

GEOPHYSICAL REPORT ON EVE GROUP  
Heffley Lake, 50°, 120° N.E.  
by J. M. Black, P.Eng.  
May 10-23, 1967  
for  
WESTERN CANADA STEEL LIMITED  
92 I/16E

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1003

GEOPHYSICAL REPORT ON EVE GROUP

by J. M. Klack, P.Eng.

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## INTRODUCTION

Fleat of magnetite with minor copper mineralization occurs on these claims and was exposed in old trenches. These showings have been known for many years.

The claims were located almost ten years ago. Before locating them, the writer ran a dip needle survey to determine the extent of an anomalous area caused by the magnetite. This preliminary survey was used to determine where to locate the claims. From this earlier survey the general extent of the anomaly and its relation to the location line was known. For this reason, the present survey was generally restricted to the central part of the group with a few traverses beyond it.

## LOCATION

The central part of the group is slightly over  $\frac{1}{2}$  mile north of Heffley Lake, about midway along its length. A newly-built public highway crosses the southern part of the claims. The claims are on the lower part of a steep slope and much of the surface is a talus slope below bluffs.

## PROCEDURE

The instrument used was a FMP-3 (No. 40512) which is read directly in gammas. Traverses were made along and from previously established base lines and tractor roads by pace and compass. Readings are shown in hundreds of gammas on the accompanying figure No. 1. All are positive except those indicated as negative.

## MAGNETICS AND INTERPRETATION

The magnetic intensity differs very markedly in the central part of the group, from high readings of 15,500 gammas to -2,500 gammas. Sharp changes occur within short distances, indicating that the bodies causing the readings,

are relatively close to the surface.

The reason for the pronounced negative readings is not known. They occur on both margins of the general area. They may be caused by negative polarity of magnetic bodies. Alternatively, they may be caused by the shallow lower poles of some of the magnetic masses that cause the positive readings. Possibly some combination of these alternatives may be true.

Inasmuch as the explanation is unknown, an outline has been drawn around the anomalous areas, including the negative ones. It is almost 800' long and up to 500' across. Within this area most of the readings are anomalous and outside of it most of the readings are normal, that is, between 700 and 1,700 gammas. This area trends north-northwest. It probably is caused by a complex pattern of bodies under different depths of cover.

A depth estimate to the upper part of the body with the steepest profile, that is, the one just north of point A, is 30' (see Figure 2). The other bodies are presumed to be at greater depths because their profiles are less steep.

Intensities of 15,000 gammas, 30' above the causative body, indicate that the intensity at the surface of the body probably would be in the range of 30,000 to 50,000 gammas and this suggests that these intensities would be caused by bodies with a high proportion of magnetite.

The marked increase in intensity to be expected as the cause is approached, was confirmed by taking some readings at ground level - 3' below the usual level. These generally were higher - some more than 4,000 gammas higher.

A series of readings at ground level were taken along the sections with the highest readings, that is, sections AB and CD. The ground level readings can be used to calculate the vertical gradient and this was done to find out what inform-

tion this would provide about the limits of the causative body (see Canadian Mining Journal, volume 85, pp 59-64).

As may be seen from section AB (Figure 2), there appear to be two bodies, about 125' and 115' wide respectively, along the line of traverse, separated by about 30' of ground which is non-magnetic. In section CD, the width of the causative body appears to be 200', which is somewhat greater than appears from the readings taken at normal height.

EMPLOYMENT

One person, J. N. Black, P.Eng., directed the work and carried it out. The work was done in four days on the following dates: May 10th and 12th,  $\frac{1}{2}$  day each; on May 11th, 22nd and 23rd. 1967

*J. N. Black.*  
*May 29 / 67*

Figure 2

Vertical Sections AB + C.D.

15000 f

10000 f

5000 f

0 f

0 f/foot

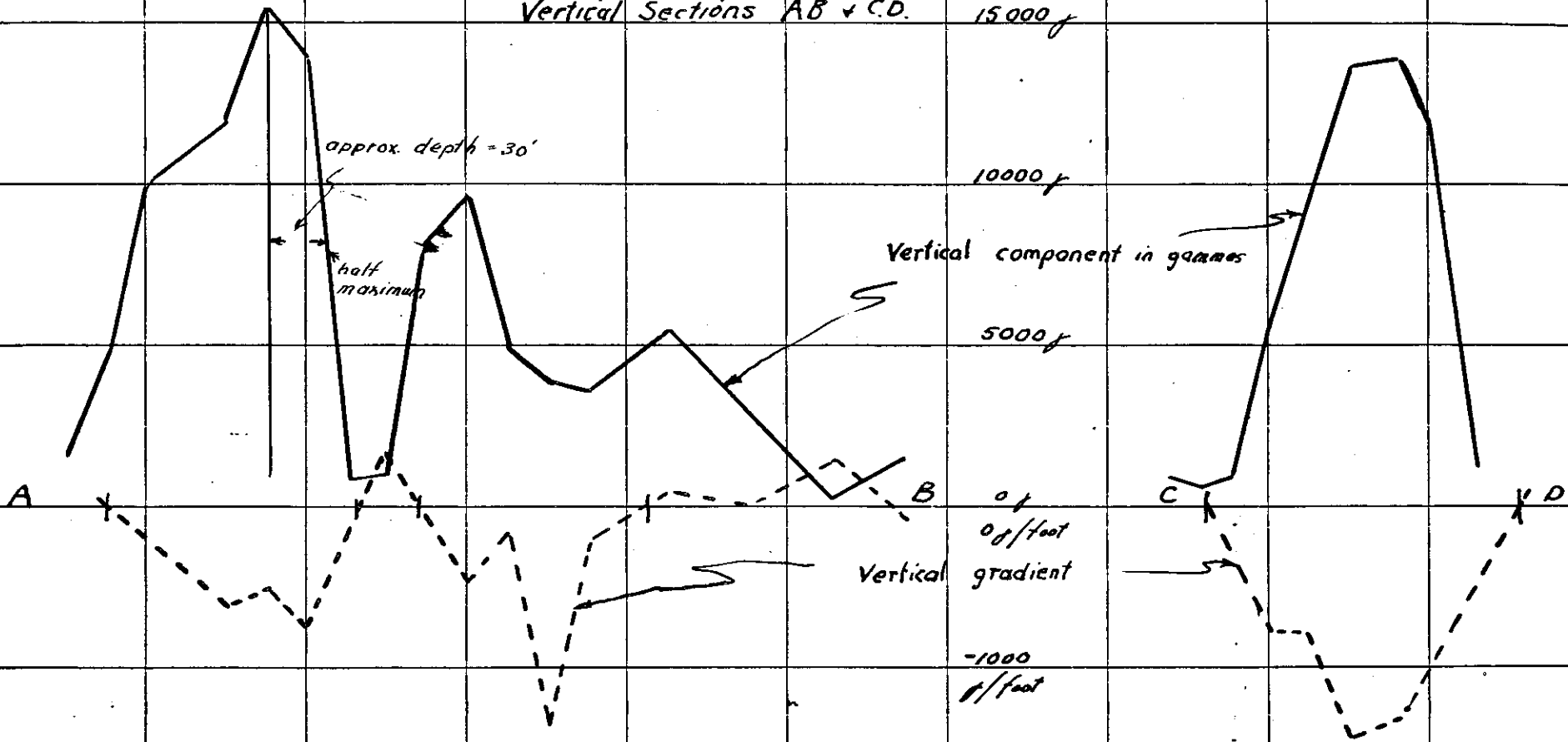
-1000 f/foot

Vertical component in gammas

Vertical gradient

approx. depth = 30'

half maximum



To accompany geophysical report by J.M. Black P.Eng  
on the Eye group, near Heffley Lake Kamloops M.D.  
dated May 29, 1967.

1" = 80 feet

CD 1" = 100'

J.M. Black

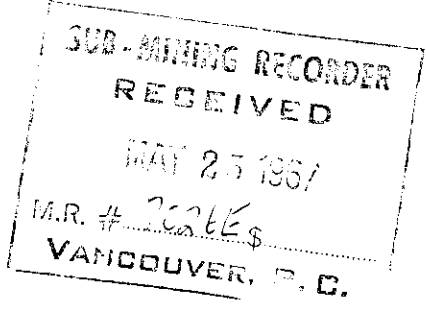


*Claims lie in a north easterly direction  
on the north side of Heffley lake.*

Record Nos.

Map No. 92/16E

Mining Div. KAMLOOPS.



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

In the Matter of

I, J. M. Black

of Vancouver.

in the Province of British Columbia, do solemnly declare that the cost of the geophysical survey and report on the EVE group, Kamloops A.D. done in May 1967 was cost \$920 as follows.

* J.M. Black 4 days @ 50	\$ 200
rental of magnetometer	20.
Total	\$ 220.

* May 10 & 12 1/2 day each = 1 day	
May 11, 22 & 23	3 days
Total	4 days

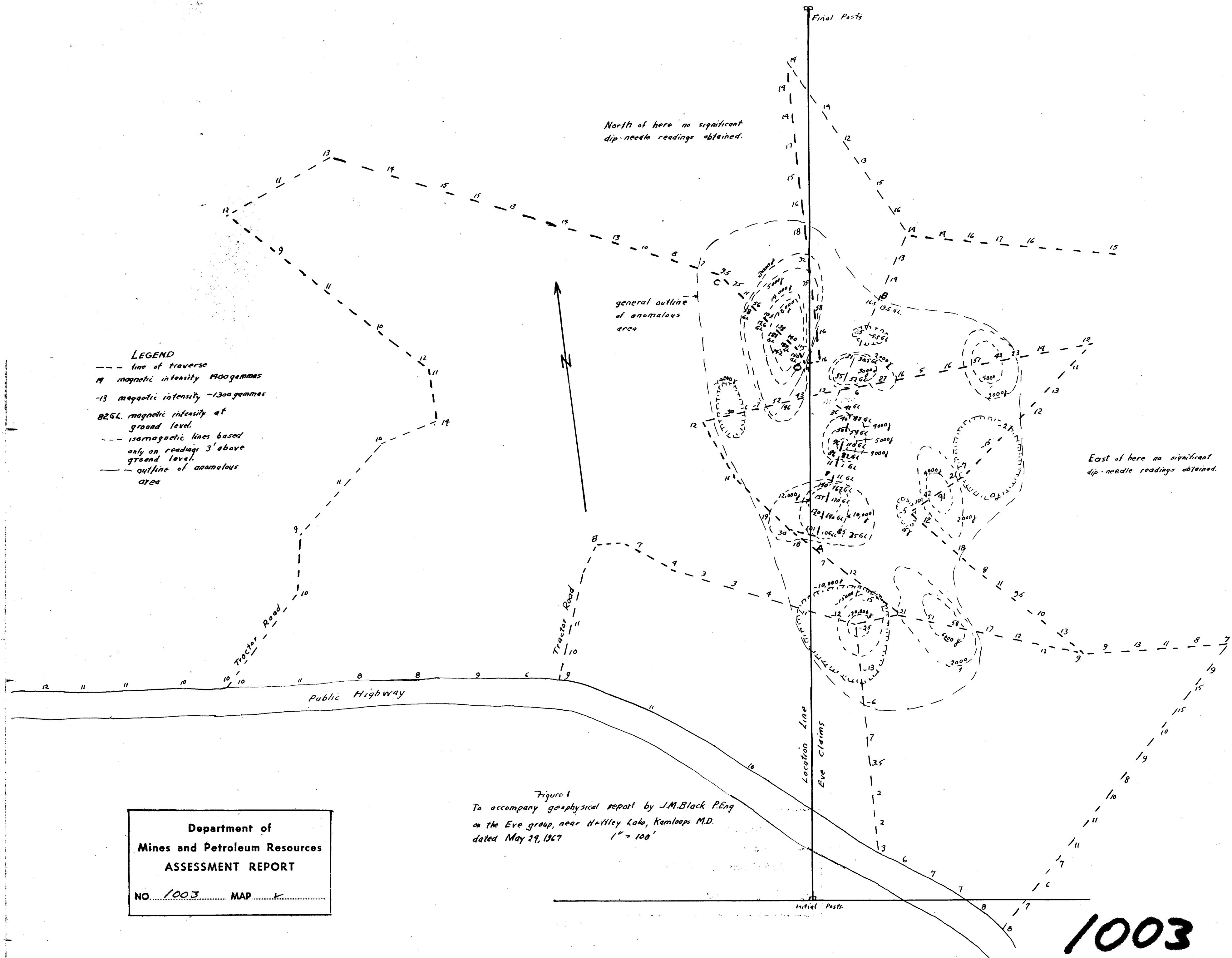
And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City of Vancouver, in the Province of British Columbia, this 25 day of May, A.D.

J.M. Black

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





Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 1003 MAP

1003