

GEOCHEMICAL REPORT
on the
OR GROUP of MINERAL CLAIMS
TWO MILES SOUTH of GREENWOOD, B.C.

49° 118° S.W 82 E/2E

FIELD WORK DONE FOR
ORTEGA MINERALS LTD.

between

MAY 29 - AUGUST 21, 1968.

by

F.J. Hemsworth, P.Eng.

16418

FRED J. HEMSWORTH
MINING ENGINEER

TELEPHONE MUTUAL 4-7734

616 CREDIT FONCIER BLDG.
850 WEST HASTINGS STREET
VANCOUVER 1, B.C.

1648

REPORT
on the
GEOCHEMICAL SURVEY
of the
OR GROUP
ORTEGA MINERALS LTD.
GREENWOOD, B.C.

September 30, 1968.

F.J. Hemsworth, P.Eng.,
Consulting Mining Engineer.

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INTRODUCTION

A geochemical survey for copper was carried out on the OR group of mineral claims for Ortega Minerals Ltd., during the 1968 field season. The company retained the writer to supervise the survey and the field work was directed by D.R. Foster, MSc.

Geochemistry or soil sampling was done as part of an exploration program aimed at finding bodies of copper mineralization. It is planned to conduct an Induced Polarization survey over the more favorable areas based on the results of the geochemical survey.

All the samples were analysed for parts per million of copper by A.C.G. Laboratories using an atomic absorption spectrophotometer.

This report on the soil testing survey, and the accompanying map, are submitted in compliance with the Mineral Act, claiming geochemical work for assessment purposes on the group of claims outlined in the text of the report.

LOCATION

The Ortega Minerals property is situated between Porter creek and Lind creek, about two miles south of Greenwood, B.C. The claims are readily accessible by logging roads.

The geographical position is Latitude 49°05' North, Longitude 118°40' West. Elevations on the property range from 3,000-4,000 feet above sea level.

PROPERTY

Particulars of the claims are as follows:-

<u>LOCATED CLAIMS</u>	<u>RECORD NOS.</u>
OR 1-12	26229-26240
OR 14-23	26242-26251
OR 3-5 Frs.	26226-26228
CU 1-6	22677-22682
<u>CROWN GRANTS</u>	<u>LOT NOS.</u>
Sovereign Fr.	1216 (M-303)
Croesus	866 (M-143)
Eholt	823 (M-302)
Johannesburg	2072 (M-272)
Lexicon	3303 (M-273)

All claims are contiguous and are situated in the Greenwood Mining Division.

GEOLOGY

The claims are underlain by limestone, greenstone tuffs, argillites, granitic stocks and porphyry dykes. Serpentine occurs on the eastern sections of the property. The general strike of the formations is North 65° East toward the Phoenix Copper mine. However, on account of the covering of drift, the varied nature of the rocks and the complex structures, it is not possible to foretell accurately the direction or extent of the formations.

WORKINGS and MINERALIZATION

On the Lexicon claim there is an old adit about 60 feet long exposing a flat-lying band of heavy sulphides about 6 feet wide. Above and to the east of the portal an area has been bulldozed, exposing an iron-stained capping 100 feet long and 30 feet wide, adjoining a granitic dyke. Where broken into, the mineralization consists principally of pyrrhotite with some garnetite and fine-grained chalcopyrite. A sample of chips from a fresh blast assayed: 0.83 percent copper.

A second similar showing is exposed on the Croesus claim about 750 feet south. Going from north to south, there is a 10-foot band of marbleized white limestone, a 10-foot thickness of iron-stained sulphides and lime silicates. An incline shaft, about 100 feet deep had been sunk on this showing many years ago. Adjoining to the south is 50 feet of fine-grained granite, followed by a second band of 15 feet of heavy iron mineralization consisting of massive pyrrhotite with garnetite and fine-grained chalcopyrite. A chip sample assayed: gold, trace; silver, 0.2 ozs/ton; copper, 1.61 percent. Adjoining to the south a further 40 feet of limestone has been uncovered.

Although these showings alone are too small to be economic, they provide an incentive to search for larger tonnages in the area.

GEOCHEMICAL SURVEY

Survey of Claims and Grid

The location lines of the claims were cut out and surveyed with Brunton compass and chain. Survey plats of the crown grants were obtained from the Surveyor General. A map was prepared on a scale of 400 feet to one inch. An east-west baseline was surveyed through the centre of the property, and stations established at 200-foot intervals. At every second station, 400-foot intervals, sidelines were run north and south to the property boundary. Soil samples were taken at 200-foot intervals along these north-south sidelines and marked with flagging tape on which was printed the station number. The grid thus formed had 400-200 foot intervals as shown on the geochemical plan which accompanies this report.

Soil Sampling Method

At the sample interval (200 feet) a hole was dug with a garden trowel. The hole was deep enough to get below the surface humus, and to reach the top of a layer of gray clay soil (A3 horizon). This horizon was usually at a depth of six to twelve inches. Extraneous material, such as pieces of root or bark, and small stones were picked out. About 200 grams of soil was placed in a small plastic bag, labelled, rolled up, and secured with an elastic band. At the completion of the job all the samples were brought to Vancouver and delivered to A.C.G. Laboratories for analyses in parts per million of copper by hot acid extraction and atomic absorption.


Interpretation

A property map on a scale of 400 feet to one inch showing the results of the geochemical analyses is contained in the report envelope. A total of 875 samples were taken, of these 677 showed less than 50 parts per million of copper and averaged 27.8 p.p.m. which is considered the background count. Of the balance, 142 showed between 50 and 74 parts per million copper and these are colored pink on the map. In addition there were 38 samples from 75 to 99 p.p.m. which are colored in red; and 18 samples containing 100 and over p.p.m. which are colored in purple.

The map shows three areas of particular interest; north of the baseline on Lines T, V and X; south of the baseline on Lines OO, B, D and F; and north of the baseline on Lines FE and DE. It is recommended that these areas be investigated further by an Induced Polarization survey.

Respectfully submitted,

September 30, 1968.


F.J. Hemsworth, P.Eng.,
Consulting Mining Engineer.

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA:

In the Matter of Geochemical Survey of the
Ortega Minerals Ltd., property at
Greenwood, B.C.

To Wit:

RECORDED
1968
M.K. 23716

I, Fred J. Hemsworth,

of 616-850 West Hastings Street, Vancouver 1, B.C.

in the Province of British Columbia, do solemnly declare that the following is a true statement of expenditures on the above geochemical survey.

D.R. Foster, MSc - May 29-June 28/68 & July 7-July 21, 1968-@ \$700.00/month-----	\$1,050.00
J. Isnardy - June 1-Aug. 21/68-@ \$450.00/month-----	1,215.00
C. Kittson - June 16-July 31/68-@ \$400.00/month-----	600.00
F.J. Hemsworth, P.Eng. - May 29-June 1/68, July 2-3/68 and August 19-20/68 - 8 Field days @ \$75.00/day-----	600.00
- 4 Office days @ \$50.00/day-----	200.00
A.C.G. Laboratories - 875 samples @ \$.88/sample-----	770.00
Total	\$4,435.00

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 30
day of Sept. 1968, A.D.

F.J. Hemsworth

John Suran
A Commissioner for taking Affidavits for British Columbia or
A Notary Public in and for the Province of British Columbia.

Subscribing Recorder



SCALE 1 IN = 400 FT.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1648 MAP 1

GEOCHEMICAL SURVEY
ORTEGA MINERALS LTD.
GREENWOOD, B.C.

COLOR LEGEND - PARTS PER MILLION COPPER
100 PLUS P.P.M. CU - PURPLE
75 - 99 P.P.M. CU - RED
50 - 74 P.P.M. CU - PINK
BACKGROUND AVERAGE 27.8 P.P.M.

1648

TO ACCOMPANY REPORT BY J.J. NEMSWORTH P.E.N.G.