

**GEOCHEMICAL / GEOPHYSICAL REPORT**

on the

**RUM RUN PROPERTY**

Quartz Claims RUM RUN 1- 20, 21 – 40, 43, 45, 47, 49, 53-58  
Grant Nos. YC17658-677, YC20192-221, YC20214, 216, 218, 220, 222-227  
Dawson Mining District  
Owner: Gordon G Richards

Claim Sheet No 1150/02,  
Latitude 63 01'  
Longitude 138 40'

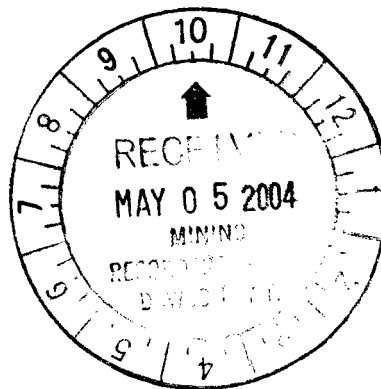
094481

written by  
Gordon G Richards

work performed

July 11 – 20, 2003 on  
RUM RUN 21 – 40, YC20192-221  
& RUM RUN 43, 45, 47, 49, 53-58, YC20214, 216, 218, 220, 222-227  
and Sept 16 – 25, 2003 on  
RUM RUN 1-20, YC17658-677  
By Gordon Richards

January 5, 2004



YUKON ENERGY, MINES  
& RESOURCES LIBRARY  
PO BOX 2728  
WHITEHORSE, YUKON Y1A 2C6

Costs associated with this report have been  
approved in the amount of \$17,000.  
for assessment credit under Certificate of  
Work No. QD00497-498.

*H. Perry*

Mining Recorder  
Dawson City Mining District

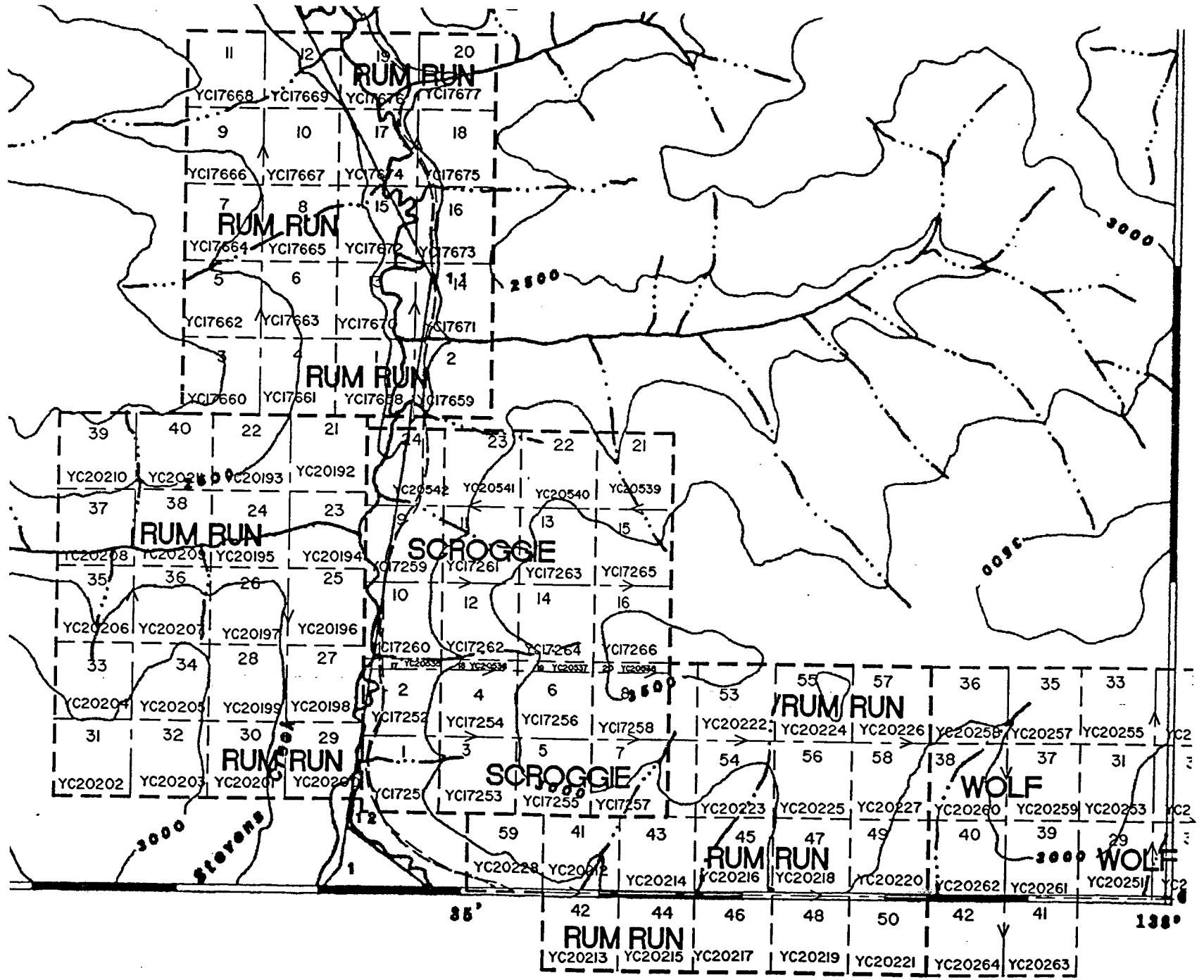
## TABLE OF CONTENTS

|   |           |
|---|-----------|
| <b>LOCATION AND ACCESS</b>                      | <b>5</b>  |
| <b>CLAIMS</b>                                   | <b>5</b>  |
| <b>HISTORY</b>                                  | <b>7</b>  |
| <b>GEOLOGY</b>                                  | <b>7</b>  |
| <b>PREVIOUS WORK</b>                            | <b>10</b> |
| <b>CURRENT WORK</b>                             | <b>11</b> |
| <b>RESULTS</b>                                  | <b>12</b> |
| <b>Magnetometer Survey</b>                      | <b>12</b> |
| <b>Geochem Survey</b>                           | <b>13</b> |
| <b>CONCLUSIONS</b>                              | <b>14</b> |
| <b>General</b>                                  | <b>14</b> |
| <b>Fault Zone</b>                               | <b>14</b> |
| <b>Peg Zone</b>                                 | <b>14</b> |
| <b>QMS Zone</b>                                 | <b>15</b> |
| <b>East Zone</b>                                | <b>15</b> |
| <b>RECOMMENDATIONS</b>                          | <b>15</b> |
| <b>STATEMENT OF COSTS</b>                       | <b>17</b> |
| <b>STATEMENT OF QUALIFICATIONS</b>              | <b>18</b> |
| <b>APPENDIX: GEOCHEMICAL RESULTS</b>            | <b>19</b> |
| <b>LIST OF FIGURES</b>                          |           |
| Figure 1. Property Location                     | <b>3</b>  |
| Figure 2. Claim Map.                            | <b>4</b>  |
| Figure 3. East Zone Magnetometer Survey.        | In Pocket |
| Figure 4. East Zone Geochem Survey              | In Pocket |
| Figure 5. Peg and Main Zone Magnetometer Survey | In Pocket |



Figure 1. Property Location

Figure 2. Claim Map.



## LOCATION AND ACCESS.

The claims are located 70 km south of the Dawson City airport along Scroggie Creek on map sheets 1150/02. See Figure 1. The property is accessible by fixed-wing aircraft from Dawson City to a 750-meter long north-south airstrip along Scroggie Creek in the center of the claims. The property is also accessible by ATV from Pelly Farm on the north side of Pelly River, 40 km west of Pelly Crossing. This is a four hour trip over 90 km of the old Dawson Trail to the mouth of Walhalla Creek and then over a 14 km dirt road along the ridge tops east of Scroggie Creek arriving at Scroggie Creek on RUM RUN 13. From here access by ATV over existing roads is possible along Scroggie and Mariposa Creeks.

## CLAIMS.

The following Quartz Claims, in the Dawson Mining District form the property.



## Claim Status Report

07 April 2004

| Claim Name and No. | Claim No.         | Regulation Type | Regulation No.     | Owner  | Area   |
|--------------------|-------------------|-----------------|--------------------|--------|--------|
| Rum Run 1          | YC17658           | 2006/09/16      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 2          | YC17659           | 2005/09/16      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 3 - 8      | YC17660 - YC17665 | 2006/09/16      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 9          | YC17666           | 2005/09/16      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 10         | YC17667           | 2006/09/16      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 11 - 12    | YC17668 - YC17669 | 2005/09/16      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 13         | YC17670           | 2006/09/16      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 14         | YC17671           | 2005/09/16      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 15         | YC17672           | 2006/09/16      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 16 - 20    | YC17673 - YC17677 | 2005/09/16      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 43         | YC20214           | 2005/06/29      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 45         | YC20216           | 2005/06/29      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 47         | YC20218           | 2005/06/29      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 49         | YC20220           | 2005/06/29      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 53 - 58    | YC20222 - YC20227 | 2005/06/29      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 21 - 28    | YC20192 - YC20199 | 2007/06/29      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 29 - 33    | YC20200 - YC20204 | 2006/06/29      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 34         | YC20205           | 2007/06/29      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 35         | YC20206           | 2006/06/29      | Gordon G. Richards | 100.00 | 115002 |
| Rum Run 36 - 40    | YC20207 - YC20211 | 2007/06/29      | Gordon G. Richards | 100.00 | 115002 |

Criteria(s) used for search:

CLAIM STATUS: ACTIVE & PENDING OWNER(S): RICHARDS GORDON G. REGULATION TYPE: QUARTZ

## **HISTORY.**

Scroggie and Mariposa Creeks are old placer gold creeks first discovered in 1898 and extensively mined by hand with the aid of steam boilers and points in the early 1900's. Refer to GSC Memoir 97. Two small cuts were mined by tractor, equipped with cable dozer blade in the mid-1950's. Cat mining began in earnest about 1980 as a result of the then high gold prices and has continued uninterrupted until today. The writer mined with partners along Scroggie Creek from two km below the airstrip to a point along Mariposa Creek about four km above it's mouth. Although early records have not been thoroughly researched, something like 100,000 ounces raw gold with a fineness of 905 has likely been produced from Mariposa and Scroggie Creeks between the top of Mariposa Creek and a point four-km below the airstrip on Scroggie Creek. This area coincides with the bulk of cabins, shafts and diggings associated with pre dozer-tractor mining.

A granite batholith mapped by H S Bostock in 1935-37 and shown on GSC Map 711A, Ogilvie, occurs north of the area of placer mining. Schists and gneisses of the Yukon Group underlie the placer mining area. A large body of pyroxenite underlies Pyroxene Mountain to the northeast.

During 1988, mining cuts along Scroggie Creek just downstream from Stevens Creek yielded abundant arsenopyrite crystals in the sluice-concentrates over about 300 meters. Although bedrock was examined closely, no source for the arsenopyrite could be found in the mining cuts. In 1990 a black-sand sluice-concentrate, with coarse gold recovered, was sent to Chemex Labs for multi-element analyses to determine other significant metals that might be present in the Scroggie drainage. This concentrate was highly anomalous for several elements including Au, Pd, Pt, Ag, Bi, Pb, W and Sn, which, except for the Pd-Pt are indicative of intrusion-related gold deposit. Common minerals found in sluice concentrates include gold, magnetite, garnet and kyanite.

Over 100 WINE and FISH Quartz Claims were staked in 1987 over the area encompassing the significant placer gold production area described above. Only minor representation work was recorded with a modest gold anomaly described in soils north of upper Mariposa Creek and now covered by the WOLF 29-41 claims, which are a recent restaking of the MCPHEE claims which lapsed in 2000. Quartz veins staked in 1917 are

described along Mariposa Creek in this same area (Minfile O-075). Other minfile occurrences, well removed from all the recently staked claims include a Cu-Mo occurrence in upper Scroggie Creek, a U occurrence in upper Stevens Creek and a PGM-Au occurrence over Pyroxenite Mt.

The writer began prospecting the area assisted by Mr. Dave Bennett, in 1999 and staked the RUM RUN 1-20 quartz claims in Sept 1999. The writer returned in June 2000 with Mr. Dave Bennett to continue prospecting the general area, conduct representation work on the RUM RUN 1-20 and to stake the RUM RUN 21-50 and 53-59. The writer returned again in late Aug 2000 to evaluate the RUM RUN 21-50 and 53-59. In early July 2001, Mr. Dave Bennett and the writer returned to conduct additional geochemical sampling and mapping on the claims. In late August 2001, the writer returned to do additional sampling and mapping as well as conduct a VLF – EM geophysical survey over some of the claims. Work in 2003, described below, included primarily magnetometer surveys in three separate areas and some limited geochemical surveying over one of these areas.

All work has been done with the aid of YMIP Target Evaluation grants.

## **GEOLOGY.**

“The large granitic body exposed on either side of Scroggie and Walhalla Creeks is a coarse white granite near the junction of these creeks but, farther south and east, is more nearly a granodiorite and carries large pink feldspar crystals. Along its southern contact is a zone composed mainly of hornblende and pink feldspar. The body contains numerous xenoliths of the Yukon Group and innumerable pegmatitic intrusions that, in places, make up fully 30 percent of the volume of the rock.” (H.S. Bostock, 1942, Map 711A, OGILVIE). Mr Jim Ryan and others of the Geological Survey of Canada have recently remapped some of the batholith and adjacent areas throughout the Stewart Map Sheet. Based on initial mapping of part of the batholith, Mr. Ryan describes the batholith as a composite intrusive complex with many phases often with diffuse contacts with country rock. (Personal communication). The area described in this report lies along the southern contact of this batholith. “Granite” in this area contains pink feldspar phenocrysts up to two cm long, is often foliated and contains hornblende and lesser

biotite of 10 to 20 percent. This fits with Bostock's description of the granodiorite which term is used throughout this report.

A stock of granite, separated from the main batholith by three to five km of metamorphic rocks is a coarse-grained, moderately foliated granite composed of one-half cm long quartz grains set in coarse to medium-grained pink feldspar with five to ten percent variably chloritized hornblende and biotite. About 20 percent of the feldspars are white. Mafic biotite-hornblende rich xenoliths are common locally.

A large poorly defined body of pegmatite occurs northwest of the airstrip within the granite batholith. This may be a single large body or more likely an area of intense dyking (see below). It measures three by four km as defined by chips in soil pits, float in creeks, boulders on hillsides and a few outcrops. Dykes of pegmatite can be seen cutting granodiorite outcrop near camp and along adjacent Scroggie Creek. Pegmatite is typically 20 – 30 percent quartz, 50 percent Kspar, 20 percent plagioclase and <5 percent biotite plus muscovite. Mirolitic cavities are present but rare. Pegmatite can also be seen as narrow dykes within the country rocks at numerous locations. Pale buff-colored aplite is occasionally seen within the batholith as outcrop and float particularly northeast of the placer mining camp.

Country rock to the batholith includes schists and gneisses of the Yukon Group. Float and outcrop of metamorphic rocks along Scroggie and Mariposa Creeks display a wide variety of textures. Most common by far are quartz-feldspar-hornblende gneisses of highly variable grain size and texture containing garnet of quite variable size and content. Kyanite, common in placer gold concentrates, is seen in float along most of Scroggie Creek as subround disc-shaped boulders of kyanite-muscovite ± garnet, ± magnetite ± staurolite (?) gneiss. Float of pegmatite, granite and chlorite and biotite rich gneisses is also common.

A quartz-muscovite ±garnet schist unit, QMS, up to a few hundred meters thick has been mapped across the area from Mariposa Creek to Cabin Creek. The unit is not massive as intercalations of other schists and gneisses do occur within it as can best be seen on the placer-mined bench opposite the mouth of Stevens Creek. Its muscovite content, generally five to twenty percent but locally over 90 percent, characterize it. Weathering of pyrite, usually forming less than one percent has produced a distinctive

orange surface. The unit strikes northwest and dips about 45 degrees northeast except near Scroggie Creek. Nearing Scroggie Creek from the east, strikes become progressively more northerly and dips steepen to near vertical. This change could be caused by drag along an unexposed north-south fault, named Scroggie Fault, with right lateral sense of movement. An outcrop of clay-altered granite containing 2 or 3 percent finely disseminated pyrite was sampled by three rock chip samples that ran 13, 15, and 23 ppb Au. This outcrop is believed to be the only exposure of the Scroggie Fault.

In 1986 during placer mining, the QMS unit along Lower Mariposa Creek was seen by the writer to terminate against a sharp fault as shown on Figure 4. The similar rock type mapped further north of this point may be a faulted offset of the same unit and not a repetition. The QMS unit continues east along Mariposa Creek drainage for several km.

South of the QMS unit along Scroggie Creek, from Mariposa Creek to north of Stevens Creek, a dark green to grey chlorite-biotite gneiss with fine laminations and augen of pink feldspar makes a distinctive unit at least several hundred meters thick. It outcrops across the floor of Scroggie Creek as seen during the course of placer mining in the late 1980's and now evidenced by the abundance of angular pieces of this rock type on the placer tailing piles. A typical specimen shown to Mr. J Ryan of the G.S.C. was identical to rocks mapped as diorite orthogneiss further west along Barker Creek and elsewhere in the general area. North of the quartz-muscovite schist, outcrops of quartzo-feldspathic gneiss containing variable amounts of hornblende and garnet make up the bulk of the exposed country rock.

The Scroggie Creek drainage in the area of this report is described as unglaciated (Duk-Rodkin 1999, G.S.C. O.F.3694). Mr. Lionel Jackson of the G.S.C. suggested that older glacial periods of greater than one my bp could have affected the area. During a placer test in the late 1980s of a bench immediately above the southwest corner of RUM RUN 59 (now lapsed), the writer examined material that looked like till. It is curious that oxidation of sulfides is absent or only shallowly developed at best on the property whereas elsewhere in unglaciated terrain it is deeply developed. The Casino porphyry Cu-Mo deposit, 25 km south is deeply leached, in places to over 100 meters. Loess is present on hillsides as was seen in two pits dug in 2001.

## **PREVIOUS WORK.**

Previous work, described in previous assessment reports, subdivided the property into three areas named the Pegmatite Zone, the QMS Zone and the East Zone.

The Pegmatite Zone occurs on the RUM RUN 1-20. Gold mineralization occurs associated with pegmatite dykes along Scroggie Creek. Gold values up to 3020 ppb Au occur associated with very fine sulfide in quartz breccias within dykes of pegmatite cutting the foliated medium-grained hornblende granodiorite. Immediately to the west, on a moderate sloping hillside devoid of outcrop, soil samples are geochemically anomalous for gold over a one-km diameter area. The rocks and some soils are moderately anomalous for Mo, Pb and Sb. Rock chips in soils and float in creeks indicate this area occurs within a large pegmatite body or intense dyke swarm about three km in diameter. The quartz-breccia sulfide mineralization within pegmatite dykes would have to be more continuous and higher grade for similar mineralization that might exist under the gold soil anomaly west of Scroggie Creek to be of economic interest. North trending Scroggie Fault may form the east boundary of the large pegmatite body.

The QMS Zone occurs on the RUM RUN 21-40. A quartz muscovite schist unit (QMS) was crudely mapped from chips in soil pits across these claims over a strike length of two km from Scroggie Fault to the granodiorite contact. Soil results indicated strong geochemically anomalous patterns for Au, As, Bi, Pb, Te, S and Zn over the QMS Zone. In the QMS target, the occurrence of anomalous Au-Bi-As-Pb in soils with Sn-W in Au placer concentrates within high-grade metamorphic rocks in association with granite and pegmatite is indicative of intrusion related gold mineralization. The anomalous geochem patterns are obviously large enough to contain a sizeable gold deposit.

The East Zone occurs on the RUM RUN 41-50, 53-59. The claims cover part of the easterly extension of the QMS unit but only a few spotty gold anomalies in low-density sampling were indicated prior to the work described below.

Scroggie Fault and associated splays are targets for gold mineralization along the east sides of the Peg and QMS Zones. During June 2001, the placer operator on Scroggie Creek, Mr. Zdenek Bidrman, showed the writer two gold-quartz pebbles measuring about

two cm in maximum dimension. These two larger pieces were from a collection of about thirty pieces of quartz pebbles laced with crystalline gold. They were collected from a very small placer mining cut on the extreme west side of Scroggie Ck adjacent to the steep valley bank downslope from the Au soil anomaly further west over the Peg Zone. Mr. P Rotheisler of the GSC noted – “The fragility of the pristine gold crystals projecting from the clasts suggests that they were not transported far following their introduction into the fluvial system. Consequently, a source on adjacent hillsides is suggested.” One possible source is adjacent Scroggie Fault mineralized with bonanza-grade gold quartz veins.

Well-formed arsenopyrite crystals were abundant within placer gold concentrates mined by the writer in the late 1980’s along 1000 feet of Scroggie Creek downstream from Stevens Creek. The placer gold collected from this area of Scroggie Creek was also unique in being coated by a fine, deep-blood-red powder. The arsenopyrite could be weathering from adjacent gold mineralized Scroggie Fault believed to lie under the left limit bench of Scroggie Creek.

### **CURRENT WORK.**

G Richards traveled to the claims by fixed-wing aircraft from Haines Junction on July 11. At this time a magnetometer survey was performed on QMS Zone and part of East Zone and a geochem survey performed on East Zone. The magnetometer broke during the East Zone survey. Richards traveled back to Haines Junction and Whitehorse on July 20. He returned September 16 to 25 by ATV from Pelly Farm to complete the East Zone magnetometer survey and conduct a magnetometer survey on the Pegmatite Zone.

Work in 2003 was designed to test for continuation and intensity of a few geochemically anomalous soils on the East Zone and to conduct magnetometer surveys over the Pegmatite, QMS and East Zones. The surveys over the Pegmatite and QMS Zones included portions of the north trending fault that was itself a target for gold mineralization as discussed above. Outcrops were mapped on the East Zone survey.

Soil samples were collected by mattock typically from depths of ten to twenty cm. About one kg of soil was collected and placed in numbered gusseted kraft sample bags.

Rock samples were made up from 3 to 7 rock chips and placed in numbered gusseted kraft sample bags. A hand specimen was collected and numbered by felt pen from each rock sample site for future examination. Each sample site was marked with sample number by felt pen. Twenty nine soil and four rock samples were collected between previously collected samples, N23-24 to the east and M53-55 to the west in an attempt to test for a continuous zone of anomalous gold and pathfinder elements and evaluate the strength of any such zone. All samples were sent to Acme Analytical Laboratories in Vancouver for analysis. Results are in an Appendix.

Grids for magnetometer surveys were measured using hip chain and compass with GPS co-ordinates of a few selected points for control. Baselines were labeled A and B as indicated on Figures 3 to 5 and cross lines were run at 200 m intervals along the baselines. Stations, at 20-m interval, were labeled on ribbon using felt pens and hung from trees.

Two magnetometer readings using a Scintrex MP2 magnetometer were taken at each station in order to assure a relatively quiet magnetic field. If electric storms were present or the earth's magnetic field was rapidly changing for any reason, the survey was postponed. Magnetic disturbance associated with electric storms did occur, usually in late afternoon, so much of the survey was conducted starting in early morning and continuing into early afternoon.

Results were plotted on Figures 3 and 5 after a best-fit correction of diurnal changes was made to the raw data. 57,000 gammas should be added to the data shown on Figures 3 and 5 to bring them to approximate absolute values. Results were contoured to a 100-gamma interval.

## **RESULTS.**

### **Magnetometer Survey.**

Mag results over the Peg Zone are featureless with readings of 57,450 gammas  $\pm$  50 gammas. Refer to Figure 5.

Mag results over the QMS Zone are similarly featureless except in two areas. Along the northwest border a 100-gamma rise may reflect proximity to the granite batholith to the north. Rock chips collected from soil pits of previous soil sampling

surveys in this area have mapped this contact slightly north of the 57,500-gamma contour shown on Figure 5. The northeast side of the QMS Zone mag-grid maps a greater than 300 gamma rise along three lines B8, B10, and B12 and a cross line between B10 and B12. QMS outcrops on the property are overlain by hornblende ± garnet quartz-feldspar gneiss including the area immediately southwest of the 57,500 gamma contour in this area. Outcrops in placer mining cuts near the mouth of Camp Creek include a variety of rock types including kyanite ± magnetite – muscovite gneiss, chlorite schist, garnet muscovite schist with garnets to four cm diameter, fine to medium grained biotite-hornblende rich gneiss and other gneisses and schists. The mag pattern may reflect one or more of these rock types. As the north trending fault described previously is mapped to occur in this area, an offset along this fault could be located by a more detailed mag survey of the area between the QMS and Peg Zone mag surveys.

Mag results over the East Zone display linear mag high features parallel to the known west southwesterly strike of metamorphic foliation. A high of 58,168 at A580sw is roughly 700 gammas above the background of about 57,400 gammas. Three distinct bands of mag highs have been interpreted from the data separated by lows about 100 gammas below background. This area of mag highs is known from a few outcrops to be underlain by biotite hornblende quartz-feldspar gneiss. The broad area of flat mag response over most of the survey is underlain by quartz muscovite schist from the north limit of the mag highs to the northern portion of the survey area. The mag data was not of much use to map the northern limit of the quartz muscovite schist known to occur from soil pits somewhere in this area.

#### **Geochem Survey.**

Figure 4 shows the mag grid and soil samples collected from the current program as well as samples from previous surveys. Sample-series N and M were collected in 2001 and show anomalous samples M53-55 and N23-24. These samples were weakly anomalous for gold, 5 to 12 ppb, and moderately anomalous for Bi, Pb, Te, Ag, and As. See Appendix. Samples collected in 2003 were located along five lines perpendicular to a line joining these two anomalous sample series. Results confirm the existence of a zone of soils anomalous for gold and the pathfinder elements over an 1100-m length with a

width of about 100-m. Highest gold value is 183 ppb. See Appendix for results. Soils in the areas of anomalous geochem were rich rusty orange with abundant QMS chips.

A second less well-defined zone of anomalous geochem occurs at the end of line A10sw where samples Q225 to 227 were anomalous for Au (50, 204, and 1333 ppb) with anomalous B, As, and Sb. See Appendix. Chips from these soil pits were grey- brown unlike the immediately previous soil pits, which contained orange QMS chips.

## **CONCLUSIONS**

### **General.**

As a general statement, intrusion related gold deposits occurring within intrusions tend to be low-grade high-tonnage targets that are rarely of economic grade at historical gold prices. Deep leaching absent at Scroggie Creek is usually considered essential to make an occurrence economic. The Peg Zone has such an intrusion hosted bulk tonnage gold target.

Within country rock adjacent to granites, intrusion related gold deposits are highly variable in nature and include much higher grade and smaller, though significant, tonnages. The QMS and East Zone geochemical anomalies could be leads to down-dip extensions with higher-grade gold of a size that would interest a major mining company. The Fault Zone has the potential to host bonanza-grade gold ( $>1\text{oz/t Au}$ ) in narrow structures possibly related to the north trending Scroggie Fault.

### **Fault Zone.**

It was hoped that the mag survey would be most useful in mapping the north trending Scroggie Fault where it crossed the Peg and QMS Zones. Even a close scrutiny of the data fails to find a hint of a linear feature in the general area of the fault. However the high mag response at the northeast end of the QMS Zone could be useful to map an offset of the fault if a more thorough survey was conducted in this area (between the Peg and QMS Zones)

### **Peg Zone.**

No contourable mag response occurs on this zone. A background of  $57,460 \pm 50$  gammas was present everywhere on this survey area.

**QMS Zone.**

A background of 57,380 to 57,520 gammas was present everywhere on this survey area except in the northwest where a 100-gamma increase may be related to the contact between metamorphics to the south and the granite batholith to the north. In the northeast, elevated values 300 gammas above background are related to a variety of metamorphic rock types.

**East Zone.**

Mag results reflect the southerly contact of QMS with other schists and gneisses quite accurately. A weak mag low at A10-500sw is coincident with the highest gold soil geochem value as described. The highest mag readings, up to 58,168 gammas, occur immediately south at A8- 580sw. More mag data in this specific area may be of use relating gold with a specific magnetic signature. In particular, the linear magnetic features mapped on line A8 and further east could be interrupted by alteration associated with gold mineralization related to the gold soil anomalies on line A10.

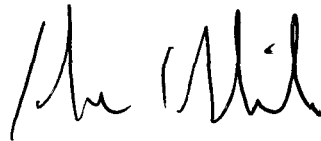
**RECOMMENDATIONS.**

Limited additional magnetometer surveys should be conducted at two locations. Around the mouth of Cabin Creek, between the limits of the Peg and QMS Zones a mag survey should be conducted to test for a magnetic pattern showing a fault offset along Scroggie Fault. A 100-m line spacing is recommended. In the East Zone a mag survey should be conducted between A8-350sw and A12-350sw extending southwest 400m. A 100-m line spacing is recommended. This survey should be conducted along with a soil geochemical survey over the same area in an attempt to relate magnetic patterns with soils anomalous for gold in the present survey.

A conventional EM survey should be conducted over the projection of Scroggie Fault presently defined by proposed drag interpreted from regional mapping and one pyritic-clay fault outcrop one km north of the Peg Zone. The mag survey proposed around the mouth of Cabin Creek may provide one specific location of this fault prior to the EM survey. Location of Scroggie Fault is important for positioning of trenches and drill holes to evaluate the fault for mineralization. Four lines about 400m long over each of the Peg and QMS Zones should be adequate to test this target.

It is further recommended that two trenches be dug on each of the East and QMS Zones over the Au-Bi-Te-Pb-As anomalous soil patterns to examine the style of mineralization and gold grades. The target, based on limited float, is a gold-bearing silicified zone ten-m or thicker that may have developed preferentially within a specific horizon of the quartz muscovite schists. Such mineralization as modeled is thought to be related to the granite batholith at deeper levels.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Gordon G Richards', written in a cursive style.

Gordon G Richards P.Eng.

## STATEMENT OF COSTS

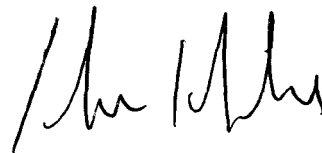
|   | Rum Run<br>1-20 | Rum Run<br>21-40 | Rum Run<br>43,45,47,<br>49,53-58 |
|---|-----------------|------------------|----------------------------------|
| <b>Wages</b>  |                 |                  |                                  |
| G Richards July 11-20, Sept 16-25 20days @ \$600/day<br>G Richards – P.Eng., geologist                  | \$3300          | \$5100           | \$2400                           |
| <b>Expenses</b>   |                 |                  |                                  |
| ATV Rental: J Bidrman July and D Board Sept   | 100             | 300              | 200                              |
| Sifton Air: Haines Junc-Scroggie-Haines Junc  | 600             | 1100             | 600                              |
| Truck Use: Whs-Haines Junc-Whs (for aircraft access)<br>Whs-Pelly Farm-Whs (for ATV access)             | 120             | 240              | 160                              |
| Food: 20 man days @ \$35/day  | 190             | 300              | 140                              |
| Acme Labs A303605 (\$537) \$20/sample   |                 |                  | 300                              |
| Supplies: string, flagging, and sample bags, etc  | 20              | 60               | 20                               |
| Mag rental P Christopher  | 100             | 200              | 100                              |
| <b>Report</b>   |                 |                  |                                  |
| Correcting mag readings for drift, plotting, contouring<br>drafting, writing, typing, reprod, collating | <u>600</u>      | <u>1300</u>      | <u>600</u>                       |
| <b>TOTALS</b>   | <b>\$5030</b>   | <b>\$8600</b>    | <b>\$4520</b>                    |

## STATEMENT OF QUALIFICATIONS

I, Gordon G Richards, of 6410 Holly Park Drive, Delta, B.C., Canada, V4K 4W6  
do hereby certify that:

1. I am a graduate of The University of British Columbia ( B.A.Sc in Geology 1968, M.A.Sc in Geology 1974)
2. I am registered as a Professional Engineer in the Province of British Columbia.
3. I have practiced my profession since 1968.
4. This report is based on my fieldwork during July 11-20, Sept 16-25, 2003 and literature cited.

Respectfully submitted,



Gordon G Richards, P.Eng.

**APPENDIX**

**GEOCHEM RESULTS**



GEOCHEMICAL ANALYSIS CERTIFICATE

Richards, Gordon PROJECT SCROGGIE File # A303605

6410 Holly Park Drive, Delta BC V4K 4W6

| SAMPLE#  | Mo    | Cu     | Pb     | Zn    | Ag   | Ni   | Co   | Mn  | Fe   | As   | U   | Au     | Th   | Sr   | Cd   | Sb   | Bi     | V   | Ca  | P    | La   | Cr    | Mg   | Ba    | Ti   | B   | Al   | Na   | K   | W   | Sc  | Tl   | S    | Hg  | Se  | Te     | Ga  |     |
|----------|-------|--------|--------|-------|------|------|------|-----|------|------|-----|--------|------|------|------|------|--------|-----|-----|------|------|-------|------|-------|------|-----|------|------|-----|-----|-----|------|------|-----|-----|--------|-----|-----|
|          | ppm   | ppm    | ppm    | ppm   | ppb  | ppm  | ppm  | ppm | %    | ppm  | ppm | ppb    | ppm  | ppm  | ppm  | ppm  | ppm    | ppm | %   | %    | ppm  | ppm   | %    | ppm   | %    | ppm | %    | %    | %   | ppm | ppm | ppm  | %    | ppb | ppm | ppm    | ppm | ppm |
| G-1      | 1.54  | 2.90   | 2.60   | 38.6  | 13   | 4.7  | 4.1  | 532 | 2.02 | .4   | 1.8 | <.2    | 4.1  | 86.9 | <.01 | .04  | .14    | 41  | .62 | .084 | 9.8  | 15.9  | .51  | 225.3 | .125 | 2   | 1.06 | .123 | .43 | 1.9 | 2.4 | .29  | <.01 | <5  | .1  | <.02   | 4.7 |     |
| Q194     | 1.16  | 14.76  | 14.91  | 58.7  | 141  | 12.6 | 6.7  | 203 | 2.28 | 5.9  | 1.0 | 2.4    | 4.6  | 19.5 | .06  | .27  | .21    | 46  | .17 | .016 | 13.2 | 22.9  | .43  | 114.5 | .068 | 1   | 1.37 | .013 | .07 | <.1 | 2.2 | .08  | .01  | 18  | .2  | .09    | 4.1 |     |
| Q195     | 2.87  | 18.06  | 30.32  | 67.2  | 98   | 6.7  | 5.3  | 184 | 2.41 | 5.0  | 2.9 | 2.5    | 12.7 | 25.6 | .06  | .20  | .50    | 26  | .14 | .024 | 18.3 | 9.7   | .17  | 132.8 | .028 | 1   | 1.16 | .016 | .07 | <.1 | 2.3 | .08  | .04  | 16  | .4  | .11    | 3.7 |     |
| Q197     | 3.03  | 25.06  | 27.23  | 65.0  | 102  | 10.9 | 8.1  | 243 | 3.37 | 8.5  | 2.0 | 12.0   | 11.1 | 36.9 | .05  | .21  | .51    | 45  | .14 | .029 | 30.2 | 20.5  | .43  | 211.1 | .060 | <1  | 1.49 | .033 | .11 | <.1 | 3.6 | .09  | .15  | 17  | .6  | .24    | 4.4 |     |
| Q198     | 4.21  | 21.59  | 30.81  | 86.4  | 114  | 15.1 | 8.5  | 233 | 2.89 | 11.9 | 2.5 | 17.2   | 11.5 | 34.1 | .08  | .26  | .58    | 40  | .19 | .023 | 32.3 | 28.8  | .56  | 199.2 | .074 | <1  | 1.41 | .032 | .08 | <.1 | 3.0 | .09  | .12  | 12  | .8  | .31    | 3.8 |     |
| Q199     | 3.77  | 18.46  | 23.35  | 49.2  | 138  | 9.3  | 4.6  | 145 | 2.68 | 12.2 | 1.5 | 8.2    | 8.8  | 27.8 | .04  | .23  | .29    | 35  | .11 | .031 | 20.0 | 17.6  | .33  | 113.0 | .044 | <1  | 1.24 | .034 | .08 | <.1 | 2.1 | .08  | .11  | 5   | 1.5 | .30    | 3.6 |     |
| Q202     | 4.48  | 16.65  | 16.94  | 22.8  | 141  | 5.0  | 2.9  | 118 | 3.14 | 39.0 | 2.2 | 10.0   | 13.8 | 39.2 | .03  | .25  | .29    | 26  | .11 | .044 | 26.9 | 10.3  | .20  | 145.6 | .048 | <1  | 1.06 | .066 | .12 | <.1 | 1.7 | .08  | .31  | 23  | 2.6 | .21    | 3.5 |     |
| Q203     | 2.95  | 10.83  | 12.10  | 31.5  | 135  | 5.0  | 2.8  | 126 | 2.47 | 32.8 | 1.8 | 3.7    | 8.5  | 36.6 | .01  | .22  | .22    | 29  | .13 | .032 | 20.8 | 11.4  | .30  | 148.5 | .061 | <1  | 1.19 | .039 | .09 | <.1 | 1.9 | .08  | .13  | 14  | 1.8 | .20    | 3.7 |     |
| Q205     | 1.95  | 32.70  | 21.04  | 128.0 | 144  | 3.1  | 4.9  | 495 | 4.78 | 2.1  | 3.9 | 3.4    | 17.3 | 42.0 | .05  | .08  | .29    | 44  | .10 | .061 | 45.0 | 8.3   | .82  | 233.6 | .211 | <1  | 2.12 | .027 | .63 | <.1 | 2.9 | .47  | .24  | 7   | 1.0 | .38    | 7.7 |     |
| Q206     | 1.08  | 18.30  | 11.72  | 100.5 | 96   | 16.3 | 16.5 | 510 | 3.47 | 5.4  | 1.2 | .7     | 4.1  | 25.6 | .07  | .31  | .20    | 71  | .20 | .031 | 11.6 | 25.4  | .85  | 289.1 | .116 | 1   | 2.13 | .013 | .18 | <.1 | 3.5 | .18  | .02  | 13  | .6  | .09    | 6.1 |     |
| Q208     | 1.91  | 15.73  | 16.52  | 32.5  | 216  | 7.5  | 5.0  | 138 | 2.71 | 4.7  | 1.7 | .4     | 4.5  | 31.9 | .09  | .22  | .30    | 46  | .11 | .039 | 16.1 | 14.2  | .19  | 142.4 | .054 | <1  | 1.20 | .023 | .06 | <.1 | 1.9 | .08  | .06  | 11  | .7  | .13    | 5.2 |     |
| Q209     | 1.58  | 18.43  | 19.49  | 42.9  | 129  | 7.8  | 5.7  | 242 | 3.33 | 4.3  | 1.8 | .8     | 7.5  | 28.6 | .07  | .24  | .23    | 49  | .15 | .037 | 20.1 | 14.1  | .30  | 260.4 | .057 | 1   | 1.62 | .021 | .09 | <.1 | 2.4 | .12  | .05  | 7   | .6  | .16    | 6.0 |     |
| Q210     | 4.08  | 14.71  | 28.52  | 64.8  | 170  | 6.3  | 3.4  | 190 | 5.10 | 55.2 | 2.6 | 1.4    | 18.2 | 64.0 | .05  | .27  | .39    | 47  | .11 | .060 | 32.4 | 14.3  | .36  | 198.8 | .093 | <1  | 1.92 | .080 | .18 | <.1 | 2.6 | .16  | .41  | 15  | 2.3 | .27    | 7.0 |     |
| Q211     | 1.52  | 20.40  | 15.53  | 60.2  | 192  | 15.2 | 7.7  | 234 | 3.62 | 14.5 | 1.0 | .6     | 6.6  | 22.4 | .06  | .41  | .27    | 66  | .16 | .034 | 15.0 | 31.4  | .50  | 175.9 | .064 | 1   | 2.04 | .013 | .09 | <.1 | 3.4 | .11  | .03  | 21  | .7  | .14    | 6.2 |     |
| Q212     | 2.39  | 16.74  | 18.25  | 39.9  | 175  | 11.5 | 6.0  | 211 | 2.71 | 11.4 | 1.0 | 1.4    | 7.6  | 20.5 | .05  | .41  | .27    | 47  | .12 | .021 | 15.8 | 24.6  | .34  | 135.6 | .051 | <1  | 1.52 | .026 | .06 | <.1 | 2.0 | .09  | .06  | 15  | 1.1 | .28    | 4.8 |     |
| Q213     | 3.24  | 28.55  | 18.26  | 29.3  | 121  | 6.7  | 4.0  | 109 | 3.06 | 14.6 | 2.1 | 2.7    | 11.3 | 41.0 | .03  | .20  | .26    | 34  | .08 | .043 | 29.4 | 13.4  | .21  | 188.9 | .041 | 1   | 1.33 | .065 | .13 | <.1 | 2.2 | .11  | .35  | 19  | 1.5 | .17    | 4.3 |     |
| Q214     | 2.29  | 15.99  | 9.25   | 39.0  | 48   | 15.0 | 8.2  | 187 | 2.86 | 32.2 | 1.4 | 3.8    | 10.3 | 37.9 | .05  | .36  | .16    | 45  | .12 | .026 | 24.8 | 27.4  | .42  | 157.5 | .045 | 1   | 1.60 | .043 | .07 | <.1 | 3.4 | .09  | .12  | 16  | 1.0 | .09    | 4.2 |     |
| RE Q214  | 2.28  | 15.23  | 9.43   | 38.2  | 51   | 14.9 | 7.6  | 190 | 2.87 | 31.6 | 1.4 | 4.0    | 10.2 | 38.3 | .04  | .39  | .17    | 45  | .13 | .025 | 25.6 | 27.4  | .43  | 162.0 | .050 | 2   | 1.60 | .042 | .07 | <.1 | 3.4 | .09  | .10  | 27  | 1.1 | .08    | 4.1 |     |
| Q215     | 1.49  | 24.00  | 24.56  | 45.0  | 123  | 12.6 | 9.4  | 457 | 2.55 | 8.8  | .8  | 1.4    | 5.8  | 12.7 | .10  | .28  | .34    | 41  | .14 | .049 | 18.1 | 23.3  | .35  | 195.0 | .019 | 2   | 1.62 | .008 | .08 | <.1 | 2.5 | .10  | <.01 | 14  | .3  | .10    | 4.9 |     |
| Q216     | 1.23  | 12.56  | 22.60  | 44.2  | 209  | 9.3  | 4.6  | 247 | 1.88 | 5.2  | .5  | .2     | 2.9  | 15.3 | .11  | .19  | .21    | 40  | .13 | .033 | 11.2 | 17.9  | .29  | 249.1 | .022 | 1   | 1.37 | .009 | .07 | <.1 | 1.9 | .10  | <.01 | 13  | .3  | .09    | 5.2 |     |
| Q217     | 10.80 | 75.04  | 244.79 | 158.6 | 350  | 4.8  | 3.9  | 164 | 3.73 | 67.0 | 1.7 | 9.2    | 23.0 | 26.5 | .10  | .33  | 1.23   | 20  | .06 | .056 | 47.0 | 9.6   | .13  | 216.2 | .008 | 1   | .89  | .047 | .12 | <.1 | 1.6 | .08  | .26  | 18  | 5.3 | 2.74   | 2.9 |     |
| Q218     | 3.34  | 22.50  | 117.82 | 63.5  | 1342 | 13.7 | 5.4  | 152 | 2.73 | 15.7 | .9  | 183.9  | 8.0  | 15.1 | .08  | .41  | 122.16 | 44  | .12 | .024 | 12.5 | 25.0  | .37  | 144.7 | .035 | 2   | 1.71 | .011 | .07 | <.1 | 2.6 | .12  | .01  | 32  | .9  | 156.71 | 4.3 |     |
| Q219     | 2.31  | 9.92   | 45.92  | 47.3  | 237  | 7.9  | 4.3  | 172 | 2.83 | 21.8 | .8  | .8     | 9.4  | 21.6 | .10  | .37  | .17    | 45  | .13 | .051 | 14.4 | 14.8  | .22  | 127.5 | .056 | 1   | .98  | .018 | .07 | <.1 | 1.8 | .09  | .05  | 20  | .5  | 1.52   | 5.3 |     |
| Q220     | 2.41  | 20.32  | 18.36  | 78.9  | 133  | 9.2  | 9.9  | 393 | 3.48 | 17.3 | 1.3 | .7     | 7.4  | 13.0 | .12  | .57  | .33    | 59  | .13 | .069 | 10.2 | 21.1  | .46  | 118.0 | .062 | 1   | 1.77 | .007 | .09 | <.1 | 2.9 | .20  | <.01 | 15  | .3  | .41    | 7.1 |     |
| Q221     | 2.02  | 17.05  | 76.76  | 87.6  | 414  | 12.2 | 4.7  | 188 | 2.95 | 18.6 | 1.6 | 14.1   | 7.8  | 22.3 | .09  | .37  | 6.07   | 41  | .19 | .040 | 23.5 | 23.3  | .40  | 115.2 | .053 | 1   | 1.40 | .018 | .07 | <.1 | 2.3 | .13  | .08  | 26  | 1.0 | 2.90   | 4.7 |     |
| Q222     | 2.80  | 18.68  | 47.43  | 84.6  | 345  | 13.5 | 5.4  | 155 | 2.94 | 12.1 | 1.4 | 5.6    | 6.3  | 31.7 | .10  | .24  | 1.15   | 44  | .14 | .043 | 20.1 | 22.8  | .44  | 111.4 | .046 | 1   | 1.47 | .025 | .09 | <.1 | 2.5 | .15  | .09  | 30  | 1.2 | .83    | 4.8 |     |
| Q223     | 2.02  | 12.25  | 27.78  | 70.7  | 239  | 10.8 | 8.0  | 213 | 3.17 | 8.3  | 3.0 | 2.2    | 11.4 | 26.3 | .07  | .28  | .44    | 35  | .46 | .047 | 26.0 | 19.6  | .41  | 171.7 | .029 | 3   | 1.53 | .014 | .07 | <.1 | 2.7 | .13  | .01  | 21  | .5  | .38    | 4.3 |     |
| Q224     | 1.34  | 12.87  | 5.76   | 102.1 | 68   | 6.5  | 18.3 | 876 | 4.11 | 3.1  | 1.1 | 6.5    | 7.0  | 42.3 | .03  | .19  | .17    | 45  | .50 | .153 | 27.0 | 13.6  | 1.14 | 205.9 | .215 | 2   | 2.42 | .024 | .73 | <.1 | 2.2 | .59  | .11  | 8   | .2  | .09    | 6.9 |     |
| Q225     | 1.80  | 9.55   | 15.16  | 48.2  | 128  | 5.7  | 5.8  | 229 | 2.00 | 6.8  | .9  | 50.4   | 4.9  | 26.5 | .06  | .52  | .13    | 36  | .30 | .032 | 14.5 | 12.6  | .47  | 132.3 | .075 | 1   | 1.29 | .010 | .18 | <.1 | 1.8 | .16  | .01  | 15  | .1  | .38    | 4.9 |     |
| Q226     | 2.01  | 26.46  | 11.88  | 70.9  | 145  | 14.8 | 11.1 | 355 | 2.93 | 11.8 | 2.0 | 204.9  | 9.6  | 24.8 | .07  | .35  | .14    | 54  | .43 | .082 | 25.8 | 21.0  | .65  | 273.3 | .084 | 3   | 1.78 | .014 | .16 | <.1 | 5.0 | .15  | <.01 | 37  | .6  | .16    | 5.8 |     |
| Q227     | 1.34  | 12.49  | 14.80  | 41.4  | 228  | 10.3 | 5.9  | 150 | 2.15 | 30.5 | .7  | 1333.4 | 6.6  | 31.4 | .07  | 1.09 | .13    | 36  | .33 | .062 | 18.9 | 15.0  | .45  | 132.2 | .058 | 6   | 1.01 | .016 | .15 | .2  | 2.3 | .10  | .07  | 17  | .4  | .12    | 3.3 |     |
| STANDARD | 13.03 | 138.00 | 25.54  | 131.6 | 278  | 24.2 | 11.8 | 744 | 2.86 | 18.1 | 5.9 | 40.0   | 3.0  | 46.9 | 5.42 | 3.40 | 6.20   | 59  | .72 | .092 | 12.0 | 187.6 | .65  | 134.8 | .089 | 17  | 2.00 | .032 | .13 | 4.5 | 3.6 | 1.03 | .05  | 170 | 4.9 | .84    | 6.4 |     |

Standard is STANDARD DS5.

GROUP 1F1 - 1.00 GM SAMPLE LEACHED WITH 6 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 20 ML, ANALYSED BY ICP/ES & MS.

UPPER LIMITS - AG, AU, HG, W, SE, TE, TL, GA, SN = 100 PPM; MO, CO, CD, SB, BI, TH, U, B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.

- SAMPLE TYPE: SOIL SS80 Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 21 2003 DATE REPORT MAILED: Sept 8/03 SIGNED BY: C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



GEOCHEMICAL ANALYSIS CERTIFICATE



Richards, Gordon PROJECT SCROGGIE File # A303606

6410 Holly Park Drive, Delta BC V4K 4W6

| SAMPLE#      | Mo<br>ppm | Cu<br>ppm | Pb<br>ppm | Zn<br>ppm | Ag<br>ppb | Ni<br>ppm | Co<br>ppm | Mn<br>ppm | Fe<br>% | As<br>ppm | U<br>ppm | Au<br>ppb | Th<br>ppm | Sr<br>ppm | Cd<br>ppm | Sb<br>ppm | Bi<br>ppm | V<br>ppm | Ca<br>% | P<br>% | La<br>ppm | Cr<br>ppm | Mg<br>% | Ba<br>ppm | Ti<br>% | B<br>ppm | Al<br>% | Na<br>% | K<br>% | W<br>ppm | Sc<br>ppm | Tl<br>ppm | S<br>% | Hg<br>ppb | Se<br>ppm | Te<br>ppm | Ga<br>ppm |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|--------|-----------|-----------|---------|-----------|---------|----------|---------|---------|--------|----------|-----------|-----------|--------|-----------|-----------|-----------|-----------|
| Q196         | .36       | 2.90      | 43.71     | 1.5       | 644       | 1.2       | .3        | 11        | .39     | 4.4       | <1       | 41.0      | .1        | .8        | .01       | .04       | 2.03      | 2        | .01     | .001   | <.5       | 6.5       | <.01    | 5.2       | <.001   | <1       | .03     | .013    | .01    | <.1      | <.1       | <.02      | .03    | <.5       | .2        | .47       | .1        |
| Q201         | 2.60      | 3.88      | 74.18     | 1.9       | 1035      | .3        | .2        | 6         | .67     | 7.1       | .1       | 3.9       | 8.8       | 15.6      | .01       | .03       | 3.34      | 3        | .01     | .009   | 6.2       | 4.1       | <.01    | 89.8      | .001    | <1       | .20     | .067    | .14    | <.1      | .3        | .02       | .24    | <.5       | .9        | .77       | 1.0       |
| Q204         | 1.00      | 8.99      | 405.21    | 24.0      | 6143      | 1.4       | 1.3       | 150       | 1.32    | 4.2       | 3.7      | 14.6      | 14.5      | 17.4      | .08       | .07       | 18.57     | 12       | .13     | .018   | 7.0       | 5.4       | .17     | 57.3      | .125    | <1       | .89     | .038    | .17    | <.1      | 2.2       | .09       | .04    | <.5       | 1.5       | 3.64      | 2.9       |
| Q207         | 1.98      | 7.18      | 35.09     | 22.8      | 468       | .7        | 1.1       | 51        | 1.49    | 2.1       | 2.9      | 1.4       | 15.1      | 41.3      | .02       | .05       | 1.23      | 9        | .10     | .033   | 20.0      | 3.1       | .10     | 75.5      | .087    | 2        | .52     | .069    | .19    | <.1      | 1.4       | .08       | .22    | <.5       | .9        | .53       | 2.0       |
| STANDARD DSS | 12.54     | 136.92    | 26.22     | 140.0     | 290       | 24.5      | 11.7      | 742       | 2.82    | 18.5      | 5.9      | 42.0      | 2.7       | 47.4      | 5.36      | 3.76      | 6.13      | 58       | .71     | .094   | 11.3      | 183.1     | .65     | 136.8     | .092    | 16       | 2.00    | .034    | .14    | 4.8      | 3.4       | 1.04      | .05    | 180       | 4.7       | .83       | 6.4       |

GROUP 1F1 - 1.00 GM SAMPLE LEACHED WITH 6 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 20 ML, ANALYSED BY ICP/ES & MS.  
UPPER LIMITS - AG, AU, HG, W, SE, TE, TL, GA, SN = 100 PPM; MO, CO, CD, SB, BI, TH, U, B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.  
- SAMPLE TYPE: ROCK R150

DATE RECEIVED: AUG 21 2003 DATE REPORT MAILED: *Sept 5/03* SIGNED BY: *Ch...* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



| SAMPLE#      | Mo    | Cu     | Pb     | Zn     | Ag  | Ni   | Co   | Mn  | Fe   | As   | U   | Au   | Th   | Sr   | Cd   | Sb   | Bi    | V   | Ca  | P    | Li   | Cr    | Hg   | Ba    | Ti   | B   | Al   | Na   | K    | W   | Sc  | Tl   | S    | Hg  | Se  | Te   | Ga   | Sample |
|--------------|-------|--------|--------|--------|-----|------|------|-----|------|------|-----|------|------|------|------|------|-------|-----|-----|------|------|-------|------|-------|------|-----|------|------|------|-----|-----|------|------|-----|-----|------|------|--------|
|              | ppm   | ppm    | ppm    | ppm    | ppb | ppm  | ppm  | ppm | ppm  | ppm  | ppm | ppb  | ppm  | ppm  | ppm  | ppm  | ppm   | ppm | %   | %    | ppm  | ppm   | %    | ppm   | %    | ppm | %    | %    | ppm  | ppm | ppm | %    | ppb  | ppm | ppm | ppm  | ppm  | ppm    |
| M-33         | 3.31  | 39.44  | 10.62  | 239.4  | 60  | 22.1 | 19.8 | 559 | 4.30 | 62.6 | .7  | 9.0  | 4.4  | 15.0 | .10  | .29  | .18   | 80  | .27 | .070 | 11.1 | 35.5  | 1.65 | 130.4 | .175 | 1   | 2.55 | .111 | .70  | <.2 | 2.8 | .52  | .01  | 10  | .5  | .13  | 7.2  | 30     |
| M-34         | 1.25  | 13.40  | 8.73   | 61.9   | 53  | 11.4 | 8.5  | 270 | 2.56 | 9.8  | .5  | 3.1  | 2.6  | 16.4 | .06  | .22  | .13   | 53  | .20 | .038 | 9.3  | 21.8  | .69  | 232.5 | .102 | 1   | 1.67 | .307 | .15  | <.2 | 1.7 | .13  | .01  | 14  | .2  | .06  | 5.5  | 30     |
| M-35         | 2.81  | 11.88  | 6.57   | 127.9  | 43  | 8.5  | 16.1 | 582 | 4.18 | 4.6  | .6  | 1.3  | 3.3  | 22.3 | .05  | .12  | .09   | 102 | .44 | .112 | 10.3 | 15.3  | 1.52 | 391.3 | .192 | <1  | 2.56 | .013 | .81  | <.2 | 3.6 | .46  | .02  | 13  | .2  | .03  | 8.9  | 30     |
| M-36         | 1.50  | 21.28  | 11.18  | 56.9   | 53  | 18.7 | 9.2  | 235 | 2.60 | 25.4 | .7  | 9.9  | 5.3  | 20.1 | .06  | .57  | .19   | 52  | .26 | .040 | 13.7 | 33.2  | .58  | 212.8 | .082 | 1   | 1.45 | .010 | .12  | <.2 | 2.9 | .10  | <.01 | 22  | .3  | .05  | 4.5  | 30     |
| M-37         | 2.30  | 11.89  | 11.39  | 36.1   | 97  | 10.5 | 3.8  | 108 | 2.14 | 76.5 | .6  | 3.0  | 3.7  | 18.3 | .06  | 1.55 | .20   | 48  | .19 | .038 | 15.2 | 15.3  | .24  | 157.7 | .030 | 1   | 1.07 | .009 | .08  | <.2 | 1.8 | .14  | <.01 | 19  | .2  | .06  | 5.1  | 30     |
| M-38         | 1.02  | 21.79  | 9.23   | 51.8   | 43  | 18.6 | 9.1  | 215 | 2.49 | 12.5 | .9  | 2.3  | 5.4  | 19.2 | .03  | .48  | .16   | 50  | .26 | .025 | 2.4  | 32.6  | .54  | 227.8 | .074 | <1  | 1.52 | .505 | .07  | <.2 | 2.6 | .08  | .02  | 27  | .3  | .02  | 4.5  | 30     |
| M-39         | .99   | 11.96  | 5.38   | 75.4   | 15  | 10.1 | 21.6 | 633 | 3.99 | 4.0  | .3  | 1.1  | 1.9  | 16.9 | .06  | .14  | .07   | 74  | .42 | .104 | 3.4  | 11.9  | 1.98 | 263.3 | .259 | 1   | 2.55 | .012 | 1.12 | .2  | 1.2 | .29  | .02  | 6   | .1  | .02  | 6.1  | 30     |
| M-40         | .98   | 20.56  | 7.91   | 60.5   | 39  | 11.9 | 11.2 | 387 | 2.90 | 7.3  | .7  | 4.1  | 3.3  | 21.0 | .07  | .22  | .13   | 68  | .38 | .048 | 13.4 | 22.6  | .98  | 248.6 | .132 | 1   | 1.96 | .014 | .20  | <.2 | 2.7 | .12  | .04  | 20  | .2  | .02  | 6.0  | 30     |
| M-41         | .80   | 13.58  | 7.05   | 67.4   | 61  | 13.0 | 11.3 | 457 | 3.17 | 4.7  | .3  | .9   | 2.1  | 17.7 | .07  | .26  | .11   | 76  | .28 | .041 | 7.3  | 25.5  | .86  | 195.6 | .105 | 1   | 1.77 | .013 | .07  | <.2 | 4.2 | .06  | .01  | 18  | .2  | .03  | 7.2  | 30     |
| M-42         | .70   | 13.54  | 6.74   | 68.4   | 58  | 14.7 | 9.1  | 310 | 2.92 | 5.4  | .4  | 2.0  | 2.4  | 20.0 | .11  | .24  | .11   | 73  | .45 | .045 | 3.4  | 35.7  | .79  | 185.9 | .106 | 1   | 1.74 | .015 | .06  | <.2 | 3.3 | .07  | .04  | 15  | .2  | .03  | 6.5  | 30     |
| M-43         | .58   | 6.68   | 6.26   | 106.6  | 28  | 14.0 | 19.3 | 790 | 4.20 | 3.1  | .4  | 1.5  | 2.9  | 41.5 | .11  | .15  | .05   | 63  | .81 | .133 | 12.1 | 25.6  | 1.96 | 507.3 | .208 | 1   | 2.77 | .014 | .37  | <.2 | 6.3 | .16  | .03  | 9   | .2  | .02  | 10.2 | 30     |
| M-44         | .76   | 9.46   | 5.83   | 57.4   | 58  | 11.2 | 7.3  | 235 | 2.31 | 3.9  | .5  | 1.9  | 2.7  | 17.1 | .10  | .21  | .10   | 47  | .33 | .057 | 12.1 | 22.9  | .54  | 303.8 | .090 | 1   | 1.35 | .011 | .09  | <.2 | 2.1 | .08  | <.01 | 16  | .2  | .02  | 5.8  | 30     |
| M-45         | 1.69  | 11.20  | 6.91   | 65.9   | 62  | 11.2 | 7.4  | 330 | 2.40 | 4.2  | .8  | 7.0  | 5.8  | 21.5 | .11  | .22  | .17   | 34  | .42 | .068 | 15.7 | 19.7  | .58  | 264.9 | .091 | 1   | 1.25 | .012 | .15  | <.2 | 2.0 | .10  | .01  | 21  | .3  | .03  | 4.7  | 30     |
| M-46         | 1.29  | 12.24  | 7.72   | 57.1   | 79  | 15.3 | 8.4  | 296 | 2.37 | 6.0  | .6  | 4.8  | 4.2  | 24.5 | .10  | .25  | .11   | 49  | .41 | .054 | 13.1 | 25.4  | .55  | 285.7 | .090 | 1   | 1.24 | .012 | .09  | <.2 | 1.9 | .08  | .01  | 13  | .2  | .05  | 4.4  | 30     |
| M-47         | 1.84  | 10.86  | 8.24   | 51.0   | 239 | 14.2 | 7.5  | 231 | 2.45 | 11.9 | .6  | 2.5  | 4.4  | 19.1 | .08  | .24  | .13   | 54  | .25 | .041 | 12.1 | 25.4  | .51  | 217.4 | .079 | 1   | 1.45 | .010 | .06  | <.2 | 2.0 | .09  | <.01 | 16  | .2  | .05  | 4.8  | 30     |
| M-48         | 1.39  | 9.56   | 30.68  | 35.3   | 295 | 6.1  | 4.0  | 160 | 2.65 | 15.4 | 1.8 | 6.1  | 18.3 | 51.0 | .04  | .76  | .34   | 20  | .22 | .060 | 5.3  | 11.4  | .33  | 249.8 | .043 | 2   | .95  | .059 | .16  | <.2 | 1.5 | .11  | .31  | 12  | .6  | .09  | 2.8  | 30     |
| M-49         | 1.67  | 15.36  | 11.35  | 50.6   | 140 | 12.0 | 7.4  | 281 | 2.49 | 8.3  | 1.4 | 5.4  | 6.7  | 30.9 | .09  | .25  | .15   | .47 | .36 | .045 | 13.4 | 24.6  | .47  | 172.2 | .078 | 1   | 1.25 | .019 | .09  | <.2 | 2.1 | .10  | .03  | 19  | .5  | .11  | 4.8  | 30     |
| M-50         | 1.68  | 11.41  | 30.17  | 93.3   | 232 | 11.3 | 9.8  | 391 | 2.58 | 8.8  | 1.9 | 4.2  | 7.0  | 27.2 | .20  | .28  | .22   | 43  | .26 | .059 | 13.1 | 21.9  | .47  | 128.6 | .080 | 1   | 1.52 | .019 | .09  | <.2 | 2.0 | .11  | .07  | 26  | .9  | .29  | 5.1  | 30     |
| RE M-50      | 1.61  | 10.85  | 30.48  | 93.6   | 232 | 10.2 | 8.8  | 394 | 2.60 | 8.8  | 1.9 | 3.6  | 7.1  | 28.3 | .19  | .27  | .24   | 43  | .26 | .055 | 13.1 | 22.5  | .48  | 129.0 | .083 | 1   | 1.34 | .017 | .09  | <.2 | 2.0 | .11  | .04  | 24  | 1.2 | .28  | 4.8  | 30     |
| M-51         | 1.94  | 12.49  | 38.65  | 69.9   | 213 | 9.2  | 6.7  | 245 | 2.66 | 13.9 | 2.7 | 3.9  | 9.6  | 32.8 | .14  | .32  | .45   | 37  | .20 | .055 | 12.1 | 19.1  | .34  | 172.7 | .052 | 1   | 1.27 | .020 | .10  | <.2 | 2.1 | .13  | .06  | 24  | 1.1 | .38  | 4.6  | 30     |
| M-52         | 2.52  | 22.52  | 31.71  | 100.2  | 188 | 9.0  | 6.7  | 317 | 3.03 | 12.9 | 3.0 | 3.2  | 11.3 | 40.6 | .13  | .32  | .51   | 38  | .17 | .045 | 17.4 | 19.1  | .48  | 185.3 | .068 | 1   | 1.47 | .045 | .17  | <.2 | 2.2 | .18  | .20  | 17  | 1.0 | .43  | 4.9  | 30     |
| M-53         | 2.28  | 16.73  | 40.99  | 76.6   | 357 | 7.9  | 4.0  | 163 | 2.78 | 15.6 | 2.9 | 5.3  | 7.9  | 35.1 | .17  | .28  | 1.22  | 33  | .16 | .050 | 22.1 | 13.4  | .33  | 157.7 | .049 | 1   | 1.22 | .036 | .09  | <.2 | 2.0 | .11  | .22  | 22  | 1.4 | .67  | 3.9  | 30     |
| M-54         | 12.43 | 22.40  | 129.64 | 569.6  | 155 | 7.9  | 8.7  | 788 | 4.05 | 23.9 | 2.4 | 4.2  | 22.5 | 30.2 | 1.04 | .41  | .56   | 9   | .16 | .061 | 17.1 | 3.1   | .19  | 247.8 | .013 | <1  | .55  | .008 | .12  | <.2 | 1.8 | .07  | .12  | 18  | 1.0 | .94  | 1.6  | 30     |
| M-55         | 14.77 | 52.88  | 406.20 | 533.04 | 612 | 7.8  | 16.2 | 478 | 5.87 | 47.3 | 3.0 | 6.3  | 15.4 | 9.0  | .80  | .33  | 10.13 | 16  | .12 | .080 | 25.7 | 9.8   | .29  | 102.5 | .019 | 1   | .94  | .005 | .08  | <.2 | 2.2 | .09  | .05  | 26  | 3.0 | 2.14 | 2.5  | 30     |
| M-57         | .87   | 14.52  | 8.26   | 61.7   | 46  | 12.4 | 10.0 | 361 | 2.63 | 5.4  | 1.3 | 5.9  | 8.1  | 22.9 | .07  | .19  | .10   | 48  | .47 | .061 | 25.1 | 16.9  | .72  | 203.1 | .101 | <1  | 1.45 | .008 | .19  | <.2 | 2.6 | .14  | <.01 | 22  | .2  | .04  | 4.8  | 30     |
| M-58         | .51   | 16.51  | 4.26   | 61.2   | 33  | 10.6 | 14.5 | 339 | 3.08 | 3.2  | .4  | 8.1  | 1.6  | 22.1 | .06  | .12  | .07   | 80  | .60 | .125 | 13.1 | 19.8  | 1.32 | 230.4 | .160 | <1  | 1.97 | .013 | .41  | <.2 | 2.9 | .12  | <.01 | 15  | .1  | .02  | 6.5  | 30     |
| M-59         | 2.95  | 20.20  | 7.64   | 63.0   | 258 | 13.1 | 10.7 | 458 | 2.63 | 6.7  | 1.5 | 12.9 | 2.8  | 31.0 | .08  | .26  | .15   | 51  | .65 | .060 | 13.1 | 11.9  | .53  | 353.9 | .079 | <1  | 1.45 | .011 | .10  | <.2 | 3.5 | .10  | .02  | 38  | .6  | .05  | 4.9  | 30     |
| M-60         | 1.07  | 11.28  | 11.17  | 57.3   | 22  | 10.9 | 9.0  | 218 | 2.62 | 13.7 | .6  | 5.8  | 6.6  | 14.1 | .06  | .25  | .19   | 39  | .18 | .041 | 15.7 | 21.7  | .53  | 151.7 | .066 | 1   | 1.52 | .008 | .10  | <.2 | 1.7 | .11  | <.01 | 9   | .3  | .04  | 4.2  | 30     |
| M-64         | 4.16  | 14.48  | 30.18  | 57.1   | 77  | 8.1  | 3.9  | 141 | 2.70 | 11.9 | 1.2 | 3.9  | 5.1  | 33.5 | .09  | .24  | 1.47  | 42  | .10 | .060 | 13.1 | 21.4  | .29  | 202.3 | .027 | <1  | 1.25 | .018 | .08  | <.2 | 1.9 | .09  | .08  | 16  | 1.0 | .08  | 4.5  | 30     |
| M-68         | 3.22  | 14.90  | 34.51  | 57.0   | 207 | 9.3  | 4.4  | 106 | 4.14 | 17.2 | 1.3 | 3.3  | 13.8 | 41.1 | .09  | .38  | 9.45  | 42  | .04 | .060 | 25.1 | 19.5  | .13  | 124.0 | .027 | <1  | 2.17 | .054 | .05  | <.2 | 1.8 | .06  | .27  | 41  | .7  | .09  | 5.2  | 30     |
| M-70         | .85   | 22.59  | 104.49 | 55.9   | 424 | 12.4 | 5.9  | 175 | 2.27 | 9.6  | 1.2 | 6.7  | 6.9  | 24.1 | .08  | .33  | 3.56  | 42  | .13 | .021 | 13.1 | 25.6  | .39  | 157.1 | .051 | <1  | 1.15 | .013 | .05  | <.2 | 2.2 | .09  | .04  | 138 | 8.7 | .40  | 4.7  | 30     |
| M-71         | 1.44  | 17.40  | 58.30  | 199.0  | 367 | 8.5  | 5.8  | 333 | 3.26 | 8.8  | 2.7 | 23.3 | 10.4 | 43.8 | .22  | .26  | 1.94  | 41  | .10 | .070 | 23.1 | 25.2  | .48  | 168.0 | .075 | 1   | 1.95 | .026 | .17  | <.2 | 1.8 | .30  | .14  | 25  | 3.0 | .38  | 5.9  | 30     |
| M-72         | .85   | 13.09  | 10.26  | 57.9   | 46  | 16.6 | 7.8  | 253 | 2.77 | 6.8  | 1.0 | 11.6 | 5.9  | 25.5 | .04  | .23  | .23   | 52  | .33 | .068 | 13.1 | 25.8  | .68  | 353.6 | .044 | 1   | 1.33 | .015 | .13  | <.2 | 3.3 | .06  | .04  | 9   | .3  | .24  | 4.7  | 30     |
| STANDARD DS3 | 9.17  | 124.81 | 33.51  | 153.1  | 270 | 34.7 | 11.2 | 785 | 3.08 | 29.2 | 5.9 | 16.3 | 3.6  | 26.1 | 5.19 | 5.05 | 5.20  | 75  | .52 | .095 | 13.1 | 153.7 | .57  | 143.2 | .081 | 2   | 1.54 | .029 | .17  | 3.7 | 3.0 | 1.04 | .02  | 222 | 1.1 | 1.04 | 6.0  | 30     |

Sample type: SOIL SS80 60C. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



| SAMPLE#      | Mo   | Cu     | Pb     | Zn    | Ag  | Ni    | Co   | Mn   | Fe   | As   | U   | Au   | Th   | Sr    | Cd   | Sb   | Bi     | V   | Ca   | P    | La   | Cr    | Mg   | Ba    | Ti   | B   | Al   | Na   | K    | W   | Sc   | Tl   | S    | Hg  | Se  | Te   | Ga   | Sample |
|--------------|------|--------|--------|-------|-----|-------|------|------|------|------|-----|------|------|-------|------|------|--------|-----|------|------|------|-------|------|-------|------|-----|------|------|------|-----|------|------|------|-----|-----|------|------|--------|
|              | ppm  | ppm    | ppm    | ppm   | ppb | ppm   | ppm  | ppm  | %    | ppm  | ppm | ppb  | ppm  | ppm   | ppm  | ppm  | ppm    | ppm | %    | %    | ppm  | ppm   | %    | ppm   | %    | ppm | %    | %    | ppm  | ppm | ppm  | %    | ppb  | ppm | ppm | ppm  | ppm  | gm     |
| M-73         | 1.42 | 17.69  | 15.39  | 44.4  | 76  | 15.8  | 6.3  | 188  | 2.57 | 10.3 | 1.4 | 23.1 | 7.1  | 29.0  | .02  | .29  | .21    | 48  | .20  | .037 | 22.8 | 42.8  | .45  | 287.5 | .038 | <1  | 1.28 | .017 | .13  | <.2 | 2.3  | .07  | .05  | 14  | .4  | .20  | 5.3  | 30     |
| M-74         | 1.32 | 21.98  | 19.63  | 109.7 | 39  | 12.1  | 21.3 | 691  | 4.55 | 14.7 | 2.4 | 23.0 | 14.0 | 24.6  | .05  | .45  | .22    | 23  | .20  | .049 | 21.1 | 25.1  | .64  | 175.0 | .059 | <1  | 1.76 | .012 | .07  | <.2 | 2.3  | .07  | .05  | 9   | .9  | .14  | 4.5  | 30     |
| M-75         | 1.63 | 21.82  | 17.91  | 86.2  | 26  | 11.2  | 12.1 | 384  | 3.61 | 8.1  | 1.8 | 8.9  | 11.8 | 17.9  | .14  | .29  | .37    | 50  | .17  | .044 | 16.9 | 25.1  | .45  | 212.5 | .043 | <1  | 1.55 | .008 | .40  | <.2 | 3.5  | .11  | .03  | <.5 | .1  | .19  | 6.1  | 30     |
| M-76         | .86  | 23.15  | 6.54   | 79.4  | 61  | 11.7  | 12.6 | 708  | 4.19 | 3.9  | .7  | 54.2 | 4.4  | 28.1  | .08  | .21  | .22    | 107 | .39  | .064 | 13.5 | 43.1  | 1.35 | 364.0 | .053 | 1   | 2.28 | .011 | .12  | <.2 | 9.6  | .04  | <.01 | 6   | <.1 | .04  | 9.8  | 30     |
| M-77         | 2.60 | 25.73  | 83.74  | 50.4  | 171 | 23.3  | 6.1  | 207  | 3.76 | 9.6  | 2.5 | 30.8 | 24.7 | 97.9  | .08  | .31  | 5.57   | 26  | .24  | .058 | 59.8 | 53.6  | .33  | 455.1 | .034 | 1   | .85  | .078 | .16  | <.2 | 3.8  | .09  | .28  | 23  | 2.2 | .11  | 4.0  | 30     |
| M-78         | 1.03 | 38.03  | 24.18  | 107.1 | 145 | 142.9 | 22.4 | 733  | 3.83 | 5.6  | 1.9 | 9.7  | 16.8 | 163.3 | .12  | .25  | 1.17   | 85  | 1.36 | .316 | 64.3 | 214.6 | 2.35 | 688.9 | .168 | 1   | 2.19 | .019 | .22  | .3  | 6.4  | .15  | .01  | 20  | .4  | .05  | 9.7  | 30     |
| M-79         | 1.01 | 30.62  | 8.97   | 87.0  | 172 | 19.9  | 14.9 | 750  | 4.64 | 3.9  | 1.5 | 8.4  | 5.7  | 42.5  | .11  | .32  | .37    | 113 | .53  | .062 | 18.6 | 69.1  | 1.54 | 406.1 | .042 | 1   | 2.65 | .010 | .24  | <.2 | 12.6 | .08  | <.01 | 18  | .6  | .03  | 12.4 | 30     |
| M-80         | 4.05 | 69.09  | 205.27 | 189.8 | 705 | 13.8  | 7.5  | 202  | 4.12 | 13.7 | 3.3 | 47.7 | 23.3 | 89.1  | .24  | .38  | 156.76 | 35  | .18  | .040 | 55.9 | 37.2  | .38  | 344.5 | .061 | <1  | 1.08 | .046 | .15  | <.2 | 3.3  | .07  | .25  | 48  | 4.8 | .19  | 4.0  | 30     |
| M-81         | 1.17 | 22.52  | 6.72   | 88.3  | 128 | 13.8  | 11.6 | 771  | 3.89 | 2.9  | .7  | 3.1  | 4.8  | 24.0  | .15  | .21  | .21    | 78  | .37  | .047 | 14.6 | 30.7  | 1.11 | 444.1 | .027 | <1  | 2.17 | .010 | .14  | <.2 | 5.3  | .08  | <.01 | 9   | <.1 | .02  | 8.3  | 30     |
| M-82         | 1.08 | 24.72  | 11.15  | 41.2  | 370 | 8.5   | 5.8  | 381  | 2.34 | 4.7  | .5  | 53.2 | 4.1  | 21.4  | .11  | .20  | .21    | 45  | .39  | .034 | 17.2 | 21.2  | .37  | 697.4 | .011 | 1   | 1.15 | .007 | .22  | <.2 | 2.4  | .09  | <.01 | 21  | .2  | .02  | 4.2  | 30     |
| M-83         | .65  | 28.59  | 134.74 | 284.4 | 767 | 10.0  | 8.6  | 775  | 4.10 | 4.0  | .8  | 2.5  | 6.9  | 17.1  | .55  | .23  | .54    | 65  | .34  | .060 | 18.0 | 20.3  | .83  | 256.1 | .017 | <1  | 1.93 | .005 | .17  | <.2 | 6.7  | .04  | <.01 | 26  | .3  | .05  | 9.4  | 30     |
| M-84         | .75  | 23.36  | 17.85  | 85.0  | 156 | 26.7  | 11.2 | 549  | 3.08 | 6.7  | .8  | 3.6  | 4.7  | 31.8  | .12  | .42  | .18    | 67  | .44  | .036 | 19.0 | 53.6  | .80  | 622.0 | .088 | <1  | 1.70 | .010 | .16  | <.2 | 4.5  | .08  | .02  | 15  | .4  | .02  | 6.4  | 30     |
| M-85         | 1.22 | 23.05  | 32.97  | 92.6  | 193 | 23.4  | 14.7 | 1225 | 3.74 | 5.9  | .5  | 4.0  | 3.5  | 35.4  | .43  | .37  | .28    | 85  | .44  | .048 | 12.7 | 55.7  | .91  | 682.9 | .057 | 1   | 2.21 | .011 | .22  | <.2 | 7.5  | .08  | <.01 | 14  | .3  | .02  | 8.0  | 30     |
| M-86         | .37  | 18.17  | 7.98   | 98.2  | 57  | 49.7  | 23.8 | 897  | 5.11 | 3.5  | .7  | 3.1  | 4.7  | 41.5  | <.01 | .17  | .11    | 155 | .59  | .110 | 14.7 | 90.7  | 2.86 | 882.2 | .279 | 1   | 3.08 | .019 | 1.37 | <.2 | 7.9  | .28  | <.01 | 8   | .2  | <.02 | 12.5 | 30     |
| M-87         | 1.14 | 38.51  | 10.92  | 62.1  | 64  | 20.9  | 10.0 | 429  | 3.33 | 7.9  | .4  | 12.2 | 4.9  | 20.3  | .07  | .38  | .13    | 66  | .23  | .029 | 16.7 | 44.9  | .82  | 932.9 | .051 | 1   | 1.92 | .011 | .21  | <.2 | 4.7  | .07  | <.01 | 10  | .3  | .02  | 6.4  | 30     |
| M-88         | .55  | 26.18  | 9.70   | 62.2  | 57  | 58.9  | 14.9 | 638  | 3.24 | 5.3  | .8  | 5.6  | 6.8  | 61.4  | .01  | .28  | .15    | 79  | .89  | .143 | 28.8 | 115.1 | 1.61 | 708.8 | .152 | 1   | 1.76 | .020 | .43  | <.2 | 6.3  | .19  | <.01 | 15  | .5  | <.02 | 7.5  | 30     |
| RE M-88      | .56  | 26.10  | 9.69   | 63.0  | 55  | 65.8  | 16.0 | 643  | 3.25 | 5.0  | .8  | 4.3  | 7.1  | 61.4  | .02  | .32  | .15    | 80  | .89  | .147 | 30.2 | 124.3 | 1.62 | 712.0 | .149 | 2   | 1.75 | .019 | .41  | <.2 | 6.1  | .19  | .01  | 14  | .6  | .02  | 7.6  | 30     |
| N-1          | 1.48 | 17.58  | 6.37   | 72.7  | 54  | 14.7  | 11.0 | 520  | 2.72 | 3.9  | .7  | 16.1 | 3.1  | 32.5  | .11  | .26  | .09    | 60  | .80  | .108 | 13.7 | 28.9  | .69  | 486.7 | .075 | 1   | 1.34 | .015 | .15  | <.2 | 4.2  | .08  | <.01 | 27  | .3  | <.02 | 5.7  | 30     |
| N-2          | 1.98 | 15.49  | 6.56   | 69.7  | 35  | 12.1  | 8.6  | 566  | 3.02 | 3.6  | .5  | 9.5  | 2.5  | 32.2  | .07  | .25  | .07    | 70  | .76  | .122 | 12.4 | 27.6  | .66  | 381.7 | .077 | 1   | 1.38 | .020 | .23  | <.2 | 4.7  | .08  | .01  | 21  | .6  | <.02 | 6.1  | 30     |
| N-3          | 2.41 | 12.66  | 5.72   | 58.6  | 27  | 10.5  | 6.8  | 327  | 2.82 | 4.3  | .4  | 9.1  | 2.3  | 26.2  | .05  | .24  | .08    | 72  | .57  | .066 | 9.2  | 24.5  | .68  | 198.7 | .097 | 1   | 1.35 | .014 | .27  | <.2 | 3.0  | .10  | <.01 | 12  | .7  | .02  | 7.3  | 30     |
| N-4          | 2.27 | 16.36  | 7.92   | 57.2  | 30  | 13.9  | 8.4  | 284  | 2.80 | 5.3  | .4  | 4.2  | 2.7  | 28.0  | .05  | .28  | .12    | 71  | .48  | .063 | 10.2 | 32.9  | .62  | 246.7 | .088 | 1   | 1.43 | .014 | .14  | <.2 | 2.9  | .07  | .02  | 14  | .5  | <.02 | 7.4  | 30     |
| N-5          | 1.78 | 29.25  | 7.66   | 56.7  | 79  | 13.9  | 10.1 | 610  | 2.82 | 5.1  | 1.3 | 7.1  | 3.6  | 32.0  | .06  | .32  | .10    | 66  | .72  | .078 | 22.7 | 29.1  | .57  | 528.1 | .066 | 1   | 1.54 | .014 | .10  | <.2 | 6.2  | .06  | <.01 | 40  | .6  | .02  | 6.0  | 30     |
| N-6          | 2.10 | 15.30  | 7.74   | 59.8  | 18  | 12.3  | 8.8  | 384  | 2.75 | 5.4  | .5  | 7.0  | 2.7  | 27.4  | .05  | .27  | .10    | 68  | .43  | .067 | 11.2 | 27.4  | .60  | 349.4 | .085 | 1   | 1.41 | .015 | .14  | <.2 | 3.3  | .07  | <.01 | 13  | .2  | <.02 | 6.5  | 30     |
| N-7          | 1.96 | 40.85  | 8.06   | 64.6  | 60  | 15.8  | 13.6 | 1057 | 2.98 | 5.0  | .8  | 6.1  | 2.6  | 35.7  | .15  | .29  | .11    | 74  | .67  | .078 | 19.9 | 32.6  | .70  | 489.6 | .067 | 1   | 1.60 | .018 | .12  | <.2 | 4.2  | .07  | <.01 | 22  | .2  | .03  | 7.1  | 30     |
| N-8          | 1.59 | 14.02  | 7.29   | 50.9  | 34  | 10.9  | 6.3  | 282  | 2.28 | 4.6  | .5  | 6.2  | 2.4  | 27.1  | .08  | .27  | .11    | 58  | .58  | .042 | 10.3 | 27.3  | .48  | 335.7 | .068 | 6   | 1.20 | .018 | .08  | <.2 | 2.5  | .06  | .02  | 15  | .2  | .02  | 5.6  | 30     |
| N-9          | 1.57 | 11.80  | 7.52   | 59.9  | 24  | 12.0  | 9.8  | 474  | 2.74 | 5.6  | .4  | 9.9  | 2.8  | 24.9  | .06  | .29  | .10    | 63  | .50  | .063 | 9.1  | 28.8  | .61  | 289.9 | .079 | <1  | 1.38 | .012 | .10  | <.2 | 3.1  | .06  | <.01 | 15  | .3  | .02  | 5.3  | 30     |
| N-10         | 1.52 | 19.58  | 7.82   | 57.1  | 49  | 14.2  | 8.5  | 551  | 2.39 | 4.5  | .8  | 28.5 | 2.8  | 29.0  | .12  | .34  | .11    | 57  | .66  | .056 | 10.3 | 26.9  | .58  | 355.2 | .078 | 1   | 1.25 | .014 | .10  | .2  | 4.0  | .07  | .01  | 35  | .7  | .02  | 5.0  | 30     |
| N-11         | .96  | 16.57  | 8.69   | 58.5  | 40  | 12.9  | 9.5  | 477  | 2.63 | 5.1  | .7  | 6.9  | 3.5  | 26.4  | .06  | .32  | .13    | 64  | .48  | .054 | 11.8 | 30.7  | .65  | 357.4 | .104 | 1   | 1.51 | .014 | .10  | <.2 | 4.2  | .08  | <.01 | 22  | .3  | .02  | 5.6  | 30     |
| N-12         | 1.02 | 14.82  | 7.73   | 53.2  | 26  | 14.1  | 9.0  | 512  | 2.44 | 5.3  | .6  | 6.3  | 3.1  | 27.7  | .06  | .28  | .11    | 60  | .52  | .057 | 10.9 | 27.2  | .55  | 343.7 | .080 | 1   | 1.32 | .017 | .07  | .2  | 3.3  | .06  | <.01 | 50  | .2  | <.02 | 4.8  | 30     |
| N-13         | .83  | 16.86  | 6.50   | 52.2  | 28  | 13.9  | 9.0  | 334  | 2.12 | 5.1  | .6  | 2.4  | 3.0  | 28.2  | .06  | .29  | .10    | 50  | .46  | .066 | 11.1 | 26.5  | .47  | 232.0 | .070 | 1   | 1.07 | .014 | .08  | .2  | 2.7  | .06  | <.01 | 14  | .2  | .02  | 4.7  | 30     |
| N-14         | .38  | 46.42  | 1.20   | 84.9  | 16  | 16.2  | 26.3 | 935  | 5.05 | .7   | .1  | .2   | .5   | 27.5  | .03  | .04  | <.02   | 115 | .98  | .218 | 10.6 | 17.3  | 2.52 | 592.0 | .323 | <1  | 3.16 | .011 | 1.30 | <.2 | 1.5  | .32  | <.01 | <.5 | .5  | .02  | 8.1  | 30     |
| N-15         | .73  | 24.91  | 6.02   | 63.4  | 42  | 18.8  | 10.5 | 408  | 2.76 | 6.0  | .5  | 2.6  | 3.4  | 25.3  | .02  | .31  | .10    | 58  | .51  | .056 | 11.8 | 27.8  | .80  | 313.0 | .102 | <1  | 1.49 | .019 | .18  | <.2 | 3.7  | .09  | <.01 | 7   | .9  | .02  | 5.3  | 30     |
| N-16         | .59  | 50.43  | 4.57   | 125.0 | 17  | 13.1  | 14.4 | 809  | 4.93 | 2.3  | .5  | .7   | 3.3  | 18.5  | .03  | .15  | .03    | 94  | .49  | .107 | 9.2  | 21.2  | 1.53 | 615.0 | .184 | <1  | 2.47 | .008 | 1.00 | <.2 | 4.2  | .25  | <.01 | 5   | .6  | .02  | 9.5  | 30     |
| STANDARD DS3 | 9.23 | 126.20 | 33.22  | 153.8 | 275 | 35.8  | 12.0 | 790  | 3.08 | 27.6 | 6.0 | 21.3 | 3.8  | 29.4  | 5.49 | 5.06 | 5.35   | 76  | .52  | .082 | 17.0 | 186.4 | .57  | 143.1 | .081 | 1   | 1.63 | .030 | .15  | 3.8 | 2.8  | 1.04 | .02  | 220 | 1.3 | 1.02 | 6.2  | 30     |

N cabinet

Handwritten initials

Sample type: SOIL SS80 60C. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

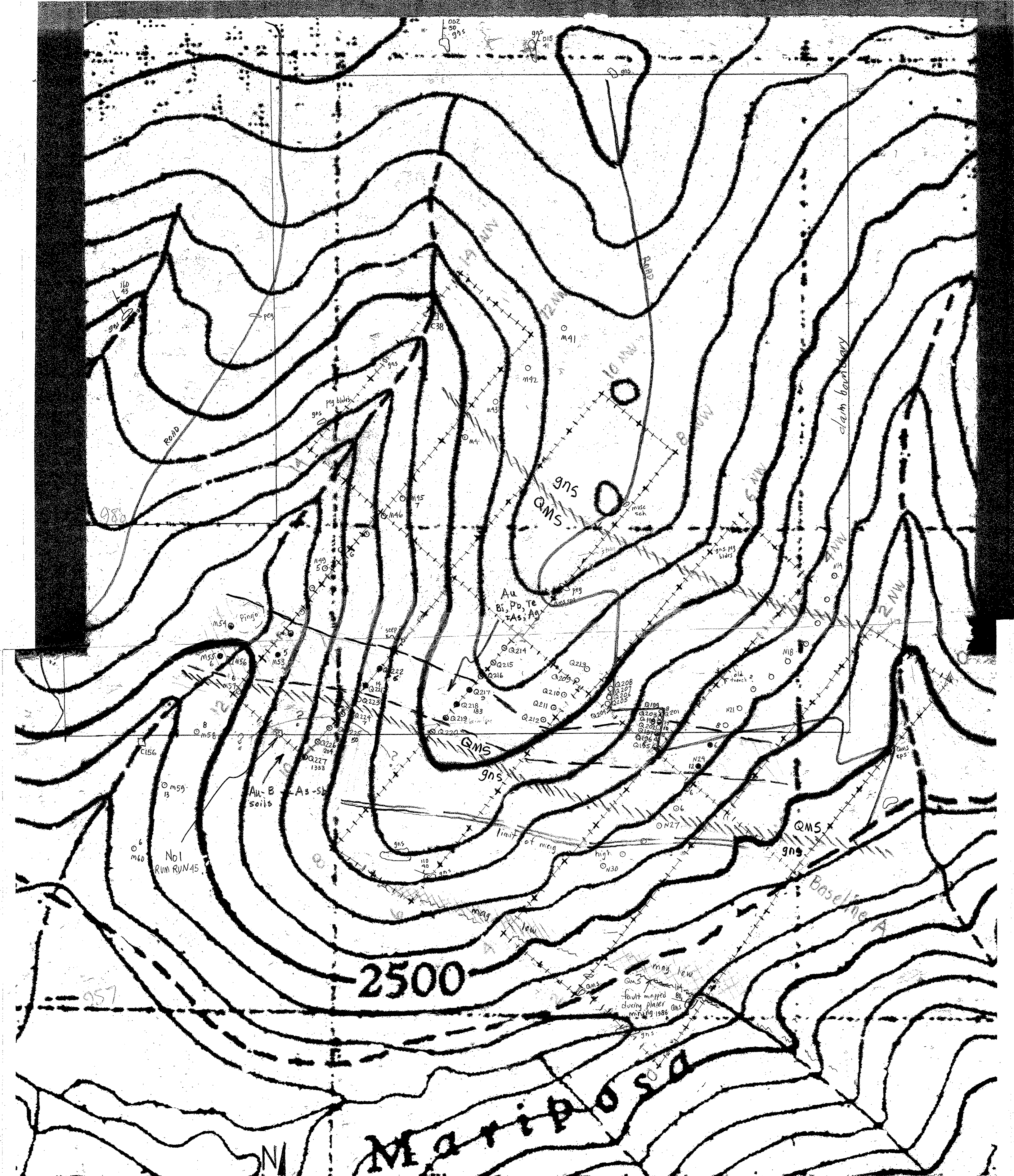
Handwritten mark



East 2nd

| SAMPLE#  | Mo<br>ppm | Cu<br>ppm | Pb<br>ppm | Zn<br>ppm | Ag<br>ppb | Ni<br>ppm | Co<br>ppm | Mn<br>ppm | Fe<br>% | As<br>ppm | U<br>ppm | Au<br>ppb | Th<br>ppm | Sr<br>ppm | Cd<br>ppm | Sb<br>ppm | Bi<br>ppm | V<br>ppm | Ca<br>% | P<br>% | La<br>ppm | Cr<br>ppm | Mg<br>% | Ba<br>ppm | Ti<br>% | B<br>ppm | Al<br>% | Na<br>% | K<br>% | W<br>ppm | Sc<br>ppm | Tl<br>ppm | S<br>% | Hg<br>ppb | Se<br>ppm | Te<br>ppm | Ga<br>ppm | Sample<br>gm |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|--------|-----------|-----------|---------|-----------|---------|----------|---------|---------|--------|----------|-----------|-----------|--------|-----------|-----------|-----------|-----------|--------------|
| N-17     | 3.39      | 39.24     | 12.10     | 34.4      | 97        | 32.7      | 7.2       | 161       | 2.99    | 76.3      | .8       | 2.3       | 4.9       | 20.3      | .04       | 2.42      | .19       | 32       | .12     | .040   | 24.2      | 12.0      | .18     | 206.5     | .010    | <1       | .77     | .005    | .10    | <.2      | 2.2       | .14       | .03    | <5        | .8        | .22       | 2.7       | 30           |
| N-18     | 1.60      | 13.08     | 16.69     | 35.9      | 25        | 10.8      | 6.2       | 211       | 2.16    | 6.7       | .6       | 1.6       | 2.3       | 12.4      | .04       | .36       | .14       | 37       | .18     | .025   | 7.7       | 20.9      | .41     | 418.4     | .046    | <1       | 1.12    | .006    | .17    | <.2      | 1.4       | .08       | .05    | <5        | .2        | .07       | 3.2       | 30           |
| N-19     | 1.69      | 23.37     | 11.30     | 55.6      | 74        | 15.4      | 9.0       | 335       | 2.99    | 8.7       | .4       | 1.7       | 2.5       | 21.9      | .04       | .32       | .12       | 54       | .34     | .024   | 7.5       | 23.8      | .82     | 343.7     | .085    | <1       | 1.75    | .008    | .19    | <.2      | 2.2       | .10       | .04    | 9         | .3        | .11       | 4.6       | 30           |
| N-20     | 2.09      | 33.78     | 14.07     | 101.1     | 32        | 39.3      | 14.6      | 376       | 3.36    | 8.0       | 1.7      | 2.8       | 16.5      | 29.5      | .04       | .43       | .14       | 56       | .60     | .158   | 31.1      | 67.6      | 1.11    | 491.3     | .127    | 1        | 1.92    | .009    | .46    | <.2      | 3.4       | .35       | .02    | <5        | .3        | .14       | 6.4       | 30           |
| N-21     | 4.16      | 47.15     | 10.59     | 71.4      | 49        | 30.9      | 11.5      | 371       | 3.42    | 8.3       | 2.0      | 2.9       | 22.7      | 37.0      | .04       | .47       | .18       | 51       | .40     | .098   | 38.0      | 44.8      | .70     | 326.8     | .069    | 1        | 1.54    | .010    | .15    | <.2      | 3.4       | .12       | .06    | <5        | .4        | .51       | 5.5       | 30           |
| N-22     | 3.10      | 26.38     | 16.26     | 76.4      | 174       | 15.3      | 8.7       | 291       | 3.35    | 15.2      | 2.8      | 7.7       | 10.8      | 41.1      | .06       | .27       | .23       | 47       | .26     | .050   | 31.1      | 24.4      | .60     | 306.0     | .075    | <1       | 1.72    | .017    | .16    | <.2      | 3.0       | .12       | .13    | 12        | .3        | .27       | 5.5       | 30           |
| RE N-22  | 3.44      | 26.01     | 16.34     | 75.3      | 170       | 15.5      | 9.4       | 289       | 3.36    | 14.6      | 2.8      | 3.9       | 11.3      | 40.3      | .06       | .25       | .23       | 47       | .26     | .052   | 31.0      | 27.2      | .59     | 305.2     | .075    | <1       | 1.72    | .020    | .13    | <.2      | 3.0       | .12       | .09    | 11        | .4        | .28       | 5.3       | 30           |
| N-23     | 2.52      | 36.23     | 78.06     | 304.6     | 93        | 7.2       | 8.4       | 239       | 3.99    | 5.5       | 5.1      | 6.1       | 12.0      | 68.0      | .16       | .19       | 3.22      | 24       | .15     | .063   | 33.9      | 7.5       | .50     | 192.2     | .081    | <1       | 1.70    | .026    | .13    | <.2      | 2.6       | .10       | .20    | <5        | .9        | 1.13      | 4.6       | 30           |
| N-24     | 4.70      | 15.50     | 85.04     | 53.8      | 331       | 7.6       | 3.5       | 108       | 2.81    | 20.9      | 2.1      | 11.8      | 13.4      | 29.7      | .07       | .24       | 1.73      | 29       | .08     | .056   | 29.1      | 14.2      | .21     | 138.1     | .032    | <1       | 1.04    | .034    | .11    | <.2      | 1.6       | .07       | .21    | 13        | 1.5       | 1.05      | 4.3       | 30           |
| N-25     | 1.66      | 16.43     | 17.54     | 66.4      | 126       | 15.0      | 8.8       | 334       | 2.81    | 7.7       | 1.2      | 5.6       | 6.8       | 30.7      | .10       | .33       | .32       | 52       | .19     | .027   | 17.4      | 26.4      | .50     | 310.9     | .068    | 1        | 1.43    | .015    | .10    | <.2      | 2.6       | .09       | .06    | 8         | .3        | .16       | 4.8       | 30           |
| N-26     | 2.07      | 14.52     | 36.84     | 66.6      | 109       | 8.2       | 6.6       | 325       | 3.03    | 18.4      | 3.2      | 5.6       | 15.5      | 51.0      | .06       | .37       | .20       | 19       | .17     | .051   | 45.2      | 12.2      | .31     | 207.0     | .048    | <1       | 1.02    | .032    | .15    | <.2      | 2.3       | .09       | .22    | 5         | 1.2       | .81       | 3.8       | 30           |
| N-27     | 1.04      | 9.55      | 10.72     | 72.2      | 28        | 5.4       | 6.0       | 315       | 3.05    | 3.5       | 1.4      | 3.4       | 10.8      | 18.3      | .03       | .37       | .13       | 30       | .32     | .051   | 21.3      | 12.1      | .56     | 127.0     | .050    | <1       | 1.49    | .004    | .12    | <.2      | 1.6       | .06       | .02    | <5        | .3        | .03       | 4.8       | 30           |
| N-28     | 1.27      | 11.46     | 8.38      | 59.5      | 23        | 7.8       | 8.5       | 338       | 2.42    | 2.6       | 1.8      | 2.4       | 20.6      | 24.5      | .06       | .12       | .06       | 17       | .38     | .070   | 31.4      | 9.5       | .62     | 133.3     | .060    | <1       | 1.26    | .004    | .23    | <.2      | 1.3       | .14       | <.01   | <5        | .2        | .03       | 4.1       | 30           |
| N-29     | .54       | 36.39     | 6.75      | 84.8      | 53        | 12.7      | 13.8      | 277       | 3.53    | 3.0       | .8       | 2.5       | 3.6       | 21.2      | .06       | .15       | .07       | 73       | .57     | .150   | 10.6      | 38.9      | 1.81    | 317.3     | .182    | <1       | 2.44    | .018    | .76    | <.2      | 4.0       | .10       | .01    | <5        | .1        | .02       | 10.4      | 30           |
| N-30     | .64       | 79.51     | 6.05      | 50.6      | 21        | 28.5      | 23.4      | 751       | 3.92    | 5.9       | 1.0      | 4.1       | 5.2       | 16.9      | .04       | .30       | .12       | 121      | .47     | .128   | 13.9      | 42.2      | 1.51    | 394.5     | .199    | 1        | 2.46    | .016    | .68    | <.2      | 6.4       | .18       | <.01   | 5         | .3        | .03       | 7.6       | 30           |
| N-31     | .07       | .62       | 4.08      | 11.3      | 10        | .4        | .9        | 230       | .61     | .2        | .1       | .2        | .5        | 39.5      | .01       | <.02      | <.02      | 5        | .89     | .013   | 2.1       | .6        | .21     | 97.4      | .002    | <1       | .48     | .004    | .05    | <.2      | .6        | <.02      | <.01   | <5        | .1        | <.02      | 1.8       | 30           |
| RE N-31  | .05       | .50       | 4.01      | 9.7       | 11        | .3        | .6        | 233       | .57     | .3        | <.1      | <.2       | .5        | 40.1      | .01       | <.02      | <.02      | 6        | .92     | .010   | 1.8       | .5        | .20     | 95.9      | .001    | <1       | .47     | .005    | .05    | <.2      | .6        | <.02      | <.01   | <5        | <.1       | <.02      | 1.6       | 30           |
| STANDARD | 9.26      | 125.93    | 34.08     | 152.6     | 285       | 34.0      | 11.1      | 784       | 3.06    | 28.3      | 5.8      | 22.7      | 3.9       | 28.6      | 5.51      | 5.14      | 5.39      | 74       | .52     | .096   | 17.8      | 178.4     | .57     | 142.3     | .081    | 1        | 1.61    | .026    | .16    | 3.6      | 2.5       | 1.03      | .02    | 233       | 1.1       | 1.05      | 5.9       | 30           |

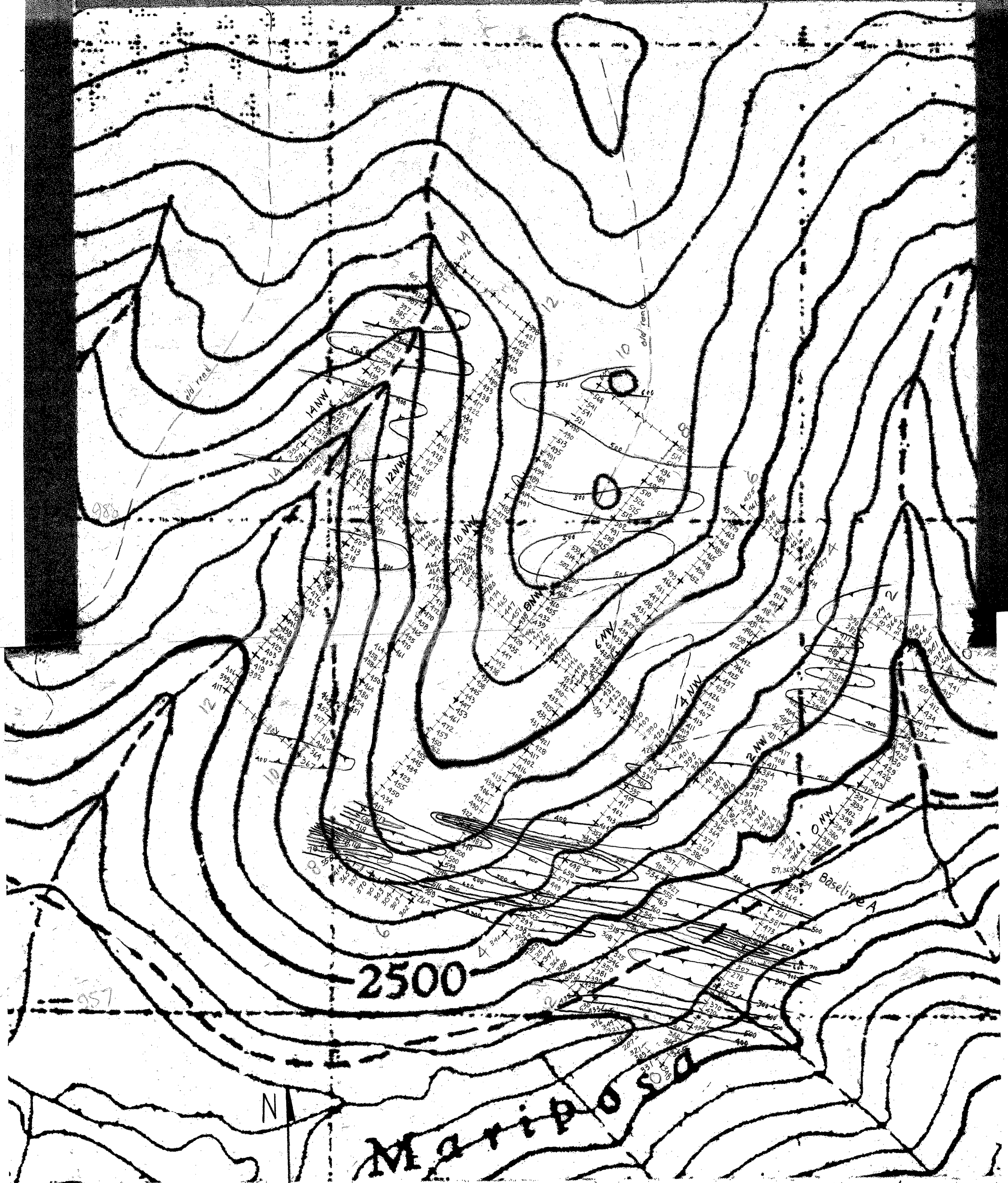
Standard is STANDARD DS3. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



**RUM RUN PROPERTY East Zone Scroggie Creek YT 1050/1,2 115.J/15,16 Jan, 2004.**  
**Geochem. Survey**  
 ▲ Rock chip sample (float)  
 ○ Soil sample  
 ○ outcrop  
 gns - gneiss  
 QMS - quartz mica schist

○ 6 ppb Au, em values  $\geq 5$  ppb shown  
 ○  $\geq 0.5$  ppm Bi  
 ●  $\geq 1.0$  ppm Bi  
 mag features taken from Figure 3

Figure 4  
 Scale 1:5,000  
 0 50 100 200 300 400 500 metres



2500

# Matiposso

RUM RUN PROPERTY East Zone Scroggie Creek YT 1050/1,2 115 J/15,16

Figure 3

Magnetometer Survey

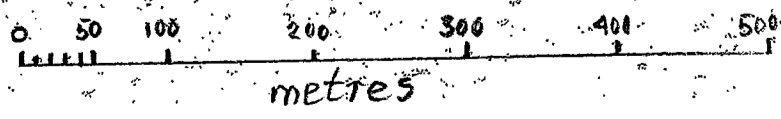
Jan, 2004

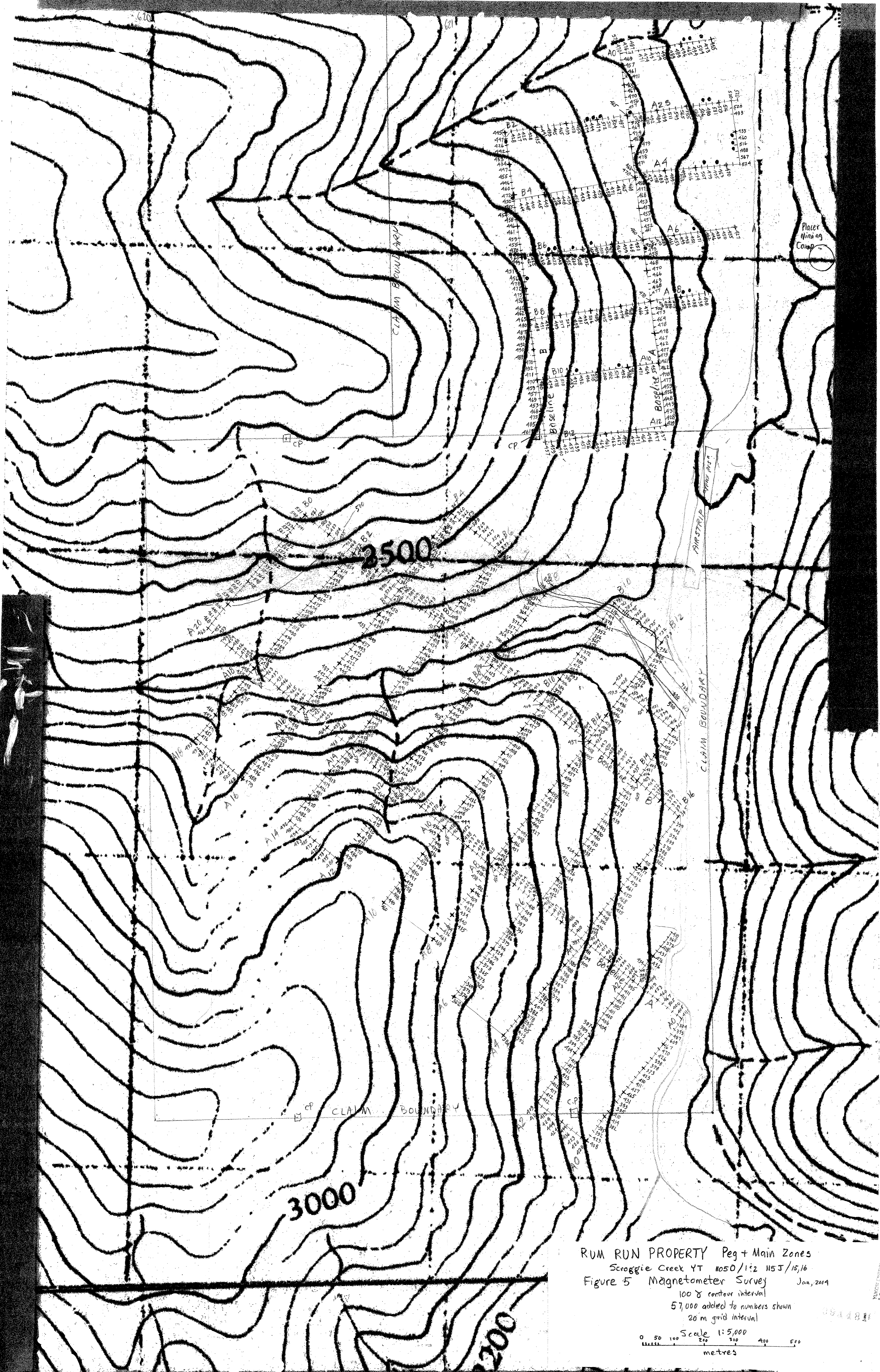
100.8 contour interval

57,000 added to numbers shown

20 m interval

Scale 1:5000





RUM RUN PROPERTY Peg + Main Zones  
 Scroggie Creek YT 1050/112 115J/15,16  
 Figure 5 Magnetometer Survey Jan, 2009  
 100 x contour interval  
 57,000 added to numbers shown  
 20 m grid interval  
 Scale 1:5,000  
 metres

YUKON TERRITORY  
 & RESOURCES  
 DEPARTMENT  
 1111 W. BROADWAY  
 WHITEHORSE, N.W.T. X1A 2S8