

DRILLING

ASSESSMENT REPORT

MARY GROUP

FORT STEEL M.D.

NTS 82G/5W

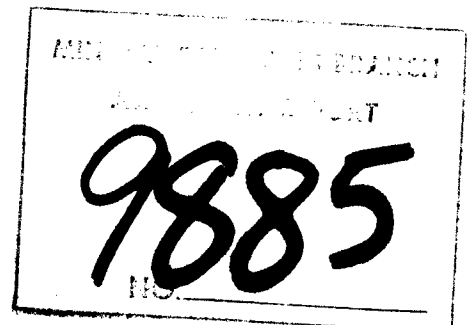
49° 24 N 115° 59 W

Owner: St. Eugene Mining Corporation Limited

Operator : St. Eugene Mining Corporation Limited

Author: John R. Wilson

Date Submitted: December 22, 1981



Part 2 of 2

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## INTRODUCTION

The Mary Group of mineral claims consists of Mary 1 (20 units), Mary 2 (20 units), Mary 3 (20 units), Mary 5 (20 units), and Mary 8 (20 units).

These claims were all staked in November, 1980.

The property is located approximately 15 kilometres southwest from Cranbrook, B. C. It straddles the Moyie River and is bounded to the west and east by Noke and Negro Creeks, respectively. The Lumberton - Moyie River road passes through the claim and an old logging road comes near the drill site.

One vertical BQ diamond drill hole was run to a depth of 170.1 metres on the Mary 1 claim for lithologic information.

St. Eugene Mining Corporation Limited is the owner and operator of the claims. No economic mineralization is known on the property.

## GENERAL GEOLOGY

Bedrock consists mainly of middle (?) Aldridge formation sedimentary rocks of the Lower Purcell Supergroup (grey quartzites, argillaceous quartzite, siltstones, argillites and argillaceous siltstones). A prominent gabbroic sill was located north of the drill site and can be projected to have lain, at one time, stratigraphically above the collar.

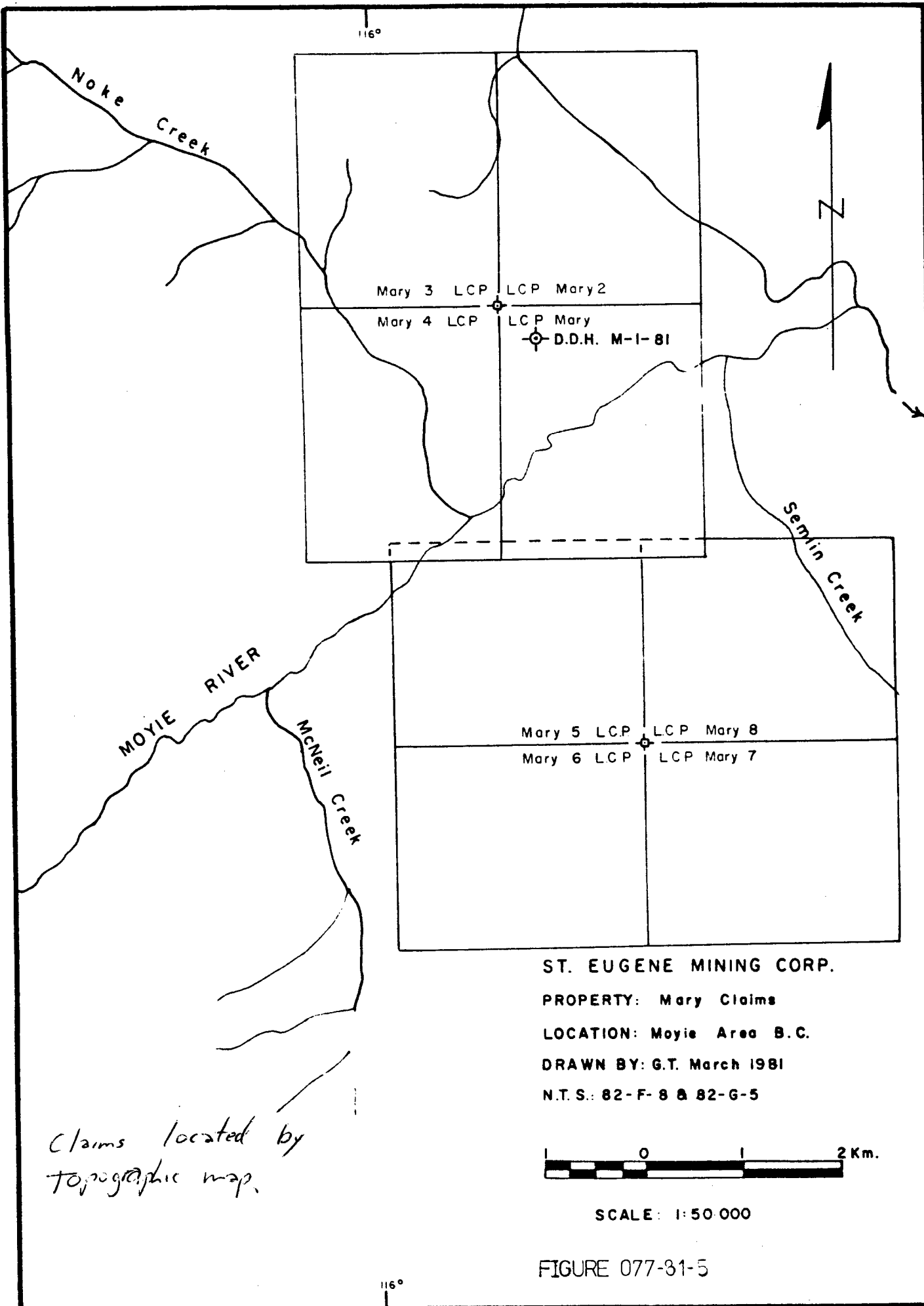
In the drilled area, outcrops exhibit  $10^{\circ}$  to  $25^{\circ}$  northerly dip.

Regional metamorphism and deformation of lithologies is minor.

## PHYSICAL WORK

A four hundred metre road was built to allow access by drill and truck.

*John R. Walker*



*Claims located by topographic map.*

**ST. EUGENE MINING CORP.**  
**PROPERTY: Mary Claims**  
**LOCATION: Moyie Area B.C.**  
**DRAWN BY: G.T. March 1981**  
**N.T.S.: 82-F-8 & 82-G-5**



**SCALE: 1:50 000**

**FIGURE 077-31-5**

L.C.P. Mary Claim No.1



4400

D.D.H. M-1-81

ROAD BUILT

Road

4300

4200

ST. EUGENE MINING CORP.

PROPERTY: Mary Claim.

LOCATION: Moyle Area B.C.

TYPE OF MAP: PHYSICAL WORK

DRAWN BY: G.T. Nov. 1981

N.T.S. NO.: 82-G-5 FIG. NO.: 077-81-6



SCALE: 1:5,000

L.C.P. Mary Claim No.1



4400

D.D.H. M-1-81

Road

4300

4200

**ST. EUGENE MINING CORP.**

**PROPERTY: Mary Claim.**

**LOCATION: Moyle Area B.C.**

**TYPE OF MAP: D.D.H. Location**

**DRAWN BY: G.T. Nov. 1981**

**N.T.S. NO.: 82-G-5 FIG.NO.: 077-81-7**



**SCALE: 1:5-000**

U.T.M.  
 NORTH 5474590 STARTED 8 May/81  
 EAST 574070 COMPLETED 13 May/81  
 ELEV. 4360' (1329 m) LENGTH 558' (170.1 m)  
 BEARING Vertical  
 DIP -90° @ collar

# FALCONBRIDGE DIAMOND DRILL RECORD

PROPERTY  
Moyie Area Claims

PURPOSE To test Dighem resistivity low. HOLE No. M-1-81  
 CLAIM Mary 1  
 SECTION \_\_\_\_\_  
 OFFSET \_\_\_\_\_  
 LOGGED BY J. Wilson PLOTTED \_\_\_\_\_

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	C.L.				
	BQ core; D. J. Drilling; BBS1 drill. Core is stored at St. Eugene Mining Corporation camp at Moyie.							
0 - 38.7	Overburden, casing in sections. Overburden recovery: 4.9 - 36.0: Diorite and massive grey Q up to 8 cm. with angular pebbles of diorite, Q and A in brownish-grey clay. 36.0 - 38.7: pale brown clay.							
38.7 - 40.5	3 cm. diorite and Q fragments.							
40.5 - 47.8	Pale red sericitic(?) S with 3 mm. rounded red spots Extremely soft & clayey. Broken in 1-6 cm lengths. 60° beds (?) @ 45.1							-2-
47.8 - 48.8	Gradual change to light brown colour, spots still reddish. Core more solid but still very soft.							
48.8 - 72.2	Gradual change to darker brown-grey. Spots become bronzy-black (biotite?). Still sericite matrix. Apparently altered siltstone/quartzite. Banding (bedding?) @ 60° @ 62.5.							
72.2 - 75.9	As above but biotite(?) spots only in patches. 25° to vertical bands (1-3 mm brown & grey) are fractures or veining. 73.8 : 70° bedding, rip up clasts, black tabular 2 mm crystals.							
75.9 - 78.9	Massive grey.							
75.9 - 76.6	Mod. soft massive aS with minor black A. Indistinct 55° bedding 5 mm to 5 cm., load casts, lensing, rip up clasts. Trace py. on frs.							
76.6 - 77.7	H.Q. with purplish tinge, pink 2 mm garnets. 0-10° frs. w. py. Greenish tinge @ base.							
77.7 - 78.9	Intermittent streaks of soft black A to 5 mm @ 65° in soft a.S. Tr. py. on 0-10° frs.							

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	C.L.				
78.9 - 84.1	Streaky appearing, alternating light and dark grey 2-10 mm. indistinct 59° bands of mod. H a.S. and S. Trace py in 0-10° frs (with chlorite). 2% diss. f.g. py. 2% diss. f.g. and bleb po. Occasional 1-3 mm po. layer parallel to bedding eg. 80.8, 82.4.							
84.1 - 98.7	Massive grey appearance.							
84.1 - 85.0	Very indistinct bands 2 mm to 5 cm. Mod. H. a.S., S. 62° bed. and occ. 2mm py. band. 3% v.f.g. diss. py., tr. po. 1% py on frs.							
85.0 - 86.4	H.Q. purplish tinge cut by 30° 3mm pale green siliceous alteration/fractures(?). Trace diss. py and 10°, 20°, 40° frs. w. py., chlorite.							
	Note: from 86.3m to 97.5 m is concentration of 5mm elongate cavities. Broken H, a.S.							
86.4 - 86.6	Broken H, a.S.							
86.6 - 88.7	H.Q. purplish cast, 40° 2mm greenish alteration/ fractures? Tr. py on 10-30° frs. 58° bed.							
88.7 - 89.0	62° bed. 4-10mm parallel, graded mod. H. a.S. Indistinct beds. Tr. py. on 10° frs.							5
89.0 - 89.3	Above grades quickly to a.Q.							
89.3 - 90.1	4 cm mod. H massive s.A. top grades to massive a.Q. and Q. Tr. py. on 0-10° chloritic frs.							
90.1 - 91.0	3 cm. S-A top grades to massive a.Q. 90.4 - 90.7 silicified? (35° dark green frs. some w. tr. py. Bleached, appearance).							
91.0 - 91.9	65° s.A., S, Q layers 2-10 mm wide. Q with tr. diss. py. Speck grey @ 91.1. Grades down to a.Q.							
91.9 - 92.0	Very H. black 1 cm chip @ 91.1 Greenish-grey 5-10 mm indistinct, non parallel bands. Mod. H. crossed by H, bleached, silicified? streaks & chalky pale yellow fr. fillings @ 60° w. tr. po., specks cpy.							
92.0 - 92.5	(3) 2-4mm py bands @ 64° w. tr. qz. v. in greenish grey banded a.S., a.Q. Irregular 2-10 mm bands.							
92.5 - 93.1	Massive Q. Purplish tinge. 25° frs. w. 1-3 mm wide silicified? zone.							
93.1 - 93.3	Several 5-10 mm graded mod. H A-S layers @ 63°.							



FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	C.L.				
93.3 - 93.6	H.Q. w. 20° pale greenish (silicified?) streaks on fractures.							
93.6 - 94.1	Graded bed. Top 6 cm is banded soft A.S. base is massive Q. Occ. 1 cm H black chips near top of Q. 70° clear Bedding.							
94.1 - 94.2	Graded bed. Massive a.S. top, massive Q base 62° clear bed.							
94.2 - 97.3	G.B. 4 cm mass. s.A. top, mass. a.Q., Q base. Silicified? 2 mm zones along 0 & 50° frs. w. tr. py. Occ. 3mm c.g. py. veins 2 0° & 80°. Tr. diss. chlorite? and py. 97.2 - 97.3 concentration of 1 cm, rounded cavities and one soft, white, angular 5 mm fragment 68° bed.							
97.3 - 97.7	G.B. a.S. top. Mass. Q. base.							
97.7 - 98.7	15-30 cm graded beds. S, a.S. tops and a.Q. bases. Intermittent and indistinct beds. Tr. py. on chloritic? 40° frs.							
98.7 - 103.6	Massive greenish appearance.							
98.7 - 100.5	Usually clear 2-20 mm beds of soft s.A. and S. @ 65°. Beds distorted and lensed in places. Diss. py. to 10% in some laminae and on frs.							
100.5 - 102.1	Mass. Q. 5° frs w. brown stain.							
102.1 - 103.6	Mod. H. 6 cm mass. a.S. top grading to mass. Q.							
103.6 - 170.1	Massive grey with some laminated sections.							
103.6 - 103.8	a.S. top, mass. Q. base.							
103.8 - 104.3	Interlayered and some graded s.A. and a.Q. as 1-5 cm wide indistinct and lensed beds @ 65°. Tr. py. on 0-10° frs. Tr. py. in some a.Q. beds.							
104.3 - 105.2	H.Q. w. 4 cm graded top of S. Load cast.							
105.2 - 105.5	G.B. Mass. H. Q. w. s.A. top, rip up clast load cast, 65° bed. Tr. py. on frs.							
105.5 - 106.2	G.B. H.Q. top s.A. base.							
106.2 - 106.5	As above but top s.A. and A parallel banded.							
106.5 - 107.1	Irregular bands, lenses of s.A., A, a.Q. @ top and parallel bands @ base. 0° qz v. and biotite quartz v., tr. py.							
107.1 - 107.9	Mass. Q. purple tinge 0° 1 cm qz. v. w. tr. py & biotite.							

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FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	C.L.				
107.9 - 109.7	Several soft s.A/S sections. Rare grading down to mass. a.Q. Some mass. a.Q. and Q. layers. Bedding usually indistinct and lensed @ 55-60° and 2-20mm (A.S.) 5-40 mm (Q) Tr. py. on frs.							
109.7 - 111.2	Mass. Q. Tr. diss. py.							
111.2 - 111.6	(2) G.B. a.S. tops mass. a.Q. base 55° bed.							
111.6 - 112.0	Q. w. silicified (?) zone @ 0° qz v. w. tr. po & cpy							
112.0 - 113.0	1-5 cm. beds mostly soft a.S., s. A. some a.Q. Usually separate. Some grading. Indistinct 65-70° Parallel bedding. Tr. py.							
113.0 - 113.3	Mass. Q.							
113.3 - 133.4	5-20 mm parallel beds of S, A. Load casts.							
113.4 - 114.3	Mass. H. Q.							
114.3 - 114.8	Interlayers of Mass. H. Q. to 8 cm & laminated soft A/S to 8 cm Rip up clasts, load casts, lensing, 58° bed.							
114.8 - 116.2	Mass. H.Q. 25° pale green silcified? streaks on fractures. Tr. py on 20° fr.							
116.2 - 116.4	Interlyaers of Mass. and G.B. A, a.S., Q. Parallel beds, lenses, @ 65°. Tr. py. on 10° frs.							
116.4 - 117.4	Mass. Q.							
117.4 - 117.9	G.B. 5 cm S.A. top. Mass. Q. base.							
117.9 - 118.6	G.B. 1 cm sA top, mass. Q. base 2 cm biot. garnet concretion?							
118.6 - 119.2	G.B. Interlayered s.A & S top grades down to a.Q. 10 cm bi-gar. concretion.							
119.2 - 119.3	5-20 mm parallel and irregular layered s.A., A, Load casts 62° bed.							
119.3 - 120.7	Mass. a.Q. to 20 cm w. 1 cm black v.f.g. v. H. chips or lenses @ 119.6 - 119.8m. Occ. 1-2 cm layer of s.A. some laminated black A. 65° bed. Tr. py. on 0° frs. some load casts.							
120.7 - 121.3	Mass. Q. Tr. py. on frs.							
121.3 - 121.9	10-20 cm G.B. (s.A. & S tops, mass. AQ bases) load casts. Tr. diss. po. patch.							
121.9 - 122.2	Mod. H. dark grey s.A w. occ. 2 cm light grey S bands @ 65° 1% diss. py & po and (3) 1 mm py layer.							
122.2 - 122.5	Interlayered mass. Q & S. Some grading, loadcasts, rip up clasts. Tr. py. on frs. @ 20, 50°							
122.5 - 124.3	Mod. H. Q. to 45 cm thick interlayered w. mod. H. S. to 7 cm (mass. & laminated). Rip up clasts & load casts.							

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FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	C.L.				
124.3 - 124.7	1-4 cm s.A., S beds usually parallel and clear. @ 65°. Loadcasts. Minor G.B. (s to Q). Distorted, lensed base of section. Tr. py. on 0° fr.							
124.7 - 125.3	Mass. Q. w. patch of pink garnets.							
125.3 - 125.7	(2) G.B. (a.S. to Q.) H. black chips, indistinct bedding. Tr. po, py in dark layers.							
125.7 - 126.7	Mod. H. a.S. w. s.A. beds occ. tr. diss. py.							
126.7 - 127.7	Mass. Q. rare darker bands.							
127.7 - 128.0	1-3 cm mod. H. beds of s.A., S @ 65° parallel, indistinct & weak grading. Loadcasts.							
128.0 - 128.2	G.B. (1 cm a.S. top, mass. a.Q. base) siliceous concretion w. diss. po around rim.							
128.2 - 129.7	1-3 cm s.A/S w. occ. G.B. (S-Q to 8 cm) cross-bedding, load casts, lensing, usually unclear bedding.							
129.7 - 131.9	Usually pale green-white silicified/bleached appearance (concretion?) with pink garnet and biotite in patches. Tr. diss. po, py.							
131.9 - 132.8	Mass. H.Q. w. thin S top.							
132.8 - 132.9	S & A as irregular indistinct bands							
132.9 - 133.0	Q.							
133.0 - 133.3	1-2 cm indistinct parallel S, sA							
133.3 - 133.6	10 cm Q. interlayered with 1-3 cm S Rip up clasts.							
133.6 - 135.0	Mod. H. S. Massive, laminated, lensed. Pale greenish-grey colour. Minor dark grey A as parallel 1 cm beds @ 65°. Pale yellow fracture fillings @ 10°, 55° w. Tr. py. Patches of 3% diss. py. in darker sections minor displacements of laminae on 45° slip.							
135.0 - 138.4	Broken core-usually 1-3 cm. chips 10-25° chloritic slickensides. Tr. py. on frs. Mass. Q., mass. s.A.							
138.4 - 138.5	Mass. H.Q.							
138.5 - 138.9	5-20 mm beds of mod. H. S, a.S. Parallel, lensed and irregular. Indistinct bedding 1 cm pebble clasts.							
138.9 - 139.6	5-10 cm. Q beds w. 1 cm interlyers of S.							
139.6 - 140.1	5-10 cm a.S., S beds w. minor G.B.							
140.1 - 140.4	5-10 cm. Q beds with 1 cm S layers. Some G.B., indistinct.							
140.4 - 142.2	H.Q. garnet concretion.							
142.2 - 142.9	Alternating 6-8 cm sections of massive slightly graded Q and indistinctly laminated (5-20 mm) S, a.S.,							
	Tr. py on frs.							

FOOTAGE	DESCRIPTION	SAMPLE	FOOTAGE	C.L.				
142.9 - 143.9	Mass. a.Q. w. occ. a.S. layers							
143.9 - 145.2	a.S./S layers. Rare Q or A. 5-20mm 58° layers. some G.B., usually clear beds.							
145.2 - 146.3	Mass. Q.							
146.3 - 148.0	Indistinctly bedded S, a.S (5-20 mm) often contorted							
148.0 - 148.9	Occ. 8 cm a.Q. layer Rip up clast. Mass. Q. Diss. pink garnets in patch.							
148.9 - 152.0	Several 6 to 20 cm 67° beds usually graded a.S. or S. to mass. Q. Contacts usually indistinct.							
	load casts, rip up clasts, contorted zones. Bleached appearance w. garnets (concretions?) in Q. zones.							
152.0 - 153.9	Mass. Q. - med. grey to pale green.							
153.9 - 156.9	Mostly mod. H. S., a.S., clear parallel and lensed bedding @ 60° (5-20 mm beds). Occ. Mass. a.Q. to 30 cm. tr. py on fr.							
156.9 - 157.4	H. a.Q.							
157.4 - 157.6	Banded S, a.S. as above.							
157.6 - 158.5	Mass. Q. Garnet concretion?							
158.5 - 159.4	Alternating a.Q/Q layers with laminated (5-20 mm) S, a.S. parallel alyers each up to 30 cm wide. Clear bedding, usually parallel.							-7-
159.4 - 160.4	Mass. Q. Load casts and pebble clasts @ base.							
160.4 - 161.3	Laminated parallel s.A., a.S., S and rip up clast? @ 160.9m. Load casts.							
161.3 - 164.0	H.Q.							
164.0 - 164.7	Mod. H. 5-30 mm a.S./S lenses and indistinct bedding rip up clasts.							
164.7 - 166.7	Mass. Q. w.occ. 5 cm S/a.S bands.							
166.7 - 168.1	Alternating 20-30 cm sections of s.A./S (parallel beds and lenses @ 64°, indistinct) and mass. Q, a.Q.							
168.1 - 170.1	H.Q. occ. a.Q.							
	END OF HOLE.							
	- Testing by Scintrex SM 5 showed 0.0 to 0.1 X10 <sup>-3</sup> cgs throughout except @ 21.6m (0.4 X 10 <sup>-3</sup> cgs).							
	- Testing w. dilute HCl produced no reaction throughout.							



ABBREVIATIONS

s	silty
a	argillaceous
arg. Q (a.Q.)	argillaceous
Q	quartzite
A	argillite
S	siltstone
diss.	disseminated
qz. v.	quartz vein
py	pyrite
occ.	occasional
Tr.	trace
dia.	diameter
qz.	quartz
v.f.g.	very fine grained
po.	pyrrhotite
f.g.	fine grained
calc.	calcite
cpy.	chalcopryrite
m.g.	med. grained
c.g.	coarse grained
H	hard
G.B.	graded bed
Mass	massive
fr	facture
w.	with
@	at

STATEMENT OF COSTS

Physical Work

Falling and bucking timber prior to pushing road: 2 days (May 4&5), 3 men @ \$110.00/day, \$55.00/day and \$50.00/day	645.00
Hauling D-7 to site May 7, 4 hours @ \$45.00/hour	180.00
Pushing road to drill site (400 m. long X 3 m. wide) 8 hours (May 7 & 8) @ \$50.00/hour	400.00
Room & Board 2 days (May 4 & 5), 3 men @ \$20.00/day/man	120.00
Truck expenses 3 days (May 4, 5 & 6) @ \$30.00/day	90.00
	<hr/>
Total Physical Work	\$1435.00

Diamond Drilling May 8-13. Hole M-1-81

Mobilizing drill (May 8) 4 men, 40 hours total @ \$19.00/hour	760.00
Moving drill to site with D7 (May 8), 5 hours @ \$50.00/hour	250.00
Drilling:	
Casing 0 - 16' @ \$21.00/ft	336.00
Core 16 - 500' @ \$19.50/ft	9438.00
Core 500 - 558' @ \$21.45/ft	1244.10
Reaming and casing 20 hours @ \$65.00/hr	1300.00
Used casing, shoes, bits	993.63
Fuel, oil, grease	159.15
Room (Tri-Way Motel) 4 men (May 7-13) 28 man days @ \$27.56/day	771.68
Meals (May 7-13) 28 mandays @ \$22.00/day	616.00
Supervision and core logging (May 8-14)	
1 man 7 days @ \$110.00/day wages	770.00
Room & Board 1 man 7 days @ \$20.00/day	140.00
Truck expenses 5 days (May 8, 10, 12, 13, 14) @ \$30.00/day	150.00
Report writing 1 day @ \$110.00/day	110.00
Report typing, copying assembly 1 day @ \$80.00/day	80.00
	<hr/>
Total Drilling	\$17,118.56
Total Sum of Physical plus Drilling	<u>\$18,553.56</u>



FALCONBRIDGE NICKEL MINES LIMITED

6415 - 64th Street, Delta, B.C., Canada V4K 4E2

Tel. (604) 946-0441

Telex 04-357583

December 21, 1981

Mining Recorder  
Department of Energy, Mines and  
Petroleum Resources  
411, Douglas Building  
Victoria, B. C.  
V8V 1X4

Dear Sir:

Mr. John R. Wilson graduated from the University of British Columbia in 1972 with a B. Sc. (honours geology) and has worked for the Falconbridge Nickel Mines group of companies as an exploration geologist since graduation.

Yours truly,

J. R. Wilson

JRW:ik