

78-3
78-4
78-1
78-2

Gem 4

2

1

78-7

78-6

78-5

Dub 3

1

2

78-10

78-9

78-8

Camp 2

1

2

Ntr

Drawn by P.H. Sevensma.
August 1978.

JONA SILVER MINES LTD
METZA RIVER T.L.

FEET 0 200 400 600 800

1978 Core-hole
drilling
July 8 - August 2, 1978

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Diamond Drill Geological Log

P.H. SEVENSMA CONSULTANTS LTD.
715 - 850 West Hastings St., Vancouver 1, B.C.

COMPANY

Iona Silver Mines Ltd
1015, 837 West Hastings
Vancouver, B.C. V6C 1C4

Objective: Canyon Vein Drilling Started: July 9, 1978 Drilling Completed: July 15, 1978

Logged by: P.H. Sevensma Date: July 15, 1978 Samples Submitted to: Whitehorse Assay Office (Lab.)-Date:

Lat.:	Long.:	Place: Canyon, Line 100 S, 70' East	App.Bear.: N 75°W	App.Dip.: -47°	Length: 252'
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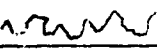
From	To	Length	Recov.	Remarks:
0	19'	19'	16"	OB. About one foot of core from 17' - 19' probably quartzite blocks. Casing to 20'
19'	26'	7'	4'6"	Spotted (with \pm 2 mm brown dots, possibly carbonate) coarse grained Q, massive. Fractures all brown limonite coated.
26'	37'	11'	9'6"	Salt & pepper grey C. grained Q, occasional bedding at 45°, good laminations 32' - 33'.
37'	40'	3'	3'	C. gr. brown spotted Q, vaguely laminated at 40°.
40'	53'	13'	12'8"	Dense fine gr. massive Q, light grey, some brown spotting here and there. Minor galena "smears" at 51 1/2'.
53'	57'4"	4'4"	4'4"	Irreg. brown spotted (1-3 mm) massive Q, grey
57'4"	59'	2'	1'	Poor recovery in dense grey Q. Reported 6" ground, but 1' missing
59'	62'	3'	2'	Major change to blue-grey siliceous dolomite or f. gr. dolomitic Q. Two irregular "veins" of f. gr. py. at 59'6" and 60'6". (1/2" - 1" wide) \pm 30° to core Note: only 66% core recovery at this change: Loss probably 61' - 62'. Seen some galena while splitting.
62'	67'	5'	5'	Blue-grey silty dolomite, still hard. Some bedding lamin. at 40°. (SD = silty dolomite)
67'	69'6"	2'6"	2'	Starts in massive f. gr. py; 6" core-loss probably here. Py = + 1" vein at 20° to core. This is most massive pyrite in all the hole. Rest is all SD. Too small to sample
69'6"	70'6"	1'	5"	Highly silty Dol. Some lamin. at 40°.
70'6"	82'	11'6"	11'	Hard blue-grey silty dol. Occas. lamin. at 30°. Core-loss \pm 6", 70'6" to 72'. Some sections good Q; some sections \pm breccia, Q matrix with D fragments, 1/4" - 1", very indistinct; some parts siltstone (S)
82'	85'	3'	3'	Q.D. + irreg. brown siderite veins and splashes up to 4". Appears to be at 45° to core, \pm , No definite structure, but is believed to represent a veinzone, and probably the

Property: Claim Gem 4
Hole No.: 78-1 091140
Core Size: BQ (1 3/8") Page 1/3

Objective: _____ Drilling Started: _____ Drilling Completed: _____

Logged by: _____ Date: _____ Samples Submitted to: _____ (Lab.)-Date: _____

Lat.: _____ Long.: _____ Place: _____ App.Bear.: _____ App.Dip.: _____ Length: _____

From	To	Length	Recov.	Remarks:
85'	95'	10'	10'	S.D., partly brecciated, quite hard.
95'	101'	6'	6'	Q. good quartz grains, but bluegrey and somewhat dol. ic, some brecciation.
101'	102'	1'	10"	Much broken; 30% massive Py with 1/4" - 1/2" S.D. fragments, maybe 20° - 30° to core.
95'	102'			Possible marker bed, 6' of Q underlain by Py.
102'	118'	16'	15'	Irreg. SD to DS to QD [±] 18" missing 107' - 110', but core fair to good
118'	119'	1'	1'	Abundant somewhat bedded, Py, with minor yellow siderite, some quartz; estimate [±] 25% Py. No other sulphides seen. Appears to cross core at [±] 50°. Probable vein zone
119'	202'	83'	80'	Good core, Some Sections broken. All SD, sometimes breccious. There are a number of sections with "incipient brecciation" denoted by stylolithic fractures:  Any vague bedding or partings appear to be at about 45° to core. There are many white 1/16" to 1" dolomite veinlets mostly at 45° - 60° to core, with a concentration in the 156' - 157' area, where there are also many 1/8" - 1/2" vugs. There are a few 1/4" - 1" areas with over 50% Py in irreg. veinlike zones at 30° - 60° to core. Nearly all core is blue-grey.
202'	209'	7'		Strong white to cream dolomite veining and many vugs. 205' - 209', core broken to sandy. Some Py at start of section at 203'
209'	212.5'	3.5'		Zones of gauge-like silty black slate 0-20° to core with zones of f. gr. SD, quartz and quartz-dolomite veining. Slip-planes graphitic.

Property: _____
Hole No.: 78-1
Core Size: BQ Page 2/3

Diamond Drill Geological Log

P.H. SEVENSON CONSULTANTS LTD.
715 - 850 West Hastings St., Vancouver 1, B.C.

COMPANY _____

Objective: _____ Drilling Started: _____ Drilling Completed: _____

Logged by: _____ Date: _____ Samples Submitted to: _____ (Lab.)-Date: _____

Lat.: _____ Long.: _____ Place: _____ App.Bear.: _____ App.Dip.: _____ Length: _____

From	To	Length	Recov.	Remarks:
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212.5	217	4.5'	4.5'	Massive salt and pepper dark-blue-grey quite c. gr. Q, with some D and some black (graphitic) matrix, very typical appearance. Could be a marker bed At its base against argillaceous looking D; irregular blebby aggregates of f.gr. Py. veinlike appearance.
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217'	220'	3'	3'	Black slaty solid striated fault gauge with thin dolomite beds (hard!) about // core. Quite amazing to see it core and being recovered.
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220'	252'	32'		Black to blue black mixtures of black siliceous slate, silty dolomite, some salt and pepper Q, argillaceous silty slate, from highly slaty to 1' to 3' near massive. Core angle vary irreg. from 0 to 30°. At 232', 3 pieces of spotted Q appear to have fallen from below the casing, which twice started turning with the rods. There are occasional irreg. 1/4" to 1/16" bands of pyrite. Some sections are graphitic. Runs vary from 1' to 4'.
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252'				End of hole
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Specimen by Asgar Bentzen for U.B.C.:

80', Sil. Dol. 95' - Q 141': Sil. Dol (some Py)

214' Salt and Pepper Q.

Property: _____

Hole No.: 78-1

Core Size: BQ

Diamond Drill Geological Log

P.H. SEVENSMA CONSULTANTS LTD.
715 - 850 West Hastings St., Vancouver 1, B.C.

COMPANY

Iona Silver Mines Ltd. DD47
#1015 837 West Hastings St.
Vancouver, B.C. V6C 1

Objective: Canyon Vein
Drilling Started: July 15/78
Drilling Completed: July 16/78

Logged by: P.H. Sevensma
Date: July 19, 1978
Samples Submitted to: U.B.C. (Lab.)-Date:

Lat.: Long.: Place: Canyon, Line 100 S + 70' E
App.Bear.: N 75° W
App.Dip.: -71°
Length: 199'

From	To	Length	Recov.	Remarks:
0	10'	10'		Overburden
10'	45'	35'	28'	Brown-spotted Q, core quite Broken, except for good grey Q from 22' - 24', which appears to have graded bedding. 13½' - 14' Sample U.B.C.
45'	47'	2'	2'	Q + brown spotted beds 2" - 3" wide.
47'	53'	6'	6'	Hard dense mostly f. gr. Q, grey, massive.
53'	56½'	3.5'	3.5'	Blue Lamin. Q. Some zones well lamin. argillite. Good bedding at 65° to core
56.5'	59.5'	3.0	3.0	Brecciated Quartz cemented bluish Q.
59.5'	61'	1.5	1.4	More solid Q, blue-grey f. gr. irreg. banded pyrite to network of py veinlets ± 20% Py.
61'	63'	1	50%	1/2 brecciated Q, 1/2 blue fault gouge. Probably significant fault.
63'	119.5	56.5	55	Mostly massive S.D., some A.D. some narrow (2"-6") Q. beds, but no sharp bedding Occas. Lamination: ± 45° at 84'
				Quite frequent ± 1/4" Dol. veinlets ± 66' to ± 84', occas. 1/4" - 1/2" Py. veinlets & bl
119.5'	124'	4.5	4.5	Siderite- Ankerite- Pyrite Vein. No galena. 120': 35° to core. 124': 30° to core Siderite: brown Ankerite: cream Py.: 120': 2" ± 35%; 123.5' - 124": 6" ± 50%
				rest of footage scattered blobs f. gr. Py.
124'	127.5'	3.5	3.5	Massive S.D. vaguely lamin. at ± 45°.
127.5'	128'	.5	.5	Core chips - maybe small fault
128'	162'	34	34	Good massive S.D. some slumping brecciation. 3" Wh. Quartz vein (at 85°) at 147'. Some 1/4" x 1" f.gr. Py. blobs 150' - 151', Due to slumpage, lamin. or bedding indistin Quite a few quartz and dolomite 1/8" - 1/4" veins at 40° - 50° to core
162'	168'	6'	6'	Massive S.D. larded with wh. qtz. and cream dolomite to ankerite veins, especially 164.5' - 166.5' Good core. Could correspond to dol. zone in 78-1, 1" Py blobs 162.5 - 163.5'

Property: Claim Gem 4

Hole No.: 78-2

Core Size: BQ (1 3/8") Page 1/2

Diamond Drill Geological Log

P.H. SEVENSMA CONSULTANTS LTD.
715 - 850 West Hastings St., Vancouver 1, B.C.

COMPANY

Iona Silver Mines Ltd. **2247**
#1015 - 837 W. Hastings St.
Vancouver, B.C. V6C 4

Objective: Canyon vein. Drilling Started: Drilling Completed: July 18/78

Logged by: P.H. Sevensma Date: July 19, 1978 Samples Submitted to: (Lab.)-Date:

Lat.: Long.: Place: L. 200S + 65' E App. Bear.: N 75° W App. Dip.: -51° Length: 250'

From	To	Length	Recov.	Remarks:
0	11'	11'	0	Overburden
11'	28'	17'	16'	F. Gr. Q, blue to light grey, broken core. Various laminated zones 45° - 70°.
28'	44.5'	16.5'	15'	Broken core. Various lamin. f. gr. bluish grey AQ to Q, mostly about 55°. Probably base area of Q.
44.5'	73.5'	29'	29'	Typical well brecciated dolomite. Excellent core. Elements up to 1 1/2" size at the top (45') 3" of about 50% Py, as usual at the Q base.
73.5'	77'	3.5'	3.5'	Vein zone as follows: Start at + 70°, 2" S.D. + dol. + Py veining. Then 5" of galena bearing Py. Then vuggy dol.-veined S.D.; Then 9" Py-spotted to veined S.D. Then 4" near-massive Py at the base at 77', which is at about 80° at the wall.
77'	124'	47'	45'	Near-massive only slightly brecciated S.D. Occasional to abundant wh. quartz and/or cream dol. veinlet = 1/8" - 2". Weak and vague brecciation.
				Note: Brecciation is a definite sedimentary feature Maybe algal. muds sliding
				One long vein of wh. dolomite from 106' - 107' nearly // core, 2" wide.
124'	127'	3'	3'	One 1/8" - 1/4" stringer Pb + specks of galena in slightly brecciated massive S.D.
				Also 1/8" siderite veinlet 126.8'. Veinlets at + 35° to core.
127'	202'	75'	75'	S.D. quite variable, from vaguely brecciated to vaguely laminated. Some sections with wh. qtz. and/or cream ankerite or dolomite 1/8" - 1/4" veinlets, + 45° to core mostly.
				From 187' to 192', brecciation coarse with black slate matrix.
202'	203'	1'	1'	Qtzitic to Q band, contacts indefinite. Argill. lam. at 30° to core.
203'	206.5'	3.5'	3.5'	Finely lamin. S.D., 10° to core.
206.5'	211.5'	5.0'	5.0'	Black slate well laminated at 10° - 20° to core.
				F- gr. Py concretion up to 1". <u>Typical black slate</u>

Property: Claim Gem 4.

Hole No.: 78-3

Core Size: BQ (1 3/8") Page 1/2

Diamond Drill Geological Log

P.H. SEVENSMA CONSULTANTS LTD.
715 - 850 West Hastings St., Vancouver 1, B.C.

COMPANY

Iona Silver Mines Ltd. 2047
#1015 - 837 West Hastings St.
Vancouver, B.C. V6C 1

Objective: Canyon Vein
Drilling Started: July 18, Night Drilling Completed: July 19, Night

Logged by: P.H. Sevensma Date: July 20, 1978
Samples Submitted to: (Lab.)-Date:

Lat.:	Long.:	Place: L. 200 S + 60' E.	App.Bear.: N 75° W	App.Dip.: -70°	Length: 181'
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From	To	Length	Recov.	Remarks:
0	6	6'	0	Overburden
6'	44'	38'	+ 35'	Badly broken core. Hard on bits. Variously dolomitic to somewhat argillaceous Q, blue grey. Good Q. 36' - 38 1/2', last foot salt & pepper type, quite coarse. Laminations 45° - 65°, quite a few laminated sections.
44'	83'	39'	38'	S.D. mostly massive, highly breccious to + 56', then less so. Vague laminations at + 50° to core.
83'	84'	1.0	1.0	Siderite-invaded dolomite and 3" of near-massive pyrite 83.75' - 84'. 83': Wall Irreg.vugg at about 60°. 84': Wall sharp, 65°
84'	94'	10'	10'	Massive, medium brecciated S.D., increasingly ankerite-veined (1/16" - 1/4") with depth No good bedding.
94'	103'	9'	9'	S.D. Irregularly invaded by creamish ankerite and maybe barite, and scattered f. gr.pyrite veinlets and blobs. 5 - 10% Py.
103'	105.5'	2.5	2.5	Solid core. Same as before, but 15 - 20% Py in blobby veinlets 1/8" - 1/2"
105.5'	106.5'	1.0	1.0	Same, but very little pyrite.
106.5'	110'	3.5	3.5	Solid core. Now up to 60% Py.
110'	112'	2.0	2.0	Massive S.D.
112'	115'	3.0	3.0	Py.dying out
94'	115'	21	21	No definite vein, but anything that might indicate a trend is at about 65° to core.
115'	141'	26	26	Massive S.D. brecciated from 115' to about 125'. Beyond that some vague laminations at 70°. In bottom 2', some bands of black slate at about 50° to core.
141'	146'			Black slates with 1" - 5" SD bands at about 50°

Property: Claim Gem 4
Hole No.: 78-4
Core Size: BQ (1 3/8") Page 1/2

Diamond Drill Geological Log
P.H. SEVENSMA CONSULTANTS LTD.
715 - 850 West Hastings St., Vancouver 1, B.C.

COMPANY _____

DD47

Objective: _____ Drilling Started: _____ Drilling Completed: _____

Logged by: _____ Date: _____ Samples Submitted to: _____ (Lab.)-Date: _____

Lat.: _____ Long.: _____ Place: _____ App.Bear.: _____ App.Dip.: _____ Length: _____

From	To	Length	Recov.	Remarks:
146'	148'	2'	2'	Med. gr. Q to D Q.
148'	149.5'	1.5	1.5	Narrow lam. black slate band with elongated Q fragments. Average $\pm 60^\circ$.
149.5'	154'	4.5	4.5	Typical salt & pepper med.-gr. Q, dark grey
				<u>This is a possible marker bed. Compare to 78-3, 229' - 237'.</u>
154'	160'	6'	6'	Laminated and brecciated S.D. Lamin. at $\pm 60^\circ$ to core. 154' - 155', Siltstone
160'	169'	9'	9'	Hard, dense brecciated siltstone. Last 3" = Q. Some vague poor bedding
169'	172.5'	3.5	3.5	Laminated dark grey argillite to slate with 1/4" silty beds near base. All 55 - 60°.
172.5'	176'	3.5	5"	Cave, only marbles of med.gr. Q.
176'	179'	3'	1	Grey silty argillite bands with black slate partings. 2' of core missing.
				Partings at 45 - 55° and appearing to represent bedding
179'	181'	2'	2'	V.f.gr. hard siltstone (grey) with black argillite irregular matrix-like partings at about 35 - 40°.
181'				End of hole.
				U.B.C. specimen: 112'

Property: _____
Hole No.: 78-4
Core Size: B Q

ASSAY — LOG

COMPANY Iona Silver Mines Ltd.
 1015 - 837 West Hastings Street
 Vancouver, B.C.

Property : Ketzar River

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 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
 XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Sample no.	From	To	Length	Rec. %	Rock type	Oz/t Au.	oz/t Ag.	% Pb	% Zn	% Fe.
	0	19'	19	-	Overburden					
	19'	59'	40'	86	Quartzite					
605	59'	62'	3'	66	3/4" Py veins (2) in sil. dolomite	.01	.40	.13	-	-
	62'	82'	20'	92	Silty dolomite					
606	82'	85'	3'	100	Siderite veining	.005	.12	.05	tr	-
	85'	95'	10'	100	Silty dolomite					
	95'	101'	6'	100	Quartzite					
607	101'	102'	1'	90	Py in Q	.005	.20	.01	tr	-
	102'	117.5'	15.5'	90	Silty dolomite					
618	117.5"	119.5'	2'	100	Veinzone, 30% Py	.045	.05	.02	.01	17.55
	119.5'	209'	89.5'	95	Silty dolomite & Slump-breccia					
	209'	212.5'	3.5'		Silty black slates & Qtz & ankerite veining.					
	212.5'	217'	4.5'	100	C.gr. salt & pepper quartzite.					
	217'	252'	35'		Black siliceous slate with Q & dolomite bands, thrusting?					
	252'				End of hole.					

