

Geological & Geochemical Assessment Report

on portions of the

JESSI I GROUP

(Luke 1-4 & Luke #1 Fr. Mineral Claims)

Hope, B. C.

New Westminster Mining Division

Latitude 49°28.5' Longitude 121°14.5'

N.T.S. 92H/6E

by

AQUARIUS RESOURCES LTD

Field work from June 28 - 30, 1982

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

Report by

10,932

P. Fowler, B.Sc. (Geol.)

and

Dan G. Cardinal, P. Geol.,

October, 1982.

Vancouver, B. C.

AQUARIUS RESOURCES LTD.



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PREAMBLE

The field work on the Luke claims was supervised by Mr. Brian Fowler, Assistant Junior Geologist for Aquarius Resources Ltd. This assessment report was also written by Mr. Fowler.

All the work carried out, including the assessment report was under the guidance of Mr. Dan Cardinal, P. Geol., Project Geologist for Aquarius Resources Ltd.



Daniel Cardinal, P. Geol.,
November, 1982



INTRODUCTION

A general prospecting and limited detail geochemical survey was conducted by Aquarius Resources Ltd. on the Luke 1-4 mineral claims, located approximately 16 km northeast of Hope, B. C.

The field crew consisted of one junior Geologist and two field persons who prospected and soil sampled in the north half of the property. Fifty-nine (59) soil samples (upper B horizon) were obtained from 4,300 ft. (1,310 m) of flagged grid line and analyzed for gold (Au) and arsenic (As) content. One bulk rock sample was assayed for gold (Au) and silver (Ag).

The purpose of this exercise was to evaluate gold geochemical and VLF-EM anomalies as delineated by Rich Hill Mines Ltd. (former property owner) in 1976 and to meet assessment work requirements.



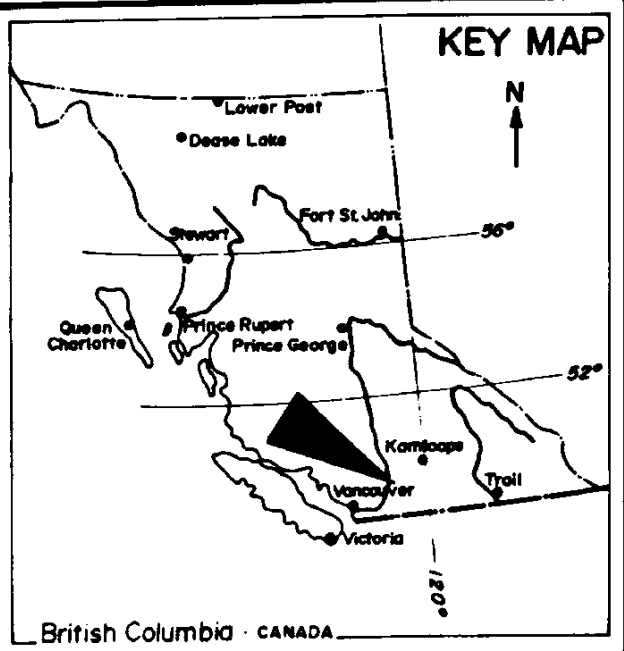
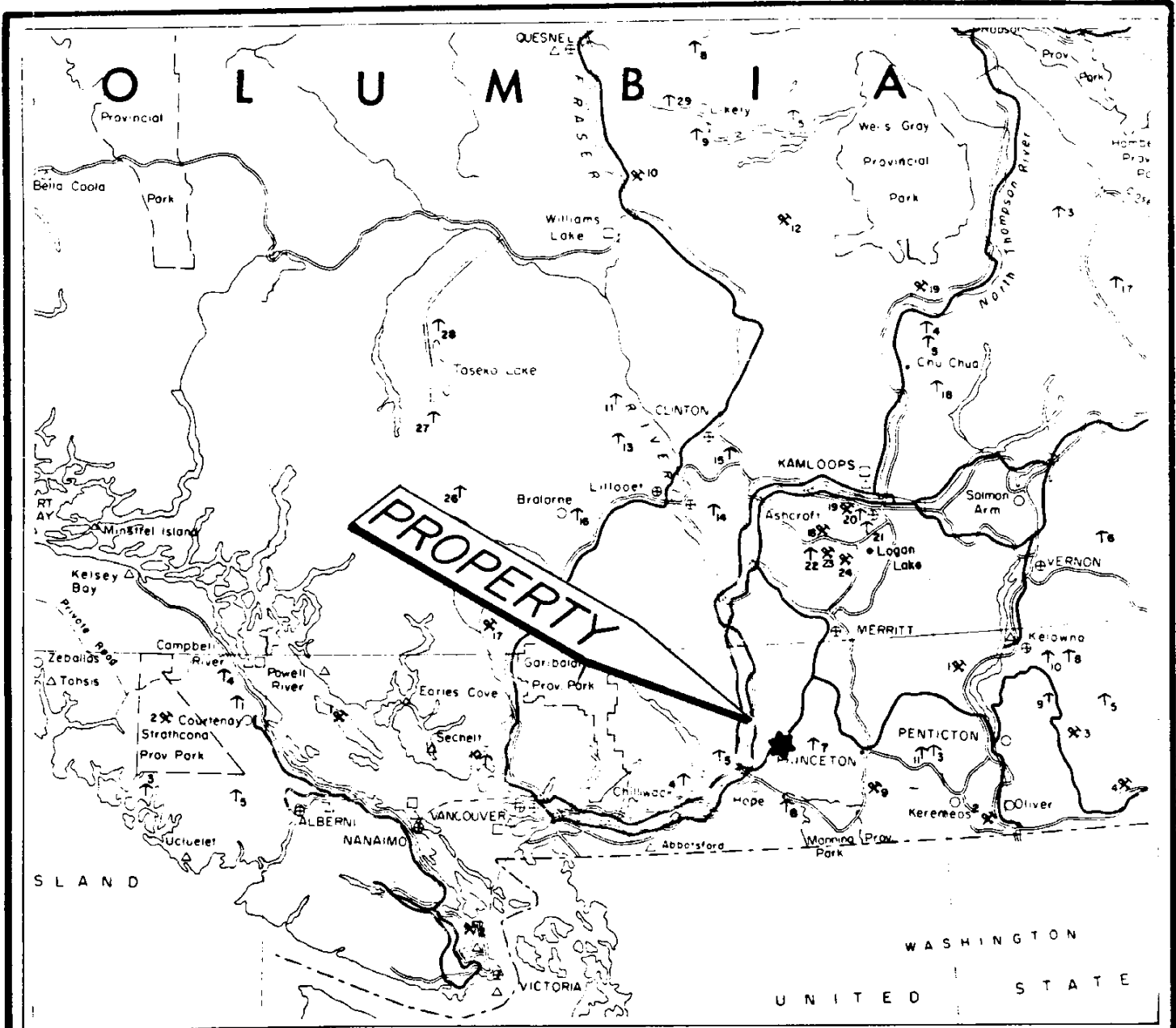
LOCATION & ACCESS

The Luke 1-4 mineral claims are registered within the New Westminster Mining Division and located 17 km northeast of Hope, B. C. Access is via the all weather Coquihalla River Road, a distance of 16 km from Hope & 1 km east along Dewdney Creek road.

This 4 unit mineral claim occupies a precipitous south facing slope bordered to the south by Dewdney Creek.

The N.T.S. coordinates are $49^{\circ}28.5'$ Latitude and $121^{\circ}14.5'$ Longitude (Map sheet 92H/6E).





AQUARIUS RESOURCES LTD.

JESSI I GROUP

*Luke Claims Dewdney Cr. area, B.C.
New Westminster Mining Division 92H/6E.*



SCALE 1 inch = 50 miles

LOCATION MAP

Figure 1

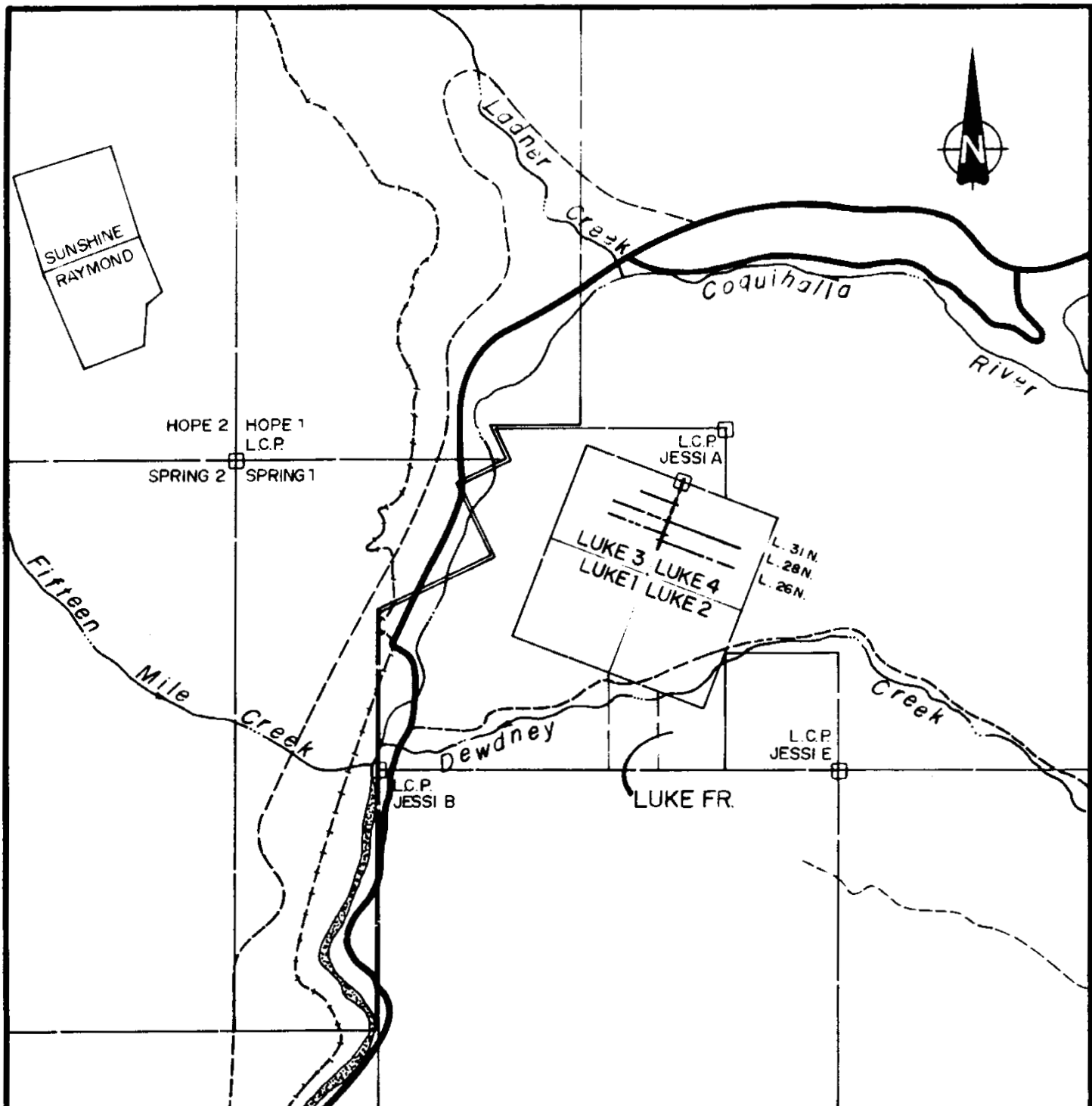
PROPERTY INFORMATION

The Luke 1-4 mineral claims are composed of four (4) single unit 2 post claims, registered within the New Westminster Mining Division.

| CLAIM NAME | RECORD NO. | ANNIVERSARY DATE | EXPIRY DATE* |
|------------|------------|------------------|--------------|
| Luke #1 | 1350 | November 13 | 1982 |
| Luke #2 | 1351 | " | 1982 |
| Luke #3 | 1352 | " | 1982 |
| Luke #4 | 1353 | " | 1982 |
| Luke #1 Fr | 1354 | " | 1982 |

Note: *before assessment credits applied for





Claim Information

Claims name : LUKE 1 — 4 / LUKE FR.
 Record number : 1350 — 1353 / 1354
 Anniversary date : November 12



AQUARIUS RESOURCES LTD.

Luke Claims Dewdney Cr. area, B.C.

New Westminster Mining Division 92H/6E.

0 500 1000 1500metres

SCALE 1:25,000

CLAIMS MAP

Figure 2

PREVIOUS WORK

The first recorded mineral exploration for the claims area was in 1974 by Rich Hill Mines Ltd.* (formally located at 215-850 West Hastings St., Vancouver, B. C.) It was then recorded as the King 11-14 claims.

The property was staked early in 1973 as a result of the excitement created by Carolin Mines Ltd. exploration of the Aurum and Pipestem Mines, former gold producers located approximately 3.5 km to the northwest.

In 1974, Rich Hill mines Ltd. conducted a reconnaissance geochemical and magnetometer survey of the claims area (B. C. Dept. of Mines Assessment Report #5449). This was followed up in June, 1976, by a detailed geochemical and VLF-EM survey. A control grid was established utilizing the central claim line as the baseline (trending N24°E). Grid lines spaced every 300 ft. (91.5 m) were flagged at 100 ft. (30.5 m) intervals trending N66°W - S66°E (lines 18N-33N) and N46°W - S46°E (lines 0N - 15N). (B. C. Dept. of Mines Assessment Report #5923).



A blazed baseline is all that remains of the grid, for grid lines were not blazed and very little flagging could be found.

*Rich Hill Mines Ltd. changed their name in March, 1980, to Blackmist Resources Inc.



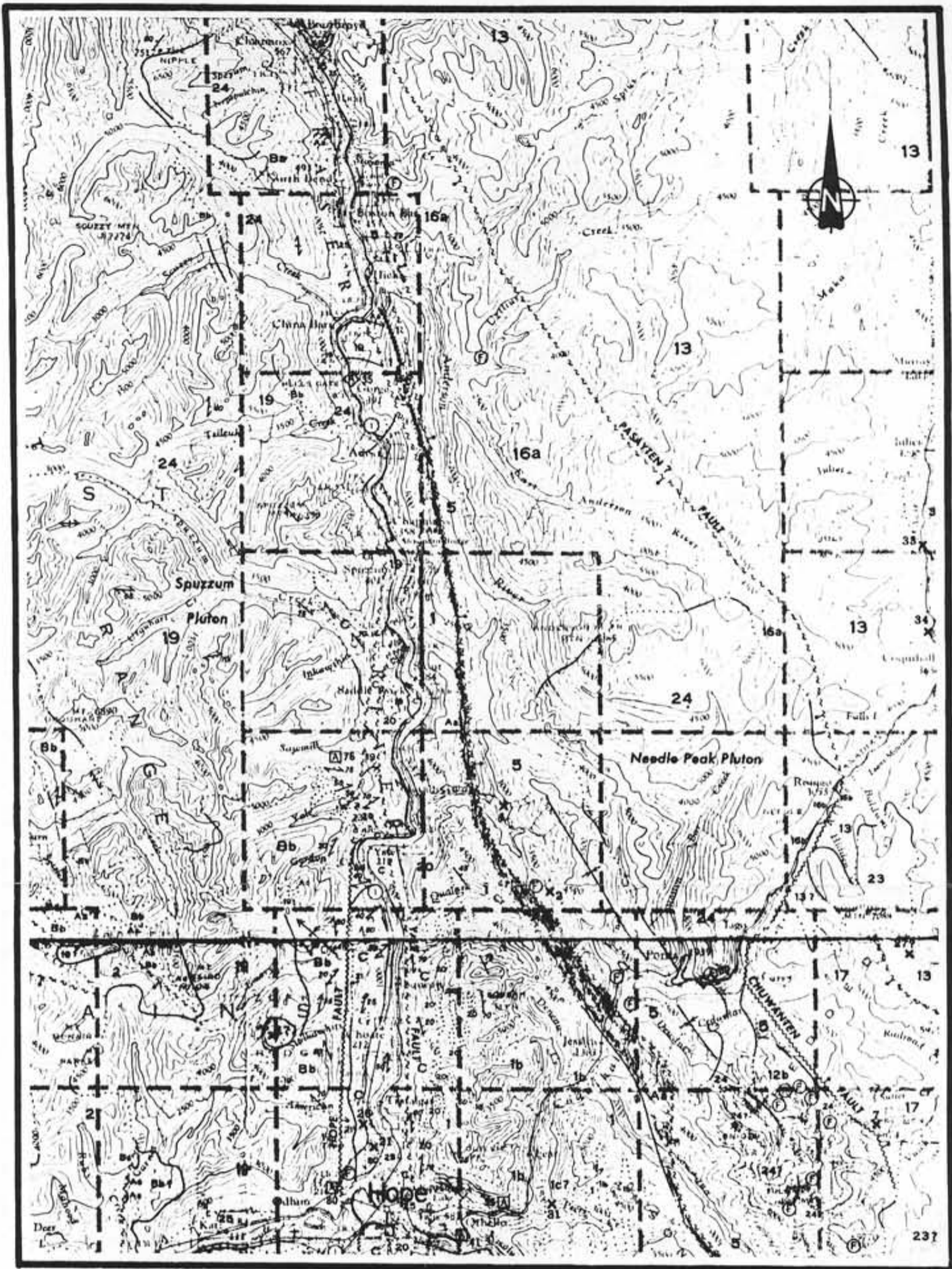
GENERAL SETTING & GEOLOGICAL BACKGROUND

The Luke 1-4 mineral claims lie in an area of small former lode gold producers and several gold occurrences which is today referred to as the "Coquihalla Gold Belt". Most former production was from shear and vein type deposits i.e. Aurum, Pipestem & Emancipation Mines. Only until recently however, has gold exploration within the belt been geared towards larger tonnage low grade replacement type deposits i.e. Carolin Mines Ladner Creek Project.

The belt consists of a northwest trending suite of rocks bounded to the west by a major structural lineament, the Hozameen Fault Zone. This structure separates the mid Jurassic Ladner Slate Group (underlies claims area) to the east from the Paleozoic Hozameen Group and a thin belt of serpentized ultramafics of unknown age to the west.

The general geology of the area has been described by Cairnes (1924) G.S.C. Memoir 139 and by Monger (1970) G.S.C. Paper 69-47.





REGIONAL GEOLOGY FIGURE 3



SCALE 1:250,000

- | | |
|---|--|
| <p>TERTIARY MIOCENE AND EARLIER</p> <p>24 Granodiorite, quartz diorite</p> | <p>CRETACEOUS UPPER CRETACEOUS OR (?) OLDER</p> <p>19 Quartz diorite</p> |
| <p>JURASSIC UPPER JURASSIC DEWDNEY CREEK GROUP</p> <p>12 12a, sandstone, pelite; 12b, tuff, pelite</p> <p>JACKASS MOUNTAIN GROUP</p> <p>16 16a, sandstone, pelite and conglomerate; 16b, sandstone, minor conglomerate</p> | <p>LOWER AND MIDDLE JURASSIC LADNER GROUP</p> <p>5 Pelite, volcanic sandstone</p> |
| <p>DEVONIAN(?), CARBONIFEROUS(?) AND PERMIAN(?) HOZAMEEN GROUP</p> <p>1 1, pelite, chert, basic volcanic rock, minor limestone; 1a, chert, basic volcanic rock; 1b, basic volcanic rock; 1c, chert, pelite; 1d, basic volcanic rock, chert, pelite; 1e, limestone</p> | |
| <p>ULTRAMAFIC ROCK</p> <p>A Aa, serpentinite, serpentinized peridotite; includes some Upper Paleozoic volcanic rocks in broad belt northeast of Hope; Ab, pyroxenite; Ac, hornblendite</p> | |

10,932

GEOLOGICAL BRANCH
ASSESSMENT REPORT

FIELD PROCEDURES

Since grid lines of the existing grid were not blazed and flagging had all but disappeared, very little control was provided. This limited geological surveillance to general prospecting and sampling.

Two (2) soil samplers flagged and chained five (5) grid lines for a cumulative distance of 4,300 ft. (1,310 m), utilizing the existing baseline (central claim line trending 24°Az) for control. Grid lines 26N (east) and 28N (east) trend at 114° Az for a distance of 1,100 ft. (335 m). Lines 26N (west) and 28N (west) trend at 294° Az for a similar distance, while L31N (west) runs for a distance of 500 ft. (152 m) on a similar bearing. Zero North was taken at the south identification post.

Fifty-nine (59) soil samples from the upper B soil horizon were collected at 100 ft. (30.5 m) and occasionally 50 ft. (15.25 m) intervals along the above mentioned grid lines by means of soil mattochs. Samples were placed in standard kraft paper bags marked with the appropriate grid coordinates and shipped to Min-En Labs Ltd. of North Vancouver, B. C. to be analyzed for gold and arsenic content by means of



Spectrophotometric and Aqua Regia A.A. analysis. Field records i.e.: soil horizon sampled, texture, color etc., were compiled by the soil samplers during the survey.

Prospecting was conducted within the north half of the property, proximal to gold geochemical anomalies delineated in 1976 by Rich Hill Mines Ltd. (L21N to L33N, Fig. 4, B. C. Dept. of Mines Assessment Report # 5923). All outcrop was mapped and tied into the 1982 grid lines at a scale of 1 cm = 31.6 m. One bulk rock sample of a predominantly quartz vein material was collected at L30N 3W. This sample was submitted to Min-En Labs Ltd. to be assayed for gold and silver content. (Fig. 4 of B. C. Dept. of Mines Assessment Report # 5923 provided the field base map.)



OBSERVATIONS & RESULTS

Geochemical Survey

Gold values of the upper B soil horizon ranged from a low of 5 ppb (parts per billion) (detection limit) to a high of 40 ppb Au, located at L26N 3W. The arithmetic mean was 8.9, the variance 46.74 with a standard deviation of 6.84.

Arsenic values ranged from a low of 4 ppm (parts per million) to a high of 390 ppm As, located at approximately L30N 3W. The arithmetic mean for arsenic was 47.05, the variance 40.36 and the standard deviation being 63.53.

There appears to be very little correlation between gold and arsenic values. Previous geochemical work performed in the Coquihalla Gold Belt by Aquarius Resources Ltd. has shown that gold values of the upper B soil horizon below 15 ppb can be regarded as background, values below 45 ppb as moderately anomalous, and gold values less than 75 ppb as anomalous. Values in excess of 75 ppb are regarded as highly anomalous.

The geochemical survey was successful in displaying



that moderately anomalous gold values are present in the upper B soil horizon, but not of the magnitude or areal extent necessary to provoke further work.

Geology & Mineralization

Bedrock is predominantly a dark grey-black well indurated meta pelite of the Ladner Group. Metamorphism is of the Low Greenschist Facies.

The structural trend for the area strikes NNW dipping moderately WSW. Minor kink folds (wave length ≈ 5 m) plunging gently towards 132° Az were noted on L28N 10E.

Quartz "gash veins" occur randomly but rarely exceed 10 cm in width and appear to be discontinuous along strike. Very minor disseminated pyrite and pyrrhotite was noted in these veins. No large silicified replacement zones were observed. It is the writers opinion that poorly mineralized quartz veins of this nature account for the moderately anomalous gold values detected in the B horizon on L26N 6+00W to 7+00W. These soil samples were obtained from a talus slope that skirts a steep NE-SW trending ridge just north of L26N. Here bedrock weathers rust brown and carries minor pyrite. Thin barren quartz veining was observed along the face of this ridge.



A fine grained light brown quartz-feldspathic dyke striking roughly E-W was noted near L30N 3W. The dyke is approximately 1m thick and displays weak hydrothermal alteration. Mineralization includes minor pyrite, arsenopyrite, pyrrhotite and sericite. A .5m quartz vein forms the east contact between dyke and sediments. This vein was sampled and the assay revealed .01 oz/ton Ag and .001 oz/ton Au. A highly oxidized sample obtained near the contact ran 390 ppm As and 5 ppb Au. Similar high Arsenic values were detected on L28N 2+00W to 3+50W.

It is most likely this weakly mineralized dyke and/or accompanying quartz vein that is responsible for the high arsenic values and sporadic gold kicks in the area. However, the paucity of good gold values and the apparent limited extent of the dyke does not provide much encouragement for better mineralization at depth.



SUMMARY

The Luke 1-4 mineral claims are composed of 4 single unit 2 post claims, located approximately 17 km north-east of Hope, B. C. A limited detail geochemical and prospecting program was conducted by Aquarius Resources Ltd. during the time period of June 28-30, 1982.

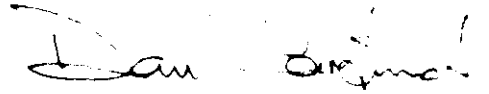
The purpose of this exercise was to evaluate the property in terms of gold mineralization and to meet assessment work requirements as prescribed by the B. C. Dept. of Mines. The program was to follow up on work performed by Rich Hill Mines Ltd. (former property holder) in 1976, outlined in the B. C. Dept. of Mines Assessment Report # 5923)

Soil geochemistry revealed sporadic moderately anomalous gold and arsenic values in the northern portion of the property. Investigation of proximal rock outcroppings has explained these anomalous values in terms of weakly mineralized quartz veins and a minor hydrothermally altered quartz feldspathic dyke.

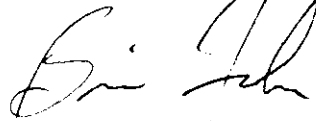
The limited areal extent of anomalous gold as detected by the geochemical survey and the sub-anomalous nature of the values provides little incentive for further exploration work.



Respectfully submitted

A handwritten signature in cursive script, appearing to read "Dan Cardinal".

Dan Cardinal, P. Geol.

A handwritten signature in cursive script, appearing to read "Brian Fowler".

Brian Fowler, B. Sc.
October, 1982



APPENDIX I

BIBLIOGRAPHY

- | | |
|------------------------|--|
| Cairnes, C.E. 1924 | Coquihalla Area, British Columbia G. S. C. Memoir 139 |
| Monger, J.W.H. 1969 | G. S. C. Paper 69-47, Hope Sheet, West half |
| Mark, D.G. 1976 | B. C. Dept. of Mines Assessment Report No. 5923 |
| Sookochoff, L. | B. C. Dept. of Mines Assessment Report No. 5449 |



APPENDIX II

ASSESSMENT WORK DETAILS

Personnel

| | |
|--------------------------|-----------|
| Geologist, June 28-30 | |
| 2 days @ \$250/day | \$ 500.00 |
| Fieldperson, June 28-30 | |
| 2 days @ \$250/day | 500.00 |
| Fieldperson, June 28-30 | |
| 2 days @ \$183/day | 366.00 |

Expenses

| | |
|--------------------------------|--------|
| 59 soil samples @ \$9.32 | 549.88 |
| (includes one rock assay) | |
| 4x4 vehicle, Sept 28-30 | |
| 2 days @ \$95/day | 190.00 |
| Room & Board, 3 men/3days | |
| @ \$50/day | 300.00 |

Report Preparation

| | |
|-------------------------------------|--------|
| Typing, 5 hrs @ \$20/hr | 100.00 |
| Drafting, 4 hrs @ \$30/hr | 120.00 |
| Repro, binding, collation etc. | 150.00 |

\$2,775.88

Respectfully submitted



Brian Fowler, B.Sc.

October, 1982

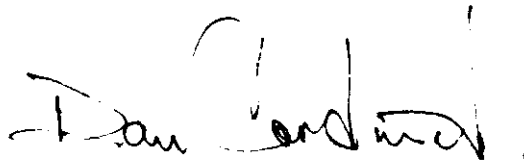


APPENDIX III

Certificate

I, Daniel G. Cardinal of the Municipality of Hope, British Columbia, do hereby certify that:

1. I am a professional geologist residing in Hope, B. C., mailing address, P. O. Box 594, Hope, British Columbia, VOX 1L0
2. I am a graduate of the University of Alberta (1975) with a B.Sc. degree in Economic Geology and a graduate of the Northern Alberta Institute of Technology with a Geological Technologist diploma (1970)
3. I am a member in good standing with the Association of Professional Engineers, Geologists and Geophysicists of Alberta; and a member of the Canadian Institute of Mining and Metallurgy.
4. Since 1968, I have been actively involved in the Canadian mining industry both as a prospector and a professional geologist, and have assisted and instructed prospector's courses through the Department of Extension, University of Alberta.
5. I am presently employed by Aquarius Resources Ltd., as a permanent staff geologist to systematically carry out geological mapping, prospecting, geochemical, geophysical and diamond drilling programs.



Daniel G. Cardinal, P. Geol.

October, 1982

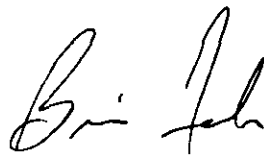


APPENDIX III

CERTIFICATE

I, Brian Fowler of the Municipality of Hope, British Columbia, do hereby certify that:

1. I am a Junior Geologist residing in Hope, British Columbia. Mailing address, P. O. Box 1465, Hope, B. C.
2. I am a graduate of the University of Alberta (1981) with a B.Sc. in Geology, specializing in Petroleum Geology.
3. I am a member in good standing with the Canadian Institute of Mining and Metallurgy.
4. Upon graduation, I have been employed by Aquarius Resources Ltd., in the capacity of Junior Geologist, to assist in geological mapping, geochemical and geophysical surveys.



Brian Fowler, B. Sc. (Geol.)

October, 1982



MIN-EN Laboratories Ltd.

705 WEST 15th STREET.
 NORTH VANCOUVER, B.C., CANADA V7M 1T2
 TELEPHONE (604) 980-5814

ANALYTICAL REPORT

Project **Luke 1-4, Gilt #2** Date of report **Sept. 8/82.**
 File No. **2-620** Date samples received **Aug. 31/82.**
 Samples submitted by:
 Company: **Aquarius Resources**
 Report on: **60 soils** Geochem samples

4 Assay samples

Copies sent to:

1. **Aquarius Resources, Vancouver, B.C.**
2.
3.

Samples: Sieved to mesh **-80 soil** Ground to mesh **-100 assay**

Prepared samples stored discarded
 rejects **assay** stored discarded **soil**

Methods of analysis: **Geochem As-Spectrophotometric., Au-Aqua Regia.**
A.A., Assays Ag-Acid digestion-chemical analysis. Au-Fire.

Remarks:

ATTENTION:

| Sample Number | Cu ppm | Pb ppm | Zn ppm | Ni ppm | Co ppm | Ag ppm | Fe ppm | Hg ppb | As ppm | Mn ppm | Au ppb |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| L 28N1+00E | | | | | | • | | | 27 | | 5 |
| 2+00E | | | | | | • | | | 19 | | 10 |
| 3+00E | | | | | | • | | | 8 | | 5 |
| 4+00E | | | | | | • | | | 7 | | 10 |
| 5+00E | | | | | | • | | | 8 | | 5 |
| 6+00E | | | | | | • | | | 36 | | 5 |
| 6+50E | | | | | | • | | | 9 | | 5 |
| 7+00E | | | | | | • | | | 6 | | 5 |
| 7+50E | | | | | | • | | | 4 | | 5 |
| 8+00E | | | | | | • | | | 10 | | 10 |
| 8+50E | | | | | | • | | | 22 | | 10 |
| 9+00E | | | | | | • | | | 23 | | 10 |
| 9+50E | | | | | | • | | | 82 | | 15 |
| 10+00E | | | | | | • | | | 31 | | 5 |
| 10+50E | | | | | | • | | | 60 | | 5 |
| L 28N11+00E | | | | | | • | | | 29 | | 10 |
| L 26N1+00E | | | | | | • | | | 14 | | 10 |
| 2+00E | | | | | | • | | | 14 | | 15 |
| 3+00E | | | | | | • | | | 28 | | 10 |
| 4+00E | | | | | | • | | | 23 | | 5 |
| 5+00E | | | | | | • | | | 21 | | 5 |
| 6+00E | | | | | | • | | | 13 | | 25 |
| 6+50E | | | | | | • | | | 21 | | 15 |
| 7+00E | | | | | | • | | | 49 | | 20 |
| 7+50E | | | | | | • | | | 60 | | 5 |
| 8+00E | | | | | | • | | | 18 | | 10 |
| 8+50E | | | | | | • | | | 36 | | 10 |
| 9+00E | | | | | | • | | | 210 | | 25 |
| 9+50E | | | | | | • | | | 152 | | 15 |
| L 26N11+00E | | | | | | • | | | 25 | | 10 |

(Handwritten signature)
 (40 mesh)

PROJECT No.: Luke 1-4

MIN - EN Laboratories Ltd.

DATE: Sept. 8,

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

1982.

ATTENTION:

| Sample. Number | % Mn | Cu ppm | Pb ppm | Zn ppm | Ni ppm | Co ppm | Ag ppm | Fe ppm | Hg ppb | As ppm | Mn ppm | Au ppb | | | |
|----------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----|-----|-----------|
| 6 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
| 81 | 86 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 | 145 | 150 | 155 |
| 26N1W | | | | | | | • | | | 32 | | 5 | | | |
| 2W | | | | | | | • | | | 16 | | 5 | | | |
| 3W | | | | | | | • | | | 61 | | 40 | | | |
| 3.5W | | | | | | | • | | | 20 | | 5 | | | |
| 5W | | | | | | | • | | | 26 | | 5 | | | |
| 5.5W | | | | | | | • | | | 15 | | 5 | | | |
| 6W | | | | | | | • | | | 8 | | 5 | | | |
| 6.5W | | | | | | | • | | | 19 | | 5 | | | |
| 7W | | | | | | | • | | | 17 | | 5 | | | |
| 7.5W | | | | | | | • | | | 76 | | 5 | | | (40 mesh) |
| 26N8W | | | | | | | • | | | 27 | | 5 | | | |
| 28N1W | | | | | | | • | | | 25 | | 5 | | | |
| 2W | | | | | | | • | | | 60 | | 10 | | | |
| 2.5W | | | | | | | • | | | 106 | | 5 | | | |
| 3W | | | | | | | • | | | 135 | | 10 | | | |
| 3.5W | | | | | | | • | | | 82 | | 15 | | | |
| 4W | | | | | | | • | | | 18 | | 5 | | | |
| 5W | | | | | | | • | | | 28 | | 5 | | | |
| 6W | | | | | | | • | | | 61 | | 5 | | | |
| 7W | | | | | | | • | | | 22 | | 5 | | | |
| 28N8W | | | | | | | • | | | 47 | | 30 | | | |
| 31N1W | | | | | | | • | | | 23 | | 5 | | | |
| 1.5W | | | | | | | • | | | 19 | | 5 | | | |
| 2W | | | | | | | • | | | 10 | | 5 | | | |
| 2.5W | | | | | | | • | | | 20 | | 5 | | | |
| 3W | | | | | | | • | | | 20 | | 5 | | | |
| 4W | | | | | | | • | | | 8 | | 10 | | | |
| 31N5W | | | | | | | • | | | 140 | | 5 | | | |
| S 1 | | | | | | | • | | | 5 | | 5 | | | |
| QV30N3W | | | | | | | • | | | 390 | | 5 | | | |

[Handwritten signature] (40 mesh)

