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MEMORANDUM

FILE

827149

DATE: Nov. 25, 1986

À TO: A.J. Davidson

COPIES À COPIES TO: D.H. Watkins

DE FROM: H.L. Gibson, M. Gray

SUJET SUBJECT: Proposed Diamond Drill Program, Mt. Sicker Project

INTRODUCTION

The target sought is a baritic, polymetallic VMS deposit with high PM values. Twelve drill holes totalling 1875m are proposed to test the Mine Package, hosting the former Lenora-Tyee VMS deposits, on both the north and south limb and hinge area of the Mt. Sicker anticline. A single hole (P1, 250m) is directed at the Myra-Nitinat contact which hosts Westmin's large H-W VMS deposit. Proposed drill holes test specific, integrated geological/geochemical/geophysical targets, follow-up mineralization encountered in previous drill programs and provide stratigraphic/structural data in key areas. Holes P1 through P4 and P6-P7 (1225m) test priority targets; it is recommended that they be completed in the 1986 program.

GEOLOGY AND TARGET AREAS

Thick, massive units of felsic and subordinate mafic pyroclastic rocks with minor ash, argillaceous sediments and chert comprise the paleozoic Myra formation which underlies Mt. Sicker. The Lenora-Tyee VMS deposits, analogous to Westmin's Myra-Lynx deposits, occur within a distinct, well-bedded volcanic succession (70m thick) characterized by quartz and quartz-feldspar crystal tuffs, fine felsic/andesitic ash, and locally minor chert and/or argillite. This distinct package, referred to as the Mine Package, occurs on both limbs of the Mt. Sicker anticline where it is locally folded into minor, smaller folds at Lenora-Tyee and Northeast Copper.

Holes P2 and P3 test the Mine package on the south limb of the anticline 1100m east of Lenora-Tyee whereas P6 and P7 test the equivalent stratigraphy on the north limb, 200m east of the Postuk-Fulton showing. Hole P1 is directed at the Myra-Nitinat contact ("H-W horizon") below the Lenora-Tyee deposit immediately north of the Mine fault, which together with the subparallel Nugget Creek fault to the north define a graben-like structure within the volcanic succession. Hole P4 tests the Mine Package in the hinge area of the anticline immediately north of the Nugget Creek fault. Details of proposed holes and specific targets are outlined in Table 1.

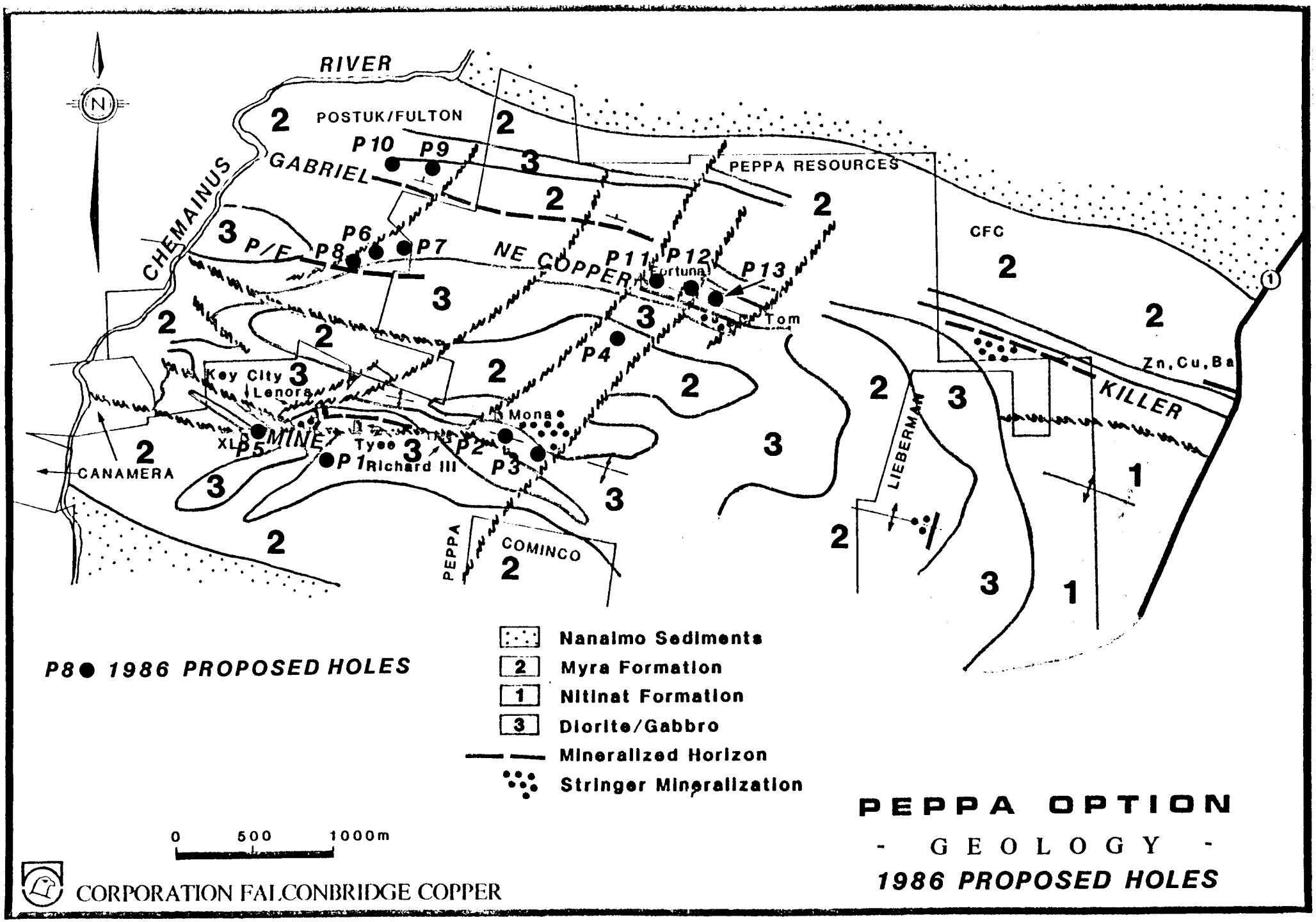
Harold Gibson

PROPOSED DIAMOND DRILL HOLES, MT. SICKER

Hole No.	Length	Dip	Azimuth	Easting	Northing	Cost $	PN	Comments
P1	250m (deepen from 534m)	-65	0°	2+00W	10+00S	22,500	305	MTS-17 will be deepened to the Myra-Nitinat contact to test the "HW horizon" for stratigraphically stacked mineralization below the former Lenora-Tyee deposits
P2	175	-45	25°	9+00E	9+15S	15,750	305	P2 and P3 will intersect the faulted eastern extension of the Mine Package (Lenora-Tyee horizon) east of the Fortuna fault. The holes test the shallow down-dip extent of Ba-enriched, Na-depleted and pyrite mineralized tuffs below a diorite sill and VPEM conductors.
P3	175	-50	25°	11+00E	10+85S	15,750	305	
P4	150	-75	0	16+00E	3+10S	13,500	305	P4 will test the shallow south-dipping Mine Package below a strong surface Ba anomaly between the Fortuna-Northeast Copper faults and immediately north of the Nugget Creek fault.
P5	175	-45	0	7+90W	8+40S	15,750	305	P2 will test the south-dipping Mine Package 50m west and 70m south of the Key City shaft. Fault repitition may result in double hits of this favourable package. The hole is located to intersect the Mine Package down-dip of significant pyrite mineralization in MTS-19 and will test a moderate to strong IP high coincident with a weak to moderate resistivity low and Deepem Conductor.

Hole No.	Length (m)	Dip	Azimuth	Easting	Northing	Cost $	PN	Comments
P6	225	-45	185	0+75E	2+60N	20,250	304	Holes P6 - P8 are directed at the Mine Package (Postuk-Fulton horizon) below a diorite intrusion on the north-dipping limb of the Mt. Sicker anticline. The Mine Package has been traced through mapping and drilling for 2.6km along strike (2+00W - 24+00E) and has a minimum down-dip extent of 1km (MTS-15). Intersections in MTS-3 (semi-massive sulphide - 2.5% Cu, 0.05% Zn, 10.5 gm/T Ag, 0.25 gm/T Au/0.5m) and MTS-8 (5-20% py over 70m - best assay 3.33% Cu, 0.05% Zn, 13.4 gm/T Ag, 0.2 gm/T Au/0.25m) define an anomalous area of mineralization and alteration within the Mine Package. P6 will test the Mine Package between MTS-3 and MTS-8, while P7 will test the package 150m east of MTS-8. P8 will test the Mine Package in an areas of known mineralization and below surface DEEPEM/Na_2O depletion anomalies and old workings.
P7	250	-45	170	3+20E	2+60N	22,500	304	
P8	150	-60	205	1+00W	2+00N	13,500	304	
P9	150	-45	180	4+00E	7+80N	13,500	304	P9 tests the Gabriel Horizon below an area of Na_2O depletion/zinc enrichment and weak DEEPEM conductors. MTS-10 will be deepened by 150m (P-10) to intersect the Gabriel Horizon below an area of Na_2O depletion.
P10 (MTS-10)	150 (245m)	-40	180	1+00E	8+55N	13,500	304	

Hole No.	Length (m)	Dip	Azimuth	Easting	Northing	Cost $	PN	Comments
P11	100	-90		18+50E	0+30N	9,000	305	Holes P11-13 test strongly sericitized (minor chlorite) and mineralized rhyolitic/andesitic tuffs and chert of the Mine Package within the hinge of a minor, shallow west-plunging syncline. P11-13 are located below strong surface Na_2O depletion/zinc enrichment anomalies and coincident DEEPEM, VPEM, IP and Dighem conductors. In particular, hole P11, located 50 east of the Fortuna adit, is proximal to previously intersected chalcopyrite-pyrite mineralized cherts/ash units (SRM-21) and massive sulphide mineralization (S-72-3).
P12	100	-75	180	20+50E	0+30S	9,000	305	
P13	75	-90	0	21+80E	1+20S	6,750	305	
Total	2125					$191,250		


RIVER
POSTUK/FULTON
P10
P9
GABRIEL
PEPPA RESOURCES
CHEMAINUS
P/E
P8
P6
P7
NE COPPER
P11
P12
Fortuna
P13
Tom
CFC
P4
Zn, Cu, Ba
KILLER
Key City
Lenora
Mona
XL
P5
MINE
Tyee
P2
P1
Richard III
P3
CANAMERA
LIEBERMAN
PEPPA
COMINCO
Nanaimo Sediments
Myra Formation
Nitinat Formation
Diorite/Gabbro
Mineralized Horizon
Stringer Mineralization
P8● 1986 PROPOSED HOLES
0 500 1000m
CORPORATION FALCONBRIDGE COPPER
PEPPA OPTION
- GEOLOGY -
1986 PROPOSED HOLES

- LEGEND -
1 MAFIC VOLCANICS
2 INTERMEDIATE VOLCANICS
2.2 Feldspar Phyric
3 FELSIC VOLCANICS
3.1 Quartz Phyric
3.2 Feldspar Phyric
3.3 Quartz Feldspar Phyric
4 MAFIC INTRUSIONS
4.1 Diorite
4.2 Gabbro
4.4 Quartz-Bearing Diorite
5 FELSIC INTRUSIONS
5.3 Andesite
6 SEDIMENTS
6.1 Cherty Sediment
6.3 Argillite / Shale
7 MINERALIZATION
7.2.6 Chert with Chalcopyrite
7.7.6 Massive Chert
Porphyritic (>5% phenocrysts)
Flow
Lapillistone
Partially (ie 3(1)-some qtz phyric o/c)
Intrusive Contact
Conformable Contact
Gradational Contact
Foliation
Second Foliation (inclined, vertical)
Lineation
Fault
Alteration Zone
Outcrop
Float
Drill Hole
Survey Point
Shaft
Adit
Trench
Claim Post
Road (maintained, abandoned)
Creek
- ABBREVIATIONS -
ba Barite
cp Chalcopyrite
ga Galena
mag Magnetite
py Pyrite
po Pyrrhotite
carb Carbonate
chl Chlorite
epid Epidote
ser Sericite
sil Silicified
N
COMINCO
POSTUK-FULTON
PEPPA RESOURCES
NANAIMO SEDIMENTS
RIVER
NUGGET CREEK FAULT
POSTUK-FULTON HORIZON
LEONA DIORITE
NUGGET CREEK FAULT
LENORA FAULT
FORTUNA FAULT
FORTUNA ADIT
Gabriel Chert
NORTHEAST COPPER
TOM'S
BLUEBELL
COPPER CANYON
VIVA VENTURES
KEY CITY
LENORA
TYEE
MINE
RICHARD III
FAULT
MONA
WESTHOLME
NORTHEAST COPPER FAULT
YANKEE FAULT
NANAIMO YANKEE FAULT
NANAIMO SEDIMENTS
COMINCO
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
P13
strongly banded py
massive chlorite
chert breccia
LOCATION MAP
CHEMAINUS
VANCOUVER ISLAND
Crofton
SALTSPRING ISLAND
Quamichan Lake
DUNCAN
SCALE 1:250,000
MT. SICKER PROPERTY
1986 FALL DRILL PROGRAM
PROPOSED HOLES
GEOLOGY BY: D.V. LEFEBURE, I.D. PIRIE, M. LEGAULT, M. BURSEN, P. RONNING, G. ALLEN J.IKINGURA
0 50 100 200 300 400 500 m
1:5000
UPDATED MTS 6-16 MAR.86 DL/dm
NOV. 1986
DVL/DG
8/11/84
MAY 1984
92 B/13
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.