1988 DRILL PROPOSAL

BRITANNIA-FLECK OPTION

826123

MINNOVA

MEMORANDUM

DATE: 22 June 1988

À TO: A.J. Davidson

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DE FROM: C.M. Burge

SUJET SUBJECT: 1988 Drill Proposal - Britannia-Fleck Option

INTRODUCTION

A helicopter-supported 940 metre diamond drill program is proposed to test the Britannia mine sequence four kilometers east of the former producer. This program was proposed August 21, 1987 but we were unable to locate a machine suitable for the job.

GEOLOGY

During the 1987 field season spectacular stringer mineralization was discovered during the summer mapping program about 400 metres and 800 metres east of the Watershed prospect. Chalcopyrite and pyrite veins up to 30 cm in width are hosted within a dacite composite flow/dome. This flow is interpreted to be the strike extension of the lower dacite flow encountered in the 1986 Watershed diamond drill program.

The 1986 program intersected two zinc-rich exhalite horizons stratigraphically above the dacite flow and below a distinctive dacite tuff breccia unit which has been traced on surface to the L4+00E area. Proposed drill holes P1, P2 and P6 will test this stratigraphy within the south limb of a northwest plunging anticline.

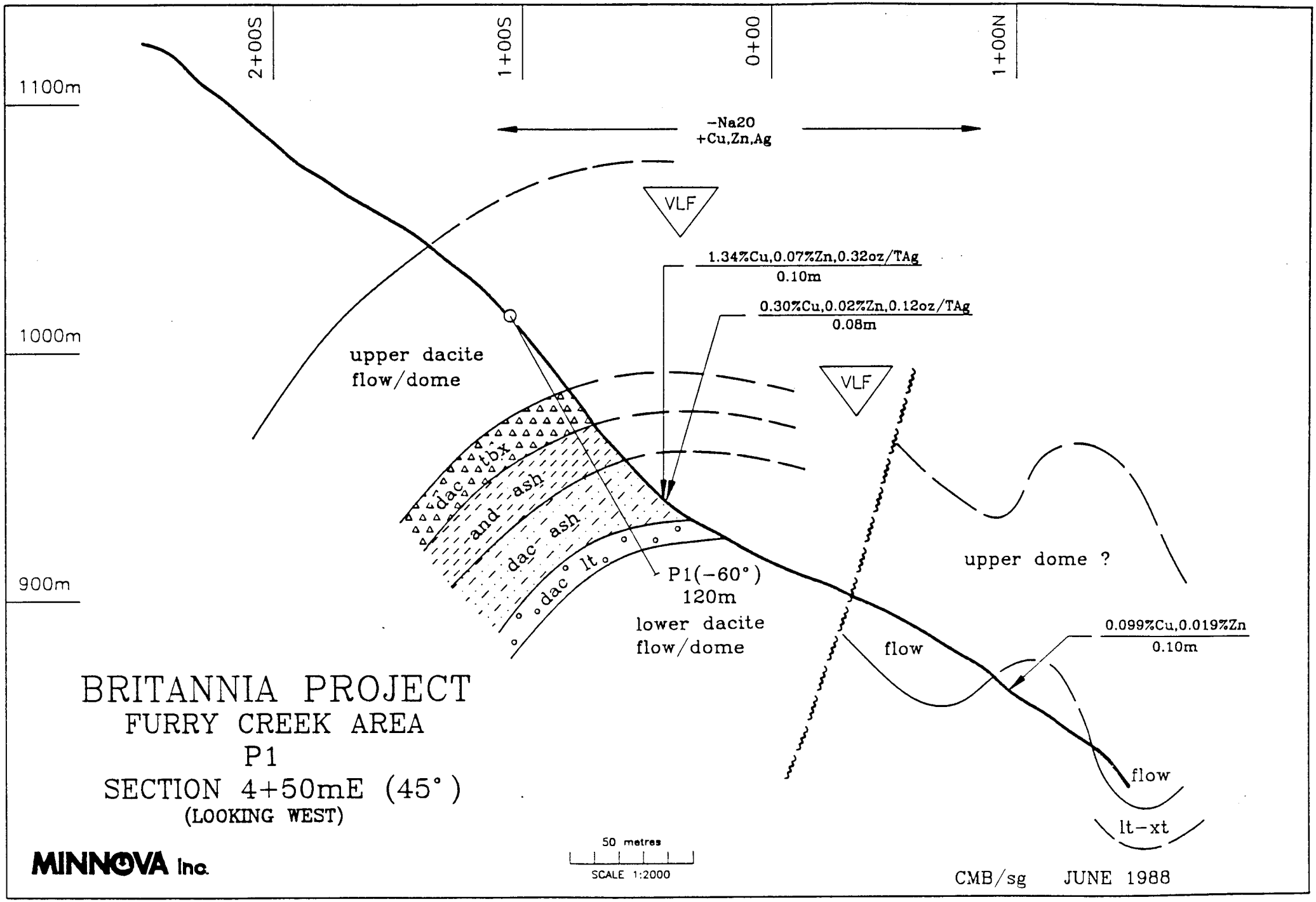
Proposed holes P3, P4 and P5 are designed to test base metal-enriched cherty ash beds above a silica-flooded andesite. This horizon is interpreted to be stratigraphically below the Watershed sequence and forms a westward plunging anticline. The andesite unit is markedly enriched in barium, depleted in soda and potash enriched. P3 and P4 will test a zinc anomaly which is associated with cherty argillites overlying the andesite and continuous over 200 metres.

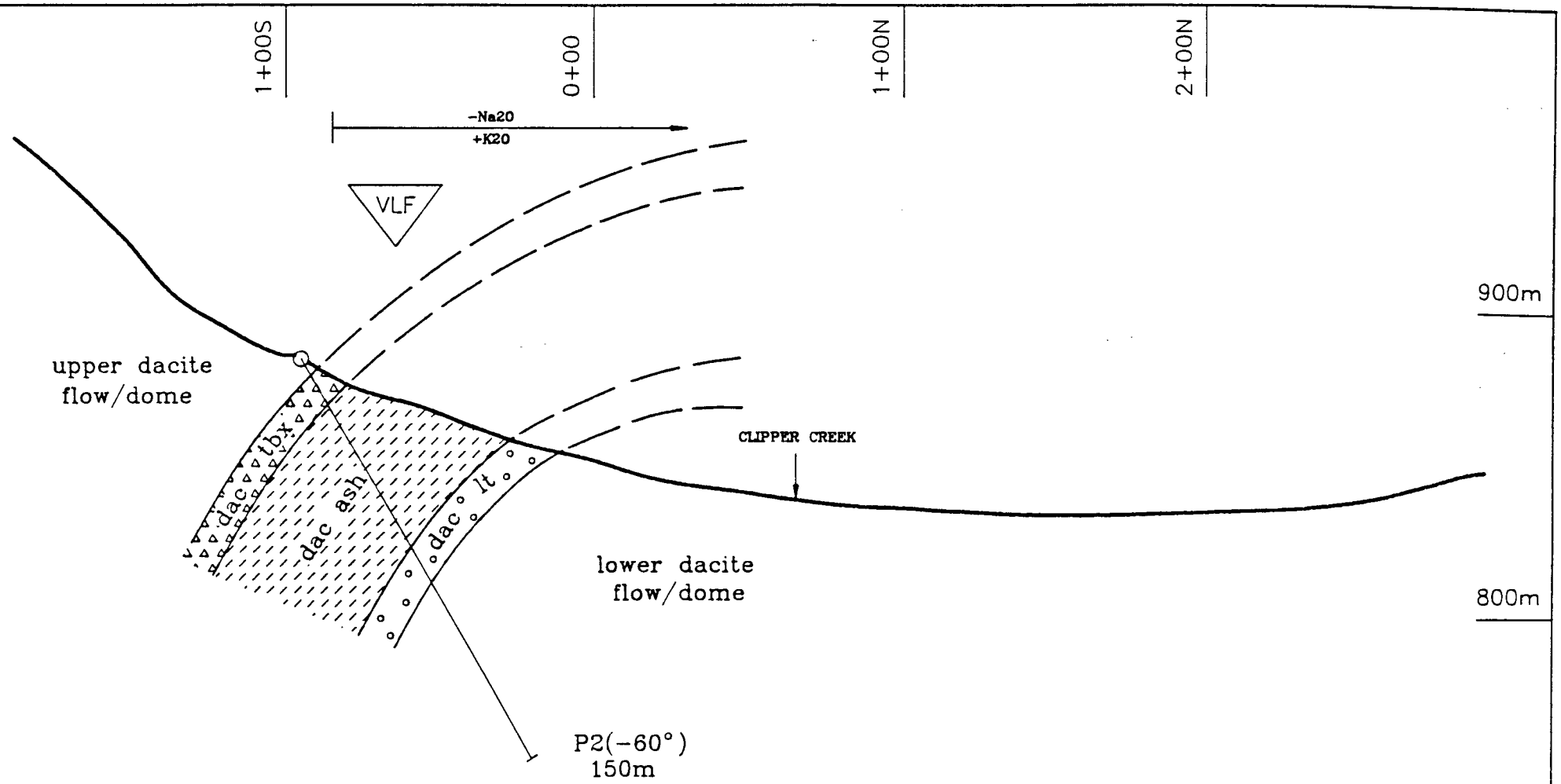
P7 will test the strike extension of cherty argillites being tested in the L8+00E area. The sediments occur stratigraphically above a quartz-feldspar porphyritic dome.

1988 PROPOSED HOLES - FLECK-BRITANNIA OPTION

Hole	Line	Station	Azimuth	Dip	Length	Cost	Remarks
P1	4+50E	1+10S	45°	-60°	120m	13,200	P1 will test mineralized dacitic ashes stratigraphically above the lower dacite dome.
P2	1+75E	0+75S	45°	-60°	150m	16,500	P2 will test the Watershed stratigraphy 175 metres east of FC-86-02.
P3	8+00E	1+00S	45°	-60°	120m	13,200	P3 and P4 will test transition stratigraphy
P4	8+00E	1+00S	60°	-90°	150m	16,500	which contain argillite and chert horizons and copper and zinc anomalies.
P5	8+90E	0+90N	240°	-60°	100m	11,000	P5 will test cherty ashes with chalcopyrite mineralization dipping north and lying above a silica-flooded andesite.
P6	3+60E	0+80S	60°	-55°	150m	16,500	P6 will test stratigraphy 100m east of P1, where zinc values up to 5.8% were obtained.
P7	6+20E	0+70S	45°	-55°	150m	16,500	P7 will test felsic ashes and argillite stratigraphically above a quartz porphyritic dacite dome.
				TOTAL	940m	103,400[1]	
				Helicopter	35 days	35,000	
						138,400	
		Accomodation, assays, transportation, salaries, etc.				18,000	
				TOTAL		156,400	

[1] Drilling cost at $110/m


2+00S
1+00S
0+00
1+00N
1100m
1000m
900m
-Na20
+Cu,Zn,Ag
VLF
1.34%Cu,0.07%Zn,0.32oz/TAg
0.10m
0.30%Cu,0.02%Zn,0.12oz/TAg
0.08m
upper dacite
flow/dome
VLF
dac tbx
and ash
dac ash
dac lt
P1(-60°)
120m
lower dacite
flow/dome
upper dome ?
0.099%Cu,0.019%Zn
0.10m
flow
flow
lt-xt
BRITANNIA PROJECT
FURRY CREEK AREA
P1
SECTION 4+50mE (45°)
(LOOKING WEST)
MINNOVA Inc.
50 metres
SCALE 1:2000
CMB/sg JUNE 1988



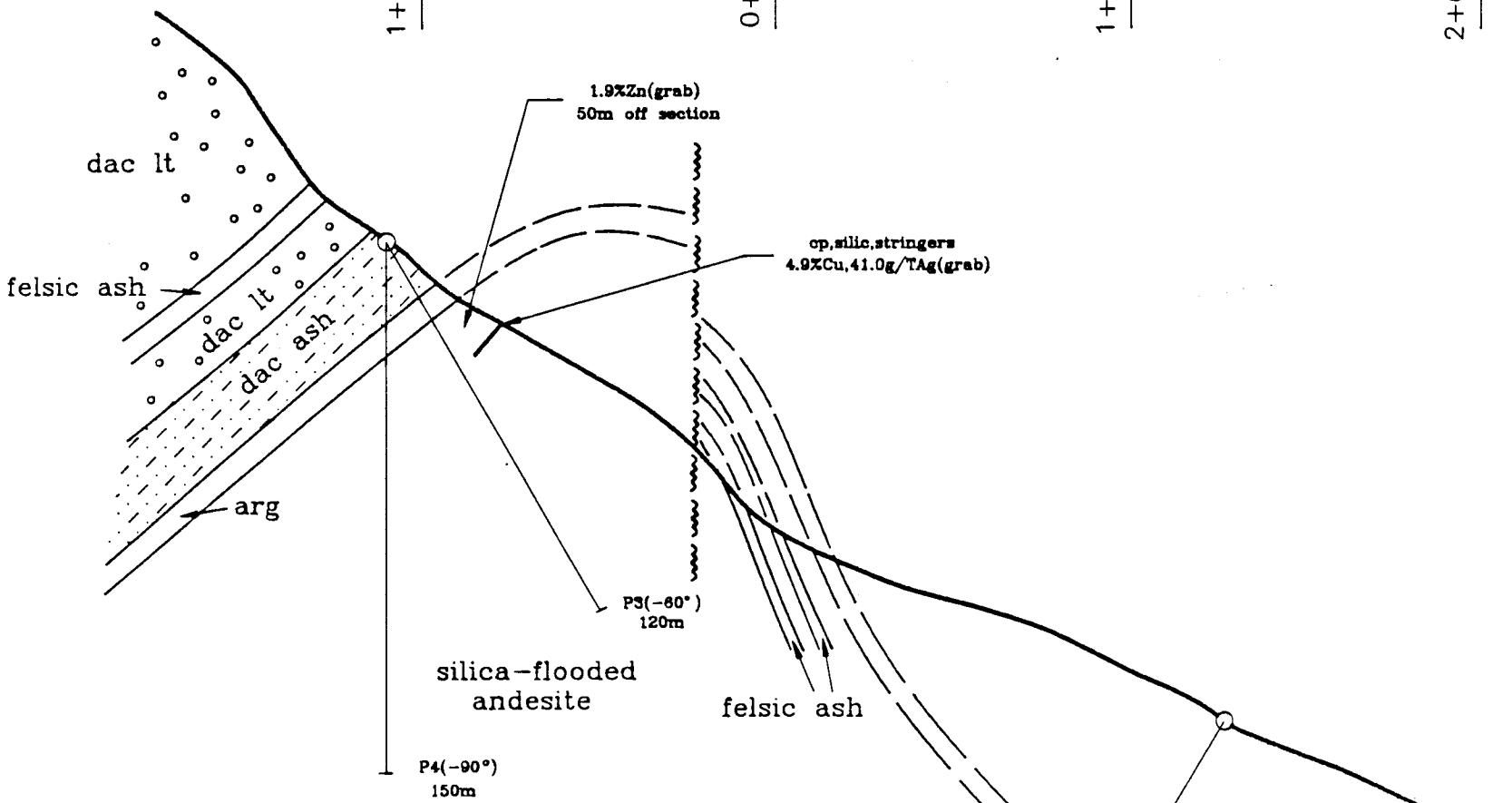
BRITANNIA PROJECT
FURRY CREEK AREA
P2
SECTION 2+00mE (45°)
(LOOKING WEST)

50 metres

SCALE 1:2000

MINNOVA Inc.

CMB/sg JUNE 1988



BRITANNIA PROJECT
FURRY CREEK AREA
P3,P4,P5
SECTION 8+00mE (45°)
(LOOKING WEST)

CMB/sg JUNE 1988

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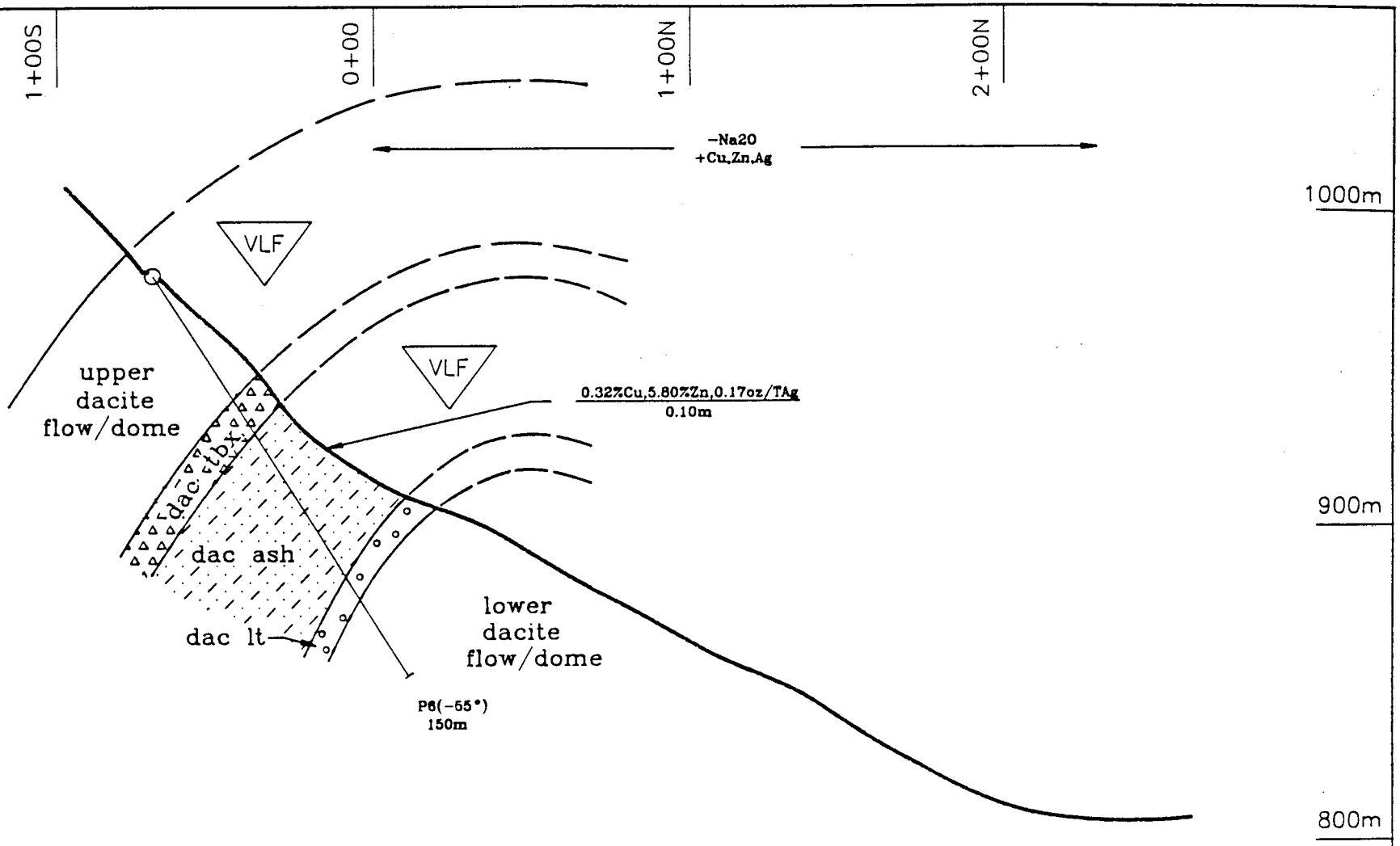

BRITANNIA PROJECT
FURRY CREEK AREA
P6
SECTION 3+80mE (45°)

50 metres

SCALE 1:2000

MINNOVA Inc.

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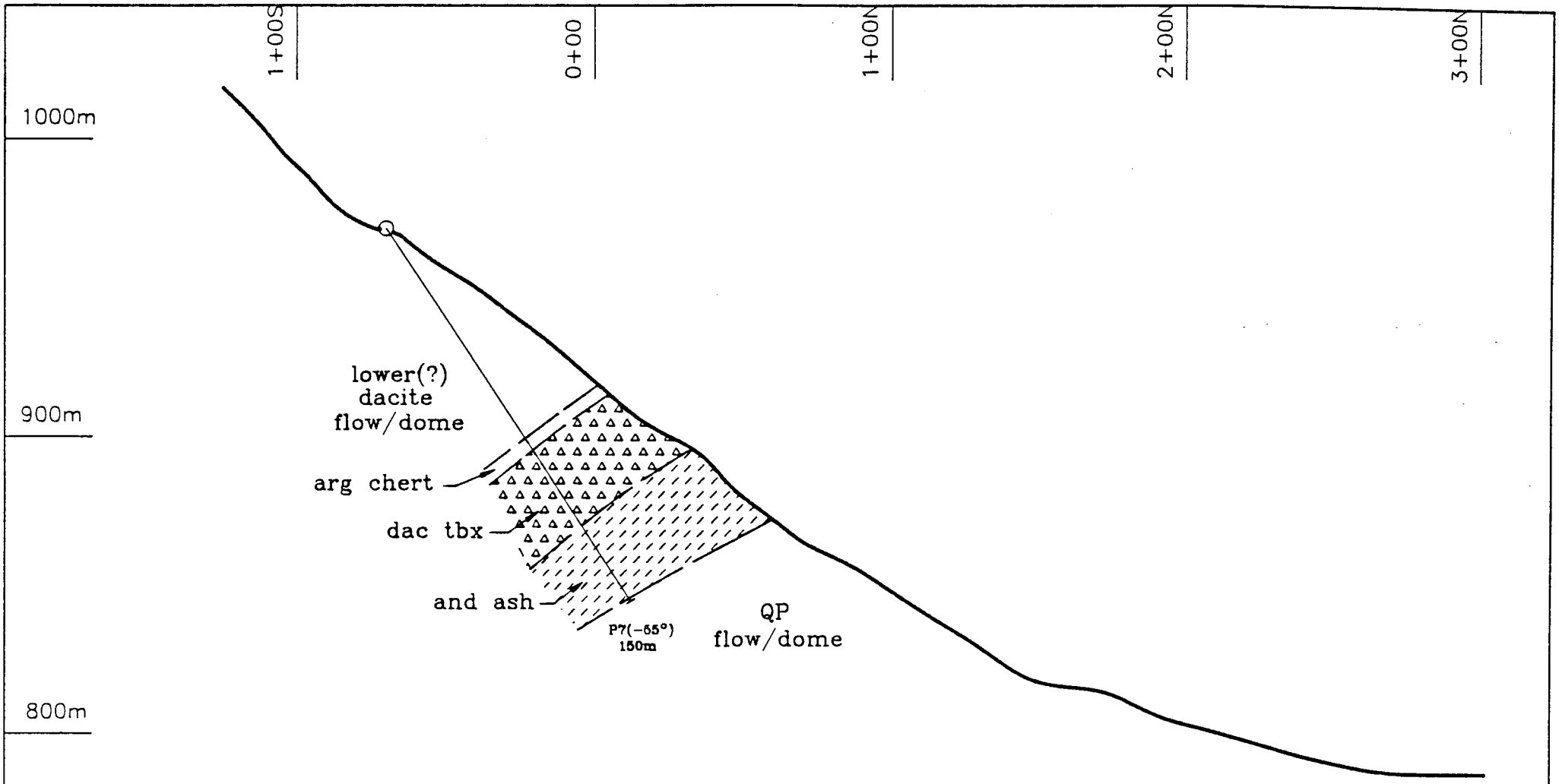
JUNE 1988



BRITANNIA PROJECT

FURRY CREEK AREA

P7

SECTION 6+00mE (45°)

50 metres

SCALE 1:2000

MINNOVA Inc.

CMB/sg

JUNE 1988

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BRITANNIA PROJECT
FURRY CREEK AREA
FURRY-CLIPPER DIVIDE
GEOLOGY AND
PROPOSED DRILL HOLES 1988
0 20 100 200m
SCALE: 1: 2000
N.T.S. 92G/10
DRAWN BY: CB/sg
DATE: JUNE 1988
MAP:
MINNOVA
BRITANNIA PROJECT
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
5 Diabase
6 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
TEXTURES
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
SYMBOLS
Breccia; sulphide fragments; chert fragments
Bedding
Foliation
Joint
Lineation
Conformable contact
Intrusive contact
Fault
Outcrop
Pit
Drill Hole
Road
Stream
Contour interval 50 m
Property boundary
ABBREVIATIONS
ccp - chalcopyrite, sph - sphalerite, gal - galena
py - pyrite, pyo - pyrrhotite, mag - magnetite
carb - carbonate, chl - chlorite, ser - sericite
epi - epidote, mal - malachite, biot - biotite
cord - cordierite, qfp - quartz - feldspar porphyritic
mfp - mafic - feldspar porphyritic, gms - grey mottled schist
Schist (quartz - sericite / chlorite)
1988 Proposed hole
FC86-01
FC86-04
FC86-02
FC86-03
BL 00
L 4+00W
L 2+00W
L 00
L 2+00E
L 4+00E
L 6+00E
L 8+00E
L 10+00E
L 12+00E
P1
P2
P3,P4
P5
P6
P7
A
B
Old Railroad Grade
1300
1200
1100
1000
900
800
3.6 chert boudins
locally graded
2,3,7 locally cherty minor 0.8 up to 15% py ± sph ll bedding
1.8 w ash tuff interbeds
1.7,8 interbedded
tr - 3% diss py
gossan
3.7 locally cherty
1.7 10-20% qp tr-2% py
1.7 15-20% f 1-3mm 5-15% fine-med ga, py
4.1,2 interbeded arg, ash, chert
3.6
sulphide frags 2-4 mm
gms
gms heterolithic 3% py
tr cp, 2% py
ccp stringers
chlorite
2.5 qp amygdules
2,3.7 5-15% py locally cherty
3.6,7 fp 5-15% py
1.1 cherty vein network chert bx chloritic
ccp py ± sph stringers
locally qp ~5% <1-4 mm amyg? 2-5% diss py (poss flow)
1.1 locally cherty network chert bx
ccp stringer horizon
1.1 local chert bx
3.6 dk grey chert
3.6 locally cherty qp
1.1 5-10% diss fg py throughout chert
3.7,8 5-10% frags
3.6 cherty
qtz, sph, ccp vein
arg cherty
(lower ctc ashes) 2,1.6
2,3.6 3-5% py
2.5 qfp
(upper dome ?)
2.1,5 (upper dome)
2,3.1,5 aphyric
2.8 poss gms 10-30% frags
2,3.6,7 fp ≤ 1.5mm
qtz veins 3.6 5-10% py
≤50% py
5.1
cut & fill
1.6 epi knots
grading
pumice beds