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Claims:	Lucky 81, Lucky Wick, Peak, TO TOQ 7, KN, KS KX, KZ, Oyster Ret,	y 82, Lucky Fraction, Lucky 2 Fraction, Q 1, TOQ 2, TOQ 3, TOQ 5, TOQ 6, , KT 1, KT 2, KT 3, KT 4, KU, KV, KW, 2, Base 1, Base 2, Key, Luck, Tur,
Mining Division:	Alberni	SUB-RECORDER
NTS Map Sheet:	NTS 92F 3	DEC 1 6 1994
Latitude: Longitude:	49° 04' N 145° 18' W	M.R. # \$ VANCOUVER, B.C.
Owner of Claims:	Electrum Resou	arce Corporation
Project Operator:	Electrum Resou	Irce Corporation
Consultant:	New Caledonia	n Geological Consulting
Report by:	Peter A SoSh	SSPSEMENT REPORT
Date of Report:	Noversen 99	3,668

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I. Summary and Conclusions

The Lucky Property is situated in British Columbia on NTS map sheet 92 F 3, on the southwest coast of Vancouver Island, approximately 22 kilometers northeast of Ucluelet. The property is rugged and densely forested, with relief of some 1,250 meters. Electrum Resource Corporation owns the claims and operated the work program described herein.

The property lies in the southern part of the Kennedy River Camp, an area that has been prospected since the early 1900's. Numerous gold veins exist, and there have been a few hundred tons of production. The most significant mineral production, however, was from the Brynnor magnetite mine, which produced 4.4 million tons of magnetite iron ore.

The Lucky is a gold-quartz vein that has been traced by surface trenching, drifting and diamond drilling for about 105 meters of strike. It has been drilled to a depth of nearly 90 meters below surface. Numerous samples have been obtained over widths of 20 cm. to 4.4 meters. Gold grades range from 0.1 oz Au/ton to almost 2 oz Au/ton.

Part of the present Lucky property was staked as early as 1905. The Lucky vein was stripped on surface and explored underground during the period 1920 - 1938. The 1980's saw extensive sampling and drilling of the vein as well as property-wide prospecting, geochemical surveys and geological mapping.

In 1991-92, a zone of highly sulphidized felsic volcanic rocks was discovered using geophysical techniques, on the TOQ grid. The exposures on the TOQ Grid are at the center of a 1.7 km long lithogeochemical trend of sub-economic but anomalous lead, zinc and gold concentrations.

It has been suggested that the sulphidized volcanics on the TOQ grid may be part of the Paleozoic Sicker Group (Northcote, 1992). If that is so then these rocks would be the oldest rocks on the Lucky Claims. Most of the property is underlain by Triassic Karmutsen volcanic rocks. Smaller areas are underlain by late Triassic Quatsino limestones or Parson Bay argillites and siltstones. Lower Jurassic Bonanza volcanics are also found locally. Plutonic rocks include lower Jurassic granitic ones equivalent to the Island Intrusions, probable Tertiary granitic rocks, and gabbro dikes that also are probably Tertiary.

Exploration targets on the Lucky Property include: (see Figure 2 for generalized locations)

- 1. Possible volcanogenic mineralization indicated by the sulphidized zone on the **TOQ Grid**. The next step in exploration of this zone would include one or two diamond drill holes to test for higher base metal contents at depth.
- 2. **The Triple Creek Area**, where skarn mineralization is known and porphyry-style alteration has been identified. Prospecting should continue as the logging road network in this area expands.
- 3. **Nugget Creek**, where gold, copper and barium anomalies are prominent both in stream sediment samples and rock chip samples from float. A new logging road scheduled for this area will facilitate further prospecting.

The Toquart Peaks Area is bounded on the south and southeast by Nugget Creek, the west and north by Toquart River and on the east by the eastern boundaries of the TOQ 1, TOQ 2 and TOQ 5 claims. Within it, to varying degrees, stream sediments contain high values of every element considered in this study. Prospecting hasn't revealed any interesting mineralization but parts of the area remain unprospected.

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4.

II. Introduction

A. Location and Access (see Figure 1)

The Lucky Property is situated in British Columbia on NTS map sheet 92 F 3, on the southwest coast of Vancouver Island, approximately 22 kilometers northeast of Ucluelet. It is about 8 kilometers east of Kennedy Lake. A main line logging road leads from Kennedy Lake to Toquart Bay, whence a network of logging roads provides access to the western parts of the property. New roads continue to be built, increasing the access for exploration. The eastern part of the property, and areas of higher elevation, are still accessible only by helicopter or by very difficult foot travel.

B. Physiography

Relief on the property is in the order of 1,250 meters, from sea level to the peak of Lucky Mountain. The rugged terrain is dissected by steep V-shaped valleys with heavily timbered slopes and dense underbrush. Only in the valley of Toquart River on the northwestern part of the property is the topography more gentle. There the river has locally formed a flood plain a kilometer or so wide.



C. Property Definition

1. Claims

(see Figure 2)

The claims that comprise the property are listed in Table 1 on page 6. All are owned by Electrum Resource Corporation.

2. History

(Much of the history described herein is adapted from Price, 1992)

a) History of the District

The Lucky property is in the southern part of the Kennedy River Camp. Considerable prospecting in the area took place in the early 1900's and in the 1930's. Numerous vein type gold showings were discovered and a few hundred tons of production resulted.

The most significant mineral production from the area was at the Brynnor magnetite mine about 10 km west of the Lucky property. Between 1962 and 1966 it produced about 4.4 million tons of magnetite iron ore from skarns in tuffaceous argillite and andesite.

In the late 1980's several companies explored for gold in the Kennedy River area, creating a minor flurry of exploration.

b) History of the Lucky Property

- 1905 Part of the present property was staked as the Red Rover property.
- 1920-38 With the work of various operators the Lucky Vein was partially stripped and two adits were driven on it. Extensive sampling was carried out.
- 1972-81 Minor exploration work, mainly sampling at the Lucky Adit.
- 1981-82 Minor assessment work.
- 1983-84 J. Barakso, who at present controls the property through Electrum Resource Corporation, acquired the property. Silt, soil and rock chip sampling programs were carried out by Victoria Resource Corporation, under option.
- 1985 Falconbridge Ltd. optioned the claims and did work which included property-wide geochemical sampling, geophysical surveys and geological mapping. Underground workings were surveyed and sampled, and 332 meters of diamond drilling was done in 7 holes on the Lucky Vein.
- 1987 Electrum Resource Corporation optioned the property to Freemont Gold Corporation, who, with Alcove Gold Corporation, completed VLF-EM and magnetometer surveys, soil and rock chip geochemistry, geological mapping and prospecting.
- 1988 Canora Mining Corporation joined the joint venture and did 2,087 meters of diamond drilling in 20 holes on the Lucky vein, as well as 6 holes in an area known as the Ridge Zone.

Claim Name	Record Number	Size in Units	*Expiry Date
Lucky 81`	200135	1	January 28,1996
Lucky 82	200136	1	January 28, 1996
Lucky Fraction	200137	1	February 15, 1996
Lucky 2 Fraction	200138	1	February 15, 1996
Wick	200537	12	May 29, 1996
Peak	201246	14	December 23, 1995
TOQ 1	201243	18	December 23, 1995
TOQ 2	201244	18	December 23, 1995
TOQ 3	201245	20	December 23, 1995
TOQ 5	305383	12	September 30, 1995
TOQ 6	307379	18	14 January, 1996
TOQ 7	305384	18	September 30, 1995
KN	305381	20	October 5, 1995
KS	200199	4	August 2, 1995
KT 1	314977	1	November 29, 1995
KT 2	314978	1	November 29, 1995
КТ 3	314979	1	November 29, 1995
KT 4	314980	1	November 29, 1995
KU	200201	6	August 2, 1995
KV	305382	10	October 5, 1995
KW	200202	15	August 2, 1995
КХ	200174	9	November 24, 1995
KZ	200175	12	November 24, 1995
Oyster 2	200463	8	December 22, 1995
Base 1	200619	1	14 January, 1995
Base 2	200620	1	14 January, 1995
Кеу	307371	14	14 January, 1994
Luck	307370	8	14 January, 1994
Tur	307372	20	14 January, 1994
Ret	307373	18	14 January, 1994
* assumes acceptance of this report			

Table 1 - List of Claims



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1991 Electrum Resource Corporation did an IP and VLF-EM survey on the TOQ grid, located on the TOQ 3 claim. Pronounced chargeability and resistivity anomalies were located. A strong VLF-EM conductor is coincident with the former.
1992 Electrum carried out geological and geochemical investigations over much of the property.
1993 Electrum continued its geological and geochemical investigations, making use of logging roads completed since 1992. The 1993 work included a helicopter reconnaissance.
1994 Electrum continued geological and geochemical investigations, making use of new logging roads and of a helicopter based in Port Alberni.

3. Economic Potential

The Lucky is a gold-quartz vein that has been traced by surface trenching, drifting and diamond drilling for about 105 meters of strike. It has been drilled to a depth of nearly 90 meters below surface. Numerous samples have been obtained over widths of 20 cm. to 4.4 meters. Gold grades range from 0.1 oz Au/ton to almost 2 oz Au/ton (data from Price, 1992). The vein may have potential to support a small, high grade gold mining operation, but no engineering or economic studies have been done to test this possibility.

The geophysical anomaly on the TOQ grid was a new discovery in 1991 (Zastavnikovich et al, 1992). Bzdel and Rockel (1991) describe the geophysical signature as being indicative of a massive sulphide core with an envelope of disseminated sulphides. No potentially economic mineralization has yet been identified on the TOQ grid.

The Triple Creek target area was discovered by Falconbridge in the mid 1980's (Rebic and Lehtinen, 1985). The construction of new logging roads has created new rock exposures which have revealed the presence of highly altered quartz feldspar porphyry dikes and an extensive zone of propylitic alteration in the Karmutsen Volcanics. The alteration may suggest the presence of a porphyry copper system.

III. Work Program

This report describes combined geological and geochemical sampling traverses done during the 1994 field season, during which 123 rock chip samples, 19 stream sediment samples and 101 soil samples were collected and analyzed. Access to hitherto unexamined areas was obtained by following new logging roads and through the use of a helicopter for crew set outs and pick ups.

Ronning (1994) described the compilation of geochemical data collected over the years by Electrum and other operators into a digital data base for use in computer-assisted generation of geochemical maps. This report describes the use of the computerized data base to test the usefulness of statistical techniques in evaluating the geochemical data.

Included with this report is a new hand drawn plot of the pre-1994 stream sediment geochemical data onto a topographic base. Prior plots had been on a digital planimetric base.

The plot of geochemical results on a topographic base makes it easier to interpret geochemistry in the light of topographic influences. Since, however, work is ongoing and the digital data base is more current than the hand drawn plots, new updated digital planimetric maps are also included with this report.

IV. Geology

A. Regional Geological Setting

(Much of the following discussion is adapted from Price, 1992) (See Figure 3)

Most of the district surrounding the Lucky claims is underlain by Triassic volcanics of the Karmutsen Formation. It includes mafic volcanics ranging from fine to medium grained, with equigranular or porphyritic textures. Amygdules are common and pillow structures are locally recognizable. The volcanics are dominantly basaltic. A few units of volcanically derived clastic sediments are present.

On a regional scale the Karmutsen commonly exhibits alteration that includes the development of chlorite, actinolite and epidote in the groundmass. Epidote, quartz and calcite are ubiquitous as veins and other open space fillings.

Limestone, argillite and tuffaceous argillite of the late Triassic Quatsino Formation overlie the Karmutsen Formation, with an abrupt but apparently conformable contact. Some argillaceous to sandy sediments found directly above the Quatsino may belong to its upper Triassic successor, the Parson Bay Formation.

A few small areas in the eastern part of the project area are underlain by felsic volcanic rocks of the Jurassic Bonanza Group.

B. Mineral Deposits in the District

(Much of the following discussion is adapted from Price, 1992)

The Karmutsen Formation is the host to many gold-silver \pm base metal veins in the Port Alberni, Kennedy Lake and Tofino areas. The veins typically contain high-grade pockets of mineralization and some have geological reserves developed. Small shipments of direct shipping ore have been made from a few of them.

The Brynnor Mine, noted on page 5, is the only significant past producer in the area. Between 1962 and 1966 it produced about 4.4 million tons of magnetite iron ore from skarns in tuffaceous argillite and andesite.



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C. Local and Property Geology

1. Lithologic Units

The most comprehensive geological mapping program done on the Lucky property was by Falconbridge (Rebic and Lehtinen, 1985). They identified the supracrustal units listed in **Table 2**, following:

Table 2 - Supracrustal Rocks		
lower Jurassic		
Bonanza Formation	andesite to dacite flows; agglomerates, breccias and tuffs. Fragments consist of bombs and blocks compositionally similar to their host.	
upper Triassic		
Parson Bay Formation	thin bedded calcareous sedimentary rocks composed of mudstone, argillite, siltstone and sandstone.	
Quatsino Formation	light to dark grey, massive or thick-bedded limestone.	
Karmutsen Formation	basalt to andesite meta-volcanics. Porphyritic amygdaloidal flows, fine grained flows and brecciated flows. Flow banding and pillow structures locally present. Plagioclase and/or augite phenocrysts are common. Narrow tuff and limestone beds are present in the upper part.	

]	he supracrustal rocks are intruded by a variety of intrusions.	With the lack of age dates
on the p	operty, the assignment of intrusive rocks to lower Jurassic of	Tertiary ages is largely
guesswo	rk. The intrusive rocks are described in Table 3, following:	

Tertiary (?)	
<u> </u>	granite, quartz monzonite
	gabbro dikes, sills, stocks (these were considered lower Jurassic by Rebic and Lehtinen)
lower Jurassic (?)	
Island Intrusions	granodiorite, quartz diorite; commonly massive, medium to coarse grained, equigranular. Some porphyritic phases present.

Table 3 - Intrusive Rocks

2. Structural Geology

The characteristic structural style on the property is block faulting, on a scale of meters to hundreds of meters or possibly kilometers. Most of the recognized faults are steep dipping. Fault zones range from sharp breaks to zones several meters wide containing gouge and brittle shears.

On the TOQ grid there is some suggestion of ductile shearing. It variably manifests as mineral alignment, stylolitic cleavage or mylonitic colour banding. The dominant orientation is

north-northeast. Insufficient work has been done to determine the implications of this localized ductile shearing. It's spatial association with extremely sulphidic rock may be important.

3. Alteration

Most of the many faults and fractures in the rocks of the Lucky Property exhibit some form of alteration, ranging from veins to limited alteration envelopes around the fractures. Quartz, calcite, chlorite, epidote and many less abundant minerals are present. For the most part the alteration is restricted to an area of a few millimeters to a few meters adjacent to whichever fracture channeled the altering fluids. The most important of the numerous alteration assemblages are described as follows:

epidote The most superficially striking alteration mineral throughout the Karmutsen Formation on the Lucky Property is epidote. It is found in veins, filling amygdules and as pods up to several centimeters or decimeters wide. The latter are not obviously open space fillings and their origin is unclear.

> The minerals most commonly associated with the epidote are quartz and/or calcite. In veins and other open space fillings one or both of them may be found interior to the epidote, giving the impression that a cavity lined with epidote was subsequently filled by the quartz or calcite. Sulphides may or may not be present. Pyrite is the most common, but large blebs of chalcopyrite are sometimes associated with the epidote-quartz±calcite assemblage.

> Epidote in the Karmutsen is not unique to the Lucky Property, being found on a regional scale. In the Triple Creek area, however, epidote alteration, accompanied by pyrite and chalcopyrite, is anomalously intense. The alteration in Triple Creek resembles epidote-rich propylitic alteration found associated with some porphyry-style mineralized systems.

quartz Quartz veins are abundant on the Lucky Property. The most significant, in terms of mineralization, is the Lucky Vein itself. Many similar-appearing veins exist, probably representing several generations of quartz.

As noted above, quartz is also found associated with the ubiquitous epidote.

Silicification is found adjacent to some quartz veins and as zones a few meters in extent associated with faults.

- calcite Calcite exists in many of the quartz veins, including the Lucky. Calcite-only veins and veinlets are also widespread.
- quartz-sericite The area of coincident geophysical anomalies on the TOQ grid is underlain by rocks that have undergone intense quartz-sericite alteration. Where the alteration is most intense the protolith is completely unrecognizable. The very finely crystalline mixture of quartz and sericite is light to medium grey, very fine grained and hard. For the most part it is unfoliated, although ductile shear foliations are present in some exposures.

This quartz-sericite rock on the TOQ Grid is almost everywhere pyritiferous, in the range 2% to 10% pyrite. Small samples of near-massive pyrite can be collected.

This silicified, sericitized and pyritized rock is the only pervasive alteration assemblage to be found covering a sizable area, some 3 hectares. Due to a paucity of outcrop on the TOQ grid the actual size of the altered zone is unknown.

argillic argillic alteration, in the form of kaolinization of feldspars, is found in quartz feldspar porphyry dikes in the vicinity of Triple Creek. These dikes contain disseminated pyrite but have not been found to contain high base metal concentrations.

D. Mineralization

1. Lucky Vein

The Lucky gold-quartz vein is the best known and studied prospect on the property. It has been extensively described in prior reports (see in particular Carter, 1989; Eccles, 1984; Northcote, 1983a; Rebic and Lehtinen, 1985; Wilson and Zastavnikovich, 1989a).

Carter (1989) describes the Lucky Vein as follows:

"The Lucky quartz (carbonate) vein occupies a northerly striking, steeply east dipping shear zone and is exposed in surface trenches and two adits. The vein pinches and swells with widths ranging from a few cm. to 0.40 meter.

"... Six vein samples collected by Falconbridge over 28 meters of strike length had gold values ranging from 0.318(opt)/0.30 meter to 7.421(opt)/0.18 meter."

2. TOQ Grid

As noted previously, about 3 hectares of the TOQ grid is underlain by intensely sericitized rocks containing 2% to 10% pyrite. Sampling to date hasn't resulted in the discovery of base or precious metal enrichments in this material, but it still represents a target for further investigation.

The present report incorporates the results of rock chip sampling northwest and southeast of the TOQ grid.

3. Triple Creek Area

The Triple Creek Area, as denoted by Rebic and Lehtinen (1985), lies primarily on the Key Claim, near the juncture of the KN, KV and Key claims (see Fig. 3). In this area Karmutsen volcanics are overlain by limestone of the Quatsino Formation, carbonaceous and calcareous mudstone of the upper Quatsino or Parson Bay Formation, and Bonanza volcanics. Intermediate dikes that may be co-eval with the Bonanza volcanics intrude the pre-Bonanza rocks.

Mineralization in the Triple Creek area is found in skarn zones, veins and silicified zones (Rebic and Lehtinen, 1985). A new logging road constructed since Rebic and Lehtinen's work has created many new rock exposures. Notable is the intense chlorite/epidote/calcite alteration of the Karmutsen volcanics in the vicinity of Triple Creek. While this type of alteration can be found in the Karmutsen throughout the property, its intensity here is anomalous. It suggests a propylitic alteration zone. The many granitic dikes in the area display alteration varying from sericitization to argillization.

The new exposures of Karmutsen volcanics display pods and veins of massive pyrite and/or chalcopyrite mineralization. Pods of massive mineralization are up to a few decimeters in any given dimension, but the mineralization lacks continuity.

Taken together, these observations suggest the possibility of a hidden pluton at depth, with the potential for associated mineralization that might take the form of a porphyry system and/or skarns larger than those known at present. With this possibility in mind, much of the 1994 field work was concentrated in the Triple Creek Area. All of the 101 soil sample were collected in this area, as were 9 stream sediment samples and 63 rock chip samples.

During October of 1994, J.R. Wilson, P. Geo., spent 3 days working in the Triple Creek area. His report is included herein as Appendix 1.

4. Suicide Creek Area

The Suicide Creek vein was described by Rebic and Lehtinen (1985) as a westerly trending structure, cropping out in cliff faces. Consisting of massive white quartz, the vein pinches and swells, with a maximum width of about half a meter. Suicide Creek in part follows the trend of a brittle shear enclosing the vein. Thickening of the vein is seen at bends in the structure. The quartz contains 3 - 5 % pyrite with traces of chalcopyrite and lesser sphalerite. The vein's host rock is a grey-green, finely crystalline basalt or andesite, with locally up to 10% one mm mafic specks. The latter are likely relict hornblendes.

5. Lower Lucky Creek

The rock chip samples numbered JL-9 through JL-14 were collected in a road building excavation containing highly sericitized granodiorite with disseminated pyrite. The extent of this sulphidized granodiorite is unknown, but it is exposed for several tens of meters. Although results from these samples were disappointing, the presence of the sulphidized, altered intrusive provides further suggestion that porphyry-style mineralization may exist on the southern part of the Lucky Property, between Triple Creek and Pipestem Inlet.

6. Other Mineral Occurrences

Several occurrences of chalcopyrite, sphalerite and/or galena, with or without precious metals, are known on the property. All are veins or skarns whose known dimensions are small, but their abundance is encouraging.

V. Discussion

A. Stream Sediment Geochemistry (see Maps 1 - 15)

The stream sediment geochemistry of the property is discussed in the following sections on an element by element basis.

The discussions refer to both conventional and heavy mineral fraction analyses. The spatial distributions of the two types of results are compared. Caution in comparing the spatial distributions is necessary, however, because there are more than three times as many conventional

results as heavy mineral results. The conventional results have a broader geographical distribution.

As part of the 1994 program, the digital geochemical data base compiled earlier (Ronning, 1994) was employed to do a statistical study of the sample populations. The statistical tool chosen was probability plots as described in Sinclair (1976). In order to generate the probability plots, the computer program PROBPLOT (Stanley, 1987) was used. The resultant graphs are included in the following discussion

1. Copper

a) Copper in Conventional Analyses (see Map 2)

As is evident in Graph 1, the population of copper in stream sediments is most closely approximated by a single normally distributed population with the parameters indicated. Given the single population, relatively arbitrary criteria for high and very high values are used, based on the mean and standard deviation:

high	Cu > 115 ppm
very high	Cu > 170 ppm

There is a strong concentration of high and very high copper values surrounding a highland that underlies most of the TOQ 2 and TOQ 1 claims (the "Toquart Peaks Area" on Figure 2). Most of the samples collected from Nugget Creek, south and east of Toquart Peaks, contain high copper values. Furthermore, most of the high and very high copper values found property-wide are in this area.

Considerable chalcopyrite-bearing float has been found in Nugget Creek (Ronning and Zastavnikovich, 1992), but it hasn't been traced to a source. The float appears to be derived from quartz vein and skarn assemblages.

An unnamed creek east of the TOQ 2 claim also yielded a large number of high copper values.

There is a minor cluster of high copper values in south draining creeks near the southern boundary of the Luck Claim. These may correlate with relatively high copper values in Suicide Creek, a west flowing creek in the center of the Tur claim. Suicide Creek is known for a gold vein, which contains traces of chalcopyrite (Ronning and Zastavnikovich, 1993).



b) Copper in Heavy Mineral Fractions (see Map 3)

As suggested by Graph 2, there may be two populations of log-normally distributed data representing copper in the heavy mineral fraction. If this is the case, however, the population with the lower copper contents (population 1 on Graph 2) represents only 12% of the samples. Thus, thresholds for high and very high values are arbitrarily selected based on the logarithmic mean and standard deviation of population 2. Those are:

high	Cu > 190 ppm
very high	Cu > 375 ppm

In the heavy mineral concentrates, Nugget Creek and Suicide Creek stand out for the frequency of high and very high copper values. In the case of Nugget Creek the highest copper values are from north flowing tributaries, pointing to a possible source of copper mineralization to the south.



2. Lead

a) Lead in Conventional Analyses

Lead in conventionally analyzed stream sediments is best approximated by a single lognormal population with the parameters indicated on Graph 3. Thresholds for high and very high values are arbitrarily selected using the logarithmic mean and standard deviation:

high	<i>Pb</i> > 22 <i>ppm</i>
very high	Pb > 40 ppm

The greatest clustering of higher lead values is in tributaries of the Upper Toquart River on the TOQ 6 and TOQ 7 claims. The reason for this isn't at present known.

Another group of higher lead values is in the Triple Creek area. This probably reflects skarn mineralization in the limestone.

The presence of high lead values southeast of Triple Creek, in streams that drain into the headwaters of Pipestem Inlet, may be due to hitherto undiscovered skarn occurrences similar to those in the Triple Creek area.

Some of the highest lead values found on the property are in Lucky Creek, south of Ellswick Lake and the Lucky Vein. They are unexplained.

Nugget Creek contains generally low amounts of lead, contrasting with its high copper concentrations.



Graph 3 - Lead in Stream Sediments

b) Lead in Heavy Mineral Fractions

The sample population of lead in heavy minerals isn't readily approximated by a normal or log-normal distribution. However, for the sake of selecting thresholds, an arithmetic normal distribution was selected as the best compromise. The thresholds thereby selected use the arithmetic mean and standard deviations:

high	Pb > 21 ppm
very high	Pb > 26 ppm

Note that the threshold chosen for very high values of lead in heavy minerals is actually lower than that chosen for lead in conventional analyses. This could be a function of the transport mechanism of lead in streams on the Lucky property. Alternatively it could simply reflect the poor approximation of the lead sample population to a normal distribution.

There is little real spatial clustering of lead in the heavy mineral fractions of stream sediments. Almost all of the higher values are found north of Nugget Creek, in tributaries of the upper Toquart River. However, the high values are scattered over different topographies and drainages, to a degree that precludes the definition of anomalous areas.



3. Zinc

a) Zinc in Conventional Analyses

Graph 5 suggests that zinc sample results may reflect two populations, population 1 represented by 95% of the values and population 2 represented by 5% of the values. Thresholds for high and very high values have been chosen as the upper 95% confidence limits (mean plus two standard deviations) for populations 1 and 2, respectively. These thresholds are:

high	Zn > 87 ppm
very high	Zn > 146 ppm

Using these criteria, most members of population 2 are considered at least high.

All of the highest zinc values cluster in the Triple Creek—Pipestem Inlet—Suicide Creek area. As in the case of lead, the cluster of zinc in the Triple Creek—Pipestem Inlet area probably relates to occurrences of skarn mineralization in the Quatsino Limestone. The quartz veins in Suicide Creek are known to contain minor sphalerite.

Drainages immediately south of Toquart Peaks, including the upper reaches of Nugget Creek, also contain an unusual number of higher zinc values.



b) Zinc in Heavy Mineral Fractions

Zinc analyses from the heavy mineral fractions of stream sediments are approximated by two log-normal distributions (Graph 6). The plot suggests the possible presence of a third population of very low values representing 5% or so of the samples, but this is ignored for the purpose of selecting thresholds. Thresholds are selected such that essentially all of the samples falling into population 2 are considered high and 95% of them are considered very high. The upper 95% of samples falling into population 1 are considered very high:

high	Zn >70 ppm
very high	Zn > 109 ppm

As in the case of lead, the thresholds for zinc in heavy minerals are actually lower than those for conventionally analyzed samples.

In terms of zinc in heavy minerals, upper Nugget Creek, where it drains southward off the Toquart Peaks area, and two small drainages flowing northward off the north side of Toquart Peaks, stand out. There are no heavy mineral analyses from the Triple Creek—Pipestem Inlet area.

Suicide Creek also has a moderate cluster of high zinc concentrations in heavy minerals.



4. Silver

a) Silver in Conventional Analyses

As seen in Graph 7, the population of silver samples is best approximated by a lognormal distribution with the parameters indicated. Values considered to be high exceed the logarithmic mean plus one standard deviation and those considered very high exceed the mean plus two standard deviations:

high	Ag > 3 ppm
very high	Ag > 4.6 ppm

A large majority of the high or very high silver values are found in tributaries of the Toquart River on the TOQ 6 and TOQ 7 claims, or in Nugget Creek. Many of the silver values along the Toquart River come from drainages on the north bank of the river and so probably don't reflect mineralization in the vicinity of Toquart Peaks. The geology and mineralization on the north side of Toquart River aren't well known due to the difficulty of access. There is no ready explanation for the prevalence of higher silver values along Toquart River.



b) Silver in Heavy Mineral Fractions

Silver in the heavy mineral fractions is also best approximated by a single lognormal population (Graph 8), although the approximation is less ideal. High and very high silver values are considered to be those which fall above the mean plus one standard deviation and two standard deviations, respectively:

high	Ag > 2.5 ppm
very high	Ag > 5.0 ppm

In the heavy mineral fractions, the spatial distribution of silver is quite different than for conventionally analyzed fractions. Higher values are found around the Toquart Peaks and in streams draining away from them towards the north.

There is one highly anomalous silver value, 6 ppm, in a small tributary of Lucky Creek, north of Pipestem Inlet. This is in the general vicinity of highly sulphidized granodiorite, but the specific reason for the high silver value isn't clear.



5. Gold



The population of gold in stream sediments has an erratic statistical distribution which isn't well approximated by either a normal or a lognormal model. An arithmetic normal distribution was chosen as the best approximation. Some extremely high values, falling above 200 ppb, were excluded from the data in order to plot Graph 9. High values are considered to be those exceeding the mean plus two standard deviations, while very high values are those in excess of 1,000 ppb.

high	Au > 105 ppb
very high	Au > 1,000 ppb

The Upper Toquart River area clearly stands for gold in conventional stream sediment samples. There are four gold values in the range 216 ppb to 950 ppb in small tributaries of the Toquart River near the common corner of the TOQ 3, TOQ 5, TOQ 6 and TOQ 7 claims. Some small chalcopyrite-bearing quartz veins are the only tentative explanation available at present for these high gold results.

High gold values of 915 ppb and 2,240 ppb from the Toquart River near the northeast corner of the TOQ 6 claim were not explained by prospecting further upriver during 1993.



A creek near the gold-bearing Lucky Vein yielded a sample containing 8,700 ppb gold. About 500 meters to the northwest a sample gave 830 ppb. These results may indicate that another gold bearing vein could be present a few hundred meters northwest of the Lucky.

In the Triple Creek area a number of high gold values in the range 94 ppb to 210 ppb may reflect the known skarn mineralization in that vicinity. Two of the values, however, come from creeks draining the north side of the valley where skarn mineralization isn't known to exist.

Suicide Creek, although known to flow along a gold-bearing vein, has only moderately high gold values in conventionally-analyzed samples.

b) Gold in Heavy Mineral Fractions

Gold in heavy minerals is plotted on Graph 10. The sample population approximates a lognormal distribution. Values exceeding 1,000 ppb were excluded from the data for the purpose of plotting Graph 10. Gold in excess of the logarithmic mean plus two standard deviations is considered to be high while that in excess of 1,000 ppb is considered very high.

highAu > 790 ppbvery highAu > 1,000 ppb

In the heavy mineral fractions, streams draining northward from the Toquart Peaks and the TOQ 5 claim stand out. Gold values are in the range 240 ppb to 9,150 ppb. A further two high values, 225 ppb and 1,095 ppb, are found in two small southwesterly flowing drainages near the southern edge of the TOQ 2 claim.



Heavy mineral fractions from Nugget Creek contain some high gold values in the range 180 ppb to 1,524 ppb. The high values relate to tributaries flowing into Nugget Creek from the south, in the general direction of the Lucky Vein. They suggest that other veins similar to the Lucky may exist.

Suicide Creek, where conventionally analyzed samples contained surprisingly modest gold values, has high gold concentrations in the heavy mineral fraction. The highest gold value obtained was 29,750 ppb.

6. Mercury

a) Mercury in Conventional Analyses

The population of mercury values in stream sediments can be approximated by a lognormal distribution with parameters as shown in Graph 11. High and very high values are considered to be those exceeding the logarithmic mean plus one and two standard deviations, respectively:

high	Hg > 191 ppb
very high	Hg > 437 ppb

Fewer mercury analyses are available than for other elements. Elevated values are scattered over much of the property, but where clusters of higher values exist they can in at least two cases be related to known mineralization. Near the Lucky Vein are three relatively higher



values between 215 ppb and 345 ppb. Values along Suicide Creek are in the 175 ppb to 235 ppb range.

Given that relatively high mercury values are associated with two known gold veins, it is interesting to note that mercury in the 160 ppb to 325 ppb range is found in the small creeks draining northwards and southwards off the Toquart Peaks area.

A high and a very high mercury value of 335 ppb and 930 ppb are found in streams draining southwards into Pipestem Inlet. However, so few samples have been collected along the shore of the inlet that their significance can't be ascertained.

b) Mercury in Heavy Mineral Fractions

The population of mercury analyses in heavy minerals is most closely approximated by a single lognormal distribution. In order to plot Graph 12 very low or very high values, falling below 20 ppb or above 400 ppb, were excluded. High and very high thresholds are considered to be the logarithmic mean plus one and two standard deviations, respectively:

high	Hg > 139 ppb
very high	Hg > 225 ppb

Note that as in the cases of lead, zinc, and barium the thresholds for mercury in heavy minerals are lower than the thresholds in conventional analyses.



The spatial distribution of mercury values in heavy mineral fractions is similar to that of mercury in conventional analyses. The same areas are highlighted, with the exception of the vicinity of the Lucky Vein. There were no heavy mineral analyses done on the two samples which yielded high conventional results near the vein.

7. Barium

The barium analyses discussed herein and plotted on the accompanying maps are from total extractions. Total extraction was not done on most pre-1992 samples, so the number of analyses available is relatively small.

a) Barium in Conventional Analyses

As Graph 13 indicates, the statistical distribution of barium in steam sediments can be approximated by two lognormal populations, 1 and 2, which include about 87% and 13% of the samples, respectively. Thresholds were chosen such that 95% of population 2 is considered to be high or very high. All but about 2% of population 1 would be considered less than high:

high	Ba > 617 ppm
very high	Ba > 3,432 ppm

There is an apparent clustering of all of the highest barium values in one drainage, Nugget Creek. Of the two sample populations apparent on the log probability plot, population 2 seems to be found almost exclusively in Nugget Creek. There may in fact be a highly anomalous

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concentration of barium there. It is, however, also possible that the apparent high concentration of barium results from an error in choosing the data to include. For example, the data presented might be a mixture of ICP analyses and total extraction analyses. The results from the total extraction would be higher and would appear as a distinct population both geographically and statistically. While unlikely, the possibility of such an error must be kept in mind.

Exclusive of Nugget Creek, too few analyses are available to discuss the distribution of barium with any confidence. It does seem that sediments from Suicide Creek contain relatively high barium levels in their heavy mineral fractions (see below).

In upper Toquart River, near the northeast corner of the TOQ 6 claim, there are generally elevated levels of barium, in the range 300 ppm to 355 ppm.



Graph 13 - Barium in Stream Sediments

b) Barium in Heavy Mineral Fractions

The population of barium in heavy minerals is displayed in Graph 14. In order to plot the graph, values greater than 250 ppm were excluded. The data appear to approximate a lognormal distribution with the parameters indicated on the graph. The logarithmic mean plus one and two standard deviations are selected as the thresholds for high and very high values, respectively:

high	Ba>129 ppm
very high	Ba > 201 ppm

Note that the thresholds for barium in heavy minerals are considerably lower than those for barium in conventionally analyzed stream sediments.



Most of the higher barium values in heavy mineral fractions cluster in Nugget Creek and Suicide Creek. In Nugget Creek 11 samples have barium in excess of 100 ppm, with the highest containing 832 ppm.

Graph 14 indicates that the barium data for heavy mineral separations come from a single population, alleviating some of the concern about a mixture of analytical techniques as discussed for conventional barium. Thus the clustering of high barium values in the heavy minerals from Nugget Creek may reflect a real barium anomaly. This in turn may lead to the conclusion that the apparent barium anomaly in Nugget Creek using conventional analyses is also real.

In Suicide Creek, 3 values fall in the range 150 ppm to 185 ppm. The quartz vein in Suicide Creek is known to contain anomalous amounts of barium.

8. Summary of Stream Sediment Geochemistry

a) Areas of Interest

The areas which stand out in terms of stream sediment geochemistry are Toquart Peaks, Nugget Creek and Triple Creek.

Toquart Peaks The small and medium sized creeks draining north and south from Toquart Peaks contain high values of copper, zinc in both conventional and heavy mineral analyses, silver in heavy minerals, gold in heavy minerals and mercury in both sample types. Three days of helicopter-assisted explorations in this area in 1993 and 1994 haven't resulted in the discovery of significant mineralization. The reason for the elevated metal values in streams isn't known.

Nugget Creek

Nugget Creek and its tributaries contain high values of copper in both conventional and heavy mineral analyses, silver, gold in heavy minerals, and barium in both sample types. Prospecting along the creek hasn't revealed any mineralization. The planned construction of a logging road in to the Nugget Creek drainage in 1995 will provide easier access and create new rock exposures which may be revealing.

Triple Creek The Triple Creek area stands out in terms of lead, zinc and minor gold in conventionally analyzed samples. The lead and zinc are probably related to known skarn mineralization and pods of chalcopyrite in the area. The known mineralization does not contain high levels of gold, so the slightly elevated gold values in the creeks aren't explained.

Two other areas stand out for gold and mercury, namely the vicinity of the Lucky Vein and the and the area adjacent to Suicide Creek. The known gold-bearing veins in these areas probably account for the stream sediment enrichments.

b) Comments on Statistical Methods

The use herein of probability plots to assist in choosing threshold levels was an attempt to make a more sophisticated interpretation of the existing data. To fully utilize mathematical methods, further work would need to be done. In particular, interpretation to date has treated all of the data from the property as a single domain. Obviously, however, the data represent several different populations. For example, Nugget Creek is clearly a distinct geochemical domain whose high metal contents tend to distort the sample population and draw attention away from other areas. It would be useful to reinterpret the geochemical data exclusive of Nugget Creek, to look for other areas of more subtle metal enrichment.

Triple Creek, with its known skarn mineralization, is also a distinct domain whose stream sediment geochemistry could usefully be treated separately from the rest of the property.

B. Soil Geochemistry in the Triple Creek Area

In 1994, one hundred one soil samples were collected along contours at the head of the basin centered on the Triple Creek Area. The samples were analyzed for 31 elements using the ICP method, as well as for gold by AA with a fire assay prep and for mercury using digestion and cold vapour AA.

Sample locations are illustrated schematically on Figure 4. Analytical results for copper, lead, zinc, silver, gold, mercury and barium are shown on Figure 5 through Figure 11.

There is a general tendency for high lead, zinc, silver and gold values to cluster in the northeast corner of the survey area, near the common boundary of the Luck and Tur claims. Rather than individual samples being high in all of these elements, samples tend to have a high level of one or two elements. The exception is L38 - 510 N, which contains high silver, lead, gold and zinc.

This is the general area where skarn mineralization is known to exist, although there is no one-to-one correlation between the soil samples and a known mineral occurrence.

Copper has a different spatial distribution than other elements in the soils, with four of the higher values being concentrated along a 150 meter stretch of logging road on the north side of the main creek. This is somewhat surprising and requires further follow-up in the field.

Other high copper values are found in scattered individual samples.


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C. **Rock Chip Samples** (see Maps 16 - 23)

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Unlike the case of the stream sediment and soil samples, there is a considerable bias inherent in the collection of the rock samples. Many samples were collected because they contained visible sulphides or evidence of hydrothermal alteration. This being the case, the rocks don't represent the entire spectrum of rock types and alteration intensities present. For this reason, any statistical analysis of the rock chemistry is suspect. Nevertheless, the histograms accompanying the following discussions indicate that for most elements considered, the concentrations approximate a lognormal distribution. The greatest exception to this is gold.

In the discussions, very high values are usually considered to be those greater than the logarithmic mean plus twice the standard deviation. This is an arbitrary criterion, and isn't rigorously adhered to. This discussion considers the property-wide, spatial distribution of higher metal values, rather than the descriptive characteristics of individual samples. Descriptions of each sample are found in Appendix 3.



The greatest concentration of high copper values is in Nugget Creek, where six rock samples were collected which contained greater than 1,400 ppm copper, including 3 with greater than 10,000 ppm copper. Most of these samples were float, with a probable source area on the ridge between Nugget Creek and the Lucky Vein. The Lucky Vein contains gold associated with copper and the abundant copper mineralization in float suggests that one or more other veins similar to the Lucky may be located.

Samples of quartz vein float from Suicide Creek also contain high copper values, in the range 2,280 ppm to greater than 10,000 ppm. The Suicide Vein, like the Lucky Vein, contains copper and gold in association, and the abundant float in Suicide Creek undoubtedly comes from the vein.

A few samples in the Triple Creek area contain high copper, but the skarn mineralization of this area is generally zinc-rich rather than copper-rich. Some of the rock samples containing

high copper were selected based on visual identification of chalcopyrite, and come from propylitically altered Karmutsen Volcanics.

A few high copper values along the upper reaches of the Toquart River on the TOQ 7 Claim come from selected samples of chalcopyrite-bearing quartz veinlets in Karmutsen Volcanics.





Higher lead values, ranging from 30 ppm up to 869 ppm, are most abundant in rocks from the Triple Creek Area, reflecting the association of lead with the zinc-dominant skarn mineralization of that zone.

The other significant cluster of high lead values, in the range 30 ppm to 864 ppm, is along a northwest-southeast trend centered on the TOQ grid. This trend is partly defined by the availability of rock exposures along creeks in this area. The creeks follow a northwest-southeast fault trend which is thought to have a controlling influence on the sulphide-rich zone that centers on the TOQ Grid. This sulphide-rich zone has yet to yield samples containing potentially economic grades, but the zone is clearly anomalous in lead.



Zinc in rock chips has a spatial distribution somewhat similar to lead, although more dispersed. The Triple Creek Area stands out with numerous samples containing zinc in the range 100 ppm to 1,947 ppm. This is unsurprising, considering the existence of zinc-rich skarns in the area.

Less expected is a clustering of high zinc values in the range 225 ppm to 6,289 ppm, centered on the TOQ Grid and following the same northwest-southeast trend as lead.

A few high zinc values in rocks are dispersed along the Upper Toquart River.



The greatest cluster of high silver values, in the range 4 ppm to 13 ppm, is in the vicinity of Triple Creek. It's distribution and lithologic association within the Triple Creek area is partly different than those of lead and zinc, in that some of the highest silver values are in propylitically altered Karmutsen Volcanic rocks, whose dominant visible sulphides are pyrite and chalcopyrite. Lead and zinc, by contrast, are found in skarn mineralization. Some silver is associated with the skarn, but less than with the propylitic alteration.

The other cluster of high silver values, ranging from 3 ppm to 126.6 ppm, is on the upper part of Toqart River, on the TOQ 6 claim. This area is underlain by Karmutsen volcanics with widespread epidote-quartz-calcite blebs and veinlets.

Some moderately high silver values, in the range 3 ppm to 5 ppm, are found around the periphery of Toquart Peaks.



Potentially economic gold values in rock samples from the Lucky property are confined to the Lucky Vein and Suicide Creek. On a property-wide scale, values in excess of 20 ppb are considered statistically anomalous, using the arbitrary threshold of the logarithmic mean plus two standard deviations. Such values are scattered throughout the property.

One notable cluster of high values is in Nugget Creek. Like copper, gold is found in float derived from the ridge between Nugget Creek and the Lucky Vein, further evidence that other veins similar to the Lucky may be found in this area.

The northwest-southeast trend centered on the TOQ grid is followed by a group of high gold values, reinforcing the evidence for a metal anomaly on that trend.

Many samples collected along the upper Toquart River contain anomalous gold values, mostly related to quartz-epidote veins and blebs.

6. Arsenic



Few very high arsenic values are present in rock samples from the Lucky Property. The only significant cluster of higher values is in the vicinity of skarn mineralization in the Triple Creek Area.



The most outstanding cluster of high barium values is in float samples from Nugget Creek. This confirms the evidence of stream sediment and heavy mineral stream sediment samples. Nugget Creek clearly contains anomalous barium. No clear-cut reason for this has yet been identified.

Some high barium values are present in rock samples from the TOQ Grid and its surroundings.

Rocks from Suicide Creek contain consistently high barium values. The Suicide quartz vein containing chalcopyrite and gold appears to have an anomalous barium content as well.

VI. Recommendations

High concentrations of certain metals are associated with most of the known mineral occurrences on the Lucky Property, including the Lucky Vein, the Triple Creek area and Suicide Creek. Some targets for further work are:

A. Toquart Peaks

Toquart Peaks is bounded on the south and southeast by Nugget Creek, the west and north by Toquart River and on the east by the eastern boundaries of the TOQ 1, TOQ 2 and TOQ 5 claims. Throughout this report, this area has been referred to as the Toquart Peaks Area. Within it, to varying degrees, every element considered in this study shows some enrichment in either conventional or heavy mineral stream sediment analyses.

Four days of helicopter-assisted traversing in the Toquart Peaks Area has failed to identify the reason for the stream sediment anomalies. Much of the prospective ground has been adequately covered, but there is scope for further exploration in the rugged area trending from Toquart Peaks towards the TOQ grid. Two days of helicopter-assisted prospecting by a two person team are warranted.

B. TOQ Grid

The TOQ Grid is at the center of a northwest-southeast trending zone, about 1.7 kilometers long, in which rocks contain relatively high values of lead, zinc, gold and barium. The zone is characterized by intensely sulphidized, felsic volcanics, ranging from 60 meters wide on the TOQ grid to 2 meters wide in a creek bank northwest of Toquart River. Extensive surface rock chip sampling in these felsic volcanics hasn't located any mineralization of potentially economic grades, but the zone remains intriguing. A 1991 IP survey indicated that the greatest sulphide concentration is at depth (Bzdel & Rockel, 1991). The vertical dimension has been tested only by geophysics and a program of one or two drill holes is warranted, despite the lack of economic mineralization on surface.

C. Triple Creek

A search for porphyry-style mineralization in the Triple Creek Area has as yet been unsuccessful, but porphyry-style alteration is widespread in that vicinity. As new logging roads continue to penetrate the area between Triple Creek and Pipestem inlet, prospecting of the newly created outcrops should continue.

D. Nugget Creek

Within the next year it is expected that a new logging road will penetrate into the Nugget Creek Drainage. When the area is opened up, further prospecting should be done in order to identify the source of gold, copper and barium anomalies in stream sediments and rock chip samples from float.

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VIII. Statement of Qualifications

I, Peter Arthur Ronning, of 1450 Davidson Road, Langdale, B.C., hereby certify that:

- 1. I am a consulting geological engineer, doing business under the registered name New Caledonian Geological Consulting. My business address is 912 510 West Hastings Street, Vancouver, B.C., V6B 1L8.
- 2. I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
- 3. I am a graduate of the University of British Columbia in geological engineering, with the degree of B.A.Sc. granted in 1973.
- 4. I hold the degree of M.Sc. (applied) in geology from Queen's University in Kingston, Ontario, granted in 1983.
- 5. I have worked as a geologist and latterly as a geological engineer in the field of mineral exploration since 1973.
- 6. I am the author of the report entitled "1994 Exploration Program on the Lucky Property"
- 7. I participated in the work described in this report.
- 8. I hold no beneficial interest in the mineral claims which are the subject of this report, nor in any corporation or other entity whose value could reasonably be expected to be affected by the conclusions expressed herein.
- 9. I authorize Electrum Resource Corporation to use this report, but only in its entire and unabridged form, for any lawful purpose.



Peter A. Ronning, P.Eng.

Appendix 1 — Report by J.R. Wilson, P.Geo.

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John R. Wilson, P.Geo., F.G.A.C. Box 233, Merville, B.C., VOR 2M0 (604) 334-2639

Mineral Exploration Mining Geology

Mr. John Barakso, 912-510 West Hastings street, Vancouver, B.C. V6B 1L0

Oct. 27, 1994.

Subject: Toquart Property, Triple Creek Area. NTS 92/F3

Enclosed as Table 1 are field descriptions of rock samples collected in the Triple Creek area of the Toquart property from October 8 to 10, 1994.

Sample locations are shown on Figure 1.

As requested, the following is a brief discussion based on field observations.

(1) <u>Epidotized Zone</u> The strongest epidotized volcanic zone lies roughly between Pillow Creek and Club Creek and extends downhill, from the base of a prominent, roughly horizontal limestone band at about 450 metres elevation to near the road level. From the road down to the main creek in the valley floor, intense epidotization appears to be less widespread. The latter conclusion is tentative, based on poor outcrop distribution. Close above the road is a thin, fairly horizontal, impure limestone or limey argillite.

The main unit is andesite or basalt. In places it is fragmental, probably pyroclastic.

Dykes and probable sills occur throughout the whole area. They are identified as quartz porphyry, feldspar porphyry, quartz-feldspar porphyry and probable diorite. Contacts range from flattish to vertical.

In terms of alteration, the epidotized zone is probably better termed a propylitic zone and some of the sedimentary rocks display a slight hornfelsed nature.

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Sulphides are not prominent.	Limestone		
Schematic	Intrusive W2, W	3,~4,~5,~28	• w14
Cross-Section	Andesite P Basalt W29 W29	• W8	₩15 • Zntrusive • ₩16 • ₩18 • ₩18 • ₩18 • ₩18 • ₩19 ₩20
Road	V Impure Limeston	e or Umey Ar	<u>eillite</u> • w21
N+W.	Andesite or Bacalt	22 لنا •	S.E.
Valley			4

John R. Wilson, P.Geo., F.G.A.C. Consulting Geologist (2) <u>Northwest from Epidotized Zone</u> Northwest from the main, valley-bottom creek are several limestone outcrops in contact with diorite and quartz-feldspar porphyry units, probably dykes and sills. Contacts range from flattish to vertical. The presence of limestone and a variety of intrusives link this area to the "Epidotized Zone" on the southeast side of the valley. Intense epidotization is rare but does occur. Sulphides are not prominent except in a quartz-feldspar porphyry unit containing 10% pyrite (W 36, W37). Outcrops are difficult to locate and map in this unlogged area.

(3) <u>North of Epidotized Zone</u> Between Pillow Creek and Bluff Creek are andesites/basalts and diorite. The only usual alteration is chloritic. Sulphides are not prominent. Bluffs are prominent above 350 metres but outcrops are rare on the valley floor. The area is unlogged.

(4) <u>Ouartz Veining</u> In general, quartz veins are not common and never exceed several centimetres in width. Small amounts of pyrite occurs in most veins, sometimes along with minor chalcopyrite and possible galena. Veins are usually located along the contacts of dykes or sills.

Sincerely,

John Wilson

John R. Wilson, P.Geo., F.G.A.C. Consulting Geologist

Table 1

Field descriptions of rock samples W 1 to W 39 collected on October 8 to 10, 1994 in the Triple Creek area of the Toquart Property, NTS 92/F3.

Refer to Figure 1 for sample locations.

- W 1 Fragmental (pyroclastic?) basalt or andesite. Strong epidote alteration. Commonly silicified. Veinlets and blebs of calcite. Trace disseminated and veinlet pyrite and calcite. Sample taken between 5 cm. and 20 cm. vertically, above a 3 cm. wide vuggy, banded quartz vein with trace epidote occupying the contact between the fragmental volcanic and underlying argillaceous limestone. Contact (bedding?) is 090°/20°S.
- W 2 Quartz porphyry with very fine traces of disseminated, reddish, possible sphalerite or hematite. Sample from a boulder measuring 2x3x4 metres within a colluvial train of similar boulders.
- W3 Quartz porphyry with occasional pale green (copper silicate?) tinge. Sample location is at base of prominent, large limestone outcrop at upper edge of clearcut.
- W 4 Fine grained section of the quartz porphyry. Trace disseminated pyrite. Sample location is at base of limestone outcrop at upper edge of clearcut.
- W 5 Fine grained section of the quartz porphyry described in W 4. Minor epidote.
- W 6 Ten cm. wide shear zone in siliceous intrusive sill or silicified volcanic. Shear is siliceous, epidotized and contains a pinkish mineral. Shear orientation is 120°/90°.
- W 7 Siliceous intrusive sill or silicified volcanic. Minor pinkish mineral. Outcrop contains the shear sampled as W 6.
- W 8 Fine fragmental (probable pyroclastic) basalt or andesite. Quartz veined, carbonate alteration, disseminated fine grained pyrite and trace chalcopyrite.
- W 9 Fine fragmental (probable pyroclastic) basalt or andesite. Silicified. Minor disseminated fine pyrite. Minor pyrite in quartz veinlets.
- W 10 Limey argillite or argillaceous limestone. Dark grey to black. Very fine grained. Weathered surface shows subangular fragments to 1 cm. in diameter. Conchoidal fractures may indicate a slight hornfelsed effect.
- W 11 As at W 10
- W 12 One metre wide contact zone between overlying limey argillite and underlying andesite or basalt. Silica and carbonate altered with trace disseminated pyrite. Contact is difficult to discern: possibilities are 075°/90° and 150°/60°E.
- W 13 Two cm. wide, white quartz vein. No visible mineralization. Sample located 2 metres below contact zone of W 12, in andesite or basalt. Vein orientation is 075°/90°.
- W 14 Andesite or basalt within 3 metres below contact zone of W 12. Pale green, silicified, carbonatized, epidotized. Rare trace disseminated pyrite.

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- W 15 Possible diorite with veinlets of calcite and pyrite. Minor reddish, probable hematite.
- W 16 Basalt(?). A medium grey, aphanitic, silicified unit with irregular, black, possible amygdales.
- W 17 Diorite or andesite/basalt. Pale green, chloritic. Trace disseminated pyrite.
- W 18 Diorite or andesite/basalt. Dark green, chloritic. Occasional quartz-calcite veinlets.
- W 19 Diorite or andesite/basalt. Epidotized and carbonatized. Chloritic specks. Occasional quartz veinlets and epidote veinlets sometimes with pyrite and possible chalcopyrite.
- W 20 Limey argillite. Weakly hornfelsed (?). Black with veinlets of calcite and trace pyrite. Contact with adjacent unit is 005°/80°E.
- W 21 Andesite or basalt. Silicified, epidotized, chloritic. Minor disseminated and veinlet pyrite and chalcopyrite.
- W 22 Two cm. wide quartz-epidote vein in epidotized andesite or basalt.
- W 23 Andesite or basalt. Silicified. Weakly epidotized. Minor disseminated pyrite. Site is above contact with limey argillite.
- W 24 Andesite or basalt. Very epidotized. Silicified, carbonatized, chloritic and vuggy. Disseminated pyrite.
- W 25 Grey argillaceous limestone immediatly below contact described in W 1.
- W 26 Five cm. wide band of bleached, silicified, grey to white, fine fragmental andesite or basalt. Minor disseminated and veinlet pyrite, chalcopyrite, and possible galena. The unit lies immediatly above a 3 cm. wide vuggy and banded quartz vein with trace epidote occupying the contact between the fragmental epidotized volcanic and underlying argillaceous limestone as described in W 1.
- W 27 Three cm. wide vuggy and banded quartz vein with epidote and calcite occupying the contact between the fragmental epidotized volcanic and underlying argillaceous limestone as described in W 1.
- W 28 Feldspar porphyry. Trace disseminated pyrite. Located adjacent to W 3.
- W 29 Three cm. wide quartz vein at the contact between a quartz-feldspar porphyry and an epidotized, chloritic andesite or basalt. Orientation of contact/vein is 112°/70°S.
- W30 Four cm. wide quartz-epidote vein at a contact between diorite and andesite/basalt.
- W 31 Diorite (?). Very minor epidote veinlets.
- W 32 Twenty cm. wide fracture zone in andesite/basalt or diorite carrying 15% disseminated pyrite.
- W 33 Diorite. Intense epidote alteration along fractures. Sample is three metres from limestone contact. Contact orientation is 065°/90°.
- W 34 Diorite. Chilled contact at limestone. Adjacent to W 33.

W 35 Andesite or basalt. Pervasively epidotized. Trace disseminated pyrite.

W 36 Ten cm. wide rusty, siliceous shear with 15% disseminated pyrite. The shear is in quartz-feldspar porphyry.

W37 Quartz-feldspar porphyry with minor epidotized feldspars and 10% disseminated pyrite.

W38 Andesite or basalt. Patches of intense epidote alteration and up to 5% disseminated pyrite.

W 39 Fragmental andesite or basalt. Weakly epidotized. Minor calcite-quartz veinlets.



Appendix 2 — Statement of Costs

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Statement of Expenditures

Lastname	Start Date	End Date	Fee	GST	Total Item
Barakso	02/05/94	11/10/94	\$3,600.00	\$0.00	\$3,600.00
Hammer	08/08/94	13/08/94	\$1,110.00	\$77.70	\$1,187.70
Ronning	02/08/94	09/11/94	\$5,390.00	\$377.30	\$5,767.30
Wilson	08/10/94	20/10/94	\$980.00	\$0.00	\$980.00
Zastavnikovic	02/05/94	13/10/94	\$3,850.00	\$0.00	\$3,850.00
			\$14,930.00	\$455.00	\$15.385.00

Vehicles

Vehicle Description	Start Date	End Date	Cost	GST	Total Cost
Chev Blazer with Camper	08/08/94	13/08/94	\$120.00	\$8.40	\$128.40
J. B. personal vehicle	02/05/94	13/10/94	\$550.00	\$0.00	\$550.00
S. Z. personal vehicle	02/05/94	13/10/94	\$550.00	\$0.00	\$550.00
			\$1,220.00	\$8.40	\$1,228.40



Equipment Description	Start Date	End Date	Cost	GST	Total Cost
Misc Camp & Field Eqpt	08/08/94	13/08/94	\$30.00	\$2.10	\$32.10
			\$30.00	\$2.10	\$32.10

Disbursements

Туре	Cost	PST	GST	Item Total
Air Charter	\$2,025.94	\$0.00	\$141.82	\$2,167.76
Communications	\$17.28	\$1.21	\$1.21	\$19.70
Equipment Rental	\$100.00	\$7.00	\$7.00	\$114.00
Fares	\$288.25	\$0.00	\$0.00	\$288.25
Field Supplies	\$135.80	\$5.66	\$5.66	\$147.11
Groceries	\$311.85	\$5.16	\$7.73	\$324.74
Hotels	\$349.00	\$8.72	\$7.63	\$365.35
Laboratory Costs	\$8,260.00	\$0.00	\$578.20	\$8,838.20
Meals	\$328.30	\$0.60	\$5.90	\$334.80
Office Supplies	\$12.27	\$0.86	\$0.86	\$13.99
Services	\$2,367.91	\$49.55	\$154.55	\$2,572.02
Vehicle Operation	\$479.68	\$0.00	\$9.22	\$488.90



10-Dec-94

As of:

Statement of Expenditures		As of: 10-Dec-94		
	\$14,676.28	\$78.75	\$919.78	\$15,674.8
Grand Total				
Grand Total	Total Before Taxes	PST	GST	Grand Tota

<u>Appendix 3 — Descriptions of Rock Samples</u>

Table 4 - Descriptions of Rock Chip Samples Collected in 1994

Sample Number	Location	Description		
(Note: samples <u>Appendix 1</u>)	s collected by J.R. V	Vilson are described in his report, appended to this report as		
Samples PRL-01 through PRL-09, and PRL-39 through PRL-45, were collected starting at the end of the logging road in the Triple Creek Area. Locations given are chainages westward alou the road away from the end.				
PRL-01	0 meters	Fresh, massive, medium grey green basalt or andesite. Fine feldspar in groundmass is waxy, possibly saussuritized. Intense epidote alteration, starting along fractures but becoming pervasive. Epidote forms 50% of overall rock mass. Minor calcite within epidote. Random chips collected from outcrop blasted by road builders.		
PRL-02	20 meters	Massive, finely sucrosic epidote. Contains 10% specks of Fe oxides. Random chips from outcrop.		
PRL-03	40 meters	Similar to PRL-02. A few unoxidized specks of pyrite. Random chips from outcrop.		
PRL-04	70 meters	Massive, finely sucrosic epidote. Minor quartz veinlets. No relict sulphides, but 10% sub-centimetric vugs lined with dark brown earthy oxides. Random chips from outcrop.		
PRL-05	95 meters	Dark grey finely crystalline basalt; 60% altered to sucrosic epidote. Vuggy; vugs are lined with dark brown Fe oxides. Sulphides not noted. Random chips from outcrop.		
PRL-06	120 meters	Dark grey, very finely crystalline volcanic. 50% pervasive epidote alteration, 10% calcite veinlets. Note: at this site, a few pebbles of Karmutsen volcanics in the road fill material contain fracture coatings of molybdenite. These weren't included in the sample as their source wasn't known.		
PRL-07	140 meters	Fresh, finely crystalline Karmutsen volcanics. Feldspars saussuritized. Rare blebs of epidote. Traces of pyrite.		
PRL-08	160 meters	Massive, dark green basalt. Very little epidote alteration. Traces of sulphides.		
PRL-09	180 meters	Massive Karmutsen volcanics. 50% carbonatized, 10% veinlets and blebs of epidote. Epidote is post-carbonate. Sulphides not noted.		
PRL-39	220 meters	Karmutsen basalt. Finely crystalline, dark green, with minor epidote. Traces of pyrite and chalcopyrite. Outcrop blasted by road builders. Chips deliberately selected for minimal alteration content.		
PRL-40	as PRL-39	Body of massive epidote in same outcrop as PRL-39. Roughly 1 meter by 4 meters, with tabular shape. On margin of epidote body, epidote is found as veinlets within the		

Sample Number	Location	Description
		basalt. Towards the center the epidote grades through a breccia filling to massive epidote at the center. Chalcopyrite disseminated. Chips deliberately selected to contain only altered rock.
PRL-41	240 meters	Medium crystalline, dark green andesite or basalt. 1% epidote, 1% calcite, both found as veinlets and blebs.
PRL-42	285 meters	Massive dark green basalt, finely crystalline. Laced with 1% epidote veinlets. Weakly magnetic. No sulphides noted.
PRL-43	305 meters	Massive dark green basalt. Epidote \pm 2% but locally massive over a few decimeters. Sample includes pieces from a 10 centimeter quartz vein. No sulphides noted.
PRL-44	370 meters	Massive dark green basalt. 5% epidote as specks, blebs, veinlets and veins. 2% calcite, in epidote veins. Trace chalcopyrite associated with the veins.
PRL-45	as PRL-44	In road fill at this point are many boulders up to 30 cm diameter of massive epidote with blebs of calcite. Boulders contain chalcopyrite associated with the calcite. Source presumed to be local.
Samples PRL- traverses on th Toquart Peaks Datum, 1927, a determined usi	10 through PRL-27 The ridges between N Area on Figure 2). The sused on the 1:50, The sen and the sen a	were collected during the course of helicopter-assisted lugget Creek and the upper part of the Toquart River (the Locations given are UTM's based on the North American ,000 scale topographic sheet for this area. Most locations were narked * were determined using the map and altimeter.
PRL-10	330150 E 5439800 N	Boulder containing veinlet of quartz-epidote±pyrite.
PRL-11	330242 E 5440197 N	Massive basalt, minor 5 centimeter quartz veinlet. No visible sulphides. Collected from steep, moss-covered west facing slope; sample could be from outcrop or a large boulder.
PRL-12	330333 E 5440490 N	Massive basalt; several fracture surfaces contain quartz- epidote veinlets ± 1 cm thick. Sulphides not noted. Sample selected from veinlets.
		This sample is from a pile of boulders 1 ton or larger below an impassable peak. Rocks are presumed to be typical of the peak.
PRL-13	20 meters east of 12	Andesite quartz breccia. 50% fragments of green, partly epidotized andesite in 50% vuggy bull quartz. 15 cm diameter boulder.
PRL-14	330340 E	10 centimeter quartz stringer vein in dark green basalt.
	5440405 N	Sulphiaes not notea.
PRL-15	330435 E	Stringer veinlets of quartz and epidote, 5 per meter, 2 mm to
	5440547 N	meter. Host is massive basalt; no sulphides present.
PRL-16	330520 E	Massive basalt boulders, 1 ton or larger; sub-centimetric

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Sample Number	Location	Description
	5440734 N	blebs contain quartz and epidote. Sample is from a 1 centimeter veinlet in a boulder, containing a trace of malachite.
PRL-17	330694 E	On a ridge top between two cirques, a 5 meter wide notch or
	5440930 N	wall rocks are fresh, black, unaltered basalt. No indication of alteration along the fracture system. Sample is a grab from both walls of the gap.
PRL-18	330389 E	Massive volcanics laced with quartz-epidote veinlets
	5440530 N	comprising $\pm 2\%$ of the rock. Sample is a grab over 15 meters, selected from veinlets. Sulphides not noted.
PRL-19	329836 E	Same site as stream sediment DHLS-01.
	5440923 N	Basalt exposed in creek bed. Finely crystalline, greenish grey, ± bleached. Local traces of pyrite. Local augite phenocrysts. Sample is random grab over 5 meter length of creek bed.
PRL-20	• 329750 E	Boulder from same site as stream sediment DHLS-02.
	5440750 N	Basalt breccia, 20% dark finely crystalline basalt fragments in a matrix of cream weathering very finely crystalline material. Both fragments and matrix contain \pm 5% sub- centimetric vugs lined with iron oxides.
PRL-21	as PRL-20	Boulder from same site as stream sediment DHLS-02.
		Silicified Karmutsen basalt. Light greenish grey, very finely crystalline quartz, slightly sucrosic. Vugs \pm 1 mm form 5% of rock. Fe oxide stains in and near vugs. No sulphides.
PRL-22	* 329750 E	Quartz vein breccia, 20 centimeters wide. About 50%
	5440700 N	quartz. No sulphides. Host rock is basalt. Found in creek bed upstream of DHLS-02.
PRL-23	* 329475 E	Massive, fine grained dark grey Karmutsen volcanics. No
	5440500 N	alteration and no sulphides. Grab from outcrop on steep west facing slope.
PRL-24	* 329350 E	As PRL-23 in all respects.
	5440600 N	
PRL-25	• 329225 E	Massive black basalt. 10% calcite as sub-millimetric
	5440750 N	veinlets. Trace pyrite disseminated. Boulder in dry stream bed.
PRL-26	as PRL-25	Basalt; highly carbonatized. No sulphides. Sample deliberately selected for high content of carbonate alteration. Outcrop, at same site as PRL-25.
PRL-27	* 329225 E	Massive black basalt. No sulphides and no significant
	5440870 N	alteration. Random grab from 10 m x 10 m outcrop.
Samples PRL-	28 through PRL-32	were collected while attempting to trace the source of gold in a

Sample Number	Location	Description
sites only IG2	00S could be re-loca	ated Locations are UTM's as in the preceding samples
PRL-28	328869 E 5442436 N	dense and lacks vugs. 1/2% pyrite, disseminated. 15 cm diameter boulder in clearcut about 100 m south of the Toquart River, below the road.
PRL-29	328844 E	Epidote-calcite vein in roadside cliff. 35 cm wide, 65%
	5442455 N	epidote, 20% calcite, \pm 10% quartz, \pm 2% pyrite coarsely disseminated.
PRL-30	328810 E	Volcanic breccia. 50% fragments of fine black basalt,
	5442455 N	angular, 1 mm to 5 cm. Matrix is medium green, made up of interlocking fragments ± 5 mm concentrically banded, de- vitrified glass. Trace of very fine pyrite. Found as a boulder in roadside ditch; may be transported road fill material.
PRL-31	328810 E 5442430 N	At site of sample IG200S. Massive black basalt containing minor quartz stringers and traces of pyrite.
PRL-32	328704 E	Volcanic breccia. Main rock mass, 75% of rock, is waxy
	5442382N	grey-green, felsic volcanic. Very finely crystalline, can't discern mineralogy. The grey material is crackle brecciated and healed by dark green, very finely crystalline material of unknown composition. Trace pyrite in the dark green material.
Samples PRL- River from the preceding sam	33 through PRL-38 Northwest, near the ples.	were all collected from a creek which drains in to the Toquart b big bend in the Toquart River. Locations are UTM's as in the
PRL-33	327771 E	Felsic volcanic rock. White, very finely crystalline
	5442592 N	groundmass, 15% clear quartz crystals. Hard, unfoliated. Pyrite 5%, ranging from semi-massive material replacing groundmass to 2% fine disseminations. Weathers rusty. 25 centimeter boulder in creek bed.
PRL-34	as PRL-33	Similar to PRL-33 but darker grey groundmass. Pyrite 2% finely disseminated. Boulder in creek bed.
PRL-35	327625 E	Bleached and pyritized zone in black volcanic rock exposed
	5442700 N	in creek bed. Visible dimension of pyritized zone is $\pm 1 \text{ m x}$ 2 m. Trend unclear but oblique to creek. Unaltered rock is a black aphanitic basalt. Altered rock is medium grey, very finely crystalline, very felsic. Pyrite 5%, disseminated. Sample is chip over 1 m x 2 m.
PRL-36	327629 E	Same site as DHLS-05.
	5442692 N	In left bank of creek, very rusty outcrop. Entirely siliceous, pyritiferous volcanic as noted at PRL-33. Too moss-covered to discern trend to this rock type, but at least 3 meters thick. Sample is random chip along 5 meters of the length.
PRL-37	• 327510 E	Rusty boulder ± 1 cubic meter. Light grey, highly siliceous,
	5442700 N	slightly schistose due to a shear foliation. Semi-massive

Sample Number	Location	Description
		pyrite to 15%
PRL-38	* 327450 E 5442700 N	Tabular body ± 4 meters wide, trending 292°. Silicified, pyritized volcanic. Sample is a random grab.
JL - 1R.		Epidotized Karmutsen volcanics from Shear zone 5-10 cm. 5 % Chalcopyrite and pyrite.
JL - 2R		Small shear zone 6" wide highly altered and limonitic goetite in hairline fractures. (Karmutsen volcanics)
JL - 3R		Light pinkish basalt with silicified veinlets specks of pyrite and occasional chalcopyrite.
JL - 4F		Gabbroic textured float with 2-4% pyrrhotite, on fractures limonite coatings.
JL - 5R		Highly silicified shear zone 6" wide jarosite and goetite coatings.
JL - 6R		Highly oxidized shear zone in contact with a latite dyke, most of the minerals oxidized.
JL - 7R		6" Quartz vein in Karmutsen volcanics. 6-10% epidote in fractures.
JL - 8R		Epidote - quartz vein in a small shear zone specs of sulphide. Relatively unoxidized.
JL - 9R		Quartz epidote veinlet 25% epidote small specs of chalcopyrite? some pyrite.
JL -10R		Quartz Feldspar porphyry fine specs of sulphides about 2- 3%.
JL -11R		Quartz Feldspar Porphyry with dark specs of matrix remnants, about 60-70% silicate.
JL -12R		Contact porphyry hybrid at contact with volcanics. Some pyrrhotite, pyrite and minor quartz veins.
JL -13R		Quartz-monzonite porphyry with 3-4% disseminated pyrite. Specs of Chalcopyrite.
JT - 1R		Shear zone boulders in quarry close to 30" quartz vein. 2% Chalcopyrite 10% sulphide.
JT - 2R		Quartz vein adjacent to the shear zone. Some of the quartz is smoky and about 2-3% epidote in fractures.
JT - 3R		Rosy quartz float with major epidote veinlets.
JT - 4R		Diorite contact material with minor quartz veinlets.
JT - 5R		Diorite from contact zone with very fine pyrite minor clay alterations.
JT - 6R		Porphyritic Diorite with 2% very fine pyrite. Some alteration noticeable.

Sample Number	Location	Description
JT - 7R		Feldspar porphyry clay alterations are noticeable very-very fine disseminated pyrite.
JT - 8R		Very fresh Feldspar porphyry with 1% pyrite.
JT - 9R		Quartz and epidote veinlets in Karmutsen volcanics.
JT -10R		Quartz blebs and veinlets with 20% epidote in Karmutsen volcanics.
JT -11R		6-10 cm quartz veins in a small shear zone, specs of pyrite and epidote.
JT -12R		Similar to JT-11 probably more calcium carbonate rich than other quartz veins. Specs of pyrite and limonite coatings.
JT -13R		About 1 foot of high cleavage quartz vein with Chalcopyrite Malachite and limonite staining.

Table 5 - Descriptions of Rock Chip Samples Collected in 1992 and 1993 (included for reference when viewing maps)

Sample Number	Description
1-26361	Piece of rip-rap from road bed. Original rock may have been dioritic; too silicified to identify. Sample is primarily quartz vein material, smoky grey to white. Chalcopyrite 1%, ±bornite, coarsely disseminated in quartz.
1-26360	Brittle shear in a quarry east of Kite Lake. Calcite 50%, chloritized Karmutsen 40%, white quartz 10%. Minor orange-red iron oxides on exposed surfaces. No sulphides noted.
1-26359	Karmutsen, partially silicified. Pale grey-green, hard, hackly fracture. All fracture surfaces are coated with dark rusty brown iron oxides.
1-26358	Boulder of rip-rap in road, same as country rock, granodiorite. Contains 2 centimeter quartz veinlet with an adjacent seam of MoS2.
1-26357	3 centimeter wide zone of carbonate \pm quartz \pm chlorite alteration follows planar fracture at strike/dip 227/76 NE.
1-26356	Karmutsen cut by dike, 15 centimeters wide, of monzo-granite. Dike pinches and swells; contains a few xenoliths Karmutsen. 1% pyrite, disseminated. Strike/dip of dike 64/40 se.
1-26355	Grey-green Karmutsen, very finely crystalline, weakly silicified. Pyrite 1% in veinlets and stringers.
1-26354	Tension gashes in Karmutsen, up to 3 centimeters wide, 20 centimeters long; sparsely scattered. Filled with quartz, variably vuggy. No visible sulphides, possibly oxidized. Wall rock within a few centimeters is orange; may contain iron carbonate.

Sample	Description	
Number		
1-26353	Quartz-epidote veinlet, 3 centimeters wide, 1% pyrite. Follows fracture set with strike/dip 285/72 n.	
1-26352	Float in small dry creek bed. Quartz-chlorite vein breccia; 3 centimeters wide; 80% quartz, 19% chlorite, 1% pyrite, trace chalcopyrite, trace malachite. Host is presumably Karmutsen.	
1-26351	ten meter high cliffs massive, amygdaloidal basalt. Amygdules commonly lined with quartz inside epidote. Sample is breccia found as float in a dry creek bed. Fragments of Karmutsen in cement of almost chalcedonic quartz. Much of quartz has framboidal texture where it fills open space. Iron and manganese oxides coat most surfaces. Sulphide, if present, completely oxidized.	
1-26345	Altered monzo-granite. May be same rock as 1-26342. 10% rounded, millimetric quartz phenocrysts. 25% clay altered feldspars. 60% felsic groundmass, varying degree of clay alteration. 5% Fe oxides, some as specks which may be after sulphides.	
1-26344	As 1-26343. Oxidized fractures more widely spaced, at 2 – 3 centimeters. Pyrite 2%, disseminated.	
1-26343	Unknown, possibly andesite. Medium grey, crypto-crystalline, hard, may be partly silicified. 10% mafic rounded spots. Parallel hairline fractures at 3 millimeter spacings, coated with orange-red iron oxides. Rock probably derived from a brittle shear zone. Pyrite 4%, disseminated.	
1-26342	Monzo-granite. 10% rounded, anhedral, millimetric quartz phenocrysts. 25% anhedral feldspar, ± 1 millimeter, chalky white; partial sericite alteration. 5% dark green mafic specks. 55% finely crystalline, grey-green, felsic groundmass. Pyrite 2%, mainly concentrated on hairline fractures.	
1-26341	Monzonite or monzo-granite. 5% euhedral, 1 mm feldspar crystals. 5% sub- millimetric specks chlorite. 90% anhedral, felsic groundmass; dominantly sericitized feldspar. Can't see quartz, but it may be present in groundmass. Sulphides not seen	
1-26340	Andesite quartz vein breccia. 30% milky white vein quartz. 60% very finely crystalline grey-green andesite, hard and partly silicified. 5% hairline calcite veinlets. 5% buff-brown oxides on weathered surfaces. Trace sulphides.	
1-26339	Quartz porphyry. Rounded, sub-millimetric quartz phenocrysts, 10%. Dark green specks, probably chlorite, 5%. Creamy pale green, felsic, aphanitic groundmass, 80%. Calcite on fracture surfaces, 3%. Chlorite on slickensides, 2%. Rock may have come from brittle shear zone. Pyrite trace	
1-26338	Andesite. 20% 1 millimeter to 2 millimeter spots chlorite after mafic minerals. 70% sericitized felsic groundmass, waxy grey green. 5% calcite as hairline veinlets. 3% pyrite, finely disseminated.	
1-26337	Carbonatized rock. Coarsely crystalline, mottled grey-white. Speckled with 10% dark green, chloritic spots. Criss-crossed by 5% hairline calcite veinlets. One fragment, 1 cm., angular dark grey, very finely crystalline. Very minor iron oxides on some fracture surfaces. Pyrite trace in fragment.	
1-26336	Felsic dike. Very finely crystalline, slightly pinkish buff colour. Waxy grey spots, 1 – 2 millimeters, appear darker than buff groundmass. No foliation, but	

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Sample Number	Description		
	sericitic sheen on fracture surfaces. Pyrite 1%, finely disseminated.		
1-26335	Calcite veinlet and carbonatized wall rock. Calcite white, medium crystalline, unmineralized. Wall rock very finely crystalline, dark grey, carbonatized. Minor iron oxides on broken surfaces. Pyrite trace, very finely disseminated.		
1-26334	Calcite vein material; 3 centimeters wide. Medium crystalline, dirty white calcite, 90%. Slightly graphitic, grey selvages 2 millimeters thick on each side of vein. Pyrite trace.		
1-26333	Carbonatized andesite; 40% very finely crystalline, semi-massive epidote; 10% hairline veinlets of calcite; pervasive calcite in groundmass, 45%. Pyrite 1%; mainly concentrated in a few calcite veinlets.		
1-26332	Carbonatized andesite; collected adjacent to calcite vein. Pale, slightly greenish grey, very finely crystalline, soft. 10% dark specks and a few larger clots of fine chlorite. Pyrite 1%, disseminated.		
1-26331	Completely altered rock. Medium grey, finely crystalline mixture of quartz and sericite. Heavy dark brown – orange coatings of iron oxides on fracture surfaces. Pyrite 5%, finely disseminated.		
1-26330	Altered; possible crystal tuff. 10% dark green specks finely felted chlorite, sub-millimetric. A few "ghost" outlines of pinkish, sub-millimetric feldspar crystals. Groundmass is very finely crystalline medium grey mixture of quartz ± feldspar. Pyrite 4%, finely disseminated.		
1-26329	Completely altered; as 1-26327. Pyrite 5%, finely disseminated.		
1-26328	Completely altered; as 1-26327. Pyrite 3%, finely disseminated.		
1-26327	Completely altered; medium grey finely crystalline mixture of quartz and sericite. Minor calcite on fractures. Pyrite 7%, finely disseminated.		
1-26326	Intensely altered (crystal tuff?). Intense quartz-sericite alteration; original crystal fragments are visible as sub-millimetric light – dark specks in groundmass. 5% 1 – 2 millimeter spots of white clay (after feldspar?). 10% sub-millimetric pore space with sharply angular, irregular shapes. Pores partly lined with very fine pyrite crystals. Pyrite 15% in total, occurring in 3 modes:		
	- 5% rounded, 1 millimeter to 5 millimeter masses of finely crystalline pyrite; could be interpreted as fragments.		
	- 3% finely crystalline pyrite lining pore spaces.		
	- 8% finely disseminated pyrite in groundmass.		
1-26325	Altered Iapilli tuff. Intense quartz-sericite alteration; 10% fragments of white finely crystalline quartz up to 1 millimeter, sub-angular. Groundmass is finely crystalline, dark grey; some "ghost" fragments or crystals, sub-millimetric, suggest tuffaceous origin. Pyrite 15%, very finely disseminated; at least some of the grey colour in the groundmass is due to very fine pyrite.		
1-26324	specimen not available for description. Probably resembles 1-26323.		
1-26323	Completely altered rock. Hard, finely crystalline mixture of quartz and sericite. 10% darker spots, sub-millimetric, indeterminate composition. Possibly waxy sericite without quartz. May be relicts of original crystals or fragments. Pyrite 7%, finely disseminated.		

Sample Number	Description	
1-26322	Completely altered rock; resembles 1-26321.	
1-26321	Completely altered rock; hard, medium grey, very finely crystalline. 10% rounded mafic specks may be a remnant of original mafic components; specks probably chlorite. 10% iron oxides on fracture surface. Pyrite 5%, mainly disseminated on fracture surfaces.	
1-26320	Completely altered rock or rhyolite. Very finely sucrosic, hard, light grey; composed almost entirely of quartz; fine feldspar may be present. Orange- brown iron oxides on all fracture surfaces. Pyrite not seen; ½% specks of iron oxide may be after pyrite.	
1-26319	Completely altered rock. Finely crystalline mixture of quartz and sericite, medium grey, hard. Iron oxides coat exposed surface. 5% pyrite, very finely disseminated.	
1-26318	Completely altered rock. Medium grey, very finely crystalline. Probably comprised of partly sericitized plagioclase. 10% calcite as hairline veinlets. 5% iron oxides, coating some fractures. 8% pyrite, very finely disseminated.	
1-26317	Altered basalt. 80% partially sericitized plagioclase, as ½ millimeter to 1 millimeter anhedral grains. 10% mafic specks, probably chlorite. 3% 1 millimeter epidote crystals. 5% calcite as hairline veinlets. 2% pyrite, very finely disseminated.	
1-26316	Completely altered rock or quartz vein material. Found as float derived from Pleistocene till. 80% finely sucrosic quartz. One fragment, ½ centimeter by 1 centimeter, green, waxy, translucent mineral, possibly celadonite. 10% iron oxides coating outer surface and some inner fractures. 10% pyrite, disseminated.	
1-26315	Altered rock; probably Karmutsen basalt. 10% relict 1 millimeter feldspar phenocrysts. Mottled medium grey groundmass, crypto-crystalline. Some angular 1 centimeter fragments, creamy light grey with sharply defined boundaries. May be a volcanic breccia. Part of specimen is an epidote vein breccia with 70% epidote in 3 millimeter crystal aggregates. Matrix is black, soft, slightly metallic; possible manganese oxide. Pyrite 10% as very coarse crystals in irregular veins.	
1-26314	Quartz vein. Milky white, sucrosic quartz. 3% fine open spaces lined with manganese oxides. Chalcopyrite rare trace.	
1-26313	Altered rock; may have originated as felsic dike. Very finely crystalline, pale waxy grey, hard. Speckled with 10% fine mafic specks. 5% specks of epidote. Pyrite trace.	
1-26312	Carbonatized basalt. Mottled pale grey green, very finely crystalline. 10% sub-millimetric mafic specks. Numerous hairline fractures healed with calcite. Chalcopyrite trace; malachite trace.	
1-26311	Altered monzo-granite; found in road fill. resembles 1-26342 and 1-26345. Pyrite 1%, finely disseminated.	
1-26310	Basalt or basaltic andesite. Black to dark green, very finely crystalline; can't discern minerals but probably plagioclase plus chloritized mafic minerals. Rare fragments to ½ centimeter, black, aphanitic. May be very finely felted biotite or chlorite after biotite. 15% calcite in veinlets. Chalcopyrite trace,	
Sample Number	Description	
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	finely disseminated.	
1-26309	Quartz vein breccia. 50% vuggy grey quartz vein material. 10% iron oxides, lining fractures and vugs within quartz. 35% rock fragments up to 2 centimeters. Fragments medium grey, finely crystalline, sericitized. Pyrite 6%, almost all concentrated in rock fragments.	
1-26308	Calcite vein breccia. 60% grey-white, finely crystalline calcite. 25% remnants of black, very finely crystalline basalt. 10% chlorite, as greenish streaks within calcite. Pyrite 3% overall, most concentrated within greenish pigmented zones.	
1-26307	Quartz vein breccia. Coarsely crystalline, clear grey quartz. 40% greenish, silicified fragments of finely crystalline andesite. ½% pyrite, finely disseminated. ½% chalcopyrite, disseminated	
1-26306	Stream washed outcrop monzo-granite; trace pyrite.	
1-26305	Dike, ± 5 meters wide, monzo-granite.	
1-26304	Rusty weathering zone; over \pm 3 meters; several vuggy quartz stringers to 2 centimeters wide. Sulphides not noted; sample collected for quartz.	
1-26303	Quartz veinlet, ± 1 centimeter wide; strike/dip 268/45 n. Sulphides not noted.	
1-26302	Brittle shear in Karmutsen, 15 cm. wide, strike/dip 195/65 w. Part of gouge is broken quartz vein material with trace pyrite. Sample is quartz vein.	
1-26301	Five meter wide dike cuts Karmutsen. Grey-green, sub-millimetric sucrosic texture. 5% white spots, ½ cm., ± equant, quartz ± carbonate. Possibly amygdules. Pyrite 1%, finely disseminated in both groundmass and spots.	
3J-34	Quartz–Sericite Altered, Pyritized Rock. Protolith unknown. Finely crystalline, waxy grey, dense and tough. Pyrite 1%.	
3J-33	Silicified and Pyritized Volcanic. Protolith is obscured by alteration. Now it is a very finely crystalline, hard, waxy green rock. Cut by $\frac{1}{2}$ cm quartz vein. Pyrite 7 – 8 % in veinlet, 1% in rock.	
3J-32	Quartz–Sericite Altered Volcanic. Composition of protolith obscured by intense alteration. Pyrite 105 as patches of fine crystals. Rock but by parallel micro-fractures at 2 mm spacing; these are coated with red-brown iron oxides.	
3J-31	Vein Quartz. Coarsely crystalline, vuggy. Vugs may mark the former location of a dissolved mineral. Chloritic selvages along vein walls; vein approximately 4 cm thick. No visible sulphides.	
3J-30	Quartz Porphyry. 70% opaque white quartz grains, 1 millimeter. Aphanitic waxy-looking dark grey groundmass. Cut by quartz veinlets to 1 cm thick and by hairline chalcopyrite veinlets. Pyrite 5%, disseminated.	
3J-29	Basalt. Dark green, finely crystalline, dense and massive. 2% calcite in hairline veinlets. Two 2 mm specks of pyrite noted.	
3J-28	Calcite Veinlets in Greenstone. Rock is very finely crystalline, pale greenish grey. 3% mafic specks which may be chlorite. 5% very finely disseminated pyrite. Veinlets area about 1 millimeter thick, spaced 1 per cm, in parallel array.	
3J-27	Rhyolite. Outcrop highly oxidized to rusty colour.	

Sample Number	Description								
3J-26	Volcanic. Hairline calcite and silica veinlets.								
3J-25	Altered Volcanic. Contains layered sulphides.								
3J-24	Quartz Vein.								
3J-23	Volcanic Breccia. Pyritized.								
3J-22	Mafic Volcanic.								
3J-21	Argillite. Contains cubic pyrite crystals. Specimen is float.								
3J-20	Mafic Volcanic. Specimen is float.								
3J-19	Volcanic.								
3J-18	Volcanic.								
3J-17	Dolomite.								
3J-16	Mafic Volcanic.								
3J-15	Volcanic. Surface coated with hydrozincite.								
3J-14	Dolomite. Sample from sheared contact of dolomite.								
3J-13	Volcanic. Contact zone with quartz veins.								
3J-12	Gossanous Material.								
3J-11	Mafic Volcanic. Brecciated and altered.								
3J-10	Volcanic. Altered and brecciated.								
3J-09	Rhyolite. Sulphidic blebs present.								
3J-08	Highly Altered Rock. Brecciated, enveloping a small shear zone along a two inch dike of carbonaceous rock.								
3J-07	Dike. Highly pyritized quartz veins and brecciated volcanics.								
3J-06	Volcanic. Pyritized with epidote alteration.								
3J-05	Intermediate Dike. Unmineralized, near quartz veins.								
3J-04	Quartz Carbonate Vein.								
3J-03	Intrusive. Highly altered, with specks of pyrite.								
3J-02	Volcanic. Sheared and pyritized.								
3J-01	Quartz vein in shear zone.								
2551	Quartz-Carbonate Vein in Greenstone. Opaque, milky white bull quartz; 105 patches of grey calcite, sucrosic to coarsely crystalline. Greenstone pale grey green, very finely crystalline. Trace pyrite in greenstone.								
2552	Quartz Calcite Vein Material. Chunk 20 cm \times 15 cm \times 10 cm, entirely of vein material. White bull quartz laced with 40% grey calcite. All fracture surfaces are coated with powdery calcite. No sulphides.								
2553	Quartz Vein. 9 cm thick; coarsely crystalline, greyish white. Chloritic selvages on upper and lower margins or contacts. Laced with pyrite, 10%, as thin coatings on microfractures within quartz.								

Sample Number	Description
2554	Calcified Greenstone. Pale greyish green, finely crystalline. Original minerals destroyed but some chloritic specks after mafics give green colour. Predominantly calcite; highly reactive in 10% HCl.
2555	Altered Granodiorite. Originally granitic textured rock partially bleached and altered. Mafics partially removed and partially altered to chlorite, CI 15. Medium grained felsic minerals saussuritized but textures retained. Trace pyrite as disseminations.
2556	Lithic Lapilli Tuff. Dark green, fine grained. 10% centimetric fragments of pale grey (rhyolite?, angular and broken. 10% black mafic clots, centimetric, which may be relicts of mafic lithic fragments. Groundmass is medium chlorite green, slightly felty texture, suggestion of devitrification. 2% quartz, as minor, irregular veinlets. No visible sulphides.
2557	Lithic Lapilli Tuff. Similar to 2556, but silicified and epidotized. Rhyolitic fragments relatively unaffected. Groundmass partly epidotized; some fragments replaced by quartz. Devitrification and fragmental textures survive alteration. No visible sulphides.
2558	Quartz-Epidote-Chlorite Altered Basalt. 10% of rock is white vein quartz and 20% is white calcite, found together as 1 cm veinlets. Wall rock is completely chloritized with an epidote overprint. Trace chalcopyrite as millimetric crystals within quartz. Trace malachite after chalcopyrite.
2559	Calcite Vein. 5 cm thick; grey 3 - 5 mm calcite crystals. Selvages of chlorite within vein and along margins. No visible sulphides.
2560	Limestone. Pale grey, sucrosic. Locally aphanitic, finely banded. Sucrosic calcite may be recrystallization of aphanitic material. Chalcopyrite rare as mm grains within sucrosic calcite.
2561	Greenstone. May be an altered basalt. Now finely crystalline mosaic of indeterminate green minerals, including chlorite and finely dispersed epidote. No visible sulphides.
2562	Vein Quartz in Greenstone. Coarsely crystalline white bull quartz, with a few centimetric patches of epidote. Wallrock is finely crystalline mixture of green minerals as in 2561. No visible sulphides.
2563	Sericitized, Pyritized Crystal Tuff. Medium grey, fine grained rock with aspect of partly welded crystal tuff. Very finely sericitized; pyrite 5% as very fine disseminations.
2564	Siliceous (Silicified?) Tuff. Chemistry of protolith unknown. 10% millimetric, round quartz grains; a few elongated crystal shards to 4 mm, in creamy white, aphanitic, very hard groundmass. Could be a very siliceous tuff or a very silicified tuff. No evidence of veining. No significant sulphides.
2565	Felsic Crystal Tuff. Medium grey, very hard, aphanitic. 20% crystal shards, rounded to angular and needle-like; probably quartz, feldspar and (?). Pyrite 5%, very finely disseminated.
19801	Basalt. 20 cm boulder in creek bed. Typical of outcrop in this area. Dark to medium grey, very finely crystalline. 20% 2 mm specks chlorite after mafics. Quartz-epidote-carbonate veinlets are common, as in the sample, but not characteristic. Sulphides not noted.

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Sample	Description
Number	
19802	Vein Quartz. 20 cm boulder. Contains aligned selvages of aphanitic grey rock amounting to 2%. Vugs 40%, containing quartz needles to 1 cm. Vugs are lined with red-brown iron oxides. No sulphides.
19803	Vein Quartz. 20 cm boulder. White quartz, 5% chalcopyrite. Malachite staining.
19804	Silicified Rock. Protolith unknown. 25 cm boulder; surface is completely covered with red iron oxide stain. Originally grey rock; now 80% silica, propagating from mm fractures on 3 – 10 mm spacing. 5% very fine pyrite dusting.
19805	Vein Quartz. 10 meters downstream from the exposure of the suicide vein, a few pieces of vein material are present in rocky rubble. 50% white quartz; 50% silicified or chloritized host rock material; 0.5 mm grain size range. 5% pyrite, locally semi-massive; some coarse pyrite crystals are very yellow, may contain some chalcopyrite.
19806	Vein Quartz. Situated as 19805. Massive vein quartz; pyrite 3%; trace chalcopyrite, trace black sphalerite.
19807	Vein Quartz. Boulder; vein must have been at least 20 cm thick. 5 cm band in center of vein contains 5% pyrite, 1% sphalerite and minor chalcopyrite. Weak malachite stain on surface.
19808	Vein Quartz. Boulder at same location as stream sediment sample SZ 104. White quartz, very coarsely sucrosic, from a vein. 10% chloritic remnants of wall rock. 3% chalcopyrite, disseminated.
19809	Altered Basalt. Massive; silicification and epidotization to 50% of rock. Takes the form of hairline quartz veinlets with enveloping epidote alteration. Sulphides not noted.
19810	Basalt. Black, very finely crystalline, locally amygdaloidal. Locally partly silicified. Sulphides are rare. Specimen contains $\pm \frac{1}{2}$ % pyrite, very localized, associated with calcite on a hairline fracture.
19811	Basalt. Very hard, black, very finely crystalline. No sulphides. Characteristic of country rock in this location.
19812	Sandy Tuff? Very hard, finely sucrosic, silica 50%, feldspar 30%, chloritized mafics 20%. Pyrite trace.
19813	Quartzite. 25 cm boulder. Medium grey, very finely crystalline; not an orthoquartzite. Pyrite trace, very finely disseminated. Minor rusty staining.
19814	Lithic Lapilli Tuff (volcanic breccia). Semi-rounded, 25 cm diameter boulder. Very hard, very finely crystalline, felsic groundmass. 60% fragments in $0.1 - 1$ cm size range, mainly felsic volcanic rock debris. 3% pyrite, very finely disseminated. Several similar pieces in this vicinity.
19815	Quartz Vein Boxwork. 50% angular cavities to ½ cm. 10% selvages of epidotized wall rock. 20% iron oxide coating cavities. No remaining sulphides.
19816	Felsic Ash Tuff. 20 cm boulder. Very finely crystalline, medium buff. ½ % pyrite, very finely disseminated along parallel hairline fractures. Oxidized; iron oxide stains 25% of surface.

Sample Number	Description
19817	Basalt. Rounded boulder. Finely crystalline, medium green, chloritized. epidote 20%, finely crystalline in the groundmass and patches up to 3 cm. Chalcopyrite ½ %, with epidote. Malachite trace.
19818	Basalt. Part of brittle shear zone, 1 meter wide, strike 221° dip 80°. Wall rock is massive, finely crystalline basalt. Minor quartz and calcite veining.
19819	Basalt. Float in dry creek bed. Massive finely crystalline basalt; now greenstone. 1 cm quartz vein, 40% vuggy pore space lined with quartz needles. Vein is discontinuous; interrupted by minor cross structures etc. Epidote in veinlets 1 – 2 mm and as local selvages on quartz veins. No sulphides.
19820	Basalt (?) Lapilli Tuff. Groundmass is hard, very finely crystalline, slightly bluish green ash. Lapilli up to 1 cm; aphanitic greenstone. ½ cm "rind" of orange-red Fe oxides on boulder prompted sample. Trace pyrite.
19821	Basaltic Volcanic Breccia. Boulder in dry creek bed, 25 cm diameter. Green groundmass as in 190820; fragments same composition as 19820 but up to 5 cm in size, sub-angular. Thin coating of calcite along preferred fractures. Pyrite disseminated 1/4 %.
173421	Vuggy Vein Quartz. Approx 2 cm thick. No visible sulphides. Slight coating of felsic weathering products on exposed surfaces.
173422	Quartz-Epidote-Calcite Vein. Approximately 3 cm. thick. Fragments of wall rock on margins of vein material bleached from dark green to pale grey. Mafics eliminated and felsic minerals sericitized to dense waxy luster. No visible sulphides.
173423	Altered Basalt. Black rock cut by hairline stringers of grey quartz. Host rock is epidotized, partly carbonatized. Latter alteration results in pinkish grey rock. No visible sulphides.
	A more intensely altered specimen from the same area contains dark green chlorite, yellow-green epidote, a very finely crystalline pinkish mineral which may be carbonate or potassium feldspar, and hairline calcite veinlets. Rock is greenish where dominated by epidote-chlorite and pinkish where dominated by epidote-(kspar?). Both assemblages are cut by hairline calcite veinlets. Pyrite as disseminated traces.
173424	Vuggy quartz vein. Two phases of quartz. First is milky white, sucrosic, relatively dense. Second is coarsely crystalline, to 3 mm, pinkish grey, and vuggy. Host is bleached, partly carbonatized basalt; 20% angular pore space, where (calcite?) has been leached out. No other minerals noted.
173425	Altered Basalt. Dark grey, very fine grained. Mafics partly removed and groundmass of felsic material sericitized to dark grey, dense waxy mass. Moderately hard. Cut by millimetric network of white calcite veinlets. No visible mineralization.
173426	Quartz Vein. Milky white, dense, massive. About 3 cm thick. No visible mineralization. Strikes NE - SW, approx dip 80° SE.
173427	Rusty, Pyritiferous Quartz Vein. Vein shattered, partly healed by medium crystalline pyrite forming 10% of rock. Exposed surfaces orange-red due to oxidation. 3 cm thick.

Sample	Description
Number	
173428	Rusty, Pyritiferous Quartz Vein. Similar to 173427, but pyrite only 3%. Approx 1% chalcopyrite, variable native copper to 1%. 2 cm thick.
173429	Quartz-Calcite Vein. Approx 2 cm thickness of milky white bull quartz, adjacent to 1 cm of white, sucrosic calcite. A few selvages of dark wall rock material, probably basaltic. No visible mineralization.
173430	Quartz-Pyrite-Magnetite Vein. Coarsely crystalline grey-white quartz; vein about 5 cm thick. Pyrite 3% concentrated along fractures within quartz. Magnetite in coarsely crystalline, euhedral clusters, also associated with fractures in quartz. Exposed surface has rusty dark brown coating. This and adjacent vein(let)s has NE – SW strike and 80° SE dip.
173431	Quartz-(Epidote?) Vein. Vuggy quartz, approximately 4 cm thick. 25% fragments of finely crystalline yellow mineral which may be a form of epidote. Yellow mineral appears to have replaced original wall rock and then been fragmented and stoped in to the quartz. Weathered surfaces rusty, but no visible sulphides.
173432	Quartz-Epidote Vein. Massive, milky white bull quartz, approximately 5 cm thick. Seams and traces of epidote and a pinkish mineral, possibly zoisite. No visible sulphides.
173433	Altered Basalt. Soft, dense, very finely crystalline, medium grey. Originally very fine grained volcanic, probably basalt. Altered such that groundmass is now soft, mostly sericite or clay minerals, but still dark. Pyrite 5% as very fine disseminations and minor concentrations along hairline fractures. Exposed surface oxidized to dark brown.
173434	Quartz Vein in Basalt. Basalt is hard, black, aphanitic. Vein is massive white bull quartz, 5 cm thick. Patches and seams of epidote within quartz, 4% of vein. No visible sulphides.
173435	Quartz-Epidote Vein in Basalt. Basalt is black, very finely crystalline, highly magnetic. Vein is 2 cm thick. Magnetite 1%, remainder quartz and epidote in roughly equal amounts. No visible sulphides.
173436	Quartz Vein in Basalt. Basalt is black, very finely crystalline, highly magnetic. Vein is 4 cm thick, consisting of white bull quartz, traces of chalcopyrite and traces of azurite.
173437	Quartz-Pyrite Vein. Clear grey, coarsely crystalline quartz; shattered and healed by 3% pyrite following micro-fractures. Vein about 3 cm thick. Wall rock is medium grained greenstone. About 2 cm of wall rock included in sample. Exposed surface has powdery red coating of iron oxides.
173438	Altered Monzo-Granite (?). Intense bleaching masks original composition. Medium to coarse grained, allotriomorphic granular. 20% 2 mm quartz grains. 2% specks chlorite, relict after mafics. 70% strongly sericitized felsic minerals with moderate degradation to clays. 5% calcite coating fracture surfaces. Trace pyrite.
173439	Basalt. Dark Green to black, very fine grained. Cut by 2 cm vein; 70% magnetite, 10% epidote, 5% quartz. Epidote locally dark green, euhedral, lining vugs. Chalcopyrite 5%, coarse blebs.

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Sample	Description
Number	
173440	Basalt with Quartz-epidote Stringers. Aphanitic, dense black basalt. Stringers 10% of rock. 60% (6% of rock) epidote; 30% (4% of rock) quartz. 10% (1% of rock) chalcopyrite as $2 - 10$ mm blebs in and near veinlets. Wallrock where stringers are most intense is bleached to a medium chlorite green. Minor malachite, plus a black mineral which could be chalcocite.
173441	Quartz Veinlets in Basalt. Veinlets $1 - 3$ mm, cloudy greenish grey, $1 - 2$ per cm. Veinlets not mineralized but rock contains 2% pyrite, very finely disseminated.
173442	Pyritized Greenstone. Pale greyish green, speckled with black. Millimetric black speckles probably are relict mafics; represent 10% of rock. 80% very fine sub-hedral white feldspar crystals; 5% fine black flecks of mafic material. Pyrite 5%, disseminated and in 1 millimeter veinlets.
173443	Pyritized Basalt. Dense, black, very fine grained. 5% quartz as millimetric veinlets. 10% pyrite as millimetric seams and veinlets.
173444	Basalt(?). Dark green, aphanitic, partly serpentinized. Minor carbonate coatings on exposed surfaces. Weakly magnetic.
173445	Quartz-Feldspar-Epidote Vein. 3 cm thick; 60% pinkish, aphanitic potassium feldspar; 20% 3 – 5 mm quartz stringers, cut across vein @ 30° to plane of vein. 20% epidote, patchy, cryptocrystalline. 5% clays after felsic minerals. No visible sulphides.
173446	Quartz Vein. 2 cm thick; walls 3 mm and 6 mm thick; core vuggy; 50% euhedral quartz crystals, 1 mm - 2 mm long. Vuggy part is lined with brown iron oxides. Material in the vein walls is dense, sucrosic quartz. Sulphides not present.
173447	Felsite Dike (?). Pale Greenish white, aphanitic, scratches with a knife readily. Pyrite 6%, disseminated and filling hairline fractures. Chalcopyrite trace.
173448	Felsite. Closely resembles 447.
173449	Quartz Vein. 60% finely sucrosic quartz; 40% euhedral, vuggy crystalline quartz. Minor iron oxides; no visible sulphides.
173450	Greenstone. 10% feldspar phenocrysts, opaque, white, partly degraded to clay, $\frac{1}{2}$ – 1 mm. Groundmass greenish grey, saussuritized, chloritic, finely crystalline. Pyrite trace, disseminated.
173451	Carbonatized Basalt. Patchy, finely crystalline calcite - epidote alteration gives rock a mottled grey and green aspect. Pyrite 3%, finely disseminated, mainly associated with calcite.
173452	Calcite Vein in Black Basalt. Over 80% of sample is vein material. Vein 2 cm thick, massive, white, medium crystalline.
173453	Basalt. Hard, dense, aphanitic, black. ½ cm. waxy greenish carbonate veinlet, pale waxy green.
173454	Basalt. Hard, dense, aphanitic; laced with 10% sub-millimetric white stringers of carbonate. Very rare pyrite crystals. Slight rust stain on fracture surfaces.

Sample	Description
Number	
173455	Siliceous Ash Tuff. Very fine grained, medium greenish grey, texture of fine ash with a few sub-millimetric shards of irregular shape. Partly welded; some devitrification textures. Hard, with hackly fracture. Pyrite 5%, finely disseminated, almost invisible.
173456	Basalt (?). Sericitized, Pyritized. Originally a dark green rock; now sericitized to a waxy grey with 5% remnant flecks of green. Pyrite 5%, very finely disseminated.
173457	Quartz-Feldspar Porphyry. Textures partly obscured by saussuritization; 25% 2 - 3 mm quartz phenocrysts; waxy grey, anhedral. Possible 20% feldspar phenocrysts; obscure, blend in with felsic, saussuritized groundmass. Pyrite ½ %, disseminated, now dominantly oxidized.
173458	Quartz-Epidote-Pyrite Vein. Vein about 4 cm thick. Milky white quartz; 10% epidote as coarsely crystalline radiating clusters within quartz. 2% pyrite, disseminated. Chalcopyrite trace, disseminated, associated with epidote. Coating of malachite along one fracture surface.
173459	Carbonatized Basalt. Dark Green, very finely crystalline. Pervasive alteration to grey medium crystalline calcite. Remnants of uncarbonatized rock are chloritic green, very finely crystalline. Trace chalcopyrite in calcite.
173460	Basalt. Dense, black, very finely crystalline. All exposed surfaces coated with shiny black film of goethite.
173461	Quartz Vein. 4 cm. thick. 50% vuggy pore space lined with medium brown Fe oxides. 25% epidote as centimetric fragments of finely crystalline epidote. No surviving sulphides.
173462	Greenstone. Kaolinized. Originally pale grey green, medium grained. Now laced with seams and pervasive white kaolinite. Minor quartz stringers. Non-sulphidic.
173463	Greenstone. Dull greyish green, aphanitic. 1% epidote in 1 millimeter seams. Trace pyrite, finely disseminated.
173464	Rhyolite Quartz Porphyry. 30% 1 – 3 mm quartz phenocrysts. Medium grey, aphanitic, felsic groundmass. Pyrite ½%, chalcopyrite trace, very finely disseminated.
173465	Quartz Porphyry (Rhyolite?). 25% ½ mm to 1 mm quartz grains, opaque, white, anhedral. Remainder aphanitic, medium grey groundmass. Pyrite 5%, finely disseminated. Exposed surfaces coated with orange-brown Fe oxides.
173466	Gossan; Vuggy Quartz Vein. Gossanous material crumbly, highly vuggy, dark brown, earth. Vein 1 cm thick, probably represents only half of original vein as one side consists of 2 - 3 cm quartz crystals projecting into open space. No visible sulphides.
173467	Carbonatized Basalt. Dark green; colour and texture partly preserved but entire groundmass reacts readily with 10% HCI. 25% of sample is vuggy quartz vein material. Fracture surfaces coated with earthy brown Fe oxides.
173468	Calcite-Wollastonite Skarn. Mottled grey-white, coarsely crystalline calcite. 15% wollastonite as fine radiating clumps. No sulphides recognized.

Sample Number	Description
173469	Vein Quartz. Vein approximately 4 cm thick. Milky white, sucrosic, 7% vuggy. Vugs to 4 mm, coated with dark brown to black iron and manganese oxides. No visible sulphides.
173470	Quartz Vein. 3 millimeters thick. Coarsely crystalline, clear grey. 10% vuggy pore space lined with mm quartz needles. Minor iron oxide staining.
173471	Bleached, Carbonatized Rock. Protolith unknown. Groundmass very finely crystalline, beige; probably a bleached and sericitized mafic volcanic. Shattered by microfractures on centimetric spacing; these healed by dark rusty red weathering carbonate, now mainly goethite. Pyrite 1% disseminated, Chalcopyrite trace.
173472	Quartz-Epidote Veinlet in Basalt. Veinlet in the order of 3 cm; very vuggy with coarse euhedral quartz crystals in vugs. Minor epidote with quartz. Wallrock is finely crystalline, dark green. 4% pyrite, disseminated.

Appendix 4 — Stream Sediment Sample Analyses





COMP: BARAKSO CONSULTING

PROJ:

ATTN: Peter Ronning

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 TEL:(604)980-5814 FAX:(604)980-9621 FILE NO: 4V-0851-LJ1 DATE: 94/09/02

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DHLS DHLS DHLS DHLS DHLS	01 -40 01 -80 02 -40 02 -80 03 -40	2.2.2.1.2.	4 3.07 2 2.96 4 3.26 7 3.21 3 2.07	1	1 1 1 1 1 1	11 13 15 21 24	.6 .4 .3 .4 .2	31 1 29 1 30 1 32 1 26 1	.44 .39 .35 .21 .25	.1 .1 .1 .1	25 25 27 29 17	134 7 140 7 162 7 174 7 57 5	.44 .19 .73 .23 .20	.03 .03 .06 .07 .03	9 3.0 8 2.7 12 3.0 11 2.4 3 2.0	9 1122 7 1225 0 1188 9 1612 5 705	2 1 3 1	.01 .01 .01 .01 .01	81 530 75 520 79 440 72 520 45 520	24 21 22 32 23	23 19 21 24 14	20 22 36 48 151	1	53 55 60 54 45	236.2 231.0 241.5 228.1 146.4	114 117 119 147 60	1111	1 1 6 7 1	12 12 12 13 8	91 84 85 94 50	15 65 30 80 15	8 75 10 12 4
DHLS DHLS DHLS DHLS DHLS	03 -80 04 -40 04 -80 05 -40 05 -80	2. 2. 3.	5 2.21 8 2.47 2 2.30 1 1.59 1 1.85	1	1 1 1 1	38 14 39 66 80	.2 .1 .1 .7 .8	29 1 32 1 32 1 11 13	.40 .35 .35 .47 .53	.1 .1 .1 .1	18 22 21 10 13	75 5 197 7 120 6 33 3 53 5	.95 .07 .80 .77 .04	.03 .03 .04 .05 .08	3 1.8 5 2.3 5 2.1 6 1.2 7 1.3	7 749 4 849 6 795 9 754 7 848	1 1 2 3	.02 .02 .02 .02 .02	50 510 57 600 60 540 23 610 31 690	21 11 15 29 36	13 11 13 14	163 73 60 52 68	1.	.52 1 .61 2 .61 2 .61 2	74.6 27.2 19.8 78.8 98.5	58 81 77 76 88	1 1 1	1 1 14 26	9 9 10 5 5	55 55 63 20 23	15 20 5 30 10	9 8 15 4 8
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SPECIALISTS IN MINERAL ENVIRONMENTS CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:

705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2 TELEPHONE (604) 980-5814 OR (604) 988-4524 FAX (604) 980-9621

SMITHERS LAB.: 3176 TATLOW ROAD SMITHERS, B.C. CANADA VOJ 2N0 TELEPHONE (604) 847-3004 FAX (604) 847-3005

Geochemical Analysis Certificate

IRONMENTS

BARAKSO CONSULTING Company: Project: Attn: Peter Ronning

Date: SEP-02-94

Copy 1. Barakso Consulting, Vancouver, B.C.

We hereby certify the following Geochemical Analysis of 10 sediment samples submitted AUG-16-94 by Peter Ronning.

Sample Number	Ba-Total PPM	
DHLS-01 DHLS-01 DHLS-02 DHLS-02 DHLS-02	-40 112 -80 125 -40 155 -80 138 40 220	
DHLS-03 DHLS-04 DHLS-04 DHLS-05 DHLS-05 DHLS-05	-40 230 -80 233 -40 130 -80 251 -40 599 -80 569	· · · · · · · · · · · · · · · · · · ·

Certified by MIN-EN KABORATORIES

4V-0851-LG1



COMP: JOHN BARAKSO

PROJ: LUCKY

.

ATTN: John Barakso

MIN-EN LABS - ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 TEL:(604)980-5814 FAX:(604)980-9621 FILE NO: 4V-1071-SJ1+2 DATE: 94/10/27

* soil * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL X	ÁS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA %	CD PPM	CO PPM	CU PPM	FE %	K %	LI PPM	MG %	MN PPM	MO PPM	NA %	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TI %	PPI	V ZN 4 PPN	I G/ I PPI	A SN M PPM	W PPM	CR PPM	Au-F	ire Hg PPB PPB
L34-700W L34-725W L34-750W L34-750W L34-775W L34-800W	3.3 4.6 .8 4.7 .1	.90 .36 .82 .30 1.23	1 1 1 1	1 1 1 1	5 4 27 1 33	.5 .1 .1 .1	47 48 13 47 12	.23 .28 .14 .09 .67	.1 .1 .1 .1	18 7 1 5 15	120 4 1 11 74	11.41 6.25 4.41 6.27 3.88	.01 .01 .03 .01 .02	11111	.05 .10 .17 .02 1.11	470 91 129 10 2110	1111	.01 .01 .01 .01 .01	13 1 1 42	270 190 200 80 680	1 1 1 37	1 1 1 5	24 44 17 9 46	1111	.74 .80 .26 .80 .17	400.9 336.3 211. 573.9 112.8	9 6 3 1 1 1 5 1 8 118		1 1 1 1 1 1 1 1	75386	16 1 1 49		3 190 5 185 2 145 1 230 1 145
L34-825W L34-850W L34-875W L34-975W L34-900W L34-910W	.1 .1 1.0 1.0 .9	.97 1.16 .42 .69 .51	1 1 1 1	. 1 1 1 1	20 69 1 7 5	.1 .3 .1 .1 .1	21 6 13 12 11	.42 .59 .43 .66 .50	.1 .1 .1 .1	34 7 1 2 4	111 54 4 10 8	4.88 4.61 3.65 3.89 3.87	.03 .01 .01 .01 .01	1 1 1 1	1.36 1.42 .09 .59 .29	3735 1343 90 227 191	1 1 1 1	.01 .01 .01 .01 .01	25 34 4 14 21	440 1040 110 250 130	41 27 1 2 1	1 3 1 1	29 38 58 93 32	1 1 1 1	.32 .08 .26 .23 .22	145. 101.4 187.8 199.4 186.	5 91 5 57 5 1 5 1	7.		45555	8 44 42 35 41		1 250 2 445 1 225 7 305 25 335
L34-925W L34-950W L34-975W L34-1000W L34-1025W	.5	1.72 1.35 2.43 2.27 1.32	11111	1 1 1 1	51 36 41 46 31	1.3 .9 .8 1.0 .4	17 12 9 6 3	.25 .29 .16 .26 .85	.1 .1 .1 .1	12 7 11 17 8	65 70 107 56 38	9.36 7.72 6.91 5.21 4.69	.01 .02 .02 .02 .03	1111	1.57 .59 .90 .79 1.03	262 168 254 1208 2319	1 1 1	.01 .01 .01 .01 .01	84 55 59 78 61	380 290 480 680 600	21 24 59 61 31	13 9 36 37 7	53 26 47 41 9	1 1 1 1	.26 .15 .11 .05 .03	283.4 171.5 168.8 97.2 110.1	25 5 56 5 60 2 50 1 39		1 1 1 1 1 1 1 1	12 8 8 8 6	115 72 61 64 49		5 295 1 380 6 345 12 420 4 535
L34-1050W L34-1075W L34-1100W L34-1125W L34-1125W L34-1150W	.1 .3 .1 .1 .1	.48 .16 .30 .98 1.78	1 24 1 1	1 1 1 1	11 7 37 23 19	· .1 .1 .1 .1	1 1 1 7	1.89 10.21 2.10 .84 .15	.1 .1 .1 .1 .1	1 1 9 4	1 1 21 21	2.58 .83 1.75 3.28 4.20	.02 .01 .02 .02 .01	1 1 1 1	.27 .11 .15 .50 .82	811 1375 3830 1204 241	11 1 1 1	.01 .01 .01 .01 .01	12 1 7 27 26	440 740 780 390 430	11 3 13 15 27	1 1 1 20	15 65 14 9 28	1 1 1 1	.01 .01 .01 .01 .01	91.5 14.4 77.1 99.3 114.0	5 1 11 37 5 17 5 45			1 1 2 5	1 1 1 28		1 130 6 220 5 195 6 185 4 215
S34-1160W <i>sed</i> L35-525N L35-550N L35-575N L35-600N	.1 .1 .1 .1 4.4	1.75 1.43 1.25 1.15 .66	1 1 1 1	1 1 1 1	26 88 107 38 9	.4 .2 .1 .4 1.5	7 3 5 49	.12 .43 1.01 1.31 .14	.1 .1 .1 .1	2 5 6 2 14	24 37 79 5 71	5.15 3.93 3.52 4.15 10.48	.01 .01 .02 .01 .02	1 1 1 1	1.30 1.05 1.40 1.50 .06	198 696 1562 2221 156	1 1 1 1	.01 .01 .01 .01 .01	17 21 24 14 26	400 510 1240 800 240	32 47 60 28 1	15 10 6 3 3	28 27 39 17 21	1 1 1 1	.11 .04 .06 .04 .80	161.7 113.8 86.0 99.1 408.7	30 3 103 3 158 3 158 48 48 12			6 6 6 3 9	33 46 54 9 26		2 130 3 330 1 375 2 345 1 215
L35-625N L35-650N L35-675N S36-000N <i>sed</i> S36-500N <i>sed</i>	3.7 2.9 1.5 3.6 4.0	.99 .60 1.06 .71 .73	1 1 1 1	1 1 1	9 9 13 6 7	2.0 1.2 2.1 .9 1.2	50 45 45 40 44	.21 .18 .18 .18 .18	.1 .1 .1 .1 .1	14 20 41 10 11	58 46 62 32 40	12.01 8.42 10.95 7.35 7.83	.02 .02 .03 .01 .02	1 29 2 2	.10 .07 .16 .18 .08	337 1083 1825 149 149	1 1 1 1	.01 .01 .01 .01 .01	30 24 32 20 18	340 260 490 260 280	2 25 57 4 3	9 3 16 7 5	35 34 51 40 44	1 1 1 1	.77 .70 .64 .62 .71	371.8 376.6 359.4 325.0 355.5	18 27 73 12 16			9 8 7 7	49 25 40 24 21		1 175 1 180 6 140 1 365 55 470
\$37-4705 <i>\$ed</i> L38-0255 L38-0505 L38-0755 L38-1005	.1 2.3 3.1 .1 3.9	1.08 .82 .91 1.11 .78	1 1 1 1	1 1 1 1	28 8 10 28 7	1.5 1.9 2.3 1.6 1.3	21 30 39 23 41	.30 .19 .16 .43 .17	.1 .1 .1 .1	34 12 14 42 11	73 31 45 100 33	5.25 9.31 11.00 5.05 8.51	.02 .03 .02 .03 .02	6 3 4 6 1	.37 .31 .23 .95 .08	4785 246 201 3881 153	3 1 2 1	.01 .01 .01 .01 .01	35 32 32 43 24	730 470 450 640 450	66 7 10 42 3	23 11 13 23 7	53 36 31 66 36	1	.27 .47 .60 .31 .65	168.4 282.9 375.4 148.8 357.0	102 18 22 93 10	1	1 1 1 1	6 9 10 7 8	34 69 58 32 29	2	67 350 3 110 3 165 2 155 4 205
L38-125S L38-150S L38-175S L38-200S L38-225S	2.2 3.0 2.8 3.6 3.4	1.25 .71 1.74 1.06 .36	1 1 1 1	1 1 1 1	13 8 10 5 4	1.6 1.2 1.2 1.7 .9	29 30 28 39 35	.22 .18 .22 .15 .16	.1 .1 .1 .1	16 8 13 10 9	93 38 107 43 21	6.08 5.89 4.89 8.93 5.94	.03 .02 .02 .01 .01	5 2 5 2 1	.47 .14 .55 .17 .04	760 141 388 91 145	1 3 1	.01 .01 .01 .01 .01	27 19 29 23 15	620 420 830 380 190	26 7 35 7 1	27 11 44 18 2	72 45 72 38 27	1.	.41 .45 .36 .56 .53	204.3 223.7 131.0 255.3 301.2	33 15 46 10 5	1	1 1 1	7 6 7 8 6	35 27 40 44 17	* 3 	3 220 1 315 5 450 5 460 1 410
L38-250S L38-275S L38-300S L38-325S L38-350S	4.0 3.2 3.9 3.9 3.2	.97 .50 .10 .08 .25	1 268 299 159	1 1 1 1	55225	1.6 .9 .2 .1 .5	38 26 13 12 15	.18 .16 .05 .06 .24	.1 .1 .1 .1 .1	10 7 2 2 6	36 27 7 8 37	7.59 4.67 1.22 .87 1.73	.01 .01 .01 .02 .01	2 1 3 3 3	.18 .17 .03 .04 .42	162 102 18 24 197	1 1 2 1	.01 .01 .01 .01 .01	22 16 5 4 12	380 200 80 60 170	9 9 10 10 13	19 10 10 10 11	49 39 14 14 34	1 . 1 . 7 . 4 .	.54 .35 .09 .06 .13	263.7 158.0 42.2 30.1 55.3	11 8 2 18	1 19 20 15		8 5 2 2 3	36 23 10 9 14		3 350 1 515 7 420 6 325 4 315
L38-375S L38-400S L38-425S	.1 2.0 .1	.74 .64 .84	1	1 1 1	28 12 21	.9 .9 1.8	16 29 24	.30 .26 .23	.1 .1 .1	25 14 75	67 78 95	3.40 4.39 5.70	-04 -01 -02	8 4 3	.29 .72 .18	3908 1314 3184	4 1 1	.01 .01 .01	27 28 29	490 180 590	36 23 27	19 14 15	37 39 35	1 . 1 . 1 .	.18 40 33	112.2 140.6 201.1	131 72 42	1 1 1	1 1 1	4 5 5	20 23 13		3 415 5 430 1 420
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COMP: JOHN BARAKSO

PROJ: LUCKY

MIN-EN LABS - ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 4V-1071-SJ3+4

DATE: 94/10/27

* soil * (ACT:F31)

ATTN: John	Barakso	. •									TEL:(604)98	0-581	4	FAX:((604)9	80-9	621												* :	soil '	* (A	.CT:F3
SAMPLE	A	GAL Ki Xi	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA %	CD PPM	CO PPM	CU PPM	FE %	K %	LI PPM	MG %	MN PPM	MO PPM	NA %	NI PPM	P PPM	PB PPM	SB PPM	SR PP m p i	TH 1 Pm	[] %	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR / PPM	Au-Fir PP	e Hg 'B PPB
L38-450S L38-475S L38-025N L38-050N L38-075N	3.	1 1.30 3 1.78 2 1.59 4 .88 2 .61	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1	11 31 28 17 16	2.3 2.1 2.0 1.6 .1	7 15 31 47 27	.19 .18 .27 .27 .27	.1 .1 .1 .1	6 7 27 15 7	17 48 104 56 33	5.00 6.22 7.07 9.23 2.38	.02 .05 .05 .03 .06	15 14 17 5 3	1.78 .64 1.44 .26 .15	624 214 1807 590 453	4 5 2 1 1	.01 .01 .01 .13 .01	28 27 63 43 10	390 850 540 350 790	42 40 54 21 30	33 44 38 13 10	54 68 77 53 57	11111	04 1 16 1 57 2 71 3 41 1	42.2 88.9 15.1 68.8 41.5	76 47 122 41 17	1 1 1	11111	6 9 11 11 5	23 76 90 80 24	. 1	2 200 5 360 1 245 5 165 2 310
L38-100N L38-125N L38-150N L38-150N L38-175N L38-200N	5. 2. 4. 4.	9 .65 9 .65 9 1.35 0 1.31 8 .67	1	1 1 1 1	8 15 10 10 11	1.8 1.3 1.8 2.6 1.2	57 36 43 54 59	.23 .23 .27 .23 .23 .28	.1 .1 .1 .1	15 12 14 15 15	54 37 82 61 58	11.41 7.13 9.95 13.38 9.73	.02 .03 .04 .03 .03	2544	.18 .12 .34 .10 .09	73 194 429 167 360	1 1 1 1	.01 .13 .01 .08 .12	32 33 31 36 41	280 280 340 440 250	5 16 14 21 10	15 6 22 19 2	56 47 85 62 68	1.8	33 4 56 2 55 3 30 4 22 3	42.5 94.6 15.0 30.2 91.5	13 39 29 21 23	1 1 1 1	1 1 1 1	14 7 10 12 9	110 33 69 67 32		1 200 4 215 4 205 2 315 3 140
L38-225N L38-250N L38-275N L38-300N L38-325N	3. 3. 2. 3. 5.	5.86 8.89 9.2.28 1.88 5.17	1 1 1 1	1 1 1 1	10 12 27 13 5	.9 2.0 2.6 2.5 .3	44 51 43 48 58	.24 .24 .28 .24 .15	.1 .1 .1 .1	12 14 18 16 13	51 54 119 148 31	6.61 11.21 10.88 11.43 6.62	.04 .04 .02 .03 .03	4 3 24 11 1	.27 .17 .19 .37 .04	243 204 209 389 353	1 1 6 1	.09 .01 .01 .01 .01	25 27 36 36 25	440 430 480 540 260	22 11 30 21 3	12 13 47 34 1	63 56 77 80 10	1.0 1.0 1.0 1.0	57 2 73 3 53 3 72 4	93.7 25.8 21.9 61.4 45.7	24 21 115 39 15	1 1 1 1	1 1 1 1	8 9 12 12 8	31 45 66 63 6		8 270 4 230 5 250 5 320 2 185
L38-350N L38-375N L38-400N L38-425N L38-425N L38-450N	5. 2. 5. 3.	1 1.08 7 .37 7 .57 1 1.36 7 1.30		11111	10 7 9 102 14	2.0 .9 .5 2.0 2.0	64 35 63 29 50	.23 .15 .29 .62 .24	.1 .1 .1 .1	16 9 16 35 14	58 39 58 149 67	12.62 6.33 8.95 6.80 11.29	.02 .04 .03 .06 .03	2 1 8 6	.18 .11 .07 1.57 .24	219 184 225 3030 262	1 1 4 1	.01 .13 .15 .01 .10	30 31 51 53 43	280 440 230 720 410	2 13 9 78 24	10 1 30 20	54 20 65 122 62	1.9	28 4 55 30 59 4 56 1 5 30	53.0 58.4 94.9 70.8 40.5	14 20 24 148 36	1 1 1 1	1 1 1 1	11 6 9 8 10	44 11 11 38 48	1	1 200 8 135 1 145 2 375 2 385
L38-475N L38-500N L38-510N L38-525N L38-525N L38-550N	2. 2. 2. 1.	7.77 5.59 1.98 5.1.10 5.60	1 1 1 1 1	11111	16 9 28 18 14	1.9 1.4 1.5 2.0 .9	38 36 27 36 17	.33 .23 .56 .43 .20	.1 .1 .1 .1	14 11 37 13 7	52 40 129 74 48	9.29 7.42 5.32 9.38 4.14	.04 .02 .06 .03 .03	3 1 5 1	.10 .08 1.21 .18 .08	159 228 4272 238 83	4 1 2 1	.11 .01 .01 .01 .01	30 19 39 25 12	410 230 640 310 200	19 16 68 21 40	9 21 23 11	45 42 89 102 47		55 34 50 29 55 10 7 3 26 1	49.3 96.0 63.6 13.3 70.6	45 18 95 40 26	1 1 1 1	1 1 1 1	7 6 8 3	24 19 24 33 12	3	2 145 7 130 4 500 4 145 4 180
L38-575N S42-000N J S42-035N S S42-045N J L250	sed sed sed	4 .78 1 1.46 1 1.37 1 1.19 1 .51	1 1	1 1 1 1	8 49 38 30 127	2.4 1.7 1.4 1.6 1.1	46 13 15 15 3	.16 1.10 .62 .55 .25	.1 .1 .1	15 20 25 25 5	101 117 90 84 210	12.13 3.76 3.96 4.11 1.99	.01 .04 .04 .04 .06	1 8 8 3	.09 1.08 .89 .97 .58	236 2334 2699 2583 553	14434	.01 .01 .01 .01 .01	30 70 53 48 17	350 1000 750 740 330	1 63 58 58 22	7 35 34 28 12	25 91 88 62 26	1.7	1 4 2 1 6 1 7 1 2	59.7 57.2 09.4 15.2 54.9	20 217 145 105 48	1 1 1 1	1 1 1 1	8 8 7 2	24 74 55 54 7	3	2 200 7 440 5 415 3 365 1 105
L300 L350 L400 L450 L500	1.	.55 2 2.09 1 1.56 0 1.97 7 1.36	11111	1 1 1 1	14 14 29 19 27	.1 1.9 2.4 2.2 1.9	3 22 16 29 46	.08 .22 .37 .14 .23	.1 .1 .1 .1	1 11 13 11 17	13 156 81 86 90	.56 6.24 6.98 8.19 9.75	.03 .01 .03 .02 .02	2 7 10 8 4	.08 .71 .83 .53 .76	32 251 820 225 425	2652	.01 .01 .01 .01 .01	3 29 30 31 33	190 520 740 410 450	12 35 38 32 18	13 49 37 44 26	15 49 47 45 44	1.0	06 28 14 19 13 58 24 57 44	53.0 42.2 51.9 45.4 45.4	7 33 59 33 38	1 1 1 1	1 1 1	1 8 6 11 11	6 46 28 74 46	1 25 1	5 125 0 275 5 330 4 310 3 165
S1500E SE N1550E N1600E N1650E N1650E N1700E	2d 1. 1. 2. 1.	5 1.13 5 1.53 3 1.69 43 2 1.44	1 1 1 1	1 1 1 1	131 16 11 11 16	2.1 2.1 2.0 1.1 1.9	23 26 28 23 23	.79 .24 .11 .04 .16	.1 .1 .1 .1	18 16 11 7 10	247 145 129 26 97	6.13 6.88 8.13 5.47 6.67	.06 .02 .01 .03 .02	10 2 11 9 1 8	2.07 .97 .37 .09 .48	1588 623 285 125 364	1.	.01 .01 .01 .01 .01	39 39 28 16 26	610 480 610 230 500	33 29 24 3 21	23 33 37 5 31	31 60 41 6 36		51 17 55 20 57 29 59 30 53 19	77.5 05.3 01.7 05.2 06.8	76 55 33 10 34	11111	1111	689 67	23 43 52 22 33		2 145 1 170 5 285 3 105 1 290
N1750E N1800E N1850E N1900E L2425	1.1.2.	2 2.55 1.78 1.46 2 1.39 7 1.72	1 1 1 1 1 1 1	1 1 1 1	15 20 19 26 18	2.4 2.4 2.7 2.7 1.9	32 34 40 29 16	.30 .52 .28 .35 .18	.1 .1 .1 .1	38 24 18 20 8	320 278 176 186 63	7.43 7.99 11.02 8.96 5.69	.01 .03 .03 .02 .03	13 13 11 14 11	1.20 1.70 .40 .39 .82	1278 1545 678 1155 274	42113	.01 .01 .01 .01	53 58 38 36 29	770 620 660 790 360	44 33 11 17 30	61 35 28 29 41	51 37 33 41 48	1.4	1 20 8 2 7 3 1 2 9 1	08.1 58.4 71.2 92.5 53.3	82 77 45 55 40		1111	11 9 10 9 8	53 48 48 55 67	1	7 310 4 230 0 205 3 285 2 315
L2450 L2500 L2550		2 1.46 9 1.28 5 2.63	1	1 1 1	29 32 32	2.3 2.0 2.2	12 22 17	.14 .29 .29	.1 .1 .1	8 14 14	60 79 105	6.01 6.39 5.01	.03 .04 .03	15 10 12	.71 .98 1.43	269 869 957	2 1 5	.01 .01 .01	29 43 62	350 520 1030	29 30 56	36 29 64	40 48 78	1 .1 1 .2 1 .1	1 14 9 19 8 13	5.8 7.1 52.7	43 45 66	1	1 1 1	7 9 11	50 63 91	1	1 280 5 210 2 435
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COMP: JOHN BAR ROJ: LUCKY ITTN: John Bar	RAKSO			, ,				₩ 705	IIN- WEST 1 TEL:(EN 15th (604)	LAB ST., 5 980-5	S - NORTH B14	I VANG	ICP COUVER : (604)	REI , B.(980-9	POR C. V7 9621	Т М 1т2	2									F1 *	LE NO: D/ soil *	4V-1071-S. TE: 94/10/2 (ACT:F31
SAMPLE NUMBER	AG AL PPM %	AS PPM I	B B PPM PP	A BE M PPN	BI PPM	CA %	CD PPM	CO PPM	CU PPM	FE %	K %	LI PPM	MG %	MN PPM	MO PPM	NA %	NI PPM	P PPM	PB PPM I	SB PPM 1	SR PPM P	TH T P m	1 % F	V PPM P	ZN PM P	GA S Pm Pp	N N M PPN	I CR A	u-Fire Hg PPB PPB
L2600 L2650 L2700 L2750 L2800	1.1 1.98 .1 1.57 .9 1.63 .5 1.68 .6 1.38	1	1 5 1 5 1 6 1 4	7 2.8 7 2.2 2 2.1 0 1.8 5 2.0	26 22 25 19 18	.25 .45 .40 .49 .24	.1 .1 .1 .1	17 16 16 13 13	142 8. 104 5. 126 6. 91 5. 71 6.	.38 .54 .33 .23 .04	.06 .05 .05 .03 .03	14 11 1 14 1 11 1 12	.62 .54 .24 .10 .41	805 1653 918 853 625	24543	.01 .01 .01 .01 .01	42 56 46 39 26	700 670 540 700 510	38 43 36 40 31	47 38 39 39 33	59 70 75 80 51	1.3 1.2 1.3 1.2 1.2	3 250 5 171 1 197 4 142 3 184	.1 .2 .0 .3	66 63 62 59 47	1111	1 10 1 9 1 10 1 8 1 7	0 64 9 70 9 73 8 64 7 46	3 275 2 245 6 285 3 250 1 240
L2825 L2850 L2900 L2950 L3150	.1 1.41 1.8 1.53 .9 2.05 1.2 1.60 .1 1.67	1 1 1 1	1 9 1 1 1 2 1 3	4 2.6 7 1.7 5 1.4 4 1.9 3 2.2	17 26 16 23 16	.58 .25 .30 .18 .13	.1 .1 .1	17 11 10 9 12	191 6. 83 5. 109 4. 67 6. 64 6.	.07 .90 .02 .77 .27	.08 .03 .03 .02 .02	11 1 6 1 7 1 10 12	.98 2 .10 .20 .36 .54	2221 364 433 368 688	34613	.01 .01 .01 .01 .01	49 33 32 23 34	750 610 780 620 860	42 39 56 27 43	35 35 51 36 42	53 63 76 52 47	1 .1 1 .3 1 .1 1 .3 1 .1	7 176 6 184 8 106 3 226 6 178	.8	84 45 61 42 61	1 1 1 1	1 8 1 9 1 8 1 9 1 9	43 62 59 52 69	9 345 2 355 4 470 3 140 3 255
L3200 L3250 L3300 S3340 sed	.6 1.47 .2 1.04 .1 2.00 .1 1.34	1 1 1	1 2 1 7 1 5 1 6	0 1.7 7 1.9 1 2.6 2 1.7	14 10 11 11	.19 .85 .23 .58	.1 .1 .1 .1	6 11 15 11	31 5. 82 3. 125 5. 68 4.	.45 .98 .49 .50	.03 .06 .05 .05	7 12 1 16 1 13 1	.43 .86 .54 1 .49	199 832 1138 747	2 6 8 6	.01 .01 .01 .01	20 45 1 48 1 43 1	530 490 690 220	29 44 64 41	36 26 52 33	62 107 88 82	1 .1 1 .0 1 .0 1 .1	9 180 9 96 9 151 1 118	.4 .9 .0	22 97 92 87	1 1 1	1 8 1 7 1 12 1 7	57 66 114 64	2 200 39 235 8 400 6 200
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Appendix 5 — Soil Sample Analyses

report 21-5: Lucky





PROJ: LUCKY

ATTN: John Barakso

MIN-EN LABS - ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 TEL:(604)980-5814 FAX:(604)980-9621 FILE NO: 4V-1071-SJ1+2 DATE: 94/10/27

* soil * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL %	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA %	CD PPM	CO PPM	CU PPM	FE %	K %	LI PPM	MG %	MN PPM	MO PPM	NA %	N I PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TI %	PPI	/ ZN I PPM	GA PPM	SN PPM	W PPM	CR PPM	Au-Fir PF	re Hg PB PPB
L34-700W L34-725W L34-750W L34-750W L34-775W L34-800W	3.3 4.6 .8 4.7 .1	.90 .36 .82 .30	1 1 1 1	1 1 1 1	5 4 27 1 33	.5 .1 .1 .1	47 48 13 47 12	.23 .28 .14 .09 .67	.1 .1 .1 .1	18 7 1 5 15	120 4 1 11 74	11.41 6.25 4.41 6.27 3.88	.01 .01 .03 .01 .02	11111	.05 .10 .17 .02 1.11	470 91 129 10 2110	1111	.01 .01 .01 .01 .01	13 1 1 42	270 190 200 80 680	1 1 1 37	1 1 1 5	24 44 17 9 46	1111	.74 .80 .26 .80 .17	400.9 336.3 211.1 573.5 112.8	6 1 1 1 1 1 1 1 1 1 1	1111	1 1 1 1	75386	16 1 1 49		3 190 5 185 2 145 1 230 1 145
L34-825W L34-850W L34-875W L34-970W L34-910W	.1 .1 1 1.0 1.0 .9	.97 .16 .42 .69 .51	1 1 1 1	11111	20 69 1 7 5	.1.3.1.1.	21 6 13 12 11	.42 .59 .43 .66 .50	.1	34 7 1 2 4	111 54 4 10 8	4.88 4.61 3.65 3.89 3.87	.03 .01 .01 .01 .01	11111	1.36 1.42 .09 .59 .29	3735 1343 90 227 191	1111	.01 .01 .01 .01	25 34 14 21	440 1040 110 250 130	41 27 1 2 1	1 3 1 1	29 38 58 93 32	1 1 1 1	.32 .08 .26 .23 .22	145.5 101.4 187.8 199.4 186.1	91 57 1 1	11111	1111	45555	8 44 42 35 41	2	1 250 2 445 1 225 7 305 5 335
L34-925W L34-950W L34-975W L34-1000W L34-1025W	.5 1 .1 1 .1 2 .1 1	.72 .35 2.43 2.27 1.32	1 1 1 1	1 1 1 1	51 36 41 46 31	1.3 .9 .8 1.0 .4	17 12 9 6 3	.25 .29 .16 .26 .85	.1 .1 .1 .1	12 7 11 17 8	65 70 107 56 38	9.36 7.72 6.91 5.21 4.69	.01 .02 .02 .02 .03	1 1 1 1	1.57 .59 .90 .79 1.03	262 168 254 1208 2319	1 1 1 1	.01 .01 .01 .01 .01	84 55 59 78 61	380 290 480 680 600	21 24 59 61 31	13 9 36 37 7	53 26 47 41 9	1 1 1 1	.26 .15 .11 .05 .03	283.4 171.5 168.8 97.2 110.1	25 56 60 50 39	1 1 1 1	1 1 1 1	12 8 8 8 6	115 72 61 64 49	1	5 295 1 380 6 345 2 420 4 535
L34-1050W L34-1075W L34-1100W L34-1125W L34-1125W L34-1150W	.1 .3 .1 .1 .1	.48 .16 .30 .98 .78	1 24 1 1	1 1 1 1	11 7 37 23 19	· .1 .1 .1 .1	1 1 1 7	1.89 10.21 2.10 .84 .15	.1 .1 .1 .1 .1	1 1 9 4	1 1 21 21	2.58 .83 1.75 3.28 4.20	.02 .01 .02 .02 .01	1 1 1 1	.27 .11 .15 .50 .82	811 1375 3830 1204 241	11 1 1 1	.01 .01 .01 .01 .01	12 1 7 27 26	440 740 780 390 430	11 3 13 15 27	1 1 1 20	15 65 14 9 28	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	.01 .01 .01 .01 .01	91.5 14.4 77.1 99.3 114.0	11 37 17 45	1 1 1 1	1 1 1	1 1 2 5	1 1 1 28		1 130 6 220 5 195 6 185 4 215
S34-1160W L35-525N L35-550N L35-575N L35-600N	.1 1 .1 1 .1 1 .1 1 4.4	.75 .43 .25 .15 .66	1 1 1 1	1 1 1 1	26 88 107 38 9	.4 .2 .1 .4 1.5	7 3 5 49	.12 .43 1.01 1.31 .14	.1 .1 .1 .1	2 5 6 2 14	24 37 79 5 71	5.15 3.93 3.52 4.15 10.48	.01 .01 .02 .01 .02	1 1 1 1	1.30 1.05 1.40 1.50 .06	198 696 1562 2221 156	1 1 1 1	.01 .01 .01 .01 .01	17 21 24 14 26	400 510 1240 800 240	32 47 60 28 1	15 10 3 3	28 27 39 17 21	1 1 1 1	.11 .04 .06 .04 .80	161.7 113.8 86.0 99.1 408.7	30 103 158 48 12	1 1 1 1	1 1 1	6 6 6 3 9	33 46 54 9 26		2 130 3 330 1 375 2 345 1 215
L35-625N L35-650N L35-675N S36-000N S36-500N	3.7 2.9 1.5 1 3.6 4.0	.99 .60 .06 .71 .73	1 1 1 1 1	1 1 1 1	9 9 13 6 7	2.0 1.2 2.1 .9 1.2	50 45 45 40 44	.21 .18 .18 .18 .19	.1 .1 .1 .1	14 20 41 10 11	58 46 62 32 40	12.01 8.42 10.95 7.35 7.83	.02 .02 .03 .01 .02	12922	.10 .07 .16 .18 .08	337 1083 1825 149 149	1 1 1 1	.01 .01 .01 .01 .01	30 24 32 20 18	340 260 490 260 280	2 25 57 4 3	9 3 16 7 5	35 34 51 40 44	1 1 1 1	.77 .70 .64 .62 .71	371.8 376.6 359.4 325.0 355.5	18 27 73 12 16	1 1 1 1	1 1 1 1	9 8 9 7 7	49 25 40 24 21	5	1 175 1 180 6 140 1 365 5 470
\$37-4705 L38-0255 L38-0505 L38-0755 L38-0755 L38-1005	.1 1 2.3 3.1 .1 1 3.9	.08 .82 .91 .11 .78	1 1 1 1	1 1 1 1 1	28 8 10 28 7	1.5 1.9 2.3 1.6 1.3	21 30 39 23 41	.30 .19 .16 .43 .17	.1 .1 .1 .1	34 12 14 42 11	73 31 45 100 33	5.25 9.31 11.00 5.05 8.51	.02 .03 .02 .03 .03 .02	63 46 1	.37 .31 .23 .95 .08	4785 246 201 3881 153	3 1 2 1	.01 .01 .01 .01 .01	35 32 32 43 24	730 470 450 640 450	66 7 10 42 3	23 11 13 23 7	53 36 31 66 36	1 1 1	.27 .47 .60 .31 .65	168.4 282.9 375.4 148.8 357.0	102 18 22 93 10	1 1 1 1	1 1 1 1	6 9 10 7 8	34 69 58 32 29	26	7 350 3 110 3 165 2 155 4 205
L38-125S L38-150S L38-175S L38-200S L38-225S	2.2 1 3.0 2.8 1 3.6 1 3.4	.25 .71 .74 .06 .36	1 1 1 1	1 1 1 1	13 8 10 5 4	1.6 1.2 1.2 1.7 .9	29 30 28 39 35	.22 .18 .22 .15 .16	.1 .1 .1 .1	16 8 13 10 9	93 38 107 43 21	6.08 5.89 4.89 8.93 5.94	.03 .02 .02 .01 .01	5 2 5 2 1	.47 .14 .55 .17 .04	760 141 388 91 145	1 1 3 1 1	.01 .01 .01 .01 .01	27 19 29 23 15	620 420 830 380 190	26 7 35 7 1	27 11 44 18 2	72 45 72 38 27	1 1 1 1	.41 .45 .36 .56 .53	204.3 223.7 131.0 255.3 301.2	33 15 46 10 5	1 1 1 1	1 1 1 1	7 6 7 8 6	35 27 40 44 17	ډ.	3 220 1 315 5 450 5 460 1 410
L38-250S L38-275S L38-300S L38-325S L38-350S	4.0 3.2 3.9 3.9 3.2	.97 .50 .10 .08 .25	1 268 299 159	1 1 1 1	55225	1.6 .9 .2 .1	38 26 13 12 15	.18 .16 .05 .06 .24	.1 .1 .1 .1	10 7 2 6	36 27 7 8 37	7.59 4.67 1.22 .87 1.73	.01 .01 .01 .02 .01	21333	.18 .17 .03 .04 .42	162 102 18 24 197	1 1 2 1	.01 .01 .01 .01 .01	22 16 5 4 12	380 200 80 60 170	9 9 10 10 13	19 10 10 10 11	49 39 14 14 34	1 1 7 4	.54 .35 .09 .06 .13	263.7 158.0 42.2 30.1 55.3	11 8 2 2 18	1 19 20 15	1 1 1 1	85223	36 23 10 9 14	-	3 350 1 515 7 420 6 325 4 315
L38-375S L38-400S L38-425S	.1 2.0 .1	.74 .64 .84	1 1 1	1 1 1	28 12 21	.9 .9 1.8	16 29 24	.30 .26 .23	.1 .1 .1	25 14 75	67 78 95	3.40 4.39 5.70	.04 .01 .02	8 4 3	.29 .72 .18	3908 1314 3184	4 1 1	.01 .01 .01	27 28 29	490 180 590	36 23 27	19 14 15	37 39 35	1 1 1	.18 .40 .33	112.2 140.6 201.1	131 72 42	1 1 1	1 1 1	4 5 5	20 23 13		3 415 5 430 1 420
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COMP: JOHN BARAKSO

PROJ: LUCKY

ATTN: John Barakso

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 TEL:(604)980-5814 FAX:(604)980-9621 FILE NO: 4V-1071-SJ3+4 DATE: 94/10/27

• soil * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL %	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA %	CD PPM	CO PPM	CU PPM	FE %	K %	LI PPM	MG %	MN PPM	MO PPM	NA %	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TI %	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	Au-Fi P	re Hg 'PB PPB
L38-450S L38-475S L38-025N L38-050N L38-075N	.1 .3 .2 3.4 2.2	.30 .78 .59 .88 .61	1 1 1 1	1 1 1 1	11 31 28 17 16	2.3 2.1 2.0 1.6 .1	7 15 31 47 27	.19 .18 .27 .27 .27	.1 .1 .1 .1	6 7 27 15 7	17 48 104 56 33	5.00 6.22 7.07 9.23 2.38	.02 .05 .05 .03 .06	15 14 17 5 3	1.78 .64 1.44 .26 .15	624 214 1807 590 453	4 5 2 1 1	.01 .01 .01 .13 .01	28 27 63 43 10	390 850 540 350 790	42 40 54 21 30	33 44 38 13 10	54 68 77 53 57	1 1 1 1 1	.04 .16 .37 .71 .41	142.2 188.9 215.1 368.8 141.5	76 47 122 41 17	1111	1 1 1	6 9 11 11 5	23 76 90 80 24		2 200 5 360 11 245 5 165 2 310
L38-100N L38-125N L38-150N L38-175N L38-200N	5.0 2.9 2.9 4.0 4.8	.97 .65 .35 .31 .67	1 1 1 1	1 1 1 1	8 15 10 10 11	1.8 1.3 1.8 2.6 1.2	57 36 43 54 59	.23 .23 .27 .23 .28	.1 .1 .1 .1	15 12 14 15 15	54 37 82 61 58	11.41 7.13 9.95 13.38 9.73	.02 .03 .04 .03 .03	2 5 4 4 1	.18 .12 .34 .10 .09	73 194 429 167 360	1 1 1 1	.01 .13 .01 .08 .12	32 33 31 36 41	280 280 340 440 250	5 16 14 21 10	15 6 22 19 2	56 47 85 62 68	1 1 1 1	.83 .56 .65 .80 .92	442.5 294.6 315.0 430.2 391.5	13 39 29 21 23	1 1 1	1 1 1	14 7 10 12 9	110 33 69 67 32		1 200 4 215 4 205 2 315 3 140
L38-225N L38-250N L38-275N L38-300N L38-325N	3.5 3.8 2.9 3.1 5.5	.86 .89 2.28 1.88 .17	1 1 1 1	1 1 1 1	10 12 27 13 5	.9 2.0 2.6 2.5 .3	44 51 43 48 58	.24 .24 .28 .24 .15	.1 .1 .1 .1	12 14 18 16 13	51 54 119 148 31	6.61 11.21 10.88 11.43 6.62	.04 .04 .02 .03 .03	4 3 24 11 1	.27 .17 .19 .37 .04	243 204 209 389 353	1 1 6 1	.09 .01 .01 .01 .01 .10	25 27 36 36 25	440 430 480 540 260	22 11 30 21 3	12 13 47 34 1	63 56 77 80 10	1 1 1 1 1	.67 .73 .63 .72 .91	293.7 325.8 321.9 361.4 445.7	24 21 115 39 15	1 1 1 1	1 1 1 1	8 9 12 12 8	31 45 66 63 6		8 270 4 230 5 250 5 320 2 185
L38-350N L38-375N L38-400N L38-425N L38-425N L38-450N	5.1 1 2.9 5.9 .1 1 3.7 1	.08 .37 .57 .36 .30	11111	11111	10 7 9 102 14	2.0 .9 .5 2.0 2.0	64 35 63 29 50	.23 .15 .29 .62 .24	.1 .1 .1 .1	16 9 16 35 14	58 39 58 149 67	12.62 6.33 8.95 6.80 11.29	.02 .04 .03 .06 .03	2 1 8 6	.18 .11 .07 1.57 .24	219 184 225 3030 262	1 1 4 1	.01 .13 .15 .01 .10	30 31 51 53 43	280 440 230 720 410	2 13 9 78 24	10 1 30 20	54 20 65 122 62	1 1 1	.98 .55 .99 .36 .75	433.0 368.4 494.9 170.8 340.5	14 20 24 148 36	1 1 1 1	1 1 1 1	11 6 9 8 10	44 11 11 38 48		1 200 8 135 1 145 12 375 2 385
L38-475N L38-500N L38-510N L38-525N L38-525N L38-550N	2.7 2.9 .1 2.6 1 1.5	.77 .59 .98 .10 .60	1111	11111	16 9 28 18 14	1.9 1.4 1.5 2.0 .9	38 36 27 36 17	.33 .23 .56 .43 .20	.1 .1 .1 .1	14 11 37 13 7	52 40 129 74 48	9.29 7.42 5.32 9.38 4.14	.04 .02 .06 .03 .03	3 1 6 5 1	.10 .08 1.21 .18 .08	159 228 4272 238 83	4 1 2 1 1	.11 .01 .01 .01 .01	30 19 39 25 12	410 230 640 310 200	19 16 68 21 40	9 9 21 23 11	45 42 89 102 47	1 1 1	-55 -50 -35 -47 -26	349.3 296.0 163.6 313.3 170.6	45 18 95 40 26	1 1 1 1	1 1 1	7 6 8 3	24 19 24 33 12		2 145 7 130 34 500 4 145 4 180
L38-575N S42-000N S42-035N S42-045N L250	3.4 .1 1 .1 1 .1 1	.78 .46 .37 .19 .51	1111	1 1 1	8 49 38 30 127	2.4 1.7 1.4 1.6 1.1	46 13 15 15 3	.16 1.10 .62 .55 .25	.1 .1 .1 .1	15 20 25 25 5	101 117 90 84 210	12.13 3.76 3.96 4.11 1.99	.01 .04 .04 .04 .06	1 8 8 3	.09 1.08 .89 .97 .58	236 2334 2699 2583 553	14434	.01 .01 .01 .01 .01	30 70 53 48 17	350 1000 750 740 330	1 63 58 58 22	7 35 34 28 12	25 91 88 62 26	1111	.71 .12 .16 .17 .02	439.7 87.2 109.4 115.2 34.9	20 217 145 105 48	1	1 1 1	8 8 7 2	24 74 55 54 7		2 200 7 440 5 415 3 365 31 105
L300 L350 L400 L450 L500	.4 1.2 2 .1 1 2.0 1 3.7 1	.55 .09 .56 .97 .36	1 1 1 1	1 1 1 1	14 14 29 19 27	.1 1.9 2.4 2.2 1.9	3 22 16 29 46	.08 .22 .37 .14 .23	.1 .1 .1 .1	1 11 13 11 17	13 156 81 86 90	.56 6.24 6.98 8.19 9.75	.03 .01 .03 .02 .02	2 7 10 8 4	.08 .71 .83 .53 .76	32 251 820 225 425	26521	.01 .01 .01 .01 .01	3 29 30 31 33	190 520 740 410 450	12 35 38 32 18	13 49 37 44 26	15 49 47 45 44	1 1 1	.06 .28 .19 .38 .67	33.0 142.2 131.9 245.4 445.4	7 33 59 33 38	1 1 1	1 1 1	1 8 6 11 11	6 46 28 74 46	2	5 125 10 275 55 330 4 310 13 165
S1500E N1550E N1600E N1650E N1700E	.5 1 1.5 1 1.8 1 2.1 1.2 1	.13 .53 .69 .43 .44	1 1 1 1	1111	131 16 11 11 16	2.1 2.1 2.0 1.1 1.9	23 26 28 23 23	.79 .24 .11 .04 .16	.1 .1 .1 .1	18 16 11 7 10	247 145 129 26 97	6.13 6.88 8.13 5.47 6.67	.06 .02 .01 .03 .02	10 11 9 1 8	2.07 .97 .37 .09 .48	1588 623 285 125 364	1 1 1 1	.01 .01 .01 .01 .01	39 39 28 16 26	610 480 610 230 500	33 29 24 3 21	23 33 37 5 31	31 60 41 6 36	1 1 1 1	.31 .35 .37 .39 .33	177.5 205.3 251.7 305.2 196.8	76 55 33 10 34	1 1 1 1	1 1 1	6 8 9 6 7	23 43 52 22 33		2 145 1 170 5 285 3 105 1 290
N1750E N1800E N1850E N1900E L2425	1.2 2 1.1 1 2.4 1 .9 1	2.55 .78 .46 .39 .72	11111	1 1 1 1	15 20 19 26 18	2.4 2.4 2.7 2.7 1.9	32 34 40 29 16	.30 .52 .28 .35 .18	.1 .1 .1 .1	38 24 18 20 8	320 278 176 186 63	7.43 7.99 11.02 8.96 5.69	.01 .03 .03 .02 .03	13 13 11 14 11	1.20 1.70 .40 .39 .82	1278 1545 678 1155 274	4 2 1 3	.01 .01 .01 .01 .01	53 58 38 36 29	770 620 660 790 360	44 33 11 17 30	61 35 28 29 41	51 37 33 41 48	1 1 1 1	.41 .48 .57 .41 .19	208.1 238.4 371.2 292.5 153.3	82 77 45 55 40	1 1 1 1	1 1 1	11 9 10 9 8	53 48 48 55 67		7 310 4 230 10 205 3 285 2 315
L2450 L2500 L2550	.2 1 .9 1 .4 2	.46 .28 2.63	1 1 1	1 1 1	29 32 32	2.3 2.0 2.2	12 22 17	.14 .29 .29	.1 .1 .1	8 14 14	60 79 105	6.01 6.39 5.01	.03 .04 .03	15 10 12	.71 .98 1.43	269 869 957	2 1 5	.01 .01 .01	29 43 62	350 520 1030	29 30 56	36 29 64	40 48 78	1 1 1	.11 .29 .18	145.8 197.1 132.7	43 45 66	· 1 1 1	1 1 1	7 9 11	50 63 91		1 280 5 210 12 435
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COMP: JOHN BA	RAKSO								MIN-E	N LA	BS		ICP	RE	POR	T	-									I	TILE NO	4v-10	71-SJ5
PROJ: LUCKY	rakeo							705	WEST 15	14 ST.	, NOR -5814	TH VAN Fay		R, B. 1080-	C. V/ 0621	M 1T	2									,	D/ Soil 1	TE: 94	/10/27
SAMPLE		24	B B	A RE	BI	CA	<u></u>	00		= K	11		MN	 MO		NT	P	PR	SR	SP	тн 1		v	71	GA (SN		u-Fire	Ha
NUMBER	PPM %	PPM I	PPM PP	1 PPM	PPM	%	PPN	PPM	PPM 5	<u>k</u> %	PPM		PPM	PPM	<u>%</u>	PPM	PPM	PPM F	PPM P	PPM P	PM	<u>%</u> F	PM P	PM P	PM P	PM PI	PM PPM	PPB	PPB
L2600	1.1 1.98	1	1 5	7 2.8	26 22	.25	.1	17 16	142 8.38	3.06	14 11	.62 1.54	805 1653	2	.01 .01	42 56	700 670	38 43	47 38	59 70	1.3	53 250 25 171).1 .2	66 63	.1	1 1	0 64 9 70	32	275
L2700	.9 1.63	i	1 5	2 2.1	25	.40	.1	16	126 6.3	.05	14	1.24	918	5	.01	46	540	36	39	75	1.3	51 197 24 142	.0	62	i	į '		Ę	285
L2800	.6 1.38	1	1 4	5 2.0	18	.24	.1	13	71 6.04	.03	12	.41	625	3	.01	26	510	31	33	51	1.2	23 184	.3	47	i	1	⁶ 64 7 46	J	240
L2825	.1 1.41	1	1 94	2.6	17	.58	.1	17	191 6.07	7.08	11	1.98	2221	3	.01	49	750	42	35	53	1.1	7 176	.8	84 45	1	1	8 43	9	345
L2900	.9 2.05	1	1 2	1.4	16	.30	.1	iģ	109 4.02	.03	7	1.20	433	6	.01	32	780	56	51	76	1.1	8 106	.5	61	1	1	8 59	4	470
L2950 L3150	1.2 1.60	1	1 24	1.9 5 2.2	23 16	.18		12	64 6.27	.02	10	- 36 - 54	368 688	3	.01	23 34	620 860	27 43	36 42	52 47	1.1	6 178	.2	42 61	1	1	9 52	53	140
L3200	.6 1.47	1	1 20	1.7	14	.19	.1	6	31 5.45	.03	7	.43	199	2	.01	20	530	29	36	62	1.1	9 180	.1	22	1	1	8 57	2	200
L3250	.2 1.04	1	1 5	2.6	10	.85	.1	11	125 5.49	.05	12	1.80	852 1138	8	.01	45 48	1490 1690	44 64	26 1 52	88 88	1.0	19 96 19 151	.4 .9	97 92	1	1 1	2 114	39 8	400
\$3340	.1 1.34	1	1 62	2 1.7	11	-58	.1	11	68 4.50	.05	13	1.49	747	6	.01	43	1220	41	33	82	1.1	1 118	.0	87	1	1	7 64	6	200
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Appendix 6 - Rock Chip Sample Analyses

COMP: BARAKSO CONSULTING

PROJ: ATTN - 0

_ . MIN-EN LABS - ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 TEL: (604)980-5814 FAX: (604)980-9621

FILE NO: 4V-0851-RJ1+2 DATE: 94/09/02

* rock * (ACT:F31)

lin: Peter Ko	onning										11	EL:(0	04) 9	00-20	014	FAX:	(004,	1200.	- 702	l 											- FOCK		(AUI:F3
SAMPLE NUMBER	AG PPM	AL % P	AS PM	8 PPM	BA PPM	BE PPM	BI PPM	CA %	CD PPM	CO PPM	CU PPM	FE %	. K	LI PPM	MG %	MN PPM	MO PPM	NA %	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	۲1 %	۱ PP	/ ZN 1 PPM	GA PPM	SN PPM	W PPM	CR PPM	Hg PPB	Au-Fire PPB
PRL-01 PRL-02 PRL-03 PRL-04 PRL-05	1.7 2 3.2 2 4.1 3 3.2 3 1.0 3	.54 .78 .27 .02 .61	1 1 1 1	1 1 1 1	10 23 31 14 21	.3 .1 .1 .1 .1	25 32 35 35 25	1.97 1.84 1.58 1.67 1.37	.1 .1 .1 .1	22 20 30 37 25	152 47 142 74 12	4.58 4.37 5.32 4.84 5.71	.01 .08 .07 .03 .06	2 2 4 5 15	2.32 .87 2.83 2.07 4.09	1581 756 532 1198 2036	74444	.01 .01 .18 .01 .01	114 88 100 113 72	460 530 580 540 830	· 92 41 24 35 25	20 23 27 25 32	329 1099 207 413 475	1 1 1	.41 .56 .62 .60 .43	140.1 158.9 213.3 136.8 162.7	159 59 59 50 50 50 50 50 50 50 50 50 50 50 50 50	1 1 1 1	1111	17 17 19 19 12	219 193 227 243 115	35 15 5 60 105	1 3 5 2 2
PRL-06 PRL-07 PRL-08 PRL-09 PRL-10	12.0 1 3.1 3 2.6 3 2.4 1 3.5 3	.79 .19 .30 .57 .40	1111	• • • • • • • • • • • • • • • • • • • •	16 19 23 9 19	.1 .5 .6 .1 .3	45 24 21 24 34	1.98 1.38 1.33 2.16 1.63	19.3 .1 .1 .1	30 22 22 13 27	57 109 123 15 122	3.70 5.43 5.67 3.16 7.32	.09 .03 .03 .01 .01	2 6 7 1 3	1.02 3.91 4.40 1.15 2.97	1131 388 386 775 834	81 4 27 3	.01 .14 .10 .02 .01	76 85 96 54 61	610 510 500 480 690	869 22 19 25 20	14 25 26 11 28	296 120 121 187 178	1 1 1 1	.44 .44 .38 .41 .60	110.8 147.8 137.6 130.1 198.9	3 1947 3 105 5 71 49 69	1 1 1 1	1 1 1 1	12 9 14 11	129 2 81 76 173 57	3000 540 235 40 10	12 8 2 1 2
PRL-11 PRL-12 PRL-13 PRL-14 PRL-15	3.5 2 3.0 2 .6 1 2.8 1 3.2 2	.76 .98 .96 .98 .81	1111	23 1 1 28	12 643 123 61 59	.1 .2 .6 .1 .1	34 26 15 24 28	1.51 1.97 .35 1.38 1.77	.1 .1 .1 .1	20 16 19 11 17	242 74 12 59 377	5.93 4.79 5.05 3.61 5.54	.01 .01 .02 .03 .01	62932	2.38 1.50 2.29 1.42 1.74	747 434 1054 321 629	3 5 4 3 5	.03 .01 .01 .01 .01	55 45 50 32 42	800 450 450 310 490	21 26 19 20 27	21 26 14 15 23	21 11 48 30 200	1 1 1 1	.60 .43 .28 .41 .50	183.1 186.1 172.5 151.3 181.4	67 49 60 30 48	1 4 1 3	1 1 8 1	10 12 13 12 13	50 94 160 135 108	10 105 5 15 170	9 7 3 6 8
PRL-16 PRL-17 PRL-18 PRL-19 PRL-20	2.5 4 5.6 3 3.1 3 3.3 3 2.7 4	.36 .07 .39 .72 .83	11111	1 10 11 1	28 34 25 21 12	.41.222	18 52 28 30 24	3.29 2.03 2.16 2.00 3.68	.1 .1 .1 .1	10 29 17 24 14	4894 421 162 114 20	3.20 9.59 5.08 6.99 4.78	.02 .03 .05 .04 .02	3 6 4 8 5	1.05 3.30 2.01 4.05 1.40	234 1144 582 1055 645	9 1 5 2 8	.03 .04 .09 .14 .01	60 70 60 65 42	350 980 530 540 400	51 6 27 16 48	53 22 31 30 50	1 31 161 35 1	1 1 1 1	.14 .94 .45 .56 .36	100.7 325.5 158.1 213.4 325.6	38 94 61 68 40	17 1 2 1 4	1 1 1 1	13 15 13 12 16	94 119 106 117 92	750 35 270 5 5	5 8 6 1 42
PRL-21 PRL-22 PRL-23 PRL-24 PRL-25	1.7 2 1.0 2 1.6 1 4.7 2 4.3 3	.73 .03 .91 .07 .65	1 1 1 1	1 1 1 125	19 9 18 32 40	.2 .5 .4 .1	13 12 22 44 41	2.04 1.52 .66 1.22 2.08	.1 .1 .1 .1	9 11 16 25 23	9 43 88 158 533	2.67 3.03 5.75 8.15 7.26	.01 .01 .03 .01 .01	1 43 22	.81 1.86 2.10 2.14 2.14 2.14	323 533 1024 826 811	6421 4	.01 .01 .06 .03 .03	36 30 33 56 57	250 340 830 780 900	30 22 24 1 20	26 19 15 7 29	50 50 66 53 14	1 1 1	.20 .19 .39 .85 .73	113.3 111.0 165.8 243.7 238.9	24 38 82 75 73	5 1 1 1	141	16 9 8 10 11	198 88 49 47 37	5 10 25 20 20	23 1 33
PRL-26 PRL-27 PRL-28 PRL-29 PRL-30	3.2 2 4.5 2 .5 1 2.7 2 4.0 2	.40 .26 .71 .93 .93	1 1 1 1	1 1 1 35	22 55 112 9 143	.4 .1 .4 .3 .2	30 44 12 26 41	1.33 1.35 1.13 3.10 1.75	.1 .1 .1 .1	21 24 6 20 25	22 264 8 11 179	5.79 7.91 2.63 5.82 7.32	.01 .03 .03 .01 .06	421 33	3.17 1.85 1.22 1.77 2.63	748 870 764 786 967	2 1 5 5 4	.04 .04 .08 .01 .10	61 56 13 54 57	500 960 910 990 680	13 10 23 33 18	17 10 14 27 23	49 48 197 709 50	1 1 1	.54 .82 .20 .43 .69	170.3 262.7 42.8 145.9 237.3	59 82 27 76 77	1 1 2 1	1 1 1 1	10 10 7 11 15	85 47 78 94 128	5 30 5 135 5	6 8 81 9
PRL-31 PRL-32 PRL-33 PRL-34 PRL-35	3.3 3 3.5 3 .1 1.9 1 .1	.27 .33 .37 .96 .72	1 95 1	1 1 1 1	54 63 82 373 87	.6 .2 .6 .1	34 36 2 21 3	1.85 1.94 .13 1.20 .31	.1 .1 .1 .1	28 29 9 13 5	179 162 33 31 46	8.25 8.40 3.56 4.51 3.01	.22 .10 .13 .23 .29	5 5 1 3 1	3.96 4.09 .07 1.07 .04	1156 1141 26 498 39	3 1 3 9 5	.06 .04 .03 .11 .07	72 73 18 24 14	670 660 200 950 1930	16 12 33 21 19	27 25 1 15 4	62 48 32 72 72	1 1 1 1	.58 .65 .01 .36 .02	278.2 298.9 10.0 114.9 41.9	82 82 12 67 8	1 1 1 1	1 1 6 1 3	15 14 8 10 8	129 122 168 102 147	5 25 5 40	7 4 6 4 13
PRL-36 PRL-37 PRL-38 PRL-39 PRL-40	.6 1 .1 .1 2 6.8 3 8.0 2	.86 .42 .71 .60 .95	1 2 1 1	1 1 1 1	147 92 316 14 10	.7 .3 1.2 .1 .1	14 8 5 59 60	.54 .10 .16 2.08 3.12	.1 .1 .1 .1	12 5 31 26	20 12 14 162 3462	5.15 3.46 5.06 8.85 5.99	.27 .25 .42 .04 .01	2 1 6 4 1	1.18 .02 1.89 3.84 1.66	650 9 1081 1077 993	5 4 7 1 5	.18 .03 .05 .12 .01	26 16 32 116 121	760 100 830 1090 950	34 61 111 3 23	17 1 28 24 21	101 20 91 422 1044	1 1 1 1	.20 .07 .01 1.11 1.02	71.8 7.3 72.7 277.7 197.7	56 6 480 137 92	1 1 5 1	6 6 12 1 1	9 7 9 19 19	108 149 87 183 208	20 45 130 10 95	15 17 8 5 1
PRL-41 PRL-42 PRL-43 PRL-44 PRL-45	6.3 3 5.9 3 5.5 4 5.4 3 6.3 3	.80 .82 .01 .48 .72	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 41 1	24 36 21 32 8	.1 .1 .1 .1	54 53 49 46 38	1.77 1.71 1.73 1.88 3.85	.1 .1 .1 .1 .1	32 35 28 28 21	93 293 119 149 4297	9.32 9.04 7.77 7.84 5.97	.04 .02 .01 .03 .01	8 7 6 1	5.39 5.32 4.10 4.21 1.01	831 972 884 665 1250	1 1 2 3 9	.20 .03 .01 .15 .01	130 142 117 111 97	1180 1200 1040 1070 680	1 1 8 4 47	25 26 29 24 40	258 598 1892 395 818	1 1 1 1	1.01 .97 .92 .85 .51	282.4 252.6 262.2 228.6 197.1	90 128 96 83 114	1 1 1 2	1 1 1 · 1	17 18 21 15 26	189 217 249 162 347	10 15 5 10 100	6 3 4 8 18
DHL-02 LS-9401	2.4 2 1.5 2	.69 .56	1 1	1 1	15 11	.6 .6	23 16	1.61 1.62	.1 .1	24 16	448 32	5.60 3.15	.03 .01	8 4	3.46 2.63	691 641	3 7	.11 .01	139 43	470 640	21 33 -	21 25	39 479	1	.37 .22	136.7 86.1	61 64	1	1	10 17	100 245	20 30	10 5
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SPECIALISTS IN MINERAL ENVIRONMENTS CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

Geochemical Analysis Certificate

IRONMENTS

ABORATORIES

Company:	BARAKSO CONSULTING
Project:	
Attn:	Peter Ronning

INERAL

(DIVISION OF ASSAYERS CORP.)

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SMITHERS LAB.: 3176 TATLOW ROAD SMITHERS, B.C. CANADA VOJ 2NO TELEPHONE (604) 847-3004 FAX (604) 847-3005

4V-0851-RG1

Date: SEP-02-94

copy 1. Barakso Consulting, Vancouver, B.C.

We hereby certify the following Geochemical Analysis of 24 rock samples submitted AUG-16-94 by Peter Ronning.

Sample	Ba-Total	
Number	PPM	
PRL-01	214	
PRL-02	113	
PRL-03	93	
PRL-04	69	
PRL-05	83	
PRL-06	72	
PRL-07	87	
PRL-08	230	(
PRL-09	12	
PRL-10	34	
PRL-11	132	
PRL-12	900	
PRL-13	246	
PRL-14	307	
PRL-15	203	
PRL-16	119	
PRL-17	248	
PRL-18	235	
PRL-19	139	
PRL-20	42	
PRL-21	194	
PRL-22	6	
PRL-23	213	
PRL-24	34	

Certified by MIN-EN LABORATORIES





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(DIVISION OF ASSAYERS CORP.)

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4V-0851-RG2

BARAKSO CONSULTING Company: Project: Attn: Peter Ronning

VIRONMENTS

BORATORIES

Date: SEP-02-94

copy 1. Barakso Consulting, Vancouver, B.C.

We hereby certify the following Geochemical Analysis of 23 rock samples submitted AUG-16-94 by Peter Ronning.

Sample Number	Ba-Total PPM	
PRL-25	44	•••••••••••••••••••••••••••••••••••••••
PRL-26	61	
PRL-27	142	
PRL-28	116	· · · · ·
PRL-29	9	
PRL-30	184	
PRL-31	107	
PRL-32	66	r
PRL-33	495	
PRL-34	769	
PRL-35	453	•••••••••••••••••••••••••••••••••••••••
PRL-36	946	
PRL-37	665	
PRL-38	2710	
PRL-39	140	
PRL-40	38	·
PRL-41	114	
PRL-42	96	
PRL-43	21	
PRL-44	63	
PRL-45	9	,
DHL-02	101	
LS-9401	48	

Certified by

MIN-EN LABORATORIES



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COMP: BARAK PROJ: LUCKY ATTN: John I	SO CONSULTAN Barakso	IS LTD	I						۲ 705	(IN-) WEST 1 TEL:(EN 5th (604)	LAE ST., 980-5	35	VANC	E C P COUVE : (604	RE R, B.)980-	POR' c. v7 9621	Г м 1т2									F	·ILE • r	NO: D ock	4V-1 ATE: *	060-RJ1+ 94/10/2 (ACT:F31
SAMPLE NUMBER	AG AL	L AS	B PPM	BA PPM	BE PPM	BI PPM	CA X	CD PPM	CO PPM	CU PPM	FE %	K %	LI PPM	MG %	MN PPM	MO PPM	NA N % PP	I M PP	P PB M PPM	SB PPM	SR PPM	TH PPM	TI %	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	Hg PPB	Au-Fire PPB
W-1 W-2 W-3 W-4 W-5	4.8 1.20 1.3 2.20 1.1 1.38 1.1 3.83 1.7 1.04	5 1 5 1 3 1 5 1	1 1 1 1	6 32 114 104 10	1.2 2.0 1.3 3.0 .9	46 13 9 13 14	1.63 1.49 1.36 3.79 1.59	.1 .1 .1 .1 .1	27 39 15 22 17	155 114 41 146 74	6.06 5.65 2.89 6.55 2.99	.01 .09 .26 .03 .01	4 2 17 2 11 2 15 2 1	.06 .74 .16 .23 .61	983 496 457 863 354	1. 3. 8. 3.	01 13 15 18 03 8 27 38 01 8	2 138 1 61 4 61 4 66 1 25	0 18 0 43 0 31 0 78 0 27	17 50 31 88 23	273 242 115 711 461	1 1 1 1	.73 .11 .09 .04 .19	164.0 158.5 68.5 231.3 53.0	86 55 39 82 18	1 1 2 1	1 1 1 1	13 20 11 22 11	157 276 155 250 163	135 175 35 55 190	2 5 3 8 12
₩-6 ₩-7 ₩-8 ₩-9 ₩-10	1.0 2.40 1.2 2.79 1.4 2.67 1.3 1.32 3.2 .11	5 1 7 1 2 1 1 265	1 1 1 1 1 1	30 23 50 20 5	2.4 2.0 2.3 .6 .2	12 12 15 8 7	.40 1.44 4.29 2.40 11.25	.1 .1 .1 .1	16 17 22 6 2	33 38 101 52 6	5.47 4.74 5.21 1.55 .66	.06 .05 .03 .05 .01	29 5 20 3 11 2 8 1	.76 .59 .02 .47 .34	845 642 832 674 282	24653	02 4 50 6 25 7 10 2 01	9 53 8 63 8 86 4 53 5 17	0 32 0 47 0 55 0 32 0 19	55 66 66 33 12	130 345 518 158 253	11111	.14 .10 .10 .07 .01	166.1 219.7 250.3 84.1 10.8	60 51 59 21 17	1 2 6 18	1 1 1 1 1	13 16 23 15 2	187 168 286 219 18	35 60 30 55 80	5 2 1 3
W-11 W-12 W-13 W-14 W-15	3.3 .03 3.1 .00 .5 .28 .8 .50 .8 2.03	3 251 5 266 3 70 5 1 5 1	1 1 1 1	30 206 339 59 56	.1 .1 .4 .8 2.7	8 8 4 3 6	11.27 11.28 14.05 2.09 2.28	.1 .1 .1 .1	1 3 2 3 24	3 7 4 8 54	.37 .65 .73 1.18 5.54	.01 .02 .12 .20 .10	1 1 4 1 17 5	.17 .17 .45 1 .12 .69	269 440 428 288 775	2 . 2	01 01 01 01 1 01 13	4 25 9 14 9 12 1 15 6 43	0 18 0 16 0 20 0 20 0 31	10 10 10 14 46	685 374 287 62 307	1 1 1 1	.01 .01 .01 .01 .01	5.4 13.7 10.7 15.0 152.4	3 2 9 26 78	19 17 3 7 1	1 1 1 1	1 2 9 7 11	14 17 166 122 154	50 75 100 185 35	4 2 1 3 1
₩-16 ₩-17 ₩-18	4.6 1.29 1.8 1.02 4.7 1.65	2 1 2 1 5 1	1	45 33 3886	1.7 1.2 2.1	41 20 38	2.36 1.35 1.19	.1 .1 .1	37 11 22	384 44 106	7.00 3.97 6.51	.08 .06 .03	8 2. 3 1. 10 5.	.34 .35 .30	580 729 371	1 . 2 . 1 .	03 12 04 1 09 8	3 108 5 87 4 110	0 19 0 20 0 12	24 21 29	111 247 356	1 1 1	.59 .28 .58	196.7 79.1 212.1	50 57 48	1	1	13 7 13	144 69 182	545 60 55	4 1 4

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			70		0.44.07		-	7 77 4		2/0	2 01	/			105	4			40		4 41 5	
1-11 1-12 1-13 1-14 1-15	3.3 .03 3.1 .06 .5 .28 .8 .56 .8 2.03	251 1 266 1 70 1 1 1 1 1	30 206 339 59 56	.1 .1 .4 .8 2.7	8 11.27 8 11.28 4 14.05 3 2.09 6 2.28	.1 .1 .1 .1	1 2 3 24	3 .37 .0 7 .65 .0 4 .73 .1 8 1.18 .2 54 5.54 .1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	269 440 1428 288 775	2 .01 2 .01 2 .01 5 .01 1 .01	4 25 9 14 9 12 11 15 136 43	0 18 0 16 0 20 0 20 0 31	10 10 10 14 46	685 374 287 62 307	1 .01 1 .01 1 .01 1 .01 1 .01	5.4 13.7 10.7 15.0 152.4	3 2 9 26 78	19 17 3 7 1	1 1 1 1	1 14 5 2 17 7 9 166 10 7 122 18 11 154 3	0 4 5 2 0 1 5 3 5 1
i-16 i-17 i-18 i-19 i-20	4.6 1.29 1.8 1.02 4.7 1.65 7.4 1.69 2.8 .05	1 1 1 1 1 1 235 1	45 33 3886 74 144	1.7 1.2 2.1 1.3 .1	41 2.36 20 1.35 38 1.19 65 1.68 7 11.41	.1 .1 .1 .1	37 11 22 30 2	384 7.00 .00 44 3.97 .00 106 6.51 .0 236 8.17 .0 6 .64 .0	8 8 2.34 5 3 1.35 5 10 5.30 1 7 4.19 1 1 .20	580 729 371 783 515	1 .03 2 .04 1 .09 1 .02 3 .01	123 108 15 87 84 110 115 110 12 25	0 19 0 20 0 12 0 10 0 20	24 21 29 25 10	111 247 356 406 11	1 .59 1 .28 1 .58 1 1.02 1 .01	9 196.7 3 79.1 3 212.1 2 265.7 1 13.3	50 57 48 74 5	1 1 1 14	1 1 1	13 144 54 7 69 6 13 182 5 17 197 6 2 17 5	5 4 0 1 5 4 0 3 5 2
I-21 I-22 I-23 I-24 I-25	4.6 1.29 1.1 .39 1.8 2.46 2.0 1.42 2.4 .03	1 1 83 1 1 1 1 1 249 1	14 10 33 21 3	.5 .8 2.1 1.5 .1	33 3.50 11 .48 24 2.31 20 1.69 6 11.38	.1 .1 .1 .1 .1	14 7 19 37 2	994 3.63 .0 185 2.66 .0 78 5.96 .0 133 4.99 .0 9 .65 .0	1 2 .89 1 1 1.03 2 8 3.30 9 9 1.78 1 1 .10	472 242 1345 558 583	2 .01 5 .01 3 .32 4 .02 3 .01	72 48 29 20 37 86 175 45 8 15	0 27 0 12 0 39 0 35 0 10	28 7 56 30 9 1	450 186 610 208 1206	1 .42 1 .12 1 .29 1 .23 1 .01	2 108.6 60.9 221.7 149.5 10.2	27 23 60 36 1	1 4 1 1 14	1 1 1 1	14 196 5 13 214 11 10 66 5 19 291 7 1 13 4	0 1 0 7 5 1 3 5 1
I-26 I-27 I-28 I-29 I-30	8.8 1.17 4.8 1.08 1.0 2.64 1.5 1.36 1.0 .95	$ \begin{array}{cccc} 1 & 4 \\ 1 & 1 \\ 1 & 1 \\ 1 & 1 \\ 1 & 1 \\ 1 & 1 \\ 1 & 1 \end{array} $	170 26 154 21 19	.6 1.1 1.8 1.3 .6	75 1.67 41 8.00 11 2.08 19 1.40 7 1.49	.1 .1 .1	41 29 9 12 4	625 6.00 .5 188 5.63 .0 35 3.88 .0 28 4.11 .1 8 1.79 .0	2 4 .73 7 2 .75 5 7 1.38 0 3 2.15 5 1 .27	411 694 615 824 547	1 .02 1 .01 9 .39 3 .07 5 .05	104 203 96 81 19 120 31 61 14 15	0 1 0 20 0 54 0 31 0 20	9 21 70 31 24	163 166 564 337 466	1 1.21 1 .58 1 .08 1 .25 1 .09	228.3 141.2 96.9 114.2 57.6	36 30 57 56 16	1 1 9 1 2	1 1 1	15 145 3 12 132 5 9 64 3 18 272 4 12 193 4	57323
I-31 I-32 I-33 I-34 I-35	3.6 1.28 3.4 1.74 4.4 1.95 .9 1.23 9.0 2.14	37 1 1 1 1 1 1 1 1 1	20 11 25 55 8	2.4 2.7 .9 2.2 1.3	41 1.48 41 1.75 41 2.15 21 .71 81 1.85	.1 .1 .1 .1	26 31 22 15 41	82 8.17 .00 89 9.31 .0 11 4.49 .0 67 6.16 .0 820 9.30 .0	5 4 3.04 8 4.23 5 1.37 7 5 2.04 5 7 3.59	1282 1364 724 1216 886	1 .05 1 .02 2 .01 3 .06 1 .01	60 73 69 75 95 44 26 116 135 132	0 19 0 23 0 28 0 27 0 17	25 33 42 28 36	113 118 597 36 301	1 .59 1 .60 1 .58 1 .26 1 1.24	253.2 284.3 187.5 137.8 253.5	65 131 41 87 100	1 1 1 1	1 1 1 1	10 71 3 12 107 12 20 258 7 8 67 4 20 242 5	12131
1-36 1-37 1-38 1-39 1L-1-R	2.6 1.97 3.7 2.36 2.6 2.26 3.7 1.41 13.3 1.10	1 1 1 1 1 1 3 1 1 1	20 27 13 9 3	1.5 1.5 2.8 1.7 .4 1	27 1.53 34 5.87 32 1.38 36 1.24 00 2.54	.1 .1 .1 .1	20 37 34 24 19 >10	98 5.72 .1 181 6.76 .13 175 8.55 .00 151 6.37 .0 0000 5.09 .0	4 .84 6 1.18 6 9 3.89 2 6 4.20 1 .76	448 675 1031 743 788	5 .36 8 .45 1 .12 1 .05 3 .01	63 64 117 94 151 59 104 49 90 90	0 31 0 42 0 32 0 14 0 23	47 54 48 27 32	203 174 100 19 759	1 .36 1 .44 1 .44 1 .53 1 .79	219.8 223.1 256.7 184.5 152.6	52 87 104 63 67	1 1 1 1	1 1 1 1	19 251 6 20 247 15 23 321 5 14 191 6 19 240 40	4 9 5 1
JL-2-R JL-3-R JL-4-F JL-5-R JL-5-R	1.0 .34 5.8 1.39 5.2 1.45 .1 .55 .1 1.53	3 1 1 1 1 1 215 42 1 5	2 46 18 129 93	.4 2.1 2.4 2.1 3.2	7 .57 55 2.58 54 1.22 7 2.38 8 .43	.1 .1 .1 .1	4 18 27 12 22	259 1.30 .0 233 9.41 .20 81 9.93 .00 35 3.81 .3 192 7.22 .22	1 .22 7 1.97 7 2.98 2 1.66 7 15 1.62	301 1097 978 1433 1086	1 .01 1 .04 1 .03 3 .03 2 .02	16 11 46 84 58 79 36 68 62 71	0 6 0 21 0 17 0 27 0 42	8 28 25 17 40	237 35 29 53 55	1 .10 1 .82 1 .81 1 .02 2 .01	67.0 312.9 321.8 91.1 182.1	9 38 66 63 114	1 1 1 1	1 1 1 1	19 355 9 12 91 6 11 55 75 6 58 8 9 68 39	3 13 4 2 9
IL-7-R IL-8-R IL-9-R	1.3 .26 .5 .52 .5 .55	1 56 170 1 221 1	8 14 23	.1 1.0 1.0	5 2.14 3 .16 10 10.06	.1 .1 .1	2 6 6	42 .76 .07 25 1.76 .00 23 2.18 .07	1 .07 5 4 1.20 3 1.16	245 218 2317	3 .01 4 .01 4 .01 4 .01	9 10 31 16 29 20	0 4 0 23 0 41	7 15 24 1	74 15 346	1 .06 2 .01 1 .01	28.1 44.2 48.0	5 76 30	1 8 11	1 1 1	10 200 7 21 379 25 6 67 80	11 13 2
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E NO: 4V-1060-RJ1+2

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DATE: 94/10/25 • rock * (ACT:F31)

COMP: BARAKSO ROJ: LUCKY	Consultants LTD		7	MIN-EN L 05 WEST 15TH ST TEL:(604)98	ABS — IC ., NORTH VANCOU	P REPORT IVER, B.C. V7M 1 04)980-9621	172		FILE N I * rock): 4V-1060-R)ATE: 94/10/ * (ACT:F3
SAMPLE	AG AL AS B	BA BE	BI CA CD	CO CU FE	K LI MG	MN MO NA NI	I P PB SB SR	TH TI V ZN	GA SN W CR	Hg Au-Fire
NUMBER JL-10-R JL-11-R JL-12-R JL-13-R JL-14-R	PPM % PPM PPM .4 .31 1 1 .1 .27 1 1 4.4 1.38 1 1 .9 1.17 1 1 .9 1.17 1 1 1.1 1.05 1 1	PPM PPM 36 .1 2606 .1 63 .1 166 .7 105 .1	PPN % PPM P 1 .47 .1 1 1.14 .1 35 2.12 .1 9 .33 .1 12 .38 .1	<u>PM PPM 2</u> 1 11 1.28 1 1 1.06 12 55 6.60 10 89 5.35 9 117 4.15	x PPM x 3 .10 1 .38 3 .13 1 .38 3 .01 1 1.51 3 .35 1 1.25 .24 1 1.30	PPM PPM % PPM 141 1 .04 1 196 1 .04 1 433 1 .03 26 413 1 .04 26 488 1 .04 11	M PPM PPM PPM PPM 1 240 1 1 1 1 240 1 1 39 5 660 1 5 7 5 690 13 4 25 1 880 8 1 62	PPN X PPM PPM 1 .01 8.6 1 1 .01 6.8 1 1 .56 233.4 1 1 .21 113.1 30 1 .12 113.1 30 1 .18 93.6 15	PPM PPM PPM PPM 1 1 5 106 1 1 5 102 1 1 9 70 1 1 10 135 1 1 8 94	PPB PPB 55 1 45 6 110 11 180 6 80 3
JT-1-R JT-2-R JT-3-F JT-4-R JT-5-R	4.6 2.41 1 1 1.0 .59 1 1 1.6 .71 1 3053 4.3 1.26 1 1 1.1 .65 1 1	10 1.1 46 .1 2 .1 9 .1 24 .1	68 1.25 .1 8 1.56 .1 9 5.13 .1 38 1.82 .1 2 1.44 .1	26 6220 10.90 1 190 2.04 1 41 1.92 16 170 6.09 1 1.30	0.01 1 4.63 3 .01 1 .91 .01 1 .52 .01 1 2.40 .10 1 .23	863 1 .01 70 843 1 .01 5 665 1 .01 3 784 1 .04 33 200 1 .02 1	790 22 31 248 120 1 1 103 140 1 1 242 580 1 1 92 220 1 1 216	1 .69 259.0 456 1 .14 55.5 34 1 .14 68.0 1 1 .61 190.8 42 1 .09 16.3 1	1 1 16 163 1 1 13 238 1 1 10 161 1 1 8 61 1 1 5 92	230 5 110 5 25 3 45 4 65 2
JT-6-R JT-7-R JT-8-R JT-9-R JT-10-R	.7 .45 1 1 1.8 .88 1 1 1.4 .64 1 1 2.7 1.49 1 1 2.2 1.70 1 1	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	3 .50 .1 9 1.99 .1 8 1.33 .1 14 10.30 .1 13 2.29 .1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$.12 1 .22 .02 1 .90 .12 1 .83 .01 1 1.32 .01 1 1.01	285 1 .03 1 387 1 .04 1 388 1 .05 1 578 1 .01 14 229 1 .01 10	170 1 174 510 3 1 530 1 1 280 19 17 230 18 17	1 .08 4.3 1 1 .15 51.2 1 1 .17 48.4 1 1 .18 95.1 3 1 .19 71.7 1	1 1 5 104 1 1 8 114 1 1 7 110 7 1 10 107 2 1 12 170	50 5 45 2 35 6 30 55 95 54
JT-11-R JT-12-R JT-13-R JT-14-R	2.1 1.45 1 1 3.8 2.44 1 1 158.8 .32 400 1 5.1 .40 1 1	1 .1 34 .1 4 2.5 56 .1	6 4.77 .1 35 2.03 .1 109 .15 .1 7 .34 .1	1 84 1.91 15 97 6.27 30 >10000 13.66 1 765 1.89	.01 1 2.39 .01 1 .33 .01 1 .33 .11 1 .40	169 1.01 1 829 1.01 38 63 1.01 34 230 1.11 1	3 630 24 31 57 5 510 16 7 1 1 290 1 1 6	1 .09 50.0 1 1 .54 218.0 38 1 .03 33.0 791 1 .11 19.1 27	2 1 8 128 1 1 11 85 1 1 11 182 1 1 1 11 218	100 16 70 11 450 181 75 4
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4V-1060-RG1

SMITHERS LAB.: 3176 TATLOW ROAD SMITHERS, B.C. CANADA VOJ 2NO TELEPHONE (604) 847-3004 FAX (604) 847-3005

Date: OCT-25-94

copy 1. Barakso Consultants Ltd., Vancouver BC

RONMENTS

ABORATORIES

(DIVISION OF ASSAYERS CORP.)

We hereby certify the following Geochemical Analysis of 24 rock samples submitted OCT-14-94 by J. Barakso.

Sample	Total	· .	
Number	Ba PPM		
W-1	28		
W-2	149		
W-3	1190		
W-4	225		
W-5	32		
W-6	116		
W-7	115		
W-8	98		
W-9	63		
W-10	11		
W-11	29		
W-12	226		
W-13	432		
W-14	367		
W-15	280		
W-16	287		
W-17	346		. •
W-18	4970		
W-19	117		· .
.W-20	168		
W-21	49		
W-22	36		
W-23	112		
W-24	184		
	•		

Certified by

MIN-EN LABORATORIES



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Geochemical Analysis Certificate

VANCOUVER OFFICE:

705 WEST 15TH STREET NORTH VANCOUVER, B.C. CANADA V7M 1T2 TELEPHONE (604) 980-5814 OR (604) 988-4524 FAX (604) 980-9621

SMITHERS LAB.: 3176 TATLOW ROAD SMITHERS, B.C. CANADA VOJ 2NO TELEPHONE (604) 847-3004 FAX (604) 847-3005

4V-1060-RG2

Company:	BARAKSO CONSULTANTS LTD
Project:	LUCKY
Attn:	John Barakso

Date: OCT-25-94

copy 1. Barakso Consultants Ltd., Vancouver BC

We hereby certify the following Geochemical Analysis of 24 rock samples submitted OCT-14-94 by J. Barakso.

W-25 8 W-26 820 W-27 89 W-28 298 W-29 97 W-30 54 W-31 99 W-32 40 W-33 115 W-34 277 W-35 35 W-36 104 W-37 99 W-38 89 W-39 119 IL-1-R 18 IL-2-R 15 IL-3-R 1130 IL-4-F 110 IL-5-R 520 IL-6-R 364 IL-7-R 40 IL-8-R 51 JL-9-R 75	Sample Number	Total Ba PPM				
W-26 820 W-27 89 W-28 298 W-29 97 W-30 54 W-31 99 W-32 40 W-33 115 W-34 277 W-35 35 W-36 104 W-377 99 W-38 89 W-39 119 IL-1-R 18 IL-2-R 15 IL-3-R 110 IL-4-F 110 IL-5-R 520 TL-6-R 364 IL-7-R 40 IL-8-R 51 IL-9-R 75	W-25	8				
W-27 89 W-28 298 W-29 97 W-30 54 W-31 99 W-32 40 W-33 115 W-34 277 W-35 35 W-36 104 W-37 99 W-38 89 W-39 119 JL-1-R 18 JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 TL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	W-26	820				
W-28 298 W-29 97 W-30 54 W-31 99 W-32 40 W-33 115 W-34 277 W-35 35 W-36 104 W-37 99 W-38 89 W-39 119 JL-1-R 18 JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	W-27	89				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	W-28	298				
	W-29	97				
W-31 99 W-32 40 W-33 115 W-34 277 \overline{W} -35 35 W-36 104 W-37 99 W-38 89 W-39 119 JL-1-R 18 JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	W-30	54		• • • • • • • • • • • • • • • •		
W-32 40 W-33 115 W-34 277 W-35 35 W-36 104 W-37 99 W-38 89 W-39 119 JL-1-R 18 JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	W-31	. 99				
W-33 115 W-34 277 w-35 35 W-36 104 W-37 99 W-38 89 W-39 119 JL-1-R 18 JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 IL-6-R 364 JL-7-R 40 JL-9-R 75	W-32	40				
W-34 277 W-35 35 W-36 104 W-37 99 W-38 89 W-39 119 JL-1-R 18 JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-9-R 75	W-33	115				
W-35 35 W-36 104 W-37 99 W-38 89 W-39 119 JL-1-R 18 JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	W-34	277				
W-36 104 W-37 99 W-38 89 W-39 119 JL-1-R 18 JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	W-35	35				
W-37 99 W-38 89 W-39 119 JL-1-R 18 JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	W-36	104				· ·
W-38 89 W-39 119 JL-1-R 18 JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	W-37	99				
W-39 119 JL-1-R 18 JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	W-38	89				
JL-1-R 18 JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	W-39	119				
JL-2-R 15 JL-3-R 1130 JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	JL-1-R	18				
JL-3-R 1130 JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	JL-2-R	15				·
JL-4-F 110 JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	JL-3-R	1130				
JL-5-R 520 JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	JL-4-F	110				
JL-6-R 364 JL-7-R 40 JL-8-R 51 JL-9-R 75	JL-5-R	520				
JL-7-R 40 JL-8-R 51 JL-9-R 75	JL-6-R	364			*	
JL-8-R 51 JL-9-R 75	JL-7-R	40				
JL-9-R 75	JL-8-R	51				
	JL-9-R	75	·			
		·				

Certified by MIN-EN LABORATORIES





(DVISION OF ASSAYERS CORP.) SPECIALISTS IN MINERAL ENVIRONMENTS CHEMISTS + ASSAYERS + ANALYSTS + GEOCHEMISTS

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SMITHERS LAB.: 3176 TATLOW ROAD SMITHERS, B.C. CANADA VOJ 2NO TELEPHONE (604) 847-3004 FAX (604) 847-3005

4V-1060-RG3

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Company:	BARAKSO CONSULTANTS	LTD
Project:	LUCKY	
Attn:	John Barakso	•

RONMENTS

ABORATORIES

Date: OCT-25-94

Copy 1. Barakso Consultants Ltd., Vancouver BC

We hereby certify the following Geochemical Analysis of 19 rock samples submitted OCT-14-94 by J. Barakso.

Sample Number	Total Ba PPM		
JL-10-R JL-11-R	669 3410		
JL-12-R JL-13-R JL-14-R	147 468 428		
JT-1-R JT-2-R	28 101	 · · · · · · · · · · · · · · · · · · ·	
JT-3-F JT-4-R JT-5-R	51 69 195		
JT-6-R JT-7-R	>10000 456	 · · · · · · · · · · · · · · · · · · ·	
JT-8-R JT-9-R JT-10-R	754 28 22		
JT-11-R JT-12-R IT-13-R	13 242 42		
JT-14-R	930		

Certified by MIN-EN LABORATORIES



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FILE NO: 4V-1071-RJ1

DATE: 94/10/27 *

PROJ: LUCKY ATTN: John Baraks	0								7	705 WE T	ST 15	TH ST	T., NG 80-581	DRTH N 14 I	ANCOL	JVER , 504) 98	B.C. 30-962	V7M 1	172										* r	C ock	ATE:	: 94/10/2 (ACT:F31
SAMPLE	AG PPM	AL	AS	B	8A PPM	BE	BI	CA	CD PPM	CO	CU	FE %	K	LI PPM.	MG	MN	MO	NA %		P PPM	PB PPM	SB	SR	TH	TI %	V PPM	ZN PPM	GA PPM	SN PPM	W	CR	Au-Fire PPB
R-2840 F33-1150W F34-980W F34-1160W R35-660N	.1 .1 2.6 .6 .1	.27 .15 1.02 .28 .20	1 1 1 1 1	1 1 1 1 1	30 3 9 7 8	.5 .1 1.0 .5 .3	1 4 35 13 5	.54 .44 .72 .36 .51	.1 .1 .1 .1 .1	2 3 23 13 6	12 12 11 7 10	1.19 .76 8.04 2.83 1.25	.12 .01 .01 .02 .01	2 1 20 2 1	.34 .09 2.45 .69 .24	390 84 689 114 972	2 1 1 2 1	.03 .01 .02 .03 .01	5 4 50 26 12	280 80 870 460 70	10 1 13 5 8	3 1 10 1 2	21 150 49 46 98	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	.01 .09 .56 .21 .08	8.3 24.5 231.3 47.1 35.9	27 3 61 13 9	1 1 1 1	1 1 1 1	3 5 9 5 6	71 94 47 59 117	1 2 1 14 3
F37-510N R37-510N R38-370N R38-555N	3.3 .9 .1 .1	1.61 .97 .40 .12	1 1 1	1 1 93	15 14 6 23	1.1 .9 .7 .3	40 18 4 1	2.08 .78 .06 .15	.1 .1 .1 .1	28 14 5 2	209 93 9 124	8.54 4.19 2.21 .66	.01 .06 .03 .11	11 7 3 1	3.27 1.90 .75 .08	1038 787 244 102	1 4 1 3	.01 .01 .01 .05	59 36 13 4	780 310 90 60	22 28 16 4	24 14 7 1	23 288 16 14	1 1 2	.61 .26 .03 .01	274.2 123.6 71.8 3.1	103 78 21 14	1 1 1	1 1 1	11 10 7 5	50 101 110 103	5 6 1 2
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Appendix 7 — Analytical Procedures

The following descriptions of analytical procedures have been provided by Min-En Laboratories Ltd.

DEC 20 '90 15:52 NORTH



Division of Assayers Corp. Ltd.

ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK: PROCEDURE FOR TRACE ELEMENT ICP

Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, U, V, Zn, Ga, Sn, W, Cr

Samples are processed by Min-En Laboratories, at 705 West 15th Street, North Vancouver, employing the following procedures.

After drying the samples at 95 C, soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized on a ring mill pulverizer.

0.50 gram of the sample is digested for 2 hours with an aqua regia mixture. After cooling samples are diluted to standard volume.

The solutions are analyzed by computer operated Jarrall Ash 9000 ICAP or Jobin Yvon 70 Type II Inductively Coupled Plasma Spectrometers.



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P.3

DEC 20 '90 15:53 NORTH



Division of Assayers Corp. Ltd.

ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK PROCEDURE FOR AU, PT OR PD FIRE GEOCHEM

Geochemical samples for Au Pt Pd are processed by Min-En Laboratories, at 705 West 15th St., North Vancouver, B. C., laboratory employing the following procedures:

• • •

After drying the samples at 95 C, soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized on a ring mill pulverizer.

A suitable sample weight; 15.00 or 30.00 grams is fire assay preconcentrated. The precious metal beads are taken into solution with agua regia and made to volume.

For Au only, samples are aspirated on an atomic absorption spectrometer with a suitable set of standard solutions. If samples are for Au plus Pt or Pd, the sample solution is analyzed in an inductively coupled plasma spectrometer with reference to a suitable standard set.



DEC 20 190 15:54 NORTH



Division of Assayers Corp. Ltd.

P.8

ANALYTICAL PRECEDURE REPORT FOR ASSESSMENT WORK: PROCEDURE FOR WET GOLD GEOCHEMICAL ANALYSIS

Samples are processed by Min-En Laboratories, at 705 West 15th Street, North Vancouver, employing the following procedures.

After drying the samples at 95 C, soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized on a ring mill pulverizer.

5.00 grams of sample is weighed into porcelain crucibles and cindered @ 800 C for 3 hours. Samples are then transferred to beakers and digested using aqua regia, diluted to volume and mixed.

Further oxidation and treatment of 75% of the above solution is then extracted for gold by Methyl Iso-butyl Ketone.

The MIBK solutions are analyzed on an atomic absorption spectrometer using a suitable standard set.

OFFICE AND LABORATORIES: 705 WEST FIFTEENTH STREET, NORTH VANCOUVER, BC. CANADA V7M 1T2

PHONE: (604) 980-5814 (604) 988-4524 TELEX: VIA USA 7601067 FAX: (604) 980-9621 DEC 20 '90 15:53 NORTH



Division of Assayers Corp. Ltd.

ÈLI	ement		DIGES	STION	METHOD	DETECTION	LIMIT
Ag	PPM		Aqua	Regia	ICP-AES	0.1	
AĨ	PPM		Aqua	Regia	ICP-AES	1	
As	PPM		Agua	Regia	ICP-AES	1	
B	PPM		Aqua	Regia	ICP-AES	1	
BA	PPM		Aqua	Regia	ICP-AES	1	
Be	PPM		Aqua	Regia	ICP-AES	0.1	
B1	PPM		Agua	Regia	ICP~AES	1	
Ċa	PPM		Aqua	Regia	ICP-AES	10	
Cđ	PPM		Aqua	Regia	ICP-AES	0.1	
Co	PPM		Aqua	Regia	ICP-AES	1	
Cu	PPM		Aqua	Regia	ICP-AES	1	
Fe	PPM		Aqua	Regia	ICP-AES	10	
K	PPM		Agua	Regia	ICP-AES	10	
Li	PPM		Aqua	Regia	icp-aes	10	
Mg	PPM		Agua	Regia	icp-aes	10	
Mn	PPM		Agua	Regia	ICP-AES	1	
Mo	PPM		Aqua	Regia	ICP-AES	1	
Na	PPM		Aqua	Regia	ICP-AES	10	
Ni	PPM		Aqua	Regia	ICP-AES	1	
P	Ppm		Aqua	Regia	ICP-AES	10	
Pb	PPM		Aqua	Regia	` ICP~AES	l	
Sb	PPM		Aqua	Regia	ICP-AES	l	
Sr	PPM		Aqua	Regia	ICP-AES	1	
Th	PPM		Aqua	Regia	ICP-AES	1	
U	PPM		Agua	Regia	icp-aes	1	
V	PPM		Aqua	Regia	ICP-AES	0.1	
Zn	PPM		Aqua	Regia	ICP-AES	1	
Ga	PPM		Aqua	Regia	ICP-AES	1	
Sn	PPM		Aqua	Regia	icp-aes	1	
W	PPM		Aqua	Regia	ICP-AES	1	
Cr	PPM		Aqua	Regia	ICP-AES	1	
Au	PPB	Fire Assay	-Aqua	Regia	AAS	1	
Au	PPB	Aqua	Regi	a-MIBK	AAS	5	
Hq	PPB	•	Aqua	Regia	AAS-Flameless	s 5	
TĨ	PPB	Aque	Regi	a-MIBK	AAS	20	
F	PPM		Fusi	on	specific Ion	2	

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