

378

KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT

ON

GEOLOGY AND GEOCHEMICAL SURVEYS

Duckling Claim Group No.2
(Dorel Mineral Claims No. 1 to 10 inclusive)

One and one-quarter miles east of Duckling Creek
Omineca River Area
Omineca Mining Division
British Columbia
55° 125° NE

93N / 14W

By
R.W. Stevenson

August 5 to August 17, 1961

TABLE OF CONTENTS

	<u>Page</u>
LIST OF CLAIMS & DISTRIBUTION OF WORK	1
INTRODUCTION	2
LOCATION AND ACCESS	2
FIELD PROCEDURES	3
Survey Lines and Base Map Control	3
Geological Survey	3
Geochemical Survey	4
INTERPRETATION	4
Geological Survey	4
Geochemical Survey	5

MAPS

Plate No. 1	Geology	1" = 400'
Plate No. 2	Geochemical Survey; Copper in soil	1" = 400'
Plate No. 3	Geochemical Survey: Molybdenum in soil	1" = 400'

DISTRIBUTION OF WORK

<u>Claim Group</u>	<u>Claim</u>	<u>Record No.</u>	<u>Distribution of Work</u>		<u>Years Work Claimed</u>
			<u>Geology</u>	<u>Geochem.</u>	
Duckling No. 2	Dorel No. 1	14018	52.50	154.25	1
	Dorel No. 2	14019	19.50	165.80	1
	Dorel No. 3	14020	37.00	115.65	1
	Dorel No. 4	14021	37.00	212.05	1
	Dorel No. 5	14022	54.50	7.70	1
	Dorel No. 6	14023	56.50	11.55	1
	Dorel No. 7	14024	37.00	0.00	1
	Dorel No. 8	14025	17.50	0.00	1
	Dorel No. 9	14026	35.00	0.00	1
	Dorel No. 10	14027	17.50	0.00	1
			<u>364.00</u>	<u>667.00</u>	<u>10</u>
		Total =	<u>\$1,031.00</u>		

The costs incurred on assessment work on the Duckling Claim Group No. 2 are as follows:

Geological Survey

Wages: R. W. Stevenson, August 5 to 14	\$350.00
Thin Sections (7 @ \$2.00)	<u>14.00</u>
	\$364.00

Geochemical Survey

Wages: G. Stewart, August 5 to 17	\$260.00
R. Cannon, August 5 to 17	234.00
Soil Analysis	<u>173.00</u>
	\$667.00

INTRODUCTION

The claim group discussed in this report is east of Duckling Creek, in the Omineca River area of British Columbia. The exploration work done on these claims during the period August 5 to August 17, 1961 consisted of geological mapping and a soil geochemical survey.

The geological mapping was done by R.W. Stevenson. The line-cutting and geochemical sampling were done by G. Stewart and R. Cannon under the supervision of R.W. Stevenson.

LOCATION AND ACCESS

The property is located at Latitude 55°54'N, and Longitude 125°19'W. It is about 1 1/4 miles east of Duckling Creek, 9 miles north of the Omineca River, and 25 miles west of Germansen Landing, British Columbia. Elevation ranges from 5100' to 6400' a.s.l. The claims cover an old cirque area which was partly smoothed out during the last stage of continental glaciation. Overburden is fairly continuous, except on the crests of ridges, and on a few cliff faces where valley glaciers have been active recently. It is probably not deep, except in the stream area on the northwest corner of the property. Average slopes in the soil survey area is about 15°. Elsewhere slopes become much steeper. The vegetation consists of grass and scrub Alpine Fir. The latter is very thick in some places.

From Germansen Landing, boat transportation was used on the Omineca River to reach a landing about two miles downstream from the mouth of Duckling Creek. This is about a six-hour trip upstream, with the boat loaded. It is a two and one half hour trip downstream empty. A horse trail passes about one mile west of the claims, at a point about 10 miles north of the Omineca River. An old foot trail was used from there to the pass leading into the cirque. This is located on the south boundary of Dorel Claim No. 8; and has an elevation of 5575' a.s.l.

FIELD PROCEDURES

Survey Lines and Base Map Control:

An east-west base line was cut with location such that north-south grid lines could be cut at 400' intervals which would cover that portion of the property to be tested by soil sampling. On some lines the dense growth of scrub timber made cutting difficult, while on other lines, the chainage markers had to be carried along because no trees were available. The grid lines were run by chain and compass, with sufficient control to allow accurate plotting of the resulting lines. A base map with scale of 1" = 400' was compiled from the survey notes. Claim location posts were chained in, in the grid area. This grid line system was used for control of the soil survey, and for mapping of outcrops within its area.

The grid lines were not extended to cover the geologic mapping done on the entire property, for several reasons. The cirque cliff on claims 5, 6, 9 and 10 made it impossible to continue chained lines in that area. Outcrops could easily and accurately be located on the government air photo, because ridges were above timber line and in the cirque bottom the trees grow in small distinct groups. The survey base line was accurately marked on the air photo overlay used for geologic mapping, and this was enlarged to the scale of 1" = 400'. The enlargement was used to prepare the base map of the property. Thus, correct scale was ensured by using the central portion of one air photo which was enlarged in accord with ground control.

Geological Survey:

The entire ten claims were mapped geologically. Because of the open nature of the country outcrops could be seen as mapping progressed over the property. In the grid line area, outcrops were marked on the air photo and tied in to the grid lines. Careful attention was paid to relating different phases of the same intrusive as well as to determining relative age relationships. Seven rock thin sections were made and studied. These were particularly valuable in establishing the origin of one of the rock units, where such information was not available from field data. The outcrops are plotted on a map with scale of 1" = 400'.

Geochemical Survey:

The geochemical survey consisted of a careful soil sample survey. The samples were taken at 100' intervals on lines 400' apart. Development of the soil profile was generally good, and samples were taken from the "B" (rusty) horizon. The samples were analysed for total copper and total molybdenum by perchloric acid extraction at the Kennco Explorations, (Western) Limited geochemical laboratory in North Vancouver. The results are plotted on maps with scale of 1" = 400'.

INTERPRETATION

Geological Survey:

A map of the geology is shown on Plate No. 1. Outcrop is fairly continuous along the crests of ridges, and on cirque cliff faces. This ridge line extends through claims 1, 3, 5, 6, 9, and 8. Elsewhere, there is a fairly uniform mantle of glacial drift. There were two stages of continental ice cover during Pleistocene time. Regional movement was from west to east, modified by local valleys. There is some local evidence to indicate that this ice moved from the north to the south and southeast in the area surveyed. The area enclosed by the ridge line was a partly developed cirque before the second stage of continental glaciation. The last continental ice movement partly smoothed it out, and deposited a layer of till. At the end of continental glaciation, an alpine glacier developed along the northeast and north sides of the ridge on claims 6, 9, and 10. The plucking action of this alpine ice exposed a good rock face on the cirque cliff. The movement of this ice down the valley deposited more till, but also deepened the valley sufficiently to expose the line of outcrops on claim No. 7.

The rocks underlying the claim area consist of two intrusives and a granitized sediment. The granitized argillite is presumably a roof pendant enclosed in the Hogen batholith. The contacts are obscured by drift and thus the field relationship is difficult to determine. In hand specimen, it is a fine grained, light green coloured rock, with very small feldspar porphyroblasts in places. Considerably more information was obtained by thin section study. The rock contains about 40% medium sized crystals of diopside in a groundmass of metamorphic plagioclase and white mica. There is about 1% accessory sphene. A section from near the contact contains appreciable carbonate.

The Hogem quartz diorite is a medium to somewhat fine grained, equigranular rock. It contains about 60% feldspar, 25% hornblende, 10% biotite, minor quartz, and accessory magnetite. It shows relatively little alteration. It is probably intrusive into the granitized argillite; however, the contacts are not exposed and, as will be explained later, they could have a faulted contact.

The syenite porphyry contains large tabular orthoclase phenocrysts in a fine to medium grained groundmass of orthoclase with minor amounts of hornblende, biotite, and magnetite. Minor variations in texture and composition are frequent and rapid. On the west side of the ridge on claim 10, there is a small zone of graphic granite. On claim 7, the rock in the most northerly outcrop is a crowded mass of small subhedral orthoclase phenocrysts. The syenite porphyry is clearly intrusive into the Hogem quartz diorite, as evidenced by the chilled contacts with the quartz diorite.

On claim 4, two outcrops consist of strong fault gouge. The approximate direction between the outcrops (which are about 150' apart) is N 35° W. Each of these outcrops is exposed by a stream bed. The fault is not observable crossing the ridge on claim No. 5; however, it may occur at the drift-obscured contact between the granitized argillite and the syenite porphyry. This raises the possibility that the granitized argillite could have a faulted relationship to the other rocks in the survey area.

Geochemical Survey:

Over most of the survey area, a good sample which was representative of the "B" horizon could be obtained. Two variables affecting the interpretation of results are: change in soil depth between the ridge and the valley floor, and the possibility of soil creep on the upper (treeless) portion of the slope. The samples were analysed for total copper and total molybdenum. The results are discussed separately.

The total copper in soil results are plotted on Plate No. 2. The background level is considered to be about 60 to 110 ppm. Anomalous values are fairly uniform over most of the grid area, except for the extreme east edge, where they are noticeably higher. The most plausible explanation for this is a thinning of the soil cover near the ridge top. Elsewhere, the anomalous results merit further investigation to determine if they overly rock with sufficient metal content to be of economic interest.

The total molybdenum in soil results are plotted on Plate No. 3. They show a uniform background of about 3 ppm molybdenum in the grid area. There are a few results in the 6 to 8 ppm range, although it is questionable whether these are really anomalous. If they are anomalous, they may indicate a very slight change in mineralization, or they may be caused by variations in mobility relative to soil depth. However, they do demonstrate that molybdenum content in the underlying rock is extremely low.

Vancouver, B. C.

November 21, 1961

R. W. Stevenson
R. W. Stevenson



DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
To Wit:

In the Matter of Assessment Work re
Duckling Claim Group No. 2

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

of Vancouver

in the Province of British Columbia, do solemnly declare that the costs incurred on assessment work on the Duckling Claim Group No. 2 are as follows:

Geological Survey

Wages: R.W. Stevenson, August 5 to August 14 \$ 350.00
Thin Sections: (7 @ \$2.00) 14.00

Geochemical Survey

Wages: linecutting & sampling
G. Stewart, August 5 to August 17 260.00
R. Cannon, August 5 to August 17 234.00
Soil Analysis: 173.00

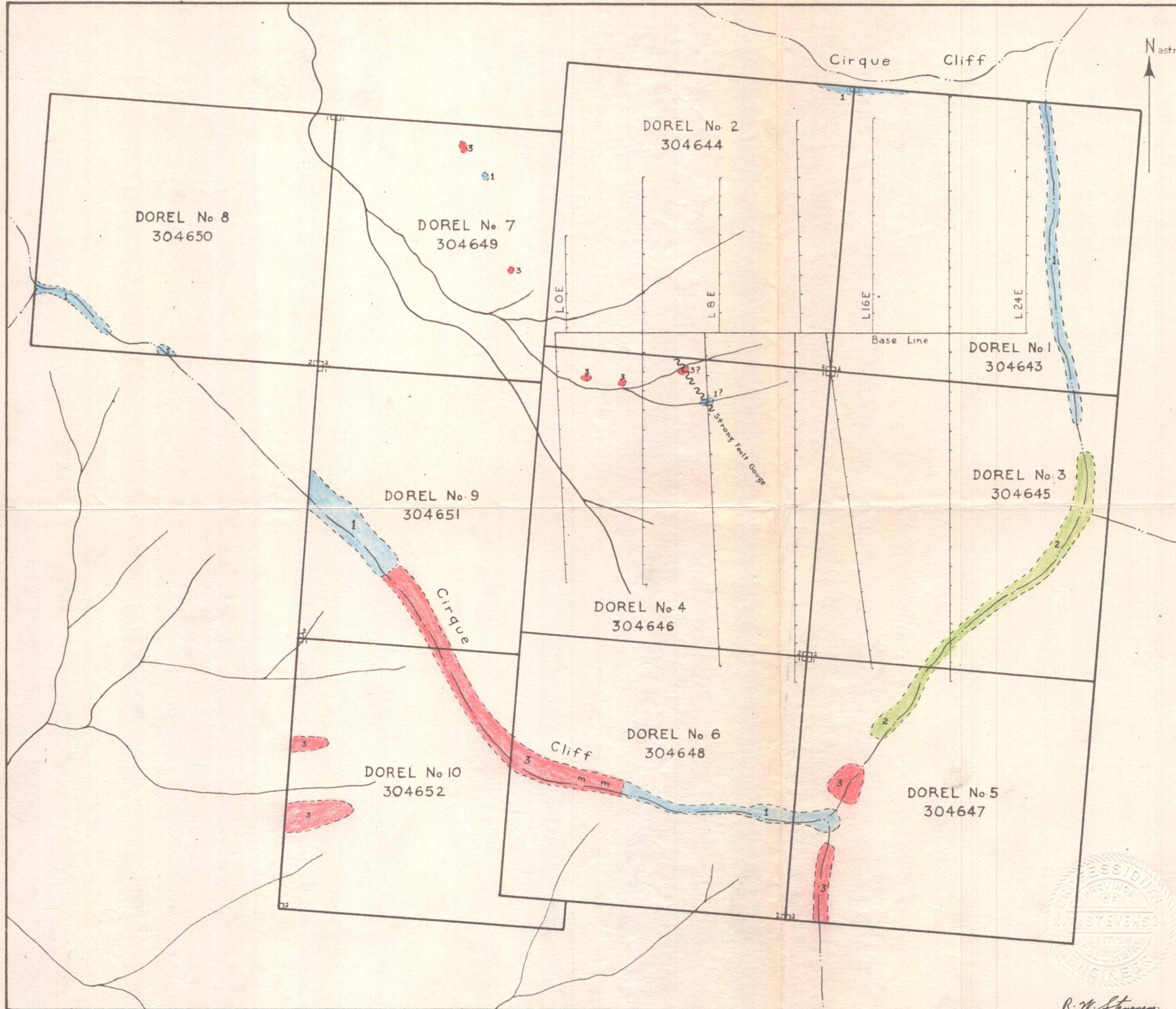
Total \$1031.00

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 29
day of November, 1961, A.D.

R. W. Stevenson

Jill Turner
Sub-Mining Recorder ~~Commissioner~~
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.



LEGEND

- 3 Syenite Porphyry
- 2 Granitized Argillite - plagioclase, mica, diopside
- 1 Hogem Quartz Diorite

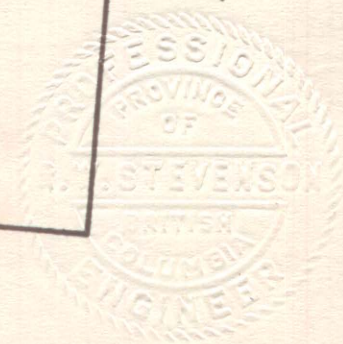
SYMBOLS

- magnetite m
- fault ~~~~~
- outcrop area ○

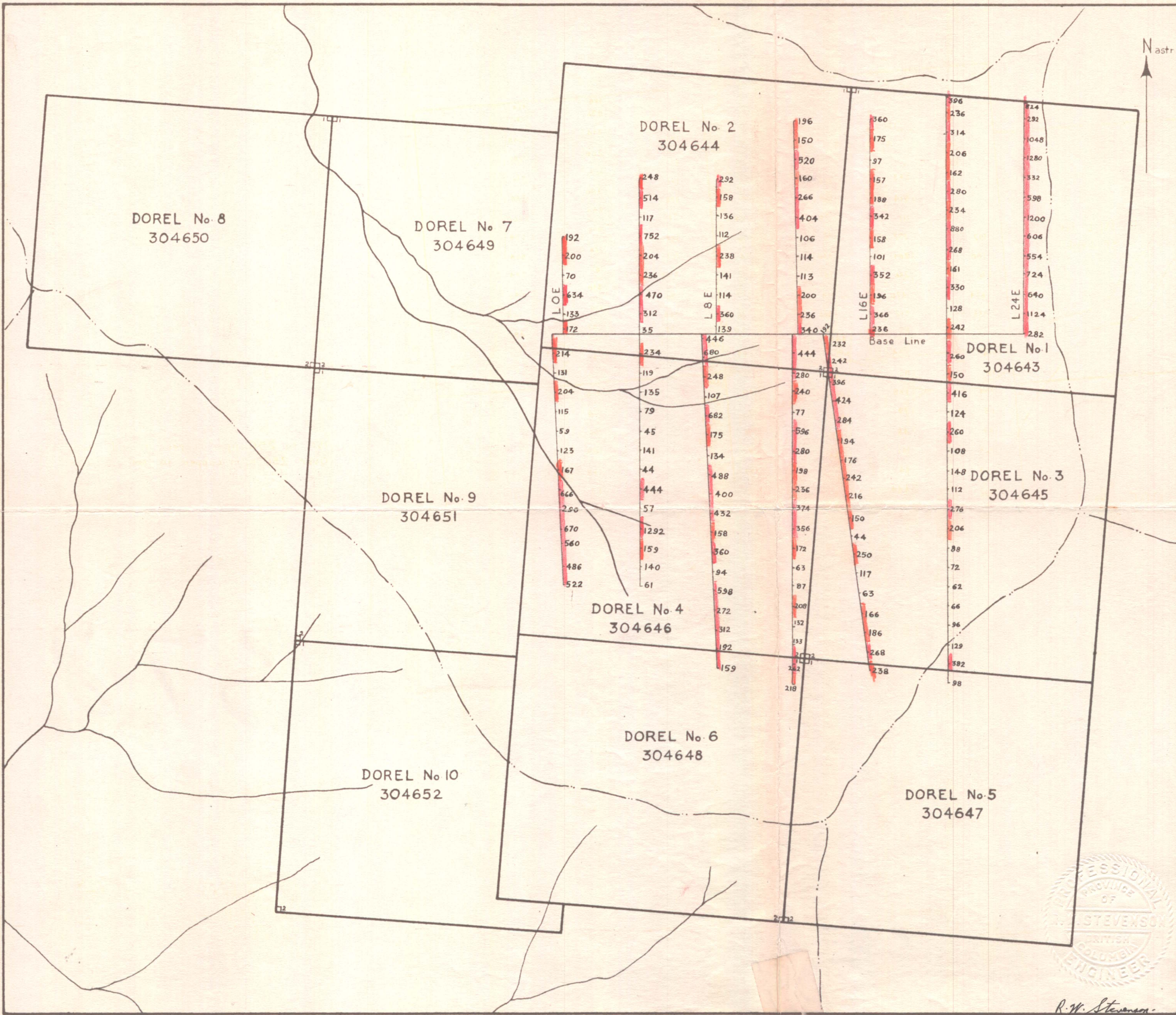
378

MI

KENCO EXPLORATIONS (WESTERN) LIMITED		
Hogem Area Omineca Mining Division, B.C. Duckling Claim Group No. 2 DOREL CLAIMS 1 TO 10 GEOLGY		
DATE: Nov. 15, 1961.	DRAWN BY: R.W.S.	PLATE NO. 1
REVISED BY:	DATE:	SCALE: 1 inch = 400 feet



R. W. Stevenson

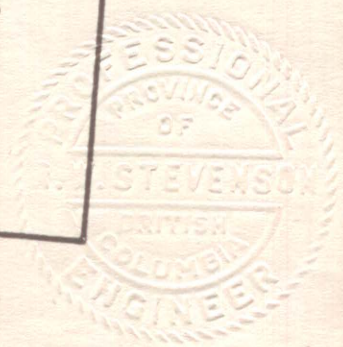


150 to 250 ppm copper in soil
 Over 250 ppm copper in soil

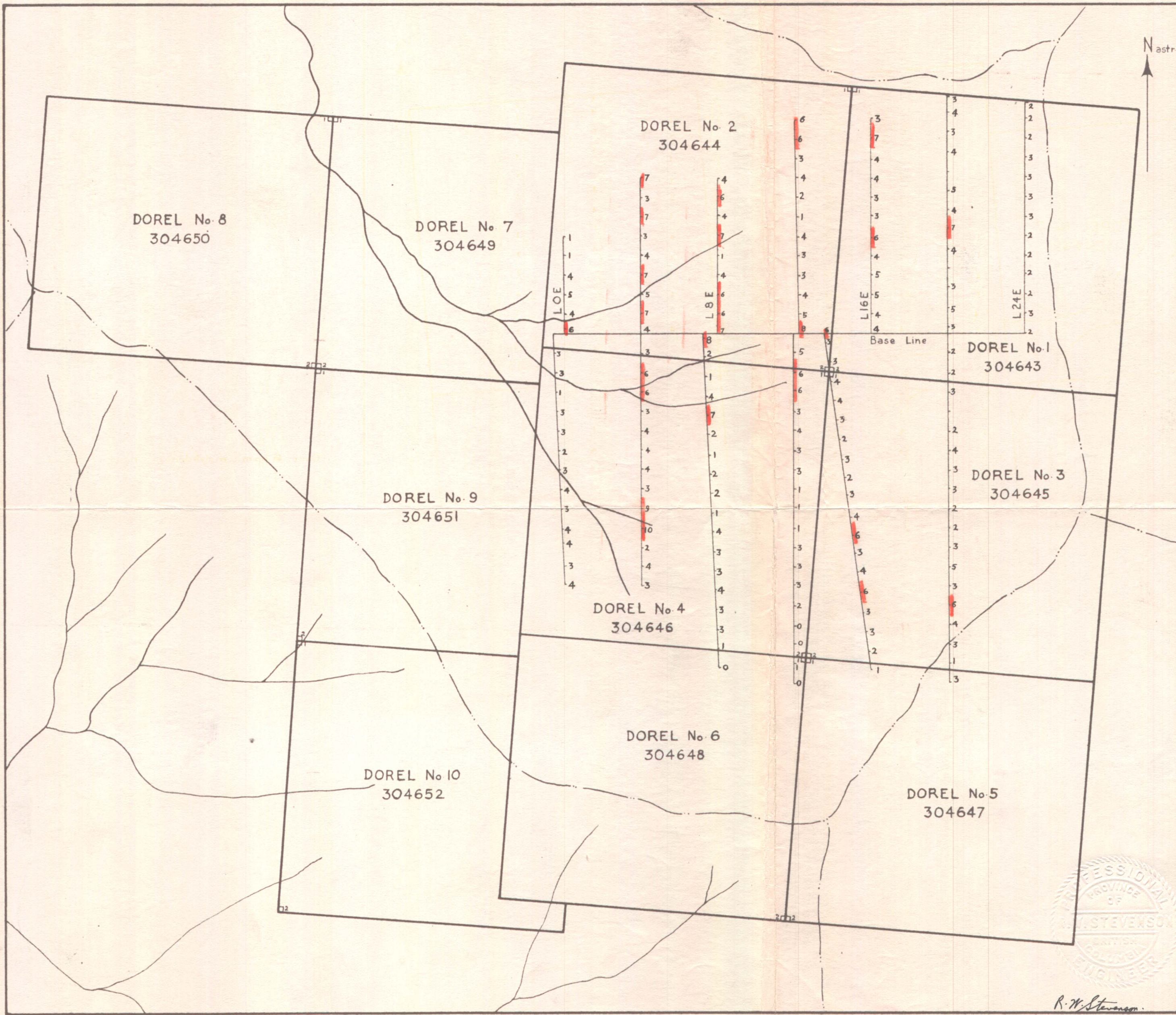
Total metal content by perchloric acid extraction

378 (12)

KENNCO EXPLORATIONS (WESTERN) LIMITED		
Hogem Area Omineca Mining Division, B.C. Duckling Claim Group No 2		
DOREL CLAIMS 1 TO 10 GEOCHEMICAL SURVEY p.p.m. Copper in Soil		
DATE: Nov. 14, 1961	DRAWN BY: R.W.S	PLATE NO. 2
REVISED BY	DATE	SCALE: 1 inch = 400 feet



R.W. Stevenson



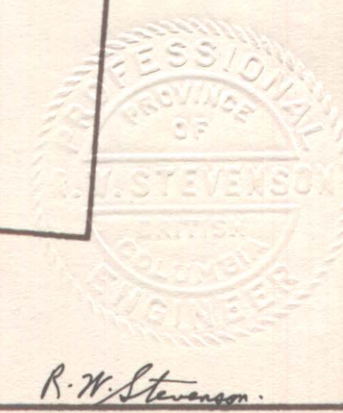
Over 6 ppm molybdenum in soil

Total metal content by perchloric acid extraction

378

M3

KENNCO EXPLORATIONS (WESTERN) LIMITED		
Hagem Area Omineca Mining Division, B.C. Duckling Claim Group No. 2 DOREL CLAIMS 1 TO 10 GEOCHEMICAL SURVEY p.p.m. Molybdenum in Soil		
DATE: Nov. 14, 1961	DRAWN BY: R.W.S.	PLATE NO. 3
REVISED BY:	DATE:	SCALE:
1 inch = 400 feet		



R. W. Stevenson

374

376