

81-#1060

GEOPHYSICAL & GEOCHEMICAL REPORT, 9828

On The NCL1-8 Claims: 13 Units
Fairview Gold Camp, Oliver Sector
Lat. 49°13'N, L.119°35'W:NTS 82E/4E

(1.5mi.) 2.4km NW of Oliver,
Osoyoos Mining Div., British Columbia

by

N.C.Lenard, P.Geol., P.Eng., Cons.Geol.
Box 863, Westbank, B.C., V0H 2A0
Dec.1, 1981

Field Work done: Mar.18, Oct.9,15,21, 1981

Owners: N.C.Lenard, Westbank, B.C.
M.S.Evick, Calgary, Alberta

9828

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Fig. 7

-FRONTISPIECE-

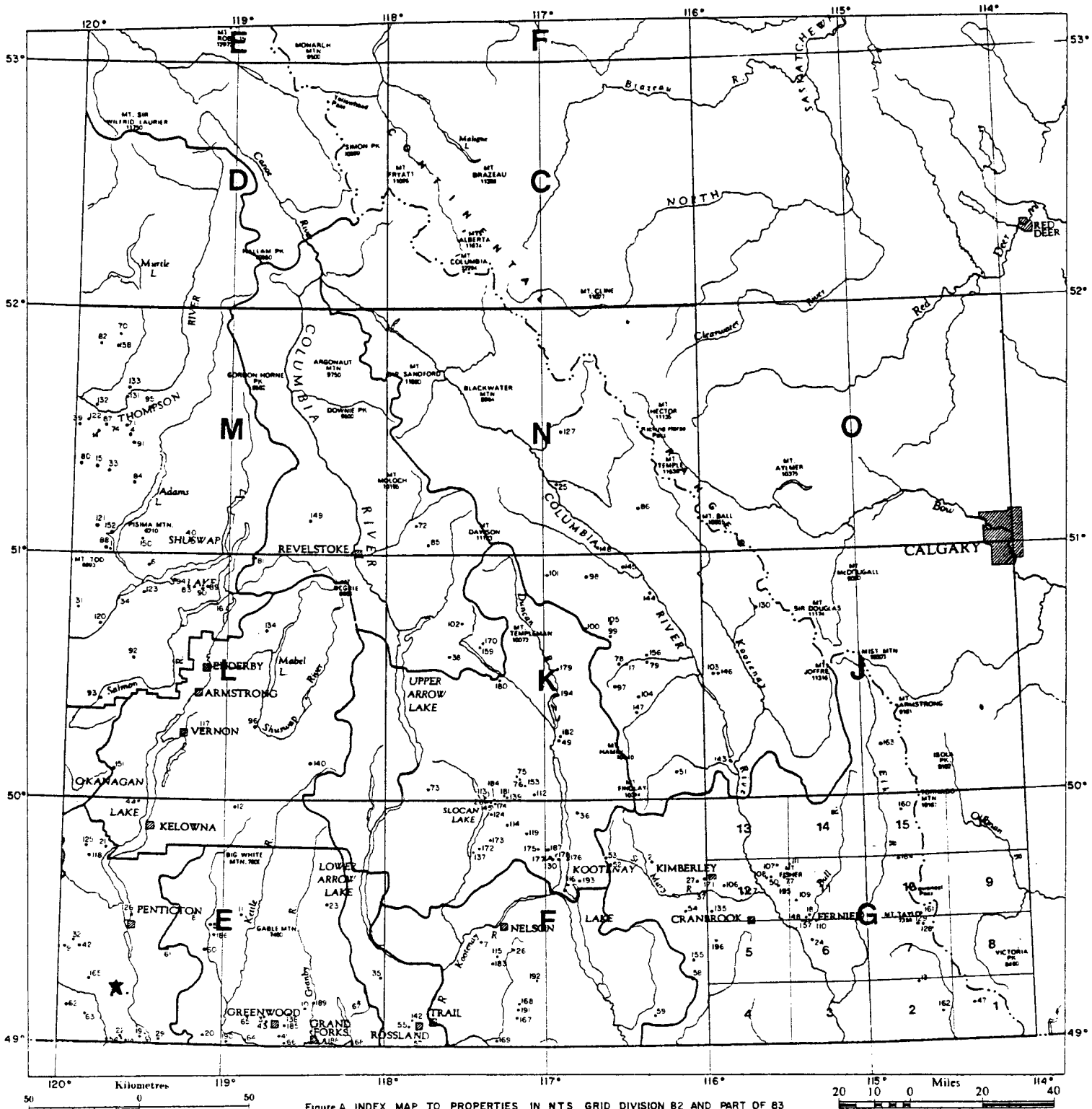


Figure A INDEX MAP TO PROPERTIES IN NTS GRID DIVISION 82 AND PART OF 83

★ NCL 1-8 Claims

INTRODUCTION:

This report deals with results of preliminary geophysical (VLF-EM) and soil geochemical surveys of a 13-unit claim block in the 'Oliver Granite' sector of historic Fairview gold camp in the southern Okanagan Valley. The property adjoins two old, one-claim gold mines with similar gold-silver grades: the Standard and Empire mines.

The goal of the subject work was to establish an exploration base by seeking vein extensions, new veins, and mineralized shear zones, if present, by exploring across the northerly structural grain of the locale between the two old properties.

PROPERTY & ACCESS:

The property was staked by the writer in December, 1980 and consists of the following 13 units:

| <u>Claim</u> | <u>Type</u> | <u>Units</u> | <u>Record No.</u> | <u>Record Date</u> |
|--------------|---------------|--------------|-------------------|--------------------|
| NCL1 | Modified Grid | 6 | 1296 | Dec.19,1981 |
| NCL2 | 2-post | 1 | 1339 | Mar.2, 1982 |
| NCL3 | 2-post | 1 | 1340 | Mar.2, 1982 |
| NCL4 | 2-post | 1 | 1341 | Mar.2, 1982 |
| NCL5 | 2-post | 1 | 1342 | Mar.2, 1982 |
| NCL6 | 2-post | 1 | 1343 | Mar.2, 1982 |
| NCL7 | 2-post | 1 | 1344 | Mar.2, 1982 |
| NCL8 | 2-post | 1 | 1368 | Mar.23,1982 |

The claims are held on a 50/50 basis by N.C.Lenard of Westbank, B.C. and M.S.Evick of Calgary, Alberta.

The property site is one mile northwest of the town of Oliver. It is 0.8 km west of Hy.97 and 0.4 km east of a paved district road. Property elevations range from 1400-2300 ft. (427-701 m). Valley bottom is 1,000 ft. (305 m) elevation. Access to the claims is by two-wheel drive vehicle from Oliver west to a point 4.1 km west, thence 3.5 km north to a right-forking gravelled road that bypasses the Legal Corner Post of NCL1 Claim. Alternately, a dirt road branches off the same paved road to the old Standard Mine.

Surface rights are privately held and the land is used for cattle grazing. A recent forest fire left excellent rock exposures. There is no surface water on the claims and timber is scattered.

Summary, Conclusions & Recommendations:

1. The NCL Claims consist of 8 unsurveyed mining claims (13 units) held in the names of N.D.Lenard and M.S.Evick.

2. The property, located 2 km northwest of Oliver, British Columbia, is accessible by the Funnell (Sawmill) Lake road.

3. Work summarized in this report consisted of preliminary soil geochemical sampling and VLF-EM geophysics over a portion of the property: north of the Empire vein on NCL5, and east-west between the Standard and Empire mines on NCL1 claim.

4. The property is underlain by a three-phase, composite, mid-Jurassic plutonic complex of quartz monzonite composition.

5. A resemblance exists between the economic and structural geology of the subject setting and that of the Beavercell silver camp, about 43 km to the east, which hosts five silver mines to date. There, the Westkettle batholith grades from quartz diorite to quartz monzonite in the Beavercell stock. The lodes there are in quartz-breccia veins or stockworks accompanied by extensive propylitization. They are complexly and abundantly faulted and only their richness has warranted exploration (Kidd & Perry, 1957).

6. Primary exploration targets at present are:

(a) the inferred structural intersection southeast of South Wow Lake; and the VLF-EM Line 2 anomalies that coincide with inferred fault traces and with derived soil lead anomalies that may reflect quartz veins;

(b) Northerly extension of the Empire vein and related veins or stockworks, as partly indicated by one high soil lead value on strike projection of the Empire structure; and,

(c) the old Quartz Queen Crown Grant claim south of the Standard mine, which is on the southerly trend of the fault trace through the Wow Lakes and Standard deposit.

7. Soil geochem and VLF-EM surveys should be expanded on the Empire vein trend on NCL5 and NCL6 and on most of NCL1 claim, where detailing of derived lead anomalies is warranted. Soil profiles need study to better recognize the B horizon in the poorly drained soils.

8. Inferred VLF-EM conductors and soil lead anomalies appear to be associated on the NCL1 claim. Other related features should be sought as leads to gold and silver: alteration, and trace elements antimony, arsenic and bismuth.

WORK HISTORY:

The property area has been intermittently explored since the late 1890's. The most recent underground development was on the Standard Mine, which shipped some gold-silver ore in 1962 (Production Table, Appendix).

Recently, surface exploration for Uranium was carried out for British Newfoundland Exploration (Brinex) in 1977-1978 (Assessment Report No.6949). This latest report mapped detailed geology, including an inferred structural intersection near South Wow Lake on NCL1 Claim, which could have controlled mineral deposition. Field work of the subject report was carried out before the Brinex report was available to the writer. However, strong lineaments on airphotos suggested potential for shear zones and major intersections and was a basic premise for the subject geophysical and geochemical work.

GEOLOGY:

Regional

The regional geological setting is the central part of the Okanagan Plutonic and Metamorphic Complex, adjoining the Shuswap Metamorphic Complex to the north. The Okanagan Complex was formerly assigned to the Monashee Group of the Shuswap.

Local

The NCL claims are underlain by the Oliver plutonic complex, - a composite mid-Jurassic, calc-alkaline complex of three distinct phases of quartz monzonite composition (Beaty & Culbert, 1978 Asst.Rept.6949), which are, in sequence of deposition:

| | |
|--------------------------------------|--------|
| Biotite-Hornblende Quartz Monzonite | : bhQM |
| Porphyritic-Biotite Quartz Monzonite | : pbQM |
| Muscovite-Garnet Quartz Monzonite | : mgQM |

The first two were previously termed 'Oliver Syenite' and 'Oliver Granite' by Postock (1940). Later studies have shown a trend from near granodiorite to near granite composition: increased alkaline enrichment with deposition. These three main phases may be all of Cretaceous Valhalla plutonic age. Dioritic rocks and fine-grained dykes and pods may comprise two added phases.

The porphyritic-biotite quartz monzonite phase forms the largest mass of the Oliver plutonic complex. It underlies the northwest and south parts of the property; it is in fault contact with the muscovite-garnet phase along the Wow Lakes fault trace on NCL1 claim.

Economic Geology

Gold-silver bearing quartz veins in the locale appear to be related to the contact of the porphyritic-biotite and muscovite-garnet quartz monzonite phases in part: the Gypo quartz quarry and the Standard Mine are so sited; and partly to dilatant zones of north-trending, late Cretaceous-Tertiary stresses (Beaty & Culbert, 1978). The old Quartz Queen claim, lying south of the Standard mine, is on the projected trace of the Wow Lakes fault and that quartz showing may be thus controlled.

Galena is the principal sulphide mineral noted in veins and mine dumps on the property, other than pyrite and minor manganese oxides. Native gold was seen by the writer in galena-bearing quartz from two veins on the Standard mine claim (Snowflake). Hesseite, the silver telluride, occurs in ores of the Standard mine (Arnott, 1963), but has not been reported in other nearby properties. Both precious metals appear to be related to galena deposition and sericitic alteration in veins and wallrocks.

Two generations of quartz have been reported in gold deposits of the main Fairview camp southwest of the subject claims, but only one has been recognized in the Oliver sector to date. Rapid vertical lensing of some quartz veins of the locale has been noted in this preliminary survey, leading to the premise that significant reserves of modest grade gold-silver quartz could exist on the property: the Gypo quartz deposit narrows rapidly upward in a series of steep veins; and a 0.8m auriferous, galena-bearing quartz vein on the Snowflake claim appears on surface, in a 3.0 m vertical rise, as a barren, 0.3 m quartz vein. Thus, any narrow quartz veins or silicified patches in outcrops may lead to economically interesting quartz structures within a few feet of surface.

A study of ore shipments from the Fairview camp shows that grade potential may be better in the granitic sector (Oliver) than in the main camp where schists predominate (see Production Table in Appendices).

GEOCHEMISTRY

An inferred genetic tie of precious metals to galena in veins of the locale, and the usual low mobility of lead in geochemical halos led to its use as a pathfinder for quartz veins in this work. In soil profiles of this semi-arid climate, the E horizon is obscure, and the sampled zone may thus vary from A-E to B. This may explain results received north of the Empire vein, where the only significant result was one reading that was four times

the mean for lead. Average depth of samples, taken with a mattock and stored in water-resistant kraft bags, was 0.4 m. The -80 fraction was used.

Analytical data are presented in the appendices, and sample sites are shown on the map, Fig.2. Extraction was by hot HNO₃-HCl; analysis, AA mode.

Interpretation of the data, which yield a background mean for lead of 8.0 ppm, suggests the presence of at least one new vein on NCL1 claim at site 81-B17 (26ppm), 480 m west of NCL1 east boundary. A sample adjacent to a mineralized vein 300 m further west on the Snowflake claim gave a like analysis for lead (81-B 20). Other potential lead-bearing veins may occur near 81-B 16, B-04, A-13 and A-02 : 14, 12, 17, and 12 ppm lead respectively.

The highest lead value recorded lies 45 m north of the most northerly exposure of the Empire vein: 32 ppm. This may indicate extension of the Empire vein to that point on the NCL5 claim, and further detailed sampling is warranted to clarify soil profiles and integrity of the data on hand. Sampling of the basal till or regolith should be tried, as the relatively soft soil may accommodate augering.

Although 22, 15 m-spaced samples of the L/H-Ah zone were taken on an east-bearing line, 81-B, only six were analyzed to check usefulness of the humic horizon for lead by comparing results for the B and humic zones in the same site. Consistently higher lead in the surface zone than in the B raises questions again about certainty of B zone development and identification here (81B-4.5, 5 and 5.5 sites).

GEOPHYSICS:

Preliminary VLF-EM geophysics was run over two lines on the NCL1 claim using a Ronka EM-16 VLF unit, Serial 16872. The SW (Seattle, Washington) station was used for signal source. All data were filtered using the Fraser method. Reconnaissance lines were run perpendicular to strike with 15m stations on a westerly, 290° Az. bearing. The two lines, L1 & L2, are 100m apart. They are shown on Fig.2 and raw and filtered data are presented in the Appendix.

REFERENCES

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Map Area, B.C., GSC Paper 37-21
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GSC MEM. 179, p.1-10
- Cooke, H.C. (1946) Canadian Lode Gold Areas: Canada Dept. Mines, Res., Econ.
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- Fraser, D.C. (1969) Contouring VLF-EM Data, Geophysics V.34, No.6, P.958-967
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GSC Paper 67-42

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- 1896-1898: White Swan, Quartz Queen
1934, p.D16: Empire & Standard Mines
1939, p.37: Empire C.G.

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- No. 6949, R.J.Beaty & R.J.Culver, 1978: Geological, Geophysical Report
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- Arnott, E.L. (1963) Mineralogy & Petrology of the Standard Mine, Oliver, B.C.
B.A.Sc. Thesis, Univ. of B.C.
- Richards, E.C. (1968) Petrology of the Oliver Quartz Monzonite, B.Sc. Thesis,
Univ. of B.C.

Addenda:

- Kidd, D.R. & Perry, D.S. (1957) Structural Geology of Canadian Ore Deposits,
V.2, pp.136-141: Beaverdell Camp.
- Canada, Geological Survey: Open File 637: Thompson-Vernon Area, B.C.

-CERTIFICATION-

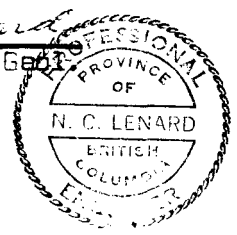
I, Neall Curtis Lenard, of the settlement of Westbank, in the Province of British Columbia do hereby certify:

1. that I am a consulting geologist with an office mailing address of Box 853, Westbank, British Columbia V0H 2A0.
2. that I am a graduate of the University of British Columbia, (BA) Honors Geology 1949.
3. that I have practised my profession continuously for 31 years,
4. that I am a 50% owner of the subject NCL1-8 claims,
5. that the statements made in this report are based on personal examination of the claims and on a study of published and unpublished reports on the property area,
6. that I am a member of the Associations of Professional Engineers of British Columbia and Alberta,
7. that no legal survey has been conducted over the subject mining claims, and, therefor, in accordance with the mining laws of the appropriate jurisdiction in which such properties are situate, the existence of and the area of such properties could be in doubt; and,
8. that I attended short courses on Exploration Geochemistry at the University of Calgary in 1970 and in mining at Spokane, Washington sponsored by the Northwest Mining Association in April, 1981.

DATED AT: The Settlement of Westbank, in the Province of British Columbia, this first day of December, 1981.

Neall Curtis Lenard

 Neall Curtis Lenard, P.Eng., P.Geol.



. Date 12/01/81

EXPENDITURES

Personnel:

N.C.Lenard, P.Geol., 4 days @ \$350.00 \$1,400.00
Mar. 18; Oct. 9, 15, 21/81

Transportation:

Auto, 4 days @ \$30. 120.00

Meals:

25.00

Assays(Geochemical Analyses)

194.75

Air Photos

7.80

Geophysical Equipment:

Rental of Ronka EM 16, VLF-EM unit 81.00

Field Supplies:

93 soil envelopes @ 10c 9.30

Express & Mail:

Air cargo and bus express 28.20

Report Preparation:

N.C.Lenard, P.Geol., 2 days @ \$350 700.00

Drafting: 3 hr. @ \$15 45.00

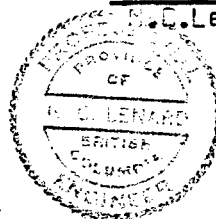
Typing, Repro'n., binding 100.00

Total: \$2,711.05

I certify that the above statement is an accurate account of expenditures made for the property evaluation of the NCL1-NCL8 Claims conducted on Mar. 18, Oct. 9, 15, and 21, 1981.

N.C. Lenard

N.C. Lenard, P. Geol., P. Eng.



Ex. Date Dec. 31/1981



-FAIRVIEW GOLD CAMP-

Recorded Lode Metal Production: B.C. Dept. Mines

| <u>Property</u> | <u>Tons</u> | <u>Au oz</u> | <u>Grade</u> | <u>Ag oz</u> | <u>Grade</u> | <u>Cu %</u> | <u>Pb %</u> | <u>Zn %</u> |
|---------------------|-------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|
| <u>SW AREA</u> | | | | | | | | |
| Morning Star | 121,518 | 13,949 | 0.11 | 152,330 | 1.25 | 0.9 | 0.8 | tr |
| Stemwinder | 30,946 | 1893 | .061 | 17,090 | 0.55 | - | 0.13 | 0.01 |
| Brown Bear | 5 | 10 | 2.0 | 5 | 1.0 | | | |
| Queen Mary | 80 | 23 | 0.26 | 40 | 0.5 | | | |
| Smuggler | 106 | 44 | 0.41 | 59 | 0.55 | | | |
| Torpedo | 135 | 44 | 0.32 | 290 | 2.15 | | | |
| <u>GRANITE AREA</u> | | | | | | | | |
| *Empire (1936-42) | 645 | 141 | 0.218 | 1,449 | 2.25 | | | |
| *Standard (1962) | 2,068 | 563 | 0.272 | 4,430 | 2.14 | - | 0.154 | 0.103 |
| Black Diamond | 37 | 8 | 0.21 | 78 | 2.1 | | | |
| Silver King | 269 | 52 | 0.19 | 486 | 1.8 | | | |
| *Gypo (Quarry) | 43 | 6 | 0.14 | 78 | 1.8 | | | |



Geochemical Lab Report

REPORT: JCL-3258

PAGE 1

| SAMPLE NUMBER | ELEMENT UNITS | Pb PPM | NOTES | SAMPLE NUMBER | ELEMENT UNITS | Pb PPM | NOTES |
|---------------|---------------|--------|-----------------------|---------------|---------------|--------|--------------------------|
| NL1-81A-01 | | 10 | | NL1-81B-10 | | 10 | |
| NL1-81A-02 | | 12 | | NL1-81B-11 | | 7 | |
| NL1-81A-03 | | 9 | | NL1-81B-12 | | 8 | |
| NL1-81A-04 | | 7 | | NL1-81B-13 | | 7 | |
| NL1-81A-05 | | 8 | | NL1-81B-14 | | 8 | |
| NL1-81A-06 | | 10 | | NL1-81B-15 | | 10 | Ridge, sheared |
| NL1-81A-07 | | 10 | | NL1-81B-16 | | 14 | |
| NL1-81A-08 | | 8 | | NL1-81B-17 | | 26 | Steep: thin soil cover |
| NL1-81A-09 | | 8 | | NL1-81B-18 | | 7 | |
| NL1-81A-10 | | 7 | Base of hill | NL1-81B-19 | | 8 | |
| NL1-81A-11 | | 6 | N.edge slough:clay | NL1-81B-20 | | 26 | Old trenched quartz vein |
| NL1-81A-12 | | 6 | W.edge slough:clay | NL1-81C-4.5EA | | 18 | |
| NL1-81A-13 | | 17 | 390 m West | NL1-81C-4.5EB | | 8 | Roadside, base hill |
| NL1-81A-14 | | 10 | | NL1-81C-5EA | | 12 | Draw |
| NL1-81A-15 | | 7 | | NL1-81C-5EB | | 8 | |
| NL1-81A-16 | | 7 | | NL1-81C-5.5EA | | 26 | |
| NL1-81A-17 | | 7 | Draw | NL1-81C-5.5EB | | 6 | |
| NL1-81A-18 | | 8 | Low ridge | NCL5-81-01 | | 8 | Empire Vein projection |
| NL1-81A-19 | | 8 | | NCL5-81-02 | | 8 | |
| NL1-81A-20 | | 8 | | NCL5-81-03 | | 10 | |
| NL1-81A-21 | | 10 | 55 m NE mine portal | NCL5-81-04 | | 8 | |
| NL1-81B-01 | | 7 | adjacent monz. o/crop | NCL5-81-05 | | 32 | Bearing: 16.5° Az. |
| NL1-81B-02 | | 7 | | NCL5-81-06 | | 8 | |
| NL1-81B-03 | | 8 | | NCL5-81-07 | | 6 | |
| NL1-81B-04 | | 12 | 90 m West | NCL5-81-08 | | 6 | |
| NL1-81B-05 | | 7 | | NCL5-81-09 | | 8 | |
| NL1-81B-06 | | 9 | | NCL5-81-10 | | 9 | |
| NL1-81B-07 | | 6 | 15 m East of draw | NCL5-81-11 | | 9 | |
| NL1-81B-08 | | 8 | Draw | NCL5-81-12 | | 8 | |
| NL1-81B-09 | | 10 | Monz. o/c hillside | NCL5-81-13 | | 10 | |



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Geochemical Lab Report

REPORT# 121-3758

PAGE 2

| SAMPLE NUMBER | ELEMENT UNITS | Pb PPM | NOTES |
|---------------|---------------|--------|-------|
| HCL5-01-14 | | 8 | |
| HCL5-01-15 | | 9 | |
| HCL5-01-16 | | 7 | |
| HCL5-01-17 | | 7 | |
| HCL5-01-18 | | 8 | |
| HCL5-01-19 | | 7 | |
| HCL5-01-20 | | 6 | |
| HCL5-01-21 | | 8 | |
| HCL5-01-22 | | 7 | |
| HCL5-01-23 | | 8 | |
| HCL5-01-24 | | 8 | |
| HCL5-01-25 | | 8 | |
| HCL5-01-26 | | 9 | |
| HCL5-01-27 | | 7 | |
| HCL5-01-28 | | 10 | |
| HCL5-01-29 | | 8 | |
| HCL5-01-30 | | 9 | |

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Geochemical Lab Report

REPORT: 121-3758

FROM: MR. NEALL C. LENARD

SUBMITTED BY: N. C. LENARD

DATE: 17-NOV-81 PROJECT: NONE GIVEN

| ELEMENT | LOWER DETECTION LIMIT | EXTRACTION | METHOD | SIZE FRACTION | SAMPLE TYPE | SAMPLE PREPARATIONS |
|---------|--------------------------|-------------------|-------------------|---------------|-------------|---------------------|
| Pb | 2 PPM | HNO3-HCL HOT EXTR | Atomic Absorption | -80 | SOILS | SEIVE -80 |

REPORT COPIES TO: MR. NEALL C. LENARD
BONDAR-CLEGG & COMPANY

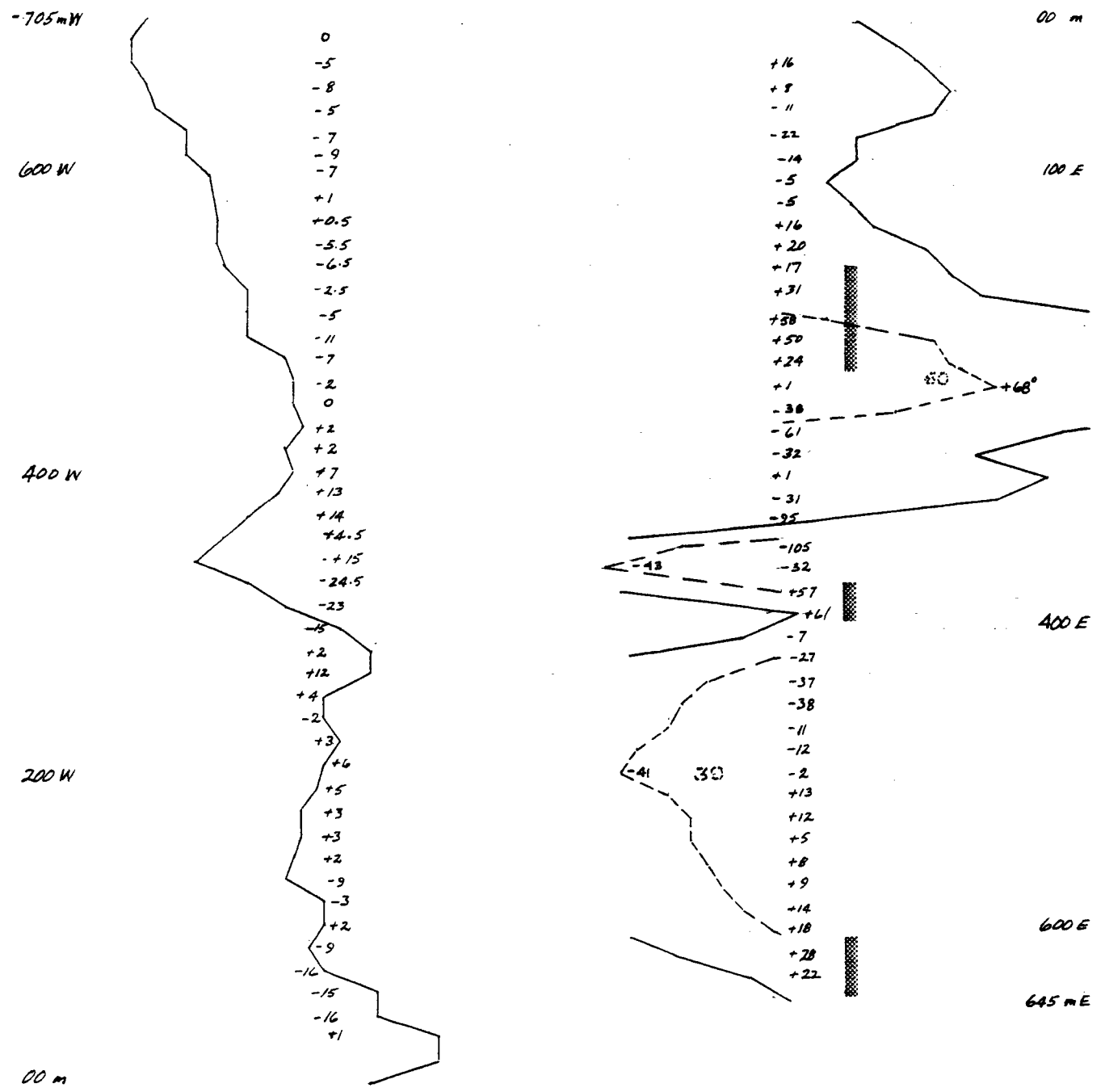
INVOICE TO: MR. NEALL C. LENARD

REMARKS:

LINE 1: VLF-EM: Dip Angle Data & Filtered Values

Line 2

LINE 1 -20° -10 0 +10 +20° -20° -10 0 +10 20° 30 +40°



LEGEND

█ Possible Conductor

Seattle
←————→
Washington

0 50 m

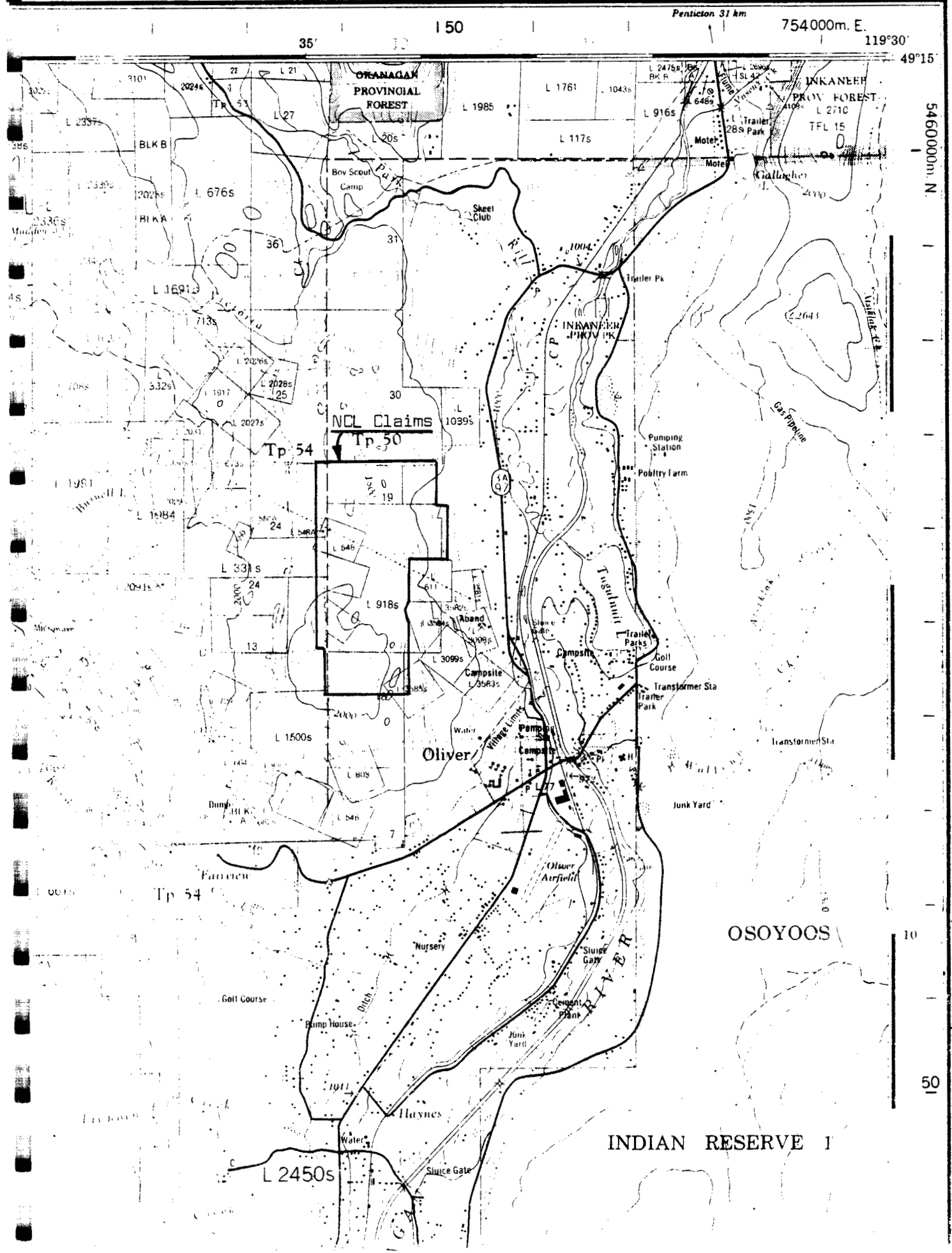
LINE 1 (L-1)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---------------------------------|-------|----------------|-------|---|----------|-------|----------------|------|----|----|----|
| Grid Station (m) | Dip | Filtered Value | | | Grid Stn | Dip | Filtered Value | | | | |
| 0+00 m West | +6 | +21 | | | 0+405 | -4 | -9 | +2 | | | |
| 0+15 | +15 | +30 | +1 | | 420 | -5 | -8 | +2 | | | |
| 30 | +15 | +22 | | | 435 | -3 | -7 | 0 | | | |
| 45 | +7 | +14 | -16 | | 450 | -4 | -8 | -2 | | | |
| 60 ^{NCL3} Cim. Bdy. | +7 | +7 | -15 | | 465 | -4 | -9 | -7 | | | |
| 75 | 0 | -2 | -9 | | 480 | -5 | -15 | -11 | | | |
| 90 | -2 | -2 | +2 | | 495 | -10 | -20 | -5 | | | |
| 105 | 0 | 0 | -3 | | 510 | -10 | -20 | -2.5 | | | |
| 120 | 0 | -5 | -9 | | 525 | -10 | -22.5 | -6.5 | | | |
| 135 | -5 | -9 | +2 | | 540 | -12.5 | -26.5 | -5.5 | | | |
| 150 | -4 | -7 | +3 | | 555 | -14 | -28 | +0.5 | | | |
| 165 | -3 | -6 | +3 | | 570 | -14 | -26 | +1 | | | |
| 180 | -3 | -4 | +5 | | 585 | -12 | -27 | -7 | | | |
| 195 | -1 | -1 | +6 | | 0+600m | -15 | -33 | -9 | | | |
| 210 | 0 | +3 | +3 | | 615 | -18 | -36 | -7 | | | |
| 225 | +2 | +2 | -2 | | 630 | -18 | -40 | -5 | | | |
| 240 | 0 | 0 | +4 | | 645 | -22 | -45 | -8 | | | |
| 255 | 0 | +6 | +12 | | 660 | -23 | -48 | -5 | | | |
| 270 | +6 | +12 | +2 | | 675 | -25 | -50 | 0 | | | |
| 285 | +6 | +8 | -15 | | 690 | -25 | -40 | | | | |
| 0+300 m W. | +2 | -3 | -23 | | 0+705m | -23 | | | | | |
| 315 | -5 | -15 | -24.5 | | | | | | | | |
| 330 | -10 | -27.5 | +15 | | | | | | | | |
| 345 | -17.5 | -30 | +4.5 | | | | | | | | |
| 360 | -13 | -23 | +14 | | | | | | | | |
| 375 | -10 | -16 | +13 | | | | | | | | |
| 390 | -6 | -10 | +7 | | | | | | | | |

VLF-EM Filtered Data, NCL 1 Claim

LINE 2 (L-2)

| Grid Station (m) East | Dip | Filtered Value |
|--------------------------------|-----|----------------|
| 0 + 00 | +10 | +25 |
| +15 | +15 | +34 |
| 30 | +19 | +41 |
| 45 | +22 | +42 |
| 60 | +20 | +30 |
| 75 | +10 | +20 |
| 90 | +10 | +14 |
| 105 | +6 | +15 |
| 120 | +9 | +21 |
| 135 | +12 | +31 |
| 150 | +19 | +41 |
| 165 | +22 | +48 |
| 180 | +26 | +72 |
| 195 | +46 | +106 |
| 210 | +60 | +122 |
| 225 | +62 | +130 |
| 240 | +68 | +123 |
| 255 | +55 | +92 |
| 270 | +37 | +62 |
| 285 | +25 | +60 |
| 0 + 300 m East | +35 | +63 |
| 315 | +28 | +29 |
| 330 | +1 | -32 |
| 345 | -33 | -76 |
| 360 | -43 | -64 |
| 375 | -21 | -19 |
| 390 | +2 | -3 |
| 405 | -5 | -26 |
| 420 | -21 | -30 |
| 435 | -30 | -63 |
| 450 | -33 | -68 |
| 465 | -35 | -74 |
| 480 | -39 | -80 |
| 495 | -41 | -76 |
| 510 | -35 | -67 |
| 525 | -32 | -64 |
| 540 | -32 | -62 |
| 555 | -30 | -58 |
| 570 | -28 | -53 |
| 585 | -25 | -46 |
| 0 + 600 m E. | -21 | -35 |
| 615 | -14 | -18 |
| 630 | -4 | -13 |
| 0 + 645 m E (ends at Clm Body) | +1 | |



5460000m. N.

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Fig.3:

AIRPHOTO LINEAMENTS: TOPOGRAPHIC DRAWS

POSSIBLE SHEAR ZONE ORIGIN

REPORTED STRUCTURAL GRAIN: NORTHERLY

BEDROCK: MONZONITE

Stereo Pair:

B.C.7582: 0084,0083

Legend:

—— Airphoto lineament

----- Quartz vein

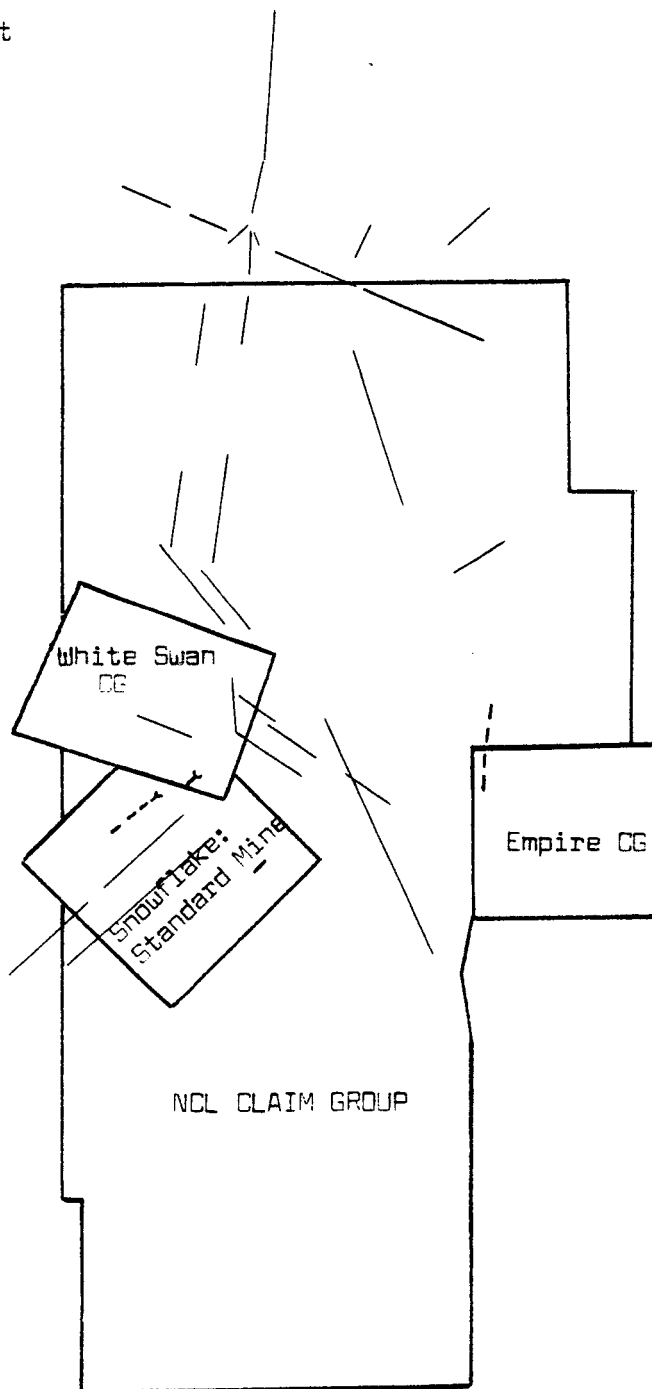


Fig.4: EMPIRE CROWN GRANT MINERAL CLAIM
(Tracing From Original Legal Survey)

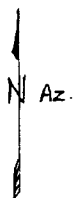
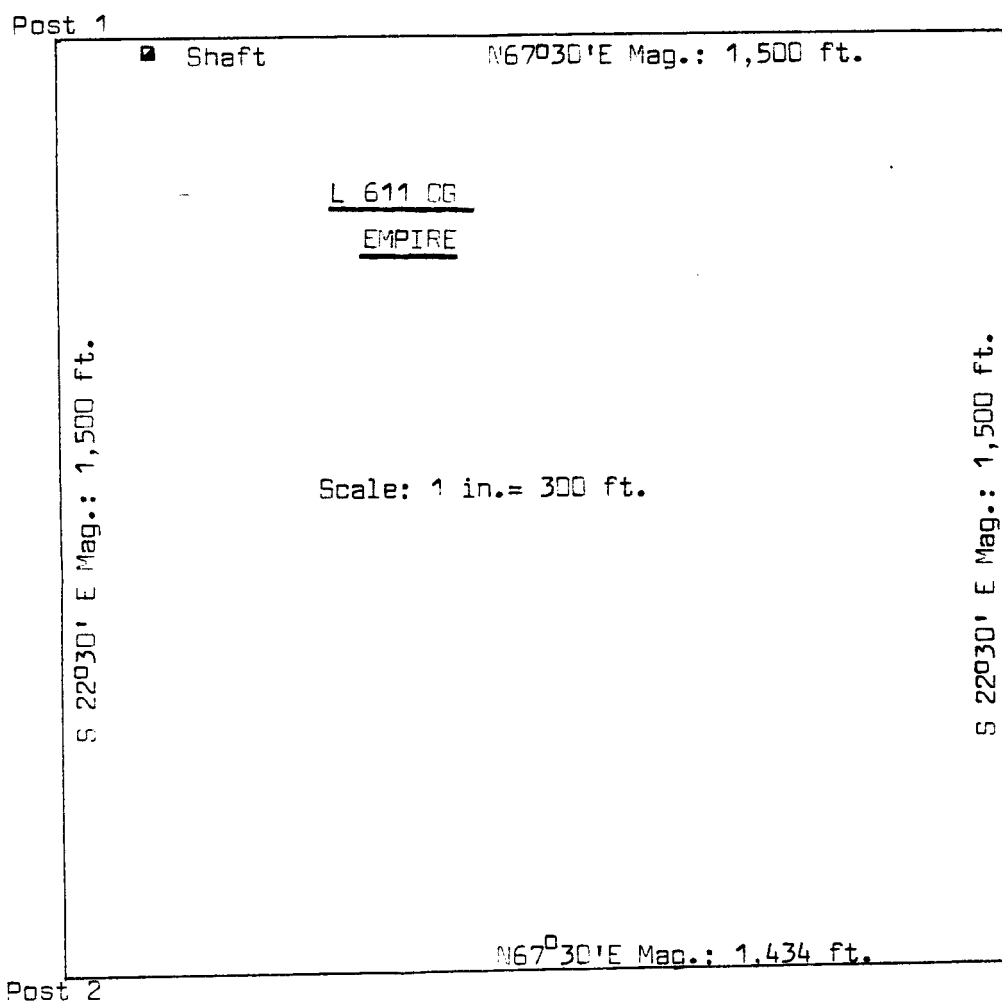


Fig. 5: Old Claim Map
Oliver Area



VOL 1-8

Oliver

L 331 S
L 54

WHITE SWAN
C.G.
1981:
Snowflake
GREY HOUND
(Standard)

L 611
EMPIRE
C.G.
2286283
0915741

QUARTZ
QUEEN

L 3584 S
SWANS EA
C.G.

LUCY
WYLLIE
C.G.

L 3098 S
GYPO
C.G.

L 3099 S
BALLARAT
C.G.

L 3583 S
FLAGSTAFF
C.G.

L 3585 S
ARIZONA
C.G.

L 729
COMSTOCK
C.G.

L 500 S

L 803
ST. JOHN
C.G.

E 546
ROB ROY
C.G.

L 447
JOE DANDY
C.G.

L 1995 S
L 682 S
C.G.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

203 A
CEMETERY

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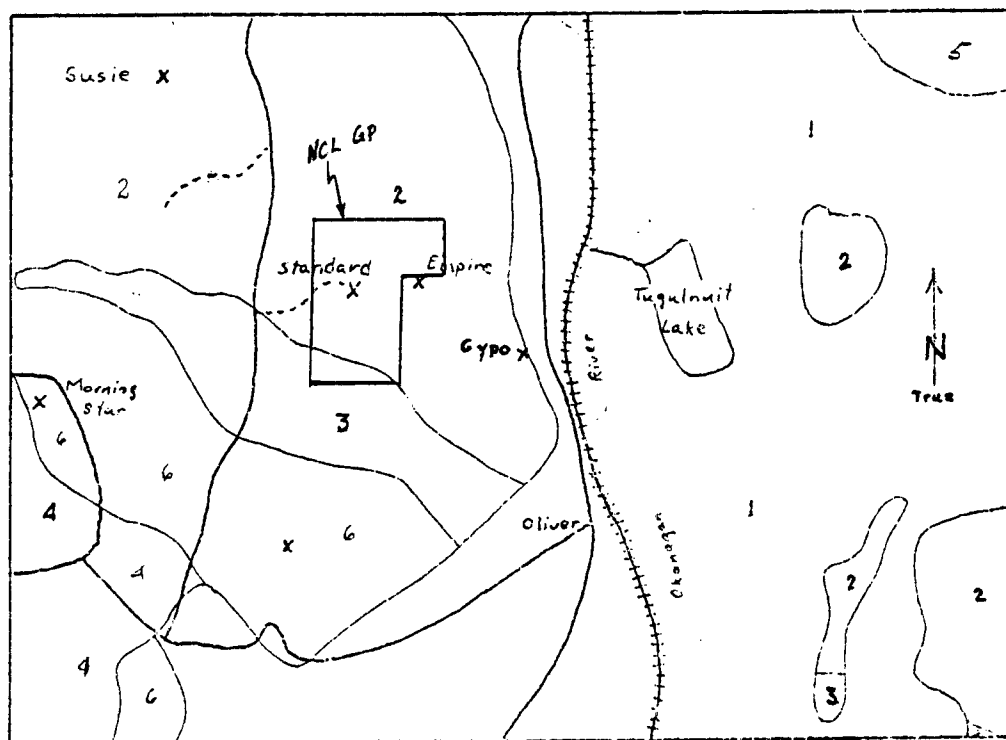
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Fig.6: Oliver Area Geology Circa 1930 (Arnott, E.L. 1963)

| | |
|--------------------------------|---|
| Recent alluvium, glacial drift | 1 |
| Oliver granite | 2 |
| Oliver Syenite | 3 |
| Fairview granodiorite | 4 |
| Pegmatite, gneissic granite | 5 |
| Quartzite, schist, greenstone | 6 |

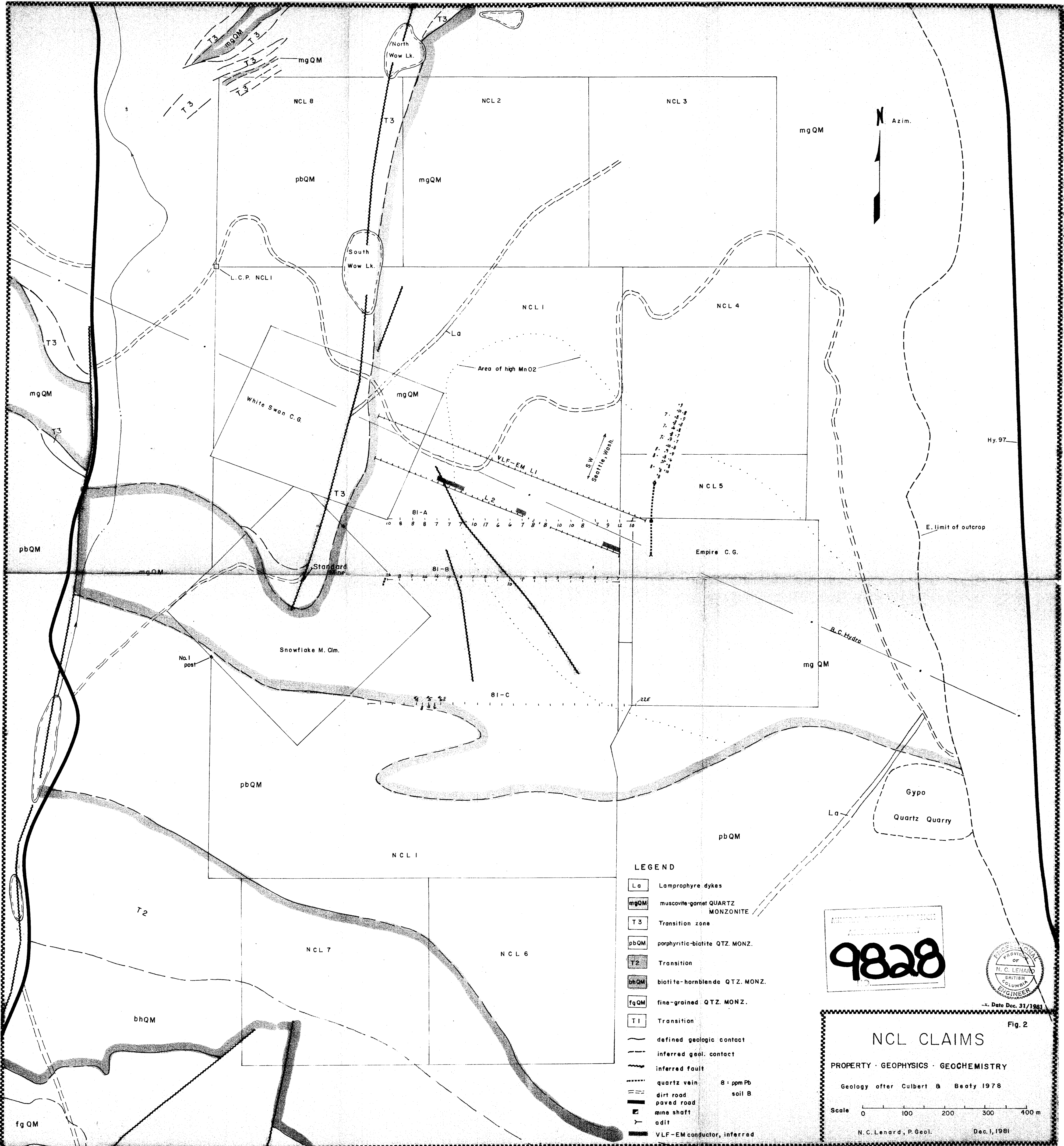


Scale 1 inch = 1 mile

Figure 1

Regional Geology and Geography¹

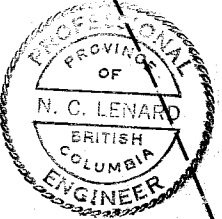
¹ Hestock, H.S. Map 241A Keregan, B.C., Canada, Department of Mines and Resources, mapped 1929, 1930.



LEGEND

- La Lamprophyre dykes
- mgQM muscovite-garnet QUARTZ MONZONITE
- T3 Transition zone
- pbQM porphyritic-biotite QTZ. MONZ.
- T2 Transition
- bhQM biotite-hornblende QTZ. MONZ.
- fgQM fine-grained QTZ. MONZ.
- T1 Transition
- defined geologic contact
- inferred geol. contact
- inferred fault
- quartz vein
- dirt road
- paved road
- mine shaft
- adit
- VLF-EM conductor, inferred

9828



Date Dec. 31/1981

Fig. 2

NCL CLAIMS

PROPERTY · GEOPHYSICS · GEOCHEMISTRY

Geology after Culbert & Beatty 1978

Scale 0 100 200 300 400 m

N.C. Lenard, P. Geol. Dec. 1, 1981