SUB-RECORDER RECEIVED MAD = 7 1990
M.R. #
ON THE
DIAMOND DRILLING PROGRAM
MOW CLAIM GROUP
ARROWSTONE PROJECT
DEADMAN RIVER VALLEY, BRITISH COLUMBIA
· · · ·
KAMLOOPS MINING DIVISION
LAT. 51 02'N, LONG. 120 53'W.
N.T.S. 92P/2W
Billion .
OWNER: MICHAEL DICKENS SAVONA, B.C.
OPERATOR: IRON RIVER RESOURCES LIMITED CAMPBELL RIVER, B.C.
BY CE
JAMES F. BRISTOW, P.ENG.
DATE: JANUARY, 1990.

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TABLE OF CONTENTS

Introduction	••	••	••	• •	••	••	Page 1.
Location and	Access	••	••	• •	••	••	Page 2.
Topography a	nd Clima	ate	••	••	••	••	Page 2.
History	••	• •	••	••	••	••	Pages 2-3.
Index Map	••	••	••	• •	••	••	Fig. #1.
Location Map	••	••	••	• •	• •	••	Fig. #2.
Claims	. ••	• •	••	• •	• •	••	Page 3.
Claim Map 1:	50000		••	••	••	••	Fig. #3.
Geology:							
Reg	ional Ge	eology	Y	• •	••	••	Page 4.
Loca	al Geolo	ogy	• •	• •	• •	• •	Page 4.
Geo	logy Mar	p 1:2!	50000	.••	• •	• •	Fig. #4.
	Nicola	a Gp.	Sedir	nents	••	••	Page 4.
	Nicola	a Gp.	Volca	anics	••	••	Page 5.
	Intrus	sive l	Rocks	• •	••	• •	Page 5.
	Tertia	ary Ro	ocks	• •	••	• •	Page 5.
	Comme	nt	• •	• •	••	••	Page 6.
	Struct	tures	• •	• •	• •	• •	Page 6.
	Minera	alizat	tion	••	• •	• •	Pages 6-7.
	Altera	ation	••	••	••	••	Page 7.
Exploration	Program	••	••	••	••	••	Page 8.
Results	••	••	••	••	••	••	Page 8.
References	••	••	••	• •	••	••	Pages 9-10.

APPENDICES

- 1. Cost Statement.
- 2. Petrographic Report.
- 3. Assay Results.
- 4. Qualifications and Certifications.
- 5. Diamond Drill Logs (in pocket).

MAPS (IN POCKET)

Fig. #5: Drill Hole Location Map 1:5000. Fig. #6: Property Geology Map 1:5000.

INTRODUCTION

This report describes a diamond drilling program consisting of 200 meters of NQWL drilling in 5 holes conducted November 16-29, 1989, on the Mow Claim Group. The property consists of 72 units in 4 claims located approximately 60 kms northwest of Kamloops, B.C., in the Deadman River Valley.

The property is held under option by Iron River Resources Limited of Campbell River, B.C., from the owner Michael Dickens of Savona, B.C.

Copper mineralization was found at two locations on the property by M. Dickens in 1980, with subsequent exploration being done by Canamax Resources in 1983, and Northair Mines Ltd. in 1984. The mineralized areas appear to be located along a major northwest-southeast striking structural break indicated by geological mapping, aero-magnetics and topography.

The present diamond drilling program was done to check the known mineralized zones and to test some of the VLF-EM anomalies found in the September, 1988, and October, 1989, surveys.

LOCATION AND ACCESS

The property is located approximately 60 kms northwest of Kamloops, B.C., in the Mowich Lake area of the Deadman River Valley. Access is by 29 kms of paved and gravel road from the Trans-Canada Highway at a point 5 kms west of the village of Savona.

TOPOGRAPHY AND CLIMATE

The Deadman River Valley is relatively narrow with moderately steep sides. Topography on the claims is moderate to rugged with elevations ranging from 650m to 1200m.

Outcrop is best along cliffs, creeks and road cuts and relatively poor elsewhere. There are very few exposures in the area of the present program.

The claims are forested mainly by Lodgepole Pine and Fir, with generally light underbrush.

The climate is typical of the interior plateau, with warm summers and cold winters. Snow free conditions usually exist from April to mid-November.

HISTORY

The area has seen sporadic activity since the late 1870's, with the earliest reference in the Index to Annual Reports of the Minister of Mines being 1879. The only major producer in the immediate area was the Vidette Mine located 14 kms north of Mowich Lake. During the 1930's, 54190 tons grading 0.550z/ton gold, 0.860z/ton silver and 0.09% copper were produced from narrow quartz veins.





Recent history of the property is as follows:

- 3 -

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1980 - Prospecting and soil sampling by M. Dickens.

1983 - Preliminary evaluation report by N.L. Tribe.

1983 - Prospecting, soil sampling, magnetometer and I.P. surveys by Canamax Resources.

1984 - Road building and trenching by Northair Mines Ltd.

1988 - Property optioned to Iron River Resources Limited. - VLF-EM, Magnetometer and I.P. Surveys.

1989 - VLF-EM and Magnetometer Survey.

CLAIMS (See Figure #3)

The property consists of four contiguous metric claims totalling 72 units.

<u>Claim</u>	Name	<u>Units</u>	<u>Record</u> Date	Record No.	<u>Expiry</u> Date
MOW	1	20	23/3/83	4383	23/3/90
MOW	3	2.0	25/10/84	5921	25/10/90
MER		12	23/3/83	4382	23/3/90
MER	2	20	27/4/88	7620	27/4/90



GEOLOGY

REGIONAL GEOLOGY (Figure #4)

The Mowich Lake property is located in the southern segment of the geological zone known as the Quesnel Trough; a northerly trending belt, up to 45 kms wide, of Upper Triassic age Nicola Group volcanic and sedimentary rocks.

The Quesnel Trough units lie between Permian and older volcanics and sediments to the east and Permian Cache Creek limestones to the west. The Nicola Group has been intruded by Triassic/Jurassic age intrusives of the Thuya and Takomkane batholiths and younger Cretaceous alkaline to calcalkaline stocks.

The region is covered by a thin layer of Miocene siliceous ashes and tuffs (Deadman River Formation) and by Eocene plateau basalt.

LOCAL GEOLOGY

The Nicola rocks underlying the Mowich property have been partially exposed by erosion of the plateau basalt and Deadman River Formation along the Deadman River Valley. This recent erosional window traverses the centre of the property in a North-South direction exposing a section of Nicola Group rocks between the younger formations along the East and West margins of the property.

A brief description of the rock types (after Canamax Resources 1984) exposed in the immediate area of the claims is as follows:

NICOLA GROUP SEDIMENTS

(a) Argillite - generally massive to poorly bedded with occasional thin bedded siltstones.

(b) Greywacke - interbedded with argillites and composed of subangular grains less than 1mm and black to grey in colour depending on the quartz and feldspar content.

(c) Limestone, Chert, Quartzite and Conglomerate - occur in minor amounts with argillite and greywacke.

NICOLA GROUP VOLCANICS

(a) Polymictic Breccia - a distinctive maroon to green colour, composed of fragments to 0.5 metres of sediments, syenodiorites, volcanic andesites and augite porphyry in an andesite groundmass. Hematite and epidote alteration is common.

(b) Andesite Breccia - occurs only along the east side of Mowich Lake and consists of rounded to angular clasts to 20cm of fine grained, light green andesite and augite porphyry with minor limestone. The groundmass is tuffaceous andesite and carbonate.

(c) Augite Porphyry - appears to be a flow rock forming the top of the Nicola Formation. It is massive, dark grey green, aphanitic groundmass with up to 8% phenocrysts of augite crystals to 5mm. It can contain up to 10% amygdaloidal material in brecciated areas.

INTRUSIVE ROCKS

The intrusive outcrops mapped by Canamax Resources all occur to the west of the Deadman River. They are reportedly diorite and symplet in composition with a maximum indicated surface exposure size of 300 metres.

TERTIARY ROCKS

(a) Deadman River Formation - this formation unconformably overlies the Nicola Group Rocks. It is composed of Miocene age non-marine tuffs, ashes and arkoses with minor conglomerates and agglomerates. The arkose unit is poorly consolidated and believed to be quite thin. The tuff is white to yellow in colour, fine grained and in at least one area 30 metres thick.

The Deadman River Formation was apparently deposited on a very uneven land surface. Outcrops are primarily high on the valley walls, but some material is found almost to the valley bottom. Some of the latter may be due to downhill movement of the poorly consolidated tuffaceous material.

(b) Plateau Basalt - probably of Eocene age, dark grey to brown in colour with variable olivine and often vesicular.



COMMENT: A question has arisen regarding the age of the Augite porphyry and andesite Breccia. They have been mapped as Triassic age Nicola group rocks, but it is possible they may belong to the Tertiary age Kamloops group. Papers by Thomas E. Ewing published in 1980 and 1981 (see references) describing the Kamloops group indicate some points comparable with the situation of the Mow claim group. Final determination would require further checking and age dating.

STRUCTURES

The Nicola Group rocks strike northerly with moderate to steep dips to the east and west. Mapping to date suggests there is no repetition due to folding. The Deadman River Valley is believed to be underlain by a major fault with possible left lateral movement in the order of 600 metres. Several apparent northwest-southeast faults have been recognized with some suggestion of accompanying block faulting.

An apparent major northwest/southeast striking fault crosses the Mow 1 and Mow 3 claims as indicated by topography and magnetics. Displacement of approximately 600 meters occurs along the Deadman River fault.

MINERALIZATION

Mineralization has been found at three locations on the property. One showing is located 1000 meters east-southeast of the bridge over the Deadman River. Chalcopyrite with low gold values occurs in fine grained amygdaloidal augite porphyry and augite porphyry breccia. The sulphide mineralization is in the amygdales and in fractures over an area roughly 50 by 150 meters. Sampling has indicated average values in the order of 2% copper and 0.018oz/t gold.

The second showing is located 75 metres southwest of the bridge on the west bank of the Deadman River. Mineralization is exposed in a pit and consists of malachite coated angular to subangular clasts of chalcocite-bornite associated with

- 6 -

serpentine. The clasts are in a tuff breccia which appears to be the basal unit of the Deadman River formation. This particular segment of the formation has obviously undergone movement downhill from the northwest for an unknown distance to its present location. The clasts appear to be roughly oriented in layers indicating a possible origin as veins which have suffered disruption during the movement of the block.

Assays for samples composed of selected clasts of the chalcocite-bornite averaged >50% copper, 8oz/t silver and 0.25oz/t gold.

Small amounts of chalcocite mineralization were found a few meters from the Mer-Mow 1 legal corner post located 1000 meters northwest of the bridge. The mineralization is in a small quartz vein in a highly serpentinized tuff breccia forming the base of the Deadman River formation.

ALTERATION

Quite extensive alteration zones have been noted on the property. These occur in the vicinity of the Deadman River fault and on the northwest/southeast trend previously mentioned. Serpentinization of the augite porphyry is found in the vicinity of the Mow 1 and Mer legal corner post located 1000 meters northwest of the bridge over the Deadman River. Similar alteration was also found around the chalcopyrite mineralization located 1000 meters southeast of the bridge.

Quartz veining with carbonate and mariposite alteration occurs along the Deadman River, particularly to the south of the bridge on the Mow 1 claim. Geological mapping in 1983 indicates this alteration may extend to the southeast for several hundred meters. Both serpentinized augite porphyry and the carbonate-mariposite alteration were found in D.D.H. #5 of the present program.

- 7 -

EXPLORATION PROGRAM

The program consisted of diamond drilling 5 NQWL sized holes totalling 200 meters from 4 drill sites. The work was done by Rainbow Drilling Co. Ltd., of Merritt, B.C. The core is stored near the site of holes 89-1 and 89-2.

RESULTS

D.D.H.89-1 (11908N, 11965E)

Drilled in direction of and beneath pit containing chalcocite nodules. Intersected tuff breccia of the Deadman River formation. No mineralization.

D.D.H.89-2 (11903N, 11958E)

Drilled to intersect a moderate VLF-EM anomaly. Hit tuff breccia similar to that in D.D.H.89-1.

D.D.H.89-3 (11095N, 11500E)

Drilled on a moderate VLF-EM anomaly. Hole intersected augite porphyry. Lost circulation at interface between overburden and bedrock may indicate source of anomaly.

D.D.H.89-4 (12170N, 11000E)

Drilled on a very strong VLF-EM anomaly. Intersected tuff breccia of Deadman River formation and strongly serpentinized augite porphyry.

D.D.H.89-5 (12015N, 12980E)(2015S, 2980E on old grid) Drilled beneath surface showing of chalcopyrite mineralization. Intersected serpentinized augite porphyry and intensely altered (ankerite-sericite) latite flow. Altered zone cut off by a fault and hole ended in arkose. Trace sulphides.

mes F. Bristow, P. Eng.

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- 10 -

COST STATEMENT

1.	Diamond Dri	lling	••	••	••	••	••	\$	20,000.00.
2.	Assaying	••	••	••	••	••	••	\$	494.50.
3.	Motels	••	••	••	••	••	••	\$	481.20.
4.	Meals: 28 m	an day	ys @ 9	\$ 25.0 0)/day	••	••	\$	700.00.
5.	Truck Renta	1 – Ka	amlool	os S	• •	••	••	\$	1,086.49.
6.	Gasoline fo	r Truo	ck	••	••	• •	••	\$	178.79.
7.	Car Costs:	Vanco	ouver	to Ka	amloop	os Ret	urn:	_	
		979 1	kms @	.25/1	cm	••	• •	\$	244.75.
8.	Lumber	••	••	••	••	••	••	\$	44.75.
9.	Geologist:	15 da	ays @	\$250.	00/da	ay	••	\$	3,750.00.
10.	Assistant:	Wages	s & E2	xpense	es	••	••	\$	2,644.00.
11.	Consulting	Geolog	gist	••	••	••	••	\$	669.00.
12.	Report	••	••	••	••	••	••	\$	2,500.00.
								s	32.793.48.



Vancouver Petrographics Ltd.

JAMES VINNELL, Manager JOHN G. PAYNE, Ph.D. Geologist CRAIG LEITCH, Ph.D. Geologist JEFF HARRIS, Ph.D. Geologist KEN E. NORTHCOTE, Ph.D. Geologist

Report for: W. Pentland, 1190 Ehkolie Cres., DELTA, B.C., V4M 2M2

Sample: 5-36.8 m.

Summary:

Sample 5-36.8 m is a slightly porphyritic, altered latite flow containing minor phenocrysts of plagioclase in an extremely fine grained groundmass dominated by plagioclase/sericite. The groundmass contains abundant ankerite replacement patches and lenses. Ankerite also forms a few veins and veinlets. Hematite forms late veinlets on fractures.

John G. Payne, 604-986-2928

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Invoice 8716 December 1989

Sample 5-36.8 m Altered (Ankerite) Latite Flow; Veins of Ankerite and of Hematite

The rock is a slightly porphyritic, altered latite flow containing minor phenocrysts of plagioclase in an extremely fine grained groundmass dominated by plagioclase/sericite. The groundmass contains abundant ankerite replacement patches and lenses. Ankerite also forms a few veins and veinlets. Hematite forms late veinlets on fractures.

plagioclase	
coarser grains	2- 3%
groundmass	40-45
sericite	12-15
ankerite	30-35
opaque/hematite	Ø.5
quartz	Ø.1
veins	
ankerite	3-4
opaque/hematite	1- 2

Plagioclase forms scattered equant to prismatic phenocrysts averaging $\emptyset.08-\theta.25$ mm in size, with a few up to $\emptyset.4$ mm long. A few clusters of such grains are from $\emptyset.3-\emptyset.8$ mm in size. A few phenocrysts contain moderately abundant replacement patches of opaque hematite.

These are set in a groundmass dominated by plagioclase. Much of the groundmass consist of equant grains averaging 0.05-0.01 mm in size. Elsewhere, plagioclase forms equant to lathy grains, with the latter averaging 0.02-0.03 mm in length. Elongate grains generally are oriented parallel to a moderate foliation. Alteration is weak to locally moderate or strong to sericite flakes, which also are oriented parallel to foliation.

Opaque forms concentrations of dusty to extremely fine grains intergrown with plagioclase and sericite. A few coarser, subhedral grains averaging Ø.Ø7-Ø.1 mm in size may be pyrite.

Ankerite forms anhedral to subhedral, equant grains averaging 0.07-0.15 mm in size, with several coarser grained patches in which grains average 0.15-0.4 mm in size. These are concentrated moderately in diffuse veins and patches. Much finer grained ankerite is disseminated in patches in the plagioclase-rich groundmass. Some ankerite is altered slightly to limonite.

Quartz forms a few patches of anhedral grains averaging 0.05 mm in size in cores of a few large ankerite-rich replacement zones.

Ankerite forms a few discrete veinlike zones up to 1.2 mm wide. The widest contains rims up to \emptyset .2 mm wide of ankerite grains oriented perpendicular to the walls of the vein.

Hematite/opaque is concentrated in a diffuse vein up to 1 mm wide, where it forms sharply defined to diffuse patches up to 0.5 mm in size intergrown intimately with groundmass plagioclase-sericite and ankerite. A discontinuous veinlet up to 0.15 mm wide of very fine grained ankerite runs along the axis of the hematite-rich vein zone. A similar, diffuse, hematite-rich, veinlike zone occurs on one broken face of the hand sample.

KA	MLOOF	PS.	B.C. CERTIFIED ASSAYERS										
RES	SEARCH	4 & ASSAY	912 - 1 LAVAL CRES	CENT, KAMLOOPS,	B.C. V2G 5P5 PH	IONE (804) 37	72-2784 FAX 372-1112	CTA					
	BORAT	ORY LTD.		**Assay C	ertificat	:e**							
To:	Iroi	n River Resou	rces		N	umber:	к 9937						
	191) Cam	0 Galerno Rd. pbell RiveB,C	7			Date:	12/06/89						
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	No		nAu		Cu								
			ozs/ton	ozs/ton	percent								
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	02	79502	<.001	<.01	<.01								
	03	79503	<.001	<.01	<.01								
	04	79504	<.001	<.01	<.01								
	05	79505	<.001	<.01	<.01								
	06	79506	<.001	<.01	<.01								
	07	79507	<.001	<.01	<.01								
	08	79508	<.001	<.01	<.01								
	09	79509	<.001	<.01	<.01								
	10	79510	<.001	<.01	<.01								
	11	79511	<.001	<.01	<.01								
	12	79512	<.001	<.01	<.01								
	13	79513	<.001	<.01	<.01								
	14	79514	<.001	<.01	<.01								
	15	79515	<.001	<.01	<.01								
	16	79516	<.001	<.01	<.01								
	17	79517	<.001	<.01	<.01								
	18	79518	<.001	<.01	<.01								
	19	79519	<.001	<.01	<.01								
	20	79520	<.001	<.01	<.01								
	21	79521	<.001	<.01	<.01								
	22	79522	<.001	<.01	<.01								
	23	79523	<.001	<.01	<.01								

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QUALIFICATIONS AND CERTIFICATIONS

I, James F. Bristow, of 9610 Thomas Place, in the Municipality of Richmond, Province of British Columbia, hereby certify as follows:

- 1. I am a graduate of the University of British Columbia with a B.A. Degree (Geology and Physics).
- 2. I am a member of the Canadian Institute of Mining Metallurgy, the Geological Society of South Africa and the Association of Exploration Geochemists.
- 3. I am a Professional Engineer registered in the Province of British Columbia.
- 4. I have actively practiced my profession in mineral exploration and mining since my graduation in 1957.
- 5. That the geological information quoted in this report is based on an examination of the property April 18 and 19, May 5, 6 and 19, 1988, and November 28 and 29, 1989, on data gathered by myself or someone working directly under my supervision and on my personal analysis of the reports and other data listed in the references.
- That I have no interest, either direct or indirect, in the property or securities of Iron River Resources Limited, nor do I expect to receive any.
- 7. That I consent to the use of this report, in or in connections with, prospectus, or a statement of material facts relating to the raising of funds for this project.

Dated at Richmond, British Columbia, this $\overline{\mathcal{F}}\mathcal{T}_h$ day of March, 1990.

DIAMOND DRILL CORE LOG - SAMPLE RECORD

	TH	DIP	BEARING AST. 098 ²⁹	PROPERTY ARRO LATITUDE 1190 DEPARTURE 1196 ELEVATION	DWSTONE 08N 55E	CLAIM MOW 1. STARTED NOVEMBER 17, 1989. FINISHED NOVEMBER 18, 1989. TOTAL LENGTH 35.4M.						LOGGH CORE SECTION HOLE	PENTLAND)	
Footage			DESCRIP TIC	N	MINERALIZATION	Sample	From	То	Length	Copper %	Mo %	Gold Oz.	Silver Oz.		
0-7M	CAS	SING.										ra 4,			
7-30M	CLA	STIC -	TUFF BRECCIA.CORE	VERY SOFT, SEMI-											
	CON	ISOLIDA	TED. IS DEADMAN R	IVER FORMATION.LT.	·										
	BRO	WIN TO	SANDY COLOR WITH DA	ARK GY-GN SECTIONS.											
	MAT	RIX IN	SANDY COLORED SECT	TIONS V. FINE WITH											
	ABU	ND. QU	ARTZ SHARDS TO 2MM.	CONTAINS ABUND.	·					-					
	v	ANGULA	R CLASTS TO 5CM. N	MAJORITY < 1CM. LGE.											
<u>-</u>	VAR	LETY II	N COMPOSITION. SOM	E TUFF SIMILAR TO											
	MAT	RIX. I	MAJORITY VOLCANIC -	- DARK, VAR. GN.	-										
	SIZ	E. WI	DE RANGE OF COLORS.	ALSO QUARTZ,											
<u></u>	CHE	RT, FE	LSITE AND DIORITE.		·	. 									
	THE	DARKE	R COLORED SECTIONS	HAVE PREDOMINANTLY											
	DAR	K COLOI	RED CLASTS BUT IS S	SOME MIXING. THE											
	MATI	RIX IS	SIMILAR TO SANDY C	COLORED VARIETY W.											
	INCI	REASED	MAFIC GRAINS.												
	DARI	K SECT	IONS: 8.5 - 11.0m.			79501	26.2	29.3	3.05	<.01		<.001	<.01	-	
F-7(0)			18.5 - 20.0m.			79502	32.3	35.4	3.05	<.01		<.001	<.01		
r3-1 VV	1					1					-	_			

DIAMOND DRILL CORE LOG -- SAMPLE RECORD

PROPERTY ARROWSTONE

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	Footage	DESCRIP TION	MINERALIZATION	Sample	From	To .	Length	Copper	Mo	Gold	Silver		
		26.5 - 27.0m.							~~~~	<u>Uz.</u>	Uz.		
		28.8 - 29.0m.								<u> </u>			
-													
-		21.0m - 12cm CLAST AUGITE PORPHYRY.											
· _		25.03m- 10cm CLAST ANDESITE.										·	·
-													
30m_	- 35.4m	DARK GREY-GREEN CLASTIC WITH SECTIONS MATRIX											
		LIGHTER GREEN COLOR. MAJORITY OF CLASTS DARK											
-		GREEN TO BLACK AND UP TO 10CMS. DIAM. ANDESITIC.											
		MATRIX COMPOSED OF SIMILAR MATERIAL WITH											
		ADDITIONAL SHARDS OF QUARTZ. SEVERAL OF LARGER											
		ANDESITIC CLASTS CUT BY IRREG. WHITE QTZ. VEINS											
		TO 1CM.											
		34.3m - PALE GREY - GREEN 3CM. CLAST ASH TUFF.											
		SERPENTINE ALTERATION RIM - GREEN GRADING TO											· · · · · · · · · · · · · · · · · · ·
		WHITE COLOR.											
		35.4 - Е.О.Н.											
		NOTE: MATRIX QUITE SOFT. POOR CR.											····
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DIAMOND DRILL CORE LOG -- SAMPLE RECORD

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PROPERTY ARROWSTONE

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HOLE No. 89-1 Page No. 3 of 3.

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Footage	DESCRIPTION	MINERALIZATION	Sample	From	To .	Length	Copper %	Mo %	Gold Oz.	Silver Oz.	
	CORE RECOVERY:										
	7M - 11M = .7M			R.							
	- 14.2 = .75										
	- 17.0 = 2.25										
	- 20.0 = 1.75										
	- 23.2 = .85										
	- 26.2 = 1.80										
	- 29.3 = 1.45										
	- 32.3 = 1.60										
	- 35.4 = 1.65										
	· · · · · · · · · · · · · · · · · · ·										
											_
E-701			-	1	1	ľ	. f	·-T			

DIAMOND DRILL CORE LOG - SAMPLE RECORD

	PTH DIP LAR -80°	BEARING AST.	PROPERTYARRO LATITUDE	WSTONE		LOGGED BY W. PENTLAND CORE SIZE NOWL SECTION								
<u> </u>			ELEVATION		TOTAL	LENGTH	36.0M	1			HOLE	<u>но. 89-</u> 2	2	*****
Footage		DESCRIPTION		MINERALIZATION	Sample	From	То	Length	Copper %	Mo %	Cold Oz.	Silver Oz.		
<u>0 - 7</u> M.	CASING.													
7 - 17,3	OVERBURDEN	•		- 										
17. <u>3 - 20.3</u>	3 TUFF BRECC	IA. LT. SANDY BROWN	COLOR, CORE VERY	·										
	SOFT. DEAL	OMAN RIVER FORM. MA	ATRIX LARGELY FINE											
	QTZ GNS - 1	MANY APPEAR TO BE SH	HARDS. ABUNDANT											
	LARGER CLAS	STS TO 2CMS BUT GEN.	6MM. ANGULAR		:									
	WIDE VARIE	TY COMPOSITION AND C	COLOR. SIMILAR 89-1	L.										
					•									
20.3 - 23.8	SIMILAR TO	ABOVE BUT GREY COLO	DR. MATRIX											
	COMPOSED OI	F COARSER GRAINED MA	ATERIAL OF VARIETY	· .										
	OF COLOR AN	ND COMPOSITION. DOP	ES NOT HAVE THE											
	ABUNDANCE (OF FINE OTZ, SHARDS.												
									-					
23.8 - 24.4	BOULDER. I	PROBABLY AN ERRATIC	OF POLYMICTIC	· · · · · · · · · · · · · · · · · · ·										
	BRECCIA FRO	OM NICOLA FORM. PAT	CHY MAROON AND	······						: 				
	EPIDOTE GRI	EEN COLOR.												

DIAMOND DRILL CORE LOG --- SAMPLE RECORD

PROPERTY ARROWSTONE

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HOLE No. 89-2 Page No. 2 Of 3.

Footage	DESCRIPTION	MINERALIZATION	Sample	From	То	Length	Copper	Мо	Gold	Silver	 <u> </u>
24.4 - 26.5	SAME AS 20.3 - 23.8.		+			. Dongu	%	.%	0z.	Oz.	
							· · · · · ·				
				·	ļ. 		 				
20 <u>.5 - 36</u>	TUFF BRECCIA. MATRIX A MEDIUM GREEN COLOR; MIX		ļ								
	OF QTZ. AND MAFIC GRAINS. V. FINE TO 1MM.	· · · · · · · · · · · · · · · · · · ·	ļ								
	CONTAINS ABUND. ANGULAR DARK MAFIC CLASTS TO								1		+
	5CMS. ANDESITIC. TWO LARGE CLASTS 15CMS & 25CMS	S							<u> </u>		
	ROCK REMAINS SOFT AND MUDDY.										 +
	<u>.</u>										 <u> </u>
	36.0M E.O.H.										
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DIAMOND DRILL CORE LOG -- SAMPLE RECORD

PROPERTY ARROWSTONE

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Footage	DESCRIP TION	MINERALIZATION	Sample	From	To .	Length	Copper %	Мо -%	Gold Oz.	Silver Oz.		
	CORE RECOVERY:											
	7M - 8.2 = .45M.											
	11.3 = .15M.											
	14.4 = .12M.											
	17.5 = OM.											
	20.4 = 2.95M.											
	23.5 = .60M.											
<u></u>	26.5 = 2.60M.											
	29.6 = 2.40M.											
	32.6 = 2.70M.											· · · · ·
	35.7 = .60M.											
	36.0 = .27M.											
E-701	_			<u> </u>							+	

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DIAMOND DRILL CORE LOG - SAMPLE RECORD

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COLLA	H DIP R -57°	BEARING AST. 198°	PROPERTY ARE LATITUDE 120 DEPARTURE 115	20WSTONE 095N 00E	starti	ed NOV.	CLAI 20, 198 22, 19	MOW 2 39. 89.	L	•	LOGGEI CORE S SECTIO	D BY W. PH	ENTLAND.	·····
			ELEVATION		TOTAL	LENGTH	35.6M.		*****		HOLE	NO. <u>89-3</u>		
Footage		DESCRIPTI	ON	MINERALIZATION	Sample	From	То	Length	Copper %	Mo %	Gold Oz.	Silver Oz.		
											"a #.			
0 - 6.1M	CASING.													
6.1 - 29.0	OVERBURDI	N. LOST WATER AT	27M.		_									
29.0 - 35.6	AUGITE PO	DRPHYRY.						<u> </u>				6 01		
	DARK GRE	COLOR. VERY FINE	GRD.		79503	32.3	35.6	3.3	<.01		<u> </u>	<.01_		
	MATRIX W	ITH DARK GREEN PHEN	VO-CRYSTS AUGITE TO											
	3MM MA		THLORITIZED.											
		TALLE FAILEY NUMERO	US IRREGILAR OTZ.							<u> </u>		ļ	· · · ·	
	CORE CON	TAINS FAIRLY NOPEN											<u> </u>	
	VEINS;	HAIRLINE TO 5MM. (CCASIONAL VEIN											
	EPIDOTE	WITH MINOR CARBONA	TE TO 2MM. NO VISIBLE				1							
	SULPHIDE	S												
	35.6M -	Е.О.Н.	·											
	CORE REC	OVERY:												
	20.0 - 3	2 3 - 2 10M	·			_								
	29.0 - 3												┨────┤	
	32.3 - 3	5.6 = 1.20M.											<u> </u>	
	_													
									_					
			·									-1	- <u> </u> <u>-</u> <u> </u> -	

DIAMOND DRILL CORE LOG - SAMPLE RECORD

DEPTH	$\frac{\mathbf{DIP}}{\mathbf{R}} - 70^{\circ}$	BEARING AST.	PROPERTYARRC	WSTONE	STARTE	D NQV NOV -	CLAIN 231989	r <u>MOW 3</u>	. .	۹.	LOGGED CORE SI SECTION	BY <u>W.</u> PI ZENQWL.	NTLAND,	
			DEPARTURE1100 ELEVATION	<u>00E</u>	finishi Total :	LENGTH	47.5M				HOLE N	o. <u></u>		······································
Footage		DESCRIPT	10N	MINERALIZATION	Sample	From	To	Length	Copper %	Mo %	Gold Oz.	Silver Oz.		
<u>0 - 6.1M</u>	CASING										- 1 - 1 - 1			
6 <u>.1 - 7.9</u>	TUFF BRE	CCIA. DEADMAN RIV	ER FORM. MATRIX SOFT; ROWN W. GREENISH CAST.											
	ABUND. A	NGULAR CLASTS TO 6	CMS. LGE. CLASTS A											
	MIX OF F	GRD. TUFF AND VO	LCANICS. MATRIX											
	PREDOMIN	IANTLY QTZ. GRAINS	- SOME SHARDS.											
	VARIADLI	S SHAFEATINE.												
7 <u>.9 - 10.4</u>	1 TUFF BR	ECCIA. MAINLY F. C	GRD. MATRIX W. FEW											
	SCATTER	ED CLASTS TO 4CMS.	CORE DULL HEMATITIC											
<u></u>	RED COL	OR. NOTED DEPOSIT.	. FEW IRREG. VEINS OF							<u> </u>				
	SERPENT	INE. OCCAS. CLAST	ALT. TO SERPENTINE.											
10 4 15	ם שיוויים	PEOCIA ABUND ANG	ULAR CLASTS TO 6CMS.											
10 <u>.4 - 15</u> .	VARI-CC	DIORED. PREDOMINAN	TLY VOLCANIC. NUMEROUS			ļ						< 01		
	CLASTS	ALT. TO OR WITH AL	T. RIMS OF SERPENTINE.		79504	14.0	15.3	1.3	<.01	+				<u> </u>

DIAMOND DRILL CORE LOG --- SAMPLE RECORD

PROPERTY ARROWSTONE

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HOLE No. 89-4 Page No. 2 of 5.

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Footage	DESCRIPTION	MIN ERALIZATION	Sample	From	To .	Length	Copper %	Mo %	Gold Oz.	Silver Oz.	
	12.6M - 25CM BK. APHANITIC CLAST.										
<u></u>	13.8M - 15.3M NUMEROUS CLASTS OF AUGITE PORPHYRY	•		,					-		
	14.5 - 15.3 V. MINOR QTZ CARB. VEINS.										
	NOTE: CORE MATRIX REMAINS SOFT. FAIRLY	· · ·									
	NUMEROUS BRICK TO DK. RED COL. CLASTS. DRILL										
	WATER RED.										
15.3 - 17.	O CONTACT ZONE WITH AUGITE PORPHYRY.		79505	15.3	17.0	1.7	<.01		<.001	<.01	
	CN. DIP 10° TO CA. DARK RED W. GREEN MOTTLING.										
	AUGITE LARGELY ALT. TO SERPENTINE. ABUNDANT										
	FINE, IRREGULAR QTZ CARBONATE - SERPENTINE										
	VEINS TO 6MM. QTZ. AND CARB. GENERALLY LATER										
· · · · · · · · · · · · · · · · · · ·	THAN SERPENTINE. CORE BECOMING HARD.										
17 <u>.0 - 22.0</u>	AUGITE PORPHYRY. ABUND. PHENOS 1-3MM. OCCAS.		79506	17.0	20.1	3.05	<.01		<.001	<.01	
	PHENO TO 5MM. MODERATE TO HEAVY SERPENTINE										
	ALTERATION OF MATRIX. WEAK TO MOD. SERPENTINE										
	ALT. OF PHENOS. EST. OVERALL 30% SERPENTINE										
	IN SOME SECTIONS. COLOR OLIVE TO YELLOWISH										
E-701											

DIAMOND DRILL CORE LOG - SAMPLE RECORD

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ARROWSTONE

PROPERTY

								но	LE No. <u>8</u>	9-4	Page No. 3 of 5.
Footage	DESCRIP TION	MINERALIZATION	Sample	From	To .	Length	Copper %	Mo %	Gold Oz.	Silver Oz.	
	GREEN. ABUND. FINE QTZ. VEINING AS BEFORE.										
	SCATTERED OXIDIZED GRAINS THROUGHOUT GIVE CORE A		-	×				1			
	MOTTLED GREEN - BROWN COLORATION.						1		1		
	·	·								-	
22.0 - 35	.0 AUGITE PORPHYRY. NUMEROUS ROUNDED TO IRREG.		79507	20.1	23.1	3.05	<.01		<.001	<.01	
	PATCHES OF DARKER GRASS GREEN COLORED SERPENTINE		508	23.1	26.2	3.05	< .01		<.001	<.01	
. ,	TO 1.5CMS. DIAM. LARGER AUGITE PHENOS WEAKLY		509	26.2	29.2	3.05	<.01		<.001	<.01	
<u></u>	ALT. TO SERPENTINE. SCATTERED FINE IRREG. VEINS		510	29.2	32.3	3.05	<.01		<.001	<.01	
<u> </u>	QTZ CARB SERPENTINE.		79511	32.3	35.3	3.05	<.01		<.001	<.01	
	EST. OVERALL 25% - 30% SERPENTINE.										
	26.0 - 26.2M SHEAR ZONE DIPPING 50° TO CA. CORE										
	FINALLY COMMINUTED AND ALT. TO SERP.	·									
	34.5 - APPROX. 10CM SECTION WITH SERPENTINE? A	·									
	DISTINCT BLUE COLOR.										
35.0 - 40.	8 AUGITE PORPHYRY. SHEAR ZONE. DIP VARIABLE		79512	35.3	38.4	3.05	< .01		<.001	< .01	
	FLAT - 45° TO C.A. VARIES FROM COARSELY		513	38.4	41.4	3.05	< .01		<.001	<.01	
	BRECCIATED WITH FRAGS. TO 6CMS TO GOUGE FROM										
<u></u>	35.3 - 38.8M.										
	1 1										1

DIAMOND DRILL CORE LOG --- SAMPLE RECORD

PROPERTY ARROWSTONE

HOLE No. 89-4 Page No. 4 Of 5. Footage DESCRIPTION MINERALIZATION Sample Copper From Мо То Gold Length Silver % .% 0z. Oz. ABUND. SERPENTINE. SCATTERED FINE OTZ. - CARB. VEINING. , 40.8 - 47.5 PYROXENITE. VERY DARK GREEN TO BLACK. EST. UP 79514 41.4 3.05 < .01 44.5 <.001 <.01 TO 60% EUHEDRAL PYROXENE XTALS TO 2MM. MANY OF 515 44.5 47.5 3.05 < .01 <.001 <.01 SMALLER GRAINS APPEAR ALT. TO EPIDOTE. ROCK WEAKLY SHEARED IN PLACES AND HIGHLY FRACTURED. FRACTURES FILLED WITH SERPENTINE. . SCATTERED FINE IRREG. VEINS CARBONATE. 47.5M = E.O.H.E-701

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DIAMOND DRILL CORE LOG -- SAMPLE RECORD

PROPERTY ARROWSTONE

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HOLE No. 89-4 Page No 5 of 5.

Footage	DESCRIPTION	MINERALIZATION	Sample	From	То	. Length	Copper	Mo	Gold	Silver		
	CORE RECOVERY:					+		70	Uz.	07.		+
<u> </u>	6.10 - 7.90 = 1.70M.				 		<u> </u>	<u> </u>	-			
	10.9 = 3.10M.			, 	 			<u> </u>	+			<u></u>
	14.0 = 3.00M.	· · · · · · · · · · · · · · · · · · ·						<u> </u>		<u> </u>		+
••••	17.0 = 2.70M.											<u></u>
	20.1 = 2.70M.											
	23.1 = 3.00M.											
	26.2 = 3.05M.							 				
	29.2 = 3,10M.											
	32.3 = 2.40M.											
	35.3 = 2.80M.											
	41.4 = 3.10M.											
	44.5 = 3.00M.											
	47.5 = 3.00M.											
	47.5 = E.O.H.											
F-701												
6-101												

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DIAMOND DRILL CORE LOG - SAMPLE RECORD

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		H DIP R -50°	BEARING AST.	PROPERTYAR LATITUDE120 DEPARTURE129 ELEVATION	ROWSTONE	START FINISH TOTAL	ed ed ed length	CLA NOV.27, NOV.29, 44.8m	MOW 1 1989. 1989.			LOCGEI CORE S SECTIO HOLE 1	D BY <u>W.</u> BIZE <u>NQ</u> N	PENTLANI	<u>}</u>
 F	Cootage		DESCRIPTI	I ОN	MINERALIZATION	Sample	From	To	Length	Copper %	Mo %	Cold Oz.	Silver Oz.		
	- 3M.	CASING.	AUGUTE PORPHYRY.												
4. <u>8</u>	- 25.6	AUGITE PC	RPHYRY. MED. GREET	N FINE GRD. ANDESITIC				· · · · · · · · · · · · · · · · · · ·							
		OCCAS. PH	ENO TO 5MM. MOD.C.	HLORITIZED.		_		·							
		<u>SECTIONS</u>	OF CORE APPEAR TO T	ANGULAR CLASTS OF											-
		AUGITE PO	DRPHYRY TO 3CMS. TERED QTZ. VEINS TO	5 MM .											
		GEN. DIP	55° TO CA.	H IRREG. VEINS AND											
		PATCHES (DTZ. MINOR PATCHY	ALTERATION OF							· · · · · · · · · · · · · · · · · · ·				
		FELDSPAR	<u>5 - KAOLIN.</u> LIMONITE STAINING.						- - -						
<u></u>		10.25M -	5CMS IRREG. VEININ	NG PINK K-SPAR.											
E	-700														

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DIAMOND DRILL CORE LOG --- SAMPLE RECORD

PROPERTY ARROWSTONE

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HOLE No. 89-5 Page No. 2 of 5.

Footage	DESCRIP TION	MIN ERALIZATION	Sample	From	To _	Length	Copper %	Mo %	Gold Oz.	Silver Oz.	
25.6 <u>-33.</u>	5 AUGITE PORPHYRY. STRONGLY ALT. AND FRACTURED.		79516	25.6	26.2	.6	<.01		< .001	<.01	
<u> </u>	MYRIAD OF FINE QTZ. FILLED FRACTS. SOME		79517	26.2	29.2	3.05	<.01		< .001	<.01	
	SILICIFICATION. ANHEDRAL AUGITE PHENOS ALT. TO		79518	29.2	32.3	3.05	<.01		< .001	<.01	
	A SOFT GREEN COLOR - PROB. SERPENTINE. NARROW		79519	32.3	35.3	3.05	<.01		<.001	< .01	
·	BLACK RIMS AROUND PHENOS. MATRIX IS SIMILARLY										
<u> </u>	ALTERED WITH SECTIONS CONTAINING PATCHES BRIGHT										
	GREEN MARIPOSITE. ARE A FEW LATER CROSS CUTTING										
<u></u>	QTZ. VEINS TO 2 CMS.										
<u> </u>	FAIRLY NUMEROUS FRACTS. FILLED WITH DK. REDDISH	· · ·									
	BROWN LIMONITE (HEMATITIC), OCCAS. V. FINE										
	GRAINS SULPHIDE - PYRITE?										
33. <u>5 - 34.</u>	5 DK. REDDISH BROWN LIMONITE GOUGE ZONE. STRONG										
	LINEATION// TO CORE.										
34. <u>6 - 36.</u>	4 STRONGLY ALT. SHEAR ZONE. RUNS// TO CORE. MANY										
	QTZ. VEINS AND FRACTS WITH HEMATITE MATRIX ALT.										
	TO SOFT GREEN COLOR - IN PART SERPENTINE. FEW										
	PATCHES BRIGHT GREEN MARIPOSITE.										
E-701											

DIAMOND DRILL CORE LOG -- SAMPLE RECORD

ARROWSTONE

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HOLE No. 89-5 Page No. 3. Of. 5.

_	PROPERT			1	Г. <u> </u>	<u> </u>					Silver		
-	Footage	DESCRIP TION	MINERALIZATION	Sample	From	To .	Length	Copper %	мо *%	Oz.	Oz.		
=		NOTED ONE 2000 MIDE EDACTIDE FILLED WITH											
-		NOTED ONE SHM WIDE FRACTORE FILLED WITH											
-		SERPENTINE.			·			1					
36.4	- 41.4	AUGITE PORPHYRY. INTENSE ALT. PALE GREEN		79520	35.3	38.4	3.05	<.01		<.001	<.01		
		COLOR - SERPENTINE? FEW PATCHES BRIGHT GREEN		79521	38.4	41.4	3.05	<.01		<.001	<.01		
		MARIPOSITE. SOME OTZ. VEINING AND SILICIFICATION.											
-		SECTION OF CORE LIGHT BUFF COLOR - LIMONITE.											
-	<u></u>	OCCAS. MANGANESE ON FRACTS.							· ·				
-		NOTE: PETROGRAPHIC STUDY OF A SPECIMEN AT 36.8M											
-		DESCRIBES THE ROCK AS A FINE GRAINED LATITE						<u></u>					
-		FLOW WITH ABUNDANT ANKERITE AND SERICITE											
-		ALTERATION.											
_													
-	41.4	FAULT. SOME LOST CORE.											
41.	4 -41.9	BLACK, MUDDY FINE GRAINED SANDSTONE. DIP ON		79522	41.4	42.4	1.0	<.01		<.001	<.01		
		BEDDING IS 70° TO CA.		79523	42.4	44.8	2.4	<.01		<.001	<.01		
-													
- 41.	9 -44.8	FINE TO MED. GRD. ARKOSE. FEW SCATTERED GRAINS										+	·
-		PYRITE. CN. WITH SANDSTONE BROKEN AND IRREGULAR.					ļ						
-	E-701									1	1	-	

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DIAMOND DRILL CORE LOG - SAMPLE RECORD

PROPERTY ARROWSTONE

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HOLE No. 89-5 Page No. 4 of 5.

Footage	DESCRIPTION	MINERALIZATION	Sample	From	To .	Length	Copper %	Mo %	Gold Oz.	Silver Oz.	
	44.5 - 10CMS CONGLOMERATE.										
•	VARIETY OF CLASTS TO 2CMS.	-					·				 · · · · · · · · · · · · · · · · · · ·
<u> </u>					<u> </u>	÷.					
• <u></u>	44.8M E.O.H.										 · ·
-	· · · · ·										
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					· · · · · · · · · · · · · · · · · · ·						
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E-701											

DIAMOND DRILL CORE LOG -- SAMPLE RECORD

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Footage	DESCRIP TION	MINERALIZATION	Sample	From	To	Length	Copper %	Mo %	Gold Oz	Silver	<u> </u>	1
	CORE RECOVERY:											
	3.7 - 4.8M = .25M											
<u> </u>	7.4 = 1.80											
	10.9 = 3.10											
<u> </u>	14.0 = 2.70											
<u> </u>	17.0 = 3.00											
	20.1 = 2.90											
	23.1 = 2.80											
	26.2 = 1.50				·					· · · · · · · · · · · · · · · · · · ·		
	29.2 = 1.60											
	32.3 = 3.00											
	35.3 = 2.00											
	38.4 = 3.10											
	41.4 = 2.50											
	44.5 = 2.50											
											†	
E-701												





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