MINNOVA

MEMORANDUM

DATE: June 23, 1989

TO: A.J. Davidson

826209
92G/10

COPIES À / COPIES TO: D.H. Watkins, I.D. Pirie

DE / FROM: C. Burge

SUJET / SUBJECT: **International Maggie Drill Proposal**

Introduction

A **2000 metre** drill program is proposed to follow-up 1988 drill intercepts and continue testing favourable stratigraphy in the Slumach area (see Figure 1). The target is a precious metal - rich volcanogenic massive sulphide deposit hosted within the Slumach rhyolite flow sequence. The Slumach rhyolite is underlain by the mar andesite which has undergone hydrothermal alteration and subsequent contact metamorphism producing a biotite - cordierite hornfels.

Geology and Targets

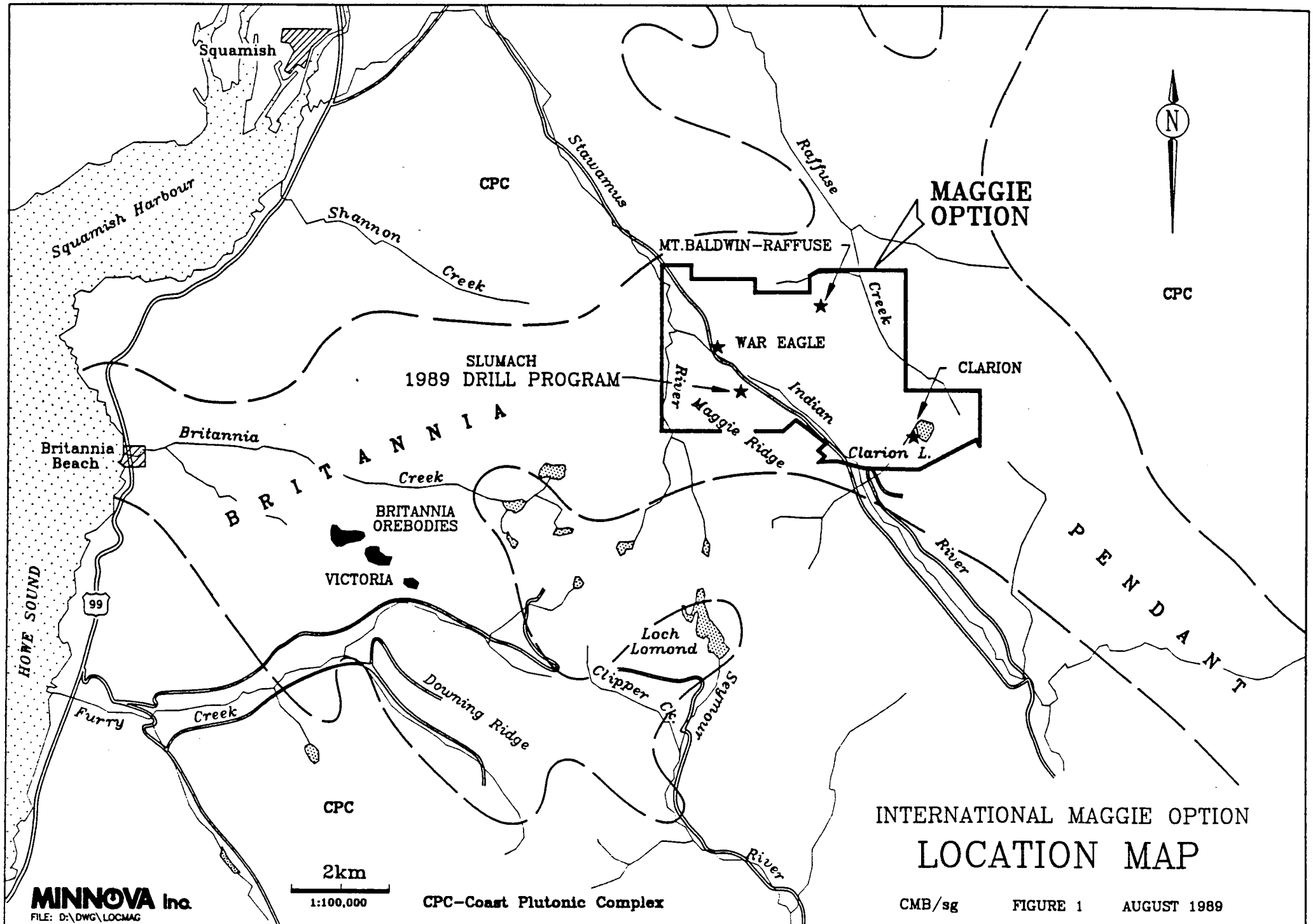
The Maggie property is underlain by volcanic and sedimentary rocks of the Gambier group which form an upright southwest dipping panel. These units have been intruded by intrusive rocks of the Coast Plutonic Complex and are interpreted to lie stratigraphically below the Britannia Mine Sequence, host rocks of the prolific Britannia orebodies.

The Slumach area has been the focus of exploration efforts since acquiring the property in 1987. Two drill programs totalling **3050 metres** have established the following stratigraphic succession from youngest to oldest. (See Figure 2)

Ridge Basalt - basalt flows.

Maggie Epiclastics - argillite, wackes, felsic tuffs.

Slumach Rhyolite - felsic flow breccias and minor andesite flows with cherty ashes.


Squamish
Squamish Harbour
CPC
Stawamus
Raffuse
MAGGIE OPTION
MT.BALDWIN–RAFFUSE
Shannon Creek
N
CPC
Creek
WAR EAGLE
SLUMACH
1989 DRILL PROGRAM
River
Maggie
Indian
CLARION
Ridge
Clarion L.
Britannia Beach
Britannia
Creek
B R I T A N N I A
BRITANNIA OREBODIES
VICTORIA
HOWE SOUND
99
River
P E N D A N T
Loch Lomond
Clipper Ck.
Seymour
Downing Ridge
Furry Creek
CPC
River
2km
1:100,000
CPC–Coast Plutonic Complex
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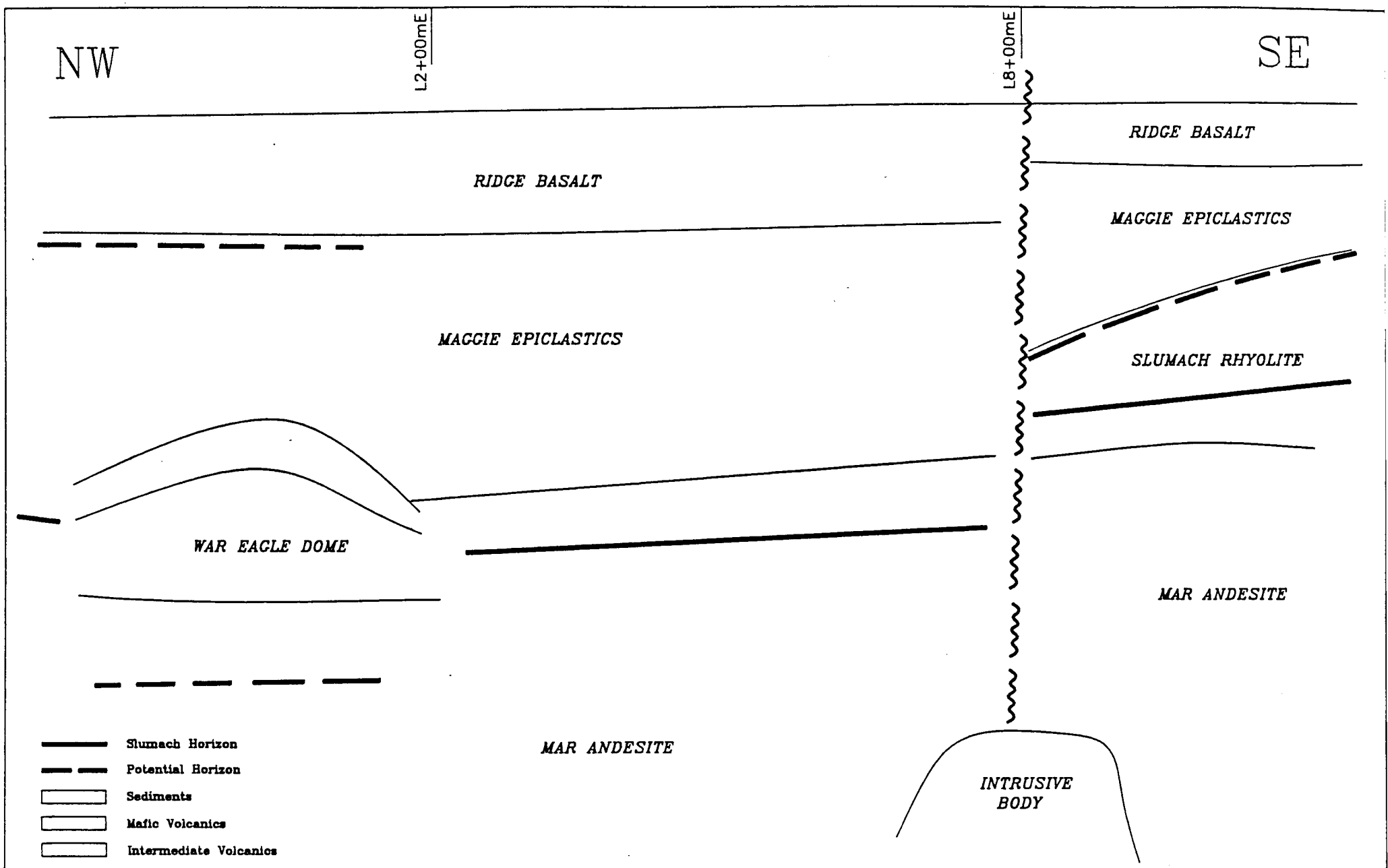
FILE: D:\DWG\LOCMAG
INTERNATIONAL MAGGIE OPTION
LOCATION MAP
CMB/sg
FIGURE 1
AUGUST 1989



IDEALIZED CROSS-SECTION THROUGH THE MAGGIE PROPERTY

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CMB/sg FIGURE 2 AUGUST 1989

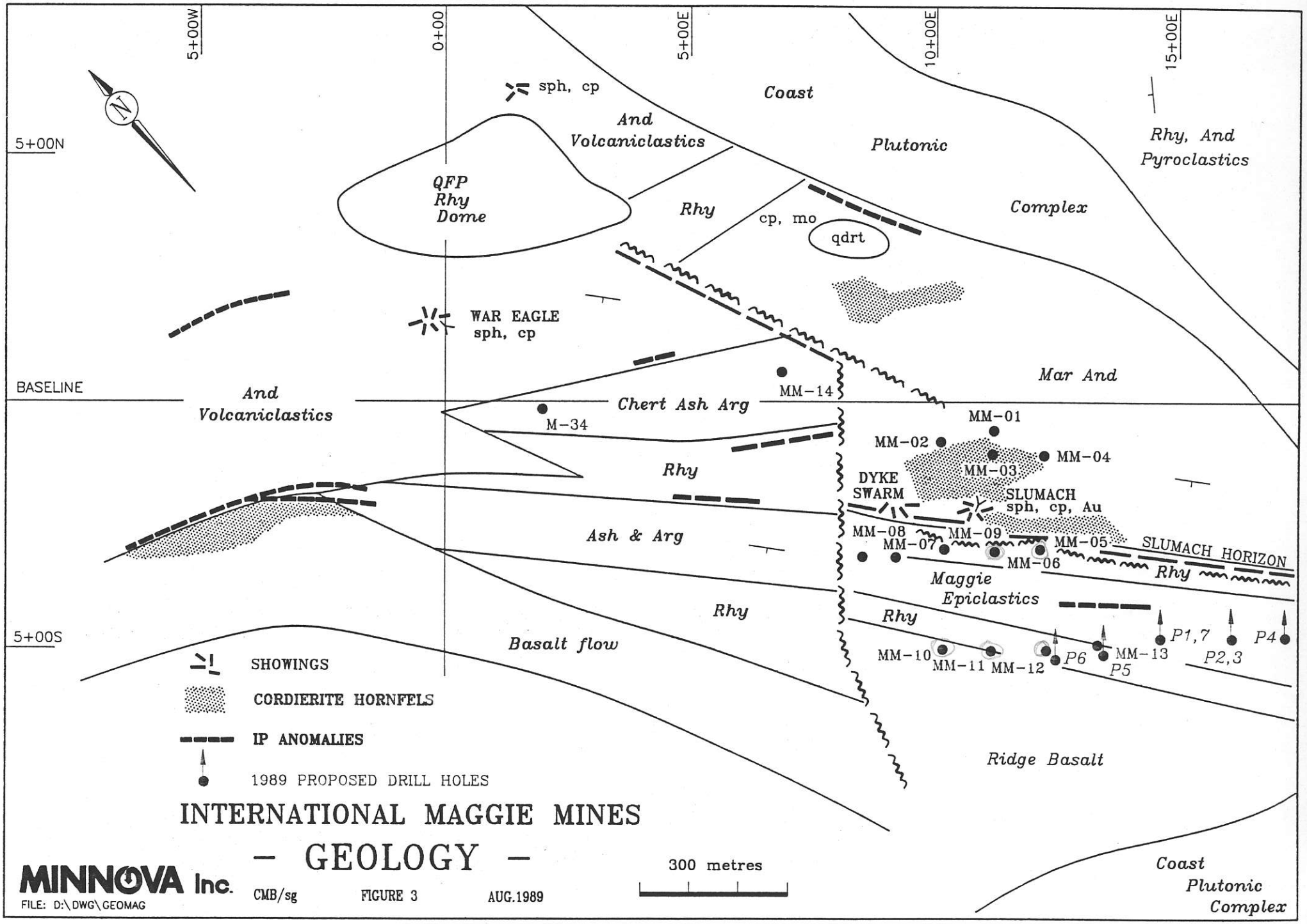
Mar Andesite - andesite to dacitic lapilli tuff and crystal tuff usually affected by biotite cordierite hornfels.

This assemblage dips moderately toward the southwest and has been traced along strike for over 1 km. (see Figure 3)

The Slumach rhyolite is known to be significantly enriched in barium, gold, zinc and lead over a strike length of 500 metres and down-dip for 250 metres. The footwall Mar andesite exhibits soda depletion and displays spectacular biotite - cordierite hornfels. Stringer type sulphide mineralization has been encountered in both units (usually quartz - sphalerite) and a number of potential horizons occur within the Slumach rhyolite each with potential to host volcanogenic massive sulphides. The top of the mineralized and altered portion of the Slumach rhyolite is marked by a bedding parallel fault which may have major implications with respect to location of orebodies. Hanging wall rocks do not display soda depletion and have been interpreted as post dating hydrothermal activity.

Each of the holes drilled in 1988 encountered significant mineralization within the Slumach rhyolite. The rhyolite is consistently cordierite altered and occasionally biotite - flooded. It is highly anomalous in zinc, barium and gold. MM-12 intersected more than 60 meters of zinc mineralization and a number of quartz - sulphide stringers within a biotite - flooded section of the Slumach rhyolite. These stringers average about 3.0% Zn and vary from .5 - 1.0 meters wide as well as being anomalous in gold. MM-13, located 100 meters southeast of MM-12, encountered similar alteration and zinc enrichment, but no quartz - sulphide stringers were intersected. MM-13 was abandoned within the mineralized zone due to technical difficulties and did not reach the footwall Mar andesite. This hole will be completed in the 1989 program.

The 1988 geological mapping program delineated a large



INTERNATIONAL MAGGIE MINES

— GEOLOGY —

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FILE: D:\DWG\GEOMAG

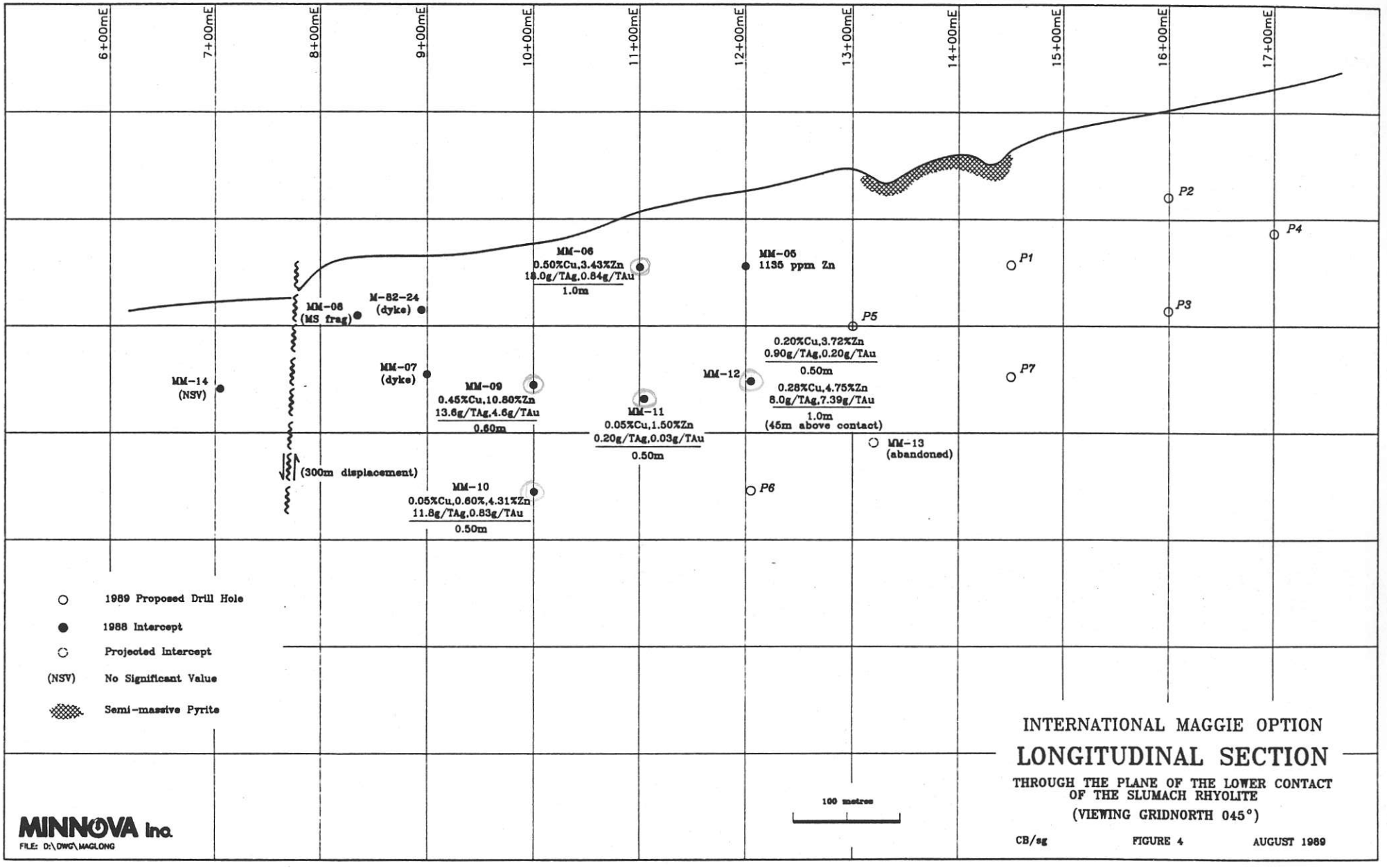
CMB/sg FIGURE 3 AUG.1989

area between L13E and L14E of massive to semi-massive pyrite situated at the base of the Slumach rhyolite. The strike and downdip potential will be tested in the 1989 program. Structural data collected in 1988 suggests that syngenetic mineralization in the vicinity of the Slumach will have a horizontal or shallow southeasterly plunge.

The following table lists significant results obtained within the Slumach rhyolite sequence.

Line	Hole	% Cu	% Zn	Au g/t	/M
10+00 E	MM-09	0.45	10.80	4.6	0.60
	MM-10	0.05	4.31	0.8	0.50
11+00 E	MM-06	0.05	3.43	.08	1.00
	MM-11	0.05	1.37	.02	0.50
12+00 E	MM-12	0.28	4.75	7.4	1.00

The 1989 drill program is designed to test the near surface shallow potential of semi-massive pyrite exposed in creeks between L13E and L14E as well as follow up encouraging results obtained in 1988. The possiblity that orebodies could occur at any contact between the Slumach rhyolite/Mar andesite contact and the Slumach rhyolite/Maggie epiclastics contact has been taken into consideration in the planning of the holes. Table 1 provides the details of individual holes and costs.



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INTERNATIONAL MAGGIE OPTION

LONGITUDINAL SECTION

THROUGH THE PLANE OF THE LOWER CONTACT OF THE SLUMACH RHYOLITE

(VIEWING GRIDNORTH 045°)

CB/sg FIGURE 4 AUGUST 1989

TABLE 1: 1989 SUMMER DRILL PROGRAM – MAGGIE OPTION

DDH #	NORTHING	EASTING	AZIMUTH	DIP	LENGTH	COST**	TARGET
P1*	5+00S	14+50E	045	-50	350m	$38,500	P1 will test the shallow downdip potential of semi-massive sulphides exposed in the creek between L13 and L14.
P2*	5+00S	16+00E	045	-55	350m	$32,000	P2 will test the postulated shallow easterly to horizontal plunge for semi-massive sulphides exposed in the creek just east of the Slumach.
P3*	5+00S	16+00E	045	-72	400m	$44,000	P3 will test the Slumach stratigraphy for VMS type mineralization downdip of P2.
P4*	4+92S	17+25E	045	-55	350m	$38,500	P4 will test the Slumach stratigraphy at L17E for VMS type mineralization.
P5*	4+92S	13+25E	045	-83	450m	$38,500	P5 will test the shallow potential of the Slumach stratigraphy 100m east of MM-05.
P6*	4+96S	12+00E	045	-83	450m	$49,500	P6 is designed to follow-up 60 metres of zinc mineralization encountered in MM-88-12 by testing Slumach horizon 100m downdip of the MM-88-12 intercept.
P7*	5+00S	14+50E	045	-75	400m	$44,000	P7 will test the postulated shallow easterly plunge for stringer type mineralization intersected in MM-88-12.
TOTAL					2650m	$291,500	

* Are high priority holes and must be drilled in 1989 for a total of 2250 metres at a cost of $247,500

** Costs include direct drilling costs, assays and salaries at $110/m – Roadbuilding not included.

STAWAMUS RIVER

INDIAN RIVER

WAR EAGLE PROSPECT

MAGGIE EPICLASTICS

MAR ANDESITE

SLUMACH PROSPECT

SLUMACH RHYOLITE

SLUMACH HORIZON

SLUMACH HORIZON?

SEMI-MASSIVE PYRITE

P1,P7

P2,P3

P4

P5

P6

4.2,3.6

1.1

3.6

6.5

6.3

3.1

5.3

4.2

3.5

MESOZOIC
CRETACEOUS
COAST PLUTONIC COMPLEX
MOUNTAIN LAKE PLUTON
SQUAMISH PLUTON
FURRY PLUTON
LOWER CRETACEOUS
MIDDLE GAMBIER GROUP-BRITANNIA PENDANT

LITHOLOGY

- 6 FELSIC INTRUSIONS
  - 1 Dacite(in part synvolcanic-flows?)
  - 2 Rhyodacite
  - 3 Rhyolite
  - 4 Granodiorite
  - 5 Granite
- 5 MAFIC INTRUSIONS
  - 1 Basalt
  - 2 Andesite
  - 3 Diorite-Quartz Diorite
  - 4 Gabbro
  - 4 Diabase
  - 4 Lamprophyre
- 4 SEDIMENTS
  - 1 Chert(Silic. ash)
  - 2 Argillite Tuff Wacke
  - 3 Siltstone
  - 4 Greywacke
  - 5 Conglomerate
- 3 FELSIC VOLCANICS
- 2 INTERMEDIATE VOLCANICS
- 1 MAFIC VOLCANICS
  - 1 Massive Flow
  - 2 Pillowed Flow
  - 3 Pillow, Flow Breccia
  - 4 Breccia
  - 5 Lava/Dome
  - 6 Tuff/Ash
  - 7 Crystal Tuff
  - 8 Lapilli Tuff
  - 9 Lapillistone
  - 10 Tuff Breccia
  - 11 Debris Flow
  - 12 Heterolithic Breccia
  - 13 Monolithic Breccia

PLACER or MAGGIE MINES DRILL HOLE

MINNOVA DRILL HOLE

PROPOSED 1989 DRILL HOLE

MAP AREA

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MAGGIE OPTION
1989 DRILL PROPOSAL

GENERALIZED GEOLOGY & PROPOSED DRILL HOLES

SCALE: 1:5000

DRAWN BY: CMB/sg

DATE: JUNE 1989

FIG. NO.: 5

WAR EAGLE PROSPECT

SLUMACH SHOWING

STACKPOOL

WC GROUP

STAWAMUS RIVER

INDIAN RIVER

Zn — LITHOGEOCHEM ANOMALY

Cu SOIL GEOCHEM

Pb SOIL GEOCHEM

Zn SOIL GEOCHEM

MAG ANOMALY

IP CHARGEABILITY HIGH

Na2O SODA DEPLETION

MAP AREA

MAGGIE

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MAGGIE OPTION

1989 DRILL PROGRAM

GEOCHEMICAL & GEOPHYSICAL COMPILATION

0 100 200 300 400 500m

SCALE: 1:5000

DRAWN BY: CMB/sg

DATE: JUNE 1989 N.T.S. 92G/10

FIG. NO. 6