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KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT

ON

MAGNETOMETER SURVEY

Duckling No. 1 & No. 3 Claim Groups  
Dorothy Mining Claims No. 1, 2, 3, 4, 5, 6, 8, 9  
Elizabeth Mining Claims No. 1, 2, 3, 4, 5, 6  
Eldor Mining Claims No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

On Duckling Creek, 9 miles upstream from mouth of creek

Omineca River Area

Omineca Mining Division

British Columbia

55° 125° NE

By

R. W. Stevenson

93N/14W

June 11, 12, 13, 14, 21, 1963

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MAP

Plate No. 1      Magnetometer Survey      1" = 400'

<p>Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. <u>511</u> MAP .....</p>
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DISTRIBUTION OF WORK

<u>Claim Group</u>	<u>Claim</u>	<u>Record No.</u>	<u>Distribution of Work</u>
Duckling No. 1	Elizabeth No.1	6016	\$ 17.00
	Elizabeth No. 2	6017	11.30
	Elizabeth No.3	6018	5.60
	Elizabeth No.4	6019	5.70
	Elizabeth No.5	6020	6.50
	Elizabeth No.6	6021	<u>4.00</u>
		Total	<u>\$ 50.10</u>
Duckling No. 3	Eldor No.7	15622	\$ 10.00
	Eldor No.8	15623	17.00
	Eldor No.9	15624	3.00
	Eldor No.11	15626	<u>3.40</u>
		Total	<u>\$ 33.40</u>
		Total Cost of Survey	<u>\$ 83.50</u>

## INTRODUCTION

The claim groups discussed in this report straddle Duckling Creek, in the Omineca Area, British Columbia. The magnetometer readings were taken on June 11, 12, 13, 14 and 21, 1963 by R. Cannon. The field work was done under the supervision of R. W. Stevenson.

This magnetometer survey is a continuation southward and westward of a magnetometer survey made in 1962 and reported for assessment work in that year. One half day was spent re-running the most southerly lines of the previous survey in order to correlate the two surveys. The results of this are described under "Magnetic Survey Method". The time spent taking these check readings was not declared as assessment work.

## LOCATION AND ACCESS

The property is located at Latitude 55°54'N, Longitude 125°20'W. It straddles Duckling Creek, 9 miles north of the Omineca River, and 26 miles west of Germansen Landing, British Columbia. Elevations range from 3800' to 5700' a.s.l. The western half of the property covers relatively flat valley bottom which is mostly spruce swamp and sandy outwash. 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.

A heliport was established on the roadside about Mile 27 west of Germansen Landing. It is about a 10 minute flight from there to the Dorothy campsite. A foot trail leads from the camp to the working area. The property can also be reached by packhorse trail from the road.

MAGNETIC SURVEY METHOD

An Askania torsion wire magnetometer was used to carry out magnetic measurements over lines previously surveyed by the induced polarization method. This magnetometer is of the null-type that measures the vertical component of the earth's magnetic field. The scale value of the instrument used on this survey was set by the manufacturer at 264.5 gammas per degree. The smallest reading or sensitivity obtainable is approximately 3 gammas. The magnetometer used on this survey was the same one used in the 1962 survey.

In performing the magnetic survey using this instrument one base station was first established in the survey area. This was done by re-running the adjacent lines of the previous survey, noting that the magnetic profiles for each year were almost identical except for a shift of 100 gammas, and then applying this 100 gamma correction to the base station reading and to all subsequent readings. The operator then took readings at each 100 foot station on the survey lines. "Tie-in" was made at a base station several times during each day in order to establish diurnal variations and to check on any unusual magnetic activity due to magnetic storms. By arbitrarily assigning a magnetic value to the original base station and knowing the difference in readings between the base station and each survey station, magnetic values are computed for each of these stations. The resultant data were then plotted and contoured on a map at a scale of 1 inch = 400 feet (Plate 1). A total of 3.15 line miles was surveyed with readings taken at 100-foot intervals.

INTERPRETATION

The chief purpose of the magnetometer survey was to trace southward, under continuous drift cover, a large aplite dyke which fills a major fracture system. The aplite dyke contains no magnetite and is non-magnetic. The wallrock is Hogem

Diorite and contains several percent accessory magnetite. The magnetic contrast between these two rocks is accentuated by an increase in magnetic susceptibility which has developed in the wallrock on the hanging wall of the dyke (i.e. on the west side of the dyke).

The linear magnetic high extending from Station 1+00E on Line 8+00S, through 0+00E on Line 16+00S and 1+00W on Line 24+00S, is considered to be metamorphosed wallrock on the west side of the dyke. Judging from outcrop relationships to the north of the 1963 survey area, the dyke would be some 200 feet or 300 feet to the east of the central part of the magnetic high zone.

The presence of a second dyke is suggested by the magnetic high extending through Station 14+00E on Line 4+00S, 16+00E on Line 8+00S, and 19+00E on Line 16+00S. This would indicate a trend of N 20° W for the dyke. Whether the dyke dips to the west, and thus would be located at about 19+00W on Line 8+00S, or whether it dips steeply to the east and lies in the magnetic trough passing through 11+00E on Line 8+00S, is not known. However, the indication of such a dyke zone is of interest, as there is an aplite dyke zone with similar trend exposed in outcrop some 3000 feet to the north.

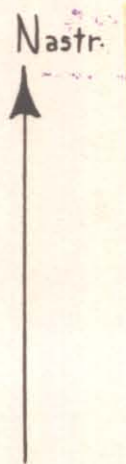
The relatively flat magnetic profile on the westward extension of Line 0+00N indicates that probably no aplite dykes occur in that area. The slight increase in magnetic intensity to the west of Station 38+00W, however, may indicate a change in rock type from Hogen Diorite to a gabbro which can be seen in outcrop further north along the creek.

Vancouver, B.C.

October 4, 1963

R. W. Stevenson  
R. W. Stevenson





Eldor No.6

Eldor No.5

Dorothy No.2

Dorothy No.1

Dorothy No.6

Eldor No.8

Eldor No.7

Dorothy No.4

Dorothy No.3

Dorothy No.5

LINE 0+00

2000  
2000  
2000  
2000

Elizabeth No.2

LINE 8+00 S

Eldor No.10

Eldor No.9

Elizabeth No.1

Elizabeth No.1

Elizabeth No.5

LINE 16+00 S

Eldor No.12

Eldor No.11

Elizabeth No.2

LINE 16+00 S

Elizabeth No.1

Elizabeth No.6

**MAGNETIC INTENSITY.**  
(IN GAMMAS)

4000 & above	
3000 - 4000	
2000 - 3000	
1000 - 2000	
less than 1000	

Elizabeth No.2

LINE 24+00 S

Elizabeth No.4

Elizabeth No.3

Duckling Claim Group No.3

Duckling Claim Group No.1

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Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 511 MAP 1

KENNCO EXPLORATIONS (WESTERN) LIMITED		
Magnetometer Survey		
Hogem Area Omineca Mining Division, B.C. Duckling Claim Groups Nos 1&3 Dorothy Claims 1 to 6, 8, 9; Eldor Claims 1 to 12, Elizabeth Claims 1 to 6		
DATE: June, 1963	DRAWN BY: R. MacD.	PLATE NO. 1
REVISED BY:	DATE:	SCALE: 1 inch = 400 feet

