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ILLUSTRATIONS.
(In pocket at back)

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Map 2 Main Showings Gam Claim Group	1" = 200'
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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 560 MAP.....

92F / 13W + 12W

GEOLOGICAL and GEOPHYSICAL (MAGNETOMETER) REPORTS

on the

"GAM GROUP", Vancouver Island, B.C.

**Vancouver, B. C.
June 29, 1964**

W. R. Bacon, P. Eng.

GEOLOGICAL
and
GEOPHYSICAL (Magnetometer) REPORT
on the
"GAM GROUP", Vancouver Island.

INTRODUCTION

The "Gam" Group ("GAM Nos. 4, 6, 8, 13, 15, 16, 17, 18, 20, 22, 26) is in the Gold River area of west central Vancouver Island, just west of the western boundary of Strathcona Park.

The claims were located to cover showings of magnetite discovered by E. Wozniak, Staff Geologist for Mastodon-Highland Bell Mines Ltd.

The claims are located on a steep, heavily-wooded slope, at elevations from 2900 feet to 4,300 feet above sea level. The overburden to bedrock ratio is typical of Vancouver Island below timberline.

After examination of the showings by the writer, geological and magnetometer work was carried out by him and by E. Wozniak.

PROCEDURE

A base line was cut along a bearing of N. 37° W. This was surveyed by transit and cross lines were cut and surveyed at 200 foot intervals, also by transit.

Geological mapping then proceeded along the surveyed lines and information was plotted at a scale of 1" = 200 feet (see Map 2).

A magnetometer survey was carried out using the same survey lines, and the results plotted on a scale of 1" = 200 feet. (see Map 3).

PROCEDURE (cont'd)

For the geophysical work, a Sharpe MF-1, battery-operated fluxgate magnetometer was used. This instrument measures the vertical component of the earth's magnetic field. Maximum sensitivity is 20 gammas per scale division on the 1000 gamma range readable to 5 gammas by estimation. Sensitivity is 50 gammas per scale division in the 3000 gamma range which was used for the greater part of the survey. However, maximum sensitivity was not used as the type of mineralization and extreme topography made this impractical. Corrections were made for diurnal variations as noted morning and evening, at the base camp. Readings were then recorded to the nearest 100 gammas and 500 gamma contours were plotted on the accompanying map.

GEOLOGY

The "Gam" group covers parts of a small pendant of Triassic limestone and volcanics surrounded by granitic rocks (see Maps 1 and 2)

The limestone is a grey to white, generally massive rock. It caps the ridge which is appropriately named White Ridge. Indications of bedding are obscure in the limestone but what evidence there is suggests a strike of North 30 degrees West and dips of greater than 60 degrees, both west and east.

The limestone is bounded on the west by typical granitic rocks of the Coast intrusives. On the east it is bounded by dark green, featureless volcanics which outcrop poorly. Further east, granitic rocks appear on the "Gam" claims Nos. 26 and 17.

A basic (basaltic) dyke occurs on "Gam No. 8" and it is entirely probable that some of the small outcrops mapped as volcanics are in actual fact dyke rock.

GEOLOGY (cont'd)

The distribution of skarn is shown on Map 2. It occurs at the southern end of the main magnetite zone, on "Gam No. 4" and essentially without magnetite, in a narrow northerly trending zone, four hundred feet to the west. Brown garnet is the preponderant mineral of the skarn.

Magnetite was found in two localities on "Gam No. 8". In both it is entirely enclosed in limestone. The western occurrence is very close to the granite-limestone contact.

The main zone of magnetite is exposed at intervals on "Gam Nos. 20 and 4". It occurs along the faulted contact of limestone and volcanics. The contact dips westerly at angles of 75 to 85 degrees.

The lower extremity of the main zone is exposed at an elevation of 3,300 feet, and it was traced northward to an elevation of about 4,150 feet. The central portion (Map 2, Location "D" "Gam No. 20") is rather weak, with the mineralization ranging in width from 2 to 6 feet. Here, the zone is cut by numerous faults, two of which have minor, right-hand displacements.

The upper part of the main zone (Map 2, Location "E" "Gam No. 20") attains a width of 30 feet of nearly pure magnetite.

GEOPHYSICS.

Two magnetically anomolous areas were encountered which, when considered in conjunction with the geological mapping, are of interest.

At Location E, "Gam No. 8", Map 3) a long, northerly trending anomaly encloses a known occurrence of magnetite (see Map 2) The extent of the anomaly beyond the boundaries of the known mineralization suggests that, more mineralization may be present beneath the surface, along strike from the known occurrence.

At Location H, "Gam No. 18" (Map 3), another area of anomalous magnetic readings was obtained. It is considered probable that these readings indicate a northward continuation of the main zone of mineralization - at a relatively shallow depth beneath the surface.

CONCLUSION:

The geological and geophysical work has outlined two interesting zones of magnetite mineralization on the "Gam" group. Both these zones will merit further work if the economic conditions that prevailed for coastal iron deposits during the period 1952 - 60 return.

C O S T S.(a) TECHNICAL:

W. R. Bacon, Ph.D., P. Eng.	8 x \$35 =	280.00
E. Wozniak, B.A. Aug. 10 - Sept. 18	30 x \$20 =	600.00
		<hr/>
		\$880.00

wms.

(b) LABOUR:

R. S. McDonald -Aug. 20 -Sept. 18	30 x \$12 =	360.00
D. McKee " 20 " 18	30 x \$12 =	360.00
G. Allan " 20 -Sept. 18	30 x \$12 =	360.00
D. Heino " 20 -Sept. 18	30 x \$12 =	360.00
A Ruff " 20 -Sept. 18	30 x \$12 =	360.00
N. Samusevich " 20 -Sept. 18	30 x \$12 =	360.00
C. M. Macleod " 20 -Sept. 18	30 x \$12 =	360.00
		<hr/>
		\$2,520.00

wms.

TOTAL APPLICABLE COSTS

\$3,400.00

*Summit subscribed to
at Vancouver this 2nd
day of July 1964*

Vancouver, B. C.
June 29, 1963

J. Miller
Gold Commissioner

W. R. Bacon
W. R. Bacon, P. Eng.



126°00' W
49°45' N

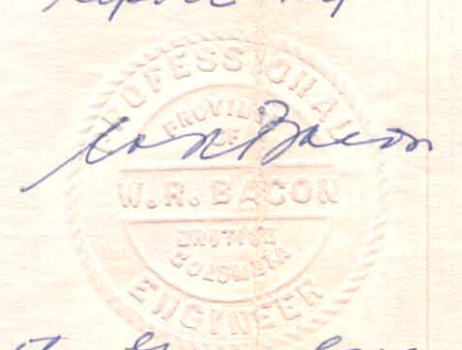
MAP #1
LOCATION OF
GAM CLAIM GROUP

LEGEND

- 3 DIORITE
- 2 LIMESTONE
- 1 VOLCANICS

SCALE 1" = 830'

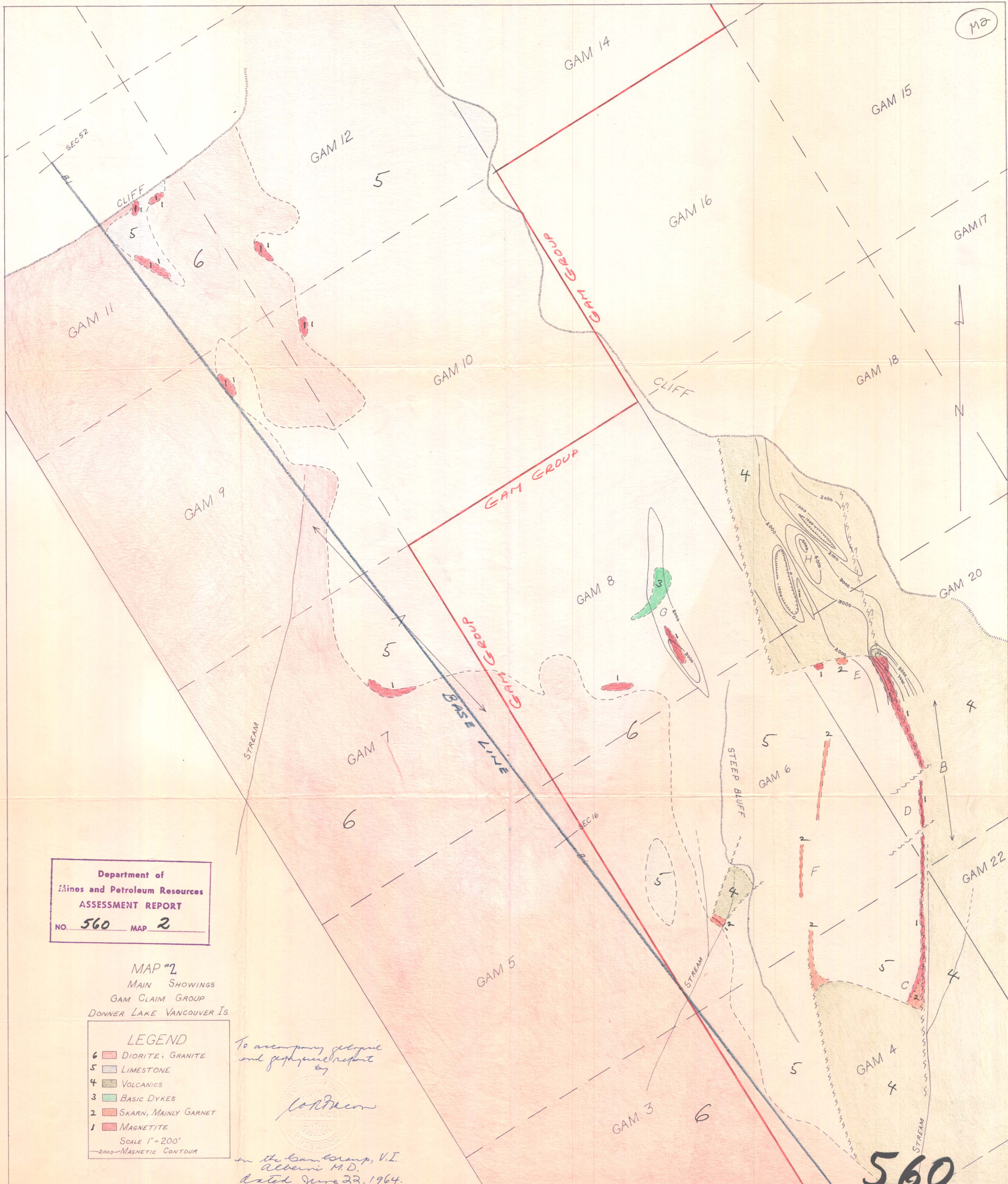
To accompany geological and geophysical
Report by



on the claim group, V.I.
Albany Mining Division
dated
June 23, 1964

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MAP #2
 MAIN SHOWINGS
 GAM CLAIM GROUP
 DONNER LAKE VANCOUVER IS.

LEGEND

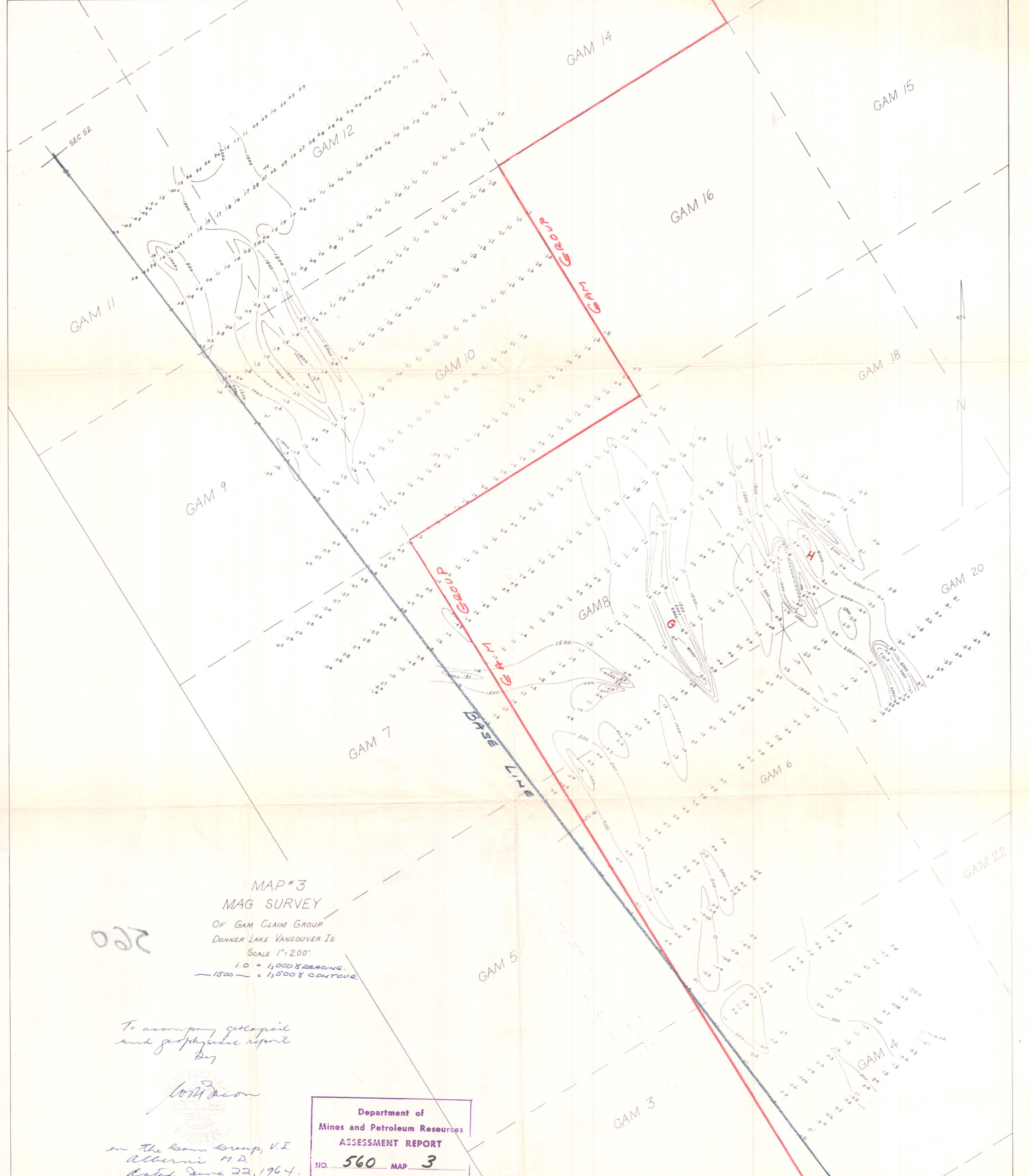
6	DIORITE; GRANITE
5	LIMESTONE
4	VOLCANICS
3	BASIC DYKES
2	SKARN, MAINLY GARNET
1	MAGNETITE
SCALE 1" = 200'	
-2000- MAGNETIC CONTOUR	

To accompany geologic
 and geophysical report
 by

W. J. McLean

in the Lands Group, V.I.
 Alberta M.D.
 Dated June 22, 1964.

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MAP #3
 MAG SURVEY
 OF GAM CLAIM GROUP
 DONNER LAKE VANCOUVER IS.
 SCALE 1" = 200'
 1.0 = 1,000' READING.
 -1500- = 1,500' CONTOUR.

200

To accompany geological
 and geophysical report
 by

W. D. Bacon
 W. D. BACON
 GEOLOGICAL
 ENGINEER

on the claim group, V.I.
 Alberni M.D.
 dated June 22, 1964.

Department of
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 NO. 560 MAP 3