

366

KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT

on

GEOLOGICAL AND GEOCHEMICAL SURVEYS

Duckling No. 1 Claim Group
(Dorothy Mining Claims No. 1, 3, 8)
(Eldor Mining Claims No. 1, 2, 3, 4)

One-half mile east of Duckling Creek
Omineca River Area
Omineca Mining Division
British Columbia
55° 124° NW

93N / 14W

By

R.W. Stevenson

July 21 to August 4, 1961

GOVERNMENT AGENT

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OCT - 2 1961

SMITHERS, B. C.

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MAPS

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

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 366	MAP

INTRODUCTION

The claim group discussed in this report is on the east side of Duckling Creek, in the Omineca River area, B. C. The exploration work done on the claims during the period July 21st to August 4th, 1961 consisted of geological mapping and a soil geochemical survey.

The geological mapping was done by R.W. Stevenson, assisted by G. Stewart. The geochemical sampling was done by R. Cannon, under the supervision of R.W. Stevenson. The line-cutting was done by G. Stewart, R. Cannon, G. Bara and T. Evans.

LOCATION AND ACCESS

The property is located at Latitude 55°54'N, Longitude 125°20'W. It is about a half mile east of Duckling Creek, 9 miles north of the Omineca River, and 26 miles west of Germansen Landing, B. C. Elevations range from 3800' to 5700' a.s.l. The eastern half of claims Eldor No.'s 1 and 3 cover relatively flat valley bottom which is mostly spruce swamp. The remainder of the property is on the west side of a north trending ridge. The average slope is about 30°. The forest cover varies from mixed spruce and fir, to scrub alpine fir on the east margin of the claims.

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 just west of the claims at a point about 10 miles north of the Omineca River. A foot trail leads from there to the base line for the survey grid.

FIELD PROCEDURES

Control Survey Lines: The claim location line was cut out and surveyed as a base line. East-west lines were cut and chained to provide control for the soil sample survey and the geologic mapping.

These were cut at 200' intervals on the Eldor claims and Dorothy No. 3; and at 800' intervals elsewhere. A base map with scale of 1" = 400' was compiled from the survey notes. Claim location posts were chained in along the base line. The entire grid system shown on the maps was cut during 1961. Old grid lines on the Dorothy claims, cut for a 1951 survey, were so overgrown that they could not be re-located.

Geological Surveys: The entire seven claims were mapped geologically. On the Eldor claims, east-west traverses were made along the survey lines. On the west half of Eldor No.'s 1 and 3, pace and compass lines were continued at 400' intervals to make sure that no outcrop occurred in the spruce swamp. On the Dorothy claims, north-south pace and compass traverses were run, with the chained east-west survey lines serving as control. Careful attention was paid to relating different phases of the same intrusive, as well as to determining relative age relationships.

Geochemical Survey: The geochemical survey consisted of a careful soil sample survey. On the Eldor claims and part of the Dorothy No. 3 claim, samples were taken at 100' intervals on lines 200' apart. Elsewhere, samples were taken at 100' intervals on lines 800' apart. Samples were taken from the "B" horizon wherever possible. Exceptions to this occurred where the "A" zone was the only horizon accessible in seepage areas, and in rocky areas where insufficient soil could be found to take a sample. The samples were analyzed for total copper and total molybdenum by perchloric acid extraction at the Kennco Explorations, (Western) Limited geochemical laboratory in North Vancouver. The results were plotted on maps which are the same scale as the geological map (1" = 400').

INTERPRETATION

Geological Survey: A map of the geology is shown on Plate No. 1. Outcrop is not abundant in the claim area; however it is plentiful relative to similar side-hill areas elsewhere. This is largely due to the fact that the north-south trending acid dyke has a definite topographic expression due to its greater resistance to erosion. A fairly continuous mantle of glacial till covers most of the area. It probably does not exceed a few tens of feet except on the west half of Eldor claims 1 and 3. The continental glaciation which deposited this till probably moved south down the valley of Duckling Creek. This is indicated by poorly developed ice smoothing and plucking on some of the more spur-like outcrops.

The country rocks underlying the claims are part of the Hogem batholith, and grade from diorite to quartz diorite. The latter outcrops in a few places along the east margin of the property. The Hogem diorite contains about equal amounts of plagioclase, and mafics consisting of biotite, hornblende, and abundant accessory magnetite. It is medium to somewhat fine grained and shows relatively little alteration. Minor amounts of epidote occasionally occur with it. Weak gneissosity is developed in two outcrops in the vicinity of Line 50+00N. It strikes 80° to 90° and dips about 85°S. The Hogem quartz diorite contains a little quartz, less mafics, and noticeably less accessory magnetite. Although there is not continuous outcrop exposure between these two rock types; there appears to be little doubt that the contact is gradational.

The acid dyke is a fracture filling type of intrusive which appears to fill a series of fractures to give a zone about 300' wide, trending north-south over most of the property length. A similar east-west trending dyke outcrops on the northeast corner of Dorothy No. 1 claim. Nothing distinguishes it from the longer north-south zone, except its east-west trend and the difference in xenolith composition corresponding to the change in country rock mentioned previously. The chief constituents of the dyke are quartz and plagioclase. Mafics occur away from the chilled margin, but are never abundant. The texture varies from aplitic near the chilled margins, to medium grained elsewhere, although the crystals outlines are somewhat blurred. There is also the possibility of more than one period of intrusion from the same source. Although magnetite is an abundant accessory in the wallrock, it is completely absent from the dyke rock, even where xenoliths are plentiful. A few specs of magnetite have been added immediately adjacent to some pegmatite stringers which cut the dyke near the south boundary of Eldor No. 2 claim. Xenoliths are usually common, and can be identified without difficulty. The contacts are usually sharp but are not always so. Minor amounts of sulphides, mostly pyrite but with occasional specs of chalcopyrite and pyrrhotite, occur in association with the dyke on Dorothy No. 1 claim. It is probably penecontemporaneous with emplacement of the intrusive.

Several narrow stringers of pegmatite cut both the dyke and the Hogem intrusives on Eldor No. 2 claim. None of these were more than 1/4 inch wide, and in no place are they plentiful. They have no apparent relationship to other rocks on the property; however, they sometimes have a narrow adjacent alteration band and add a few specs of magnetite to the acid dyke.

Geochemical Survey: Over most of the survey area, a good sample which was representative of the "B" soil horizon could be obtained; however, because of the rocky nature of the soil in some places, considerable work was required to collect the samples. The fact that the zone to be tested is at right angles to the 30° slope of the hillside also added to the general cost of sampling. The samples were analysed for total copper and total molybdenum. The results are discussed separately.

The total molybdenum in soil results are plotted on Plate No. 2. They show a background level of 2 to 5 p.p.m. molybdenum over the entire claim area. Only a few scattered samples are significantly higher than background. They appear to be related to accumulations of plant remains in seepage areas.

The total copper in soil results are plotted on Plate No. 3. Background values vary considerably, but for the most part are in the range from 50 to 150 p.p.m. copper. Some of the scattered high results were taken from the "A" horizon, and thus are not representative of underlying mineralization. (Samples taken from the "A" horizon are marked on the map). Except for these, high results only confirm the limited extent of mineralization observed in outcrop.

Vancouver , B. C.

September 25, 1961

R. W. Stevenson
R. W. Stevenson



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. 1	Dorothy No. 1	5954	\$110.00	\$ 90.45	4
	Dorothy No. 3	5956	80.00	244.55	1
	Dorothy No. 8	6037	110.00	73.70	3
	Eldor No. 1	14028	85.00	257.95	3
	Eldor No. 2	14029	110.00	291.45	3
	Eldor No. 3	14030	55.00	150.75	3
	Eldor No. 4	14031	55.00	324.95	3
				<hr/>	
			\$605.00	\$1433.80	20
		Total		<u>\$2038.80</u>	

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

In the Matter of Geological and Geochemical
Surveys on Duckling No. 1
Claim Group

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 in the Duckling Claim Group No. 1 are as follows:

Geological Survey

Wages:	R. W. Stevenson, July 25 to August 4	\$385.00
	G. Stewart, July 25 to August 4	220.00

Geochemical Survey

Wages: linecutting & sampling		
	G. Stewart, July 21 to July 24	85.00
	R. Cannon, July 21 to August 4	266.00
	G. Bara, July 21 to August 4	305.00
	T. Evans, July 21 to August 4	351.00
Soil Shipment		12.80
Soil Analysis		414.00

\$2,038.80

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 *25th*
day of *September, 1961*, A.D.

R. W. Stevenson

Shirley Jeanrotte

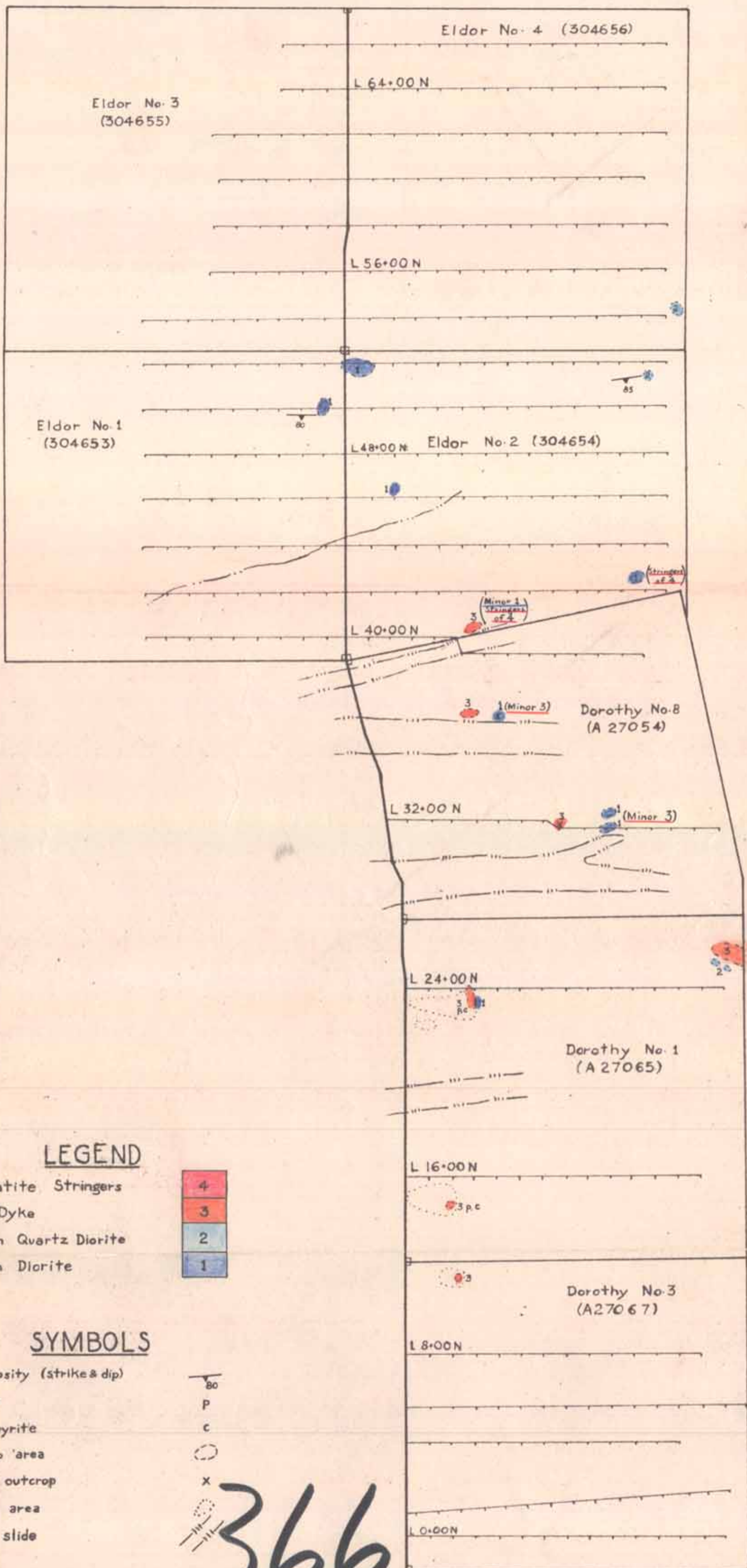
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

★o

Sub-mining Recorder.

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SMITHERS. B. C.



LEGEND

Pegmatite Stringers	4
Acid Dyke	3
Hogem Quartz Diorite	2
Hogem Diorite	1

SYMBOLS

gneissosity (strike & dip)	
pyrite	
chalcopyrite	
outcrop area	
small outcrop	
talus area	
snow slide	

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NO. _____ MAP _____



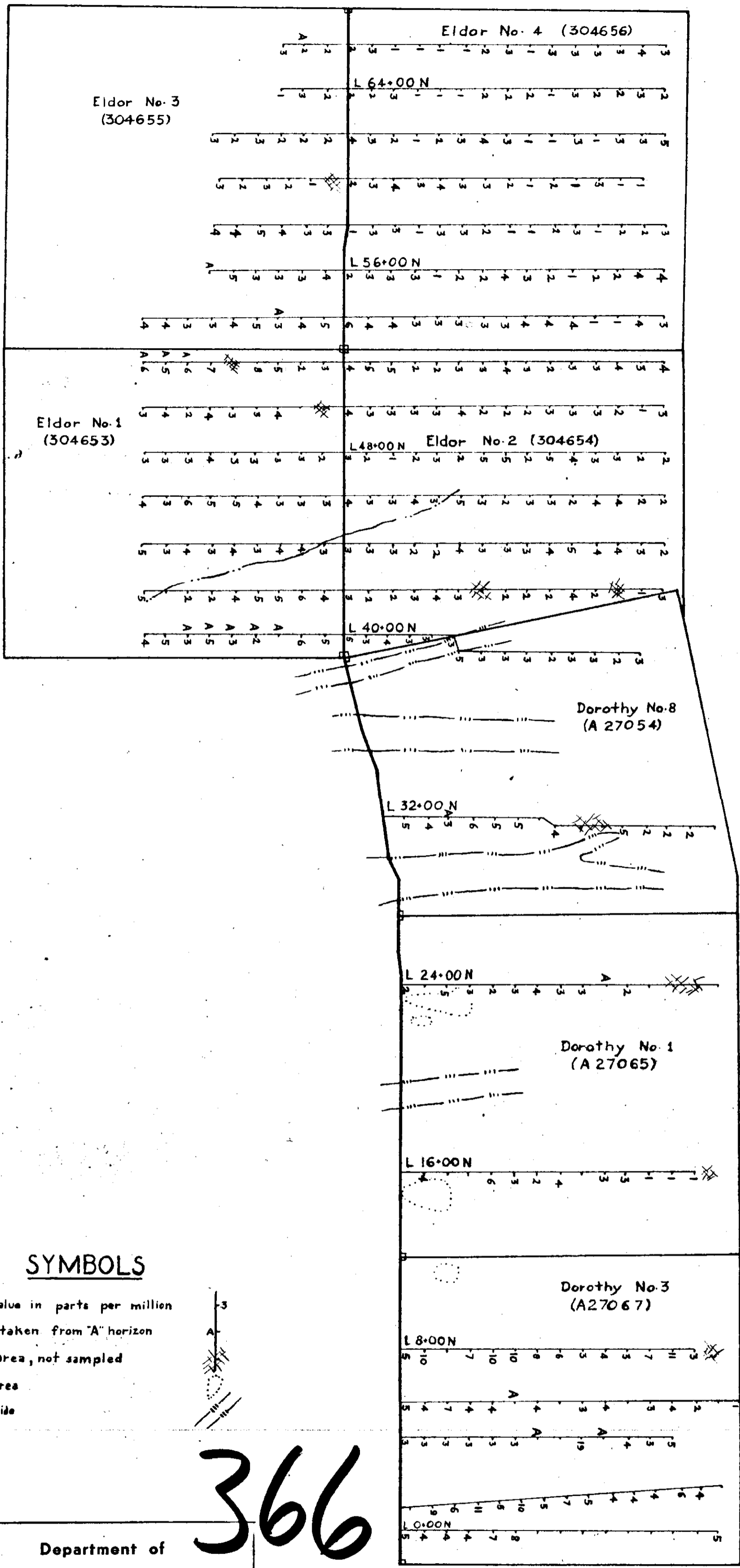
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Hogem Area
Omineca Mining Division, B.C.
Duckling Claim Group No 1
Dorothy Claims 1,3,8; Eldor Claims 1,2,3,4

GEOLOGY

DATE: Sept. 19, 1961	DRAWN BY: R.W.S.	PLATE NO. 1
REVISED BY	DATE	SCALE:
		1 inch = 400 feet

R.W. Stevenson



SYMBOLS

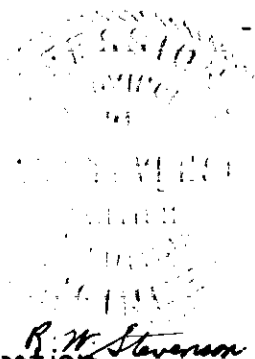
- metal value in parts per million
- sample taken from 'A' horizon
- rocky area, not sampled
- talus area
- snow slide



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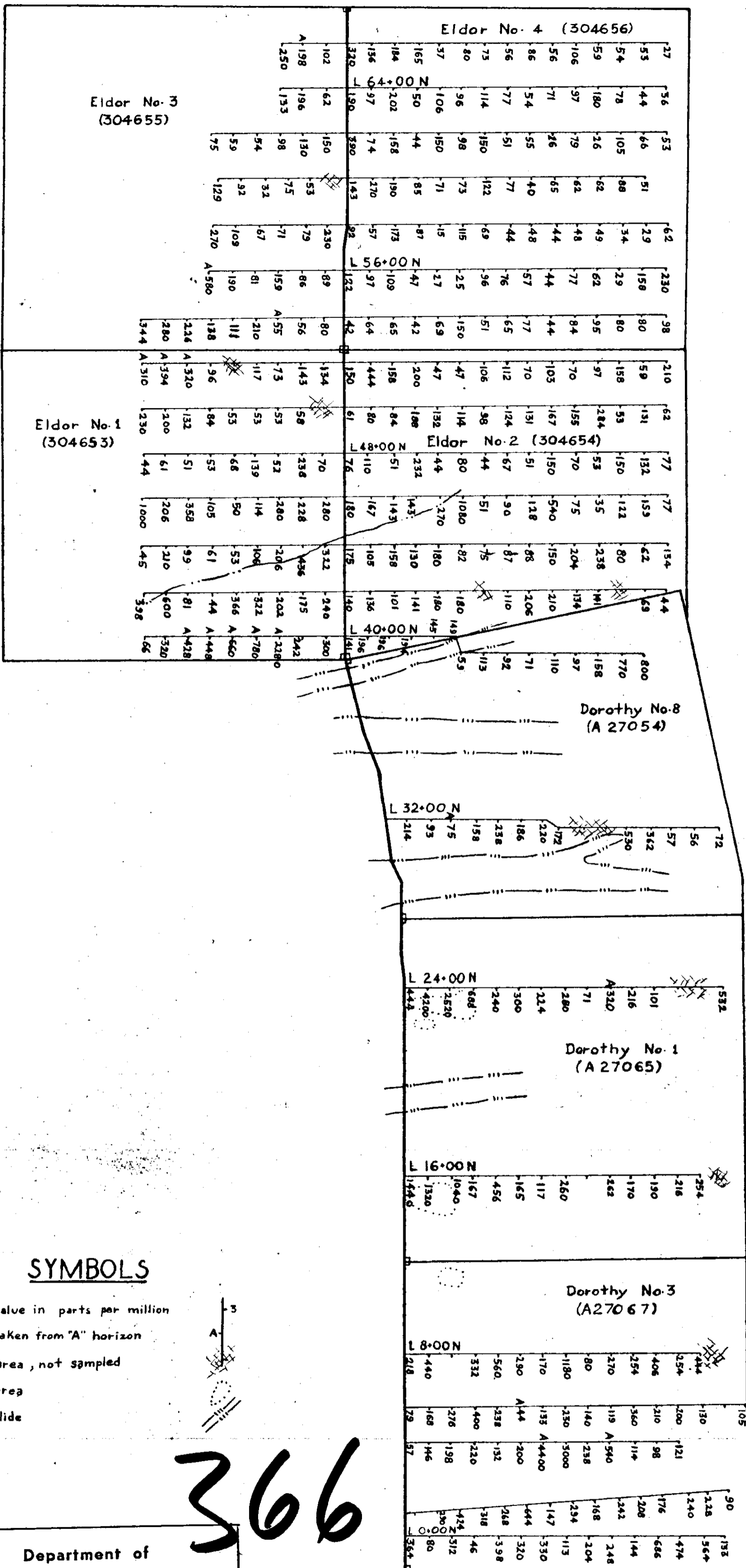
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(M2)



KENCO EXPLORATIONS (WESTERN) LIMITED		
Hogem Area Omineca Mining Division, B.C. Duckling Claim Group No. 1 Dorothy Claims 1,3,8; Eldor Claims 1,2,3,4		
GEOCHEMICAL SURVEY p.p.m. Molybdenum in Soil		
DATE: Sept. 19, 1961	DRAWN BY: R.W.S.	PLATE NO. 2
REVISED BY	DATE	SCALE: 1 inch = 400 feet

Total metal content by perchloric acid extraction *R. W. Stevenson*



SYMBOLS

- metal value in parts per million
- sample taken from "A" horizon
- rocky area, not sampled
- talus area
- snow slide

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M3

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Total metal content by perchloric acid extraction *R. H. Stevenson*

KENNCO EXPLORATIONS (WESTERN) LIMITED

Hogem Area
 Omineca Mining Division, B.C.
 Duckling Claim Group No. 1
 Dorothy Claims 1,3,8; Eldor Claims 1,2,3,4
GEOCHEMICAL SURVEY
 p.p.m. Copper in Soil

DATE: Sept. 19, 1961	DRAWN BY: R.W.S.	PLATE NO. 3
REVISED BY:	DATE:	SCALE:
1 inch = 400 feet		