

ST. EUGENE MINING CORP.

REPORT

ON

1966 WORK - MOYIE

B.C.

N.T.S. 82-F-15

FORT STEELE
MINING DIVISION

Vancouver, B.C. March 15, 1967

ENGINEER
ALEX SMITH

LATER REPORT IN NTS FILES
HAS ANN RER'S MAPS & SECTIONS DD LOGS

ST. EUGENE MINING CORPORATION LIMITED

REPORT ON OPERATIONS 1962 - 1968

Annual reports by Cominco for the 1962-63 diamond drilling under the St. Eugene - Cominco agreement have been forwarded to Toronto. The subsequent work by St. Eugene has been reported on in detail by A. Burgoyne (1964, 1965).

Attached are copies of the annual reports to shareholders for 1965 and 1968, and:-

1. Long section of the D.D.H.'s 10, 66-1 & 66.2, 1966
2. Plan 1" = 400' showing depth of water Moyie Lake.
3. Plan 1" = 400' showing depth to bedrock Moyie Lake.
4. Cross Section 'A' Moyie Lake.
5. Cross Section 'B' Moyie Lake.
6. Geology legend.
7. Report on 1966 work Moyie with logs D.D.H.'s 66-1 & 66-2.

Geophysical logs for the seismic and hydros'onde surveys are in Vancouver office. Also drill logs.

April 1969

A.S.
Alex Smith

3 copies

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NTS files VR

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L. KILBURN FNML TOR

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John Richardson Cominco

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Two AX wireline holes were drilled totalling 1,953' to test the area of sphalerite mineralization previously intersected in DDH 10.

Attached are logs for the two holes 66-1 and 66-2 logged on the same system as the earlier St. Eugene drilling.

In addition, R. Gifford of COMINCO kindly logged and sampled the holes by their system so that our 1966 holes can be correlated with holes C1 - C5 drilled under the COMINCO - St. Eugene Agreement. The expenditure of \$21,534 on this 1966 program enabled us to complete Stage II of that Agreement.

Attached is a longitudinal projection of the three holes (10, 66-1, 66-2). Visible but trace amounts of sphalerite were observed throughout the quartzites of 66-1, 66-2, occurring in 1/2" - 2" qtz. veins, on fracture planes and disseminated in the rock. The most attractive intersection 66-2 @ 854' - 906' could correlate with the structure in 66-1 @ 546-553' or with the zone cut in the bottom of DDH 10. The latter interpretation would indicate a St. Eugene type structure, the former a fault zone dipping about 40° S. The best 5' of the 66-2 intersection assayed Ag 0.3, Pb 0.6, Zn 1.6, the balance of 36' Ag 0.1, Pb 0.1, Zn 0.2.


Alex Smith

Vancouver, B.C.
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ST. EUGENE MINING CORP.

MOYIE, B.C.

ABBREVIATIONS

Diamond Drill Records

ROCK TYPES

Q - Quartzites
AQ - Argillaceous Quartzites
S - Siltstone
AS - Argillaceous Siltstone
A - Argillites
MAR - Chubbs banded marker bed

ROCK COLOR

DG - Dark Grey
MG - Med. Grey
SG - Silver Grey
LG - Light Grey
Bl - Black
T - Tan
RW - Rusty Weathering
Gn - Greenish
Pu - Purple
Y - Yellowish
Mu - Mustard
BR - Brownish

BANDING

B - Banding
aB - Occasional Banding
fB - faint Banding
hB - Hairlike Banding
as in Argillites.
dB - distinct Banding
pB - pronounced Banding
gB - gradational Banding
MAR - Chubbs banded member.

SEDIMENTATION FEATURES

bp - bedding plane
ib - interbeds
Rm - Ripple marked
Rd - Rain drop casts
Mc - Mud cracks
C - Concretions
Gl - Glistening Crystals
XC - Crystal Casts on
bedding plane.
Frc.Clv. - Fracture Cleavage.

GENERAL

gr - grading
cl - clean
Ma - Massive
cr - Crudy (messy)
Thick
Thin
Alt - Alteration
Simi- Similar
Sa - Sandy
Sh - Shaly
Sl - Slaty
Bio - Biotite
xl - Crystal

ST. EUGENE PROPERTY

NOYIE, B. C.

Hole #66 - 1	Drilled:	May 1966
Length: 925'	Lat.	31,736.5N
Dip: -43°	Dep.	25,984.5E
Bearing: N12°E	Eiv.	3073'
Location: East of track and north of DDH 10		
Object: To test mag. anomaly and mineralization cut in DDH10.		

Footage From	Footage To	Angle to Hole	Color of Beds	Thickness of beds	Rock Type	Description
0	30					Overburden
30	60	Bl5°	MG		Q	Occasional 1/4" MGA beds. Pyrite on jt. pl. R.W to 60'
	50	V60°				1/4" frozen qtz. stringer with cp. and sp.
60	100		MG		Q	Becoming lighter. A frag. at 77' ser. 1/8 frozen veins with pyr. & rare cp.
100	102		DG		AQ	Breccia zone cemented with white calcite. A. fragments.
102	106	Bl0°	DG		AQ	
106	146	Bl5°	DG	Thick	AQ	
146	148					L.Gn. Alt. Core broken s.garnet?
148	178		L & DG	Thinner	A	S. alt. A streaked with pyr.
178	200		90% MG 10% Ba		Q A	
200	253		MG		Q	
	203		Bn	1/2		Brownish bands with pyr. biot. gar. & sp?
	251					S. A. frags.
253	315		DG		Q	Brownish & LG bleaching at 259, 270, 315-317. Sp. noted @ 279' - 282' - 315'.

Footage From	Footage To	Angle to Hole	Color of Beds	Thickness of Beds	Rock Type	Description
315	347		Dove G.	30"±		Bleached L.Dove & Gn.G. s.pyr.
326	329					Fault zone, strong SHEARING
347	381		DG	1"-10"	AQ	with softer Bl. A.
381	400		NG BR	1/4"-10"	AQ A	382' - A frag.
400	474		50% NG 50% NG	1/4"-30"	Q AQ	Heavy flow water 425. Bleached 421-23, 440-456.
	421	V50°				2" Breccia with qtz.
476	483					Spotty bleaching.
477	478					6" Breccia zone, Q frags. in calcite
483	548	B30°	DG & Bl.	20"-30"	A & AQ	Bleaching 513, 523, 546-48. A folded 511 and 546.
546	552	V80°				Major fault or vein zone Sp & gal. in hairline fractures 546-53 Ag 0.15, PBO, 15, Zn 0.25% 550-52 2' Gouge 90° to core 540 Heavy flow water.
554	563		Bl	Thick	AQ	
563	575			Thick	Q & AQ	Bleached and broken
575	625			3"-10"	AQ & Q	Bleached and broken. Graded bedding. 578, 600 sp. noted. 585 - 6" gouge.
625	700	B50°	NG	Thick	40% Q 45% AQ 10% A	Brownish cast due to biotite. Bleaching 626, 628, 647, 678, 682. Sparse sphalerite 600, 633.
700	725			Thinner		Ditto 625-700 but thinner and more A. 721 Heavy flow water.
725	925	B45°	NG Dove & DG	8" - 2'	50% Q 25% A	Sp noted 728, 763, 825-919 Kaolin on hairlike frc.
725	800					v.f.g. marcasite coatings on A beds.
	867					1" Breccia zone
	869					1/4" Qtz. tourmaline veinlet/ bedding.
920	924			Thick	Q	Bed.

Summary:

In a quartzite unit throughout (Q80% A20%). Major structures at 327 and 550, the latter having a St. Eugene vein type orientation. Traces Chalcopyrite and Sphalerite in upper 100' of hole. More pyrite in upper portion. Bleaching on fault and fracture structures and in patches throughout hole. Very light amount of Sphalerite (0.3% Zn) associated with the bleaching.

Dip Tests: Collar -43° 600' -52°
300' -46° 924' -57°

Alex Smith

Vancouver, B.C. March 31, 1967

ST. EUGENE PROPERTY

MOYIE, B. C.

Hole: #66-2

Length: 1,028' Dip - 43°

Bearing: N21°E

Location: East of Track and South of DDH 10

Objective: To test structures cut in DDH's 10 X 66-1

Drilled: May - June 1966

Lat.: 30,826.7 N

Dep.: 25,737.7E

Elev.: 3,072'

Footage From	To	Angle to Hole	Color of Beds	Thickness of beds	Rock Type	Description
0	7				Q	Casing
7	88	B40°	80% M & LG 20% MG		A	Rusty on frc. pl. hairlike str. pyrr.//bedding.
88	136		70% Gr G 30% B1		Q A	Q frc.
136	223	B45°	80% D G 20% M G		A S	Hairlike bedding with occas. qtz.-pyr. segregation
182	193					Broken ground. 190-193 no core.
223	292		50% L & Dove G 50% D & M G		SQ A	Be 24' A-banded. 267-74 bleached. 267-69. 50% Recovery 240, 270, 291 rare sp. in qtz. veinlets
292	315		85% D G 80% M G		A Q	Banded
315	380		20% Ba		A	350 - 2" brecciated
380	400		D G		AS	Softer. 387-6" Br.A. Calcite, sp.
400	467	B45°	80% L G to MG 20%		Q AS A	Fine grained. 422-2" qtz. pyr. vein 45° slump structure.

Footage From To	Angle to Hole	Color of Beds	Thickness of beds	Rock Type	Description
467 540		75% MG 25% Dove & DG	8" - 3' 1/4"	S A	Softer
540 591		65% MG 35% Ba	10" - 3'	Q A	549 Gn Q fault breccia zone s. sp.
580 583					No core
591					Slump structure, s pyr. in AQ
591 652		LGn G		Q	Bleaching calcareous?
594 600					Weak sp-gal frc filling & dissem assay - tr.
640	V45°				1" qtz. veinlet. Fr. pyrrho. pyr., cp.
652 708		85% M BR G. 15% M & Dove G	8" - 3'	S A	Softer, 675, 708 mustardy. Bleaching, marcasite on frc. pl.
708 838	B45°	85% M & LG 15% M & Dove G	2' - 3'	Q A	798 - 1" qtz. pyrrho. vein V10°
838 893		LG		Q	Frc. except 860 - 70 842, 45 & 48. frc. filling with sp.
854 -906		LG		Q	Sphalerite - Galena mineralization. Overall weak in qtz. veins, as frc. filling & as dissem. grains. Rock Frc. & bleached. Assays 854-895 low best 5' 854-59 Ag 0.3, Pb 0.6, Zn 1.6.
850 853.5	V70°				850-852 35% core rec. looks like vein wall.
858 859	F90° V75°				Dark gougy. Narrow 1" - 2" veins up to 70% sp. and galena @ 853', 874', 881', 893', 898', 906'.
901	B30°				Slump folding.
906 944		85% MG 15% DG	1" - 2'	Q A	939 s. dissem. pyrrho.
944 1001	45°	25% MG 75% DG & B1	5" - 2'	Q A	Hairlike bedding considerable up to (10%) pyr. & pyrrho. on hairlike bedding to 1,004'. Sp noted 956, 965.

Footage From	To	Angle to Hole	Color of beds	Thickness of Beds	Rock Type	Description
1001	1028		DG		A	Hairlike Calc. str. 1009 - 1/2 calcite veinlet @ 20°

SUMMARY:

Quartzite unit (Q75%, A25%) to 944', then Argillite 944' - 1028'. Trace amounts sphalerite in quartz veinlets, fracture filling and as disseminated grains throughout quartzite horizon with stronger mineralization in narrow veinlets at 850' to 906'. This lies immediately above the argillite and could be either a zone controlled by the argillite or lie on a St. Eugene type vein.

Dip Tests

Collar -43°
300' -43°
600' -49°
926' -48°
1028' -48°


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