

373

KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT

ON

GEOCHEMICAL SURVEYS

G.C. 26-33 M.C.'s, G.C. 98-101 M.C.'s,  
G.C. 115, 116 M.C.'s, G.C. 2 Fr. M.C.

Liard M.D.  
British Columbia  
57° 131°SE

By: D. A. Barr

August 25, 1961

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NORTHWESTERN EXPLORATIONS LIMITED		
LOCATION MAP GALORE CREEK AREA BRITISH COLUMBIA		
DATE: 12/12/60	DRAWN BY:	PLATE NO.: 1
REVISED BY:	DATE:	SCALE:
		1:250,000

KENNCO EXPLORATIONS, (WESTERN) LIMITED

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G.C. 26-33 M.C.'s, G.C. 98-101 M.C.'s  
G.C. 115, 116 M.C.'s, G.C. 2 Fr. M.C.

INTRODUCTION

This report describes the results of geochemical surveys completed during 1961 on G.C. 26-33 M.C.'s, G.C. 98-101 M.C.'s, G.C. 115, 116 M.C.'s, and G.C. 2 Fr. M.C. situated on the west side of the confluence of the east and west forks of Galore Creek, approximately 7 miles from the mouth of Galore Creek. (c.f. Plate No. 1)

LOCATION AND ACCESS

The northern part of the G.C. claims included in the soil survey lie on a gentle east-facing morainal slope, lying on the west side of Galore Creek. The west fork of Galore Creek (West Fork) has entrenched itself through moraine to the south, and the southern part of the claim group lies on the east side of a glacial basin.

All operations in the Galore Creek area have relied on a helicopter to mobilize men and supplies from landings on Stikine River at the mouth of Scud and Anuk Rivers. Ground travel within the claim area is slow as a result of thick underbrush at lower elevations. Consequently a helicopter was used in transporting men to the more distant points on the soil sampling grid, in order to permit greater coverage per man-day.

### SOIL PROFILES

Much of the claim area is believed to be underlain by unsorted to poorly sorted glacial moraine. True soils are being developed on the fringes of the more recently deposited moraine, and as a general rule this corresponds with the vegetation limit. The western margin of soil coverage in the southern part of the claim group subsequently contains a clay-rich soil which can be correlated with the C horizon. With the progressive development of soils to the north and east, well defined A and B horizons occur. In sampling a consistent attempt was made to sample the top of the B horizon wherever developed. Where this horizon was not present a notation was made of the horizon sampled. A record has also been maintained of the depth to the sampled horizon.

### METHOD

The soil survey was completed on 34,400 feet of line, with samples collected at intervals of 100 feet on parallel east-west picket lines spaced 800 feet apart.

A total of 322 soil samples and 24 stream sediment samples were collected, bagged and shipped to the Company's Vancouver laboratory for analyses. The samples were then oven-dried, screened to minus 80 mesh, and analysed for total copper and total molybdenum.

### PURPOSE

Soil tests were undertaken with the object of delineating any areas with copper and molybdenum contents above background values. Although the area is largely underlain by unknown depths of glacial moraine, evidence of bedrock protruding above moraine occurs, and the survey was initiated with the objective of detecting copper-molybdenum mineralization in areas of shallow drift cover.

## RESULTS AND INTERPRETATION

The results of the soil and stream sediment surveys are indicated on Plate No.'s 2 and 3. The relative intensity of copper contents in soil is indicated by contours which are twice the value of adjacent contours.

Guidance for contouring has been established by referring to glacial trends, in areas where doubt or choice exists concerning contour linkage from line to line. The relative abundance of copper in stream sediment is indicated by worm lines coloured upstream from the site in conformity with the arbitrarily selected soil contours.

Where insufficient data exists on several lines to indicate the relative position of contours broken lines have been used. This procedure has been necessary on certain lines on the molybdenum map as a result of accidental burning of several samples in the process of drying.

All results are expressed in parts per million ( p.p.m.)

### Total copper results

Anomaly A is a strong northerly trending feature apparently centered between 222-225E on line 208N. Two adjacent sites contain 1464 p.p.m. and 2020 p.p.m. copper. The strength of the anomaly relative to the balance of the area sampled suggests the possibility that the source of copper in soil might lie in bedrock under a thin mantle of moraine, or in depositional moraine derived from only a short distance southerly.

Anomaly B which trends northerly for 2000 feet across the west ends of lines 200N, 208N and 216N contains values between 500-900 p.p.m. Its southern portion coincides with a morainal ridge paralleling the anomaly. Streams draining to the northeast in this area reflect the high content of the anomaly. The most prominent of these streams contain values of 600-700 p.p.m. copper in stream sediment where it crosses lines 208N and 216N.

Anomaly C is represented by six adjacent sites on line 232N which all contain in excess of 1000 p.p.m. total copper. Although this represents a line length of 600 feet, the location of the sites coincides with the bed and immediate slopes bordering West Fork. Inasmuch as the soils collected are all sands, they probably represent deposition as river sands from West Fork at an earlier stage in its development. These values are in accord with

recent results obtained from periodic testing of West Fork stream sediments 1800 feet downstream. They all check with stream sediment values of West Fork on lines 224N and 232N.

Anomaly D is a weak anomaly which occurs at the west side of line 240N in an area underlain by a terrace-like accumulation of ground moraine on the west side of Galore Creek. It forms the southern extremity of a northeasterly trending belt of equivalent copper content in soil. The anomaly is of interest since it appears to cut across northeasterly glacial trends, and may therefore reflect mineralization in bedrock beneath shallow moraine.

Anomaly E at the west end of line 264N represents build-up of soil content to the northwest. The consistently high background content of copper in soils in this area probably reflects accumulation of copper in soils derived by downstream carriage of copper-bearing fragments from a large gully which heads in slopes to the west. The area lies at the base of steep slopes near bedrock.

Anomaly F is indicated by an isolated site containing 976 p.p.m. copper on line 264N.

#### Molybdenum results

Molybdenum values show no consistent relationship to copper values. Such a condition can be expected in view of the relatively higher mobility of molybdenum in ground water.

Both anomalies A and B have moderate molybdenum values associated with the northeastern flanks of the anomalies. An area of moderately high molybdenum content also occurs on line 192N, southeasterly from anomaly B.

The inconsistency of molybdenum-copper ratios in both soil and stream sediment is illustrated by comparing values in the vicinity of anomaly C.

The highest molybdenum value obtained, 164 p.p.m., occurs on line 248N in an area of moderately high molybdenum background. The value and nearby high molybdenum contents correspond to the northeasterly trending anomaly D.

No correspondingly high molybdenum values are associated with copper anomalies E and F.

FINANCIAL STATEMENT

<u>Wages &amp; Salaries</u>	<u>Date</u>	<u>Amount</u>	<u>Man Days</u>	<u>Total</u>
D. A. Barr	June 25	\$ 35.00	1	
G. Davis	July 9	17.65	1	
G. A. Rayner	June 25	21.80	1	
J. Nuppenen	July-August/61	110.00	6	
				<u>\$ 184.45</u>
<u>Geochemical Sample analyses</u>				
322 samples analysed for total copper, molybdenum @ \$1.50				483.00
<u>Line Cutting</u>				
6.5 line miles @ \$90.00 per line mile				585.00
<u>Direct Costs applicable</u>				208.00
<u>Supervision</u>				
D. A. Barr - 2 days @ \$35.00				<u>70.00</u>
				<u><u>\$1,530.45</u></u>

Galore Creek, B.C.

August 25, 1961



D. A. Barr



LIST OF CLAIMS AND WORK DISTRIBUTION

<u>Claim No.</u>	<u>Record No.</u>	<u>Tag No.</u>	<u>Soil Survey</u>	<u>Amt. Claimed</u>	<u>Years Applied</u>
G.C. 26	8668	390746			1
27	8669	390747			1
28	8670	390748			1
29	8671	390749			1
30	8672	390750			1
31	0673	390751			1
32	8674	390752			1
33	8675	390753			1
98	8824	228798			1
99	8825	228799			1
100	8826	228740			1
101	8827	228741			1
115	9612	405715			1
116	9613	405716			1
12 Fr.	9606	390792			1
			\$1530.45	\$1500.00	15



LEGEND

- CREEK
  - GLACIAL RIDGE
  - RIVER GRAVEL, SAND
  - SOIL SITE
  - STREAM SEDIMENT SITE
  - TOTAL MOLYBDENUM IN SOIL - P.P.M.
  - TOTAL MOLYBDENUM IN STREAM SEDIMENT - P.P.M.
  - PICKET LINE REFERENCE
- TOTAL MOLYBDENUM IN SOIL CONTOURS
- 0 - 4 P.P.M.
  - 4 - 8 P.P.M.
  - 8 - 16 P.P.M.
  - 16 - 32 P.P.M.
  - 32 - 64 P.P.M.
  - 64 - 128 P.P.M.
  - GREATER THAN 128 P.P.M.

373 MI

*DeSaw*  
September 7/61

KENNCO EXPLORATIONS (WESTERN) LIMITED		
TOTAL MOLYBDENUM IN SOILS AND STREAM SEDIMENTS PART OF <b>GALORE CREEK PROPERTY</b> (GC CLAIMS) Galore Creek, Liard M.D. British Columbia		
DATE: 25/8/61	DRAWN BY: <i>DeSaw</i>	PLATE NO. 3
REVISED BY	DATE	SCALE: 1" = 400'



LEGEND

- CREEK
- GLACIAL RIDGE
- RIVER GRAVEL, SAND
- SOIL SITE
- STREAM SEDIMENT SITE
- TOTAL COPPER IN SOIL - P.P.M.
- TOTAL COPPER IN STREAM SEDIMENT - P.P.M.
- PICKET LINE REFERENCE
- REPORT REFERENCE
- TOTAL COPPER IN SOIL CONTOURS:
  - LESS THAN 67 P.P.M.
  - 67 - 124 P.P.M.
  - 125 - 249 P.P.M.
  - 250 - 499 P.P.M.
  - 500 - 999 P.P.M.
  - GREATER THAN 999 P.P.M.

373

(M2)

*Ref Sam*  
September 7/61

KENNCO EXPLORATIONS (WESTERN) LIMITED		
TOTAL COPPER IN SOILS AND STREAM SEDIMENTS PART OF GALORE CREEK PROPERTY ( G C CLAIMS ) Galore Creek, Liard M.D. British Columbia		
DATE: 24 / 8 / 61	DRAWN BY: <i>Ref Sam</i>	PLATE NO. 2
REVISED BY:	DATE:	SCALE: 1" = 400'