# ARIS SUMMARY SHEET

District Geologist, Nelson — Off Confidential: 89.02.15

ASSESSMENT REPORT 16984 — MINING DIVISION: Slocan

PROPERTY: Purcell
LOCATION: LAT 49 59 18 LONG 117 11 00
UTM 11 5537130 486857
NTS 082F14E
CLAIM(S): Grey Copper,Grey Copper Fr. 1,Goodenough,Purcell,Idaho 2,Rawdon Link 1
OPERATOR(S): Rawdon Res.
AUTHOR(S): Spearing, C.;Ostler, J.
REPORT YEAR: 1988, 40 Pages
COMMODITIES SEARCHED FOR: Silver,Lead,Zinc
GEOLOGICAL SUMMARY: The Purcell Property is underlain by fissile metasediments of the Slocan series which are intruded by sill-like granodioritic bodies. Northeast-trending tear faults host quartz-carbonate veins that are mineralized with argentite, pyrargyrite, native silver, galena, tetrahedrite and sphalerite. Three veins on the property have previously been mined at a profit. They are the Goodenough vein, the Grey Copper vein and the Idaho vein. Ore grades in these veins ran up to 22630 grams of silver per tonne.
WORK TYPE: Geochemical
LINE 7.4 km
SOIL 219 sample(s) ;CU,PB,ZN,AG,AS
Map(s) - 2; Scale(s) - 1:2500
MINFILE: 082FNW033,082FNW230

# SOIL GEOCHEMICAL REPORT ON THE PURCELL PROPERTY

| Reverted Crown Grants | | | Located Claims | |
|---|---|---|---|---|
| Grey Copper | L580 | R18230(2) | Grey Copper Fr.1 | R 613(4) |
| Goodenough | L581 | R18230(2) | Link 1 | R1264(6) |
| Purcell | L849 | R18230(2) | Link 2 | R1265(6) |
| Rawdon | L855 | R18231(2) | Chambers Fr.1 | R1266(6) |
| Idaho No.2 | L1013 | R18232(2) | Chambers Fr.2 | R1267(6) |

Slocan Mining Division

N.T.S. 82 F/14E



for

Rawdon Resources Ltd.

800-1140 West Pender Street

Vancouver, BC

V6E 4G1



by

C. Geoffrey Spearing, B.Sc.(Eng.)
Consulting Mining Engineer



and

John Ostler; M.Sc., P.Geol.
Consulting Geologist

February 1, 1988

# CONTENTS

CONTENTS
continued

FIGURES continued

# Soil Geochemical Report on the Purcell Property

## SUMMARY

The writers were retained by Rawdon Resources Ltd. of Vancouver, British Columbia through Cassiar East Yukon Expediting Ltd. to assemble and review the results of a soil geochemical survey conducted on the Purcell Property during 1987.

The Purcell Property is located in the Slocan Ranges of the Selkirk Mountains of southeastern British Columbia. The property comprises five reverted crown-grants, three of which are recorded together and five located claims. These claims comprise 8 claim-units covering about 70 ha. The property is centred on 49° 59.3' N. and 117° 11' W. in the Slocan Mining Division of B.C.

The property is about 20 km (12 mi) by dirt road from New Denver, B.C. which is about 765 km (467 mi) east of the city of Vancouver.

The claims are located on the northern side of the Carpenter Creek valley on a steep southwest-facing slope of Reco Mountain. Elevations on the property range from 1555 m (5100 ft) to 2134 m (7000 ft) in the western part of the property.

Soils on this proeprty were developed beneath a fir, spruce and hemlock forest. Generally, they were sufficiently well-developed to have distinct horizons amenable to meaningful soil survey results.

Exploration around the area now covered by the Purcell Property commenced in the early 1890's. Three vein systems carrying high-grade silver-lead ores were mined on the area now covered by the claims. They were the Goodenough Vein, the Grey Copper Vein and the Idaho Vein.

The Goodenough Vein was mined on seven levels from 1895 until 1917.

That vein contained argentite, pyragyrite (ruby silver), galena, tetrahedrite and native silver. Silver contents ranged up to 730 oz/ton. Below the seventh level, the vein contained sphalerite (ZnS) that was not profitable to mine at that time.

The Grey Copper Vein was developed from 1893 to 1953. Ore from that vein ran 145 to 160 oz/ton silver and up to 72% lead with considerable zinc in places.

The Idaho Vein was traced on surface up the ridge to the Bluebird claim east of the Purcell Property where it contained high concentrations of lead and silver. The Idaho Vein was tunnelled for 1180 ft (360 m) across the Idaho No.2 claim onto the Rawdon claim. At that level, the vein contained mostly sphalerite that had comparatively low silver values.

During 1987, Phillip Bilodeau and Terry Holman took 219 soil samples over a grid laid out over the area around the Goodenough and Grey Copper veins. The soil data was analized by C. Geoffrey Spearing B.Sc.(Eng.) and John Ostler; M.Sc.,P.Geol.

The grid-area is underlain by slaty metasediments of the Slocan series that strike about 320° and dip about 45° southwest. These rocks are intruded by grannodioritic sill-like bodies. Northeasterly trending fractures probably related to oblique tear faulting are filled with quartz-carbonate veins that contain high-grade lead and silver ore in their upper parts and zinc mineralization in their lower parts.

Soil anomalies in the west-central part of the soil grid are directly related to vein exposures and mine dumps of the Goodenough and Grey Copper veins. Soil anomalies in the eastern part of the grid are probably due to unexposed extensions of silver-lead bearing veins, particularly the veins exposed on the Grey Copper claim in the central part of the grid.

The writers recommend the following: survey of the property perimeter, extension of the soil grid to cover the eastern part of the property and a program of detailed mapping and trenching to expose lodes suitable for low tonnage high-grade production.

# SOIL GEOCHEMICAL REPORT ON THE PURCELL PROPERTY

## 1.0 INTRODUCTION

### 1.1 Terms of Reference

The writers were retained by Rawdon Resources Ltd. of Vancouver, British Columbia through Cassiar East Yukon Expediting Ltd. to assemble and review the results of a soil geochemical survey conducted on the Purcell Property during 1987.

### 1.2 Location and Access

The Purcell Property is located in the Slocan Range of the Selkirk Mountains of southeastern British Columbia (Figure 1).

The property comprises five reverted crown-granted claims, three of which are recorded together and five located claims. These claims comprise eight claim-units covering about 70 ha (168 A). The property is centred on 49° 59.3' north latitude and 117° 11' west longitude in the Slocan Mining Division of British Columbia (Figure 2).

It is about 765 km (467 mi) from Vancouver via highways 1, 3 and 6 to New Denver, the nearest supply centre to the property. Access to the property from New Denver is via highway 31A and dirt roads through Sandon, a trip of about 20 km (12 mi).

The property is on the steep northern slope of the Carpenter Creek valley about 4 km (2.4 mi) east of Sandon.

Recently, road access to the western part of the property near the old workings was upgraded by Rawdon Resources Ltd. Reportedly, the roads on the property are still in good repair.

## 1.3 Terrain and Vegetation

The Purcell Property is located in the Slocan Range of the Selkirk Mountains, one of four subdivisions of the Columbia Mountains of southeastern British Columbia (Holland, 1976).

Holland's description of the terrain of the Slocan Range near the Purcell Property is as follows;

> South of Trout Lake the area is largely underlain by intrusive rocks, which Cairnes remarks in the Slocan Mountains " show the strong relief characteristic of a mountainous topography in a late adolescent stage of erosion. . . . The areas of Nelson granite and Kaslo series are normally more rugged and sharper in outline than those underlain by sediments of the Slocan series."* The Slocan Ranges are characterized by long, uniformly steep, heavily timbered slopes rising through about 5,000 feet to angular peaks and sharp narrow interconnecting ridges. Cirque glaciers have sculptured the peaks, and high ridges and valley glaciers have facetted the spurs.

Holland, S.S.; 1976: p. 80

The Purcell Property is located on the northern side of the Carpenter Creek valley on the steep southwest-facing slope of Reco Mountain. Elevations on the property range from 1555 m (5100 ft) to 2134 m (7000 ft) in the western part of the property.

Soils on this property were developed beneath a fir, spruce and hemlock forest. Generally, they were sufficiently well-developed to have distinct horizons amenable to meaningful soil survey results despite their development on steep slopes.

The original forest has been removed by fires and logging for mining timber. It has been replaced by second growth.

## 1.4 Property

The Purcell Property comprises the following claims all located in the Slocan Mining Division of British Columbia:

| Claim Name | Lot No. | Record No. | No. of Units | Record Date |
|---|---|---|---|---|
| Grey Copper | L580 | | | |
| Goodenough | L581 | R18230(2) | 1 | Feb. 28, 1975 |
| Purcell | L849 | | | |
| Rawdon | L855 | R18231(2) | 1 | Feb. 28, 1975 |
| Idaho No.2 | L1013 | R18232(2) | 1 | Feb. 28, 1975 |
| Grey Copper Fr.1 | | R 613(4) | 1 | Apr. 21, 1979 |
| Link 1 | | R 1264(6) | 1 | June 27, 1979 |
| Link 2 | | R 1265(6) | 1 | June 27, 1979 |
| Chambers Fr.1 | | R 1266(6) | 1 | June 27, 1979 |
| Chambers Fr.2 | | R 1267(6) | 1 | June 27, 1979 |

These claims are believed to be owned 100% by Rawden Resources Ltd.

## 1.5 Previous Work

Exploration around the area now covered by the Purcell Property commenced in the early 1890's. Mineral targets saught were northeasterly-trending veins carrying high concentrations of silver and lead-bearing minerals.

Mineralized quartz veins were explored on surface and underground on the Goodenough L581, Grey Copper L580, Purcell L849, Rawdon L855 and Idaho No.2 L1013 claims.

The Goodenough was probably the most well-known of the veins explored on the area now covered by the Purcell Property.

In 1895, work began on a narrow, high-grade vein on the Goodenough claim. The following year, that claim was added to the Reco group located to the west of what is now the Purcell Property. The Goodenough Vein became known as the small or No.3 Vein.

Over 600 tons of hand-cobbed ore was shipped from the Goodenough claim in 1896. It contained an average of 407 oz/ton silver and 42% lead. A subsequent shipment assayed 730 oz/ton silver and 67% lead.

The Goodenough Vein was 0 to 20 in. (0 to 0.5 m) thick and contained abundant argentite, pyragyrite (ruby silver), native silver, tetrahedrite and galena. The best ore was found where the vein crossed granitic porphyry dykes.

The Goodenough Vein cut across both the Goodenough L581 and Ruecau L624 claims. The vein was mined on a co-operative basis by the owners of the two claims.

By 1907, crosscuts had been driven into the vein on eight levels over a vertical distance of 161 m (529 ft) on the Ruecau claim near its boundary with the Goodenough claim. Drifts were stoped out on both claims from the centrally located crosscuts. At that time, the vein had been mined out down to the seventh level. Below the seventh level, the vein contained mostly sphalerite (ZnS) and had little silver and lead. The last significant shipment of ore from the Goodenough Vein was made in 1917.

During 1981, J.C. Snell sampled the dumps of the eighth level of the Goodenough workings (Sookochoff, 1986). The dump samples ran 3.74 and 2.58 oz/ton silver with minor lead. Sookochoff's 1980 samples from this vein at higher elevations assayed as high as 122.1 oz/ton silver. This sampling confirmed that the lower boundary of silver-rich ore in the Goodenough Vein was between the seventh and eighth levels.

The Grey Copper Vein was discovered in 1893 a few hundred metres east of the Goodenough Vein. The Grey Copper L580 claim was staked to cover it.

The Grey Copper Vein was 3 ft (1 m) thick and was mineralized for at least 200 ft (61 m) in outcrop. Ore from this vein assayed 145 to 160 oz/ton silver and up to 72% lead.

By 1935, the Grey Copper Vein had been explored by five adits driven into a quartz vein that had been exposed for several hundred feet in a steep gulch. The vein was 3 to 6 ft (1 to 2 m) thick with a 1 to 2 ft (0.3 to 0.6 m) thick ore seam.

A thousand-ton block developed in 1906 from the lower two levels assayed 33.2 oz/ton silver, 18.8% lead and 42% zinc. In 1917, 37 tons of ore shipped to the smelter contained 80 oz/ton silver and 50% lead.

Early shipping records from the Grey Copper Vein were very incomplete. It was not known how much ore was shipped from that vein.

In 1953, the Grey Copper claim was part of the Bluebird Property. The Bluebird Property now adjoins the Purcell Property on its northeastern boundary.

During 1953, part of the Grey Copper adit No.3 was rehabilitated and some sampling was done. In 1978, 20.5 tons of ore was shipped from the property. It contained 3.6% lead, 26.8% zinc, 9.59 oz/ton silver and 0.015 oz/ton gold.

It had generally been felt that the Grey Copper Vein may have extended northeastward onto the Purcell and Bluebird claims (Figure 2)(Cairnes, 1935). A local geochemical anomaly and some assays up to 433.2 oz/ton silver from trenches on strike with the Grey Copper vein on the Purcell L849 claim taken in 1980 (Sookochoff, 1986), indicated that the Grey Copper Vein could have significant unexplored extension onto the Purcell L849 claim.

One of the goals of the 1987 soil survey on the Purcell Property was to test the northeasterly extension of the Grey Copper Vein.

In 1981, trenching revealed a parallel vein 83 m (272 ft) south of the Grey Copper No.3 adit. A 146 m (479 ft) long drill hole intersected the Grey Copper Vein 138 m (453 ft) down. There, the vein was 1.06 m (3.5 ft) thick and mineralized with sphalerite and galena.

Prospecting in 1982 and 1983 resulted in the location of 12 old trenches that may have tested the extension of the Grey Copper Vein onto the Purcell L849 claim.

The Idaho No.2 L1013 claim adjoins the Grey Copper claim at its northeastern corner. By 1928, the Idaho No.2 claim was part of the Bluebird Property. Development on the Idaho No.2 was on a quartz vein that was traced up to showings on the Bluebird L540 claim (Figure 2).

The Idaho tunnel was driven in 315 ft (96 m) from a point 1000 ft (305 m) below the summit of the ridge. Later, a shaft was constructed to connect the tunnel with surface about 200 ft (61 m) in from the portal. In the tunnel, the vein was mineralized with bunches of galena in a quartz-carbonate gangue.

In 1951, drilling revealed a parallel vein west of the Idaho Vein. A crosscut was driven to explore it.

By 1952, the Idaho tunnel had been driven 1180 ft (360 m) across the Idaho No.2 claim onto the Rawdon L855 claim. A crosscut driven 80 ft (24 m) to the northwest from a point 400 ft (122 m) in from the portal exposed a 2 to 3 ft (0.61 to 1 m) thick lead of sphalerite over 50 ft (15.2 m). Another crosscut driven 20 ft (6.1 m) northwesterly from a point 600 ft (183 m) in from the portal intersected another lode of sphalerite.

Sookochoff (1986) reported that the main Idaho tunnel intersected at least 500 ft (152.4 m) of abundant sphalerite in a vein 2 to 3 ft (0.6 to 1 m) thick. His sampling from 1981 to 1983 indicated that at the elevation of the Idaho tunnel, about 6250 ft (1905 m) a.s.l., mineralization in the Idaho Vein is mostly sphalerite assaying up to about 45% zinc with minor silver and lead values. However, silver and lead concentrations in the Idaho Vein seem to improve with elevation. At the collar of the Idaho shaft which is about 60 ft (18.3 m) above the tunnel, Sookochoff's assays ran as high as 27.24 oz/ton silver.

## 1.6 Summary of Present Work

Field work of the 1987 soil survey on the Purcell Property was conducted from May 28 to June 7, 1987. Data compilation and interpretation was done from January 25 to 30, 1988. The work was undertaken by:

| | |
|---|---|
| Phillip Bilodeau<br>Coquitlam, B.C. | Geological Technician |
| Terry Holman<br>Coquitlam, B.C. | Geological Technician |

Data compilation and interpretation was undertaken by:

| | |
|---|---|
| C. Geoffrey Spearing, B.Sc.(Eng.)<br>North Vancouver, B.C. | Consulting Mining Engineer |
| John Ostler; M.Sc., P.Geol.<br>West Vancouver, B.C. | Consulting Geologist |

The 1987 work program on the Purcell Property included the following:

| | |
|---|---|
| A. Location of Workings and Grid Establishment; | man-days |
| The part of the Carpenter Creek valley near the Purcell Property contains a plethora of old workings. The workings of the Goodenough, Idaho No.2 and Grey Copper claims were located and 7.4 km of grid line was laid out among them | 14 |

| | | man-days |
|---|---|---|
| B. Soil Survey; | balance c.f. | 14 |
| 219 soil samples were taken over the soil grid | | 8 |
| C. Camp Mobilization and Transport; | | |
| crew in transit to and from New Denver | | 4 |
| D. Data Compilation and Interpretation; | | |
| generation of LePeltier curves for soil populations, mapping and interpretation; data assembly and report | | 6 |
| Total man-days on 1987 Purcell Property exploration | | 32 |

1.7 Claims Worked On

During 1987, work was done on the following claims:

| Claim Name | | Record No. | Current Expiry Date | No. of Units |
|---|---|---|---|---|
| Grey Copper | L580 | R18230 (2) | Feb. 28, 1988 | 1 |
| Goodenough | L581 | | | |
| Purcell | L849 | | | |
| Rawdon | L855 | R18231 (2) | Feb. 28, 1988 | 1 |
| Idaho No.2 | L1013 | R18232 (2) | Feb. 28, 1988 | 1 |
| Grey Copper | Fr.1 | R 613 (4) | Apr. 21, 1988 | 1 |
| Link 1 | | R 1264 (6) | June 27, 1988 | 1 |
| | | | | 5 units |

## 2.0 GEOLOGY AND MINERALIZATION

The following accounts of regional and property geology and mineralization are quoted from Sookockoff's report to Rawdon Resources Ltd. dated December 11, 1986.

### 2.1 Regional Geology

"The area generally is underlain by sediments of the Slocan series which is intruded by dykes and small stocks of intrusives related to the Nelson batholith.

The Slocan series are comprised mainly of argillites, quartzites, limestones and tuffs or intimate admixtures of these rock types. The rocks are locally slaty.

The generally sill-like stocks are of quartz diorite with a highly variable texture.

Metamorphism and accompanying alteration is widespread, The principal alteration is silicification which mostly affects limestone resulting in a quartzitic appearance.

Two types of faults, generally related to the structural complex, are evident. Tangential bedded faults and crosscutting faults which are crosscutting tear faults related to underthrusting.

The larger faults or lodes are crosscutting faults within which are found the majority of the mineralized zones of the area. Localization of bearing zones within the lodes is primarily structural in addition to a factor of local confining pressure in a structurally complex environment."

Sookochoff, 1986

2.2 Property Geology

"Slates and fissile, thinly banded argillites of the Slocan series predominate on the Purcell Property with minor massive quartzitic and argillaceous members in addition to several narrow limestone beds are in evidence. The sediments strike 305° to 335° with a southwesterly dip of 40° to 45°.

The sediments are intruded by two northwesterly trending granodiorite to quartz-diorite sill-like bodies.

Three vein lodes, which were explored by drifts occur on the Bluebird claim and extend in part into the Stranger and Idaho No.2 claims. The "Big vein" strikes north 55° east dip 60° southeast and reportedly has been traced to the Idaho No.2 claim 500 feet below. The outcrop of this vein at the No.2 portal has a width of about eight feet. The "Big vein" and associated lodes have been explored by six main adits and a number of short adits and open cuts on the Bluebird and Idaho No.2 claims.

On the Purcell and Grey Copper claims, two parallel veins trend northeasterly. On the upper vein, four levels have exposed the vein to a vertical depth of 130 metres with a total stoping area of 1100 square metres. The vein varies from .25 to .8 metres wide. 450 tons of hand sorted galena was shipped averaging 45% lead, 2% zinc and 300 oz/ton silver.

The lower vein - the Grey Copper vein - is reported by the Zinc Commission as "while so far not productive of the same high grade of ore as the upper vein has the advantage of being wider and more regular. It promises to become of importance as a zinc producer ... has in every respect the appearance of a well defined and true fissure".

Two levels, 17 metres and 40 metres long develop the lower Grey Copper vein which is from 1.8 to 2.0 metres wide and outcrops plainly on the surface. The same grade and character of ore is found in both levels with the pay streak .3 metres in the upper level and .6 metres in the lower level. Reportedly 1000 tons of ore has been blocked out between the two levels.

The Goodenough claim covers a vein lode which extends into the adjacent Reco claim. ... In 1969 Reco Silver Mines reported that work on the #7 and #8 levels of the Goodenough workings disclosed a vein to the southeast.

On the Goodenough and extending onto the Ruecau claim, the sediments are intruded by a granodiorite porphyry. There are also several smaller quartz porphyry sills reported.

On the Purcell claim, a road constructed in the 1970's disclosed a silver-lead float 300 m northeast on the vein strike from the showings in the Grey Copper mineral claim. The favourable zone is indicated to be approximately 100 metres below the present surface.

A 1980 mapping program disclosed apparent lode zones associated with an anticlinal structure trending at 330° with a central core and adjacent granodiorite porphyry."

Sookochoff, 1986

2.3 Property Mineralization

"Mineralization occurs predominantly as high grade galena and/or zinc with silver values as generally narrow zones within the lode structure.

The "Little vein" lode claim (Goodenough L581) was the chief source of production ... The lode varies from .3 to 1.8 metres wide and contained a paystreak of solid galena from a centimetre to over .3 metres wide...

The "Big vein" lode which has been traced to the Idaho No.2 claim is reportedly in a zone of brecciation, about 2.3 metres wide cemented by quartz and carrying disseminate sulphides and pockets of silver ore.

Mineralization within the Grey Copper workings consists of discontinuous stringers, braided stringers, and lenses of sphalerite with associated galena."

Sookochoff, 1986

# 3.0 SOIL GEOCHEMISTRY

## 3.1 1987 Soil Survey

The 1987 soil survey was undertaken by Phillip Bilodeau and Terry Holman of Coquitlam, B.C. across the north and central parts of the Purcell claim group (Figures 3 and 4).

Soil lines were reportedly run perpindicular to a northeasterly trending baseline. A total of 7.4 line-km were surveyed comprising a 14-line grid covering approximately 25 ha. In the southwestern part of the survey grid, soil stations were located at 50 m intervals along lines spaced 50 m apart. The northeastern part of the grid comprised soil lines and stations spaced 25 m apart.

A total of 219 soil samples were taken in undyed kraft paper envelopes. They were analized at Acme Analytical Labratories of Vancouver, B.C. Samples were analized for copper, arsenic, zinc, lead and silver. Methods of analysis and results comprise Appendix A. Results of the analyses indicate that at most survey stations, soils were sufficiently well-developed to collect representative samples from an illuviated "B" horizon.

A statistical analysis using the methods of Lepeltier (1969) was performed on the soil geochemical data by the writers. Through this method, graphic representations of cumulative frequency curves resulted in the separation of data into common and anomalous populations.

Accepting the assumption that the logs of the soil data form a normal distribution, these populations represent the 50th, 84th and 97.5th centiles. Geochemical contour intervals for copper, arsenic and lead reflect the upper first and second standard deviations derived from the graphic analyses as follow:

| | copper ppm | arsenic ppm | lead ppm | |
|---|---|---|---|---|
| 84th centile (sub-anomalous) | 56 | 32 | 180 | |
| 97.5th centile (anomalous) | 110 | 97.5 | 450 | (Figures 5, 6 and 8) |

Geochemical contours for silver and zinc are derived from threshold values determined graphically. These values are taken at the abscissa above which there is a departure from the lognormal distribution of sample data:

| | zinc ppm | silver ppm | |
|---|---|---|---|
| 84th centile (sub-anomalous and anomalous) | 600 | 2.6 | (Figures 7 and 9) |

The graphic representations of copper, lead, zinc, silver and arsenic are similar to Lepeltier's (1969) curves for single and complex populations. Lead and arsenic are characterized by single lognormal populations, the diagramatic representation of which are straight lines (Figures 8 and 6).

The fliction of the copper curve (Figure 5) indicates an excess of low concentrations within a single population.

Conversly; the silver curve (Figure 9) is positively skewed, indicating an excess of high silver values within the sample populus.

The cumulative distribution for zinc (Figure 7) shows two breaks; first a negative then a positive one. The graph illustrates a mixture of two distinct populations within a single set of geochemical data.

The negatively skewed portion of the zinc curve indicates a background population comprised of an excess of "lower than normal" zinc concentrations. Superimposed on this background distribution is a second positively skewed distribution comprised of an excess of high zinc values. The positively skewed data is related to zinc mineralization within the surveyed area.

3.2 Interpretation of Soil Results

For each of the metals surveyed the threshold values derived from the Lepeltier curves are higher than would generally be found within a regional soil survey (Sinclair et al., 1978; p.31). This was because the survey was entirely within an area of known mineralization.

Some anomalous areas outlined by contours (Figures 3 and 4) may be representative of topographical features such as mine dumps rather than in-place lithological anomalies. However; previous prospecting in the survey-area obviates the probability that some of the soil anomalies relate directly to undiscovered mineralized veins.

The copper, lead and silver anomalies centred on line 100 W in the northern part of the grid are probably caused by mass wastage from the dumps of the 1895 to 1917 mining operation on the Goodenough Vein. Adits for that operation are located along the Goodenough-Ruecau claim boundary uphill from this part of the grid.

Soil geochemical anomalies centred on 200 W, 00 N probably reflect the presence of vein exposures and mine dumps on the two veins on the Grey Copper claim.

Anomalies along the eastern margin of the grid probably reflect the unexposed extensions of highly mineralized veins. These veins may be the same as those exposed on the Grey Copper claim. They are the best exploration targets in the grid-area.

# 4.0 CONCLUSIONS AND RECOMMENDATIONS

## 4.1 Conclusions

We conclude that the 1987 soil survey on the Purcell Property was successful in that new exploration targets have been defined in the eastern part of the grid-area on the Purcell, Rawdon and Idaho No.2 claims. These targets are possibly extensions of veins exposed and tunnelled in the central part of the Grey Copper claim (Figures 3 and 4).

In the area around the Purcell Property historical records show that most mineralized veins have lower portions that contain mostly sphalerite (ZnS) and upper portions that contain lead and silver-bearing minerals carrying very high silver values.

Topography rises rapidly from the vein exposures on the Grey Copper claim to the eastern part of the soil grid. Beneath the eastern part of the soil grid may be the upper silver-rich extensions of the Grey Copper veins.

It is encouraging to note that the Goodenough Vein, a parallel structure on the western part of the grid, yielded considerable tonnage of material that graded over 300 oz/ton silver.

## 4.2 Recommendations

The writers recommend that future exploration on the Purcell Property include the following aspects in order to expand and develop the economic mineral potential of the property:

A. Before any other exploration is conducted on the property, its boundaries should be surveyed. The entire property is surrounded by surveyed claims. The records and notes of these surveys are available at the mineral

Titles office in Victoria, B.C.

In the area around the Purcell Property, highly mineralized veins cross many claim boundaries. To avoid litigation, it is necessary to know exactly where the claim boundaries are located.

B. The 1987 soil survey was successful in locating possible extensions of the Grey Copper veins. The Idaho (Big) vein has been traced across the Idaho No.2 claim to the Rawdon claim underground. The rest of the Idaho No.2 and Link claims should be soiled to test for the presence of this and other veins on surface.

C. A program of detailed geological mapping and trenching should be conducted over all of the property to locate and develop high-grade vein exposures.

The goal of this exploration program is to locate and expose all silver-bearing veins on the Purcell Property to facilitate a subsequent low tonnage high grade mining operation.

West Vancouver, British Columbia
February 1, 1988

C. Geoffrey Spearing, B.Sc.(Eng.)
Consulting Mining Engineer

John Ostler, M.Sc., P.Geol.
Consulting Geologist

## 5.0 REFERENCES


Cairnes, C.E.; 1935: Slocan Mining Camp; Geol. Surv. Canada, Mem.184.

Holland, S.S.; 1976: Landforms of British Columbia, A Physiographic Outline; B.C. Min. Mines and Petr. Res., Bull. 48, pp. 78-80.

Lepeltier, Claude; 1969: A Simplified Statistical Treatment of Geochemical Data by Graphical Representation; Economic Geology, Vol. 64, pp. 538-550.

Sinclair, A.J. et al.; 1978: An Analysis of Distribution of Mineral Occurences in British Columbia; B.C. Min. Mines and Petr. Res., Bull. 68, p.31.

Sookochoff, Lawrence; 1986: Geological and Progress Report for Rawdon Resources Ltd. (formerly Sipald Resources Ltd.), 15p.

B.C. Minister of Mines Annual Reports:

| Goodenough claim: | Grey Copper claim: | Purcell claim: |
|---|---|---|
| 1895, p. 675 | 1893, p. 1060 | 1897, p. 573 |
| 1896, pp. 37,47,59,558 | 1896, p. 59 | |
| 1898, p. 1074 | 1917, p. 448 | |
| 1901, p. 1026 | 1931, p. A24, A138 | |
| 1904, p. 192 | 1933, pp. A200, A206 | |
| 1906, p. 145 | 1953, p. A139 | |
| 1907, p. 162-163 | | |

| Idaho No.2 claim: | Rawdon claim: |
|---|---|
| 1897, p. 572 | 1898, p. 1193 |
| 1928, p. C287 | 1919, p. N124 |
| 1929, p. C309 | 1928, p. C287 |
| 1951, p. A170 | 1952, p. A175 |
| 1952, p. A175 | 1953, p. A139 |

## 6.0 ITEMIZED COST STATEMENT FOR 1987 PROGRAM

| | | | |
|---|---|---|---|
| **Wages:** | | | |
| Phillip Bilodeau | 14 days @ $100/day | $1400.00 | |
| Terry Holman | 13 days @ $ 60/day | $ 780.00 | |
| C.G. Spearing, B.Sc.(Eng.) Consulting Mining Engineer | 4½days @ $200/day | $ 900.00 | |
| John Ostler; M.Sc.,P.Geol. Consulting Geologist | 2½days @ $250/day | $ 625.00 | |
| Burden on wages of Bilodeau and Holman Company's cont. CPP, UIC, WCB | | $ 163.29 | |
| | | $3868.29 | $3868.29 |
| **Crew in Transit and Camp:** | | | |
| Hotel | | $ 334.88 | |
| Camp food and meals in transit | | $ 629.97 | |
| Field equipment and supplies | | $ 345.33 | |
| | | $1310.18 | $1310.18 |
| **Transport:** | | | |
| Truck rental | | $ 770.00 | |
| Gasoline, oil and tire repair | | $ 380.38 | |
| Highway toll | | $ 8.00 | |
| | | $1158.38 | $1158.38 |
| **Assay:** | | | |
| 219 soils analized for Cu, As, Pb, Zn, Ag Acme Analytical Labs. | | $1095.00 | $1095.00 |
| **Report Production:** | | | |
| Drafting; 39 hr @ $25/hr | | $ 975.00 | |
| Typing; 5 hr @ $10/hr | | $ 50.00 | |
| Blackline copies of maps | | $ 28.76 | |
| Photocopy and report assembly | | $ 24.45 | |
| | | $1078.21 | $1078.21 |
| **Total Cost of 1987 Program For Assessment:** | | | $8510.06 |

John Ostler

John Ostler; M.Sc., P.Geol.
Consulting Geologist

APPENDIX A

ACME ANALYTICAL LABORATORIES
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JUN 17 1987
DATE REPORT MAILED: June 22/87.

# GEOCHEMICAL ICP ANALYSIS

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

ASSAYER: D. Toye. DEAN TOYE, CERTIFIED B.C. ASSAYER

RAWDON RESOURCES File # 87-1820 Page 1

| SAMPLE# | CU PPM | PB PPM | ZN PPM | AG PPM | AS PPM |
|---|---|---|---|---|---|
| L3+50W 2+50N | 3 | 10 | 20 | .9 | 2 |
| L3+50W 2+00N | 21 | 17 | 164 | .3 | 3 |
| L3+50W 1+50N | 6 | 61 | 135 | .1 | 2 |
| L3+50W 1+00N | 11 | 30 | 111 | .2 | 2 |
| L3+50W 0+50N | 5 | 62 | 162 | .2 | 2 |
| L3+50W 0+00N | 15 | 72 | 202 | .1 | 2 |
| L3+50W 0+50S | 13 | 81 | 206 | .5 | 2 |
| L3+50W 1+00S | 14 | 109 | 367 | 1.1 | 4 |
| L3+50W 1+50S | 11 | 191 | 355 | .7 | 2 |
| L3+50W 2+00S | 18 | 90 | 385 | .4 | 12 |
| L3+50W 2+50S | 39 | 71 | 650 | 1.1 | 3 |
| L3+00W 2+50N | 37 | 12 | 131 | .2 | 2 |
| L3+00W 2+00N | 25 | 50 | 278 | .5 | 6 |
| L3+00W 1+50N | 11 | 29 | 125 | .1 | 4 |
| L3+00W 1+00N | 46 | 24 | 213 | 2.3 | 58 |
| L3+00W 0+50N | 13 | 49 | 299 | .1 | 13 |
| L3+00W 0+00N | 10 | 90 | 361 | .5 | 3 |
| L3+00W 0+50S | 16 | 118 | 273 | .1 | 3 |
| L3+00W 1+00S | 10 | 57 | 492 | .1 | 2 |
| L3+00W 2+00S | 44 | 83 | 648 | 1.0 | 3 |
| L3+00W 2+50S | 42 | 49 | 197 | .2 | 7 |
| L2+50W 2+50N | 20 | 16 | 119 | .1 | 2 |
| L2+50W 2+00N | 13 | 52 | 135 | 1.7 | 3 |
| L2+50W 1+50N | 43 | 37 | 268 | .6 | 14 |
| L2+50W 1+00N | 30 | 38 | 233 | .5 | 11 |
| L2+50W 0+50N | 11 | 41 | 107 | .7 | 11 |
| L2+50W 0+00N | 22 | 185 | 462 | 2.8 | 16 |
| L2+50W 0+50S | 20 | 78 | 254 | .4 | 7 |
| L2+50W 1+00S | 22 | 88 | 477 | 1.0 | 8 |
| L2+50W 1+50S | 20 | 68 | 391 | .3 | 2 |
| L2+50W 2+00S | 12 | 34 | 88 | .7 | 6 |
| L2+50W 2+50S | 22 | 23 | 178 | .1 | 2 |
| L2+00W 2+50N | 21 | 53 | 106 | .6 | 6 |
| L2+00W 2+00N | 25 | 63 | 230 | .7 | 18 |
| L2+00W 1+50N | 28 | 25 | 160 | .1 | 14 |
| L2+00W 1+00N | 38 | 71 | 316 | .6 | 43 |
| STD C | 59 | 35 | 141 | 7.1 | 35 |

APPENDIX A



**RAWDON RESOURCES** FILE # 87-1820

| SAMPLE# | CU PPM | PB PPM | ZN PPM | AG PPM | AS PPM |
|---|---|---|---|---|---|
| L2+00W 0+50N | 64 | 51 | 315 | 2.0 | 29 |
| L2+00W 0+00N | 231 | 3827 | 30437 | 309.4 | 1259 |
| L2+00W 0+50S | 26 | 49 | 2726 | 5.4 | 33 |
| L2+00W 1+00S | 48 | 192 | 677 | 1.8 | 95 |
| L2+00W 1+50S | 12 | 94 | 141 | 1.7 | 3 |
| L2+00W 2+00S | 14 | 34 | 135 | .2 | 4 |
| L2+00W 2+50S | 4 | 16 | 37 | .3 | 2 |
| L1+50W 2+50N | 41 | 48 | 175 | 1.2 | 5 |
| L1+50W 2+00N | 45 | 39 | 251 | .8 | 14 |
| L1+50W 1+50N | 98 | 23 | 138 | .9 | 2 |
| L1+50W 1+00N | 20 | 38 | 208 | 2.2 | 12 |
| L1+50W 0+50N | 27 | 35 | 148 | .6 | 12 |
| L1+50W 0+00N | 83 | 187 | 953 | 7.4 | 28 |
| L1+50W 0+50S | 47 | 30 | 220 | 1.0 | 12 |
| L1+50W 1+00S | 18 | 69 | 174 | .6 | 5 |
| L1+50W 1+50S | 16 | 16 | 123 | .5 | 2 |
| L1+50W 2+00S | 4 | 11 | 18 | 5.8 | 4 |
| L1+50W 2+50S | 6 | 8 | 44 | .1 | 2 |
| L1+00W 1+50N | 80 | 56 | 461 | 3.8 | 3 |
| L1+00W 0+50N | 40 | 30 | 242 | 1.5 | 12 |
| L1+00W 0+00N | 32 | 29 | 148 | .4 | 8 |
| L1+00W 0+50S | 8 | 21 | 44 | .3 | 2 |
| L1+00W 1+00S | 10 | 12 | 70 | .3 | 2 |
| L1+00W 1+50S | 19 | 36 | 195 | .3 | 3 |
| L1+00W 2+00S | 11 | 24 | 73 | .9 | 5 |
| L1+00W 2+50S | 14 | 39 | 95 | .1 | 2 |
| L0+50W 2+50N | 45 | 306 | 576 | 3.2 | 17 |
| L0+50W 2+00N | 29 | 49 | 233 | 1.0 | 5 |
| L0+50W 1+50N | 80 | 24 | 191 | 2.0 | 2 |
| L0+50W 1+00N | 63 | 32 | 1842 | 28.2 | 21 |
| L0+50W 0+50N | 24 | 47 | 207 | 1.2 | 10 |
| L0+50W 0+00N | 13 | 15 | 152 | 1.1 | 7 |
| L0+50W 0+50S | 6 | 8 | 42 | .1 | 3 |
| L0+50W 1+00S | 35 | 29 | 203 | .4 | 10 |
| L0+50W 1+50S | 22 | 33 | 223 | .5 | 13 |
| L0+50W 2+00S | 17 | 33 | 137 | .5 | 6 |
| STD C | 61 | 37 | 143 | 7.0 | 38 |

APPENDIX A

**RAWDON RESOURCES** FILE # 87-1820



| SAMPLE# | CU PPM | PB PPM | ZN PPM | AG PPM | AS PPM |
|---|---|---|---|---|---|
| LO+50W 2+50S | 2 | 2 | 19 | .2 | 2 |
| LO+00W 2+50N | 25 | 93 | 345 | .6 | 12 |
| LO+00W 2+25N | 40 | 2276 | 678 | 49.0 | 34 |
| LO+00W 2+00N | 35 | 300 | 636 | 3.6 | 15 |
| LO+00W 1+75N | 21 | 211 | 347 | 3.5 | 12 |
| LO+00W 1+50N | 37 | 100 | 392 | 5.4 | 15 |
| LO+00W 1+25N | 36 | 179 | 324 | 3.1 | 17 |
| LO+00W 1+00N | 92 | 14 | 201 | .6 | 3 |
| LO+00W 0+75N | 59 | 48 | 316 | 1.4 | 11 |
| LO+00W 0+50N | 44 | 70 | 264 | 1.3 | 10 |
| LO+00W 0+25N | 27 | 50 | 211 | 2.4 | 16 |
| LO+00W 0+00N | 57 | 53 | 677 | 2.8 | 28 |
| LO+00W 0+25S | 72 | 86 | 493 | 3.6 | 8 |
| LO+00W 0+50S | 11 | 18 | 191 | .7 | 3 |
| LO+00W 0+75S | 26 | 46 | 366 | .8 | 11 |
| LO+00W 1+00S | 3 | 12 | 43 | .3 | 2 |
| LO+00W 1+25S | 42 | 53 | 277 | 1.0 | 15 |
| LO+00W 1+50S | 11 | 18 | 78 | .6 | 8 |
| LO+00W 1+75S | 47 | 31 | 284 | .9 | 7 |
| LO+00W 2+00S | 20 | 9 | 201 | .6 | 3 |
| LO+00W 2+25S | 4 | 16 | 84 | .1 | 2 |
| LO+00W 2+50S | 57 | 7 | 168 | .6 | 2 |
| LO+25E 2+50N | 44 | 74 | 343 | .4 | 15 |
| LO+25E 2+25N | 20 | 160 | 409 | 1.6 | 8 |
| LO+25E 2+00N | 30 | 52 | 274 | .5 | 9 |
| LO+25E 1+75N | 14 | 36 | 158 | .7 | 7 |
| LO+25E 1+50N | 54 | 37 | 283 | 1.0 | 10 |
| LO+25E 1+25N | 6 | 15 | 60 | .3 | 3 |
| LO+25E 1+00N | 36 | 41 | 280 | .7 | 10 |
| LO+25E 0+75N | 36 | 47 | 253 | .5 | 9 |
| LO+25E 0+50N | 49 | 44 | 301 | .5 | 35 |
| LO+25E 0+25N | 44 | 47 | 393 | 1.8 | 23 |
| LO+25E 0+00N | 27 | 19 | 208 | 1.0 | 12 |
| LO+25E 0+25S | 14 | 13 | 130 | .3 | 9 |
| LO+25E 0+50S | 13 | 27 | 177 | .5 | 5 |
| LO+25E 0+75S | 10 | 25 | 196 | .8 | 2 |
| STD C | 60 | 36 | 143 | 7.3 | 39 |

APPENDIX A



**RAWDON RESOURCES** FILE # 87-1820

| SAMPLE# | CU PPM | PB PPM | ZN PPM | AG PPM | AS PPM |
|---|---|---|---|---|---|
| L0+25E 1+00S | 17 | 41 | 380 | 1.7 | 6 |
| L0+25E 1+25S | 35 | 21 | 363 | .5 | 10 |
| L0+25E 1+50S | 2 | 2 | 40 | .9 | 2 |
| L0+25E 1+75S | 46 | 30 | 483 | 1.2 | 21 |
| L0+25E 2+00S | 26 | 15 | 261 | .8 | 5 |
| L0+25E 2+25S | 40 | 13 | 156 | .5 | 2 |
| L0+25E 2+50S | 57 | 22 | 164 | .9 | 2 |
| L0+50E 2+50N | 37 | 38 | 245 | .9 | 8 |
| L0+50E 2+25N | 12 | 55 | 184 | .4 | 7 |
| L0+50E 2+00N | 45 | 86 | 402 | 2.0 | 11 |
| L0+50E 1+75N | 23 | 25 | 252 | .7 | 8 |
| L0+50E 1+50N | 30 | 28 | 278 | .5 | 3 |
| L0+50E 1+25N | 28 | 57 | 300 | .5 | 12 |
| L0+50E 1+00N | 4 | 5 | 37 | .2 | 2 |
| L0+50E 0+75N | 15 | 45 | 158 | .7 | 8 |
| L0+50E 0+50N | 26 | 27 | 201 | .2 | 18 |
| L0+50E 0+25N | 17 | 45 | 165 | .3 | 11 |
| L0+50E 0+25S | 3 | 39 | 78 | .3 | 2 |
| L0+50E 0+50S | 14 | 15 | 155 | .4 | 5 |
| L0+50E 0+75S | 12 | 29 | 199 | .6 | 5 |
| L0+50E 1+00S | 18 | 20 | 226 | .5 | 5 |
| L0+50E 1+25S | 15 | 22 | 174 | .7 | 5 |
| L0+50E 1+50S | 10 | 153 | 180 | 2.7 | 39 |
| L0+50E 1+75S | 7 | 10 | 83 | .3 | 3 |
| L0+50E 2+00S | 22 | 37 | 357 | 1.1 | 3 |
| L0+50E 2+25S | 43 | 13 | 255 | .8 | 3 |
| L0+50E 2+50S | 56 | 11 | 128 | .7 | 2 |
| L0+75E 2+50N | 53 | 249 | 584 | 8.2 | 18 |
| L0+75E 2+25N | 36 | 41 | 252 | .7 | 10 |
| L0+75E 2+00N | 52 | 52 | 272 | .4 | 14 |
| L0+75E 1+75N | 12 | 51 | 88 | .3 | 4 |
| L0+75E 1+50N | 3 | 9 | 14 | .5 | 2 |
| L0+75E 1+25N | 26 | 81 | 199 | .4 | 9 |
| L0+75E 1+00N | 12 | 64 | 92 | 1.0 | 5 |
| L0+75E 0+75N | 14 | 53 | 137 | 1.6 | 7 |
| L0+75E 0+50N | 17 | 89 | 110 | 1.3 | 10 |
| STD C | 58 | 39 | 138 | 7.1 | 38 |

APPENDIX A



**RAWDON RESOURCES** FILE # 87-1820

| SAMPLE# | CU PPM | PB PPM | ZN PPM | AG PPM | AS PPM |
|---|---|---|---|---|---|
| L0+75E 0+25N | 11 | 22 | 119 | .3 | 9 |
| L0+75E 0+00N | 32 | 30 | 309 | 1.1 | 16 |
| L0+75E 0+25S | 7 | 5 | 81 | .3 | 5 |
| L0+75E 0+50S | 19 | 35 | 221 | .2 | 16 |
| L0+75E 0+75S | 24 | 37 | 303 | .2 | 11 |
| L0+75E 1+00S | 18 | 27 | 220 | .3 | 10 |
| L0+75E 1+25S | 10 | 309 | 191 | 9.6 | 34 |
| L0+75E 1+50S | 6 | 29 | 107 | .8 | 8 |
| L0+75E 1+75S | 23 | 25 | 343 | .9 | 10 |
| L0+75E 2+00S | 19 | 31 | 278 | .9 | 5 |
| L0+75E 2+25S | 20 | 12 | 141 | .1 | 2 |
| L0+75E 2+50S | 59 | 14 | 142 | 1.1 | 2 |
| L1+00E 2+50N | 33 | 17 | 185 | 1.5 | 4 |
| L1+00E 2+25N | 14 | 34 | 150 | .2 | 3 |
| L1+00E 2+00N | 34 | 34 | 252 | .1 | 7 |
| L1+00E 1+75N | 19 | 34 | 145 | .8 | 4 |
| L1+00E 1+50N | 6 | 9 | 53 | .1 | 4 |
| L1+00E 1+25N | 15 | 35 | 114 | .2 | 8 |
| L1+00E 1+00N | 38 | 157 | 361 | 1.1 | 16 |
| L1+00E 0+75N | 28 | 63 | 290 | .6 | 13 |
| L1+00E 0+50N | 18 | 23 | 124 | .6 | 10 |
| L1+00E 0+25N | 10 | 43 | 167 | .2 | 8 |
| L1+00E 0+00N | 16 | 91 | 148 | .3 | 7 |
| L1+00E 0+25S | 14 | 36 | 184 | .3 | 14 |
| L1+00E 0+50S | 26 | 41 | 295 | .3 | 17 |
| L1+00E 0+75S | 43 | 41 | 416 | .5 | 22 |
| L1+00E 1+00S | 32 | 156 | 886 | 22.9 | 191 |
| L1+00E 1+25S | 35 | 317 | 1968 | 5.4 | 240 |
| L1+00E 1+50S | 6 | 22 | 144 | 1.0 | 11 |
| L1+00E 1+75S | 4 | 11 | 79 | .1 | 3 |
| L1+00E 2+00S | 11 | 24 | 254 | .4 | 5 |
| L1+00E 2+25S | 16 | 20 | 199 | .2 | 3 |
| L1+00E 2+50S | 26 | 13 | 138 | .1 | 2 |
| L1+25E 2+50N | 28 | 21 | 209 | .6 | 9 |
| L1+25E 2+25N | 37 | 23 | 242 | 1.1 | 9 |
| L1+25E 2+00N | 25 | 22 | 194 | .5 | 9 |
| STD C | 59 | 43 | 141 | 7.2 | 38 |

APPENDIX A



RAWDON RESOURCES FILE # 87-1820

| SAMPLE# | CU PPM | PB PPM | ZN PPM | AG PPM | AS PPM |
|---|---|---|---|---|---|
| L1+25E 1+75N | 22 | 38 | 211 | .6 | 8 |
| L1+25E 1+50N | 20 | 31 | 204 | .3 | 6 |
| L1+25E 1+25N | 17 | 36 | 246 | .4 | 7 |
| L1+25E 1+00N | 7 | 28 | 58 | .1 | 6 |
| L1+25E 0+75N | 21 | 39 | 266 | .4 | 7 |
| L1+25E 0+50N | 17 | 47 | 197 | .1 | 10 |
| L1+25E 0+25N | 21 | 54 | 270 | .6 | 12 |
| L1+25E 0+00N | 19 | 36 | 215 | .2 | 8 |
| L1+25E 0+25S | 28 | 65 | 288 | .3 | 13 |
| L1+25E 0+50S | 33 | 50 | 365 | .3 | 17 |
| L1+25E 0+75S | 13 | 207 | 384 | .8 | 55 |
| L1+25E 1+00S | 13 | 487 | 710 | 3.2 | 193 |
| L1+25E 1+25S | 23 | 50 | 657 | 1.3 | 29 |
| L1+25E 1+50S | 53 | 71 | 1392 | .6 | 77 |
| L1+25E 1+75S | 25 | 49 | 626 | .9 | 31 |
| L1+25E 2+00S | 33 | 40 | 510 | .1 | 17 |
| L1+25E 2+25S | 38 | 43 | 682 | .4 | 10 |
| L1+25E 2+50S | 38 | 64 | 1239 | .7 | 27 |
| L1+50E 2+50N | 18 | 13 | 171 | .2 | 8 |
| L1+50E 2+25N | 23 | 15 | 133 | .3 | 6 |
| L1+50E 2+00N | 39 | 39 | 351 | .2 | 12 |
| L1+50E 1+75N | 20 | 27 | 209 | 1.2 | 8 |
| L1+50E 1+50N | 33 | 25 | 250 | .4 | 7 |
| L1+50E 1+25N | 29 | 39 | 272 | .4 | 6 |
| L1+50E 1+00N | 44 | 43 | 342 | .1 | 14 |
| L1+50E 0+75N | 31 | 45 | 272 | .6 | 12 |
| L1+50E 0+50N | 10 | 128 | 177 | .7 | 13 |
| L1+50E 0+25N | 122 | 5117 | 1169 | 9.1 | 18 |
| L1+50E 0+00N | 15 | 61 | 195 | .3 | 8 |
| L1+50E 0+25S | 39 | 146 | 622 | 1.1 | 21 |
| L1+50E 0+50S | 47 | 54 | 474 | .8 | 35 |
| L1+50E 0+75S | 58 | 250 | 1591 | 4.6 | 189 |
| L1+50E 1+00S | 76 | 1248 | 2575 | 8.5 | 811 |
| L1+50E 1+25S | 71 | 192 | 1752 | 5.4 | 127 |
| L1+50E 1+50S | 69 | 275 | 2357 | 3.5 | 147 |
| L1+50E 1+75S | 33 | 131 | 701 | .3 | 34 |
| STD C | 59 | 41 | 142 | 7.0 | 41 |

APPENDIX A

RAWDON RESOURCES FILE # 87-1820 

| SAMPLE# | CU PPM | PB PPM | ZN PPM | AG PPM | AS PPM |
|---|---|---|---|---|---|
| L1+50E 2+00S | 15 | 31 | 324 | 1.4 | 15 |
| L1+50E 2+25S | 23 | 108 | 658 | 1.1 | 40 |
| L1+50E 2+50S | 41 | 151 | 1700 | 3.6 | 118 |

## APPENDIX B
## CERTIFICATE OF QUALIFICATION

I, C. Geoffrey Spearing, of 503-2016 Fullerton Avenue in the City of North Vancouver, British Columbia do hereby certify:

That I am a consulting mining engineer with office at 1000-401 West Georgia Street, Vancouver, British Columbia;

That I am a graduate of Queen's University at Kingston, Ontario where I did obtain my Bachelor of Science degree in Mining Engineering in 1986;

That my principal employment since 1985 has been in the field of mineral exploration;

That this report is based on data in published literature and on analyses and field data from Philip Bilodeau taken from May 28 to June 7, 1987.

That I have no interest in the Purcell Property nor in the securities of Rawdon Resources Ltd. nor do I expect to receive any.

Dated at West Vancouver, British Columbia this 1st day of February, 1988.

Spearing

C. Geoffrey Spearing, B.Sc.(Eng.)
Consulting Mining Engineer

## APPENDIX B
## CERTIFICATE OF QUALIFICATION

I, John Ostler, of 2224 Jefferson Avenue in the City of West Vancouver, Province of British Columbia do hereby certify:

That I am a consulting geologist with business address at 515-470 Granville Street, Vancouver, British Columbia;

That I am a graduate of Carleton University of Ottawa, Ontario where I obtained my Master of Science degree in Geology in 1977;

That I am licenced to practice as a Professional Geologist by the Association of Professional Engineers, Geologists and Geophysicists of Alberta, and I am a Fellow of the Geological Association of Canada;

That I have been engaged in the study and practice of the geological profession for over 15 years;

That this report is based on data in published literature and on analyses and field data from Phillip Bilodeau taken from May 28 to June 7, 1987.

That I have no interest in the Purcell Property nor in the securities of Rawdon Resources Ltd. nor do I expect to receive any.

Dated at West Vancouver, British Columbia this 1st day of February, 1988.

John Ostler

John Ostler; M.Sc., P.Geol.
Consulting Geologist

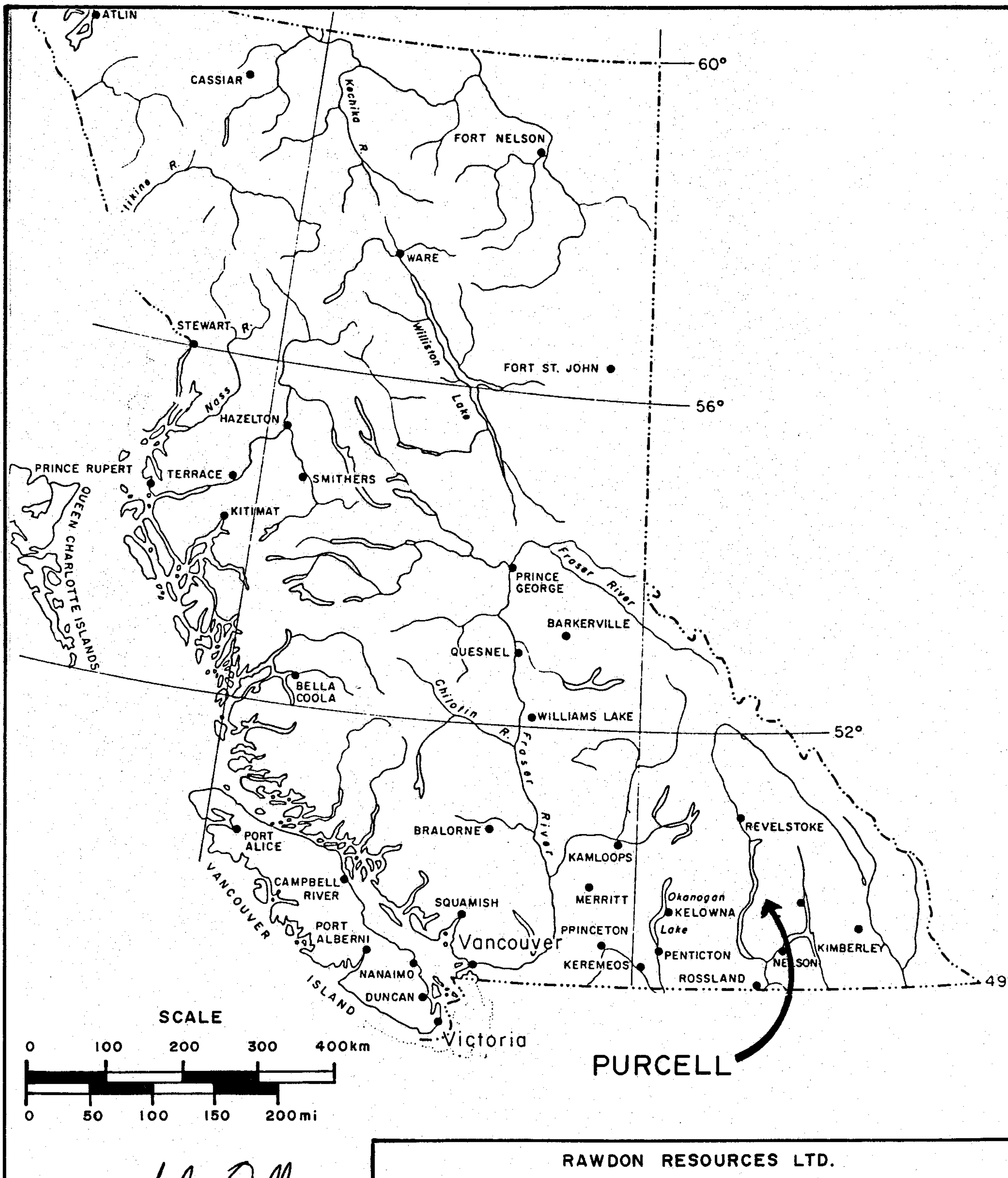



Figure I

CASSIAR EAST YUKON EXP. LTD.

RAWDON RESOURCES LTD.

# GENERAL LOCATION

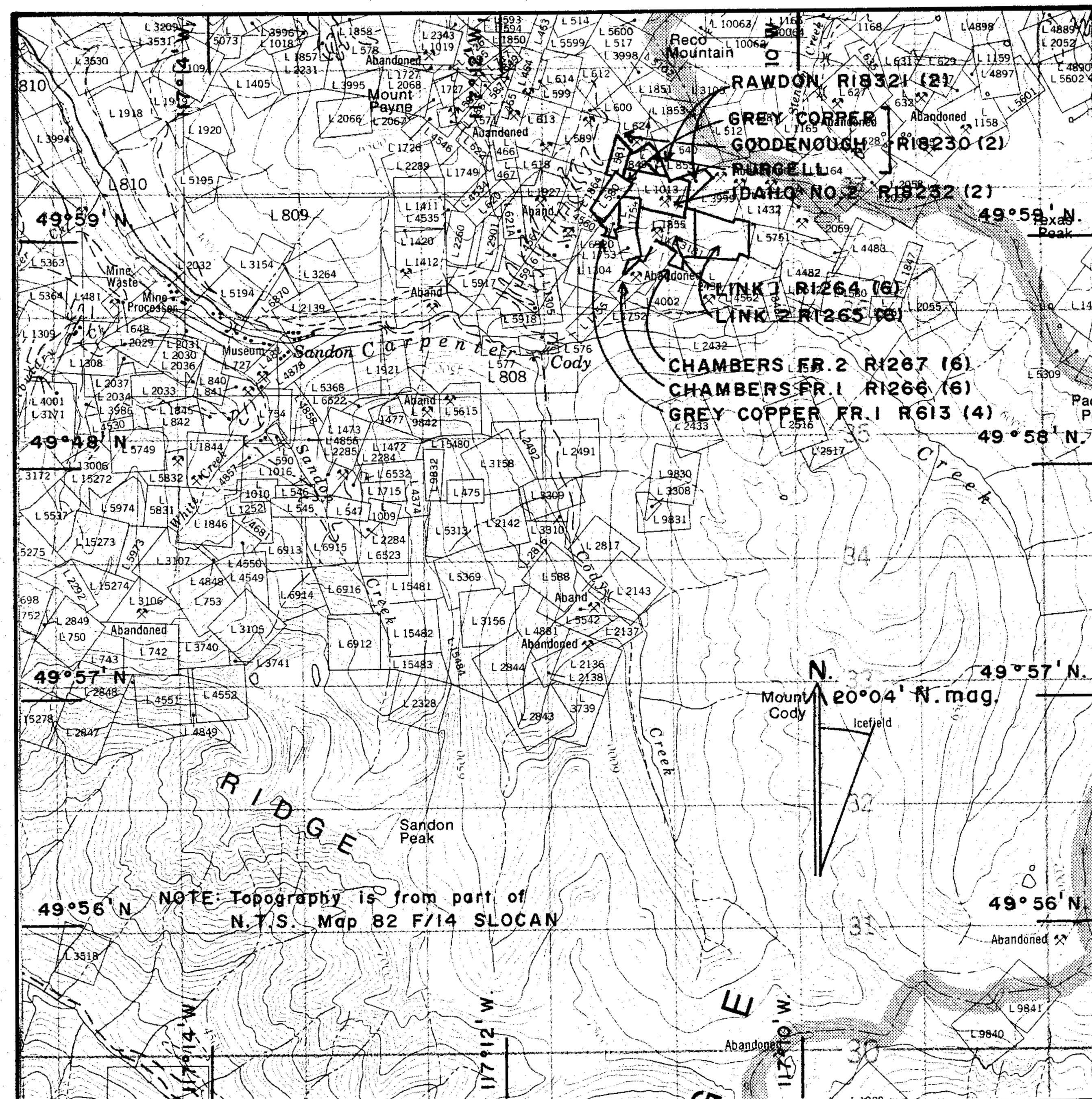
## PURCELL PROPERTY

## 49° 59.3'N., 117° 11'W.

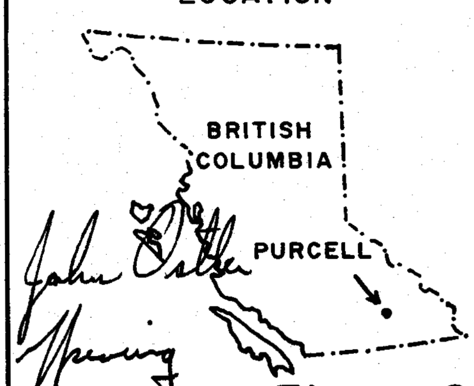
SLOCAN M.D. BRITISH COLUMBIA

C.G. SPEARING, B.Sc.(Eng.)

JOHN OSTLER; M.Sc., P.Geol. FEBRUARY, 1988




LOCATION




John Ostler

Spearing

**Figure 2**

CASSIAR EAST YUKON EXP. LTD.

SCALE

0 1 2 3 km

0 1 2 mi

RAWDON RESOURCES LTD.

# LOCATION AND TERRAIN

## PURCELL PROPERTY

## 49°59.3'N., 117°11'W.

SLOCAN M.D. BRITISH COLUMBIA

C. G. SPEARING, B.Sc.(Eng.)

JOHN OSTLER; M.Sc., P.Geol. FEBRUARY, 1988

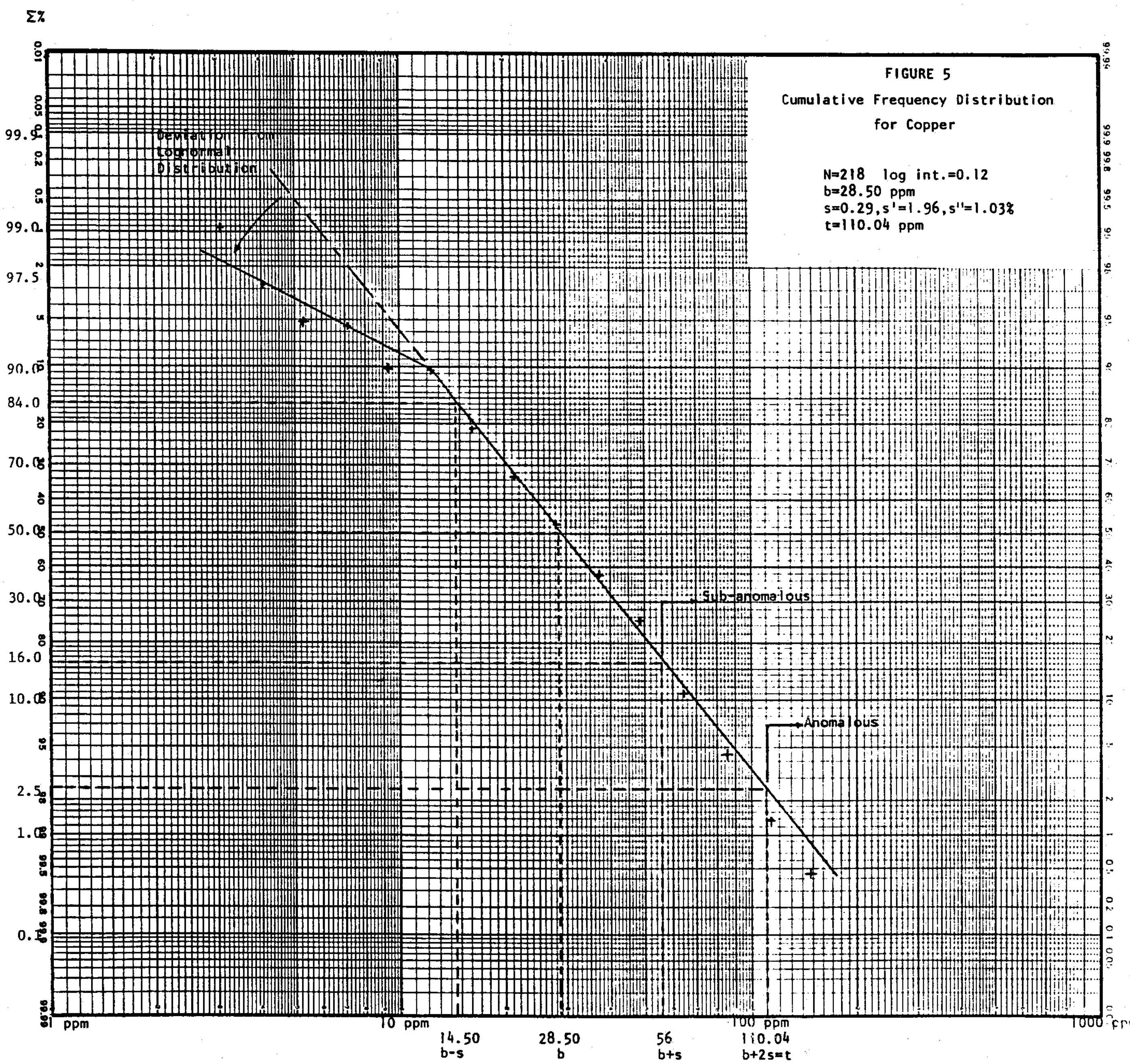
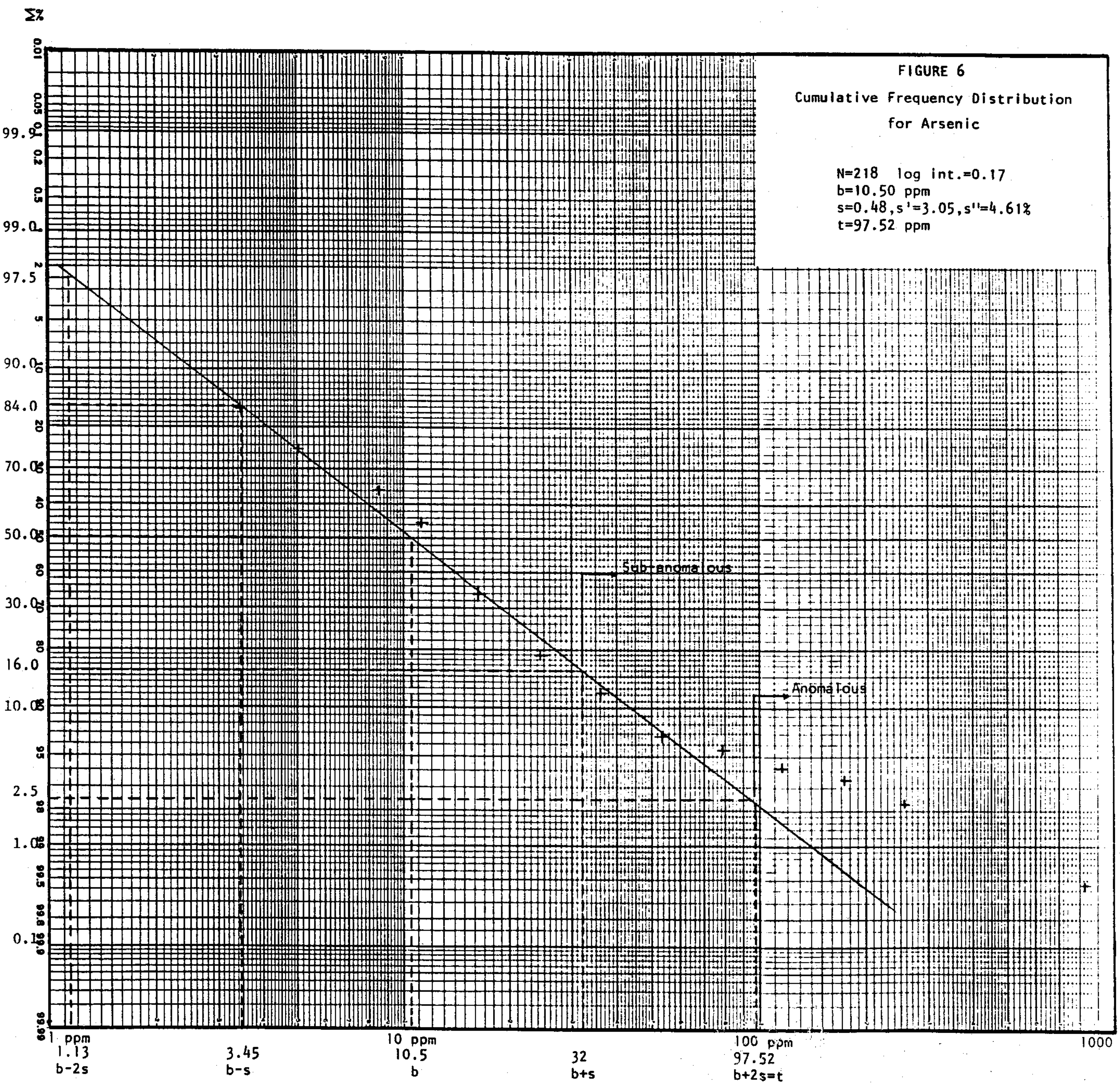


FIGURE 5
Cumulative Frequency Distribution
for Copper
N=218 log int.=0.12
b=28.50 ppm
s=0.29,s'=1.96,s''=1.03%
t=110.04 ppm
Σ%
99.9
99.0
97.5
90.0
84.0
70.0
50.0
30.0
16.0
10.0
2.5
1.0
0.1
Deviation from
Lognormal
Distribution
Sub-anomalous
Anomalous
1 ppm
10 ppm
100 ppm
1000
14.50
b-s
28.50
b
56
b+s
110.04
b+2s=t


John Ostler




John Ostler [signature]

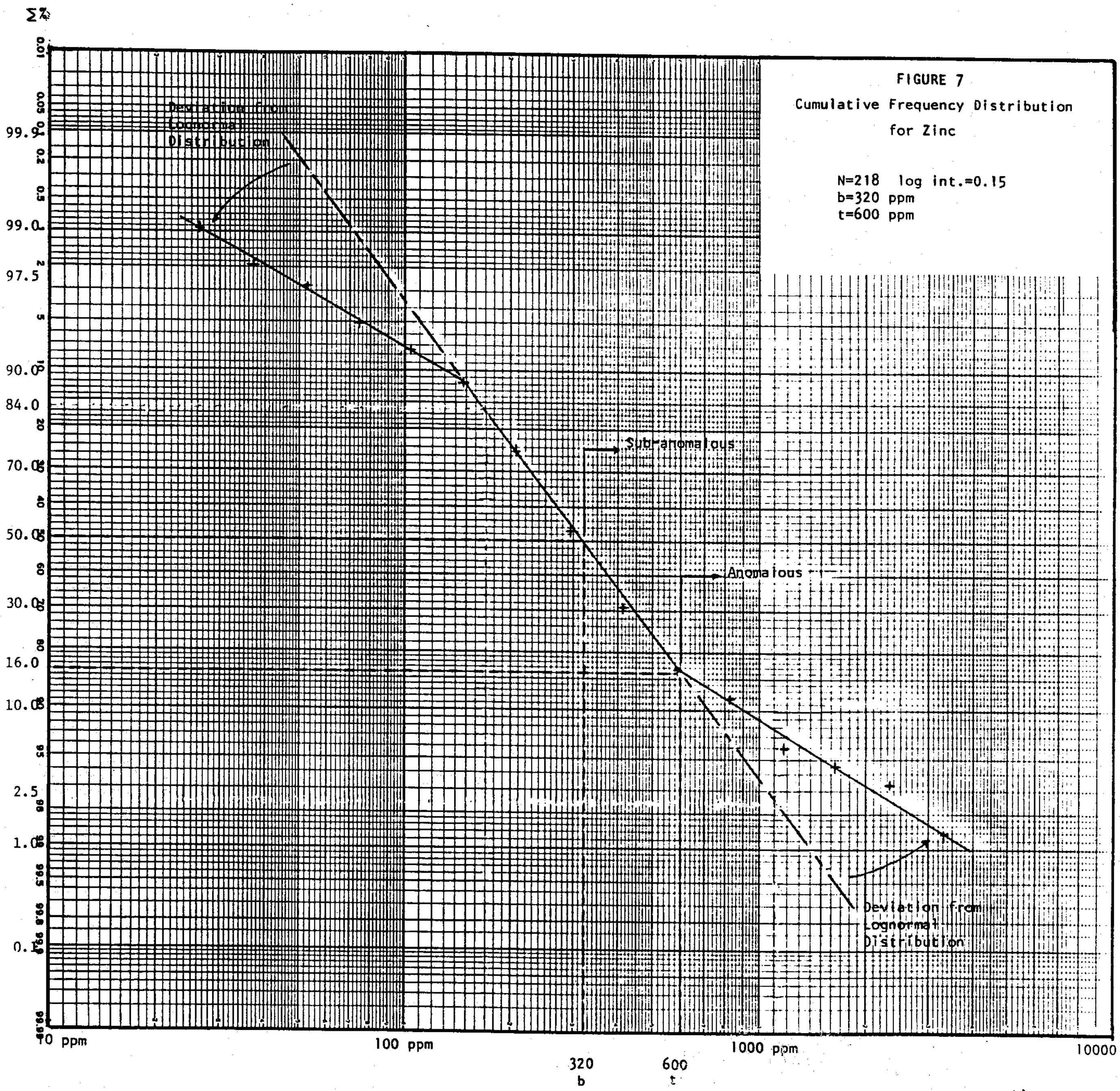



FIGURE 7

Cumulative Frequency Distribution for Zinc

N=218 log int.=0.15
b=320 ppm
t=600 ppm

John Ostler

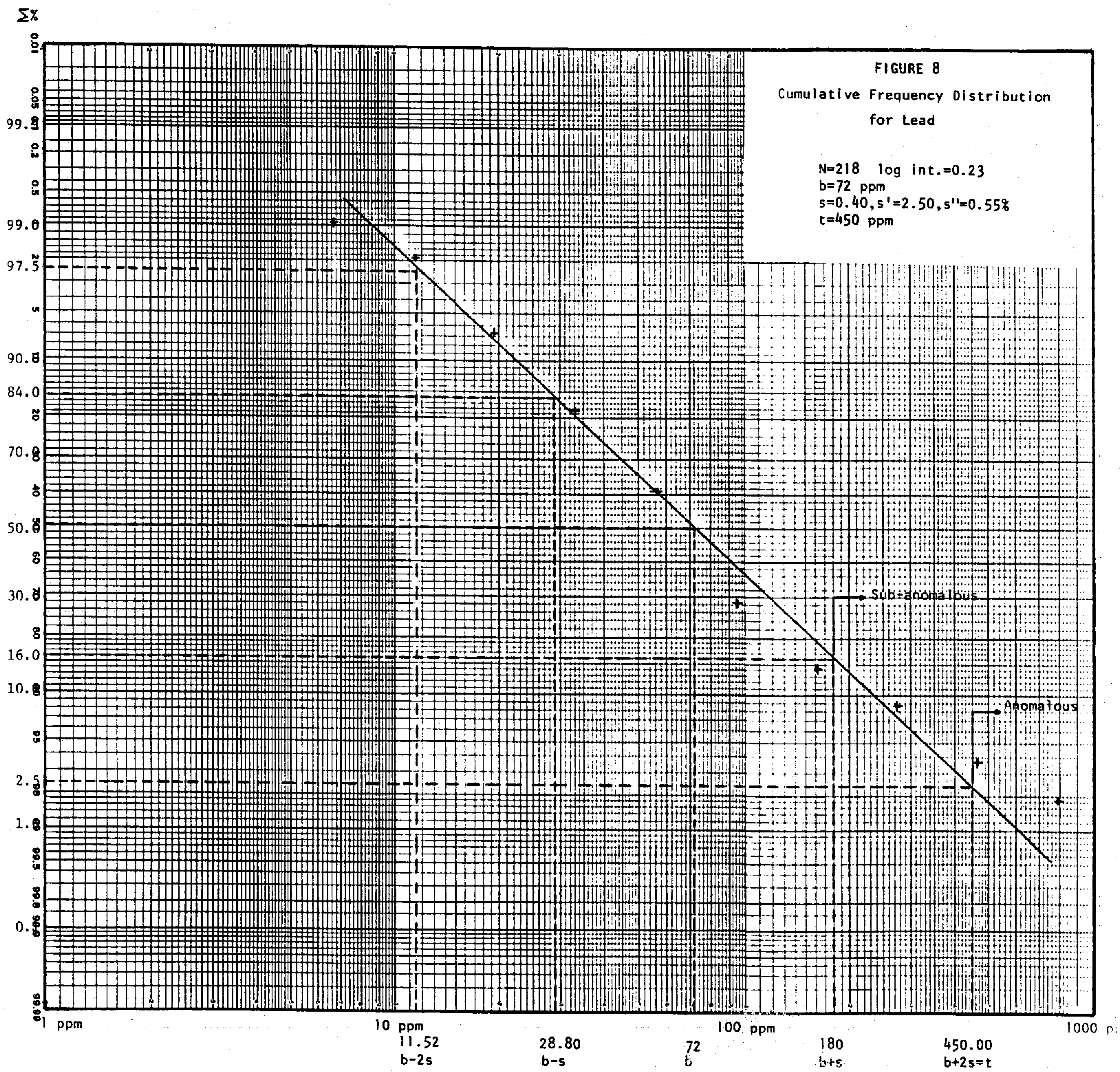



FIGURE 8
Cumulative Frequency Distribution
for Lead

N=218 log int.=0.23
b=72 ppm
s=0.40, s'=2.50, s''=0.55%
t=450 ppm

John Ostler

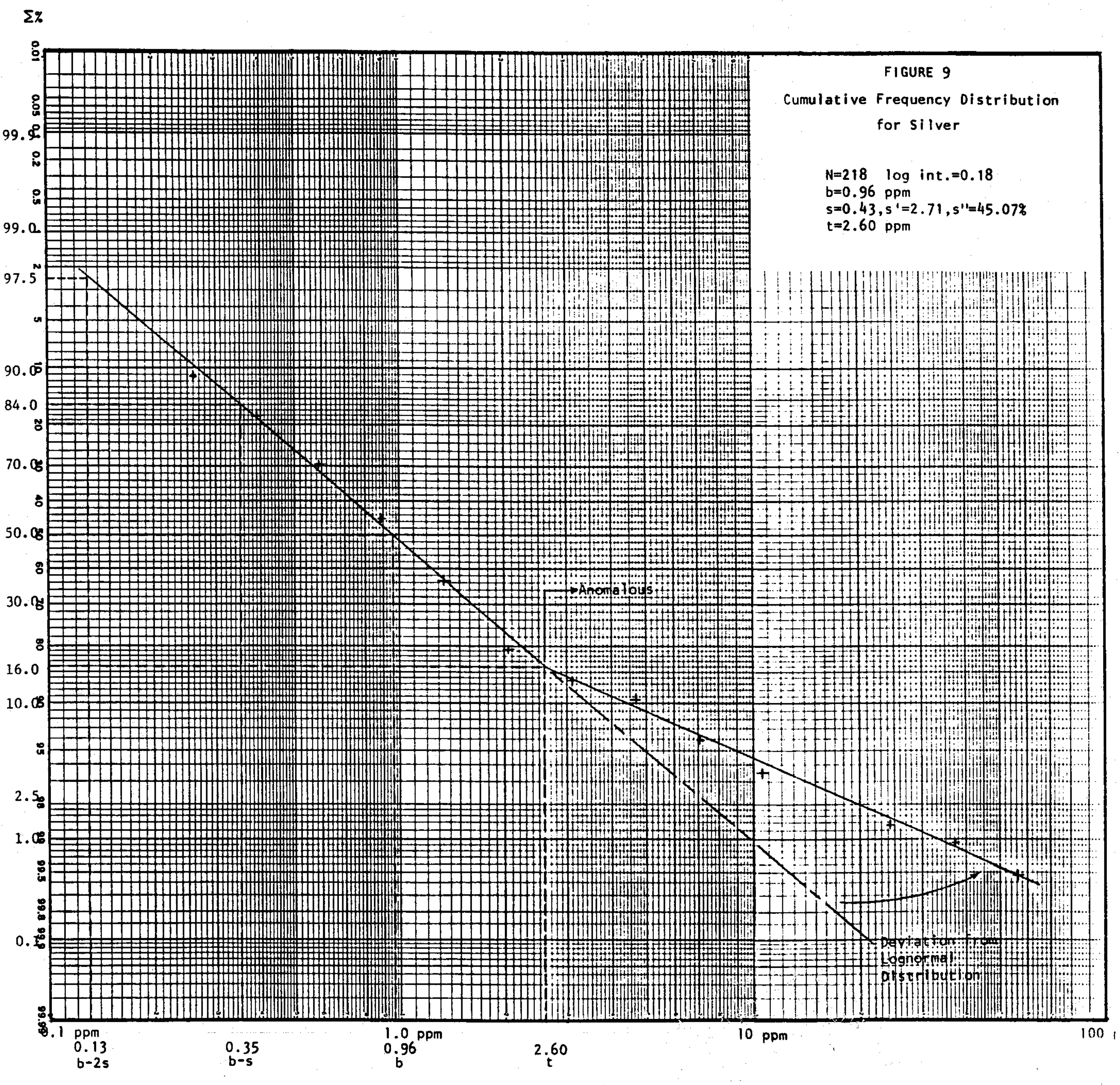
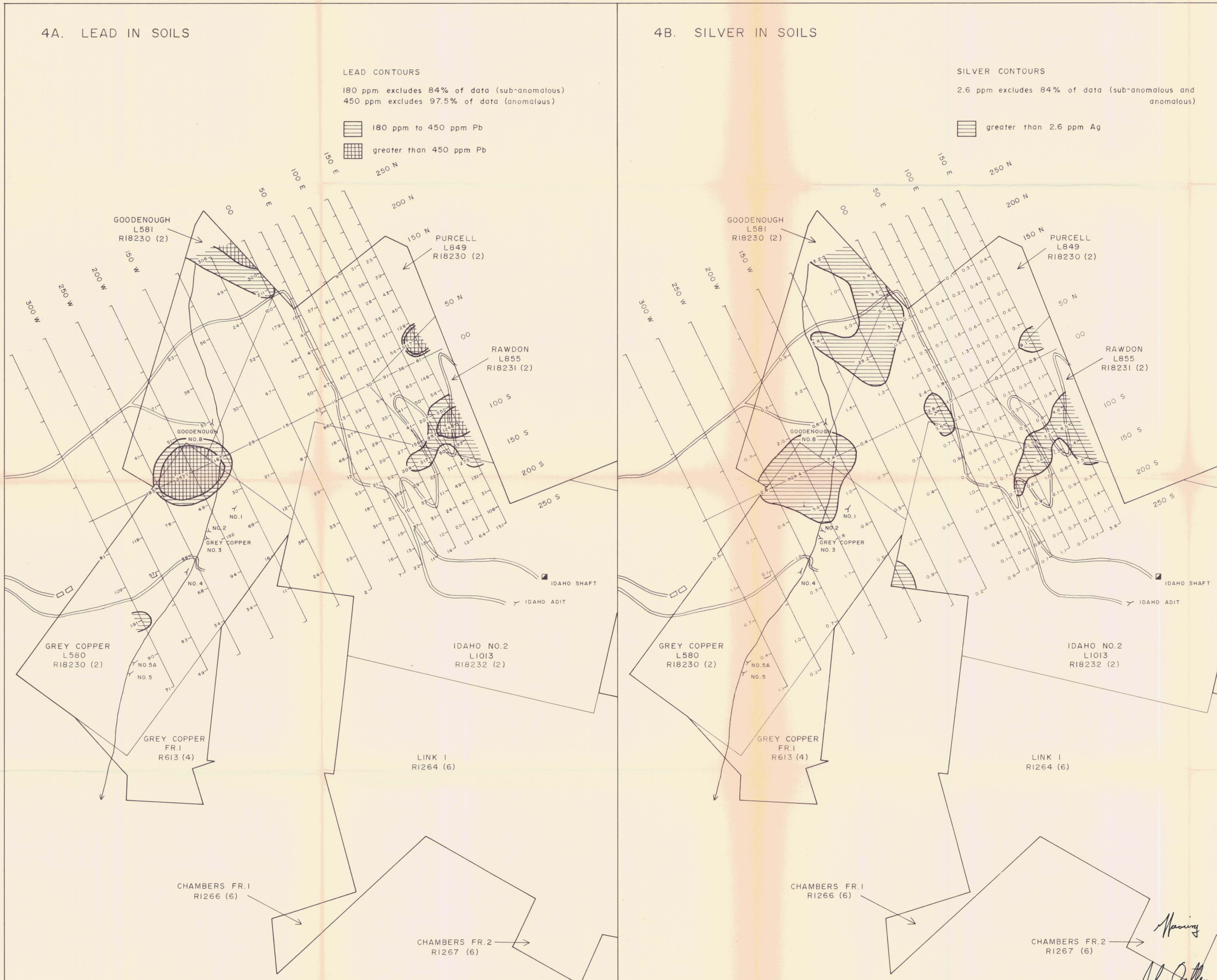



FIGURE 9

Cumulative Frequency Distribution for Silver

N=218 log int.=0.18
b=0.96 ppm
s=0.43, s'=2.71, s''=45.07%
t=2.60 ppm

John Ostler Young



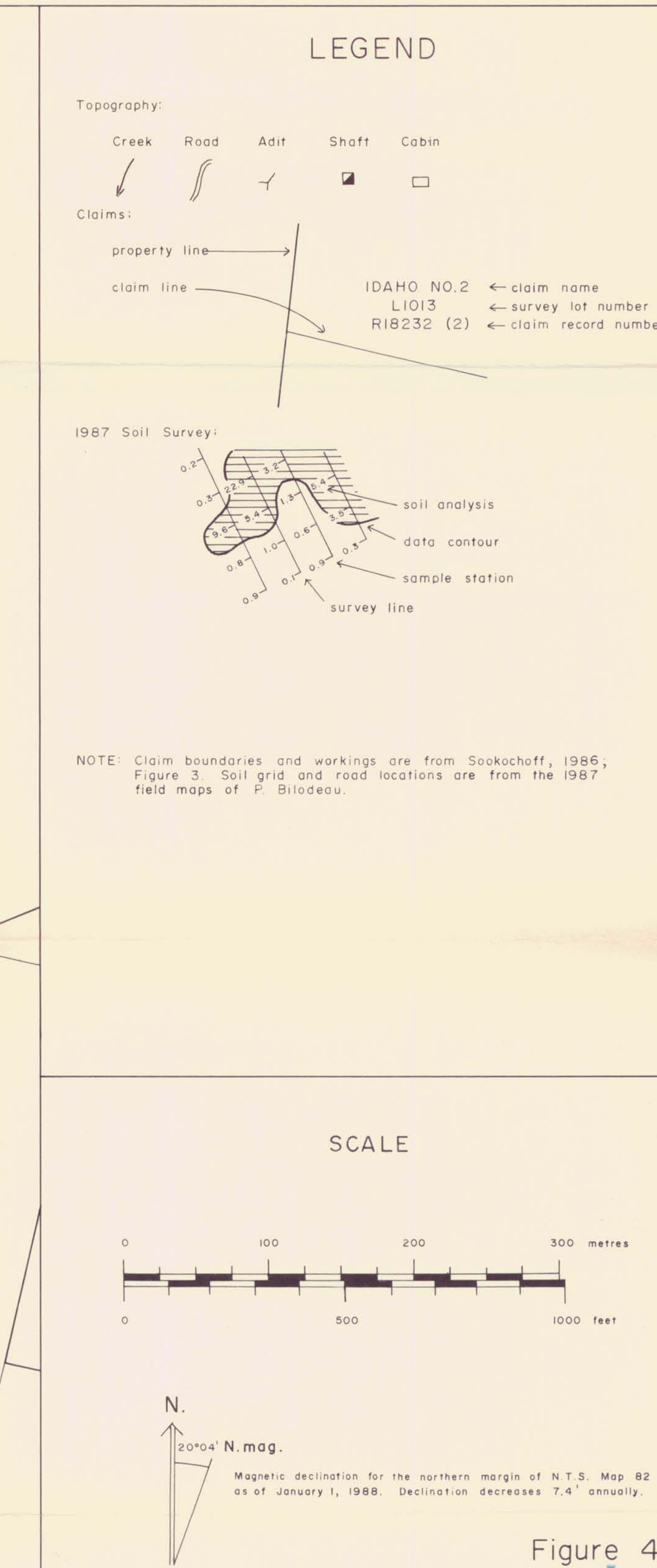




Figure 4

RAWDON RESOURCES LTD.

# LEAD AND SILVER IN SOILS

PURCELL PROPERTY
49° 59.3'N., 117° 11'W.

SLOCAN MINING DIVISION
BRITISH COLUMBIA

C.G. SPEARING, B.Sc. (Eng.)
JOHN OSTLER, M.Sc., P.Geol.

FEBRUARY, 1988

## 3A. COPPER AND ARSENIC IN SOILS

COPPER CONTOURS

56 ppm excludes 84% of data (sub-anomalous)
110 ppm excludes 97.5% of data (anomalous)

56 ppm to 110 ppm Cu

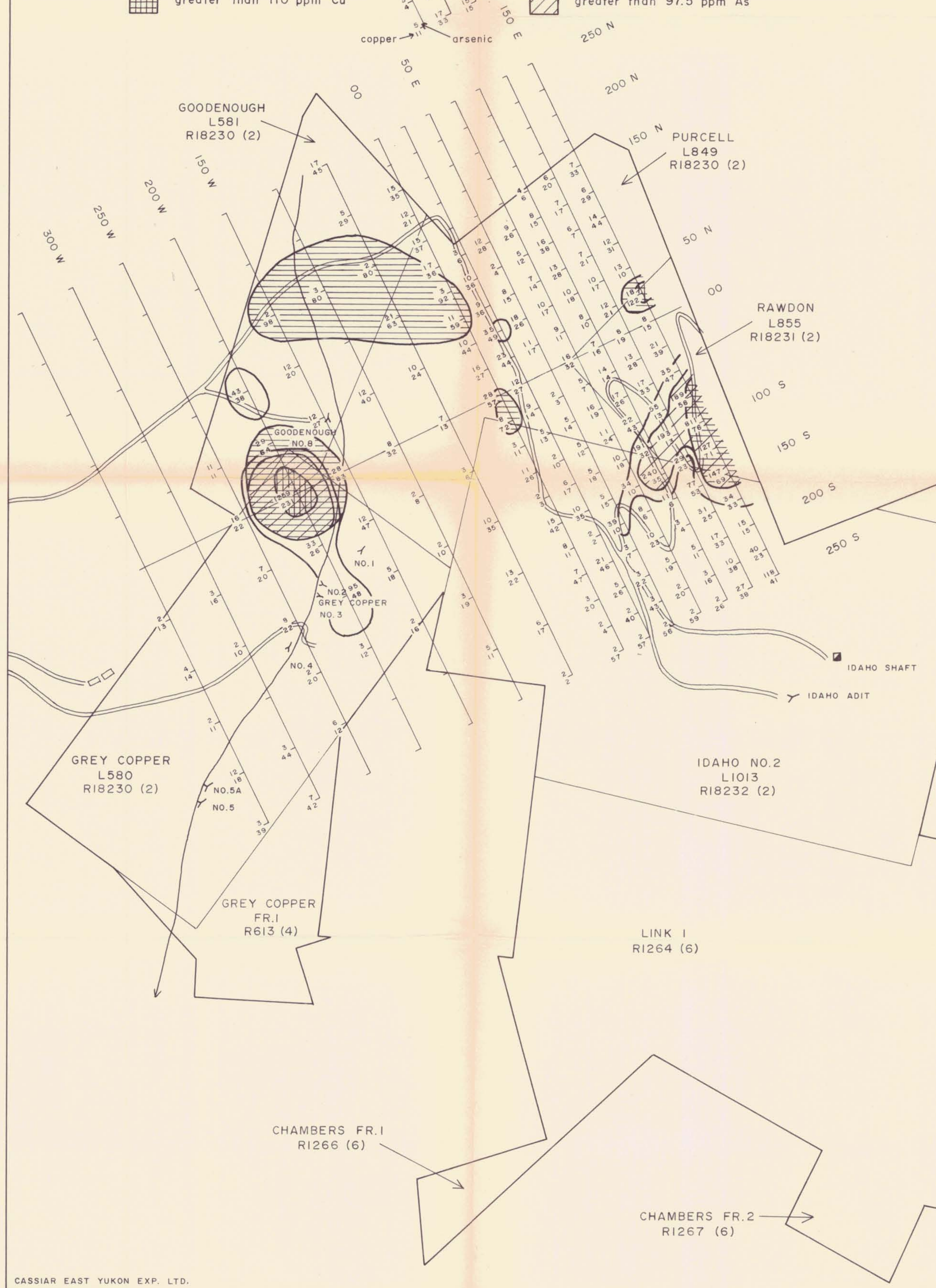
greater than 110 ppm Cu

ARSENIC CONTOURS

32 ppm excludes 84% of data (sub-anomalous)
97.5 ppm excludes 97.5% of data (anomalous)

32 ppm to 97.5 ppm As

greater than 97.5 ppm As



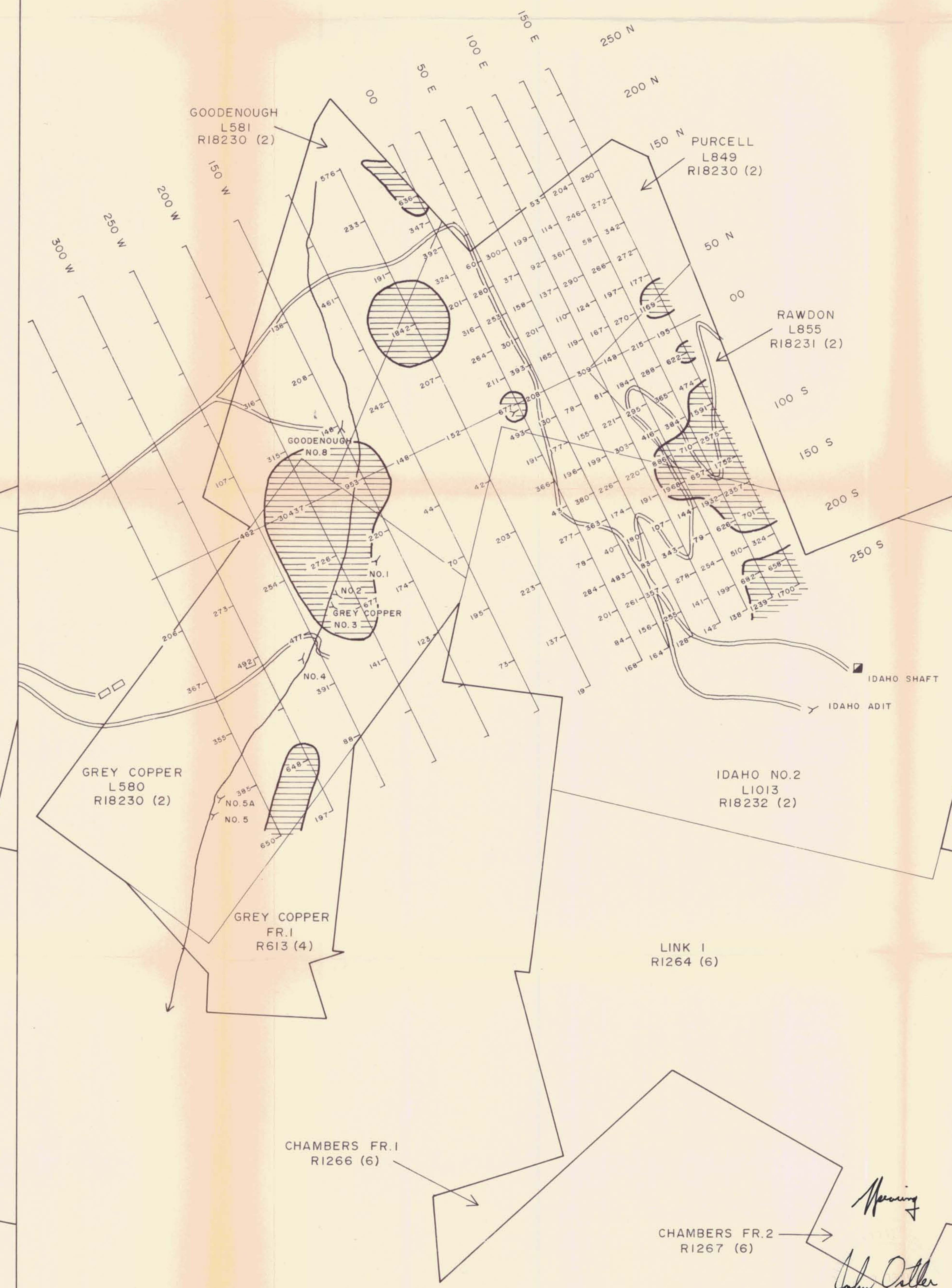

CASSIAR EAST YUKON EXP. LTD.

## 3B. ZINC IN SOILS

ZINC CONTOURS

600 ppm excludes 84% of data (sub-anomalous and anomalous)

greater than 600 ppm Zn




## LEGEND

Topography:

Creek Road Adit Shaft Cabin

Claims:

property line

claim line

IDAHO NO.2 ← claim name
L1013 ← survey lot number
R18232 (2) ← claim record number

1987 Soil Survey:

soil analysis

data contour

sample station

survey line

NOTE: Claim boundaries and workings are from Sookochoff, 1986; Figure 3. Soil grid and road locations are from the 1987 field maps of P. Bilodeau.

SCALE

0 100 200 300 metres

0 500 1000 feet

N.

20°04' N.mag.

Magnetic declination for the northern margin of N.T.S. Map 82 F/14 as of January 1, 1988. Declination decreases 7.4' annually.

Figure 3

RAWDON RESOURCES LTD.

# COPPER, ARSENIC AND ZINC IN SOILS

PURCELL PROPERTY
49° 59.3'N., 117° 11'W.

SLOCAN MINING DIVISION    BRITISH COLUMBIA

C.G. SPEARING, B.Sc.(Eng.)
JOHN OSTLER; M.Sc., P.Geol.

FEBRUARY, 1988