

GEOCHEMICAL REPORT - RINGO & NORLEN CLAIMS
15 MILES SE OF SUSTUT LAKE, OMINECA M.D.

for

STELLAC EXPLORATION LTD.

by

94D/8E

D. L. Cooke, Ph.D., P.Eng., Dec.12, 1972



41092

D. L. COOKE AND ASSOCIATES LTD.

GENERAL EXPLORATION CONSULTANTS

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16331 BELL ROAD
SURREY, B. C.,
CANADA

GEOCHEMICAL REPORT

ON THE

RINGO AND NORLEN CLAIMS

FIFTEEN MILES SE OF SUSTUT LAKE

OMINECA MINING DIVISION, 56° 126° SE

for

STELLAC EXPLORATION LTD.

GERMANSEN LANDING, B.C.

by

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 4092	MAP

D. L. Cooke, Ph.D., P.Eng.

Consulting Geologist.

December 12, 1972.

Mining Recorder's Office RECORDED
DEC 15 1972
AT..... SMITHERS, B. C.

D. L. Cooke

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 1" = 200 ft.

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16331 BELL ROAD
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GEOCHEMICAL REPORT

ON THE

RINGO AND NORLEN CLAIMS

FIFTEEN MILES SE OF SUSTUT LAKE

OMINECA MINING DIVISION, 56° 126° SE

The located claims on which assessment credits are requested are as follows:

<u>Name of Claim</u>	<u>Credit Requested</u>
Norlen #7 and 8	1 year each
Ringo #13 and 15	1 year each
Ringo #17 to 21 inclusive	1 year each
Total	9 years.

Work was done on these claims during the period August 31, 1972 and September 14, 1972.

The results are interpreted and reported on by:

D. L. Cooke, Ph.D., P.Eng.

Consulting Geologist

December 12, 1972.

SUMMARY

The Norlen and Ringo claims, covered by this geochemical report, form a part of the Ringo claim group. This claim group is located on molybdenite mineralization on the northern margin of the Hogen batholith, 15 miles southeast of Sustut Lake. Access to the property is by helicopter, 12 miles west from Aiken Lake, which is connected by road to Germansen Landing, B.C.

The geochemical work on the west zone was done between August 31, 1972 and September 14, 1972. The soil samples collected were analyzed for copper, zinc and molybdenum by colour comparison methods.

The sedimentary and volcanic rocks of the area belong to the Takla Group of Triassic age. The claims overlie the drift-covered area in the vicinity of the contact between Takla rocks and the Omineca batholith. Molybdenite mineralization occurs in "float" from the claims.

INTRODUCTION

This report describes the results of a soil survey which was carried out on the Ringo Group by Douglas Stelling and George Garner of Germansen Landing, B.C. during the period August 31, 1972 to September 14, 1972. The survey area adjoins the west side of the claims (Figure 1) on which geological and geochemical work was done by the writer (Cooke, 1972). During this period the writer laid out and checked the sampling procedure employed in this survey.

The soil samples were prepared and analyzed by Douglas Stelling in his geochemical laboratory at Germansen Landing. The results were then plotted (Figure 2) and passed on to the writer.

The writer accepts the responsibility for the interpretation of the results and for all conclusions and opinions expressed with respect to this geochemical data.

As a result of the geochemical work completed during the period, it is requested that assessment credits be applied to the Ringo claim group as follows:

<u>Name of Claim</u>	<u>Record Number</u>	<u>Date Recorded</u>	<u>Credit Requested</u>
Norlen #7 and 8	104157 & 104158	September 15, 1971	1 year each
Ringo #13 and 15	104153 & 104155	September 15, 1971	1 year each
Ringo #17 -21 incl.	Not available	Staked - Sept.2,1972	<u>1 year each</u>
Total:			9 years

Expenditures on the Ringo Group since August 31, 1972 total \$908.50.

PROPERTY AND OWNERSHIP

The Ringo claim group consists of the following thirty two contiguous mineral claims, owned by Douglas Stelling of Germansen Landing, B.C.:

<u>Name of Claim</u>	<u>Record Number</u>
Ringo #1 - 12	102393 - 102404
Ringo #13 & 15	104153 & 104155
Norlen #7 - 14	104157 - 104164
Tumble #3 & 4	102073 & 102074
Ringo #17 - 22	Not available
Ringo #23 & 24 Frs.	Not available

LOCATION AND ACCESS

Latitude: 56° 24' N

Longitude: 126° 07' W

Elevation: 5,000' - 7,500'

Mining Division: Omineca

The Ringo claim group is located 12 miles west of Aiken Lake and 15 miles southeast of Sustut Lake, at the head of Doratelle and Kliyul Creeks. Access is by road to Aiken Lake via Germansen Landing, and then by helicopter up Kliyul Creek. The showings occur above timberline, and they were found in the vicinity of two MoS₂ prospects shown on Map 962A of McConnell Creek Map-area (Lord, 1948).

PREVIOUS WORK

No previous work had been recorded on these mineral occurrences prior to 1972. The property was examined in September 1971 and soils (MO series) were collected and analysed. A geological and geochemical survey was carried out in August of 1972 on the Ringo claim group, exclusive of the Ringo #17 to 24 claims. The results of this work appear in an earlier report (Cooke, 1972). The Ringo #17 - 24 claims were staked on September 2, 1972 and are now being added to the Ringo Group.

GEOLOGY AND MINERALIZATION

The claims occur on the contact of the northern margin of the Hogen batholith. A small ultrabasic intrusion underlies the eastern portion of the property. The sheared and foliated Triassic volcanic and sedimentary units are believed to be in contact with granitic rocks in

the area of the Norlen claims. These claims are substantially covered by glacial debris and unconsolidated material.

Molybdenite mineralization occurs in felsite dikes along the contact of the ultrabasic intrusion. Although no such mineralization was located in place on the Norlen claims, MoS_2 was found in erratic material in this western area. Minor amounts of pyrite and chalcopyrite also occur within quartz veins which appear in the Takla rocks.

GEOCHEMISTRY

The soil cover on the western portion of the property is better developed than that on the Ringo #1 - 12 claims. This western area is covered by moss, shrubs and small evergreens. The geochemical work done consisted of the collection and analysis of approximately 75 soil samples from the Norlen and Ringo claims.

Soil Sampling

These samples were collected from the B horizon, which is developed at a depth of from six to fifteen inches. The sample points were uniformly distributed on a 200 ft. grid (Figure 2). Each sample was placed in a high wet strength kraft paper bag, and taken to the laboratory of Stellac Exploration at GERMansen Landing for analysis.

Sample Preparation and Analysis

A sulphuric acid-nitric acid digestion is employed in the analysis for molybdenum. After drying at temperatures below 100°C , the samples are sifted through an 80 mesh stainless steel sieve. A 200 milligram

portion of the minus 80 mesh fraction is digested with a sulphuric-nitric acid mixture over low heat for 45 seconds. The digested solution is then extracted into one millilitre of isoamyl alcohol, which forms an immiscible layer. This organic layer is transferred to a test tube containing a buffering solution, stannous chloride and ammonium thiocyanate. The mixture is shaken for ten seconds and the colour of the organic layer is then compared with previously prepared molybdenum standards. The standards range from 0 to 40 ppm, in steps of 5 ppm.

For copper and zinc pyrosulphate fusion is used, in which a 100 milligram portion of the sample is digested over a bunsen burner. The fused mass is extracted in a strong hydrochloric acid solution and then diluted to a specific volume. Aliquots of this solution are transferred to separate test tubes containing a copper buffer and a zinc buffer respectively. Copper is determined by the standard 2/2 biquinoline method, and zinc by the standard biquinoline method. Colour comparisons are made with standard solutions for the respective elements.

Results

The results for molybdenum, copper and zinc are presented in Figure 2. A histogram plot of the molybdenum results indicates background to be 5 ppm. and anomalous values to be in excess of 20 ppm. Two linear anomalous zones occur to the southeast and southwest of the small lake occupying the pass between the Dortatelle Creek and Mesilinka River drainages (Figure 1). One anomaly is open to the southeast and the other to the southwest. These anomalies may reflect linear mineralized structures such as felsite dikes, veins or shear zones. The area is void of outcrops.

The results for copper and zinc are less diagnostic than those for molybdenum. These sample populations are too small and the deviations too large to provide a meaningful interpretation.

CONCLUSIONS

The soil survey has indicated the presence of two linear anomalous zones for molybdenum, lying on either side of the pass between the headwaters of Dortatelle Creek and Mesilinka River. These represent either underlying molybdenite mineralization or mineralization transported downslope from the ridges to the east and west of the pass. Because the area is void of rock exposure, further work will be necessary to determine the source of these anomalies.

RECOMMENDATIONS

As the source of the anomalous soils is unknown, it is important to prospect and map the area in detail. Further soil sampling is also recommended to define the southeast and southwest limits of the anomalous areas.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "D. L. Cooke". The signature is written in black ink and is positioned above a horizontal line.

D. L. Cooke, Ph.D., P.Eng.
Consulting Geologist

December 12, 1972.

REFERENCES

1. Cooke, D. L., 1972, Geological and Geochemical Report on the Ringo Claim Group, Omineca M.D., 10 pages.
2. Lord, C. S., 1948, McConnell Creek Map-Area, Cassiar District, British Columbia, G.S.C. Mem.251, 72 pages.
3. Roots, E. F., 1954, Geology and Mineral Deposits of Aiken Lake Map-Area, British Columbia, G.S.C. Mem.274, 246 pages.
4. Stelling, D., 1972, Geochemical results, Field Notes and Maps, Ringo and Norlen Claims.

STATEMENT OF EXPENDITURES
ON THE
RINGO AND NORLEN CLAIMS
FIFTEEN MILES SE OF SUSTUT LAKE
OMINECA MINING DIVISION, 56° 126° SE

GEOCHEMISTRY

D. Stelling, Field Manager and G. Garner, Field Assistant - Collection of Samples Sept. 1 - 2, 1972	\$160.00
Sample Preparation and Analysis - D. Stelling, Sept. 10 - 14, 1972	432.50

TRANSPORTATION

Helicopter Transportation from Aiken Lake, Aug. 31, 1972	116.00
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INTERPRETATION AND REPORT

D. L. Cooke, Consulting Geologist, Dec. 11 & 12, 1972 2 days @ \$100.00/day	<u>200.00</u>
Total Expenditures Aug. 31, 1972 to Dec. 12, 1972	<u><u>\$908.50</u></u>

December 12, 1972

STATUTORY DECLARATION IN
SUPPORT OF EXPENDITURES

CANADA) IN THE MATTER OF the Statement of
) Expenditures for Geochemical work
Province of British Columbia) on the Ringo and Norlen Mineral
) Claims in the Omineca Mining Division.
TO WIT)

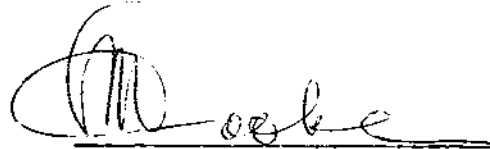
I, DAVID LAWRENCE COOKE, Consulting Geologist of 16331 Bell Road,
Surrey, in the Province of British Columbia, DO SOLEMNLY DECLARE:-


1. THAT the Geochemical Investigation of the Ringo and Norlen Claims was recommended by me, and that I concur with the manner in which the soil sampling and analyses were done.
2. THAT the Statement of Expenditures set out in Appendix A of my report "Geochemical Report on the Ringo and Norlen Claims", dated December 12, 1972, truly represents the amounts expended on the said claims.

AND

I make this solemn Declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath, and by virtue of the Canada Evidence Act.

DECLARED before me at the)
City of Vancouver, in the)
Province of British Columbia)
this 13th day of December)
A.D. 1972.)




A Commissioner for taking
Affidevits for British Columbia.

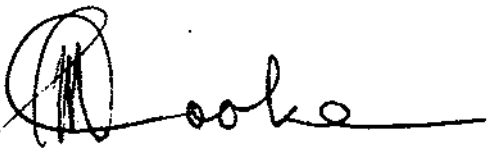
C E R T I F I C A T E

I, DAVID LAWRENCE COOKE, of the Municipality of Surrey, British Columbia, Canada,

HEREBY CERTIFY:

1. That I am a Consulting Geologist, residing at 16331 Bell Road, Surrey, B.C., with an office at the same address.
2. That I graduated with a B.Sc. degree in Geology from the University of New Brunswick in 1959, and obtained a M.A. and a Ph.D. degree in Geology from the University of Toronto in 1961 and 1966 respectively.
3. That since graduation I have practised my profession as a Geologist in Canada, Mexico, and Jamaica.
4. That I am a certified member of the Association of Professional Engineers of the Province of British Columbia.
5. That the accompanying report on the Ringo and Norlen claims was prepared by me, and this report is based on personal knowledge of the area, and on work and results which I believe to be accurate.

DATED this 12th day of December, 1972, at Surrey, B.C.



D. L. Cooke, Ph.D., P.Eng.
Consulting Geologist

APPENDIX D

Figure 1: Claim Location, Ringo Group, $\frac{1}{2}$ mile = 1 inch.

Figure 2: Geochemistry, West Zone - Ringo Claim Group, 1" = 200 ft.



CLAIM LOCATION Ringo Group

Scale: 1/2 mile = 1"

FIGURE 1.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO **4092** MAP # **1**

[Handwritten signature]

TO ACCOMPANY REPORT ON THE
3 NORLEN CLAIMS DATED DEC 2
D. COOKE, PH.D., P.E.T.S.

FIGURE

(10, 25, 10) (15, 10, 12) (20, 10, 12) (10, 10, 20) (25, 40, 12) (10, 10, 12) (10, 10, 12)

Norlen
F10

(10, 20, 12) (10, 120, 12) (5, 20, 15) (25, 15, 20) (20, 15, 40) (5, 75, 15) (5, 15, 12)

Ringo
F17

(10, 15, 42) (30, 15, 20) (5, 20, 15) (40, 15, 20) (5, 20, 12) (15, 40, 12) (30, 15, 42) (10, 15, 12)

LAKE

Norlen
F15

(25, 20, 12) (60, 20, 12) (5, 75, 25) (40, 15, 20) (30, 20, 12) (10, 10, 42) (30, 10, 42)

M30W 8250

(25, 20, 12) (25, 30, 12) (10, 20, 12) (30, 75, 20) (20, 15, 25) (15, 10, 20) (15, 10, 20)

M30W 6400

(20, 20, 35) (30, 15, 30) (5, 50, 30) (10, 25, 35) (20, 15, 25) (10, 30, 30) (20, 15, 25)

M30 47100

(25, 10, 42) (10, 10, 12) (25, 40, 12) (10, 30, 42) (60, 40, 12) (20, 10, 42) (10, 40, 42)

M30 43100

(10, 10, 42) (30, 15, 42) (25, 10, 42) (25, 10, 20) (10, 20, 12) (20, 10, 42) (30, 15, 12)

M30 50400

(10, 10, 12) (25, 10, 20) (25, 10, 12) (50, 15, 12) (35, 40, 12) (30, 10, 42) (20, 10, 42)

4092 M-2

Cooke

GEOCHEMISTRY
WEST ZONE - RINGO CLAIM GROUP
1" = 200' FIGURE 2
Results: (Mo, Cu, Zn)

TO ACCOMPANY REPORT ON THE RINGO & NORLEN CLAIMS, DATED DEC 12, 1974,
D. L. COOKE, PH.D., P. ENG.

(15, 10, 50) (10, 10, 12) (5, 10, 12) (10, 10, 12) (5, 20, 12) (5, 10, 42) (30, 10, 42)

(5, 10, 12) (30, 20, 12) (15, 10, 12) (25, 10, 12) (25, 10, 42)

S-M

Department of
Mineral and Petroleum Resources
ASSESSMENT REPORT
NO. 4092 MAP #2