# REPORT ON THE 1991 GEOLOGICAL AND GEOCHEMICAL EXPLORATION WORK ON THE JACK PROPERTY

**Whitehorse Mining District**
**July 18 -27, 1991**

**Claims:** JACK 1-64 (YB26512-26575)
JACK 65-138 (YB27873-27946)

**Location:** 1. 45 km SW of Faro, Yukon
2. NTS 105L/1
3. Latitude 62°02'
Longitude 134°05'

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December 10, 1991

# SUMMARY


Greater Lenora Resources Corp.'s Jack Property consists of 138 contiguous mineral claims in the Whitehorse Mining District, Yukon. The claims are accessible by helicopter from Whitehorse or Carmacks, and are located approximately 15 km south of the Robert Campbell Highway and 45 km southwest of Faro, Yukon.

The Jack claims were staked after a 1989 GSC regional stream sediment geochemical release reported anomalous zinc, lead, silver, and cadmium in the upper tributaries of Solitary Creek.

Lower Cambrian Harvey Group schists, gneisses, and marble underlie most of the property. They are passive continental margin sediments of the Cassiar terrane. Harvey Group rocks are in fault contact to the west with Carboniferous to Permian basic volcanics, chert and tuff of the Slide Mountain Terrain. The Harvey Group is intruded by Cretaceous granites.

Skarn mineralization, developed in Harvey Group marble, locally contain high grade lead, zinc and silver values. The geological setting and mineralization found on the Jack Property is similar to that of the Mt. Hundere deposit, now the Sa Dena Hes Mine, owned by Curragh Resources and Hillsborough Resources.

Results of exploration to date has identified four mineralized occurrences on the Jack Property; the President, Glenn, Hobo and Geoff Occurrences. Additional occurrences are suspected from anomalous geochemistry data (stream sediment and soil samples) and from information filed with the mining recorder, in 1957, by previous claim holders.

Skarn mineralization consists of sphalerite, galena, chalcopyrite, pyrite, and pyrrhotite in a variable diopside-actinolite-magnetite-quartz-calcite assemblage. A weighted average from trench 90-1, over the President Occurrence, returned 18% zinc, 13% lead, and 8.9 ounces per tonne silver over 3.0 meters. Mineralization is controlled by marble-granite (or dyke) contacts and possibly by faults.

Soil and stream sediment sampling in conjunction with prospecting and geological mapping are effective methods of locating mineralization on the property. Silt and soil sampling results show a strong correlation between zinc, lead, and silver. A number of anomalies distant from known mineralization require follow up work, which could result in the discovery of other mineralized zones.

Based on these results, continued exploration consisting of orthophoto preparation, prospecting, geological mapping, geochemistry, geophysics, and trenching are warranted and recommended.

# TABLE OF CONTENTS


| | Page |
|---|---|
| SUMMARY | i |
| TABLE OF CONTENTS | ii |
| INTRODUCTION | 1 |
| LOCATION AND ACCESS | 2 |
| CLIMATE, TOPOGRAPHY AND VEGETATION | 2 |
| PROPERTY | 4 |
| HISTORY | 6 |
| GEOLOGY | 7 |
| Regional Geology | 7 |
| Property Geology | 7 |
| MINERALIZATION | 10 |
| GEOCHEMISTRY | 16 |
| Introduction | 16 |
| Stream Sediment Samples | 17 |
| Soil Sampling | 19 |
| CONCLUSIONS AND RECOMMENDATIONS | 22 |
| REFERENCES | 24 |
| STATEMENT OF QUALIFICATIONS, R.A.D. | 25 |
| STATEMENT OF QUALIFICATIONS, R.W.H. | 26 |
| STATEMENT OF COSTS | 27 |

List of Tables

| | | |
|---|---|---|
| Table I; | Comparison of Mt Hundere & Jack Property: | 15 |
| Table II; | Sample Number Sequences; 1990 & 1991: | 16 |
| Table III; | Correlation Matrix; 1990 Silt & Soil Samples: | 17 |
| Table IV; | Silt Sample Statistics: | 18 |
| Table V; | Correlation Matrix, 1990 & 1991 Silt Samples: | 18 |
| Table VI; | Soil Sample Statistics: | 20 |

List of Figures

| | | |
|---|---|---|
| Figure 1; | Location Map, 1:5,000,000: | 3 |
| Figure 2; | Claim Map, 1:31,680: | 5 |
| Figure 3; | Regional Geology, 1:1,000,000: | 8 |
| Figure 4; | Compilation, 1:20,000: | in pocket |
| Figure 5; | Property Geology & Rock Geochemistry, 1:5,000: | in pocket |
| Figure 6; | President Occurrence Compilation, 1:500: | in pocket |
| Figure 7; | Glenn Occurrence, Trench 91-1, 1:100: | in pocket |
| Figure 8; | Hobo Occurrence Compilation, 1:1000: | in pocket |
| Figure 9; | Stream Silt Geochemistry, 1:5,000: (Ag, Cu, Pb, Zn) | in pocket |
| Figure 10; | Soil Geochemistry, 1:5,000: (Ag, Cu, Pb, Zn) | in pocket |

List of Appendices

| | |
|---|---|
| Appendix A | Rock Sample Descriptions |
| Appendix B | Analytical Methods |
| Appendix C | Geochemical Results |
| Appendix D | Selected Papers |

# INTRODUCTION

This report was prepared at the request of Mr. R. J. Kasner, President of Greater Lenora Resources Corp. It describes the 1991 exploration program, carried out between July 18 - 27, 1991, on the Jack property.

The Jack 1-138 Claims are located 20 km south of the Robert Campbell Highway near the southeast end of Little Salmon Lake.

The purpose of the 1991 program was to follow up on encouraging results obtained in 1990 that included the discovery of a high grade Zn-Pb-Ag mineralized skarn, the President occurrence. The geological setting and mineralization resembles that found at the Mt. Hundere Deposit (Sa Dena Hes Mine). The initial 1990 work was following up on two Geological Survey of Canada regional stream geochemical samples sites that were anomalous in lead, zinc, silver, copper, and cadmium. Work carried out in the 1990 field season is summed up in a report by Doherty, 1990, to whom the reader is referred to for background information.

In 1991 a work program consisting of stream sediment sampling, soil sampling, geological mapping, prospecting, gridding and hand trenching was carried out from a three man helicopter fly camp. Field work was completed by Roger Hulstein and Geoffrey Petite both of Aurum Geological Consultants Inc. and Glenn Kasner, Operations Manager for Greater Lenora Resources Corp.

## LOCATION AND ACCESS

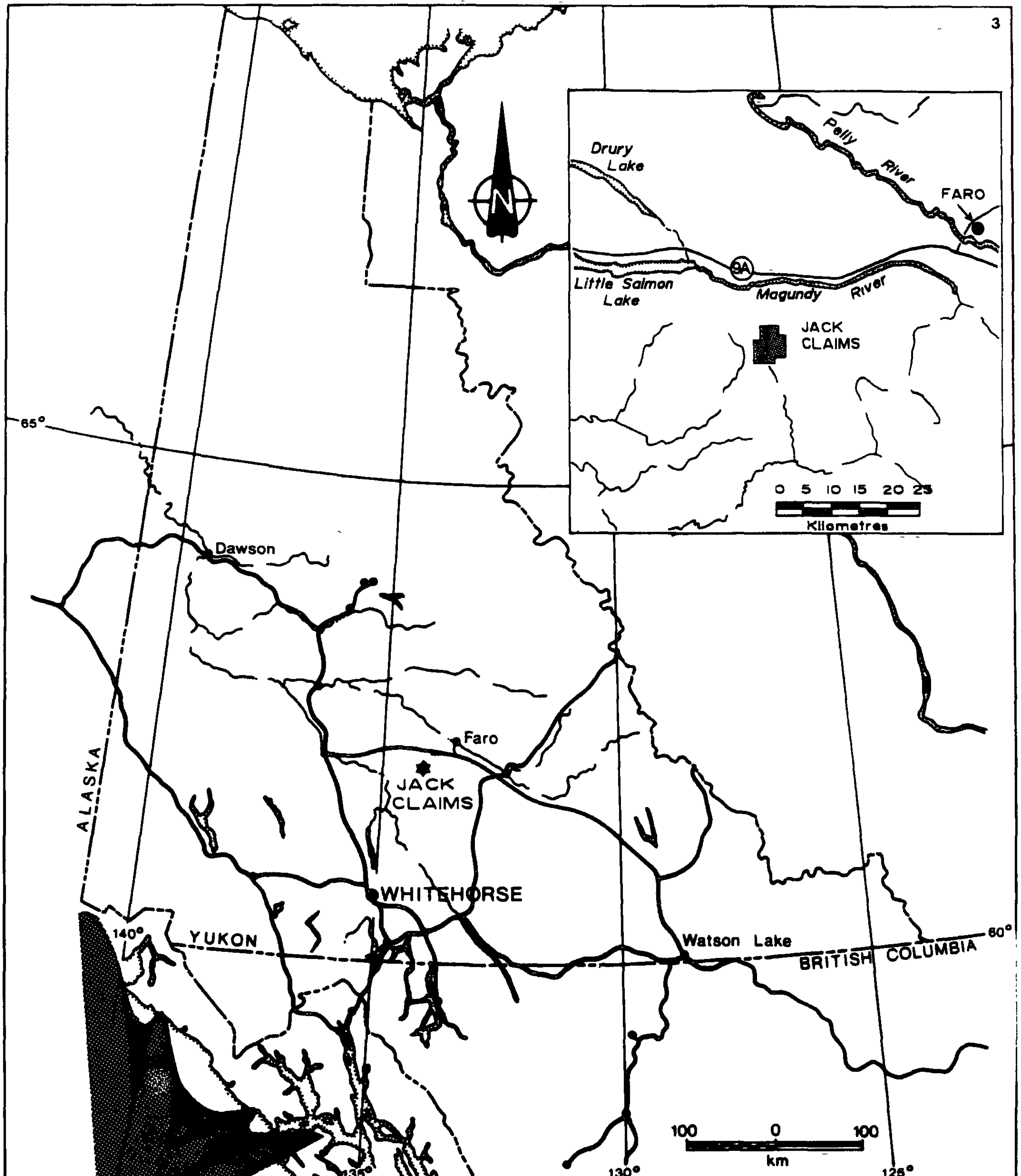
The Jack 1-138 claims are located 20 km southeast of Little Salmon Lake and 45 km southwest of Faro, Yukon. Carmacks is 110 km west of the property and Ross River is 85 km east. A point at the center of the claim block is at 62° 03' North latitude and 134° 05' West longitude, within NTS map area 105L/1, (Figure 1).

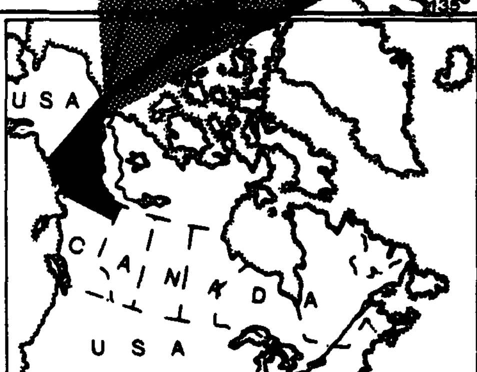
Year round access to the Jack claims is via helicopter from Whitehorse, 150 km south of the property. There are seasonal helicopter bases in Carmacks and Ross River during the summer months. The Robert Campbell Highway is 15 km north of the property. Road access could be constructed to the property with a bridge over the Magundy River.

## CLIMATE, TOPOGRAPHY AND VEGETATION

The Jack claims are located in an area of moderate topography. Elevations vary between 3700' to 5100'. Treeline is at 4500' or lower. Sub-alpine to alpine vegetation on the property consists of stunted white spruce, willows and grasses. The claims cover the north part of Solitary Creek and its tributaries. The topography is rolling and hummocky and numerous small alpine tarns dot the area.

The property has been extensively glaciated resulting in barren uplands and glacial debris filled valleys. Glacial striae, where observed, are from a northeast to northwest direction.



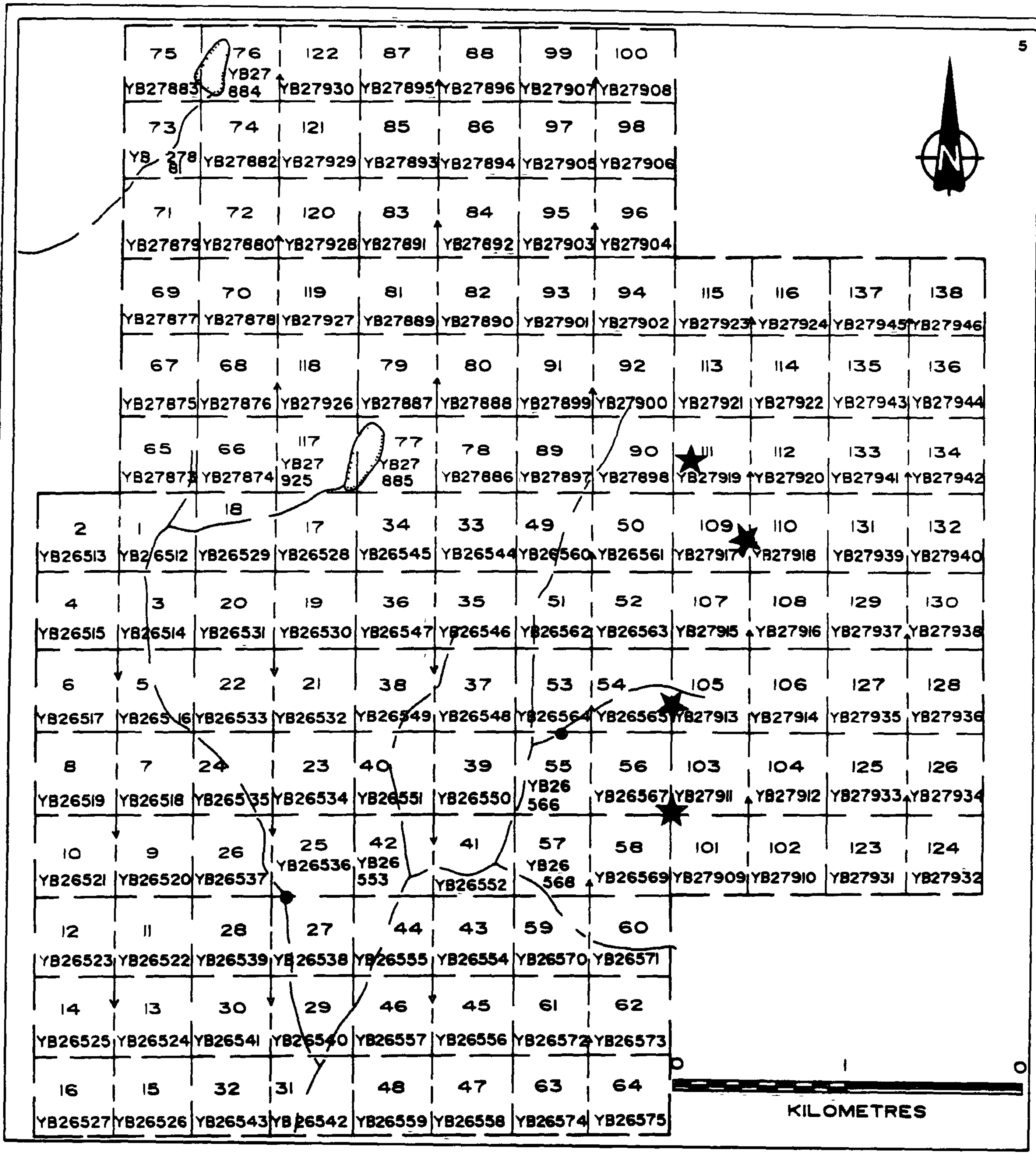

| | | |
|---|---|---|
| GREATER LENORA RESOURCES CORP | | |
| JACK CLAIMS | | |
| **LOCATION** | | |
| ***Aurum Geological Consultants Inc.*** | Date DEC 1991 | |
| NTS 105L/4 | Drawn by AD/LK | Scale 1,6000,000 | Figure 1 |

# PROPERTY

The Jack property consists of 138 unsurveyed contiguous quartz mineral claims within NTS map area 105L/1, located in the Whitehorse Mining District (Figure 2). The claims are 100% owned by Greater Lenora Resources Corp. The Jack 1-64 claims were staked on August 3, 1989 to cover two anomalous stream sediment samples reported in the GSC regional geochemical survey Open File 1961. The Jack 65-138 claims were added in September 1990 after high grade Zn-Pb-Ag mineralization, the President occurrence, was discovered in outcrop on the eastern boundary of the Jack 1-64 claims. Claim data and expiry dates are listed below.

| Claim Name | Grant Number | Recording Date | Expiry * Date |
|---|---|---|---|
| Jack 1-64 | YB26512-6575 | Aug. 17,1989 | Aug. 17, 1995 |
| Jack 65-138 | YB27873-7946 | Sep. 19,1990 | Sep. 19, 1993 |

* subject to acceptance of assessment work described herein




LEGEND

- claim boundary
- claim number
- tag number tag
- staking direction
- Lake/creek
- Pb-Zn mineralization
- GSC sample location

| GREATER LENORA RESOURCES CORP | | | |
|---|---|---|---|
| JACK CLAIMS | | | |
| CLAIM MAP | | | |
| *Aurum Geological Consultants Inc* | | DECEMBER 1991 | |
| NTS 105L/1 | Scale 1:31,680 | Drawn by AD LK | FIGURE. 2 |

# HISTORY

The Jack 1-64 claims were staked by Aurum Geological Consultants Inc., on behalf of Greater Lenora Resources Corp., after reviewing the geochemical release and deciding the two coincident anomalies at the southeast side of Little Salmon Lake could indicate bedrock mineralization. The geological formations underlying the area were also thought to be favorable host rocks for Pb-Zn mineralization.

The Jack 1-138 claims are the only claims in the area and now cover the Lokken mineral occurrence. Regarding the Lokken Zn-skarn, the Yukon Minfile Occurrence 105L001, states that: *"Minor amounts of sphalerite, chalcopyrite and galena occur in weak diopside garnet skarn, which has developed in lower Cambrian carbonates near an intrusive contact and a fault."*

Claim forms, for the expired Chopper 1-6 claims, filed by Asbestos Corporation in 1957 indicate that the Lokken occurrences and Chopper 1-6 claims lie within the present claim group (Figure 4). Old claim posts, aviation oil cans and mineralization were discovered in 1991 in this area located between 1.3 and 2.5 kilometers north of the President occurrence.

The Lokken occurrence was named after nearby Lokken Creek and Mount Lokken. H.O.Lokken was a long-time Yukon pioneer and prospector from gold rush days, (Coutts, 1980).

In 1990 a two man crew spent four days carrying out reconnaissance sampling, mapping and prospecting over the original Jack 1-64 claims (Doherty, 1990). This work resulted in the discovery of the President Occurrence, a high grade Pb-Zn-Ag bearing skarn and a number of unexplained soil and stream sediment sample anomalies. These encouraging results lead to the staking of the Jack 65-138 claims.

# GEOLOGY

## Regional Geology

The geology of the Glenlyon area was mapped by Campbell (1967). The area is underlain by three separate geological units belonging to two tectonic terranes; the Cassiar and Slide Mountain terranes (Wheeler and McFeely, 1987). Carboniferous to Permian greenstones and local serpentinite bodies are part of the Slide Mountain terrane and consist of oceanic marginal basin volcanics and sediments. The Cassiar terrane consists of upper Proterozoic clastic continental margin sediments and lower Cambrian age metamorphic rocks originally deposited as rifted and passive continental margin sediments. The terranes are separated by major regional faults, and are intruded by Cretaceous granitic rocks.

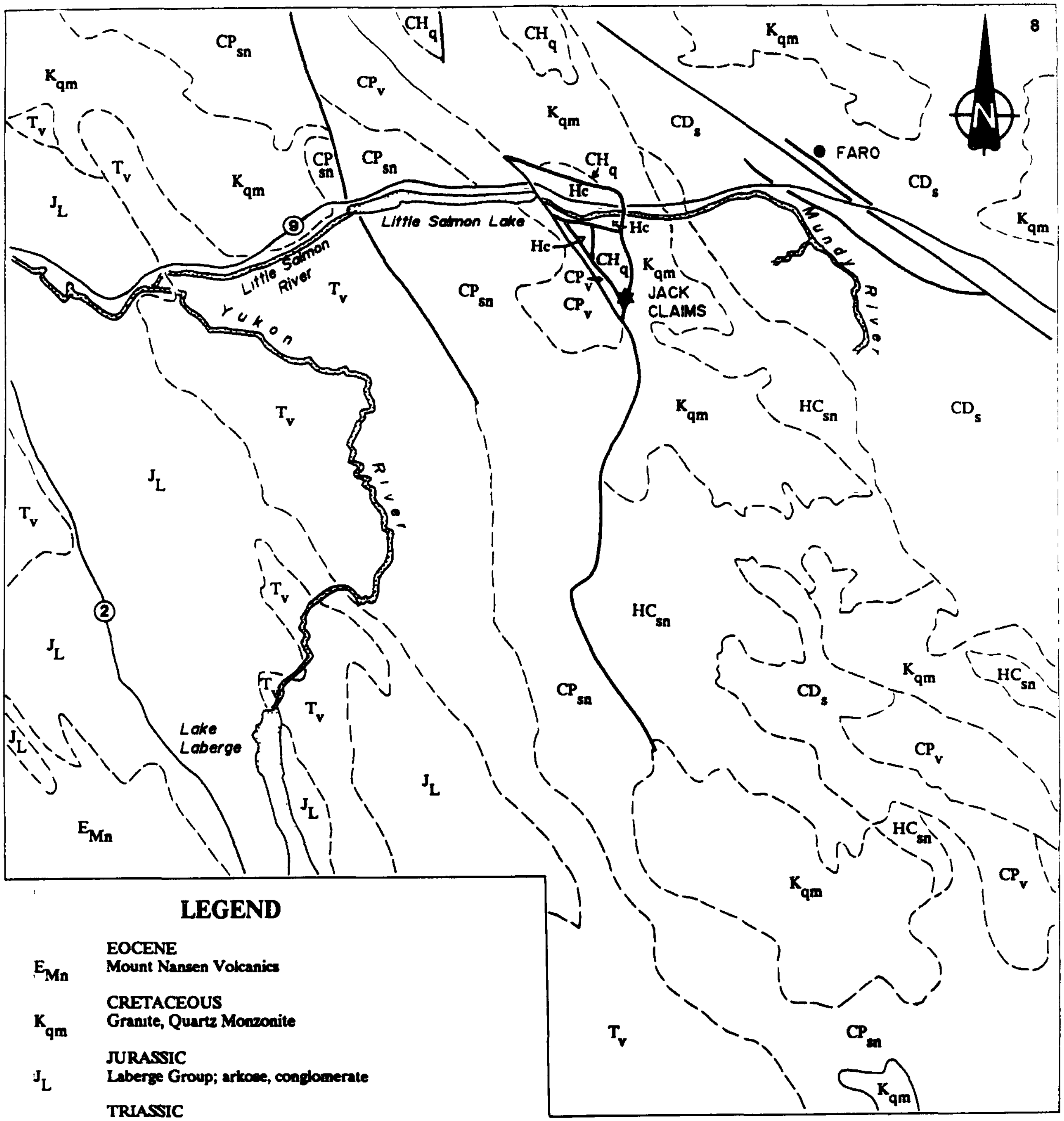
The 1:1,000,000 scale Macmillan River Map (from GSC map 1398A) (Figure 3), shows the three units from east to west as: Hadrynian to Cambrian schist and gneiss (HCsn); lower Cambrian Harvey Group quartzites and marble (CHc), which form the Cassiar Terrane; and Carboniferous to Permian basic volcanics, chert and tuff (CPv) forming the Slide mountain terrane. All units are separated by northwest trending faults.

Mineralization found to date on the Jack claims has been located within the rifted and passive continental margin sedimentary rocks of the lower Cambrian Harvey Group.

## Property Geology

The geology of the Jack claims is shown in Figure 4 and 5. These preliminary geology maps are based on the 1990 and 1991 fieldwork. Information from the Geological Survey of Canada regional, 1:250,000 scale, map (Campbell, 1967) has also been incorporated.

Two strong northwest trending regional faults bisect the property. The faults juxtapose Lower Cambrian Harvey Group schist, gneiss and marble (Map units CHsn and CHc) on the northeast side of the faults, with Carboniferous and Permian phyllite, shale, marble, limestone and greenstone (Map unit CPv) on the southwest side of the faults. A large body of Cretaceous granite (Map unit Kg)




## LEGEND

| | |
|---|---|
| | EOCENE |
| $E_{Mn}$ | Mount Nansen Volcanics |
| | CRETACEOUS |
| $K_{qm}$ | Granite, Quartz Monzonite |
| | JURASSIC |
| $J_L$ | Laberge Group; arkose, conglomerate |
| | TRIASSIC |
| $T_v$ | Lewis River Group; andesite,basalt |
| | CARBONIFEROUS AND PERMIAN |
| $CP_v$ | Andesite, basalt, chert |
| $CP_{sn}$ | Big Salmon Metamorphic Complex |
| | CAMBRIAN to DEVONIAN |
| $CD_s$ | Shale, Phyllite, Limestone ( Anvil Allocthon in Faro area) |
| $CH_q$ | Harvey Group |
| | HADRYNIAN TO CAMBRIAN |
| $HC_{sn}$ | Schist Gneiss Quartzite |
| Hc | Crystalline dolomite |
| — — — | Geological Contact |
| (symbol) | Lake/River |

Geology from GSC's Macmillan River Map 1398A

GREATER LENORA RESOURCES CORP

JACK CLAIMS

Whitehorse Mining District

# REGIONAL GEOLOGY

| Aurum Geological Consultants Inc. | | Date: Dec. 91 |
|---|---|---|
| Drawn by: LK | Scale 1:1,000,000 | Figure 3. |

intrudes the Harvey Group schist and gneiss on the northeast side of the fault. The granite body appears to be cut by the northwest trending faults.

Harvey Group (Map unit CHsn) is a high grade metamorphic assemblage of predominantly quartz-rich metasedimentary rocks, metapelite and marbles. Common lithologies include quartz-muscovite and quartz-muscovite-biotite schists, biotite-feldspar schist, garnet-biotite schist, quartzite, marble, and amphibolite.

Carboniferous to Permian rocks (Map unit CPv) are a low grade metamorphic assemblage of shale, greenstone and carbonate, variably sheared and foliated. Sub-units include a light grey phyllite, micaceous shale, marble and limestone, and foliated intermediate greenstone.

Cretaceous granite (Map unit Kg) consists of a light, pale orange, blocky weathering quartz-rich, variably foliated and sheared, biotite and hornblende-biotite alaskite, granite and quartz monzonite. Locally fine grained quartz-feldspar porphyry dykes and sills intrude rocks of the Harvey Group.

Foliations within the map area are more or less parallel to the regional northwest structural trend, particularly within the Carboniferous to Permian metasediments. Near granitic bodies, within the Harvey Group schists and gneiss, foliations are commonly parallel to the intrusive contacts.

Within the Harvey Group, on the northeast side of the northwest trending faults, a number of parallel northeast trending lineaments have been mapped. These are presumed to be faults. Both sets of faults are readily visible on air photos of the area.

# MINERALIZATION

Four mineralized skarns, the President, Glenn, Geoff and Hobo Occurrences, have been discovered to date on the property. At least three additional occurrences (original Lokken occurrences) are suspected based on Asbestos Corporation data filed with the Whitehorse Mining Recorder. All occurrences are of skarn type mineralization hosted by limestones/marbles of the Harvey Group (map unit CHc) near or adjacent to felsic intrusive rocks (map unit Kg). Mineralization is controlled by the carbonate-intrusive contact and probably fault zones, visible for the most part as lineaments.

Mineralization commonly consists of disseminated to massive sphalerite and galena in a gangue of diopside, garnet, actinolite, calcite, quartz and a chalky white matrix (altered feldspar or wollastonite). Locally disseminated chalcopyrite may be present along with disseminated to semi-massive pyrite and pyrrhotite. Massive magnetite and epidote-chlorite bearing calc-silicates are frequently found on the edges of mineralized zones. Weathered mineralized outcrops are particularly unspectacular as there are no gossans. The mineralization weathers to a dark chocolate brown color, and on close inspection azurite and malachite can often be seen. Usually the mineralized skarns are recessive weathering. Manganese coatings and wad are often found near mineralized zones.

## President Occurrence

Discovered in 1990 while prospecting and soil sampling upstream of the anomalous GSC silt sediment sample (#3052) on the east fork of Solitary Creek (Figure 6). Sphalerite and galena bearing talus was traced uphill to an outcrop of folded marbles adjacent to a felsic dyke near the margin of a granite batholith. The main mineralized zone, located near L10+00N/10+00E is in a skarnifed horizon immediately adjacent to a sinuous, steeply dipping quartz porphyry dyke approximately 50 meters north of the exposed marble-granite contact. Any mineralization to the west is covered by talus and overburden while to the east the mineralization appears to end where the dyke changes strike from approximately southeast to southwest.

Trench 90-1 returned a weighted average of 13 % lead, 18 % zinc, and 8.9 ounces per tonne silver over 3 meters. Sample 206597 from the President Zone, located approximately 25 m north of the discovery showing returned 9.87 % lead, 15.8 % zinc, and 2.65 ounces per tonne silver over 0.8 meters. Rock sample descriptions are included in Appendix A.

Twenty meters south of trench 90-1, a rusty outcrop was found to contain massive manganese wad (MnO) with rare disseminated galena and azurite. Malachite coatings are found on weathered fracture surfaces (Samples 206958 & 959 from Trench 90-3). Samples returned low values for lead and zinc but in the case of sample #74-2037, elevated copper values. The mineralization is restricted to a 0.5 meter thick horizon around a rusty weathering decomposed granite outcrop.

Mapping and prospecting in 1991 located galena-sphalerite mineralization 120 meters north of trench 90-1. The mineralization is found as a discontinuous narrow band, commonly less than 0.30 meters wide, over a horizontal distance of 35 meters, adjacent to a steeply dipping, east trending, felsic dyke and or sill. The mineralization appears to terminate to the west in a calc silicate band. To the east the mineralization is poddy and terminates in a magnetite-epidote-actinolite-diopside skarn. One of the better samples (#344406) returned 532.0 ppm silver, 8.33 % lead and 12.20 % zinc over a 0.60 meter width.

Large blocks of mineralized float (up to 1.0 X 1.5 X 3.0 meters) found near station 9+80E/10+60N returned up to 222.8 ppm silver, 3.92 % lead and 6.86 % zinc (sample #344458) over a 1.0 meter apparent width. The source of this float is thought to be nearby and covered by limestone talus.

Solitary Creek and its tributary from the east at the President Occurrence are linear and are thought to be fault zones, especially Solitary Creek. Outcrop west of Solitary Creek, comprised of Harvey Group schist and gneisses bear no resemblance to the large marble outcrop hosting the mineralization on the east side of the creek.

## Glenn Occurrence

Discovered in 1991 by Mr. Glenn Kasner, the Glenn Occurrence is located approximately 600 meters south of the President Occurrence on a west facing slope (Figure 7). The occurrence is characterized by magnetite-diopside-calc-silicate skarn variably mineralized with disseminated galena, sphalerite, chalcopyrite and pyrite/pyrrhotite. The host rock consists of biotite marble exposed in the center of trench 91-1. Best results from the trench include one sample (#344485) that returned 3.2 ppm silver, 2392 ppm copper, <0.1 % lead and 5.41 % zinc within a 8.1 meter interval grading 2.66 % zinc. Both ends of the trench terminate in granite. The area surrounding the trench has been prospected but not mapped although limestone outcrop was noted some distance below the trench.

## Hobo Occurrence

The Hobo Occurrence, located approximately 1200 meters north of the President Occurrence, was briefly mapped and sampled in 1991 (Figure 8). Sampling marks left by previous explorationists were noted on mineralized outcrops.

Mineralization is similar to that found at the President Occurrence. Mineralized garnet-actinolite-quartz-calcite and calc-silicate skarns are found near or adjacent to a marble-granite contact. The occurrence area is crosscut by recessive overburden filled lineaments trending northwest to northeast and at some sample sites (#344469) mineralization appears to be controlled by steep dipping east trending fractures. Mineralization consists of disseminated to semi-massive sphalerite and galena along with magnetite and locally pyrite and pyrrhotite. A quartz stockwork zone, approximately 10 X 10 meter in area, with variable amounts of disseminated sphalerite was mapped on line 1+20E. Eight rock samples, returned up to 257 ppm silver, 8070 ppm copper, 2.25 % lead and 9.11% zinc over widths greater than 0.75 meters.

## Geoff Occurrence

The Geoff Occurrence, located approximately 1000 meters north northeast of the President Occurrence, is found in an alpine area on a gentle westerly facing slope. Limited prospecting and geological mapping were carried out in 1991. A total of four rock samples were collected from different skarn zones up to a 100 meters apart. Three types of weakly mineralized skarn were noted: (1) rusty weathering siliceous marble with calc-silicates, (2) limonite and manganese stained green calc-silicates with disseminated magnetite and, (3) a black weathering massive magnetite-diopside skarn. Contacts and relationships are difficult to trace out due to overburden and low vegetation. A sample (#344403) of rusty weathering siliceous marble with 2-3% pyrite blebs and disseminated sphalerite returned the highest values from the area; 4.2 ppm silver, 0.05 % lead, 1.05 % zinc.

### Lokken Occurrence

Only one small pod (<1.0 X 1.0 m) of massive diopside-hornblende(?) skarn containing disseminated galena and sphalerite (sample #344460) was located in 1991 in the area covered by the original Chopper 1-6 claims staked by Asbestos Corporation in 1991. A sketch showing the locations of mineralized (lead, zinc and copper) outcrops was located at the Whitehorse Mining Recorders office in the fall of 1991. These locations are plotted as L1, L2 and L3 on Figures 4,5,9,10, and 11. These areas have not been examined although immediately south of L1, calc-silicate, epidote skarn was noted. A schistose limestone/marble bed, also weakly skarnified, is approximately on strike with the plotted locations of showings L2 and L3. The assumed granite-Harvey Group contact also lies in the vicinity of the plotted locations of L2 and L3.

### Other Mineralization

Several rusty zones uncovered on the property were determined to result from alteration of Fe-rich zones (e.g. amphibolite or biotite schist). Two rusty gossanous areas, caused by fractured pyritic granite were noted. One of these areas is immediately north of the Hobo Occurrence while the other is near the northern property boundary. A set of three quartz veinlets, filling joints, containing disseminated pyrite, galena and sphalerite was sampled (#344459) and returned 44.2 ppm silver, 0.42 % lead and 0.58 % zinc.

**Deposit Model**

The geological and geochemical setting of the mineralization located on the Jack claims is characteristic of Zn-Pb-Ag skarn deposits. The Mt. Hundere deposit (Sa Dena Hes Mine) located approximately 320 km to the southeast is an example. The Sa Dena Hes Mine, owned by Curragh Resources 80%, and Hillsborough Resources 20%, officially opened on September, 1991 (The Claim Post, Nov., 1991). Initial mill rate is estimated at 1500 tonnes per day with a mine life of at least ten years. Total reserves are given as 4.9 million tonnes grading 4% lead, 12.7% zinc and 59 grams per tonne silver, contained in four separate skarn deposits up to four kilometers apart.

The deposits are found in an isoclinally folded sequence of Lower Cambrian limestone and intercalated phyllites (INAC, 1990). Skarns are found on the margins of the limestone bodies, on the sheared contact with phyllite, near intermediate dykes and sills. Mineralization is epigenetic and appears to be structurally controlled (Bremner, et al, 1990). The deposits are up to 10 meters wide, 20 meters thick and over 150 meters long. Grades of over 30% combined lead-zinc and greater than three ounces of silver are not uncommon.

Mineralization is characterized by medium to coarse grained sphalerite and galena in a gangue of actinolite,diopside, green garnet, quartz and calcite. Although little iron sulfide is contained in the lead-zinc-silver ore, some iron-copper skarns are found locally and contain magnetite, chalcopyrite, pyrrhotite, and minor pyrite and hematite.

The following descriptive model is based on Cox (1987) in 'USGS Deposit Models'. These deposits are found in continental margin settings within carbonate and calcareous clastic sedimentary rocks intruded by granitic and porphyritic granite bodies.

Mineralization consists of galena and sphalerite with or without pyrrhotite, pyrite, magnetite, chalcopyrite. Ore textures are granoblastic with the sulfides being massive to interstitial. These deposits have a geochemical signature that includes Zn, Pb, Mn, Cu, Co, Au, Ag, As, W , Sn, F and possibly Be . The geochemical results to date indicate that all elements except W, Sn, F, and Be are elevated in the area (See Appendix C) . Gossans with strong Mn oxide stain are a common weathering feature.

The mineralization discovered on the Jack claims is typical of a Zn-Pb-Ag skarn deposit type. Table I below compares the characteristics of the mineralization on the Jack Claims with the Mt. Hundere deposit.

**TABLE I**

**COMPARISON OF MT. HUNDERE ZN-PB SKARN AND JACK PROPERTY SKARNS**

| JACK PROPERTY | MT. HUNDERE |
|---|---|
| Zn-Pb-Ag Skarn in Cambrian Limestone | Zn-Pb-Ag Skarn in Cambrian Limestone |
| Approximately Equidistant from Tintina Trench 320 km apart Both within Cassiar Platform | |
| Mineralization is Fault controlled (?) within marble units | Mineralization is Fault controlled margins of limestone |
| | Domed Sequence |
| Actinolite-diopside-quartz-calcite-epidote assemblage | Actinolite-diopside-quartz-calcite-epidote assemblage |
| Tabular lenses | >3 tabular lenses |
| Other skarns in area Lokken, May, Little Salmon | numerous skarns in area |
| Cretaceous Granite, porphyry dykes | Intermediate dykes |
| Weighted Avg. 18% Zn 13 % Pb, 305 g/t Ag over 3.0 meters | 4.9 mT @ 12.7 % Zn, 4.0% Pb, 59 g/t Ag |

# GEOCHEMISTRY

## Introduction

During the 1991 work program, a total of 112 soil samples, 78 silt samples and 44 rock samples were collected and analyzed for silver, copper, lead, zinc and 25 other elements by ICP analyses at Acme Analytical Laboratories Ltd. Northern Analytical Laboratories Ltd. of Whitehorse analyzed some soil and silt samples for Au by fire assay with atomic absorption finish. All rock samples were analyzed for lead, zinc and silver by atomic absorption at Northern Analytical Laboratories Ltd. Analytical methods are outlined in Appendix A. The reader is referred to Doherty, 1990 for further information (rock sample descriptions, etc) on samples collected in 1990. Sample number sequences collected in 1990 and 1991 are outlined below in Table II.

### TABLE II

### SAMPLE NUMBER SEQUENCES, 1990 & 1991

**Rock Samples**

| Sampler (Name) | 1990 # Series | 1991 # Series | Total # |
|---|---|---|---|
| C.H | 74-2034 to 037 | | 5 |
| V.C. | 74-2026 | | 1 |
| R.H. | 206951 to 959 | 34444511 to 486 | 45 |
| G.P. | 344401 to 408 | | 8 |

**Soil Samples**

| Sampler (Name) | 1990 # Series | 1991 # Series | Total # |
|---|---|---|---|
| C.H. | 74-C-300 to 318,320 | | 20 |
| V.C. | 74-V-01 to 120 | | 120 |
| R.H. | | 91-3001 to 3018 | 18 |
| G.P. | | 91-4001 to 4066 | 66 |
| Grid | | (grid locations) | 28 |

**Stream Sediment Samples**

| Sampler (Name) | 1990 # Series | 1991 # Series | Total # |
|---|---|---|---|
| C.H. | 74-2027 to 33,38 to 40,42,43 | | 12 |
| V.C. | 74-201 to 227 | | 27 |
| R H. | | 91-501 to 533 | 33 |
| G.P. | | 91-601 to 645 | 45 |

Basic statistical parameters were computed for the silt and soil results in 1990 and for the combined silt samples (from 1990 and 1991) to determine background and anomalous values and to develop correlation matrices.

A correlation matrix from Doherty (1990) for copper, lead, zinc, silver, and manganese is tabulated below in Table III. This matrix is based on 167 samples collected in 1990 from both stream silt sample and soil sample analyses. A number of very high values were excluded from the sample population.

**TABLE III**

**CORRELATION MATRIX, 1990 SILT & SOIL SAMPLES**

| | Cu | Pb | Zn | Ag | Mn |
|---|---|---|---|---|---|
| Cu | ------ | 0 0129 | 0.0159 | 0.0145 | 0.1332 |
| Pb | | ------ | 0 9879 | 0.9969 | 0.0255 |
| Zn | | | ------ | 0.9941 | 0.0346 |
| Ag | | | | ------ | 0 0302 |
| Mn | | | | | ------ |

Lead, zinc, and silver values show a very high correlation for the sample population. Copper and manganese show a weak correlation independent of the correlation between lead, zinc and silver.

## Stream Sediment Samples

The 1990 program followed up on anomalous lead, zinc, silver and cadmium values in two stream sediment samples collected by the Geological Survey of Canada (Friske, et. al.) from two tributaries of Solitary Creek draining the southern portion of the property. These samples are above the 98 percentile confidence interval for the Glenlyon map area. Stream silt sample results are shown on Figure 4 and 9.

The two anomalous GSC sample results are as follows:

| Sample # | Pb ppm | Zn ppm | Ag ppm | Cd ppm |
|---|---|---|---|---|
| 3051 | 321 | 965 | 1.6 | 6.6 |
| 3052 | 319 | 931 | 1.5 | 7.0 |

Work in 1991 located sample #3052 approximately 900-1000 meters upstream from where it was plotted by the GSC. Sample #3051 has not been located nor the anomalous values explained. As the results for these two samples are almost identical and that follow up sampling could not reproduce the results on the west fork of the creek it is probable that both samples (No's 3051 & 3052) were collected from the same location. Alternatively #3051 may be misplotted, as was #3052, and the correct location for sample #3051 has yet to be sampled.

Most creeks draining the property were sampled at intervals varying from 150 meters to 300 meters. A total of 117 stream silt samples were collected and analyzed for gold, silver, lead, zinc, copper and 25 additional elements. Geochemical results are tabulated in Appendix C.

Statistical calculations were completed, after eliminating three high values, and results were determined for a sample population of 114 as shown in Table IV.

**TABLE IV**

**SILT SAMPLE STATISTICS**

| n = 114 | Ag(ppm) | Cu(ppm) | Pb(ppm) | Zn(ppm) |
|---|---|---|---|---|
| BACKGROUND | 0.6 | 33 | 33 | 216 |
| ANOMALOUS | 1.4 | 75 | 116 | 456 |

For better definition, background is the mean of the sample population, and the anomalous value is set at the mean plus two standard deviations. correlation matrix for copper, lead, zinc, silver, and manganese is tabulated below (Table V) based on the 114 samples collected in 1990 and 1991.

**TABLE V**

**CORRELATION MATRIX, 1990 & 1991 SILT SAMPLES**

| | Cu | Pb | Zn | Ag | Mn |
|---|---|---|---|---|---|
| Cu | ------ | 0.00715 | 0 03942 | 0.02374 | 0.15636 |
| Pb | | ------ | 0.61925 | 0.37891 | 0.02396 |
| Zn | | | ------ | 0.35036 | 0.06696 |
| Ag | | | | ------ | 0.00396 |
| Mn | | | | | ------ |

As in Table III lead, zinc, and silver show a very high correlation for the sample population. Copper and manganese show a weaker correlation independent of the correlation between lead, zinc, and silver.

Most anomalous values are found on the east fork of Solitary Creek, which drains the President and Glenn Occurrences. Samples collected up-stream of the GSC sample site 3052 and up to the area of mineralization are all anomalous.

Samples upstream, to the north of the President Occurrence, are above background in silver (Samples #201 & #2038 both returned 1.2 ppm silver). Four out of five samples from the steep tributary to the east are anomalous or above background in silver, copper, lead and zinc.

Samples from the creek draining Camp Lake and emptying into the lake are for the most part above background in silver, copper, lead and zinc. These results suggest that further zones of mineralization may occur north and west of Camp Lake.

A single sample (#517) on a west flowing tributary to Solitary Creek, just south of the Geoff Occurrence, returned values above background for silver, copper and zinc (plus 29 ppm lead). As this small (<0.5 m wide) creek drains a gentle depression, likely with permafrost, near a granite-marble contact these values are significant.

Numerous other samples on the property returned values for silver, copper, lead and zinc above background. Two samples are anomalous; # 207 returned 219 ppm copper, and #622 returned 1.7 ppm silver. Sample #512 just north of the property returned above background values for silver, copper, lead, zinc and 212 ppb gold, the highest gold value in 1991.

## Soil Sampling

In 1990 a total of 140 soil samples were collected by mattock on two contour sample lines at the 4000 foot and 4600 foot contour levels to locate anomalous areas in the central part of the property (Figure 4 and 10). Soil sampling in 1991 was concentrated for the most part in the immediate vicinity of the mineral occurrences or in the area of anomalous values returned from the 1991 program.

Statistical calculations were completed on the 1990 sample population (Doherty, 1990) after removing two high values from the sample population. The 1991 sample population was excluded as sample sites were close spaced and often near known mineralization. It is thought that the regional nature of the 1990 sample population better determines the background and anomalous threshold values. Results from the 1990 sample population of 138 are listed in Table VI below.

**TABLE VI**

**SOIL SAMPLE STATISTICS**

| n = 138 | Cu (ppm) | Pb(ppm) | Zn(ppm) | Ag(ppm) |
|---|---|---|---|---|
| BACKGROUND | 21 | 16 | 67 | 0 3 |
| ANOMALOUS | 48 | 50 | 129 | 0.8 |

Soil sample anomalies coincide well with stream silt anomalies and in some cases, known mineralization (President and Glenn Occurrences). Soil samples collected immediately below the mineralized showings returned anomalous values including sample #012 which returned 28591 ppm lead, 18288 ppm zinc, 83.5 ppm silver and 68 ppm copper. Samples collected 100 meters away also returned anomalous or above background values, although these values are not as spectacular.

Sample #019 (returned 3.8 ppm silver, 474 ppm copper, 1291 pm lead, and 783 ppm zinc) collected northwest of Camp Lake in 1990 could not be located in .1991. A line of soil samples (#4001 to 4015) in the area attempting to duplicate the anomaly returned primarily values below background. Another soil line (#4016 to 4024) collected further downslope returned anomalous values up to 0.7 ppm silver, 102 ppm copper, 41 ppm lead, and 572 ppm zinc. Soil sampling in this area is hampered by an extensive 'A' soil horizon, swamp, and a volcanic ash layer. The bedrock source causing the soil anomalies described above has yet to be located

Two sample sites on the extreme northwest side of the claim block returned anomalous values; sample #071 returned 63 ppm lead; and sample #066, 171 ppm zinc.

A line of soil samples (#4025 to 4041) collected on the west bank on the east fork of Solitary Creek, opposite the President Occurrence, returned numerous anomalous values. These anomalies have yet to be explained. A small outcrop of calc-silicate skarn was noted on the opposite creek bank at one location. The possibility of the soil being contaminated by stream or glacial action from the President Occurrence should be kept in mind.

Soil samples (#3007 to 3013) collected upstream of the President Occurrence on the east bank returned numerous values above background and one significant anomalous sample (#3009). This sample returned 0.3 ppm silver, 106 ppm copper, 42 ppm lead, and 195 ppm zinc from a recessive and a probable permafrost area.

# CONCLUSIONS AND RECOMMENDATIONS

Galena and sphalerite mineralization are found at the contact of marbles with felsic intrusives. A total of four separate mineral occurrences (President, Glenn, Hobo, and Geoff Occurrence) have been discovered to date on the Jack property, some with high lead, zinc and silver grades. These occurrences and their surrounding area have only been explored in a reconnaissance manner for the most part. Numerous anomalous soil and silt samples remain unexplained. Known mineralization is readily detected by stream and soil sampling methods. There is a strong correlation between zinc lead and silver. Skarn mineralization is the only style of mineralization found on the property. Mineralization found to date resembles that currently being mined by Curragh Resources at Mt. Hundere (Sa Dena Hes Mine) in a similar geological terrane.

The potential to find additional skarn bodies is considered to be excellent. Considering the rock types underlying most of the claim block, other types of mineral occurrences seem unlikely.

In the western portion of the claim block, no mineral occurrences were found to justify the anomalous silt values reported by the Geological Survey regional geochemical program. A few scattered anomalies were obtained in the 1990 follow up sampling program.

The north and east areas of the property are considered to be favorable areas where additional skarn mineralization may be found. Previously unmapped felsic intrusions were noted in this area. Geological mapping, aeromag interpretation and location of lithophile element anomalies (ie. uranium and fluorine) are methods of locating the presence of these intrusions.

The potential for finding a base metal deposit on the Jack claims is good considering the favorable geology, known mineralization, geochemistry, structure, and the positive results obtained to date. The Jack Property warrants continued mineral exploration. The following work is recommended for the 1992 field season:

1. Prepare orthophoto base maps and compile all geological, geochemical, geophysical and remote sensing data for the Jack claims at 1:5,000 scale.

2. Exploration consisting of geological mapping, prospecting, rock and soil geochemistry, and stream sediment geochemistry, at 1:5,000 scale should be carried out over the Jack 1-138 claims on those areas that have not been sampled.

3. Further stream silt sampling, mapping and prospecting should be completed outside the immediate claim boundaries, especially to the north and east, to identify any areas that should be staked or examined in more detail.

4. Detailed follow up sampling, mapping, and prospecting should be completed around all anomalies, especially the suspected Lokken Occurrences and the area between the Geoff and President Occurrences.

5. Further detailed mapping, sampling, and trenching (hand, mechanized and/or explosives) should be carried out over the President, Geoff, Hobo, and Glenn Occurrences.

6. Various geophysical methods (magnetics, VLF, and HLEM) should be tested over the mineralized occurrences.

7. Should any of the above targets yield positive results further trenching (mechanized and/or explosives) and possibly diamond drilling may be warranted.

Respectfully submitted,

GEOLOGICAL ASSOCIATION OF CANADA
R. W. HULSTEIN
FELLOW

R. Allan Doherty, B.Sc.,

R. W. Hulstein, B.Sc.,
Aurum Geological Consultants Inc.
December 10, 1991

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# STATEMENT OF QUALIFICATIONS, R.A.D.

I, R. Allan Doherty with business address:

Aurum Geological Consultants Inc.
P.O. Box 4367
Whitehorse, Yukon
Y1A 3T5

do hereby certify that:

1. I am a geologist with AURUM GEOLOGICAL CONSULTANTS INC.

2. I am a graduate of the University of New Brunswick, with a degree in geology (Hons. B.Sc., 1977) and that I attended graduate school at Memorial University of Newfoundland, 1978-81. I have been involved in geological mapping and mineral exploration continuously since then.

3. I am a member of the Yukon Association of Professional Geoscientists and the CIMM.

4. I am the co-author of this report on the Jack Property, Whitehorse mining district, Yukon, which is based on my personal examination of the ground during July, 1991 and on referenced sources.

5. I have no direct or indirect interests in the properties of Greater Lenora Resources Corp.

6. I consent to the use of this report in a company report or statement, provided that no portion is used out of context in such a manner as to convey a meaning differing materially from that set out in the whole.

December 10, 1991

R. Allan Doherty, B.Sc.

# STATEMENT OF QUALIFICATIONS, R.W.H.

I, ROGER W. HULSTEIN, with business address:

Aurum Geological Consultants Inc.
P.O. Box 4367
Whitehorse, Yukon
Y1A 3T5

do hereby certify that:

1. I am a geologist with AURUM GEOLOGICAL CONSULTANTS INC.

2. I am a graduate of Saint Mary's University, Halifax, with a degree in geology (B.Sc., 1981) and have been involved in geology and mineral exploration continuously since 1978.

3. I am a fellow of the Geological Association of Canada (F3572).

4. I have no direct or indirect interest in the properties of Greater Lenora Resources Corp.

5. I am the author of this report on the Jack Property, Whitehorse mining district, Yukon, which is based on my personal examination of the ground during July, 1991 and on referenced sources.

6. I consent to the use of this report in a company report or statement, provided no portion is used out of context in such a manner as to convey a meaning differing materially from that set out in the whole.

GEOLOGICAL ASSOCIATION OF CANADA — R. W. HULSTEIN — FELLOW

December 10, 1991 Roger Hulstein, B.Sc., FGAC

# STATEMENT OF COSTS

Assessment Work Valuation: Jack 1-138 Claims: 1991 Program

**A. Fieldwork; July 18-27,1990**

| | |
|---|---|
| G. Petite, B.Sc., July 17-27, 29, 30 | |
| 12 days @ $300/day: | 3,600.00 |
| R.W. Hulstein, B.Sc.,July 17(1/2), 18-27, 29(1/2) | |
| 11.0 days @$350: | 3,850.00 |
| G. Kasner, prospector | |
| 7 days @ $400/day: | 2,800.00 |
| R.A. Doherty, B.Sc., July 23, 1991 & Expediting | |
| Total 2 days @ $350/day: | 700.00 |

**B. Geochemical Analysis**

| | |
|---|---|
| 44 rock, 112 soil and | |
| 78 stream sediment samples: | $3,492.00 |

**C. Support Costs**

| | |
|---|---|
| Helicopter Charter (Trans North): | $4,841.97 |
| Gasoline: | 96.67 |
| Misc. consumables (flagging etc.): | 232.44 |
| Camp and Groceries: | 1,320.00 |
| Truck rental: | 360.00 |
| Radios rental: | 150.00 |
| Meals and Accommodation (Whse): | 320.00 |

**D. Data Compilation and Report Preparation**

| | |
|---|---|
| R.W. Hulstein, B.Sc., 12 days @ $350.00/day: | $4,200.00 |
| R. A. Doherty, B.Sc., 1.0 day @ $350/day: | 350.00 |
| Drafting: | 1,826.00 |
| Reprographics: | 410.00 |
| Shipping: | 120.00 |
| **Total 1990 Assessment Work Valuation:** | **$28,669.08** |

# APPENDIX A

*Rock Sample Descriptions*

JACK CLAIM GROUP
NTS 105L/1

JULY 18-26, 1991

GREATER LENORA RESOURCES CORP
Samplers: R.W.H & G.P.

| Sample No. | Location | Description | Attitude | Width | Ag ppm | Cu ppm | Pb % | Zn % |
|---|---|---|---|---|---|---|---|---|
| 344401 | Pres Occ On Lst Ridge | Massive Sulfide, mostly sphalerite, orange limonite matrix, 0-20% green diopside crystals with skarnified limestone contacts | 092/80N | 0 40m | 209 7 | 57 | 1 77 | 31 90 |
| 344402 | 6 5m west of 344401 | Silicified-skarnified limestone, 1% each galena & sphalerite Weathered oxide surface | 120/90 | 0 20m | 194 3 | 1636 | 0 21 | 0 44 |
| 344403 | Geoff Occ | Rusty gossanous sil limestone 2-3% pyrite blebs 5-10% sphalerite, fine grained | Grab fracture/So 090/90 | 0 20m | 4 2 | 156 | 0 05 | 1 05 |
| 344404 | Pres Occ | Rusty weathering sil limestone 2-5% sphalerite | 070/90 | 1.1m | 94 8 | 73 | 1 03 | 3 41 |
| 344405 | Pres. Occ. | Mineralized & altered Aplite dyke Weathers rusty, black to light grey. 1-2% sphalerite | N/A | 1 1m | 6 1 | 82 | 0 07 | 0 12 |
| 344406 | 9m E of 344401 | Gossanous greenish-grey mineralized skarn Medium grained, grey, sil limestone 30% sphalerite | N/A | 0 60m | 532 0 | 78 | 8 33 | 12.20 |
| 344407 | 35m E of 344403 | Green calc-silicate skarn, limonite and Mg staining, 10-15% pyrite blebs, diss and stringers. | N/A | Grab | 1 3 | 1212 | <0 01 | 0.03 |
| 344408 | 100m E of 344403 | Pod of Mag -diopside skarn with tr sph Weathers a gossanous dark blue black | N/A | 1.75 | 1 5 | 81 | <0 01 | 0 60 |
| 344451 | Pres. Occ. 9+20E/9+60N | Limonite weathering diopside, rare garnet, skarn. 10-15% diss sph, <1.0% galena | Float | Grab | 187 | 985 | 0.56 | 7.12 |
| 344452 | Pres. Occ 25m s of Tr 90-1 | Oxidized/rusty bed of mineralized limestone (+/- sil) diopside skarn. 5% diss med grained galena, 10% sph | 065/30N | 0 30m | 150 7 | 61 | 3 39 | 6.88 |
| 344453 | 375m west of samp 74-117 | Float of v. rusty, limonite weathering biotite schist. Tr-5% sph, gn??. | Float | N/A | 10 0 | 19 | 0.07 | 2.85 |
| 344454 | Pres. Occ N side | Pod of mag-diopside skarn in green calc-silicate band. 4660' elev. | 080/70N | Grab <0 40m | 14 9 | 213 | 0.04 | 0 27 |
| 344455 | Pres. Occ NE Side | Small pod, 0.3 X 0.3m, of green hbl-chl calc-silicate. <0.5% po, Trace diss sph. | 088/85N | Grab | 7 9 | 37 | 0.03 | 0 08 |
| 344456 | E of Pres Occ by small pond | Limonite weathering ser-musc pyritized Kg. Found in N-S shr/flt | Float | Float | 5 4 | 201 | 115ppm | 112ppm |
| 344457 | Pres. Occ | Float (3.5 X 1.0m) in talus. Brown-black Mn stained amphibole, diopside Skarn with 20% diss sph, tr gn. | Float | 0 65m | 63.6 | 22 | 0 65 | 7.19 |

| Sample No. | Location | Description | Attitude | Width | Ag ppm | Cu ppm | Pb % | Zn % |
|---|---|---|---|---|---|---|---|---|
| 344458 | Pres Occ 2m N of 344457 | As 344457 | Float 060/90? | 1 00 | 222 8 | 34 | 3 92 | 6.86 |
| 344459 | N. side of property | 3 cockscomb qtx vnlts (<1 0cm wide) with diss py, gn | 160/80W | 0 30m | 44 2 | 19 | 0 42 | 0 58 |
| 344460 | Lokken Occ. | Small 0 8 X 1 0m pod of massive diopside, hbl? skarn, with <10% diss galena and <10% sph, in Ist bed | 120/40S | 0 80 | 151 3 | 249 | 2 78 | 0.35 |
| 344461 | Pres Occ STN C | Calc-silicate, limestone and alaskite dyke, <2.0% diss sph. | 084/65N | 0 20 | 41 3 | 31 | 0 22 | 0.80 |
| 344462 | As 344461 | Diopside-amphibole-epidote skarn with 5-10% diss sph & 2-4% gn | 084/65N | 0 30 | 249.0 | 29 | 3 95 | 2 16 |
| 344463 | Pres. Occ 5m below STN E | Massive Sulfide, 30% sph, 5% gn, oxidized Epidote, calc-silicate diopside skarn | 090/80N | 0.25 | 102.4 | 22 | 1 01 | 2 64 |
| 344464 | Geoff Occ. 50m E of 344403 | Green garnet skarn with calcite & qtz, white hydrozincite stained, <2%py, trace sph | 090/90 | Grab | 11 2 | 35 | 0.14 | 0 54 |
| 344465 | Hobo Occ. N pond | Limonite weathering fractured pyritic Kg, 2% diss py. Weak ser. | Grab | 2 0 | 0 9 | 5 | 0 10 | 0 04 |
| 344466 | Hobo Occ. | Pod of weakly mineralized (along frac?) epidote, diopside, garnet skn approx 1-3% diss sph. | N/A | 0.3 | 7.9 | 66 | 0 10 | 2.88 |
| 344467 | Hobo Occ. | Mn coated gar-ep skarn with irregular mineralization, 3% sph, 2% gn Controlled by fracture 100/90?. | N/A | 0 75 | 257.0 | 28 | 2.25 | 2 63 |
| 344468 | Hobo Occ. | Irregular Mn stained ep-brown-green garnet skarn with marble, 5% sp, 3% gn Controlled by fracture 175/30W?. | N/A | 0 30 | 12.9 | 62 | 0.17 | 1.57 |
| 344469 | Hobo Occ | Mn stained diopside marble skarn, 25% sph, 10% gn. | 010/90? | 1 00 | 28 9 | 42 | 0 25 | 9.11 |
| 344470 | Hobo Occ. | Mn stained actinolite skarn with 40% remnant limestone | 084/40N | Grab | 0.4 | 6 | <0 01 | 1 27 |
| 344471 | Hobo Occ | Qtz stockwork cross cutting actinolite skarn with 10 X 10 cm pods of massive pyrite + ?? Trace Gn + sph. | N/A | 3.0m | 4.4 | 1164 | <0.01 | 0 43 |
| 344472 | Hobo Occ E of 344471 | Massive magnetite skarn with actinolite, limestone, qtz, 2%? sph. | N/A | 2.5 | 10 7 | 8070 | <0 01 | 0 37 |
| 344473 | Hobo Occ. | Skarn with diss gn + sph, possibly partially displaced boulder. | N/A | 1.0 | 134.1 | 797 | 1 82 | 3 37 |

JACK CLAIM GROUP
NTS 105L/1 JULY 18-26, 1991

GREATER LENORA RESOURCES CORP
Samplers: R.W H & G P

| Sample No. | Location | Description | Attitude | Width | Ag ppm | Cu ppm | Pb % | Zn % |
|---|---|---|---|---|---|---|---|---|
| 344474 | Glenn Occ. 0 3-1 7 | Green diopside-calcite-tremolite calc-silicate skarn. Trace sph & gn | N/A | 1.4 | 3 3 | 229 | <0 01 | 0 05 |
| 344475 | Glenn Occ 1.7-2 3 | Green diopside, tremolite & white calcite skarn, Mn stained, tr py. | N/A | 0.6 | 1 7 | 202 | <0 01 | 0 19 |
| 344476 | Glenn Occ 2.3-2 7 | Dark green calc-silicate-diopside(?) skarn with calcite, tr py, tr sph. | N/A | 0.4 | 0 3 | 152 | <0 01 | 0 43 |
| 344477 | Glenn Occ 2.7-3 5 | Dark green- black skarn, green diopside-tremolite, some white cal, 10% diss sph, 20 % magnetite. | N/A | 0 8 | 3 6 | 983 | <0 01 | 2 70 |
| 344478 | Glenn Occ. 3 5-4 5 | Dark brown-black weathering mag-diopside skarn, 60% mag, 30% diop, 1% cpy, 2% sph? | 125/40S | 1 0 | 6 5 | 4822 | <0 01 | 2.90 |
| 344479 | Glenn Occ 4 5-5 7 | Highly oxidized-rusty limonitic mag micaceous skarn, remnant-10%? sph 10% muscovite | 122/40S | 1 2 | 16.5 | 2429 | <0.01 | 0 23 |
| 344480 | Glenn Occ 5 7-6 7 | Green diopside skarn with two 10cm wide FeMn altered schist zones | 120/30S | 1 0 | 2.6 | 1529 | <0 01 | 1 53 |
| 344481 | Glenn Occ 6 7-7 5 | Green Diopside-calcite skarn with minor red garnet, tr py | joints 080/90 | 0 8 | 1 7 | 222 | <0 01 | 0 40 |
| 344482 | Glenn Occ 7.5-8 4 | Light grey foliated marble with diss. biotite. | 144/34S | 0.9 | 0 6 | 56 | <0 01 | 0.13 |
| 344483 | Glenn Occ 8 4-9 7 | Massive "boulder" slightly displaced of green diopside-trem? skarn, 30 % mag, tr py. | N/A | 1 3 | 3 7 | 1996 | <0.01 | 3 15 |
| 344484 | Glenn Occ 9 7-10 7 | Dark green siliceous diopside-mag cal skarn, 30% mag, 10% sph?,tr gn, minor py & cpy. | N/A | 1.0 | 3.8 | 1780 | <0.01 | 2.15 |
| 344485 | Glenn Occ 10 7-11 8 | Dark green siliceous diopside, trem skarn, 20 % sph+mag??, tr gn, 10% py | Frac 170/90 | 1 1 | 3 2 | 2392 | <0 01 | 5 41 |
| 344486 | Glenn Occ 11 8-12 0 | Narrow zone of diopside skarn and vuggy-porous limonite, Mn wad, & alt Kg | Joint 100/90 | 0.20 | 0.5 | 107 | <0.01 | 0.12 |

# APPENDIX B

*Analytical Methods*

# ANALYTICAL METHODS

All analytical work [redacted] performed by Acme Analytical Laboratories Ltd., 852 East Hastings Street, Vancouver, B.C. was by methods described below.

### Sample Preparation

All drill core samples are crushed to -10 mesh, riffle split to 300 grams, ring pulverize to -150 mesh.

### Analytical Methods

**For Au;** 20 or 30 gram samples are fused ignited at 600°C, digested with hot aqua regia, extracted by MIBK and, analysed by graphite furnace atomic absorbtion (AA).

**For;**

| Element | Detection |
|---|---|
| Ag | 0.1 ppm |
| Cd, Co, Cr, Cu, Mn, Mo, Ni, Sr, Zn | 1 ppm |
| As, Au, B, Ba, Bi, La, Pb, Sb, Th, V, W | 2 ppm |
| U | 5 ppm |
| Al, Ca, Fe, K, Mg, Na, P, Ti; | 0.01% |

For the elements above the following procedure is followed: 0.5 gram samples are digested with 3 mls 3-1-2 HCL-$HNO_3$-$H_20$ at 95°C for one hour then diluted to 10 ml with water. This leach is near total for base metals, partial for Mn, Fe, Sr, Ca, P, La, Cr, Mg, Ba, Tl, B, W and, limited for Na, K and, Al. Solubility limits Ag, Pb,Sb, Bi, and, W for high grade samples. Extracted metals are determined by inductively coupled argon plasma (ICP).

Northern Analytical Laboratories ltd.

# TRACE LEVEL GOLD FIRE ASSAY

15g of sample is mixed with a suitable flux in a 30g crucible, inquarted with 2 mg Ag and fused at 1900 F. The contents of the crucible is poured into a mold and allowed to cool. The slag is broken off and discarded. The lead button is then pounded into a cube.

The lead button is placed into a bone ash cupel which has been preheated to 1800 F. When the lead is completely molten, the temperature is dropped to 1750 F. The dampers are opened to allow air inside the furnace. When cupelation is complete, the cupel is taken out and allowed to cool.

The silver-gold prill is picked out of the cupel and dropped into a 16 x 150 mm test tube. 2 mls of 1:1 Nitric Acid is added and the test tube is heated to dissolve the silver. 3 mls of HCl is then added to dissolve the gold. The test tube is made up to 10 mls using a reference, mixed and run on the A.A.

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

Northern Analytical Laboratories ltd.

# ATOMIC ABSORPTION ANALYSIS

## Geochem Digestion [Trace Level Analysis]

0.500g of sample is weighed into a 16 x 150 mm test tube. 2 mls of 1:1 Nitric Acid is added and the test tube is placed in a hot water bath for 20 minutes. 3 ml of HCl is added and the sample is heated for 40 minutes. When digestion is completed, the sample is cooled in a cold water bath. The test tube is then bulked to 10 mls using a reference, stirred and allowed to settle The sample is now ready to run on the A.A.

For ICP the sample is digested in one step using 5 mls of 3 parts HCl, 1 Part Nitric Acid and 2 parts water.

## Assay Digestion [Ore Level Analysis]

1.000g of sample is weighed into a class A 100 ml volumetric flask. 5 mls of Nitric Acid is added and the flask is placed on a 400 F hot plate until the red fumes indicating reaction subside. 20 mls of water* and 10 mls of HCL are added and placed on the hot plate for 5 minutes. The flask is then bulked to the neck with water and brought to a boil. The flask is then cooled, bulked to the mark, shaken and allowed to settle prior to running on the A.A.

* Some elements require special treatment. For example, Sb requires 20 mls 10% Tartaric acid.

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

Northern Analytical Laboratories ltd.

## SAMPLE PREPARATION

### Soils

Incoming soils are sorted, counted and logged. The soils are placed in an oven devoted to geochem and dried at 150 F

When soils are dry, they are sieved through an 80 mesh screen. If 20g of -80 # soil is not obtained, the +80 # is then sieved through a 40 # sieve and placed in a separate bag. The reject is stored in its´ origional bag.

### Rocks

Incoming rocks are sorted, counted and logged. Rocks are first crushed through a jaw crusher set at 3/8" gap and then crushed through a 1/8" gap.

The crushed sample is split using a Jones Riffle until a 250g sample is obtained. The reject is placed in its´ original bag and stored.

The sample is then dried at 150 F and pulverized to -150 # using a ring pulverizer.

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# APPENDIX C

*Geochemical Results*

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

# GEOCHEMICAL ANALYSIS CERTIFICATE

**Northern Analytical Labs. Ltd.** File # 91-5566 Page 1
105 Copper Road, Whitehorse YT Y1A 2Z7

| SAMPLE# | Mo ppm | Cu ppm | Pb ppm | Zn ppm | Ag ppm | Ni ppm | Co ppm | Mn ppm | Fe % | As ppm | U ppm | Au ppm | Th ppm | Sr ppm | Cd ppm | Sb ppm | Bi ppm | V ppm | Ca % | P % | La ppm | Cr ppm | Mg % | Ba ppm | Ti % | B ppm | Al % | Na % | K % | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13271 344401 | 7 | 57 | 25337 | 99999 | 340.5 | 13 | 357 | 3736 | 3.80 | 24 | 5 | ND | 5 | 47 | 3181.0 | 92 | 902 | 9 | 1.58 | .081 | 8 | 21 | .30 | 7 | .07 | 22 | .58 | .01 | .01 | 1 |
| 13271 344402 | 12 | 1616 | 2596 | 4888 | 246.3 | 14 | 20 | 1744 | 6.60 | 6 | 5 | 3 | 2 | 84 | 44.1 | 139 | 23 | 26 | 3.25 | .081 | 10 | 67 | .25 | 39 | .19 | 2 | 1.34 | .01 | .03 | 257 |
| 13271 344451 | 2 | 985 | 7672 | 72071 | 215.1 | 1 | 93 | 2006 | 3.06 | 9 | 5 | 5 | 3 | 18 | 608.8 | 46 | 2322 | 3 | .56 | .029 | 2 | 16 | .07 | 25 | .03 | 16 | .12 | .01 | .02 | 1 |
| 13271 344452 | 25 | 61 | 22897 | 68559 | 220.3 | 41 | 59 | 5312 | 8.51 | 31 | 5 | 2 | 5 | 225 | 722.7 | 32 | 794 | 41 | 8.55 | .083 | 9 | 103 | 1.58 | 39 | .09 | 23 | 2.33 | .01 | .05 | 2 |
| 13271 344453 | 1 | 19 | 757 | 27115 | 11.9 | 40 | 52 | 2526 | 6.58 | 2 | 5 | ND | 11 | 127 | 344.8 | 4 | 18 | 25 | 3.80 | .039 | 27 | 50 | 1.11 | 27 | .07 | 2 | 2.53 | .01 | .09 | 3 |
| 13271 344454 | 1 | 213 | 288 | 2919 | 24.5 | 5 | 4 | 916 | 57.04 | 2 | 5 | 2 | 2 | 9 | 19.9 | 20 | 378 | 21 | .30 | .025 | 5 | 11 | .05 | 34 | .03 | 8 | .29 | .02 | .04 | 1 |
| 13271 344455 | 1 | 37 | 548 | 946 | 14.0 | 61 | 17 | 2437 | 7.20 | 2 | 5 | ND | 3 | 152 | 4.6 | 6 | 36 | 38 | 15.79 | .092 | 10 | 81 | 1.42 | 9 | .09 | 8 | 2.79 | .01 | .04 | 31 |
| 13271 344456 | 1 | 201 | 112 | 121 | 11.2 | 26 | 17 | 515 | 5.53 | 2 | 5 | ND | 5 | 360 | .2 | 9 | 9 | 10 | 5.79 | .040 | 23 | 29 | .62 | 37 | .03 | 3 | 9.67 | .27 | .06 | 1 |
| 13271 344457 | 4 | 22 | 8390 | 77174 | 100.0 | 3 | 83 | 7255 | 6.32 | 14 | 5 | 3 | 3 | 86 | 710.9 | 13 | 350 | 7 | 4.10 | .041 | 4 | 11 | .31 | 33 | .04 | 19 | .58 | .01 | .05 | 4 |
| 13271 344458 | 4 | 34 | 22905 | 67194 | 307.3 | 1 | 59 | 11369 | 6.58 | 20 | 5 | ND | 3 | 120 | 614.4 | 14 | 1024 | 6 | 4.68 | .041 | 3 | 19 | .23 | 31 | .03 | 19 | .51 | .01 | .10 | 3 |
| STANDARD C | 20 | 62 | 40 | 131 | 7.5 | 73 | 32 | 1094 | 3.95 | 42 | 18 | 8 | 37 | 52 | 17.0 | 15 | 21 | 61 | .49 | .088 | 39 | 56 | .89 | 180 | .09 | 36 | 1.86 | .06 | .15 | 13 |

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: PULP

**DATE RECEIVED:** NOV 22 1991 **DATE REPORT MAILED:** Nov 27/91. **SIGNED BY** C. Leong ........D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

| SAMPLE# | Mo ppm | Cu ppm | Pb ppm | Zn ppm | Ag ppm | Ni ppm | Co ppm | Mn ppm | Fe % | As ppm | U ppm | Au ppm | Th ppm | Sr ppm | Cd ppm | Sb ppm | Bi ppm | V ppm | Ca % | P % | La ppm | Cr ppm | Mg % | Ba ppm | Ti % | B ppm | Al % | Na % | K % | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13286 344403 | 1 | 156 | 578 | 10285 | 6.4 | 3 | 8 | 4215 | 9.10 | 10 | 5 | ND | 1 | 67 | 84.4 | 2 | 60 | 3 | 10.02 | .019 | 2 | 21 | .67 | 49 | .02 | 7 | .43 | .01 | .05 | 2 |
| 13286 344404 | 1 | 73 | 12234 | 34791 | 118.8 | 19 | 43 | 2113 | 2.09 | 16 | 5 | 2 | 7 | 163 | 304.0 | 2 | 445 | 17 | 6.66 | .074 | 20 | 50 | .33 | 41 | .16 | 7 | .83 | .01 | .04 | 1 |
| 13286 344405 | 7 | 82 | 933 | 1383 | 9.1 | 20 | 13 | 1852 | 2.40 | 4 | 5 | ND | 5 | 184 | 11.6 | 2 | 27 | 8 | 3.52 | .030 | 12 | 89 | .34 | 14 | .07 | 4 | 1.61 | .01 | .04 | 1 |
| 13286 344406 | 10 | 78 | 21549 | 99999 | 262.9 | 35 | 119 | 11663 | 9.34 | 44 | 5 | 6 | 8 | 201 | 1047.5 | 17 | 3133 | 24 | 7.15 | .076 | 10 | 59 | .79 | 12 | .05 | 31 | 1.96 | .01 | .05 | 2 |
| 13286 344407 | 1 | 1212 | 86 | 324 | 1.3 | 24 | 9 | 1034 | 14.15 | 2 | 5 | ND | 3 | 109 | .3 | 2 | 23 | 17 | 1.21 | .038 | 8 | 39 | .76 | 10 | .09 | 5 | 4.44 | .22 | .03 | 191 |
| 13286 344408 | 8 | 81 | 74 | 5349 | 1.9 | 5 | 4 | 5734 | 22.99 | 2 | 5 | ND | 2 | 14 | 36.7 | 2 | 191 | 9 | 1.71 | .017 | 2 | 76 | .17 | 58 | .02 | 4 | .55 | .01 | .03 | 85 |
| 13286 344459 | 33 | 19 | 4962 | 6185 | 50.1 | 5 | 7 | 694 | 3.71 | 5 | 5 | ND | 29 | 38 | 37.5 | 2 | 107 | 23 | .78 | .099 | 28 | 58 | .65 | 57 | .02 | 2 | 1.10 | .03 | .23 | 1 |
| 13286 344460 | 1 | 249 | 18336 | 3391 | 205.4 | 12 | 37 | 43329 | 22.10 | 26 | 7 | ND | 1 | 24 | 10.6 | 4 | 470 | 38 | .88 | .107 | 2 | 11 | 2.05 | 11 | .01 | 7 | 9.02 | .01 | .08 | 1 |
| 13286 344461 | 1 | 31 | 2610 | 8912 | 43.0 | 7 | 16 | 2276 | 2.02 | 4 | 5 | ND | 4 | 173 | 69.8 | 3 | 156 | 11 | 7.10 | .076 | 19 | 24 | .19 | 43 | .12 | 2 | .86 | .01 | .03 | 22 |
| 13286 344462 | 1 | 29 | 21942 | 23903 | 195.5 | 7 | 32 | 4283 | 2.80 | 15 | 5 | 2 | 1 | 38 | 222.1 | 2 | 975 | 6 | .88 | .047 | 3 | 19 | .11 | 9 | .06 | 4 | .33 | .01 | .02 | 3 |
| 13286 344463 | 1 | 22 | 12411 | 26435 | 122.8 | 30 | 42 | 9879 | 6.61 | 14 | 5 | ND | 2 | 136 | 219.3 | 2 | 455 | 27 | 5.17 | .081 | 13 | 54 | .75 | 89 | .16 | 9 | 1.61 | .01 | .10 | 2 |
| 13286 344464 | 1 | 35 | 1572 | 6805 | 20.0 | 3 | 5 | 3323 | 20.50 | 9 | 5 | ND | 1 | 46 | 57.6 | 2 | 154 | 4 | 18.98 | .014 | 2 | 26 | .16 | 15 | .01 | 7 | .60 | .01 | .03 | 8 |
| 13286 344465 | 7 | 5 | 366 | 733 | 3.5 | 3 | 3 | 417 | 1.74 | 2 | 5 | ND | 25 | 21 | 6.3 | 2 | 10 | 11 | .41 | .044 | 25 | 75 | .34 | 167 | .09 | 3 | .71 | .04 | .21 | 1 |
| 13286 344466 | 1 | 66 | 1322 | 30421 | 15.5 | 8 | 46 | 16711 | 6.81 | 7 | 5 | ND | 1 | 180 | 184.3 | 2 | 49 | 6 | 12.59 | .018 | 2 | 13 | 1.70 | 63 | .01 | 7 | 2.09 | .01 | .03 | 1 |
| 13286 344467 | 1 | 28 | 24502 | 29405 | 200.4 | 9 | 26 | 3379 | 2.47 | 29 | 6 | 3 | 10 | 478 | 171.9 | 2 | 1421 | 14 | 9.59 | .044 | 18 | 26 | .82 | 61 | .03 | 5 | 1.60 | .02 | .22 | 1 |
| 13286 344468 | 1 | 62 | 2171 | 16040 | 20.7 | 5 | 30 | 13870 | 3.68 | 6 | 5 | ND | 1 | 203 | 90.0 | 2 | 68 | 4 | 11.55 | .016 | 2 | 11 | 1.36 | 22 | .01 | 7 | 1.34 | .01 | .02 | 3 |
| 13286 344469 | 4 | 42 | 3627 | 99999 | 46.7 | 6 | 116 | 14281 | 5.51 | 19 | 5 | 3 | 6 | 144 | 759.2 | 6 | 165 | 8 | 6.29 | .031 | 7 | 21 | 1.26 | 18 | .01 | 29 | 1.68 | .01 | .02 | 1 |
| 13286 344470 | 1 | 6 | 56 | 13604 | 1.6 | 3 | 7 | 39350 | 4.12 | 2 | 6 | ND | 4 | 31 | 68.3 | 3 | 34 | 6 | 18.51 | .019 | 13 | 13 | .12 | 1 | .05 | 22 | 1.11 | .01 | .01 | 6 |
| 13286 344471 | 1 | 1164 | 256 | 4002 | 5.7 | 4 | 15 | 5510 | 14.92 | 6 | 5 | ND | 1 | 43 | 24.4 | 2 | 18 | 3 | 5.16 | .013 | 2 | 31 | .58 | 14 | .02 | 4 | .88 | .01 | .03 | 43 |
| 13286 344472 | 1 | 8070 | 169 | 3426 | 15.8 | 3 | 22 | 2412 | 29.04 | 2 | 5 | ND | 1 | 18 | 19.1 | 2 | 37 | 2 | 1.62 | .021 | 2 | 13 | .66 | 12 | .02 | 8 | .84 | .01 | .04 | 11 |
| 13286 344473 | 1 | 797 | 19164 | 28679 | 176.8 | 9 | 42 | 9428 | 13.54 | 43 | 5 | ND | 1 | 159 | 161.8 | 3 | 463 | 13 | 10.93 | .014 | 2 | 16 | 2.13 | 14 | .01 | 8 | 3.25 | .01 | .04 | 2 |
| 13286 344474 | 4 | 229 | 104 | 610 | 1.4 | 6 | 7 | 1556 | 5.66 | 6 | 5 | ND | 17 | 108 | 7.4 | 2 | 7 | 7 | 2.81 | .105 | 30 | 40 | .27 | 51 | .03 | 3 | 1.94 | .01 | .26 | 1 |
| 13286 344475 | 1 | 202 | 152 | 1851 | 2.0 | 10 | 12 | 3595 | 9.86 | 4 | 5 | ND | 9 | 134 | 25.6 | 2 | 33 | 15 | 7.14 | .150 | 21 | 26 | .46 | 45 | .01 | 5 | 3.62 | .01 | .22 | 4 |
| 13286 344476 | 2 | 152 | 24 | 4059 | .6 | 7 | 10 | 3827 | 6.12 | 2 | 5 | ND | 1 | 37 | 64.8 | 2 | 192 | 13 | 6.64 | .051 | 3 | 42 | .48 | 85 | .07 | 4 | 2.02 | .01 | .06 | 71 |
| 13286 344477 | 1 | 983 | 17 | 23506 | 4.8 | 6 | 15 | 1405 | 28.35 | 4 | 5 | 4 | 1 | 26 | 341.8 | 2 | 272 | 19 | .78 | .047 | 4 | 17 | .22 | 40 | .07 | 3 | .66 | .01 | .12 | 3 |
| 13286 344478 | 1 | 4822 | 21 | 23667 | 10.0 | 5 | 24 | 549 | 43.09 | 2 | 5 | ND | 1 | 25 | 294.5 | 2 | 88 | 25 | .57 | .046 | 5 | 20 | .26 | 19 | .07 | 7 | .67 | .01 | .11 | 1 |
| 13286 344479 | 2 | 2429 | 32 | 1693 | 25.0 | 3 | 7 | 343 | 58.81 | 2 | 5 | ND | 1 | 12 | 15.8 | 2 | 141 | 34 | .12 | .043 | 4 | 29 | .24 | 103 | .08 | 2 | .69 | .01 | .29 | 5 |
| RE 13286 344476 | 2 | 180 | 18 | 3871 | 1.0 | 5 | 9 | 3525 | 6.38 | 2 | 5 | ND | 1 | 35 | 63.4 | 2 | 180 | 12 | 6.18 | .045 | 2 | 37 | .44 | 85 | .07 | 4 | 1.96 | .01 | .07 | 70 |
| 13286 344480 | 1 | 1529 | 22 | 12090 | 4.2 | 8 | 6 | 493 | 34.44 | 2 | 5 | ND | 3 | 30 | 129.7 | 2 | 108 | 61 | .60 | .094 | 16 | 63 | .55 | 104 | .21 | 2 | 1.84 | .01 | .41 | 1 |
| 13286 344481 | 1 | 222 | 54 | 3541 | 2.0 | 15 | 10 | 2873 | 7.67 | 6 | 5 | 3 | 3 | 49 | 42.1 | 2 | 47 | 22 | 4.80 | .074 | 13 | 30 | .45 | 148 | .15 | 2 | 1.42 | .01 | .12 | 2 |
| 13286 344482 | 1 | 56 | 15 | 1371 | .6 | 12 | 8 | 527 | 2.33 | 8 | 5 | ND | 1 | 618 | 14.3 | 2 | 4 | 25 | 32.99 | .059 | 9 | 25 | .77 | 19 | .07 | 2 | .76 | .02 | .03 | 1 |
| 13286 344483 | 1 | 1996 | 13 | 26603 | 4.5 | 9 | 21 | 1959 | 22.16 | 4 | 5 | ND | 2 | 54 | 303.7 | 2 | 295 | 18 | 2.22 | .056 | 7 | 12 | .27 | 10 | .08 | 2 | .66 | .02 | .11 | 1 |
| 13286 344484 | 1 | 1780 | 21 | 18521 | 5.0 | 6 | 15 | 1548 | 21.84 | 2 | 5 | ND | 1 | 53 | 222.5 | 2 | 173 | 27 | 1.69 | .051 | 4 | 15 | .20 | 8 | .10 | 2 | .65 | .02 | .12 | 1 |
| 13286 344485 | 3 | 2392 | 16 | 49396 | 5.2 | 11 | 24 | 2363 | 24.23 | 9 | 5 | ND | 4 | 48 | 579.7 | 16 | 60 | 15 | 2.77 | .058 | 5 | 10 | .26 | 9 | .06 | 22 | .76 | .01 | .09 | 1 |
| 13286 344486 | 2 | 107 | 17 | 1198 | .3 | 5 | 4 | 2019 | 8.64 | 12 | 5 | 2 | 18 | 82 | 16.7 | 2 | 5 | 8 | 1.70 | .057 | 30 | 14 | .24 | 84 | .01 | 2 | 2.83 | .01 | .42 | 1 |
| STANDARD C | 21 | 65 | 40 | 129 | 7.4 | 68 | 32 | 1030 | 4.04 | 41 | 16 | 6 | 37 | 53 | 18.6 | 14 | 21 | 54 | .50 | .083 | 36 | 59 | .87 | 173 | .08 | 34 | 1.87 | .08 | .17 | 11 |

Sample type: PULP. Samples beginning 'RE' are duplicate samples.

Northern Analytical Laboratories ltd.

July 31, 1991

**Work Order #** 13271

Aurum Geological Consultants Inc
P O Box 5179
Whitehorse, Yukon
Y1A 4S3

**File #**13271a

**Project #**74

**Assay Certificate for Samples Provided**

| Sample # | Ag ppm | Pb % | Zn % |
|---|---|---|---|
| 344401 | 209 7 | 1.77 | 31 90 |
| 344402 | 194.3 | 0 21 | 0 44 |
| 344451 | 187.3 | 0.56 | 7.12 |
| 344452 | 150 7 | 3.39 | 6.88 |
| 344453 | 10.0 | 0.07 | 2.85 |
| 344454 | 14.9 | 0.04 | 0 27 |
| 344455 | 7.9 | 0.03 | 0.08 |
| 344456 | 5.4 | ---- | ---- |
| 344457 | 63.6 | 0.65 | 7 19 |
| 344458 | 222 8 | 3.92 | 6.86 |
| AR-3 | 9.3 | ---- | 0.02 |

| Sample # | Pb ppm | Zn ppm |
|---|---|---|
| 344456 | 115 | 112 |
| AR-3 | 94 | 195 |

Certified by ____________________

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax. (403) 668-4890

NAL Northern Analytical Laboratories ltd.

August 1,1991 **Work Order #** 13286

Aurum Geological Consultants Inc
P O Box 5179
Whitehorse, Yukon
Y1A 4S3

**File #**13286b

**Project #**74

**Assay Certificate for Samples Provided**

| Sample # | Ag ppm | Pb% | Zn% |
|---|---|---|---|
| 344403 | 4.2 | 0.05 | 1.05 |
| 344404 | 94.8 | 1.03 | 3.41 |
| 344405 | 6.1 | 0.07 | 0.12 |
| 344406 | 532.0 (FA) | 8.33 | 12.20 |
| 344407 | 1.3 | <0.01 | 0.03 |
| 344408 | 1.5 | <0.01 | 0.60 |

Certified by ____________________

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

Northern Analytical Laboratories ltd.

August 1,1991

**Work Order #** 13286

Aurum Geological Consultants Inc
P.O Box 5179
Whitehorse, Yukon
Y1A 4S3

**File** #13286a

**Project** #74

## Assay Certificate for Samples Provided

Rock

| Sample # | Ag ppm | Pb% | Zn% |
|---|---|---|---|
| 344459 | 44.2 | 0 42 | 0.58 |
| 344460 | 151 3 | 2.78 | 0.35 |
| 344461 | 41.3 | 0.22 | 0.80 |
| 344462 | 249.0 | 3.95 | 2.16 |
| 344463 | 102.4 | 1.01 | 2.64 |
| 344464 | 11.2 | 0.14 | 0.54 |
| 344465 | 0 9 | 0.01 | 0.04 |
| 344466 | 7.9 | 0.10 | 2.88 |
| 344467 | 257 0 | 2.25 | 2.63 |
| 344468 | 12.9 | 0.17 | 1 57 |
| 344469 | 28.9 | 0.25 | 9.11 |
| 344470 | 0.4 | <0.01 | 1 27 |
| 344471 | 4.4 | <0.01 | 0.43 |
| 344472 | 10.7 | <0.01 | 0.37 |
| 344473 | 134.1 | 1.82 | 3.37 |
| 344474 | 3.3 | <0.01 | 0.05 |
| 344475 | 1.7 | <0 01 | 0.19 |
| 344476 | 0.3 | <0.01 | 0.43 |
| 344477 | 3.6 | <0.01 | 2.70 |
| 344478 | 6.5 | <0.01 | 2.90 |
| 344479 | 16.5 | <0.01 | 0.23 |
| 344480 | 2.6 | <0.01 | 1.53 |
| 344481 | 1.7 | <0 01 | 0 40 |
| 344482 | 0.6 | <0.01 | 0.13 |
| 344483 | 3.7 | <0.01 | 3.15 |
| 344484 | 3.8 | <0.01 | 2.15 |
| 344485 | 3.2 | <0 01 | 5.41 |
| 344486 | 0.5 | <0.01 | 0.12 |

Certified by CHyokki

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

[redacted]

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

# GEOCHEMICAL ANALYSIS CERTIFICATE

**Northern Analytical Labs. Ltd.** File # 91-3395 Page 1

105 Copper Road, Whitehorse YT Y1A 2Z7

| SAMPLE# | Mo ppm | Cu ppm | Pb ppm | Zn ppm | Ag ppm | Ni ppm | Co ppm | Mn ppm | Fe % | As ppm | U ppm | Au ppm | Th ppm | Sr ppm | Cd ppm | Sb ppm | Bi ppm | V ppm | Ca % | P % | La ppm | Cr ppm | Mg % | Ba ppm | Ti % | B ppm | Al % | Na % | K % | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13271 S91-501 | 1 | 42 | 26 | 106 | .5 | 13 | 3 | 85 | 1.25 | 2 | 50 | ND | 1 | 72 | .7 | 2 | 2 | 22 | 1.09 | .104 | 11 | 10 | .19 | 66 | .04 | 13 | .98 | .03 | .04 | 1 |
| 13271 S91-502 | 1 | 55 | 68 | 318 | .8 | 27 | 7 | 465 | 2.25 | 25 | 5 | ND | 1 | 90 | 1.5 | 2 | 2 | 32 | 1.48 | .112 | 28 | 17 | .36 | 108 | .05 | 25 | 1.47 | .03 | .10 | 1 |
| 13271 S91-503 | 1 | 51 | 41 | 253 | .7 | 23 | 8 | 596 | 2.85 | 69 | 5 | ND | 1 | 82 | 1.3 | 2 | 2 | 39 | 1.45 | .110 | 22 | 17 | .43 | 104 | .06 | 13 | 1.52 | .03 | .08 | 1 |
| 13271 S91-504 | 1 | 40 | 20 | 245 | .4 | 29 | 6 | 343 | 2.18 | 23 | 5 | ND | 1 | 65 | 1.1 | 2 | 2 | 33 | 1.14 | .090 | 23 | 12 | .28 | 126 | .05 | 5 | 1.25 | .03 | .05 | 1 |
| 13271 S91-505 | 1 | 49 | 8 | 67 | .3 | 24 | 5 | 191 | 1.89 | 38 | 5 | ND | 1 | 101 | .6 | 2 | 2 | 41 | 1.46 | .064 | 13 | 10 | .27 | 94 | .07 | 8 | .96 | .05 | .04 | 1 |
| 13271 S91-506 | 1 | 22 | 19 | 180 | .5 | 9 | 5 | 649 | 2.77 | 11 | 38 | ND | 1 | 54 | 1.0 | 2 | 2 | 29 | .69 | .096 | 20 | 8 | .13 | 73 | .04 | 8 | 1.25 | .04 | .02 | 1 |
| 13271 S91-507 | 1 | 38 | 93 | 271 | 1.9 | 37 | 12 | 776 | 4.29 | 25 | 25 | ND | 6 | 34 | .9 | 2 | 2 | 32 | .41 | .055 | 37 | 24 | .72 | 109 | .04 | 5 | 2.02 | .01 | .16 | 1 |
| 13271 S91-508 | 2 | 52 | 57 | 314 | 1.0 | 30 | 16 | 4049 | 5.93 | 16 | 30 | ND | 1 | 59 | 2.3 | 2 | 2 | 36 | .83 | .159 | 28 | 21 | .27 | 205 | .03 | 8 | 1.90 | .02 | .09 | 1 |
| 13271 S91-509 | 1 | 41 | 26 | 149 | .5 | 36 | 10 | 496 | 3.17 | 2 | 21 | ND | 5 | 27 | .7 | 2 | 2 | 42 | .43 | .095 | 34 | 25 | .48 | 126 | .10 | 5 | 1.95 | .02 | .12 | 1 |
| 13271 S91-510 | 1 | 26 | 24 | 119 | .3 | 21 | 8 | 492 | 2.74 | 6 | 9 | ND | 2 | 23 | .2 | 2 | 2 | 40 | .30 | .087 | 24 | 21 | .48 | 117 | .07 | 6 | 1.89 | .02 | .11 | 1 |
| 13271 S91-511 | 1 | 38 | 158 | 294 | .9 | 19 | 9 | 2360 | 2.99 | 25 | 25 | ND | 1 | 51 | 1.8 | 2 | 2 | 34 | .92 | .103 | 18 | 14 | .24 | 112 | .04 | 10 | 1.37 | .02 | .11 | 1 |
| 13271 S91-601 | 1 | 28 | 30 | 137 | .3 | 26 | 9 | 1211 | 3.20 | 10 | 11 | ND | 1 | 29 | .5 | 2 | 2 | 42 | .38 | .064 | 21 | 27 | .51 | 108 | .05 | 5 | 2.00 | .02 | .08 | 1 |
| 13271 S91-602 | 1 | 27 | 17 | 161 | .6 | 21 | 8 | 898 | 2.48 | 2 | 32 | ND | 1 | 55 | .7 | 2 | 2 | 41 | .67 | .100 | 27 | 17 | .27 | 122 | .06 | 4 | 1.71 | .03 | .06 | 1 |
| 13271 S91-603 | 1 | 50 | 48 | 280 | .5 | 21 | 7 | 670 | 2.23 | 8 | 55 | ND | 1 | 77 | 1.3 | 2 | 2 | 28 | .97 | .099 | 25 | 16 | .30 | 128 | .04 | 6 | 1.96 | .03 | .06 | 1 |
| 13271 S91-604 | 1 | 38 | 67 | 396 | .6 | 24 | 8 | 883 | 2.62 | 6 | 50 | ND | 1 | 67 | 1.7 | 2 | 2 | 34 | .85 | .096 | 23 | 18 | .34 | 137 | .05 | 7 | 2.01 | .03 | .06 | 1 |
| 13271 S91-605 | 1 | 36 | 59 | 448 | .8 | 22 | 7 | 669 | 2.47 | 8 | 28 | ND | 1 | 71 | 2.2 | 2 | 2 | 32 | .95 | .098 | 23 | 15 | .30 | 127 | .05 | 13 | 1.87 | .03 | .07 | 1 |
| 13271 S91-606 | 2 | 41 | 69 | 459 | .8 | 24 | 8 | 791 | 2.49 | 7 | 36 | ND | 1 | 80 | 2.5 | 2 | 2 | 29 | 1.10 | .104 | 27 | 18 | .33 | 143 | .05 | 9 | 1.95 | .03 | .07 | 1 |
| 13271 S91-607 | 2 | 25 | 78 | 354 | .6 | 29 | 9 | 885 | 2.89 | 8 | 65 | ND | 1 | 53 | 1.5 | 2 | 2 | 39 | .69 | .087 | 25 | 16 | .27 | 121 | .05 | 13 | 1.57 | .02 | .06 | 1 |
| 13271 S91-608 | 2 | 27 | 69 | 420 | .7 | 35 | 9 | 924 | 2.88 | 7 | 60 | ND | 1 | 59 | 2.2 | 2 | 2 | 38 | .74 | .088 | 30 | 15 | .27 | 140 | .05 | 10 | 1.74 | .02 | .06 | 2 |
| 13271 S91-609 | 2 | 27 | 74 | 382 | .7 | 32 | 10 | 925 | 2.59 | 6 | 85 | ND | 1 | 66 | 2.5 | 2 | 2 | 30 | .87 | .093 | 29 | 13 | .25 | 130 | .04 | 11 | 1.68 | .02 | .07 | 1 |
| 13271 S91-610 | 2 | 27 | 54 | 413 | 1.2 | 40 | 9 | 551 | 2.67 | 9 | 95 | ND | 1 | 69 | 1.4 | 2 | 2 | 29 | .85 | .099 | 28 | 19 | .24 | 148 | .04 | 12 | 2.26 | .03 | .09 | 1 |
| 13271 S91-611 | 2 | 23 | 57 | 255 | .5 | 25 | 8 | 429 | 2.13 | 4 | 95 | ND | 1 | 48 | 1.3 | 2 | 2 | 32 | .59 | .094 | 25 | 15 | .25 | 112 | .04 | 7 | 1.73 | .02 | .06 | 1 |
| 13271 S91-612 | 4 | 25 | 18 | 276 | .8 | 10 | 10 | 1787 | 1.87 | 4 | 70 | ND | 1 | 73 | 2.6 | 2 | 2 | 24 | 1.26 | .153 | 16 | 10 | .12 | 107 | .03 | 13 | 1.65 | .03 | .03 | 1 |
| 13271 S91-613 | 1 | 44 | 39 | 282 | .6 | 23 | 6 | 494 | 1.76 | 9 | 11 | ND | 1 | 95 | 1.6 | 2 | 2 | 21 | 1.78 | .107 | 42 | 16 | .25 | 119 | .03 | 12 | 1.60 | .03 | .07 | 1 |
| 13271 S91-3007 | 2 | 36 | 28 | 109 | .4 | 23 | 8 | 401 | 3.21 | 10 | 20 | ND | 1 | 35 | .4 | 2 | 2 | 46 | .46 | .066 | 22 | 25 | .48 | 90 | .06 | 7 | 1.97 | .02 | .08 | 1 |
| 13271 S91-3008 | 2 | 28 | 44 | 84 | .2 | 19 | 16 | 1168 | 3.28 | 4 | 5 | ND | 1 | 17 | .2 | 2 | 2 | 37 | .14 | .078 | 29 | 14 | .28 | 70 | .04 | 6 | 1.35 | .02 | .08 | 1 |
| 13271 S91-3009 | 1 | 106 | 42 | 195 | .3 | 67 | 32 | 1153 | 7.94 | 2 | 7 | ND | 3 | 14 | 1.0 | 2 | 3 | 29 | .20 | .146 | 45 | 24 | .72 | 78 | .02 | 8 | 2.05 | .01 | .13 | 1 |
| 13271 S91-3010 | 1 | 15 | 8 | 42 | .2 | 9 | 4 | 161 | 1.61 | 2 | 5 | ND | 1 | 14 | .2 | 2 | 2 | 25 | .15 | .051 | 12 | 6 | .13 | 42 | .04 | 5 | .71 | .04 | .07 | 1 |
| 13271 S91-3011 | 2 | 25 | 29 | 120 | .4 | 34 | 13 | 386 | 5.34 | 8 | 5 | ND | 2 | 10 | .3 | 2 | 2 | 34 | .12 | .080 | 33 | 21 | .31 | 45 | .02 | 7 | 1.35 | .01 | .08 | 1 |
| 13271 S91-3012 | 1 | 35 | 57 | 142 | .4 | 31 | 14 | 1002 | 4.21 | 6 | 5 | ND | 1 | 25 | .8 | 2 | 4 | 32 | .21 | .103 | 29 | 20 | .25 | 92 | .03 | 7 | 1.43 | .02 | .09 | 1 |
| 13271 S91-3013 | 2 | 31 | 24 | 101 | .2 | 33 | 10 | 266 | 3.99 | 7 | 5 | ND | 2 | 20 | .3 | 2 | 2 | 66 | .17 | .053 | 29 | 37 | .26 | 84 | .06 | 5 | 1.35 | .01 | .10 | 1 |
| 13271 S91-3014 | 1 | 51 | 932 | 1735 | 6.4 | 33 | 15 | 820 | 3.24 | 8 | 18 | ND | 1 | 48 | 9.4 | 2 | 16 | 39 | .78 | .082 | 33 | 27 | .39 | 116 | .07 | 6 | 1.99 | .03 | .11 | 1 |
| 13271 S91-3015 | 1 | 32 | 46 | 169 | .6 | 36 | 12 | 697 | 3.30 | 6 | 5 | ND | 1 | 41 | .7 | 2 | 2 | 38 | .57 | .087 | 25 | 31 | .38 | 158 | .05 | 8 | 1.68 | .03 | .10 | 1 |
| STANDARD C | 19 | 57 | 39 | 131 | 7.2 | 72 | 33 | 1045 | 4.00 | 41 | 18 | 8 | 39 | 52 | 17.4 | 16 | 23 | 57 | .47 | .098 | 37 | 55 | .87 | 177 | .07 | 33 | 1.93 | .06 | .14 | 13 |

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: PULP

**DATE RECEIVED:** AUG 12 1991 **DATE REPORT MAILED:** Aug 19/91. **SIGNED BY**.......... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

| SAMPLE# | Mo ppm | Cu ppm | Pb ppm | Zn ppm | Ag ppm | Ni ppm | Co ppm | Mn ppm | Fe % | As ppm | U ppm | Au ppm | Th ppm | Sr ppm | Cd ppm | Sb ppm | Bi ppm | V ppm | Ca % | P % | La ppm | Cr ppm | Mg % | Ba ppm | Ti % | B ppm | Al % | Na % | K % | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13271 91-3001 | 2 | 26 | 45 | 187 | .2 | 24 | 19 | 990 | 4.14 | 5 | 6 | ND | 2 | 43 | 1.0 | 2 | 3 | 41 | .40 | .051 | 19 | 34 | .59 | 98 | .07 | 2 | 1.76 | .02 | .14 | 1 |
| 13271 91-3002 | 1 | 25 | 16 | 94 | .1 | 32 | 13 | 412 | 2.90 | 6 | 11 | ND | 3 | 50 | .3 | 2 | 2 | 38 | .55 | .037 | 22 | 35 | .70 | 102 | .09 | 4 | 2.20 | .02 | .09 | 1 |
| 13271 91-3003 | 1 | 35 | 16 | 101 | .2 | 38 | 13 | 430 | 3.11 | 13 | 6 | ND | 4 | 49 | .2 | 2 | 2 | 41 | .78 | .037 | 24 | 37 | .91 | 123 | .12 | 4 | 1.86 | .02 | .12 | 1 |
| 13271 91-3004 | 2 | 29 | 25 | 111 | .2 | 37 | 15 | 440 | 3.25 | 17 | 6 | ND | 6 | 28 | .5 | 2 | 3 | 44 | .49 | .034 | 29 | 34 | .71 | 159 | .09 | 5 | 2.14 | .02 | .10 | 1 |
| 13271 91-3005 | 2 | 37 | 56 | 133 | .3 | 54 | 16 | 534 | 3.51 | 68 | 6 | ND | 5 | 16 | .3 | 2 | 5 | 48 | .26 | .073 | 22 | 36 | .71 | 124 | .08 | 3 | 2.00 | .01 | .10 | 1 |
| 13271 91-3006 | 1 | 15 | 20 | 85 | .1 | 18 | 10 | 290 | 3.11 | 7 | 5 | ND | 5 | 18 | .2 | 2 | 2 | 51 | .15 | .018 | 18 | 29 | .50 | 104 | .10 | 2 | 1.69 | .01 | .08 | 1 |
| 13271 91-4001 | 2 | 39 | 28 | 81 | .2 | 18 | 10 | 270 | 3.18 | 4 | 6 | ND | 3 | 25 | .2 | 2 | 2 | 50 | .30 | .023 | 17 | 32 | .44 | 126 | .10 | 2 | 1.56 | .01 | .07 | 1 |
| 13271 91-4002 | 1 | 18 | 22 | 76 | .1 | 17 | 8 | 256 | 3.00 | 5 | 6 | ND | 1 | 12 | .2 | 2 | 2 | 45 | .12 | .030 | 16 | 26 | .48 | 58 | .10 | 5 | 1.37 | .02 | .10 | 1 |
| 13271 91-4003 | 1 | 11 | 31 | 75 | .1 | 13 | 7 | 240 | 3.22 | 7 | 6 | ND | 3 | 12 | .3 | 2 | 3 | 49 | .13 | .051 | 13 | 30 | .42 | 61 | .09 | 4 | 1.75 | .01 | .08 | 1 |
| 13271 91-4004 | 1 | 16 | 16 | 57 | .1 | 18 | 9 | 265 | 2.66 | 5 | 5 | ND | 3 | 14 | .2 | 2 | 2 | 50 | .18 | .034 | 17 | 34 | .51 | 81 | .12 | 3 | 1.83 | .01 | .07 | 1 |
| 13271 91-4005 | 1 | 11 | 4 | 32 | .1 | 7 | 5 | 116 | 1.52 | 2 | 5 | ND | 1 | 13 | .2 | 2 | 2 | 26 | .11 | .029 | 7 | 13 | .20 | 47 | .06 | 2 | 1.07 | .04 | .04 | 1 |
| 13271 91-4006 | 1 | 11 | 18 | 53 | .1 | 11 | 6 | 217 | 2.37 | 4 | 7 | ND | 1 | 16 | .2 | 2 | 2 | 54 | .15 | .036 | 13 | 27 | .36 | 54 | .07 | 5 | 1.14 | .01 | .06 | 1 |
| 13271 91-4007 | 1 | 13 | 17 | 38 | .1 | 8 | 4 | 107 | 2.08 | 4 | 5 | ND | 1 | 10 | .2 | 2 | 2 | 42 | .07 | .029 | 14 | 18 | .17 | 46 | .06 | 4 | 1.40 | .01 | .04 | 1 |
| 13271 91-4008 | 1 | 9 | 6 | 21 | .2 | 6 | 3 | 48 | 1.05 | 2 | 5 | ND | 1 | 7 | .2 | 2 | 2 | 17 | .03 | .026 | 3 | 5 | .04 | 9 | .02 | 2 | .29 | .03 | .03 | 1 |
| 13271 91-4009 | 1 | 19 | 14 | 94 | .1 | 16 | 7 | 294 | 1.80 | 3 | 22 | ND | 1 | 41 | .6 | 2 | 2 | 29 | .51 | .065 | 15 | 17 | .31 | 106 | .04 | 5 | 1.15 | .03 | .06 | 1 |
| 13271 91-4010 | 1 | 26 | 29 | 146 | .2 | 21 | 9 | 494 | 2.30 | 5 | 24 | ND | 1 | 39 | .6 | 2 | 2 | 32 | .41 | .080 | 21 | 23 | .41 | 122 | .04 | 3 | 1.65 | .02 | .06 | 1 |
| 13271 91-4011 | 1 | 9 | 11 | 24 | .1 | 2 | 2 | 43 | .71 | 2 | 5 | ND | 1 | 10 | .2 | 2 | 2 | 25 | .05 | .012 | 9 | 6 | .05 | 35 | .07 | 3 | .54 | .03 | .03 | 1 |
| 13271 91-4012 | 2 | 23 | 24 | 49 | .1 | 17 | 4 | 116 | 1.39 | 3 | 5 | ND | 1 | 10 | .3 | 2 | 2 | 57 | .08 | .016 | 14 | 17 | .15 | 34 | .12 | 3 | .89 | .01 | .05 | 1 |
| 13271 91-4013 | 1 | 21 | 12 | 71 | .1 | 10 | 5 | 191 | 1.69 | 2 | 6 | ND | 1 | 11 | .2 | 2 | 2 | 33 | .08 | .032 | 9 | 15 | .19 | 36 | .05 | 2 | .85 | .02 | .04 | 1 |
| 13271 91-4014 | 2 | 10 | 11 | 62 | .1 | 10 | 5 | 110 | 1.61 | 9 | 5 | ND | 1 | 20 | .2 | 2 | 3 | 36 | .22 | .017 | 10 | 11 | .21 | 37 | .04 | 4 | .58 | .02 | .06 | 1 |
| 13271 91-4015 | 1 | 24 | 52 | 131 | .6 | 14 | 10 | 1167 | 2.03 | 5 | 10 | ND | 1 | 48 | .3 | 2 | 3 | 30 | .68 | .084 | 19 | 19 | .39 | 134 | .04 | 4 | 1.49 | .03 | .05 | 1 |
| 13271 91-4016 | 1 | 26 | 326 | 334 | .1 | 37 | 14 | 574 | 3.69 | 12 | 7 | ND | 5 | 19 | .5 | 2 | 5 | 45 | .23 | .037 | 23 | 36 | .80 | 110 | .11 | 3 | 2.09 | .01 | .16 | 1 |
| 13271 91-4017 | 1 | 102 | 18 | 362 | .3 | 49 | 29 | 755 | 6.67 | 9 | 16 | ND | 4 | 64 | 2.2 | 2 | 13 | 93 | 1.33 | .148 | 47 | 80 | 1.60 | 205 | .22 | 5 | 2.87 | .04 | .30 | 2 |
| 13271 91-4018 | 2 | 42 | 41 | 374 | .3 | 30 | 16 | 827 | 3.91 | 14 | 43 | ND | 1 | 58 | .4 | 2 | 6 | 39 | .71 | .087 | 26 | 33 | .65 | 178 | .06 | 2 | 2.29 | .01 | .15 | 1 |
| 13271 91-4019 | 12 | 101 | 39 | 572 | .7 | 73 | 17 | 1155 | 3.67 | 87 | 32 | ND | 3 | 69 | .5 | 2 | 2 | 30 | .72 | .112 | 60 | 30 | .55 | 184 | .03 | 2 | 2.99 | .02 | .09 | 1 |
| 13271 91-4020 | 1 | 22 | 10 | 53 | .1 | 11 | 7 | 280 | 2.03 | 3 | 5 | ND | 1 | 21 | .2 | 2 | 2 | 40 | .19 | .069 | 11 | 14 | .20 | 73 | .06 | 2 | .96 | .03 | .05 | 1 |
| 13271 91-4021 | 1 | 20 | 21 | 76 | .2 | 14 | 10 | 543 | 2.26 | 2 | 5 | ND | 1 | 29 | .2 | 2 | 2 | 38 | .34 | .045 | 16 | 20 | .36 | 136 | .05 | 3 | 1.43 | .03 | .09 | 1 |
| 13271 91-4022 | 2 | 20 | 24 | 85 | .1 | 15 | 10 | 513 | 2.62 | 5 | 5 | ND | 1 | 14 | .3 | 2 | 2 | 38 | .17 | .067 | 17 | 24 | .47 | 100 | .04 | 2 | 1.75 | .01 | .09 | 1 |
| 13271 91-4023 | 4 | 18 | 26 | 73 | .2 | 12 | 12 | 748 | 2.34 | 3 | 6 | ND | 1 | 14 | .4 | 2 | 4 | 39 | .15 | .063 | 15 | 19 | .30 | 112 | .03 | 2 | 1.50 | .01 | .08 | 1 |
| 13271 91-4024 | 2 | 15 | 18 | 86 | .1 | 17 | 9 | 362 | 2.56 | 4 | 5 | ND | 5 | 12 | .2 | 2 | 2 | 38 | .15 | .037 | 21 | 18 | .45 | 87 | .07 | 5 | 1.26 | .01 | .08 | 1 |
| 13271 91-4025 | 1 | 11 | 8 | 44 | .2 | 4 | 4 | 68 | 1.02 | 6 | 5 | ND | 1 | 31 | .5 | 2 | 2 | 21 | .32 | .022 | 5 | 6 | .07 | 35 | .04 | 2 | .54 | .04 | .03 | 1 |
| 13271 91-4026 | 1 | 17 | 20 | 72 | .1 | 20 | 11 | 286 | 3.03 | 5 | 5 | ND | 4 | 19 | .2 | 2 | 2 | 43 | .22 | .035 | 20 | 32 | .57 | 106 | .10 | 2 | 2.03 | .01 | .12 | 1 |
| 13271 91-4027 | 1 | 37 | 25 | 66 | .1 | 15 | 8 | 237 | 2.75 | 9 | 8 | ND | 1 | 18 | .4 | 2 | 2 | 48 | .11 | .027 | 18 | 24 | .34 | 84 | .09 | 2 | 1.57 | .02 | .07 | 1 |
| 13271 91-4028 | 2 | 85 | 25 | 144 | .5 | 37 | 13 | 909 | 2.81 | 8 | 75 | ND | 1 | 45 | .3 | 2 | 4 | 36 | .58 | .117 | 45 | 31 | .49 | 187 | .05 | 3 | 2.25 | .02 | .08 | 1 |
| RE 13271 91-4025 | 1 | 9 | 7 | 44 | .2 | 4 | 3 | 72 | 1.02 | 4 | 5 | ND | 1 | 30 | .4 | 2 | 2 | 22 | .32 | .023 | 5 | 6 | .06 | 34 | .04 | 4 | .52 | .04 | .03 | 1 |
| 13271 91-4029 | 1 | 16 | 12 | 67 | .1 | 13 | 10 | 583 | 2.31 | 3 | 15 | ND | 1 | 28 | .2 | 2 | 5 | 37 | .34 | .038 | 17 | 20 | .37 | 109 | .09 | 2 | 1.28 | .02 | .10 | 1 |
| 13271 91-4030 | 1 | 28 | 27 | 117 | .1 | 36 | 17 | 536 | 4.17 | 8 | 8 | ND | 7 | 15 | .2 | 2 | 2 | 36 | .29 | .072 | 25 | 37 | .85 | 106 | .10 | 2 | 2.17 | .01 | .24 | 1 |
| STANDARD C | 19 | 61 | 39 | 133 | 7.0 | 70 | 32 | 1068 | 4.00 | 42 | 23 | 7 | 40 | 53 | 19.0 | 15 | 23 | 58 | .48 | .090 | 41 | 59 | .88 | 180 | .09 | 32 | 1.88 | .06 | .15 | 13 |

Samples beginning 'RE' are duplicate samples.

| SAMPLE# | Mo ppm | Cu ppm | Pb ppm | Zn ppm | Ag ppm | Ni ppm | Co ppm | Mn ppm | Fe % | As ppm | U ppm | Au ppm | Th ppm | Sr ppm | Cd ppm | Sb ppm | Bi ppm | V ppm | Ca % | P % | La ppm | Cr ppm | Mg % | Ba ppm | Ti % | B ppm | Al % | Na % | K % | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13271 91-4031 | 1 | 17 | 60 | 126 | .6 | 32 | 15 | 471 | 4.43 | 18 | 5 | ND | 8 | 40 | .2 | 2 | 2 | 48 | .54 | .058 | 23 | 40 | .79 | 123 | .09 | 2 | 2.30 | .01 | .12 | 1 |
| 13271 91-4032 | 1 | 31 | 35 | 110 | .2 | 26 | 12 | 340 | 4.02 | 14 | 24 | ND | 5 | 48 | .5 | 2 | 4 | 52 | .78 | .044 | 35 | 31 | .57 | 176 | .08 | 5 | 2.04 | .01 | .10 | 1 |
| 13271 91-4033 | 1 | 26 | 241 | 564 | 1.4 | 18 | 9 | 485 | 2.57 | 16 | 30 | ND | 1 | 50 | 1.8 | 2 | 6 | 41 | .77 | .099 | 26 | 22 | .36 | 106 | .06 | 2 | 1.68 | .03 | .06 | 1 |
| 13271 91-4034 | 1 | 25 | 42 | 163 | .2 | 50 | 21 | 813 | 6.08 | 6 | 5 | ND | 18 | 19 | .2 | 2 | 4 | 39 | .31 | .068 | 50 | 45 | .41 | 96 | .03 | 2 | 1.39 | .01 | .29 | 1 |
| RE 13271 91-4032 | 1 | 31 | 35 | 105 | .2 | 24 | 11 | 318 | 3.84 | 11 | 23 | ND | 5 | 46 | .5 | 2 | 5 | 50 | .74 | .041 | 35 | 30 | .53 | 165 | .08 | 3 | 1.95 | .01 | .10 | 1 |
| 13271 91-4036 | 1 | 40 | 196 | 130 | 1.3 | 21 | 10 | 843 | 2.07 | 3 | 5 | ND | 2 | 59 | .4 | 2 | 4 | 19 | .86 | .065 | 61 | 18 | .37 | 167 | .06 | 3 | 1.49 | .04 | .12 | 1 |
| 13271 91-4037 | 1 | 9 | 18 | 81 | .2 | 14 | 7 | 454 | 2.18 | 5 | 5 | ND | 1 | 22 | .9 | 2 | 2 | 34 | .23 | .050 | 15 | 17 | .28 | 99 | .06 | 5 | 1.02 | .02 | .09 | 1 |
| 13271 91-4038 | 1 | 6 | 13 | 32 | .3 | 3 | 6 | 565 | .90 | 4 | 5 | ND | 1 | 12 | .5 | 2 | 2 | 17 | .07 | .039 | 6 | 6 | .08 | 51 | .02 | 4 | .66 | .04 | .03 | 1 |
| 13271 91-4039 | 1 | 6 | 2 | 18 | .1 | 2 | 3 | 163 | .78 | 4 | 5 | ND | 1 | 22 | .2 | 2 | 2 | 18 | .25 | .070 | 4 | 3 | .08 | 21 | .05 | 7 | .44 | .05 | .03 | 1 |
| 13271 91-4040 | 1 | 18 | 19 | 91 | .1 | 10 | 6 | 423 | 2.40 | 5 | 5 | ND | 1 | 17 | .6 | 2 | 2 | 47 | .15 | .036 | 20 | 16 | .25 | 80 | .07 | 4 | .94 | .01 | .10 | 1 |
| 13271 91-4041 | 2 | 41 | 30 | 104 | .5 | 37 | 15 | 366 | 3.20 | 8 | 11 | ND | 2 | 36 | .4 | 2 | 3 | 42 | .43 | .054 | 26 | 30 | .55 | 111 | .08 | 4 | 1.85 | .02 | .12 | 1 |
| STANDARD C | 20 | 60 | 40 | 133 | 7.4 | 75 | 32 | 1063 | 4.02 | 43 | 15 | 7 | 41 | 52 | 18.9 | 16 | 23 | 57 | .50 | .091 | 40 | 59 | .88 | 178 | .09 | 34 | 1.90 | .06 | .15 | 11 |

Samples beginning 'RE' are duplicate samples.

ACME ANALYTICAL

| SAMPLE# | Mo ppm | Cu ppm | Pb ppm | Zn ppm | Ag ppm | Ni ppm | Co ppm | Mn ppm | Fe % | As ppm | U ppm | Au ppm | Th ppm | Sr ppm | Cd ppm | Sb ppm | Bi ppm | V ppm | Ca % | P % | La ppm | Cr ppm | Mg % | Ba ppm | Ti % | B ppm | Al % | Na % | K % | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13271 L9+60E 10+60N | 1 | 19 | 234 | 495 | .5 | 16 | 10 | 1139 | 2.32 | 12 | 5 | ND | 1 | 71 | 7.4 | 2 | 5 | 33 | 1.49 | .126 | 13 | 23 | .43 | 109 | .04 | 5 | 1.31 | .02 | .08 | 1 |
| 13271 L9+60E 10+40N | 1 | 2 | 19 | 114 | .1 | 3 | 5 | 180 | 1.66 | 2 | 5 | ND | 1 | 25 | 1.4 | 2 | 3 | 46 | .38 | .035 | 2 | 6 | .08 | 36 | .09 | 4 | .71 | .05 | .03 | 1 |
| 13271 L9+60E 10+20N | 1 | 24 | 32 | 282 | .2 | 19 | 10 | 719 | 1.94 | 7 | 5 | ND | 1 | 194 | 2.9 | 2 | 2 | 21 | 6.09 | .192 | 13 | 19 | .35 | 93 | .04 | 11 | .87 | .03 | .04 | 1 |
| 13271 L9+60E 10+00N | 1 | 42 | 6283 | 8683 | 14.1 | 26 | 14 | 981 | 2.82 | 17 | 5 | 3 | 2 | 76 | 39.4 | 2 | 29 | 36 | 1.62 | .120 | 20 | 51 | .61 | 75 | .08 | 8 | 1.57 | .03 | .08 | 1 |
| 13271 L9+60E 9+80N | 1 | 61 | 1106 | 2060 | 3.3 | 25 | 14 | 698 | 1.84 | 6 | 5 | ND | 1 | 67 | 39.6 | 2 | 12 | 31 | 1.52 | .068 | 8 | 22 | .24 | 57 | .06 | 5 | 1.06 | .04 | .04 | 1 |
| 13271 L9+60E 9+60N | 2 | 67 | 495 | 554 | 1.0 | 10 | 9 | 531 | 2.33 | 11 | 5 | ND | 1 | 28 | 4.2 | 2 | 7 | 35 | .33 | .084 | 19 | 21 | .35 | 109 | .04 | 3 | 1.65 | .02 | .07 | 1 |
| 13271 L9+60E 9+40N | 1 | 57 | 277 | 398 | .7 | 14 | 8 | 511 | 2.14 | 13 | 45 | ND | 1 | 48 | 1.5 | 2 | 2 | 32 | .55 | .075 | 32 | 24 | .40 | 108 | .05 | 4 | 1.66 | .03 | .06 | 1 |
| 13271 L9+60E 9+20N | 1 | 21 | 129 | 238 | .8 | 9 | 6 | 567 | 1.68 | 17 | 39 | ND | 1 | 33 | .7 | 2 | 7 | 27 | .38 | .058 | 32 | 12 | .23 | 79 | .05 | 6 | 1.28 | .04 | .05 | 1 |
| 13271 L9+60E 9+00N | 1 | 16 | 61 | 152 | .7 | 8 | 6 | 290 | 1.79 | 13 | 20 | ND | 1 | 29 | .3 | 2 | 2 | 35 | .41 | .049 | 17 | 14 | .26 | 53 | .06 | 3 | 1.11 | .04 | .03 | 1 |
| 13271 L9+60E 8+80N | 1 | 10 | 65 | 125 | .8 | 6 | 8 | 868 | 1.95 | 7 | 6 | ND | 1 | 24 | 1.6 | 2 | 2 | 42 | .25 | .053 | 11 | 12 | .11 | 68 | .06 | 4 | .97 | .04 | .03 | 1 |
| 13271 L9+60E 8+60N | 1 | 17 | 43 | 206 | .4 | 11 | 5 | 235 | 1.95 | 13 | 13 | ND | 1 | 46 | 1.1 | 2 | 2 | 32 | .53 | .046 | 24 | 21 | .39 | 100 | .07 | 3 | 1.28 | .03 | .09 | 1 |
| RE 13271 L10+60E 9+65N | 4 | 30 | 155 | 227 | 3.0 | 16 | 9 | 649 | 2.83 | 34 | 21 | ND | 1 | 38 | .2 | 2 | 3 | 43 | .43 | .081 | 44 | 31 | .55 | 121 | .05 | 4 | 2.51 | .02 | .07 | 1 |
| 13271 L9+60E 8+40N | 1 | 20 | 77 | 205 | .6 | 12 | 8 | 366 | 2.51 | 15 | 26 | ND | 1 | 30 | .7 | 2 | 2 | 43 | .28 | .056 | 40 | 25 | .46 | 99 | .07 | 3 | 1.68 | .02 | .08 | 1 |
| 13271 L9+60E 8+20N | 1 | 20 | 72 | 181 | .2 | 8 | 7 | 360 | 2.20 | 20 | 8 | ND | 1 | 31 | .8 | 2 | 2 | 42 | .35 | .069 | 24 | 18 | .35 | 86 | .07 | 3 | 1.35 | .02 | .07 | 1 |
| 13271 L9+60E 8+00N | 1 | 23 | 123 | 249 | .9 | 9 | 6 | 549 | 1.46 | 22 | 23 | ND | 1 | 49 | 1.1 | 2 | 4 | 23 | .65 | .072 | 24 | 14 | .22 | 87 | .04 | 4 | 1.15 | .04 | .06 | 1 |
| 13271 L10+60E 9+80N | 2 | 18 | 31 | 118 | .1 | 21 | 9 | 522 | 3.14 | 7 | 5 | ND | 1 | 28 | .4 | 2 | 2 | 52 | .33 | .049 | 26 | 35 | .70 | 123 | .08 | 4 | 2.19 | .02 | .08 | 1 |
| 13271 L10+60E 9+65N | 4 | 26 | 152 | 227 | 3.1 | 17 | 9 | 660 | 2.93 | 33 | 25 | ND | 1 | 37 | .2 | 2 | 5 | 44 | .42 | .081 | 44 | 31 | .58 | 123 | .05 | 3 | 2.58 | .02 | .08 | 1 |
| 13271 L10+60E 9+40N | 1 | 18 | 53 | 112 | .7 | 12 | 6 | 571 | 2.01 | 12 | 75 | ND | 1 | 42 | .2 | 2 | 6 | 31 | .43 | .079 | 67 | 23 | .35 | 104 | .05 | 4 | 1.61 | .03 | .05 | 1 |
| 13271 L10+60E 9+20N | 1 | 26 | 118 | 218 | 2.4 | 14 | 6 | 327 | 2.18 | 14 | 140 | ND | 1 | 59 | .4 | 2 | 13 | 33 | .67 | .121 | 121 | 33 | .53 | 108 | .05 | 3 | 2.05 | .02 | .08 | 1 |
| 13271 L10+60E 9+00N | 1 | 19 | 56 | 177 | .2 | 17 | 10 | 605 | 3.02 | 16 | 7 | ND | 1 | 26 | .5 | 2 | 2 | 49 | .31 | .071 | 34 | 31 | .60 | 98 | .07 | 4 | 2.10 | .02 | .09 | 1 |
| 13271 BL 11+36N | 1 | 34 | 24 | 79 | .2 | 23 | 10 | 532 | 1.65 | 8 | 5 | ND | 1 | 301 | .6 | 2 | 2 | 23 | 13.01 | .139 | 10 | 18 | .43 | 74 | .03 | 6 | 1.00 | .02 | .04 | 2 |
| 13271 BL 11+20N | 1 | 1 | 2 | 30 | .1 | 1 | 3 | 79 | 1.18 | 2 | 5 | ND | 1 | 28 | .2 | 2 | 7 | 34 | .52 | .066 | 3 | 1 | .08 | 14 | .07 | 4 | .56 | .04 | .03 | 1 |
| 13271 BL 11+00N | 1 | 13 | 48 | 190 | .4 | 12 | 7 | 481 | 1.94 | 9 | 5 | ND | 1 | 30 | .7 | 2 | 2 | 33 | .45 | .065 | 14 | 17 | .34 | 71 | .06 | 3 | 1.22 | .04 | .06 | 1 |
| 13271 BL 10+80N | 1 | 28 | 872 | 836 | 1.7 | 15 | 11 | 2172 | 2.22 | 47 | 5 | ND | 1 | 48 | 7.2 | 2 | 11 | 29 | .84 | .085 | 24 | 22 | .39 | 107 | .04 | 4 | 1.70 | .04 | .07 | 1 |
| 13271 BL 10+60N | 1 | 9 | 29 | 44 | .1 | 1 | 3 | 123 | .72 | 3 | 5 | ND | 1 | 23 | .3 | 2 | 2 | 18 | .37 | .061 | 4 | 1 | .11 | 23 | .05 | 5 | .28 | .06 | .05 | 1 |
| 13271 BL 10+40N | 1 | 18 | 6 | 32 | .1 | 2 | 3 | 90 | .84 | 2 | 5 | ND | 1 | 27 | .2 | 2 | 2 | 23 | .44 | .089 | 4 | 1 | .08 | 27 | .06 | 4 | .42 | .07 | .04 | 1 |
| 13271 BL 10+20N | 1 | 36 | 185 | 289 | .5 | 25 | 12 | 642 | 2.42 | 14 | 5 | ND | 1 | 115 | 1.7 | 2 | 2 | 33 | 3.13 | .152 | 17 | 24 | .58 | 90 | .05 | 8 | 1.21 | .03 | .07 | 1 |
| 13271 BL 9+80N | 1 | 36 | 180 | 250 | .2 | 30 | 13 | 395 | 2.27 | 5 | 5 | ND | 1 | 64 | 2.8 | 2 | 2 | 28 | 1.27 | .197 | 13 | 26 | .39 | 72 | .05 | 4 | 1.20 | .03 | .08 | 1 |
| 13271 BL 9+60N | 1 | 14 | 37 | 73 | .1 | 6 | 4 | 141 | 1.68 | 6 | 5 | ND | 1 | 18 | .5 | 2 | 2 | 38 | .20 | .060 | 12 | 15 | .22 | 60 | .06 | 4 | 1.00 | .02 | .05 | 1 |
| 13271 BL 9+40N | 2 | 28 | 53 | 303 | .4 | 13 | 8 | 422 | 2.01 | 16 | 60 | ND | 1 | 46 | 1.0 | 2 | 5 | 31 | .52 | .077 | 47 | 22 | .43 | 87 | .05 | 4 | 1.61 | .02 | .06 | 1 |
| 13271 BL 9+20N | 1 | 20 | 23 | 46 | .1 | 4 | 2 | 55 | 1.01 | 2 | 5 | ND | 1 | 11 | .2 | 2 | 2 | 26 | .07 | .040 | 9 | 6 | .05 | 45 | .03 | 4 | .62 | .03 | .04 | 1 |
| 13271 BL 9+00N | 1 | 19 | 47 | 175 | .1 | 16 | 8 | 402 | 2.79 | 6 | 8 | ND | 2 | 35 | .8 | 2 | 2 | 58 | .34 | .048 | 19 | 32 | .50 | 114 | .09 | 3 | 1.80 | .01 | .07 | 1 |
| STANDARD C | 18 | 64 | 40 | 130 | 7.3 | 68 | 32 | 1079 | 3.91 | 41 | 18 | 8 | 40 | 54 | 18.9 | 16 | 21 | 59 | .49 | .090 | 39 | 57 | .88 | 177 | .09 | 34 | 1.91 | .07 | .16 | 11 |

Samples beginning 'RE' are duplicate samples.

| SAMPLE# | Mo ppm | Cu ppm | Pb ppm | Zn ppm | Ag ppm | Ni ppm | Co ppm | Mn ppm | Fe % | As ppm | U ppm | Au ppm | Th ppm | Sr ppm | Cd ppm | Sb ppm | Bi ppm | V ppm | Ca % | P % | La ppm | Cr ppm | Mg % | Ba ppm | Ti % | B ppm | Al % | Na % | K % | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13286 S91-512 | 27 | 41 | 40 | 311 | 1.1 | 19 | 9 | 1030 | 2.79 | 5 | 40 | ND | 5 | 65 | 1.6 | 3 | 2 | 42 | .79 | .098 | 46 | 25 | .41 | 310 | .04 | 11 | 2.18 | .02 | .17 | 3 |
| 13286 S91-513 | 8 | 29 | 27 | 277 | .9 | 20 | 8 | 439 | 2.76 | 2 | 45 | ND | 4 | 59 | 1.0 | 2 | 2 | 46 | .70 | .100 | 34 | 18 | .38 | 196 | .05 | 10 | 1.71 | .03 | .09 | 1 |
| 13286 S91-514 | 6 | 27 | 36 | 298 | .7 | 19 | 8 | 784 | 2.79 | 2 | 45 | ND | 3 | 52 | 1.7 | 2 | 2 | 46 | .60 | .088 | 32 | 16 | .33 | 203 | .05 | 8 | 1.54 | .03 | .08 | 1 |
| RE 13286 S91-518 | 4 | 22 | 23 | 193 | .4 | 19 | 8 | 364 | 3.03 | 2 | 23 | ND | 4 | 38 | 1.0 | 2 | 2 | 63 | .47 | .091 | 22 | 18 | .32 | 148 | .09 | 9 | 1.32 | .02 | .07 | 1 |
| 13286 S91-515 | 2 | 25 | 45 | 229 | .8 | 15 | 5 | 352 | 2.05 | 2 | 39 | ND | 3 | 47 | 1.3 | 2 | 2 | 29 | .56 | .083 | 31 | 13 | .28 | 162 | .04 | 10 | 1.28 | .02 | .08 | 1 |
| 13286 S91-516 | 17 | 33 | 15 | 119 | .5 | 9 | 5 | 410 | 1.75 | 2 | 70 | ND | 4 | 50 | 1.0 | 2 | 2 | 31 | .73 | .095 | 33 | 11 | .22 | 141 | .05 | 12 | 1.09 | .03 | .05 | 1 |
| 13286 S91-517 | 4 | 21 | 21 | 226 | .6 | 19 | 8 | 582 | 2.71 | 2 | 28 | ND | 6 | 34 | .7 | 2 | 2 | 39 | .40 | .081 | 25 | 17 | .38 | 174 | .06 | 6 | 1.21 | .02 | .09 | 1 |
| 13286 S91-518 | 4 | 25 | 24 | 196 | .8 | 21 | 9 | 402 | 3.26 | 2 | 30 | ND | 7 | 40 | 1.4 | 2 | 2 | 67 | .48 | .095 | 25 | 20 | .35 | 156 | .10 | 8 | 1.46 | .02 | .08 | 1 |
| 13286 S91-519 | 4 | 40 | 21 | 222 | .7 | 18 | 7 | 816 | 2.52 | 2 | 40 | ND | 2 | 67 | 1.3 | 2 | 2 | 39 | .77 | .099 | 29 | 16 | .32 | 190 | .05 | 15 | 1.43 | .03 | .08 | 1 |
| 13286 S91-520 | 2 | 30 | 31 | 259 | .6 | 15 | 9 | 945 | 3.14 | 3 | 29 | ND | 5 | 50 | 1.4 | 2 | 2 | 37 | .60 | .090 | 35 | 16 | .38 | 173 | .04 | 9 | 1.34 | .02 | .10 | 1 |
| 13286 S91-521 | 1 | 22 | 24 | 176 | .4 | 14 | 6 | 344 | 2.14 | 2 | 16 | ND | 2 | 34 | .5 | 2 | 2 | 28 | .42 | .085 | 28 | 15 | .35 | 138 | .04 | 7 | 1.48 | .02 | .07 | 1 |
| 13286 S91-522 | 1 | 22 | 21 | 190 | .4 | 21 | 10 | 654 | 3.54 | 3 | 25 | ND | 3 | 39 | .5 | 2 | 3 | 70 | .49 | .079 | 21 | 20 | .36 | 135 | .11 | 8 | 1.53 | .02 | .08 | 1 |
| 13286 S91-523 | 1 | 20 | 19 | 188 | .3 | 21 | 10 | 877 | 3.11 | 2 | 23 | ND | 2 | 42 | .9 | 2 | 2 | 44 | .56 | .077 | 19 | 17 | .34 | 126 | .07 | 7 | 1.35 | .02 | .07 | 1 |
| 13286 S91-524 | 1 | 23 | 18 | 137 | .2 | 16 | 9 | 829 | 3.56 | 5 | 18 | ND | 2 | 33 | .2 | 2 | 3 | 68 | .44 | .073 | 17 | 16 | .29 | 94 | .10 | 7 | 1.07 | .02 | .05 | 1 |
| 13286 S91-525 | 1 | 42 | 23 | 201 | .5 | 25 | 9 | 2002 | 4.17 | 21 | 40 | ND | 1 | 64 | 1.0 | 2 | 3 | 29 | .88 | .123 | 26 | 22 | .34 | 138 | .04 | 10 | 1.59 | .01 | .08 | 1 |
| 13286 S91-526 | 1 | 16 | 7 | 88 | .1 | 7 | 10 | 471 | 3.91 | 2 | 22 | ND | 1 | 42 | .3 | 2 | 2 | 112 | .66 | .117 | 11 | 12 | .14 | 39 | .22 | 12 | .58 | .03 | .02 | 1 |
| 13286 S91-527 | 1 | 50 | 29 | 398 | .8 | 18 | 9 | 832 | 2.74 | 6 | 23 | ND | 1 | 83 | 2.7 | 2 | 2 | 38 | 1.13 | .081 | 30 | 17 | .37 | 132 | .06 | 13 | 1.38 | .03 | .09 | 1 |
| 13286 S91-528 | 1 | 58 | 15 | 132 | .6 | 15 | 7 | 683 | 3.12 | 2 | 40 | ND | 1 | 60 | .6 | 2 | 2 | 41 | .84 | .187 | 18 | 23 | .22 | 94 | .04 | 9 | 2.31 | .03 | .08 | 1 |
| 13286 S91-529 | 1 | 22 | 11 | 86 | .2 | 18 | 6 | 225 | 1.93 | 2 | 11 | ND | 1 | 32 | .3 | 2 | 2 | 36 | .47 | .073 | 24 | 23 | .40 | 94 | .08 | 6 | 1.66 | .03 | .06 | 1 |
| 13286 S91-530 | 1 | 27 | 11 | 103 | .4 | 18 | 8 | 406 | 2.54 | 2 | 55 | ND | 2 | 60 | .6 | 2 | 2 | 37 | .54 | .069 | 25 | 23 | .30 | 97 | .06 | 7 | 2.02 | .04 | .08 | 1 |
| 13286 S91-531 | 1 | 26 | 30 | 81 | .6 | 15 | 9 | 289 | 5.48 | 3 | 38 | ND | 49 | 20 | .3 | 2 | 2 | 35 | .23 | .077 | 121 | 24 | .43 | 87 | .09 | 6 | 2.29 | .02 | .11 | 1 |
| 13286 S91-532 | 1 | 14 | 22 | 62 | .1 | 13 | 5 | 194 | 1.89 | 2 | 6 | ND | 4 | 21 | .2 | 2 | 2 | 30 | .33 | .053 | 44 | 20 | .39 | 99 | .07 | 5 | 1.85 | .01 | .07 | 1 |
| 13286 S91-533 | 1 | 25 | 36 | 131 | .5 | 23 | 7 | 324 | 3.01 | 2 | 105 | ND | 4 | 27 | .3 | 2 | 2 | 40 | .34 | .057 | 41 | 21 | .45 | 143 | .06 | 6 | 2.33 | .02 | .11 | 1 |
| 13286 S91-614 | 1 | 32 | 31 | 233 | 1.0 | 18 | 8 | 317 | 2.30 | 12 | 80 | 2 | 2 | 38 | .8 | 2 | 3 | 37 | .41 | .079 | 36 | 23 | .54 | 142 | .06 | 8 | 2.23 | .02 | .14 | 1 |
| 13286 S91-615 | 2 | 17 | 22 | 125 | .5 | 11 | 6 | 318 | 1.61 | 3 | 37 | ND | 2 | 39 | .2 | 2 | 2 | 26 | .43 | .079 | 22 | 15 | .34 | 128 | .04 | 7 | 1.74 | .03 | .09 | 1 |
| 13286 S91-616 | 1 | 26 | 39 | 183 | .7 | 12 | 6 | 425 | 2.13 | 4 | 30 | ND | 2 | 57 | .9 | 2 | 2 | 30 | .62 | .076 | 33 | 17 | .38 | 127 | .05 | 6 | 1.52 | .02 | .10 | 1 |
| 13286 S91-618 | 3 | 23 | 41 | 205 | .7 | 12 | 7 | 885 | 2.33 | 5 | 40 | ND | 2 | 48 | 1.3 | 2 | 2 | 30 | .53 | .073 | 40 | 16 | .35 | 167 | .05 | 9 | 1.74 | .02 | .10 | 1 |
| 13286 S91-619 | 5 | 20 | 36 | 168 | .7 | 10 | 5 | 413 | 2.92 | 3 | 27 | ND | 2 | 32 | .7 | 2 | 4 | 32 | .42 | .070 | 36 | 14 | .32 | 159 | .05 | 8 | 1.60 | .02 | .07 | 1 |
| 13286 S91-620 | 2 | 21 | 40 | 266 | .7 | 11 | 7 | 960 | 2.33 | 2 | 35 | ND | 1 | 48 | 2.0 | 2 | 2 | 31 | .59 | .077 | 41 | 15 | .36 | 177 | .05 | 7 | 1.83 | .03 | .10 | 1 |
| 13286 S91-621 | 2 | 20 | 36 | 245 | .7 | 12 | 6 | 599 | 2.10 | 2 | 33 | ND | 2 | 32 | 1.7 | 2 | 6 | 32 | .42 | .068 | 36 | 14 | .31 | 122 | .05 | 5 | 1.52 | .02 | .07 | 1 |
| 13286 S91-622 | 2 | 25 | 33 | 355 | 1.7 | 12 | 7 | 433 | 2.76 | 38 | 75 | ND | 5 | 40 | 1.1 | 2 | 6 | 50 | .57 | .072 | 33 | 17 | .42 | 73 | .09 | 14 | 1.50 | .02 | .11 | 1 |
| 13286 S91-623 | 1 | 27 | 26 | 177 | .7 | 16 | 8 | 557 | 2.98 | 3 | 18 | ND | 4 | 40 | .5 | 2 | 3 | 49 | .49 | .081 | 36 | 21 | .58 | 172 | .08 | 8 | 2.15 | .02 | .16 | 4 |
| 13286 S91-624 | 1 | 26 | 26 | 171 | .7 | 16 | 8 | 476 | 2.95 | 2 | 12 | ND | 3 | 40 | .5 | 3 | 4 | 47 | .50 | .081 | 39 | 22 | .56 | 168 | .08 | 5 | 2.16 | .03 | .15 | 3 |
| 13286 S91-625 | 1 | 19 | 25 | 141 | .6 | 12 | 6 | 359 | 2.38 | 2 | 5 | ND | 1 | 34 | .7 | 2 | 8 | 37 | .47 | .056 | 116 | 17 | .33 | 113 | .06 | 8 | 1.58 | .02 | .12 | 1 |
| 13286 S91-626 | 2 | 24 | 16 | 127 | .8 | 15 | 8 | 564 | 2.74 | 2 | 18 | ND | 1 | 36 | .3 | 2 | 7 | 38 | .52 | .083 | 90 | 24 | .49 | 183 | .05 | 7 | 2.03 | .02 | .11 | 1 |
| 13286 S91-627 | 4 | 21 | 18 | 162 | .8 | 14 | 7 | 325 | 2.54 | 2 | 22 | ND | 1 | 33 | .5 | 2 | 6 | 32 | .47 | .085 | 93 | 20 | .43 | 155 | .05 | 7 | 1.86 | .02 | .10 | 1 |
| STANDARD C | 18 | 63 | 37 | 132 | 7.2 | 71 | 33 | 1060 | 3.98 | 41 | 18 | 6 | 40 | 52 | 18.7 | 16 | 22 | 56 | .48 | .091 | 39 | 59 | .87 | 178 | .09 | 33 | 1.93 | .06 | .15 | 11 |

Samples beginning 'RE' are duplicate samples.

| SAMPLE# | Mo ppm | Cu ppm | Pb ppm | Zn ppm | Ag ppm | Ni ppm | Co ppm | Mn ppm | Fe % | As ppm | U ppm | Au ppm | Th ppm | Sr ppm | Cd ppm | Sb ppm | Bi ppm | V ppm | Ca % | P % | La ppm | Cr ppm | Mg % | Ba ppm | Ti % | B ppm | Al % | Na % | K % | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13286 S91-628 | 4 | 15 | 14 | 122 | .1 | 8 | 6 | 911 | 1.95 | 3 | 40 | ND | 1 | 56 | .8 | 2 | 2 | 21 | .82 | .094 | 58 | 9 | .20 | 179 | .03 | 5 | 1.57 | .02 | .06 | 1 |
| 13286 S91-629 | 4 | 11 | 20 | 108 | .1 | 10 | 9 | 1532 | 3.22 | 2 | 24 | ND | 3 | 37 | .7 | 2 | 2 | 36 | .54 | .073 | 44 | 11 | .26 | 193 | .05 | 5 | 1.48 | .03 | .06 | 1 |
| 13286 S91-630 | 1 | 11 | 10 | 96 | .1 | 8 | 6 | 382 | 2.11 | 2 | 23 | ND | 1 | 41 | .2 | 2 | 2 | 39 | .59 | .090 | 47 | 12 | .23 | 103 | .06 | 5 | 1.25 | .02 | .05 | 1 |
| 13286 S91-631 | 2 | 18 | 15 | 92 | .1 | 14 | 6 | 236 | 2.10 | 5 | 19 | ND | 1 | 39 | .2 | 2 | 2 | 30 | .59 | .083 | 38 | 20 | .42 | 102 | .05 | 6 | 1.65 | .02 | .06 | 1 |
| 13286 S91-632 | 4 | 31 | 54 | 305 | .3 | 41 | 15 | 1463 | 2.57 | 5 | 51 | ND | 1 | 48 | 1.9 | 2 | 2 | 29 | .69 | .088 | 24 | 15 | .28 | 140 | .04 | 8 | 1.70 | .02 | .06 | 1 |
| 13286 S91-633 | 5 | 31 | 35 | 326 | .1 | 43 | 20 | 2196 | 2.80 | 4 | 51 | ND | 1 | 50 | 1.9 | 2 | 2 | 29 | .71 | .094 | 25 | 14 | .25 | 150 | .04 | 5 | 1.80 | .02 | .06 | 2 |
| 13286 S91-634 | 2 | 22 | 36 | 279 | .2 | 29 | 11 | 1235 | 2.41 | 4 | 36 | ND | 1 | 39 | 1.2 | 2 | 2 | 31 | .57 | .086 | 18 | 13 | .26 | 115 | .06 | 10 | 1.38 | .03 | .05 | 1 |
| 13286 S91-635 | 16 | 37 | 27 | 293 | .1 | 48 | 37 | 1610 | 3.54 | 5 | 57 | ND | 1 | 47 | 2.5 | 2 | 2 | 34 | .68 | .119 | 39 | 13 | .16 | 129 | .04 | 14 | 2.00 | .02 | .05 | 1 |
| 13286 S91-636 | 11 | 14 | 28 | 182 | .2 | 14 | 7 | 475 | 2.47 | 5 | 5 | ND | 1 | 23 | .6 | 2 | 2 | 46 | .32 | .062 | 16 | 19 | .38 | 110 | .07 | 4 | 1.60 | .02 | .07 | 2 |
| 13286 S91-637 | 28 | 56 | 42 | 165 | .1 | 15 | 4 | 356 | 1.70 | 4 | 62 | ND | 1 | 46 | .2 | 2 | 2 | 22 | .68 | .160 | 47 | 15 | .22 | 88 | .02 | 7 | 2.08 | .02 | .06 | 1 |
| 13286 S91-638 | 16 | 33 | 33 | 187 | .1 | 20 | 7 | 1048 | 1.92 | 5 | 66 | ND | 1 | 57 | 1.0 | 2 | 2 | 26 | .79 | .113 | 50 | 14 | .27 | 105 | .03 | 10 | 1.64 | .02 | .07 | 2 |
| RE 13286 S91-634 | 2 | 22 | 40 | 288 | .3 | 29 | 11 | 1305 | 2.45 | 5 | 44 | ND | 1 | 40 | 1.3 | 2 | 2 | 30 | .57 | .084 | 19 | 14 | .26 | 120 | .06 | 15 | 1.42 | .03 | .05 | 1 |
| 13286 S91-639 | 19 | 25 | 34 | 233 | .1 | 18 | 7 | 596 | 2.24 | 3 | 50 | ND | 1 | 39 | .8 | 2 | 2 | 37 | .53 | .088 | 39 | 18 | .35 | 110 | .04 | 7 | 1.73 | .02 | .07 | 1 |
| 13286 S91-640 | 11 | 14 | 22 | 206 | .2 | 12 | 7 | 486 | 2.18 | 3 | 28 | ND | 2 | 31 | 1.0 | 2 | 2 | 41 | .48 | .080 | 25 | 12 | .28 | 90 | .07 | 11 | 1.19 | .02 | .05 | 1 |
| 13286 S91-641 | 39 | 41 | 26 | 224 | .4 | 14 | 7 | 383 | 1.93 | 5 | 77 | ND | 1 | 49 | .8 | 2 | 2 | 25 | .73 | .079 | 42 | 15 | .34 | 201 | .03 | 4 | 1.84 | .03 | .08 | 1 |
| 13286 S91-642 | 8 | 35 | 29 | 130 | .1 | 14 | 7 | 384 | 2.29 | 6 | 5 | ND | 2 | 27 | .4 | 2 | 2 | 39 | .43 | .060 | 36 | 17 | .45 | 121 | .06 | 8 | 1.36 | .02 | .07 | 1 |
| 13286 S91-643 | 8 | 36 | 35 | 280 | .1 | 15 | 7 | 489 | 2.35 | 3 | 18 | ND | 3 | 43 | 1.0 | 2 | 2 | 32 | .69 | .071 | 47 | 16 | .41 | 195 | .04 | 5 | 1.69 | .02 | .08 | 1 |
| 13286 S91-644 | 10 | 31 | 56 | 325 | .2 | 14 | 6 | 540 | 2.30 | 4 | 17 | ND | 1 | 41 | .7 | 2 | 2 | 32 | .66 | .076 | 41 | 13 | .32 | 183 | .04 | 9 | 1.67 | .02 | .07 | 1 |
| 13286 S91-645 | 11 | 24 | 21 | 206 | .2 | 14 | 7 | 849 | 2.54 | 4 | 13 | ND | 2 | 36 | .7 | 2 | 2 | 33 | .57 | .070 | 21 | 13 | .34 | 183 | .04 | 6 | 1.63 | .02 | .07 | 1 |
| STANDARD C | 18 | 55 | 43 | 132 | 6.9 | 70 | 33 | 1034 | 3.94 | 40 | 19 | 6 | 37 | 53 | 18.5 | 16 | 19 | 55 | .48 | .090 | 37 | 57 | .88 | 176 | .09 | 31 | 1.87 | .06 | .15 | 13 |

Samples beginning 'RE' are duplicate samples.

| SAMPLE# | Mo ppm | Cu ppm | Pb ppm | Zn ppm | Ag ppm | Ni ppm | Co ppm | Mn ppm | Fe % | As ppm | U ppm | Au ppm | Th ppm | Sr ppm | Cd ppm | Sb ppm | Bi ppm | V ppm | Ca % | P % | La ppm | Cr ppm | Mg % | Ba ppm | Ti % | B ppm | Al % | Na % | K % | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13286 91-3016 | 1 | 21 | 33 | 347 | .1 | 17 | 7 | 396 | 2.54 | 5 | 5 | ND | 2 | 24 | .4 | 2 | 3 | 41 | .34 | .054 | 18 | 26 | .57 | 89 | .07 | 5 | 1.88 | .02 | .07 | 3 |
| 13286 91-3017 | 1 | 170 | 18 | 3810 | .1 | 21 | 12 | 887 | 3.01 | 12 | 5 | ND | 1 | 42 | 34.1 | 2 | 6 | 37 | .84 | .093 | 26 | 26 | .49 | 98 | .06 | 9 | 1.76 | .02 | .08 | 22 |
| 13286 91-3018 | 1 | 36 | 23 | 174 | .2 | 21 | 10 | 889 | 2.81 | 10 | 5 | ND | 1 | 55 | .8 | 2 | 2 | 40 | 1.03 | .097 | 97 | 24 | .42 | 123 | .06 | 14 | 1.93 | .02 | .07 | 1 |
| 13286 91-3019 | 1 | 15 | 23 | 85 | .1 | 18 | 8 | 483 | 2.81 | 9 | 5 | ND | 1 | 19 | .2 | 2 | 4 | 43 | .24 | .043 | 23 | 32 | .54 | 81 | .08 | 6 | 1.55 | .01 | .09 | 1 |
| 13286 91-3020 | 1 | 13 | 20 | 69 | .1 | 12 | 6 | 329 | 2.14 | 6 | 5 | ND | 1 | 22 | .2 | 2 | 2 | 37 | .27 | .046 | 20 | 22 | .36 | 82 | .06 | 4 | 1.22 | .02 | .07 | 1 |
| 13286 91-4042 | 1 | 16 | 19 | 75 | .1 | 19 | 9 | 494 | 2.44 | 5 | 5 | ND | 2 | 17 | .2 | 2 | 2 | 41 | .27 | .083 | 24 | 26 | .55 | 77 | .08 | 5 | 1.74 | .02 | .09 | 1 |
| 13286 91-4043 | 4 | 26 | 59 | 245 | .6 | 22 | 8 | 707 | 2.82 | 5 | 8 | ND | 1 | 29 | .8 | 2 | 2 | 40 | .43 | .079 | 50 | 19 | .42 | 143 | .04 | 9 | 1.89 | .02 | .13 | 1 |
| 13286 91-4044 | 1 | 38 | 45 | 143 | .5 | 31 | 13 | 608 | 3.26 | 6 | 5 | ND | 1 | 41 | .2 | 2 | 2 | 39 | .66 | .079 | 29 | 33 | .58 | 128 | .10 | 6 | 1.90 | .03 | .18 | 1 |
| 13286 91-4045 | 1 | 48 | 23 | 121 | .4 | 38 | 12 | 600 | 2.87 | 5 | 11 | ND | 1 | 40 | .2 | 2 | 2 | 35 | .55 | .090 | 37 | 27 | .50 | 133 | .07 | 9 | 1.89 | .03 | .13 | 1 |
| 13286 91-4046 | 1 | 55 | 23 | 131 | .5 | 42 | 15 | 659 | 3.41 | 5 | 12 | ND | 1 | 44 | .2 | 2 | 3 | 38 | .62 | .091 | 39 | 35 | .62 | 154 | .08 | 8 | 2.17 | .03 | .18 | 1 |
| 13286 91-4047 | 1 | 18 | 30 | 128 | .1 | 25 | 11 | 509 | 2.78 | 7 | 5 | ND | 5 | 18 | .2 | 2 | 2 | 40 | .29 | .065 | 25 | 26 | .53 | 100 | .07 | 9 | 1.56 | .02 | .09 | 1 |
| 13286 91-4048 | 1 | 30 | 41 | 201 | .1 | 24 | 10 | 580 | 3.14 | 8 | 5 | ND | 3 | 22 | .2 | 2 | 3 | 41 | .36 | .073 | 29 | 35 | .68 | 108 | .08 | 7 | 1.92 | .01 | .11 | 3 |
| 13286 91-4049 | 1 | 48 | 42 | 209 | .3 | 20 | 11 | 535 | 3.32 | 8 | 5 | ND | 1 | 28 | .6 | 2 | 2 | 60 | .47 | .063 | 21 | 30 | .58 | 114 | .09 | 4 | 1.94 | .02 | .09 | 1 |
| 13286 91-4050 | 1 | 29 | 24 | 127 | .2 | 21 | 9 | 476 | 3.19 | 9 | 5 | ND | 1 | 25 | .2 | 2 | 2 | 52 | .33 | .044 | 23 | 35 | .67 | 127 | .09 | 10 | 1.99 | .01 | .12 | 1 |
| 13286 91-4051 | 1 | 31 | 26 | 142 | .1 | 15 | 9 | 513 | 2.65 | 6 | 5 | ND | 1 | 27 | .4 | 2 | 2 | 48 | .36 | .052 | 23 | 25 | .48 | 108 | .08 | 4 | 1.63 | .02 | .09 | 1 |
| 13286 91-4052 | 1 | 128 | 32 | 283 | .1 | 18 | 8 | 419 | 2.74 | 9 | 5 | ND | 2 | 24 | 1.8 | 2 | 2 | 45 | .33 | .042 | 29 | 26 | .53 | 98 | .09 | 12 | 1.56 | .02 | .11 | 1 |
| 13286 91-4053 | 1 | 55 | 46 | 104 | .3 | 7 | 3 | 184 | 1.71 | 32 | 5 | ND | 1 | 22 | 1.8 | 2 | 2 | 34 | .28 | .054 | 24 | 14 | .12 | 80 | .03 | 3 | .84 | .01 | .09 | 1 |
| 13286 91-4054 | 1 | 18 | 33 | 105 | .2 | 17 | 11 | 617 | 2.92 | 7 | 5 | ND | 2 | 21 | .2 | 2 | 2 | 46 | .28 | .051 | 24 | 28 | .52 | 93 | .08 | 6 | 1.51 | .01 | .11 | 1 |
| 13286 91-4055 | 1 | 18 | 30 | 95 | .1 | 17 | 8 | 388 | 2.72 | 5 | 5 | ND | 1 | 18 | .2 | 2 | 3 | 40 | .23 | .053 | 20 | 28 | .50 | 85 | .07 | 13 | 1.49 | .01 | .11 | 1 |
| RE 13286 91-4051 | 1 | 31 | 21 | 140 | .2 | 14 | 9 | 509 | 2.60 | 6 | 5 | ND | 1 | 27 | .5 | 2 | 2 | 47 | .36 | .052 | 22 | 26 | .48 | 106 | .08 | 11 | 1.62 | .02 | .09 | 1 |
| 13286 91-4056 | 1 | 19 | 34 | 85 | .3 | 16 | 9 | 475 | 2.63 | 6 | 5 | ND | 1 | 26 | .2 | 2 | 2 | 40 | .35 | .059 | 23 | 26 | .48 | 102 | .07 | 10 | 1.57 | .02 | .09 | 1 |
| 13286 91-4057 | 1 | 19 | 34 | 101 | .2 | 22 | 11 | 586 | 3.09 | 7 | 5 | ND | 3 | 25 | .2 | 2 | 2 | 39 | .34 | .050 | 27 | 30 | .59 | 107 | .08 | 7 | 1.64 | .01 | .12 | 1 |
| 13286 91-4058 | 2 | 26 | 45 | 104 | .3 | 21 | 13 | 828 | 3.60 | 10 | 5 | ND | 3 | 36 | .2 | 2 | 3 | 44 | .38 | .082 | 36 | 34 | .65 | 152 | .06 | 7 | 2.25 | .01 | .12 | 1 |
| 13286 91-4059 | 1 | 26 | 49 | 111 | .3 | 18 | 14 | 1016 | 3.01 | 12 | 5 | ND | 1 | 32 | .2 | 2 | 3 | 40 | .41 | .070 | 51 | 29 | .52 | 143 | .06 | 9 | 1.93 | .02 | .12 | 1 |
| 13286 91-4060 | 1 | 20 | 31 | 93 | .3 | 15 | 8 | 413 | 2.80 | 7 | 5 | ND | 2 | 24 | .2 | 2 | 2 | 40 | .35 | .062 | 25 | 27 | .47 | 97 | .07 | 7 | 1.57 | .02 | .10 | 2 |
| 13286 91-4061 | 1 | 31 | 47 | 109 | .3 | 25 | 10 | 455 | 3.14 | 8 | 5 | ND | 3 | 22 | .2 | 2 | 2 | 42 | .31 | .066 | 29 | 33 | .60 | 114 | .08 | 14 | 2.10 | .01 | .14 | 1 |
| 13286 91-4062 | 2 | 39 | 47 | 115 | .5 | 20 | 11 | 711 | 3.04 | 13 | 14 | ND | 1 | 44 | .2 | 2 | 4 | 38 | .58 | .089 | 79 | 31 | .56 | 188 | .06 | 17 | 2.05 | .01 | .14 | 1 |
| 13286 91-4063 | 1 | 24 | 38 | 105 | .3 | 20 | 10 | 508 | 3.08 | 7 | 5 | ND | 4 | 21 | .2 | 2 | 2 | 38 | .33 | .075 | 27 | 29 | .57 | 95 | .08 | 7 | 1.63 | .01 | .14 | 1 |
| 13286 91-4064 | 1 | 18 | 26 | 95 | .3 | 17 | 10 | 563 | 2.87 | 6 | 5 | ND | 1 | 19 | .2 | 2 | 2 | 41 | .25 | .059 | 27 | 31 | .55 | 88 | .07 | 8 | 1.62 | .01 | .13 | 1 |
| 13286 91-4065 | 1 | 26 | 40 | 143 | .4 | 17 | 8 | 461 | 2.80 | 11 | 5 | ND | 4 | 20 | .4 | 2 | 4 | 34 | .35 | .064 | 27 | 27 | .50 | 79 | .07 | 10 | 1.33 | .01 | .15 | 1 |
| 13286 91-4066 | 2 | 24 | 37 | 170 | .4 | 19 | 11 | 598 | 3.24 | 8 | 5 | ND | 2 | 27 | .3 | 2 | 2 | 43 | .34 | .060 | 30 | 32 | .58 | 116 | .08 | 8 | 1.81 | .02 | .15 | 1 |
| STANDARD C | 18 | 57 | 36 | 133 | 7.1 | 71 | 34 | 1048 | 3.99 | 39 | 17 | 8 | 37 | 54 | 18.5 | 14 | 19 | 55 | .50 | .091 | 37 | 59 | .87 | 178 | .09 | 33 | 1.90 | .06 | .15 | 13 |

Samples beginning 'RE' are duplicate samples.

Northern Analytical Laboratories ltd.

August 5,1991

**Work Order #** 13271

Aurum Geological Consultants Inc.
P O Box 5179
Whitehorse, Yukon
Y1A 4S3

**File #** 13271a

**Project #** 74

## Assay Certificate for Samples Provided

| Sample # | Au ppb |
|---|---|
| S91-501 | <5 |
| S91-502 | <5 |
| S91-503 | <5 |
| S91-504 | <5 |
| S91-505 | <5 |
| S91-506 | <5 |
| S91-507 | <5 |
| S91-508 | <5 |
| S91-509 | <5 |
| S91-510 | <5 |
| S91-511 | <5 |
| S91-601 | <5 |
| S91-602 | <5 |
| S91-603 | <5 |
| S91-604 | <5 |
| S91-605 | <5 |
| S91-606 | <5 |
| S91-607 | <5 |
| S91-608 | <5 |
| S91-609 | <5 |
| S91-610 | <5 |
| S91-611 | <5 |
| S91-612 | <5 |
| S91-613 | 70 |
| S91-3007 | <5 |
| S91-3008 | <5 |
| S91-3009 | <5 |
| S91-3010 | <5 |
| S91-3011 | <5 |
| S91-3012 | <5 |
| S91-3013 | <5 |
| S91-3014 | <5 |
| S91-3015 | <5 |

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

Northern Analytical Laboratories ltd.

August 13,1991

**Work Order #** 13286

Aurum Geological Consultants Inc
P O. Box 5179
Whitehorse, Yukon
Y1A 4S3

**File #**13286c

**Project #**74

## Assay Certificate for Samples Provided

| Sample # | Au ppb | |
|---|---|---|
| S91-512 | 212 | — NORTHERN MOST STREAM SAMPLE |
| S91-513 | 36 | |
| S91-514 | 22 | |
| S91-515 | 44 | |
| S91-516 | 45 | |
| S91-517 | 13 | |
| S91-518 | 22 | |
| S91-519 | 78 | |
| S91-520 | 15 | |
| S91-521 | 39 | |
| S91-522 | 23 | |
| S91-523 | 37 | |
| S91-524 | 23 | |
| S91-525 | 38 | |
| S91-526 | 47 | |
| S91-526 | 30 | |
| S91-527 | 30 | |
| S91-528 | 14 | |
| S91-529 | 19 | |
| S91-530 | 18 | |
| S91-531 | 22 | |
| S91-532 | 65 | |
| S91-533 | 42 | |

Certified by ________

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

Northern Analytical Laboratories ltd.

August 13,1991

**Work Order #** 13286

Aurum Geological Consultants Inc.
P.O. Box 5179
Whitehorse, Yukon
Y1A 4S3

**File #**13286d

**Project #** 74

## Assay Certificate for Samples Provided

| Sample # | Au ppb |
|---|---|
| S91-614 | <5 |
| S91-615 | 45 |
| S91-616 | <5 |
| S91-618 | <5 |
| S91-619 | <5 |
| S91-620 | <5 |
| S91-621 | <5 |
| S91-622 | <5 |
| S91-623 | <5 |
| S91-624 | 12 |
| S91-625 | <5 |
| S91-626 | <5 |
| S91-627 | 45 |
| S91-628 | <1 |
| S91-629 | <5 |
| S91-630 | <5 |
| S91-631 | <5 |
| S91-632 | 31 |
| S91-633 | 24 |
| S91-634 | 12 |
| S91-635 | 27 |
| S91-636 | 13 |
| S91-637 | 33 |
| S91-638 | 23 |
| S91-639 | 32 |
| S91-640 | 13 |
| S91-641 | 39 |
| S91-642 | 31 |
| S91-643 | 41 |
| S91-644 | 36 |
| S91-645 | 54 |

Certified by ____________

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Northern Analytical Laboratories ltd.

August 13,1991
Aurum Geological Consultants Inc
P.O. Box 5179
Whitehorse, Yukon
Y1A 4S3

**Work Order #** 13271
**File #**13271c

**Project #**74

**Assay Certificate for Samples Provided**

| Sample # | Au ppb |
|---|---|
| 91-4001 | 48 |
| 91-4002 | 86 |
| 91-4003 | 165 |
| 91-4004 | 65 |
| 91-4005 | 34 |
| 91-4006 | 348 |
| 91-4007 | 15 |
| 91-4008 | 165 |
| 91-4009 | 66 |
| 91-4010 | <5 |
| 91-4011 | <5 |
| 91-4012 | <5 |
| 91-4013 | 17 |
| 91-4014 | 58 |
| 91-4015 | <5 |
| 91-4016 | 19 |
| 91-4017 | 16 |
| 91-4018 | 104 |
| 91-4019 | <5 |
| 91-4020 | <5 |
| 91-4021 | 13 |
| 91-4022 | 84 |
| 91-4023 | 208 |
| 91-4024 | <5 |
| 91-4025 | <5 |
| 91-4026 | <5 |
| 91-4027 | 106 |
| 91-4028 | 60 |
| 91-4029 | 50 |

Certified by____________________

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

Northern Analytical Laboratories ltd.

August 13,1991

**Work Order #** 13271

Aurum Geological Consultants Inc.
P O Box 5179
Whitehorse, Yukon
Y1A 4S3

**File #**13271d

**Project #** 74

## Assay Certificate for Samples Provided

| Sample # | Au ppb |
|---|---|
| 91-4030 | 143 |
| 91-4031 | 85 |
| 91-4032 | 40 |
| 91-4033 | 5 |
| 91-4034 | 29 |
| 91-4035 | 64 |
| 91-4036 | 18 |
| 91-4037 | 42 |
| 91-4038 | 34 |
| 91-4039 | 24 |
| 91-4040 | 15 |
| 91-4041 | 32 |

Certified by ________

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

# APPENDIX D

*Selected References*

5317
Appln No. ~~4017~~

FORM "A"

# THE YUKON QUARTZ MINING ACT

## FOR A FULL CLAIM

---

I, Jim Crawford of Vancouver, B.C.

in the Whitehorse Mining District, make oath and say:—

1. At the hour of 2:30 PM on the 24th day of July 1957, I located the "Chopper" No. 1 mineral claim, situated 15½ miles S 19° E of Truitt Peak, 8 miles south of Magundy River, 12 miles S.E. of Little Salmon Lake.

105 L/13C

(Here describe the position of the claim as nearly as possible, giving the name or names of any claim or claims it may join.)

2. I have placed location posts No. 1 and No. 2 of the legal dimensions on the said claim with the inscription on each post prescribed by The Yukon Quartz Mining Act.

3. I have inscribed on location post No. 1 the following words:— No. 1 Post M.C. Chopper No. 1, No. 2 Post lies 1500' W, claim lies 1500' R of loc line, staked by J. Crawford, July 24, 1957

4. I have inscribed on location post No. 2 the following words:— No. 2 Post M.C., Chopper No. 1, J. Crawford, July 24, 1957

(If a witness post has been used the particulars as to such post should be fully set out.)

5. That I have marked the line between post No. 1 and post No. 2 as required by Section 29 of this Act.

6. That to the best of my knowledge and belief the ground comprised within the boundaries of the said claim is unoccupied and unrecorded by any other person as a mineral claim; that it is not occupied by any building or any land falling within the curtilage of any dwelling house or any land under cultivation, or any land reserved from entry under The Yukon Quartz Mining Act.

7. That the said claim has not heretofore been staked out by any one in my interest.

8. I attach hereto a plan of the location, as required by Section 32 of The Yukon Quartz Mining Act.

Sworn and subscribed to at WHITEHORSE, Y.T.
this 12th day of August 1957 } Jim Crawford

J. Burke
A ~~Commissioner for taking Affidavits~~ Mining Recorder.
in and for the Yukon Territory



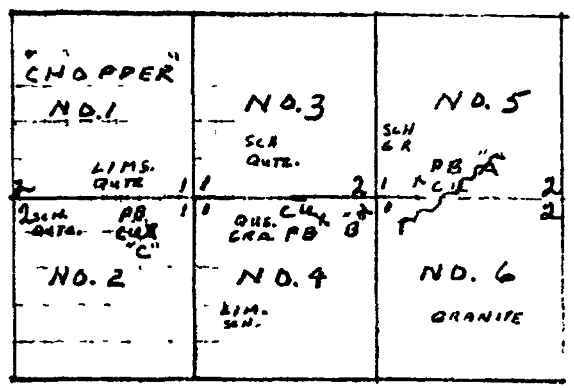
56 — $10.00

"CHOPPER" CLAIMS JULY 24/57

J. CRAWFORD No's 1, 2, 3.
W. MUNDELL NO's 4, 5, 6

SCALE 1" = 1500'

N




"A" SHOWING LIES 15¼ MILES S19°E OF TRUITT PEAK AND EIGHT MILES ... "MAG... RIVER"

AUG 12 1957
Whitehorse, Y.T.
MINING RECORDER

C C C 73111-16

CHOPPER 1-6 73111-16

Glenlyon (105 L/SE.

PLOTTED by A.J.P

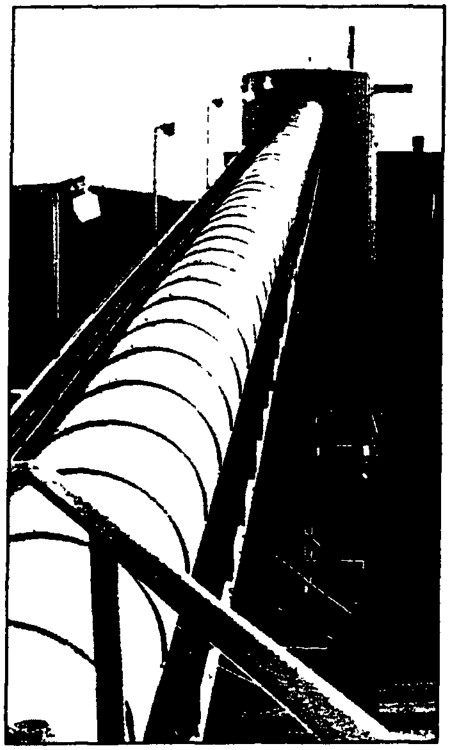
(18)

ASBESTOS CORP. EXPLOR. LTD.

W R [illegible]

# A gathering in the Wilderness:

It was the party of the year, and it took place in the middle of the wilderness about 45 km north of Watson Lake. Some 200 guests came at the invitation of Curragh Resources from as far away as Toronto



to help mark the official opening of the Sa Dena Hes mine on Sept. 23 and 24

The lead-zinc mine, owned by a joint venture partnership between Curragh, 80%, and Hillsborough Resources, 20%, is operated and managed by Curragh. Construction of the project commenced in October, 1990, and the first ore went through the mill on July 25 of this year

The speedy development phase was only one of several unique features of the project. At the opening ceremonies in a large tent at the mine site, Curragh Chairman Clifford Frame stated that a mine of this size and complexity has never before been built so quickly in Canada. In addition, Frame said, referring to the high quality of the concentrate, "...it's the only mine I know of where we've had to dump rock in to knock the grade down to put it through the mill."

Another unique feature? Referring to the working relationship the joint venture has developed with the Kaska Dena Nation, representing the native population of the area, Frame said it was "...the only relationship of its kind" in the Canadian mining industry.

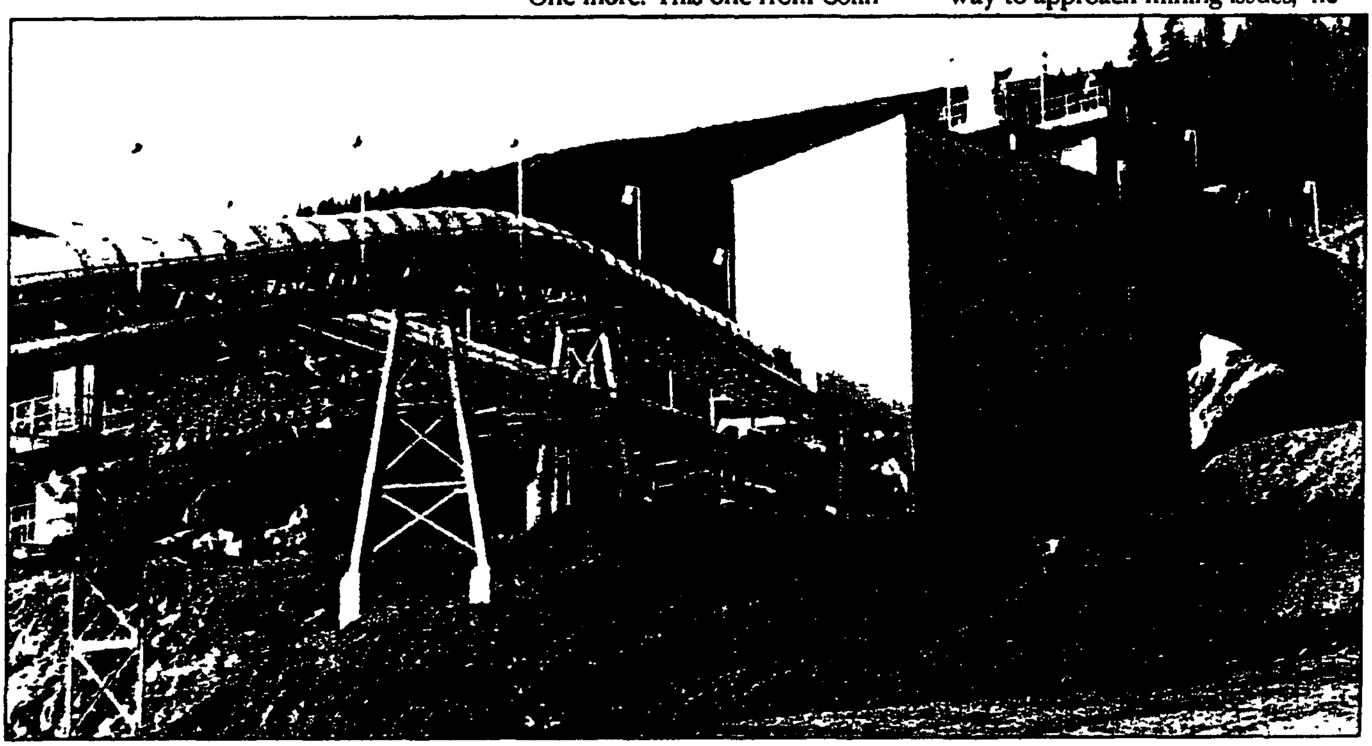
One more? This one from Colin Bener, Executive VP of Operations, who noted that in the space of a month, Curragh Resources had opened the only two new mines in the country this year, the other being the Westray Coal Project in Nova Scotia.

In fact, Sa Dena Hes represents a significant piece of good news for the Territory's mining industry. From an eventual labor force of 120-130 people (down from the current 160) the mine is expected to produce 120,000-150,000 tonnes of concentrate a year from a mill feed of 550,000 tonnes. That represents an increase of almost 30% from 1990 lead/zinc levels in the Territory

The Kaska Dena Nation has an option to purchase a 5% interest in the mine by the end of 1993. There is also an agreement in place which extends to Kaska business, employment and training opportunities. An additional agreement, announced at the opening ceremonies, guarantees 30% of the labour force will be native

Speaking at the opening banquet, Gene Gleason, President of Kaska Inc, said the agreement heralds a new relationship between First Nations and development companies

"Confrontation is not the only way to approach mining issues," he



# Sa Dena Hes opens

said. While acknowledging that the final outcome remains to be seen, Gleason said the important thing about the agreement was that the Kaska now had a part in the future development of the land and the way it was treated. "It shows a growing awareness and appreciation of our native rights," he said.

Mida Donnesay, an elder from the Liard Indian Band, then bestowed this Kaska name to a visibly-moved Clifford Frame: Ano Sêde, *Man who travels all over the place*. The name was originally that of a Kaska chief who had traveled afar.

The entire cost of the project, including acquisition and exploration expenditures, will total $94.5 million. Of this amount, $72.3 million went to site infrastructure, ore processing and handling facilities and construction of underground and open pit. Primary financing came from a $45 million term loan and a $10 million silver loan from the Bank of Nova Scotia.

Enough ore has been delineated to operate for at least nine years with potential to expand reserves considered excellent. Reserves are estimated at 4.9 million tonnes grading 4% lead, 12.7% zinc and 59 grams per tonne silver. In the long term, Curragh envisions a mine life of 20 years.

Reserves are contained in 4 skarn-type deposits, located in 2 main areas, Jewelbox Hill and North Hill. The distance between the two is about 4 km. Jewelbox is the first to be mined, with reserves of 1,615,500 tonnes grading 7.4% lead, 12.1% zinc and 58 grams per tonne of silver. It will be in production until 1994. Gribbler Ridge, with 347,000 tonnes of 11.1% Pb, 16.1% Zn and 106 g/t Ag, will be developed next. Waiting in the wings are the Burnick and Atilla deposits, while exploration continues on a fifth deposit, Porcupine Hill.

Both open pit and underground methods will be used at Sà Dena Hes. About 90,000 tonnes of high grade was removed from Jewelbox Hill by open pit this summer. Part of the Burnick zone will also be mined with this method. Although the pit design has yet to be finalized, Curragh expects to remove 11 million tonnes of ore from Burnick by open pit.

Underground development began on Jewelbox Hill in November of 1990, with a portal collared at the 1408 metre elevation. Variations in the ore zone thickness and orientation in all four deposits will require the use of three stoping methods: room and pillar, cut and fill, and longhole stoping.

Production and development mining is carried out by two boom electric-hydraulic drill jumbos. Ore or waste is loaded by scooptrams into 26-tonne capacity low profile haulage trucks which deliver the material to surface stockpiles near the 1408 adit.

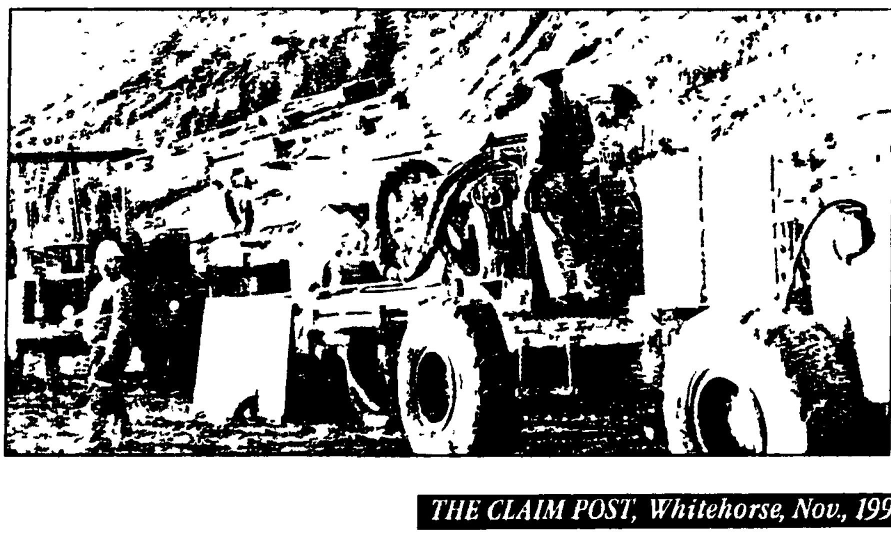
The concentrator is designed to process 1500 tonnes of ore per day at a 22% feed grade. At lower grades the mill is capable of 2500 tonnes per day. Ore is transported 18 km by articulated off-road trucks from the stockpiles to the crusher. There, it is fed through a grizzly equipped with a rock breaker and reduced to minus 20 cm. By conveyor, the crushed material passes on to a semi-autogenous grinding (SAG) mill and a closed circuit ball mill to produce the desired grind of 60% passing 200 mesh. In slurry, the ground ore is pumped to the flotation circuit where it passes through a series of rougher and cleaner flotation cells for both a lead and zinc circuit. Both concentrates are thickened and then de-watered to a shipping moisture content of 6-8%.

The zinc concentrate contains an average 60% zinc at a metal recovery rate of 90%. The lead concentrate contains an average of 70% lead with metal recovery at 93%. The latter also contains silver, averaging 350-450 grams of silver per tonne of concentrate.

CLIFFORD FRAME, Chairman and CEO of Curragh Resources, surveys the completion of his company's latest project. Curragh recently hosted an official opening ceremony at the mine site. *(CP Photos by Loreen Keefe)*

Tailings are deposited in an impoundment area 3 km from the mill site. Solids are contained and effluent is decanted, impounded, and recycled to the mill for use in processing. Tailings are essentially non-acid generating as the percentage of acid-generating minerals is low and the host rock, limestone, acts as a natural acid buffer and may in fact be a net acid consumer, according to early reports from Curragh.

Concentrates are transported 671 km to the port of Skagway, Alaska by custom designed B-train tractor trailer units each carrying four 125 tonne containers. Currently, 12 trucks a day make the trip.



# MT HUNDERE

Trevor Bremner, Dennis Ouellette
NTS: 105 A 10
Coordinates: 60°31'N, 128°53'W
Area: Watson Lake
Access: Road
MINFILE #: 12
Company: Curragh Resources Incorporated, Hillsborough Resources Limited
Commodities: Zinc, lead, silver

## INTRODUCTION

In 1990, Curragh Resources announced its intention to spend $70 million to develop a high-grade zinc-lead-silver mine at Mt Hundere, 54 km north of Watson Lake. The deposit has formed by the replacement of limestone at the sheared contact between Lower Cambrian limestone and phyllite. Proved reserves are approximately 4 million tonnes in 4 zones, with an average grade of 8.45 Pb, 13.2% Zn and 50 g/t Ag. A further 1.2 million tonnes of possible sulphide reserves grading 5.2% Pb and 12.5% Zn have also been identified. The ore is coarse grained and free of impurities, and the waste will be non-acid generating due to the limestone host rock and the relatively low amount of waste sulphides Production is estimated at 100 000 to 150 000 tonnnes of concentrate per year over a mine life of 8.5 years.

## EXPLORATION HISTORY

Previous work on the property was compiled by Archer, Cathro & Associates (1981) Ltd and is documented in the Yukon Minfile. The first claims on Jewelbox Hill were staked in 1962 by prospectors Jake Hundere and Pete Ritco, on behalf of the Frances River syndicate (Dr A Aho). A road to the property was built in 1963, and the claims were explored with bulldozer trenches and six diamond drillholes. Over the next 20 years, a number of Aho's companies surveyed the claim boundaries and explored the property with geochemical and geophysical surveys and bulldozer trenching, and 72 holes were drilled between 1979 and 1982, resulting in the discovery of the north and south zones about 5 km apart. A feasibility study in 1982 recommended a small open pit operation and a 250 ton per day mill. In 1984, Canamax Resources Incorporated purchased and remapped the property and carried out more geochemical and airborne geophysical surveys, and drilled 37 more holes, identifying 3 separate deposits in the area of the south zone (Jewelbox Hill). By the end of 1988 Canamax had completed 186 drillholes and increased the reserves to approximately their present level. Mt Hundere Joint Venture (Curragh Resources 80%, Hillsborough Resources 20%) purchased the property from Canamax and the Kaska Nation acquired a 5% ownership in 1990.

## CURRENT WORK

Commencing in September, 1990, infill drilling was completed on the main zone at Jewelbox Hill. The drilling consisted of 25 diamond drillholes totalling 450 m, and brings the total number of holes on the property to 356. Construction began on a 70 x 22 m concentrator and tailings disposal facilities, and a 28 km haul road was completed from the mine site to the Campbell Highway. Underground work began with the collaring of an upper exploration and ventilation adit at the 1400 m level on the east side of Jewelbox Hill, and a lower development and haulage adit at the 1250 m level which will be accessible to 50 ton trucks.

## GEOLOGY AND MINERALIZATION

High grade sphalerite and galena occur in skarn zones at the sheared contact between Lower Cambrian phyllite and limestone. Highly sheared graphitic phyllite lying immediately above the main limestone body forms a major marker. Outside of the sheared zone, the phyllite is calc-silicate altered and lacks graphite, and the limestone has been altered to pale green andradite garnet-quartz-calcite skarn.

Proved reserves to date are confined to the main zone on Jewelbox Hill (Figure 1). A further 2 million tonnes of possible reserves occur in the Attila and Burnick zones on North Hill, and a high grade mineralized skarn lens beneath Gribbler Ridge (between Jewelbox Hill and North Hill) is known from 1987 drilling.
On Jewelbox Hill the main ore type consists of coarse actinolite skarn with massive sphalerite and galena. Copper-iron skarns and replacements with magnetite, pyrrho-

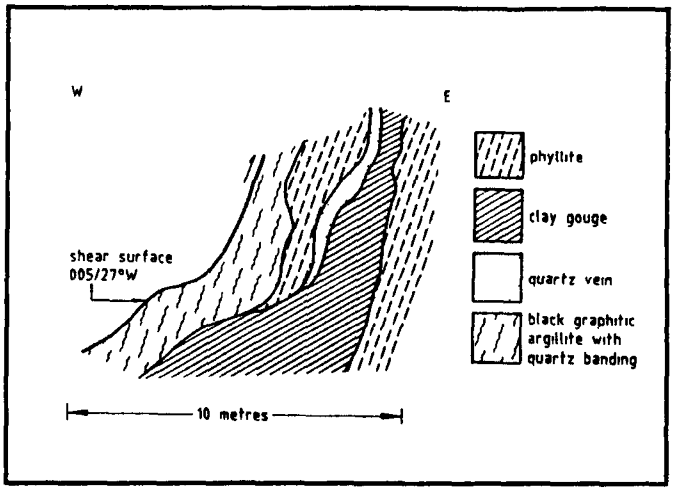
*Figure 1. Coarse grained sphalerite and galena, diamond drill hole MH 90-368.*




E.I. & H.L. ... WHITEHORSE, Y...ON

tite and pyrite also occur. The highest silver values on the property come from prograde diopside-rich skarn on the east side of Jewelbox Hill. The mineralized skarns form lensoid and tubular bodies from 1 to 15 m thick in two sheared, brecciated limestone layers with extensively developed cavernous porosity. Some of the ore occurs in horizontal tubular bodies and in a 50 m chimney of high grade material connecting the upper and lower limestone. Two vertical eastnortheast-trending faults filled with quartz-fluorite breccia occur near ore, and some fluorite extends into in the ore (Figure 2).

*Figure 3. Field sketch of shear zone exposed in north rib near entrance to 1440 m portal.*




## DISCUSSION AND CONCLUSIONS

The mineralization at Mt Hundere is epigenetic and appears to be structurally controlled. Examination of the area around the upper portal on Jewelbox Hill shows that the footwall of the mineralization consists of 10 m of mylonitic graphitic phyllite and clay gouge, cut by curving low-angle shear surfaces which strike about 005° and dip 27° W (Figure 3). Lenticular quartz boudins lie along these shear surfaces. Examination of the area around the Discovery showing on Jewelbox Hill shows low-angle fault duplexes in the limestone immediately overlying actinolite-sphalerite skarn. Both of these fabrics are consistent with eastward-directed thrust faulting. The upper and lower limestones may represent imbricated tectonic slices, with zones of fault breccia controlling the emplacement of the sulphides.

Abbott (1977) described several episodes of deformation in the area. His D2 deformation produced the strong shear fabric seen in the host limestone and adjacent argillite. This deformation consists of low-angle shearing and drag folds with subhorizontal axes. Abbott also referred to thermal metamorphism which was contemporaneous with and/or post-dated the D2 structures and produced the mineralized skarns. On the basis of a dome-shaped uplift in the Mt Hundere area and quartz-albite porphyry dykes on the property, Abbott proposed that the mineralization was related to a buried intrusion, probably of Cretaceous age. However, a whole rock K/Ar age of 50 Ma was reported by Sinclair from a quartz porphyry dyke on North Hill, suggesting that both the igneous activity and the late structures in the area may be Tertiary rather than Cretaceous (Grant Abbott, personal communication).

*Figure 2. Jewelbox Hill looking west, showing upper portal, (top), haul road, and concentrator site (bottom). The gully on the north side of Jewelbox Hill is the topographic expression of the "Fluorite Fault", a normal fault which separates Jewelbox Hill (left) from Gribbler Ridge (right).*

## EXPLORATION POTENTIAL

All of the ore zones remain open. The Attila and Burnick zones on North Hill are not presently being developed as they are contain about half the reserves of the Jewelbox Hill deposit, are lower grade and are lead-poor. However, potential for further reserves exists between the North Hill deposits.

## ACKNOWLEDGEMENTS

Bill Mann (Curragh Resources Inc.) provided information and a tour of the property. Grant Abbott contributed his knowledge of the regional geology and the structure of the property and edited the manuscript. The contributions of these two people are gratefully acknowledged.

## REFERENCES

ABBOTT, J.G., 1987. Structure and stratigraphy of the Mt Hundere area, southeastern Yukon; unpublished MASc thesis, Queen's University, Kingston, Ontario.

## WATSON LAKE MAP-AREA (NTS 105 A)

General Reference: GSC Map 19-1966 by J. Gabrielse, 1966.

| NO. | PROPERTY NAME | OCCURRENCE TYPE | N.T S | STATUS | REFERENCE |
|---|---|---|---|---|---|
| 1 | WATSON | Vein Ag Pb Zn | 105 A 2 | 7 | INAC (1986, p. 38); Morin (1989) |
| 2 | NAZO | Vein Ag Pb Ba | 105 A 2 | 5 | INAC (1986, p. 39); Morin (1989) |
| 3 | CAROL | Work Target | 105 A 2 | 9 | Lord (1944, p. 19) |
| 4 | ALBERT | Work Target | 105 A 2 | 9 | Lord (1944, p. 19) |
| 5 | SAWMILL | Work Target | 105 A 3 | 9 | Lord (1944, p. 19) |
| 6 | HUNDERE | Skarn Pb Zn Ag | 105 A 10<br>105 A 7 | 2 | INAC, (1989); Morin (1989)<br>This Report |
| 7 | RITCO | Skarn Pb Zn Ag | 105 A 10 | 7 | INAC (1986, p. 40) |
| 8 | BAILEY (OSCAR) | Skarn W Cu Mo | 105 A 10 | 2 | INAC, (1989) |
| 9 | PAT | Skarn W Cu | 105 A 15 | 2 | INAC (1981, p. 140) |
| 10 | MARTIN | Skarn W Cu | 105 A 15 | 7 | Yukon Minfile |
| 11 | NOTT | Vein Cu Pb Zn Ag | 105 A 15 | 6 | INAC (1982, p. 93-94; 1986, p. 42, 1988, p. 68) |
| 12 | WARBURTON | Vein Ag Cu Pb Zn | 105 A 9 | 6 | INAC (1985, p. 131, 132); Morin (1989) |
| 13 | HYLAND | Work Target | 105 A 8 | 9 | INAC (1982, p. 94) |
| 17 | CELESTIAL | Work Target | 105 A 8 | 9 | INAC (1982, p. 94) |
| 20 | BLACK | Work Target | 105 A 15 | 9 | INAC (1982, P. 94-94) |
| 21 | MURRAY (RAY) | Work Target | 105 A 15 | 9 | INAC (1981, p. 140) |
| 22 | PEGASUS | Work Target | 105 A 15 | 9 | INAC (1981, p. 141) |
| 23 | GUM BEE | Work Target | 105 A 9 | 9 | Morin et al (1980, p. 51) |
| 24 | EMILY | Work Target | 105 A 15 | 9 | Morin et al (1980, p. 52 |
| 25 | MARK | Vein W | 105 A 15 | 7 | Morin et al (1980, p. 52) |
| 26 | GE | Work Target | 105 A 7 | 9 | INAC (1985, p. 131, 132; 1983, p. 91-92) |
| 29 | AUP | Work Target | 105 A 8 | 9 | INAC (1983, p. 91-92); This Report |
| 31 | MOLLY | Vein Au Mo | 105 A 15 | 7 | INAC, (1989); Morin (1989) |
| 35 | NORTHWEST | Work Target | 105 A 10 | 9 | INAC (1986, p 41) |
| 39 | LIV | Work Target | 105 A 13 | 9 | INAC (1987, p. 104) |

**MT HUNDERE**
**Curragh Resources Inc.**

**Zinc, lead zinc skarn/ replacement**
**105 A 7,10 (6)**
**60°32'N, 128°53'W**
**1989**

MT HUNDERE PROJECT: RESERVE ESTIMATE

| Zone | Reserve (tonnes) | Pb (%) | Zn (%) | Ag (g/t) |
|---|---|---|---|---|
| JEWELBOX HILL | | | | |
| Sulphide (probable): | 1 584 000 | 9.2 | 14 5 | 55 |
| (possible): | 177 000 | 5.3 | 9.6 | 64 |
| Oxide (probable + possible) : | 662 000 | 8 0 | 11.0 | 84 |
| GRIBBLER RIDGE | | | | |
| Sulphide (possible): | 392 000 | 10 4 | 19.1 | 138 |
| NORTH HILL | | | | |
| Sulphide (possible): | 431 000 | 7.4 | 4.8 | 74 |
| BURNICK | | | | |
| Sulphide (possible). | 2 021 000 | 0.4 | 12.4 | 40 |

**References:** Abbott (1981, p. 45-50); INAC (1987, p 104, 1988, p. 67-68)

**Claims:** MICA 1-41; CIMA 13-102; HUN 1-308

**Source:** Information supplied by W. Mann and G. Jilson for 1989 Yukon Mining and Exploration Overview. D. Emond and S. Morison visited the property in 1989.

**Description:**

The skarn zinc-lead-silver deposits at Mt Hundere occur in an isoclinally folded sequence of Lower Cambrian limestone and intercalated phyllites in three main areas. Jewelbox Hill, Gribbler Ridge, and North Hill (Figure 1) The skarn deposits occur on the margins of the limestone bodies Medium to coarse grained sphalerite and galena occur with actinolite, diopside, green garnet, quartz, and calcite While very little iron sulphide is contained in Pb-Zn ore, some iron-copper skarns occur locally and contain magnetite, chalcopyrite, pyrrhotite, and minor pyrite and hematite.

Reserves of each zone calculated by previous consultants on behalf of Canamax Resources Inc. (the previous owner) are shown in Table 1. The skarn zones are up to 30 m thick, and up to several hundred metres long. The Main Zone on Jewelbox Hill is 10 m wide, 20 m deep and 150 m long (over 100,000 tonnes) and contains over 30% combined Pb-Zn. Also on Jewelbox Hill, the Lower, Middle and Upper zones were originally thought to be three stacked lenses. Recent drilling indicates those three to be linked up; the Middle zone could be a chimney linking the Lower and Upper zones and appears to follow the nose of the folded limestone (Figure 2). The Upper Zone tends to be oxidized where close to surface.

**Current Work and Results:**

Curragh Resources Inc. and Hillsborough Resources Ltd. purchased the property from Canamax in 1989 and carried out a large diamond drilling program. Infill drilling of 28 773.1 M in 155 holes confirmed results on NORTH HILL and JEWELBOX HILL for a total of 5.2 million tonnes containing 18.5% combined Pb-Zn and 60 g/t Ag which includes approximately 662 000 tonnes of oxidized ore. Curragh Resources plans to begin open pit production from the Upper Main Zone on Jewelbox Hill as early as 1991 and geotechnical studies are underway including checking of potential tailing pond sites, road sites, hydrological work, acid generation studies on the ore, as well as metallurgical testing, mine planning and design The initial mill rate is estimated at 500,000 tonnes per year expandable to 1 million tonnes (this translates to 1500 to 3000 tonnes per day). Initial mine life is estimated at 10 years.

This property shows good future potential since the deposits at North Hill are open in all directions, and the Attila and Burnick Zones are likely part of the same deposit. Jewelbox Hill deposits are open to the south. Also there are two undrilled targets, Grizzly Hill and Porcupine Hill, which have excellent potential.

From G.S.C. ECO. GEOL. RPT. 36

## 19.2 SKARN ZINC-LEAD-SILVER

| | |
|---|---|
| COMMODITIES | Zn, Pb, Ag (Cu, W) |
| EXAMPLES: Canadian – *Foreign* | Cassiar and Mount Billings Batholiths, Yukon; HPH and Zip deposits, B.C.; Meat Cove, N.S. – *Central Mining District (Hanover), New Mexico, Santa Eulalia, Chihuahua, Mexico, Trepca, Yugoslavia; Yeonhua, Korea* |
| IMPORTANCE | Canada: numerous small subeconomic deposits in northern Cordillera, Vancouver Island, and Appalachians.<br>World: signficant past and current production from Mexico, New Mexico, Yugoslavia, Korea, Japan, California, Argentina, U.S.S.R., China. |
| TYPICAL GRADE, TONNAGE | Canada: less than 1 million tonnes, 10 to 20% Zn or Zn+Pb, 30 to 60 g Ag/tonne.<br>Foreign: some examples of large deposits:<br>Santa Eulalia - 29 million tonnes, 11% Zn, 10% Pb, 200 g Ag/tonne<br>Central Mining District - 18 million tonnes, 14% Zn, 0.3 to 4% Pb, 1% Cu, 70 to 140 g Ag/tonne<br>Stri Trg Mine, Trepca - 12.5 million tonnes, 3.8% Zn, 8.6% Pb, 0.2% Cu, 140 g Ag/tonne<br>Yeonhua I and II - 9.6 million tonnes, 6.6% Zn, 3.0% Pb, 0.1% Cu |
| GEOLOGICAL SETTING | Either in thermal aureoles at contacts between felsic to intermediate intrusive and calcareous sedimentary rocks or along structural pathways in unmetamorphosed rocks distant from an intrusive source. The thermal aureoles are less extensive than in tungsten- and copper-rich skarns. Cordilleran skarns are localized typically where upper Mesozoic plutons discordantly intrude lower Paleozoic outer shelf carbonate-pelite sequences, except on Vancouver Island where the intruded rocks are Paleozoic and Mesozoic oceanic arc-type volcanic-carbonate sequences. In Nova Scotia, the intruded rocks are Precambrian shelf carbonate sequences. |
| HOST ROCKS OR MINERALIZED ROCKS | Most Cordilleran skarns are in contact metamorphosed equivalents of relatively pure limestone beds, impure limestones and calcareous pelites, or regionally metamorphosed equivalents: skarn and hornfels (calc-silicate and biotite-pyrite). On Vancouver Island, skarns are in thick limestone beds between basaltic lava flows and pyroclastic rocks. In Nova Scotia skarns occur in intensely metamorphosed Precambrian marble. |
| ASSOCIATED ROCKS | Felsic to intermediate stocks or plutons: quartz monzonite most common, quartz diorite less common; also leucogranitic plutons and minor intrusions (syenite at Meat Cove). Dykes and sills locally abundant. Border phases may be argillized, and locally greisened or tourmalinized. Quartz veining more abundant within intrusive rocks than in skarn. Intrusive rock is generally not in contact with skarn. |
| FORM OF DEPOSIT, DISTRIBUTION OF ORE MINERALS | Form variable: broadly stratiform skarns follow limestone bedding near plutonic contacts; semiconcordant to elongate discordant bodies occur commonly at lithologic and structural contacts at some distance from plutonic and dyke margins; thin conformable skarn layers in biotite schist. Proximal zinc-lead skarns tend to have relatively high copper and tungsten contents; distal skarns tend to be rich in manganese, silver and lead. |
| MINERALS: Principal ore minerals – *Associated minerals* | Sphalerite (mainly Fe-rich), more abundant than galena.<br>– *Chalcopyrite, scheelite, pyrrhotite, pyrite, arsenopyrite. Fe- and Mn-rich calc-silicate minerals manganoan hedenbergitic pyroxene predominates; andraditic garnet, diopside, hastingsite, epidote, magnetite, vesuvianite, wollastonite. Retrograde minerals: manganiferous actinolite, chlorite, epidote, ilvaite, rhodonite, fluorite, calcite and quartz. At Meat Cove, assemblage of syenitic affinity includes silica undersaturated minerals, e.g. scapolite* |
| AGE, HOST ROCKS | Late Proterozoic to Cretaceous. |
| AGE, ORE | Same as associated intrusive rock: Jurassic to Early Tertiary in Cordillera. Conformable skarns at Mount Billings may be related to an older regional metamorphic event. |
| GENETIC MODEL | Zn, Pb and associated metals may be derived from both pluton and country rocks by a magmatic-hydrothermal system, by convecting groundwater or formational water, or by a combination of both. Metal transport may be effected by a broad range of chemical mechanisms, including fluoride and chloride complexing. Metal deposition controlled mainly by reaction of ore fluid with calcium carbonate in country rocks. Zonation of metals into early, proximal, iron-deficient, tungsten-copper-rich assemblages, intermediate Pb-Zn-Ag-rich assemblages, and late, distal iron-manganese-rich assemblages probably reflects evolution of metasomatic fluid composition away from an igneous heat source. Conformable base metal skarns may develop penecontemporaneously with metamorphic formation of calcareous schist, adjacent to synmetamorphic granitic bodies in high grade metamorphic-migmatitic terrane; they do not represent pre-metamorphic stratiform sulphide deposits. |
| ORE CONTROLS, GUIDES TO EXPLORATION | 1. Relatively thick limestone beds.<br>2. Shallow-dipping pluton-limestone contacts.<br>3. Structural and stratigraphic traps in host rocks.<br>4. Irregularities in pluton-limestone contact, particularly reentrants and troughs.<br>5. Stockwork fracturing along pluton/limestone contact.<br>6. Limestone - leucogranite contacts in high grade metamorphic-migmatitic terrane.<br>7. Some zinc skarns are controlled by fault and/or dyke contacts at some distance from the intrusive contact. |
| AUTHORS | K.M. Dawson, D.F. Sangster |

U.S.G.S Bull. 1693



## DESCRIPTIVE MODEL OF Zn-Pb SKARN DEPOSITS

By Dennis P. Cox

DESCRIPTION Sphalerite and galena in calc-silicate rocks.

GENERAL REFERENCES Einaudi and Burt (1982); Einaudi and others (1981).

GEOLOGICAL ENVIRONMENT

Rock Types Granodiorite to granite, diorite to syenite. Carbonate rocks, calcareous clastic rocks.

Textures Granitic to porphyritic; granoblastic to hornfelsic.

Age Range Mainly Mesozoic, but may be any age.

Depositional Environment Miogeoclinal sequences intruded by generally small bodies of igneous rock.

Tectonic Setting(s) Continental margin, late-orogenic magmatism.

Associated Deposit Types Copper skarn.

DEPOSIT DESCRIPTION

Mineralogy Sphalerite + galena ± pyrrhotite ± pyrite ± magnetite ± chalcopyrite ± bornite ± arsenopyrite ± scheelite ± bismuthinite ± stannite ± fluorite. Gold and silver do not form minerals.

Texture/Structure Granoblastic, sulfides massive to interstitial.

Alteration Mn-hedenbergite ± andradite ± grossular ± spessartine ± bustamite ± rhodonite. Late stage Mn-actinolite ± ilvaite ± chlorite ± dannemorite ± rhodochrosite.

Ore Controls Carbonate rocks especially at shale-limestone contacts. Deposit may be hundreds of meters from intrusive.

Weathering Gossan with strong Mn oxide stains.

Geochemical Signature Zn, Pb, Mn, Cu, Co, Au, Ag, As, W, Sn, F, possibly Be. Magnetic anomalies.

EXAMPLES

Ban Ban, AUQU (Ashley, 1980)
Hanover-Fierro district, USNM (Hernon and Jones, 1968)

## GRADE AND TONNAGE MODEL OF Zn-Pb SKARN DEPOSITS

By Dan L. Mosier

COMMENTS Zinc grade is correlated with lead grade (r = 0.66, n = 30) and with copper (r = 0.61, n = 17). See figs. 61-65.

DEPOSITS

| Name | Country | Name | Country |
|---|---|---|---|
| Aguilar | AGTN | El Mochito | HNDR |
| Ammeberg | SWDN | Falun | SWDN |
| Aravaipa | USAZ | Garpenberg Norra | SWDN |
| Black Hawk | USNM | Garpenberg Odal | SWDN |
| Dolores | MXCO | Groundhog | USNM |

| | | | |
|---|---|---|---|
| Kalvbacken | SWDN | Shuikoushan | CINA |
| Kennecott | USNM | Stollberg | SWDN |
| Langban | SWDN | Svardsio | SWDN |
| McDame Belle | CNBC | Tetyukhe | URRS |
| Meat Cove | CNNS | Tienpaoshan | CINA |
| Mount Hundere | CNYT | Uchucchacua | PERU |
| Nyseter | NRWY | Ulchin | SKOR |
| Parroquio-Magistral | MXCO | Washington Camp | USAZ |
| Rajabasa | INDS | Yanchiachangtze | CINA |
| Ryllshyttan | SWDN | Yeonhwa I | SKOR |
| Sala | SWDN | Yeonhwa II | SKOR |
| Saxberget | SWDN | Zip | CNBC |

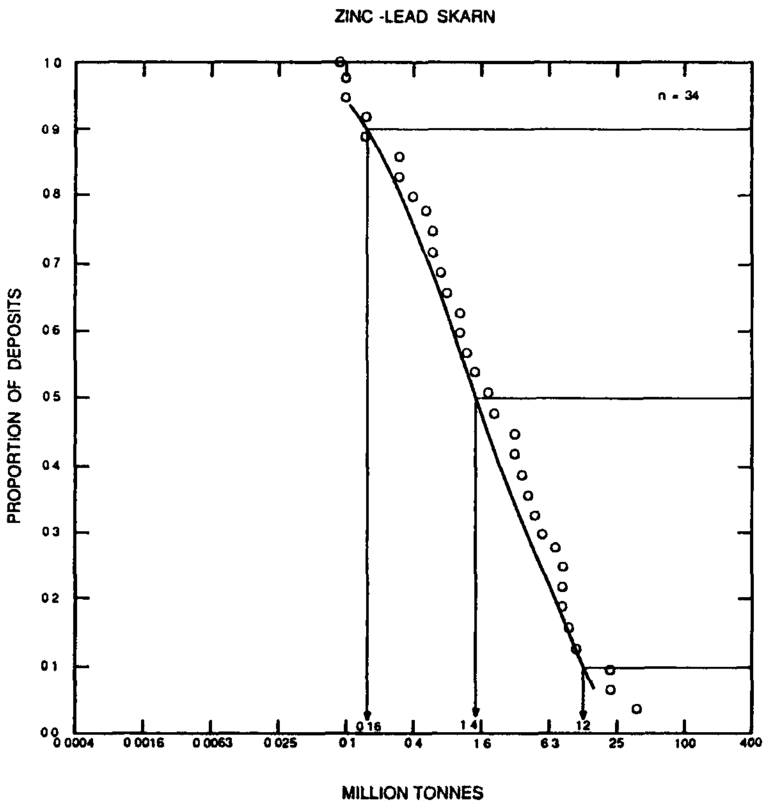



**Figure 61.** Tonnages of Zn-Pb skarn deposits.

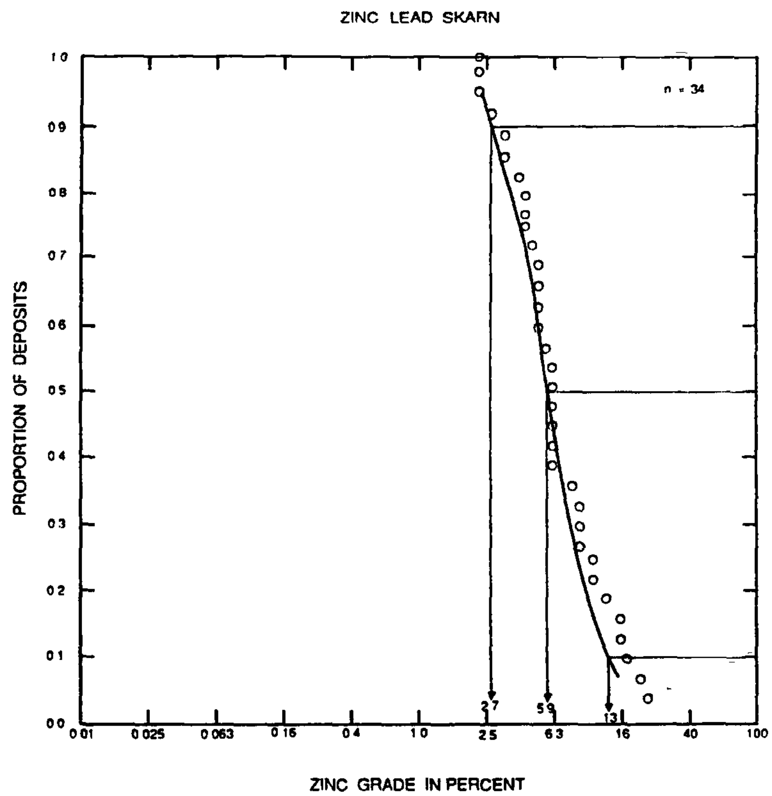



**Figure 62.** Zinc grades of Zn-Pb skarn deposits.

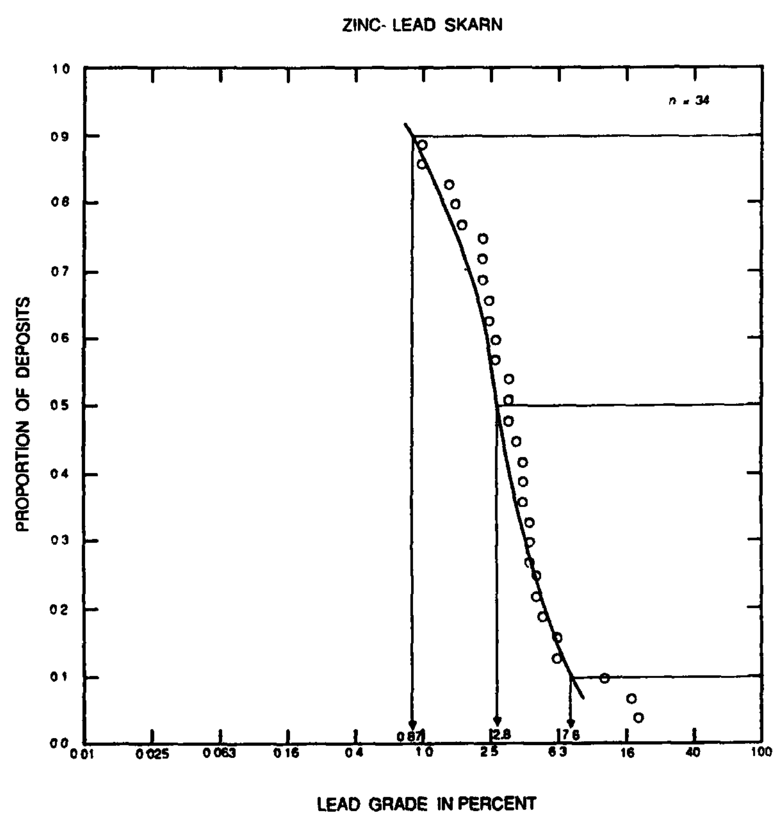



**Figure 63.** Lead grades of Zn-Pb skarn deposits.

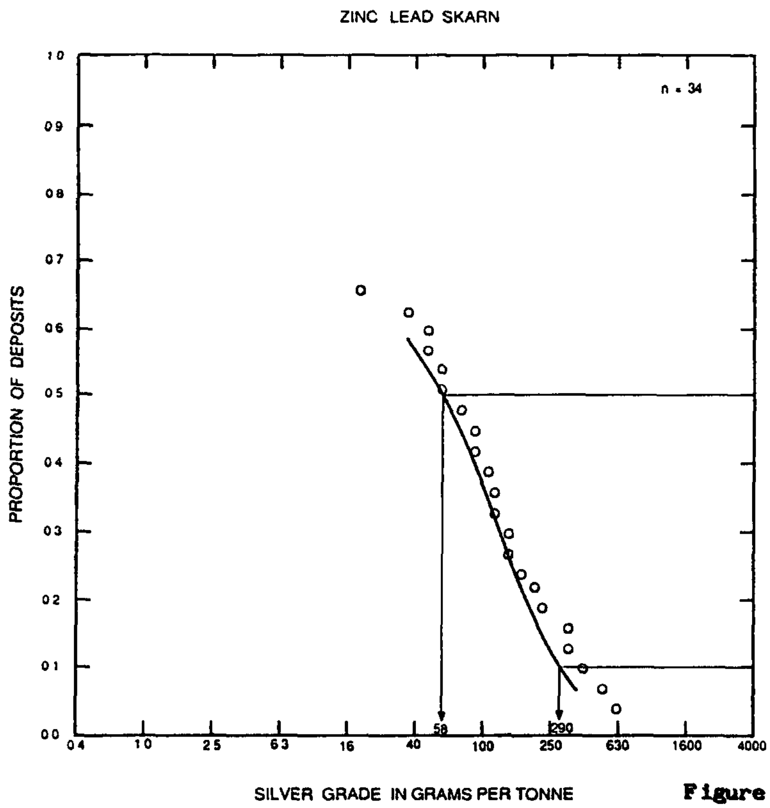



**Figure 64.** Silver grades of Zn-Pb skarn deposits.

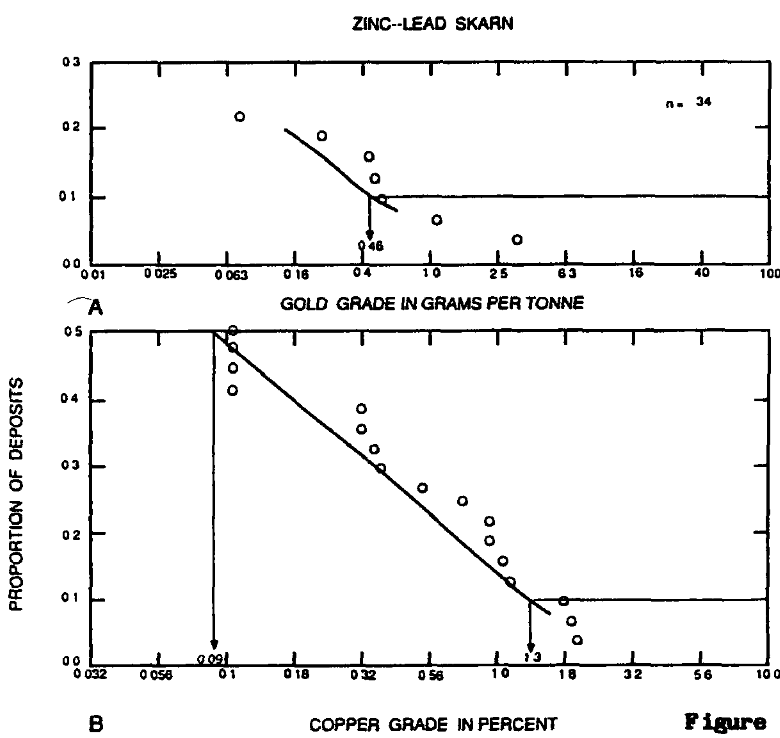
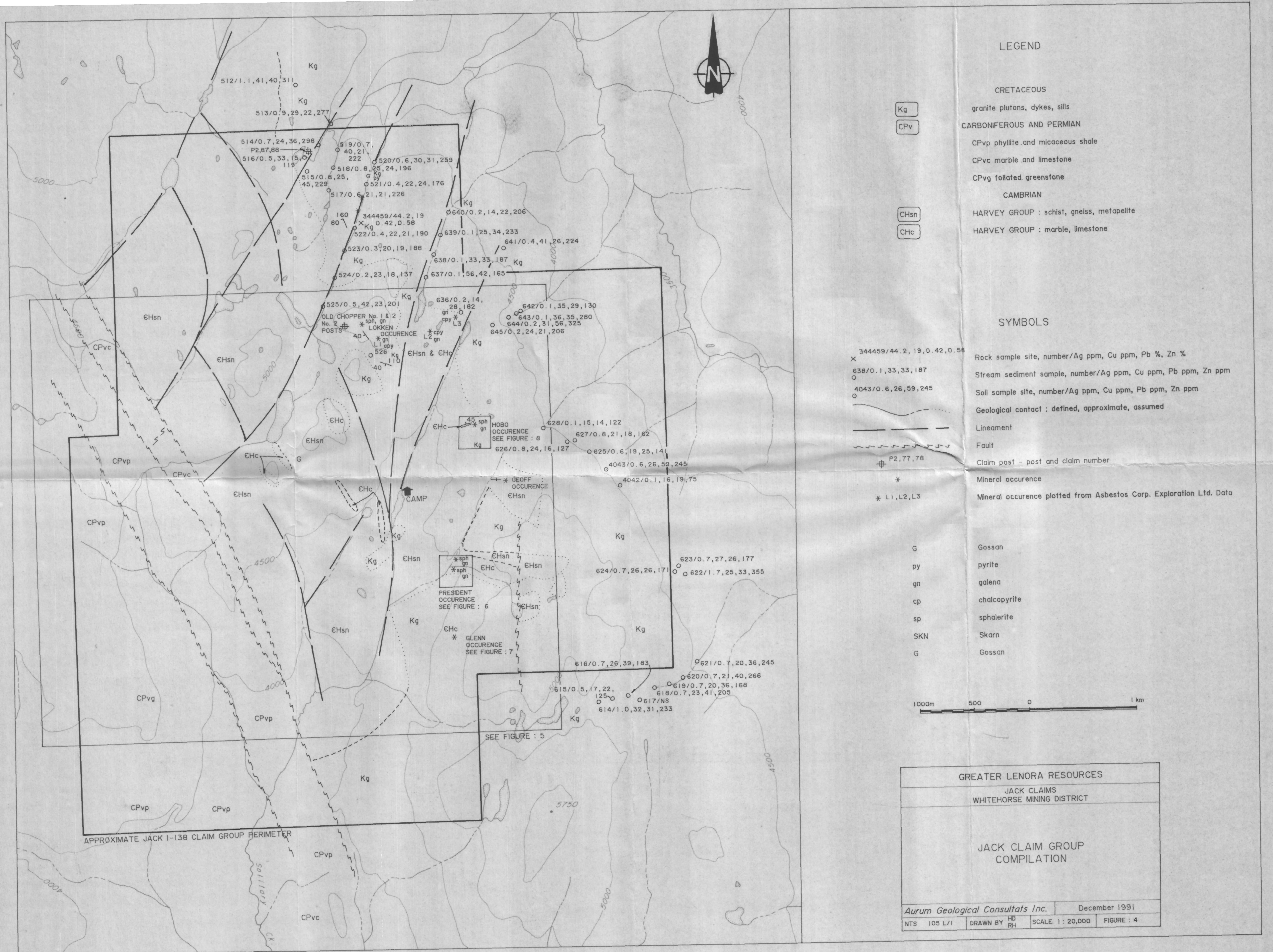
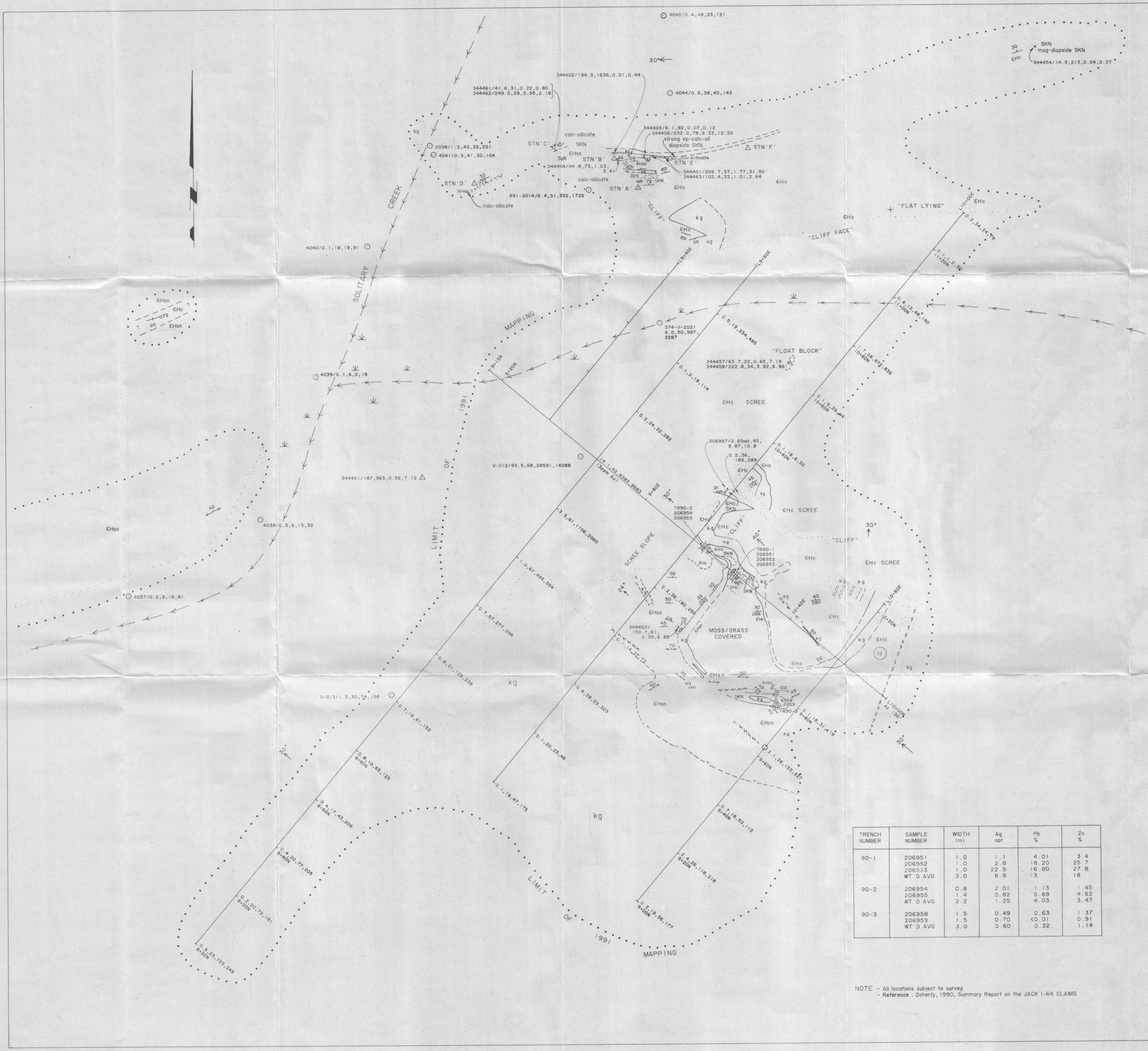



**Figure 65.** Metal grades of Zn-Pb skarn deposits. A, Gold. B, Copper.


LEGEND
CRETACEOUS
Kg granite plutons, dykes, sills
CPv CARBONIFEROUS AND PERMIAN
CPvp phyllite and micaceous shale
CPvc marble and limestone
CPvg foliated greenstone
CAMBRIAN
CHsn HARVEY GROUP : schist, gneiss, metapelite
CHc HARVEY GROUP : marble, limestone
SYMBOLS
344459/44.2,19,0.42,0.58 Rock sample site, number/Ag ppm, Cu ppm, Pb %, Zn %
638/0.1,33,33,187 Stream sediment sample, number/Ag ppm, Cu ppm, Pb ppm, Zn ppm
4043/0.6,26,59,245 Soil sample site, number/Ag ppm, Cu ppm, Pb ppm, Zn ppm
Geological contact : defined, approximate, assumed
Lineament
Fault
P2,77,78 Claim post - post and claim number
Mineral occurence
L1,L2,L3 Mineral occurence plotted from Asbestos Corp. Exploration Ltd. Data
G Gossan
py pyrite
gn galena
cp chalcopyrite
sp sphalerite
SKN Skarn
G Gossan
1000m 500 0 1 km
GREATER LENORA RESOURCES
JACK CLAIMS
WHITEHORSE MINING DISTRICT
JACK CLAIM GROUP
COMPILATION
Aurum Geological Consultats Inc.
December 1991
NTS 105 L/I
DRAWN BY HD RH
SCALE 1 : 20,000
FIGURE : 4
N
512/1.1,41,40,311
513/0.9,29,22,277
514/0.7,24,36,298
P2,87,88
516/0.5,33,15,119
515/0.8,25,45,229
517/0.6,21,21,226
518/0.8,25,24,196
519/0.7,40,21,222
520/0.6,30,31,259
521/0.4,22,24,176
344459/44.2,19 0.42,0.58
522/0.4,22,21,190
523/0.3,20,19,188
524/0.2,23,18,137
525/0.5,42,23,201
640/0.2,14,22,206
639/0.1,25,34,233
641/0.4,41,26,224
638/0.1,33,33,187
637/0.1,56,42,165
636/0.2,14,28,182
642/0.1,35,29,130
643/0.1,36,35,280
644/0.2,31,56,325
645/0.2,24,21,206
OLD CHOPPER No. 1 & 2
No. 2 POSTS
LOKKEN OCCURENCE
HOBO OCCURENCE SEE FIGURE : 8
628/0.1,15,14,122
627/0.8,21,18,182
626/0.8,24,16,127
625/0.6,19,25,141
4043/0.6,26,59,245
4042/0.1,16,19,75
GEOFF OCCURENCE
CAMP
PRESIDENT OCCURENCE SEE FIGURE : 6
GLENN OCCURENCE SEE FIGURE : 7
623/0.7,27,26,177
624/0.7,26,26,171
622/1.7,25,33,355
621/0.7,20,36,245
620/0.7,21,40,266
619/0.7,20,36,168
618/0.7,23,41,205
616/0.7,26,39,183
615/0.5,17,22,125
617/NS
614/1.0,32,31,233
SEE FIGURE : 5
APPROXIMATE JACK 1-138 CLAIM GROUP PERIMETER
Solitary Ck
5000
4500
4000
5750

APPROXIMATE JACK 1-138 CLAIM GROUP PERIMETER
OLD CHOPPER
HOBO OCCURENCE
FIGURE : 8
GEOFF OCCURENCE
PRESIDENT OCCURENCE
FIGURE : 6
GLENN OCCURENCE
FIGURE : 7
CAMP
CAMP LAKE
CREEK
LEGEND
CRETACEOUS
Kg granite
CARBONIFEROUS AND PERMIAN
CPvp phyllite and micaceous shale
CPvc marble and limestone
CPvg foliated greenstone
LOWER CAMBRIAN
ЄHsn HARVEY GROUP : schist and gneiss
ЄHc HARVEY GROUP: limestone, marble
SYMBOLS
distribution of outcrop
geological contact : defined, approximate, assumed
lineament
fault
P1,53,54 claim post No. 1, Jack 53 & 54
minor fold, plunge direction
4500 contour interval
lake, creek
344465/0.9,5, 0.10,0.04 rock sample site / Ag ppm, Cu ppm, Pb ppm, Zn ppm (width m)
52 attitude of foliation
60 attitude of structure/bedding
mineral occurence
L1,L2,L3 mineral occurence plotted from Asbestos Corp. Exploration Data
grid
G gossan
SKN SKARN
sph sphalerite
gn galena
gar garnet
mag magnetite
cc calcite
qtz quartz
diop diopside
cp chalcopyrite
py pyrite
po pyrrhotite
ep epidote
lim limonite
0 50 100 150 200 250 300 350 400
METRES
GREATER LENORA RESOURCES CORP.
JACK CLAIMS
WHITEHORSE MINING DISTRICT
GEOLOGY
and
ROCK GEOCHEMISTRY
Aurum Geological Consultants Inc.
December 1991
NTS : 105L/1
Scale 1 : 5000
Drawn by HD RWH
Figure : 5




| TRENCH NUMBER | SAMPLE NUMBER | WIDTH (m) | Ag opt | Pb % | Zn % |
|---|---|---|---|---|---|
| 90-1 | 206951 | 1.0 | 1.1 | 4.01 | 3.4 |
| | 206952 | 1.0 | 2.8 | 18.20 | 25.7 |
| | 206953 | 1.0 | 22.9 | 16.80 | 27.8 |
| | WT'D AVG | 3.0 | 8.9 | 13 | 18 |
| 90-2 | 206954 | 0.8 | 2.01 | 1.13 | 1.45 |
| | 206955 | 1.4 | 0.82 | 5.69 | 4.62 |
| | WT'D AVG | 2.2 | 1.25 | 4.03 | 3.47 |
| 90-3 | 206958 | 1.5 | 0.49 | 0.63 | 1.37 |
| | 206959 | 1.5 | 0.70 | <0.01 | 0.91 |
| | WT'D AVG | 3.0 | 0.60 | 0.32 | 1.14 |

NOTE - All locations subject to survey
- Reference : Doherty, 1990, Summary Report on the JACK 1-64 CLAIMS

## LEGEND

### CRETACEOUS

kg — granite plutons, dykes, sills

SKN — Skarn

### LOWER CAMBRIAN

ЄHsn — Harvey Group : schist, gneiss

ЄHc — Harvey Group : limestone, marble

## SYMBOLS

- Swamp
- Creek with flow directions
- Grid line, Station
- Slope direction and angle
- Helicopter landing site
- Attitude of bedding, structure: inclined, horizontal
- Attitude of foliation, schistosity
- Attitude of jointing, vertical
- Limit of mapping
- Distribution of outcrop
- STN'F' — Survey station, number
- Lithologic contact; defined, approximate, assumed
- Fault, shear zone
- Tr-1 — Trench, number
- 344457 — Rock sample site: chip, grab, float; Number/ Ag ppm, Cu ppm, Pb%, Zn%
- 391-3014 — Soil sample site : grid stations, off grid; Number/ Ag ppm, Cu ppm, Pb ppm, Zn ppm
- 574-V-202/ — Stream sediment sample site, number/ Ag ppm, Cu ppm, Pb ppm, Zn ppm

| | |
|---|---|
| gn | galena |
| sph | sphalerite |
| py | pyrite |
| ep | epidote |
| sil | silica |
| diop | diopside |
| mag | magnetite |

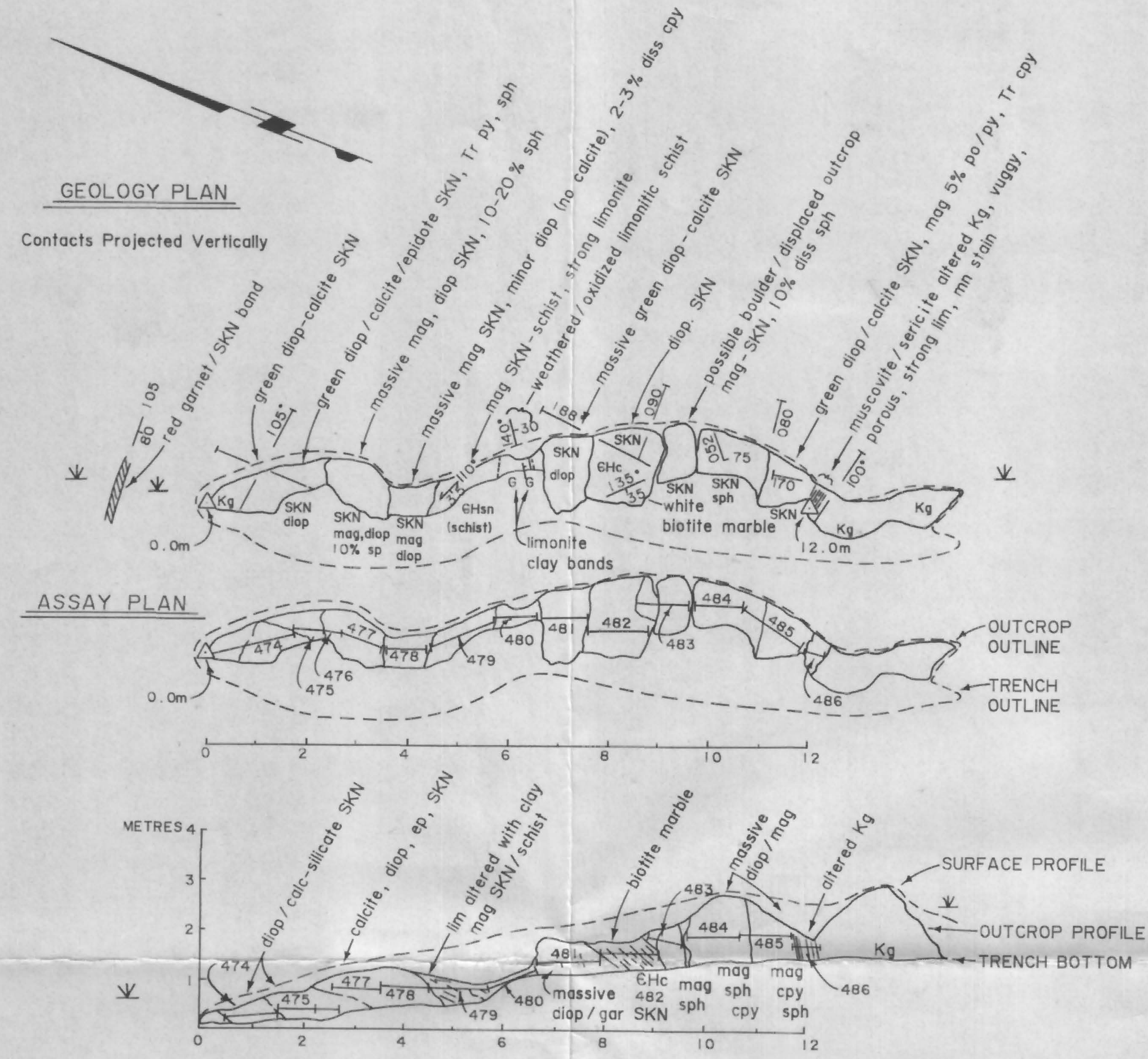
25 20 15 10 5 0 25
METRES

GREATER LENORA RESOURCES CORP.

JACK CLAIMS

# PRESIDENT OCCURENCE COMPILATION

| | | | |
|---|---|---|---|
| Aurum Geological Consultants Inc. | | December 1991 | |
| NTS 105L/1 | Drawn by: HD RWH | Scale 1 : 500 | Figure : 6 |




## GEOLOGY & ASSAY

Vertical Cross Section
( Looking East )

### TRENCH 91 - 1
### ANALYTICAL RESULTS

| Sample Number | Sample Width | Ag ppm | Cu ppm | Pb % | Zn % |
|---|---|---|---|---|---|
| 344474 | 1.4 | 3.3 | 229 | <0.1 | 0.05 |
| 344475 | 0.6 | 1.7 | 202 | <0.1 | 0.19 |
| 344476 | 0.4 | 0.3 | 152 | <0.1 | 0.43 |
| 344477 | 0.8 | 3.6 | 983 | <0.1 | 2.70 |
| 344478 | 1.0 | 6.5 | 4822 | <0.1 | 2.90 |
| 344479 | 1.2 | 16.5 | 2429 | <0.1 | 0.23 |
| 344480 | 1.0 | 2.6 | 1529 | <0.1 | 1.53 |
| 344481 | 0.8 | 1.7 | 222 | <0.1 | 0.40 |
| 344482 | 0.9 | 0.6 | 56 | <0.1 | 0.13 |
| 344483 | 1.3 | 3.7 | 1996 | <0.1 | 3.15 |
| 344484 | 1.0 | 3.8 | 1780 | <0.1 | 2.15 |
| 344485 | 1.1 | 3.2 | 2392 | <0.1 | 5.41 |
| 344486 | 0.2 | 0.5 | 107 | <0.1 | 0.12 |

2.66% Zn over 8.1m (samples 344477–344485)

## LEGEND

### CRETACEOUS

- Kg — Granite
- SKN — Skarn; Diopside, magnetite, calc silicates, calcite

### LOWER CAMBRIAN

- CHsn — Harvey Group : Schist gneiss
- CHc — Harvey Group :Limestone, Marble

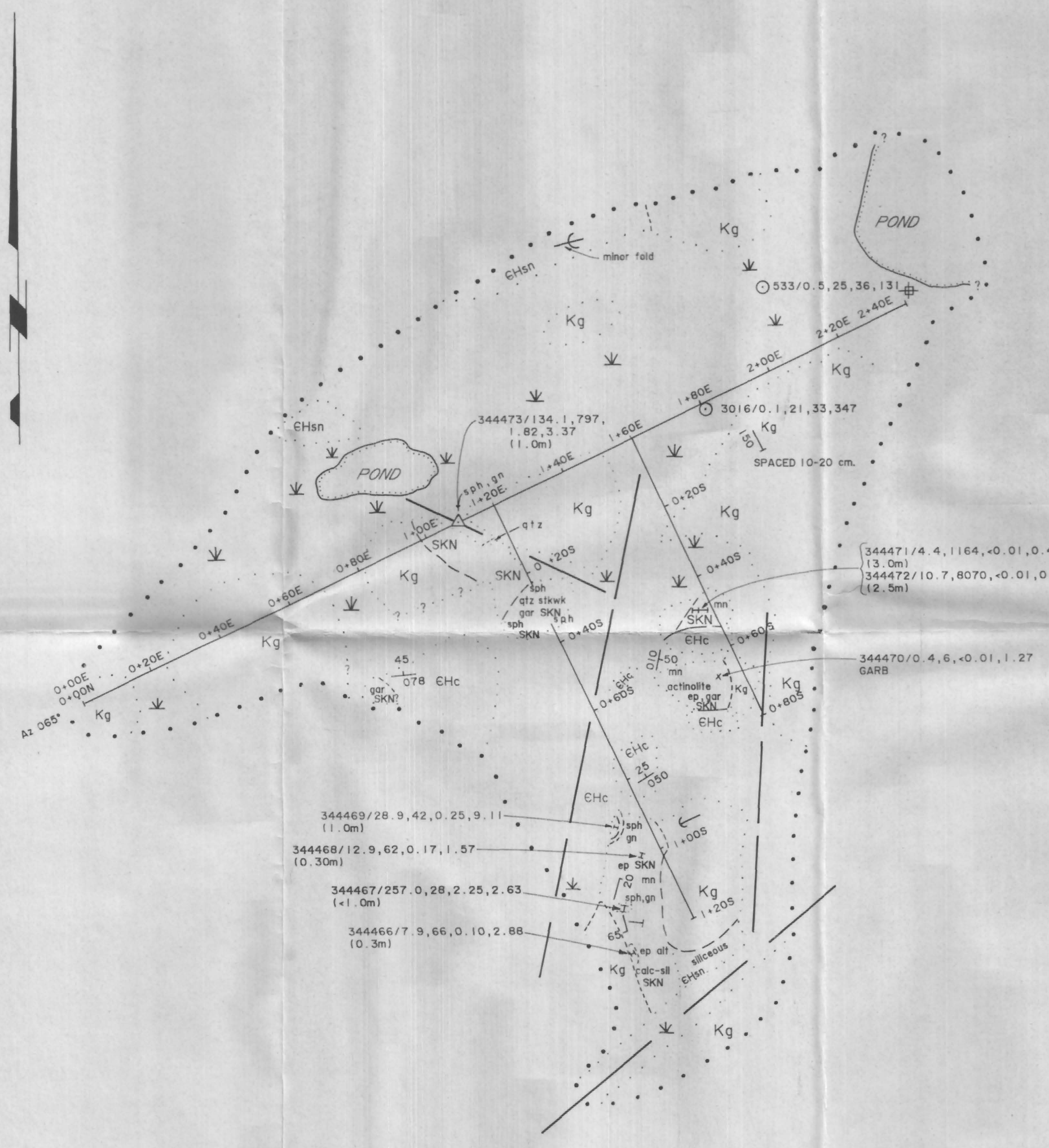
## SYMBOLS

- Trench boundary
- Geological contact, defined, approximate
- 35 — Attitude of bedding
- 35 — Attitude of foliation, schistosity
- Attitude of jointing, vertical, inclined
- 484 — Rock chip sample location, sample number
- Strongly foliated
- G — Gossanous

| | |
|---|---|
| diop | diopside |
| mag | magnetite |
| cpy | chalcopyrite |
| py | pyrite |
| po | pyrrhotite |
| ep | epidote |

0 1 2 3 4 5
METRES

| | | | |
|---|---|---|---|
| GREATER LENORA RESOURCES CORP. | | | |
| JACK CLAIMS | | | |
| GLENN OCCURENCE<br>TRENCH 91 - 1 | | | |
| Aurum Geological Consultants Inc. | | December 1991 | |
| NTS 105L/1 | Drawn by HD / RWH | Scale 1 : 100 | Figure : 7 |




## LEGEND

### CRETACEOUS

| | |
|---|---|
| Kg | Granite plutons, Dykes, Sills |
| SKN | Skarn |

### LOWER CAMBRIAN

| | |
|---|---|
| ЄHsn | Harvey Group : Schist gneiss |
| ЄHc | Harvey Group : Limestone, Marble |

## SYMBOLS

| | |
|---|---|
| | Limit of mapping |
| | Distribution of outcrop |
| | Geological contact : defined, approximate, assumed |
| | Glacial striae |
| | Lineament |
| 2+00E | Grid line, Station |
| | Swamp |
| 25/050 | Attitude of bedding, Structure |
| 65 | Attitude of jointing : Inclined, Vertical |
| | Pond |
| 344469 (1.0m) | Rock sample site : Chip, Grab<br>Number/ Ag ppm, Cu ppm, Pb %, Zn %<br>(Width) |
| 3016 | Soil sample site,<br>Number/Ag ppm, Cu ppm, Pb%, Zn % |
| | Claim post |
| gn | galena |
| sph | sphalerite |
| ep | epidote |
| qtz | quartz |
| gar | garnet |
| stkwk | stockwork |
| mn | manganese (stain, gossan) |

50 40 30 20 10 0 50
METRES

GREATER LENORA RESOURCES CORP.

JACK CLAIMS

HOBO OCCURENCE
COMPILATION

| | | | |
|---|---|---|---|
| Aurum Geological Consultants Inc. | | December 1991 | |
| NTS: 105L/1 | Drawn by HD RWH | Scale 1 : 1000 | Figure : 8 |

APPROXIMATE JACK 1-138 CLAIM GROUP PERIMETER
525/0.5,42,23,201
636/0.2,14,28,182
sph gn
L1 sph, gn
L2 sph, gn
L3 sph, gn
526/0.1,16,7,88
634/0.2,22,36,279
635/0.1,37,27,293
PI 113,114
633/0.1,31,35,326
531/0.6,26,30,81
532/0.1,14,22,62
632/0.3,31,54,305
PI 33,34
PI 77,78
501/0.5,42,26,156
603/0.5,50,48,280
HOBO OCCURENCE
FIGURE : 8
628/0.1,15,14,122
629/0.1,11,20,108
612/0.8,25,18,276
611/0.5,23,57,255
228/0.5,32,29,259
610/1.2,27,54,413
630/0.1,11,10,96
631/0.1,18,15,92
2043/0.8,54,19,136
225/0.2,48,13,270
604/0.6,38,67,396
609/0.7,27,74,382
605/0.8,36,59,448
220/0.5,36,20,149
227/0.9,36,50,302
608/0.7,27,68,420
606/0.8,41,69,459
CAMP SITE
GEOFF OCCURENCE
530/0.4,27,11,103
529/0.2,22,11,86
506/0.5,22,19,180
527/0.8,50,29,398
PI 35,36
224/0.3,29,17,116
2028/0.7,37,22,116
502/0.8,55,68,318
607/0.6,25,78,354
528/0.6,56,15,132
2029/0.7,30,18,120
219/0.4,46,17,146
2040/0.3,34,14,96
2030/0.4,31,15,105
CAMP LAKE
205/0.5,23,16,141
222/0.8,58,42,232
223/0.5,46,21,180
PI 51,52
PI 37,38
218/0.9,61,48,338
201/1.2,30,17,163
503/0.7,51,41,253
602/0.6,27,17,161
221/0.3,35,18,188
2031/0.2,18,10,68
2038/1.2,43,35,251
217/1.0,80,46,333
2042/0.6,38,11,105
202/6.0,50,987,2287
507/1.9,38,93,271
PI 38,39
2033/0.2,16,9,76
2032/0.6,30,12,125
504/0.4,40,20,245
209/0.5,49,8,107
216/0.5,32,25,225
PRESIDENT OCCURENCE
FIGURE : 6
601/0.3,28,30,137
PI 105,106
208/0.6,29,10,90
613/0.6,44,39,282
2039/2.1,36,340,641
215/0.9,41,25,258
3052/1.5,36,319,931
214/2.3,43,303,997
508/1.0,52,57,314
210/0.6,35,15,176
511/0.9,38,158,294
509/0.5,41,26,149
213/1.8,27,211,540
510/0.3,26,24,119
PI 40,41
GLENN OCCURENCE
FIGURE : 7
505/0.3,49,8,67
212/1.3,35,106,511
206/0.6,28,18,108
211/1.2,36,120,549
207/0.6,219,34,285
PI 42,43
3051/1.6,39,321,965
SOLITARY CREEK
203/0.7,18,31,116
204/1.1,27,18,159
LEGEND
GSC Regional site sample numbers & results
220/0.5,36,20,149 Stream sediment sample location, Number / Silver (ppm), Copper (ppm) Lead (ppm), and Zinc (ppm)
NS No sample
LOKKEN Mineral occurence (L1→L3 plotted from Asbestos Corp. data)
PI 33,34 Claim post, number
Trench
5000 Elevation contour (contour interval 100')
Lake / pond
sph sphalerite
gn galena
Ag (ppm) Cu (ppm) Pb (ppm) Zn (ppm)
BACKGROUND 0.6 33 33 216
ANOMALOUS 1.4 75 116 456
0 50 100 150 200 250 300 350 400
METRES
GREATER LENORA RESOURCES CORP.
JACK CLAIMS
STREAM SILT GEOCHEMISTRY
SILVER (ppm), COPPER (ppm),
LEAD (ppm) & ZINC (ppm)
Aurum Geological Consultants Inc.
December 1991
NTS 105L/1
Scale 1 : 5000
Drawn by HD RWH
Figure : 9


* sph, gn
L1
* sph, gn
L2
* sph, gn
L3
* sph, gn
4047
4015/0.6,24,52,131
4014/0.1,10,11,62
4013/0.1,21,12,71
4012/0.1,23,24,49
4011/0.1,9,11,24
4010/0.2,26,29,146
4009/0.1,19,14,94
4008/0.2,9,6,21
4007/0.1,13,17,38
4006/0.1,11,18,53
4005/0.1,11,4,32
4004/0.1,16,16,57
4003/0.1,11,31,75
4002/0.1,18,22,76
4001/0.2,39,28,81
FIGURE : 8
HOBO OCCURENCE
sph
gn
3001/0.2,26,45,187
3002/0.1,25,16,94
120/0.6,29,35,39
119/3.8,47,1291,783
118/0.1,21,49,57
117/0.2,12,12,27
116/0.4,27,30,38
115/0.4,37,79,110
114/0.1,11,12,42
113/0.1,10,9,25
112/0.2,16,10,54
111/0.1,15,20,64
110/0.3,21,15,117
109/0.1,14,12,34
108/0.3,23,15,69
107/0.1,29,23,99
106/0.6,61,23,614
105/0.5,64,16,89
104/0.5,31,16,68
103/0.1,18,15,56
102/0.5,63,19,203
101/0.1,27,6,75
100/0.3,29,6,54
099/0.1,17,14,77
098/0.1,23,15,65
097/0.1,22,14,80
096/0.1,25,20,79
095/0.1,20,14,87
094/0.1,14,12,42
093/0.1,18,15,53
092/0.1,23,17,65
091/0.1,26,19,74
090/0.1,26,26,78
089/0.3,20,19,59
088/0.4,19,14,31
087/0.6,17,8,64
086/0.4,14,16,38
085/0.5,26,30,94
084/0.5,15,18,55
083/0.5,28,29,71
082/0.6,24,44,113
081/0.7,38,15,43
080/0.6,32,35,80
079/0.6,28,43,63
078/0.6,22,16,72
077/0.2,8,5,50
076/0.1,12,9,53
075/0.1,10,5,43
074/0.1,5,1,25
073/0.1,22,15,74
072/0.1,11,10,61
071/0.1,14,63,5
070/0.1,11,8,57
069/0.2,15,12,49
068/0.2,14,10,43
067/0.4,18,11,62
066/1.0,64,14,171
320/0.1,22,11,60
NS
318/0.3,22,17,66
317/0.2,12,14,55
316/0.2,19,12,62
315/0.3,47,13,76
314/0.2,27,13,88
313/0.5,50,16,101
312/0.5,41,17,114
311/0.5,22,17,84
310/0.5,23,20,75
309/0.6,28,24,102
308/0.1,21,15,75
307/0.2,34,19,85
306/0.5,27,31,100
305/0.1,21,14,58
304/0.4,25,14,68
303/0.4,21,7,83
302/0.3,24,15,59
301/0.5,24,13,77
300/0.6,18,14,58
APPROXIMATE JACK 1-138 CLAIM GROUP PERIMETER
039/0.6,12,14,50
040/0.1,22,16,58
041/0.1,18,25,69
042/1.0,101,34,132
038/0.1,21,20,72
043/0.2,18,10,40
037/0.4,34,15,106
036/0.6,40,16,91
035/0.8,21,17,65
034/0.7,19,20,70
033/0.4,20,19,67
032/0.3,38,19,107
053/0.3,21,17,67
052/0.6,36,14,94
051/0.5,27,18,84
050/0.3,15,8,31
049/0.1,10,16,39
048/0.4,24,13,170
047/0.1,4,17,65
046/0.6,24,24,89
045/0.3,17,12,60
044/0.1,18,15,82
054/0.1,15,17,57
055/0.2,18,13,57
056/0.2,14,15,49
057/0.6, 24,14,64
058/0.5,29,10,60
059/0.2,28,22,76
060/0.2,19,8,38
061/0.4,25,25,99
065/0.2,28,4,21
062/0.4,23,13,53
064/0.6,24,28,90
063/0.4,16,13,61
SOLITARY CREEK
3003/0.2,35,16,101
3004/0.2,29,25,111
3005/0.3,37,56,133
3006/0.1,15,20,85
4024/0.1,15,18,86
4023/0.2,18,26,73
4022/0.1,20,24,85
4021/0.2,20,21,76
4020/0.1,22,10,53
4019/0.7,101,39,572
4018/0.3,42,41,374
4017/0.3,102,18,362
4016/0.1,26,326,334
CAMP
CAMP LAKE
GEOFF OCCURENCE
* sph, gn
3007/0.4,36,28,109
3008/0.2,28,44,84
3009/0.3,106,42,195
3010/0.2,15,8,42
3011/0.4,25,29,120
3012/0.4,35,57,142
3013/0.2,31,24,101
001/0.5,27,48,112
002/0.1,18,16,49
003/0.1,18,24,74
004/0.3,22,12,55
005/0.2,23,21,82
006/0.3,19,12,56
007/0.9,18,31,93
008/0.5,43,31,116
009/0.2,21,32,92
010/0.1,18,9,35
011/0.4,15,42,163
4046/0.5,55,23,131
3015/0.6,32,46,169
4041/0.5,41,30,104
4040/0.1,18,19,91
4039/0.1,6,2,18
4038/0.3,6,13,32
4037/0.2,9,18,81
4036/1.3,40,96,130
4035/NS
4034/0.2,25,42,163
4033/1.4,26,241,564
4032/0.2,31,35,110
4031/0.6,17,60,126
4030/0.1,28,27,117
4029/0.1,16,12,67
4028/0.5,85,25,144
4027/0.1,37,25,66
4026/0.1,17,20,72
4025/0.2,11,8,44
012/83.5,68,28591,18288
sph
gn
013/1.2,30,74,158
PRESIDENT
OCCURENCE
FIGURE : 6
014/0.6,16,93,78
015/0.2,19,28,63
016/0.5,28,21,65
017/0.3,27,22,148
018/1.5,42,73,181
3017/0.1,170,18,3810
3018/0.2,36,23,174
3019/0.1,15,23,85
3020/0.1,13,20,69
019/0.2,11,9,26
sph, gn
GLENN OCCURENCE
FIGURE : 7
4053/0.3,55,46,104
4052/0.1,128,32,283
4051/0.1,31,26,142
4050/0.2,29,24,127
4049/0.3,48,42,209
4048/0.1,30,41,201
4054/0.2,18,33,105
4055/0.1,18,30,95
4056/0.3,19,34,85
4057/0.2,19,34,101
4058/0.3,26,45,104
4059/0.3,26,49,111
4060/0.3,20,31,93
4061/0.3,31,47,109
4062/0.5,39,47,115
4063/0.3,24,38,105
020/0.6,25,32,106
021/0.4,24,74,116
022/0.3,17,37,85
4064/0.3,18,26,95
4065/0.4,26,40,143
4066/0.4,24,37,170
023/0.6,25,35,87
024/0.3,18,32,93
025/0.1,16,24,73
026/0.3,10,16,48
027/0.1,7,15,32
028/0.9,21,30,96
030/0.1,19,42,91
031/0.3,17,45,84
029/0.2,19,21,62
4500
4300
4000
5000
5200
64°02
LEGEND
301/0.5,24,16,38 Sample location and number / Silver (ppm), Copper (ppm), Lead (ppm), and Zinc (ppm)
NS No sample
Creek
Lake/Pond
5000 Contour (contour interval 100')
* Mineral occurence (L1-L3 plotted from Asbestos Corp. data)
sph sphalerite
gn galena
Ag (ppm) Cu (ppm) Pb (ppm) Zn (ppm)
BACKGROUND 0.3 21 16 67
ANOMALOUS 0.8 48 50 129
0 50 100 150 200 250 300 350 400
METRES
GREATER LENORA RESOURCES CORP.
JACK CLAIMS
SOIL GEOCHEMISTRY
SILVER (ppm), COPPER (ppm),
LEAD (ppm) & ZINC (ppm)
Aurum Geological Consultants Inc.
December 1991
NTS 105L/1
Scale 1 : 5000
Drawn by HD RWH
Figure : 10