

Samatosum
825414

Discussion of Drill Log and General Results of
Borehole V - 88 - 1.

1. **Alteration Intensity.** The alteration scale used in this drill log will range from 01 (low) to 05 (intense). Most of the alteration in the borehole, is related to regional metamorphism. The level of alteration associated with the main volcanic - sediment contact is quite light, evidence of strong hydrothermal alteration was not documented.
2. **Sulphide Development.** Net sulphide content is typically modest within the core. Low levels (1.0% or less) of pyrite were the only sulphide noted. Background geochemical levels for both base and precious metals, taken from the principle volcanic - sediment contact, 94.9 - 111.2 m's, support this observation.
3. **Stratigraphic Position.** Graded beds within this borehole, clearly indicate that the stratigraphy is inverted. This appears to be a regional phenomenon, and is widespread throughout this area. The low level of alteration and sulphide development in this core, may suggest that the volcanic - sediment contact penetrated in this borehole, lies significantly structurally above, the horizon of interest.

Published data on the Rea and Samatosum zones, would suggest that borehole V - 88 - 1, would had to have penetrated through the sediments (of undetermined thickness) at the bottom of the borehole, and into a second very thick (hundreds of metres) mafic volcanic package, prior to intersecting the zone of interest.

The possibility of other productive horizons on the property should not be eliminated by this result. However, their identification may require some very careful work.

4. **Geophysical Signature.** Moderately developed graphitic partings are common throughout the sediments encountered in the lower half of drill hole V - 88 - 1. A good conductive response would be anticipated.

J. L. OLIVER CONSULTING GEOLOGICAL SERVICES

DRILL LOG

Victory 1 Property
Pacific Mine Search Ltd.
Suite 2380 - 555 West Hasting St.,
Vancouver B.C.

Hole No. V - 88 - 1
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Date Started: Dec. 18/88
Date Completed: Dec. 23/88

N.T.S. 82M/4W
Drilling Co.: P. Whitney

Northing: 2+90 N
Easting: 0+00 E
Azimuth 220°, Dip -50°
Depth 195.0 m.
Down Hole Test: not done.

Core Size.: NQ
Date Logged.: Jan. 5/89
Logged By.: J. Oliver

FROM - TO (m's)	ROCK TYPE	DESCRIPTION
0 to 17	CASING	
17.0 to 21.75	MAFIC FRAGMENTAL, CARBONITIZED	This weakly oxidized mafic lithology does not contain recognizable coarse grained pyroclastic fragments. A fine grained tuffaceous protolith is likely. Chlorite is pseudomorphic after primary phenocrysts. Streaked hematitic surfaces are weakly developed. The section is weakly oxidized, anastomosing and foliation parallel carbonate veinlets occupy 20% rock volume. Colour: generally dark green, texture: fine grained, with a strong penetrative foliation. Alteration: sericite 01, chlorite, 02.5, carbonate, 02. Fractures / M. 8-10 Sulphide development: trace Py. 17.0 - 18.8 Broken core. 18.8 - 21.75 Mafic fragmental. 20.1 Foliation to CA: 070°
21.75 to 29.9	HEMATITIC MAFIC FRAGMENTAL	Well defined porphyroblastic hematite, within fine foliation parallel lamella, and as discrete knots (1.0 to 2.0 mm) characterize this interval. Stable metamorphic phases are chlor. carbonate and hematite. Very limited, < 5.0 mm, sericitic envelopes are adjacent to carbonate veins and veinlets. Colour: medium gray green, locally reddish cast. Texture: finely laminated via chl.-carb-hem.

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Alteration: Ser 01, carb 02, hem. 01.5

Fractures / M. 10-12

Sulphide Development: none

21.75 - 29.9 Hematitic mafic fragmental.
Fine grained pyroclastic protolith inferred.
28.8 Hematite compositional layering to
CA.: 065°.

29.9 to AMYGDALOIDAL
53.9 MAFIC VOLCANIC

Relative to the preceding interval, hematite content has significantly decreased. The unit is defined principally by the presence of abundant carbonate amygdalae. Net sulphide content, as in all preceding intervals is low, pyrite < 0.5%, disseminated.

Colour: med. green, Texture: f.g. to strongly amygdaloidal.

Alteration: chl 02, hem. 01, ser. 01, carb 02.5

Fractures / M. 8-10

29.9 - 40.3 Carbonate injected mafic volcanic.
37.6 - 37.8 Minor fault, partial gouge development.

40.3 - 53.9 Marked increase in amygdale content. Carbonate amygdalae average 2.0 to 3.0 mm, 35% rock volume.

43.4 Foliation to CA.: 063°

53.4 - 53.9 Broken core, minor fault.

53.9 to MAFIC LAPILLI
63.25 PYROCLASTIC

Definitive pyroclastic breccias are noted near the upper and lower contacts of this unit. Highly angular fragments may exceed 2.0 cm. Plastic deformational features may be noted. Carbonate may be rimmed by chlorite in this interval.

Colour: med. green, texture:, limited lean pyroclastic breccias, f.g. matrix.

Alteration: chl 02, hem <01, ser 01, carb 01.5

Fractures / M. 10-12.

Sulphides: absent.

53.9 - 63.25 Lean mafic fragmentals, amygdale content significantly reduced.

53.9 - 56.5 Well developed fragmental textures.

60.1 - 60.7 Broken Core.

62.3 - 63.25 Open space textures, late vugs.

63.25 to HEMATITIC MAFIC
81.7 FRAGMENTAL

This interval closely resembles that noted between 21.75 and 29.9 m's. The elevated hematite content and obvious colour change are diagnostic features of this section.

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Colour: med gray green, texture: f.g., finely lam., chl - hem - car, strong penetrative fabric.

Alteration: ser 01, chl 02, car 01, hem 01.5

Fractures / M. 10-12.

Sulphides: Trace Py.

63.25 - 81.7. Hematitic mafic tuff.
68.6 Foliation to CA.: 078°
71.8 - 72.0 Discordant pyritic veinlet,
1.0 cm in width.

GEOCHEM	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
71.7 - 72.0	3.0	0.4	8.0	5.0	19.0

81.7 to 94.9 SERICITIZED
MAFIC FRAGMENTAL

Sericite content increases gradually toward the lower contact, and becomes the dominant alteration product near the last two metres of this interval. Net sulphide content remains low, < 0.5 % pyrite, throughout the interval. Sulphide content does not appear to increase towards the contact.

Colour: light yellow grey green, texture: matrix f.g., locally lean fragmental.

Alteration: ser 01.5, carb 01, hem < 01, chl 02, qtz 01.

81.7 - 94.9 Sericitized mafic fragmental.

81.7 - 90.6 Chlorite exceeds sericite.

88.0 Foliation to CA.: 067°

90.6 - 94.9 Silica injection slightly increased. Quartz veins, 5% by volume, discordant to foliation, sericite content exceeds chlorite.

GEOCHEM	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
93.0 - 94.0	3.0	0.4	68.0	3.0	41.0
94.0 - 95.0	3.0	0.4	78.0	4.0	37.0

94.9 to 111.2 GRAPHITIC CHERTS,
LESSER SERICITIC
VOLCANICLASTICS

The interval is dominated by fine grained chemical sediments, typically thin bedded, < 2.0 cm's. Bedding orientations to CA are often highly irregular, both soft sediment deformation and tectonic breccias are suspected. Near the contact, pyrite content is slightly elevated but is present only in a disseminated porphyroblastic form, averaging 1.0%.

Colour: grey-black, Texture: aphanitic to f.g. locally ribbon banded.

Alteration: ser 01

94.9 - 98.4 Dark grey black cherts, core badly broken.

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98.4 - 103.0 Strongly sericitic volcaniclastic interbed, pyrite < 1.0%.

98.4 - 100.0 Core badly fractured and extremely blocky.
101.0 Foliation to CA 081°.

103.0 - 111.2 Dark grey black, graphitic ribbon banded chert.

GEOCHEM	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
95.0 - 96.0	3.0	0.2	43.0	6.0	20.0
96.0 - 97.0	3.0	0.3	55.0	10.0	36.0
102.0 - 103.0	3.0	0.5	64.0	3.0	30.0
103.0 - 104.0	3.0	0.5	39.0	8.0	119.0

111.2 to 122.6 LIGHT CREAM
CHERTS AND FINE
GRAINED GRITS.

The interval is defined by a homogeneous pale cream chert, and very fine grained quartz rich clastic sediments. Foliation remains consistent throughout this interval and may frequently occur at high angles to bedding. Interlimb distances between minor fold structures average 10 - 20 cm's.

Colour: cream, texture: aphanitic, massive, weak pressure solution partings.

Alteration: no significant.

Fractures / M. 10 - 12.

Sulphides: pyrite < 0.5%.

111.2 - 122.6 Light cream chert.
120.6 Foliation to CA.: 080°
- 120.6 Bedding to CA.: 05°

122.6 to 145.2 INTERBEDDED
ARGILLITES,
GRAPHITIC WACKES
AND LESSER
RIBBON BANDED
CHERTS

Mixed clastic and chemical sediments occur throughout this interval. Disseminated, fine grained porphyroblastic pyrite average 0.5 - 1.0% by volume.

Colour: black to light grey, texture: f.g. to aphanitic. Locally well bedded, graded beds noted.

Alteration: no significant.

Fractures / M. 8 - 12.

122.6 - 124.6 Minor fault localized within a dark black graphitic argillite.

124.6 - 137.6 Quartz injected fine grained clastics.

129.8 Bedding to CA.: 063°.
134.4 Well developed tight minor folds, 5.0 cm interlimb angles.

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137.6 - 145.2 Fine grained turbidities. Large scale, 2.0 m, graded beds indicate down hole younging.

141.5 Bedding to CA.: 068°.

145.2 to INTERBEDDED
195.0 FINE GRAINED
BLACK CLASTICS
AND LIGHT GREY
WACKES.

The borehole continues through a thick sediment dominated package. Distinctive subunits within this interval are not definable. Graphitic partings are common on foliation planes throughout, but may slightly increase down hole. Minor fold structures are ubiquitous throughout this section.

Colour: black to light grey, texture: f.g., thin bedded.

Alteration: no significant.

Sulphides: Pyrite <0.5%.

145.2 - 167.8 Quartz injected fine grained black clastic. Quartz veins average 5.0 to 10.0 cm's, are discordant to foliation and do not carry an appreciable alteration selvage.

154.2 Bedding to CA.: 069°.

167.8 - 174.2 Interbedded light grey quartz rich wackes and black clastics. Light grey wackes account for 30% of this interval and are often highly contorted, and thin bedded.

173.7 Foliation to CA.: 072°.

174.2 - 195.0 Graphitic argillites and tectonic breccias. Very limited sericite development in association with late faults. Quartz veins less than 5% by volume. Trace Py.

174.2 - 177.4 Anastomosing faults, core may locally lose competency, rotated fragments . 0.5 cm to 3.5 cm.

180.7 - 182.8 Weak sericitization, 01, may envelope quartz veins, sulphide content remains low.

189.6 - 191.0 Early quartz veins lack sericite or sulphide development.

191.0 - 195.0 Fine grained black clastics, may contain pale yellow slightly carbonitized clasts.

192.3 Foliation to CA.: 078°.

193.6 - 195.0 Weak tectonic breccias.

195.0 END OF HOLE

JIM L. OLIVER (M.Sc.)**CONSULTING GEOLOGICAL SERVICES**

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STATEMENT OF QUALIFICATIONS

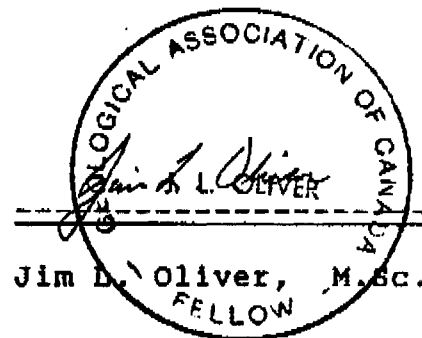
I, JIM L. OLIVER, of the City of Kamloops, Province of British Columbia, DO HEREBY CERTIFY THAT:

1. I am a Consulting Geologist with a business office at 4377 Karindale Road, Kamloops, British Columbia, V2C 1Z3.
2. I hold a combined degree, Bachelor of Science, Honors Geology and Geophysics, granted by the University of British Columbia (1982), a Master of Science in Geology, granted by Queen's University (1985) and I am currently enrolled in a Doctoral program at the latter university.
3. I am a Fellow of the Geological Association of Canada.
4. I have actively practiced my profession as a geologist for the past eight years.

Pre-graduate work experience includes base and precious metal exploration in British Columbia and the Yukon (1979 - 1981).

Postgraduate work experience includes exploration for gold and base metals in Ontario, the southwestern United States and in British Columbia (1982 - 1989).

5. On Jan. 5/1989, I logged, in detail, the core from borehole V - 88 - 1, drilled on the Victory 1 Property, and on Jan. 16/89 reported those results to Pacific Mine Search Ltd.
6. I own no direct, indirect or contingent interest in any of the subject property, nor do I expect to receive any.



Jim L. Oliver, M.Sc.

Dated at Kamloops, British Columbia, this 16 day of January, 1989.

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RESEARCH & ASSAY
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B.C. CERTIFIED ASSAYERS

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**** GEOCHEMICAL REPORT ****



To: MR. JIM OLIVER
4377 KARINDALE RD.,
S. 1, BOX 40, R.R. #1,
KAMLOOPS, B.C.

Number: B 2086

Date: JAN. 11, 1989

Proj.:

Attn:

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KRAL NO.	IDENTIFICATION	AU PPB	CU PPM	PB PPM	ZN PPM	AG PPM
1	V88-1 71.7-72.0	3.0	8.0	5.0	19.0	0.4
2	V88-1 93.0-94.0	3.0	68.0	3.0	41.0	0.4
3	V88-1 94.0-95.0	3.0	78.0	4.0	37.0	0.4
4	V88-1 95.0-96.0	3.0	43.0	6.0	20.0	0.2
5	V88-1 96.0-97.0	3.0	55.0	10.0	36.0	0.3
6	V88-1 102.0-103.0	3.0	64.0	3.0	30.0	0.5
7	V88-1 103.0-104.0	3.0	39.0	8.0	119.0	0.5

IN AU COLUMN 3 INDICATES (5 PPB

368 P10

MINNOVA INC

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