432 A

KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT

on

MAGNETOMETER SURVEY

Duckling No. 1 Claim Group
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

One-half mile east of Duckling Creek
Omineca River Area
Omineca Mining Division
British Columbia

55° 125° NE

By

R. W. Stevenson

June 12,13,14,24, 1962

TABLE OF CONTENTS

MAP

Plate No.1	Magnetometer Survey	1" = 400'

DISTRIBUTION OF WORK

Claim Group	Claim	Record No.	Distribution of Work
Duckling No. 1	Dorothy No. 1	5954	$ 19.23
	Dorothy No. 2	6085	5.76
	Dorothy No. 3	5956	19.23
	Dorothy No. 4	6086	19.23
	Dorothy No. 6	6035	4.49
	Elizabeth No. 2	6017	10.26
		Total	$ 78.20

INTRODUCTION

The claim group discussed in this report is on the east side of Duckling Creek, in the Omineca River area, British Columbia. The magnetometer readings were taken on June 12, 13, 14, and 24, 1962.

The readings were taken by R. Cannon on June 12 and 24; and by G. Bara on June 13 and 14. The field work was done under the supervision of R. W. Stevenson.

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, 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.

In performing the magnetic survey using this instrument one base station was first established in the survey area. The operator 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 2.2 line miles was surveyed with readings taken at 100-foot intervals.

INTERPRETATION

The chief purpose of the magnetometer survey was to supply further information about the extent and character of a large aplite dyke which fills a major fracture system. Outcrop is scarce; however, sufficient rock was visible to establish the nature of the aplite dyke and the wallrock. The intrusive pattern was suspected from some features visible in outcrop, and from comparison with a similar dyke elsewhere in the same area.

The aplite dyke contains no magnetite and is non-magnetic. The wallrock is Hogem diorite and contains several percent accessory magnetite. Thus a distinct magnetic contrast exists between these rocks. The magnetic results indicate that the dyke system trends at about N15°E, and is about 500 feet wide. The occurrence of lineal "highs" in the indicated dyke area confirms the previously held concept that the intrusive contains large tabular blocks of wallrock which thus give a "braided" pattern to the distribution of aplite at the present surface. The magnetic high which occurs at 4 + 00W on line 0 +00N, 2 + 00W on line 8 + 00N, and 0 + 00W on line 16 + 00N is thought to represent an increase in magnetic susceptibility which has developed in the wallrock on the hanging wall of the dyke. This agrees with a westward dip indicated by air photo interpretation of the weak topographic expression of the dyke.

The slight regional rise in magnetism near the east edge of the survey area is probably due to the effect of decreasing over-

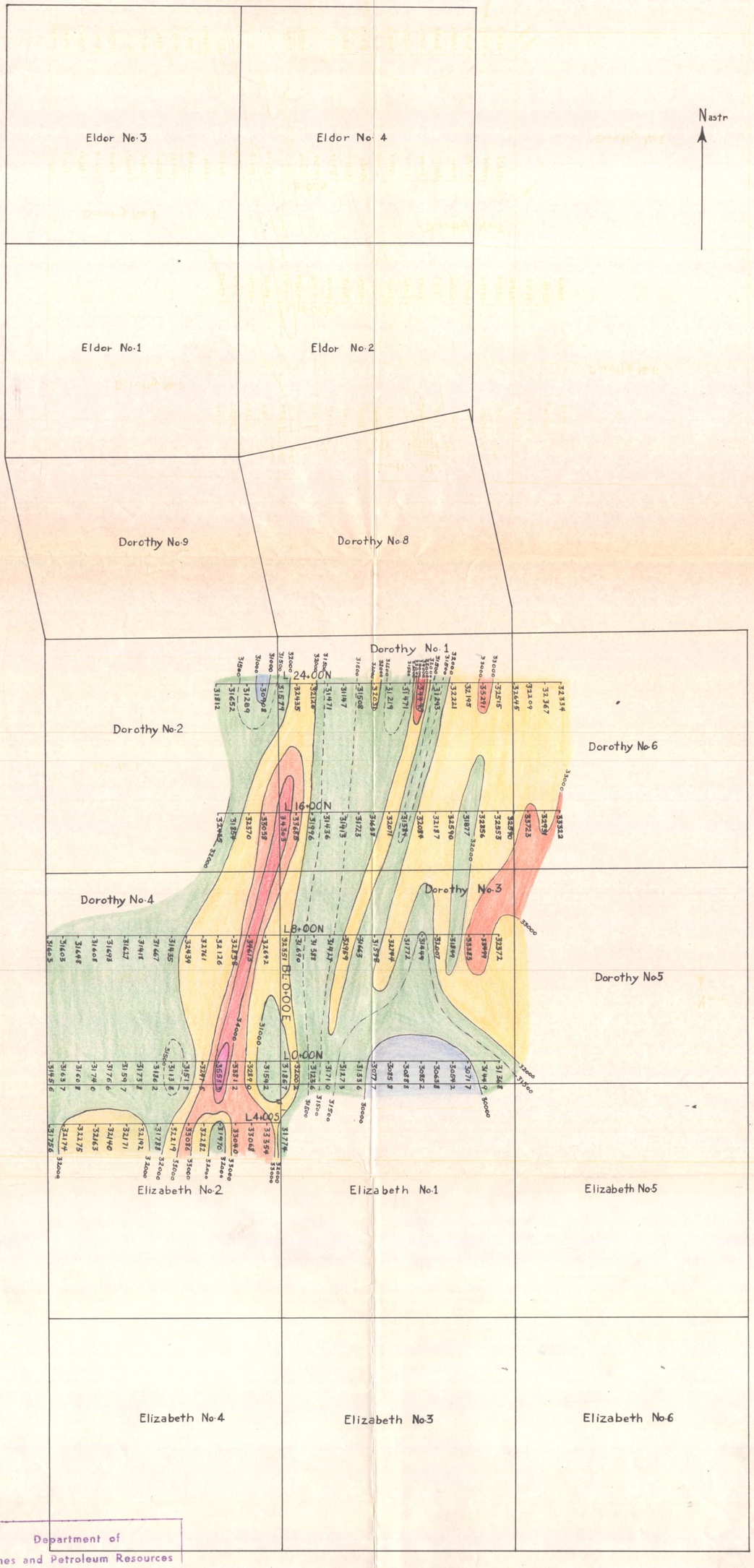
burden as the mountain ridge is approached. The drop in magnetism near the west edge of the survey area is probably due to much deeper overburden which consists of outwash sand deposits in the valley of Duckling Creek. The low values from 6 +00E to 12 + 00E on line 0 + 00N are in the valley of Dorel Brook and are probably caused by deeper overburden which resulted from post-glacial mud flows from the ridge to the east.

Vancouver, B. C.

July 13, 1962

R. W. Stevenson

R. W. Stevenson



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 432A MAP 1

Magnetic Contours

35000γ - 36000γ	
34000γ - 35000γ	
33000γ - 34000γ	
32000γ - 33000γ	
31000γ - 32000γ	
30000γ - 31000γ	

432

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PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R.W. STEVENSON

R.W. Stevenson

KENNCO EXPLORATIONS (WESTERN) LIMITED

Magnetometer Survey

Hogem Area

Omineca Mining Division, B.C.
Duckling Claim Group No.1
Dorothy Claims 1 to 6, 8, 9; Eldor Claims 1 to 4, Elizabeth Claims 1 to 6

DATE: July 12, 1962	DRAWN BY: R.W.S	PLATE NO. 1
REVISED BY	DATE	SCALE: 1 inch = 400 feet