

78-#319#6889

GEOLOGICAL ASSESSMENT REPORT

on the

Norm Group of Mineral Claims

(Norm 1 to Norm 4 inclusive)

Situated 19 km NNE of Hope, B. C.

in the Coquihalla Gold Belt

on the South-West slope of Spider Peak

New Westminster Mining Division, B. C.

Latitude  $49^{\circ}32'$ ; Longitude  $121^{\circ}18'W$

N.T.S. 92H/11W

for Mr. E.N. Ascroft

of Vancouver, B. C.

Report by

R. Ross Dion and

D. R. Cochrane, P. Eng.

August 18, 1978

Delta, B. C.



**Cochrane Consultants Limited**  
4882 Delta St., Delta, B.C. V4K 2T8 946-9221  
Geotechnical Consulting / Exploration Services

6889  
geology  
geophysics  
geochemistry

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MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT

NO. 6889



INTRODUCTION

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On the 15th and 16th days of August, 1978, a two-men field crew consisting of R. R. Dion and Paul Willson conducted a reconnaissance survey of the Norm 1 to Norm 4 inclusive mineral claims for the purpose of preparing a preliminary geological map of the area covered by these claims. This work was supervised by D. R. Cochrane, P. Eng.

This report describes the general geologic setting, and attempts to correlate this information with data obtained by previous geochemical soil sampling and magnetometer surveys performed since 1975.



PART A

---

SUMMARY AND CONCLUSIONS

1. E. N. Ascroft holds title to four (4) contiguous full-sized located mineral claims, situated in the Coquihalla Gold Belt, New Westminster Mining Division. The claims lie at the headwaters of Arsenic Creek, a tributary of Qualark Creek, on the westflank of Spider Peak.
2. Access to the claims is by logging roads, generally requiring the use of four-wheel drive vehicles, traversing the east side of the Fraser River from Hope, B. C. and thence along Qualark Creek to the south boundary of the claims.
3. The claims are heavily timbered at present but will probably be subject to logging operations in the near future.
4. The claims adjoin an area described in B. C. Minister of Mines Report as the Georgia No. 2 from which 2 tons of presumably hand sorted ore yielded 37 ounces of gold in 1925.



5. The general area is the subject of an extensive exploration program being conducted by Carolin Mines Ltd. et al. (Aquarius Resources Ltd., Longbar Minerals Ltd.)
  
6. The main axis of the Coquihalla Gold Belt is the Hozameen Fault, a major north-northwest trending tectonic feature which forms the west boundary of the Methow Graben and separates a mafic complex on the west side of the belt from the Jurassic Ladner Slates on the east side.
  
7. The current mapping program on the Norm claims established the location of the Hozameen fault traversing the Norm 1 and Norm 2 mineral claims. An intensely sheared and oxidized block of silicified carbonates (sometimes referred to as the Green Leader formation) occupies a zone 300 to 500 feet (100 to 160 meters) wide between the mafic complex on the west side of the Hozameen Fault and the Ladner Slates on the east side.





8. Three samples of oxidized fault detritus were panned during the reconnaissance, the location of which are shown on Map 4, samples 1 thru 3. Samples 1 and 2 each yielded two "colors" (fine gold particles) sample 3 yielded none.
9. Random grab samples (Map 4, sample 4 and 5), representing approximately 50 feet (15 meters) and 75 feet (23 meters) were taken across the highly oxidized zone and assayed for Gold and Silver at Bondar Clegg and Co., North Vancouver B. C.
10. The trend of 1975 magnetometer survey results correlates with the location of the Hozameen fault, the mafics yielding magnetometer "highs", and the fault and related oxidized zone yielding a lineal magnetometer "low".
11. The anomalous geochemical results in the southern portion of Norm 2 mineral claim are explained by the colors in panning fault detritus. The anomalous result in the northern portion of Norm 1 mineral claim is yet to be explained.



12. The Hozameen fault as it traverses the most northerly portion of the claims is covered by at least 15 meters of overburden. The location shown therefore is approximate.
  
13. In the light of continuing exploration successes enjoyed on the other properties in the Coquihalla Gold Belt in association with the Hozameen Fault and Ladner Slates, the Norm mineral claims should be maintained and subjected to further evaluation at some future date, although economic mineralization in the Ladner Slates may be at some considerable depth.

Respectfully submitted

  
  
D. R. COCHRANE, P. Eng.  
August 16, 1978



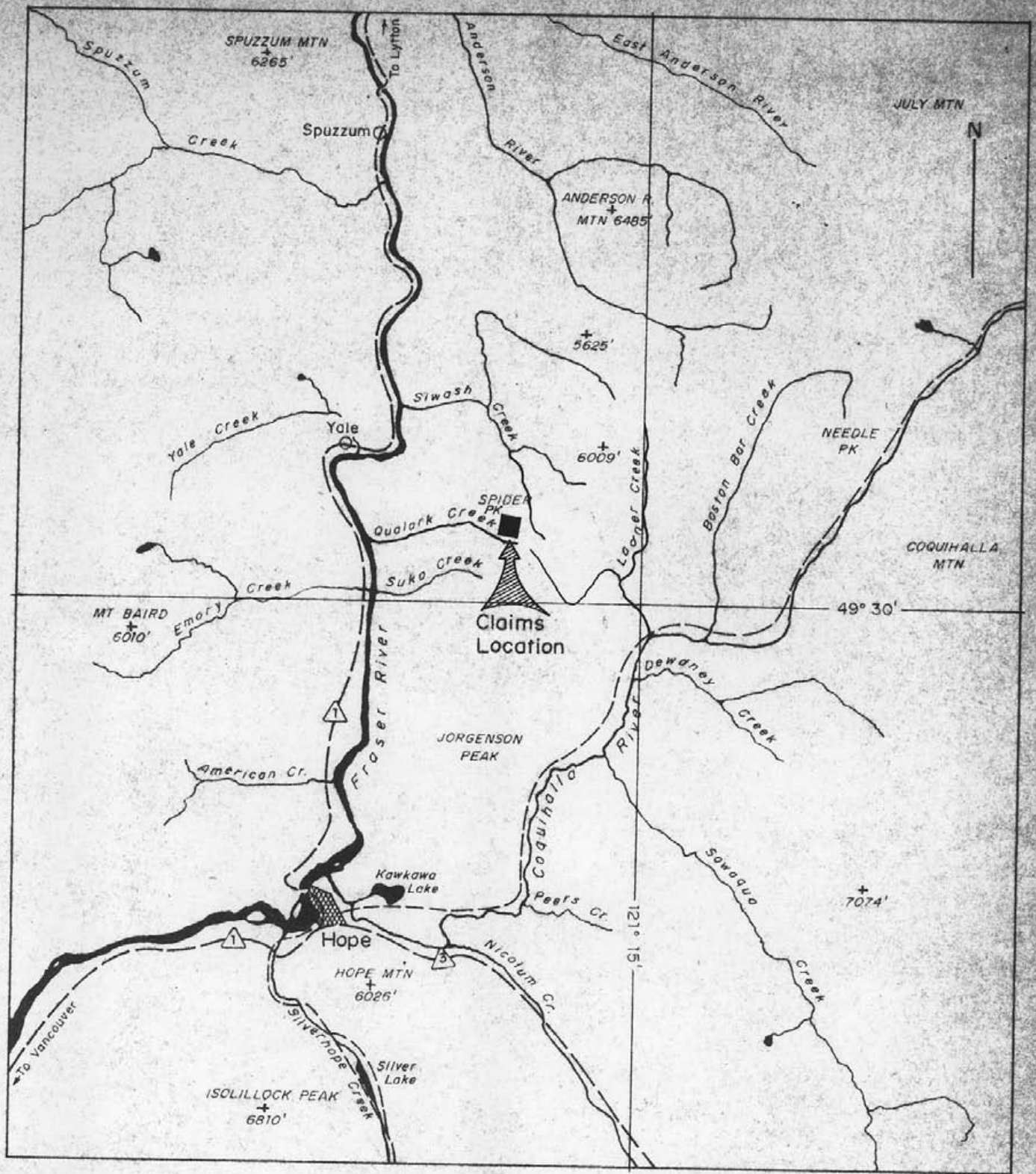
PART B:       SETTING

B-1            LOCATION AND ACCESS

The Norm claims lie some 12 air miles (19 km) north-north east of the town of Hope in Southern British Columbia. Access via logging roads is available from Hope, west on the Kawkawa Lake road, across the Coquihalla Bridge then left onto an access road which circles the west side of Kawkawa Lake. The road then proceeds northerly past Squeah on the C.N.R. line, over Suka Creek to Qualark (Hillsbar) Creek. The most easterly point on the Qualark Creek logging road is at an elevation of 3200 feet (975m). From there, a branch logging road, under construction, crosses Arsenic Creek at approximately 3400 feet (1035m) elevation. Access from this point is by foot north and north-easterly up Arsenic Creek, to an elevation of 4500 feet (1371m) (a slope distance of approximately 1000 meters) to the first Norm claim post. Total road mileage is just under 20 miles (32km). The claims lie on the south-west flank of Spider Peak, and the location line runs approximately west.







LOCATION MAP

Fig. 1

**NORM CLAIMS**

Quolark Creek/Spider Peak Area  
 New Westminster Mining Division, B. C.

Gochran Consultants Limited  
 4880 Delta Street Delta, B.C.

N.T.S. 92H/11 west half

Scale 1:250,000

A helicopter base is situated in Hope and facile access may also be gained by helicopter. The NTS code for the area is 92H/11W; the latitude is  $49^{\circ}32'N$  and longitude  $121^{\circ}18'N$ .

B-2 CLAIMS AND OWNERSHIP

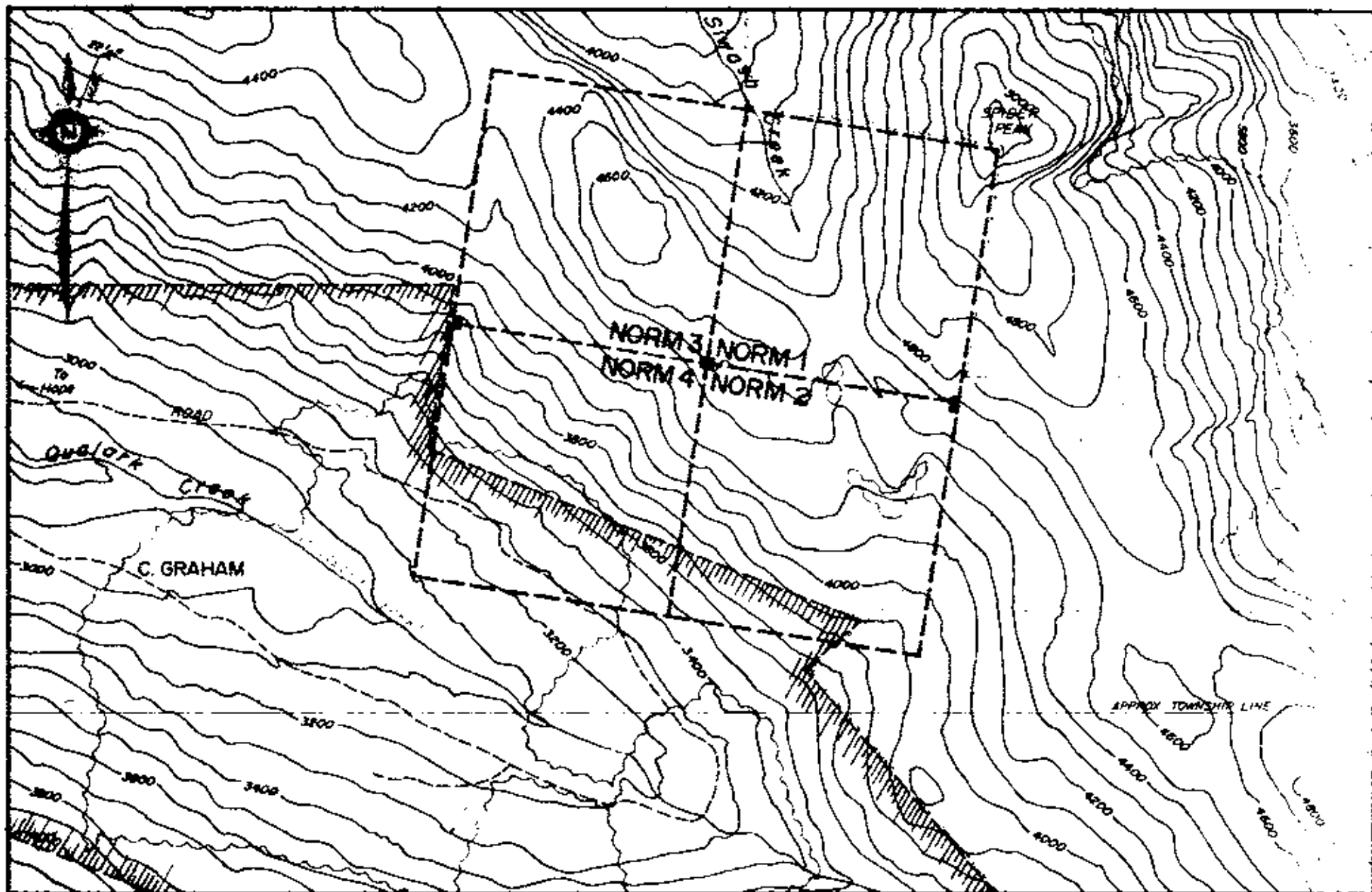
The approximate position of the Norm #1 to #4 (inclusive) claims are shown on B. C. Department of Mines map 92H/11 (West).

The four located Norm claims are owned by Mr. E. N. Ascroft, of 1878 West 37th Avenue, Vancouver, British Columbia and were recorded on the 16th of August, 1974.

The record numbers are as follows:

CLAIM NAME	RECORD NO.	ANNIVERSARY DATE
Norm #1	29448	August 16
" 2	29449	" "
" 3	29450	" "
" 4	29451	" "





## Norm Claims

Qualark Creek / Spider Peak Area  
 New Westminster Mining Division  
 British Columbia

## TOPO & CLAIMS MAP

Fig 2

Map Area N.T.S. 92H/11W.  
 Contour Interval 100 feet.

Cochrane Consultants Ltd. Aug/75  
 ~~~~~ Indicates logged off or clearing

Scale: 1" = 800'

1:9600

0 400 800 1600 FEET.

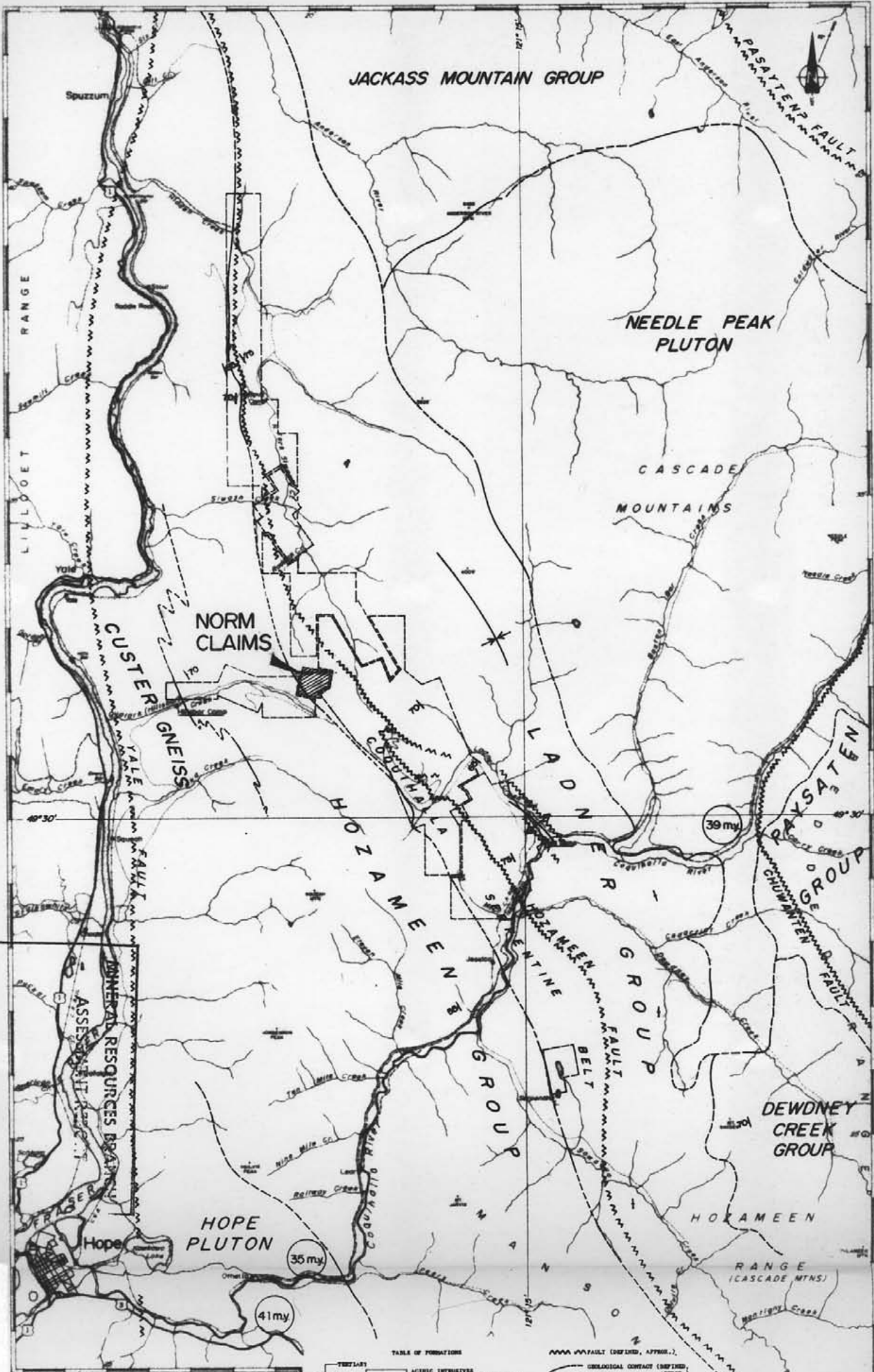
B-3      GENERAL SETTING

The Norm claims lie in the northern most section of the Cascade Range, a rugged upland surface which locally, rises steeply from the Fraser Canyon to elevations in excess of 6000 feet (1829m) above sea level. The summit on Spider Peak is just over 5200 feet (1585m). The Norm claims lie in the divide between a fork of Siwash Creek (draining northerly) and the headwaters of Qualark Creek, (draining westerly). Both creeks are tributaries of the Fraser River. The area is well forested with Douglas Fir, Red and Yellow Cedar, Hemlock, Spruce and Pine.

The claims straddle a narrow basic intrusive/extrusive complex, with associated serpentine, talc, and carbonate-quartz-maraposite(?) rocks. To the east of this north trending complex is the Jurassic Ladner Group, (slate greywacke), and to the west, the Paleozoic Hozameen Group (volcanics, limestone, chert).

A series of gold occurrences lie along this belt, which is collectively known as the Coquihalla Gold Belt. The gold occurrences are of several varieties including





NO. 6889  
 GENERAL RESOURCES BRANCH  
 ASSESSMENT DIVISION

**Coquihalla Gold Belt**

HOPE AREA, BRITISH COLUMBIA  
 NEW WESTMINSTER MINING DIVISION  
 N.T.S. 92H/6E & W, 92H/11E & W  
**GENERAL GEOLOGY** Fig. 5



TABLE OF FORMATIONS

|                                |                                                                                                    |
|--------------------------------|----------------------------------------------------------------------------------------------------|
| TRIASSIC                       | ACIDIC INTRUSIVES (GRANODIORITE, QUARTZ DIORITE)                                                   |
| LATE CRETACEOUS/EARLY TERTIARY | CUSTER GNEISS (METAMORPHIC GRANITE BODIES)                                                         |
| LOWER CRETACEOUS               | PAYSAKEN GROUP (SANDSTONE, CONGLOMERATE)                                                           |
| UPPER JURASSIC                 | DEWDNEY CREEK GROUP (SANDSTONE, FELTITE, TUFF)                                                     |
| LOWER AND MIDDLE JURASSIC      | LAMBER CREEK GROUP (GNEISS, SLATE, ETC.)                                                           |
| UPPER PALAEZOIC                | HORAMEEN GROUP (CHERT, ARGILLACEOUS SCHIST, METAGNEISS, MICA SLIESTONE)                            |
| PALEOZOIC                      | COQUIHALLA SERPENTINE BELT (INCLUDING SERPENTINE, METAGNEISS, TALS., MICA, MISC. BASIC INTRUSIVES) |

~~~~~ FAULT (DEFINED, APPROX.)  
 ——— GEOLOGICAL CONTACT (DEFINED, APPROX.)  
 ——— BEDDING ATTITUDE  
 \* \* \* \* \* ANTIPODE, SYNPODE  
 m.y. AGE DATE (MILLION YEARS BEFORE PRESENT)  
 See Fig. 6 (DEFINED 1916 AND 1942 FIVE (5) PROPERTIES PRODUCED 3,912 oz. Au FROM 3,102 TONS (AVERAGE OF 1.3 oz.))

- GEOLOGY MODIFIED FROM:
1. CALDER, C.E. (1924) GEOLOGICAL MAP, COQUIHALLA RIVER AREA, S.S.C.
  2. MONROE, J.W.S. (1969) G.S.C. PAPER 69-17, HOPE SHEET, WEST HALF.
  3. HENAGAN, R.C. & FRENCH, S.H. (1967) GEOLOGY OF PART OF THE NORTHERN CASCADES, CAN. JOUR. EARTH SCIENCES, VOL. 4.
  4. GRIFFITH, D.J. PERSONAL COMMUNICATIONS.
  5. MONTGOMERY, J.H. (1975) GEOLOGY OF HILDAVA GROUP (PRIVATE REPORT FOR GARDIN MINES LIMITED)
  6. COCHRAN, S.A. VARIOUS PROPERTY EXAMINATIONS, COQUIHALLA GOLD BELT.
  7. STEPHEN, G.C. GEOLOGY OF THE HOPE CLAIMS.
  8. STUART, J. GEOLOGY OF THE HOPE CLAIMS.

(a) quartz vein type: (Siwash deposits, Pipestem Mine and Emancipation Mine);

(b) talc-fault gouge type: Spider Peak (Georgia #2), and Aurum Mine;

and

(c) replacement type deposits; Idaho Zone of Carolin Mines .

B-4      HISTORY

Placer gold was first discovered in quantity on the Fraser River near Yale in 1858. Prior to this date the crown colony was sparsely settled and largely ignored by the remainder of Canada, and the great Fraser "Rush" did much to settle and develop southern British Columbia. Emory Bar and Hillis Bar on The Fraser situated a few miles due west of Spider Peak were important producers of placer gold for several decades and production although continuous at first became more and more intermittent until commencement of the first world war, at which time placering virtually ceased. The "mother lode" of these bars was not actively sought until the late teens. The 1912 Report of the Minister of Mines (pg. 186) describes "considerable placer prospecting



on Hillsbar (Qualark) Creek", however, according to Cairnes (1923) it was not until the summer of 1921 that lode gold was found in place on Hillsbar (or Qualark) Creek. Meanwhile lode deposits were also found in Ladner Creek, Siwash Creek and the Coquihalla River. There was sporadic production from at least five (5) of these Coquihalla Gold Belt deposits and total production between 1916 and 1943 was 3912 ounces of gold from 3102 tons of ore mined. The old Georgia #2 claim on Spider Peak shipped two tons of ore to Tacoma in 1925 and 37 ounces of gold was recovered. (B. C. Dept. of Mines Records). In 1928, the Aurum Mine was discovered and reports describe "spectacular specimens of free gold". This led to another rush, at which time most of the Coquihalla Belt was staked and prospected, and certain deposits developed. Activity declined steadily thereafter; the Pipestem (Home Gold) ceased production in 1937, the Emancipation in 1941, and the last reported shipment from the Aurum Mine was in 1942. Activity remained at a low ebb until 1972 when the price of gold increased and Carolin Mines optioned a block of claims covering the old Aurum, Home Gold (Pipestem) and Idaho claims. Exploration activity in the area has continued at a moderate pace to date but was dampened temporarily by Provincial Mining Taxation. Carolin Mines has recently reported a total of 3½ million tons in the Idaho Zone,



grading 0.114 ounces of gold per ton. The Idaho lies a few kilometers south-east of Spider Peak.





PART C

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DETAILED GEOLOGY AND SAMPLING

- The four Norm Claims are underlain by four (4) different rock types from west to east, namely:
- (a) Paleozoic (?) rocks of the Hozameen series (ribbon cherts etc.) on the extreme west side of the Norm 3 and 4 claims;
  - (b) a mafic suite of rocks of unknown age (greenstones, serpentine, etc.) in the central area of the claims;
  - (c) a quartz, carbonate green mica rock (locally known as the green leader) of unknown origin and relation with other rocks. The term "exholite" has been tentatively proposed, but certainly additional work is required on this rock type;
  - (d) the Jurassic Ladner Slate sequence exposed on the east side of the Norm #1 and #2 claims, and consisting of interbedded slates, argillites and wackes.

These "bands" of different rock suites appear to be in fault contact, and the Hozameen fault and sympathetic and ancillary faults trend northwesterly across the claims.

Special attention was directed to the quartz-carbonate-green mica rock, which underlies the majority of the area in which previously collected upper "B" horizon soil samples were found to anomalous with respect to gold.

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This rock is found on the west flank of Spider Peak, and the carbonate weathers brown and the irregular quartz veinlet network adds a relief that resembles a spiders web.

In the hand specimen the rock consists of foliated flakes and scales of green mica, (maroposite (?) roscoelite(?)) set in a carbonate matrix (presumably slightly iron rich as suggested by weathering) and laced with a network of quartz veinlets and veins varying from a few mm up to 1 meter wide. Metallic minerals include finely disseminated pyrite and magnetite (chromite?) and traces of chalcopyrite. A composite sample of "float" material from the headwaters of Hillsbar (Qualark) Creek collected in 1973 and assayed by Kamloops Research and Assay Laboratory Ltd., assayed as follows:

|        |                           |
|--------|---------------------------|
| Gold   | 0.018 troy ounces per ton |
| Silver | 0.402 " " " "             |
| Copper | 0.02%                     |
| Nickel | 0.11%                     |



In thin section, and under crossed nicols, the rock consists of a fine mosaic of quartz (0.1mm) blebs, intimately associated with irregular carbonate particles. The green mica is often banded through this matrix (see sketch No. 1)

This rock type is quite consistently "geochemically" anomalous with respect to gold along parts of the Coquihalla gold belt, and chip samples collected by Mr. Dion (and shown on accompanying map #4) were assayed by Bondar Clegg & Co. of Vancouver with results as follows:

| SAMPLE NO. | DESCRIPTION     | Au (oz/ton) | Ag(oz/ton) |
|------------|-----------------|-------------|------------|
| 4 (7954)   | chips along 15m | 0.003       | 0.03       |
| 5 (7955)   | " " 23m         | 0.004       | 0.04       |

Additional detailed exploration work is required on the Green Leader Rock, and on the Ladner Slate sequence adjacent to the east.

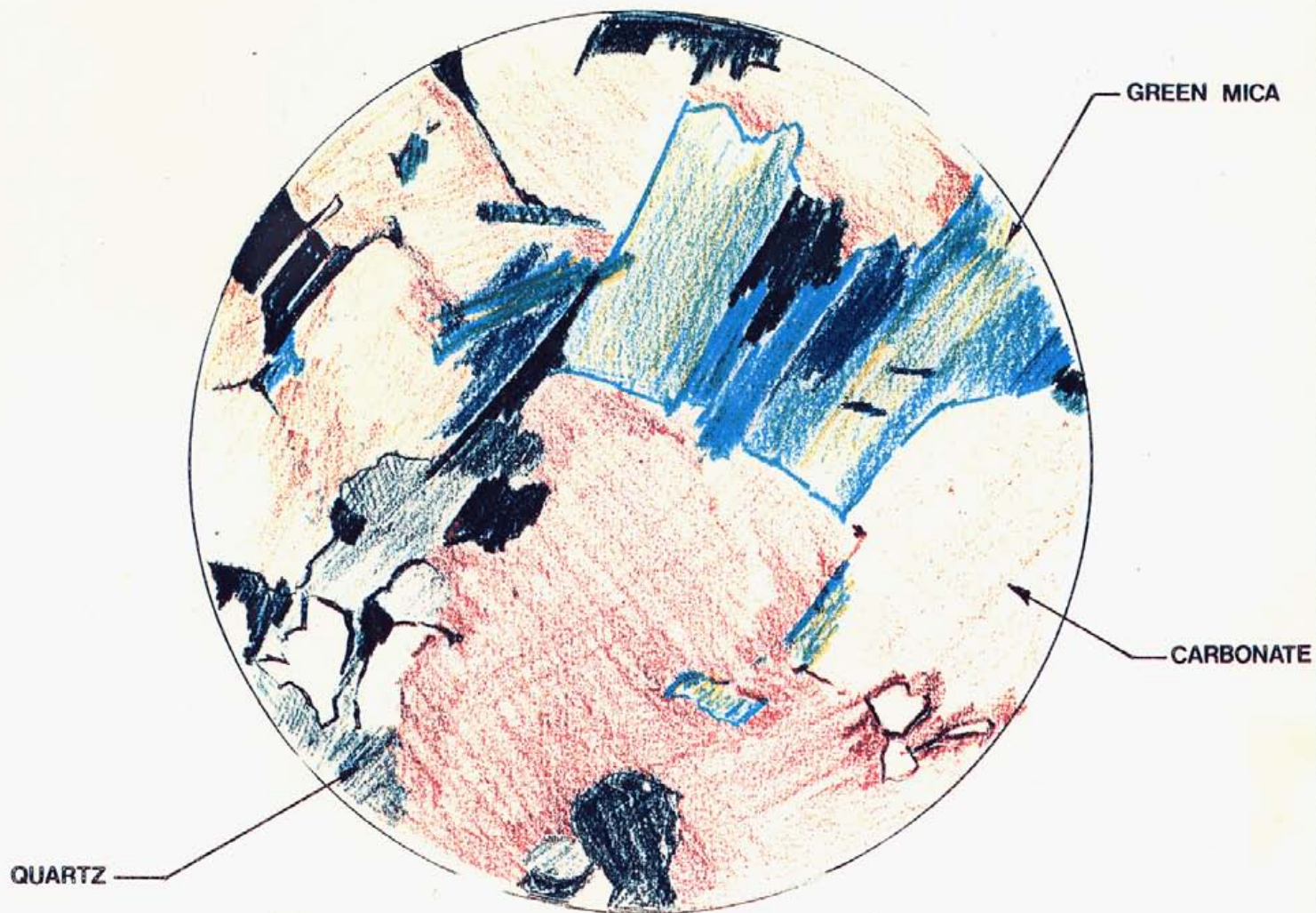
Respectfully submitted



D. R. Cochrane, P. Eng.

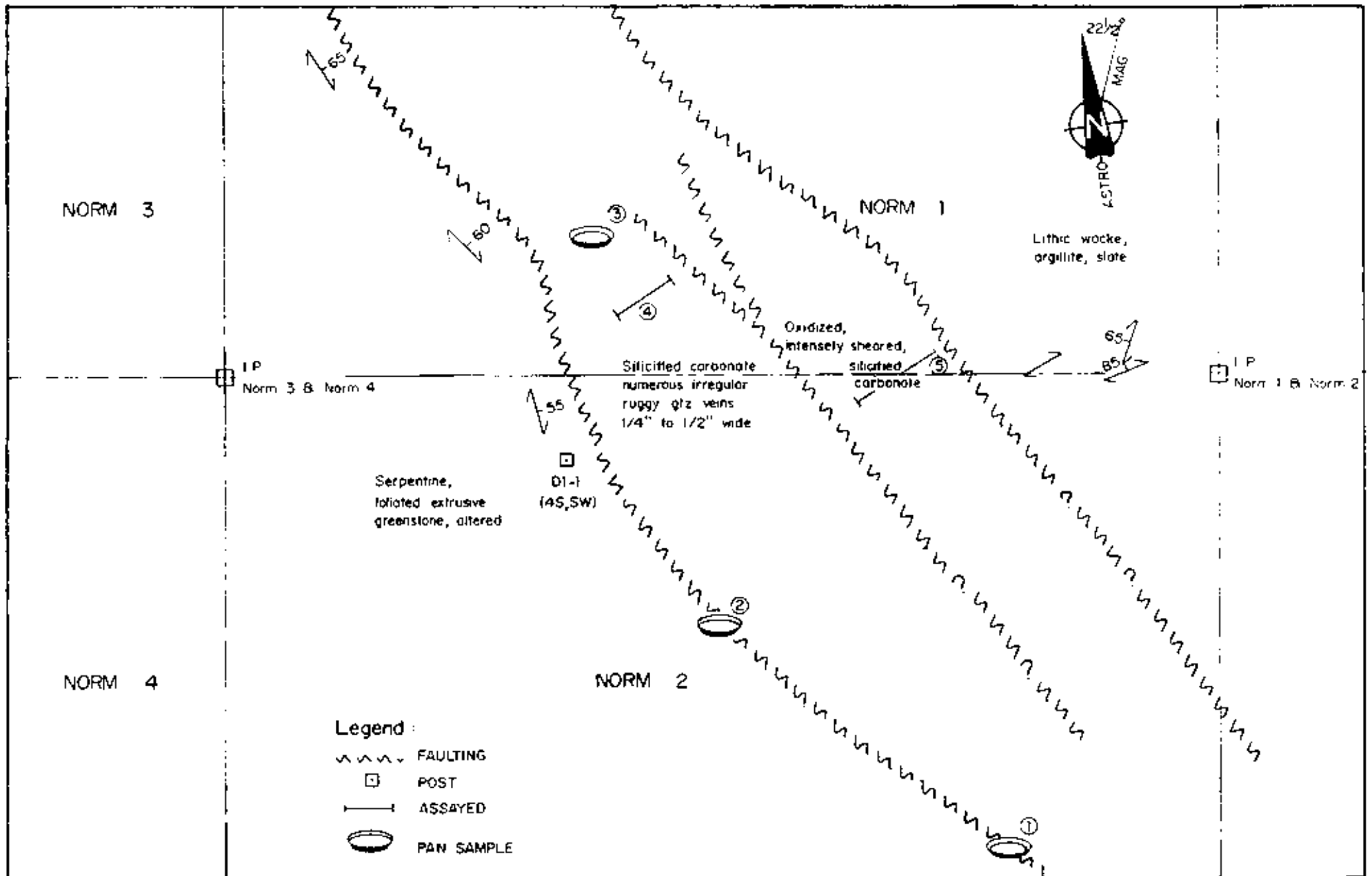
August 18, 1978





SKETCH OF QUARTZ - CARBONATE GREEN MICA ROCK ( TIMES 80, CROSS NICOLS )

SKETCH Nº 1  
AUG. '78 - P. K. C.



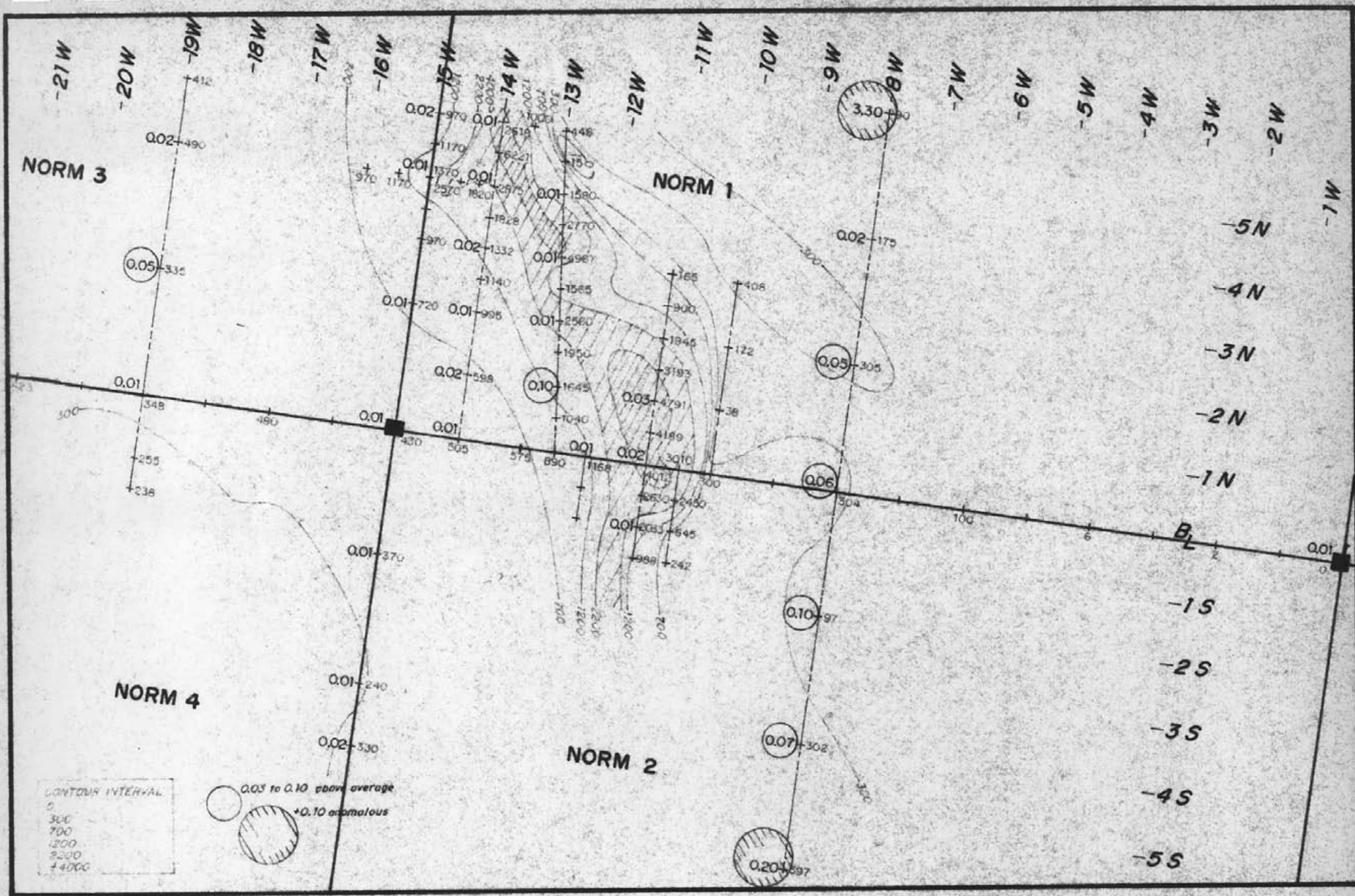
### Norm Claims

Qualark Creek / Spider Peak Area  
 New Westminster Mining Division  
 British Columbia

### SURFACE GEOLOGY (1978) Fig. 4

Map Area N.T.S. 92H/11W Cochrane Consultants Ltd Aug/78  
 Map by R.R.D. Traced by P.K.C.

Scale 1" = 200'



**Norm Claims**  
 Qualark Creek / Spider Peak Area  
 New Westminster Mining Division  
 British Columbia

**MAGNETOMETER & GEOCHEMICAL RESULTS**

Fig. 3

Map Area N.T.S. 92H/11W  
 Geochemical Values: Au p.p.m.  
 Magnetometer values: gammas

Scale 1" = 200'



1:2400

APPENDIX 1

ASSESSMENT WORK DETAILS & COST BREAKDOWN

PROJECT: NORM CLAIMS; New Westminster M. D.  
LOCATION: 19 air km NNE of Hope B. C.  
N.T.S.: 92H/11w  
OWNER: Mr. E. N. Ascroft SPONSOR: Golden Shamrock Mines  
FIELD WORK: August 15 and 16, 1978  
FIELD CREW: 1 Field Man from Cochrane Consultants Ltd.  
1 Prospector  
Mr. D. R. Cochrane, P. Eng. (Aug. 16, 1978)  
OFFICE WORK:  
1 Prospector (Aug. 17, 1978)  
Mr. D. R. Cochrane, P. Eng. (Aug. 18 and 29, 1978)  
1 Draftsperson  
1 Typist  
WORK DONE: Geological mapping, sampling, thin section  
work, assaying, follow-up of geochem.

COSTS:

|  |            |
|--|------------|
| 1 Prospector - 3 days @ \$150/day.....                 | \$ 450.00  |
| 1 Field Man - 2 days @ \$90/day .....                  | 180.00     |
| Mr. D.R. Cochrane, P. Eng.<br>2 days @ \$200/day ..... | 400.00     |
| Drafting - 16 hrs @ \$13.50/hr .....                   | 216.00     |
| Reproduction .....                                     | 50.00      |
| Typing - 10 hrs @ \$9/hr .....                         | 90.00      |
| Assays: Invoice #B-2675 (Bondar Clegg & Co....         | 17.00      |
| Rental of 4 x 4 (a) 2 days @ \$20/day .....            | 40.00      |
| (b) 297 mi. @ 25¢/mi.....                              | 74.25      |
| Groceries .....  | 36.91      |
| Total costs .....                                      | \$1,554.16 |



APPENDIX II

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Bibliography:

- CAIRNES, C.E., (1924), Coquihalla Area, B.C., G.S.C. Mem. 139
- CAIRNES, C.E. (1929), The Serpentine Belt of Coquihalla Region,  
Yale District, B.C., G.S.C. Sum. Rep.  
1929-A
- (a) B.C. Dept. of Mines, Index #3, Table 1, Recorded Lode Metal  
Production
- (b) B.C. Minister of Mines Reports, 1936, F35
- COCHRANE, GRIFFITH, and MONTGOMERY, Report on the Idaho/Aurum  
Pipestem Project for Carolin Mines  
(Assessment Report), January 10, 1974
- COCHRANE, D.R. Report on the Carolin Mines, Coquihalla  
Property, July 3, 1973.
- COCHRANE & GRIFFITH Report on the Diamond Drilling and Assaying,  
Idaho Zone (Private Report) Feb. 1, 1974  
(Includes drill logs and sections).





APPENDIX III

CERTIFICATE

I, Donald Robert Cochrane of the Municipality of Delta, British Columbia, do hereby certify that:

1. I am a consulting geological engineer with an office at 4882 Delta Street, Delta, British Columbia.  
V4K 2T8
2. I am a graduate of the University of Toronto (1962) with a degree in Applied Geology (B.A. Sc.) and a graduate of Queen's University (1964) with a degree in Economic Geology (M. Sc. Eng.).
3. I have practiced my profession continuously since graduation and while being employed by such companies as Noranda Exploration Co. Ltd., Quebec Cartier Mines, and Meridian Explorations Syndicate. I have been in private independent practice since 1969.
4. I am a member in good standing of the Association of Professional Engineers (A.P.E.) of the Province of British Columbia, and also a member of the A.P.E. in the Provinces of Ontario, Saskatchewan, and the Yukon Territories.

August 18, 1978  
Delta, B. C.

(signed) D. R. Cochrane, P. Eng.



**BONDAR-CLEGG & COMPANY LTD.**

DATE: August 25, 1978

4882 Delta Street  
Delta, B. C.  
V4K 2T8

**CERTIFICATE OF ASSAY**

Samples submitted: August 21, 1978  
Results completed: August 25, 1978

PROJECT: G S

I hereby certify that the following are the results of assays made by us upon the herein described ore samples.

| MARKED | GOLD              |                  | SILVER            | Percent | Percent | Percent | Percent | Percent | Percent | Percent | TOTAL VALUE<br>PER TON<br>(2000 LBS.) |
|--------|-------------------|------------------|-------------------|---------|---------|---------|---------|---------|---------|---------|---------------------------------------|
|        | Ounces<br>per Ton | Value<br>per Ton | Ounces<br>per Ton |         |         |         |         |         |         |         |                                       |
| 7954   | 0.003             |                  | 0.03              |         |         |         |         |         |         |         |                                       |
| 7955   | 0.004             |                  | 0.04              |         |         |         |         |         |         |         |                                       |

  
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