

I GEOLOGICAL & GEOPHYSICAL REPORT
II ACE & BETA CLAIMS AT QUATSE LAKE
50°, 127° NW
III J. M. BLACK, P.ENG.
IV WESTERN CANADA STEEL LTD.
V JUNE 14, 19, 20, 23, 24; JULY 4;
AUGUST 16-18 & 21

92 L/12E

1060

1060

GEOLOGICAL & GEOPHYSICAL REPORT
on
ACE #6 FRACTION & BETA CLAIMS 1-5
by J. M. Black, P.Eng.

TABLE OF CONTENTS

Introduction	Page 1
Geology	" 1
Magnetics	" 2
Electromagnetics	" 2
General Interpretation	" 2
Employment	" 2
Figure 1 - Geological and magnetic map of Ace #6 Fraction and Beta Claims #1	
Figure 2 - Electromagnetic map of the same claims #2	

ACE FRACTION AND BETA CLAIMS

INTRODUCTION

These claims are at the east end of Quatse Lake. They are reached by following a long-abandoned plank logging road, westward for one to two miles on the Coal Harbour-Port Hardy road.

Most of the area is gently sloping and the southern part of Beta #1 is marshy. The southern part of Beta #2 and the western part of Beta #4 slope fairly steeply. The area was logged and burnt over many years ago and tree growth has been very slow to get re-established and the area is covered with an almost impenetrable growth of salal and other shrubs.

Ace Fraction was reported on previously in geological and geophysical report #2.602

Both magnetic and electro-magnetic surveys were made. The magnetometer used was a Sharpe PMF-3 Series 40512. It is read directly in gammas and the readings are shown on Figure 1 in hundreds of gammas.

The EM instrument was a minigun, type 1681 #24, made by ABEM. It operates at a frequency of 3520 cycles per second and the oscillator and receiver were connected by a 200' cable. The receiver gives in-phase and out of phase components in percentages, more or less than the norm established for the background. One man carried the oscillator and the other the receiver and took the readings. The locations shown for the readings on Figure 2 is the location of the mid point of the cable, 100' away from the receiver.

Traverses were made by pace and compass along blazed and tagged lines and from such lines.

GEOLOGY

Most of the area is covered with fluvio-glacial deposits. Rock outcrops are found only along the road on the Beta #2 and Ace Fractional claim.

Most of these outcrops are dark grey, massive limestone. Others range from grey to white in color and some are thin-bedded. The outcrops and the attitude of the bedding are shown on Figure 1.

The outcrops, unless there has been repetition by unknown faults or folds, represent a thickness of several hundred feet. This limestone group of beds is not exposed along its strike to the northwestward on these claims.

A porphyritic, pale grey-green dyke rock outcrops east of the limestone. Its relationships are not exposed. It may be an offshoot from a granitic mass which is exposed in a quarry about a mile to the east.

MAGNETICS

The isomagnetic lines are shown on Figure 1. Those on Ace #6 Fraction were taken from Report 602 and adjusted to conform with the level of this year's readings.

A well-defined anomaly occurs on Beta #1 and Beta #2 claims. It is most intense between the road and Quatse River. It may extend northwestward to join up with some moderately high readings obtained southwest of the #1 post of the Beta #4 claim.

At the most intense part of this anomaly the gradients are moderate, which indicates that it is caused by a moderately deep source. The possible continuation to the west northwest may be caused by a body with lower magnetic intensity or by one that is more deeply covered.

This anomaly and its possible continuation lies along strike from some limestone beds, which suggests that these may be partly replaced by magnetite or pyrrhotite. The highest readings were obtained where the limestone does not outcrop along the road, which suggests that here the limestone may be disrupted.

ELECTROMAGNETICS

The results of traverses with the minigun are shown on Figure 2. The response was generally weak, indicating an absence of conductors in the areas traversed. However, in the vicinity of the most intense part of the magnetic anomaly, in-phase readings 10% to 20% greater than background were obtained. At these same points, out of phase readings as much as 6.5% below background were obtained. These latter indicate the presence of a weak conductor or one at considerable depth. The high in-phase readings generally would be taken to contradict this indication but here in an area which is probably underlain by a magnetic body, the induced magnetism caused by the electrical currents may nullify the in-phase response and cause high in-phase readings.

No significantly anomalous readings were obtained in the northwest near the extension of the magnetic anomaly. This suggests that the cause of the magnetic anomaly lies so deep that it is not detectable with this equipment using a 200' cable.

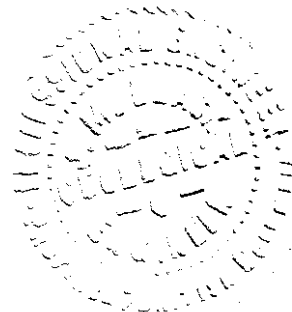
GENERAL INTERPRETATION

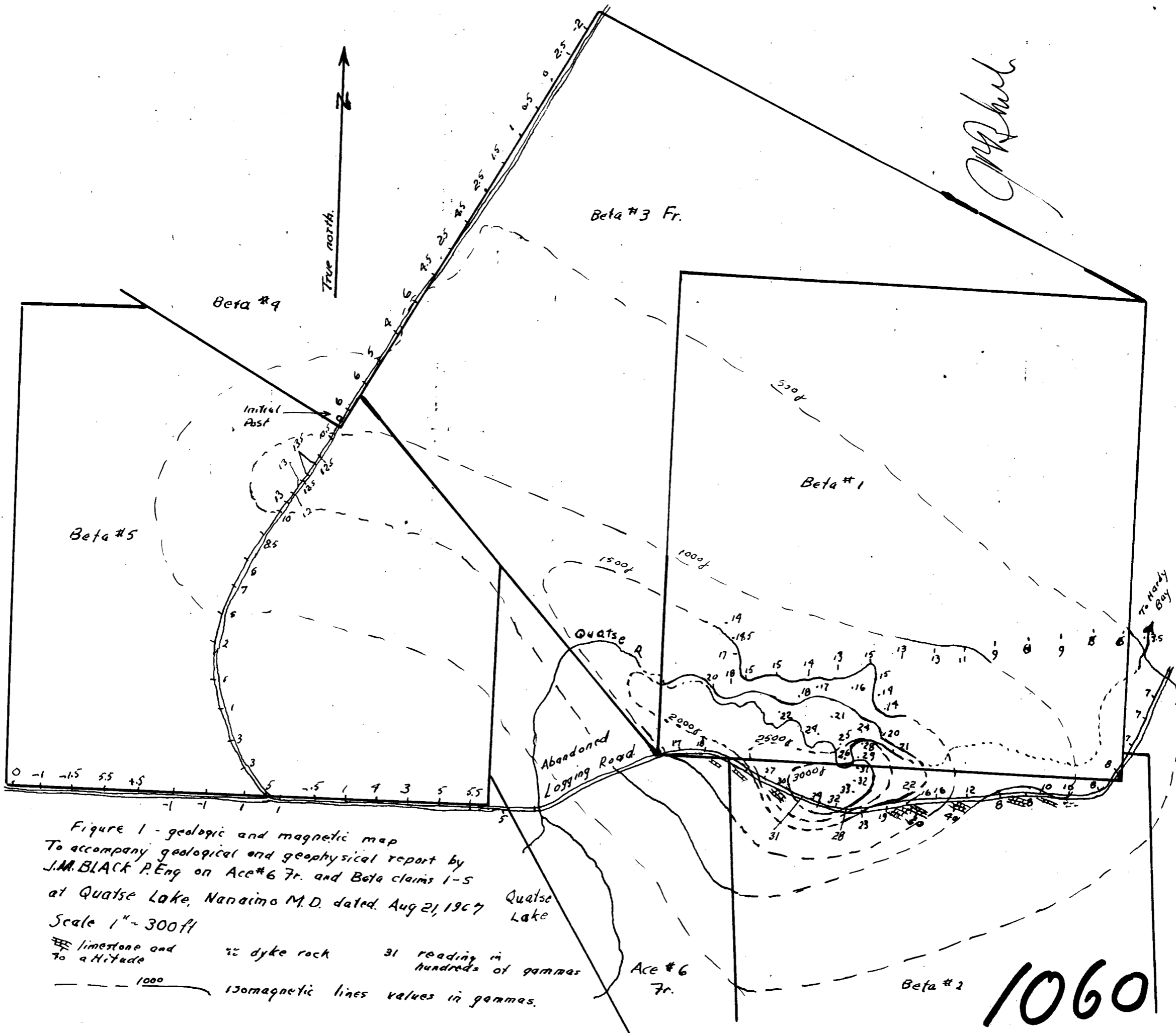
It may be concluded that a body containing magnetite and possibly pyrrhotite occurs in a limestone series at considerable depth and may continue with less mineralization or at greater depth for as much as 2,000'.

EMPLOYMENT

The work was done by J. M. Black, except when EM traverses were run, when an assistant was employed. The work was done on the following dates: June 14 $\frac{1}{2}$ day; June 19, 20, 23, 24 $\frac{1}{2}$ day and July 4. Office work was done August 16th to 18th and 21st.

J. M. Black
Aug 21/67





J.M. Black

Figure 1 - geologic and magnetic map
 To accompany geological and geophysical report by
 J.M. BLACK P. Eng on Ace #6 Fr. and Beta claims 1-5
 at Quatse Lake, Nanaimo M.D. dated Aug 21, 1967

Scale 1" = 300ft

- limestone and a hillside
- 1000 isomagnetic lines values in gammas.
- dyke rock
- reading in hundreds of gammas

1060

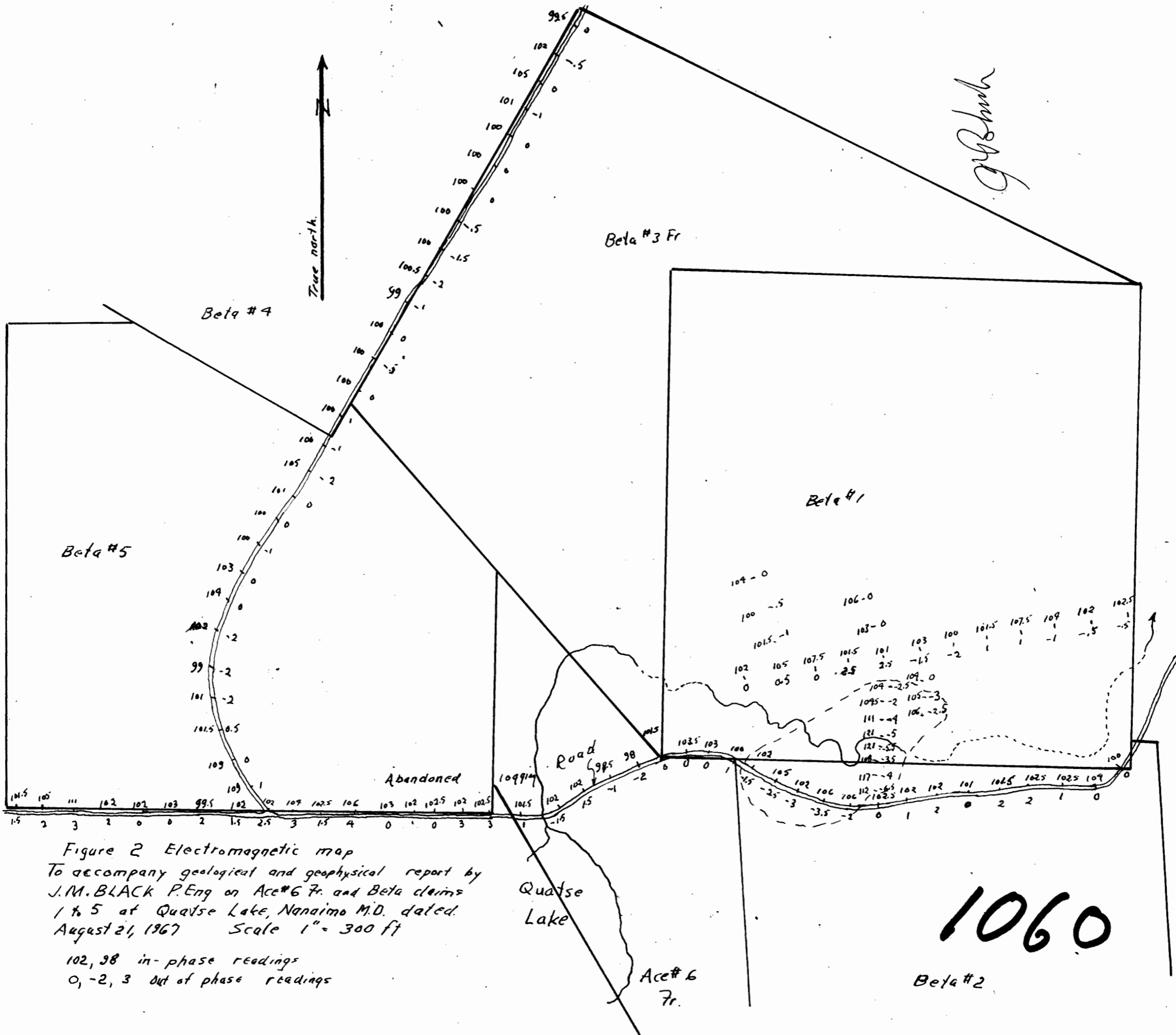


Figure 2 Electromagnetic map
 To accompany geological and geophysical report by
 J.M. BLACK P. Eng on Ace#6 Fr. and Beta claims
 1 to 5 at Quatse Lake, Nanaimo M.D. dated
 August 21, 1967 Scale 1" = 300 ft

102, 98 in-phase readings
 0, -2, 3 out of phase readings

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

In the Matter of ^{#6} Acc-Beta Group
Acc 70 & Beta claims 1 to 5

SUB-MINING RECORDER
RECEIVED
AUG 25 1967
M.R. #14040.00 \$ 57.00
VANCOUVER, B.C.

I, James Murray Black
of 6050 Carnarvon St. Vancouver B3

in the Province of British Columbia, do solemnly declare that the following costs were incurred in making a geological and geophysical survey and report on the Acc #670 and Beta claims in the Vancouver Mining Division.

Salary J.M. Black field 5 days @ \$50 = 250
office 4 " " " 200 \$ 450.00

Salary M. Nielson 1/5 day 6.90
S. Deacon 1/2 day 30.
R. Smith " " 16.80 53.70

Rental of Sharp magnetometer 2 days 30.
Rental of ABEM minivan 3 days @ 31.34 \$ 93.72
\$ 617.42

of this
the geological survey & its party report cost \$ 45.
the magnetometer " " \$ 175
the electromagnetics " " \$ 397.42

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 August 1967, A.D.

J. A. Blair

Jill Turner

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