| LOG NO: 0530 | U |
|--------------|---|
| ACTION: | |
| | |
| | |
| FILE NO: | |

ASSESSMENT REPORT

GEOLOGY AND GEOCHEMISTRY

of the

GUT PROPERTY

Gut 1 - 12 Mineral Claims Record Numbers 324394 - 324406

CARIBOO MINING DIVISION BRITISH COLUMBIA

ASSESSMENT REPORT

NTS 93 J / 13W

Latitude 54 degrees 58.5 minutes N
Longitude 123 degrees 46.5 minutes W

Work Performed: 1 August to 1 October 1994

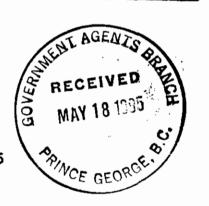
for: TALISMAN SILVER CORPORATION

8182 River Road Delta, B.C. V4G 1B5 Phone 604-946-5466

Report by:

Del Myers, P.Geo.

RR 7, Site 23, Comp. 36 Prince George, BC V2N 2J5 Phone 604-330-4465 FILMED



18 May 1995

TABLE OF CONTENTS

| LIST OF FIGURES | | | | | | | | | | | | | | | P | age |
|---|-------|------|-------|-------|------|------|------|-------|------|------|----|---|---|---|---|-----|
| SUMMARY | LIST | OF : | FIGU | RES | | | • | • | • | | | • | • | | • | ii |
| INTRODUCTION PURPOSE | LIST | OF ' | TABL | ES | | | • | • | | • | | • | • | | • | ii |
| PURPOSE | SUMM | ARY | • | • | • | • | • | | • | | | | • | | • | 1 |
| LOCATION AND ACCESS | INTR | ODUC | TION | | | | | | | | | | | | | |
| LOCATION AND ACCESS | | PUR | POSE | | | | | | | | _ | | _ | _ | | 2 |
| PROPERTY | | | | | D AC | CESS | | • | | | | | | | | |
| REGIONAL GEOLOGY | | | | | | | | _ | _ | _ | | | _ | - | _ | |
| PREVIOUS WORK | | _ | | - | OLOC | Y | _ | _ | • | | | _ | - | | • | 7 |
| WORK UNDERTAKEN | | | | | | _ | | | | | | _ | | • | | |
| | | | | | | • | • | • | • | • | • | • | • | • | • | • |
| סרפוון שפ | WORK | UND | erta: | KEN | • | • | • | • | • | • | • | • | • | • | • | 9 |
| | DEGII | TTE | | | | | | | | | | | | | | |
| GEOLOGY | RESUL | | T ACV | | | | | | | | | | | | | 12 |
| GEOCHEMISTRY | | | | T CMD | · | • | • | • | • | • | • | • | • | • | | |
| GEOCHEMISIRI | | GEO | CHEM. | TOIL | . 1 | • | • | • | • | • | • | • | • | • | • | 14 |
| CONCLUSIONS | CONC | LUSI | ONS | | | | | _ | | | | _ | _ | | | 22 |
| | | | | • | | · | • | - | • | • | • | • | • | • | • | |
| RECOMMENDATIONS | RECO | MMEN | DATI | ONS | • | • | • | • | • | • | | • | • | • | • | 24 |
| REFERENCES | REFEI | RENC | ES | • | • | | • | • | | | | • | • | • | | 25 |
| | 1 | 5.E. | | | | | | | | | | | | | | |
| APPENDIX 1. List of Field Personnel 26 | APPE | NDIX | 1. | Lis | t of | Fie | ld I | Perso | nnel | | | | | | | 26 |
| APPENDIX 2. Statement of Costs | | | | | | | | | | | | | _ | | | |
| APPENDIX 3. Statements of Qualifications 29 | | | | | | | | | fica | tion | ıs | | • | | | |
| APPENDIX 4. Sample Reports | | | | | | | | | | | | | | - | | |
| APPENDIX 5. Analysis Reports | | | - + | | | | | | • | | | | • | | | - • |

LIST OF FIGURES

| | | | | | | | | | Pa | ge |
|----|------------------------|-------|-------|------|------|---|---|---|-------|----|
| 1. | Location map, 1:2,500, | 000 | • | • | • | • | • | • | • | 3 |
| 2. | Location map, 1:500,00 | 0 | • | • | • | • | • | • | • | 4 |
| 3. | Claim map, 1:33,000 | • | • | • | • | • | • | • | • | 6 |
| 4. | Geology Map, 1:2,500 | • | • | • | • | • | • | • | pocke | t |
| 5. | Soil Geochem., Au, Ag, | Cu, | Mo, | 1:2 | ,500 | • | • | • | pocke | t |
| | LI | ST OI | F TAI | BLES | | | | | | |
| | | | | | | | | | Pa | ge |
| 1. | List of claims | • | • | • | • | • | • | • | • | 5 |

SUMMARY

The Gut 1-12 claims were staked in April 1994 to cover IP anomalies and proposed drill holes (Walker, 1991c) on the lapsed Alpha claims.

A new grid was established using E-W side lines because much of the previous grids had been destroyed by clearcut logging. The new grid and the two previous grids (Noranda soil and geophysics grids) were tied together where possible. Geological mapping was done and soil geochemical anomalies were examined and tested by additional soil sampling.

Takla mafic volcanic rocks underlie most of the claims. They are propylitically altered and weakly mineralized with minor pyrite, traces of chalcopyrite, and rare molybdenite. Mafic, probably syn-volcanic intrusives lie along a NW-trending magnetic high, which reflects the elevated magnetite content of the intrusives. Propylitic alteration and weak pyrite mineralization are also noted in these intrusives. Magnetite is abundant in these rocks. White feldspar-quartz dikes cut the Takla volcanics at a SW angle. Rusty outcrops are common but almost no fresh pyrite was seen, although some pyrite casts were Quartz veins and breccias, commonly with graphite, are associated with these felsic intrusives and sometimes contain several percent pyrite. Anomalous rock geochemical values for Au, Ag, Bi, Cu, Mo, Sb, and Zn are found in some of these quartz-rich rocks. These quartz veins and breccias, the felsic intrusives, and hornfelsed wallrocks are the most promising hosts for economic mineralization.

Soil sampling over some previous soil gold anomalies was encouraging at three locations. These areas warrant further sampling and prospecting. Other 1990-1991 Noranda soil anomalies remain to be re-sampled.

INTRODUCTION

PURPOSE

This report describes work done from 1 August to 1 October 1994 on the Gut claims. The property was staked on 4 April 1994 to cover IP anomalies located by Noranda Exploration in 1991. It is hoped that the claims host copper - gold porphyry style mineralization as found at Mt. Milligan 25 km to the northwest.

LOCATION AND ACCESS

The Gut claims are located in central British Columbia (Figure 1). They lie 66 km northeast of Fort St. James, B.C. (Figure 2). The property is centered just south of three small lakes near the headwaters of the Salmon River, a tributary of the Fraser River. The initial post of the Gut 1 and 2 claims lies just over the drainage divide at the upper reaches of Philip Creek which drains northward into the Nation River

The Gut claims are best accessed from Ft. St. James by all-weather forest roads: the North Road to the 400 Road to the 600 Road which goes through the western edge of the property at km 12. The property can also be accessed in dry weather from the Philip South Mainline Road from Windy Point, north of Prince George.

The Gut property lies 11 km NNE of Salmon Lake (882 m). The low and high points on the claims are about 1000 m and 1130 m above sea level. Windy Lake is four and one-half kilometer west of the Gut claims.

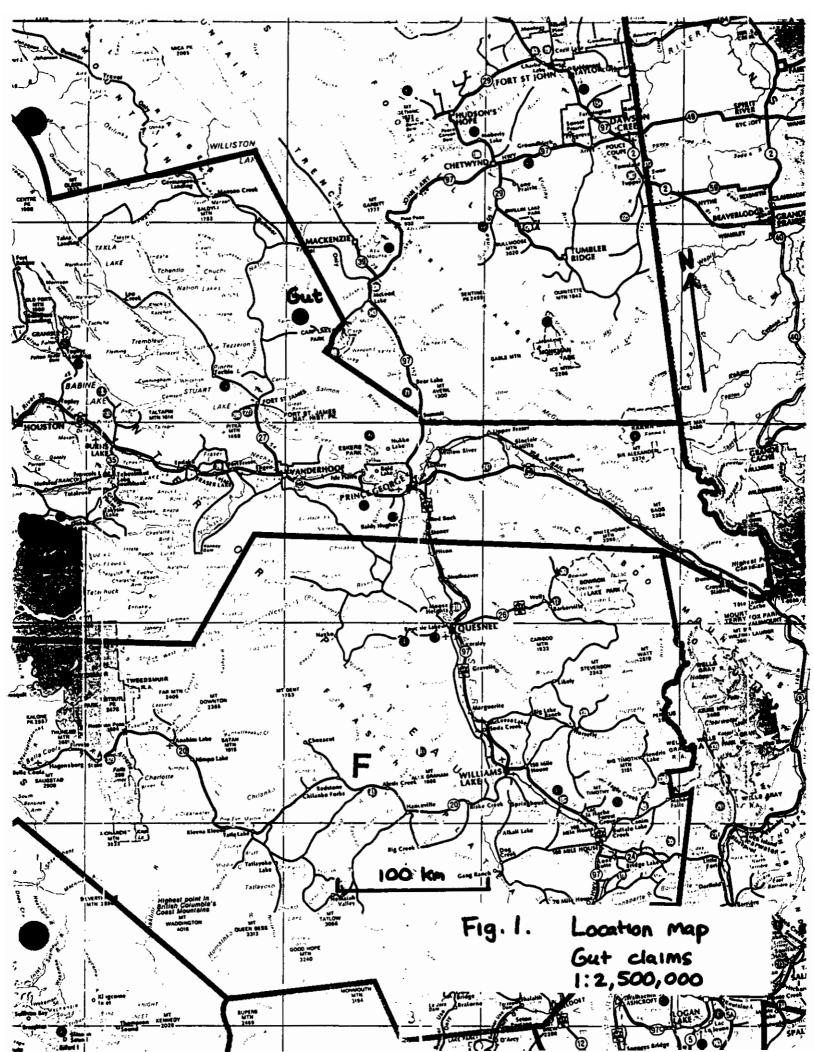
Much of the claims has been clear cut logged in the last decade. The remainder of the claims are covered by spruce, balsam, and pine forest and by numerous small swamps.

Persons working on the property camped on a log landing in a clearcut on the claims.

PROPERTY

The property consists of 12 two-post mineral claims owned by Alan Raven, prospector, of Prince George, B.C. The claims are listed in Table 1. Talisman Silver Corp. holds an option to purchaser the claims. The claims are shown on Figure 3.

The claims are bordered on the east by the PM claims of Gerald Klein of Prince George, B.C.; on the west by the Windy claims of Richard Haslinger of Ft. St. James, B.C.; and are otherwise surrounded by the Sam claims of Hudson Bay Mining. The Sam claims were staked the same day as the Gut claims but most of the Gut claims were completed before the overlying Sam claims.



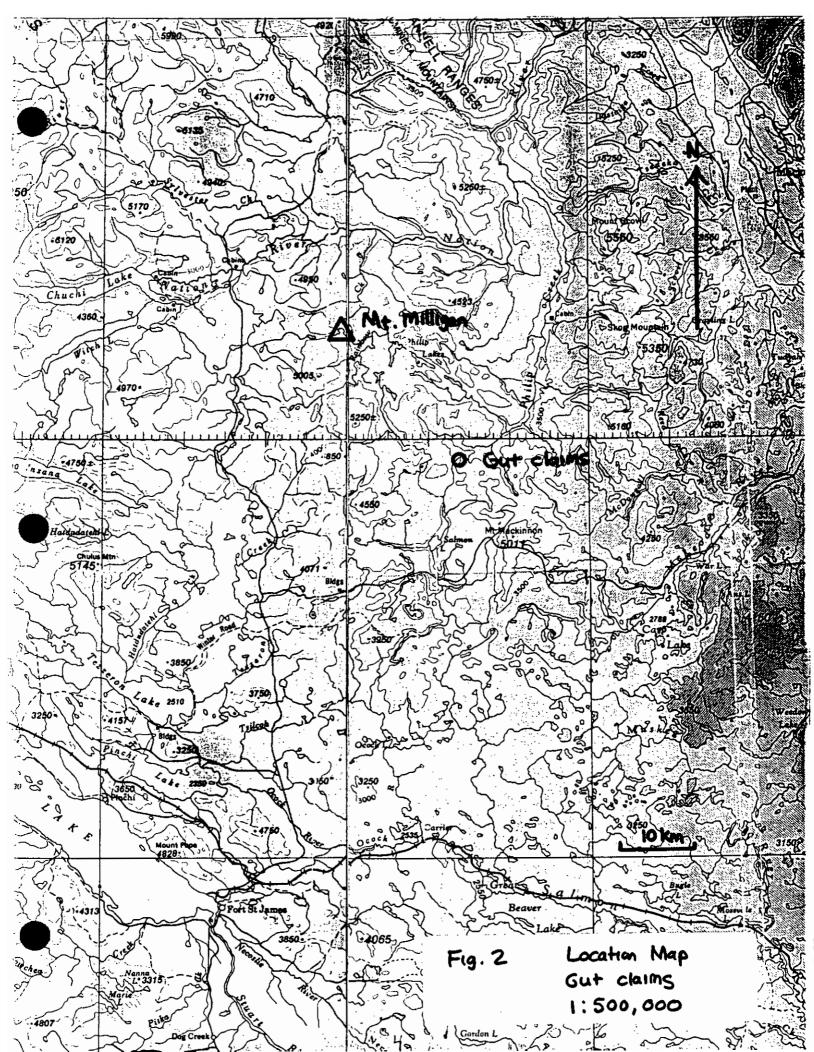
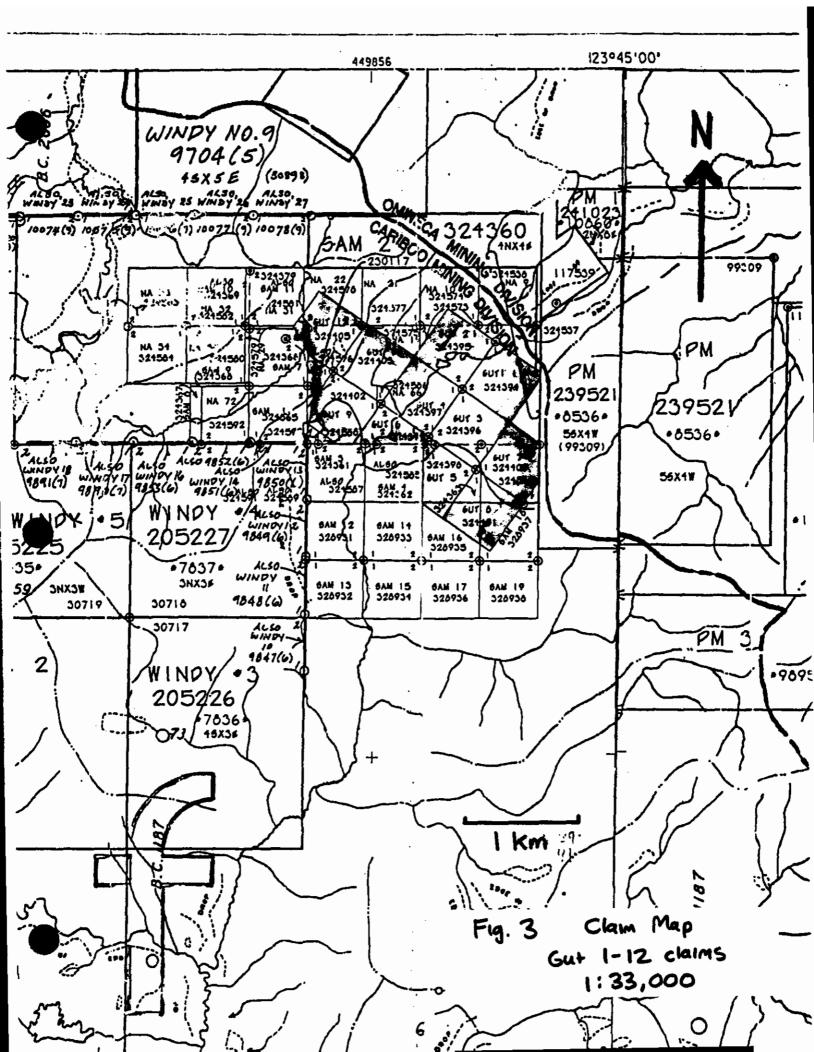


Table 1. List of claims, Gut property, Cariboo M.D. NTS 93 J / 13W

| Claim Name | Rec.No. | Type | Units | Owner | Record Date | Due* |
|------------|---------|------------|--------|---------|--------------|------|
| Gut 1 | 324394 | 2P | 1 | A.Raven | 4 April 1994 | 2005 |
| Gut 2 | 324395 | 2P | 1 | " | 11 | 11 |
| Gut 3 | 324396 | 2 P | 1 | 11 | 19 | ** |
| Gut 4 | 324397 | 2 P | 1 | 11 | " | ** |
| Gut 5 | 324398 | 2 P | 1 | 15 | ** | ** |
| Gut 6 | 324399 | 2P | 1 | н | 11 | 11 |
| Gut 7 | 324400 | 2P | 1 | ** | 11 | 11 |
| Gut 8 | 324401 | 2P | 1 | 19 | 11 | " |
| Gut 9 | 324402 | 2 P | 1 | " | 11 | 11 |
| Gut 10 | 324403 | 2P | 1 | 27 | n | ** |
| Gut 11 | 324404 | 2 P | 1 | ** | ** | 10 |
| Gut 12 | 324405 | 2P | 1 | ** | ** | 11 |
| | | total | 12 uni | ts | | |

^{*} upon acceptance of this report and filed documents



REGIONAL GEOLOGY

The Gut claims lie on the eastern edge of the Quesnellia accreted terrane next to gneisses and schists on the Cassiar pericratonic terrane of the Canadian Cordillera (Wheeler and McFeely, 1991). The terrane boundaries are NW and NE trending faults.

One inch to four mile mapping by Muller and Tipper (1969) on map sheet 93 J shows the area of the claims is covered by Quaternary till, gravel, sand, etc. with outcrops of Triassic and Lower Jurassic Takla volcanics and Wolverine complex gneisses to the south and southeast, respectively. Glacial transport directions are shown to be NNE.

Recent mapping by Struik (1994) shows the claims to be underlain by Takla Group volcanics and sediments with upper Cretaceous to Tertiary Wolverine Metamorphic Complex schists and gneisses just to the southeast of the claims. The same NNE ice movement directions are shown on Struick's map.

The Struick's map shows faults, striking 030 and 330 degrees, separating Takla volcanics from Wolverine schists and gneisses in the area of the Gut property.

The Takla volcanics and their lateral equivalent to the south, the Nicola volcanics, host a number of important porphyry copper-gold deposits. The Mount Milligan deposit of Placer-Dome is the closest example. It is estimated to contain 300 million tonnes of 0.23 % Cu and 0.56 gmt Au mineralization in altered intrusive and volcanic rocks. Placer-Dome is investigating the feasibility of mining this deposit.

PREVIOUS WORK

Selco did airborne magnetic and EM surveys on or near the area of Gut claims in the early 1980's. One hole was drilled on a ground follow-up anomaly (Sask 39 claim) about 4 1/2 km S of the Gut claims in 1982. The hole intersected 1 to 2% pyrite in a graphitic argillite zone in Wolverine complex gneisses (Farmer, 1983).

R. Haslinger prospecting in the early 1980's discovered chalcopyrite mineralization with minor Au values south of Windy Lake. The Windy claims were staked on this mineralization and were subject to work from the mid 1980's through 1990. Drilling by Placer-Dome in 1989 and 1990 encountered anomalous but uneconomcic grades of Cu and Au mineralization in Takla Group volcanics and diorite intrusives (Frostad, 1989; Deschenes, 1991). Trenching in 1990 encountered better mineralization, up to 5.2 m grading 875 ppb gold and 2000 ppm Cu in narrow, sulfide-bearing fault gouges in Takla volcanics, 2 km south of Windy Lake.

The area of the Gut claims was first staked as the Alpha claims by Alan Raven in 1987 as tie-on ground to the Windy claims. Reconnaissance geochemistry for E.S. Peters yielded silt geochemical anomalies to 2250 ppb Au and soil anomalies to 240 ppb Au (Poloni, 1988). Noranda Exploration optioned the property and did an airborne magnetic and EM survey and grid soil geochemical, IP, and ground magnetic surveys over the claims from 1989 to 1991 (Maxwell, 1990, Walker et al., 1991a and 1991c).

An number of IP chargeability highs flanking aeromagnetic highs were detected and a program of diamond drilling was proposed (T.Walker, 1991c) but never undertaken.

The Gut claims were staked in April 1994 when the Alpha claims lapsed, to cover the anomalies with proposed drilling.

The PM claims, which adjoin the Gut claims on the east, were staked to cover the source of mineralized float found by Gerald Klein, prospecting from the Philips South Mainline road. Mineralized schistose mafic rocks of the Takla group graded up to 2.4% Cu or 1.0% Mo with minor Au and Ag values. The claims were also optioned by Noranda Exploration. A program of airborne and surface exploration similar to that on the adjoining Alpha claims was undertaken (MacArthur, 1989; Walker, 1991b; Walker, 1991d).

The Mt. Milligan deposit of Placer Dome lies only 25 km to the NW of the Gut property. A successful exploration programs by United Lincoln, Continental Gold, and Placer Dome have delineated 300 million tonnes of mineralization grading 0.23% Cu and 0.56 gmt Au.

WORK UNDERTAKEN

Noranda used both a geochemical grid and a re-chained IP grid with cut N-S sidelines. Line 15,600 E of these grids was located in July 1994. A point at 21,200 N, 15,600 E was chosen as the origin of a new grid using the same coordinates. The two Noranda grids coincided at this point. A new grid was needed because most of the Noranda grids had been obliterated by clearcut logging since 1991.

The new grid (13.825 km) was laid out using a Silva compass and a topofil hip chain measuring device. It consists of four N-S tielines totalling 4.925 km and thirteen (13) E-W sidelines totalling 8.9 km. No slope corrections were used. Stations were marked with pickets and / or flagging. The grid is shown in Figure 4.

Geological mapping and rock sampling were done over the new grid. Mapping was done by walking most of the grid lines, especially in areas of soil or IP anomalies. A few random traverses were also mapped, however not all this data could be plotted on Figure 4. Thirty-one (31) rock samples were analysed. Analyses were done by Chemex using a multi-element ICP method and by a fire assay and AA method for gold. All rock samples were grab samples consisting of at least 3 non-contiguous pieces. Additional rock samples were taken for future reference.

Some strong Au geochemical anomalies were re-sampled at 25 or 50 m intervals. B-horizon soil was collected using a shovel. Samples were placed in high strength kraft paper bags and air dried. The samples were shipped to Chemex Labs Ltd. in North Vancouver for analysis by 32 element ICP and by fire assay fusion and AA analysis for gold. Twenty-four (24) soil samples were analysed.

RESULTS

GEOLOGY

The following map units were recognized by the author:

- 1. Takla andesites and basalts which are commonly massive or augite phyric, but also banded (tuffaceous) or foliated. These are pervasively, propylitically altered with chlorite, epidote, and carbonate variably developed. Minor pyrite mineralization, usually from trace to 0.5% occurring mainly as disseminations, is wide-spread.
- 2. Syn-volcanic stocks of diorite or gabbro intrude Takla andesites to basalts. Fine grained margins and limited outcrops make it difficult to be certain as to where to place contacts with the enclosing volcanics. One half to several percent magnetite with lesser hematite is commonly observed in the mafic intrusives. Less pyrite is noted in the mafic intrusives than in the mafic volcanics. Propylitic alteration is ubiquitous in these intrusives.
- 3. Crosscutting white feldspar and quartz-rich granite dikes, with minor chlorite or sericite and very minor pyrite and or hematite or limonite, cut the Takla volcanics. This unit ranges from fine to coarse grained and often has a pegmatitic appearance. Quartz veins and breccias cut this unit and nearby wallrocks. Graphite and minor pyrite are common in these quartz-rich rocks.
- 4. A fine grained, gray colored, hypabyssal intrusive unit of dacitic(?) composition cuts Takla volcanics. Two small bodies were mapped, one NE of 16,000 E, 21,500 N and one near 15,600 E, 20,500 N. The latter body appears to strike SW and is over 5 m wide.
- 5. Various quartz veins up to 0.5 m in thickness. Typically these consisted of quartz-carbonate or quartz-carbonate-chlorite. A number of quartz + graphite + pyrite veins were located in or near the granite dikes. Several percent of coarse grained chalcopyrite was noted in quartz vein float near 20,500 N, 16,000 E.

Propylitic alterion was noted in all the Takla volcanics and intrusives examined. It is reflected as variable amounts of chlorite, epidote, and white carbonate as disseminations, veinlets, or fracture coatings. Pyrite is widespread in these rocks and averages around 1/4% but commonly reaches 1% abundance and is believed to be responsible for most of the IP chargeability anomalies outlined by Noranda.

Mineralization noted included pyrite, magnetite (in the Takla diorites or gabbroes), chalcopyrite, and traces of molybdenite and sphalerite(?). Graphite is a major component in

a few quartz veins and quartz-rich breccias believed to be associated with the white granite dikes.

GEOCHEMISTRY

Soils

Twenty-four (24) soil samples were collected at 25 or 50 m intervals from the Gut grid. The analyses are included in Appendix 5. These were taken to cover eight gold soil anomalies from Noranda's soil sampling program (Walker, 1991b). Noranda found twenty-four (24) soil gold anomalies greater than 100 ppb.

Of the eight anomalies re-sampled the following three areas are considered to be significantly anomalous:

- 1. 15,220 E, 21,275 N = 35 ppb Au, 908 ppm Cu, 339 ppm Mo
- 2. 15,400 E, 20,850 N = 105 ppb Au, 120 ppm As, 112 ppm Cu, 98 ppm Pb, 878 ppm Zn
- 3. 15,600 E, 21,300 N = 184 ppm Cu, 10 ppm Mo

Soil anomaly 1 occurs in an area of spotty outcrop in a clearcut. Pyrite and chalcopyrite mineralization were found in float samples 100 to 200 m to the north. This anomaly should be further investigated by soil sampling, prospecting, and mapping.

Soil anomaly 2 occurs on the south side of a small, steep knob of mafic volcanic or intrusive. Disseminated pyrite was noted in the rocks mapped. A small stream flowing SW lies about 20 m to the south of the sample site. The same follow-up as for anomaly 1 is recommended.

Soil anomaly 3 occurs just north of twin NE-SW trending eskers. The soil sample site occurs in till. Disseminated pyrite is present in nearby outcrops. It is probably sufficient to explain this anomaly.

The remaining five anomalies re-sampled are considered not anomalous.

Soil geochemical results are shown on Figure 5 for Au, Ag, Cu, Mo, Pb, and Zn.

1990-1991 Noranda soil anomalies not sampled, should be re-sampled, prospected, and mapped.

Rocks

Thirty-one (31) rock samples were collected for analysis during the course of mapping the Gut grid. The analyses are included as Appendix 5.

None of the samples analysed could be considered to be of ore grades, even by bulk mining methods. Six (6) of the samples are considered to be geochemically anomalous. They are:

- G9424301R float, sheared basalt with pyrite and chalcopyrite 2430 ppm Cu and elevated values of Al,Ca,Fe,K,Mg,Mn (near 15,600 E, 21,450 N; 150 m N of soil anomaly 1)
- G9424401R float, quartz vein with chalcopyrite 8.8 ppm Ag, 3680 ppm Cu (near 16,000 E, 20,500 N)
- G9426904R outcrop, andesite with chlorite, pyrite, chalcopyrite 165 ppb Au, 2250 ppm Cu, and elevated Al, Fe (near 14,800 E, 21,050 N)
- G9427001R outcrop, granite with pyrite and graphite 275 ppb Au, 118.0 ppm Ag, 70 ppm Mo, 12 ppm Sb (near 15,900E, 21,500 N)
- G9427004R outcrop, quartz-pyrite-graphite vein
 10.6 ppm Ag, 22 ppm Bi, 360 ppm Cu, 1005 Zn, 63 ppm Mo, and
 elevated Fe and Mn
 (at 15,945 E, 21,501 N)
- G9427302R outcrop, graphitic quartz breccia 122 ppm Mo (E of 16,000 E, 20,100 N)

Only four of the 31 rock samples were anomalous in gold (greater than or equal to 20 ppb Au). Four of the rock samples were anomalous in silver (3 ppm or more Ag). Nine of the rock samples had greater than 200 ppm copper. Seven rock samples had 10 ppm molybdenum or more.

The two areas of white granite dike, at 16,000 E, 21,500 N and 16,000 E, 20,100 N, warrant further prospecting and mapping because of the number (four out of six) of anomalous rock samples collected nearby.

CONCLUSIONS

Three intrusive units outcrop on the Gut claims. Diorite or gabbro intrusives, of the same age as the Takla volcanics enclosing them, strike NW-SE across the property. No porphyry-style mineralization was seen in them, however they are poorly exposed toward the NW.

Fine grained, hypabyssal dacites(?) cut the Takla volcanics at one location and were seen at one other location. They appear to be unmineralized.

Granitic dikes appear to cut the Takla volcanics at two locations on the claims. Quartz-graphite+-pyrite veins with anomalous base and precious metal contents are associated with the granite dikes. Iron staining, hematite, and/or limonite, is common, especially near 16,000 E, 21,500 N. Significant Cu and Mo values in mineralized float on the PM claims appear to be related to the southern granite body found on the Gut claims.

All three intrusives appear unlikely to host Mt. Milligan type and scale mineralization. However smaller, better grade copper - molybdenum mineralization may be associated with either granitic dike on the Gut claims.

Weak disseminated and veinlet pyrite and chalcopyrite mineralization is wide-spread in Takla andesites and basalts and syn-volcanic intrusives on the Gut claims. Propyllitic alteration is widespread. No other type of alteration was noted on the claims. Anomalous, but uneconomic, copper (+/- gold) grades were encountered at several locations.

Noranda soil gold anomalies re-sampled at three locations proved to be anomalous.

RECOMMENDATIONS

1. Sample, prospect, and map the three follow-up soil anomalies at: 15,220 E, 21,275 N
15,400 E, 20,850 N
15,600 E, 21,300 N.

- 2. Re-sample remaining Noranda soil gold anomalies and review Noranda soil analyses, particularly for Mo anomalies.
- 3. Grid, map, and sample the areas of the granitic dikes and along their possible extensions to the SW.
- 4. Compile and reinterpret previous assessment data from the Alpha and PM claims.

REFERENCES

- Campbell, T., 1990.

 BCMEMPR Assessment Report 20,102.
- Deschenes, M., 1991.

 BCMEMPR Assessment Report 21,430.
- Farmer, R., 1983.

 BCMEMPR Assessment Report 11,259.
- Forstad, S., 1989.

 BCMEMPR Assessment Report 19,853.
- MacArthur, R., 1989.
 BCMEMPR Assessment Report 19,115.
- Maxwell, G., 1990.

 BCMEMPR Assessment Report 18,883.
- Muller, J.E. and Tipper, H.W., 1969. Geology, McLeod Lake, NTS 93 J, Geological Survey of Canada, Map 1204A, scale 1:253,440.
- Poloni, J.R., 1988.

 BCMEMPR Assessment Report 17,216.
- Struik, L.C., 1994. Geology of McLeod Lake map area (93 J), British Columbia. Geological Survey of Canada, Open File 2439.
- Walker, T. et al., 1991a.

 BCMEMPR Assessment Report 21,470.
- Walker, T., 1991b.

 BCMEMPR Assessment Report 21,473.
- Walker, T., 1991c.

 BCMEMPR Assessment Report 22,009
- Walker, T. and Wong, T., 1991d.
 BCMEMPR Assessment Report 22,022.
- Wheeler, J.O. and McFeely, P. (comp.), 1991. Tectonic Assemblage Map of the Canadian Cordillera and adjacent parts of the United States of America, Geological Survey of Canada, Map 1712A, scale 1:2,000,000.

| APPENDIX 1. List of Fie | ld Personnel, 1994 | , Gut property |
|-------------------------------------|--------------------|---|
| Name, Address | Position | Dates worked Man on claims days |
| Alan Raven Prince George, B.C. | Prospector | 1-12, 29 August- 31 2, 16-22, 25 Sept 1 October |
| Kevin Martin Prince George, B.C. | Assistant | 1-12 August 12 |
| Del Myers Prince George, B.C. | Geologist | 31 August - 2, 7 26-29 September |
| Norman Raven Vancouver, B.C. | Assistant | 25 Sept 1 Oct. 7 |
| | | |
| | total man-days | 57 |

APPENDIX 2. Statements of Costs, 1994, Gut property

| Field Personnel | |
|---|------------------|
| 38 man-days @ \$218.42 | \$8,300 |
| Food and accommodation | |
| camp rental 38 man-days at \$25 | \$950 |
| food 38 man-days at 22.73 | 863 |
| Mobilization and demobilization in B.C. | |
| 12 man-days at \$225 | \$2,700 |
| motel and meals | 234 |
| | |
| Vehicle rentals | A1 760 |
| 38 vehicle-days @ \$46.33 fuel | \$1,760 629 |
| | 023 |
| Equipment and supplies | |
| Equipment rentals | |
| radiophone | \$77 |
| | 4 |
| Laboratory analyses | |
| 24 soils and 31 rocks for 32 element ICP + Au | • |
| freight | 46 |
| Report preparation | |
| 7 days at \$300/day | \$2,100 |
| Managament . | |
| Management 5% of \$18,844 | \$942 |
| -0 | |
| | |
| total | \$ 19,786 |

APPENDIX 3. Statements of Qualifications

Relevant Training

- B.Sc. (1970) Pennsylvania State University University Park, Pa., USA Geological Sciences
- M.Sc. (1973) University of Toronto Toronto, Ontario, Canada Geochemistry

Relevant Experience

- 1973 1980 Exploration and Mine Geologist
 Cominco Ltd.
 Vancouver and Yellowknife
- 1980 1982 Exploration Geologist
 Noranda Exploration Co., Ltd.
 Yellowknife, N.W.T.
- 1982 1983 Exploration Geologist
 Noranda Exploration Co., Ltd.
 Smithers, B.C.
- 1983 1991 Exploration Geologist
 Noranda Exploration Co., Ltd.
 Prince George, B.C.
- 1992 Consulting Geologist

Professional Affiliations

Fellow, Geological Association of Canada

Member, Association of Professional Engineers, Geologists, and Geophysicists of the Northwest Territories

Member, Association of Professional Engineers and Geoscientists of BC

Delbert E. Myers, Jr.

P. Geo.

18 May 1995

APPENDIX 4. Sample reports, Gut claims (in numerical order)

| ARGUTRX.WB1 | Sample Report | | 22-Feb-95 | | | | dm |
|-------------------|-----------------|---------|--|--------|--------|--------|--------|
| Sample No. Grid N | Grid E Material | | Description | ppb Au | ppm Ag | ppm Cu | ppm Mo |
| G9424301R | rock | float | sheared basalt 3% pyrite, 1% chalcopyrite | <5 | 2.4 | 2430 | 1 |
| G9424302R | rock | outcrop | hypabyssal granite white feldspar, quartz, chlorite 5% fine grain pyrite cubes | <5 | 1.0 | 9 | 7 |
| G9424303R | rock | float | black breccia quartz veined bleached hypabyssal granite | <5 | 2.0 | 14 | 13 |
| G9424304R | rock | outcrop | basalt chlorite-carbonate altered 3% pyrite | <5 | 0.2 | 16 | 9 |
| G9424305R | rock | outcrop | schistose basalt chlorite, 4% dissem. pyrite, 0.5% chalcopyrite | <5 | 0.2 | 91 | <1 |
| G9424306R | rock | outcrop | schistose basalt chlorite, 4% dissem. pyrite | <5 | 0.2 | 384 | <1 |
| G9424401R 20500 | 0 16000 rock | float | quartz vein minor chlorite, 1% chalcopyrite 40 cm diameter | <5 | 8.8 | 3680 | <1 |
| G9424402R | rock | outcrop | andesite ash tuff chlorite-epidote-carbonate 0.5% pyrite, chalcopyrite | 65 | 2.4 | 694 | 2 |
| G9424403R | rock | outcrop | quartz-graphite vein trace pyrite | <5 | 0.2 | 9 | 9 |
| G9426901R 21492 | 2 15225 rock | float | andesite 1% pyrite, 0.25% chalcopyrite | <5 | <0.2 | 27 | <1 |

| G9426902R | 21445 | 15225 ro | ck float | augite phyric andesite 5 mm pyrrhotite(2%) masses rimmed with chalcopyrite(0.5%) | <5 | <0.2 | 272 | <1 |
|-----------|-------|----------|------------|--|-----|-------|------|----|
| G9426903R | 21375 | 15240 ro | ck float | andesite chlorite 2% dissem. and veinlet pyrite, trace chalcopyrite | <5 | <0.2 | 393 | <1 |
| G9426904R | | ro | ck outcrop | andesite chlorite, 2% pyrite, trace chalcopyrite | 165 | 1.2 | 2250 | <1 |
| G9426905R | 21127 | 14805 ro | ck outcrop | augite phyric andesite epidote-chlorite, trace malachite, epidote veinlets | 10 | 0.2 | 591 | <1 |
| G9427001R | 21502 | 15877 ro | ck outcrop | granite quartz-feldspar 2% dissem. pyrite, 2% graphite | 275 | 118.0 | 29 | 70 |
| G9427002R | 21505 | 15887 ro | ck float | quartz vein 5% dissem. pyrite, graphite? | 10 | 4.0 | 45 | 7 |
| G9427003R | 21500 | 15920 ro | ck outcrop | limonite stained granite + andesite quartz veins, weathered pyrite, graphite | <5 | 1.6 | 6 | 77 |
| G9427004R | 21501 | 15945 ro | ck outcrop | quartz vein 10% pyrite, graphite | 15 | 10.6 | 360 | 1 |
| G9427005R | 21456 | 15973 ro | ck float | quartz-rich breccia quartz-graphite veins | <5 | 0.6 | 6 | 63 |
| G9427006R | | ro | ck outcrop | quartz-feldspar-sericite-chlorite schist limonitic weathering with quartz veins trace pyrite | <5 | 0.2 | 25 | 3 |
| G9427007R | | ro | ck outcrop | granite limonite, chlorite | <5 | <0.2 | 8 | 1 |
| G9427008R | 21005 | 15635 ro | ck outcrop | andesite chlorite, epidote, 0.5% pyrite | <5 | <0.2 | 133 | 2 |

| G9427101R | | rock | outcrop | andesite tuff carbonate, 0.5% pyrite | <5 | <0.2 | 135 | <1 |
|-----------|-------|------------|---------|---|----|------|-----|-----|
| G9427102R | | rock | outcrop | augite phyric gabbro | 10 | <0.2 | 77 | <1 |
| G9427103R | 20185 | 15600 rock | outcrop | rusty zone in basalt or gabbro limonite, hematite, magnetite | 30 | <0.2 | 23 | <1 |
| G9427104R | 19990 | 16005 rock | outcrop | quartz-chlorite vein minor honey color mineral | <5 | <0.2 | 10 | <1 |
| G9427105R | | rock | outcrop | rusty gabbro chlorite, 0.5% pyrite | <5 | <0.2 | 10 | 2 |
| G9427106R | | rock | outcrop | andesite chlorite, carbonate, 1% pyrite | 10 | <0.2 | 18 | <1 |
| G9427301R | | rock | | graphitic quartz breccia | <5 | 2.0 | 4 | 77 |
| G9427302R | | rock | | graphitic quarte breaka | <5 | 1.6 | 19 | 122 |
| G9427303R | | rock | | graphitic quartz breecia | <5 | 0.2 | 5 | 35 |

APPENDIX 5. Analysis Reports (in chronological order)

Lab reports: A9426722

A9426723 A9428668 A9428669



Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

TO: RAVEN, A.

R.R. 5, SITE 5, COMP.17 PRINCE GEORGE, BC V2N 2J3

Project:

Comments: ATTN: ALAN RAVEN

Page Number :1-A
Total Pages :1
Certificate Date: 29-SEP-94
Invoice No. : I9426722
P.O. Number :

Account :LV

| | | _ | | | | | | | | CE | RTIFI | CATE | OF A | NAL | YSIS | | 49426 | 722 | | |
|--|---|------------------|-----------------------------------|--------------------------------------|-----------------------------|-----------------------------|----------------------------------|---------------------------------|--------------------------------------|-----------------------------------|----------------------------|------------------------------|-------------------------------|--------------------------------------|--------------------------------------|--------------------------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------|
| SAMPLE | PREP CODE | Au ppb FA+AA | Ag ppm | 11 1 | As ppm | Ba ppm | Be ppm | Bi ppm | Ca % | Cđ ppm | Co ppm | Cr ppm | Cu ppm | Fe % | Ga pps | Hg ppm | K % | La ppm | Ng % | Mn ppm |
| L15400E 20800N L15400E 20850N L15400E 20900N L15600E 21275N L15600E 21300N | 201 229 201 229 201 229 201 229 201 229 | 105 10 < 5 | 0.2 1.2 0.6 < 0.2 0.2 | 2.14 2.94 2.44 2.65 2.81 | 36 120 78 28 14 | 70 40 50 110 60 | | < 2 < 2 < 2 < 2 < 2 | 0.39 0.41 0.66 0.39 0.46 | 0.5 3.0 0.5 0.5 < 0.5 | 13 23 36 13 20 | 47 104 77 55 264 | 51 112 168 48 184 | 5.02 6.39 6.54 4.99 4.57 | < 10 < 10 < 10 < 10 < 10 | < 1 < 1 < 1 < 1 | 0.06 0.05 0.04 0.08 0.10 | < 10 < 10 < 10 < 10 < 10 | 0.93 1.62 1.31 0.77 2.29 | 545 750 675 380 470 |
| L15800E 21300N L15800N 21400N L15800E 21 850 N .350 | 201 225 201 225 201 225 | < 5 | 0.4 | 2.18 1.73 2.84 Soi | 14 4 12 | 140 150 120 Gut | < 0.5 < 0.5 < 0.5 claim | < 2 < 2 < 2 | 0.38 0.35 0.33 | < 0.5 < 0.5 < 0.5 | 10 8 9 | 55 56 50 | 33 27 26 | 4.16 2.72 3.85 | < 10 < 10 < 10 | < 1 1 | 0.07 0.14 0.08 | < 10 20 < 10 | 0.73 0.80 0.70 | 670 345 400 |
| | | | | | | | | | | | | | | | | | | | | |

| | | 4. | | |
|----------------|---|----|--|--|
| CERTIFICATION: | _ | | | |



Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

RAVEN, A.

R.R. 5, SITE 5, COMP.17 PRINCE GEORGE, BC V2N 2J3

Project:

Comments: ATTN: ALAN RAVEN

Page Number : 1-8
Total Pages : 1
Certificate Date: 29-SEP-94
Invoice No. : I9426722
P.O. Number :

:LVI Account

| CERTIFICATE | OF | ANALYSIS | A9426722 |
|-------------|----|----------|----------|

| | _ | _ | | | | | | | | | _== | | | | | | | |
|-------------------------|-----|------|----------|---------------|---------|-----------|----------|-----------|-----------|-----------|-----------|---------|-----------|----------|----------|----------|-----------|--|
| Sample | PRE | - 1 | M pp: | о т | Na % | Ni ppm | ppm P | Pb ppm | Sb ppm | Sc ppm | 8r ppm | Ti % | T1 ppm | U ppm | V ppm | W ppm | Zn ppm | |
| L15400E 20800N | 201 | 229 | | 1 . | 0.01 | 19 | 1310 | | , | 4 | 35 | 0.10 | < 10 | < 10 | 127 | < 10 | 114 | |
| | | | | | | | | ~~ | | | | | | | | | | |
| L15400E 20850N | 201 | | | | 0.01 | 33 | 850 | 98 | < 2 | y | 35 | 0.08 | < 10 | < 10 | 193 | < 10 | 878 | |
| L15400E 20900N | 201 | 229 | | 2 < | 0.01 | 49 | 630 | 14 | < 2 | 20 | 49 | 0.11 | < 10 | < 10 | 196 | < 10 | 82 | |
| L15600E 21275N | 201 | 229l | | 2 < | 0.01 | 26 | 2340 | 10 | < 2 | 4 | 30 | 0.11 | < 10 | < 10 | 141 | < 10 | 68 | |
| L15600E 21300N | 201 | | | | 0.01 | 74 | 640 | 6 | 4 2 | Ā | 40 | 0.17 | < 10 | < 10 | 156 | < 10 | 54 | |
| | | 1 | - | • | **** | | | • | ` • | • | | **** | | 1 20 | 130 | 1 10 | 74 | |
| L15800E 21300N | 201 | 229 | | 1 < | 0.01 | 26 | 1890 | 10 | < 2 | 4 | 30 | 0.11 | < 10 | < 10 | 124 | < 10 | 82 | |
| L15800N 21400N | 201 | 220 | | 3 4 | 0.01 | 20 | 860 | 16 | < 2 | 1 | 46 | 0.07 | < 10 | < 10 | 76 | < 10 | 126 | |
| | | | | _ | | | | | ` . | 7 | | | | | | | | |
| L15800E 21 900 N | 201 | 229 | | 1 < | 0.01 | 23 | 1630 | 6 | 2 | • | 29 | 0.11 | < 10 | < 10 | 107 | < 10 | 112 | |
| 350 | | - 1 | | | | | | | | | | | | | | | | |

soils (cont.), but claims

Harrisahler CERTIFICATION:_



Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 : RAVEN, A.

R.R. 5, SITE 5, COMP.17 PRINCE GEORGE, BC V2N 2J3

A9426723

Comments: ATTN: ALAN RAVEN

CERTIFICATE

A9426723

(LVI) - RAVEN, A.

Project: P.O. #:

Samples submitted to our lab in Vancouver, BC. This report was printed on 29-SEP-94.

| | SAMI | PLE PREPARATION |
|-------------------|-------------------|--|
| CHEMEX | NUMBER SAMPLES | DESCRIPTION |
| 205 226 229 | 9 9 9 | Geochem ring to approx 150 mesh 0-5 1b crush and split ICP - AQ Digestion charge |
| * NOTE | 1: | |

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

| CODE | NUMBER SAMPLES | DESCRIPTION | METHOD | DETECTION LIMIT | UPPEI LIMN |
|--------------|-------------------|--|------------------------------------|--------------------|----------------|
| 100 | 9 | Au ppb: Fuse 10 g sample | FA-AAS | 5 | 10000 |
| 2118 | 9 | Ag ppm: 32 element, soil & rock | ICP- AES | 0.2 | 200 |
| 2119 | 9 | Al %: 32 element, soil & rock | ICP- AES | 0.01 | 15.00 |
| 2120 | 9 | As ppm: 32 element, soil & rock | ICP- AES | 2 | 10000 |
| 2121 | 9 | Ba ppm: 32 element, soil & rock | ICP- AES | 10 | 10000 |
| 2122 | 9 | Be ppm: 32 element, soil & rock | ICP- AES | 0.5 | 100.0 |
| 2123 | 9 | Bi ppm: 32 element, soil @ rock | ICP-ARS | 2 | 10000 |
| 2124 | 9 | Ca %: 32 element, soil & rock | ICP- AES | 0.01 | 15.00 |
| 2125 | 9 | Cd ppm: 32 element, soil & rock | ICP-ARS | 0.5 | 100.0 |
| 2126 | 9 | Co ppm: 32 element, soil & rock | ICP-ARS | 1 | 10000 |
| 2127 | 9 | Cr ppm: 32 element, soil & rock | ICP-ARS | 1 | 10000 10000 |
| 2128 | 9 | Cu ppm: 32 element, soil & rock | ICP-AES | 0.01 | 15.00 |
| 2150 2130 | 9 | Fe %: 32 element, soil @ rock Ga ppm: 32 element, soil @ rock | ICP- AES ICP- AES | 10 | 10000 |
| | ا و ا | Hg ppm: 32 element, soil & rock | ICP-AES | 1 | 10000 |
| 2131 2132 | 9 | K %: 32 element, soil & rock | ICP-AES | 0.01 | 10.00 |
| 2151 | 9 | La pom: 32 element, soil & rock | ICP-AES | 10 | 10000 |
| 2134 | 9 | Mg %: 32 element, soil @ rock | ICP-AES | 0.01 | 15.00 |
| 2135 | ا و ا | Mn ppm: 32 element, soil & rock | ICP-ARS | 5 | 10000 |
| 2136 | ا و | Mo ppm: 32 element, soil & rock | ICP-AES | 1 | 10000 |
| 2137 | ا و ا | Na %: 32 element, soil & rock | ICP-AES | 0.01 | 5.00 |
| 2138 | ا و ا | Ni ppm: 32 element, soil & rock | ICP-ARS | 1 | 10000 |
| 2139 | ا وَ ا | P ppm: 32 element, soil & rock | ICP-ARS | 10 | 10000 |
| 2140 | ا وَ ا | Pb ppm: 32 element, soil & rock | ICP-ARS | 2 | 10000 |
| 2141 | ا و ا | Sb ppm: 32 element, soil & rock | ICP-AES | 2 | 10000 |
| 2142 | ا و ا | Sc ppm: 32 elements, soil & rock | ICP-AES | <u>ī</u> | 10000 |
| 2143 | 9 | Sr ppm: 32 element, soil & rock | ICP-AES | 1 | 10000 |
| 2144 | 9 | Ti %: 32 element, soil & rock | ICP-AES | 0.01 | 5.00 |
| 2145 | و ا | Ti ppm: 32 element, soil & rock | ICP-AES | 10 | 10000 |
| 2146 | 9 | U ppm: 32 element, soil & rock | ICP-AES | 10 | 10000 |
| 2147 | 9 | V ppm: 32 element, soil & rock | ICP- AES | 1 | 10000 |
| 2148 | 9 | W ppm: 32 element, soil & rock | ICP-AES | 10 | 10000 |
| 2149 | 9 | En ppm: 32 element, soil & rock | ICP-AES | 2 | 10000 |



Analytical Chemists " Geochemists " Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

RAVEN, A.

R.R. 5, SITE 5, COMP.17 PRINCE GEORGE, BC V2N 2J3

Project : Comments: ATTN: ALAN RAVEN

CERTIFICATE OF ANALYSIS

A9426723

Page Number: 1-A
Total Pages: 1
Certificate Date: 29-SEP-94
Invoice No.: 19426723 P.O. Number

Account :LVI

| | | | | | | | | | | | | | OAIL | . 01 / | 1176 | 1010 | | 73720 | 77 23 | | |
|-----------|----------|-----|-----------------|-----------|---------|-----------|-----------|-----------|-----------|------|-----------|-----------|-----------|-----------|------|-----------|-----------|--------|-----------|---------|-----------|
| SAMPLE | PR CO | | Au ppb FA+AA | Ag ppm | A1 * | As ppm | Ba ppm | Be ppm | Bi ppm | Ca % | Cđ ppm | Co ppm | Cr ppm | Cu ppm | Pe % | Ga ppa | Hg ppm | K % | La ppm | Ng k | Mr ppi |
| 294243-1R | 205 | 226 | < 5 | 2.4 | 3.17 | 28 | 60 | < 0.5 | < 2 | 5.72 | < 0.5 | 62 | 170 | 2430 | 6.44 | < 10 | < 1 | 1.73 | < 10 | 2.41 | 125 |
| G94243-2R | | 226 | | 1.0 | 1.71 | 16 | 90 | < 0.5 | < 2 | 0.64 | < 0.5 | 11 | 70 | 9 | 4.18 | < 10 | ₹ 1 | 0.24 | 30 | 1.25 | 330 |
| 294243-3R | | 226 | | 2.0 | 0.54 | 4 | 40 | < 0.5 | < 2 | 0.10 | < 0.5 | < 1 | 141 | 14 | 0.69 | < 10 | < 1 | 0.11 | < 10 | 0.14 | 4! |
| G94243-4R | | 226 | | 0.2 | 1.73 | 6 | 80 | < 0.5 | 2 | 0.71 | < 0.5 | 7 | 153 | 16 | 3.60 | < 10 | < 1 | 0.18 | < 10 | 1.39 | 425 |
| G94243-5R | 205 | 226 | < 5 | 0.2 | 1.23 | 44 | 60 | < 0.5 | < 2 | 1.07 | < 0.5 | 35 | 128 | 91 | 4.74 | < 10 | < 1 | 0.39 | < 10 | 1.15 | 345 |
| G94243-6R | 205 | 226 | < 5 | 0.2 | 1.81 | 40 | 30 | < 0.5 | < 2 | 2.18 | < 0.5 | 34 | 37 | 384 | 4.74 | < 10 | < 1 | 0.14 | < 10 | 1.62 | 560 |
| G94244-1R | 205 | 226 | < 5 | 8.8 | 0.22 | 4 | 20 | < 0.5 | < 2 | 0.02 | 2.0 | 40 | 199 | 3680 | 1.40 | < 10 | < 1 | 0.01 | < 10 | 0.20 | 50 |
| G94244-2R | 205 | 226 | 65 | 2.4 | 2.21 | 6 | 170 | < 0.5 | < 2 | 1.22 | < 0.5 | 17 | 17 | 694 | 3.08 | < 10 | < 1 | 0.36 | < 10 | 1.56 | 655 |
| G94244-3R | 205 | 226 | < 5 | 0.2 | 1.20 | 2 | 80 | < 0.5 | < 2 | 0.06 | < 0.5 | 2 | 142 | 9 | 1.99 | < 10 | < 1 | 0.20 | < 10 | 1.01 | 325 |

Rock samples, Gut claims

ナ



Analytical Chemists * Geochemists * Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

RAVEN, A.

R.R. 5, SITE 5, COMP.17 PRINCE GEORGE, BC V2N 2J3

Project : Comments: ATTN: ALAN RAVEN

Page Number: 1-B
Total Pages: 1
Certificate Date: 29-SEP-94
Invoice No.: 19426723

| P.O. Number | |
|-------------|---------|
| O. Number | • |
| Account | :LVI |
| 40COUNT | . L V : |
| | |

| | i . | | | | | | | | | | | A 1 1 1 1 A | | | _ | | | |
|--|--|----|-----------|--------------------------------------|---------------------------|------------------------------------|--------------------------|---------------------------------|-------------------------|-----------|--------------------------------------|--------------------------------------|--------------------------------------|-----------------------------|--------------------------------------|-----------------------------|----------|--|
| | | | | | | | | | | | CE | RTIF | CATE | OF A | NALY | 'SIS | A9426723 | |
| SAMPLE | PREP CODE | | Mo ppm | Na % | Ni ppm | p pm | Pb ppm | Sb ppm | Sc ppm | Sr ppm | Ti % | T1 ppm | U ppm | V ppm | ppm W | Zn ppm | | |
| 94243-1R 94243-2R 94243-3R 94243-4R 94243-5R | 205 22 205 22 205 22 205 22 205 22 | 6 | 7 | 0.01 0.05 0.01 0.03 0.03 | 99 17 3 40 63 | 1370 2910 280 960 1460 | 6 14 118 4 6 | < 2 < 2 < 2 < 2 < 2 | 9 1 < 1 4 4 | 19 < | 0.35 0.01 0.01 0.01 0.18 | < 10 < 10 < 10 < 10 < 10 | < 10 < 10 < 10 < 10 < 10 | 134 41 13 82 70 | < 10 < 10 < 10 < 10 < 10 | 126 62 20 38 50 | | |
| 4243-6R 4244-1R 4244-2R 4244-3R | 205 22 205 22 205 22 205 22 | 16 | < 1 - | 0.01 0.01 0.04 0.01 | 38 7 6 23 | 840 30 1500 270 | 8 4 10 26 | < 2 < 2 < 2 < 2 | 7 < 1 2 1 | 79 | 0.23 0.01 0.07 0.01 | < 10 < 10 < 10 < 10 | < 10 < 10 < 10 < 10 | 113 12 56 56 | 10 < 10 < 10 < 10 | 42 22 136 40 | | |
| | | | | R | zks | (cant. |), (| Sur | clain | 15 | | | | | | | | |
| | | | | | | | • | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

CERTIFICATION:



Analytical Chemists * Geochemists * Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221



R.R. 5, SITÉ 5, COMP.17 PRINCE GEORGE, BC V2N 2J3

CERTIFICATE OF ANALYSIS

Project : Comments:

nber :1-A Total ages :1 Certificate Date: 20-OCT-94 Invoice No. P.O. Number :

A9428668

:19428668 Account :LVI

| Sample | PREP | Au ppb FA+AA | Ag ppm | Al % | As ppm | Ba ppm | Be ppm | Bi ppm | Ca % | Çđ ppm | Со ррт | Cr ppm | Cu ppm | Fe % | Ga. ppm | Hg ppm | K % | La ppm | Mg % | Mn ppm |
|---------------|---------|-----------------|-----------|---------|----------------|-----------|-----------|-----------|---------|-----------|------------------|-----------|-----------|------|------------|-----------|--------|-----------|---------|-----------|
| 14800E 20400N | 201 229 | < 5 | < 0.2 | 1.89 | 12 | 90 | < 0.5 | 2 | 0.26 | < 0.5 | 11 | 49 | 27 | 3.80 | < 10 | < 1 | 0.12 | 10 | 0.70 | 280 |
| 14800E 21125N | 201 229 | | < 0.2 | 0.96 | < 2 | 60 | < 0.5 | < 2 | 0.30 | < 0.5 | -4 | 29 | 17 | 1.24 | < 10 | < 1 | 0.04 | < 10 | 0.39 | 135 |
| 14800E 21150N | 201 229 | | 0.2 | 2.18 | ` - | 160 | < 0.5 | 2 | 0.53 | 4 0.5 | 17 | 143 | 45 | 3.12 | < 10 | 1 | 0.16 | 10 | 1.66 | 340 |
| 15200E 20750N | 201 229 | | 0.2 | 2.79 | 14 | 80 | ₹ 0.5 | 5 | 0.26 | < 0.5 | 16 | 66 | 52 | 4.80 | < 10 | ī | 0.05 | 10 | 0.76 | 285 |
| 15200E 20800N | | | < 0.2 | 1.86 | 12 | 80 | < 0.5 | - | 0.29 | < 0.5 | 13 | 54 | 37 | 3.74 | ₹ 10 | < 1 | 0.03 | < 10 | 0.67 | 255 |
| 19200E 20800R | 201 229 | , , | . 0.2 | 1.00 | | - | | • | 0.23 | - 0.5 | 13 | | • | 3.74 | \ 10 | ` . | 0.03 | 1 10 | 0.0, | |
| 15200E 20850N | 201 229 | 15 | < 0.2 | 1.56 | 4 | 70 | < 0.5 | < 2 | 0.29 | < 0.5 | 9 | 41 | 22 | 3.64 | < 10 | < 1 | 0.06 | 10 | 0.48 | 285 |
| 15200E 20900N | 201 229 | | < 0.2 | 2.31 | 4 | 80 | < 0.5 | < 2 | 0.28 | < 0.5 | 9 | 49 | 23 | 3.24 | < 10 | < 1 | 0.06 | 10 | 0.57 | 245 |
| 15200E 20950N | 201 229 | | < 0.2 | 3.04 | Ē | 80 | < 0.5 | 2 | 0.28 | < 0.5 | 13 | 78 | 33 | 6.59 | < 10 | < 1 | 0.07 | 10 | 0.78 | 390 |
| 15220E 21225N | 201 229 | | 0.2 | 2.92 | 12 | 110 | < 0.5 | < 2 | 0.40 | < 0.5 | 15 | 55 | 32 | 4.57 | < 10 | 1 | 0.11 | 10 | 0.76 | 350 |
| 15220E 21250M | 201 229 | | < 0.2 | 1.97 | | 140 | < 0.5 | ` 2 | 0.33 | 0.5 | 16 | 82 | 95 | 4.86 | < 10 | < 1 | 0.10 | 10 | 1.03 | 665 |
| 13770# 71730# | 201 223 | 1 10 | . 0.2 | 1.37 | • | 140 | | - | 0.33 | 0.5 | | 4.4 | ,,, | 1.00 | 1 10 | ` • | 4.10 | | **** | 003 |
| 15220E 21275M | 201 229 | 35 | 1.6 | 2.53 | 14 | 160 | < 0.5 | 2 | 0.48 | < 0.5 | 33 | 116 | 908 | 6.38 | < 10 | < 1 | 0.10 | 10 | 1.32 | 730 |
| 15220E 21625N | 201 229 | | 0.2 | 2.32 | 10 | 140 | < 0.5 | 2 | 0.70 | 0.5 | 17 | 67 | 74 | 3.73 | < 10 | < 1 | 0.09 | 10 | 0.85 | 795 |
| 15220E 21650N | 201 229 | 1 | < 0.2 | 1.60 | 6 | 90 | < 0.5 | < 2 | 0.46 | < 0.5 | 9 | 44 | 28 | 2.48 | < 10 | < 1 | 0.07 | 10 | 0.68 | 375 |
| 15220E 21675M | 201 229 | | < 0.2 | 1.57 | 6 | 140 | < 0.5 | < 2 | 0.52 | < 0.5 | 9 | 44 | 29 | 2.83 | < 10 | < 1 | 0.09 | 10 | 0.58 | 330 |
| 15220E 21700N | 201 229 | | 0.2 | 2.36 | 2 | 140 | < 0.5 | < 2 | 0.55 | < 0.5 | 13 | 61 | 57 | 3.32 | < 10 | < 1 | 0.10 | 10 | 0.80 . | 520 |
| | -*- | l ' | ٠.2 | | - | | | | | | | | | | | | | | | |
| 15220E 21725N | 201 229 | 10 | < 0.2 | 1.73 | 2 | 90 | < 0.5 | < 2 | 0.50 | < 0.5 | 9 | 48 | 36 | 2.63 | < 10 | < 1 | 0.06 | 10 | 0.70 | 315 |

Soils, Gut claims

Hart Bichle CERTIFICATION:_



Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 Го:

To: RAVEN, A.

R.R. 5, SITE 5, COMP.17 PRINCE GEORGE, BC V2N 2J3

Project : Comments: Page the 1-B
Total Pages :1
Certificate Date: 20-OCT-94
Invoice No. : 19428668

P.O. Number : Account :LVI

CERTIFICATE OF ANALYSIS A9428668

| Sample | PRI COI | | Mo ppm | Na % | Ni ppm | P PPm | Pb ppm | Sb ppm | Sc ppm | Sr p pm | Ti % | T1 ppm | U ppm | PPM V | W | Zn ppm | |
|---------------|---------------|------------|-----------|---------|-----------|----------|-----------|-----------|-----------|-------------------|---------|-----------|----------|-------|-----------|-----------|-------------|
| 14800E 20400N | 201 | 229 | < 1 | 0.01 | 25 | 610 | 4 | 2 | 4 | 25 | 0.10 | < 10 | < 10 | 96 | < 10 | 62 | |
| 4800E 21125N | | 229 | < 1 | < 0.01 | 10 | 430 | i | < 2 | 2 | 26 | 0.09 | < 10 | < 10 | 51 | < 10 | 28 | |
| 4800E 21150N | | 229 | λī | 0.01 | 48 | 910 | < 2 | ` - | 7 | 37 | 0.17 | < 10 | < 10 | 116 | < 10 | 62 | |
| 5200E 20750N | | 229 | ₹ 1 | 0.01 | 26 | 2300 | ` 2 | 5 | | 20 | 0.08 | < 10 | < 10 | 116 | < 10 | 138 | |
| 15200E 20800N | | 229 | ₹1 | 0.01 | 22 | 680 | 2 | 5 | Ä | 29 | 0.12 | ₹ 10 | < 10 | 111 | < 10 | 66 | |
| 13400# 20600# | * ** | ^^* | ` . | 0.01 | 44 | 900 | • | • | • | 49 | V.12 | 10 | 10 | 111 | 1 10 | 99 | |
| 5200E 20850N | 201 | 229 | < 1 | 0.01 | 14 | 1000 | 2 | 2 | 4 | 27 | 0.11 | < 10 | < 10 | 119 | < 10 | 68 | |
| 5200E 20900M | 201 | 229 | < 1 | 0.01 | 19 | 1270 | 2 | 4 | 4 | 27 | 0.10 | < 10 | < 10 | 88 | < 10 | 82 | |
| 5200E 20950N | 201 | 229 | < 1 | 0.01 | 23 | 3680 | 2 | 2 | 6 | 25 | 0.11 | < 10 | < 10 | 157 | < 10 | 126 | |
| 5220E 21225N | 201 | 229 | 1 | 0.01 | 27 | 2770 | 6 | 2 | 6 | 31 | 0.12 | < 10 | < 10 | 109 | < 10 | 166 | |
| 15220E 21250N | | 229 | 34 | 0.01 | 28 | 1440 | < 2 | < 2 | 4 | 39 | 0.13 | < 10 | < 10 | 120 | < 10 | 92 | |
| 5220E 21275M | 201 | 229 | 339 | 0.01 | 46 | 1300 | < 2 | 2 | 8 | 44 | 0.12 | < 10 | < 10 | 128 | < 10 | 72 | |
| 5220E 21625N | | 229 | 1 | 0.01 | 29 | 700 | 6 | 2 | 7 | 57 | 0.09 | < 10 | < 10 | 101 | < 10 | 84 | |
| 5220E 21650M | | 229 | < 1 | 0.01 | 20 | 690 | 2 | < 2 | 4 | 37 | 0.09 | < 10 | < 10 | 65 | < 10 | 72 | |
| 5220E 21675M | | 229 | < 1 | 0.01 | 18 | 1850 | 2 | 2 | Ā | 45 | 0.08 | < 10 | < 10 | 79 | < 10 | 76 | |
| 5220E 21700N | | 229 | ₹ 1 | 0.01 | 26 | 960 | - 4 | 2 | 6 | 50 | 0.09 | < 10 | < 10 | 86 | < 10 | 82 | |
| | | / | | | | | - | - | • | | | • •• | | | - | ~- | • |
| 15220E 21725N | 201 | 229 | < 1 | 0.01 | 20 | 630 | 2 | < 2 | 4 | 41 | 0.10 | < 10 | < 10 | 75 | < 10 | 60 | |
| | | - | | | | | _ | | - | | | | | •• | | | |

Soils (cont.), Gut claims

27

CERTIFICATION:

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221

RAVEN, A.

R.R. 5, SITE 5, COMP.17 PRINCE GEORGE, BC V2N 2J3

Project : Comments:

Page 1 :1-A Total Pages :1 Certificate Date: 20-OCT-94

| Invoice No. | : 194286 |
|-------------|----------|
| P.O. Number | : |
| Account | : LVI |
| | |

| | | | | | | | | | | | CE | RTIFI | CATE | OF A | NAL | YSIS | / | 19428 | 669 | | = |
|---|-------------------|---------------------------------|--------------------------------|---|--------------------------------------|-----------------------------|-------------------------------|---|------------------------------|--------------------------------------|---|----------------------------|---------------------------------|---------------------------------|---------------------------------------|--------------------------------------|-------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|------------------------------------|
| Sample | PRI | | Au ppb FA+AA | Ag ppm | Al % | As ppm | Ba ppm | Be ppm | Bi ppm | Ca % | Cq Cq | Co ppm | Cr ppm | Cu ppm | Fe % | Ga ppm | Hg ppm | K % | La ppm | Mg % | Mn ppm |
| 79426901R 79426902R 79426903R 79426904R 79426905R | 205 205 205 | 294 294 294 294 294 | < 5 < 5 < 5 165 10 | < 0.2 < 0.2 < 0.2 1.2 0.2 | 2.40 0.60 2.91 3.63 1.68 | < 2 12 4 22 < 3 | 140 60 20 40 20 | < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 | 2 < 2 < 2 < 2 | 2.80 2.07 0.73 1.36 1.63 | < 0.5 < 0.5 < 0.5 0.5 < 0.5 | 22 41 62 84 28 | 173 85 94 70 82 | 27 272 393 2250 591 | 3.97 2.49 7.82 8.24 7.04 | < 10 < 10 < 10 < 10 < 10 | < 1 < 1 < 1 < 1 | 0.10 0.05 0.32 0.81 0.02 | < 10 < 10 < 10 < 10 < 10 | 2.45 0.18 2.76 2.73 1.40 | 745 270 530 830 625 |
| 39427001R 39427002R 39427003R 39427004R 39427005R | 205 205 205 | 294 294 294 294 294 | 275 10 < 5 15 < 5 | 118.0 4.0 1.6 10.6 0.6 | 0.40 1.07 0.74 2.47 0.65 | 88 80 14 88 | 160 150 30 30 40 | < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 | 4 2 2 2 22 22 | 0.02 0.02 0.02 0.01 0.04 | < 0.5 < 0.5 < 0.5 7.5 < 0.5 | 1 3 1 13 | 164 199 182 214 181 | 29 45 6 360 6 | 1.67 8.25 1.96 10.95 1.09 | < 10 < 10 < 10 < 10 < 10 | < 1 < 1 < 1 < 1 | 0.38 0.27 0.29 0.11 0.17 | 20 30 20 < 10 10 | 0.04 0.27 0.29 0.85 0.30 | 30 355 90 2080 150 |
| 29427006R 29427007R 29427008R 29427101R 29427102R | 205 205 205 | 294 294 294 294 294 | < 5 < 5 < 5 < 5 | 0.2 < 0.2 < 0.2 < 0.2 < 0.2 | 2.07 0.36 1.68 1.56 1.11 | 8 12 2 10 26 | 40 20 200 140 180 | < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 | 2 < 2 2 2 < 2 | 0.04 0.01 1.08 1.11 2.28 | < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 | 8 1 25 36 27 | 176 111 194 208 105 | 25 8 133 135 77 | 4.41 1.41 3.19 3.75 2.87 | < 10 < 10 < 10 < 10 < 10 | 1 < 1 < 1 < 1 < 1 | 0.27 0.20 0.76 0.33 0.01 | 10 10 < 10 < 10 < 10 | 1.43 0.07 1.89 1.58 1.30 | 345 135 490 430 665 |
| 39427103R 39427104R 39427105R 39427106R 39427301R | 205 205 205 | 294 294 294 294 294 | 30 < 5 < 5 10 < 5 | < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 | 2.63 3.09 0.88 3.32 0.90 | 364 4 < 2 20 20 | 60 20 60 20 150 | < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 | < 2 < 2 2 < 2 2 | 2.54 7.57 0.24 7.44 0.06 | 0.5 < 0.5 < 0.5 < 0.5 < 0.5 | 48 23 4 26 2 | 166 274 192 149 201 | 23 10 10 18 4 | 10.30 4.46 1.83 5.19 2.02 | < 10 < 10 < 10 < 10 < 10 | < 1 1 < 1 < 1 | 0.01 0.12 0.20 0.12 0.22 | < 10 < 10 10 < 10 < 10 | 3.23 3.04 0.43 3.38 0.76 | 1605 1150 305 1100 205 |
| 39427302R 39427303R | | 294 294 | < 5 < 5 | 1.6 0.2 Roc | 1.05 0.39 | 28 6 Gut | 70 60 cla | < 0.5 < 0.5 رسح | 2 2 | 0.09 | < 0.5 < 0.5 | 3 < 1 | 189 94 | 19 5 | 2.13 | < 10 < 10 | < 1 < 1 | 0.29 | 10 10 | 0.67 | 235 75 |

8

Analytical Chemists * Geochemists * Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221



RAVEN, A.

R.R. 5, SITE 5, COMP.17 PRINCE GEORGE, BC V2N 2J3

CERTIFICATE OF ANALYSIS

Project : Comments:

Page Number: 1-B
Total Pages: 1
Certificate Date: 20-OCT-94
Invoice No.: 19428669
P.O. Number:
Account: LVI

A9428669

| | | | | | | | | | <u> </u> | | | VAIL | | | | A3420003 |
|------------------------|--------------------|------------|--------------|-----------|--------------|------------|----------|-----------|-------------|------------------|--------------|--------------|-------------|--------------|-------------------|-------------|
| Sample | PREP | Mo ppm | Na % | Ni PPE | ppm P | Pp pp | Sp Sp | Sc ppm | Sr ppm | Ti % | T1 ppm | D ppm | V ppm | DDm M | Zn ppm | |
| 19426901R | 205 294 | < 1 | 0.06 | 40 | 1000 | < 2 | < 2 | 12 | 131 | 0.26 | < 10 | < 10 | 138 | < 10 | 34 | <u> </u> |
| 9426902R | 205 294 | < 1 | 0.01 | 149 | 940 | < 2 | < 2 | 2 | 48 | 0.13 | < 10 | < 10 | 24 | < 10 | 8 | |
| 39426903R 39426904R | 205 294 205 294 | < 1 < 1 | 0.06 | 23 75 | 1600 2480 | < 2 < 2 | < 2 | 7 5 | 69 161 | 0.20 | < 10 < 10 | < 10 < 10 | 135 104 | 20 30 | 30 10 4 | |
| 29426905R | 205 294 | < 1 | 0.04 | 26 | 390 | < 2 | 2 | 13 | 165 | 0.38 | < 10 | < 10 | 308 | 10 | 50 | |
| 39427001R | 205 294 | | 0.01 | 3 | 30 | 376 | 12 | 1 | | 0.01 | < 10 | < 10 | 32 | < 10 | 12 | |
| 39427002R | 205 294 | | < 0.01 | 8 | 350 | 24 | < 2 | 2 | | < 0.01 | < 10 | < 10 | 31 | < 10 | 72 | |
| 09427003R | 205 294 | 77 | 0.01 | - 4 | 180 70 | 26 168 | < 3 | 1 | | < 0.01 < 0.01 | < 10 | < 10 < 10 | 20 46 | < 10 10 | 22 1005 | |
| 29427004R 29427005R | 205 294 205 294 | | 0.01 | 37 10 | 240 | 38 | < 2 | i | | 0.01 | < 10 < 10 | < 10 | 27 | < 10 | 40 | |
| 39427006R | 205 294 | 3 | 0.01 | 20 | 340 | 4 | < 2 | 3 | | 0.01 | < 10 | < 10 | 58 | < 10 | 50 | |
| 29427007R | 205 294 | 1 | 0.04 | _1 | 180 | 22 | < 2 | < 1 | | 0.01 | < 10 | < 10 | 1 | < 10 | 16 | |
| 99427008R | 205 294 | 2 | 0.03 | 70 | 1380 | < 2 | 2 | • | 139 | 0.16 | < 10 | < 10 | 86 | < 10 | 40 | |
| 39427101R 39427102R | 205 294 205 294 | < 1 < 1 | 0.04 0.02 | 60 34 | 1220 330 | < 2 | 2 2 | 6 9 | 78 78 | 0.23 0.28 | < 10 < 10 | < 10 < 10 | 98 134 | < 10 < 10 | 26 18 | |
| 39427103R | 205 294 | | < 0.01 | 57 | 170 | < 2 | 2 | 59 | 150 | 0.01 | < 10 | < 10 | 434 | < 10 | 88 | |
| G9427104R | 205 294 | < 1 | 0.01 | 44 | 910 | < 2 | 4 | 12 | | 0.01 | < 10 | < 10 | 142 | 20 | 56 | |
| G9427105R G9427106R | 205 294 205 294 | 2 < 1 | 0.06 0.01 | 16 36 | 200 830 | 34 < 2 | < 2 4 | 2 22 | 14 < 487 | 0.01 | < 10 < 10 | < 10 < 10 | 17 174 | < 10 20 | 42 58 | |
| 39427301R | 205 294 | | 0.01 | 12 | 340 | 32 | < 2 | 3 | | 0.01 | ₹ 10 | ₹ 10 | 45 | < 10 | 32 | |
| 9427302R | 205 294 | | 0.01 | 17 | 520 | 64 | 2 | - 3 | | 0.01 | < 10 | < 10 | 72 | < 10 | 40 | |
| 29427303R | 205 294 | 35 ∢ | 0.01 | 4 | 300 | 14 | < 2 | < 1 | 4 4 | 0.01 | < 10 | < 10 | 18 | < 10 | 14 | |
| | | | ŗ | Zocks | F (Osu | nt.), | Gu | r cla | ZMS | | | | | | | |
| | | | | | | | | | | | | | | | | |

CERTIFICATION:_

