3031

KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT

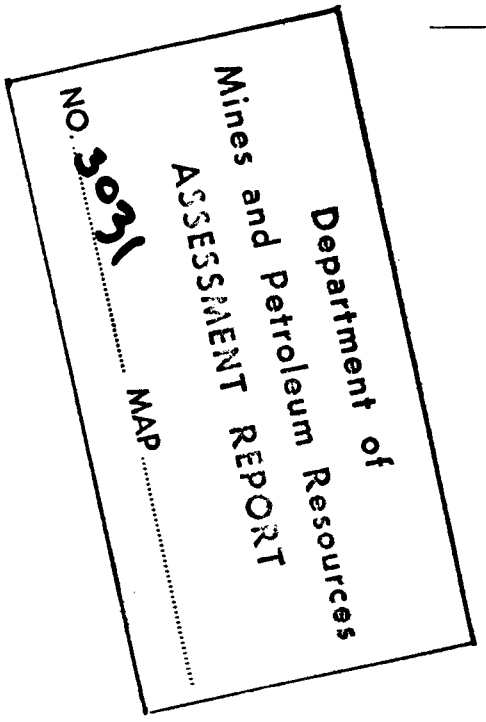
ON

SOIL GEOCHEMICAL & MAGNETOMETER SURVEYS

PINE NO. 6 & 7 GROUPS
(Pine Mineral Claims 13-18, 31-46, 65, 67-79, 85-88, 90, 93, 95, 129, 131, 135 Fr-142 Fr,80)

94 E /2E

Situated 13 miles northeast of Thutade Lake,
Omineca Mining Division,
British Columbia



Lat. 57°13'N, Long. 126°43'W

By

R. W. Stevenson, P. Eng.

July 17 to 30, 1970

May 18, 1971

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

Kennco Explorations, (Western) Limited

PINE CLAIMS

Situated 14 miles northeast of Thutade Lake

Omineca Mining Division,
British Columbia

57° 127° SE

LOCATION MAP

Scale:
1 : 250,000

INTRODUCTION

The mineral property discussed in this report is about 13 miles northeast of Thutade Lake, B. C., on the southeast side of the Finlay River. The survey work was done during the period July 17 to 30, 1970. The work was done by M. Tavela, who is a graduate of the University of Helsinki, and D. R. Reid, under the supervision of R. W. Stevenson, P. Eng.

LOCATION AND ACCESS

The property is situated at Latitude 57°13'N, Longitude 126°43'W, about 270 miles northwest of Prince George. This is about 13 miles northeast of Thutade Lake. It is on the south side of the Finlay River, in the Finlay valley, an area of subdued topography which is characterized by erratic drainage caused by numerous eskers and both lateral and terminal moraines. The elevation there is from 3400' to 4500' above sea level; and vegetation varies from good stands of mature Lodgepole pine to semi-open swamp areas.

Access to the area is by fixed-wing aircraft from Smithers to Pine Lake, a distance of about 175 miles. This is a small lake, about 4000' long, which is situated 3 miles northeast of the Pine area. Local travel on the Pine property is fairly easy, except for the difference in elevation between the survey area and the river level.

SOIL GEOCHEMICAL SURVEY

Soil Survey Field Work

Control Survey Lines

Some of the samples were taken on a grid that had been established previously. The baseline direction of that grid is N45°E. For purposes of marking the stations, this was termed Grid North. Several new lines were run by chain and compass, using surveyor's flagging to mark the stations. Elevations range from 3400' to 4000' above sea level. A base map with scale 1" = 400' was compiled for use in plotting the sample results.

Soil Sample Collection

The samples were taken at 100-foot intervals along the grid lines. The location of the sample sites is shown on Plate No. 7. They were taken from the top of the "B" (rusty) horizon. Samples were not taken in swampy areas where only the "A" horizon was accessible.

The samples were collected by digging a small hole with a trenching tool type of spade. By this means it was possible to see where the top of the "B" horizon was. The soil sample was then taken from the top of the "B" horizon, either with the tip of the spade, or with a small trowel.

A note was then made of the grid line location, the sample number, the depth to the top of the "B" horizon, the direction of drainage, the type of vegetation (i.e. - grass, or mature forest) and the soil type.

Packaging

The samples were placed in 3" x 4 1/2" brown paper envelopes on which the sample numbers had been marked. These were closed with a triangular triple fold. (The bags are not anomalous in trace metals).

Sample Preparation

The samples were shipped to our laboratory in North Vancouver, where they were oven-dried at 80°C and sieved through an 80-mesh size stainless steel screen. (These sieves do not show noticeable wear even after several thousand samples have been sifted). The minus 80 mesh fraction was collected for all the analyses involved.

Analysis

The samples were analysed in the North Vancouver laboratory of Kennco Explorations, (Western) Limited, under the supervision of H. Goddard, laboratory manager, and G. Henrioulle, chemist.

A one gram -80 mesh sample is placed in a 25 x 200 mm test tube. Two ml of concentrated nitric acid is added. The sample is allowed to digest 15 minutes, and 5 ml of 70% perchloric acid is added. The sample is digested on a medium heat hot plate for four hours. After cooling, the sample is diluted to 55 ml with distilled water, agitated, and after settling, the solution is used for the determination of Mo, Cu, Zn, Pb, Ni, and Co by an Atomic Absorption Spectrophotometer (Techtron AA5).

Interpretation

Over most of the area a good sample which was representative of the "B" horizon was obtained. The depth of overburden varies from a few inches to probably about 30' over most of the areas sampled. Considering the type of soil, it would seem likely that soil geochemistry is a reliable technique on these parts of the property. The samples were analysed for total metal content in copper, molybdenum, zinc, lead, cobalt, and nickel.

Sample stations that are considered to be background are uncoloured. Sample stations that are considered to be only weakly anomalous are coloured yellow. The weakly anomalous levels are 150 ppm to 399 ppm for copper, 10 ppm to 19 ppm for molybdenum, 200 ppm to 499 ppm for zinc, and 30 ppm to 64 ppm for lead, 50 ppm to 99 ppm for cobalt. No samples were anomalous in nickel. Sample stations that are definitely anomalous are coloured red. The results are plotted on Plates No. 1 to 6.

The survey area is characterized by several small anomalies in copper and molybdenum. There are no large, well defined anomalies; however, the molybdenum anomaly on claims 15 and 17 should be explored by further soil sampling.

Zinc and lead are co-anomalous over most of the area surveyed; the lead anomaly being somewhat more widespread. Cobalt is only weakly anomalous in a few samples.

MAGNETOMETER SURVEY

Magnetic Survey Method

The survey grid had been established previously, as noted in the section on 'Soil Survey Field Work'. Readings were taken at 100' intervals along 9.5 miles of line, and at 200' intervals along 1.0 mile of baseline, as shown on Plate No. 8 on a scale of 1" = 400'.

A Jaelander Fluxgate magnetometer, model 67, was used to take the magnetic measurements. This measures vertical magnetic intensity with a sensitivity of 10 gammas on the 2500 gamma scale. This is sufficient resolution to distinguish between the two rock types being delimited. The lines were run in loop patterns, with the maximum time between check stations being three hours. This information was used to make diurnal corrections, and check for any unusual magnetic activity caused by magnetic storms.

Interpretation

Two rock units can be distinguished by their magnetic response. A group of syenitic intrusives of probable Cretaceous age underlie claim 37 and the northeast quarter of claim 36. They have a magnetic intensity of about 800 to 1000 gammas. These are in contact with andesitic volcanics of Upper Triassic age that underlie claims 34, 35, and 36. The volcanics have a magnetic intensity of about 1500 to 2200 gammas, and display considerably more magnetic relief than the intrusives. The contact has a northwest trend, and is in the vicinity of Line 0+00N.

There is a slightly higher magnetic intensity along parts of Line 28+00N, on claims 40, 75, and 139 Fr. This may be due to andesite underlying deeper drift cover known in this area, or it may be due to higher percentages of magnetite in hybrid intrusives.

The magnetometer survey has been successful in delimiting the extent of the andesite on claims 15, 34, 35, and 36. It is recommended that the magnetometer survey should be continued in this area so as to outline completely the extent of the andesitic rocks.

A continuation of the magnetometer survey may assist in delimiting the extent of andesite under heavy drift cover on claims 73 to 78. It is recommended that the magnetometer survey should be continued in this area. The survey lines should be laid out so as to cover known outcrops of the various rock types in order to facilitate interpretation.

Vancouver, B.C.

R. W. Stevenson P.Eng.

R. W. Stevenson

May 18, 1971

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
TO WIT:

In the Matter of Soil geochemical and magnetometer surveys done on Pine No. 6 and 7 Groups of mineral claims, in 1970.

I, R. W. Stevenson for Kennco Explorations, (Western) Limited

of Vancouver

in the Province of British Columbia, do solemnly declare that the costs incurred on assessment work on the Pine No. 6 and 7 Groups were as follows:

Chemical analysis of 163 samples - Cu,Mo,Zn,Pb,Co,Ni		$ 733.50
Wages & Board - M. Tavela July 17-30	$50.00 + $10.00	840.00
- D.R. Reid July 17-30	$21.00 + $10.00	434.00
Magnetometer Rental 14 days @ $9.00/day		126.00
Drafting & Typing		116.00
	Total =	$2,249.50

Cost of soil geochemical survey	= $1,464.50
Cost of magnetometer survey	= $ 785.00
	$2,249.50

Total amount expended on Group 6	= $1,620.50
Total amount expended on Group 7	= $ 629.00
	$2,249.50

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 21 day of May 1971, A.D.

R. W. Stevenson

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

Sub-mining Recorder

N

Group No. 6

Group No. 7

Legend

Soil Sample

400+ Anomalous

150-399 Weakly Anomalous

3031 M-2

All Metal Values in P. P. M.

To accompany Soil Geochemical Survey Report by R.W. Stevenson, P. Eng., on the Pine No. 6 & No. 7 Groups, situated 13 miles northeast of Thutade Lake (57° 126° SW), in the Omineca Mining Division, dated May 18, 1971

R.W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine Mineral Claims
Omineca M. D., B.C.

Copper in Soil

DATA BY: M. T.		N.T.S. 94 - E	PL. NO.: 1
DRAWN BY: B.F.	DATE: 1/2/71	SCALE:	
TRACED BY:	DATE:	1" = 400'	
REVISIONS:			

N

Legend

Soil Sample

+20 Anomalous

10-19 Weakly Anomalous

3031 M-3

All Metal Values in P. P. M.

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KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine Mineral Claims
Omineca M. D., B.C.

Molybdenum in Soil

DATA BY: M.T.		N.T.S. 94 - E	PL. NO.: 2
DRAWN BY: B.F.	DATE: 1/2/71	SCALE: 1" = 400'	
TRACED BY:	DATE:		
REVISIONS:			

Group No. 6

Group No. 7

N

Group No. 6

Group No. 7

141 Fr.

140 Fr.

139 Fr.

138 Fr.

137 Fr.

142 Fr.

Legend

Soil Sample

Anomalous

Weakly Anomalous

3031 M-4

All Metal Values in P. P. M.

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R.W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine Mineral Claims
Omineca M. D., B.C.

Zinc in Soil

DATA BY: M. T.		N.T.S. 94 - E	PL. NO.: 3
DRAWN BY: B.F.	DATE: 1/2/71	SCALE:	
TRACED BY:	DATE:	1" = 400'	
REVISIONS:			

N

Group No. 6

Group No. 7

Legend

Soil Sample

Anomalous

Weakly Anomalous

3031 M5

All Metal Values in P. P. M.

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R.W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine Mineral Claims
Omineca M. D., B.C.

Lead in Soil

DATA BY: M.T.		N.T.S. 94 - E	PL. NO.: 4
DRAWN BY: B.F.	DATE: 1/2/71	SCALE:	
TRACED BY:	DATE:	1" = 400'	
REVISIONS:			

N

Group No. 6

Group No. 7

142 Fr.

141 Fr.

140 Fr.

139 Fr.

138 Fr.

137 Fr.

136 Fr.

Legend

Soil Sample

Anomalous

Weakly Anomalous

3031 M·6

All Metal Values in P. P. M.

To accompany Soil Geochemical Survey Report by R.W. Stevenson, P. Eng., on the Pine No. 6 & No. 7 Groups, situated 13 miles northeast of Thutade Lake (57° 126° SW), in the Omineca Mining Division, dated May 18, 1971

R.W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine Mineral Claims
Omineca M. D., B.C.

Cobalt in Soil & Silt

DATA BY: M.T.		N.T.S. 94 - E	PL. NO.: 5
DRAWN BY: B.F.	DATE: 1/2/71	SCALE:	
TRACED BY:	DATE:	1" = 400'	
REVISIONS:			

N

Group No. 6

Group No. 7

142 Fr.

141 Fr.

140 Fr.

139 Fr.

138 Fr.

137 Fr.

Legend

Soil Sample

Anomalous

Weakly Anomalous

3031 M-7

All Metal Values in P. P. M.

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R.W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine Mineral Claims
Omineca M. D., B.C.

Nickel in Soil

DATA BY: M.T.		N.T.S. 94 – E	PL. NO.: 6
DRAWN BY: B.F.	DATE: 1/2/71	SCALE:	
TRACED BY:	DATE:	1" = 400'	
REVISIONS:			

N

Group No. 6

Group No. 7

Legend

Soil Sample

3031 M-8

To accompany Soil Geochemical Survey Report by R.W. Stevenson, P. Eng., on the Pine No. 6 & No. 7 Groups, situated 13 miles northeast of Thutade Lake (57° 126° SW), in the Omineca Mining Division, dated May 18, 1971

R.W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine Mineral Claims
Omineca M. D., B.C.

Soil Sample Sites

DATA BY: M. T.		N.T.S. 94 - E	PL. NO.: 7
DRAWN BY: B.F.	DATE: 1/2/71	SCALE:	
TRACED BY:	DATE:	1" = 400'	
REVISIONS:			

N

141 Fr.

142 Fr.

140 Fr.

139 Fr.

138 Fr.

137 Fr.

Contours

	0	– 500	Gammas
	500	– 1000	Gammas
	1000	– 1500	Gammas
	1500	– 2000	Gammas
	2000	– 2500	Gammas
	2500	– 3000	Gammas
	3000	– 3500	Gammas

3031 M-9

To accompany Magnetometer Survey Report by R.W. Stevenson, P. Eng., on the Pine No. 6 & No. 7 Groups, situated 13 miles northeast of Thutade Lake (57° 126° SW), in the Omineca Mining Division, dated May 18, 1971

R.W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Pine Mineral Claims
Omineca M. D., B.C.
Magnetometer Survey

DATA BY: M. T.		N.T.S. 94 – E	PL. NO.: 8
DRAWN BY: B.F.	DATE: 1/2/71	SCALE:	
TRACED BY:	DATE:	1" = 400'	
REVISIONS:			