl. Sample weight to solution volume is 1 g per 20 mL.

Sample Analysis

Group 1D: solutions aspirated into a Jarrel Ash AtomComp 800 or 975 ICP emission spectrometer are analysed for 30 elements: Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W, Zn.

Group 1DX: solutions aspirated into a Perkin Elmer Elan6000 ICP mass spectrometer are analysed for 36 elements: Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Se, Tl, Sr, Th, Ti, U, V, W, Zn.

Quality Control and Data Verification

An Analytical Batch (1 page) comprises 34 samples. QA/QC protocol incorporates a sample-prep blank (SI or G-1) carried through all stages of preparation and analysis as the first sample, a pulp duplicate to monitor analytical precision, a -10 mesh rejects duplicate to monitor sub-sampling variation (drill core only), two reagent blanks to measure background and aliquots of in-house Standard Reference Materials like STD DS5 to monitor accuracy.

Raw and final data undergo a final verification by a British Columbia Certified Assayer who signs the Analytical Report before it is released to the client. Chief Assayer is Clarence Leong, other certified assayers are Dean Toye, Jacky Wang and Ken Kwock.

APPENDIX II

**DESCRIPTIONS WITH INDICATED
ANOMALOUS VALUES FOR
AU, AG, AS, CU, PB and ZN**

- CK-1 Gray rhyolite tuff, angular crystal fragments up to 0.5 mm form 10% of the rock. Fine grained pyrite approximately 1-2%.
- | | |
|---------------|--------------|
| Au - 0.7 ppb | Ag - 0.2 ppm |
| Pb - 10.2 ppm | Zn - 146 ppm |
| Cu - 3.8 ppm | As - 88 ppm |
- CK-2 Gray to black rhyolite crystal tuff, feldspar crystals, angular up to 15% of the rock. Fine pyrite approximately 1%.
- | | |
|----------------|---------------|
| Au - 10.5 ppb | Ag - 4.2 ppm |
| Pb - 346.6 ppm | Zn - 178 ppm |
| Cu - 11.6 ppm | As - 37.8 ppm |
- CK-3 Black, medium grained rhyolite, minor quartz veinlets up to 5 mm form 10% of the rock. Pyrite less than 1%.
- | | |
|---------------|---------------|
| Au - 7.2 ppb | Ag - 0.3 ppm |
| Pb - 12.7 ppm | Zn - 35 ppm |
| Cu - 12.3 ppm | As - 47.2 ppm |
- CK-4 Gray to white rhyolite lapilli tuff fragments, up to 2 cm, form 5% of the rock. Traces pyrite.
- | | |
|---------------|----------------|
| Au - <.5 ppb | Ag - 0.4 ppm |
| Pb - 20.1 ppm | Zn - 7.0 ppm |
| Cu - 3.4 ppm | As - 125.1 ppm |
- CK-5 Gray rhyolite lapilli tuff, heavy fine grained pyrite up to 20% of the rock.
- | | |
|---------------|---------------|
| Au - 1.1 ppb | Ag - 5.9 ppm |
| Pb - 39.7 ppm | Zn - 1.8 ppm |
| Cu - 3.4 ppm | As - 52.2 ppm |
- CK-6 Gray rhyolite tuff, fine grained pyrite 2%.
- | | |
|--------------|--------------|
| Au - <.5 ppb | Ag - <.1 ppm |
| Pb - 9.0 ppm | Zn - 65 ppm |
| Cu - 2.9 ppm | As - 52 ppm |
- CK-7 Gray to black, coarse grained lapilli tuff (rhyolite). Fine grained pyrite 10%.
- | | |
|---------------|---------------|
| Au - 12.3 ppb | Ag - 1.4 ppm |
| Pb - 39.5 ppm | Zn - 22 ppm |
| Cu - 9.4 ppm | As - 54.8 ppm |
- CK-8 Dark gray, coarse grained rhyolite lapilli tuff. 1% pyrite.
- | | |
|---------------|---------------|
| Au - <.5 ppb | Ag - 0.1 ppm |
| Pb - 16.4 ppm | Zn - 32 ppm |
| Cu - 5.7 ppm | As - 61.8 ppm |

CK-9 Brecciated, dark gray rhyolite lapilli tuff. Fragments up to 4 cm surrounded by black chlorite veinlets.

Au - 4.4 ppb	Ag - 0.5 ppm
Pb - 32.7ppm	Zn - 9.0 ppm
Cu - 5.8 ppm	As - 91.8 ppm

CK-10 Barren white quartz with minor green chlorite.

Au - 13.0 ppb	Ag - 12.4 ppm
Pb - 16.3 ppm	Zn - 49 ppm
Cu - 4.5 ppm	As - 57.6 ppm

CK-11 Gray chlorite altered rhyolite lapilli tuff. Traces pyrite.

Au - 4.7 ppb	Ag - 3.5 ppm
Pb - 1.6 ppm	Zn - 32 ppm
Cu - 1.9 ppm	As - 1.5 ppm

CK-12 Black, medium grained lapilli tuff. Traces pyrite.

Au - <.5 ppb	Ag - 0.2 ppm
Pb - 14.4 ppm	Zn - 56 ppm
Cu - 4.2 ppm	As - 19.0 ppm

CK-13 Dark gray, glassy appearing rhyolite lapilli tuff.

Au - <.5 ppb	Ag - 0.4 ppm
Pb - 25.2ppm	Zn - 396 ppm
Cu - 16 ppm	As - 43.5 ppm

CK-14 Light gray, medium grained crystal rhyolite tuff. Coarse patches of pyrite, up to 0.5 cm across, form 5% of the rock.

Au - <.5 ppb	Ag - 1.4 ppm
Pb - 64 ppm	Zn - 96 ppm
Cu - 13.3 ppm	As - 11.5 ppm

CK-15 Light gray, fine grained rhyolite crystal tuff. Fine pyrite, 1-2%

Au - 20.9 ppb	Ag - 0.7 ppm
Pb - 26.4ppm	Zn - 21 ppm
Cu - 23.5 ppm	As - 81.1 ppm

CK-16 Thinly banded black argillite.

Au - <.5 ppb	Ag - 1.1 ppm
Pb - 7.9 ppm	Zn - 53 ppm
Cu - 28.9 ppm	As - 6.3 ppm

CK-17	Gray, medium grained rhyolite lapilli tuff. Pyrite less than 1%.						
	<table border="0"> <tbody> <tr> <td>Au - <.5 ppb</td> <td>Ag - 0.1 ppm</td> </tr> <tr> <td>Pb - 22 ppm</td> <td>Zn - 49 ppm</td> </tr> <tr> <td>Cu - 8.4 ppm</td> <td>As - 34.4 ppm</td> </tr> </tbody> </table>	Au - <.5 ppb	Ag - 0.1 ppm	Pb - 22 ppm	Zn - 49 ppm	Cu - 8.4 ppm	As - 34.4 ppm
Au - <.5 ppb	Ag - 0.1 ppm						
Pb - 22 ppm	Zn - 49 ppm						
Cu - 8.4 ppm	As - 34.4 ppm						
CK-18	Gray brecciated rhyolite lapilli tuff. Strong quartz veining, up to 10%. Pyrite 1-2%.						
	<table border="0"> <tbody> <tr> <td>Au - 3.0 ppb</td> <td>Ag - 0.7 ppm</td> </tr> <tr> <td>Pb - 13.9 ppm</td> <td>Zn - 31 ppm</td> </tr> <tr> <td>Cu - 5.1 ppm</td> <td>As - 60.5 ppm</td> </tr> </tbody> </table>	Au - 3.0 ppb	Ag - 0.7 ppm	Pb - 13.9 ppm	Zn - 31 ppm	Cu - 5.1 ppm	As - 60.5 ppm
Au - 3.0 ppb	Ag - 0.7 ppm						
Pb - 13.9 ppm	Zn - 31 ppm						
Cu - 5.1 ppm	As - 60.5 ppm						
CK-19	Black, glassy appearing crystal rhyolite tuff. Pyrite 1%.						
	<table border="0"> <tbody> <tr> <td>Au - 14.5 ppb</td> <td>Ag - 3.0 ppm</td> </tr> <tr> <td>Pb - 28.7 ppm</td> <td>Zn - 20 ppm</td> </tr> <tr> <td>Cu - 16.8 ppm</td> <td>As - 727.8 ppm</td> </tr> </tbody> </table>	Au - 14.5 ppb	Ag - 3.0 ppm	Pb - 28.7 ppm	Zn - 20 ppm	Cu - 16.8 ppm	As - 727.8 ppm
Au - 14.5 ppb	Ag - 3.0 ppm						
Pb - 28.7 ppm	Zn - 20 ppm						
Cu - 16.8 ppm	As - 727.8 ppm						
CK-20	Black, glassy appearing crystal rhyolite tuff. Pyrite less than 1%.						
	<table border="0"> <tbody> <tr> <td>Au - 14.9 ppb</td> <td>Ag - 3.0 ppm</td> </tr> <tr> <td>Pb - 223 ppm</td> <td>Zn - 383 ppm</td> </tr> <tr> <td>Cu - 7.1 ppm</td> <td>As - 48.7 ppm</td> </tr> </tbody> </table>	Au - 14.9 ppb	Ag - 3.0 ppm	Pb - 223 ppm	Zn - 383 ppm	Cu - 7.1 ppm	As - 48.7 ppm
Au - 14.9 ppb	Ag - 3.0 ppm						
Pb - 223 ppm	Zn - 383 ppm						
Cu - 7.1 ppm	As - 48.7 ppm						
CK-21	Black, glassy appearing rhyolite tuff. Pyrite 20-25% as fine grained interstitial grains.						
	<table border="0"> <tbody> <tr> <td>Au - 3.0 ppb</td> <td>Ag - 1.7 ppm</td> </tr> <tr> <td>Pb - 59.8 ppm</td> <td>Zn - 48 ppm</td> </tr> <tr> <td>Cu - 9.5 ppm</td> <td>As - 78.2 ppm</td> </tr> </tbody> </table>	Au - 3.0 ppb	Ag - 1.7 ppm	Pb - 59.8 ppm	Zn - 48 ppm	Cu - 9.5 ppm	As - 78.2 ppm
Au - 3.0 ppb	Ag - 1.7 ppm						
Pb - 59.8 ppm	Zn - 48 ppm						
Cu - 9.5 ppm	As - 78.2 ppm						
CK-22	Black, glassy appearing rhyolite crystal tuff. Pyrite 10-15%.						
	<table border="0"> <tbody> <tr> <td>Au - 4.5 ppb</td> <td>Ag - 3.5 ppm</td> </tr> <tr> <td>Pb - 37.0 ppm</td> <td>Zn - 46 ppm</td> </tr> <tr> <td>Cu - 8.9 ppm</td> <td>As - 95.9 ppm</td> </tr> </tbody> </table>	Au - 4.5 ppb	Ag - 3.5 ppm	Pb - 37.0 ppm	Zn - 46 ppm	Cu - 8.9 ppm	As - 95.9 ppm
Au - 4.5 ppb	Ag - 3.5 ppm						
Pb - 37.0 ppm	Zn - 46 ppm						
Cu - 8.9 ppm	As - 95.9 ppm						
CK-23	Black, glassy appearing rhyolite crystal tuff. Pyrite 10-15%.						
	<table border="0"> <tbody> <tr> <td>Au - <.5 ppb</td> <td>Ag - 0.4 ppm</td> </tr> <tr> <td>Pb - 38.2 ppm</td> <td>Zn - 18 ppm</td> </tr> <tr> <td>Cu - 8.2 ppm</td> <td>As - 147.8 ppm</td> </tr> </tbody> </table>	Au - <.5 ppb	Ag - 0.4 ppm	Pb - 38.2 ppm	Zn - 18 ppm	Cu - 8.2 ppm	As - 147.8 ppm
Au - <.5 ppb	Ag - 0.4 ppm						
Pb - 38.2 ppm	Zn - 18 ppm						
Cu - 8.2 ppm	As - 147.8 ppm						
CK-24	Gray to black fine grained rhyolite lapilli tuff, minor barren quartz veinlets. Pyrite 2%.						
	<table border="0"> <tbody> <tr> <td>Au - 1.1 ppb</td> <td>Ag - 0.4 ppm</td> </tr> <tr> <td>Pb - 10.6 ppm</td> <td>Zn - 12 ppm</td> </tr> <tr> <td>Cu - 4.6 ppm</td> <td>As - 21.9 ppm</td> </tr> </tbody> </table>	Au - 1.1 ppb	Ag - 0.4 ppm	Pb - 10.6 ppm	Zn - 12 ppm	Cu - 4.6 ppm	As - 21.9 ppm
Au - 1.1 ppb	Ag - 0.4 ppm						
Pb - 10.6 ppm	Zn - 12 ppm						
Cu - 4.6 ppm	As - 21.9 ppm						

CK-25 Chlorite altered, gray crystal lapilli tuff. Traces pyrite.

Au - <.5 ppb	Ag - 0.4 ppm
Pb - 15.1 ppm	Zn - 43 ppm
Cu - 3.9 ppm	As - 42.2 ppm

CK-26 Gray to black crystal tuff. Fine pyrite veins in bands between large clasts, approximately 25%.

Au - 2.1 ppb	Ag - 1.5 ppm
Pb - 40.5 ppm	Zn - 67 ppm
Cu - 8.4 ppm	As - 782.9 ppm

CK-27 Gray to black medium grained rhyolite lapilli tuff. Pyrite 2%.

Au - 0.9 ppb	Ag - 0.5 ppm
Pb - 81.6 ppm	Zn - 133 ppm
Cu - 16.9 ppm	As - 141.9 ppm

CK-28 Coarse grained rhyolite lapilli tuff, angular fragments up to 4 cm across.

Au - 2.9 ppb	Ag - 2.7 ppm
Pb - 48.8 ppm	Zn - 16 ppm
Cu - 15.3 ppm	As - 125.7 ppm

CK-29 Black, glassy appearing rhyolite crystal tuff. Fine grained pyrite as bands and seams, up to 20%.

Au - 9.7 ppb	Ag - 10.8 ppm
Pb - 649 ppm	Zn - 36 ppm
Cu - 36 ppm	As - 170.7 ppm

CK-30 Gray to black crystal rhyolite tuff. Fine quartz carbonate veinlets, subparallel to each other, form 10% of the rock. Veinlets are from 1-5 mm in width.

Au - 4.6 ppb	Ag - 1.1 ppm
Pb - 79.3 ppm	Zn - 68 ppm
Cu - 7.9 ppm	As - 24.0 ppm

CK-31 White quartz with coarse pyrite patches, up to 4 cm across. Pyrite 10% of the rock.

Au - 40.1 ppb	Ag - 3.2 ppm
Pb - 36.6 ppm	Zn - 1546 ppm
Cu - 49.0 ppm	As - 685.9 ppm

CK-32 Black, very thinly banded rhyolite ash tuff. Pyrite less than 1%.

Au - 3.3 ppb	Ag - 6.5 ppm
Pb - 2305.0 ppm	Zn - >10000 ppm
Cu - 12.7 ppm	As - 293.8 ppm

CK-33 Gray, coarse grained rhyolite crystal tuff. Pyrite 1%.

Au - 0.69 ppb	Ag - 1.2 ppm
Pb - 43.4ppm	Zn - 258 ppm
Cu - 7.5 ppm	As - 92.4 ppm

CK-34 Gray to black, medium grained crystal rhyolite tuff. Minor quartz veinlets, up to 1 cm wide.

Au - 1.3 ppb	Ag - 0.1 ppm
Pb - 14.8ppm	Zn - 79 ppm
Cu - 5.7 ppm	As - 36.6 ppm

CK-35 Red jasper.

Au - .9 ppb	Ag - 0.8 ppm
Pb - 1026.0ppm	Zn - 1146 ppm
Cu - 15.9 ppm	As - 13.1 ppm

CK-36 Gray to black, glassy appearing rhyolite tuff. Fine pyrite, as wisps and stringers, form 15% of the rock.

Au - <.5 ppb	Ag - 10.8 ppm
Pb - 1064.3 ppm	Zn - 834 ppm
Cu - 56.6 ppm	As - 493.5 ppm

CK-37 Green, medium grained andesite with 10% pink to white barren quartz veinlets.

Au -.7 ppb	Ag - .1 ppm
Pb - 5.9 ppm	Zn - 20 ppm
Cu - 2.2 ppm	As - 26.2 ppm

CK-38 Black crystal rhyolite tuff, with traces pyrite.

Au - <.52 ppb	Ag - 0.3 ppm
Pb - 22.1 ppm	Zn - 34 ppm
Cu - 6.5 ppm	As - 77.0 ppm

CK-39 Black, glassy rhyolite tuff. Traces pyrite.

Au - <.5 ppb	Ag - 8.3 ppm
Pb - 1398.3 ppm	Zn - >10000 ppm
Cu - 56.9 ppm	As - 323.7 ppm

CK-40 Gray to tan, silicified and altered rhyolite tuff. Traces pyrite.

Au - 6.7 ppb	Ag - 0.3 ppm
Pb - 16.7ppm	Zn - 46 ppm
Cu - 24.9 ppm	As - 30.9 ppm

CK-41 White, barren quartz veins.

Au - <.5 ppb	Ag - 0.1 ppm
Pb - 7.7 ppm	Zn - 102 ppm
Cu - 2.2 ppm	As - 6.8 ppm

CK-41a Black to gray rhyolite lapilli tuff. Pyrite 2-3%.

Au - <.5 ppb	Ag - 0.1 ppm
Pb - 14.8ppm	Zn - 91 ppm
Cu - 5.1 ppm	As - 45.8 ppm

CK-42 Black rhyolite breccia - clasts composed of black glassy rhyolite with black chlorite and pyrite filling spaces between the clasts. Pyrite approximately 15%.

Au - <.5 ppb	Ag - 0.3 ppm
Pb - 1447.2ppm	Zn - 464 ppm
Cu - 17.0 ppm	As - 657.4 ppm

CK-43 Dark gray, fine grained rhyolite lapilli tuff. Pyrite less than 2%.

Au - <.5 ppb	Ag - 0.3 ppm
Pb - 175.9ppm	Zn - 633 ppm
Cu - 35.3 ppm	As - 199.1 ppm

CK-44 Light gray rhyolite breccia. Clasts are up to 4 cm with pyrite forming 10% of the space between the breccia clasts.

Au - <.5 ppb	Ag - 3.6 ppm
Pb - 173.0 ppm	Zn - 92 ppm
Cu - 26.9 ppm	As - >10000 ppm

CK-45 Green, medium grained andesite with 5% barren quartz carbonate veinlets, up to 1 cm wide.

Au -1.5 ppb	Ag - 3.6 ppm
Pb - 173.0 ppm	Zn - 92 ppm
Cu -26.9 ppm	As - >10000 ppm

CK-46 Gray, coarse grained rhyolite lapilli tuff.

Au - <.5 ppb	Ag - 0.3 ppm
Pb - 169.3 ppm	Zn - 1307 ppm
Cu - 20.5 ppm	As - 39.0 ppm

CK-47 Black, glassy appearing rhyolite tuff with 1-2% pyrite.

Au - <.5 ppb	Ag - 10.1 ppm
Pb - 1184.5ppm	Zn - 589 ppm
Cu - 31 ppm	As - 353.1 ppm

CK-48 Gray, medium grained feldspar porphyry. Traces pyrite.

Au - <.5 ppb	Ag - 2.8 ppm
Pb - 37.3 ppm	Zn - 90 ppm
Cu - 9.5 ppm	As - 90.4 ppm

CK-49 Black, glassy appearing rhyolite tuff. Pyrite as fine grained interstitial veinlets up to 10%.

Au - <.5 ppb	Ag - 4.6 ppm
Pb - 648.0ppm	Zn - 447 ppm
Cu - 24.5 ppm	As - 275.2 ppm

CK-50 Brecciated, black argillite with 50% barren quartz-carbonate stockwork.

Au - <.5 ppb	Ag - 7.9 ppm
Pb - 101ppm	Zn - 794 ppm
Cu - 80.6 ppm	As - 200.7 ppm

CK-51 Black glassy rhyolite tuff, pyrite 5%.

Au - .5 ppb	Ag - 1.2 ppm
Pb - 670.2ppm	Zn - 3322 ppm
Cu - 10.8 ppm	As - 578.3 ppm

CK-52 Black glassy rhyolite tuff, pyrite 1%.

Au - <.5 ppb	Ag - 1.2 ppm
Pb - 406.6 ppm	Zn - 863 ppm
Cu - 8.5 ppm	As - 1188.6 ppm

CK-53 Black glassy rhyolite tuff, pyrite 3-4%.

Au - <.5 ppb	Ag - 7.1 ppm
Pb - 2755.2 ppm	Zn - 1518 ppm
Cu - 27.9 ppm	As - 756.6 ppm

CK-54 Black glassy rhyolite tuff, weakly brecciated, with 1-2% barren narrow quartz veinlets. Pyrite 3-4%.

Au - <.5 ppb	Ag - 0.5 ppm
Pb - 405.7 ppm	Zn - 208 ppm
Cu - 13.4 ppm	As - 3561.5 ppm

CK-55 Barren white quartz carbonate.

Au - .6 ppb	Ag - 0.1 ppm
Pb - 10.6ppm	Zn - 24 ppm
Cu - 10.9 ppm	As - 8.6 ppm

CK-56 Gray rhyolite lapilli tuff, pyrite 1%.

Au - <.5 ppb	Ag - 0.2 ppm
Pb - 30.7ppm	Zn - 25 ppm
Cu - 4.6 ppm	As - 28.2 ppm

CK-57 Gray, medium grained, rhyolite crystal tuff. Pyrite 1-2%.

Au - .6 ppb	Ag - 0.6 ppm
Pb - 50.9ppm	Zn - 17 ppm
Cu - 7.2 ppm	As - 53.6 ppm

CK-58 Light gray rhyolite crystal tuff. Pyrite 1-2%.

Au - <.5 ppb	Ag - 2.1 ppm
Pb - 198.8 ppm	Zn - 33 ppm
Cu - 8.1 ppm	As - 510.8 ppm

CK-59 Light gray rhyolite lapilli tuff. Pyrite less than 1%.

Au - <.5 ppb	Ag - 1.7 ppm
Pb - 36.8ppm	Zn - 49 ppm
Cu - 3.7 ppm	As - 1017.6 ppm

CK-60 Light gray rhyolite lapilli tuff. Pyrite less than 1%.

Au - <.5 ppb	Ag - 1.7 ppm
Pb - 357.9ppm	Zn - 33 ppm
Cu - 2.4 ppm	As - 1026.9 ppm

CK-61 Light gray brecciated rhyolite tuff. Narrow chlorite veinlets between fragments. Pyrite 3% as coarse blebs.

Au - 2.2 ppb	Ag - 6.7 ppm
Pb - 186.6 ppm	Zn - 129 ppm
Cu - 4.0 ppm	As - 1984.2 ppm

CK-62 Gray, medium grained lapilli tuff. Pyrite 2%.

Au - <.55 ppb	Ag - 1.5 ppm
Pb - 68.1 ppm	Zn - 47 ppm
Cu - 5.9 ppm	As - 323.8 ppm

CK-63 Gray, medium grained lapilli tuff. Pyrite 2%.

Au - .8 ppb	Ag - 5.6 ppm
Pb - 325 ppm	Zn - 181 ppm
Cu - 6.7 ppm	As - 1636.9 ppm

CK-64 Dark gray, fine grained rhyolite lapilli tuff. Pyrite less than 1%.

Au - <5 ppb	Ag - 0.6 ppm
Pb - 43.7ppm	Zn - 275 ppm
Cu - 7.1 ppm	As - 275 ppm

CK-65 Dark gray, fine grained rhyolite lapilli tuff. Pyrite less than 1%.

Au - 3.4 ppb	Ag - >116 ppm
Pb - 135.8ppm	Zn - 624 ppm
Cu - 458.2 ppm	As - 206.3 ppm

CK-66 Light gray, brecciated rhyolite lapilli tuff. Pyrite approximately 5%.

Au - 5.0 ppb	Ag - 4.6 ppm
Pb - 529.5 ppm	Zn - 350 ppm
Cu - 21 ppm	As - 988.9 ppm

CK-67 Gray, medium grained rhyolite crystal tuff. Pyrite less than 1%.

Au - 1.3 ppb	Ag - 1.4 ppm
Pb - 53.8 ppm	Zn - 31 ppm
Cu - 7.5 ppm	As - 75.8 ppm

CK-68 Black glassy appearing rhyolite. Pyrite 1-2%.

Au - 1.0 ppb	Ag - 0.5 ppm
Pb - 53.8 ppm	Zn - 129 ppm
Cu - 6.1 ppm	As - 55.0 ppm

CK-69 Black rhyolite crystal tuff. Traces pyrite.

Au - 1.2 ppb	Ag - 2.4 ppm
Pb - 65.8ppm	Zn - 15 ppm
Cu - 7.0 ppm	As - 84.6 ppm

CK-70 Black brecciated argillite, with 10% quartz carbonate veinlets, random and up to 5 mm wide.

Au - 1.1 ppb	Ag - 2.0 ppm
Pb - 163.0 ppm	Zn - 99 ppm
Cu - 31.6 ppm	As - 297.6 ppm

CK-71 Black glassy rhyolite with 3-4% pyrite.

Au - 1.1 ppb	Ag - 20 ppm
Pb - 2159.7 ppm	Zn - 965.2 ppm
Cu - 30.9 ppm	As - 210.1 ppm

CK-72 Black, fine grained lapilli tuff, pyrite as fine disseminations, approximately 3%.

Au - 1.2 ppb	Ag - 4.8 ppm
Pb - 270.2 ppm	Zn - 13 ppm
Cu - 5.5 ppm	As - 621.8 ppm

CK-73 Black glassy appearing rhyolite. 3-4% pyrite.

Au - .9 ppb	Ag - 3.3 ppm
Pb - 6473.0 ppm	Zn - 271 ppm
Cu - 19.2 ppm	As - 258 ppm

CK-73a Black, medium grained rhyolite lapilli tuff. 5% pyrite.

Au - .8 ppb	Ag - 1.7 ppm
Pb - 89.2 ppm	Zn - 156 ppm
Cu - 7.9 ppm	As - 33.2 ppm

CK-75 Black, glassy appearing, medium grained rhyolite crystal tuff.

Au - .6 ppb	Ag - 1.6 ppm
Pb - 99.9 ppm	Zn - 9.0 ppm
Cu - 4.7 ppm	As - 83.7 ppm

CK-76 Black, glassy appearing, medium grained rhyolite crystal tuff.

Au - 1.8 ppb	Ag - 4.4 ppm
Pb - 84.2 ppm	Zn - 136 ppm
Cu - 10.9 ppm	As - 54.3 ppm

CK-77 Black, glassy appearing rhyolite. Pyrite 2%.

Au - <.5 ppb	Ag - 0.9 ppm
Pb - 2621.8 ppm	Zn - 94 ppm
Cu - 17.5 ppm	As - 183.5 ppm

CK-78 Black, medium grained rhyolite crystal tuff. Weak carbonate veinlets.

Au - 1.1 ppb	Ag - 1.8 ppm
Pb - 230.8 ppm	Zn - 25 ppm
Cu - 7.4 ppm	As - 96 ppm

CK-79 Black, glassy appearing, medium grained rhyolite crystal tuff. Pyrite 1-2%.

Au - 1.1 ppb	Ag - 1.6 ppm
Pb - 36.0 ppm	Zn - 27 ppm
Cu - 5.4 ppm	As - 110.5 ppm

CK-80 Black, glassy appearing, medium grained rhyolite crystal tuff. Pyrite 1-2%.

Au - 1.2 ppb	Ag - .9 ppm
Pb - 201.6 ppm	Zn - 177 ppm
Cu - 4.2 ppm	As - 91.6 ppm

CK-81 Black, glassy appearing, medium grained rhyolite crystal tuff. Pyrite 1-2%.

Au - .6 ppb	Ag - 0.9 ppm
Pb - 196.3 ppm	Zn - 171 ppm
Cu - 4.2 ppm	As - 90.5 ppm

CK-82 Silicified green andesite. Traces pyrite.

Au - <.5 ppb	Ag - 4.8 ppm
Pb - 47.9 ppm	Zn - 410 ppm
Cu - 4.3 ppm	As - 129.8 ppm

CK-83 Coarse grained rhyolite lapilli tuff. Pyrite 3%.

Au - 3.4 ppb	Ag - 70 ppm
Pb - 140.6 ppm	Zn - 61 ppm
Cu - 44.34 ppm	As - 53.1 ppm

CK-84 Black rhyolite breccia - black chlorite and pyrite are found between clasts. Pyrite 4%.

Au - .7 ppb	Ag - 7.4 ppm
Pb - 49ppm	Zn - 14 ppm
Cu - 12.1 ppm	As - 31.3 ppm

CK-85 Black glassy appearing rhyolite breccia. Pyrite approximately 20% between clasts.

Au - 1.2 ppb	Ag - 38 ppm
Pb - 406 ppm	Zn - 72 ppm
Cu - 6.6 ppm	As - 47.3 ppm

CK-86 Silicified brecciated rhyolite tuff. Pyrite 1-2%.

Au - 1.6 ppb	Ag - 18.1 ppm
Pb - 1790.31ppm	Zn - 73 ppm
Cu - 4.9 ppm	As - 450.5 ppm

CK-87 Black, weakly silicified crystal lapilli tuff.

Au - 4.6 ppb	Ag - 4.4 ppm
Pb - 104.8 ppm	Zn - 13 ppm
Cu - 10.0 ppm	As - 32.5 ppm

CK-88 Black glassy rhyolite. Pyrite 1-2%.

Au - <.5 ppb	Ag - 1.5 ppm
Pb - 219.5 ppm	Zn - 38 ppm
Cu - 5.7 ppm	As - 191.5 ppm

CK-89 Black, fine grained rhyolite tuff. Pyrite 1%.

Au - 1.3 ppb	Ag - 1.7ppm
Pb - 45.0 ppm	Zn - 156 ppm
Cu - 5.6 ppm	As - 52.4 ppm

CK-90 Dark gray rhyolite lapilli tuff. Pyrite 1%.

Au - .7 ppb	Ag - 0.7 ppm
Pb - 26.9ppm	Zn - 127 ppm
Cu - 14.3 ppm	As - 23.4 ppm

CK-91 Black, fine grained argillite. Pyrite less than 1%.

Au - <.5 ppb	Ag - 2.2 ppm
Pb - 8.7 ppm	Zn - 196 ppm
Cu - 58.4 ppm	As - 16.5 ppm

CK-92 Black, glassy rhyolite, fine pyrite along banding in rhyolite. Pyrite bands up to 2 mm.

Au - 19.7 ppb	Ag - 20 ppm
Pb - 216.8ppm	Zn - 8742 ppm
Cu - 240.0 ppm	As - 4530.1 ppm

CK-93 Black, very fine grained, weakly brecciated argillite.

Au - <.5 ppb	Ag - 0.7 ppm
Pb - 7.7ppm	Zn - 125 ppm
Cu - 30.2 ppm	As - 21.9 ppm

CK-94 Black, very fine grained rhyolite tuff.

Au - <.5 ppb	Ag - 3.2 ppm
Pb - 8.5ppm	Zn - 976 ppm
Cu - 255 ppm	As - 542.7 ppm

CK-95 Black, very fine grained rhyolite tuff.

Au - <.5 ppb	Ag - 0.5 ppm
Pb - 13.1ppm	Zn - 177 ppm
Cu - 64 ppm	As - 42.8 ppm

CK-96 Black, very fine grained rhyolite tuff.

Au - 0.7 ppb	Ag - 0.6 ppm
Pb - 8.8 ppm	Zn - 109 ppm
Cu - 62.9 ppm	As - 11.2 ppm

CK-97 Red jasper.

Au - .5 ppb	Ag - .2 ppm
Pb - 32.2 ppm	Zn - 108 ppm
Cu - 8.0 ppm	As - 17.1 ppm

CK-98 Light gray rhyolite crystal tuff. Pyrite 1%.

Au - 1.3 ppb	Ag - 0.7 ppm
Pb - 35.9 ppm	Zn - 182 ppm
Cu - 22.2 ppm	As - 33.7 ppm

CK-99 Dark gray rhyolite lapilli tuff. Pyrite 1%.

Au - <.5 ppb	Ag - 0.6 ppm
Pb - 10.9ppm	Zn - 41 ppm
Cu - 30.3 ppm	As - 3.9 ppm

CK-100 Gray, medium grained feldspar porphyry, with barren white vein.

Au - 50.9 ppb	Ag - 0.3 ppm
Pb - 2.8ppm	Zn - 9.0 ppm
Cu - 66.6 ppm	As - 3085.3 ppm

CK-102 Black argillite.

Au - .5 ppb	Ag - 0.4 ppm
Pb - 15.8 ppm	Zn - 48 ppm
Cu - 39.5 ppm	As - 210.9 ppm

CK-103 White granodiorite.

Au - 37 ppb	Ag - 0.1 ppm
Pb - 2.7ppm	Zn - 15 ppm
Cu - 58.5 ppm	As - 21.1 ppm

CK-104 White granodiorite.

Au - 37.8 ppb	Ag - 0.1 ppm
Pb - 2.7ppm	Zn - 34 ppm
Cu - 48.1 ppm	As - 8.5 ppm

CK-105 White granodiorite.

Au - 3.2 ppb	Ag - <.1 ppm
Pb - 2.4ppm	Zn - 13 ppm
Cu - 44.6 ppm	As - 1.2 ppm

CK-106 Barren white quartz.

Au - <.5 ppb	Ag - <.1 ppm
Pb - .8 ppm	Zn - 6 ppm
Cu - 5.0 ppm	As - <.5 ppm

CK-107 Rusty black argillite.

Au - 1.9 ppb	Ag - 2.1 ppm
Pb - 48.46 ppm	Zn - 1308 ppm
Cu - 244.8 ppm	As - .5 ppm

CK-108 Gray andesite tuff.

Au - 5.0 ppb	Ag - 1.9 ppm
Pb - 22.0 ppm	Zn - 459 ppm
Cu - 92.6 ppm	As - 1.0 ppm

CK-109	Tan colored, altered rhyolite tuff.	
	Au - 2.95 ppb	Ag - 0.5 ppm
	Pb - 16.4ppm	Zn - 226 ppm
	Cu - 95.9 ppm	As - 1.0 ppm
CK-110	Altered, medium grained granodiorite.	
	Au - <.5 ppb	Ag - 0.7 ppm
	Pb - 20.ppm	Zn - 73 ppm
	Cu - 12.9 ppm	As - 11.3 ppm
CK-111	Red jasper.	
	Au - .9 ppb	Ag - 0.4 ppm
	Pb - 78.41ppm	Zn - 515 ppm
	Cu - 6.2 ppm	As - 46.9 ppm
CK-112	Gray rhyolite lapilli tuff. Pyrite 3%.	
	Au - .5 ppb	Ag - 0.2 ppm
	Pb - 25.0 ppm	Zn - 99 ppm
	Cu - 4.4 ppm	As - 18.5 ppm
CK-113	Gray, fine grained lapilli tuff. Pyrite 1-2%.	
	Au - <.5 ppb	Ag - 0.4 ppm
	Pb - 26.7 ppm	Zn - 24 ppm
	Cu - 6.74 ppm	As - 28.4 ppm
CK-114	Black, fine grained crystal lapilli tuff.	
	Au - 0.5 ppb	Ag - 0.4 ppm
	Pb - 97.7 ppm	Zn - 185 ppm
	Cu - 42.8 ppm	As - 8.8 ppm
CK-115	Black, fine grained crystal lapilli tuff.	
	Au -.6 ppb	Ag - .5 ppm
	Pb - 178 ppm	Zn - 140 ppm
	Cu - 27.9 ppm	As - 11.5 ppm
CK-116	Gray, sericite-altered rhyolite lapilli tuff.	
	Au - <.5 ppb	Ag - 0.1 ppm
	Pb - 25.4 ppm	Zn - 193 ppm
	Cu - 4.2 ppm	As - 27.9 ppm
CK-117	Red jasper.	
	Au - 4.3 ppb	Ag - 0.5 ppm
	Pb - 124ppm	Zn - 384 ppm
	Cu - 3.7 ppm	As - 65.5 ppm

CK-118 Gray, sericite-altered rhyolite ash tuff.

Au - 2.3 ppb Ag - 27.7 ppm
Pb - 771.3 ppm Zn - 213 ppm
Cu - 241.9 ppm As - 730.2 ppm

CK-119 Gray, sericite-altered rhyolite lapilli tuff. Pyrite 5-10%.

Au - 1.3 ppb Ag - 3.8 ppm
Pb - 75 ppm Zn - 27 ppm
Cu - 39.1 ppm As - 66.6 ppm

CK-120 Gray, sericite-altered, fine grained lapilli rhyolite tuff. Pyrite 2%.

Au - .8 ppb Ag - 4.7 ppm
Pb - 71 ppm Zn - 3470 ppm
Cu - 39.6 ppm As - 46.7 ppm

CK-121 Black argillite.

Au - 1.7 ppb Ag - 15.8 ppm
Pb - 237 ppm Zn - 185 ppm
Cu - 46.9 ppm As - 200.6 ppm

CK-122 Black, fine grained rhyolite lapilli tuff.

Au - .7 ppb Ag - 10.3 ppm
Pb - 95 ppm Zn - 176 ppm
Cu - 30.4 ppm As - 105.3 ppm

CK-123 Gray, fine grained silicified argillite.

Au - 2.8 ppb Ag - 0.6 ppm
Pb - 18.5 ppm Zn - 181 ppm
Cu - 110.1 ppm As - .9 ppm

CK-124 Gray to black rhyolite breccia. Pyrite 2%.

Au - .7 ppb Ag - 5.8 ppm
Pb - 4112 ppm Zn - 4112 ppm
Cu - 64.5 ppm As - 326.6 ppm

CK-125 Rhyolite crystal tuff. Carbonate veining approximately 5%.

Au - 1.5 ppb Ag - 4.7 ppm
Pb - 536.2 ppm Zn - 4099 ppm
Cu - 26 ppm As - 262.5 ppm

- ERK-1 Subcrop of pale gray siliceous rock. Rhyolite, minor pyrrhotite blebs, rock is fine grained tuff.
- | | |
|---------------|---------------|
| Au - 1.4 ppb | Ag - 60.5 ppm |
| Pb - 5.9 ppm | Zn - 111 ppm |
| Cu - 23.1 ppm | As - 3.7 ppm |
- ERK-2 Outcrop of fossiliferous siltstone, medium grained, gray. Weak pyrite less than 1%.
- | | |
|--------------|--------------|
| Au - <.5 ppb | Ag - .1 ppm |
| Pb - 8.3 ppm | Zn - 96 ppm |
| Cu - 5.9 ppm | As - 3.4 ppm |
- ERK-3 Brecciated argillite with quartz and black shiny stibnite. Strong green stain, vein 1-1 1/2 m in width.
- | | |
|----------------|-----------------|
| Au - 6.6 ppb | Ag - 6.2 ppm |
| Pb - 187.0 ppm | Zn - 2087 ppm |
| Cu - 63.4 ppm | As - >10000 ppm |
- ERK-4 Massive black stibnite.
- | | |
|----------------|----------------|
| Au - <.1 ppb | Ag - 41 ppm |
| Pb - 163.4 ppm | Zn - 2127 ppm |
| Cu - 331.6 ppm | As - 421.3 ppm |
- ERK-5 Siliceous zone, grab of massive pyrite pocket.
- | | |
|-----------------|-----------------|
| Au - 388.7 ppb | Ag - 55 ppm |
| Pb - 1065.6 ppm | Zn - 105 ppm |
| Cu - 84.3 ppm | As - 2826.5 ppm |
- ERK-6 Quartz vein, very rusty along zone. Zone is 5 m wide.
- | | |
|----------------|-----------------|
| Au - 84.1 ppb | Ag - 42 ppm |
| Pb - 330.8 ppm | Zn - 96 ppm |
| Cu - 30.4 ppm | As - 6753.9 ppm |
- ERK-7 Brecciated argillite, strong quartz veining. Sparse shiny black mineral.
- | | |
|---------------|-----------------|
| Au - .7 ppb | Ag - 1.7 ppm |
| Pb - 98.3 ppm | Zn - 335 ppm |
| Cu - 20.3 ppm | As - 5016.4 ppm |
- ERK-8 Massive shiny black stibnite.
- | | |
|----------------|---------------|
| Au - 1.1 ppb | Ag - 32 ppm |
| Pb - .2 ppm | Zn - 3345 ppm |
| Cu - 148.2 ppm | As - 7.6 ppm |

ERK-9

Massive shiny black stibnite.

Au - 15.7 ppb	Ag - 12.1 ppm
Pb - .2 ppm	Zn - 1024 ppm
Cu - 325.8 ppm	As - 39.3 ppm

ERK-10

Quartz stockwork, up to 5 m wide, with green stained quartz, small amounts of pyrite, as well as black shiny stibnite.

Au - 258.8 ppb	Ag - 65 ppm
Pb - 7819.03 ppm	Zn - 186 ppm
Cu - 83.9 ppm	As - >10000 ppm

ERK-11

Quartz with very sparse shiny black stibnite.

Au - 1.5 ppb	Ag - 6.2 ppm
Pb - 147.2 ppm	Zn - 2087 ppm
Cu - 29.7 ppm	As - <10000 ppm

ERK-12

Gray rhyolite, fine grained with fine grained pyrite bands approximately 15%.

Au - 19.9 ppb	Ag - >256 ppm
Pb - 37.4 ppm	Zn - 35 ppm
Cu - 28.3 ppm	As - 503.7 ppm

ERK-13

Large rhyolite boulder - fine grained pyrite as bands up to 0.5 cm. Traces galena.

Au - 5.2 ppb	Ag - 12.2 ppm
Pb - 3293.6 ppm	Zn - 1162 ppm
Cu - 35.2 ppm	As - 192.3 ppm

ERK-14

Gray rhyolite with fine grained pyrite bands approximately 15%.

Au - 1.6 ppb	Ag - 57 ppm
Pb - 215 ppm	Zn - 123 ppm
Cu - 16.6 ppm	As - 161.8 ppm

ERK-15

Manganese stained gray rhyolite. Fine grained pyrite approximately 5%. Minor sphalerite.

Au - 29.7 ppb	Ag - 7.8 ppm
Pb - 385.6 ppm	Zn - >10000 ppm
Cu - 837.3 ppm	As - 158.5 ppm

ERK-16

15 cm gray rhyolite cobble with 20-25% fine grained pyrite.

Au - <.5 ppb	Ag - 64 ppm
Pb - 717 ppm	Zn - >10000 ppm
Cu - 44.5 ppm	As - 446.8 ppm

ERK-17 15 cm cobble – gray rhyolite with abundant fine grained pyrite approximately 5-7%.

Au – 16.7 ppb	Ag – 7.5 ppm
Pb – 34.7 ppm	Zn – 362 ppm
Cu – 442 ppm	As – 61.9 ppm

ERK-18 0.4 m boulder of gray rhyolite, traces galena, pyrite approximately 7%.

Au – 5.5 ppb	Ag – 35 ppm
Pb – 3401.0 ppm	Zn – >10000 ppm
Cu – 37.5 ppm	As – 121.5 ppm

ERK-19 Gray-white manganese stained boulder. 0.6 m in diameter, rhyolite with strong sphalerite-galena-pyrite mineralization.

Au – 17.7 ppb	Ag – >137 ppm
Pb – >10000 ppm	Zn – >10000 ppm
Cu – 225.9 ppm	As – 41.4 ppm

ERK-20 0.6 m boulder – rhyolite breccia with fine grained pyrite between clasts. Angular clasts approximately 4-6 cm, pyrite approximately 7%.

Au – 28.2 ppb	Ag – 10.6 ppm
Pb – 359.8 ppm	Zn – 661 ppm
Cu – 21.3 ppm	As – 369.3 ppm

ERK-21 Boulder approximately 0.6 m – rhyolite breccia with massive fine grained pyrite veins approximately 30% of the rock.

Au – 201.7 ppb	Ag – 25.2 ppm
Pb – 319.8 ppm	Zn – 3163 ppm
Cu – 45.8 ppm	As – 420.8 ppm

ERK-22 Quartz with semi-massive cube pyrite, approximately 40-50%.

Au – 1140.0 ppb	Ag – 8.8 ppm
Pb – 9.3 ppm	Zn – 385 ppm
Cu – 308.6 ppm	As – 1170 ppm

ERK-23 Large 1m x 0.5m boulder – rhyolite with minor galena-sphalerite. Pyrite approximately 5%.

Au – 1.9 ppb	Ag – 18.4 ppm
Pb – 2033.2 ppm	Zn – 2487 ppm
Cu – 32. ppm	As – 373.2 ppm

ERK-24 0.3 m boulder of gray rhyolite, fine grained pyrite approximately 5%.

Au – 1.4 ppb	Ag – 25.2 ppm
Pb – 1668.7 ppm	Zn – 630 ppm
Cu – 60.2 ppm	As – 32.5 ppm

ERK-25 Float - 1.5 m argillite boulder, thinly banded pyrite approximately 10% in argillite.

Au - 3.2 ppb	Ag - 2.1 ppm
Pb - 813.5 ppm	Zn - 7974 ppm
Cu - 8.1 ppm	As - 1604.1 ppm

RDM-1 Black argillite.

Au - 0.1 ppb	Ag - .4 ppm
Pb - 7.1 ppm	Zn - 72 ppm
Cu - 17.4 ppm	As - 6.2 ppm

RDM-2 Black argillite.

Au - 1.4 ppb	Ag - 0.70 ppm
Pb - 16.4 ppm	Zn - 81 ppm
Cu - 30.8 ppm	As - 42.0 ppm

RDM-3 Black argillite.

Au - <.5 ppb	Ag - .1 ppm
Pb - 11.7 ppm	Zn - 126 ppm
Cu - 21.4 ppm	As - 2.4 ppm

RDM-4 Black argillite.

Au - 1.1 ppb	Ag - .6 ppm
Pb - 5.4 ppm	Zn - 5562 ppm
Cu - 38.8 ppm	As - 8.2 ppm

RDM-5 Black siltstone, minor 0.5 mm quartz veinlets.

Au - <.5 ppb	Ag - 0.4 ppm
Pb - 10.4 ppm	Zn - 100 ppm
Cu - 19.1 ppm	As - 38.4 ppm

RDM-6 Black argillite with fine cube pyrite, approximately 5%.

Au - <.5 ppb	Ag - .2 ppm
Pb - 2.1 ppm	Zn - 82 ppm
Cu - 31.7 ppm	As - 105.7 ppm

RDM-7 Black argillite.

Au - 0.5 ppb	Ag - .4 ppm
Pb - 6.1 ppm	Zn - 64 ppm
Cu - 30.2 ppm	As - 10.1 ppm

RDM-8 Black argillite.

Au - .5 ppb	Ag - 0.10 ppm
Pb - 2.2 ppm	Zn - 129 ppm
Cu - 35.7 ppm	As - 6.3 ppm

RDM-9 Black argillite with barren quartz carbonate stockwork, approximately 50%.

Au - .8 ppb	Ag - .4 ppm
Pb - 6.7 ppm	Zn - 115 ppm
Cu - 61.7 ppm	As - 219.6 ppm

RDM-10 Black argillite.

Au - <.5 ppb	Ag - .4 ppm
Pb - 14.6 ppm	Zn - 87 ppm
Cu - 62.2 ppm	As - 1.4 ppm

RDM-11 Black argillite. Pyrite 2%.

Au - <.5 ppb	Ag - 0.3 ppm
Pb - 5.7 ppm	Zn - 115 ppm
Cu - 17.4 ppm	As - 3.3 ppm

RDM-12 Black argillite.

Au - <.5 ppb	Ag - .8 ppm
Pb - 8.5 ppm	Zn - 99 ppm
Cu - 41.8 ppm	As - 1.4 ppm

RDM-13 Black argillite.

Au - <.5 ppb	Ag - .7 ppm
Pb - 20.2 ppm	Zn - 163 ppm
Cu - 82.8 ppm	As - 1.1 ppm

RDM-14 Black argillite with barren white quartz veinlets 5% of the rock.

Au - <.5 ppb	Ag - .2 ppm
Pb - 4.3 ppm	Zn - 76 ppm
Cu - 19.7 ppm	As - 2.4 ppm

RDM-15 Rusty gray siltstone.

Au - .1 ppb	Ag - .1 ppm
Pb - 4.6 ppm	Zn - 34 ppm
Cu - 31.1 ppm	As - 2.3 ppm

RDM-16 Gray argillite.

Au - .8 ppb	Ag - 0.4 ppm
Pb - 17.9 ppm	Zn - 102 ppm
Cu - 71.7 ppm	As - 1.6 ppm

RDM-17 Gray sericite-altered lapilli rhyolite tuff.

Au - .6 ppb	Ag - .1 ppm
Pb - 10.0 ppm	Zn - 859 ppm
Cu - 8.4 ppm	As - 39.7 ppm

RDM-18 Green chlorite-altered andesite with barren quartz veining.

Au - .6 ppb	Ag - .1 ppm
Pb - 8.4 ppm	Zn - 117 ppm
Cu - 2.5 ppm	As - 2.8 ppm

RDM-19 Gray-green, fine grained rhyolite lapilli tuff.

Au - <.5 ppb	Ag - <.1 ppm
Pb - 14.5 ppm	Zn - 99 ppm
Cu - 3.1 ppm	As - 16.3 ppm

RDM-20 Black, fine grained, rhyolite lapilli tuff.

Au - .6 ppb	Ag - <.1 ppm
Pb - 16.7 ppm	Zn - 63 ppm
Cu - 3.3 ppm	As - 2.2 ppm

RDM-21 Gray, sericite-altered rhyolite breccia, pyrite approximately 4%.

Au - <.5 ppb	Ag - .2 ppm
Pb - 18.3 ppm	Zn - 145 ppm
Cu - 3.4 ppm	As - 18.7 ppm

RDM-22 Red jasper.

Au - 1.3 ppb	Ag - 1.6 ppm
Pb - 88.8 ppm	Zn - 1181 ppm
Cu - 2.3 ppm	As - 14.3 ppm

RDM-23 Red jasper.

Au - <.5 ppb	Ag - .1 ppm
Pb - 21.9 ppm	Zn - 72 ppm
Cu - .7 ppm	As - 8.6 ppm

RDM-24 Gray, fine grained lapilli tuff. Pyrite 5%.

Au - <.5 ppb	Ag - .6 ppm
Pb - 42.0 ppm	Zn - 124 ppm
Cu - 3.9 ppm	As - 53.1 ppm

RDM-25 Sericite-altered, gray, medium grained rhyolite lapilli tuff.

Au - <.5 ppb	Ag - 0.5 ppm
Pb - 28.1 ppm	Zn - 106 ppm
Cu - 3.4 ppm	As - 22.8 ppm

RDM-26 Black, medium grained rhyolite lapilli tuff. Pyrite 2%.

Au - <.5 ppb	Ag - .7 ppm
Pb - 43.1 ppm	Zn - 84 ppm
Cu - 4.9 ppm	As - 75 ppm

RDM-27 Sericite-altered, gray andesite tuff.

Au - <.5 ppb	Ag - .4 ppm
Pb - 74.8 ppm	Zn - 63 ppm
Cu - 25 ppm	As - 7.7 ppm

RDM-28 Black, fine grained glassy appearing rhyolite tuff. Thinly banded, pyrite 3%.

Au - <.5 ppb	Ag - 3.0 ppm
Pb - 141 ppm	Zn - 1496 ppm
Cu - 62.6 ppm	As - 63.1 ppm

RDM-29 Black rhyolite breccia. Pyrite 5%.

Au - <.5 ppb	Ag - 12 ppm
Pb - 214 ppm	Zn - >10000 ppm
Cu - 68.4 ppm	As - 298.4 ppm

RDM-30 Gray rhyolite breccia, pyrite 7%.

Au - <.5 ppb	Ag - .6 ppm
Pb - 25.3 ppm	Zn - 135 ppm
Cu - 6.9 ppm	As - 35.1 ppm

RDM-31 Gray rhyolite crystal tuff.

Au - <.5 ppb	Ag - 1.0 ppm
Pb - 150 ppm	Zn - 928 ppm
Cu - 15.86 ppm	As - 70.0 ppm

RDM-32 Gray, fine grained rhyolite lapilli tuff.

Au - <.5 ppb	Ag - .2 ppm
Pb - 22.1 ppm	Zn - 70 ppm
Cu - 25.1 ppm	As - 1.4 ppm

RDM-39 Medium grained gray granodiorite.

Au - 4.0 ppb	Ag - .5 ppm
Pb - 6.8 ppm	Zn - 48 ppm
Cu - 4.9 ppm	As - 11.7 ppm

RDM-40 Medium grained pink to gray granodiorite.

Au - 8.5 ppb	Ag - 1.1 ppm
Pb - 25 ppm	Zn - 52 ppm
Cu - 7.8 ppm	As - 8.5 ppm

RDM-41 Medium grained pink to gray granodiorite.

Au - 2.1 ppb	Ag - .9 ppm
Pb - 22.4 ppm	Zn - 61 ppm
Cu - 1.2 ppm	As - 4.0 ppm

RDM-42 Fine grained silicified granodiorite.

Au - .7 ppb	Ag - .2 ppm
Pb - 3.0 ppm	Zn - 30 ppm
Cu - 1.9 ppm	As - 5.9 ppm

RDM-43 Gray to pink granodiorite.

Au - 1.2 ppb	Ag - .4 ppm
Pb - 6.8 ppm	Zn - 48 ppm
Cu - 2.5 ppm	As - 7.8 ppm

RDM-44 Gray, fine grained rhyolite.

Au - <.5 ppb	Ag - .3 ppm
Pb - 34.3 ppm	Zn - 49 ppm
Cu - 5.1 ppm	As - 6.3 ppm

RDM-45 Gray chlorite-altered green granodiorite.

Au - <.5 ppb	Ag - .3 ppm
Pb - 2.0 ppm	Zn - 51 ppm
Cu - 1.7 ppm	As - 4.9 ppm

RDM-45 Fine grained granodiorite.

Au - <.5 ppb	Ag - .3 ppm
Pb - 2.0 ppm	Zn - 51 ppm
Cu - 1.7 ppm	As - 4.9 ppm

RDM-46 Fine grained rhyolite tuff.

Au - 2.4 ppb	Ag - .5 ppm
Pb - 4.8 ppm	Zn - 61 ppm
Cu - 2.2 ppm	As - 6.7 ppm

RDM-47 Gray, fine grained rhyolite ash tuff. Pyrite approximately 10%.

Au - .9 ppb	Ag - .5 ppm
Pb - 5.2 ppm	Zn - 14 ppm
Cu - 4.2 ppm	As - 11.1 ppm

RDM-48 Gray, fine grained rhyolite ash tuff. Pyrite approximately 10%.

Au - .6 ppb	Ag - .7 ppm
Pb - 9.5 ppm	Zn - 58 ppm
Cu - 407.7 ppm	As - 9.2 ppm

RDM-49

Black, fine grained rhyolite ash tuff. Pyrite approximately 5%.

Au - 4.1 ppb	Ag - .1 ppm
Pb - 61 ppm	Zn - 61 ppm
Cu - 39.0 ppm	As - 55.1 ppm

TEK-1

Massive pyrite cobble, approximately 15 cm.

Au - 0.8 ppb	Ag - 18.2 ppm
Pb - 204.5 ppm	Zn - 269 ppm
Cu - 24.2 ppm	As - 520.7 ppm

TEK-2

Gray rhyolite with coarse grained pyrite bands approximately 5-10%. Traces fine grained galena, boulder approximately 30 cm in diameter.

Au - 38.4 ppb	Ag - 60 ppm
Pb - >10000 ppm	Zn - >10000 ppm
Cu - 56.5 ppm	As - 895.7 ppm

TEK-3

Gray carbonate-altered rhyolite cobble approximately 15 cm. Traces galena, sphalerite.

Au - 12.6 ppb	Ag - 4.9 ppm
Pb - 427 ppm	Zn - 3118 ppm
Cu - 223.9 ppm	As - 48.5 ppm

TEK-4

Small 4 cm cobble -rhyolite with carbonate-altered fracture. Traces galena.

Au - 42.7 ppb	Ag - 14 ppm
Pb - 1191.2ppm	Zn - >10000 ppm
Cu - 24.1 ppm	As - 140.1 ppm

TEK-5

0.4 m float boulder - rhyolite with quartz-pyrite veinlets up to 2 cm. Quartz stockwork approximately 10-15%.

Au - 28.7 ppb	Ag - 2.7 ppm
Pb - 36.1ppm	Zn - 328 ppm
Cu - 13.6 ppm	As - 68.2 ppm

TEK-6

Quartz pebble with minor galena.

Au - 2.6 ppb	Ag - 1.5 ppm
Pb - 240.5 ppm	Zn - 732 ppm
Cu - 1.6 ppm	As - 11.2 ppm

TEK-7

Gray rhyolite with 8% fine grained pyrite. Approximately 10% barren quartz veinlets.

Au - 3.9 ppb	Ag - >163 ppm
Pb - 477.5 ppm	Zn - 1738 ppm
Cu - 83.8 ppm	As - 212.4 ppm

- TEK-8 0.3 m boulder – coarse pyrite veins up to 0.5 cm in carbonate-rich zone with jasper pyrite approximately 10%.
- Au – 60.7 ppb Ag – 4.2 ppm
Pb – 85.2 ppm Zn – 616 ppm
Cu – 14.6 ppm As – 60.7 ppm
- TEK-9 Boulder approximately 0.3 m of rhyolite breccia. Fine grained pyrite approximately 8% between clasts.
- Au – 1.0 ppb Ag – 23.3 ppm
Pb – 442.2 ppm Zn – 662 ppm
Cu – 22.1 ppm As – 145.4 ppm
- TEK-10 Manganese-stained boulder 0.3 m – green sphalerite and minor galena. Pyrite approximately 5%.
- Au – 2.6 ppb Ag – 77 ppm
Pb – >10000 ppm Zn – >10000 ppm
Cu – 57.4 ppm As – 251.8 ppm
- TEK-11 Quartz with 40-50% coarse cube pyrite.
- Au – 269.4 ppb Ag – 6.7 ppm
Pb – 103.2 ppm Zn – 293 ppm
Cu – 1976.5 ppm As – 88 ppm
- TEK-12 Brecciated andesite with carbonate veins approximately 15% of rock. Galena and sphalerite approximately 10% of carbonate veins.
- Au – 8.7 ppb Ag – 70 ppm
Pb – >10000 ppm Zn – 1713 ppm
Cu – 84.1 ppm As – 18.1 ppm
- TEK-13 Quartz cobble with coarse pyrite approximately 5%.
- Au – 39.5 ppb Ag – 1.9 ppm
Pb – 150 ppm Zn – 164 ppm
Cu – 18.6 ppm As – 164.9 ppm
- A04-234 Float (very angular, brick size) of completely silicified rock cut by vein of vuggy quartz with 3-5% tetrahedrite, minor galena, chalcopyrite and sphalerite.
- Au – 420 ppb Ag – 2560 ppm
Pb – 3900 ppm Zn – 17,900 ppm
Cu – 23,100 ppm

A04-235 Float (very angular, brick size) of vuggy quartz vein with 10% of galena, minor tetrahedrite and wad.

Au - 200 ppb **Ag - 1620 ppm**
Pb - 176,000 ppm **Zn - 1300 ppm**
Cu - 4620 ppm

A04-236 Float (1x1m) of completely silica replaced rock with 5-7% pyrite and some wad.

Au - 90 ppb **Ag - 24.3 ppm**
Pb - 2200 ppm **Zn - 100 ppm**
Cu - 90 ppm

A04-269

Float from sub outcrop of moderately silicified and chloritized andesite with 30-40% of combined pyrite and chalcopyrite. Sample was taken from a small pile of rocks removed from a pit above.

Au - 3900 ppb **Ag - 115 ppm**
Pb - 3900 ppm **Zn - 800 ppm**
Cu - 86,700 ppm

A04-270 Grab sample from the wall of a small pit. Weakly silicified andesite with 1-2% disseminated pyrite.

Au - 160 ppb **Ag - 6.9 ppm**
Pb - 3900 ppm **Zn - 800 ppm**
Cu - 1040 ppm

A04-271 Chip 1.0 m across silicified andesite with 3-5% pyrite and abundant limonite. The zone strikes N-S, it is 1-2 m wide and can be traced for 7-8 m.

Au - 850 ppb **Ag - 13.2 ppm**
Pb - 2200 ppm **Zn - 200 ppm**
Cu - 7180 ppm

A04-272 Grab from chloritized andesite with 2-3% pyrite.

Au - 50 ppb **Ag - 7.0 ppm**
Pb - 1100 ppm **Zn - 300 ppm**
Cu - 1750 ppm

A04-273 Chip 1.0 m from carbonates-quartz altered andesite with 1% pyrite, trace chalcopyrite and minor malachite stain. The zone is irregular, fracture controlled, up to 1 m wide, 2.5 m long (open on the bottom).

Au - 140 ppb **Ag - 6.7 ppm**
Pb - 500 ppm **Zn - 300 ppm**
Cu - 7800 ppm

EB-04-152 Float. Highly silicified rock with limonite stain, gray to white silica with yellow-red staining.

Au - 10 ppb Ag - 4.9 ppm
Pb - 200 ppm Zn - 200 ppm
Cu - 20 ppm

EB-04-153 Float. Galena-pyrite in quartz-barite rock.

Au - 150 ppb Ag - 1305.0 ppm
Pb - 91,000 ppm Zn - 3400 ppm
Cu - 8700 ppm

EB-04-154 Quartz float, vuggy looking with a gray sulfide.

Au - 100 ppb Ag - 1132.0 ppm
Pb - 1400 ppm Zn - 1400 ppm
Cu - 7450 ppm

EB-04-155 Float. Quartz with barite carrying gray sulfide and pyrite. Gray sulfide may possibly be stibnite.

Au - 110 ppb Ag - 14.1 ppm
Pb - 300 ppm Zn - 100 ppm
Cu - 50 ppm

EB-04-156 Float. From Enterprise Tunnel.

Au - 120 ppb Ag - 335 ppm
Pb - 1900 ppm Zn - 800 ppm
Cu - 11,900 ppm

APPENDIX III
ANALYSIS RESULTS

P. 02/02
FAX NO. 6042531716
OCT-12-2004 TUE 09:00 AM ACME ANALYTICAL LAB

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE (604) 253-3158 FAX (604) 253-1716
(ISO 9002 Accredited Co.)

ASSAY CERTIFICATE

Pinnacle Mines File # A405319R

305 - 1549 Marine Drive, West Vancouver BC V7V 1R9 Submitted by: Andrew Bowering



SAMPLE#	Ag** gm/mt	Au** gm/mt
R2004-CK-65	116	-
R2004-CK-83	70	-
R2004-CK-85	38	-
S2004-ERK-4	41	-
S2004-ERK-5	55	-
S2004-ERK-6	42	-
S2004-ERK-8	32	-
S2004-ERK-10	65	-
S2004-ERK-12	256	-
S2004-ERK-14	57	-
S2004-ERK-16	63	-
RE S2004-ERK-16	64	-
S2004-ERK-18	35	-
S2004-ERK-19	137	-
S2004-ERK-22	-	1.14
TEK-2004-2	60	-
TEK-2004-7	163	-
TEK-2004-10	77	-
TEK-2004-12	70	-
STANDARD R-2a/AU-1	155	3.35

GROUP 6 - PRECIOUS METALS BY FIRE ASSAY FROM 1 A.T. SAMPLE, ANALYSIS BY ICP-ES.
- SAMPLE TYPE: ROCK PULP
Samples beginning 'RF' are Retuns and 'RRE' are Reject Retuns.

Data 1 FA _____ DATE RECEIVED: SEP 27 2004 DATE REPORT MAILED: Oct 7/04



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



GEOCHEMICAL ANALYSIS CERTIFICATE

Pinnacle Mines File # A405319 Page 1

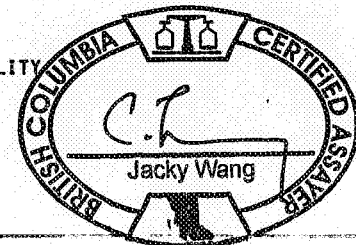
305 - 1549 Marine Drive, West Vancouver BC V7V 1H9 Submitted by: Andrew Bowering

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	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	
SI	.1	.9	.3	1	<.1	.4	.1	1	.08	<.5	<.1	<.5	<.1	3	<.1	<.1	<.1	<.1	.14	<.001	<.1	2.2	<.01	4	<.001	<.1	.02	.642	.01	.1	<.01	<.1	<.1	<.05	<.1	<.5
R2004-CK-1	2.7	3.8	10.2	146	.2	1.2	2.4	22	1.98	88.0	.9	.7	5.9	6	1.6	2.5	<.1	2	.09	.033	13	6.9	.04	62	.001	2	.27	.012	.22	<.1	.06	.6	.1	1.25	1	<.5
R2004-CK-2	20.9	11.6	346.6	178	4.2	8.5	1.4	92	2.86	37.8	2.3	10.5	4.8	15	1.3	6.0	<.1	4	.18	.028	10	9.7	.03	47	.001	3	.25	.015	.24	1.2	.05	.6	.1	2.58	1	.6
R2004-CK-3	1.2	12.3	12.7	35	.3	4.2	9.1	359	2.89	47.2	.6	7.2	2.7	217	.2	13.3	<.1	10	2.97	.076	8	3.4	.03	46	.002	3	.22	.022	.18	<.1	.07	1.3	.9	2.73	1	<.5
R2004-CK-4	6.4	3.4	20.1	7	.4	11.2	2.1	15	2.25	125.1	.5	10.9	3.6	5	<.1	20.9	1.2	2	.05	.030	9	5.5	.02	41	.001	2	.27	.020	.23	1.1	.37	.4	1.0	1.97	1	<.5
R2004-CK-5	3.1	7.3	39.7	10	1.8	5.9	2.5	21	2.93	52.2	.6	1.1	5.2	4	<.1	5.9	<.1	6	.02	.011	12	5.0	.01	33	.001	4	.26	.005	.26	<.1	.07	.4	.2	2.50	1	<.5
R2004-CK-6	22.8	2.9	9.0	65	<.1	10.8	1.4	68	2.37	52.0	2.7	<.5	6.3	16	.2	9.9	<.1	6	.25	.030	12	10.8	.02	69	.001	5	.24	.008	.25	1.5	.16	.6	.2	1.39	1	.9
R2004-CK-7	1.6	9.4	39.5	22	1.4	5.9	6.1	47	4.38	54.8	1.2	12.3	5.3	27	.1	4.6	.2	7	.22	.049	12	3.0	.08	21	.001	1	.40	.029	.20	1	.03	1.5	.2	3.89	1	1.5
R2004-CK-8	4.6	5.7	16.4	32	.1	4.9	2.6	44	9.47	61.8	.3	<.5	1.4	8	<.1	8.9	.1	12	.14	.029	4	5.4	.08	7	.003	5	.39	.016	.29	.7	.08	1.1	.6	9.40	1	<.5
R2004-CK-9	21.7	5.8	32.7	9	.5	12.9	3.3	26	2.23	91.8	3.3	4.4	10.7	9	<.1	9.8	.1	4	.15	.036	15	6.1	.02	62	.002	3	.25	.006	.26	<.1	.05	.5	.4	1.84	1	1.3
R2004-CK-10	12.6	4.5	16.3	49	1.2	12.4	1.0	38	3.54	57.6	1.9	13.0	7.2	8	.2	6.8	<.1	5	.23	.021	13	7.0	.02	34	.001	6	.32	.005	.28	.9	.07	.4	.2	3.10	1	.6
R2004-CK-11	.4	1.9	1.6	32	<.1	3.5	6.9	444	2.68	1.5	.1	4.7	.2	59	.1	.1	<.1	22	1.20	.032	1	11.2	.45	28	.001	2	1.09	.009	.04	<.1	.01	1.3	<.1	.06	2	<.5
R2004-CK-12	2.8	4.2	14.4	56	.2	2.0	1.2	22	1.68	19.0	1.3	<.5	8.1	6	.5	2.3	<.1	3	.06	.031	16	15.1	.01	80	.001	4	.28	.008	.28	1.5	.04	.5	.1	1.14	1	<.5
RE R2004-CK-12	3.1	4.1	15.4	56	.2	1.9	1.3	26	1.70	20.1	1.4	<.5	8.8	6	.4	2.4	<.1	3	.06	.033	17	14.6	.02	85	.001	4	.30	.008	.30	1.5	.05	.6	.1	1.25	1	<.5
R2004-CK-13	3.2	16.0	25.2	396	.4	7.5	15.0	243	7.37	43.5	.4	<.5	1.7	12	.2	8.8	<.1	61	.47	.099	9	4.2	.85	16	.017	8	1.35	.016	.51	<.1	.16	3.8	.2	5.91	5	<.5
R2004-CK-14	1.1	13.3	64.0	96	1.4	6.7	5.4	1262	2.67	11.5	1.2	<.5	3.2	88	.4	5.7	.2	16	2.90	.041	9	13.4	.23	64	.004	4	.47	.029	.16	1.3	.06	1.9	.1	2.09	2	<.5
R2004-CK-15	.5	23.5	26.4	21	.7	7.4	18.9	39	4.34	81.1	.2	20.9	1.7	9	<.1	13.1	.1	20	.23	.122	8	2.5	.04	34	.004	6	.35	.021	.28	<.1	.07	3.0	.7	3.61	1	1.5
R2004-CK-16	2.6	28.9	7.9	53	1.1	10.7	3.2	343	2.93	6.3	.1	<.5	.5	6	.1	2.2	.1	39	.06	.037	4	22.3	1.10	83	.001	1	1.51	.023	.10	.4	.01	2.5	.1	.64	5	6.8
R2004-CK-17	2.9	8.4	22.0	49	.1	4.3	6.7	102	4.12	34.4	.4	<.5	2.5	14	<.1	10.0	.1	21	.38	.118	11	2.1	.11	33	.003	5	.43	.015	.22	<.1	.06	1.8	.2	3.32	1	<.5
R2004-CK-18	9.1	5.1	13.9	31	.7	5.6	2.2	121	2.43	60.5	2.0	3.0	6.5	27	.2	5.3	<.1	3	.52	.030	8	10.7	.02	51	.001	1	.15	.008	.16	1.2	.28	.9	.1	2.54	<.1	<.5
R2004-CK-19	2.4	16.8	28.7	20	1.6	3.0	5.3	108	5.93	727.8	1.1	14.5	3.4	27	.1	62.2	<.1	3	.37	.023	5	5.2	.05	16	.001	3	.20	.005	.18	.1	1.57	.5	10.0	5.64	1	.8
R2004-CK-20	13.8	7.1	223.0	383	3.0	4.4	1.3	146	2.58	48.7	2.4	14.9	6.3	28	4.4	6.4	<.1	2	.32	.032	12	7.7	.03	55	.001	1	.18	.005	.17	1.2	.09	.6	.2	1.95	1	.6
R2004-CK-21	45.5	9.5	59.8	48	1.7	9.3	1.5	16	5.28	78.2	.7	3.0	5.1	4	.4	8.6	<.1	2	.03	.024	12	5.4	.01	17	.001	5	.17	.003	.22	<.1	.08	.4	.3	5.14	1	1.1
R2004-CK-22	106.2	8.9	37.0	46	3.5	24.7	2.6	116	3.51	95.9	1.3	4.5	2.7	3	.4	24.6	.1	7	.01	.003	8	7.2	.02	26	.001	3	.26	.005	.21	1.2	.31	.3	1.1	3.17	1	4.8
R2004-CK-23	200.9	8.2	38.2	18	.4	18.3	2.0	122	14.49	147.8	1.2	<.5	2.2	6	<.1	12.5	<.1	2	.05	.004	4	3.6	.01	4	.001	4	.19	.005	.17	.1	.26	.2	.4	>10	1	1.7
R2004-CK-24	4.1	4.6	10.6	12	.4	2.6	6.1	91	5.56	21.9	2.3	1.1	6.4	21	<.1	7.2	.1	3	.34	.030	13	5.2	.12	22	.001	6	.40	.007	.29	.9	.10	.7	2.5	5.39	1	<.5
R2004-CK-25	3.7	3.9	15.1	43	.3	1.5	3.2	61	3.50	42.2	1.2	<.5	5.3	12	<.1	6.8	<.1	2	.24	.030	13	3.0	.04	26	.001	4	.33	.008	.25	<.1	.05	.4	1.7	3.37	1	<.5
R2004-CK-26	97.0	8.4	40.5	67	1.5	16.1	2.9	90	13.22	782.9	2.1	.6	2.1	4	.6	34.0	.1	5	.04	.017	3	6.1	.02	5	.002	8	.27	.004	.23	1.0	.26	.5	1.9	>10	1	2.6
R2004-CK-27	5.7	16.9	81.6	113	.5	7.8	2.3	192	10.52	141.9	1.6	.9	4.0	36	.1	20.6	.2	7	.78	.034	5	5.6	.10	10	.003	7	.43	.012	.22	<.1	.25	.9	.2	>10	1	1.4
R2004-CK-28	2.9	15.3	48.8	16	2.7	2.7	3.7	63	8.75	125.7	.6	2.9	3.9	10	<.1	10.1	.1	4	.11	.032	10	6.5	.07	14	.001	2	.27	.042	.11	1.1	.04	1.0	.2	8.79	1	.9
R2004-CK-29	160.5	36.0	649.0	2260	10.8	34.8	4.9	509	9.89	170.7	5.0	9.7	5.5	33	20.3	14.8	<.1	3	.60	.028	5	5.5	.09	15	.001	2	.23	.006	.17	.2	.28	.7	1.0	9.94	1	1.6
R2004-CK-30	10.5	7.9	79.3	68	1.1	8.1	1.9	183	1.63	24.0	5.0	4.6	6.7	30	.6	3.6	.1	2	.29	.040	11	15.4	.08	79	.001	2	.27	.006	.22	1.4	.02	1.0	.1	1.13	1	<.5
R2004-CK-31	2.8	49.0	36.6	1546	3.2	1.3	2.5	17	2.06	685.9	.1	40.1	.1	2	45.7	2.0	3.9	<.1	.01	.002	<.1	14.5	.01	10	<.001	<.1	.04	.004	.02	6.8	.35	.1	<.1	1.57	<.1	1.2
R2004-CK-32	42.6	12.7	2305.0	>10000	6.5	2.5	20.7	14992	13.65	293.8	3.2	3.3	.2	8	54.7	37.5	<.1	27	.26	.003	2	11.7	.12	27	<.001	1	.03	.002	.02	1.7	26.08	.3	9.4	2.95	1	.6
R2004-CK-33	.8	7.5	43.4	258	1.2	3.2	5.4	900	4.44	92.4	.9	.6	8.2	53	1.9	4.9	.2	23	1.47	.046	10	5.0	.39	41	.025	8	.88	.035	.12	.2	.12	1.7	3.2	2.74	4	<.5
STANDARD D55	11.9	139.2	24.0	136	.3	23.6	11.9	742	2.96	17.8	5.7	40.8	2.5	45	5.3	3.5	5.7	60	.72	.089	11	181.7	.64	132	.087	19	1.99	.033	.12	4.5	.17	3.2	1.1	<.05	6	4.6

GROUP 10X - 15.0 GM SAMPLE LEACHED WITH 90 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 300 ML, ANALYSED BY ICP-MS.
(>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY
- SAMPLE TYPE: ROCK R150 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data 1 FA

DATE RECEIVED: SEP 7 2004 DATE REPORT MAILED: Sept. 24/04



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



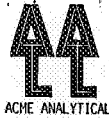
SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm
R2004-CK-34	3.1	5.7	14.8	79	.1	1.4	3.3	547	2.06	36.6	1.1	1.3	5.7	75	.2	.8	.1	23	1.50	.041	9	10.5	.32	133	.090	1	.68	.065	.03	.4	.04	1.6	.2	.77	3	<.5
R2004-CK-35	10.8	15.9	1026.0	1146	.8	1.4	1.2	386	4.88	13.1	5.2	.9	.2	23	3.9	6.9	<.1	168	.66	.007	4	21.6	.04	53	.006	<.1	.11	.002	.01	7.7	.90	.2	.1	<.05	<.1	<.5
R2004-CK-36	16.1	56.6	1064.3	834	10.8	2.8	6.5	2530	10.98	493.5	1.6	<.5	.3	125	3.6	102.5	<.1	13	6.65	.014	5	8.9	.23	12	.002	1	.41	.002	.03	.7	.63	1.0	1.2	>10	2	<.5
R2004-CK-37	.3	2.2	5.9	20	.1	.3	1.2	93	.51	26.2	1.7	.7	9.1	6	.1	1.4	<.1	2	.04	.022	23	6.7	.01	41	.001	3	.19	.012	.21	.1	.13	.5	.2	<.05	<.1	<.5
R2004-CK-38	36.7	6.5	22.1	34	.3	4.8	3.3	765	2.00	77.0	1.4	<.5	4.7	106	<.1	6.3	<.1	16	2.25	.698	33	9.1	.12	63	.013	3	.35	.098	.07	.9	.16	1.4	.6	1.20	2	.9
R2004-CK-39	53.2	56.9	1398.3	>10000	8.3	5.1	34.9	6026	9.96	323.7	12.7	<.5	1.4	130	63.9	41.7	.1	54	7.47	.082	14	5.0	.69	51	.054	4	1.79	.005	.30	.3	2.66	3.1	7.4	5.34	5	3.5
R2004-CK-40	2.5	24.9	16.7	46	.3	1.1	2.2	630	1.76	30.9	1.4	6.7	10.0	87	.2	.5	.4	4	1.65	.047	7	6.3	.10	70	.001	2	.36	.006	.30	.4	.02	.7	.1	.82	1	<.5
R2004-CK-41	.6	2.2	7.7	102	.1	.6	.7	109	.38	6.8	.1	<.5	<.1	23	.4	.4	<.1	2	.26	.007	<.1	10.1	.01	8	.001	1	.03	.008	.01	.1	.01	.2	.1	<.05	<.1	<.5
R2004-CK-41a	1.2	5.1	14.8	91	.1	1.8	3.9	1016	1.94	45.8	1.1	<.5	7.1	51	.1	1.4	.1	31	1.90	.050	12	10.5	.30	147	.091	1	.58	.060	.05	.5	.04	2.1	.3	.74	3	<.5
R2004-CK-42	13.7	17.0	1447.2	464	.3	2.7	2.5	1017	2.77	657.4	1.3	<.5	.1	15	14.0	29.1	<.1	51	.50	.012	1	15.7	.02	36	.001	2	.07	.002	<.01	.1	.13	.3	2.0	1.04	<.1	<.5
R2004-CK-43	11.5	35.3	175.9	633	.3	2.4	7.7	3746	4.28	199.1	.1	<.5	1.0	79	.8	8.8	.1	83	2.89	.064	10	7.6	.53	62	.099	5	1.22	.021	.16	.8	.18	3.8	1.0	2.06	4	<.5
R2004-CK-44	43.0	26.9	173.0	92	3.6	.8	6.1	999	17.08	>10000	.7	<.5	3.4	78	.7	79.8	.1	4	2.32	.027	5	3.0	.17	9	.001	3	.19	.019	.15	.1	.34	1.0	>100	>10	1	.7
R2004-CK-45	3.2	5.8	22.9	70	.2	.8	4.3	672	2.11	63.3	2.3	1.5	8.8	239	.2	.9	.2	11	2.90	.056	12	3.8	.30	193	.107	5	.74	.012	.27	.5	.01	1.1	1.2	.91	3	<.5
R2004-CK-46	1.4	20.5	169.3	1307	.3	1.9	10.2	9583	4.37	39.0	1.1	<.5	9.7	127	2.1	1.2	.1	23	6.92	.076	17	1.3	1.15	180	.088	8	1.86	.016	.31	.4	.17	2.8	1.0	1.03	5	<.5
R2004-CK-47	55.9	31.0	1184.5	589	10.1	3.4	6.2	292	2.86	353.1	2.5	<.5	.4	4	11.0	31.6	<.1	16	.04	.004	1	29.1	.04	67	.001	4	.08	.002	.04	.7	.29	.3	6.7	1.40	<.1	<.5
R2004-CK-48	.7	9.5	37.3	90	2.8	.5	2.3	329	9.31	90.4	.3	<.5	3.8	32	.7	5.2	<.1	4	.50	.024	8	6.3	.10	11	.001	3	.19	.031	.09	.1	.10	.9	29.2	9.21	1	<.5
R2004-CK-49	26.3	24.5	648.0	447	4.6	1.6	3.4	1013	6.75	275.2	2.4	<.5	.2	11	1.4	27.1	.1	49	.68	.009	2	18.9	.07	34	.001	2	.26	.001	.03	1.4	.19	.3	2.6	3.19	1	<.5
R2004-CK-50	32.7	80.6	101.0	794	7.9	31.8	1.7	948	12.55	200.7	.3	<.5	.1	139	13.9	115.0	.1	19	2.40	.039	<.1	9.9	.63	20	<.001	2	.12	.006	.06	.1	.71	1.5	.7	>10	<.1	35.6
RE R2004-CK-50	32.3	78.7	107.2	699	7.7	32.2	1.7	900	12.00	193.7	.3	<.5	.1	136	12.5	105.8	.1	19	2.27	.036	<.1	10.1	.60	21	<.001	2	.12	.006	.06	.1	.66	1.5	.7	>10	<.1	34.2
R2004-CK-51	46.1	10.8	670.2	3322	1.2	1.5	2.8	9752	12.21	578.3	2.7	.5	.1	66	14.0	51.7	<.1	36	2.32	.004	2	15.9	.29	13	.001	4	.19	.001	<.01	.3	1.98	.7	4.2	6.96	1	1.2
R2004-CK-52	162.3	8.5	406.6	863	4.3	1.8	3.1	1518	14.95	1188.6	1.0	<.5	.3	3	.2	122.1	<.1	36	.07	.010	1	18.0	.12	13	.002	2	.30	.002	.03	1.1	.71	.5	7.4	>10	2	.7
R2004-CK-53	63.1	27.9	2755.2	1518	7.1	7.4	8.2	959	12.25	756.6	5.0	<.5	.4	12	1.0	45.3	<.1	188	.28	.115	6	17.8	.32	9	.006	4	1.05	.001	.01	.6	1.80	2.6	7.4	>10	4	2.7
R2004-CK-54	74.5	13.4	405.7	208	.5	2.7	4.1	200	7.35	3561.5	2.7	<.5	<.1	6	4.7	243.5	<.1	12	.06	.003	<.1	20.4	.01	10	<.001	1	.02	.001	<.01	.5	10.75	.1	62.6	7.23	<.1	<.5
R2004-CK-55	2.6	10.9	10.6	24	.1	2.8	4.6	718	1.00	8.6	.7	.6	4.8	20	<.1	2.4	.1	4	.85	.033	8	15.3	.05	103	.001	4	.18	.012	.15	<.1	.02	.8	.1	.07	<.1	<.5
R2004-CK-56	3.3	4.6	30.7	25	.2	.4	.9	19	1.24	28.2	2.8	<.5	12.0	4	.1	8.5	<.1	6	.01	.023	19	5.9	.01	242	.001	2	.27	.004	.23	.1	.05	.5	.2	<.05	1	<.5
R2004-CK-57	8.3	7.2	50.9	17	.6	.8	.7	59	2.50	53.6	1.8	.6	9.2	9	.1	11.7	<.1	16	.04	.046	10	4.9	.12	245	.014	4	.62	.036	.29	.1	.01	1.6	.3	.40	3	<.5
R2004-CK-58	2.4	8.1	198.8	80	2.1	.8	3.6	24	2.15	510.8	2.9	<.5	9.2	5	.2	17.9	<.1	15	.05	.045	14	6.7	.08	100	.002	4	.39	.005	.25	.1	.35	.8	1.8	.50	3	<.5
R2004-CK-59	2.3	3.7	36.8	49	1.2	1.7	4.1	36	2.28	1017.6	1.7	<.5	7.9	6	.3	13.7	<.1	11	.04	.033	9	11.4	.05	78	.003	3	.27	.004	.24	.2	1.04	.6	2.3	1.25	2	<.5
R2004-CK-60	1.3	2.4	357.9	33	1.7	.4	2.1	5	2.35	1026.9	1.2	<.5	4.9	15	<.1	17.9	<.1	8	.01	.017	13	5.0	.01	73	.002	3	.20	.004	.27	.1	.73	.4	2.6	1.69	1	<.5
R2004-CK-61	5.3	4.0	186.6	129	6.7	.9	2.8	9	3.85	1984.2	.8	2.2	4.9	3	.7	38.9	<.1	6	.04	.009	6	5.1	.01	23	.001	4	.22	.004	.26	.1	1.34	.5	5.4	3.39	1	<.5
R2004-CK-62	2.5	5.9	68.1	47	1.8	1.5	.6	14	1.59	323.8	.6	<.5	10.7	6	.1	11.3	<.1	6	.02	.035	9	13.2	<.01	162	.001	2	.18	.004	.28	.1	.13	.5	.8	.54	1	<.5
R2004-CK-63	3.7	6.7	325.0	181	5.6	.5	5.2	4	3.96	1636.9	1.2	.8	5.6	2	1.5	36.4	<.1	5	<.01	.008	9	4.6	.01	21	.001	4	.21	.003	.26	.1	1.24	.3	5.8	3.81	1	<.5
R2004-CK-64	2.3	7.1	43.7	275	.6	1.4	1.3	31	1.26	93.5	1.2	<.5	10.4	9	.4	4.5	<.1	7	.07	.041	15	12.6	.02	59	.001	1	.19	.003	.16	<.1	.07	.7	.3	.20	1	<.5
R2004-CK-65	4.6	458.2	135.8	624	>100	.5	5.3	284	2.60	206.3	4.2	3.4	3.6	26	2.3	119.4	.1	14	.28	.196	19	2.3	.04	136	.002	9	.50	.003	.38	.1	.40	2.7	1.1	.14	2	1.0
STANDARD DS5	12.5	144.9	25.6	138	.3	24.4	12.0	767	3.03	17.9	6.3	44.7	2.9	52	5.7	3.9	5.9	61	.76	.092	13	190.5	.68	136	.098	17	2.10	.035	.15	4.7	.17	3.4	1.0	<.05	7	5.0

Sample type: ROCK R150 60C. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



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	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B %	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm
R2004-CK-66	7.2	21.0	529.5	350	4.6	1.5	4.6	62	2.63	988.9	3.8	5.0	15.2	3	3.0	30.2	<.1	3	.01	.014	10	8.1	.01	55	.001	2	.22	.009	.22	1.3	.93	.3	4.0	1.97	1	<.5
R2004-CK-67	2.7	7.5	53.8	31	1.3	.7	1.4	55	2.13	75.8	1.3	1.3	10.8	9	.1	10.3	.1	7	.09	.058	20	3.7	.04	201	.003	3	.35	.010	.29	.1	.06	1.1	.3	.79	1	<.5
R2004-CK-68	2.4	6.1	53.8	129	.5	1.3	2.8	93	2.72	55.1	1.4	1.0	11.2	8	.2	5.6	<.1	7	.11	.062	18	4.4	.04	97	.002	3	.31	.013	.28	.8	.10	1.2	.2	1.42	1	<.5
R2004-CK-69	3.6	7.0	65.8	15	2.4	1.0	5.1	65	1.80	84.6	2.2	1.2	6.7	3	.2	14.5	<.1	5	<.01	.008	8	5.7	.01	104	.001	3	.18	.010	.20	.1	.09	.3	.5	1.42	1	<.5
R2004-CK-70	76.8	31.6	163.0	99	2.0	.6	1.0	1106	35.38	297.6	1.9	1.1	1.2	42	.1	9.8	<.1	18	.34	.031	5	1.6	.20	61	.007	41	.95	.002	.06	2.6	.01	2.2	.1	2.73	3	<.5
R2004-CK-71	72.5	30.9	2159.7	965	20.0	1.8	22.0	17	1.32	210.1	1.0	1.1	4.9	6	5.7	32.7	<.1	7	.01	.013	10	5.8	<.01	95	.001	1	.14	.005	.21	.1	1.38	.5	.7	1.08	1	<.5
R2004-CK-72	13.0	5.5	270.2	13	4.8	1.0	.8	14	1.46	621.8	.3	1.2	3.0	5	.2	11.2	<.1	5	<.01	.022	9	9.8	<.01	139	.001	1	.13	.004	.26	1.0	.21	.6	.2	.36	1	<.5
R2004-CK-73	210.1	19.2	6473.0	271	3.3	1.0	9.4	58	1.65	258.0	2.9	.9	7.0	5	2.4	62.1	<.1	7	.01	.037	15	10.2	<.01	100	.002	1	.15	.004	.19	1	.31	.5	.3	1.14	1	<.6
R2004-CK-73a	2.8	7.9	89.2	156	1.7	1.6	1.9	58	2.15	33.2	1.5	.8	10.3	13	.6	6.3	.1	32	.11	.060	18	12.3	.11	85	.002	1	.57	.007	.23	1.3	.11	1.4	.1	.39	4	<.5
R2004-CK-75	17.4	4.7	99.9	9	1.6	.7	7.9	23	1.47	83.7	1.0	.6	7.7	4	.1	19.8	.1	7	.01	.015	5	8.1	<.01	92	.002	1	.17	.003	.25	.1	.22	.5	.2	1.09	1	<.5
R2004-CK-76	5.1	10.9	84.2	136	4.4	2.3	14.2	38	2.05	54.3	1.6	1.8	8.5	15	.7	19.7	.1	12	.07	.058	20	11.4	.02	86	.002	2	.31	.006	.30	1.6	.10	.7	.3	1.57	2	<.5
R2004-CK-77	190.3	17.5	621.8	94	.9	1.3	15.5	315	2.07	183.5	.8	<.5	3.5	4	1.0	54.9	<.1	6	<.01	.003	6	6.0	<.01	87	.002	1	.13	.003	.23	.1	1.68	.3	.7	1.60	<.1	<.5
R2004-CK-78	97.0	7.4	230.8	25	1.8	2.0	6.5	41	.90	96.0	.6	1.1	3.7	4	.3	30.3	<.1	5	<.01	.005	10	10.1	.01	142	.002	3	.17	.004	.23	1.2	1.05	.6	.5	.47	1	<.5
R2004-CK-79	2.6	5.4	36.0	27	1.6	.8	2.4	29	1.85	110.5	.6	1.1	8.6	12	.1	7.8	.1	23	.08	.056	11	7.2	.05	87	.002	2	.31	.003	.20	<.1	.12	.9	.8	.40	3	<.5
R2004-CK-80	1.9	4.2	201.6	177	.9	1.5	.6	10	2.08	91.6	.5	1.2	6.3	12	2.2	5.6	.1	6	.05	.043	12	9.6	<.01	74	.001	1	.15	.004	.21	1.7	.11	.4	.4	1.27	1	<.5
RE R2004-CK-80	1.9	4.2	196.3	171	.9	1.5	.7	13	2.04	90.5	.5	.6	6.4	11	2.1	5.5	.1	5	.05	.042	12	8.9	<.01	73	.001	1	.14	.004	.20	1.5	.11	.4	.4	1.22	1	<.5
R2004-CK-81	4.0	12.7	47.9	9	1.0	1.3	9.5	18	1.54	620.9	1.2	<.5	6.9	8	.1	17.1	<.1	7	.02	.019	9	13.0	.01	61	.002	1	.16	.004	.21	.1	.10	.7	.1	1.29	1	<.5
R2004-CK-82	1.7	4.3	215.7	410	4.8	1.3	1.0	445	4.90	129.8	1.6	1.2	2.9	7	1.4	13.6	<.1	89	.02	.014	6	12.4	.48	27	.004	2	1.54	.004	.04	.9	.13	3.6	.1	.30	16	<.5
R2004-CK-83	3.9	44.3	140.6	61	71.9	.7	.6	130	5.57	53.1	.4	3.4	2.8	6	.1	76.2	.1	116	.01	.020	12	8.9	.16	67	.003	3	.66	.002	.16	.1	.37	2.7	1.0	1.43	16	<.5
R2004-CK-84	1.0	12.1	49.0	14	7.4	1.0	.4	24	2.10	31.3	3.0	.7	6.7	27	.1	20.6	.2	21	.12	.104	8	11.1	.04	158	.002	1	.30	.006	.26	.2	.07	1.2	.4	.18	6	<.5
R2004-CK-85	16.2	6.6	406.0	72	37.5	.8	.2	17	6.26	47.3	.2	1.2	.7	2	1.0	47.5	.1	3	<.01	.008	4	9.1	.01	13	.001	4	.08	.005	.09	.1	.79	.4	2.0	5.63	1	<.5
R2004-CK-86	13.3	4.9	1790.3	73	18.1	1.0	.2	23	1.53	450.5	.3	1.6	2.2	4	.3	37.6	.2	5	<.01	.004	18	13.5	<.01	296	<.001	4	.11	.005	.19	.9	.23	.6	.6	.25	1	<.5
R2004-CK-87	6.5	10.0	104.8	13	4.4	.7	.2	23	4.52	32.5	.8	4.6	7.5	13	<.1	28.1	2.2	12	.04	.019	9	10.6	.01	42	.001	2	.18	.008	.21	.2	.15	.4	.8	2.50	2	<.5
R2004-CK-88	3.3	5.7	219.5	38	1.5	.7	.4	16	.80	191.5	4.1	<.5	1.6	74	.5	25.4	.1	20	.41	.237	10	6.7	.01	197	.002	2	.26	.006	.30	.3	.13	2.0	.7	.08	1	<.5
R2004-CK-89	.5	5.6	45.0	156	1.7	1.1	5.5	24	1.08	52.4	1.3	.6	8.7	12	.5	7.6	.2	11	.10	.049	19	15.4	.03	90	.001	1	.19	.004	.18	.1	.13	.7	.2	.23	1	<.5
R2004-CK-90	2.9	14.3	26.9	127	.7	6.2	9.3	191	3.04	23.4	.5	.7	3.5	25	.4	4.1	.1	6	.30	.064	9	5.4	.06	52	.002	2	.29	.023	.22	.3	.04	.9	.2	2.15	1	<.5
R2004-CK-91	17.1	58.4	8.7	196	2.2	21.2	9.9	415	3.45	16.5	.1	<.5	1.7	7	1.6	6.1	.1	14	.24	.106	6	3.9	.54	54	.028	1	.93	.012	.59	.1	.10	1.5	.7	2.38	2	17.4
R2004-CK-92	28.4	240.0	216.8	8742	20.0	75.0	20.7	108	7.44	4530.1	1.1	19.7	1.1	9	118.7	15.4	45.2	42	.13	.042	2	12.7	.30	25	.001	1	.65	.007	.14	4.4	.53	1.4	.1	7.20	2	43.8
R2004-CK-93	1.3	30.2	7.7	125	.7	12.5	5.8	287	3.40	21.9	.1	<.5	.7	8	.8	1.8	.2	52	.12	.049	5	14.1	.62	93	.085	1	1.03	.033	.64	<.1	.02	3.0	.4	1.44	4	7.7
R2004-CK-94	25.7	255.0	8.5	976	3.2	33.9	11.8	295	4.81	542.7	.2	<.5	2.0	7	22.7	4.3	.2	47	.16	.052	5	7.0	.42	27	.026	1	.80	.016	.48	.1	.13	1.0	.6	3.95	2	>100
R2004-CK-95	2.3	64.0	13.1	177	.5	6.8	5.3	428	3.93	42.8	.1	<.5	.9	8	1.1	4.8	.1	53	.08	.038	2	10.5	.89	77	.127	<.1	1.46	.043	.97	.4	.03	4.7	.6	1.64	6	13.8
R2004-CK-96	1.0	62.9	8.8	109	.6	9.5	15.1	808	4.88	11.2	.1	<.5	1.9	5	.1	1.6	.1	86	.08	.042	3	9.6	1.44	106	.134	<.1	2.42	.033	1.01	.1	.02	5.2	.5	1.12	12	5.3
R2004-CK-97	8.2	8.0	32.2	108	.2	.9	5.1	6148	2.70	17.1	2.3	.5	2	384	4.9	1.1	<.1	48	14.65	.024	2	5.8	.21	1310	.012	2	.22	.003	.01	.9	.35	.6	.3	.06	1	<.5
R2004-CK-98	11.0	22.2	35.9	182	.7	2.1	13.3	168	2.03	33.7	41.7	1.3	4.2	22	1.9	3.4	.4	29	.55	.049	7	4.7	.03	60	.007	2	.31	.035	.24	.8	.15	1.2	1.3	1.84	1	1.0
STANDARD DSS	12.5	142.0	25.8	138	.3	24.3	11.7	748	2.92	18.2	6.0	41.3	2.7	49	5.6	3.8	5.9	58	.73	.091	13	185.6	.65	135	.098	17	1.98	.035	.15	4.9	.19	3.6	1.0	<.05	6	4.9

Sample type: ROCK R150 60C. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



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	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	
R2004-CK-99	9.8	30.3	10.9	41	.6	2.9	2.7	57	1.66	3.9	.2	<.5	1.9	32	.2	2.6	.2	5	.21	.117	20	1.1	.06	397	.002	2	.52	.017	.30	<.1	.03	1.2	.2	.36	1	3.9
R2004-CK-100	2.4	66.6	2.8	9	.3	1.9	6.6	43	1.38	3085.3	1.5	50.9	5.2	10	.1	1.5	2.4	2	.10	.035	5	8.0	.02	171	.005	<1	.36	.014	.27	5.0	<.01	.3	<.1	.69	1	1.1
R2004-CK-102	8.4	39.5	15.8	48	.4	90.5	13.5	128	4.32	210.9	.3	.5	3.2	13	<.1	4.2	1.6	24	.13	.070	7	35.1	.50	69	.002	1	1.19	.025	.29	.1	<.01	3.0	.1	2.18	3	2.7
R2004-CK-103	1.6	58.5	2.7	15	.1	1.4	2.4	300	1.41	21.1	2.5	37.0	8.2	24	.1	.2	1.0	4	.89	.054	8	2.8	.10	181	.007	1	.59	.040	.29	.4	<.01	.5	<.1	.70	2	.9
R2004-CK-104	1.8	48.1	2.7	34	.1	1.4	2.6	275	1.62	8.5	2.6	37.8	8.2	36	.4	.2	1.2	4	1.44	.066	11	4.1	.11	185	.004	1	.56	.037	.26	.3	<.01	.4	.1	.80	2	.5
R2004-CK-105	1.3	44.6	2.4	13	<.1	1.8	2.1	196	1.52	1.2	2.1	3.2	7.8	20	.1	.2	.3	6	.56	.060	10	3.4	.11	162	.036	1	.56	.049	.24	.6	<.01	.6	<.1	.57	2	.5
R2004-CK-106	.2	5.0	.8	6	<.1	1.5	.4	331	.38	<.5	<.1	<.5	<.1	64	<.1	.1	<.1	1	.97	.024	1	12.5	.13	5	<.001	<1	.05	.006	<.01	<.1	<.01	.5	<.1	.06	<.1	<.5
R2004-CK-107	23.1	244.8	48.4	130	2.1	287.6	50.9	552	12.67	.5	.3	1.9	2.0	17	.8	8.6	1.5	87	.26	.057	3	66.9	1.41	20	.110	<1	1.61	.054	.54	.1	.01	5.5	.7	9.66	6	12.8
R2004-CK-108	30.1	92.6	22.0	459	1.9	146.8	25.1	1800	4.33	1.0	.8	5.0	1.2	44	7.3	1.6	25.9	154	.48	.053	6	294.8	2.15	81	.119	1	2.26	.182	1.51	.3	.02	8.5	1.3	1.76	11	1.9
R2004-CK-109	14.2	95.9	16.4	226	.5	144.2	21.1	913	4.84	1.0	.5	2.9	2.5	68	2.1	1.3	13.3	211	.98	.191	6	192.4	1.90	55	.214	2	2.61	.261	1.40	.6	<.01	13.1	.9	2.36	11	2.1
R2004-CK-110	.7	12.9	20.0	73	.7	2.0	3.9	998	2.70	11.3	.6	<.5	4.1	51	.5	2.4	.2	6	1.44	.053	21	12.8	.12	84	.002	4	.30	.006	.31	<.1	.12	2.5	1.0	.54	1	.5
R2004-CK-111	7.4	6.2	78.4	515	.4	2.4	2.7	2243	6.38	46.9	1.6	.9	.2	106	.3	37.7	<.1	40	1.37	.016	3	23.0	.16	328	.004	7	.30	.004	.01	2.4	.64	.9	.1	.38	1	<.5
R2004-CK-112	2.5	4.4	25.0	99	.2	.6	1.9	38	1.98	18.5	.4	.5	6.4	18	.1	4.6	<.1	8	.16	.090	24	6.3	.11	136	.004	2	4.7	.047	.23	<.1	1.9	1.8	.1	1.29	3	<.5
RE R2004-CK-112	2.6	4.6	25.3	97	.2	.6	1.9	40	1.96	18.9	.5	<.5	6.3	17	.1	4.3	<.1	7	.16	.089	24	5.5	.11	114	.004	1	4.6	.045	.21	<.1	1.8	1.7	.1	1.30	3	<.5
R2004-CK-113	4.9	6.7	26.7	24	.4	.9	1.7	20	1.69	28.4	.3	<.5	2.9	14	.1	4.3	<.1	4	.02	.041	12	4.8	.03	159	.030	3	.30	.028	.37	.1	.11	1.3	.1	.98	1	<.5
R2004-CK-114	1.8	42.8	97.7	185	.4	1.0	4.7	46	1.31	8.8	.6	.5	4.1	9	.4	3.1	<.1	13	.31	.116	21	3.5	.15	166	.053	3	.65	.022	.39	.1	.09	2.6	.1	.76	4	.5
R2004-CK-115	1.6	22.9	178.0	140	.5	.8	3.6	75	2.21	11.5	.5	.6	3.4	10	.2	3.2	<.1	17	.34	.087	28	9.6	.18	104	.082	2	.52	.036	.22	.2	.12	2.2	.1	1.49	3	<.5
R2004-CK-116	1.1	4.2	25.4	193	.1	.6	6.0	88	5.53	27.9	.2	<.5	3.2	8	.7	3.9	.1	6	.14	.064	17	1.8	.29	35	.051	4	1.09	.019	.48	.1	.09	2.4	.1	4.20	3	<.5
R2004-CK-117	10.9	3.7	124.0	384	.5	2.2	6.1	2985	12.95	65.5	.7	4.3	.2	382	1.5	49.4	.2	55	5.40	.046	7	9.2	.78	112	.011	2	.79	.003	.05	6.5	.14	1.6	.1	1.32	2	.7
R2004-CK-118	3.2	241.9	771.3	213	27.7	29.1	125.1	30	4.07	730.2	.8	2.3	1.0	11	.8	15.1	.1	31	.18	.106	4	4.1	.04	39	.003	8	.54	.003	.43	.1	1.49	2.8	3.2	4.20	1	2.4
R2004-CK-119	3.4	39.1	75.0	27	3.8	3.9	13.6	30	8.68	66.6	.2	1.3	.8	3	.3	26.9	.1	11	.02	.033	5	3.6	.02	11	.002	3	.31	.008	.31	<.1	.39	1.6	10.0	8.73	1	.6
R2004-CK-120	3.2	39.6	71.0	3470	4.5	4.7	21.9	103	2.99	46.7	.3	.8	2.4	20	28.1	7.2	.1	17	.36	.087	11	4.3	.03	45	.003	4	.44	.008	.50	.1	4.29	1.6	3.8	3.33	1	<.5
R2004-CK-121	58.1	46.9	237.0	185	15.8	5.2	18.2	483	5.86	200.6	.5	1.7	1.4	13	11.9	27.9	.4	60	.02	.047	11	14.3	.38	65	.004	5	1.44	.062	.25	<.1	.42	2.7	5.2	2.45	7	.8
R2004-CK-122	33.1	30.4	95.0	176	10.3	3.9	19.2	419	5.86	105.3	.4	.7	1.4	10	1.4	21.6	.3	46	.13	.067	8	6.6	.39	53	.003	7	1.47	.003	.30	<.1	.41	2.4	4.0	2.93	6	<.5
R2004-CK-123	6.2	110.1	18.5	181	.6	128.0	22.6	1391	6.20	.9	.4	2.8	.9	102	.9	1.2	15.1	166	1.15	.054	2	183.2	2.15	59	.195	1	3.37	.377	1.92	.1	.03	12.1	1.4	2.96	15	2.6
R2004-CK-124	17.0	64.5	878.5	4112	5.8	2.6	7.8	2377	4.67	326.6	1.1	.7	3.6	125	26.5	51.0	.2	15	3.17	.115	17	3.1	.12	32	.003	8	.49	.012	.35	.1	8.18	3.9	23.6	3.22	1	<.5
R2004-CK-125	38.9	26.0	536.2	4099	4.7	4.6	40.6	3294	5.83	262.5	.6	1.5	2.1	48	57.2	15.1	<.1	14	4.88	.111	12	1.4	.12	43	.127	4	.71	.008	.32	.5	3.23	2.9	2.3	5.15	2	.6
S2004-ERK-1	.5	23.1	5.9	111	<.1	60.5	36.4	1493	6.54	3.7	.2	1.4	.5	98	.4	1.1	.1	264	2.00	.055	3	129.3	3.90	238	.521	4	3.48	.053	.11	.1	.03	24.4	.1	.41	13	<.5
S2004-ERK-2	.4	5.9	8.3	96	.1	6.2	7.1	534	3.46	3.4	.2	<.5	2.5	179	.2	1.3	<.1	25	3.74	.089	20	15.0	.69	62	.005	2	1.67	.034	.11	<.1	.02	2.9	.1	.06	5	<.5
S2004-ERK-3	1.1	63.4	187.0	2087	6.2	8.7	4.7	41	2.20	>10000	.1	6.6	<.1	10	38.4	>2000	.1	5	.07	.015	1	8.0	.01	33	<.001	4	.17	.005	.13	<.1	.48	1.1	.2	2.27	<.1	15.1
S2004-ERK-4	.7	331.6	163.4	2127	45.7	5.6	2.9	101	2.88	421.3	<.1	94.0	<.1	9	62.4	>2000	.1	5	.08	.004	1	9.6	.04	30	<.001	2	.09	.005	.05	<.1	.57	<.1	.3	9.66	<.1	1.9
S2004-ERK-5	.7	84.3	1065.6	105	62.7	14.6	13.5	876	22.95	2826.5	<.1	388.7	.1	5	.9	914.6	26.9	3	.02	.008	1	3.6	.01	22	.001	2	.12	.003	.11	.2	.17	4.7	.2	>10	<.1	61.9
S2004-ERK-6	2.1	30.4	330.8	96	45.1	2.7	1.0	80	3.04	6753.9	<.1	84.1	.2	13	.8	316.0	1.7	4	.06	.016	3	10.0	.01	30	.001	2	.14	.003	.09	.1	.07	.7	.1	.26	<.1	40.9
STANDARD DSS	12.4	146.5	25.4	140	.3	25.3	12.0	744	3.03	18.8	6.5	42.0	2.9	50	5.5	4.0	6.5	63	.77	.098	13	189.2	.67	136	.108	16	2.06	.032	.15	4.9	1.8	3.6	1.1	<.05	7	5.0

Sample type: ROCK R150 60C. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



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	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm
S2004-ERK-7	1.3	20.3	98.3	335	1.7	9.6	4.8	737	2.11	5016.4	.1	.7	.4	70	4.8	>2000	.4	10	1.15	.063	3	10.2	.28	61	.001	7	.30	.010	.20	1.5	.05	3.3	.1	.68	1	5.2
S2004-ERK-8	2.2	148.2	.2	3345	34.1	5.1	.8	1955	2.60	7.6	<.1	1.1	<.1	78	46.0	>2000	.1	8	2.34	.005	<.1	18.5	.77	19	<.001	1	.04	.003	.03	<.1	.84	.3	.1	6.55	<.1	<.5
S2004-ERK-9	<.1	325.8	.2	1024	12.1	2.2	.5	35	.54	39.3	<.1	15.7	<.1	<.1	10.8	>2000	.3	1	<.01	<.001	<.1	3.9	.01	15	<.001	1	.02	<.001	.01	<.1	.26	<.1	.1	7.24	<.1	.7
S2004-ERK-10	4.3	83.9	7819.0	186	72.1	10.7	4.8	61	4.82	>10000	<.1	258.8	.1	11	5.6	>2000	.3	4	.02	.006	<.1	27.6	.01	21	.001	2	.11	.005	.08	5.5	.08	1.8	.1	2.78	<.1	21.6
S2004-ERK-11	9.7	29.7	147.2	112	3.7	6.7	2.3	43	1.54	>10000	<.1	1.5	.3	7	1.3	331.3	1.8	4	.01	.012	3	26.0	.01	33	.001	3	.20	.004	.14	6.6	.02	1.0	.1	.53	<.1	4.7
S2004-ERK-12	386.1	28.3	37.4	35	>100	1.4	6.7	30	12.19	503.7	.5	19.9	<.1	71	<.1	192.5	.1	1	.04	.020	<.1	3.6	<.01	32	.001	1	.11	.005	.10	3.4	2.65	.6	3.3	>10	<.1	<.5
S2004-ERK-13	5.1	35.2	3293.6	1162	12.2	6.1	5.7	164	2.14	192.3	.2	5.2	.2	106	11.5	89.7	2.8	6	.24	.016	2	23.2	.01	32	.002	1	.13	.003	.10	3.7	1.53	1.5	.6	1.96	<.1	.6
S2004-ERK-14	41.6	16.6	215.0	123	58.6	1.6	8.0	33	3.34	161.8	1.0	1.6	.2	146	.4	75.6	.1	4	.16	.072	1	2.9	.01	36	.002	5	.22	.005	.16	1.7	3.14	.8	1.5	3.54	1	<.5
S2004-ERK-15	342.0	837.3	385.6	>10000	7.8	7.1	11.6	2663	5.12	158.5	1.9	29.7	.3	113	124.7	53.0	4.4	6	2.05	.011	2	15.9	.38	40	.001	1	.19	.002	.12	4.3	1.79	1.5	1.6	3.20	1	.5
S2004-ERK-16	15.7	44.5	717.9	>10000	55.8	4.6	17.4	61	8.84	446.8	1.5	<.5	.1	65	156.6	52.7	.6	11	.09	.032	<.1	7.3	.02	13	.003	4	.23	.013	.21	.8	74.35	1.3	6.7	>10	1	1.1
S2004-ERK-17	2.3	442.0	34.7	362	7.8	4.1	14.2	617	2.83	61.9	.7	16.7	1.5	108	8.2	74.3	.4	5	.59	.031	8	6.8	.21	59	.001	1	.24	.006	.20	1.3	.86	2.1	.1	2.70	<.1	<.5
S2004-ERK-18	18.9	37.5	3401.0	>10000	37.9	3.2	6.0	912	3.30	121.5	5.2	5.5	.1	121	143.9	65.7	.1	9	1.38	.012	1	20.1	.01	25	.001	1	.27	.005	.13	2.1	47.31	2.4	6.1	3.96	1	1.0
S2004-ERK-19	68.9	225.9	>10000	>10000	>100	6.5	5.1	2049	2.64	41.4	3.5	17.7	.1	128	614.2	216.1	.2	5	2.17	.016	3	21.1	.77	36	<.001	1	.05	.002	.04	5.2	49.27	1.9	.8	5.02	<.1	1.8
S2004-ERK-20	25.3	21.3	359.8	661	10.6	1.1	5.6	129	5.44	369.3	.4	28.2	.1	97	4.6	28.0	.1	2	.14	.051	<.1	3.0	.01	24	.001	5	.18	.003	.14	1.4	2.55	1.0	6.6	5.40	1	.5
S2004-ERK-21	27.9	45.8	319.8	3163	25.2	2.1	5.4	515	9.15	420.8	.3	201.7	.1	81	15.9	31.4	5.9	3	.63	.033	<.1	5.4	.01	108	.001	3	.14	.002	.09	2.3	21.69	1.0	6.5	>10	1	.6
S2004-ERK-22	113.7	308.6	9.3	385	8.8	6.2	21.3	5526	25.69	1170.0	.7	1192.0	.1	6	2.5	17.0	17.8	3	.21	.027	<.1	5.3	.06	162	.001	2	.49	.007	.17	2.3	1.03	2.1	.6	>10	1	5.8
S2004-ERK-23	27.1	32.0	2033.2	2487	18.4	3.7	11.3	1159	3.65	373.2	.6	1.9	1.6	67	23.2	24.7	.1	5	2.18	.066	6	8.0	.02	29	.001	4	.26	.004	.26	2.0	1.72	1.8	1.9	3.08	1	<.5
S2004-ERK-24	1.5	60.2	1668.7	630	25.2	6.0	13.0	348	2.03	32.5	.2	1.4	.5	159	5.3	47.2	.1	9	.45	.079	9	7.3	.02	44	.002	3	.25	.007	.20	1.0	.70	2.0	.6	1.91	1	<.5
S2004-ERK-25	117.1	8.1	813.5	7974	2.1	2.1	9.4	14004	12.11	1604.1	10.7	3.2	.2	267	25.9	22.4	<.1	57	13.40	.008	4	2.7	.26	13	.002	4	1.29	.005	.01	.5	1.19	5.2	86.1	7.22	3	.9
RE S2004-ERK-25	118.9	7.7	790.4	7835	2.1	1.6	9.4	13691	11.89	1570.6	10.4	2.0	.2	269	26.4	22.8	<.1	58	13.25	.008	4	3.1	.26	12	.002	4	1.28	.004	.01	.6	1.14	4.7	85.9	7.35	3	.9
R2004-RDM-1	2.2	17.4	7.1	72	.4	7.7	4.0	1203	1.89	6.2	.1	.6	.5	173	.3	16.3	.1	35	2.33	.036	3	20.6	.33	223	.063	1	.78	.050	.26	.1	.06	4.9	.7	.42	3	2.5
R2004-RDM-2	12.1	30.8	16.4	81	.7	19.4	3.5	380	2.09	42.0	.2	1.4	1.5	29	.3	9.8	.2	62	.47	.017	5	30.0	.63	115	.043	1	.96	.058	.31	<.1	.03	3.1	.6	.67	3	4.0
R2004-RDM-3	.6	21.4	11.7	126	.1	16.9	10.4	671	4.90	2.4	.3	<.5	1.7	64	.1	2.8	.1	43	.87	.075	7	32.6	1.27	113	.006	2	2.69	.039	.15	<.1	.01	3.4	.1	.22	6	<.5
R2004-RDM-4	2.4	38.8	5.4	556	.6	11.0	4.2	305	2.13	8.2	.2	1.1	.2	8	9.0	7.0	<.1	111	.19	.036	2	15.5	.36	26	.084	<.1	.71	.079	.02	.1	.07	5.6	.1	.46	3	13.6
R2004-RDM-5	3.5	19.1	10.4	100	.4	6.8	2.6	395	1.59	38.4	.1	<.5	.6	43	1.1	3.7	.1	33	.61	.022	5	18.4	.23	48	.003	<.1	.50	.084	.02	<.1	.03	3.3	.1	.19	2	3.5
R2004-RDM-6	1.3	31.7	2.1	82	.2	5.5	4.1	345	2.45	105.7	.1	<.5	.5	43	.8	4.0	.1	11	.64	.018	9	5.6	.28	73	.001	1	.34	.028	.09	<.1	.04	1.3	.1	1.41	1	5.5
R2004-RDM-7	2.2	30.2	6.1	64	.4	10.7	4.2	285	1.97	10.1	.1	.5	.7	29	.3	3.2	.1	23	.66	.199	16	16.2	.25	70	.005	<.1	.65	.028	.09	<.1	.03	2.1	.1	.50	2	4.1
R2004-RDM-8	2.3	35.7	2.2	129	.1	42.9	9.4	1125	3.12	6.3	.1	.5	.6	31	.2	1.7	<.1	53	.51	.025	4	17.3	.69	60	.043	<.1	1.33	.049	.11	.1	.03	3.6	.1	.36	5	2.0
R2004-RDM-9	2.7	61.7	6.7	115	.4	98.9	20.1	711	3.69	219.6	.4	.8	2.9	23	.1	2.3	.7	42	.16	.055	13	122.3	1.66	207	.081	1	2.02	.015	.84	4.3	.02	3.5	.4	.69	5	1.4
R2004-RDM-10	3.5	62.2	14.6	87	.4	133.7	20.3	438	4.28	1.4	.3	<.5	3.0	18	.2	2.7	.7	89	.37	.108	5	119.1	1.68	55	.150	1	1.81	.043	.72	.2	.03	5.7	.5	2.14	7	1.6
R2004-RDM-11	2.3	17.4	5.7	115	.3	11.2	2.7	114	1.40	3.3	.1	<.5	1.5	44	1.2	2.3	.1	7	.39	.042	8	8.1	.17	55	.001	<.1	.32	.038	.06	<.1	.02	.7	<.1	.52	1	4.8
R2004-RDM-12	.8	41.8	8.5	99	.8	18.5	6.7	802	3.64	1.4	.2	<.5	.8	153	.3	5.8	.1	40	1.90	.562	9	26.4	.63	97	.005	<.1	1.10	.030	.11	<.1	.02	3.9	.1	1.61	3	12.3
R2004-RDM-13	3.0	82.8	20.2	163	.7	155.3	30.4	930	5.08	1.1	.3	<.5	2.8	9	.8	4.6	.3	55	.19	.056	4	55.4	1.54	51	.062	1	1.79	.022	.39	<.1	.02	2.1	.3	2.92	5	3.0
R2004-RDM-14	2.9	19.7	4.3	76	.2	5.6	2.9	1963	2.76	2.4	.1	<.5	.8	299	.1	2.8	.1	43	2.65	.187	9	10.1	.78	29	.007	<.1	1.32	.064	.02	<.1	.01	4.9	<.1	.13	6	6
STANDARD DSS	12.4	147.0	25.0	131	.3	25.0	11.8	761	3.04	17.8	6.6	43.0	2.8	50	5.3	4.0	6.2	61	.77	.086	13	187.7	.67	136	.099	17	2.00	.035	.14	4.7	.19	3.5	1.0	<.05	6	5.0

Sample type: ROCK R150 60C. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Hg	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	
R2004-RDM-15	1.3	31.1	4.6	34	.1	31.8	8.5	299	1.41	2.3	.1	.7	.8	18	.1	1.6	2.6	61	.24	.043	3	125.5	.72	111	.073	1	.96	.097	.55	.3	.01	5.8	.3	.39	4	.7
R2004-RDM-16	3.1	71.7	17.9	102	.4	119.8	18.9	873	4.20	1.6	.3	.8	2.6	120	.4	2.2	8.4	172	1.46	.146	4	147.0	1.35	79	.150	2	3.19	.465	1.14	.9	.02	9.9	.8	2.08	10	2.3
R2004-RDM-17	2.5	8.4	10.0	859	.1	3.6	8.1	8126	4.81	39.7	1.3	.6	1.2	75	7.6	10.8	.1	6	4.25	.050	9	3.6	.73	45	.002	3	.42	.008	.18	<.1	.06	3.7	.2	.08	1	<.5
R2004-RDM-18	.6	2.5	8.4	117	.1	1.8	6.2	4226	2.07	2.8	.2	.6	.8	472	.6	.8	<.1	34	19.87	.042	7	1.9	.50	633	.003	6	.66	.009	.23	.1	.05	3.7	<.1	<.05	2	<.5
R2004-RDM-19	.4	3.1	14.5	99	<.1	.5	3.7	192	3.93	16.3	.2	<.5	3.0	16	.1	2.3	.1	8	.52	.155	16	<.1	.45	123	.018	5	1.41	.006	.49	<.1	.07	2.9	.1	1.49	3	<.5
R2004-RDM-20	1.0	3.3	16.7	63	<.1	1.0	2.0	366	1.92	2.2	.4	.6	3.1	43	.3	1.2	<.1	20	1.42	.049	18	10.2	.23	120	.067	1	.79	.036	.14	.1	.02	2.9	<.1	<.05	4	<.5
R2004-RDM-21	.7	3.4	18.3	145	.2	.2	4.2	125	4.46	18.7	.1	<.5	4.1	6	.1	2.5	.1	6	.19	.064	13	<.1	.41	41	.042	4	1.12	.019	.41	.1	.07	2.0	.1	3.42	3	<.5
R2004-RDM-22	8.0	2.3	88.8	1181	1.6	2.1	3.6	1389	7.63	14.3	1.2	1.3	.3	304	1.4	13.8	.1	42	2.19	.023	4	15.8	.22	273	.012	2	.32	.003	.04	.8	.07	1.9	<.1	.58	1	<.5
R2004-RDM-23	4.1	.7	21.9	72	.1	1.3	.7	611	9.09	8.6	1.3	<.5	<.1	11	1.7	50.4	<.1	6	.18	.009	2	10.8	.01	43	.001	<.1	.03	.002	.01	14.7	.85	3.7	<.1	<.05	<.1	5.5
R2004-RDM-24	8.8	3.9	42.0	124	.6	1.1	2.5	53	5.85	53.1	.5	<.5	2.8	7	.6	7.3	<.1	4	.19	.065	13	8.0	.06	23	.018	2	.41	.030	.29	.1	.24	1.4	.1	5.90	2	.7
R2004-RDM-25	1.7	3.4	28.1	106	.5	1.2	5.4	2470	2.09	22.8	.3	<.5	1.9	120	1.1	4.1	<.1	14	3.24	.052	11	3.2	.51	66	.002	2	.29	.005	.26	.1	.07	6.2	.3	.99	1	<.5
R2004-RDM-26	3.9	4.9	43.1	84	.7	2.0	4.5	44	2.16	75.0	.4	<.5	3.5	8	.8	6.4	<.1	7	.17	.077	12	7.0	.09	110	.024	1	.41	.032	.21	.1	.16	1.5	.3	1.42	2	<.5
R2004-RDM-27	.6	25.0	74.8	63	.4	2.3	9.1	3485	2.77	7.7	.1	<.5	.7	230	.7	1.9	<.1	14	6.00	.092	9	2.4	1.23	207	.004	3	.63	.016	.32	<.1	.06	5.3	.2	.36	1	.6
R2004-RDM-28	4.5	62.6	141.0	149	3.0	4.3	21.3	73	1.13	63.1	.7	<.5	2.3	11	3.8	11.3	.6	13	.13	.058	14	6.6	.06	155	.003	11	.58	.004	.35	<.1	.17	2.4	4.8	.59	1	.6
R2004-RDM-29	13.7	68.4	214.0	>10000	12.0	19.1	41.7	43	1.55	298.4	2.1	<.5	.9	11	269.2	50.9	.1	7	.13	.056	11	8.1	.01	62	.001	5	.22	.002	.19	<.1	10.29	.7	14.6	2.20	1	1.5
R2004-RDM-30	3.7	6.9	25.3	135	.6	1.0	3.2	181	2.15	35.1	.5	<.5	4.6	12	.9	5.2	<.1	18	.30	.077	15	9.9	.13	117	.076	<.1	.42	.048	.16	.1	.20	3.0	.1	1.68	3	<.5
R2004-RDM-31	9.4	15.8	150.0	928	1.0	3.3	24.4	2852	2.31	70.0	.6	<.5	2.8	51	9.0	4.4	<.1	17	4.20	.139	13	1.9	.13	186	.156	5	.96	.007	.39	.6	.73	4.3	1.4	1.27	2	<.5
R2004-RDM-32	3.8	25.1	22.1	70	.2	9.4	5.8	527	2.81	1.4	2.3	<.5	13.2	20	.3	.9	.2	47	.25	.071	7	6.6	1.07	81	.005	1	1.36	.052	.13	<.1	.04	2.4	.1	.20	7	.6
R2004-RDM-39	5.1	4.9	6.8	48	.5	2.5	12.6	549	2.95	11.7	3.3	4.0	15.5	6	.1	.5	2.7	42	.13	.053	14	4.9	.68	35	.005	2	1.16	.079	.07	.8	.02	3.3	.1	.37	6	4.8
R2004-RDM-40	26.3	7.8	25.0	52	1.1	3.8	18.9	539	3.16	8.5	3.8	8.5	12.4	8	<.1	.7	3.4	31	.12	.044	15	7.8	.63	162	.006	1	1.06	.049	.14	.5	.01	2.5	<.1	.26	5	1.5
RE R2004-RDM-40	27.8	8.8	25.8	54	1.1	4.6	17.9	538	3.22	8.8	3.9	12.0	12.9	8	<.1	1.0	3.7	30	.12	.046	15	8.3	.63	160	.006	1	1.05	.055	.14	.5	.01	2.6	<.1	.27	5	1.4
R2004-RDM-41	7.7	1.2	22.4	61	.9	3.7	44.7	672	4.95	4.0	1.4	2.1	8.7	5	<.1	.3	2.3	107	.29	.135	10	6.1	1.40	28	.008	1	1.69	.079	.03	.9	.01	7.4	<.1	1.42	11	7.0
R2004-RDM-42	8.0	1.9	3.0	30	.2	3.2	17.4	515	3.48	5.9	1.2	.7	9.1	26	.1	.3	1.1	78	.26	.120	17	7.8	.89	192	.010	1	1.11	.104	.03	.1	.01	5.7	<.1	.71	6	2.2
R2004-RDM-43	6.0	2.5	6.8	48	.4	2.3	10.7	153	2.02	7.8	1.2	1.2	9.5	8	<.1	.5	.7	37	.26	.123	15	5.6	.50	203	.003	1	.77	.080	.06	.1	<.01	3.1	<.1	.35	4	2.2
R2004-RDM-44	4.1	5.1	34.3	49	.3	3.9	14.7	357	6.00	6.3	.1	<.5	1.7	12	.1	.8	.4	77	.33	.157	5	5.4	1.17	35	.003	5	1.31	.030	.22	<.1	.01	3.8	<.1	4.63	6	1.9
R2004-RDM-45	3.7	1.7	2.0	51	.3	5.8	14.2	1045	3.15	4.9	1.2	<.5	8.3	29	.1	.5	.6	62	1.52	.133	13	4.5	1.17	74	.003	2	1.12	.066	.13	<.1	.01	6.5	<.1	.61	6	2.3
R2004-RDM-46	6.8	2.2	4.8	61	.5	3.9	27.2	225	4.89	6.7	1.2	2.4	8.9	7	.1	.4	1.9	74	.28	.128	16	5.7	1.19	34	.009	1	1.67	.069	.06	.2	<.01	7.9	<.1	.92	10	2.8
R2004-RDM-47	3.7	4.2	5.2	14	.5	1.3	19.3	68	2.76	11.1	1.9	.9	12.4	9	<.1	.8	1.6	29	.26	.140	12	3.3	.19	92	.005	<.1	.45	.095	.02	.1	.01	3.8	<.1	1.67	4	6.0
R2004-RDM-48	2.2	407.7	9.5	58	.7	5.3	18.5	468	7.18	9.2	.3	.6	3.3	15	.2	8.2	.2	100	.50	.169	14	5.5	1.35	29	.004	3	1.52	.031	.16	<.1	.01	4.4	<.1	6.19	8	9.3
R2004-RDM-49	2.5	39.0	9.8	61	.1	2.5	7.0	471	4.10	55.1	.7	4.1	5.9	16	<.1	1.0	1.6	92	.21	.105	16	14.0	.77	194	.006	1	1.33	.038	.09	.1	<.01	5.4	<.1	.58	8	<.5
TEK-2004-1	15.3	24.2	204.5	269	18.2	5.2	14.3	2014	7.71	520.7	.6	.8	1.4	133	2.0	16.9	<.1	23	2.09	.090	6	2.9	.11	21	.006	2	.30	.005	.28	.6	.96	2.1	6.7	6.42	1	.6
TEK-2004-2	18.5	56.5	>10000	>10000	58.3	.9	4.1	718	4.92	895.7	3.7	38.4	<.1	84	1047.0	426.2	<.1	9	.70	.010	<.1	4.7	.02	14	<.001	<.1	.06	.003	.03	.4	>100	1.1	5.9	>10	3	<.5
TEK-2004-3	10.8	223.9	427.0	3118	4.9	1.7	5.9	1178	2.63	48.5	.6	12.6	2.5	27	22.8	10.3	.1	8	.50	.074	12	4.0	.08	114	.002	3	.22	.005	.21	.3	.59	1.8	.6	1.28	1	1.2
TEK-2004-4	63.2	24.1	1191.2	>10000	14.0	2.6	11.5	771	1.63	140.1	3.6	42.7	.4	67	87.3	23.9	.9	10	1.24	.032	2	8.1	.01	54	.001	1	.20	.005	.14	1.2	5.64	1.7	3.2	1.89	1	1.2
STANDARD D55	13.2	146.2	25.2	136	.2	25.2	11.4	737	2.96	18.7	6.5	45.9	2.8	49	5.3	3.9	6.0	58	.73	.086	13	182.5	.65	137	.100	18	1.97	.034	.14	5.3	.17	3.6	1.0	<.05	6	5.1

Sample type: ROCK R150 60C. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



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	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm
TEK-2004-5	6.4	13.6	36.1	328	2.7	1.2	12.1	696	3.59	68.2	.5	28.7	.9	98	2.1	3.0	4.5	7	.21	.079	4	3.2	.01	22	.002	2	.30	.006	.19	.4	.56	2.1	.5	2.20	1	<.5
TEK-2004-6	.6	1.6	240.5	732	1.5	.4	.2	22	.31	11.2	<.1	2.6	<.1	5	4.1	1.8	<.1	1	.01	.001	<1	6.0	<.01	366	<.001	2	.01	.003	.01	.1	1.89	.2	<.1	.12	<.5	
TEK-2004-7	74.4	83.8	477.5	1738	>100	2.8	6.2	166	2.89	212.4	.7	3.9	.1	56	16.2	27.0	.2	1	.15	.008	<1	10.4	<.01	17	<.001	1	.19	.006	.12	.9	10.51	.7	4.7	2.69	<.5	
TEK-2004-8	3.4	14.6	85.2	616	4.2	1.1	6.2	5179	4.82	60.7	.4	30.7	.1	444	5.6	3.7	7.9	10	7.40	.013	5	3.1	.09	15	.001	1	.07	.002	.05	3.2	1.42	1.3	.5	4.31	<1	1.0
TEK-2004-9	28.2	22.1	442.2	662	23.3	2.9	6.8	81	7.54	145.4	.2	1.0	<.1	16	4.2	39.9	<.1	3	.04	.008	<1	13.9	<.01	6	.001	1	.21	.005	.11	.3	4.14	1.4	1.9	7.58	1	<.5
TEK-2004-10	13.3	57.4	>10000	>10000	78.2	6.4	24.0	113	4.55	251.8	.3	2.6	.1	70	481.0	65.4	<.1	1	.22	.063	<1	3.1	.01	8	.001	1	.16	.008	.13	.3	>100	1.3	5.6	6.53	1	<.5
TEK-2004-11	80.3	1976.5	103.2	293	6.7	2.8	51.7	2824	24.77	2600.7	.2	269.4	.2	7	1.7	115.7	5.2	<1	.11	.009	1	7.7	.04	3	<.001	1	.04	.001	.02	.7	2.55	.5	.2	>10	<.5	
TEK-2004-12	1.0	84.1	>10000	1713	71.8	1.9	9.7	7712	2.31	18.1	.2	8.7	.9	319	15.1	66.8	.1	23	14.85	.064	13	5.6	.32	119	.076	2	.52	.008	.38	.5	1.50	3.0	.4	.95	2	<.5
TEK-2004-13	32.7	18.6	150.0	164	1.9	2.4	6.3	205	4.48	164.9	.3	39.5	.1	38	1.1	8.5	5.7	4	.22	.009	1	9.8	<.01	19	.001	1	.04	.001	.03	.2	.21	.4	.2	4.09	<1	1.0
STANDARD DS5	12.5	140.7	24.0	137	.3	24.2	12.5	747	2.99	17.9	6.5	41.7	2.6	47	5.4	3.8	6.3	62	.73	.089	11	185.5	.68	130	.097	16	1.99	.034	.13	4.8	.19	3.3	1.1	<.05	6	4.9

Sample type: ROCK R150 60C.



GEOCHEMICAL ANALYSIS CERTIFICATE



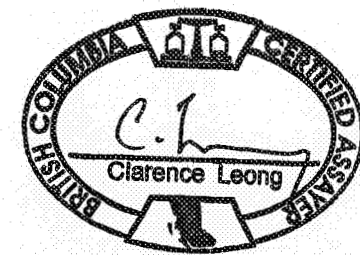
Pinnacle Mines File # A405320

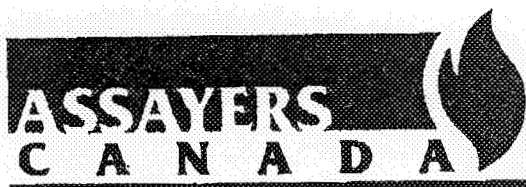
305 - 1549 Marine Drive, West Vancouver BC V7V 1H9 Submitted by: Andrew Bowering

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	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B %	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm	Sample gm
SS2004 CK-1	1.9	37.4	37.2	136	.7	23.2	11.6	740	3.00	67.5	.6	22.8	2.0	49	1.0	5.7	.1	19	1.26	.118	8	12.9	.64	61	.006	1	.77	.004	.06	.2	.06	1.7	.4	.86	2	.6	15.0
SS2004 CK-2	1.9	34.8	43.8	150	.7	20.9	11.7	694	3.18	79.5	.6	13.0	2.2	47	1.1	6.0	.1	19	1.27	.117	8	12.7	.60	64	.006	1	.74	.004	.06	.3	.08	1.6	.4	1.13	2	.8	15.0
SS2004 CK-3	1.6	30.3	33.9	130	.6	22.5	10.2	705	2.78	54.0	.5	16.7	1.8	46	1.0	4.5	.1	19	1.19	.102	7	14.0	.61	56	.006	1	.74	.004	.05	.2	.07	1.5	.3	.71	2	.6	15.0
SS2004 CK-4	1.4	35.7	30.3	129	.5	23.6	9.6	712	2.65	50.3	.5	4.2	1.9	46	.9	4.8	.1	18	1.26	.107	8	13.0	.64	61	.005	1	.76	.004	.05	.1	.06	1.7	.2	.53	2	.6	15.0
SS2004 CK-5	1.5	30.4	30.2	123	.5	21.0	9.2	742	2.60	46.1	.5	8.9	2.1	46	1.1	4.6	.1	21	1.22	.105	8	14.7	.61	63	.006	1	.75	.004	.05	.1	.06	1.6	.3	.59	2	<.5	15.0
SS2004 CK-6	1.8	37.9	45.1	153	.7	25.8	13.6	757	3.40	78.3	.5	28.2	1.8	46	1.1	5.6	.1	21	1.17	.108	7	16.2	.61	59	.006	<1	.75	.004	.05	.2	.09	1.6	.4	1.12	2	1.0	15.0
SS2004 CK-7	2.1	41.3	54.9	163	1.0	21.3	14.6	701	3.74	109.0	.6	39.8	2.0	45	1.3	7.9	.1	19	1.22	.111	7	11.5	.56	56	.005	1	.69	.004	.05	.3	.10	1.5	.5	1.64	2	1.0	15.0
SS2004 CK-8	1.8	37.3	41.6	141	.6	23.3	11.4	819	3.14	63.9	.6	10.6	2.0	51	1.1	5.4	.1	20	1.34	.117	7	15.4	.66	63	.005	1	.80	.004	.05	.2	.06	1.6	.3	.84	2	.6	15.0
SS2004 CK-9	.9	58.1	19.7	98	.3	26.7	12.5	572	3.50	111.3	.2	49.6	1.2	23	.4	4.3	.1	42	.37	.133	9	21.9	.96	36	.018	1	1.29	.006	.05	.4	.03	2.4	.1	.12	5	.5	15.0
SS2004 CK-10A	3.1	98.2	73.6	445	.6	13.8	13.8	1919	5.64	42.4	1.2	5.9	2.4	24	3.3	2.7	.2	110	.35	.103	13	16.4	.69	160	.018	2	.90	.006	.06	.1	.09	4.0	.4	.29	5	.9	1.0
SS2004 CK-10B	2.7	63.0	76.7	220	1.3	29.7	23.8	721	5.31	181.6	.6	49.1	1.8	51	1.8	10.8	.2	22	1.27	.123	7	14.5	.60	53	.007	1	.70	.004	.05	.5	.15	1.6	.9	2.90	2	1.6	15.0
SS2004 CK-11	2.6	39.4	147.2	301	1.8	13.2	9.6	1233	3.98	66.1	.8	2.2	3.4	20	2.5	8.1	.2	40	.37	.089	14	11.3	.40	116	.032	2	.76	.005	.06	.1	.11	2.9	.9	.71	3	<.5	15.0
SS2004 CK-12	3.3	301.9	45.4	205	1.3	32.1	15.6	1778	4.52	32.0	.7	18.1	2.2	25	1.1	6.3	.5	61	.41	.088	9	41.2	.87	222	.015	1	1.25	.010	.07	.2	.38	4.1	.3	.17	5	.9	1.0
SS2004 CK-13	.8	37.5	42.2	214	.3	5.4	16.8	955	4.54	14.7	.8	3.0	2.2	29	1.4	1.0	.2	80	1.04	.107	12	5.7	1.08	90	.106	4	1.09	.014	.05	.2	.05	4.3	.1	1.33	4	.8	15.0
SS2004 CK-14	1.7	29.8	14.4	102	.2	5.4	15.2	995	4.33	21.1	.7	30.8	2.3	21	.3	1.4	.1	80	.53	.119	17	8.0	1.12	160	.061	5	1.38	.009	.08	.1	.02	5.0	.4	.14	5	<.5	15.0
RE SS2004 CK-1	1.7	37.7	40.1	152	.6	22.3	11.6	736	3.04	72.5	.6	11.1	2.1	49	1.0	5.6	.1	19	1.42	.114	8	12.7	.63	62	.006	1	.75	.004	.06	.2	.07	1.8	.3	.93	2	.7	15.0
SS2004 CK-16	9.6	45.7	267.5	970	.8	68.8	40.1	9729	3.75	51.0	1.2	2.8	1.7	25	18.9	3.0	.2	33	.29	.112	20	32.7	.65	250	.008	1	1.76	.007	.09	.5	.10	3.0	.9	.06	4	3.0	7.5
SS2004 CK-17	1.8	11.7	26.9	103	.2	34.9	12.6	1429	3.01	24.3	.3	13.1	.9	7	.7	.9	.1	28	.09	.045	9	32.2	.68	82	.007	1	1.28	.007	.04	.2	.02	1.5	.2	<.05	5	<.5	15.0
SS2004 CK-18	45.2	28.7	59.3	453	.5	34.7	13.4	1812	15.89	355.7	.6	.9	1.5	14	1.8	4.1	.1	27	.15	.100	12	24.0	.52	139	.006	1	.92	.004	.06	.1	.08	2.8	.4	<.05	3	3.3	15.0
SS2004 CK-19	4.7	24.2	37.6	274	.4	38.9	8.1	746	2.68	32.8	.6	.5	1.4	19	2.4	3.5	.1	26	.22	.078	12	22.9	.53	116	.005	1	.88	.005	.06	<.1	.04	2.3	.3	.06	3	2.0	15.0
STANDARD DS5	12.2	148.1	24.4	142	.3	25.7	11.9	785	2.99	17.9	6.3	41.8	2.9	45	5.6	3.8	6.0	61	.76	.092	12	190.5	.67	140	.100	15	1.98	.033	.14	5.0	.16	3.6	1.1	<.05	6	5.0	15.0

GROUP 1DX - 15.0 GM SAMPLE LEACHED WITH 90 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 300 ML, ANALYSED BY ICP-MS.
(>) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. REFRACTORY AND GRAPHITIC SAMPLES CAN LIMIT AU SOLUBILITY.
- SAMPLE TYPE: SOIL SS80 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Data h FA _____ DATE RECEIVED: SEP 7 2004 DATE REPORT MAILED: Sept. 23/04...





Assayers Canada
8282 Sherbrooke St.
Vancouver, B.C.
V5X 4R6
Tel: (604) 327-3436
Fax: (604) 327-3423

Quality Assaying for over 25 Years

Assay Certificate

4V-1039-RA1

Company: **Mountain Boy Minerals**
Project:
Attn: **Randy Kasum**

Oct-15-04

We hereby certify the following assay of 19 rock samples
submitted Oct-04-04

Sample Name	Au g/tonne	Au-check g/tonne	Ag g/tonne	Cu %	Pb %	Zn %
EB-04-152	0.01		4.9	0.002	0.02	0.02
EB-04-153	0.15		1305.0	0.870	9.10	0.34
EB-04-154	0.10		1132.0	0.745	0.14	0.14
EB-04-155	0.11		14.1	0.005	0.03	0.01
EB-04-156	0.12		335.0	1.190	0.19	0.08
EB-04-157	2.35		281.0	2.290	0.23	7.30
EB-04-158	0.16		2.1	0.008	0.01	0.02
EB-04-159	0.02		0.8	0.006	0.01	0.02
EB-04-160	0.02		0.2	0.002	0.01	0.02
A04-234	0.42	0.38	2560.0	2.310	0.39	1.79
A04-235	0.20		1620.0	0.462	17.60	0.13
A04-236	0.09		24.3	0.009	0.22	0.01
A04-237	83.77	88.16	330.0	2.570	3.19	25.40
A04-238	0.10		3.8	0.012	0.01	0.06
A04-239	0.12		2.9	0.011	0.03	0.08
A04-240	0.02		0.2	0.001	0.01	0.01
A04-241	0.01		0.3	0.001	0.01	0.02
A04-242	0.01		0.2	0.001	0.01	0.02
A04-243	0.01		0.2	0.001	0.01	0.01
*DUP EB-04-152			4.6	0.002	0.02	0.02
*DUP A04-234			2590.0	2.320	0.40	1.81
*97-45	1.44					
*CPb-1			627.0			4.43
*KC-1a				0.628	2.24	
*BLANK	<0.01		<0.1	<0.001	<0.01	<0.1

] ENTER

] ENTERPRISE

Certified by _____



**ASSAYERS
CANADA**

Assayers Canada
8282 Sherbrooke St.
Vancouver, B.C.
V5X 4R6
Tel: (604) 327-3436
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Quality Assaying for over 25 Years

Assay Certificate

4V-1048-RA2

Company: **Mountain Boy Minerals**
Project:
Attn: **Randy Kasum**

Oct-15-04

We hereby certify the following assay of 13 rock samples submitted Oct-06-04 by Randy Kasum.

Sample Name	Au g/tonne	Au-check g/tonne	Ag g/tonne	Cu %	Pb %	Zn %
A04-269	3.90	3.73	115.0	8.670	0.39	0.08
A04-270	0.16		6.9	0.104	0.11	0.02
A04-271	0.85		13.2	0.718	0.22	0.02
A04-272	0.05		7.0	0.175	0.11	0.03
A04-273	0.14		6.7	0.780	0.05	0.03
EB-04-161	0.01		0.8	0.013	0.06	0.06
EB-04-162	0.01		0.6	0.005	0.01	0.01
EB-04-163	0.01		1.0	0.002	0.01	0.01
EB-04-164	0.01		0.2	0.002	0.01	0.01
EB-04-165	0.01	0.01	0.2	0.001	0.01	0.01
EB-04-166	0.01		1.1	0.001	0.01	0.01
EB-04-167	0.01		0.3	0.001	0.01	0.01
A04-255	0.01		0.5	0.001	0.01	0.01
*DUP A04-269			114.0	8.690	0.38	0.08
*DUP EB-04-165			0.3	0.001	0.01	0.01
*97-45	1.45					
*CPb-1			627.0			4.40
*KC-1a				0.628	2.21	
*BLANK	<0.01		<0.1	<0.001	<0.01	<0.01

Entepris

Certified by _____



APPENDIX IV
PETROGRAPHIC STUDIES

DESCRIPTION OF POLISHED THIN SECTIONS: S-17, S-22, S-28, S-41

Report for: Ed Kruckowski
Pinnacle Mines Ltd
Vancouver, BC

February 24, 2004

Sample S-17 **Feldspar phenocrysts bearing rock, very strong K-feldspar alteration, mineralization with pyrite and sphalerite.**

Mineral composition:

Secondary K-feldspar	90-95%
Sericite	2-3%
Quartz	1-2%
Muscovite	<1%
Plagioclase	<1%
Pyrite	4-5%
Goethite	<1%
Sphalerite	0.5-1%

The original rock contained 15-20% of euhedral to subhedral feldspar phenocrysts which have been completely replaced by secondary K-feldspar and to lesser extent by sericite. The bulk of secondary K-feldspar along with a portion of pyrite form very fine grained (0.01-0.03 mm across) groundmass. Pyrite and sphalerite occur as irregular blebs and small grains ranging in size from 0.01 to 2.0 mm in diameter. In several places there are replacements of goethite after pyrite. Pyrite is disseminated throughout the sample with most of its large grains and sphalerite concentrated in a sulphide zone along the edge of the thin section. The sulphide zone contains also quartz, muscovite and plagioclase.

Due to complete alteration it is not possible to determine the original rock. The only certain thing is that the rock contained phenocrysts of plagioclase and/or K-feldspar. The original rock could have been a part of a subvolcanic intrusion, a flow or a layer of tuff. The rock was later strongly sericitized followed by an introduction of K-feldspar and fine grained pyrite. The last event was a precipitation of coarser grained pyrite and sphalerite along with quartz, muscovite and plagioclase gangue. The presence of muscovite and plagioclase indicate formation in a high temperature environment.

Sample S-22**A rock composed of quartz, carbonates and sulphides**Mineral composition:

Quartz	80-85%
Calcite	15-20%
Pyrite	0.1-1.0%
Goethite	0.1-1.0%
Chalcopyrite	0.1-1.0%
Sphalerite	0.1-1.0%
Galena	<0.1%

The bulk of the sample consists of a mosaic of equigranular, slightly interlocking quartz grains ranging in size from 0.02 to 0.3 mm across. Larger quartz grains form patches and discontinuous veinlets. Calcite occurs as equigranular grains 0.2-0.8 mm in diameter which make up irregular patches. Pyrite, goethite (replacements after pyrite), chalcopyrite, sphalerite, and galena are present as anhedral to subhedral grains 0.02-0.5 mm across disseminated throughout the sample. The sample lacks any characteristic feature which would indicate the environment in which the sample have formed.

Sample S-28**A rock composed of quartz, carbonates and sulphides
Possible VMS environment ?**Mineral composition:

Quartz	55-60%
Chalcedony	1-2%
Carbonates	35-40%
Sphalerite	1-2%
Galena	trace
Bournonite ?	trace

The sample is composed by alternating sections dominated either by quartz or carbonates. Quartz forms a mosaic of equigranular, slightly interlocking grains ranging in size from 0.01 to 0.2 mm. Quartz grains do not show so called undulatory extinction which is characteristic of quartz grains which undergone tectonic deformation. Carbonates occur as equigranular grains 0.02 to 0.2 mm in diameter. There are some minor quartz and carbonate veinlets, which in most cases are oriented perpendicular to the borders between quartz and carbonate dominated sections. Chalcedony (with a typical feathery appearance) is closely associated with sulphides. Small amount of chalcedony was replaced by carbonate. Sulphides occur as anhedral grains and small blebs ranging in size from 0.02 to 0.4 mm across. Most of them form parallel bands and streaks up to 1 mm wide, with the reminder being disseminated throughout the sample.

The origin of the examined rock is uncertain. The rock does not display any tectonically induced foliation or shearing, that's why, the formation of parallel bands and streaks of sulphides could have occurred during syngenetic rather than tectonic process. This fact, as well as the presence of chalcedony indicate the formation in VMS environment.

Sample S-41 A rock composed of quartz with minor carbonate and sulphides

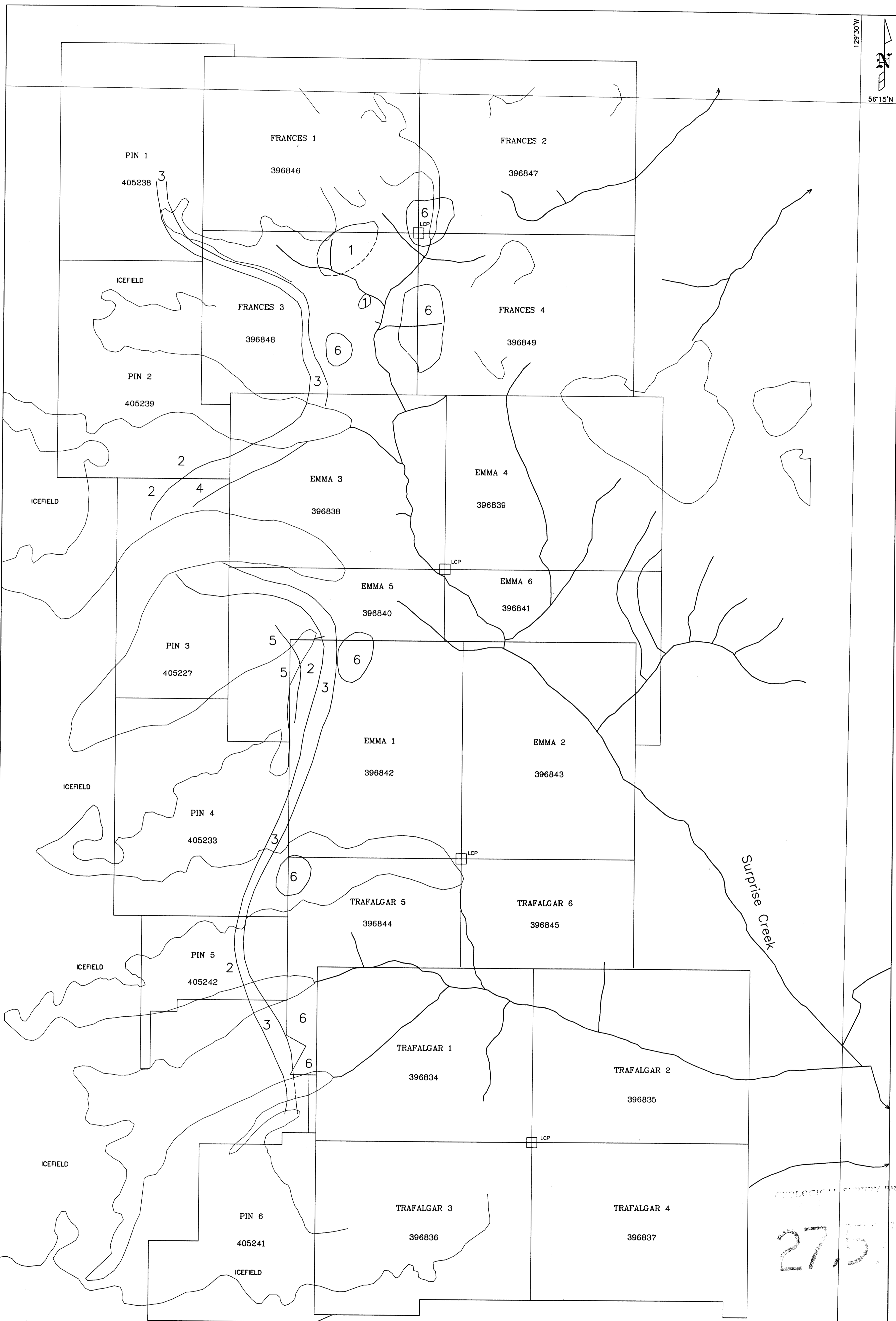
Mineral composition:

Quartz	95-99%
Carbonates	<1%
Galena	1-2%
Sphalerite	0.0-1.0%
Pyrite	<0.1%
Chalcopyrite	trace

Quartz occurs as partly interlocking grains ranging widely in size from 0.02 to 1.0 mm in diameter. Larger quartz grains form mostly separate patches and irregular, discontinuous veins. Some grains display moderate undulatory extinction. Carbonates make up one irregular patch 1.5 mm across composed of equigranular grains 0.02-0.05 mm across. Sulphides occur as anhedral disseminated grains ranging in size from 0.02 to 1.0 mm in diameter.

The sample lacks any feature indicative of any specific environment of the rock formation.

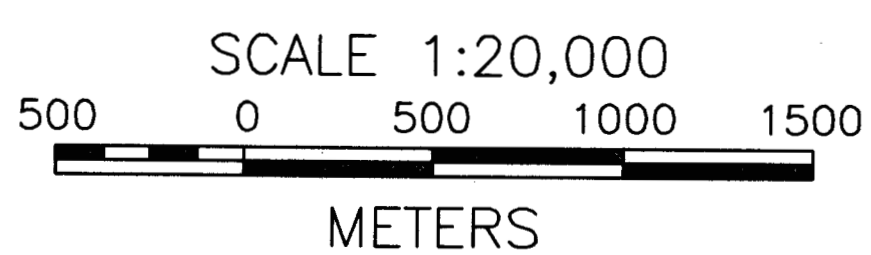
Alex Walus, M.Sc.
Ph: (604) 592-6046



27,577

LEGEND

- 6 Argillite, thinly bedded, pyritic
- 5 Green Andesite, mainly epiclastic
- 4 Rhyolite, pyroclastic, grey
- 3 Rhyolite Tuff, grey, sericitic
- 2 Maroon Tuff, thinly bedded
- 1 Quartz Monzonite, grey, medium grained



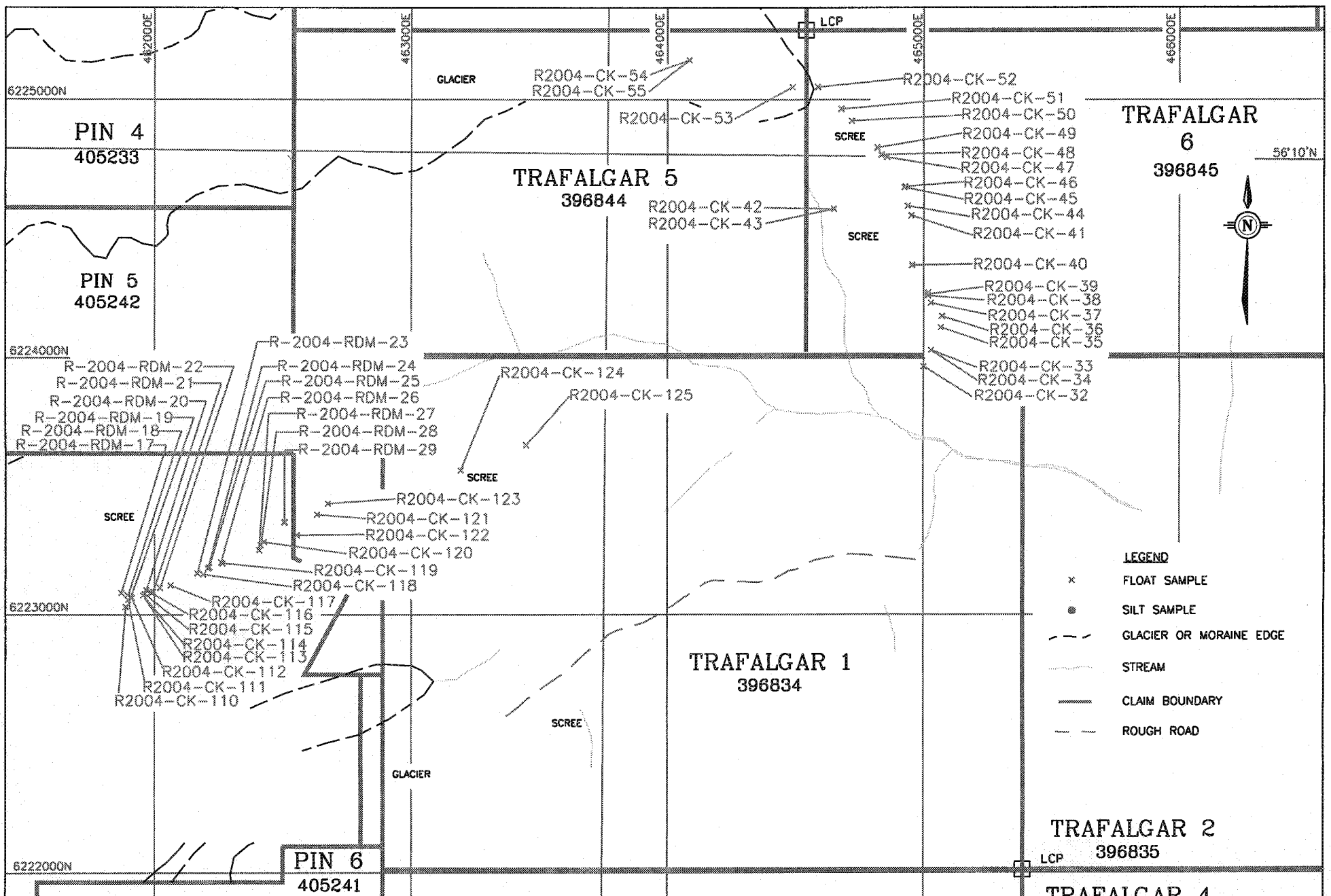
PINNACLE MINES LTD.

SURPRISE PROPERTY, STEWART, B.C., SKEENA M.D.

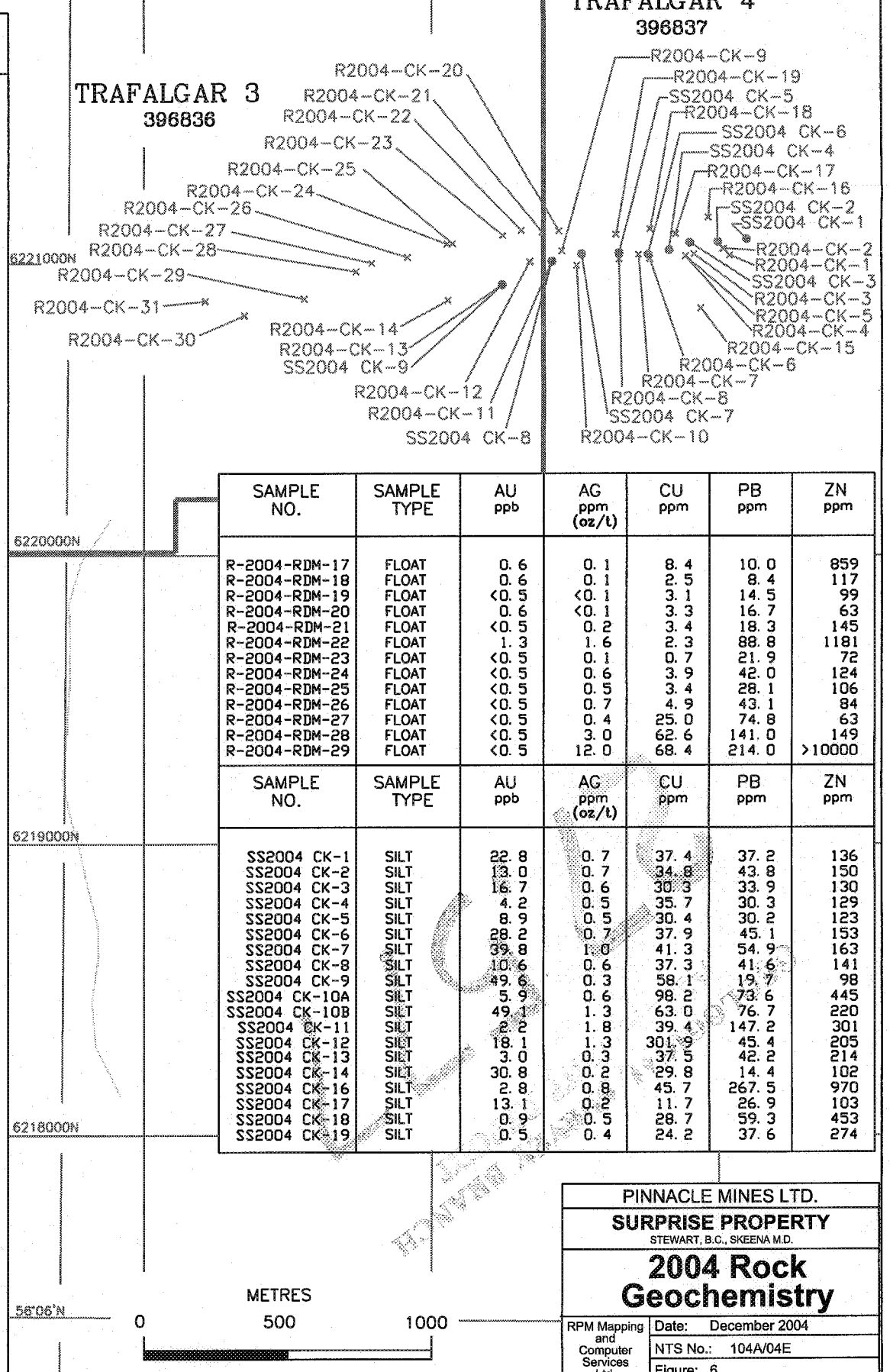
Property
Geology Map

RPM Mapping
and
Computer
Services
Ltd.

Date: December 2004
Claim Map: 104A/04E
Figure: 5



SAMPLE NO.	SAMPLE TYPE	AU ppb	AG ppm (oz/t)	CU ppm	PB ppm	ZN ppm
R2004-CK-1	FLOAT	0.7	0.2	3.8	10.2	146
R2004-CK-2	FLOAT	10.5	4.2	11.6	346.6	178
R2004-CK-3	FLOAT	10.9	0.3	12.3	20.7	35
R2004-CK-4	FLOAT	7.0	0.4	13.4	20.1	7
R2004-CK-5	FLOAT	1.1	1.8	7.3	39.7	10
R2004-CK-6	FLOAT	<0.5	<0.1	2.9	9.0	65
R2004-CK-7	FLOAT	12.9	1.4	9.4	39.5	22
R2004-CK-8	FLOAT	<0.5	0.1	5.7	16.4	32
R2004-CK-9	FLOAT	4.4	0.5	5.8	32.7	9
R2004-CK-10	FLOAT	13.0	1.2	4.5	16.3	49
R2004-CK-11	FLOAT	4.7	<0.1	1.9	1.6	32
R2004-CK-12	FLOAT	<0.5	0.2	4.2	14.4	56
R2004-CK-13	FLOAT	<0.5	0.4	16.0	25.2	396
R2004-CK-14	FLOAT	<0.5	1.4	13.3	64.0	96
R2004-CK-15	FLOAT	20.0	0.7	23.5	26.4	21
R2004-CK-16	FLOAT	<0.5	1.1	28.9	7.9	53
R2004-CK-17	FLOAT	<0.5	0.1	8.4	22.0	49
R2004-CK-18	FLOAT	3.0	0.7	5.1	13.9	31
R2004-CK-19	FLOAT	14.5	1.6	16.8	28.7	20
R2004-CK-20	FLOAT	14.9	3.0	7.1	223.0	383
R2004-CK-21	FLOAT	3.0	1.7	9.5	59.8	48
R2004-CK-22	FLOAT	4.5	3.5	8.9	37.0	46
R2004-CK-23	FLOAT	<0.5	0.4	8.2	38.2	18
R2004-CK-24	FLOAT	1.1	0.4	4.6	10.6	12
R2004-CK-25	FLOAT	<0.5	0.3	3.9	15.1	43
R2004-CK-26	FLOAT	0.6	1.5	8.4	40.5	67
R2004-CK-27	FLOAT	0.9	0.5	16.9	81.6	113
R2004-CK-28	FLOAT	2.7	2.7	15.3	48.8	16
R2004-CK-29	FLOAT	9.7	10.8	36.0	649.0	2260
R2004-CK-30	FLOAT	4.6	1.1	7.9	79.3	68
R2004-CK-31	FLOAT	40.1	3.2	49.0	36.6	1546
R2004-CK-32	FLOAT	3.3	6.5	12.7	2305.0	>10000
R2004-CK-33	FLOAT	0.0	1.2	7.5	43.4	258
R2004-CK-34	FLOAT	1.1	0.1	15.7	14.8	79
R2004-CK-35	FLOAT	0.0	0.8	15.9	1026.0	1146
R2004-CK-36	FLOAT	<0.5	10.8	56.6	1064.3	834
R2004-CK-37	FLOAT	0.7	0.1	2.2	5.9	20
R2004-CK-38	FLOAT	<0.5	0.3	6.5	22.1	34
R2003-CK-39	FLOAT	<0.5	8.3	56.9	1398.3	>10000
R2004-CK-40	FLOAT	6.7	0.3	24.9	16.7	46
R2004-CK-41	FLOAT	<0.5	0.1	2.2	7.7	102
R2004-CK-42	FLOAT	<0.5	0.3	17.0	1447.2	464
R2004-CK-43	FLOAT	<0.5	0.3	35.3	175.9	633
R2004-CK-44	FLOAT	<0.5	3.6	26.9	173.0	92
R2004-CK-45	FLOAT	1.1	0.2	5.8	22.9	70
R2004-CK-46	FLOAT	<0.5	0.3	20.5	169.3	1307
R2004-CK-47	FLOAT	<0.5	10.1	31.0	1184.5	589
R2004-CK-48	FLOAT	<0.5	2.8	9.5	37.3	90
R2004-CK-49	FLOAT	<0.5	4.6	24.5	648.0	447
R2004-CK-50	FLOAT	<0.5	7.9	80.6	10.0	794
R2004-CK-51	FLOAT	0.0	1.2	10.8	670.2	3322
R2004-CK-52	FLOAT	<0.5	4.3	8.5	406.6	863
R2004-CK-53	FLOAT	<0.5	7.1	27.9	2755.2	1518
R2004-CK-54	FLOAT	<0.5	0.5	13.4	405.7	208
R2004-CK-55	FLOAT	0.0	0.7	10.9	10.6	24
R2004-CK-90	FLOAT	<0.5	2.2	14.3	26.9	127
R2004-CK-91	FLOAT	<0.5	2.2	58.4	29.7	196
R2004-CK-92	FLOAT	19.7	20.0	240.0	216.8	8742
R2004-CK-93	FLOAT	<0.5	0.7	30.2	7.7	125
R2003-CK-94	FLOAT	<0.5	3.2	255.0	8.5	976
R2004-CK-95	FLOAT	<0.5	0.5	64.0	13.1	177
R2004-CK-96	FLOAT	<0.5	0.6	62.9	8.8	109
R2004-CK-97	FLOAT	0.5	0.2	8.0	32.2	108
R2004-CK-98	FLOAT	1.3	0.7	22.2	35.9	182
R2004-CK-99	FLOAT	<0.5	0.6	30.3	10.9	41
R2004-CK-100	FLOAT	50.9	0.3	66.6	2.8	9
R2004-CK-101	FLOAT	0.0	0.0	0.0	0.0	0.0
R2004-CK-102	FLOAT	0.0	0.4	39.5	15.8	48
R2004-CK-103	FLOAT	37.0	0.1	58.5	2.7	15
R2004-CK-104	FLOAT	37.8	0.1	48.1	2.7	34
R2004-CK-105	FLOAT	3.2	<0.1	44.6	2.4	13
R2004-CK-106	FLOAT	<0.5	<0.1	5.0	0.8	6
R2004-CK-107	FLOAT	1.9	2.1	244.8	48.4	130
R2004-CK-108	FLOAT	5.0	1.9	92.6	22.0	459
R2004-CK-109	FLOAT	2.9	0.5	95.9	16.4	226
R2004-CK-110	FLOAT	<0.5	0.7	12.9	20.0	73
R2004-CK-111	FLOAT	<0.5	0.4	6.2	78.4	515
R2004-CK-112	FLOAT	<0.5	0.2	4.4	25.0	99
R2004-CK-113	FLOAT	<0.5	0.4	6.7	26.7	24
R2004-CK-114	FLOAT	0.0	0.4	42.8	97.7	185
R2004-CK-115	FLOAT	0.6	0.5	22.9	178.0	140
R2004-CK-116	FLOAT	<0.5	0.1	4.2	25.4	193
R2004-CK-117	GRAB	4.3	0.5	3.7	124.0	384
R2004-CK-118	FLOAT	2.3	27.7	241.9	771.3	213
R2004-CK-119	FLOAT	1.3	3.8	29.1	75.0	27
R2004-CK-120	FLOAT	0.8	4.5	39.6	71.0	3470
R2004-CK-121	FLOAT	1.7	15.8	46.9	237.0	185
R2004-CK-122	FLOAT	0.7	10.3	30.4	95.0	176
R2004-CK-123	FLOAT	2.8	0.6	110.1	18.5	181
R2004-CK-124	GRAB	0.7	5.8	64.5	878.5	4112
R2004-CK-125	FLOAT	1.5	4.7	26.0	536.2	4099



SAMPLE NO.	SAMPLE TYPE	AU ppb	AG ppm (oz/t)	CU ppm	PB ppm	ZN ppm
R-2004-RDM-17	FLOAT	0.6	0.1	8.4	10.0	859
R-2004-RDM-18	FLOAT	0.6	0.1	2.5	8.4	117
R-2004-RDM-19	FLOAT	<0.5	<0.1	3.1	14.5	99
R-2004-RDM-20	FLOAT	0.6	<0.1	3.3	16.7	63
R-2004-RDM-21	FLOAT	<0.5	0.2	3.4	18.3	145
R-2004-RDM-22	FLOAT	1.3	1.6	2.3	88.8	1181
R-2004-RDM-23	FLOAT	<0.5	0.1	0.7	21.9	72
R-2004-RDM-24	FLOAT	<0.5	0.6	3.9	42.0	124
R-2004-RDM-25	FLOAT	<0.5	0.5	3.4	28.1	106
R-2004-RDM-26	FLOAT	<0.5	0.7	4.9	43.1	84
R-2004-RDM-27	FLOAT	<0.5	0.4	25.0	74.8	63
R-2004-RDM-28	FLOAT	<0.5	3.0	62.6	141.0	149
R-2004-RDM-29	FLOAT	<0.5	12.0	68.4	214.0	>10000

SAMPLE NO.	SAMPLE TYPE	AU ppb	AG ppm (oz/t)	CU ppm	PB ppm	ZN ppm
SS2004 CK-1	SILT	22.8	0.7	37.4	37.2	136
SS2004 CK-2	SILT	13.0	0.7	34.8	43.8	150
SS2004 CK-3	SILT	16.7	0.6	30.3	33.9	130
SS2004 CK-4	SILT	4.2	0.5	35.7	30.3	129
SS2004 CK-5	SILT	8.9	0.5	30.4	30.2	123
SS2004 CK-6	SILT	28.2	0.7	37.9	45.1	153
SS2004 CK-7	SILT	39.8	1.0	41.3	54.9	163
SS2004 CK-8	SILT	10.6	0.6	37.3	41.6	141
SS2004 CK-9	SILT	49.6	0.3	58.1	19.7	98
SS2004 CK-10A	SILT	5.9	0.6	98.2	73.6	445
SS2004 CK-10B	SILT	49.1	1.3	63.0	76.7	220
SS2004 CK-11	SILT	2.2	1.8	39.4	147.2	301
SS2004 CK-12	SILT	18.1	1.3	301.9	45.4	205
SS2004 CK-13	SILT	3.0	0.3	37.5	42.2	214
SS2004 CK-14	SILT	30.8	0.2	29.8	14.4	102
SS2004 CK-16	SILT	2.8	0.8	45.7	267.5	970
SS2004 CK-17	SILT	13.1	0.2	11.7	26.9	103
SS2004 CK-18	SILT	0.9	0.5	28.7	59.3	453
SS2004 CK-19	SILT	0.5	0.4	24.2	37.6	274

LEGEND

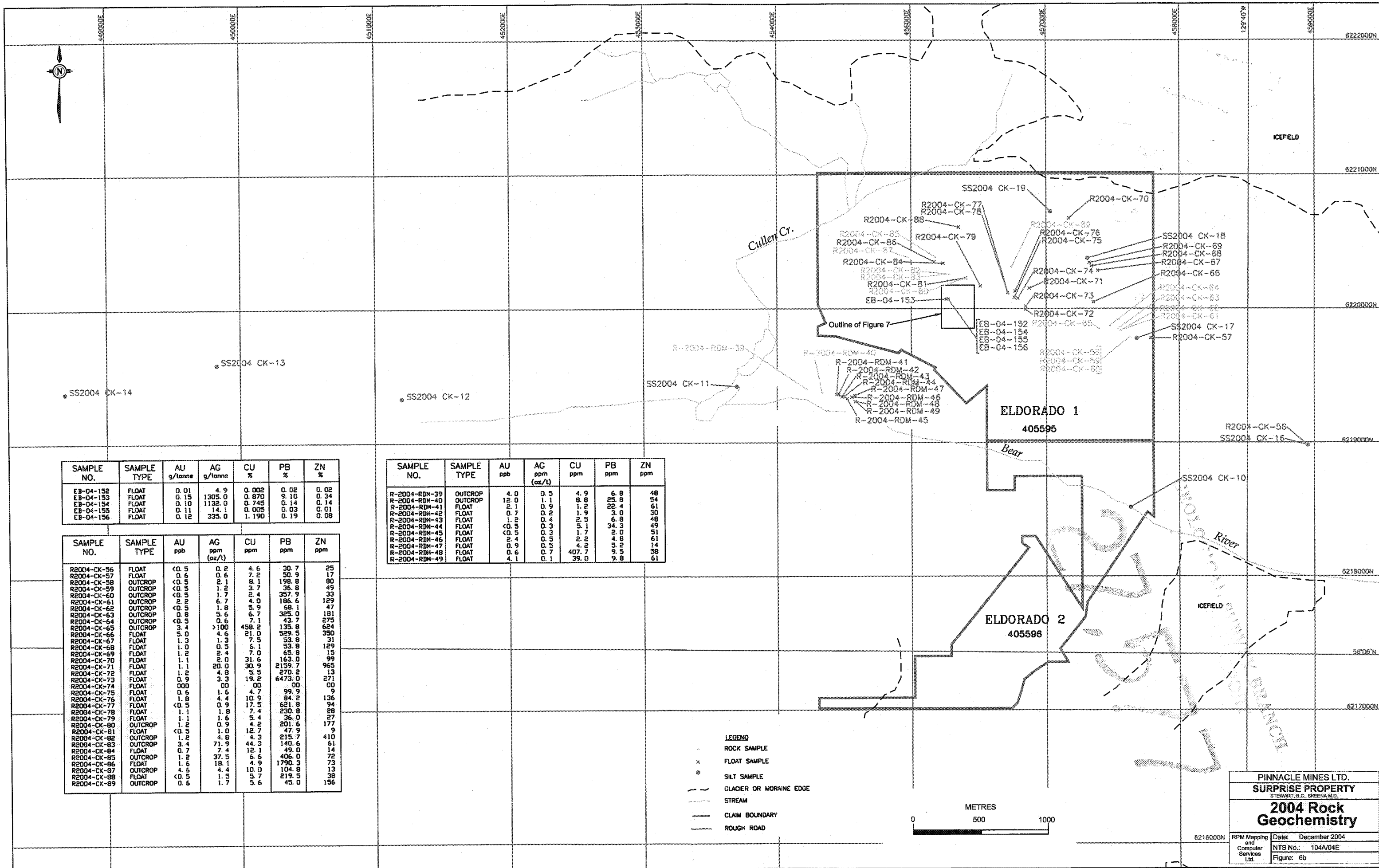
- x FLOAT SAMPLE
- SILT SAMPLE
- - - GLACIER OR MORAINÉ EDGE
- ~ STREAM
- CLAIM BOUNDARY
- - - ROUGH ROAD

PINNACLE MINES LTD.
SURPRISE PROPERTY
 STEWART, B.C., SKEENA M.D.
2004 Rock Geochemistry

RPM Mapping and Computer Services Ltd. Date: December 2004
 NTS No.: 104A/04E
 Figure: 6



58°06'N



SAMPLE NO.	SAMPLE TYPE	AU g/tonne	AG g/tonne	CU %	PB %	ZN %
EB-04-152	FLOAT	0.01	4.9	0.002	0.02	0.02
EB-04-153	FLOAT	0.15	1305.0	0.870	9.10	0.34
EB-04-154	FLOAT	0.10	1132.0	0.745	8.14	0.14
EB-04-155	FLOAT	0.11	14.1	0.005	0.03	0.01
EB-04-156	FLOAT	0.12	335.0	1.190	0.19	0.08

SAMPLE NO.	SAMPLE TYPE	AU ppb	AG ppm (oz/t)	CU ppm	PB ppm	ZN ppm
R-2004-RDM-39	OUTCROP	4.0	0.5	4.9	6.8	48
R-2004-RDM-40	OUTCROP	12.0	1.1	8.8	25.8	54
R-2004-RDM-41	FLOAT	2.1	0.9	1.2	22.4	61
R-2004-RDM-42	FLOAT	0.7	0.2	1.9	3.0	30
R-2004-RDM-43	FLOAT	1.2	0.4	2.5	6.8	48
R-2004-RDM-44	FLOAT	<0.5	0.3	5.1	34.3	49
R-2004-RDM-45	FLOAT	<0.5	0.3	1.7	2.0	51
R-2004-RDM-46	FLOAT	2.4	0.5	2.2	4.8	61
R-2004-RDM-47	FLOAT	0.9	0.5	4.2	5.2	14
R-2004-RDM-48	FLOAT	0.6	0.7	407.7	9.5	38
R-2004-RDM-49	FLOAT	4.1	0.1	39.0	9.8	61

SAMPLE NO.	SAMPLE TYPE	AU ppb	AG ppm (oz/t)	CU ppm	PB ppm	ZN ppm
R2004-CK-56	FLOAT	<0.5	0.2	4.6	30.7	25
R2004-CK-57	FLOAT	0.6	0.6	7.2	50.9	17
R2004-CK-58	OUTCROP	<0.5	2.1	8.1	198.8	80
R2004-CK-59	OUTCROP	<0.5	1.2	2.7	36.8	49
R2004-CK-60	OUTCROP	<0.5	1.7	2.4	357.9	33
R2004-CK-61	OUTCROP	2.2	6.7	4.0	186.6	129
R2004-CK-62	OUTCROP	<0.5	1.8	5.9	68.1	47
R2004-CK-63	OUTCROP	0.8	5.6	6.7	325.0	181
R2004-CK-64	OUTCROP	<0.5	0.6	7.1	43.7	275
R2004-CK-65	OUTCROP	3.4	>100	458.2	135.8	624
R2004-CK-66	FLOAT	5.0	4.6	21.0	529.5	350
R2004-CK-67	FLOAT	1.3	1.3	7.5	53.8	31
R2004-CK-68	FLOAT	1.0	0.5	5.1	53.8	129
R2004-CK-69	FLOAT	1.2	5.4	7.0	65.8	15
R2004-CK-70	FLOAT	1.1	20.0	31.6	163.0	99
R2004-CK-71	FLOAT	1.1	20.0	30.9	2159.7	965
R2004-CK-72	FLOAT	1.2	4.8	5.5	270.2	13
R2004-CK-73	FLOAT	0.9	3.3	19.2	6473.0	271
R2004-CK-74	FLOAT	0.00	0.00	0.00	0.00	0
R2004-CK-75	FLOAT	0.6	1.6	4.7	99.9	9
R2004-CK-76	FLOAT	1.8	4.4	10.9	84.2	136
R2004-CK-77	FLOAT	<0.5	0.9	17.9	621.6	94
R2004-CK-78	FLOAT	1.1	1.8	7.4	230.8	28
R2004-CK-79	FLOAT	1.1	1.6	5.4	36.0	27
R2004-CK-80	OUTCROP	1.2	0.9	4.2	201.6	177
R2004-CK-81	FLOAT	<0.5	1.0	12.7	47.9	9
R2004-CK-82	OUTCROP	1.2	4.8	4.3	215.7	410
R2004-CK-83	OUTCROP	3.4	71.9	44.3	140.6	61
R2004-CK-84	FLOAT	0.7	7.9	12.9	49.0	14
R2004-CK-85	OUTCROP	1.2	37.5	6.6	406.0	72
R2004-CK-86	FLOAT	1.6	18.1	4.9	1790.3	73
R2004-CK-87	OUTCROP	4.6	4.4	10.0	104.8	13
R2004-CK-88	FLOAT	<0.5	1.5	5.7	219.5	38
R2004-CK-89	OUTCROP	0.6	1.7	5.6	45.0	156

- LEGEND**
- - - - - ROCK SAMPLE
 - x - - - - - FLOAT SAMPLE
 - o - - - - - SILT SAMPLE
 - - - - - GLACIER OR MORaine EDGE
 - - - - - STREAM
 - - - - - CLAIM BOUNDARY
 - - - - - ROUGH ROAD



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 STEWART, B.C., SKEENA M.D.
2004 Rock Geochemistry

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 Figure: 6b