NTS 94C/5E,5W
Lat 56°21'N
Long 125°48'W



# GEOLOGICAL and GEOCHEMICAL REPORT
on the
**ABE PROPERTY**
Aiken Lake area
Omineca Mining District
British Columbia



for

**SWANNELL MINERALS CORPORATION**
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by

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23 February 1993

**SUMMARY**

At the request of the Swannell Minerals Corporation, Reliance Geological Services carried out an exploration program consisting of rock and stream sediment surveys and geological mapping on the ABE property during July and August 1992.

The ABE property comprises twelve contiguous mineral claims totalling 140 units in the Aiken Lake area of the Omineca Mining Division. The property is situated approximately 225 kilometers northwest of Fort St James, B.C., and is accessible by helicopter.

The claims lie in the regionally extensive Mesozoic Quesnel Belt where alkalic plutons commonly host porphyry copper-gold deposits. In the Aiken Lake district, Triassic Takla volcanic rocks are intruded by Triassic-Jurassic alkaline stocks and Cretaceous calk-alkaline stocks of the Hogem Batholith.

The claims are underlain by Triassic-Jurassic Takla volcanics which are intruded by pyroxenite, diorite, monzonite and quartz monzonite of the Triassic-Jurassic Hogem batholith.

Previous work consisted of regional aeromagnetic, soil, and silt sampling surveys, and one short drill hole. Four magnetic highs and one 550 by 1550 meter molybdenum were defined.

In 1991, Swannell contracted a silt sampling, rock sampling, and reconnaissance mapping program. Copper and gold mineralization was encountered in two areas and found to consist of:

a) flat-lying quartz veins carrying sporadic pyrite-chalcopyrite-galena-hematite,
b) fracture-controlled malachite-chalcopyrite-magnetite, and
c) disseminated chalcopyrite-pyrite associated with strong carbonate-chlorite alteration.

The 1992 program identified two target areas:

First: centered around an outcrop which consists of fracture-filled and disseminated chalcopyrite in a chlorite/sericite/K-feldspar altered porphyritic andesite. A one meter chip sample assayed 2202 ppm Cu and 117 ppb Au. The isolated outcrop is in a talus filled valley, and the general area has yet to be investigated.

Second: an open-ended, 400 by 600 meter copper soil anomaly with anomalous gold results forming a peripheral pattern.

Further work consisting of geological mapping, and magnetic and IP geophysics has been recommended to establish drill targets. Contingent on favorable results, diamond drilling is recommended to test the targets at depth.

## TABLE OF CONTENTS

**ABE** Property

## 1. INTRODUCTION

This report was prepared at the request of Swannell Minerals Corporation to describe and evaluate the results of the 1992 geological and geochemical program carried out by Reliance Geological Services Inc on the ABE claim group in the Johanson Lake area of the Omineca Mining District, British Columbia.

The field work was undertaken for the purpose of following up on the 1991 programn and evaluating the potential of the property to host porphyry copper/gold deposits.

Field work was carried out from July 25 to 27, 1992, by Alan Taylor (project geologist), Doug Johannessen (geologist), Brian Chore (geo-technician), and Ted Archibald (prospector). A follow-up program was carried out on August 22, 23, and 26, 1992, by Alan Taylor (project geologist), Reg Faulkner (geologist), George King (geologist), and John Fleishman (prospector). All work was carried out under the supervision of Peter Leriche, P.Geo.

This report is based on published and unpublished information and the maps, reports and field notes of the crew listed above.

## 2. LOCATION, ACCESS and PHYSIOGRAPHY

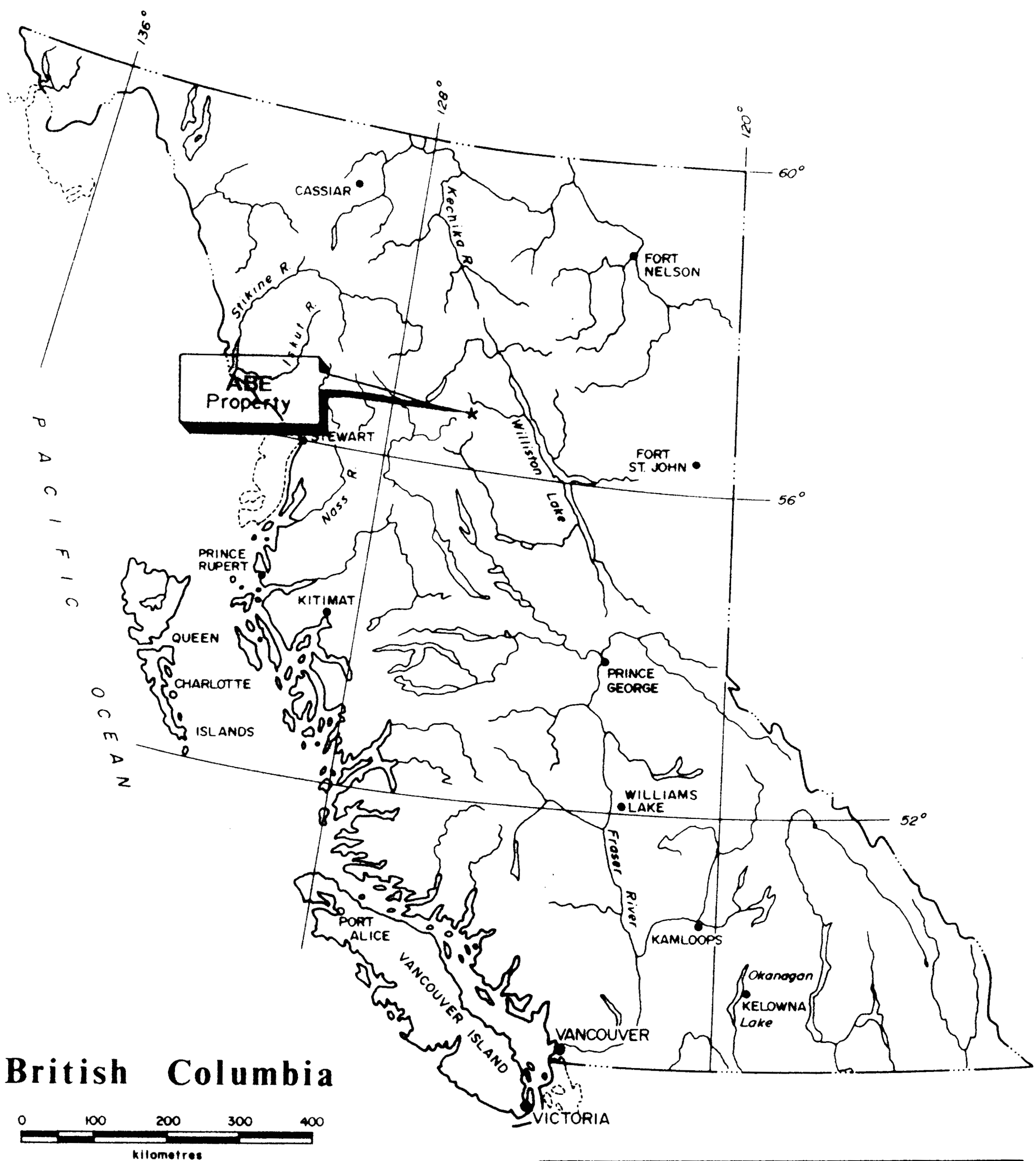
The ABE property is situated in the Omineca Mining Division in the Aiken Lake area, approximately 235 kilometers northwest of Fort St James (Figures 1 and 2).

The claims are located on Map Sheet NTS 94C/5E & 5W, at latitude 56° 21' North, longitude 125° 48' West, and between UTM 6251000 m and 6245500 m North, and UTM 325000 m and 333000 m East.

Road access is via the Omineca Mining Road from Fort St James north to Aiken Lake (approximately 360 km), then by helicopter from the seasonal base at Aiken Lake.

The property is on mountainous terrain with moderate to steep slopes rising from approximately 1320 meters to 2000 meters. The area is sparsely forested with spruce and pine. Scrub fir and alpine vegetation occur above tree-line (± 1600 meters).

Recommended work season is mid-June to early October.

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| SWANNELL MINERALS CORPORATION | | |
|---|---|---|
| **ABE PROPERTY** | | |
| *General Location Map* | | |
| Scale noted above | N.T.S | Drawn by |
| Date JAN. 93 | Geologist | Figure 1 |
| RELIANCE GEOLOGICAL SERVICES INC. | | |

## 3. PROPERTY STATUS

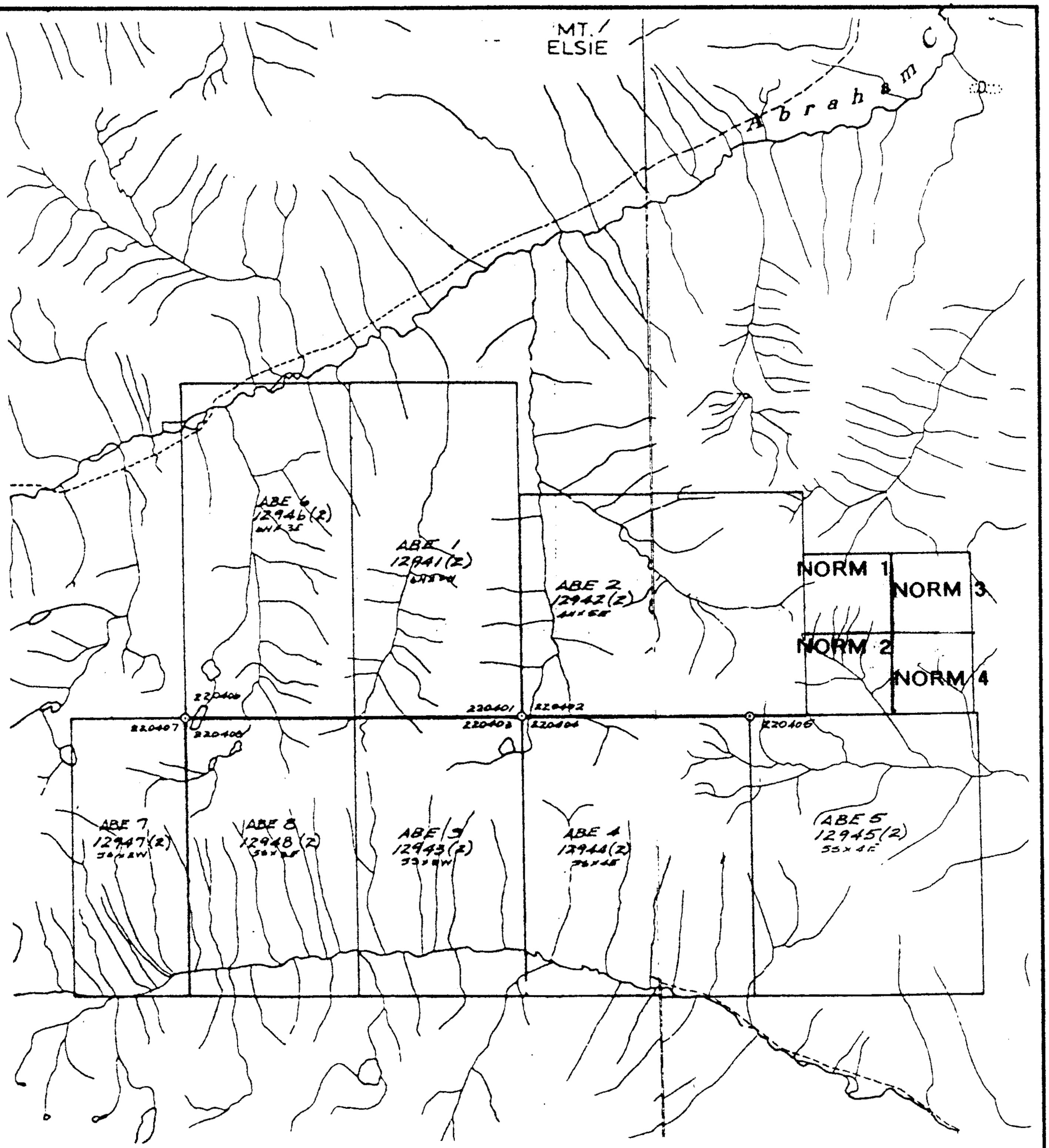
The property consists of twelve contiguous mineral claims (Figure 2) in the Omineca Mining Division. The claims are registered in the name of Major General Resources Ltd and Harvey Keck, and have been optioned to Swannell Minerals Corporation.

Details of the claims are as follows:

| Claim | Record Number | Units | Record Date | Expiry Date |
|---|---|---|---|---|
| Abe 1 | 243091 | 18 | 9 Feb 1991 | 9 Feb 1995 |
| Abe 2 | 243092 | 20 | 9 Feb 1991 | 9 Feb 1995 |
| Abe 3 | 243093 | 15 | 10 Feb 1991 | 10 Feb 1995 |
| Abe 4 | 243094 | 20 | 10 Feb 1991 | 10 Feb 1995 |
| Abe 5 | 243095 | 20 | 9 Feb 1991 | 9 Feb 1995 |
| Abe 6 | 243096 | 18 | 9 Feb 1991 | 9 Feb 1995 |
| Abe 7 | 243097 | 10 | 10 Feb 1991 | 10 Feb 1995 |
| Abe 8 | 243098 | 15 | 10 Feb 1991 | 10 Feb 1995 |
| Norm 1 | 312957 | 1 | 22 Aug 1992 | 22 Aug 1995 |
| Norm 2 | 312958 | 1 | 22 Aug 1992 | 22 Aug 1995 |
| Norm 3 | 312959 | 1 | 22 Aug 1992 | 22 Aug 1995 |
| Norm 4 | 312960 | 1 | 22 Aug 1992 | 22 Aug 1995 |
| Total | | 140 units | | |

The total area covered by the claims is 3500 hectares, or 8645 acres, allowing for overlap.

The writers are not aware of any particular environmental, political or regulatory problems that would adversely affect mineral exploration and development on the ABE property.




SWANNELL MINERALS CORPORATION

# ABE PROPERTY

## CLAIM MAP

| | | |
|---|---|---|
| Scale 1:50,000 | N.T.S. 94C/5W,5E | Drawn by |
| Date JAN. 93 | Geologist | Figure 2 |

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## 4. REGIONAL GEOLOGY

(from Rebagliati, 1991)

"The ABE property lies within the regionally extensive early Mesozoic Quesnel Belt. This 35 km wide belt extends northwesterly for 1200 km and includes equivalent rocks of the Upper Triassic-Lower Jurassic Takla, Nicola, and Stuhini Groups (Mortimer, 1986) (Figures 3 and 4). To the west, deformed and uplifted Permian Cache Creek Group rocks are separated from the Quesnel Belt by the Pinchi Fault Zone. To the east, the Manson Fault Zone separates this belt from the uplifted Proterozoic/ early Palaeozoic Wolverine Metamorphic Complex, and the Mississippian-Permian Slide Mountain and Cache Creek Groups (Garnet, 1978).

In the Mt. Milligan - Johanson Lake district, the Takla Group volcanics are dominated by subaqueous alkalic to subalkalic dark green tuffs and volcanic breccias of andesitic and basaltic composition, interbedded with pyroxene porphyritic flow rocks of similar composition. Intercalated bedded tuffs and argillites are subordinate. Black argillites interfinger with volcanic rocks to the east and west of the central volcanic core. Locally, thick successions of maroon coloured lahars suggest the presence of emergent subaerial volcanic centres.

The volcanic-sedimentary strata of the Quesnel Belt are locally intruded by alkaline syenite, monzonite, and diorite batholiths, stocks and dykes. In the Quesnel Belt, most intrusions are considered coeval and comagmatic with late Triassic-early Jurassic volcanism. Many of the stocks lie along linear trends which are interpreted to reflect fault zones which have localized volcanism and associated stock emplacement.

The Hogem Batholith of Early Jurassic to Cretaceous age is the largest body of intrusive rock within the Omineca Mountains (Armstrong and Garnett 1973) (Figure 4). Takla Group volcanic and sedimentary strata are intruded by the north-south elongate batholith which is, in part, truncated along its western margin by the Pinchi Fault. Numerous satolithic plutons flank the eastern margins of the batholith.

The complexity of the Hogem Batholith is characterized by rock units ranging in composition from diorite to granite. Lithologic changes are rapid to gradational at all scales of mapping.

Garnett, who used the I.U.G.S. classification of 1973 as shown in Table 1 on the following page, described three phases within the Hogem Batholith.

The earliest, Phase I, contains the more basic phases, including pyroxenite, gabbro, diorite, monzodiorite, monzonite, and the "Hogem Granodiorite", and accounts for two-thirds of all rock types mapped. The Hogem Granodiorite is a distinctive leucocratic felsic division, predominantly quartz diorite in composition, but also comprising quartz monzodiorite, quartz monzonite and, more rarely, quartz diorite, tonalite and granite.

The Phase II syenites, such as the Duckling Creek complex, (with migmatitic, compositionally banded, and intrusive varieties) and the leucocratic Chuchi (quartz) syenite, are reported to be intrusive into Phase I rocks.

Phase III rocks include leucocratic varieties (including aplites, pegmatite, varieties of granite, quartz syenite and alaskite). These rocks may be represented by leucocratic late-stage dykes cutting units of Phases I and II.

Numerous porphyry copper prospects occur throughout the Hogem Batholith.

The alkalic plutons of the Quesnel Belt commonly host porphyry copper deposits, which are increasingly being recognized as an important source of gold. It has also been recently recognized that related failed porphyry systems (those that did not form copper deposits) also have the potential to generate disseminated gold deposits (eg: QR and the 66 Zone at Mt Milligan).

The volcanic strata on all of the ABE property claims are intruded by alkalic plutons. Some of these plutons are reported to display some of the geological characteristics which are related to the formation of gold-rich porphyry copper deposits in the Quesnel Belt."

Many auriferous porphyry copper prospects are under active exploration within the Quesnel Belt, and the following deposits have been identified:

Gold-Copper Porphyry Deposits
Quesnel Belt
British Columbia

| Property | No. of Deposits | Reserves/Mineral Inventory Copper($x10^6$lbs) | Gold ($x10^6$oz) |
|---|---|---|---|
| In Production: | | | |
| Copper Mountain (Cassiar) | 5 | 1,600 | .910 |
| Afton (Teck) | 2 | 680 | .970 |
| Exploration/Development Stage | | | |
| Mt Polley (Imperial Metals) | 2 | 875 | 2.000 |
| Galore Creek (Hudsons Bay et al) | 8 | 3,000 | 1.750 |
| Red Chris (Noranda) | 2 | 550 | .450 |
| QR (QPX) | 4 | -0- | .200 |
| Lorraine (Kennco) | 2 | 150 | .100 |
| Mt. Milligan (Continental Gold/Placer Dome) | 2 | 1,680 | 6.376 |
| Kemess (El Condor) | 2 | 1,615 | 6.226 |


LEGEND

- ALKALINE VOLCANIC ROCKS
- SUBALKALINE VOLCANIC ROCKS
- MAINLY SEDIMENTARY ROCKS
- GOLD AND / OR COPPER DEPOSIT

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After Fox et. al. 1976

6A

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# ABE PROPERTY

QUESNEL BELT
UPPER TRIASSIC & LOWER JURASSIC VOLCANIC ROCKS, SIGNIFICANT GOLD AND / OR COPPER DEPOSITS, ASSOCIATED WITH ALKALIC PLUTONS

| | | |
|---|---|---|
| Scale AS SHOWN | N.T.S. | Drawn by |
| Date JAN. 93 | Geologist | Figure 3 |

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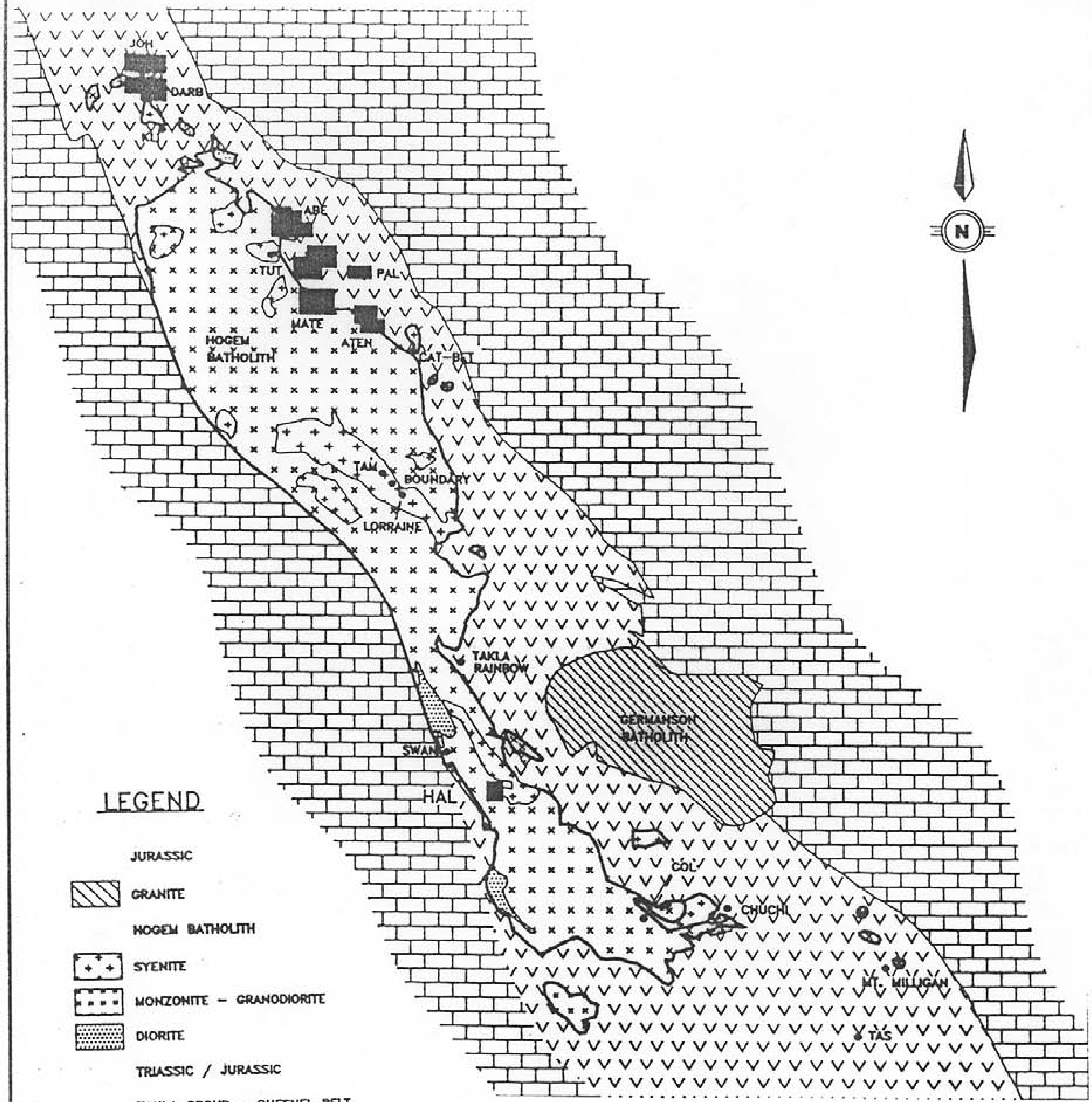


LEGEND

JURASSIC

GRANITE

HOGEM BATHOLITH

SYENITE

MONZONITE – GRANODIORITE

DIORITE

TRIASSIC / JURASSIC

TAKLA GROUP – QUESNEL BELT

BASALT – ANDESITE

PERMIAN

LIMESTONE – SHALE

TAKLA JOINT VENTURE PROPERTY

• PORPHYRY DEPOSITS

SCALE

0 25 50

KILOMETRES

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6B

SWANNELL MINERALS CORPORATION

# ABE PROPERTY

# REGIONAL GEOLOGY

| | | |
|---|---|---|
| Scale as shown | N.T.S. | Drawn by |
| Date JAN. 93 | Geologist | Figure 4 |

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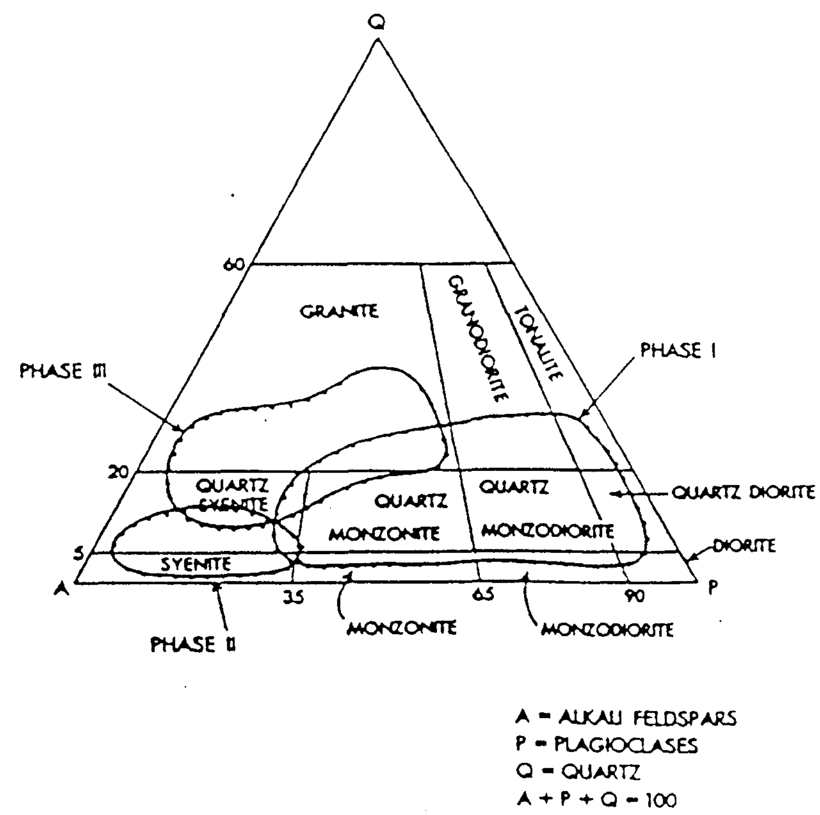
# TABLE 1

SOUTHERN HOGEM BATHOLITH: INTRUSIVE ROCK DIVISIONS

| INTRUSIVE PHASES | PHASE DIVISIONS | UNIT | ROCK VARIETIES |
|---|---|---|---|
| PHASE III LOWER CRETACEOUS | - | 9 | LEUCOCRATIC GRANITE, Alaskite |
| PHASE II MIDDLE JURASSIC TO LOWER JURASSIC | CHUCHI SYENITE | 8 | LEUCOCRATIC SYENITE, Quartz Syenite |
| | DUCKLING CREEK SYENITE COMPLEX | 7 | LEUCOCRATIC SYENITE |
| | | 6 | FOLIATED SYENITE |
| PHASE I LOWER JURASSIC TO UPPER TRIASSIC | HOGEM GRANODIORITE | 5 | GRANODIORITE, QUARTZ MONZONITE, minor Tonalite, Quartz Diorite, Quartz Monzonite, Granite |
| | HOGEM BASIC SUITE | 4 | MONZONITE to Quartz Monzonite |
| | | 3 | MONZODIORITE to Quartz Monzodiorite |
| | | 2 | NATION LAKES PLAGIOCLASE PORPHYRY (a) Monzonite (b) Monzodiorite |
| | | 1 | DIORITE, minor Gabbro, Pyroxenite, Hornblendite |




Hogem batholith intrusive phases in relation to general plutonic rock classification (after I.U.G.S., 1973).

## 5. PREVIOUS WORK

Early work included one short hole diamond drilled on the ABE 4 to test a narrow quartz vein mineralized with pyrite, chalcopyrite, galena and tetrahedrite. This vein had been first sampled during the 1950's by the Geological Survey of Canada during regional geologic mapping.

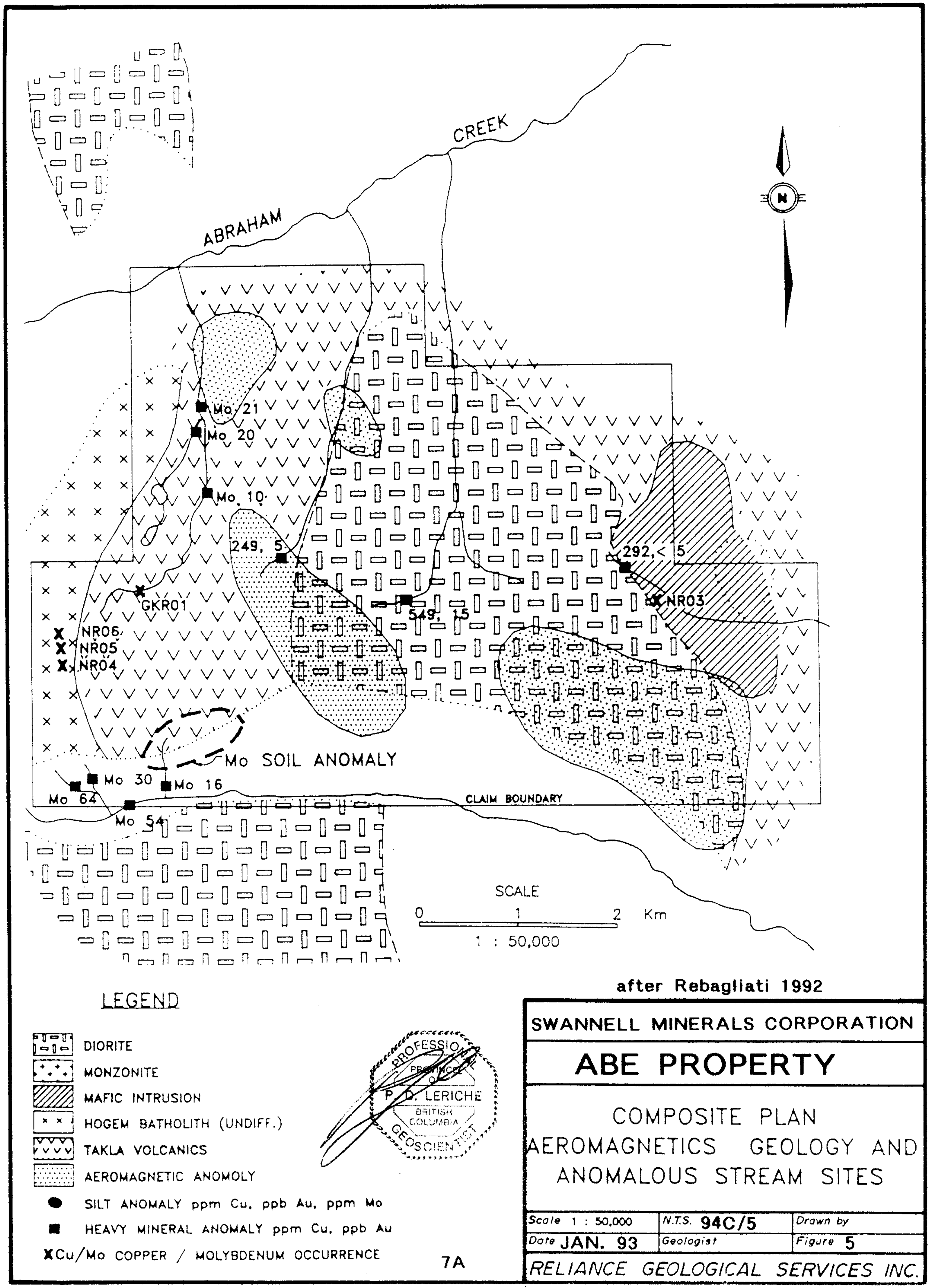
During the 1970's, the ABE claim area was explored by the UMEX-Wenner Gren Joint Venture. The property was covered by regional aeromagnetic, soil and stream sampling surveys.

Four magnetic anomalies were defined (Figure 5): three on the margin of a diorite stock, and one in Takla volcanics near a contact with the Hogem Batholith.

Soil sampling outlined a 550 by 1550 meter molybdenum anomaly on the ABE 7 and 8 claims.

Copper-molybdenum silt anomalies were discovered on three of the streams that drain the property. No samples were analyzed for gold.

In 1991, Swannell contracted Reliance Geological Services to carry out a program of silt sampling, rock sampling, and 1:10,000 reconnaissance geological mapping. Copper mineralization with values up to 1.28% was found in two areas, one of which had anomalous gold values up to 0.365 oz/t. Anomalous copper and gold values were identified in silts from two streams.



ABRAHAM
CREEK
N
Mo 21
Mo 20
Mo 10
249, 5
292, < 5
549, 15
GKR01
NR03
NR06
NR05
NR04
Mo SOIL ANOMALY
Mo 30
Mo 16
Mo 64
Mo 54
CLAIM BOUNDARY
SCALE
0
1
2
Km
1 : 50,000
after Rebagliati 1992
LEGEND
DIORITE
MONZONITE
MAFIC INTRUSION
HOGEM BATHOLITH (UNDIFF.)
TAKLA VOLCANICS
AEROMAGNETIC ANOMOLY
SILT ANOMALY ppm Cu, ppb Au, ppm Mo
HEAVY MINERAL ANOMALY ppm Cu, ppb Au
X Cu/Mo COPPER / MOLYBDENUM OCCURRENCE
PROFESSIONAL
PROVINCE OF
P. D. LERICHE
BRITISH COLUMBIA
GEOSCIENTIST
SWANNELL MINERALS CORPORATION
ABE PROPERTY
COMPOSITE PLAN
AEROMAGNETICS GEOLOGY AND
ANOMALOUS STREAM SITES
Scale 1 : 50,000
N.T.S. 94C/5
Drawn by
Date JAN. 93
Geologist
Figure 5
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## 6. 1992 WORK PROGRAM

Done under B.C.M.E.M.P.R. Approval Number **PRG-1300199-44752**

### 6.1 Methods and Procedures, General

Geological and geochemical surveys were carried out on the claims to follow up on anomalous rock and soil geochemistry identified in previous exploration programs.

A survey grid was laid out over the eastern area of the property. The baseline and tie-line were surveyed using compass, hipchain, and flagging.

Cross-lines were put in at 200 meter line spacings using compass, hipchain, flagging, pickets and metal tags. Stations on baselines and cross-lines were marked at 50 meter intervals using flagging and marked double flagging. Total line surveyed was 21.3 kilometers.

Eleven line kilometers in the northeastern grid area (Lines 98+00N to 108+00N) were cut and marked with embossed metal tags on wooden pickets at 50 meter intervals to prepare for magnetic and induced polarization surveys.

Geological mapping was performed over the grid area at a scale of 1:10,000 (Figure 6).

Thirty-five rock samples were collected and analyzed for gold (FA/AA) and multi-element ICP by International Plasma Laboratory Ltd of Vancouver, B.C.

See Appendix A for rock sample descriptions and Appendix B for analytical reports and techniques.

A polished thin section and a petrographic description of one rock sample was completed by Vancouver Petrographics Ltd, Fort Langley, B.C. (Appendix D)

The current grid was soil sampled at 100 meter station spacings. Using a grub hoe, 158 samples were taken from the B horizon (approximate depth 30 cm), placed into marked Kraft paper bags, and sent to International Plasma Laboratory for analysis.

Forty-one additional soil samples were collected from lines 98+00N, 100+00N, 102+00N, 104+00N, 106+00N, and 108+00N. Samples have not been analyzed.

The analytical results for 2 elements (Cu, Au) were computer-plotted on 1:10,000 scale maps (Figures 7 and 8).

To evaluate any existing geochemical anomalies, frequency distribution histograms based on laboratory data were prepared for each of the aforementioned elements (Appendix C). Anomalous values were chosen using natural breaks in each histogram.

For interpretation purposes, correlation coefficients were calculated (Appendix C) and anomalous ranges for each element were plotted using symbol maps (Figures 7 and 8). All statistical and plotting work was performed by Tony Clark, Ph.D.

## 6.2 Property Geology (Figure 6)

### 6.2.1 Lithologies

The ABE grid area is underlain by Triassic - Jurassic Takla volcanics which are intruded by pyroxenite, diorite, monzonite, and quartz monzonite of the Triassic - Jurassic Hogem batholith.

Approximately 40% of the claim area was mapped, with exposed rock along ridges and steeper slopes accounted for approximately 50% of the surface area.

Takla Group:
Unit 1A is an andesite augite porphyry which is exposed on the ridge east of the ABE grid. Augite porphyry commonly weathers a dark brown and, locally where cut by ankeritic dykes, a bright orangy brown. Mineral constituents include 20% (range 10% to 40%) subhedral to euhedral dark green augite phenocrysts in a fine grained matrix of plagioclase and biotite.

Unit 1B consists of fine grained, light grey to dark green andesitic tuffs found in the west central part of the property adjacent to Unit 4B. Tuffs weather to a dark green to rusty brown color. Ankeritic zones with disseminated 1% pyrite are common.

Intrusive Rocks (Hogem Batholith):

Units 2A, 2B, 2C, and 2D are moderately to strongly magnetic green-brown pyroxenites occurring throughout the southern area of the grid.

Unit 2 is variable in texture and has been classified into four local subdivisions:

Unit 2A: fine to medium grained dark green massive pyroxenite.

Unit 2B: sheared, dark black, fine grained chlorite rich phase.

Unit 2C: local coarse gabbroic phase with plagioclase and pyroxene crystals up to 10 cm in length.

Unit 2D: weathers light grey and contains numerous carbonate veins with minor talc and chrysotile.

Unit 3A is a brown-grey, fine to medium grained diorite which is exposed in isolated outcrops on the grid. Minor chlorite and epidote give the rock a light green color. Diorite occurs both as massive outcrop and as dyke-like bodies.

Unit 3B is a hybrid zone located near the periphery of the pyroxenite. It consists of 10% to 90% subangular to angular xenoliths of pyroxenite set in a felsic matrix. The matrix varies from a very fine grained felsite to diorite in composition and weathers to a white chalky color. This zone is distinctive but possibly correlates with Unit 3A.

Unit 3C is a feldspar porphyry which occurs as sub-vertical dyke-like bodies up to 30 meters wide crosscutting pyroxenite. Due to high silica content, Unit 3C forms prominent ridges and pinnacles. Dykes consist of white, subhedral to euhedral, medium grained plagioclase phenocrysts set in a light grey, fine grained silicic matrix containing minor black amphiboles and biotite.

Unit 4A (monzonite) and Unit 4B (quartz monzonite) are found in the western area of the claim. Unit 4 is a massive, coarsely jointed unit. It weathers to a pinkish-brown color, and consists of both medium grained potassium and plagioclase feldspar phenocrysts set in a biotite rich interstial matrix.

### 6.2.2 Alteration

Pyroxenite units exhibit local alteration consisting of carbonate-talc veinlets, chloritization and minor serpentine development. Rusty brown weathering quartz-ankerite intrusion-type and replacement-type veins are common within shear zones.

Diorite Unit 3A contains minor epidote-chlorite and exhibits weak pervasive propylitic alteration.

A small outcrop of Takla volcanics in a stream cut north of line 108+00N shows strong chlorite-carbonate alteration.

### 6.2.3 Structure

Prominent, generally flat-lying sequences of quartz veins cut all local stratigraphy within the pyroxenite units. Quartz crystals within the veins are commonly in a comblike intergrowth indicating static emplacement.

Numerous dykes and shear zones are located in the northern part of the ABE grid. A fault in the northeastern corner of the grid places andesite tuff stratigraphy adjacent to intrusive rocks.

### 6.2.4 Mineralization

Three types of mineralization have been found on the property:

a) Vein-type:
Relatively flat lying quartz veins up to 1 meter thick carry sporadic pyrite-chalcopyrite-galena-hematite. Small local quartz veins and lenses within the pyroxenite unit carry pyrite-chalcopyrite.

b) Fracture controlled:
Malachite-chalcopyrite-magnetite occurs along fracture planes within the pyroxenite, diorite dykes, hybrid zone (in ultramafic xenoliths), and in quartz-feldspathic lenses of the feldspar porphyry.

c) Disseminated:
Chalcopyrite-pyrite, associated with strong carbonate-chlorite alteration, occurs as disseminations within Takla volcanics and in carbonate veinlets.

## 6.3 Rock Geochemistry (Figure 6)

For complete rock sample descriptions, see Appendix A.

Eleven rock samples returned significant assay results in copper (>1000 ppm) or gold (>300 ppb). For details, see Table 1 on the following page.

Sample 12206 was collected from an isolated outcrop in a talus filled creek valley north of the grid. Mineralization consisted of fracture-filled and disseminated chalcopyrite in a chlorite altered andesite.

A polished thin section was prepared from Sample 12206 (see Appendix D). The section was described as a crushed, altered porphyritic andesite/latite. Plagioclase and chloritized mafic phenocrysts are set in a "crushed" groundmass of sericitic plagioclase, chlorite altered mafics, and introduced K-feldspar. Opaques (5%) include fracture controlled and disseminated pyrite/chalcopyrite, magnetite as diffuse clusters, and specular hematite associated with chalcopyrite.

| Sample | Type | Width (m) | Cu (ppm) | Au (ppb) | Description |
|---|---|---|---|---|---|
| 12357 | Select | - | 2.3% | 14000 | Diorite subcrop with pyrite blebs and 2% chalcopyrite. 47.5 ppm Ag. |
| 12358 | Chip | 0.3 | 2231 | 7 | Hybrid unit with malachite stain. |
| 12360 | Select | - | 2.7% | 4070 | Hybrid unit hosting flat-lying quartz veins mineralized with chalcopyrite and tetrahedrite. 79 ppm Ag. |
| 12367 | Chip | 3.0 | 3261 | < 5 | Shear zone in malachite stain pyroxenite. |
| 12477 | Select | - | 665 | 366 | Pyroxenite with quartz veinlets. |
| 12023 | Chip | 1.0 | 1440 | 202 | Rusty andesite with trace chalcopyrite. |
| 12025 | Chip | 2.0 | 11961 | 1100 | Andesite porphyry with pyrite blebs and malachite/ azurite stain. |
| 12201 | Chip | 0.5 | 272 | 398 | Lapilli tuff with moderate ankerite alteration and disseminated pyrite/ pyrrhotite up to 10% |
| 12203 | Panel | $2m^2$ | 2.4% | 99 | Pyroxenite with strong malachite and limonite stain. |
| 12205 | Chip | 2.0 | 1925 | < 5 | Quartz-feldspar dyke with moderate malachite/ azurite stain. |
| 12206 | Chip | 1.0 | 1744 | 82 | |
| 12206 | (reassayed) | | 2202 | 117 | |

### 6.4 Soil Geochemistry (Figures 7 and 8)

Summary Statistics:

| | Copper | Gold |
|---|---|---|
| Range | 8 to 1207 ppm | 2.5 to 560 ppb |
| Mean | 224.47 | 24.78 |
| Standard deviation | 268.77 | 78.30 |
| Background | 8 to 149 ppm | 2.0 to 5 ppb |
| Low Anomalous | 150 to 299 ppm | 6 to 17 ppb |
| Medium Anomalous | 300 to 599 ppm | 18 to 29 ppb |
| High Anomalous | 600+ ppm | 30+ ppb |

The correlation coefficient chart (Appendix C) shows no significant correlations between gold and other elements. Copper shows a strong correlation with molybdenum, a moderate correlation with silver, and a weak correlation with nickel.

The northeast area of the grid is overlain by a consistent copper anomaly measuring approximately 1500 by 600 meters. The anomaly is open to the north, east, and west, and is cut off sharply to the southwest at the contact between pyroxenite and diorite/hybrid units. Outcrop in the area consists of diorite, hybrid rocks, and andesites. The few small zones with malachite/azurite staining which were found in outcrop are not considered to be the mineralization which is the source of the size, consistency, and strength of the existing anomaly.

Eleven significant gold values in soils are clustered in the northeast area of the grid and are coincident with the copper anomaly described above. Highly anomalous values include 66, 70, 166, 204, 250, 370, 414, 436, and 560 ppb. Outcrop in the area is ankerite altered andesite with local zones of pyrite, chalcopyrite, malachite mineralization. Gold values from two rocks sampled in the area were 1100 and 1440 ppb.
Six anomalous gold values up to 260 ppb occur along the west part of line 100+00N.

## 7. DISCUSSION

Although approximately 60% of the claim area has yet to be investigated, the 1992 exploration program has outlined targets which indicate good potential for extensive porphyry mineralization.

The first target is at rock sample site 12206. Fracture-filled and disseminated chalcopyrite mineralization is in a chlorite/sericite/K-feldspar altered porphyritic andesite. The outcrop is in a talus filled valley, and the general area has yet to be investigated.

The second area is a large, open ended copper/gold soil anomaly. Copper shows moderate to strong correlation with molybdenum and silver, both of which are often associated with porphyry deposits.

## 8. CONCLUSIONS

The ABE property has potential to host a porphyry style copper/ gold deposit because:

* it lies within the Mesozoic Quesnel Belt which hosts several significant porphyry copper/gold deposits;

* the geological environment, which includes diorite, monzonite, and pyroxenite stocks intruding Takla Group volcanic rocks, is favorable;

* porphyry style copper mineralization has been located in outcrop; and

* a large copper/gold soil anomaly, yet to be fully outlined, indicates the presence of buried mineralization.

## 9. RECOMMENDATIONS

a) Perform a total of approximately 25 line kilometers of induced polarization and magnetic geophysics over both target areas.

Contingent on favorable results from these IP surveys, further work would consist of diamond drilling to test the targets at depth.

b) Perform reconnaissance geological mapping and rock sampling over the unmapped portions of the property.

Contingent on favorable results from the mapping and sampling, further work would consist of detailed mapping, soil sampling, and IP surveys to establish drill targets.

<u>CERTIFICATE</u>

I, **PETER D. LERICHE**, of 3125 West 12th Avenue, Vancouver, B.C., V6K 2R6, do hereby state that:

1. I am a graduate of McMaster University, Hamilton, Ontario, with a Bachelor of Science Degree in Geology, 1980.

2. I am registered as a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.

3. I am a Fellow in good standing with the Geological Association of Canada.

4. I have actively pursued my career as a geologist for twelve years in British Columbia, Ontario, the Yukon and Northwest Territories, Montana, Oregon, Alaska, Arizona, Nevada and California.

5. The information, opinions, and recommendations in this report are based on fieldwork carried out under my direction, and on published and unpublished literature. I visited the subject property during July 1992.

6. I have no interest, direct or indirect, in the subject claims or the securities of Swannell Minerals Corporation or Major General Resources Ltd, nor do I expect to receive any.

7. I consent to the use of this report only in its entirety in a Prospectus or Statement of Material Facts for the purpose of private or public financing.

RELIANCE GEOLOGICAL SERVICES INC.

PROVINCE OF
P. D. LERICHE
BRITISH COLUMBIA

**Peter D. Leriche**, B.Sc., P.Geo.

Dated at North Vancouver, B.C., this 23rd day of February 1993.

**REFERENCES**

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## ITEMIZED COST STATEMENT
## ABE PROJECT (J770)

| | | | |
|---|---|---|---|
| Project preparation | | | $ 550 |
| Mobilization and demobilization (includes transportation, and wages) | | | $ 5,080 |
| Consulting | | | $ 500 |
| **Field Crew:** | | | |
| Supervision | | $ 650 | |
| Project Geologist (A. Taylor: Jul 25,26,27, Aug 22,23, 26, 1992) | $ 325/day x 6 days | $ 1,950 | |
| Field Geologists (D. Johannessen & R. Faulkner Jul 25,26,27, Aug 22,23, 26, 1992) | $ 275/day x 12 days | $ 3,300 | |
| Geotechnicians (B. Chore: Jul 25,26,27, 1992) (J. Fleishman: Aug 22,23, 26, 1992) | $ 210/day x 6 days | $ 1,260 | $ 7,160 |
| **Field Costs:** | | | |
| Helicopter | $ 840/hr x 6.3 hrs | $ 5,292 | |
| Communications | $ 50/day x 6 days | $ 300 | |
| Expediting and freight | | $ 400 | |
| Food & accommodation | $ 75/day x 24 days | $ 1,800 | |
| Supplies | $ 18/day x 24 days | $ 432 | |
| Vehicle | $ 30/day x 6 days | $ 180 | $ 8,404 |
| **Assays & Analysis:** | | | |
| 157 soil samples @ $14/sample (Geochem/AA for Au + 30 element ICP) | | $ 2,198 | |
| 35 rock samples @ $17/sample (FA/AA for Au and 30 element ICP) | | $ 595 | |
| Thin section analysis | | $ 150 | |
| 41 soil prep @ 1.50/sample | | $ 61 | $ 3,004 |
| **Report:** | | | |
| Writing, editing, map prep, processing, binding, copying | | | $ 1,875 |
| Administration, incl overhead and profit | | | $ 2,657 |
| Sub-total | | | $ 29,230 |
| plus 7% G.S.T. | | | $ 2,046 |
| TOTAL | | | $ 31,276 |

# APPENDIX A

Rock Sample Descriptions

## ROCK SAMPLE DESCRIPTIONS

### ABE Claims

| SAMPLE NUMBER | TYPE | WIDTH (meters) | DESCRIPTION |
|---|---|---|---|
| 12023 | chip | 1.0 | Below old trench. Rusty ankeritic andesite, trace malachite and chalcopyrite. |
| 12024 | chip | 2.0 | In old trench. Rusty ankerite. Trace malachite with calcite veinlets. |
| 12025 | chip | 2.0 | Malachite-azurite stained andesite porphyry. Blobs of pyrite up to 5% occur sporadically. |
| 12026 | chip | 1.0 | Augite porphyry with minor malachite. Trace chalcopyrite, magnetite, hematite, and calcite veinlets. |
| 12201 | chip | .5 | 10590N, 12550E. Lapilli tuff with moderate ankeritic alteration adjacent to shear zone. Weathers black with 10% local disseminated pyrite/pyrrhotite. |
| 12202 | chip | .5 | 10450N, 11650E. Rusty weathering, pyritic pyroxene porphyry. |
| 12203 | panel | 2 $m^2$ | 10200N, 11010E. Rusty subcrop. Limonite-malachite debris in pyroxenite adjacent to feldspar porphyry dyke. |
| 12205 | chip | 2.0 | 10800N, 11150E, cliff. Quartz-feldspar dyke intruding feldspar porphyry. Moderate malachite-azurite stain. |
| 12206 | chip | 1.0 | 11000N, 12000E, in poorly exposed creekcut. Carbonate-chlorite rich andesite with chalcopyrite-carbonate vein and disseminated pyrite. |

## ROCK SAMPLE DESCRIPTIONS

### ABE Claims

| SAMPLE NUMBER | TYPE | WIDTH (meters) | DESCRIPTION |
|---|---|---|---|
| 12357 | select | | 9995N, 9960E, 1770 m, beside lake. Pyrite blebs with heavy malachite stain, 2% chalcopyrite, in diorite (subcrop) |
| 12358 | chip | .3 | 1075N, 9300E, 2000 m, ridgetop. Malachite stain in hybrid felsite/ ultramafic unit adjacent to a porphyry dyke. |
| 12359 | chip | .15 | 10400N, 10205E, 1690 m. Three 1 cm quartz-ankerite veins with platy hematite visible, host diorite. |
| 12360 | select | | 10300N, 10700E, 1676 m. Hybrid unit with large ultramafic pyroxenite blocks. Limonitic area with reddish hematite stain. Outcrop is cut by flat-lying quartz veins containing visible chalcopyrite, tetrahedrite and hematite. |
| 12361 | chip | 1.5 | same as 12360 |
| 12362 | select | | 10600N, 11100E, 1770 m. Diorite with 1 mm veinlets of pyrite next to feldspar porphyry. |
| 12363 | select | | 10600N, 11170E, 1825 m. Semi-massive fine-grained magnetite vein next to feldspar porphyry. |
| 12364 | chip | 1.0 | 10425N, 11475E, 1955 m. Gossanous pyroxenite with malachite stain, hybrid unit. |
| 12365 | chip | 1.0 | 9650N, 10850E, 1915 m, cliff. Two 1 cm quartz veinlets with galena and pyrite in feldspar porphyry. |

# ROCK SAMPLE DESCRIPTIONS

## ABE Claims

| SAMPLE NUMBER | TYPE | WIDTH (meters) | DESCRIPTION |
|---|---|---|---|
| 12366 | chip | 1.0 | 9500N, 10900E, 2000 m. Two 20 cm flat-lying quartz veins in silicic and ankeritic diorite. Trace galena and pyrite. |
| 12367 | chip | 3.0 | 10 m west of peak, 2040 m. Rusty pyroxenite with visible malachite in a shear zone. |
| 12368 | chip | 1.0 | West of 12367. Limonitic shear zone, ankerite with pyroxenite and hematite. |
| 12369 | chip | 3.0 | 9600N, 11045E, 2032 m, ridge. Chip across dioritic unit cut by three horizontal quartz veins. No obvious mineralization. |
| 12370 | chip | 2.0 | 9340N, 11400E, 1850 m. Ankeritic diorite with multiple quartz veins mineralized with galena. |
| 12371 | chip | 2.0 | 9350N, 11500E, 1830 m. Medium-grained, dark green pyroxenite. |
| 12372 | chip | 3.0 | Limonitic/ankeritic horizon in Takla tuffs with disseminated 5% pyrite. |
| 12427 | select | | Pyroxenite talus with disseminated pyrite. Small outcrops are scattered about the area. |
| 12428 | select | | Reddish to bright-orange weathering intrusive with specks of magnetite. |
| 12429 | select | | Pyritic siliceous fine-grained volcanic. Talus. |

## ROCK SAMPLE DESCRIPTIONS

### ABE Claims

| SAMPLE NUMBER | TYPE | WIDTH (meters) | DESCRIPTION |
|---|---|---|---|
| 12476 | select | | 1850 m, ridge. Andesite feldspar porphyry dyke. Slightly silicified. 2 to 3% pyrite as blebs. Minor sphalerite(?) intergrown with some pyrite blebs. |
| 12477 | select | | Same ridge as 12476. Pyroxenite with limonite stains and 30% quartz veinlets. 5 to 10% magnetite as large blebs. |
| 12478 | chip | 2.0 | On ridge near eastern boundary of Abe 5. Three meter wide zone of anastomosing quartz ankerite veinlets to 10 mm in augite porphyry. Minor pyrite as blebs to 1 mm. |
| 12479 | select | | On spur of ridge near eastern boundary of Abe 5. Augite porphyry (Takla). Clay altered with pods of silicification. 3 to 20% boxwork, some relict pyrite. |
| 12480 | select | | On north-south ridge in north-eastern part of claim group at 1900 m. Fine-grained black basalt. Limonite stained and clay altered. Some small silicified patches. 5 to 10% boxwork, 2 to 3% pyrite. |
| 12481 | select | | On small knob directly east of lake at 1700 m. Ankeritized zone in fine-grained andesite. Slightly silicified. |

**APPENDIX B**

Analytical Reports and Techniques

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R E P O R T   S U M M A R Y          Report:[ 9200579 R ]

# A N A L Y T I C A L   R E P O R T

Origin          Inception Date:[ Jul 31, 1992 ]

| | | |
|---|---|---|
| Client:[ | 269 | Reliance Geological Services Ltd. ] |
| Contact:[ | | Peter Leriche ] |
| Project:[ | 0 | AB ] |
| Amount/Type:[ | 25 | Rock ] |
| [ | | ] |

Analytical Requisition

Geochemical:[ ICP(AqR)30 ]
Assay:[ Au(FA/AAS 20g) ]   ICP:[ 30 ]
Comments:[ None ]

Delivery Information          Reporting Date:[ Aug 11, 1992 ]

Principal Destination (Hardcopy,Fascimile,Invoice)

Company:[ Reliance Geological Services Ltd. ]
Address:[ 241 East 1st Street ]
City/Province:[ North Vancouver, BC ]
Country/Postal:[ V7L 1B4 ]
Attention:[ Peter Leriche ]
Fascimile:[ (604)988-4653 ]

Secondary Destination (Hardcopy)

Company:[ ]
Address:[ ]
City/Province:[ ]
Country/Postal:[ ]
Attention:[ ]
Fascimile:[ ]

1 data pages in this report.     Approved by: ____________

B.C. Certified Assayers

iPL CODE: 920811-15:31:11

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?36 C[illegible]a Str[illegible]
Vancouver, B.C.
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Fax (604) 879-7898



| Sample Name | Type | Au ppb | Ag ppm | Cu ppm | Pb ppm | Zn ppm | As ppm | Sb ppm | Hg ppm | Mo ppm | Tl ppm | Bi ppm | Cd ppm | Co ppm | Ni ppm | Ba ppm | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12357 | Rock | 14m | 47.5 | 2.3% | 9 | 64 | <5 | <5 | <3 | 8 | <10 | <2 | 1.3 | 32 | 33 | 13 | 10 |
| 12358 | Rock | 7 | 1.2 | 2231 | <2 | 16 | <5 | <5 | <3 | 1 | <10 | <2 | <0.1 | 16 | 25 | 6 | <5 |
| 12359 | Rock | 10 | <0.1 | 57 | <2 | 31 | <5 | <5 | <3 | 1 | <10 | <2 | <0.1 | 13 | 6 | 249 | <5 |
| 12360 | Rock | 4070 | 79.3 | 2.7% | 539 | 81 | <5 | 7 | <3 | 28 | <10 | 87 | 2.8 | 27 | 16 | 17 | <5 |
| 12361 | Rock | 804 | 4.8 | 1018 | 40 | 35 | <5 | <5 | <3 | 26 | <10 | <2 | 0.2 | 14 | 8 | 59 | <5 |
| 12362 | Rock | <5 | <0.1 | 132 | <2 | 33 | <5 | <5 | <3 | 2 | <10 | <2 | <0.1 | 23 | 42 | 163 | <5 |
| 12363 | Rock | 33 | <0.1 | 140 | 2 | 19 | 34 | <5 | <3 | 49 | <10 | 17 | 0.2 | 43 | 184 | 33 | 65 |
| 12364 | Rock | <5 | <0.1 | 182 | <2 | 31 | <5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 25 | 133 | 28 | <5 |
| 12365 | Rock | 5 | 33.0 | 38 | 6312 | 47 | <5 | <5 | <3 | 99 | <10 | 65 | 2.1 | 8 | 7 | 39 | <5 |
| 12366 | Rock | 44 | 14.6 | 336 | 988 | 21 | <5 | <5 | <3 | 4 | <10 | 24 | 0.7 | 6 | 6 | 327 | <5 |
| 12367 | Rock | <5 | 0.4 | 3261 | 10 | 30 | <5 | 9 | <3 | 2 | <10 | <2 | <0.1 | 35 | 71 | 27 | <5 |
| 12368 | Rock | 8 | 0.8 | 853 | 13 | 24 | 13 | <5 | 5 | 12 | <10 | <2 | 0.5 | 98 | 286 | 111 | <5 |
| 12369 | Rock | 21 | 1.0 | 40 | 135 | 90 | <5 | 6 | <3 | 2 | <10 | <2 | 2.8 | 7 | 19 | 633 | <5 |
| 12370 | Rock | <5 | 0.3 | 30 | 207 | 410 | <5 | <5 | <3 | 2 | <10 | <2 | 8.1 | 9 | 8 | 204 | <5 |
| 12371 | Rock | <5 | <0.1 | 7 | 2 | 23 | <5 | 23 | 3 | 2 | <10 | <2 | <0.1 | 41 | 165 | 5 | <5 |
| 12372 | Rock | <5 | 0.1 | 26 | 8 | 46 | 6 | 6 | <3 | 7 | <10 | <2 | <0.1 | 11 | 34 | 15 | <5 |
| 12427 | Rock | 15 | 0.5 | 701 | 3 | 10 | <5 | 6 | <3 | 1 | <10 | <2 | <0.1 | 57 | 81 | 33 | <5 |
| 12428 | Rock | <5 | <0.1 | 5 | 3 | 22 | <5 | <5 | <3 | 2 | <10 | <2 | <0.1 | 5 | 3 | 137 | <5 |
| 12429 | Rock | <5 | 0.2 | 14 | 2 | 24 | <5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 13 | 14 | 30 | <5 |
| 12476 | Rock | <5 | 0.1 | 195 | <2 | 4 | <5 | <5 | <3 | 18 | <10 | <2 | <0.1 | 12 | 6 | 64 | 6 |
| 12477 | Rock | 366 | 2.5 | 665 | <2 | 32 | 40 | <5 | <3 | 13 | <10 | 5 | <0.1 | 21 | 54 | <2 | <5 |
| 12478 | Rock | 12 | <0.1 | 57 | 4 | 108 | <5 | 5 | <3 | 3 | <10 | <2 | 0.4 | 25 | 77 | 432 | <5 |
| 12479 | Rock | 8 | <0.1 | 29 | 2 | 30 | <5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 16 | 26 | 10 | <5 |
| 12480 | Rock | <5 | 0.2 | 130 | <2 | 10 | <5 | <5 | <3 | <1 | <10 | <2 | <0.1 | 14 | 18 | 65 | <5 |
| 12481 | Rock | 5 | <0.1 | 29 | <2 | 43 | <5 | <5 | 4 | 16 | <10 | <2 | 0.1 | 25 | 28 | 226 | <5 |
| Minimum Detection | | 5 | 0.1 | 1 | 2 | 1 | 5 | 5 | 3 | 1 | 10 | 2 | 0.1 | 1 | 1 | 2 | 5 |
| Maximum Detection | | 10000 | 100.0 | 20000 | 20000 | 20000 | 10000 | 1000 | 10000 | 1000 | 1000 | 10000 | 10000.0 | 10000 | 10000 | 10000 | 1000 |
| Method | | FA/AAS | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

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| Sample Name | Cr ppm | V ppm | Mn ppm | La ppm | Sr ppm | Zr ppm | Sc ppm | Ti % | Al % | Ca % | Fe % | Mg % | K % | Na % | P % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12357 | 170 | 138 | 494 | <2 | 14 | 1 | 6 | 0.08 | 0.99 | 0.47 | 9.4% | 1.34 | 0.03 | 0.04 | 0.08 |
| 12358 | 187 | 11 | 254 | <2 | 12 | <1 | 3 | 0.03 | 0.69 | 1.87 | 1.27 | 1.30 | 0.01 | 0.03 | 0.01 |
| 12359 | 70 | 38 | 966 | 4 | 65 | <1 | 4 | 0.01 | 0.76 | 2.71 | 3.26 | 0.75 | 0.25 | 0.05 | 0.11 |
| 12360 | 133 | 22 | 2057 | <2 | 156 | 4 | 2 | <0.01 | 0.81 | 2.22 | 7.0% | 1.00 | 0.09 | 0.02 | 0.06 |
| 12361 | 91 | 33 | 1887 | 4 | 116 | 6 | 3 | 0.01 | 0.97 | 2.27 | 4.57 | 0.90 | 0.16 | 0.05 | 0.06 |
| 12362 | 48 | 140 | 420 | <2 | 70 | 1 | 4 | 0.20 | 2.56 | 1.18 | 3.68 | 2.56 | 0.93 | 0.04 | 0.04 |
| 12363 | 17 | 110 | 242 | <2 | 6 | 10 | <1 | 0.03 | 0.16 | 0.07 | 33% | 0.16 | 0.41 | 0.02 | 0.01 |
| 12364 | 102 | 185 | 481 | 2 | 66 | 1 | 3 | 0.12 | 1.63 | 1.30 | 6.0% | 1.67 | 0.12 | 0.06 | 0.34 |
| 12365 | 152 | 40 | 353 | 3 | 57 | 9 | 1 | 0.08 | 0.44 | 0.90 | 2.19 | 0.48 | 0.14 | 0.08 | 0.05 |
| 12366 | 178 | 23 | 484 | 2 | 17 | 8 | 1 | <0.01 | 0.27 | 0.57 | 1.36 | 0.12 | 0.06 | 0.06 | 0.04 |
| 12367 | 386 | 70 | 257 | <2 | 11 | 2 | 7 | 0.07 | 0.55 | 1.60 | 3.46 | 1.30 | 0.31 | 0.09 | 0.01 |
| 12368 | 108 | 268 | 531 | <2 | 30 | 3 | 7 | 0.08 | 0.83 | 2.38 | 11% | 1.42 | 0.82 | 0.11 | 0.08 |
| 12369 | 152 | 20 | 5171 | 4 | 82 | 6 | 6 | 0.01 | 0.48 | 4.47 | 2.77 | 1.61 | 0.26 | 0.03 | 0.03 |
| 12370 | 95 | 65 | 1215 | 4 | 64 | 7 | 4 | 0.01 | 0.34 | 2.32 | 3.23 | 0.36 | 0.11 | 0.08 | 0.07 |
| 12371 | 897 | 51 | 539 | <2 | 10 | 1 | 6 | 0.06 | 0.66 | 2.26 | 4.93 | 4.65 | 0.01 | 0.02 | <0.01 |
| 12372 | 123 | 41 | 273 | 2 | 47 | 3 | 2 | 0.16 | 1.39 | 1.22 | 4.28 | 0.30 | 0.10 | 0.04 | 0.05 |
| 12427 | 237 | 44 | 144 | <2 | 40 | 2 | 2 | 0.11 | 0.66 | 0.63 | 3.53 | 0.91 | 0.11 | 0.04 | 0.02 |
| 12428 | 64 | 16 | 287 | 9 | 22 | 3 | 1 | <0.01 | 0.83 | 0.87 | 1.37 | 0.41 | 0.27 | 0.06 | 0.07 |
| 12429 | 70 | 65 | 195 | 2 | 105 | 2 | 2 | 0.18 | 1.12 | 0.97 | 3.51 | 0.44 | 0.19 | 0.10 | 0.08 |
| 12476 | 40 | 48 | 46 | 7 | 54 | 7 | 1 | 0.14 | 0.28 | 0.25 | 3.73 | 0.11 | 0.17 | 0.10 | 0.12 |
| 12477 | 5 | 1130 | 293 | <2 | 2 | 10 | 2 | 0.09 | 0.24 | 0.04 | 33% | 0.07 | 0.03 | 0.02 | 0.01 |
| 12478 | 59 | 90 | 1296 | <2 | 55 | 1 | 13 | <0.01 | 1.35 | 7.40 | 5.1% | 2.55 | 0.20 | 0.04 | 0.06 |
| 12479 | 96 | 193 | 142 | <2 | 7 | 5 | 11 | 0.24 | 1.56 | 0.11 | 7.2% | 2.21 | 0.09 | 0.06 | 0.07 |
| 12480 | 40 | 158 | 148 | <2 | 54 | 3 | 8 | 0.29 | 0.83 | 1.00 | 4.82 | 0.72 | 0.22 | 0.07 | 0.03 |
| 12481 | 39 | 22 | 1259 | <2 | 144 | 1 | 13 | <0.01 | 0.52 | 8.00 | 4.40 | 2.15 | 0.24 | 0.02 | 0.07 |
| Minimum Detection | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Maximum Detection | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 1.00 | 5.00 | 10.00 | 5.00 | 10.00 | 10.00 | 5.00 | 5.00 |
| Method | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

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R E P O R T   S U M M A R Y    Report:[ 9200740 R ]

# A N A L Y T I C A L   R E P O R T

Origin    Inception Date:[ Sep 09, 1992 ]

| | | |
|---|---|---|
| Client:[ | 269 | Reliance Geological Services Ltd. ] |
| Contact:[ | | Peter Leriche ] |
| Project:[ | 0 | 770 ABC ] |
| Amount/Type:[ | 10 | Rock ] |
| [ | | ] |

Analytical Requisition

Geochemical:[ ICP(AqR)30 ]
Assay:[ Au(FA/AAS 20g) ]   ICP:[ 30 ]
Comments:[ None ]

Delivery Information    Reporting Date:[ Sep 11, 1992 ]

Principal Destination (Hardcopy,Fascimile,Invoice)

Company:[ Reliance Geological Services Ltd. ]
Address:[ 241 East 1st Street ]
City/Province:[ North Vancouver, BC ]
Country/Postal:[ V7L 1B4 ]
Attention:[ Peter Leriche ]
Fascimile:[ 604/988-4653 ]

Secondary Destination (Hardcopy)

Company:[ ]
Address:[ ]
City/Province:[ ]
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Fax (604) 879-7898

Report: 9200740 R Reliance Geological Services Ltd. Project: 770 ABC  Section 1 of 2

| Sample Name | Type | Au ppb | Ag ppm | Cu ppm | Pb ppm | Zn ppm | As ppm | Sb ppm | Hg ppm | Mo ppm | Tl ppm | Bi ppm | Cd ppm | Co ppm | Ni ppm | Ba ppm | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12023 | Rock | 1440 | 0.5 | 202 | <2 | 543 | 14 | <5 | <3 | 3 | <10 | <2 | 1.4 | 25 | 15 | 85 | <5 |
| 12024 | Rock | 10 | 0.2 | 498 | 3 | 105 | <5 | 6 | <3 | 4 | <10 | <2 | 0.6 | 20 | 59 | 347 | <5 |
| 12025 | Rock | 1100 | 3.8 | 11961 | 7 | 53 | <5 | <5 | <3 | 4 | <10 | <2 | 2.9 | 116 | 149 | 56 | <5 |
| 12026 | Rock | 193 | 0.2 | 585 | <2 | 77 | <5 | <5 | <3 | 5 | <10 | <2 | 0.6 | 55 | 112 | 46 | <5 |
| 12106 | Rock | 717 | 7.3 | 10 | 235 | 1 | <5 | <5 | <3 | 5 | <10 | 20 | <0.1 | 5 | 6 | 52 | <5 |
| 12201 | Rock | 398 | 75.5 | 272 | 156 | 107 | 259 | <5 | <3 | 9 | <10 | 11 | <0.1 | 39 | 51 | <2 | <5 |
| 12202 | Rock | 6 | 0.7 | 529 | <2 | 66 | 5 | <5 | <3 | 4 | <10 | <2 | <0.1 | 21 | 63 | 31 | <5 |
| 12203 | Rock | 99 | 19.7 | 2.4% | 14 | 166 | 7 | <5 | <3 | 227 | <10 | <2 | <0.1 | 86 | 346 | 7 | 6 |
| 12205 | Rock | <5 | <0.1 | 1925 | <2 | 12 | <5 | <5 | <3 | 5 | <10 | <2 | 0.1 | 57 | 38 | 11 | <5 |
| 12206 | Rock | 82 | 0.8 | 1744 | <2 | 60 | <5 | <5 | <3 | 4 | <10 | <2 | 0.2 | 32 | 106 | <2 | <5 |
| Minimum Detection | | 5 | 0.1 | 1 | 2 | 1 | 5 | 5 | 3 | 1 | 10 | 2 | 0.1 | 1 | 1 | 2 | 5 |
| Maximum Detection | | 10000 | 100.0 | 20000 | 20000 | 20000 | 10000 | 1000 | 10000 | 1000 | 1000 | 10000 | 10000.0 | 10000 | 10000 | 10000 | 1000 |
| Method | | FA/AAS | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

---=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

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Fax (604) 879-7898

Report: 9200740 R Reliance Geological Services Ltd. Project: 770 ABC 

| Sample Name | Cr ppm | V ppm | Mn ppm | La ppm | Sr ppm | Zr ppm | Sc ppm | Ti % | Al % | Ca % | Fe % | Mg % | K % | Na % | P % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12023 | 40 | 104 | 205 | 3 | 17 | 2 | 6 | 0.10 | 0.82 | 0.20 | 4.40 | 0.71 | 0.22 | 0.04 | 0.09 |
| 12024 | 148 | 81 | 1929 | <2 | 101 | 2 | 14 | <0.01 | 1.28 | 7.84 | 5.8% | 4.16 | 0.28 | 0.01 | 0.07 |
| 12025 | 238 | 216 | 1055 | <2 | 47 | 3 | 13 | 0.14 | 3.31 | 2.40 | 8.1% | 5.34 | 0.13 | 0.02 | 0.11 |
| 12026 | 306 | 179 | 2750 | <2 | 64 | 2 | 20 | 0.03 | 3.37 | 5.57 | 10% | 4.43 | 0.22 | 0.01 | 0.08 |
| 12106 | 206 | 12 | 33 | 3 | 8 | 3 | <1 | <0.01 | 0.21 | 0.06 | 2.05 | 0.03 | 0.26 | 0.02 | 0.01 |
| 12201 | 157 | 40 | 123 | <2 | 2 | 2 | 2 | <0.01 | 0.28 | 0.02 | 16% | 0.21 | 0.01 | 0.01 | <0.01 |
| 12202 | 154 | 105 | 913 | <2 | 79 | 2 | 4 | 0.15 | 1.79 | 0.83 | 4.88 | 2.05 | 0.13 | 0.05 | 0.11 |
| 12203 | 28 | 113 | 534 | 5 | 36 | 2 | 1 | 0.01 | 0.49 | 2.73 | 14% | 0.56 | 0.07 | 0.01 | 1.29 |
| 12205 | 53 | 16 | 136 | <2 | 30 | <1 | 1 | 0.02 | 0.76 | 0.35 | 0.57 | 0.46 | 0.12 | 0.10 | 0.06 |
| 12206 | 356 | 181 | 1541 | <2 | 14 | 1 | 18 | 0.08 | 4.77 | 1.30 | 8.8% | 6.42 | 0.05 | 0.01 | 0.05 |
| Minimum Detection | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Maximum Detection | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 1.00 | 5.00 | 10.00 | 5.00 | 10.00 | 10.00 | 5.00 | 5.00 |
| Method | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

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R E P O R T   S U M M A R Y    Report:[ 9200779 R ]

# A N A L Y T I C A L   R E P O R T

Origin    Inception Date:[ Sep 16, 1992 ]

| | | |
|---|---|---|
| Client:[ | 269 | Reliance Geological Services Ltd. ] |
| Contact:[ | | Peter Leriche ] |
| Project:[ | 0 | 770 Abe ] |
| Amount/Type:[ | 1 | Rock ] |
| [ | | ] |

Analytical Requisition

Geochemical:[ ICP(AqR)30 ]
Assay:[ Au(FA/AAS 30g) ]   ICP:[ 30 ]
Comments:[ Re:9200740 ]

Delivery Information    Reporting Date:[ Sep 18, 1992 ]

Principal Destination (Hardcopy,Fascimile,Invoice)

Company:[ Reliance Geological Services Ltd. ]
Address:[ 241 East 1st Street ]
City/Province:[ North Vancouver, BC ]
Country/Postal:[ V7L 1B4 ]
Attention:[ Peter Leriche ]
Fascimile:[ (604)988-4653 ]

Secondary Destination (Hardcopy)

Company:[ ]
Address:[ ]
City/Province:[ ]
Country/Postal:[ ]
Attention:[ ]
Fascimile:[ ]

1 data pages in this report.    Approved by: ______________

B.C. Certified Assayers

iPL CODE: 920918-17:36:23

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| Sample Name | Type | Au ppb | Ag ppm | Cu ppm | Pb ppm | Zn ppm | As ppm | Sb ppm | Hg ppm | Mo ppm | Tl ppm | Bi ppm | Cd ppm | Co ppm | Ni ppm | Ba ppm | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12206 | Rock | 117 | 0.7 | 2202 | <2 | 65 | <5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 35 | 116 | <2 | <5 |
| Minimum Detection | | 2 | 0.1 | 1 | 2 | 1 | 5 | 5 | 3 | 1 | 10 | 2 | 0.1 | 1 | 1 | 2 | 5 |
| Maximum Detection | | 10000 | 100.0 | 20000 | 20000 | 20000 | 10000 | 1000 | 10000 | 1000 | 1000 | 10000 | 10000.0 | 10000 | 10000 | 10000 | 1000 |
| Method | | FA/AAS | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

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Fax (604) 879-7898

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| Sample Name | Cr ppm | V ppm | Mn ppm | La ppm | Sr ppm | Zr ppm | Sc ppm | Ti % | Al % | Ca % | Fe % | Mg % | K % | Na % | P % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12206 | 422 | 209 | 1725 | <2 | 16 | 2 | 21 | 0.16 | 5.3% | 1.52 | 9.8% | 7.11 | 0.06 | 0.02 | 0.06 |
| Minimum Detection | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Maximum Detection | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 1.00 | 5.00 | 10.00 | 5.00 | 10.00 | 10.00 | 5.00 | 5.00 |
| Method | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

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R E P O R T   S U M M A R Y   Report:[ 9200566 R ]

# A N A L Y T I C A L   R E P O R T

Origin   Inception Date:[ Jul 31, 1992 ]

| | | |
|---|---|---|
| Client:[ | 269 | Reliance Geological Services Ltd. ] |
| Contact:[ | | Peter Leriche ] |
| Project:[ | 0 | AB ] |
| Amount/Type:[ | 158 | Soil ] |
| [ | | ] |

Analytical Requisition

Geochemical:[ ICP(AqR)30 ]
Assay:[ Au(FA/AAS 10g) ]   ICP:[ 30 ]
Comments:[ No Instructions ]

Delivery Information   Reporting Date:[ Aug 10, 1992 ]

Principal Destination (Hardcopy,Fascimile,Invoice)

Company:[ Reliance Geological Services Ltd. ]
Address:[ 241 East 1st Street ]
City/Province:[ North Vancouver, BC ]
Country/Postal:[ V7L 1B4 ]
Attention:[ Peter Leriche ]
Fascimile:[ (604)988-4653 ]

Secondary Destination (Hardcopy)

Company:[ ]
Address:[ ]
City/Province:[ ]
Country/Postal:[ ]
Attention:[ ]
Fascimile:[ ]

5 data pages in this report.   Approved by: ______________

B.C. Certified Assayers

iPL CODE: 920810-11:22:54

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Report: 9200566 R Reliance Geological Services Ltd. Project: AB 

| Sample Name | Type | Au ppb | Ag ppm | Cu ppm | Pb ppm | Zn ppm | As ppm | Sb ppm | Hg ppm | Mo ppm | Tl ppm | Bi ppm | Cd ppm | Co ppm | Ni ppm | Ba ppm | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AB92 94+00N 108+00E | Soil | <5 | 0.1 | 37 | 52 | 116 | <5 | 13 | 4 | 2 | <10 | <2 | 0.1 | 32 | 124 | 151 | <5 |
| AB92 94+00N 109+00E | Soil | <5 | <0.1 | 57 | 38 | 39 | <5 | 10 | <3 | 2 | <10 | <2 | 0.2 | 30 | 78 | 109 | <5 |
| AB92 94+00N 110+00E | Soil | <5 | <0.1 | 87 | 52 | 45 | <5 | 8 | 3 | 2 | <10 | <2 | <0.1 | 30 | 88 | 104 | <5 |
| AB92 94+00N 111+00E | Soil | <5 | 0.4 | 107 | 259 | 59 | <5 | 5 | <3 | 4 | <10 | 4 | 0.3 | 27 | 35 | 996 | <5 |
| AB92 94+00N 112+00E | Soil | <5 | <0.1 | 39 | 311 | 32 | <5 | 7 | <3 | 2 | <10 | <2 | <0.1 | 24 | 63 | 111 | <5 |
| AB92 94+00N 113+00E | Soil | <5 | <0.1 | 41 | 99 | 46 | <5 | 7 | <3 | 3 | <10 | <2 | <0.1 | 28 | 75 | 145 | <5 |
| AB92 94+00N 114+00E | Soil | <5 | 0.2 | 69 | 115 | 68 | <5 | 9 | 4 | 2 | <10 | <2 | <0.1 | 35 | 92 | 200 | <5 |
| AB92 94+00N 115+00E | Soil | <5 | <0.1 | 18 | 25 | 52 | <5 | 16 | <3 | 2 | <10 | <2 | <0.1 | 57 | 156 | 36 | <5 |
| AB92 94+00N 116+00E | Soil | <5 | <0.1 | 24 | 3 | 94 | <5 | 8 | <3 | 4 | <10 | <2 | <0.1 | 30 | 69 | 280 | <5 |
| AB92 94+00N 117+00E | Soil | <5 | <0.1 | 37 | 35 | 71 | <5 | 15 | <3 | 4 | <10 | <2 | <0.1 | 46 | 125 | 35 | <5 |
| AB92 94+00N 118+00E | Soil | <5 | <0.1 | 23 | 48 | 42 | <5 | 11 | 5 | 2 | <10 | <2 | <0.1 | 41 | 106 | 26 | <5 |
| AB92 94+00N 119+00E | Soil | <5 | <0.1 | 15 | 22 | 63 | <5 | 11 | <3 | 3 | <10 | <2 | <0.1 | 35 | 77 | 16 | <5 |
| AB92 94+00N 120+00E | Soil | <5 | <0.1 | 42 | 25 | 77 | <5 | 9 | <3 | 7 | <10 | <2 | <0.1 | 37 | 85 | 38 | <5 |
| AB92 94+00N 121+00E | Soil | <5 | 0.1 | 36 | 31 | 70 | <5 | 15 | 3 | 3 | <10 | <2 | <0.1 | 46 | 96 | 30 | <5 |
| AB92 94+00N 122+00E | Soil | <5 | <0.1 | 30 | 12 | 54 | <5 | 9 | <3 | 11 | <10 | <2 | <0.1 | 32 | 67 | 36 | <5 |
| AB92 94+00N 123+00E | Soil | <5 | 0.2 | 133 | 19 | 68 | <5 | 8 | <3 | 7 | <10 | <2 | <0.1 | 34 | 100 | 86 | <5 |
| AB92 96+00N 108+00E | Soil | 6 | <0.1 | 43 | 51 | 47 | <5 | 9 | <3 | 4 | <10 | <2 | 0.1 | 37 | 106 | 88 | <5 |
| AB92 96+00N 110+00E | Soil | <5 | <0.1 | 28 | 17 | 54 | <5 | 17 | <3 | 2 | <10 | <2 | <0.1 | 42 | 152 | 68 | <5 |
| AB92 96+00N 111+00E | Soil | <5 | <0.1 | 31 | 110 | 56 | <5 | <5 | <3 | 2 | <10 | <2 | <0.1 | 25 | 59 | 106 | <5 |
| AB92 96+00N 112+00E | Soil | <5 | <0.1 | 27 | 146 | 41 | <5 | 8 | <3 | 2 | <10 | <2 | 0.1 | 25 | 68 | 91 | <5 |
| AB92 96+00N 113+00E | Soil | <5 | <0.1 | 29 | 56 | 51 | <5 | 10 | <3 | 2 | <10 | <2 | <0.1 | 34 | 105 | 82 | <5 |
| AB92 96+00N 114+00E | Soil | <5 | <0.1 | 40 | 86 | 68 | <5 | 11 | 3 | 6 | <10 | <2 | <0.1 | 35 | 108 | 114 | <5 |
| AB92 96+00N 115+00E | Soil | <5 | <0.1 | 21 | <2 | 42 | <5 | 7 | <3 | 2 | <10 | <2 | <0.1 | 25 | 85 | 11 | <5 |
| AB92 96+00N 116+00E | Soil | <5 | <0.1 | 10 | 21 | 52 | <5 | 6 | <3 | 3 | <10 | <2 | <0.1 | 17 | 47 | 25 | <5 |
| AB92 96+00N 117+00E | Soil | <5 | <0.1 | 8 | 31 | 47 | <5 | 7 | <3 | 3 | <10 | <2 | <0.1 | 17 | 50 | 21 | <5 |
| AB92 96+00N 118+00E | Soil | <5 | <0.1 | 29 | 12 | 40 | <5 | 12 | <3 | 3 | <10 | <2 | <0.1 | 34 | 100 | 14 | <5 |
| AB92 96+00N 119+00E | Soil | 6 | <0.1 | 22 | 12 | 49 | <5 | 9 | <3 | 5 | <10 | <2 | <0.1 | 26 | 70 | 21 | <5 |
| AB92 96+00N 120+00E | Soil | <5 | 0.1 | 28 | 17 | 41 | <5 | 9 | 4 | 4 | <10 | <2 | <0.1 | 28 | 79 | 7 | <5 |
| AB92 96+00N 121+00E | Soil | <5 | <0.1 | 33 | 13 | 46 | <5 | 10 | <3 | 3 | <10 | <2 | <0.1 | 25 | 60 | 18 | <5 |
| AB92 96+00N 122+00E | Soil | <5 | <0.1 | 41 | 17 | 41 | <5 | 11 | <3 | 3 | <10 | <2 | <0.1 | 26 | 73 | 15 | <5 |
| AB92 96+00N 123+00E | Soil | <5 | 0.2 | 45 | 12 | 32 | <5 | 10 | <3 | 2 | <10 | <2 | <0.1 | 27 | 61 | 17 | <5 |
| AB92 98+00N 108+00E | Soil | <5 | 0.5 | 95 | 136 | 57 | <5 | 11 | 3 | 4 | <10 | <2 | <0.1 | 32 | 80 | 161 | <5 |
| AB92 98+00N 109+00E | Soil | <5 | 0.2 | 102 | 45 | 43 | <5 | 12 | <3 | 3 | <10 | <2 | <0.1 | 42 | 106 | 89 | <5 |
| AB92 98+00N 110+00E | Soil | 6 | 0.4 | 101 | 110 | 86 | <5 | 13 | <3 | 3 | <10 | <2 | 0.1 | 45 | 124 | 47 | <5 |
| AB92 98+00N 111+00E | Soil | <5 | <0.1 | 34 | 20 | 42 | <5 | 11 | <3 | 3 | <10 | <2 | <0.1 | 32 | 98 | 81 | <5 |
| AB92 98+00N 112+00E | Soil | <5 | 0.1 | 30 | 22 | 51 | <5 | <5 | 3 | 3 | <10 | <2 | <0.1 | 37 | 90 | 103 | <5 |
| AB92 98+00N 113+00E | Soil | 38 | <0.1 | 32 | 36 | 73 | <5 | <5 | <3 | 5 | <10 | <2 | <0.1 | 28 | 50 | 85 | <5 |
| AB92 98+00N 114+00E | Soil | <5 | <0.1 | 71 | 37 | 75 | <5 | 10 | 3 | 8 | <10 | <2 | <0.1 | 33 | 89 | 86 | <5 |
| AB92 98+00N 115+00E | Soil | <5 | <0.1 | 37 | 40 | 43 | <5 | 7 | <3 | 8 | <10 | <2 | <0.1 | 27 | 76 | 64 | <5 |
| Minimum Detection | | 5 | 0.1 | 1 | 2 | 1 | 5 | 5 | 3 | 1 | 10 | 2 | 0.1 | 1 | 1 | 2 | 5 |
| Maximum Detection | | 10000 | 100.0 | 20000 | 20000 | 20000 | 10000 | 1000 | 10000 | 1000 | 1000 | 10000 | 10000.0 | 10000 | 10000 | 10000 | 1000 |
| Method | | FA/AAS | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

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Phone (604) 879-7878
Fax (604) 879-7898



| Sample Name | Cr ppm | V ppm | Mn ppm | La ppm | Sr ppm | Zr ppm | Sc ppm | Ti % | Al % | Ca % | Fe % | Mg % | K % | Na % | P % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AB92 94+00N 108+00E | 639 | 77 | 898 | <2 | 10 | 1 | 3 | 0.05 | 2.07 | 0.64 | 4.24 | 4.32 | 0.73 | 0.01 | 0.02 |
| AB92 94+00N 109+00E | 446 | 64 | 660 | <2 | 12 | 2 | 5 | 0.08 | 1.75 | 0.89 | 3.52 | 3.43 | 0.25 | 0.02 | 0.02 |
| AB92 94+00N 110+00E | 216 | 79 | 612 | <2 | 17 | 1 | 6 | 0.11 | 2.03 | 0.79 | 3.21 | 3.72 | 0.24 | 0.02 | 0.02 |
| AB92 94+00N 111+00E | 201 | 64 | 3116 | 7 | 39 | 2 | 3 | 0.02 | 1.69 | 0.51 | 3.71 | 1.36 | 0.04 | 0.02 | 0.15 |
| AB92 94+00N 112+00E | 303 | 59 | 556 | <2 | 8 | <1 | 5 | 0.06 | 1.14 | 0.40 | 3.19 | 2.07 | 0.06 | 0.02 | 0.01 |
| AB92 94+00N 113+00E | 379 | 90 | 667 | <2 | 14 | 1 | 9 | 0.08 | 1.56 | 0.59 | 3.85 | 3.03 | 0.07 | 0.02 | 0.02 |
| AB92 94+00N 114+00E | 376 | 108 | 985 | <2 | 16 | 2 | 7 | 0.15 | 2.17 | 0.71 | 4.46 | 4.37 | 0.65 | 0.02 | 0.03 |
| AB92 94+00N 115+00E | 731 | 95 | 1938 | <2 | 10 | 1 | 5 | 0.07 | 1.65 | 0.24 | 6.7% | 3.08 | 0.03 | 0.01 | 0.02 |
| AB92 94+00N 116+00E | 185 | 169 | 1313 | <2 | 14 | 2 | 13 | 0.18 | 5.1% | 1.42 | 6.4% | 8.86 | 1.72 | 0.02 | 0.11 |
| AB92 94+00N 117+00E | 594 | 67 | 392 | <2 | 23 | 1 | 5 | 0.07 | 1.47 | 0.35 | 4.29 | 3.49 | 0.18 | 0.02 | 0.01 |
| AB92 94+00N 118+00E | 468 | 114 | 655 | <2 | 7 | 1 | 5 | 0.11 | 1.78 | 0.54 | 6.0% | 3.37 | 0.31 | 0.02 | 0.01 |
| AB92 94+00N 119+00E | 507 | 82 | 572 | <2 | 6 | 1 | 3 | 0.08 | 1.28 | 0.28 | 4.66 | 2.37 | 0.04 | 0.02 | 0.03 |
| AB92 94+00N 120+00E | 456 | 94 | 602 | <2 | 9 | 1 | 5 | 0.06 | 1.46 | 0.50 | 5.2% | 2.53 | 0.14 | 0.02 | 0.03 |
| AB92 94+00N 121+00E | 595 | 101 | 843 | <2 | 6 | 1 | 6 | 0.07 | 1.51 | 0.49 | 6.0% | 2.60 | 0.05 | 0.02 | 0.03 |
| AB92 94+00N 122+00E | 398 | 95 | 565 | <2 | 12 | 1 | 4 | 0.10 | 1.30 | 0.41 | 4.87 | 1.87 | 0.04 | 0.02 | 0.03 |
| AB92 94+00N 123+00E | 387 | 97 | 506 | <2 | 11 | 1 | 5 | 0.06 | 1.69 | 0.65 | 5.5% | 2.63 | 0.17 | 0.02 | 0.04 |
| AB92 96+00N 108+00E | 440 | 83 | 692 | <2 | 17 | 2 | 5 | 0.09 | 1.80 | 1.20 | 3.78 | 3.68 | 0.44 | 0.02 | 0.01 |
| AB92 96+00N 110+00E | 679 | 71 | 482 | <2 | 24 | 2 | 2 | 0.09 | 1.67 | 1.67 | 4.62 | 4.35 | 0.70 | 0.02 | 0.01 |
| AB92 96+00N 111+00E | 172 | 99 | 793 | <2 | 23 | 1 | 9 | 0.11 | 1.90 | 0.70 | 3.46 | 3.11 | 0.20 | 0.02 | 0.02 |
| AB92 96+00N 112+00E | 303 | 66 | 620 | <2 | 10 | 1 | 4 | 0.07 | 1.19 | 0.37 | 3.28 | 2.16 | 0.12 | 0.02 | 0.01 |
| AB92 96+00N 113+00E | 426 | 70 | 570 | <2 | 10 | 1 | 3 | 0.07 | 1.59 | 0.51 | 4.06 | 3.35 | 0.11 | 0.02 | 0.01 |
| AB92 96+00N 114+00E | 445 | 83 | 1034 | <2 | 39 | 1 | 4 | 0.09 | 1.77 | 0.77 | 4.26 | 3.42 | 0.20 | 0.02 | 0.02 |
| AB92 96+00N 115+00E | 347 | 64 | 313 | <2 | 4 | <1 | 3 | 0.07 | 1.24 | 0.39 | 4.01 | 2.47 | 0.03 | 0.02 | 0.01 |
| AB92 96+00N 116+00E | 305 | 118 | 221 | <2 | 11 | 1 | 4 | 0.14 | 1.28 | 0.22 | 4.14 | 1.65 | 0.02 | 0.02 | 0.02 |
| AB92 96+00N 117+00E | 365 | 87 | 289 | <2 | 8 | 1 | 3 | 0.10 | 1.23 | 0.15 | 3.86 | 1.70 | 0.02 | 0.02 | 0.03 |
| AB92 96+00N 118+00E | 534 | 80 | 397 | <2 | 6 | 1 | 3 | 0.10 | 1.54 | 0.54 | 4.66 | 2.84 | 0.06 | 0.02 | 0.01 |
| AB92 96+00N 119+00E | 401 | 86 | 430 | <2 | 7 | 1 | 5 | 0.07 | 1.32 | 0.54 | 4.37 | 2.22 | 0.04 | 0.02 | 0.02 |
| AB92 96+00N 120+00E | 445 | 108 | 364 | <2 | 4 | 1 | 4 | 0.14 | 1.63 | 0.14 | 5.7% | 2.26 | 0.04 | 0.02 | 0.02 |
| AB92 96+00N 121+00E | 386 | 84 | 398 | <2 | 5 | 1 | 3 | 0.10 | 1.21 | 0.23 | 4.34 | 1.95 | 0.02 | 0.02 | 0.02 |
| AB92 96+00N 122+00E | 402 | 88 | 383 | <2 | 5 | 1 | 3 | 0.11 | 1.34 | 0.21 | 4.49 | 2.24 | 0.03 | 0.02 | 0.02 |
| AB92 96+00N 123+00E | 331 | 103 | 444 | <2 | 8 | 1 | 3 | 0.14 | 1.39 | 0.15 | 4.89 | 1.84 | 0.05 | 0.02 | 0.02 |
| AB92 98+00N 108+00E | 428 | 85 | 886 | <2 | 12 | 2 | 6 | 0.10 | 1.63 | 0.71 | 4.06 | 3.12 | 0.31 | 0.02 | 0.02 |
| AB92 98+00N 109+00E | 441 | 78 | 536 | <2 | 26 | 1 | 4 | 0.07 | 1.45 | 2.12 | 4.48 | 3.05 | 0.45 | 0.02 | 0.04 |
| AB92 98+00N 110+00E | 575 | 93 | 925 | <2 | 21 | 2 | 7 | 0.08 | 1.89 | 1.35 | 5.1% | 4.46 | 0.08 | 0.02 | 0.02 |
| AB92 98+00N 111+00E | 477 | 70 | 477 | <2 | 38 | 1 | 3 | 0.07 | 1.34 | 1.83 | 4.56 | 2.94 | 0.51 | 0.01 | 0.02 |
| AB92 98+00N 112+00E | 140 | 111 | 625 | <2 | 11 | 1 | 5 | 0.09 | 2.06 | 0.61 | 4.17 | 3.48 | 0.73 | 0.02 | 0.02 |
| AB92 98+00N 113+00E | 195 | 155 | 856 | <2 | 16 | 2 | 5 | 0.14 | 2.24 | 0.13 | 5.8% | 1.98 | 0.14 | 0.02 | 0.04 |
| AB92 98+00N 114+00E | 322 | 160 | 562 | <2 | 18 | 2 | 7 | 0.07 | 2.07 | 0.79 | 4.50 | 3.39 | 0.37 | 0.02 | 0.04 |
| AB92 98+00N 115+00E | 321 | 99 | 439 | <2 | 11 | 1 | 5 | 0.08 | 1.46 | 0.51 | 3.83 | 2.57 | 0.27 | 0.02 | 0.02 |
| Minimum Detection | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Maximum Detection | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 1.00 | 5.00 | 10.00 | 5.00 | 10.00 | 10.00 | 5.00 | 5.00 |
| Method | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

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Report: 9200566 R   Reliance Geological Services Ltd.   Project: AB   

| Sample Name | Type | Au ppb | Ag ppm | Cu ppm | Pb ppm | Zn ppm | As ppm | Sb ppm | Hg ppm | Mo ppm | Tl ppm | Bi ppm | Cd ppm | Co ppm | Ni ppm | Ba ppm | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AB92 98+00N 116+00E | Soil | <5 | <0.1 | 38 | 45 | 34 | <5 | 8 | <3 | 3 | <10 | <2 | <0.1 | 31 | 83 | 49 | <5 |
| AB92 98+00N 117+00E | Soil | 18 | <0.1 | 16 | 3 | 69 | <5 | 8 | <3 | 3 | <10 | <2 | <0.1 | 31 | 86 | 37 | <5 |
| AB92 98+00N 118+00E | Soil | <5 | 0.2 | 81 | 9 | 76 | <5 | 7 | <3 | 8 | <10 | <2 | <0.1 | 49 | 77 | 44 | <5 |
| AB92 98+00N 119+00E | Soil | <5 | <0.1 | 643 | 5 | 45 | <5 | <5 | <3 | 16 | <10 | <2 | <0.1 | 43 | 63 | 53 | <5 |
| AB92 98+00N 120+00E | Soil | 12 | 0.1 | 701 | 3 | 50 | <5 | 5 | <3 | 23 | <10 | <2 | <0.1 | 37 | 84 | 77 | <5 |
| AB92 98+00N 121+00E | Soil | 10 | 0.1 | 987 | 10 | 66 | <5 | <5 | <3 | 21 | <10 | <2 | <0.1 | 72 | 87 | 65 | <5 |
| AB92 98+00N 122+00E | Soil | <5 | 0.1 | 364 | 3 | 75 | <5 | 9 | <3 | 22 | <10 | <2 | <0.1 | 52 | 90 | 98 | <5 |
| AB92 98+00N 123+00E | Soil | <5 | 0.2 | 388 | <2 | 99 | <5 | <5 | <3 | 11 | <10 | <2 | <0.1 | 41 | 65 | 100 | <5 |
| AB92 100+00N 75+00E | Soil | 14 | 0.1 | 55 | 6 | 50 | <5 | <5 | 4 | 7 | <10 | <2 | <0.1 | 19 | 34 | 202 | <5 |
| AB92 100+00N 76+00E | Soil | 6 | <0.1 | 87 | 4 | 67 | <5 | 5 | <3 | 3 | <10 | <2 | <0.1 | 24 | 53 | 236 | <5 |
| AB92 100+00N 77+00E | Soil | 22 | 0.3 | 91 | 11 | 78 | <5 | <5 | <3 | 5 | <10 | <2 | <0.1 | 29 | 57 | 199 | <5 |
| AB92 100+00N 78+00E | Soil | <5 | 0.1 | 135 | 18 | 106 | 13 | <5 | <3 | 13 | <10 | <2 | <0.1 | 45 | 45 | 165 | 153 |
| AB92 100+00N 79+00E | Soil | 94 | 0.5 | 210 | 3 | 76 | <5 | 6 | 4 | 7 | <10 | <2 | <0.1 | 47 | 118 | 260 | <5 |
| AB92 100+00N 80+00E | Soil | 64 | 0.4 | 338 | <2 | 75 | <5 | 6 | <3 | 12 | <10 | <2 | <0.1 | 67 | 131 | 464 | <5 |
| AB92 100+00N 81+00E | Soil | 260 | 1.3 | 194 | 64 | 75 | <5 | 5 | <3 | 42 | <10 | <2 | <0.1 | 48 | 93 | 548 | <5 |
| AB92 100+00N 82+00E | Soil | 28 | <0.1 | 130 | <2 | 60 | <5 | <5 | <3 | 6 | <10 | <2 | <0.1 | 31 | 42 | 676 | <5 |
| AB92 100+00N 83+00E | Soil | 12 | <0.1 | 83 | 2 | 66 | <5 | <5 | <3 | 4 | <10 | <2 | <0.1 | 24 | 33 | 374 | <5 |
| AB92 100+00N 84+00E | Soil | 22 | <0.1 | 166 | <2 | 66 | <5 | <5 | <3 | 7 | <10 | <2 | <0.1 | 25 | 22 | 495 | <5 |
| AB92 100+00N 85+00E | Soil | <5 | <0.1 | 40 | 10 | 28 | <5 | 9 | <3 | 2 | <10 | <2 | <0.1 | 24 | 72 | 134 | <5 |
| AB92 100+00N 86+00E | Soil | <5 | <0.1 | 138 | <2 | 23 | <5 | 5 | <3 | 1 | <10 | <2 | 0.1 | 22 | 48 | 150 | <5 |
| AB92 100+00N 87+00E | Soil | <5 | <0.1 | 276 | 2 | 23 | <5 | 5 | <3 | 1 | <10 | <2 | <0.1 | 24 | 38 | 203 | <5 |
| AB92 100+00N 88+00E | Soil | <5 | <0.1 | 103 | <2 | 24 | <5 | 5 | <3 | 1 | <10 | <2 | <0.1 | 17 | 32 | 62 | <5 |
| AB92 100+00N 89+00E | Soil | 8 | <0.1 | 83 | <2 | 32 | 5 | 5 | <3 | 1 | <10 | <2 | <0.1 | 16 | 27 | 80 | <5 |
| AB92 100+00N 90+00E | Soil | <5 | <0.1 | 172 | <2 | 17 | <5 | 6 | <3 | 1 | <10 | <2 | <0.1 | 20 | 39 | 48 | <5 |
| AB92 100+00N 91+00E | Soil | <5 | <0.1 | 413 | <2 | 21 | <5 | 7 | <3 | 1 | <10 | <2 | <0.1 | 44 | 61 | 76 | <5 |
| AB92 100+00N 92+00E | Soil | <5 | 0.2 | 117 | <2 | 37 | <5 | <5 | 4 | 2 | <10 | <2 | <0.1 | 33 | 47 | 491 | <5 |
| AB92 100+00N 93+00E | Soil | 14 | <0.1 | 95 | <2 | 37 | <5 | <5 | <3 | 2 | <10 | <2 | <0.1 | 20 | 34 | 110 | <5 |
| AB92 100+00N 94+00E | Soil | <5 | <0.1 | 56 | <2 | 26 | <5 | <5 | <3 | 1 | <10 | <2 | <0.1 | 14 | 22 | 107 | <5 |
| AB92 100+00N 95+00E | Soil | <5 | <0.1 | 118 | 2 | 47 | <5 | 5 | <3 | 2 | <10 | <2 | <0.1 | 21 | 37 | 117 | <5 |
| AB92 100+00N 96+00E | Soil | 98 | <0.1 | 138 | <2 | 33 | <5 | <5 | <3 | 2 | <10 | <2 | <0.1 | 19 | 27 | 129 | <5 |
| AB92 100+00N 97+00E | Soil | <5 | <0.1 | 50 | <2 | 34 | <5 | <5 | <3 | 2 | <10 | <2 | <0.1 | 17 | 31 | 84 | <5 |
| AB92 100+00N 98+00E | Soil | <5 | <0.1 | 31 | 2 | 18 | <5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 10 | 16 | 133 | <5 |
| AB92 100+00N 99+00E | Soil | <5 | <0.1 | 37 | <2 | 22 | 5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 9 | 9 | 132 | <5 |
| AB92 100+00N 100+00E | Soil | <5 | <0.1 | 55 | 3 | 15 | <5 | <5 | <3 | 2 | <10 | <2 | <0.1 | 9 | 8 | 85 | <5 |
| AB92 100+00N 101+00E | Soil | <5 | <0.1 | 124 | <2 | 48 | <5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 23 | 28 | 148 | <5 |
| AB92 100+00N 102+00E | Soil | 36 | <0.1 | 77 | <2 | 44 | <5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 18 | 34 | 108 | <5 |
| AB92 100+00N 103+00E | Soil | 14 | 0.5 | 201 | 61 | 35 | <5 | 10 | <3 | 9 | <10 | <2 | <0.1 | 46 | 68 | 193 | <5 |
| AB92 100+00N 104+00E | Soil | <5 | 0.1 | 146 | 28 | 109 | <5 | 6 | 3 | 3 | <10 | <2 | 0.4 | 27 | 50 | 97 | <5 |
| AB92 100+00N 105+00E | Soil | <5 | 0.7 | 173 | 163 | 85 | <5 | 7 | <3 | 16 | <10 | <2 | 0.2 | 31 | 60 | 104 | <5 |
| Minimum Detection | | 5 | 0.1 | 1 | 2 | 1 | 5 | 5 | 3 | 1 | 10 | 2 | 0.1 | 1 | 1 | 2 | 5 |
| Maximum Detection | | 10000 | 100.0 | 20000 | 20000 | 20000 | 10000 | 1000 | 10000 | 1000 | 1000 | 10000 | 10000.0 | 10000 | 10000 | 10000 | 1000 |
| Method | | FA/AAS | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test   ReC=ReCheck   ins=Insufficient Sample   m=Est/1000   %=Est %   Max=No Est

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Report: 9200566 R  Reliance Geological Services Ltd.  Project: AB  

| Sample Name | Cr ppm | V ppm | Mn ppm | La ppm | Sr ppm | Zr ppm | Sc ppm | Ti % | Al % | Ca % | Fe % | Mg % | K % | Na % | P % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AB92 98+00N 116+00E | 331 | 80 | 482 | <2 | 8 | 1 | 6 | 0.07 | 1.44 | 0.47 | 4.03 | 2.61 | 0.27 | 0.02 | 0.01 |
| AB92 98+00N 117+00E | 274 | 111 | 695 | <2 | 9 | 1 | 3 | 0.16 | 2.52 | 0.28 | 4.33 | 2.99 | 0.10 | 0.04 | 0.04 |
| AB92 98+00N 118+00E | 313 | 117 | 1128 | 2 | 14 | 1 | 12 | 0.06 | 1.92 | 0.42 | 5.1% | 2.36 | 0.05 | 0.02 | 0.05 |
| AB92 98+00N 119+00E | 188 | 149 | 661 | <2 | 31 | 1 | 5 | 0.16 | 2.01 | 0.32 | 5.8% | 1.80 | 0.11 | 0.02 | 0.03 |
| AB92 98+00N 120+00E | 276 | 139 | 365 | <2 | 32 | 2 | 7 | 0.10 | 2.08 | 0.43 | 4.51 | 2.41 | 0.32 | 0.02 | 0.03 |
| AB92 98+00N 121+00E | 170 | 128 | 872 | 2 | 39 | 1 | 8 | 0.09 | 2.40 | 0.58 | 5.8% | 2.46 | 0.27 | 0.02 | 0.04 |
| AB92 98+00N 122+00E | 186 | 157 | 706 | <2 | 30 | 1 | 5 | 0.13 | 2.53 | 0.43 | 6.1% | 2.76 | 0.58 | 0.02 | 0.12 |
| AB92 98+00N 123+00E | 148 | 167 | 795 | <2 | 49 | 2 | 5 | 0.15 | 3.06 | 0.27 | 7.8% | 2.72 | 0.40 | 0.02 | 0.12 |
| AB92 100+00N 75+00E | 62 | 71 | 1091 | 5 | 543 | 1 | 1 | 0.03 | 3.72 | 0.89 | 3.54 | 1.02 | 0.09 | 0.03 | 0.12 |
| AB92 100+00N 76+00E | 122 | 79 | 1295 | 6 | 326 | 2 | 4 | 0.05 | 4.36 | 1.06 | 3.72 | 1.71 | 0.12 | 0.03 | 0.11 |
| AB92 100+00N 77+00E | 81 | 80 | 1040 | 7 | 211 | 1 | 3 | 0.04 | 3.97 | 1.15 | 4.24 | 1.66 | 0.15 | 0.05 | 0.09 |
| AB92 100+00N 78+00E | 67 | 110 | 2182 | 5 | 242 | 1 | 5 | 0.05 | 3.62 | 0.55 | 6.8% | 1.88 | 0.16 | 0.03 | 0.14 |
| AB92 100+00N 79+00E | 171 | 78 | 1105 | 2 | 489 | 1 | 3 | 0.08 | 3.22 | 1.25 | 4.58 | 2.27 | 0.43 | 0.03 | 0.10 |
| AB92 100+00N 80+00E | 102 | 65 | 1348 | 3 | 405 | 2 | 4 | 0.07 | 2.42 | 1.00 | 4.70 | 1.73 | 0.23 | 0.03 | 0.09 |
| AB92 100+00N 81+00E | 135 | 93 | 1913 | 7 | 351 | 5 | 7 | 0.07 | 2.76 | 0.71 | 6.6% | 2.23 | 0.38 | 0.06 | 0.09 |
| AB92 100+00N 82+00E | 69 | 70 | 1254 | 5 | 343 | 2 | 3 | 0.04 | 2.95 | 0.50 | 4.45 | 1.70 | 0.11 | 0.03 | 0.09 |
| AB92 100+00N 83+00E | 47 | 69 | 1060 | 6 | 203 | 2 | 2 | 0.07 | 3.10 | 0.37 | 3.54 | 1.46 | 0.22 | 0.02 | 0.13 |
| AB92 100+00N 84+00E | 35 | 62 | 1098 | 4 | 170 | 2 | 2 | 0.07 | 2.26 | 0.41 | 3.85 | 1.61 | 0.19 | 0.02 | 0.10 |
| AB92 100+00N 85+00E | 365 | 33 | 740 | 2 | 30 | 1 | 5 | 0.04 | 1.25 | 0.32 | 2.39 | 2.01 | 0.06 | 0.02 | 0.04 |
| AB92 100+00N 86+00E | 152 | 33 | 261 | <2 | 20 | 1 | 2 | 0.04 | 1.26 | 0.41 | 1.94 | 1.76 | 0.08 | 0.02 | 0.09 |
| AB92 100+00N 87+00E | 120 | 33 | 282 | 2 | 19 | 1 | 2 | 0.04 | 1.30 | 0.35 | 2.07 | 1.57 | 0.09 | 0.02 | 0.11 |
| AB92 100+00N 88+00E | 132 | 47 | 333 | 2 | 30 | 1 | 2 | 0.04 | 1.34 | 0.30 | 2.26 | 1.46 | 0.04 | 0.02 | 0.07 |
| AB92 100+00N 89+00E | 108 | 49 | 399 | 3 | 33 | 1 | 2 | 0.03 | 1.48 | 0.26 | 2.37 | 1.19 | 0.05 | 0.02 | 0.10 |
| AB92 100+00N 90+00E | 219 | 33 | 431 | <2 | 33 | 1 | 4 | 0.02 | 1.13 | 0.34 | 1.83 | 1.60 | 0.04 | 0.01 | 0.05 |
| AB92 100+00N 91+00E | 145 | 39 | 487 | <2 | 38 | 1 | 3 | 0.04 | 1.53 | 0.46 | 2.28 | 2.24 | 0.15 | 0.02 | 0.08 |
| AB92 100+00N 92+00E | 137 | 124 | 1614 | 2 | 248 | 1 | 10 | 0.06 | 3.01 | 0.96 | 4.10 | 3.23 | 0.23 | 0.02 | 0.12 |
| AB92 100+00N 93+00E | 129 | 71 | 690 | <2 | 79 | <1 | 2 | 0.03 | 2.50 | 0.49 | 2.78 | 2.06 | 0.04 | 0.02 | 0.07 |
| AB92 100+00N 94+00E | 92 | 36 | 448 | 2 | 71 | 1 | 1 | 0.02 | 1.55 | 0.36 | 2.00 | 0.98 | 0.04 | 0.02 | 0.06 |
| AB92 100+00N 95+00E | 183 | 76 | 935 | <2 | 86 | 1 | 4 | 0.05 | 2.15 | 0.63 | 2.80 | 2.10 | 0.12 | 0.02 | 0.08 |
| AB92 100+00N 96+00E | 107 | 53 | 731 | 2 | 86 | 1 | 3 | 0.03 | 1.76 | 0.49 | 2.51 | 1.59 | 0.05 | 0.02 | 0.07 |
| AB92 100+00N 97+00E | 150 | 83 | 409 | <2 | 64 | <1 | 2 | 0.05 | 2.45 | 0.30 | 3.27 | 1.78 | 0.03 | 0.02 | 0.05 |
| AB92 100+00N 98+00E | 71 | 78 | 156 | 2 | 367 | 1 | 1 | 0.09 | 2.13 | 0.56 | 2.36 | 0.69 | 0.05 | 0.03 | 0.04 |
| AB92 100+00N 99+00E | 30 | 76 | 194 | 2 | 152 | <1 | 1 | 0.07 | 2.09 | 0.52 | 2.14 | 0.65 | 0.03 | 0.04 | 0.03 |
| AB92 100+00N 100+00E | 48 | 99 | 107 | <2 | 69 | 1 | 1 | 0.14 | 1.09 | 0.26 | 1.76 | 0.45 | 0.03 | 0.02 | 0.04 |
| AB92 100+00N 101+00E | 54 | 104 | 751 | 2 | 157 | 1 | 3 | 0.06 | 2.89 | 0.50 | 3.75 | 1.82 | 0.07 | 0.03 | 0.12 |
| AB92 100+00N 102+00E | 96 | 107 | 403 | 2 | 89 | 1 | 3 | 0.07 | 2.59 | 0.31 | 3.74 | 1.85 | 0.02 | 0.03 | 0.04 |
| AB92 100+00N 103+00E | 441 | 66 | 831 | <2 | 18 | 1 | 6 | 0.04 | 1.53 | 0.59 | 3.90 | 3.07 | 0.16 | 0.01 | 0.07 |
| AB92 100+00N 104+00E | 242 | 48 | 370 | <2 | 18 | 1 | 4 | 0.04 | 1.00 | 0.55 | 2.86 | 2.12 | 0.12 | 0.02 | 0.03 |
| AB92 100+00N 105+00E | 230 | 61 | 753 | <2 | 23 | 1 | 4 | 0.06 | 1.78 | 0.66 | 3.51 | 3.36 | 0.29 | 0.02 | 0.07 |
| Minimum Detection | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Maximum Detection | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 1.00 | 5.00 | 10.00 | 5.00 | 10.00 | 10.00 | 5.00 | 5.00 |
| Method | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test  ReC=ReCheck  ins=Insufficient Sample  m=Est/1000  %=Est %  Max=No Est

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| Sample Name | Type | Au ppb | Ag ppm | Cu ppm | Pb ppm | Zn ppm | As ppm | Sb ppm | Hg ppm | Mo ppm | Tl ppm | Bi ppm | Cd ppm | Co ppm | Ni ppm | Ba ppm | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AB92 100+00N 106+00E | Soil | <5 | 0.9 | 1188 | 85 | 131 | <5 | <5 | <3 | 7 | <10 | <2 | <0.1 | 77 | 54 | 183 | <5 |
| AB92 100+00N 107+00E | Soil | <5 | 0.5 | 76 | 181 | 89 | <5 | 19 | <3 | 7 | <10 | <2 | <0.1 | 43 | 110 | 180 | <5 |
| AB92 100+00N 108+00E A | Soil | <5 | 0.1 | 55 | 56 | 55 | <5 | 15 | <3 | 3 | <10 | <2 | <0.1 | 38 | 107 | 184 | <5 |
| AB92 100+00N 108+00E B | Soil | <5 | 0.2 | 56 | 69 | 67 | <5 | 15 | <3 | 3 | <10 | <2 | <0.1 | 39 | 114 | 182 | <5 |
| AB92 100+00N 109+00E | Soil | <5 | <0.1 | 97 | 43 | 51 | <5 | 9 | 4 | 3 | <10 | <2 | <0.1 | 38 | 112 | 76 | <5 |
| AB92 100+00N 110+00E | Soil | <5 | <0.1 | 26 | 25 | 31 | <5 | 13 | <3 | 2 | <10 | <2 | <0.1 | 29 | 94 | 40 | <5 |
| AB92 100+00N 111+00E | Soil | <5 | <0.1 | 23 | 12 | 67 | <5 | <5 | <3 | 4 | <10 | <2 | <0.1 | 47 | 63 | 182 | <5 |
| AB92 100+00N 112+00E | Soil | <5 | <0.1 | 27 | 34 | 36 | <5 | 8 | <3 | 2 | <10 | <2 | <0.1 | 35 | 92 | 53 | <5 |
| AB92 100+00N 113+00E | Soil | <5 | <0.1 | 41 | 27 | 30 | <5 | 9 | <3 | 2 | <10 | <2 | <0.1 | 30 | 76 | 44 | <5 |
| AB92 100+00N 114+00E | Soil | <5 | <0.1 | 13 | 2 | 22 | <5 | 9 | <3 | 1 | <10 | <2 | <0.1 | 28 | 68 | 6 | <5 |
| AB92 100+00N 115+00E | Soil | <5 | <0.1 | 85 | 11 | 42 | <5 | 13 | <3 | 6 | <10 | <2 | <0.1 | 46 | 102 | 23 | <5 |
| AB92 100+00N 116+00E | Soil | <5 | <0.1 | 334 | 4 | 43 | <5 | 7 | <3 | 10 | <10 | <2 | <0.1 | 65 | 140 | 67 | <5 |
| AB92 100+00N 117+00E | Soil | <5 | <0.1 | 220 | <2 | 49 | <5 | 5 | <3 | 7 | <10 | <2 | <0.1 | 31 | 62 | 44 | 6 |
| AB92 100+00N 118+00E | Soil | <5 | <0.1 | 601 | 6 | 62 | <5 | <5 | <3 | 18 | <10 | <2 | <0.1 | 53 | 74 | 43 | <5 |
| AB92 100+00N 119+00E | Soil | <5 | <0.1 | 212 | <2 | 55 | <5 | <5 | <3 | 6 | <10 | <2 | <0.1 | 17 | 64 | 51 | <5 |
| AB92 100+00N 120+00E | Soil | <5 | 0.1 | 883 | 3 | 69 | <5 | <5 | <3 | 11 | <10 | <2 | <0.1 | 28 | 56 | 137 | <5 |
| AB92 100+00N 121+00E | Soil | <5 | <0.1 | 243 | 3 | 58 | <5 | <5 | <3 | 4 | <10 | <2 | <0.1 | 31 | 66 | 131 | <5 |
| AB92 100+00N 122+00E | Soil | 6 | <0.1 | 142 | 2 | 55 | 7 | <5 | <3 | 6 | <10 | <2 | <0.1 | 24 | 67 | 88 | <5 |
| AB92 100+00N 123+00E | Soil | 560 | 0.2 | 201 | 4 | 69 | <5 | <5 | <3 | 4 | <10 | <2 | <0.1 | 60 | 111 | 121 | <5 |
| AB92 102+00N 108+00E | Soil | <5 | 0.3 | 35 | 90 | 39 | <5 | 11 | <3 | 5 | <10 | <2 | <0.1 | 30 | 86 | 44 | <5 |
| AB92 102+00N 109+00E | Soil | <5 | 0.1 | 219 | 24 | 85 | <5 | 5 | <3 | 3 | <10 | <2 | <0.1 | 32 | 64 | 49 | <5 |
| AB92 102+00N 110+00E | Soil | <5 | 0.5 | 60 | 98 | 36 | <5 | 9 | <3 | 2 | <10 | <2 | 0.1 | 32 | 73 | 27 | <5 |
| AB92 102+00N 111+00E | Soil | <5 | 0.7 | 790 | 7 | 47 | <5 | 12 | <3 | 8 | <10 | <2 | <0.1 | 33 | 104 | 6 | <5 |
| AB92 102+00N 112+00E | Soil | <5 | 0.3 | 617 | 3 | 18 | <5 | 5 | <3 | 12 | <10 | <2 | <0.1 | 56 | 92 | 58 | <5 |
| AB92 102+00N 113+00E | Soil | 6 | 0.4 | 623 | 3 | 25 | <5 | 6 | <3 | 12 | <10 | <2 | <0.1 | 68 | 110 | 83 | <5 |
| AB92 102+00N 114+00E | Soil | <5 | 0.4 | 847 | 2 | 18 | <5 | 7 | 3 | 7 | <10 | <2 | <0.1 | 37 | 77 | 48 | <5 |
| AB92 102+00N 115+00E | Soil | 10 | <0.1 | 231 | <2 | 27 | <5 | 8 | 3 | 8 | <10 | <2 | <0.1 | 44 | 79 | 42 | <5 |
| AB92 102+00N 116+00E | Soil | 6 | <0.1 | 254 | <2 | 40 | <5 | 5 | <3 | 8 | <10 | <2 | <0.1 | 30 | 71 | 57 | <5 |
| AB92 102+00N 117+00E | Soil | 26 | <0.1 | 395 | 6 | 54 | <5 | <5 | <3 | 11 | <10 | <2 | <0.1 | 27 | 61 | 80 | <5 |
| AB92 102+00N 118+00E | Soil | <5 | <0.1 | 199 | 4 | 71 | <5 | <5 | <3 | 9 | <10 | <2 | <0.1 | 25 | 53 | 120 | <5 |
| AB92 102+00N 119+00E | Soil | 6 | <0.1 | 140 | 4 | 69 | 5 | <5 | <3 | 6 | <10 | <2 | <0.1 | 20 | 48 | 140 | <5 |
| AB92 102+00N 120+00E | Soil | 18 | 0.1 | 129 | <2 | 56 | 6 | 5 | <3 | 3 | <10 | <2 | <0.1 | 19 | 61 | 76 | <5 |
| AB92 102+00N 121+00E | Soil | 66 | 0.2 | 83 | <2 | 67 | <5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 27 | 56 | 98 | <5 |
| AB92 102+00N 122+00E | Soil | 70 | <0.1 | 184 | <2 | 60 | 7 | 6 | <3 | 2 | <10 | <2 | <0.1 | 34 | 71 | 56 | <5 |
| AB92 102+00N 123+00E | Soil | 436 | 0.1 | 171 | 2 | 74 | <5 | 5 | <3 | 4 | <10 | <2 | <0.1 | 37 | 87 | 72 | <5 |
| AB92 104+00N 95+00E | Soil | 16 | <0.1 | 85 | <2 | 27 | <5 | <5 | <3 | 1 | <10 | <2 | <0.1 | 18 | 21 | 26 | <5 |
| AB92 104+00N 96+00E | Soil | <5 | <0.1 | 257 | 2 | 42 | <5 | 5 | <3 | 2 | <10 | <2 | <0.1 | 31 | 43 | 74 | <5 |
| AB92 104+00N 97+00E | Soil | <5 | 0.1 | 146 | <2 | 27 | <5 | <5 | <3 | 1 | <10 | <2 | <0.1 | 22 | 29 | 74 | <5 |
| AB92 104+00N 98+00E | Soil | <5 | <0.1 | 221 | <2 | 55 | <5 | <5 | 3 | 3 | <10 | <2 | <0.1 | 32 | 25 | 165 | 6 |
| Minimum Detection | | 5 | 0.1 | 1 | 2 | 1 | 5 | 5 | 3 | 1 | 10 | 2 | 0.1 | 1 | 1 | 2 | 5 |
| Maximum Detection | | 10000 | 100.0 | 20000 | 20000 | 20000 | 10000 | 1000 | 10000 | 1000 | 1000 | 10000 | 10000.0 | 10000 | 10000 | 10000 | 1000 |
| Method | | FA/AAS | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

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| Sample Name | Cr ppm | V ppm | Mn ppm | La ppm | Sr ppm | Zr ppm | Sc ppm | Ti % | Al % | Ca % | Fe % | Mg % | K % | Na % | P % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AB92 100+00N 106+00E | 31 | 257 | 1081 | <2 | 165 | 1 | 6 | 0.16 | 2.65 | 1.12 | 7.0% | 3.27 | 0.78 | 0.02 | 0.07 |
| AB92 100+00N 107+00E | 710 | 118 | 965 | <2 | 24 | 2 | 9 | 0.14 | 2.56 | 1.62 | 4.53 | 5.33 | 1.17 | 0.02 | 0.05 |
| AB92 100+00N 108+00E A | 584 | 90 | 883 | <2 | 11 | 1 | 6 | 0.08 | 1.70 | 0.74 | 5.1% | 3.63 | 0.32 | 0.02 | 0.04 |
| AB92 100+00N 108+00E B | 611 | 90 | 871 | <2 | 11 | 1 | 6 | 0.09 | 1.98 | 0.78 | 4.73 | 4.25 | 0.33 | 0.01 | 0.04 |
| AB92 100+00N 109+00E | 409 | 82 | 663 | <2 | 15 | 1 | 5 | 0.09 | 1.80 | 0.74 | 4.16 | 3.78 | 0.23 | 0.02 | 0.03 |
| AB92 100+00N 110+00E | 521 | 64 | 400 | <2 | 8 | 1 | 3 | 0.06 | 0.95 | 0.43 | 4.68 | 2.30 | 0.19 | 0.02 | 0.02 |
| AB92 100+00N 111+00E | 70 | 179 | 546 | <2 | 360 | 1 | 4 | 0.30 | 3.44 | 0.63 | 5.7% | 3.88 | 0.30 | 0.03 | 0.01 |
| AB92 100+00N 112+00E | 369 | 84 | 516 | <2 | 13 | 1 | 5 | 0.08 | 1.52 | 0.75 | 4.57 | 3.19 | 0.44 | 0.02 | 0.02 |
| AB92 100+00N 113+00E | 316 | 80 | 434 | <2 | 10 | 1 | 4 | 0.08 | 1.15 | 0.80 | 4.06 | 2.23 | 0.33 | 0.02 | 0.02 |
| AB92 100+00N 114+00E | 302 | 55 | 396 | <2 | 2 | 1 | 4 | 0.05 | 1.12 | 0.42 | 3.30 | 2.51 | 0.06 | 0.02 | <0.01 |
| AB92 100+00N 115+00E | 462 | 94 | 563 | <2 | 9 | 1 | 4 | 0.06 | 1.30 | 0.36 | 5.5% | 2.51 | 0.05 | 0.02 | 0.02 |
| AB92 100+00N 116+00E | 338 | 114 | 494 | <2 | 14 | 1 | 8 | 0.16 | 1.87 | 0.46 | 7.2% | 3.06 | 0.17 | 0.03 | 0.02 |
| AB92 100+00N 117+00E | 280 | 105 | 709 | <2 | 20 | 1 | 3 | 0.12 | 1.81 | 0.30 | 4.19 | 1.91 | 0.04 | 0.02 | 0.03 |
| AB92 100+00N 118+00E | 179 | 116 | 543 | <2 | 26 | 1 | 6 | 0.11 | 1.80 | 0.30 | 4.74 | 1.96 | 0.13 | 0.02 | 0.03 |
| AB92 100+00N 119+00E | 200 | 170 | 441 | <2 | 29 | 1 | 2 | 0.12 | 2.51 | 0.21 | 5.5% | 1.57 | 0.14 | 0.02 | 0.07 |
| AB92 100+00N 120+00E | 127 | 182 | 737 | 4 | 33 | 1 | 5 | 0.11 | 2.54 | 0.69 | 7.1% | 2.06 | 0.51 | 0.02 | 0.06 |
| AB92 100+00N 121+00E | 149 | 174 | 1358 | <2 | 31 | 1 | 1 | 0.09 | 2.49 | 0.27 | 5.5% | 1.78 | 0.35 | 0.02 | 0.11 |
| AB92 100+00N 122+00E | 163 | 134 | 513 | <2 | 49 | 1 | 1 | 0.05 | 2.36 | 0.28 | 5.5% | 1.79 | 0.26 | 0.02 | 0.15 |
| AB92 100+00N 123+00E | 251 | 230 | 2213 | 3 | 98 | 2 | 13 | 0.11 | 3.72 | 0.30 | 8.1% | 4.29 | 0.38 | 0.02 | 0.14 |
| AB92 102+00N 108+00E | 389 | 85 | 503 | <2 | 12 | 1 | 4 | 0.07 | 1.31 | 0.51 | 4.54 | 2.65 | 0.28 | 0.02 | 0.03 |
| AB92 102+00N 109+00E | 256 | 186 | 625 | <2 | 9 | 1 | 5 | 0.22 | 2.54 | 0.24 | 6.0% | 3.12 | 0.19 | 0.04 | 0.02 |
| AB92 102+00N 110+00E | 297 | 78 | 549 | <2 | 4 | 1 | 5 | 0.09 | 1.45 | 0.37 | 3.36 | 2.64 | 0.17 | 0.02 | 0.01 |
| AB92 102+00N 111+00E | 438 | 96 | 343 | <2 | 4 | 1 | 3 | 0.06 | 0.99 | 0.28 | 5.6% | 2.19 | 0.03 | 0.02 | 0.02 |
| AB92 102+00N 112+00E | 249 | 66 | 328 | <2 | 16 | 1 | 4 | 0.06 | 1.39 | 0.29 | 4.30 | 2.20 | 0.33 | 0.02 | 0.01 |
| AB92 102+00N 113+00E | 245 | 69 | 433 | <2 | 16 | 1 | 5 | 0.07 | 1.77 | 0.37 | 4.53 | 2.90 | 0.42 | 0.02 | 0.02 |
| AB92 102+00N 114+00E | 279 | 78 | 285 | <2 | 20 | 1 | 5 | 0.06 | 1.23 | 0.29 | 3.85 | 1.91 | 0.17 | 0.02 | 0.01 |
| AB92 102+00N 115+00E | 308 | 78 | 493 | <2 | 14 | <1 | 5 | 0.06 | 1.30 | 0.33 | 4.26 | 2.13 | 0.05 | 0.02 | 0.02 |
| AB92 102+00N 116+00E | 219 | 136 | 447 | <2 | 56 | 1 | 2 | 0.06 | 1.84 | 0.43 | 5.3% | 1.88 | 0.07 | 0.02 | 0.04 |
| AB92 102+00N 117+00E | 135 | 114 | 649 | 2 | 83 | 1 | 2 | 0.08 | 2.32 | 0.29 | 4.28 | 1.57 | 0.10 | 0.02 | 0.12 |
| AB92 102+00N 118+00E | 148 | 153 | 938 | <2 | 50 | 1 | 1 | 0.10 | 2.31 | 0.22 | 4.51 | 1.52 | 0.20 | 0.02 | 0.09 |
| AB92 102+00N 119+00E | 117 | 137 | 989 | 2 | 49 | 1 | 1 | 0.07 | 2.03 | 0.21 | 4.68 | 1.29 | 0.12 | 0.02 | 0.15 |
| AB92 102+00N 120+00E | 130 | 125 | 646 | <2 | 33 | 1 | 1 | 0.05 | 2.34 | 0.20 | 4.47 | 1.54 | 0.09 | 0.02 | 0.10 |
| AB92 102+00N 121+00E | 195 | 139 | 1335 | <2 | 36 | <1 | 1 | 0.05 | 2.27 | 0.23 | 6.0% | 1.65 | 0.12 | 0.02 | 0.12 |
| AB92 102+00N 122+00E | 165 | 121 | 865 | 2 | 54 | 1 | 4 | 0.08 | 2.44 | 0.33 | 5.5% | 2.23 | 0.24 | 0.02 | 0.13 |
| AB92 102+00N 123+00E | 239 | 238 | 2149 | 2 | 14 | 1 | 9 | 0.12 | 3.44 | 0.17 | 7.8% | 3.43 | 0.09 | 0.01 | 0.08 |
| AB92 104+00N 95+00E | 65 | 60 | 535 | <2 | 68 | 1 | 3 | 0.01 | 1.41 | 0.55 | 2.84 | 1.32 | 0.02 | 0.02 | 0.08 |
| AB92 104+00N 96+00E | 171 | 90 | 977 | <2 | 88 | 1 | 6 | 0.08 | 2.39 | 0.47 | 3.50 | 2.56 | 0.12 | 0.02 | 0.07 |
| AB92 104+00N 97+00E | 117 | 64 | 424 | 2 | 73 | 1 | 2 | 0.04 | 1.65 | 0.33 | 3.07 | 1.19 | 0.04 | 0.02 | 0.06 |
| AB92 104+00N 98+00E | 54 | 133 | 1230 | <2 | 81 | <1 | 3 | 0.08 | 2.82 | 0.56 | 4.46 | 2.13 | 0.26 | 0.03 | 0.10 |
| Minimum Detection | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Maximum Detection | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 1.00 | 5.00 | 10.00 | 5.00 | 10.00 | 10.00 | 5.00 | 5.00 |
| Method | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

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| Sample Name | Type | Au ppb | Ag ppm | Cu ppm | Pb ppm | Zn ppm | As ppm | Sb ppm | Hg ppm | Mo ppm | Tl ppm | Bi ppm | Cd ppm | Co ppm | Ni ppm | Ba ppm | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AB92 104+00N 99+00E | Soil | <5 | <0.1 | 195 | <2 | 30 | <5 | 5 | <3 | 2 | <10 | <2 | <0.1 | 26 | 30 | 73 | <5 |
| AB92 104+00N 100+00E | Soil | <5 | 0.1 | 55 | <2 | 47 | <5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 17 | 29 | 103 | <5 |
| AB92 104+00N 101+00E | Soil | <5 | 0.1 | 50 | 2 | 36 | <5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 14 | 19 | 54 | <5 |
| AB92 104+00N 102+00E | Soil | <5 | <0.1 | 89 | <2 | 49 | <5 | <5 | <3 | 4 | <10 | <2 | <0.1 | 22 | 32 | 105 | <5 |
| AB92 104+00N 103+00E | Soil | <5 | <0.1 | 168 | <2 | 37 | <5 | <5 | <3 | 2 | <10 | <2 | <0.1 | 31 | 37 | 106 | <5 |
| AB92 104+00N 104+00E | Soil | <5 | <0.1 | 109 | <2 | 42 | <5 | <5 | <3 | 2 | <10 | <2 | <0.1 | 25 | 30 | 99 | <5 |
| AB92 104+00N 105+00E | Soil | <5 | 0.4 | 30 | <2 | 26 | <5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 15 | 23 | 67 | <5 |
| AB92 104+00N 106+00E | Soil | <5 | 0.5 | 328 | 190 | 119 | <5 | 13 | <3 | 17 | <10 | <2 | <0.1 | 83 | 198 | 44 | <5 |
| AB92 104+00N 107+00E | Soil | <5 | 0.1 | 121 | 187 | 121 | <5 | 13 | 4 | 13 | <10 | <2 | 0.1 | 58 | 143 | 57 | <5 |
| AB92 104+00N 108+00E | Soil | <5 | 0.3 | 31 | 92 | 57 | <5 | 11 | <3 | 4 | <10 | <2 | <0.1 | 45 | 87 | 60 | <5 |
| AB92 104+00N 109+00E | Soil | <5 | <0.1 | 32 | 29 | 47 | <5 | 13 | <3 | 5 | <10 | <2 | <0.1 | 40 | 101 | 24 | <5 |
| AB92 104+00N 110+00E | Soil | <5 | <0.1 | 312 | 11 | 24 | <5 | 5 | <3 | 20 | <10 | <2 | <0.1 | 40 | 85 | 51 | <5 |
| AB92 104+00N 111+00E | Soil | <5 | <0.1 | 492 | 9 | 25 | <5 | 5 | <3 | 18 | <10 | <2 | <0.1 | 51 | 94 | 66 | <5 |
| AB92 104+00N 112+00E | Soil | <5 | 0.3 | 439 | 35 | 22 | <5 | 7 | <3 | 29 | <10 | <2 | <0.1 | 54 | 86 | 58 | <5 |
| AB92 104+00N 113+00E | Soil | <5 | 0.2 | 800 | 2 | 27 | <5 | 5 | <3 | 17 | <10 | <2 | <0.1 | 68 | 106 | 50 | <5 |
| AB92 104+00N 114+00E | Soil | <5 | 0.4 | 1207 | 6 | 44 | 5 | 7 | 3 | 9 | <10 | <2 | <0.1 | 77 | 119 | 111 | <5 |
| AB92 104+00N 115+00E | Soil | <5 | <0.1 | 404 | 4 | 65 | <5 | 5 | <3 | 8 | <10 | <2 | <0.1 | 44 | 98 | 125 | <5 |
| AB92 104+00N 116+00E | Soil | <5 | 0.1 | 755 | 4 | 58 | <5 | 5 | <3 | 7 | <10 | <2 | <0.1 | 38 | 95 | 66 | <5 |
| AB92 104+00N 117+00E | Soil | 6 | 2.1 | 871 | 6 | 70 | 6 | <5 | <3 | 16 | <10 | <2 | <0.1 | 60 | 132 | 111 | <5 |
| AB92 104+00N 118+00E | Soil | <5 | 0.2 | 939 | 5 | 69 | <5 | <5 | <3 | 25 | <10 | <2 | <0.1 | 36 | 126 | 123 | <5 |
| AB92 104+00N 119+00E | Soil | 16 | 0.4 | 355 | 148 | 167 | <5 | <5 | <3 | 9 | <10 | <2 | <0.1 | 116 | 113 | 102 | <5 |
| AB92 104+00N 120+00E | Soil | <5 | 0.1 | 205 | <2 | 65 | 5 | <5 | <3 | 3 | <10 | <2 | <0.1 | 49 | 93 | 82 | <5 |
| AB92 104+00N 121+00E | Soil | 22 | 0.1 | 214 | 3 | 62 | <5 | 5 | <3 | 3 | <10 | <2 | <0.1 | 34 | 89 | 78 | <5 |
| AB92 104+00N 122+00E | Soil | 26 | <0.1 | 175 | <2 | 79 | <5 | 7 | 4 | 3 | <10 | <2 | <0.1 | 48 | 88 | 94 | <5 |
| AB92 104+00N 123+00E | Soil | 204 | 0.4 | 365 | 4 | 147 | <5 | 8 | <3 | 5 | <10 | <2 | <0.1 | 64 | 99 | 157 | <5 |
| AB92 106+00N 108+00E | Soil | <5 | <0.1 | 90 | 20 | 38 | <5 | 7 | 3 | 9 | <10 | <2 | <0.1 | 32 | 77 | 19 | <5 |
| AB92 106+00N 109+00E | Soil | <5 | 0.1 | 300 | 11 | 48 | <5 | 5 | <3 | 24 | <10 | <2 | <0.1 | 50 | 100 | 60 | <5 |
| AB92 106+00N 110+00E | Soil | <5 | <0.1 | 182 | <2 | 38 | <5 | 5 | <3 | 11 | <10 | <2 | <0.1 | 34 | 73 | 53 | <5 |
| AB92 106+00N 111+00E | Soil | <5 | 0.1 | 302 | <2 | 35 | <5 | <5 | <3 | 20 | <10 | <2 | <0.1 | 39 | 69 | 57 | <5 |
| AB92 106+00N 112+00E | Soil | 6 | <0.1 | 207 | <2 | 28 | <5 | 9 | <3 | 10 | <10 | <2 | <0.1 | 35 | 83 | 7 | <5 |
| AB92 106+00N 113+00E | Soil | <5 | <0.1 | 315 | <2 | 28 | <5 | 9 | <3 | 4 | <10 | <2 | <0.1 | 31 | 89 | 27 | <5 |
| AB92 106+00N 114+00E | Soil | 74 | 0.3 | 945 | 3 | 40 | 8 | <5 | <3 | 11 | <10 | <2 | <0.1 | 62 | 108 | 75 | <5 |
| AB92 106+00N 115+00E | Soil | 22 | 0.5 | 1197 | 3 | 47 | <5 | 5 | <3 | 40 | <10 | <2 | <0.1 | 70 | 143 | 62 | <5 |
| AB92 106+00N 116+00E | Soil | 20 | 0.6 | 1075 | <2 | 48 | <5 | <5 | <3 | 33 | <10 | <2 | <0.1 | 46 | 112 | 62 | <5 |
| AB92 106+00N 117+00E | Soil | 14 | 0.5 | 408 | 5 | 33 | <5 | 7 | <3 | 17 | <10 | <2 | <0.1 | 29 | 78 | 105 | <5 |
| AB92 106+00N 118+00E | Soil | 8 | 0.3 | 408 | <2 | 50 | 6 | 7 | 3 | 12 | <10 | <2 | <0.1 | 26 | 84 | 111 | <5 |
| AB92 106+00N 119+00E | Soil | 10 | 0.3 | 363 | <2 | 51 | 7 | 7 | <3 | 5 | <10 | <2 | <0.1 | 41 | 140 | 107 | <5 |
| AB92 106+00N 120+00E | Soil | 166 | 0.3 | 439 | <2 | 77 | 6 | 8 | <3 | 5 | <10 | <2 | <0.1 | 65 | 108 | 64 | <5 |
| AB92 106+00N 121+00E | Soil | 370 | 0.3 | 441 | <2 | 72 | <5 | <5 | <3 | 6 | <10 | <2 | <0.1 | 56 | 116 | 54 | <5 |
| Minimum Detection | | 5 | 0.1 | 1 | 2 | 1 | 5 | 5 | 3 | 1 | 10 | 2 | 0.1 | 1 | 1 | 2 | 5 |
| Maximum Detection | | 10000 | 100.0 | 20000 | 20000 | 20000 | 10000 | 1000 | 10000 | 1000 | 1000 | 10000 | 10000.0 | 10000 | 10000 | 10000 | 1000 |
| Method | | FA/AAS | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

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| Sample Name | Cr ppm | V ppm | Mn ppm | La ppm | Sr ppm | Zr ppm | Sc ppm | Ti % | Al % | Ca % | Fe % | Mg % | K % | Na % | P % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AB92 104+00N 99+00E | 116 | 71 | 582 | 2 | 78 | 1 | 3 | 0.05 | 1.76 | 0.38 | 3.06 | 1.55 | 0.09 | 0.02 | 0.08 |
| AB92 104+00N 100+00E | 92 | 89 | 497 | 2 | 62 | <1 | 2 | 0.06 | 2.20 | 0.25 | 3.34 | 1.58 | 0.03 | 0.02 | 0.07 |
| AB92 104+00N 101+00E | 65 | 124 | 443 | 3 | 42 | 1 | 2 | 0.08 | 2.35 | 0.18 | 4.53 | 1.08 | 0.05 | 0.02 | 0.10 |
| AB92 104+00N 102+00E | 69 | 130 | 809 | 2 | 55 | 1 | 3 | 0.08 | 2.64 | 0.24 | 4.77 | 1.73 | 0.05 | 0.02 | 0.12 |
| AB92 104+00N 103+00E | 67 | 106 | 802 | 2 | 75 | 1 | 3 | 0.07 | 2.22 | 0.51 | 3.98 | 1.91 | 0.10 | 0.02 | 0.13 |
| AB92 104+00N 104+00E | 56 | 120 | 679 | 2 | 69 | 1 | 3 | 0.07 | 2.24 | 0.46 | 4.37 | 1.74 | 0.05 | 0.03 | 0.15 |
| AB92 104+00N 105+00E | 53 | 119 | 654 | 2 | 40 | 1 | 2 | 0.08 | 1.58 | 0.26 | 3.87 | 1.03 | 0.05 | 0.02 | 0.10 |
| AB92 104+00N 106+00E | 485 | 100 | 1090 | <2 | 14 | 1 | 7 | 0.08 | 2.79 | 0.92 | 4.86 | 6.33 | 0.11 | 0.02 | 0.02 |
| AB92 104+00N 107+00E | 425 | 100 | 790 | <2 | 10 | 1 | 8 | 0.07 | 2.42 | 0.54 | 5.3% | 4.74 | 0.23 | 0.02 | 0.02 |
| AB92 104+00N 108+00E | 382 | 126 | 655 | <2 | 18 | 1 | 5 | 0.12 | 2.13 | 0.33 | 5.3% | 3.18 | 0.30 | 0.02 | 0.02 |
| AB92 104+00N 109+00E | 476 | 71 | 476 | <2 | 5 | 1 | 5 | 0.06 | 1.31 | 0.42 | 4.05 | 2.56 | 0.07 | 0.02 | 0.01 |
| AB92 104+00N 110+00E | 192 | 86 | 372 | <2 | 11 | 1 | 4 | 0.08 | 1.43 | 0.34 | 4.34 | 2.21 | 0.25 | 0.02 | 0.03 |
| AB92 104+00N 111+00E | 193 | 86 | 390 | <2 | 11 | 1 | 7 | 0.09 | 1.51 | 0.39 | 4.33 | 2.37 | 0.31 | 0.02 | 0.03 |
| AB92 104+00N 112+00E | 176 | 79 | 365 | <2 | 12 | 1 | 5 | 0.08 | 1.30 | 0.39 | 4.18 | 2.12 | 0.35 | 0.02 | 0.03 |
| AB92 104+00N 113+00E | 187 | 73 | 316 | <2 | 11 | 1 | 7 | 0.09 | 1.43 | 0.37 | 4.56 | 2.35 | 0.42 | 0.02 | 0.04 |
| AB92 104+00N 114+00E | 234 | 117 | 749 | <2 | 31 | 1 | 8 | 0.12 | 2.14 | 0.45 | 5.4% | 3.09 | 0.33 | 0.02 | 0.04 |
| AB92 104+00N 115+00E | 217 | 209 | 1326 | 2 | 57 | 1 | 3 | 0.09 | 3.01 | 0.34 | 6.3% | 2.42 | 0.08 | 0.02 | 0.07 |
| AB92 104+00N 116+00E | 140 | 111 | 613 | 2 | 219 | 1 | 3 | 0.09 | 2.70 | 0.46 | 4.13 | 1.96 | 0.06 | 0.03 | 0.06 |
| AB92 104+00N 117+00E | 152 | 305 | 1004 | 5 | 99 | 1 | 6 | 0.09 | 2.92 | 1.94 | 6.7% | 2.88 | 0.80 | 0.03 | 0.83 |
| AB92 104+00N 118+00E | 132 | 223 | 1002 | 3 | 88 | 1 | 6 | 0.14 | 3.10 | 1.31 | 5.6% | 3.13 | 0.76 | 0.02 | 0.49 |
| AB92 104+00N 119+00E | 130 | 136 | 1193 | 2 | 88 | 2 | 8 | 0.12 | 4.42 | 1.09 | 5.6% | 2.11 | 0.33 | 0.05 | 0.22 |
| AB92 104+00N 120+00E | 144 | 171 | 1465 | 3 | 36 | 1 | 8 | 0.05 | 2.85 | 0.25 | 6.9% | 2.87 | 0.09 | 0.02 | 0.08 |
| AB92 104+00N 121+00E | 219 | 160 | 1172 | 3 | 51 | 1 | 6 | 0.11 | 2.73 | 0.30 | 6.4% | 2.65 | 0.10 | 0.02 | 0.05 |
| AB92 104+00N 122+00E | 256 | 229 | 1963 | <2 | 71 | 2 | 17 | 0.19 | 3.82 | 0.72 | 7.4% | 5.03 | 1.28 | 0.02 | 0.10 |
| AB92 104+00N 123+00E | 227 | 181 | 1756 | 4 | 92 | 2 | 11 | 0.16 | 3.28 | 0.33 | 6.5% | 3.38 | 0.33 | 0.02 | 0.08 |
| AB92 106+00N 108+00E | 373 | 74 | 406 | <2 | 7 | <1 | 5 | 0.06 | 1.08 | 0.41 | 4.06 | 2.04 | 0.07 | 0.02 | 0.02 |
| AB92 106+00N 109+00E | 245 | 106 | 715 | <2 | 25 | <1 | 7 | 0.11 | 1.96 | 0.60 | 4.69 | 2.87 | 0.06 | 0.02 | 0.03 |
| AB92 106+00N 110+00E | 194 | 109 | 351 | <2 | 18 | 1 | 4 | 0.10 | 1.64 | 0.35 | 4.15 | 2.32 | 0.20 | 0.02 | 0.03 |
| AB92 106+00N 111+00E | 145 | 126 | 420 | <2 | 31 | 1 | 5 | 0.14 | 1.85 | 0.37 | 4.77 | 2.32 | 0.19 | 0.02 | 0.02 |
| AB92 106+00N 112+00E | 297 | 70 | 380 | <2 | 9 | 1 | 6 | 0.06 | 1.15 | 0.38 | 3.57 | 1.87 | 0.03 | 0.02 | 0.02 |
| AB92 106+00N 113+00E | 291 | 71 | 383 | <2 | 10 | 1 | 10 | 0.08 | 1.44 | 0.39 | 3.29 | 2.36 | 0.12 | 0.02 | 0.02 |
| AB92 106+00N 114+00E | 142 | 127 | 703 | <2 | 67 | 1 | 5 | 0.08 | 2.34 | 0.87 | 5.7% | 2.73 | 0.30 | 0.02 | 0.20 |
| AB92 106+00N 115+00E | 168 | 155 | 692 | <2 | 102 | 1 | 4 | 0.09 | 2.47 | 0.82 | 6.7% | 2.59 | 0.33 | 0.02 | 0.25 |
| AB92 106+00N 116+00E | 149 | 128 | 548 | <2 | 147 | 2 | 5 | 0.09 | 2.34 | 0.85 | 5.4% | 2.47 | 0.33 | 0.02 | 0.23 |
| AB92 106+00N 117+00E | 215 | 163 | 440 | 2 | 64 | 1 | 3 | 0.21 | 2.49 | 0.35 | 6.2% | 2.27 | 0.81 | 0.03 | 0.17 |
| AB92 106+00N 118+00E | 196 | 125 | 511 | <2 | 96 | <1 | 1 | 0.07 | 2.94 | 0.50 | 4.97 | 1.98 | 0.22 | 0.03 | 0.12 |
| AB92 106+00N 119+00E | 279 | 129 | 649 | <2 | 134 | 1 | 3 | 0.13 | 3.09 | 0.43 | 5.1% | 2.86 | 0.31 | 0.02 | 0.11 |
| AB92 106+00N 120+00E | 203 | 205 | 1940 | <2 | 88 | 2 | 12 | 0.12 | 3.44 | 0.72 | 7.9% | 4.24 | 0.58 | 0.02 | 0.11 |
| AB92 106+00N 121+00E | 241 | 206 | 1688 | <2 | 65 | 2 | 13 | 0.12 | 3.93 | 0.66 | 9.0% | 4.92 | 0.41 | 0.01 | 0.12 |
| Minimum Detection | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Maximum Detection | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 1.00 | 5.00 | 10.00 | 5.00 | 10.00 | 10.00 | 5.00 | 5.00 |
| Method | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

---=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

iPL
INTERNATIONAL PLASMA LABORATORY LTD.
]36 C( ]a Str
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898



| Sample Name | Type | Au ppb | Ag ppm | Cu ppm | Pb ppm | Zn ppm | As ppm | Sb ppm | Hg ppm | Mo ppm | Tl ppm | Bi ppm | Cd ppm | Co ppm | Ni ppm | Ba ppm | W ppm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AB92 106+00N 122+00E | Soil | 250 | 0.5 | 489 | <2 | 87 | <5 | 7 | 3 | 7 | <10 | <2 | <0.1 | 101 | 181 | 106 | <5 |
| AB92 106+00N 123+00E | Soil | 414 | 0.5 | 273 | 10 | 95 | <5 | <5 | 3 | 5 | <10 | <2 | <0.1 | 85 | 113 | 172 | <5 |
| Minimum Detection | | 5 | 0.1 | 1 | 2 | 1 | 5 | 5 | 3 | 1 | 10 | 2 | 0.1 | 1 | 1 | 2 | 5 |
| Maximum Detection | | 10000 | 100.0 | 20000 | 20000 | 20000 | 10000 | 1000 | 10000 | 1000 | 1000 | 10000 | 10000.0 | 10000 | 10000 | 10000 | 1000 |
| Method | | FA/AAS | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

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36 C[illegible]a Str[illegible]
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Canada V5Y 3E1
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| Sample Name | Cr ppm | V ppm | Mn ppm | La ppm | Sr ppm | Zr ppm | Sc ppm | Ti % | Al % | Ca % | Fe % | Mg % | K % | Na % | P % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AB92 106+00N 122+00E | 385 | 245 | 3034 | 3 | 26 | 2 | 18 | 0.11 | 3.98 | 0.71 | 10% | 5.83 | 0.37 | 0.01 | 0.15 |
| AB92 106+00N 123+00E | 252 | 213 | 3349 | <2 | 13 | 2 | 21 | 0.09 | 3.58 | 0.25 | 9.4% | 4.11 | 0.26 | 0.01 | 0.13 |
| Minimum Detection | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Maximum Detection | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 1.00 | 5.00 | 10.00 | 5.00 | 10.00 | 10.00 | 5.00 | 5.00 |
| Method | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP | ICP |

--=No Test ReC=ReCheck ins=Insufficient Sample m=Est/1000 %=Est % Max=No Est

2036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

# Method of Gold analysis by Fire Assay / AAS

(a) 20.0 to 30.0 grams of sample is mixed with a combination of fluxes in a fusion pot. The sample is then fused at high temperature to form a lead "button".

(b) The precious metals are extracted by cupellation. Any Silver is dissolved by nitric acid and decanted. The gold bead is then dissolved in boiling concentrated aqua regia solution heated by a hot water bath.

(c) The gold in solution is determined with an Atomic Absorption Spectrometer. The gold value, in parts per billion, is calculated by comparision with a set of known gold standards.

## QUALITY CONTROL

Every fusion of 24 pots contains 22 samples, one internal standard or blank, and a random reweigh of one of the samples. Samples with anomalous gold values greater than 500 ppb are automatically checked by Fire Assay/AA methods. Samples with gold values greater than 10000 ppb are automatically checked by Fire Assay/Gravimetric methods.

INTERNATIONAL PLASMA LABORATORY LTD

2036 Columbia Street
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Fax (604) 879-7898

# Method of ICP Multi-element Analyses

(a) 0.50 grams of sample is digested with diluted aqua regia solution by heating in a hot water bath for 90 minutes, then cooled, bulked up to a fixed volume with demineralized water, and thoroughly mixed.

(b) The specific elements are determined using an Inductively Coupled Argon Plasma spectrophotometer. All elements are corrected for inter-element interference. All data are subsequently stored onto computer diskette.

* Aqua regia leaching is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

## QUALITY CONTROL

The machine is calibrated using six known standards and a blank. Another blank, which was digested with the samples, and a standard are tested before any samples to confirm the calibration. A maximum of 20 samples are analysed, and then a standard, also digested with the samples, is run. A known standard with characteristics best matching the samples is chosen and tested. Another 20 samples are analysed, with the last one being a random reweigh of one of the samples. The standard used at the beginning is rerun. This procedure is repeated for all of the samples.

# APPENDIX C

Statistical Analysis

# SOIL SAMPLE GEOCHEMISTRY
# ON THE ABE PROPERTY

By

A.M.S.Clark, Ph.D., FGAC, P.Geo.(B.C.)
**SEGURO CONSULTING INC.**

28 September 1992

## INTRODUCTION

An investigation of the distribution of gold and copper in soil samples from the Abe Property was carried out between 15 August and 28 September 1992.

This report is based on an evaluation of the geochemical analyses only, the author has not visited the property.

A total of 158 samples were collected from one grid on the property in the summer of 1992.

## DISCUSSION

Summary statistics and correlation coefficients have been calculated for the main elements of interest, and histograms plotted for gold and copper.

Gold:

Gold values are predominantly low, with a few high values ranging up to 560 ppb Au (see Summary Statistics Table). Gold shows no significant correlation with other elements (see Correlation Coefficient Table). The strongest correlation with elements of exploration interest is only 0.257 (very weak correlation) between gold and zinc.

The detailed histogram of gold shows an irregular distribution that may be a normal Gaussian distribution incompletely defined due to an insufficient data set. This irregular data distribution ends at about 30 ppb, with isolated higher values of gold up to 560 ppb (see histograms).

The 'breakpoints' for the symbol sizes used on the symbol maps were determined by inspection of the detailed histogram. All 'breakpoint' values are low compared to the usual soil values in British Columbia, for which usually only values of greater than 25 ppb Au are considered of exploration significance. The following are the 'breakpoints' chosen as showing the most useful pattern of values on the maps:

| | | |
|---|---|---|
| Gold: | Low values | >=6 and <18 ppb Au |
| | Medium values | >=18 and <30 ppb Au |
| | Higher values | >=30 ppb Au. |

The higher values are located mainly in the northeast of the grid and also to the west of the longest sample line. Other higher values occur scattered over the grid.

Copper:
Copper shows a strong correlation with molybdenum, a moderate correlation with silver, a very weak correlation with nickel and a very weak negative correlation with antimony. Copper shows medium to high background values (above 100 ppm Cu, see Statistics Table and histograms) and an irregular normal distribution ending at about 300 ppm, with a possible second population from 300 ppm to about 600 ppm. Copper high values are distributed in the northeast part of the grid, but appear to have the medium values in the higher gold area, and the higher copper values as a 'halo' adjacent to the higher gold area. The possible second population of copper values defined by the medium group (mid-sized triangles on the map) could be real as a second population of copper values genetically associated with the higher gold values, whereas the higher copper values could be copper with no genetic gold association.

| | | |
|---|---|---|
| Copper: | Low values | >=150 and <300 ppm Cu |
| | Medium values | >=300 and <600 ppm Cu |
| | Higher values | >=600 ppm Cu. |

CONCLUSION

There appears to be a significant area of higher gold and associated medium copper results in the northeast part of the grid. In addition there appears to be a 'halo' of higher copper values, with little or no gold associated, forming a second population on the edge of the high gold area. High gold values have some copper associations on the west end of the longest sample-line of the grid.

## CERTIFICATE

I, ANTHONY M.S. CLARK, of 2988 Fleet Street, Coquitlam, B.C., do hereby state that:

1. I am a graduate of the University of Cape Town, Cape Town, South Africa, with a Bachelor of Science Degree in Geology, 1963, and of Memorial University, St. John's, Newfoundland, with a Doctor of Philosophy Degree in Geology, 1974.

2. I am a Fellow in good standing with the Geological Association of Canada, and registered as a Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta.

3. I actively pursued my career as an exploration geologist for twenty-three years from 1963 to 1986, since when I have undertaken consulting in the fields of mineral exploration and computer applications to exploration.

4. The information, opinions, and recommendations in this report are based on information obtained by other personnel who undertook the fieldwork on the property, and on published and unpublished literature. I have not visited the subject property.

5. I have no interest, direct or indirect, in the subject claims or the securities of Swannell Minerals Corporation.

6. I consent to the use of this report in Prospectus or Statement of Material Facts for the purpose of private or public financing.

Anthony M.S. Clark, Ph.D., F.G.A.C. P.Geo. (B.C.)

Dated at Coquitlam, B.C., 28 Sept 92

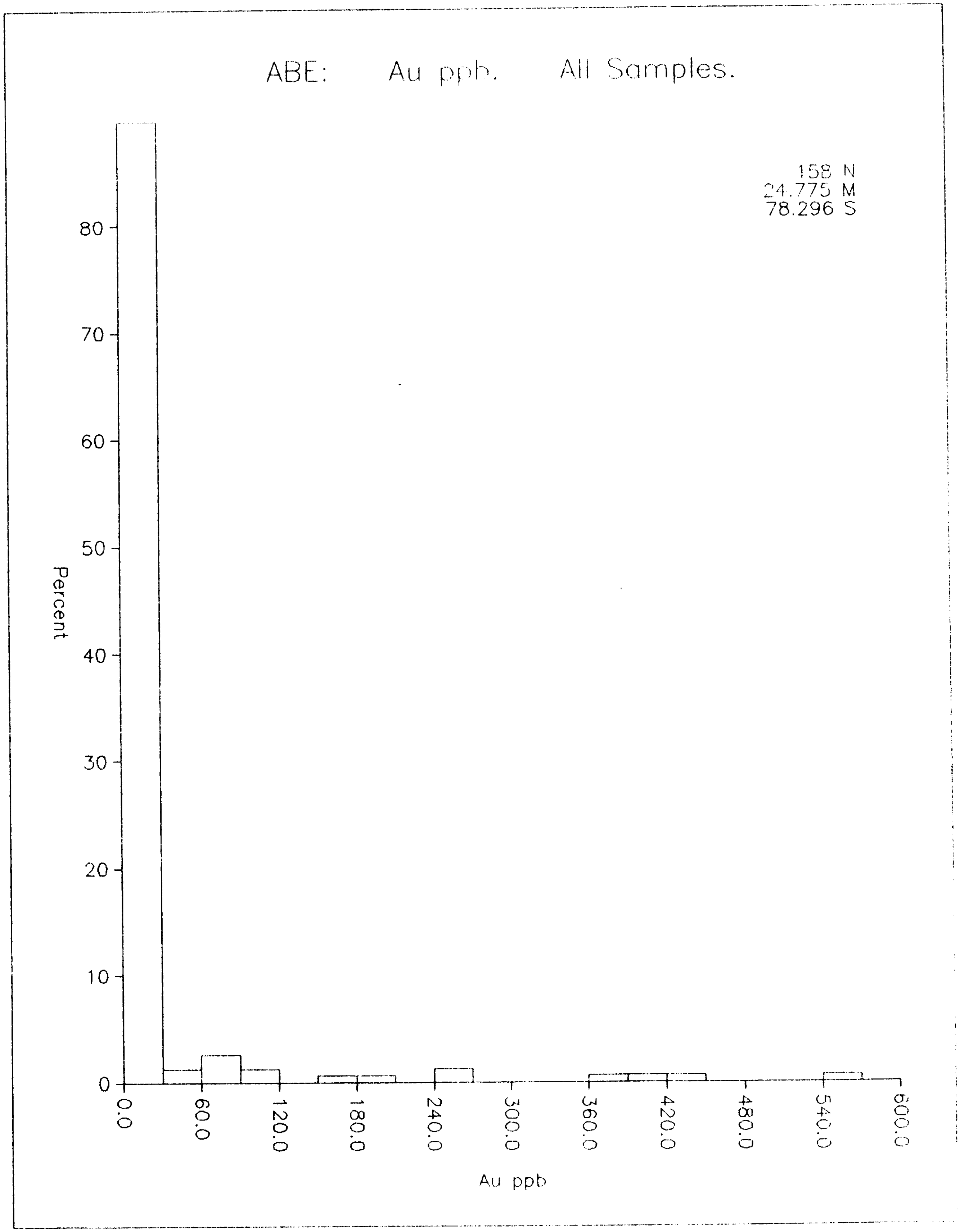
ABE Property:

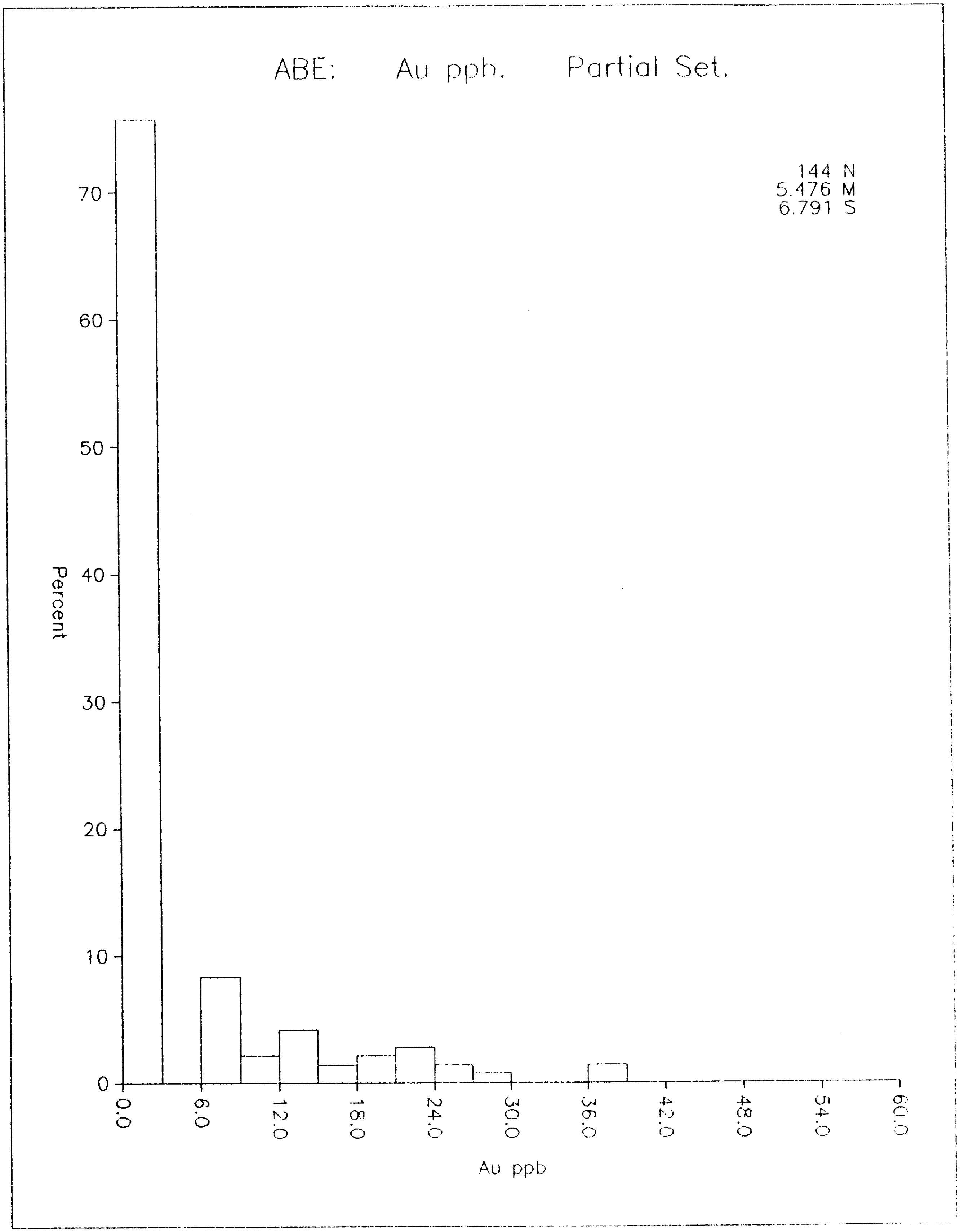
Pearson Correlation Coefficients

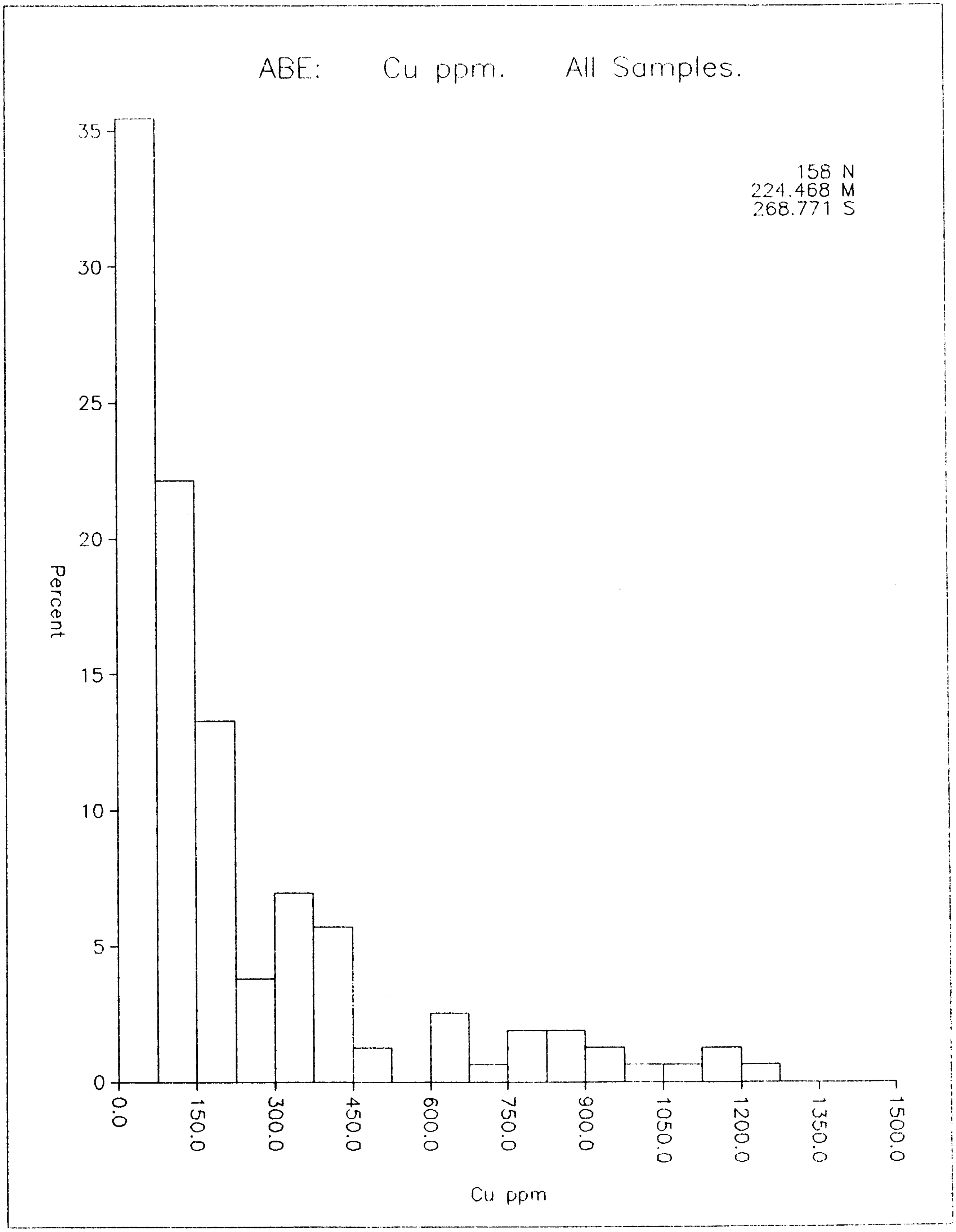
| | Ag_ppm | As_ppm | Au_ppb | Cu_ppm | Mo_ppm | Ni_ppm | Pb_ppm | Sb_ppm | Zn_ppm |
|---|---|---|---|---|---|---|---|---|---|
| Ag_ppm | 1. | 0.1278 | 0.2145 | 0.4416 | 0.4188 | 0.3235 | 0.1987 | -0.0113 | 0.2759 |
| As_ppm | 0.1278 | 1. | 0.0113 | 0.1430 | 0.0367 | 0.0120 | -0.1232 | -0.1616 | 0.1012 |
| Au_ppb | 0.2145 | 0.0113 | 1. | 0.0741 | 0.0577 | 0.2127 | -0.1053 | -0.1622 | 0.2571 |
| Cu_ppm | 0.4416 | 0.1430 | 0.0741 | 1. | 0.6095 | 0.2989 | -0.1797 | -0.2811 | 0.0894 |
| Mo_ppm | 0.4188 | 0.0367 | 0.0577 | 0.6095 | 1. | 0.3295 | -0.0214 | -0.1502 | 0.1147 |
| Ni_ppm | 0.3235 | 0.0120 | 0.2127 | 0.2989 | 0.3295 | 1. | 0.2037 | 0.5505 | 0.3529 |
| Pb_ppm | 0.1987 | -0.1232 | -0.1053 | -0.1797 | -0.0214 | 0.2037 | 1. | 0.3653 | 0.2901 |
| Sb_ppm | -0.0113 | -0.1616 | -0.1622 | -0.2811 | -0.1502 | 0.5505 | 0.3653 | 1. | 0.0685 |
| Zn_ppm | 0.2759 | 0.1012 | 0.2571 | 0.0894 | 0.1147 | 0.3529 | 0.2901 | 0.0685 | 1. |

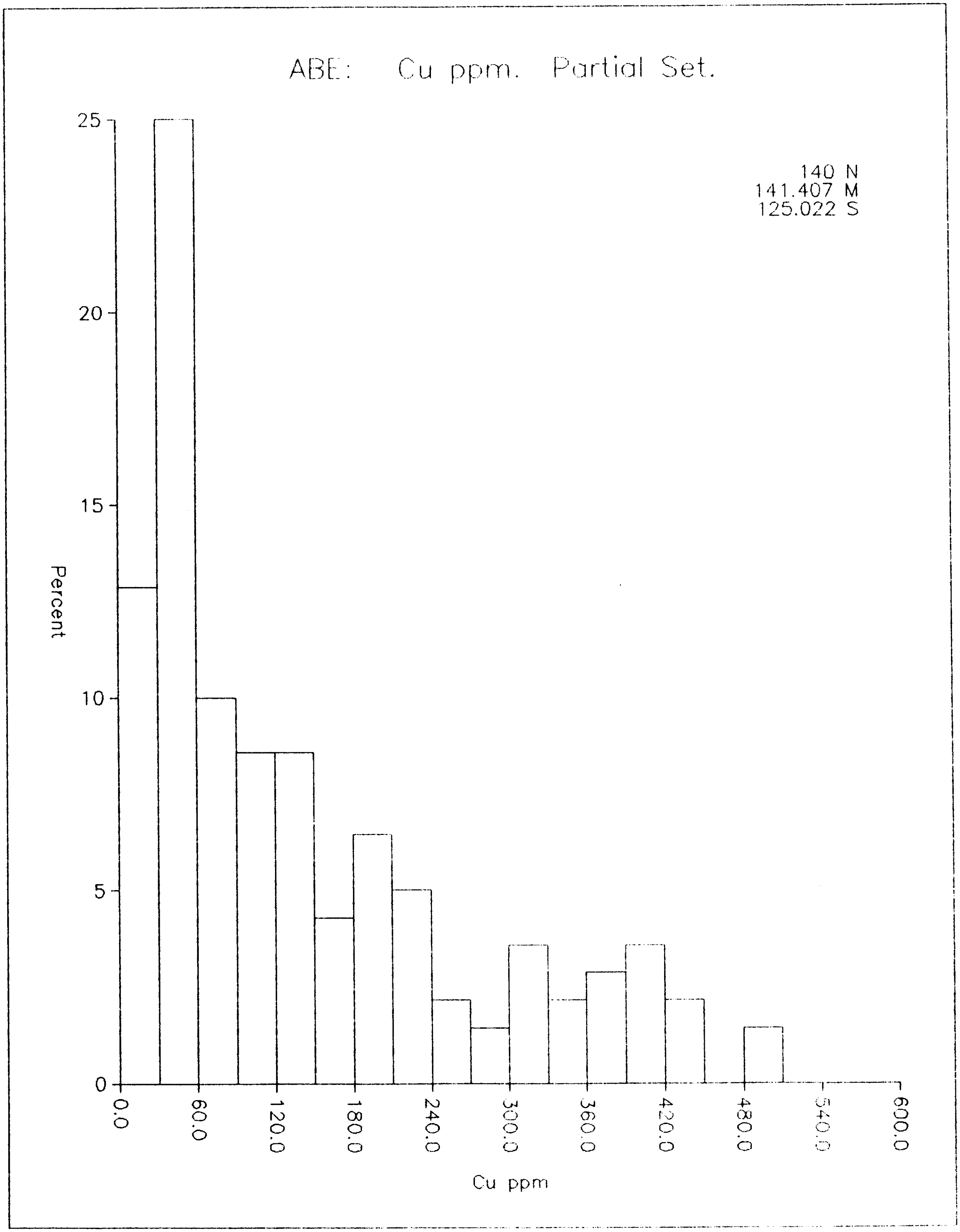
Summary Statistics

| | Ag_ppm | As_ppm | Au_ppb | Cu_ppm | Mo_ppm | Ni_ppm | Pb_ppm | Sb_ppm | Zn_ppm |
|---|---|---|---|---|---|---|---|---|---|
| Number | 158 | 158 | 158 | 158 | 158 | 158 | 158 | 158 | 158 |
| Mean | 0.1712 | 2.854 | 24.775 | 224.468 | 6.848 | 77.165 | 27.196 | 6.462 | 54.000 |
| Std Dev | 0.2446 | 1.291 | 78.296 | 268.771 | 7.129 | 34.455 | 49.482 | 3.806 | 25.416 |
| Variance | 0.06 | 1.7 | 6130.3 | 72238.0 | 50.8 | 1187.2 | 2448.5 | 14.5 | 646.0 |
| Maximum | 2.10 | 13.0 | 560.0 | 1207.0 | 42.0 | 198.0 | 311.0 | 19.0 | 167.0 |
| Minimum | 0.05 | 2.5 | 2.5 | 8.0 | 1.0 | 8.0 | 1.0 | 2.5 | 15.0 |
| Range | 2.05 | 10.5 | 557.5 | 1199.0 | 41.0 | 190.0 | 310.0 | 16.5 | 152.0 |
| Coef Var | 142.8968 | 45.2265 | 316.0260 | 119.7368 | 104.0966 | 44.6515 | 181.9444 | 58.8983 | 47.0672 |
| Std Err | 0.0195 | 0.1027 | 6.2289 | 21.3823 | 0.5671 | 2.7411 | 3.9366 | 0.3028 | 2.0220 |
| Median | 0.050 | 2.50 | 2.50 | 119.50 | 4.00 | 77.00 | 5.00 | 6.00 | 49.00 |
| Mode | 0.05 | 2.5 | 2.5 | 37.0 | 3.0 | 61.0 | 1.0 | 2.5 | 47.0 |
| Skewness | 4.1916 | 4.5943 | 4.6910 | 1.9271 | 2.3925 | 0.3901 | 2.9710 | 0.7955 | 1.3447 |
| Kurtosis | 25.4469 | 25.8990 | 23.0996 | 3.2355 | 6.7709 | 0.3277 | 10.1840 | 0.0189 | 2.8869 |


ABE: Au ppb. All Samples.
158 N
24.775 M
78.296 S
Percent
0
10
20
30
40
50
60
70
80
0.0
60.0
120.0
180.0
240.0
300.0
360.0
420.0
480.0
540.0
600.0
Au ppb


ABE: Au ppb. Partial Set.
144 N
5.476 M
6.791 S
Percent
0
10
20
30
40
50
60
70
0.0
6.0
12.0
18.0
24.0
30.0
36.0
42.0
48.0
54.0
60.0
Au ppb


ABE: Cu ppm. All Samples.
158 N
224.468 M
268.771 S
Percent
35
30
25
20
15
10
5
0
0.0
150.0
300.0
450.0
600.0
750.0
900.0
1050.0
1200.0
1350.0
1500.0
Cu ppm


ABE: Cu ppm. Partial Set.
140 N
141.407 M
125.022 S
Percent
25
20
15
10
5
0
0.0
60.0
120.0
180.0
240.0
300.0
360.0
420.0
480.0
540.0
600.0
Cu ppm

# APPENDIX D

# PETROGRAPHIC DESCRIPTION

# Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE, Ph.D. Geologist
CRAIG LEITCH, Ph.D. Geologist
JEFF HARRIS, Ph.D. Geologist
KEN E. NORTHCOTE, Ph.D. Geologist

P.O. BOX 39
8080 GLOVER ROAD,
FORT LANGLEY, B.C.
V0X 1J0
**PHONE (604) 888-1323**
**FAX. (604) 888-3642**

Peter D. Leriche
Reliance Geological Services Inc.
241 East 1st Street
North Vancouver, B.C. V7L 1B4
Tel. 984-3663, Fax 988-4653

Sept. 22/92
JOB #.070

Dear Peter,

**Re: Petrographic Description Reliance-1**

The petrographic description for the Reliance-1 sample has been completed.

I am sending a copy by Fax with hard copy, thin section and sample rejects to follow by mail.

If you wish to discuss the results call me anytime at [Telephone/Fax] 796-2068.

Yours very truly,

Ken Northcote

K.E. Northcote, Ph.D., P.Eng.

There is a total of 3 pages including this one.

**Reliance.070**
**Crushed altered porphyritic andesite/latite andesite (K-feldspar introduced)**

**Summary description**
Protolith porphyritic with outlines of "crushed" plagioclase and mafic phenocrysts discernable. In a crushed fine grained altered groundmass similar to phenocryst but more abundantly chloritic and with abundantly introduced(?) K-feldspar.

Plagioclase phenocrysts, crushed, outlines visible, patchy felted sericite alteration and fracture-controlled chlorite. Mafics chloritized with carbonate patches, strong cleavage control.

Groundmass strong crushed fabric composed of sericitic plagioclase and chlorite altered mafics as for phenocrysts. Crushing void networks filled with chlorite and K-feldspar (conspicuous in stained slab), lesser carbonate.

Stronger linear fractures and larger breccia voids filled with segregated chlorite, carbonate and K-feldspar.

Note: No secondary biotite, but abundantly chloritic.

Opaques; Pyrite, magnetite > chalcopyrite. Pyrite and chalcopyrite mainly fracture controlled but disseminations also occur. Magnetite diffuse clusters in chloritized mafic. Hematite (specular) associated with chalcopyrite. Few alteration rims on pyrite.

**Microscopic description**
**Phenocrysts**

Plagioclase; 15%, anhedral/subhedral (0.2 to >2.0 mm) Shattered grains, generally indistinct outlines. Patchy sericitic alteration. Shattered, fractures filled with chlorite, lesser K-feldspar.

Chlorite-altered mafic; 10%, anhedral (0.2 to 3.0 mm). Crushed, original *outlines visible, pseudomorphous alteration to chlorite with small* clusters of carbonate. Associated clusters of magnetite.

**Groundmass:** Crushed fabric

Plagioclase; 25%, anhedral (<.05 to 0.2 mm). Indistinct interlocking grains in a chlorite-rich shatter fracture network. Weak sericite slightly stronger carbonate alteration clusters.

Chlorite; ?%, anhedral, (<.01 to 0.2 mm?). Altered mafics. Indistinguishable from fracture network controlled chlorite..

**Crushing networks**

Chlorite; 30%, anhedral (<.05 to 0.1 mm). Felted to weakly foliated blades. Fracture controlled networks among plagioclase phenocrysts and groundmass.

Reliance.070 Continued

K-feldspar; 15%, anhedral (<.05 to 0.2 mm). Most conspicuous in stained slab in groundmass. Scattered coarser grains. Observed in thin section as well defined fracture fillings.

**Linear fracture fillings/veins**

Chlorite; late fracture fillings cutting through groundmass and phenocrysts.

Carbonate; minor amounts associated with K-feldspar veinlets.

K-feldspar; conspicuous in thin section as minute irregular veinlets associated with lesser carbonate.

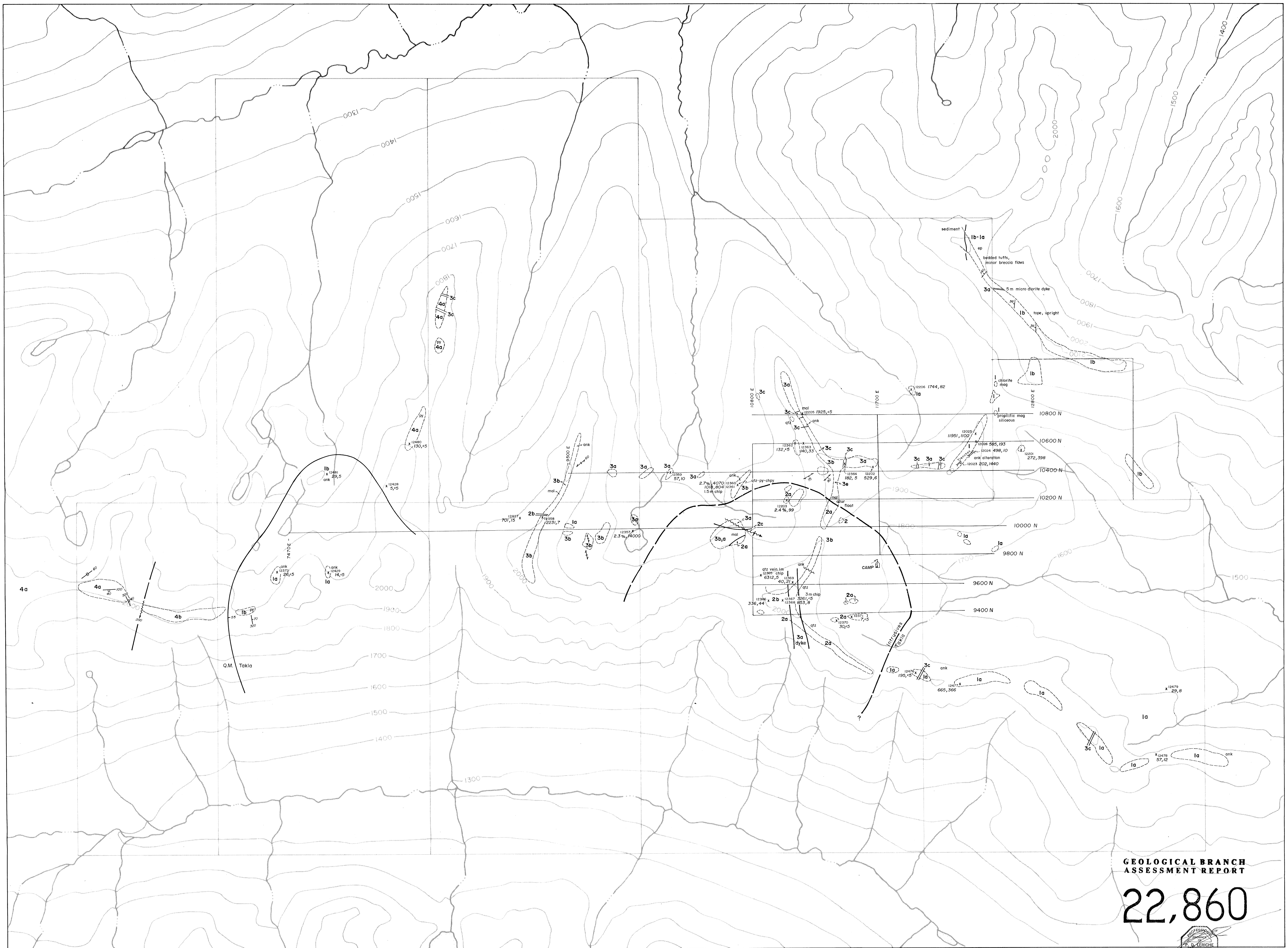
**Reflected light**
**Opaques**; about 5%

Pyrite; <2%, euhedral/anhedral (<.01 to 0.2 mm). Clusters of grains, strong fracture control. Associated chalcopyrite.

Chalcopyrite; 1%, anhedral (<.01 to >0.1 mm). Clusters of grains, some disseminated but strong fracture control. Associated interstitial to magnetite and pyrite.

Magnetite; 2%, euhedral, (<.01 to 0.4 mm, most grains <0.2 mm). Single grains, clusters of interlocking grains associated with chlorite altered mafic phenocrysts.

Hematite; <<1%, anhedral, (<.01 to <.05 mm)
[a] specular felted clusters intergrown with chalcopyrite.
[b] alteration rims on pyrite.




## Volcanics

**1 - TAKLA**

- **1a** - andesitic augite porphyry flows and dykes
- **1b** - andesitic tuffs

## Intrusives

- **2a** - pyroxenite, massive medium grain dark green
- **2b** - pyroxenite chlorite rich, dark green to black
- **2c** - pyroxenite, gabbro phase medium grain, light green weathering
- **2d** - pyroxenite carbonate talc altered, moderately sheared

- **3a** - light gray-green diorite massive and dyke-like
- **3b** - hybrid zone, variable amounts of angular pyroxenite xenoliths set in a diorite matrix
- **3c** - feldspar porphyry flows and dykes

- **4a** - monzonite massive
- **4b** - quartz monzonite

qtz - quartz
ank - ankerite
hem - hematite
mag - magnetite
mal - malachite
py - pyrite
chpy - chalcopyrite

outcrop
geological contact (defined, assumed)
shearing
bedding
jointing
dyke
12477 x 665,366 rock sample location and I.d. Cu (ppm), Au (ppb)

0 100 200 500 750 1000 METRES

N

# SWANNELL MINERALS CORPORATION

## ABE PROPERTY

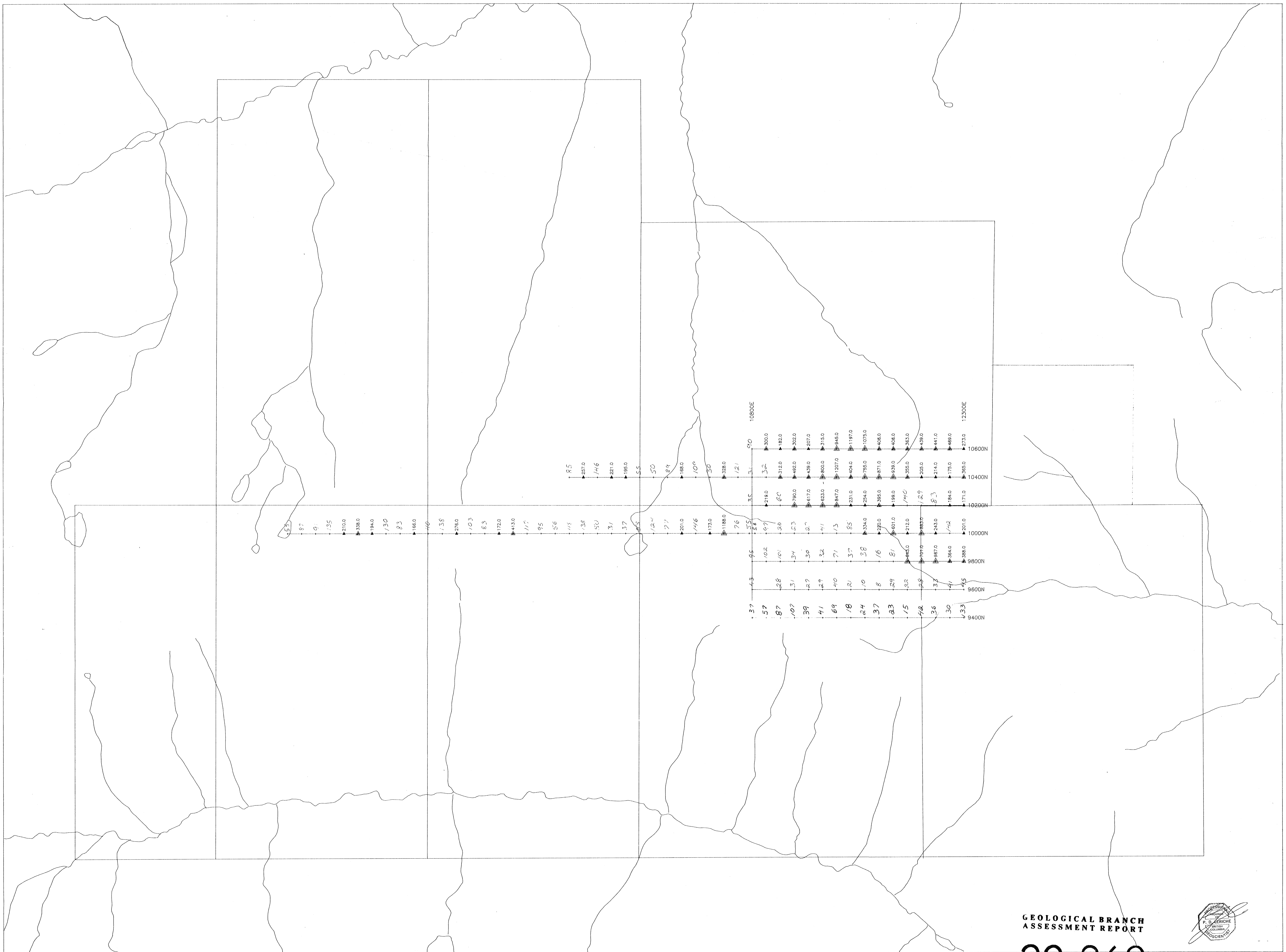
OMINECA M.D., B.C.

# GEOLOGY and GEOCHEMISTRY

| | | |
|---|---|---|
| Scale 1 : 10,000 | N.T.S. 94·C/5E,5W | Drawn by g.e.l. |
| Date August 1992 | Geologist | Figure 6 |

REBAGLIATI GEOLOGICAL CONSULTING LTD.

RELIANCE GEOLOGICAL SERVICES INC.




GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,860

LEGEND

182.0 Cu ppm

▲ >=150 and <300 ppm Cu

▲ >=300 and <600 ppm Cu

▲ >=600 ppm Cu

N

0 — 1000 metres

SWANNELL MINERALS CORPORATION

ABE PROPERTY
British Columbia

FIGURE 7

OMINECA M.D. 94C/5E,5W

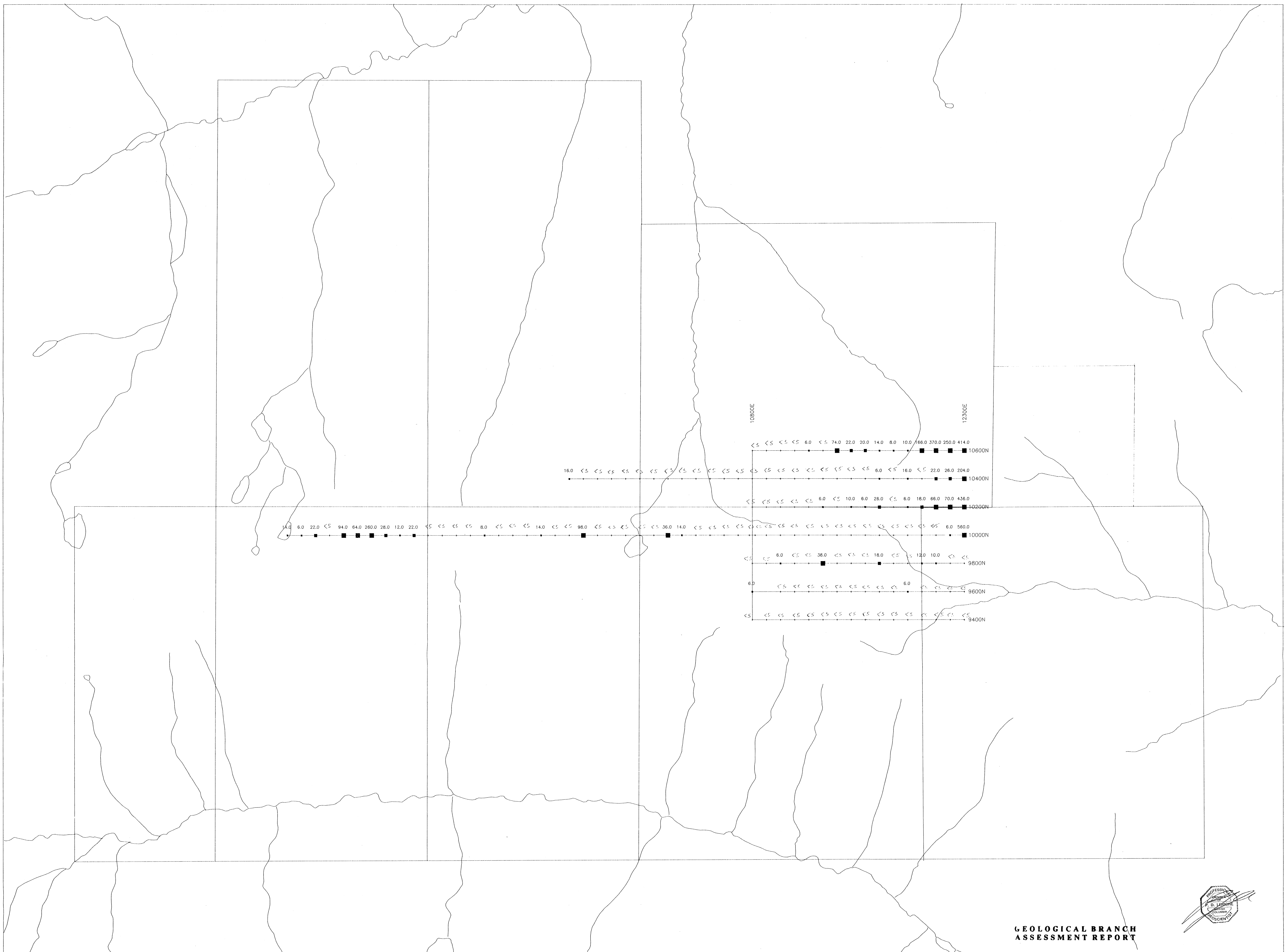
DETAILED SOIL GEOCHEMISTRY

COPPER

RELIANCE GEOLOGICAL SERVICES INC.

DATE: 24 Sept. 1992 | SCALE: 1 : 10000

Drawn By: TONY CLARK CONSULTING






LEGEND

Au ppb

>=6 and <18 ppb Au

>=18 and <30 ppb Au

>=30 ppb Au

N

0 1000

metres

| | |
|---|---|
| SWANNELL MINERALS CORPORATION | |
| ABE PROPERTY<br>British Columbia | FIGURE 8 |
| OMINECA M.D. | 94C/5E,5W |
| DETAILED SOIL GEOCHEMISTRY<br>GOLD | |
| RELIANCE GEOLOGICAL SERVICES INC. | |
| DATE: 24 Sept. 1992 | SCALE: 1 : 10000 |
| Drawn By: TONY CLARK CONSULTING | |