GEOLOGICAL, AND SAMPLING REPORT
ON THE

PATERSON LAKE 1 - 6 MINERAL CLAIMS

FILMED

RECORD NUMBERS

2000, 1993, 2207, 2208, 2216, 2209

ALBERNI MINING DIVISION
NTS 92F/6E,7W

LATITUDE 49° 20'N; LONGITUDE 125° 00'W 00-3'

by

W.A. HOWELL, J.C. STEPHEN

OWNERS: D. PATERSON, GREAT H. M. Marker, S. Tresierra

OPERATOR: DELLA TERRA RESOURCES LTD.

WORK DONE BY: J.C. STEPHEN EXPLORATIONS LTD.

DATES: APRIL I = 25, 1987

GEOLOGICAL BRANCH ASSESSMENT REPORT

16,101

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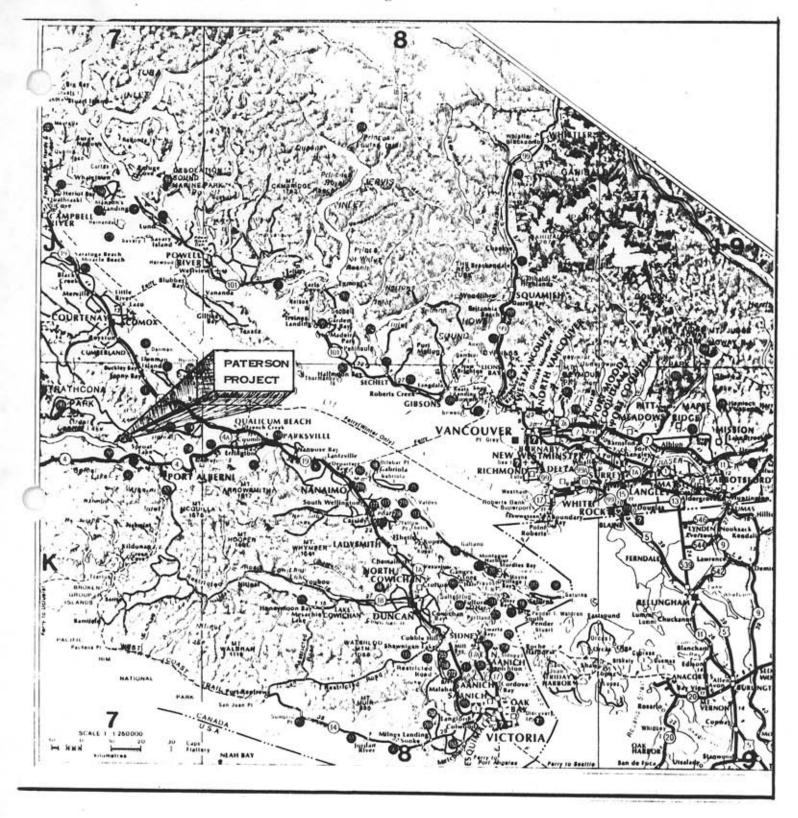
PRELIMINARY GEOLOGICAL REPORT ON THE PATERSON LAKE 1 - 6 MINERAL CLAIMS

INTRODUCTION

The Paterson Lake 1 - 6 claims were examined in February 1987 at which time three mineral occurrences were visited and sampled. Favourable assay results were obtained and an option on the claims was subsequently negotiated by Della Terra Resources Inc.

The vendors of the claims, as part of the agreement, filed assessment work for claims coming due on March 9 and 19, 1987 and Della Terra undertook to complete additional work adequate to hold the claim group through the April 27 anniversary date. The work presently being filed was conducted between April 1 and 17 to provide the necessary assessment work credits. This work is, however, only a portion of the planned line cutting, sampling, geological and geophysical program to be completed. by Della Terra. Additional work, covered by a separate, more comprehensive report, will be recorded on completion of that program.

Initial examination of the property had revealed significant copper mineralization in three different geological settings within Karmutsen volcanic rocks. Interesting values were obtained for gold and silver. Early prospecting work was evidenced by several areas blasted into bedrock and by two short adits which are presently caved and appear as rather large pits. Data from a report by D.V. Lefebure for Corporation Falconbridge Copper dated February 5, 1986 is essentially the only printed data on the property known to this writer.



J C STEPHEN EXPLORATIONS LTD

DELLA TERRA RESOURCES LTD

PATERSON PROJECT 92F/6E,7W

LOCATION MAP

LOCATION, ACCESS AND TOPOGRAPHY

The 72 unit Paterson Lake property is located north and east of the east end of Great Central Lake extending north from the lake itself for about 3500 metres.

Access from Nanaimo, on the northeast side of Vancouver Island, is by way of Highway 19 northwest to the junction with Highway 4 south of Parksville, west to Port Alberni and northwest to Great Central Lake. This is all on paved highway to near the south east boundary of the property.

Several logging roads give excellent access to various portions of the property courtesy of McMillan Bloedel.

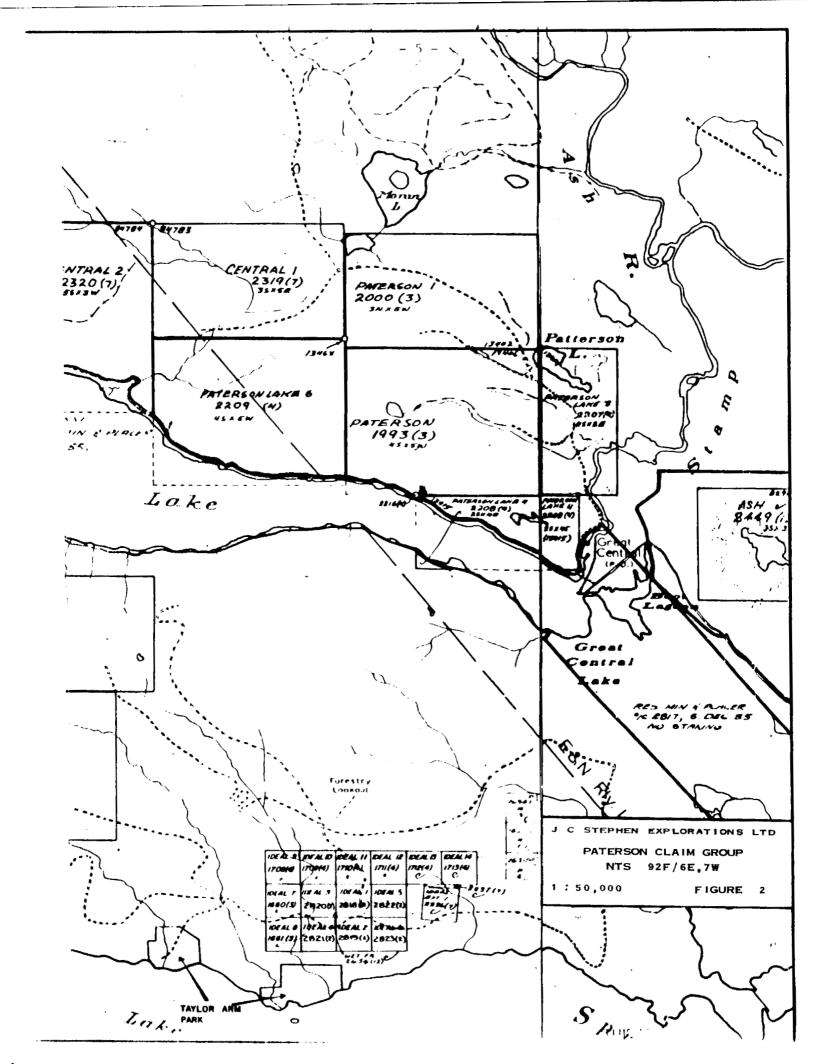
Elevations on the property range from 83 metres above sea level at Great Central Lake to about 480 metres in the western portion of the property. The slopes above the lake are relatively steep and abrupt rock bluffs occur in places on the property making direct access, in places, difficult. In general, however, the topography is moderate and old logging railway grades reached several portions of the property during logging operations 60 to 80 years ago. Much of this old logging area now supports substantial stands of new timber. More re ent logging has taken place in portions of the property and these show as cleared areas on recent air photos.

REGISTER OF CLAIMS AND OWNERSHIP

The Paterson Lake claim group consists of the following claims: -

| NAME | RECORD NUMBER | NUMBER OF UNITS | RECORDING DATE |
|------------------|---------------|-----------------|----------------|
| PATERSON LAKE #1 | 2000 | 15 | March 19, 1984 |
| PATERSON LAKE #2 | 1993 | 20 | March 9, 1984 |
| PATERSON LAKE #3 | 2207 | 8 | April 27, 1984 |
| PATERSON LAKE #4 | 2208 | 8 | April 27, 1984 |
| PATERSON LAKE #5 | 2216 | 1 | April 27, 1984 |
| PATERSON LAKE #6 | 2209 | 20 | April 27, 1984 |

The claims were recorded in the name of Herbert McMaster as of the dates shown and one third interests were transferred by various bills of sale to each of Douglas William Paterson and Sylvester E. Tresierra. Della Terra Resources Inc. entered into an option agreement to earn up to 100% interest in the claims in March 1987. Relative location of the claims is shown on Figure 2.

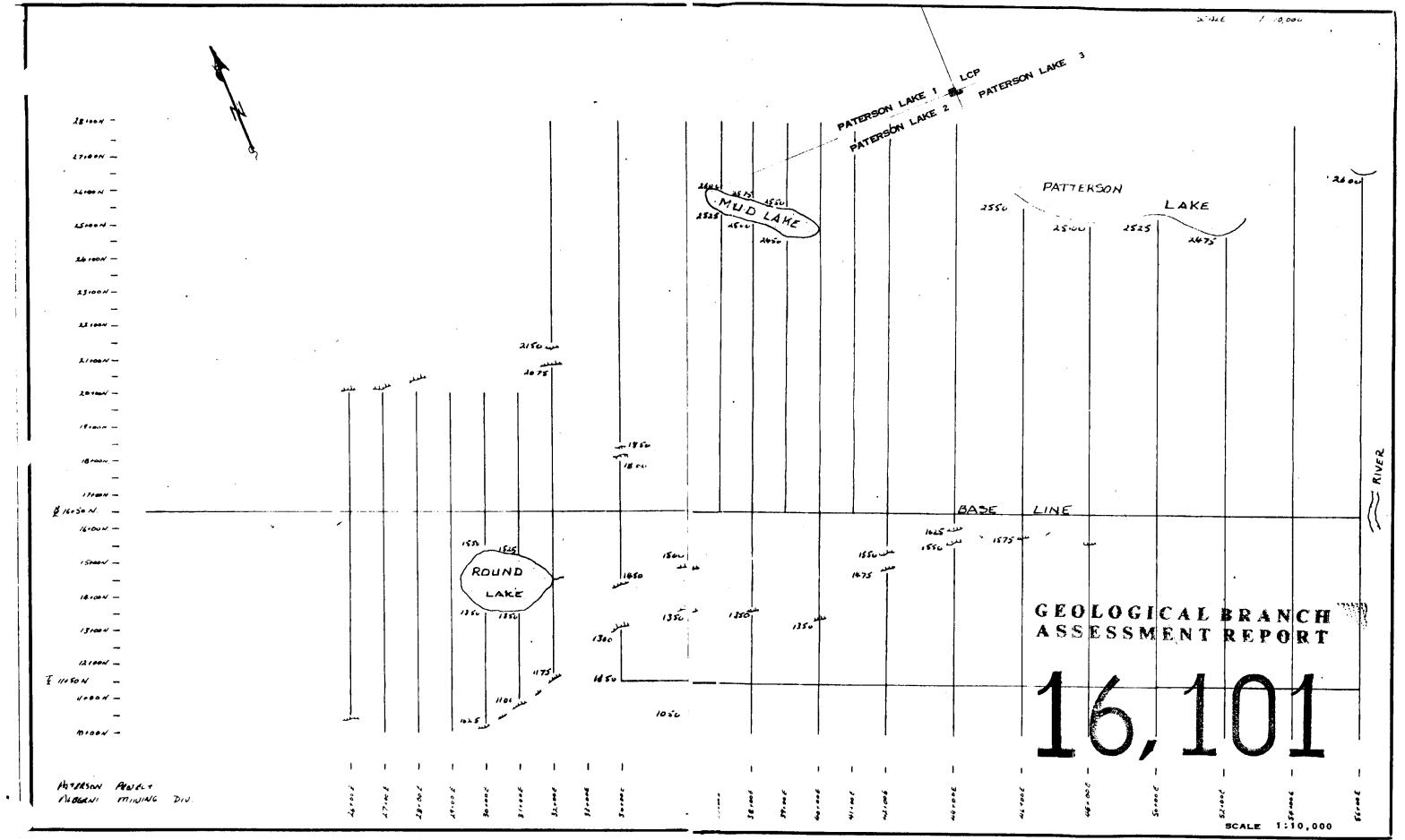


WORK PROGRAM

To assess the mineral potential of the Paterson Lake 1-6 claims Della Terra has initiated a program of line cutting, rock sampling geological mapping, magnetometer, VLF-EM and IP surveys. This work is presently underway and this report is intended to document the portion of this program completed to meet the April 27 anniversary date for assessment work purposes.

Line cutting was contracted to Ron Bilquist and associates and, to date, consisted of 3.8 Km of base line, 1.8 km of tie line and 28.2 km of picket line. Location of the grid is shown in Figure 3. Preliminary geological mapping was undertaken by W.A. Howell, geologist, during comprehensive sampling of mineral occurrences. Analyses for gold, silver, and copper was carried out by Chemex Labs Ltd. Location of outcrops and samples are shown on Map I in the pocket of this report.

Detailed geological mapping was commenced by Ellen Lambert, geologist, April 16 and geophysical surveys were commenced by Al Scott, geophysicist April 20. These surveys will be reported on in a later detailed report.



PATERSON LAKE CLAIMS GRID MAP FIGURE 3

NOTE: - CHOINING WAS DONE FROM THE SWITH TIE LINE
AT 1/+SON TO THE CLIPPS ON LINES 34E

GEOLOGY

The regional geology of the area is shown at 1:250,000 scale on Open File Maps (0.F.473) published by the GSC. As shown on these maps the claim group is largely underlain by Karmutsen volcanic rocks. These Triassic rocks are intruded in the northwest portion of the property by a grano-dioritic stock. Contacts between the stock and intruded Karmutsen volcanics may be largely fault controlled.

ROCK TYPES

On the property the following rock units were noted during the rock sampling program.

Hornblende Porphyry Diorite Dyke - A dark green to black dyke occurs southeast of Round Lake. Exposures indicate a width up to 10 metres and a strike of approximately N45°W. The rock is medium grained and rather granular in appearance.

Hornblende Biotite Cranodiorite - A stock like intrusive occurs in the northwest portion of the property extending north and west into the adjoining CENTRAL claims. An east to southeast trending dyke of similar composition occurs on the Ash River road in PATERSON LAKE #1.

Karmutsen Volcanics

(a) Massive volcanics - In north central PATERSON LAKE 1 outcrops of massive dark green volcanics occur along the Ash River road. This unit trends east and southeast and is cut by the hornblende biotite granodiorite dyke. Some shearing and silicification were noted. Occasional chlorite and epidote filled amygdules occur.

- (b) Fragmental volcanics south of the massive volcanics a zone of fragmental volcanics and breccia occur in east central PATERSON LAKE 1 and extends south to the vicinity of the linear structure trending easterly through Mud Lake. Locally the fragmental volcanic horizon contains tuffaceous beds.
- (c) Massive Volcanics from the Mud Lake linear southerly the volcanics are primarily massive to near the Thunder Bay Road.
- (d) Pillowed volcanics from north of Thunder Bay road to the south
 facing slopes above Great Central Lake the
 volcanics commonly exhibit pillow structures. This unit is cut by the
 hornblende porphyry diorite dyke. Some shearing was noted. Dips appear
 to be steep to vertical but insufficient data has yet been gathered to
 indicate flow top directions. Aggregations of quartz, epidote, chlorite
 and sulphides occur between pillows at certain locations.

MUNERALIZATION

The principal mineralized zone occurs east of Mud Lake where two caved adits explore copper mineralization in the north side of the Mud Lake linear. Chalcopyrite occurs over five feet or more in silicified volcanics and is succeeded to the south by over five feet of additional chalcopyrite mineralization in heavily chloritized whear zone material. The silicified zone assayed 1.26% copper, 0.006 oz/ton gold, 0.13 oz/ton silver; the shear zone assayed 2.08% copper, 0.002 oz/ton gold; 0.13 oz/ton silver. Mineralization with quartz veins in volcanics south of the Mud Lake shear assayed 1.92% copper, 0.006 oz/ton gold and 0.13 oz/ton silver.

On the main access road south of the Thunder Bay road turn off a shear zone occurs near the east margin of a shallow pit cleared on the east side of the road. This shear zone is vertical and trends north. Its width is approximately three feet with two eight inch zones of heavy malachite staining. A chip sample across the zone assayed 2.09% copper, <0.002 oz/ton gold, 0.51 oz/ton silver.

Above Round Lake two flow top structures exhibit chlorite, epidote, quartz, bornite, chalcopyrite mineralization in a steep road cut. Character samples assayed 3.21% copper, 0.030 oz/ton gold; 0.13 oz/ton silver and 0.44% copper, 0.002 oz/ton gold, 0.06 oz/ton silver from a chip sample across 3 feet.

The following is a list of additional samples collected to test various mineral occurrences and alteration zones: -

LIST OF GEOCHEMICAL SAMPLE RESULTS

| Sample No | Do ale Ween | ppm | ppb | ppm . |
|------------|-------------------------------|-----------|----------------|------------------|
| Sample No. | Rock Type | <u>Cu</u> | <u>Au</u> 2 | <u>Ag</u> 0.1 |
| B-31 | Silicified Volcanics/ankerite | 4 O | | |
| • | Silicified Volcanics/ankerite | 36 59 | -1 20 | 0.1 |
| B-32 | Bedded? tuff | | 30 | 0.1 |
| B-33 | Breccia near dyke | 180 23 | 2 | 0.1 |
| B-34 | Pyroclastics | 46 | 1 | 0.1 |
| B-35 | Breccia volc | | 1 | 0.1 |
| B-36 | Breceia vole | 181 | 3 | 0.1 |
| B-37 | Breceia volc | 41 | 5 | 0.1 |
| 8-38 | Brece fa volc | 192 | 3 | 0.1 |
| B=39 | SIIt sample | 340 | 5 | 0.1 |
| B-4() | Ankerite alteration | 65 | 3 | 0.1 |
| B-41 | breccia voic | 26 | 1 | 0.1 |
| B-42 | Breccia volc | 590 | 15 `. | 0.1 |
| B-43 | Ankerite alteration | 120 | ż | 0.1 |
| B-44 | Cu and quartz in shears | +10,000 | 885 | 3.0 |
| B-45 | Cu and quartz in shears | +10,000 | 1500 | 57.0 |
| B-46 | Cu and quartz in shears | 5,000 | 19 | 2.1 |
| B-47 | Cu and quartz in shears | 410,000 | 2 | 4.5 |
| B-48 | Float breccia | 700 | 3 | 0.1 |
| B-49 | Ankerite alteration | 680 | 8 | 0.1 |
| B-50 | Ankerite alteration | 57 | 2 | 0.1 |
| B-51 | Ankerite alteration | 1,280 | 10 | 0.2 |
| B-52 | Ankerite alteration | 1,000 | 21 | 0.2 |
| в-53 | Ankerite alteration | 1,390 | 10 | 0.2 |
| в-54 | Ankerite alteration | 1,760 | 17 | 0.3 |
| B-55 | Quartz breccia | 1,500 | 24 | 0.4 |
| B-56 | Weak ankerite | 138 | 2 | 0.1 |
| B-57 | Ankerite quartz breccia | 30 | -1 | 0.1 |
| B-58 | Ankerite quartz breccia | 15 | -1 | 0.1 |
| B-59 | Ankerite quartz breccia | 7 | -1 | 0.1 |

| | | рpm | ppb | p pm |
|------------|----------------------------|---------|------|------|
| Sample No. | Rock Type | Cu | Λu | Ag |
| B-60 | Ankerite quartz breccia | 7 | -1 | 0.1 |
| B-61 | Ankerite quartz breccia | 200 | 4 | 0.3 |
| B-62 | Ankerite quartz breccia | 24 | -1 | 0.1 |
| B-63 | Quartz float | 400 | 1350 | 0.9 |
| B-64 | Breccia float | 51 | 5 | 0.5 |
| B-65 | Interpillow breccia | 71 | 10 | 0.1 |
| 8-66 | Float rubble on shear | 760 | 3 | 0.1 |
| B-67 | .Float rubble on shear | 10,000 | 1 57 | 2.6 |
| B-68 | Float rubble on shear | 7,200 | 63 | 0.5 |
| B-69 | Float rubble on shear | +10,000 | 89 | 1.8 |
| B-70 | Cu mineralization at adits | +10,000 | 48 | 2.3 |
| B-71 | Cu mineralization at adits | +10,000 | 84 | 3.6 |
| B-72 | Cu mineralization at adits | +10,000 | 440. | 12.8 |
| B-73 | Cu mineralization at adits | +10,000 | 243 | 4.3 |
| B-74 | Cu mineralization at adits | 290 | 3 | 0.1 |
| B-75 | Silt sample | 83 | -5 | 0.1 |
| в-76 | Quartz vein in volcanics | 154 | 3 | 0.1 |
| B-77 | Breccia | 170 | 5 | 0.5 |
| B-78 | Quartz breccia, ankerite | 1,150 | 12 | 0.1 |
| B-79 | Quartz breccia, ankerite | 3,900 | 61. | 0.8 |
| B-80 | Quartz breccia, ankerite | 2,500 | 31 | 0.4 |
| в-81 | Quartz breccia, ankerite | 2,650 | 26 | 0.4 |
| B-82 | Float | 80 | 3 | 0.1 |
| 8-83 | Minor quartz veins | 2,250 | 27 | 0.3 |
| B-84 | Minor quartz veins | 5,500 | 65 | 0.7 |
| B-85 | Ankerite float | 180 | 2 | 0.1 |
| B-86 | Ankerite float | 132 | -5 | 0.1 |
| B-87 | Ankerite float | 450 | 31 | 0.1 |
| 8-88 | Float | 48 | 2 | 0.1 |
| B-89 | Quartz breccia | 87 | 13 | 0.1 |

| | | p pm | ppb | ppm |
|-------|---------------------|----------|------------|-----|
| | | Cu | Au | Ag |
| B-90 | Quartz breccia | - | 14 | 0.1 |
| B-91 | Float | - | 3 | 0.1 |
| B-92 | Silt | na | -5 | 0.1 |
| B-93 | Silt | na | _5 | 0.1 |
| B-94 | Silt | na | -5 | 0.1 |
| B-95 | Quartz breccia floa | т/сру - | -1 | 0.3 |
| B-96 | Ankerite | - | 4 | 0.1 |
| B-97 | Ankerite | - | 3 | 0.1 |
| B-98 | Ankerite | _ | 5 | 0.1 |
| B-99 | Ankerite | - | 2 | 0.1 |
| B-100 | Interpillow breccia | - | 12 | 0.1 |
| 8-101 | Interpillow breceia | , - · | 20 | 0.1 |
| B-102 | Interpillow breceia | - | 12 | 0.1 |
| B-103 | Si1t | na | - 5 | 0.1 |
| 8-104 | Hh prophyry dyke | - | -1 | 0.1 |
| B-105 | Ankerite | - | 6 | 0.1 |

RECOMMENDATIONS

Although prospecting has been conducted on the PATERSON LAKE 1 - 6 claims over a long period of time by the Paterson family and associates these mineral showings are not well documented in public files.

It is recommended that: -

- a) the current program of sampling, geological mapping and geophysical surveying be completed;
- b) all zones of mineralization, quartz breccia and ankeritic alteration be checked for precious metals content.
- c) The caved adits be cleaned out using a small back hoe to allow more complete sampling;
- d) that diamond drilling be planned to test the more important mineral showings and possible geophysical anomalies.

No reasonable estimation of the expenditures required for these exploration stages can be prepared until after completion of the current program.

Respectfully submitted
J.C. Stephen Explorations Ltd.

C. Stephen

JCS/ms

STATEMENT OF EXPENDITURE

LINE CUTTING

R. Bilquist and Associates

April 1 - 12, 1987

3.6 km Base line @ \$400/km \$1,440.00 30 km tie line and picket line @ \$175/km 5,250.00

MAPPING AND SAMPLING

W.A. Fowell B.Sc.

April 3 - 10, 1987 @ \$300/day 2,400.00

ANALYSIS

5 Silt, 2 Soil, 67 Rock Samples for Au, Ag, Cu 962.00

AIR PHOTO ENLARGEMENTS, DRAFTING, ETC 300.00

TOTAL \$10,352.00

STATEMENT OF QUALIFICATIONS

J.C. STEPHEN

| Academic | |
|------------|--|
| 1950 | Associate Member British Institute Engineering Technology |
| 1950-1951 | One year Geology University of Alberta |
| | |
| Experience | Summary · |
| 1947-1955 | Development and production experience in engineering and geology |
| ; | at Central Patricia Gold Mines, Eldorado Mining and Refining, |
| | Madsen Gold Mines, Hasaga Gold Mines, Pickle Crow Gold Mines |
| | as Surveyor, Assistant to the Engineer, Geologist. |
| 1955-1959 | Regional exploration experience with Pickle Crow Gold Mines, |
| | Combined Developments Ltd., R.G. Crosby and Associates, Jay-Kay |
| | Syndicate as Field Geologist. |
| 1959-1961 | Municipal construction including monolithic concrete tunnels as |
| | Senior Inspector. |
| 1962-1968 | Regional exploration with Mastodon Highland Bell Mines as field |
| | geologist. |
| 1968-1976 | Regional exploration with Bacon and Crowhurst Ltd., as super- |
| | visor of exploration syndicates. |

1977-Present President J.C. Stephen Explorations Ltd.

Management of various exploration syndicates. B.C. and Yukon
Management of publicly listed resource companies and supervision
of exploration and development programs



212 BROOKSBANK AVE NORTH VANCOUVER. BRITISH COLUMBIA CANADA V7J-2C1

PHONE (604) 984-0221

CERTIFICATE OF ANALYSIS A8713. J2

To STEPHEN, J.C. EXPLORATION LIMITED

746 REGAL CRESCENT NORTH VANCOUVER, B.C. V7K 2X8

Page No. :1 Tot Pages 2

Date :01-MAY-87 Invoice #: I-8713562

P.O. I NONE

Project : PATTERSON

DELLA TERRA

Comme a ta: PATERSON LAKE PROJECT

| SAMPLE DESCRIPTION | PREP CODE | Cu ppm | Ag ppm Aqua R | Au NAA ppb | | | |
|--|---------------------------------|--|--|---------------------------|--|---|---|
| 87 B 030 87 B 031 87 B 033 87 B 033 87 B 034 87 B 035 | 205 205 205 205 205 | 1 0 3 6 1 8 0 2 3 4 6 | 0.1 | < 1 2 | | | |
| 87 B 036 87 B 038 87 B 040 87 B 041 87 B 042 | 205 205 205 205 205 | 181 192 65 26 590 | | 3 3 3 1 1 5 | | | |
| 87 B 043 87 B 044 87 B 045 87 B 046 87 B 047 | 205 205 205 205 205 | >10000 >10000 >10000 >10000 | 0 · 1 3 · 0 57 · 0 2 · 1 4 · 5 | 885 1500 19 | | | |
| 87 B 048 87 B 049 87 B 050 87 B 051 87 B 052 | 205 205 205 205 205 | 700 680 57 1280 1000 | 0 · 1 0 · 1 0 · 1 0 · 2 0 · 2 | 3 8 2 1 0 2 1 | | | |
| 87 B 053 87 B 054 87 B 055 87 B 056 87 B 056 | 205 205 205 205 205 | 1390 1760 1500 138 30 | 0 · 2 0 · 3 0 · 4 0 · 1 0 · 1 | 1 7 2 4 2 | | | |
| 87 B 058 87 B 059 87 B 060 87 B 061 87 B 062 | 205 205 205 205 205 | 1 5 7 7 2 0 0 2 4 | 0 · 1 0 · 1 0 · 1 0 · 3 0 · 1 | < 1 < 1 4 | | - | : |
| 87 B 063 87 B 064 87 B 065 87 B 066 87 B 067 | 205 205 205 205 205 | 400 51 71 760 10000 | 0.9 0.5 0.1 0.1 2.6 | 5! | | | |
| 87 B 068 87 B 069 87 B 070 87 B 071 87 B 072 | 205 205 205 205 205 | 7200 >10000 >10000 >10000 >10000 | 0.5 1.8 2.3 3.6 12.8 | | | | |



Chemex Labs Ltd

Analytical Chemists * Geochemists * Registered Assayer:

212 BROOKSBANK AVE , NORTH VANCOUVER. BRITISH COLUMBIA, CANADA V7J-2C1 PHONE (604) 984-0221

ERTIFICATE OF ANALYSIS A87135

To STEPHEN, J.C. EXPLORATION LIMITED

746 REGAL CRESCENT NORTH VANCOUVER, B.C. V7K 2X8 Page No. :2 Tot. Pages:2

Date :01-MAY-87 Invoice #:I-8713562 P.O. # :NONE

Project : PATTERSON Comments:

| SAMPLE DESCRIPTION | PREP CODE | Cu ppm | Ag ppm Aqua R | Au NAA ppb | | | : | |
|--|---------------------------------|---|---|-----------------------------|---|---|---|--|
| 87 B 073 87 B 074 87 B 076 87 B 076 87 B 077 87 B 078 | 205 205 205 205 205 | >10000 290 154 170 1150 | 0 · 1 0 · 1 0 · 5 | 3 3 5 | | • | | |
| 87 B 079 87 B 080 87 B 081 87 B 082 87 B 083 | 205 205 205 205 205 | 3900 2500 2650 80 2250 | 0 · 4 0 · 4 0 · 1 | | | | | |
| 87 B 084 87 B 085 87 B 085 87 B 087 87 B 088 87 B 089 | 205 205 205 205 205 | 5 5 0 0 1 8 0 4 5 0 4 8 8 7 | 0.1 | 2 3 1 2 | | | | |
| 87 B 090 87 B 091 87 B 095 87 B 096 87 B 097 | 205 205 205 205 205 | | 0 . 1 0 . 1 0 . 3 0 . 1 0 . 1 | < 1 4 | : | | | |
| 87 B 098 87 B 099 87 B 100 87 B 101 87 B 102 | 205 205 205 205 205 | | 0 . 1 0 . 1 0 . 1 0 . 1 0 . 1 | 5 2 1 2 2 0 1 2 | , | | | |
| 87 B 104 87 B 105 | 205 | | 0 . 1 0 . 1 | < 1 6 | | | | |

CERTIFICATION: HautBuchle

