3312

KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT

ON

SOIL AND SILT GEOCHEMICAL SURVEY

KLI NO. 1 GROUP
(Kli Mineral Claims 1-38)

Situated at the headwaters of Kliyul Creek
Omineca Mining Division,
British Columbia

56°30'N, 126°09'W 94 D / 8E, 9E

July 30 to August 5, 1971

By

R. W. Stevenson, P. Eng.

October 8, 1971

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

Kennco Explorations, (Western) Limited

KLI CLAIMS

Situated at the headwaters of Kliyul Creek

Omineca Mining Division
British Columbia

56° 126° NE & SE

R. S. F. Stevenson

LOCATION MAP

Scale:
1 : 250,000

INTRODUCTION

The Kli No. 1 Group of mineral claims discussed in this report is situated at the headwaters of Kliyul Creek, British Columbia. The exploration work on these claims consisted of soil and silt geochemical surveys.

The work was done under the supervision of R.W. Stevenson, P.Eng. The personnel employed are listed in the 'Statement of Costs'.

LOCATION AND ACCESS

The property is situated at Latitude 56°30'N, Longitude 126°09'W, about 125 miles northeast of Smithers, British Columbia. This is on a treeless plateau at about 5700' elevation, at the headwaters of Kliyul Creek.

Access to the property is from the Fort St. James-Germansen Landing-Aiken Lake road. This road is being extended northward along Lay Creek by the British Columbia Department of Mines and Petroleum Resources. It has now reached a point about five miles northeast of the property.

SILT GEOCHEMICAL SURVEY

Silt Survey Field Work

Sample Site Control

The silt survey area is characterized by numerous small seepages that cannot be identified on the available air photos. In order to plot the samples accurately, the B. C. Government drainage map was enlarged from 1" = 2640' to 1" = 400' so as to show the major drainages. Between the major streams, picket lines were used to give detailed control. Some of these lines had been run previously, but on the east half of the property new lines were run to be used in collecting soil samples. As each silt sample was taken, it was related either to a major stream or to a picket line station. The sample site was then plotted directly on the map as shown on Plate No. 9.

Silt Sample Collection

In general, the samples were taken at 200 to 400-foot intervals on the main streams, depending on where suitable silt could be found. More detail was added in areas containing numerous small streams or seepages.

Samples were taken from "active" material; that is, under flowing water, either in streams or seepages. The samples were taken with a shovel. Fine-grained silt was selected. Care was taken to avoid high organic material, and well washed clay.

The sample site and number were then plotted on the field map. A note was made of the sample number; the width, depth, and speed of flow of the stream; the type of sediment sampled; and any peculiarities of nearby drainage, such as above or below a pond or swamp.

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 taken to base camp, and partly air-dried. The samples were then 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. Total extraction from a weighed sample is achieved by digestion with concentrated nitric acid and 70% perchloric acid. Determination of the Cu, Mo, Zn, Pb, Ag, Co, Ni content is made by aspiration in a Techtron AA5 Atomic Absorption Spectrophotometer. To determine the gold content, a weighed sample is digested in aqua regia, filtered, and the gold removed by solvent-solvent extraction in an organic solvent, MIBK (methyl-isobutyl-key tone). This is aspirated in the Techtron AA5.

Interpretation

The purpose of the silt survey was to explore the potential of the property outside the soil survey area. The configuration of streams and seepages made this a practicable goal.

Sample stations that are considered to be background are uncoloured. Sample stations that are considered to be only weakly anomalous are coloured yellow; those that are anomalous are coloured red. The weakly anomalous levels vary somewhat with the size of the stream and the drainage area. For example, a value of 300 ppm Cu would be only weakly anomalous in a small seepage, but would be definitely anomalous in a large stream.

Numerous silt sample sites are strongly anomalous in copper on claims 8, 15, 17, and 19. This area also has a few anomalous gold and silver samples. Other metals are not anomalous.

A somewhat weaker copper anomaly occurs on claims 11, 12, 13, and 14. The other metals are virtually non-anomalous.

SOIL GEOCHEMICAL SURVEY

Soil Survey Field Work

Control Survey Lines

A control grid was established by chain and compass survey. Laths were used to mark the stations because the survey area is above tree-line. These were plotted on the base map at a scale of 1" = 400'.

Soil Sample Collection

The samples were taken at 100-foot intervals along the grid lines. They were taken from the top of the "B" (rusty) horizon where possible. In much of the grassland area above tree-line, soil horizon development is relatively poor.

The samples were collected by digging a small hole with a spade. By this means it was possible to examine the soil horizon development. A note was made of the grid line location, the sample number, the depth of sample, the horizon sampled, the direction of drainage, the type of vegetation, 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 taken to base camp, and partly air-dried. The samples were then 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.

The analytical procedures used on the soil samples were the same as those used on the silt samples. These are described in the section entitled 'Silt Geochemical Survey'.

Interpretation

The depth of overburden varies from a few inches to probably about 20' over most of the area sampled. Considering the type of soil, it would seem likely that soil geochemistry is a reliable technique on this part of the property. The samples were analysed for total metal content in copper, molybdenum, zinc, lead, silver, gold, 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 299 ppm for copper, 10 ppm to 19 ppm for molybdenum, 200 ppm to 499 ppm for zinc, 70 ppm to 149 ppm for lead, 2.0 ppm to 3.9 ppm for silver, 0.10 ppm to 0.29 ppm for gold, 50 ppm to 99 ppm for cobalt, and 200 ppm to 499 ppm for nickel. Sample stations that are definitely anomalous are coloured red.

There is a well defined copper in soil anomaly on claims 8 and 17. Scattered anomalous sites continue onto claims 6, 15, and 19. There are a few coincident gold anomalies, but in general the other metals are not anomalous.

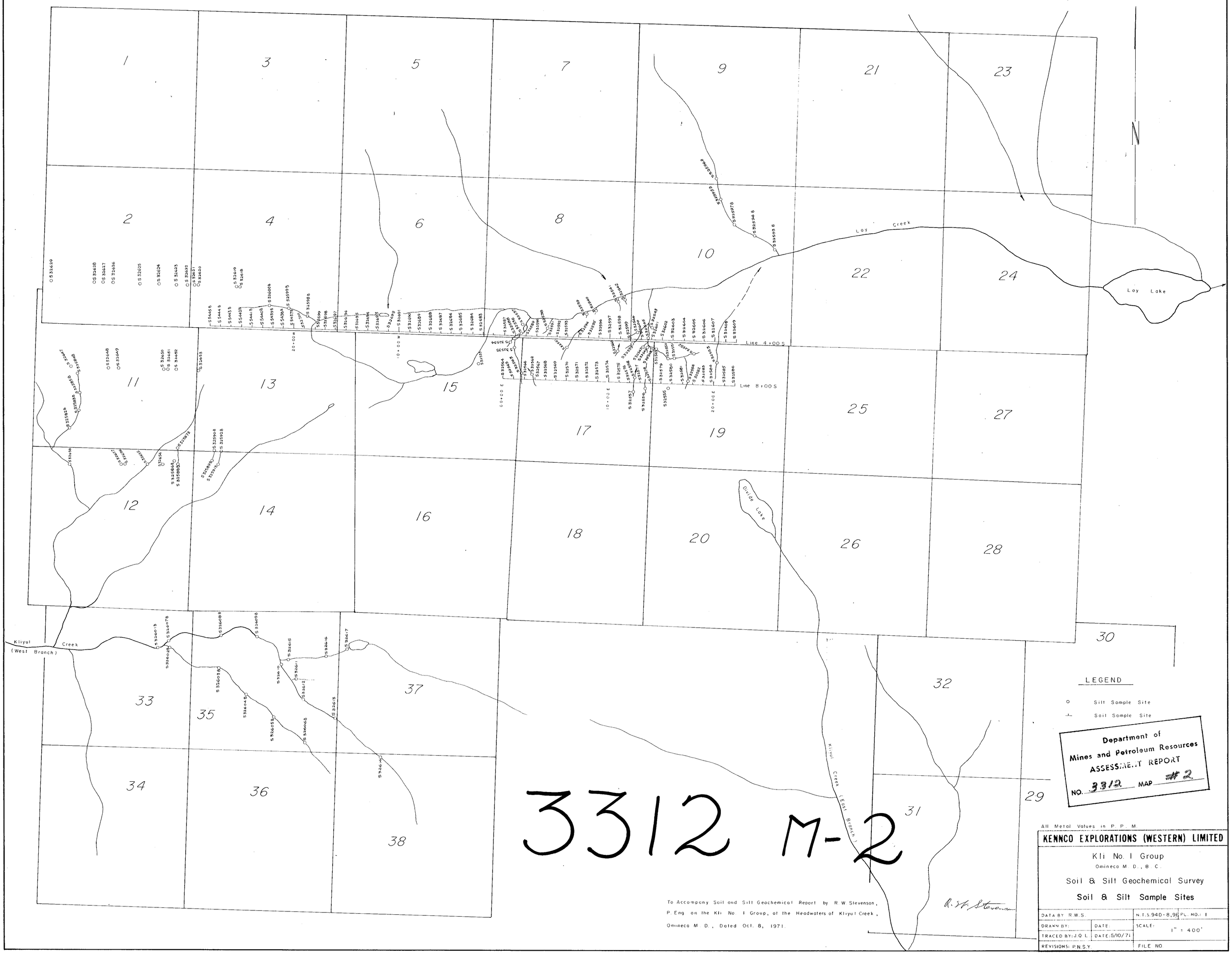
The overburden in the vicinity of the copper in silt anomaly on claims 11 to 14 was considered to be too deep for soil sampling to be a reliable technique.

More work should be done to ascertain the cause of the silt and soil anomalies.

Vancouver, B. C.

October 8, 1971

R. W. Stevenson, P.Eng.



3312 M-2

To Accompany Soil and Silt Geochemical Report by R.W. Stevenson, P. Eng. on the Kli No. 1 Group, at the Headwaters of Kliyul Creek, Omineca M.D., Dated Oct. 8, 1971.

R.W. Stevenson

LEGEND

○ Silt Sample Site

⊥ Soil Sample Site

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3312 MAP #2

All Metal Values in P.P.M.

KENNCO EXPLORATIONS (WESTERN) LIMITED

Kli No. 1 Group

Omineca M.D., B.C.

Soil & Silt Geochemical Survey

Soil & Silt Sample Sites

DATA BY: R.W.S.		N.T.S. 94D-8,9E	PL. NO.: 1
DRAWN BY:	DATE:	SCALE: 1" = 400'	
TRACED BY: J.Q.L.	DATE: 5/10/71		
REVISIONS: P.N.S.Y.		FILE NO.	

LEGEND

- Silt Sample Site
- Soil Sample Site
- Anomalous
- Weakly Anomalous

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3312 MAP #3

All Metal Values in P. P. M.

To Accompany Soil and Silt Geochemical Report by R.W. Stevenson, P. Eng. on the Kli No. 1 Group, at the Headwaters of Kliyul Creek, Omineca M. D., Dated Oct. 8, 1971.

R. W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Kli No. 1 Group
Omineca M. D., B. C.

Soil & Silt Geochemical Survey

Copper in Soil & Silt

DATA BY: R.W.S.		N.T.S. 94D-8,9E	PL. NO.: 2
DRAWN BY:	DATE:	SCALE:	1" = 400'
TRACED BY: J.Q.L.	DATE: 5/10/71		
REVISIONS: P.N.S.Y.		FILE NO.	

LEGEND

- Silt Sample Site
- Soil Sample Site
- Anomalous
- Weakly Anomalous

All Metal Values in P. P. M.

To Accompany Soil and Silt Geochemical Report by R.W. Stevenson, P.Eng. on the Kli No. 1 Group, at the Headwaters of Kliyul Creek, Omineca M.D., Dated Oct. 8, 1971.

R.W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Kli No. 1 Group

Omineca M.D., B.C.

Soil & Silt Geochemical Survey

Molybdenum in Soil & Silt

DATA BY: R.W.S.		N.T.S. 94D-8,9E PL. NO.: 3
DRAWN BY:	DATE:	SCALE: 1" = 400'
TRACED BY: J.Q.L.	DATE: 5/10/71	
REVISIONS: P.N.S.Y.		FILE NO.

LEGEND

- Silt Sample Site
- Soil Sample Site
- Anomalous
- Weakly Anomalous

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3312 MAP 3

All Metal Values in P. P. M.

To Accompany Soil and Silt Geochemical Report by R W Stevenson, P Eng on the Kli No. 1 Group, at the Headwaters of Kliyul Creek, Omineca M. D., Dated Oct. 8, 1971

R. W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Kli No. 1 Group

Omineca M. D., B. C.

Soil & Silt Geochemical Survey

Zinc in Soil & Silt

DATA BY R.W.S		N.T.S. 94D-8,9E	PL. NO.: 4
DRAWN BY:	DATE:	SCALE:	1" = 400'
TRACED BY: J.Q.L.	DATE: 5/10/71		
REVISIONS P.N.S.Y.		FILE NO.	

Lay Creek

Lay Lake

Line 4+00 S

Line 8+00 S

20+00 W

10+00 W

00+00 E

10+00 E

20+00 E

Divide Lake

Kliyul (West Branch) Creek

Kliyul Creek (East Branch)

N

1 3 5 7 9 21 23

2 4 6 8 10 22 24

11 13 15 17 19 25 27

12 14 16 18 20 26 28

30

32

29

31

33 35 37

34 36 38

LEGEND

- Silt Sample Site
- Soil Sample Site
- Anomalous
- Weakly Anomalous

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3012 MAP

All Metal Values in P. P. M.

To Accompany Soil and Silt Geochemical Report by R. W. Stevenson, P. Eng. on the Kli No. 1 Group, at the Headwaters of Kliyul Creek, Omineca M. D., Dated Oct. 8, 1971

R. W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Kli No. 1 Group

Omineca M. D., B. C.

Soil & Silt Geochemical Survey

Lead in Soil & Silt

DATA BY: R.W.S.		N.T.S. 94D-8,9E PL. NO.: 5
DRAWN BY:	DATE:	SCALE: 1" = 400'
TRACED BY: J.O.L.	DATE: 5/10/71	
REVISIONS: P.N.S.Y.		FILE NO.

LEGEND

- Silt Sample Site
- Soil Sample Site
- Anomalous
- Weakly Anomalous

All Metal Values in P. P. M.

To Accompany Soil and Silt Geochemical Report by R. W. Stevenson, P. Eng. on the Kli No. 1 Group, at the Headwaters of Kliyul Creek, Omineca M. D., Dated Oct. 8, 1971.

R. W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Kli No. 1 Group
Omineca M. D., B. C.
Soil & Silt Geochemical Survey
Silver in Soil & Silt

DATA BY: R.W.S.		N.T.S. 94D-8,9E PL. NO.: 6
DRAWN BY:	DATE:	SCALE: 1" = 400'
TRACED BY: J.Q.L.	DATE: 5/10/71	
REVISIONS: P.N.S.Y.		FILE NO.

LEGEND

- Silt Sample Site
- Soil Sample Site
- Anomalous
- Weakly Anomalous

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3312 MAP # 8

All Metal Values in P. P. M.

To Accompany Soil and Silt Geochemical Report by R.W. Stevenson, P. Eng. on the Kli No. 1 Group, at the Headwaters of Kliyul Creek, Omineca M. D., Dated Oct. 8, 1971.

R.W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Kli No. 1 Group

Omineca M. D., B. C.

Soil & Silt Geochemical Survey

Gold in Soil & Silt

DATA BY: R.W.S.		N.T.S. 94D-8,9E PL. NO.: 7
DRAWN BY:	DATE:	SCALE: 1" = 400'
TRACED BY: J.Q.L.	DATE: 5/10/71	
REVISIONS: P.N.S.Y.		FILE NO.

Kliyul Creek (West Branch)

Kliyul Creek (East Branch)

Divide Lake

Lay Creek

Lay Lake

N

LEGEND

- Silt Sample Site
- Soil Sample Site
- Anomalous
- Weekly Anomalous

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3313 MAP #1

All Metal Values in P P M

To Accompany Soil and Silt Geochemical Report by R.W. Stevenson, P. Eng. on the Kli No. 1 Group, at the Headwaters of Kliyul Creek, Omineca M. D., Dated Oct. 8, 1971

R. W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Kli No. 1 Group

Omineca M. D., B. C.

Soil & Silt Geochemical Survey

Cobalt in Soil & Silt

DATA BY: R.W.S.	N.T.S. 94D-8,9E P. NO. 8
DRAWN BY: DATE	SCALE 1" = 400'
TRACED BY: J.Q.L. DATE: 5/10/71	
REVISIONS: P.N.S.Y.	FILE NO.

Lay Creek

Lay Lake

Line 4+00S

Line 8+00S

0+00E

10+00W

20+00W

10+00E

20+00E

Divide Lake

Kliyul (West Branch) Creek

Kliyul Creek (East Branch)

1 3 5 7 9 21 23

2 4 6 8 10 22 24

11 13 15 17 19 25 27

12 14 16 18 20 26 28

30

32

29

31

33 35 37

34 36 38

N

LEGEND

- Silt Sample Site
- Soil Sample Site
- Anomalous
- Weakly Anomalous

All Metal Values in P. P. M.

To Accompany Soil and Silt Geochemical Report by R.W. Stevenson, P. Eng. on the Kli No. 1 Group, at the Headwaters of Kliyul Creek, Omineca M. D., Dated Oct. 8, 1971.

R.W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Kli No. 1 Group

Omineca M. D., B. C.

Soil & Silt Geochemical Survey

Nickel in Soil & Silt

DATA BY: R.W.S		N.T.S. 94D-8,9E PL. NO.: 9
DRAWN BY:	DATE:	SCALE: 1" = 400'
TRACED BY: J.Q.L.	DATE: 5/10/71	
REVISIONS: P.N.S.Y.		FILE NO.