from 172 to 218

Underground

VANGORDA GRUM

DIAMOND DRILL RECORDS

UNDERGROUND

018547

76-~~U26 to U55~~ U34 -

Typed

76-U172
to U218

76 - U26 to U55 U.G. 172-218 (Typed) Hand written Copied.

Calcs. checked Jan. 19/77 JL calculations ✓

DIAMOND DRILL RECORD

LOGGED BY J. PAXTON

PROPERTY GRUM JOINT VENTURE

D.D.H. No. U-172 PAGE 1 of 6

	CO-ORDS	GRID
LATITUDE	11,017.447"N	7N
DEPARTURE	7494.882	82W
ELEVATION	1105.822	

BEARING OF HOLE * Layout 224°

DIP OF HOLE * Layout -24°

DIP TESTS 45.7m 509°W -28°
91.4m 507°W -40°
* Layout

STARTED Sept 12/76

COMPLETED Sept 14/76

DEPTH Proposed: Ultimate: 121.9

N

CLAIM No.

DIRECTION AND DISTANCE FROM NE. CLAIM POST

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Py	Pb-Zn
0.0	1.6	Ground Core		
1.6	7.2	Mixed Massive Sulphide & Graphitic Phyllite (MI+G)		
		Massive sphalerite - pyrite with round	Py	Pb-Zn
		1-3 cm inclusions of siliceous material.	60	20
		Streaky flow banding ? at 20°	70	20
		Contacts sharp at 0° & 20°	30	8
			50	11.6
7.2	14.0	Quartz Graphite Phyllite (G)		
		Dark grey color.		
		Drag folded F_1 cut by F_2 at 30°		
		Local small bands of sulphides		
		9.4 - 10.5 Fault gouge		

Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
1.4/1.5	B344	1.8	3.3	1.5	6.87	15.93	146.06			10.31	23.90	219.09
0.9/1.3	B345	3.3	4.6	1.3	9.43	20.32	175.54			12.26	26.42	228.20
1.4/1.5	B346	4.6	6.1	1.5	4.05	6.90	85.72			6.08	10.35	128.58
1.0/1.1	B347	6.1	7.2	1.1	3.80	13.66	67.54			4.18	15.03	74.29
6.5/6.6												
	WT. Av.	1.8	7.2	5.4	6.08	14.02	120.4	-		32.83	75.70	650.16

LOGGED. BY _____ D.D.H. No U-172 PAGE 2 of 6

Interval From	Interval To	DESCRIPTION	Py	Pb-Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
14.0	40.6	Quartz Sulphide (P)					14.0										
		Grey phyllite interbanded	10	10	1.2/1.2	B348	14.0	15.2	1.2	6.89	12.60	122.06			8.27	15.12	146.47
		with quartz-sulphide in ragged	10	10	1.6/1.6	B349	15.2	16.8	1.6	7.47	13.10	146.06			11.95	20.96	233.70
		bands 0°-30°. No well defined	10	10	1.5/1.5	B350	16.8	18.3	1.5	5.49	9.90	93.94			8.24	14.85	140.91
		Fz visible. Sulphide mineralization	10	10	1.5/1.5	B351	18.3	19.8	1.5	4.35	6.70	67.54			6.53	10.05	101.31
		is remarkably high in sphal. and low	10	10	1.5/1.5	B352	19.8	21.3	1.5	2.80	3.85	45.26			4.20	5.78	67.89
		in pyrite.	10	10	1.5/1.6	B353	21.3	22.9	1.6	3.55	7.43	65.49			5.68	11.89	104.78
		18.1 - 18.4 Bleached Sericite at 60°	10	10	1.5/1.5	B354	22.9	24.4	1.5	3.18	6.38	54.52			4.77	9.57	81.78
		18.7 - 18.9 " " "	10	10	1.5/1.5	B355	24.4	25.9	1.5	1.30	3.10	22.29			1.95	4.65	33.44
		33.3 - 35.3 " " 30°	10	10	1.5/1.5	B356	25.9	27.4	1.5	3.78	8.27	60.34			5.67	12.41	90.51
		36.0 - 40.6 Fz at 30°	10	10	1.5/1.6	B366	27.4	29.0	1.6	3.60	8.09	54.51			5.76	12.94	87.22
			8	5	1.5/1.5	B367	29.0	30.5	1.5	1.28	2.70	19.20	✓		1.92	4.05	28.80
			10	8	1.5/1.5	B368	30.5	32.0	1.5	4.50	8.25	63.43			6.75	12.38	95.15
40.6	~~40.9~~	Quartz Sericite Phyllite	10	12	1.5/1.5	B369	32.0	33.5	1.5	5.21	9.00	82.63			7.82	13.5	123.95
			5	2	1.6/1.6	B370	33.5	35.1	1.6	0.53	0.15	8.23	✓		0.85	0.24	13.17
			10	8	1.5/1.5	B371	35.1	36.6	1.5	2.80	5.35	43.54			4.20	8.03	65.31
			10	8	1.5/1.5	B372	36.6	38.1	1.5	3.30	8.05	60.34			4.95	12.08	90.51
			12	15	1.5/1.5	B373	38.1	39.6	1.5	3.75	7.85	64.46			5.63	11.78	96.69
			15	12	1.0/1.0	B374	39.6	40.6	1.0	2.30	4.25	46.29	✓		2.30	4.25	46.29
40.9	41.3	Massive Sulphide M	60	10	0.4/0.4	B375	40.9	41.3	0.4	1.50	2.03	30.17	✓				
		Contacts at 30°															

LOGGED. BY _____ D.D.H. No U-172 PAGE 3 of 6

Interval From	Interval To	DESCRIPTION	Py	Pb-Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
41.3	49.2	Quartz Chlorite Phyllite (C)			7.9/7.9	WT.Av.	14.0	18.3	4.3	6.62	11.84	121.18	✓		28.46	50.93	521.08
		Coarse foliation (F_2) at 30°				Wt. Av	14.0	19.8	5.8	6.03	10.51	107.3	-		34.99	60.98	622.39
		with 1-2 cm augen of quartz				" "	21.3	24.4	3.1	3.37	6.92	60.2	-		10.45	21.46	186.56
		Grey-green color				"	25.9	29.0	3.1	3.69	8.18	57.3	-		11.43	25.35	177.73
						"	19.8	33.5	13.7	3.25	6.36	52.1			44.52	87.17	713.52
						"	30.5	33.5	3.0	4.86	8.63	73.03	-		14.57	25.88	219.10
						"	14.0	33.5	19.5	4.08	7.6	68.5			79.51	148.15	1335.91
						"	33.5	39.6	6.1	2.56	5.27	43.4			16.63	32.43	265.68
							35.1	39.6	4.5	3.28	7.09	56.17	-		14.78	31.89	252.51
							36.6	39.6	3.0	3.53	7.95	62.4	-		10.58	23.86	187.20
49.2	65.0	Quartz Sulphide				"	14.0	39.6	25.6	3.72	7.04	62.56	-		95.14	180.28	1601.59
		Similar to previous				"	14.0	40.6	26.6	3.66	6.94	62.	-		97.44	184.53	1647.88
		Section 14.0-40.6. High in	15	10	1.1/1.1	B357	49.2	50.3	1.1	4.23	6.40	62.06			4.65	7.04	68.27
		sphalerite, low in quartz.	15	15	1.5/1.5	B358	50.3	51.8	1.5	6.23	8.84	85.72			9.35	13.26	128.58
		Near contact F_2 = 30° grades	20	10	1.5/1.5	B359	51.8	53.3	1.5	6.28	9.24	89.83			9.42	13.86	134.75
		into breccia past 52.0	25	8	1.5/1.5	B360	53.3	54.9	1.6	4.00	8.76	61.37		✓	6.4	14.02	98.19
			15	6	1.5/1.5	B361	54.9	56.4	1.5	3.28	7.50	55.54			4.92	11.25	83.31
			20	8	1.5/1.5	B362	56.4	57.9	1.5	2.40	5.83	41.49			3.60	8.75	62.24
			25	12	1.5/1.5	B363	57.9	59.4	1.5	5.56	8.50	82.63			8.34	12.75	123.95
			20	8	1.6/1.6	B364	59.4	61.0	1.6	1.38	2.55	23.31			2.21	4.08	37.30
			20	6	1.5/1.5	B365	61.0	62.5	1.5	0.50	1.08	9.94			0.75	1.62	14.91
			15	6	1.5/1.5	B376	62.5	64.0	1.5	0.68	1.88	12.00			1.02	2.82	18.00
			5	3	1.0/1.0	B377	64.0	65.0	1.0	0.50	1.00	8.23	✓				
65.0	69.5	Quartz Sericite Phyllite (S)			4.5/4.5	WT. Av.	49.2	59.4	10.2	4.58	7.93	68.56	-		46.68	80.93	699.29
		Soft and friable				"	50.3	54.9	4.6	5.47	8.94	78.6	-		25.17	41.14	361.52
		F_2 at 50°				"	59.4	64.0	4.6	0.87	1.85	15.26			3.98	8.52	70.21
		68.7-69.1 White quartz															

LOGGED. BY _____ D.D.H. Nº V-172 PAGE 4 of 6

Interval From	Interval To	DESCRIPTION	Py	Pb-Zn	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
69.5	73.6	Quartz Sulphide (P)	10	5	1.5/1.5	B378	70.1	71.6	1.5	1.55	2.43	20.23			3.98	pt zn	
		Similar to section 49.2-65.0	10	5	1.6/1.6	B379	71.6	73.2	1.6	1.10	2.10	17.14			3.20	"	
		except less sulphide.															
		F_2 = 60°				WT. AV.	70.1	73.2	3.1	3.58	Pb zn.						
73.6	75.0	Chlorite Phyllite (C) Coarse, flakey dark green chlorite. Contorted and sheared. Scattered blebs of pyrite			1.4/1.4												
75.0	79.3	Quartz Chlorite Phyllite (Sc) F_2 at 76.0 = 25° " " 78.0 = 10° " " 80 = 60°			4.3/4.3												
79.3	80.7	Quartz chlorite calcite Phyllite (Sk) Similar to previous, but with 2mm laminae of calcitic material at 60°			1.4/1.4												

LOGGED BY _____ D.D.H. No V-172 PAGE 5 of 6

Interval From	Interval To	DESCRIPTION	Py	Pb-Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
80.7	90.0	Quartz Chlorite Phyllite (C) Streaks and wisps of dark green flakey chlorite. Foliation (F_2?) at ~~45~~ ° Numerous irregular veinlets of pyrrhotite. Traces of sphalerite			9.3/9.3		80.7	90.0		Trace Pb, Zn est.							
90.0	94.5	Bleached siliceous phyllite (S_s) Pale grey charty phyllite with 1-3 mm bands of sulphides at 45° Py 5-10% Pb-Zn 1% Traces of chalcopyrite			4.5/4.5		90.0	94.5		1 Pb, Zn, est.							
94.5	115.8	Quartz Sulphide P Interbanded grey sericite phyllite and granular quartz-pyrite.	30	5	1.5/1.5	B380	94.5	96.0	1.5	3.43	3.90	49.37			5.15	5.85	74.06
			15	3	1.5/1.5	B381	96.0	97.5	1.5	3.08	4.00	35.31			4.62	6.00	52.97
			25	5	1.5/1.6	B382	97.5	99.1	1.6	1.13	1.20	21.26	✓				
			50	8	1.5/1.5	B383	99.1	100.6	1.5	0.50	0.65	17.14	✓				
		96.0 - F_1 = 45 F_2 = 45	20	6	1.5/1.5	B384	100.6	102.1	1.5	1.20	1.15	28.11	✓				
		99.0 - F_1 = 0 F_2 = 80 Nose area	20	6	1.5/1.5	B385	102.1	103.6	1.5	4.05	4.30	44.23	✓	-	6.08	6.45	66.35
		100.5 = F_1 = 30 F_2 = 30	20	6	1.6/1.6	B386	103.6	105.2	1.6	2.18	2.05	25.37		-	3.49	3.28	40.59
		103.5 = F_1 = 0 F_2 = 60	20	6	1.5/1.5	B387	105.2	106.7	1.5	1.83	3.03	27.43			2.75	4.55	41.15
		105 - 108 Nose area F_2 = 45	20	6	1.5/1.5	B388	106.7	108.2	1.5	2.30	2.15	40.46			3.45	3.23	60.69

LOGGED BY _____ D.D.H. No U-172 PAGE 6 of 6

Interval From	Interval To	DESCRIPTION	Py	Pb-Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
			20	6	1.5/1.5	B389	108.2	109.7	1.5	0.50	1.00	10.97			1.50	Pb-Zn	
			15	3	1.6/1.6	B390	109.7	111.3	1.6	0.55	0.85	13.03			1.40	"	
			15	3	1.5/1.5	B391	111.3	112.8	1.5	1.78	0.93	24.34			2.67	1.40	36.51
			15	3	1.5/1.5	B392	112.8	114.3	1.5	1.68	0.65	23.31			2.52	0.98	34.97
			15	3	1.5/1.5	B393	114.3	115.8	1.5	0.98	1.53	25.37			1.47	2.30	38.06
			70	20	1.5/1.5	B394	115.8	117.3	1.5	6.73	11.29	120.00			10.10	16.94	180.00
			80	15	1.6/1.6	B395	117.3	118.9	1.6	2.65	2.85	46.29			4.24	4.56	74.06
			80	15	1.5/1.5	B396	118.9	120.4	1.5	2.48	2.65	40.46			3.72	3.98	60.69
			70	20	1.5/1.5	B397	120.4	121.9	1.5	4.65	9.13	66.51			6.98	13.70	99.77
115.8	121.9	Massive Sulphide (Mb)			6.1/6.1												
		115.8 – 116.2 Fine grained Py with much interstitial sphalerite. Red-brown color.				Wt. Av.	94.5	97.5	3.0	3.26	3.95	42.34	–		9.77	11.85	127.03
						"	103.6	108.2	4.6	2.11	2.40	30.96	–		9.69	11.06	142.43
						"	102.1	105.2	3.1	3.09	3.14	34.5	–		9.57	9.73	106.94
						"	108.2	111.3	3.1	1.45	Pb-Zn	"					
		116.2 – 117.2 Fine grained Py with 10% interstitial barite. Brass color				"	111.3	115.8	4.5	1.48	1.04	24.34	–		6.66	4.68	109.54
						"	115.8	121.9	6.1	4.10	6.42	67.95	–		25.04	39.18	414.52
		117.2 – 120.2 Fine grained Py				"	117.3	120.4	3.1	2.57	2.75	43.47	–		7.96	8.54	134.75
		120.2 – 121.0 Fine grained Py with 15% interstitial barite				"	115.8	118.9	3.1	4.63	6.94	82.	–		14.34	21.50	254.06
						"	118.9	121.9	3.0	3.57	5.89	53.5	–		10.70	17.68	160.46
		121.0 – 121.9 Fine Py with interstitial sphalerite. Red-brown color															
	121.9	End of hole. Hole stopped in ore.															

DIAMOND DRILL RECORD

LOGGED BY JIM PAXTON D.D.H. Nº 76-U-173 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE 62W STARTED SEPTEMBER 3, 1976

DEPARTURE 2N COMPLETED SEPTEMBER 4, 1976

ELEVATION PROPOSED DEPTH

ULTIMATE DEPTH 57.9

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR		-53°

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

Interval From	Interval To	DESCRIPTION	Py PbZn	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	3.0	MASSIVE SULPHIDE (M).														
		Locally brecciated MXm.	65 10	0.6/3.0	091B	0	3.0	3.0	3.10	7.48	55.54					
3.0	4.6	FAULT GOUGE.														
		Dark gray and graphitic														
4.6	14.3	QUARTZ SERICITE GRAPHITE PHYLLITE (Sg).														
		Dark gray colour. Strong F = 45°.														
		2														
14.3	15.3	MASSIVE BANDED SULPHIDE (MB).														
		Strongly laminated pyritic and sphaleritic bands	50 6	1.0/1.0	092B	14.3	15.3	1.0	0.35	0.80	8.91					
		plus 1mm. laminae of white chert. Banding @ 40°.	20 3	1.4/3.0	093B	15.3	18.3	3.0	0.45	0.70	7.89					
15.3	16.8	GRAPHITIC QUARTZ SULPHIDE (Pg).														
		Strongly laminated (1-3mm.) @ 45°.														

LOGGED BY _____ D.D.H. No 76-U-173 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
16.8	21.5	FAULT GOUGE.													
		Fragments of graphitic quartz sulphide in black mud.													
21.5	34.5	GRAPHITIC QUARTZ SULPHIDE (Pg).													
		Dark gray colour. Beaded granular texture with strong F													
		foliation @ 45°. 20 2/2	1.6/1.6	094B	21.3	22.9	1.6	0.23	0.65	5.14					
		20 3	1.4/1.5	095B	22.9	24.4	1.5	0.05	0.38	2.06					
34.5	37.5	MASSIVE SULPHIDES (MI). 20 3	1.4/1.5		24.4	25.9									
		Fine grained pyritic sulphide with sounded 2-5cm. 20 5	1.0/1.0	096B	33.5	34.5	1.0	0.10	0.08	4.11					
		inclusions of wall rock. Contacts sharp @ 45°.			34.5										
		80 6	1.9/2.1	097B		36.6	2.1	1.25	0.25	21.26					
		60 10	1.5/1.5	098B	36.6	38.1	1.5	1.70	1.40	22.29					
37.5	38.5	BLEACHED SERICITE (Sb). 20 5	1.5/1.5	099B	38.1	39.6	1.5	1.63	1.25	17.14					
		15 3	1.5/1.5	100B	39.6	41.1	1.5	0.05	0.13	4.11					
38.5	39.2	BRECCIA OF PYRITE IN A QUARTZ (MXp) PYRITE GROUNDMASS. 75 5	1.6/1.6	101B	41.1	42.7	1.6	0.55	0.33	15.09					
		75 8	1.5/1.5	102B	42.7	44.2	1.5	1.60	1.33	28.46					
		30 5	1.5/1.5	103B	44.2	45.7	1.5	2.40	2.00	47.31					
39.2	41.1	QUARTZ GRAPHITE PYRITE PHYLLITE (G-P). 75 10	1.5/1.5	104B	45.7	47.2	1.5	0.50	0.28	14.06					
41.1	48.8	MASSIVE SULPHIDE (MI).													
		Fine grained pyritic sulphides with rounded 20 5	1.6/1.6	105B	47.2	48.8	1.6	1.03	0.75	21.26					
		inclusions of sericite, quartz, and bleached sericite. 30 5	1.5/1.5	106B	48.8	50.3	1.5	1.35	1.55	19.20					

LOGGED BY _____ D.D.H. Nº 76-U-173 PAGE 3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
			0.0/1.5		50.3	51.8		GROUND CORE							
		20 8	1.5/2.2	107B	51.8	54.0	0.28	0.38	8.23						
48.8	53.5	GRAPHITIC PHYLLITE (G).													
		F = 10°.													
		2													
53.5	54.0	MASSIVE SULPHIDE (MI).													
		Similar to previous section. Could perhaps be (S-GXm).													
54.0	56.4	GRAPHITIC PHYLLITE (G).													
		Dark gray colour. Quartz and graphite with scattered streaks													
		of pyrite. F = 45°.													
		2													
		8.0cm. of very fine grained Massive Pyrite at 56.0-56.1.													
56,4	57.9	BLEACHED SERICITE (Sb).													
		Sheared and crumbly. F = 60°.													
		2													
	57.9	END OF HOLE.													

DIAMOND DRILL RECORD

LOGGED BY JIM PAXTON D.D.H. Nº 76-U-174 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE 11,020.25 82W STARTED SEPTEMBER 14, 1976

DEPARTURE 7,495.5 7N COMPLETED SEPTEMBER 15, 1976

ELEVATION 1.109.3 PROPOSED DEPTH 100.0

ULTIMATE DEPTH 28.0

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR		+90°

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	2.9	QUARTZ SERICITE CHLORITE PHYLLITE (Sc).	1.3/2.9												
		Dark gray colour. F = 90°.													
		2													
2.9	4.7	BLEACHED SERICITE PHYLLITE (Sb).	1.2/1.8												
		Pale tan colour. Streaks and blebs of pyrite.													
4.7	12.2	FAULT GOUGE.	1.6/7.5												
		Gray colour. Core washed out. Pebbles.													
12.2	16.4	SERICITE GRAPHITE PHYLLITE (Sg).	3.0/4.2												
		Dark gray. Strong F foliation @ 60°. Soft and friable.													
		2													
16.4	18.4	BLEACHED SERICITE PHYLLITE (Sb).	2.1/4.0												
		Pale tan colour. Streaks of sulphides. Earthy & kaolinized.													
18.4	20.3	INTERBANDED MASSIVE SULPHIDE (MI) AND BLEACHED SERICITE (Sb).													
		Brown, fine grained sulphide bands up to 15cm with 20 8	1.5/2.0	B437	18.3	20.3	2.0	2.98	4.85	40.46			5.96	9.7	80.92

LOGGED BY _____ D.D.H. Nº 76-U-174 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		inclusions of white siliceous material at 75°.													
20.3	27.0	QUARTZ SERICITE PHYLLITE (S).													
		Folded F at 30° to C.A. Strong F at 80°. Local small													
		1 2 bands of Quartz Sulphide (P).													
		24.4-24.6: Fault gouge at 35°.													
27.0	28.0	MASSIVE SULPHIDE.													
		Streaks of quartz. 60 12	1.5/1.5	438B	26.5	28.0	1.5	2.28	4.90	39.43			3.42	7.35	6.0
		Sulphide at 70°. .			24.5	28.0	3.5	0.97	2.1						
	28.0	END OF HOLE.													
		Hole abandoned after intersecting fault gouge under pressure.													

DIAMOND DRILL RECORD

LOGGED BY JIM PAXTON D.D.H. Nº 76-U-175 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE 62W STARTED SEPTEMBER 4, 1976

DEPARTURE 2N COMPLETED SEPTEMBER 4, 1976

ELEVATION PROPOSED DEPTH

ULTIMATE DEPTH 53.3

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR		-39°

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

Interval From	Interval To	DESCRIPTION	Py PZ	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	43.8	QUARTZ SULPHIDE WITH GRAPHITE (PG).														
		Interbanded coarse granular pyrite, white quartz	25 2	1.0/1.2	128B	0	1.2	1.2	0.13	0.73	12.00			0.86	PbZn	
		bands and black graphitic phyllite. Rock has a	25 2	1.1/1.5	129B	1.2	2.7	1.5	0.25	1.50	10.97			1.75	PbZn	
		stripped appearance.	25 2	1.0/1.9	130B	2.7	4.6	1.9	0.10	0.38	8.23			0.48	PbZn	
		0-9.0: F destroyed; F = 80°.	20 Tr.	1.1/1.5	131B	4.6	6.1	1.5	0.08	0.68	9.94			0.76	PbZn	
		^{1} ^{2} 9.0-15.0: F = 30°; F = 60°. F -F angle = 30°.	20 Tr.	1.5/1.5		6.1	7.6	1.5								
		^{1} ^{2} ^{1} ^{2} 15.0-16.0: F destroyed; F = 90°.	20 Tr.	0.9/0.9		7.6	8.5	0.9								
		^{1} ^{1} 16.0-17.0: F = 0°; F = 80°.	20 Tr.	1.5/1.5		8.5	10.0	1.5								
		^{1} ^{2} 17.0-22.0: F destroyed; F = 90°.	20 Tr.	2.0/2.2		10.0	12.2	2.2								
		^{1} ^{2} 22.0-26.0: F = 0-30°; F = 90°.	20 Tr.	1.5/1.5		12.2	13.7	1.5								
		^{1} ^{2} 26.0-32.0: F = 30°; F = 70°.	20 Tr.	1.5/1.5		13.7	15.2	1.5								
		^{1} ^{2} 32.0-36.5: F destroyed; F = 80°.	20 Tr.	1.3/1.3		15.2	16.5	1.3								
		^{1} ^{2} 36.5-38.0: F = 0°; F = 80°.	15 Tr.	1.2/1.5		16.5	18.0	1.5								
		^{1} ^{2} 38.0-40.0: F = 70°; F = 90°.	15 Tr.	1.0/1.5		18.0	19.5	1.5								
		^{1} ^{2} 40.0-41.0: F = 0°; F = 70°.	15 Tr.	1.5/2.4		19.5	21.9	2.4								
		^{1} ^{2} 41.0-43.8: F destroyed; F = 50°.	15 Tr.	1.5/1.6		21.9	23.5	1.6								
		^{1} ^{2} Scattered blebs of Cpy throughout section.	15 Tr.	0.9/0.9		23.5	24.4	0.9								
					W.Av.	0	6.1	6.1	0.94	PbZn						

LOGGED BY _____ D.D.H. Nº 76-U-175 PAGE 2

Interval From	Interval To	DESCRIPTION	Py PZ	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
43.8	44.6	MASSIVE SULPHIDE (MB).														
		Numerous 1-3mm. quartz grains.	15 Tr.	1.2/1.5		24.4	25.9	1.5								
		Faint compositional banding at 50° parallel to	15 Tr.	1.5/1.5		25.9	27.4	1.5								
		shapr contacts.	15 Tr.	1.0/1.2		27.4	28.6	1.2								
			15 Tr.	1.0/1.0		28.6	29.6	1.0								
			15 Tr.	0.8/0.9		29.6	30.5	0.9								
44.6	45.0	QUARTZ SULPHIDE (P).	15 Tr.	1.4/2.1		30.5	32.6	2.1								
			15 Tr.	2.0/2.8		32.6	35.4	2.8								
45.0	45.6	MASSIVE SULPHIDE (MB).	15 Tr.	1.5/1.5		35.4	36.9	1.5								
		Similar to previous.	15 Tr.	1.5/1.5		36.9	38.4	1.5								
			15 Tr.	1.5/1.8		38.4	40.2	1.8								
45.6	49.2	QUARTZ SULPHIDE (PG).	15 Tr.	2.3/2.5		40.2	42.7	2.5								
		F destroyed; F - 60°.	15 Tr.	1.0/1.0	132B	42.7	43.7	1.0	0.58	0.30	10.97			0.88	PbZn	
		F_1 F_2	70 10	0.9/0.9	133B	43.7	44.6	0.9	3.43	4.40	53.49			7.83	PbZn	
49.2	50.3	FAULT GOUGE.	50 8	1.0/1.0	134B	44.6	45.6	1.0	1.08	0.90	20.23			1.98	PbZn	
50.3	53.3	QUARTZ SULPHIDE (PG).														
		F_2 = 70°; F_1 (?) = 90°.														
	53.3	END OF HOLE.														
		Further sampling depending on results of above.														

DIAMOND DRILL RECORD

LOGGED BY ALEXANDER YOUNG-PO D.D.H. Nº 76-U-176 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE *11,052.879m N 84W STARTED SEPTEMBER 16, 1976

DEPARTURE *7,445.669m 7N COMPLETED SEPTEMBER 21, 1976

ELEVATION *1.100.718 PROPOSED DEPTH 575' - 175.2m

* - approximated ULTIMATE DEPTH 560' - 170.7m

HOLE SURVEY:		
DEPTH	BEARING	DIP

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	25.3	GRAPHITIC PHYLLITE (G). Very fissile, easily breaking into poker chips. Foliation F_2 = 75-85°; F_1 = 0-10°. Series of small F_1 fold nose closures on both opposite sides of core. 21.3-23.0: Interval with short Calcitic-chloritic run (=7cm) Contacts sharp and clean = 75°. 25.3: Sharp contact with Calcitic chloritic phyllite (CK) = 80°.	23.1		0	25.3	25.3									
25.3	28.0	CALCITIC-CHLORITIC PHYLLITE (CK). Competent. Greenish groundmass with white stripes. Medium grain. Foliation F_2 = 85-90°; F_1 = 0-10°. 28.0: Abrupt change to Mineralized Graphitic Phyllite (PG). Contact broken ground.	2.5		25.3	28.0	2.7									
28.0	30.8	MINERALIZED GRAPHITIC PHYLLITE (PG). Competent. 30 18 F_2 = 70-75°; F_1 = 0-10°. Sulfides in both foliation. 30.8: Abrupt change to Bleached Sericite Phyllite. Contact	2.1	B455	28.0	30.8	2.8	4.00	8.64	80.57					

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		broken ground.													
30.8	31.8	BLEACHED SERICITE PHYLLITE (Sb). Broken, fragmented core.	0.7		30.8	31.8	1.0								
		Buff to light gray colour. F_2 = 80°; F_1 = 5°.													
		31.8: Sharp contact with Sericite Phyllite (S) = 35°.													
31.8	58.5	SERICITE PHYLLITE (S). Blocky core ranging from flakes to	25.3		31.8	58.5	26.7								
		4cm. long. F_2 = 80-90°; F_1 = 0-5°.													
		54.1-56.3: Bleached Sericite Phyllite interval (Sb).													
		Foliation F_2 = 90°; F_1 = 0-5°. Light gray to													
		buff. Contacts gradual.													
		58.5: Sharp clean contact with Quartz-Sulphide (P) = 40°.													
58.5	62.8	QUARTZ-SULPHIDE (P). Competent. Has wide sulphide 30 10	1.9	B456	58.5	60.6	2.1	4.88	8.33	67.54			10.25	17.49	141.83
		bands. Foliation F_2 = 75-80°; F_1 = 35-40°. Sulfides 35 12	1.7	B457	60.6	62.8	2.2	2.55	3.80	44.23			5.61	8.36	97.31
		in both foliation. Compositional banding in wider bands													
		(Ph/Sph) = 60-70°.		W.AV.	58.5	61.5	3.0	4.18	6.97	60.55			12.55	20.91	181.62
		62.8: Abrupt change to Sericite Phyllite (S). Contact		W.AV.	58.5	62.8	4.3	3.69	6.01	55.6			15.86	25.85	239.14
		broken ground. Has 3cm. long Graphitic interval.													
62.8	101.0	SERICITE PHYLLITE (S). Broken blocky core from flakes to 4cm													
		long. F_2 = 75-80°; F_1 = 0° (?) not well developed. Only in	36.3		62.8	101.0	38.2								
		71.9 was good observation or showing noted.													

LOGGED BY _____ D.D.H. No 76-U-176 PAGE 3

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		65.5-66: Bleached Phyllite interval. Buff to silvery white.													
		Foliation = 85°. Contacts gradual.													
		66-66.9: Sulfide showing as thin laminae following foliation													
		PY: 2%, PbZn: 1%.													
		74.9-75.0: Small fault. Gray sticky gouge.													
		83.9-85.4: Bleached Phyllite (Sb). Tuffaceous looking													
		contacts sharp : first contact = 50°, second													
		contact = abrupt broken ground; trace of biotite.													
		89.0: Shear.													
		91.7-92.0: FAULT. Dark gray gouge with sericite flakes.													
		93.3-94: Bleached Sericite Phyllite (Sb). Competent. Buff													
		groundmass with fuchsite laminae. Contacts sharp													
		= 70°.													
		98-99.5: Bleached Sericite Phyllite (Sb). With trace of													
		Calcite, biotiteand chlorite (Sbc + K + Bio).													
		Contacts gradual. Foliation = 85-90°.													
		101: Gradual change to Graphitic Sericite Phyllite (SG).													
101.0	104.2	GRAPHITIC SERICITE PHYLLITE (SG). Fissile, blocky.	3.1		101.0	104.2	3.2								
		F = 85-90°; F = 0-5°. Isolated clots of Po.													
		2 1													
		103.6-104.1: Short alternating intervals of Bleached Sericite													
		Phyllite and Graphitic Sericite units. Contacts													

LOGGED BY _____ D.D.H. No 76-U-176 PAGE 4

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		sharp and clean = 85-90°. Intervals = 10cm long.													
		104.2: Abrupt change to Bleached Sericite Phyllite (Sb).													
		Contact = 85°.													
104.2	110.0	BLEACHED SERICITE PHYLLITE WITH CHLORITIC INTERVAL (Sb+Sbc).	5.3		104.2	109.7	5.5								
		Competent. Buff to silvery white. Chloritic interval has													
		green stripes. Foliation F_2 = 75-85°; F_1 = 0-5°.													
		108.2-108.6: Chloritic interval. Contacts sharp and clean													
		= 75°.													
		109.5-110: Sulfide showing. Py: 4% PbZn: 1%													
		110.0: Sharp contact with mineralized Graphitic Phyllite (PG)													
		= 80°.													
110.0	117.3	MINERALIZED GRAPHITIC PHYLLITE (PG) WITH MASSIVE 10 3	1.4	B494	109.7	111.3	1.6	0.55	1.08	12.00			1.63	PbZn	
		SULFIDE INTERVAL HAVING BARITE IN GROUNDMASS (Mb). 15 4	1.3	B495	111.3	112.8	1.5	0.70	0.95	14.06			1.65	PbZn	
		Competent. Foliation = 75-85°; F_1 = 15-20°. 25 4	1.5	B496	112.8	114.3	1.5	1.00	0.83	20.23			1.83	PbZn	
		115.7-117.3: Massive Sulfide (M) and Barite-in-ground 30 5	1.5	B497	114.3	115.8	1.5	1.80	3.03	34.29			2.70	4.55	51.44
		mass sulfide varieties (Mb). Competent. 70 8	1.5	B498	115.8	117.3	1.5	5.25	7.51	72.69			7.88	11.27	109.04
		Contacts sharp = 80°.													
		117.3: Sharp contact with Chloritic Bleached Sericite		W.Av.	109.7	114.3	4.6	1.70	PbZn						
		Phyllite. Contacts = 75°.		W.Av.	114.3	117.3	3.0	3.53	5.27	53.49			10.58	15.82	160.48

LOGGED BY _____ D.D.H. No 76-U-176 PAGE 5

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
117.3	118.3	CHLORITIC BLEACHED PHYLLITE (Sbc). Competent.	0.9		117.3	118.3	1.0								
		Silvery white with green stripes and spots. Foliation =													
		75-80°.													
		118.3: Abrupt change to Graphitic Phyllite (G). Contact													
		marked by bull quartz - broken ground.													
118.3	150.8	GRAPHITIC SERICITE PHYLLITE (G). Competent.	32.8		118.3	150.8	32.5								
		F_2 = 85-90°; F_1 = 0-5°. Graphite = 20%. Isolated sporadic													
		clots/clusters of sulfides = 1% Py and Po.													
		152.3: Sharp clean contact with Massive Sulfides. Contact													
		plane is wavy with general dip of 85°.													
150.8	159.5	MASSIVE SULFIDE WITH BARITE IN GROUNDMASS. Competent. 65 12	1.6	B499	150.8	152.4	1.6	4.23	6.87	72.69			6.77	10.99	116.30
		Ba = 10% (Mb). Faint compositional banding Sph-py/ba 65 12	1.5	B500	152.4	153.9	1.5	5.49	7.93	102.9			8.24	11.90	154.29
		= 80-85°. 65 10	1.5	601B	143.9	155.4	1.5	5.33	7.04	75.77			8.00	10.56	113.66
		152.6-152.8: Bleached Sericite Phyllite interval. 70 5	1.5	602B	155.4	157.0	1.6	2.95	4.05	48.34			4.72	6.48	77.34
		White with prominent fuchsite spots. 70 5	1.5	603B	157.0	158.5	1.5	1.63	1.78	29.14			2.45	2.67	43.71
		Contacts abrupt, broken ground. 60 6	1.5	604B	158.5	160.0	1.5	2.60	3.80	41.49			3.90	5.70	62.24
		159.5: Gradual change to Mineralized Graphitic 60 10	1.9	605B	160.0	162.0	2.0	4.68	9.37	69.60			9.36	18.74	139.2
		Phyllite (PG).		W.Av.	152.4	155.4	3.0	5.41	7.49	89.3					
				W.Av.	150.8	155.4	4.6	5.00	7.27	83.53			23.01	33.45	384.25
159.5	162.0	MINERALIZED GRAPHITIC PHYLLITE(PG). Competent.		W.Av.	158.5	162.0	3.5	3.79	6.98	57.55			13.26	24.44	201.44

LOGGED BY _____ D.D.H. No 76-U-176 PAGE 6

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		F_2 = 75-80°; F_1 = 0-10°. Sulfides in both foliation.													
		Calcite as short stringers @ 161.7-161.9.		W.Av.	150.8	162.0	11.2	3.88	5.99	63.10			43.44	67.04	706.74
		162.0: Abrupt clean change to Graphitic Sericite Phyllite =		W.Av.	159.0	162.0	3.0	3.99	7.51	60.2			11.96	22.54	180.69
				W.Av.	155.4	159.0	3.6	2.35	3.07	39.4			8.47	11.05	141.20
		70°.													
162.0	170.7	GRAPHITIC SERICITE PHYLLITE (SG). Blocky core from flakes to	8.6		162.0	170.7	8.7								
		4cm. long. Foliation = 75-80°; F_1 = 0-10°.													
		Sulfide showing = 2% mostly Py and Po as clots/blebs.													
		167.0: Shear.													
	170.7	END OF HOLE. Good drilling.													

DIAMOND DRILL RECORD

LOGGED BY STANLEY B. REAMSBOTTOM D.D.H. Nº 76-U-177 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE 10,483.85 62W STARTED SEPTEMBER 5, 1976

DEPARTURE 7,825.00 2N COMPLETED SEPTEMBER 5, 1976

ELEVATION 1,195.11 PROPOSED DEPTH

ULTIMATE DEPTH 65.5

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR	53° 53'	+42° 22'

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

Interval From	Interval To	DESCRIPTION	S% PZ	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	36.1	QUARTZ-SULPHIDE ZONE (PBg) (graphitic).														
		Ribbon banded quartz-graphitic and locally lesser	20 2	3.0	B135	0	3.0	3.0	0.15	0.45	8.91			0.60	PbZn	
		white quartz-sericitic sulphide zone.	20 4-6	1.6	B136	3.0	4.6	1.6	1.21	0.98	20.23			2.19	PbZn	
		Local thin breccia zones in which sulphide recemented	25 6	1.5	B137	4.6	6.1	1.5	0.94	1.43	16.11			2.37	PbZn	
		by quartz and fine grained sulphide at 6-6.3; 10.5-	25 4-6	1.5	B138	6.1	7.6	1.5	0.65	0.60	15.09			1.25	PbZn	
		10.7; 11.4-12.2; 14.3-15.3.	20 2-4	3.1	B139	7.6	10.7	3.1	0.30	0.85	10.97			1.15	PbZn	
		Mineralization: 10 to locally 50% Pyrite ave. 25%, with														
		lesser dark-red sphalerite, minor galena, Cpy. Grade	15 2	3.0	B140	10.7	13.7	3.0	0.14	0.58	8.91			0.72	PbZn	
		varies 2% to locally 6%. Chalcopyrite in tension	15 2	3.0	B141	13.7	16.7	3.0	0.49	0.63	13.03			1.12	PbZn	
		gashes.	15 2	3.0	B142	16.7	19.7	3.0	0.35	0.35	10.91			0.70	PbZn	
		NOTE: Intersected drill hole at 10.8.				19.7	29.0		Quartz-Gr. Sulph. 1-2% PbZn.							
		CA: 1.5 = F 56; 3.0 = 52; 4.5 = 55 F ; 6 = F fold nose;		0.5		26.5	29.0	2.5	Poor recovery.							
		60 F ; 7.5=35; 8 = F = 30; 10.5 = 43 F ; 12 = 40 = F ;														
		14 = BX; 16 = 41 F ; 18 = F 40; 20 = F 50, F = 20 s.														
		dip; 22 = F = 50°; 24 = F 35; 26 = F 65, F = 35°			W.Av.	0	19.7	19.7	1.11	PbZn						
		same dip.			W.Av.	3.0	6.1	3.1	2.28	PbZn						

LOGGED BY _____ D.D.H. Nº 76-U-177 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		NOTE: Unit quite quartzitic less sulphide from 18m onwards;													
		note also how F_2 foliation is locally sub-parallel to													
		foliation from 20m. No assays 19.7 on, as grade falls													
		off. Note representative assay 30.5-33.5.													
		CA: 30° = F_1 = 10; 32 = 9 F_1; 34 = F_1 = 0; F_2 = 5; 36 = F_1													
		5, F_2 = 6 fold nose. 8 1%	3.0	B143	30.5	33.5	3.0	0.08	0.18	6.17					
36.1	39.2	MINERALIZED BLEACHED QUARTZ-SERICITE & GREEN MARIPOSITE 6 2-4	1.5	B144	36.6	38.1	1.5	2.68	3.35	34.29					
		(Sbm). Mineralization: 5% sulphide : red-sphalerite, 6 2-4	1.5	B145	38.1	39.6	1.5	0.58	1.30	9.94					
		Pyrite, Minor galena.													
		CA: 38 = F_1 = 8°.													
39.2	46.6	QUARTZ-GRAPHITE SULPHIDES (PBg).													
		Ribbon-banded quartz-graphitic pyrite zone. Thin laminae of													
		quartz-pyrite alternating with black graphitic laminae. Up													
		to 8% sulphide : mainly pyrite. Hole worthy of assay as													
		PbZn >1%. Thin breccia zone 39.7-39.9. Representative 5 >1	1.5	B146	42.7	44.2	1.5	0.06	0.10	5.14					
		section 42.7-44.2.													
		CA: 40 = F_1 5, F_2 = 25 s. dip; 42 = F_1 20; 44 = F_1 20; 46 =													
		31 F_1; F_2 = 36 same dip.			44.2	45.7									

LOGGED BY _____ D.D.H. Nº 76-U-177 PAGE 3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
46.6	51.8	MASSIVE BANDED SULPHIDE IN QUARTZ-GRAPHITIC GANGUE 40 2-4	1.5	B147	45.7	47.2	1.5	0.83	0.85	13.03					
		(MBg). 55 2-4	1.6	B148	47.2	48.8	1.6	0.10	0.08	5.14					
		50 6	1.5	B149	48.8	50.3	1.5	2.38	3.58	38.40					
		Bands of massive pyritic sulphide within the quartz- 40 2	1.5	B150	50.3	51.8	1.5	0.08	0.18	5.14					
		graphitic phyllite.													
		50-60% Sulphide: Pyrite, minor red sphalerite, galena,													
		chalcopyrite. Grade 2 - locally 6%, PbZn. Cpy in tension													
		gashes.													
		CA: 48 = 21 F_1 ; 50 = 41 F_1 ; 52 = F_1 = 75, F_2 = 33.													
51.8	65.5	QUARTZ-GRAPHITIC SULPHIDES (PBg).													
		Quartz-rich sulphide (PY) laminae alternating with dark													
		cherty graphitic laminae. Section mainly pyritic 35-40%													
		Sulphide : Less than 2% PbZn. Rock broken throughout section													
		Gouged, fine grained sulphide-quartz 62.5-65.5. 15 2	1.5	B151	51.8	53.3	1.5	0.05	0.08	5.14					
		Gravel recovered. Recovery very poor. Representative sec-	0.8		53.3	54.3	1.0								
		tion 51.8-53.3. Most of section assays less than 2% PbZn.	0.5		54.3	54.9	0.6								
			0.4		54.9	55.5	0.6								
			0.9		55.5	56.4	0.9								
			0.7		56.4	57.9	1.5								
		CA: 54 = F_1 F_2 62; 56 = F_1 = F_2 = 53 but opposite dip;	0.3		57.9	61.0	3.1	Poor recovery.							

LOGGED BY _____ D.D.H. Nº 76-U-177 PAGE 4

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		58 = 62; 60 = Gouge.	0.3		61.0	62.5	1.5								
			0.4		62.5	64.0	1.5	GRAVEL							
			0.3		64.0	65.5	1.5	GRAVEL							
	65.5	END OF HOLE.													
		Hole broke into overburden.													

DIAMOND DRILL RECORD

LOGGED BY ALEXANDER YOUNG-PO D.D.H. Nº 76-U-178 PAGE 1

PROPERTY GRUM JOINT VENTURE

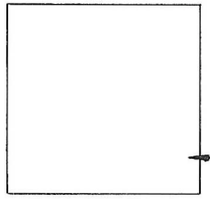
LATITUDE 11,053.118 84W STARTED SEPTEMBER 20, 1976

DEPARTURE 7,446.147 7N COMPLETED SEPTEMBER 22, 1976

ELEVATION 1.104.896 PROPOSED DEPTH

HOLE STOPPED ULTIMATE DEPTH 230'- 70.1m

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR	56° 15'	+77° 04!



CLAIM Nº

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 89.7%

Interval From	Interval To	DESCRIPTION		Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	13.5	MINERALIZED GRAPHITIC PHYLLITE (PG). Competent.	30 10	2.1	606B	0	4.6	4.6	4.51	7.36	60.34			20.75	33.86	277.56
		Foliation F_2 = 65-70°; F_1 = 0-5°.	30 10	1.5	607B	4.6	6.1	1.5	2.15	4.65	35.31			3.23	6.98	52.97
		Series of small F_2 F_1 fold nose closures. Sulfides in	25 12	1.4	608B	6.1	7.6	1.5	1.90	4.10	28.46			2.85	6.15	42.69
		both foliation. F_1	20 10	1.5	609B	7.6	9.1	1.5	4.55	10.77	74.74			6.83	16.16	112.11
		6.1-7.6: Mineralized Bleached Sericite Phyllite	15 10	1.6	610B	9.1	10.7	1.6	5.24	9.66	87.77			8.38	15.46	140.43
		interval. Contacts gradual.	20 8	1.3	611B	10.7	12.2	1.5	2.35	3.44	33.26					
		13.5: Abrupt change to Mineralized Bleached Phyllite	10 3	1.4	612B	12.2	13.7	1.5	1.60	1.90	23.31			3.50	PbZn	
		(P-Sb). Contact broken ground.	10 3	1.5	613B	13.7	15.2	1.5	0.23	0.36	5.14			0.59	PbZn	
13.5	15.5	MINERALIZED BLEACHED SERICITE PHYLLITE (P-Sb).	15 4	1.5	614B	15.2	16.8	1.6	2.78	0.75	29.14			4.44	1.2	46.6
		Competent. Buff to silvery white groundmass. Sul-	10 4	1.5	615B	16.8	18.3	1.5	3.30	1.25	37.37			4.95	1.875	56.00
		phides as laminae. Foliation = 75°; F_1 = 0-10°.	5 1	2.0		18.3	20.5	2.2	1 Est.					(3.03	0.99	33.00)
		15.5: Gradual change to Mineralized Graphitic	15 8	1.7	616B	20.5	22.5	2.0	3.79	2.65	45.26					
		Phyllite (PG).	2 Tr.	1.0		22.5	23.5	1.0	Tr. Est.							
15.5	18.3	MINERALIZED GRAPHITIC PHYLLITE (PG). Broken, blocky	10 8	1.0	617B	23.5	24.5	1.0	3.83	4.05	50.40					
		core. F_2 = 70-75°; F_1 = 0-5°.	5 1	1.3		24.5	25.9	1.4	1 Est.							
		Sulphides in both foliation.	5 4	3.0	618B	25.9	29.0	3.1	2.45	3.80	36.34					
		18.3: Gradual change to Bleached Sericite Phyllite(Sb)	4 2	7.2		29.0	36.6	7.6								

LOGGED BY _____ D.D.H. Nº 76-U-178 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
18.3	20.5	BLEACHED SERICITE PHYLLITE (Sb). Competent.		W.Av.	0	10.7	10.7	3.93	7.35	58.48			42.04	78.61	625.76
		Weakly mineralized. Buff with prominent green (fuchsite)		W.Av.	4.6	7.6	3.0	2.03	4.38	31.89			6.08	13.13	95.66
		spots/laminae.		W.Av.	7.6	10.7	3.1	4.91	10.2	81.46			15.21	31.62	252.54
		20.5: Abrupt change to Quartz-Sulfide (P). Contact broken		W.Av.	12.2	16.8	4.6	2.56	PbZn						
		ground.		W.Av.	0	7.6	7.6	3.53	6.18	49.1			26.83	46.99	373.22
20.5	22.5	QUARTZ-SULFIDE (P) W/SHORT INTERVAL OF BLEACHED SERICITE (P-		W.Av.	10.7	13.7	3.0	1.98	2.67	28.3					
		Sb). Competent. Foliation F_1 = 45-50°; F_1 = 0-10° @ 21.2-		W.Av.	15.2	18.3	3.1								
		21.3. Foliation change to F_2 = 75-85°; F_1 = 0-5° @ 21.3-22.5													
		22.5: Abrupt change to Chloritic Bleached Phyllite (Sbc).													
		Contact broken ground.													
22.5	23.5	CHLORITIC BLEACHED SERICITE PHYLLITE (Sbc). Competent.													
		Buff to silvery white with green stripes. Foliation F_2 =													
		80-85°.													
		23.5: Clean contact with quartz-sulfide and bleached sericite													
		phyllite (P-Sb) = 85°.													
23.5	24.5	QUARTZ-SULFIDE W/BLEACHED SERICITE PHYLLITE (P-Sb). Competent													
		Foliation = 65-75°; F_1 = 0-5°. Sulfides in both foliation.													
		24.5: Clean change to Chloritic Bleached Sericite Phyllite													
		(Sbc). Contact = 75°.													
24.5	25.9	CHLORITIC BLEACHED SERICITE PHYLLITE. Competent. Buff to													
		greenish groundmass. F_2 = 60-65°. Weakly mineralized. 15 8	2.9	653B	36.6	39.7	3.1	2.80	5.00	41.49					

LOGGED BY _____ D.D.H. Nº 76-U-178 PAGE 3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		25.9: Abrupt change to Mineralized Graphitic Phyllite (PG).													
		Contact broken ground.													
25.9	39.7	MINERALIZED GRAPHITIC PHYLLITE (PG). Competent.													
		F = 70-75°; F = 0-10°. Short bleached sericite phyllite													
		interval = 10cm. - 50cm. @ 27.2-27.3; 31.8-32.3. Sulphides													
		not evenly distributed but more-or-less sporadic with rich													
		and lean mineralizations in the run.													
		27.6: Flakes, no gouge. Could be sheared ground.													
		31.5-32.5: Bleached sericite phyllite (Sb). Silvery white													
		with buff to greenish hue. Foliation = 75-80°.													
		Po/Mgtt laminae ff. foliation. Contacts gradual.													
		39.7: Decrease in mineralization. Rx becoming Graphitic													
		Phyllite (G). Shear.													
39.7	47.2	GRAPHITIC PHYLLITE (G). Broken, blocky core. Poker chips to	7.1		39.7	47.2									
		flakes. Foliation = 75-80°; F = 0-10°.													
		42.2-42.5: Bleached Sericite Phyllite (Sb). Buff.													
		Foliation = 80°; F = 0-5°. Fold nose. Both													
		contacts = 80°.													
		43.0: Shear.													
		47.2: Gradual changeto Sericite Phyllite (S).													

LOGGED BY _____ D.D.H. No 76-U-178 PAGE 4

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
47.2	53.0	SERICITE PHYLLITE (S). Blocky. Foliation = 75-80°;	5.8		47.2	53.0	5.8								
		F_1 = 0-5°. Short Bleached Sericite Phyllite (Sb) interval													
		@ 50.3-50.5. Contacts gradual.													
		53.0: Gradual change to Calcitic sericite phyllite (SK).													
53.0	56.4	CALCITIC SERICITE PHYLLITE (SK). Blocky core. Foliation F_2	3.4		53.0	56.4	3.4								
		= 80-85°; F_1 = 0-5°.													
		56.4: Calcite gradually decreasing. Rx becoming normal													
		sericite phyllite again.													
56.4	62.0	SERICITE PHYLLITE (S). Blocky core. Fissile. F_2 = 80-85°;	5.5		56.4	62.0	5.6								
		F_1 = 0-5°.													
		62.0: Gradual change to Calcitic Bleached Sericite Phyllite													
		(Sbk).													
62.0	64.0	CALCITIC BLEACHED SERICITE PHYLLITE (Sbk). Competent.	2.0		62.0	64.0	2.0								
		Cream white to buff. Foliation = 70-75°; F_1 = 0-5° marked													
		by calcite.													
		64.0: Contact with fault zone.													
64.0	65.0	FAULT ZONE. Gray thick sticky gouge.	0.7		64.0	65.0	1.0								
		65.0: Change to alternating short interval of Bleached													
		Sericite Phyllite (Sb), and Quartz Sulphide (P).													

LOGGED BY _____ D.D.H. Nº 76-U-178 PAGE 5

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
65.0	68.6	ALTERNATING INTERVAL OF BLEACHED SERICITE PHYLLITE AND QUARTZ													
		SULPHIDE (P-Sb). Broken core. Each interval ave. = 30cm.													
		Sulphides composed of Py-Po-Zn-Pb. Bleached interval, buff													
		to white with prominent fuchsite laminae. 10 4	2.5		65.0	68.6	3.6								
		68.6: Sharp change to Graphitic Phyllite (G). Sandy.													
68.6	70.1	GRAPHITIC PHYLLITE (G). Sandy to gougey. FAULT ZONE.													
		Squeezing ground.													
	70.1	END OF HOLE. Stopped due to bad ground condition.													

DIAMOND DRILL RECORD

LOGGED BY JIM PAXTON D.D.H. Nº 76-U-179 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE 10,482.00 STARTED SEPTEMBER 5, 1976

DEPARTURE 7,819.50 62W COMPLETED SEPTEMBER 6, 1976

ELEVATION 1,195.71 PROPOSED DEPTH

ULTIMATE DEPTH 51.8

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR	225° 07'	+59° 18'

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

Interval From	Interval To	DESCRIPTION	Py PbZ	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	16.1	MASSIVE SULPHIDE (MI,MB) & BRECCIA (PXm).	60 8	0.9/1.5	108B	0	1.5	1.5	0.05	0.20	7.20			0.25	PbZn	
		Composition banded and quartz banded Massive Sulphide	70 10	1.3/1.5	109B	1.5	3.0	1.5	0.08	0.53	14.06			0.61	PbZn	
		grade locally into breccias of siliceous rounded	70 10	1.2/1.6	110B	3.0	4.6	1.6	0.38	0.88	14.06			1.26	PbZn	
		fragments or inclusions in a pyrite-sphalerite	60 8	1.4/1.5	111B	4.6	6.1	1.5	2.13	2.20	30.17					
		groundmass. Banding is generally at 75°.	70 15	1.5/1.5	112B	6.1	7.6	1.5	6.54	7.24	92.92			9.81	10.86	139.38
			60 20	1.5/1.5	113B	7.6	9.1	1.5	7.78	9.98	105.9			11.67	14.97	158.91
			50 25	1.5/1.5	114B	9.1	10.7	1.6	9.63	17.24	142.3			15.41	27.58	227.66
			60 15	0.4/1.5	115B	10.7	12.2	1.5	6.27	16.59	100.8			9.41	24.89	151.20
				0.0/1.5		12.2	13.7	1.5	8.00	20.18	122.57			12.00	30.27	183.86
			60 20	0.6/1.5	116B	13.7	15.2	1.5	9.73	23.77	144.3			14.60	35.66	216.51
			50 15	0.8/0.9	117B	15.2	16.8	0.9	9.97	22.30	155.3			8.97	20.07	139.79
16.1	17.5	BLEACHED SERICITE PHYLLITE (Sb).	20 5	0.7/0.8	118B	17.5	18.3	0.8	2.95	4.85	42.51					
17.5	18.3	BLEACHED PHYLLITE PLUS MASSIVE SULPHIDE BANDS.														
18.3	22.9	DARK GRAY QUARTZ SERICITE PHYLLITE (S).			W.Av.	0	4.6	4.6	0.72	PbZn						
		Strong F at 70° which changes suddenly to 30° at 22.9.			W.Av.	6.1	16.1	10.0	8.19	16.43	121.7			81.87	164.30	1217.3
		2														

LOGGED BY _____ D.D.H. Nº 76-U-179 PAGE 2

Interval From	Interval To	DESCRIPTION		Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
22.9	29.7	GRAPHITE SERICITE PHYLLITE (Sg).														
		Black colour. Weak and friable. Talc? Strong F at 30°.														
		Although colour is dark only traces of Graphite present.														
29.7	37.0	MASSIVE SULPHIDE (Mb).	Py PbZn	1.7/2.3	119B	29.7	32.0	2.3	5.43	11.50	85.72			12.49	26.45	197.16
		Fine grained pyrite and sphalerite in a quartz-	60 12	1.4/1.5	120B	32.0	33.5	1.5	2.33	4.90	40.46			3.50	7.35	60.69
		barite groundmass which comprises about 40%. Faint	60 12	1.5/1.6	121B	33.5	35.1	1.6	0.95	2.58	10.97			1.52	4.13	17.55
		compositional banding at 60°.	60 12	1.5/1.5	122B	35.1	36.6	1.5	2.28	5.78	29.14			3.42	8.67	43.71
			70 20	1.5/1.5	123B	36.6	38.1	1.5	3.73	5.98	59.31			5.60	8.97	88.97
37.0	45.7	MASSIVE SULPHIDE (MV).	60 15	1.1/1.5	124B	38.1	39.6	1.5	3.98	4.55	73.71			5.97	6.83	110.57
		This is a continuation of previous section but is	70 15	0.7/1.5	125B	39.6	41.1	1.5	2.70	3.75	39.43			4.05	5.63	59.15
		porous and has only traces of barite.	80 15	0.3/1.6	126B	41.1	42.7	1.6	3.68	2.55	48.34			5.89	4.08	74.34
		Past 45.7 only bits of clay and overburden pebbles.	80 15	0.1/1.5	127B	42.7	44.2	1.5	0.43	1.00	8.23					
					W.Av.	29.7	32.7	3.0	4.71	9.96	75.16			14.12	29.88	225.48
					W.Av.	29.7	33.5	3.8	4.21	8.89	67.86			15.99	33.80	257.85
					W.Av.	35.1	39.6	4.5	3.33	5.44	54.06			14.99	24.47	243.25
					W.Av.	39.6	42.7	3.1	3.21	3.13	44.03			9.94	9.71	136.49
					W.Av.	32.0	42.7	10.7	2.8	4.27	42.80			29.95	45.66	457.98
					W.Av.	29.7	42.7	13.0	3.26	5.55	50.4			42.44	72.11	655.14
45.7	51.8	CLAY OVERBURDEN.		0.5/5.8	B200	46.0	51.8	5.8	0.23	0.50	5.14					
	51.8	END OF HOLE.														

DIAMOND DRILL RECORD

LOGGED BY ALEXANDER YOUNG-PO D.D.H. Nº 76-U-180 PAGE 1

PROPERTY GRUM JOINT VENTURE

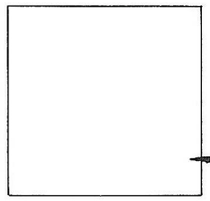
LATITUDE 11,021.749 84W STARTED SEPTEMBER 23, 1976

DEPARTURE 7,412.555 5N + 6.5m COMPLETED SEPTEMBER 23, 1976

ELEVATION 1,104.036 PROPOSED DEPTH

ULTIMATE DEPTH 100' - 30.5

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR	332° 14'	+87° 21'



CLAIM Nº

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 88.5%

Interval From	Interval To	DESCRIPTION		Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	2.4	MINERALIZED GRAPHITIC PHYLLITE (PG). Broken,	30 6	1.5	678B	0	3.0	3.0	2.40	4.25	35.31					
		blocky core. Foliation = 75-80° followed by sulfides.	20 4	3.0	679B	3.0	6.0	3.0	0.50	0.80	8.23			1.30	PbZn	
		2.4: Abrupt change to Mineralized Bleached Sericite	15 3	2.5	680B	6.0	9.0	3.0	0.40	0.73	7.20			1.13	PbZn	
		Phyllite (P-Sb). Contact broken ground.	15 4	1.9	681B	9.0	12.0	3.0	0.90	1.60	13.03			2.50	PbZn	
			10 3	2.8	682B	12.0	15.0	3.0	0.87	0.55	9.94			1.42	PbZn	
2.4	5.2	MINERALIZED BLEACHED SERICITE (P-Sb). Competent.	10 4	1.5	683B	15.0	16.5	1.5	1.58	2.23	25.37			3.81	PbZn	
		Buff with silvery white groundmass. Foliation = 85-	25 4	1.5	684B	16.5	18.0	1.5	2.23	2.90	35.31					
		90°.	30 4	1.5	685B	18.0	19.5	1.5	0.68	0.83	16.11			0.20	0.25	4.83
		5.2: Clean contact with Mineralized Graphitic	30 6	1.5	686B	19.5	21.0	1.5	4.78	6.84	71.66			7.17	10.26	107.49
		Phyllite (PG) = 85°.	35 8	1.2	687B	21.0	22.2	1.2	3.68	4.55	52.46			4.42	5.46	62.95
5.2	22.2	MINERALIZED GRAPHITIC PHYLLITE (PG). Competent.														
		Foliation = 75-85°; F = 0-10°.			W.Av.	3.0	9.0	6.0	1.22	PbZn						
		13.5: Shear.			W.Av.	9.0	16.5	7.5	2.33	PbZn						
		17.3-17.5: Bleached Sulfide Phyllite (Sb). Buff with pro-			W.Av.	19.5	22.2	2.7	4.29	5.82	63.13			11.59	15.72	170.44
		minent fuchsite laminae. Competent. Foliation			W.Av.	19.2	22.2	3.0	3.93	5.32	58.4			11.79	15.97	175.27
		75-80°. Contacts clean and sharp = 80°.														
		22.2: Abrupt change to Dark Sericite Phyllite (SG). Contact broken ground.														

LOGGED BY _____ D.D.H. No 76-U-180 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
22.2	30.5	SERICITE PHYLLITE WITH TRACE GRAPHITE (SG). Broken, blocky	8.1		22.2	30.5	8.3								
		core. Fissile. Easily breaks into poker chips. Foliation													
		=80-85°; F = 0-10°.													
		24.9-25.2: Shear.													
		29.5: Small fault = 10cm. Black, sandy gouge material.													
	30.5	END OF HOLE.													

calcn checked Dec 14/76 gc. calculations ✓

DIAMOND DRILL RECORD

LOGGED BY Stanley B Hamilton

PROPERTY

LATITUDE 2N BEARING OF HOLE STARTED Sept 6/76

DEPARTURE 68W DIP OF HOLE +3° COMPLETED Sept 7/76

ELEVATION DIP TESTS Proposed: DEPTH Ultimate: 68.6

D.D.H. No. U 181 PAGE 1

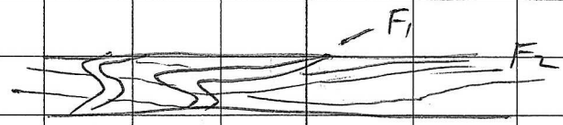
CLAIM No.

DIRECTION AND DISTANCE FROM NE. CLAIM POST

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION		Rec. Ft.		Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	11.8	MASSIVE BANDED PYRITIC SULPHIDE. M BX	Sy.	Pz	R		~~0~~	~~1.5~~									
		Massive Sulphide: 75-90 Sulphide: Pyrite;	80	12	1.2	B201	0	1.5	1.5	6.12	11.95	78.86			9.18	17.93	118.29
		orange-amber sphalerite, galena, Note locally	80	15	1.5	B202	1.5	3.0	1.5	8.91	16.86	129.94			13.37	25.29	194.91
		Contains white Barite ex 7.4-8.2 m. C.g. (3-4cm)	85	10	1.6	B203	3.0	4.6	1.6	7.13	11.60	90.86			11.41	18.56	145.38
		blebs of sph-galena at 6m. Some banded	85	10	1.5	B204	4.6	6.1	1.5	4.80	9.14	78.86			7.20	13.71	118.29
		zones porous, Grade vanes 10-20%. ave 15.	80	18	1.5	B205	6.1	7.6	1.5	7.41	14.53	87.77			11.12	21.80	131.66
		Note mini-bx zones at 5-5.7. local buff ankerite.	75	15	1.5	B206	7.6	9.1	1.5	6.31	15.14	117.94			9.47	22.71	176.91
		CA.: 2=F1=45; 4=F1,55; 6=36F1; 8=37F1;	80	20	1.6	B207	9.1	10.7	1.6	10.41	22.56	184.46			16.66	36.10	295.14
		10=50F1.	80	20	1.1	B208	10.7	11.8	1.1	10.41	20.77	171.43			11.45	22.85	188.57
11.8	13.8	GREY QU SERICITE PHYLLITE. S				WT. AV.	0	11.8	11.8	7.62	15.17	116.03			89.86	178.95	1369.15
		Contact with Sulphide is muddy gouge for				"	7.6	11.8	4.2	8.95	19.44	157.3			37.58	81.66	660.62
		0.2 m. Barren of Pb Zn. Rock lustrous															
		mica-rich. Broken. Minor pyrite.															
		CA 12 = F2=30; 14 = F1,65, F2 7 opp. dip.															

LOGGED BY FBR D.D.H. No U1B1 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
11.0	19.8	CREAM BLEACHED QU-SER PHYLLITE Sb	1.1	✓	13.1	14.6	1.5								
		Rock broken, with muddy gouge at 16-16.2													
gouge contact		local thin qu-veins.	0.8	✓	18.3	19.8	1.5								
		CA. 14 = $2 < F_2$; 16 = gouge, $F_2 \approx 20$; 18 = $F_2 = 10$.	0.8	✓	19.8	21.3	1.5								
19.8	32.5	GREY QU-SERICITE PHYLLITE S													
		Med – dk grey, mica-rich phyllite													
		nor v. quartzose. Thin veins of													
		qu, with local blebs of py, po.													
		F_2 foliation sub-parallel to core axis.													
		Broken gouged 30.5-32:													
		CA. 20 = $F_2 = 8$; 22 = $F_2 = 30$; 24 = $F_2 = 28$;													
		26 = $F_2 = 20$; 28 = $F_2 = 20$; 30 = $F_2 = 17$; 32 = 30 F_2													
			0.5	✓	32	33.5	1.5								
32.5	49.8	BLACK QU-GRAPHITIC PHYLLITE G.													
		Thin zone of bleached-buff qu-ser phy, with	0.5	✓	35.1	36.6	1.5								
		small-scale F_2 fold noses at 33.5-34.	0.7	✓	36.6	38.1	1.5								
		Minor pyrite. Unit becomes quartzose from 38 on.													
		More striped with net veins of white qu-carbonate.													
		Rock broken 35-39.6. Minor py. blebs.													
		CA: 34 = $F_2 = 41$, 36 = $F_2 = 44$; 38 = $F_1 = 60$, $F_2 = 40$ S. dip.													



$F_1 - F_2$ 41-42 m.

LOGGED BY _____ D.D.H. Nº U181 PAGE 3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		CA 40 = F_2 = 29. , 42 = F_2 = 10, 44 = F_2 = 60;													
		46 = F_2 = 10, 48 = F_2 = 45 ⋘ F_2 folds., varies to													
		10 F_2. ;													
			S PZ R	~~B209~~	~~49.8~~	~~57.3~~	~~1.5~~								
49.8	60.4	MASSIVE BANDED BARITIC SULPHIDE. MB$_b$.	75 15 1.5	B209	49.8	51.3	1.5	5.40	9.30	91.89			8.10	13.95	137.84
			75 15 1.4	B210	51.3	52.8	1.5	7.05	11.92	87.77			10.58	17.88	131.66
		Fine grained pyrite, amber sph, galena, barite	75 15+ 1.5	B211	52.8	54.3	1.5	5.70	10.16	84.69			8.55	15.24	127.04
		v. finely banded, locally folded (F_2?).	75 15+ 1.5	B212	54.3	55.8	1.5	4.58	8.09	85.72			6.87	12.14	128.58
		Minor mafic at 53.6m. Sulphide 75%, Barite	15 5 1.3	B213	55.8	57.1	1.3	2.40	5.48	37.37			3.12	7.12	48.58
		20-25% locally. Grade 15% plus. Pb Zn.	75 15+ 1.5	B214	57.1	58.6	1.5	5.65	8.67	103.89			8.48	13.01	155.84
		Graphitic-Sulphide band 55.1-57.1 near F_2 fold nose.	75 15+ 1.8	B215	58.6	~~59.4~~ ~~60.1~~ 60.4	~~1.8~~	7.80	10.21	150.17			14.04	18.38	270.31
		CA. 50 = F_1 = 50; 52 = F_1 55, 54 = F_1 = 42; 56 = F_1 =													
		10; F_2 fold nose (1.5m nose).; 58 = F_1 = 35;		W.Av.	49.8	60.4	10.6	5.64	9.22	94.33			59.74	97.72	999.85
		60 = F_1 = 10, Fold nose; 62 = F_1 = 15 fold nose; 64 =		"	51.3	54.3	3.0	6.38	11.04	86.23			19.13	33.12	258.70
				"	57.1	60.4	3.3	6.82	9.51	129.14			22.52	31.39	426.15
60.4	65.5	ALTERED QU-SER MARIPOSITE PHYLLITE with SB_m		"	54.3	58.6	4.3	4.30	7.50	77.44			18.47	32.27	333.00
		local thin bands of MASSIVE BARITIC	0.3	/	60.4	61.	0.6								
		SULPHIDE which are in F_2 fold noses at	1.5	/	61.	62.5	1.5								
		61.2 and 62.5. Not worthy of assay.	0.2	/	62.5	64	1.5								
		Poor core recovery.	0.2	/	64	65.5	1.5								
		CA. 64 = 10 F_2, F_1 to be core axis; 6													

LOGGED BY [illegible signature] D.D.H. No C181 PAGE 4 of 4

Interval From	Interval To	DESCRIPTION
65.5	68.6	BLACK STRIPED Qu GRAPHITIC PHYLLITE (G)
		Barren mica-rich graphitic phyllite.
		F_2 sub parallel to core axis.
		CA: 66 = F_2=25; 68 F_2=20:
END	68.6	

DIAMOND DRILL RECORD

LOGGED BY ALEXANDER YOUNG-PO D.D.H. Nº 76-U-182 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE *10,981.46 84W STARTED SEPTEMBER 24, 1976

DEPARTURE *7,380.44 3N+13.5m COMPLETED SEPTEMBER 27, 1976

ELEVATION *1.098.8 PROPOSED DEPTH

* - approximated ULTIMATE DEPTH 504' - 153.6m

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR		-90°
88.1m	200	-82°
149m	222	-80°

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 89.3%

Interval From	Interval To	DESCRIPTION	Py	PbZ	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	5.2	QUARTZ-SULFIDE (P). Broken, blocky core.	30	4	0.6/3	835B	0	3.0	3.0	0.40	0.83	8.23			1.23	PbZn	
		Foliation = 75°. Sulfides following foliation trend.	25	4	2.1	836B	3.0	5.2	2.2	0.58	0.75	9.26			1.33	PbZn	
		F /F relationship not clear.	3	Tr.	0.8		5.2	6.2	1.0								
		1 2 3.5-4.0: Bleached Sericite Phyllite. Buff. Compe-	25	5	2.9	837B	6.2	9.3	3.1	3.28	5.10	52.46			10.168	15.81	162.6
		tent. Contacts clean and sharp = 75°.	15	3	1.1	838B	9.3	12.3	3.0	1.50	3.73	19.20			4.5	11.19	57.6
		5.2: Sharp contact with Bleached Sericite Phyllite	5	Tr.	0.6		12.3	15.3	3.0								
		(Sb). Contact 75°.	10	1	0.4		15.3	17.3	2.0								
5.2	6.2	BLEACHED SERICITE PHYLLITE (Sb). Competent. Buff to	5	Tr.	0.9		17.3	20.2	2.9								
		silvery white. Sporadic clots/blebs of Py.	15	3	1.5	839B	20.2	23.2	3.0	0.43	0.90	8.23					
		Foliation = 75-80°.	15	4	1.5	840B	23.2	25.0	1.8	1.23	2.28	22.29					
		6.2: Abrupt change to Mineralized Graphitic Phyllite (PG).															
		Contact broken ground.				W.Av.	0	5.2	5.2	1.27	PbZn				6.62	PbZn	
6.2	25.0	MINERALIZED GRAPHITIC PHYLLITE (PG). Broken pebbly to gougy					6.2	12.3	6.1	2.4	4.42	36.0					
		core. Foliation = 70-75° (based on short blocks). F = 0-10															
		1 17.3-20.2: Interval of Quartz/Graphitic phyllite pebbles and															
		gouge. FAULT.															

LOGGED BY _____ D.D.H. Nº 76-U-182 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		NOTE: 12.2-13.7; 13.7-15.2; 15.2-16.8: Extreme low core													
		recovery averaging approximately = 0.20/1.5. Core													
		pebbly.													
		25.0: Gradual change to Graphitic Sericite Phyllite with													
		decrease in mineralization.													
25.0	32.0	GRAPHITIC SERICITE PHYLLITE (SG). Competent. Dark gray.	7.0		25	32.0	7.0								
		Foliation = 70-80°; F_1 = 0-10°. Sporadic clusters/isolated													
		Py blebs.													
		32.0: Gradual decrease in Graphitic constituents. Rx be-													
		coming normal Sericite Phyllite (S).													
32.0	49.1	SERICITE PHYLLITE (S). Competent. Dark to light gray.	15.5		32.0	49.1	17.1								
		F_2 = 75-85°; F_1 = 0-10°.													
		39.5-42.7: Calcitic interval (SK). Calcite as thin laminae													
		and marking F_1 foliation.													
		43-44.2: Chloritic Bleached Sericite Phyllite (Sbc). Buff													
		with light green stripes. Contacts gradual.													
		49.1: Abrupt change to Bleached Sericite Phyllite (Sb).													
		Contact = 70°.													
49.1	51.8	BLEACHED SERICITE PHYLLITE (Sb). Buff to silvery white.	2.5		49.1	51.8	2.7								
		Chloritic @ 50.3-51.8. Foliation = 80-85°. No clear F_1.													
		Core broken/blocky.													

LOGGED BY _____ D.D.H. Nº 76-U-182 PAGE 3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		51.8: Contact with Mineralized Graphitic Phyllite (PG).													
		Contact broken ground.													
51.8	59.4	MINERALIZED GRAPHITIC PHYLLITE (PG). Competent. 30 4	2.8	844B	51.8	54.9	3.1	1.50	2.00	28.46					
		Mineralization not evenly distributed but rather 40 15	1.5	845B	54.9	56.4	1.5	4.90	10.32	90.86					
		occurring as rich/lean intervals. 10 1	2.9		56.4	59.4	3.0	1 est.							
		Foliation = 70°; F = 0-10°. 50 15	1.6	846B	59.4	61.0	1.6	4.80	9.39	100.8			7.68	15.02	161.28
		51.8-52.0: Sulfide bx (MXg) cemented by graphite. 40 7	1.5	847B	61.0	62.5	1.5	3.28	7.57	55.54			4.92	11.36	83.31
		Angular fragments Ø = 1-1.5cm. 60 15	1.5	848B	62.5	64.0	1.5	8.75	14.65	126.2			13.13	21.98	189.26
		55.1-56.4: Rich mineralization. Barite in groundmass. 60 12	1.5	849B	64.0	65.5	1.5	6.00	10.27	104.9			9.00	15.41	157.38
		Compositional banding Py-Sph-Pbs/ba = 70°. 60 12	1.5	850B	65.5	67.0	1.5	4.63	8.18	89.83			6.95	12.27	134.75
		56.4-59.4: Lean mineralization. Sulfides mostly Py 70 6	1.5	851B	67.0	68.5	1.5	4.48	5.22	68.57			6.72	7.83	102.86
		as widely spaced thin laminae and/or iso- 60 15	2.4	852B	68.5	71.0	2.5	6.75	12.50	111.1			16.88	31.25	277.73
		lated clots.													
		59.4: Abrupt change to Massive Sulfide (M). Contact marked		W.Av.	59.4	62.5	3.1	4.06	8.51	78.90			12.60	26.38	244.59
		by 10cm. long Bleached Sericite Phyllite = 75°.		W.Av.	65.5	67.0	3.0	4.56	6.70	79.20			13.67	20.10	237.61
59.4	71.0	MASSIVE SULFIDE - Structureless (M), banded (MB) and barite		W.Av.	59.4	71.0	11.6	5.63	9.92	95.39			65.28	115.12	1106.57
		in groundmass variety (Mb). Competent. Contacts between		W.Av.	53.4	56.4	3.0	3.20	6.16	59.7					
		varieties gradual. Compositional banding Sph/Py/Ba = 80-85°.		W.Av.	53.4	56.4									
		61.2-62.1: Bleached sericite phyllite interval. Buff to		W.Av.	6.2	12.3									
		silvery white groundmass with prominent fuchsite													
		spots/laminae. Foliation = 65-70°. Clean con-													
		tacts = 65°.													

LOGGED BY _____ D.D.H. Nº 76-U-182 PAGE 4

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		71.0: Sharp clean contact with Graphitic Phyllite (G) = 70°.													
71.0	73.4	GRAPHITIC PHYLLITE (G). Fissile, easily breaksn into poker	2.3		71.0	73.4	2.4								
		chips. Foliation = 75-80°.													
		73.4: Gradual change to Graphitic Sericite Phyllite (SG).													
73.4	86.0	GRAPHITIC SERICITE PHYLLITE (SG). Competent. Foliation =	12.4		73.4	86.0	12.6								
		75-80°; F ^{1} = 0-10°.													
		74-74.8: Calcitic Bleached Sericite unit, (Sbk). Tuffaceous													
		looking. Foliation = 65-70°. Light gray colour													
		with greenish hue. Contacts sharp and clean = 75°.													
		84.1-86.0: Calcitic Bleached Sericite Phyllite (Sbk). Simi-													
		lar to 74-74.8 run unit but more calcitic.													
		Contacts = 65°.													
		86.0: Rx. change to Calcitic Sericite Phyllite (SK).													
86.0	135.5	CALCITIC SERICITE PHYLLITE (SK). Competent. Light gray.	48.6		86.0	135.5	49.5								
		Foliation = 80-85°; F ^{1} = 0-5° marked usually by calcite.													
		97.5-98.0: Sand/silty core - FAULT.													
		99-103: Chloritic-calcitic sericite phyllite unit. Greenish													
		groundmass with calcite laminae. F ^{2} = 85-90°;													
		F ^{1} = 0-5°. Contacts gradual. Sporadic clots/blebs													
		of Po.													
		135.5: Gradual decrease in calcitic constituents. Rx be-													
		coming normal Sericite Phyllite (S). Contact arbi-													
		trary.													

LOGGED BY _____ D.D.H. Nº 76-U-182 PAGE 5

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
135.5	139.5	SERICITE PHYLLITE (S). Competent. Light gray colour.	4.0		135.5	139.5	4.0								
		Foliation = 85-90°; F$_1$ = 0-10°.													
		139.5: Gradual change to Bleached Sericite Phyllite (Sb).													
139.5	142.5	BLEACHED SERICITE PHYLLITE (Sb). Competent. Buff to light	3.0		139.5	142.5	3.0								
		gray. Foliation = 85°; F$_1$ = 0°.													
		142.5: Sharp clean contact with Massive Sulfide (Mb). Con-													
		tact plane = 75° marked by a broad Po band.													
142.5	143.8	MASSIVE SULFIDE WITH BARITE IN GROUNDMASS (Mb). 60 12	1.3	853B	142.5	143.8	1.3	5.00	8.93	85.72					
		Competent. Barite = 15%. Faint compositional banding sul-													
		fides/ba = 40-45°.													
		143.8: Sharp change to Sericite Phyllite with trace of													
		Graphite (S+G). Contact marked by 10cm. Bleached													
		Sericite Phyllite (Sb). Plane = 85°.													
143.8	153.6	SERICITE PHYLLITE WITH TRACE GRAPHITE (S+G). Competent.	9.5		143.8	153.6	9.8								
		Foliation = 80-85°; F$_1$ = 0-10°. Sporadic Po clots.													
		153.4-153.6: Chloritic Bleached Phyllite (Sbc). Buff with													
		green stripe. Contact sharp = 75°.													
	153.6	END OF HOLE.													

DIAMOND DRILL RECORD

LOGGED BY STANLEY B. REAMSBOTTOM D.D.H. Nº 76-U-183 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE 10,623.25 2N STARTED SEPTEMBER 7, 1976

DEPARTURE 7,704.20 68W COMPLETED SEPTEMBER 8, 1976

ELEVATION 1,171.19 PROPOSED DEPTH

ULTIMATE DEPTH 76.2m

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR	231° 50'	-29° 50'

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	1.6	MASSIVE BANDED PYRITIC SULPHIDE (MBx). 80 15	1.5	B216	0	1.5	1.5	6.27	13.71	110.1			9.41	20.57	165.09
		Fine grained magnetite, pyrite, sphalerite, galena, which is													
		locally brecciated (1m.). Banding parallels core axis.													
		CA: 1.2 = 7°.													
1.6	9.7	RIBBON BANDED QUARTZ-GRAPHITE SULPHIDE (PBgx). 25 2-4	1.5	B217	1.5	3.0	1.5	3.50	2.55	47.31			5.25	3.83	70.97
		Quartz-py laminae (3-4m.) alternating with black 50 2-4	1.5	B218	3.0	4.5	1.5	1.68	2.55	30.17			2.52	3.83	45.26
		graphitic cherty laminae. F banding parallels core. 45 2-4	1.5	B219	4.5	6.0	1.5	2.13	4.00	35.31			3.20	6.00	52.97
		Local massive pyrite bands at 3.4-4.4; 4.6-5.6. These 30 2-4	1.5	B220	6.0	7.5	1.5	3.33	3.65	43.54			5.00	5.48	65.31
		again possibly thin; parallel to core. Sulphide: 30- 30 2-4	1.0	B221	7.5	8.5	1.0	1.05	2.45	22.29			1.05	2.45	22.29
		50%; pyrite: minor, sphalerite galena. Note Bx zone 30 6-8	1.2	B222	8.5	9.7	1.2	6.11	8.16	70.63			7.33	9.79	84.76
		8-8.7m.													
		CA: 2 = F 25' 4 = F = 10; 6 = F = 10; 8 = F = 30, 10 =		W.Av.	0	3.0	3.0	4.89	8.13	78.69			14.66	24.40	236.06
		F = 35.		W.Av.	4.5	7.5	3.0	2.73	3.83	39.43			8.20	11.48	118.28

LOGGED BY _____ D.D.H. Nº 76-U-183 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
9.7	21.8	MASSIVE BANDED PYRITIC, SPHALERITE-RICH SULFIDE (MBvx).													
		Locally the sulphide has a porous, vuggy texture and 80 +15	1.5	B223	9.7	11.2	1.5	5.91	11.75	76.80			8.87	17.63	115.20
		has also been brecciated. These Bx. zones (9.7-10.2; 80 20	1.5	B224	11.2	12.7	1.5	7.46	14.93	103.9			11.19	22.40	115.84
		11-11.3; 12.7-13.0) have been recemented by fine 80 20	1.5	B225	12.7	14.2	1.5	7.28	12.71	114.2			10.92	19.07	171.26
		grained sulphide. Locally sulphide has flecks of ser- 70 12	1.5	B226	14.2	15.7	1.5	3.80	7.95	67.54			5.70	11.93	101.31
		phyllite, and ankerite. Grade varies 10-20% PbZn; 75 20	1.5	B227	15.7	17.2	1.5	4.98	8.08	69.60			7.47	12.12	104.4
		averages 15%. Note extensive sulphide - Bx zone 13.7- 80 15	1.5	B228	17.2	18.7	1.5	5.68	12.05	74.74			8.52	18.08	112.11
		19.8. Sulphides in this section vuggy, porous, sph- 80 +20	1.5	B229	18.7	20.2	1.5	7.61	21.12	134.1			11.42	31.68	201.09
		rich. Last 2m. has sericite-mariposite inclusions. 75 18-20	1.6	B230	20.2	21.8	1.6	8.72	19.99	151.2			13.95	31.98	241.92
		CA: 12 = F_1 = 25; 14 = F_1 = 7 parallel to core; 16 = Bx;		W.Av.	8.5	21.8	13.3	6.42	13.13	96.83			85.37	174.86	1287.9
		18 = Bx; 20 = F_1 = 15 = folded.		W.Av.	14.2	17.2	3.0	4.39	8.02	68.57			13.17	24.05	205.71
				W.Av.	0	21.8	21.8	5.13	9.95	78.4			111.80	216.84	1709.8
21.8	32.0	GRAY QUARTZ-SERICITE PHYLLITE (S).	1.1		22.9	24.4	1.5								
		Lustrous, barren, mica-rich phyllite. Rock broken and													
		gouged 21.8-24.4. Note F_2 foliation mainly sub-parallel to													
		core axis. Local thin sericite (white) rich zones 0.1-0.3m.													
		Thin quartz-veins, some with green chlorite knots.													
		CA: 22 = F_2 = 40; 24 = F_2 = 4°; 26 = F_2 = 5°; 28 = F_2 = 6,													
		F_1 80 (folds); 30 = F_1 = 65, F_2 = 18 folds, same dip;													
		32 = F_2 = 24.													

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Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
32.0	35.6	WHITE-CREAM BLEACHED QUARTZ-SERICITE PHYLLITE (Sb).													
		With thin band of sulphide 34.7-35.2. Pyrite, magnetite,													
		minor sphalerite, 2-3% PbZn. F_2 sub-parallel to core axis.													
		CA: 34 = 21 F_2 ; 36 = F_2 = 18.													
	76.2	GRAY QUARTZ-SERICITE PHYLLITE (Ssb).													
		With thin zones of slight bleached sericite-rich phyllite.													
		Quartz veins 37-37.5; buff ankerite in bleached sericite													
		zones (39-40). F_2 fold zone 39-43m. Minor pyrite blebs,													
		some sphalerite at 42.6.													
		CA: 38 = F_2 = 30; 40 = F_2 19; 42 = F_1 25, F_2 30 oppisite													
		dip.													
		Unit becomes more striped quartz-rich from 44m on. Also thin													
		graphitic zone at 48-48.8. Many small-scale F_2 folds from													
		44 on. Local Py in quartz-carb. veins. Broken-fracture	0.7		54.9	56.4	1.5								
		gouge zone 51-64m. Fractured rock recemented by white cry-	0.5		56.4	57.9	1.5								
		stalline calcite 54.8-56.0. Recovery poor.	0.5		57.9	59.4	1.5								
			0.5		59.4	61.0	1.6								
			0.4		61.0	62.5	1.5								
			0.5		62.5	64.0	1.5								
			1.1		64.0	65.5	1.5								

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Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		CA: 44 = F$_1$ 70, F$_2$ 20 same dip; 46 = F$_1$ = 70, F$_2$ = 9 same dip; 48 = F$_1$ = 65, F$_2$ 30 oppisite dip; 50 = F$_1$ = 32; 52 = F$_1$ = 4; 54 = 25 F$_2$; 56 = Bx. zone; 58 = F$_2$ = 15, fault slips; 60 = F$_2$ = 11; 62 = F$_2$ = 10; 64 = F$_2$ = 10	0.9		68.6	70.1	1.5								
		66 = F$_2$ = 85, F$_1$ 11 oppisite dip; 68 = F$_2$ = 45, F$_1$ = 18 oppisite dip; 70 = 26 F$_2$; 72 = F$_2$ = 36; 74 = F$_1$ = 60, F$_2$ 35 oppisite dip.													
	76.2	END OF HOLE.													

DIAMOND DRILL RECORD

LOGGED BY ALEXANDER YOUNG-PO D.D.H. Nº 76-U-184 PAGE 1

PROPERTY GRUM JOINT VENTURE

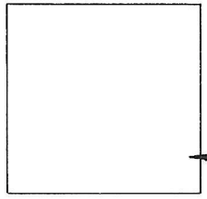
LATITUDE *10,987.6 84W STARTED SEPTEMBER 27, 1976

DEPARTURE *7,377.98 3N+13.5m COMPLETED SEPTEMBER 30, 1976

ELEVATION *1,098.83 PROPOSED DEPTH 550' - 167.6m

* - approximated ULTIMATE DEPTH 550' - 167.6m

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR	224°	-55°
103.6	204°	-62°
164.5	200°	-71°



DIRECTION AND DISTANCE FROM N.E. CLAIM POST

CLAIM Nº

164.5
136.1
26.4
3-1

TOTAL CORE RECOVERY: 90.4%

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	2.5	MINERALIZED GRAPHITIC PHYLLITE(PG). Broken, blocky 20 4	0.9	864B	0	3.0	3.0	0.53	0.80	8.91					
		core. Foliation = 80-85°; F$_1$ = 0-10°. Low core 15 3	2.0	865B	3.0	5.0	2.0	0.58	1.55	8.91					
		recovery. 1 NIL	1.0		5.0	6.0	1.0	NIL							
		2.5: Abrupt change to Quartz-Sulfide (P). Contact 5 2	1.5	866B	6.0	7.5	1.5	0.58	0.48	8.91			1.06	PbZn	
		broken ground. 15 4	1.5	867B	7.5	9.0	1.5	0.55	1.03	7.20			1.58	PbZn	
2.5	5.0	QUARTZ-SULPHIDE (P). Broken, blocky core. 10 3	0.8	868B	9.0	10.5	1.5	0.75	1.25	10.97					
		F$_2$ = 75-85°; F$_1$ = 0-5°. Series of small F$_1$ fold nose	0.9		10.5	12.0	1.5	NIL							
		closures. 30 8	1.5	869B	12.0	13.5	1.5	3.40	6.86	61.37			5.1	10.29	92.0
		5.0: Sharp clean contact with Bleached Sericite 5 1	0.4		13.5	15.2	1.7								
		Phyllite (Sb). Contact = 80°.		W.Av.	12.0	16.5	4.5	1.13	2.26						
5.0	6.0	BLEACHED SERICITE PHYLLITE (Sb). Competent. Buff1		W.Av.	6.0	9.0	3.0	1.32	PbZn						
		Foliation = 80°.													
		6.0: Sharp clean contact with quartz-sulfide = 70°.													
6.0	12.2	QUARTZ-SULFIDE (P). Competent. Has short bleached sericite													
		phyllite intervals = 4cm. long @ 6.5-7.0. Foliation = 85-90°													
		F$_1$ = 0-5°.													

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Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		10.7-11.3: FAULT. Sulfide fragments;grains mixed with qtz/													
		phyllite set in white sticky gouge.													
		12.2: Abrupt change to Mineralized Graphitic Phyllite.													
		Contact broken ground.													
12.2	14.0	MINERALIZED GRAPHITIC PHYLLITE (PG). Competent. Foliation													
		F_2 = 70-75°; F_1 = 10-15°.													
		14.0: Abrupt change to Mineralized Bleached Sericite													
		Phyllite (P-Sb). Contact = 75°.													
14.0	15.2	MINERALIZED BLEACHED SERICITE PHYLLITE (P-Sb). Broken,													
		flakey. Foliation = 70°. Mineralization weak in form of													
		thin laminae. Low core recovery = 0.3/1.2													
		15.2: Introduction of chlorite and trace calcite. Tran-													
		sition gradual. Decrease in sulfide occurrence.													
15.2	23.2	CHLORITIC BLEACHED SERICITE PHYLLITE W/TRACE CALCITE (Sbc+K).													
		Competent. Has intervals of quartz-sulfides @ 18.5- 3_1	7.4		15.2	23.2	8.0								
		18.7; 20.5-21. Buff with green stripes/spots. Foliation =													
		75-80°; F_1 = 0-10°.													
		23.2: Abrupt change to quartz-sulfide (P). Contact sharp =													
		70° and marked by buff bleached sericite phyllite with													
		fuchsite.													

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Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
23.2	50.5	QUARTZ-SULFIDE (P). Competent. 20 7	1.5	870B	23.2	24.8	1.6	2.50	3.66	38.40			4.0	5.85	61.44
		F = 80-85°; F = 0-5°. 1 NIL	1.3		24.8	26.1	1.3								
		2 1 Sulfides in both foliation. 20 7	1.5	871B	26.1	27.6	1.5	1.80	2.60	27.43			2.70	3.90	41.15
		24.8-26.1: Chloritic unit. Green and white stripes. 20 8	1.4	872B	27.6	29.1	1.5	1.55	3.15	25.37			2.33	4.73	38.06
		Competent. F = 85-90°; F = 0-5°. 20 5	1.5	873B	29.1	30.6	1.5	0.48	0.95	7.20			1.43	PbZn	
		2 1 Contacts sharp and clean = 85°. 15 4	1.5	874B	30.6	32.1	1.5	0.65	1.08	12.00			1.73	PbZn	
		33.7-35.6: Mineralized Bleached Sericite interval. 25 6	1.5	875B	32.1	33.6	1.5	0.78	1.23	10.97			2.01	PbZn	
		Competent. Silvery white to buff. 15 6	1.3	876B	33.6	35.1	1.5	0.40	0.78	5.14			1.18	PbZn	
		F = 80-85°; F = 0-10°. 15 4	1.4	877B	35.1	36.6	1.5	0.60	1.23	8.91			1.83	PbZn	
		2 1 Contacts = 80°. 10 5	2.8	878B	36.6	39.6	3.0	0.85	1.28	12.00			2.13		
		39.6-41.1: Alternating intervals of quartz-sulfide 10 3	2.5	879B	39.6	42.6	3.0	0.65	0.90	8.91			1.55	PbZn	
		and bleached sericite phyllite (P-Sb). 15 4	3.0	880B	42.6	45.6	3.0	0.65	1.20	9.94			1.85	PbZn	
		Each interval = 20cm. Sharp contacts = 15 4	3.0	881B	45.6	48.6	3.0	0.88	1.23	12.00					
		80°. Bleached unit. Buff w/fuchsite, 2 Tr.	1.9		48.6	50.5	1.9								
		barren.													
		47.5-48.8: Graphite as laminae alternating with quartz-		W.Av.	26.1	29.1	3.0	1.68	2.88	26.40			5.03	8.63	79.21
		sulphide laminae.		W.Av.	29.1	45.6	16.5	1.75	PbZn				28.88	PbZn	
		49-50.5: Chloritic Bleached Sericite Phyllite (Sbc).		W.Av.	23.2	29.1	5.9	1.53	2.45						
		Competent. White/green stripe with buff ground-													
		mass. Foliation = 80-85°.													
		50.5: Change to Mineralized Graphitic Phyllite (PG).													
		Contact abrupt, broken ground.													

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Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
50.5	57.9	MINERALIZED GRAPHITIC PHYLLITE (PG). Competent. 35 8	0.9	882B	50.5	52.0	1.5	2.05	2.65	29.14					
		F = 75-85°; F = 0-10°. 35 12	1.5	883B	52.0	53.5	1.5	5.78	8.93	87.77			8.67	13.40	131.66
		Prominent sulfide bands in F_2 as compared with F_1. 30 15	1.5	884B	53.5	55.0	1.5	3.88	8.85	65.49			5.82	13.28	98.24
		Series of small F_2 fold nose closure. 30 15	1.5	885B	55.0	56.5	1.5	4.70	11.84	71.66			7.05	17.76	107.49
		57.9: Abrupt change to Massive Sulfide (M). Contact F_1 35 12	1.5	886B	56.5	58.0	1.5	3.50	7.77	57.60			5.25	11.66	86.4
		broken ground. 70 6	1.3	887B	58.0	59.3	1.3	9.86	12.34	140.2			12.82	16.04	182.30
57.9	59.3	MASSIVE SULFIDES-STRUCTURELESS AND BRECCIATED VARIETIES (M +	4.6		59.3	64.2	4.9								
		MXk + s). Competent. Breccia @ 58.4-59.3 has angular													
		sulfide fragments Ø = 1mm-1cm. well cemented by $CaCO_3$, S 0		W.Av.	52.0	55.0	3.0	4.83	8.89	76.63			14.49	26.68	229.90
		and in some part by finer grain sulfides.		W.Av.	52.0	59.3	7.3	5.43	9.88	83.03			39.61	72.14	606.09
		59.3: Sharp clean change to Graphitic Phyllite (G). Contact													
		marked by 5cm. long Bleached Sericite Phyllite.													
		Plane = 50°.													
59.3	64.2	GRAPHITIC PHYLLITE (G). Very fissile breaking into poker													
		chips. F_2 = 85-90°; F_1 = 0-5°.													
		64.0: Shear.													
		64.2: Abrupt change to Massive Sulfide (M) = 45°.		W.Av.	64.2	67.4	3.2	9.10	14.67	123.1			29.12	46.93	393.89
64.2	67.4	MASSIVE SULFIDES, BANDED AND BARITE-IN-GROUNDMASS VARIETIES													
		(MB+Mb). Competent. Compositional banding sulfides/ 70 12	1.6	888B	64.2	65.8	1.6	7.90	14.06	110.1			12.64	22.50	176.10
		ba. = 30°. 70 10	1.6	889B	65.8	67.4	1.6	10.30	15.27	136.1			16.48	24.43	217.79
		66-66.3: Bleached Sericite Phyllite (Sb). Competent. Has													
		prominent fuchsite laminae. F_2 = 65°; F_1 = 10°.													

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Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		Contacts sharp and clean = 75°.													
		67.4: Abrupt change to Graphitic Phyllite (G). Contact													
		broken ground.													
67.4	70.1	GRAPHITIC PHYLLITE (G). Fissile, easily breaking into poker	0.8		67.4	70.1	2.7								
		chips. F_2 = 60°; F_1 = 20°. Clots of Py in F_1 = 1%.													
		68.6-70.1: Pebbly core. Extreme poor recovery. No gougey													
		material noted - 0.3/1.5 recovery.													
		70.1: Abrupt change to Broad bands of Banded Sulfides and													
		Bleached Sericite Phyllite (MB-Sb).													
70.1	71.0	ALTERNATING BAND OF BANDED MASSIVE SULFIDES (MB) & BLEACHED													
		SERICITE PHYLLITE (Sb). Competent. Compositional 65 10	0.9	890B	70.1	71.0	0.9	8.35	11.48	112.1					
		band Py/Sph-Pb = 35-40°; Sulfides/bleached sericite = 10-20°													
		with wavy but sharp contacts. Po band @ 70.9-71.0.													
		71.0: Abrupt change to Graphitic Phyllite (G). Contact													
		broken ground.													
71.0	77.0	GRAPHITIC PHYLLITE (G). Competent. Foliation varying:													
		71-74: F_2 = 25-30°; F_1 = 0-5°.													
		75-77: F_2 = 40-45°; F_1 = 40-45° (oppisite dip direction).													
		Sporadic blebs of Po.													
		77.0: Gradual change to Sericite Phyllite (S).													
77.0	82.3	SERICITE PHYLLITE (S). Competent. Gray colour.													
		F_2 = 55°; F_1 = 10-15°. Sporadic Po clots w/quartz stringers.													

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Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		82.3: Gradual increase in calcite. Rx becoming Calcitic													
		Sericite Phyllite unit (SK).													
82.3	98.0	CALCITIC SERICITE PHYLLITE (SK). Competent. F_1 = 50-55°;	15.5		82.3	98.0	15.7								
		F_2 = 5-15° marked by $CaCO_3$. Trace chlorite @ 87-87.1,													
		91.5-91.6.													
		98.0: Sharp contact with Quartz-Sulfide (P) = 80°.													
98.0	100.6	QUARTZ-SULFIDE (P). Competent. F_1 = 70°; 15 8	2.6	891B	98	100.6	2.6	1.80	2.55	26.40					
		F_2 = sub-parallel to F_1 @ 99.1-99.5 then @ 99.7-100.6 F_2													
		appear to be 0° with series of small fold nose closure.													
		NOTE: This run is characterized by Bleached Sericite inter-													
		vals that has regular foliation 75°. Contacts are													
		clean and sharp = 70-75°.													
		100.6: Sharp clean contact with Calcitic Sericite Phyllite													
		(SK). Contact marked by 5cm. Bleached Sericite.													
		Plane = 45°.													
100.6	108.5	CALCITIC SERICITE PHYLLITE (SK). Competent. F_1 = 80-85°;	7.9		100.6	108.5	7.9								
		F_2 = 0-10°. Calcite in groundmass and also marking F_1.													
		108.5: Abrupt change to Quartz-Sulfide (P) = 85°.													
108.5	115.0	QUARTZ-SULFIDE (P). Competent. Foliation = 85-90°; 15 3	2.9	892B	108.5	111.5	3.0	1.13	1.10	15.09					
		F_1 = 0-10°. Sulfides evenly distributed in foliation 30 4	1.5	893B	111.5	113.0	1.5	2.33	3.10	32.23			3.5	4.65	48.35
		plane. Faint Sph/Py--compositional banding in wide 15 2	3.0	894B	113.0	116.0	3.0	1.23	1.40	18.17			1.85	2.10	27.26
		sulfide zone = 80°. 15 4	3.0	895B	116.0	119.0	3.0	1.00	1.58	15.09					

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Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		Po/Mgtt erratically distributed as blebs and thin 2 Tr.	3.7		119.0	122.8	3.8								
		laminae.													
		115.0: Gradual change to Mineralized Graphitic Phyllite (PG)													
115.0	119.0	MINERALIZED GRAPHITIC PHYLLITE (PG). Competent. F_2 = 80°;		W.Av.	113.0	119.0	6.0	2.61	PbZn						
		F_1 = 0-5° with series of small F_1 fold noses.		W.Av.	111.5	114.5	3.0	1.78	2.25	25.2			5.35	6.75	75.61
		119.0: Sharp clean contact with Chloritic-Calcitic Bleached													
		Sericite unit = 85°.													
119.0	122.8	CHLORITIC-CALCITIC BLEACHED SERICITE PHYLLITE (Sbc-K).													
		Competent. White with green stripes. Foliation = 85-90°;													
		F_1 = 0-5°. Weak mineralization.													
		122.8: Sharp clean change to Quartz-Sulfide (P). Contact													
		plane = 80°.													
122.8	136.3	QUARTZ-SULFIDE (P). Competent. Foliation F_2 = 80°; 40 4	3.0	896B	122.8	125.8	3.0	1.50	1.95	25.37					
		F_2 = 0-10°. Series of small F_1 fold nose closure. 35 3	3.0	897B	125.8	128.8	3.0	0.83	0.80	12.00			1.63	PbZn	
		Clots of Po erratically distributed in asso. w/Py. 20 2	3.0	898B	128.8	131.8	3.0	0.13	0.18	5.14			0.31	PbZn	
		Sulfides in both foliation. 25 3	3.0	899B	131.8	134.8	3.0	0.17	0.15	5.14			0.32	PbZn	
		Trace G in groundmass. 25 4	1.5	900B	134.8	136.3	1.5	0.98	1.28	14.06					
		136.3: Gradual increase of mineralization. Rx be- 35 8	1.5	901B	136.3	137.8	1.5	3.85	5.00	47.31					
		coming banded sulfides unit (MB). 10 2	1.5	902B	137.8	139.3	1.5	0.45	0.63	8.32					
136.3	145.5	MASSIVE BANDED SULFIDES (MB) WITH BARITE-IN-GROUNDMASS 25 5	1.5	903B	139.3	140.8	1.5	2.35	3.05	35.31					
		VARIETY (Mb). Competent. Compositional banding = 80° 70 10	1.5	904B	140.8	142.3	1.5	5.00	7.02	63.43			7.50	10.53	95.15
		60 8	1.5	905B	142.3	143.8	1.5	4.23	5.45	70.63			6.35	8.18	105.95

LOGGED BY _____ D.D.H. Nº 76-U-184 PAGE 8

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		138.4-140.5: Graphite in groundmass (PG). Sulfides as 2 Tr.	1.7		143.8	145.5	1.7								
		thin laminae. F_2 = 80-85°; F_1 = 0-10°.													
		140.5-143.5: Barite in groundmass (Mb). Compositional		W.Av.	125.8	134.8	9.0	0.75	PbZn				6.78	PbZn	
		banding sulfides/ba = 75-80°.		W.Av.	140.8	143.8	3.0	4.62	6.24	67.03			13.85	18.71	201.10
		143.5-145.5: Transitional zone - decreasing sulfide. Rx is		W.Av.	136.3	140.8	4.5	2.22	2.89	30.3					
		weakly mineralized quartz-sulfide (P).													
		145.5: Sharp contact with Calcitic sericite phyllite (SK).													
		Contact marked by 10cm. chloritic-calcitic bleached													
		sericite phyllite (Sbc+K). Plane = 80-85°.													
145.5	167.6	CALCITIC SERICITE PHYLLITE (SK). Broken, blocky core.	21.8		145.5	167.6	22.1								
		Foliation = 75-80°; F_1 = 0-10°. Calcite in both groundmass													
		and F_1.													
	167.6	END OF HOLE.													

DIAMOND DRILL RECORD

LOGGED BY JIM PAXTON D.D.H. Nº 76-U-185 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE 10,600.75 2N STARTED SEPTEMBER 8, 1976

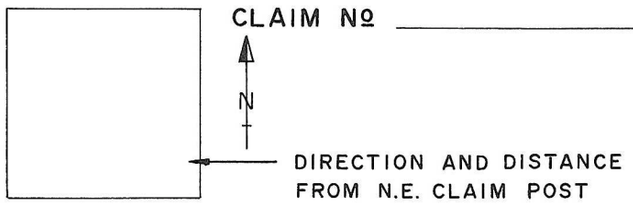
DEPARTURE 7,723.40 67W COMPLETED SEPTEMBER 9, 1976

ELEVATION 1,175.36 PROPOSED DEPTH

ULTIMATE DEPTH 91.4m

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR	224° 29'	+1° 36'

CLAIM Nº



DIRECTION AND DISTANCE FROM N.E. CLAIM POST

Interval From	Interval To	DESCRIPTION	Py	PbZ	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	1.5	CORE GROUND AT COLLAR.															
1.5	3.0	SERICITE PHYLLITE (S).			0.7/1.5												
		Soft, silvery, friable, gray sericite. F (?) = 0-20°.															
			15	5	1.3/1.5	B190	6.1	7.6	1.5	1.23	1.85	20.23					
3.0	5.5	BLEACHED QUARTZ SERICITE (Sb). Rec. 2.0/2.5	50	15	1.3/1.5	B191	7.6	9.1	1.5	6.43	14.02	93.94			9.65	21.03	140.91
		Flecks of green mariposite.	50	20	1.6/1.6	B192	9.1	10.7	1.6	6.83	15.27	110.1			10.93	24.43	176.10
		Irregular bands of sulphides - trace?	70	20	1.5/1.5	B193	10.7	12.2	1.5	5.86	11.84	66.51			8.79	17.76	99.77
			70	20	1.5/1.5	B194	12.2	13.7	1.5	7.81	15.99	84.69			11.72	23.99	127.04
5.5	7.4	BRECCIA (MXg).	70	20	1.5/1.5	B195	13.7	15.2	1.5	6.43	11.59	84.69			9.65	17.39	127.04
		Angular fragments of sulphide rock in a black	70	30	1.6/1.6	B196	15.2	16.8	1.6	8.11	17.43	104.9			12.98	27.89	167.87
		graphitic groundmass.	70	30	1.5/1.5	B197	16.8	18.3	1.5	10.47	26.45	172.5			15.71	39.68	258.69
			65	20	1.5/1.5	B198	18.3	19.8	1.5	6.23	17.52	90.86			9.35	26.28	136.29
7.4	10.7	QUARTZ SULPHIDE (P).	65	20	0.7/0.7	B199	19.8	20.5	0.7	9.69	20.65	141.3			6.78	14.46	98.88
		Bands of quartz-sericite in brown sphalerite-pyrite															
		mixture at 20°.				W.Av.	7.6	20.5	12.9	7.41	16.50	103.3			95.56	212.91	1332.6

LOGGED BY _____ D.D.H. Nº 76-U-185 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
10.7	20.5	MASSIVE SULPHIDE (M) (MB+MV).													
		Brown to red brown colour. Occasional streaky composition													
		banding at 45°. Local small vuggy sections (MV). Contacts													
		sharp 45° at 75° to F_2. F_2 @ 30° to CA.													
20.5	24.4	BLEACHED SERICITE PHYLLITE (Sb) to (S).	3.5/3.9												
		Grades to silvery friable sericite similar to 1.5-3.0.													
		F_2 = 30°.													
24.4	33.0	FAULT ZONE.	6.0/8.6												
		24.4-25.9: White gouge.													
		25.9-29.0: Dark gray gouge.													
		29.0-30.0: Bleached sericite (Sb) and gouge.													
		30.0-33.0: Graphitic Phyllite (G) plus black gouge.													
33.0	36.5	QUARTZ GRAPHITE PHYLLITE (G).	3.5/3.5												
		Wavey F_2 0° to 30° to Core Axis.													
36.5	39.6	QUARTZ SERICITE PHYLLITE (S).	3.0/3.1												
		F_2 at 0-10°.													

LOGGED BY _____ D.D.H. Nº 76-U-185 PAGE 3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
39.6	41.3	QUARTZ GRAPHITE PHYLLITE (G).	1.7/1.7												
		Drag folded F_1 quartz bands at 0° and 30°. F_2 is axial to these folds at 30-45°.													
41.3	43.1	QUARTZ VEIN.	1.8/1.8												
		Scattered veinlets of galena. Contacts at 45°.													
43.1	57.9	QUARTZ SERICITE GRAPHITE PHYLLITE (S)(g).	13.0/14.8												
		F_2 = 0°.													
		49.2-50.3: Fault gouge.													
		53.3-54.9: Fault gouge. Washed away.													
57.9	58.6	MASSIVE SULPHIDE (M). 70 15	0.7/0.7	B301	57.9	58.6	0.7	5.50	9.70	80.57					
		Very faint banding at 45°.													
58.6	61.0	BRECCIA.	2.4/2.4												
		Quartz, pyrite, in sericite plus chalcopyrite.													
61.0	80.0	QUARTZ SERICITE GRAPHITE PHYLLITE (Sg).	18.0/19.0												
		Strong F_2 at 10°. F_1 dragfolded axially to F_2.													

LOGGED BY _____ D.D.H. Nº 76-U-185 PAGE 4

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
80.0	91.4	CHLORITE CALCITE PHYLLITE (SK).	11.0/11.4												
		Pale gray colour. Interbanded silvery sericite, flakey													
		green chlorite and laminae of white quartz-calcite drag													
		folded as in previous section and cut by F_2 @ 0-20°. Also													
		numerous tension fractures and veinlets at right angles													
		to F_2.													
	91.4	END OF HOLE.													

DIAMOND DRILL RECORD

LOGGED BY ALEXANDER YOUNG-PO D.D.H. Nº 76-U-186 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE 10,980.569 84W STARTED SEPTEMBER 30, 1976

DEPARTURE 7.379.747 3N+14m COMPLETED OCTOBER 1, 1976

ELEVATION 1,103.110 PROPOSED DEPTH 200' - 61m

ULTIMATE DEPTH 200' - 61m

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR	228° 15'	72° 27'

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 87.3%

Interval From	Interval To	DESCRIPTION	Py	PbZ	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	11.5	MINERALIZED GRAPHITIC PHYLLITE (PG). Broken, blocky	10	3	1.5	906B	0	3.0	3.0	0.38	0.53	6.17					
		core. Foliation = 75-80°; F_1 = 0-10°.	10	2	2.8	907B	3.0	6.0	3.0	0.98	1.15	14.06					
		Sulfides weakly distributed in both foliation.	15	2	2.7	908B	6.0	9.0	3.0	0.58	0.98	8.91					
		9.6-10.6: Chloritic bleached sericite phyllite inter-	10	3	2.1	909B	9.0	11.5	2.5	1.43	2.90	21.26			3.58	7.25	53.15
		val (Sbc). White to buff with green stripes/spots															
		Foliation = 75°. 1st contact = 70°, 2nd = 75°.				W.Av.	8.5	11.5	3.0	1.29	2.58	19.2			3.87	7.74	57.61
		11.5: Abrupt change to Graphitic Phyllite (G). Contact															
		broken ground.															
11.5	17.0	GRAPHITIC PHYLLITE (G). Broken, blocky core, very fissile			5.2		11.5	17.0	5.5								
		easily breaking into poker chips. F_2 = 80-90°; F_1 = 0-15°.															
		17.0: Sharp clean contact with Bleached Sericite Phyllite															
		(Sb). Plane = 70°.															
17.0	19.8	BLEACHED SERICITE PHYLLITE. Soft, bloken core. Earthy white			2.3		17.0	19.8	2.8								
		to silvery gray. Foliation = 65-75°; F_1 = 0-10°.															
		18.5: Shear.															
		19.8: Abrupt change to Sericite Phyllite (S). Contact															
		broken ground.															

LOGGED BY _____ D.D.H. Nº 76-U-186 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
19.8	22.9	SERICITE PHYLLITE (S). Light gray. Broken, soft blocky	3.0		19.8	22.9	3.1								
		core. Foliation = 70-75°.													
		21.0: Shear.													
		22.9: Introduction of calcite in groundmass. Rx becoming													
		calcitic sericite phyllite (SK).													
22.9	24.5	CALCITIC-SERICITE PHYLLITE (SK). Broken, blocky core.	1.4		22.9	24.5	1.6								
		Foliation = 80-85°; F_1 not well defined. Calcite in ground-													
		mass and as thin laminae.													
		24.4: Rx gradually changing to Chloritic-calcitic sericite													
		phyllite (SK+C).													
24.5	48.5	CHLORITIC-CALCITIC SERICITE PHYLLITE (SK+C). Blocky to	20.3		24.5	48.5	24.0								
		flakey. Greenish colour in groundmass with white stripe.													
		Foliation = 80-85°; F_1 = 0-10°.													
		48.5: Decrease in Chlorite. Rx reverts back to Calcitic													
		sericite phyllite (SK).													
48.5	61.0	CALCITIC SERICITE PHYLLITE (SK). Blocky core.	12.0		48.5	61.0	12.5								
		F_2 = 85-90°; F_1 = 0-5°.													
		51.8-55.0: Chloritic F_2 = 80-85°; F_1 = 0-10°.													
	61.0	END OF HOLE.													

Calcn. checked Jan 22/77 calculations ✓ HG

DIAMOND DRILL RECORD

LOGGED BY J. PAXTON

PROPERTY Grum Joint Venture

D.D.H. No. U-187 PAGE 1 of 3

LATITUDE 2N BEARING OF HOLE approx 226.5° STARTED Sept 9/76

CLAIM No.

DEPARTURE 67W DIP OF HOLE -35°35' -45 COMPLETED Sept 16/76

DIRECTION AND DISTANCE FROM NE. CLAIM POST

ELEVATION DIP TESTS None DEPTH Proposed: Ultimate: 91.4

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION			Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0.0	2.2	Core Missing															
2.2	5.0	Sericite Phyllite (S)			3.5/3.8												
		Dark grey friable sericite															
		F_2 = 0°-30°															
		3.0-3.2 Grey gouge.															
					4.5/4.5												
5.0	9.5	Bleached Quartz Sericite (Sb)	Py	Pb-Zn													
		Irregular masses of quartz	15	Tr	1.5/1.5		7.5	9.1	1.5								
		and of pyrite.	15	Tr	1.5/1.6		9.1	10.7	1.6								
			15	Tr	0.9/0.9		10.7	11.6	0.9								
9.5	51.0	Graphitic Quartz Sulphide	15	Tr	0.6/0.6		11.6	12.2	0.6								
		Graphitic phyllite interbanded with	15	Tr	1.3/1.5		12.2	13.7	1.5								
		coarse grained quartz-sulphide.	15	Tr	1.2/1.5		13.7	15.2	1.5								
		10.5 F_1 = 30° F_2 = 30°	15	Tr	1.3/1.6		15.2	16.8	1.6								
		16.0 F_1 = 90° F_2 = 30°	25	2	1.4/1.5	B302	16.8	18.3	1.5	0.10	0.70	4.11			0.80	Pb+Zn	
		20.0 F_1 Lost F_2 = 40°	40	3	1.3/1.5	B303	18.3	19.8	1.5	0.43	0.78	15.09			1.21	"	
		27.0 F_1 Lost F_2 = 45°															

LOGGED BY _____ D.D.H. Nº V-187 PAGE 2 of 3

Interval From	Interval To	DESCRIPTION	Py	Pb-Zn	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		Past 18.0 containg interbands	30	2	1.3/1.5	B304	19.8	21.3	1.5	1.48	2.85	20.23	✓		2.22	4.28	30.35
		of massive sulphide 3-5 cm	40	2	1.5/1.5	B305	21.3	22.9	1.6	3.05	3.55	40.46	✓		4.88	5.68	64.74
		32.1-33.0 Breccia PX_p	40	2	1.5/1.5	B306	22.9	24.4	1.5	1.23	1.33	17.14			2.56	Pb Zn	
		35.0- F_1 = 90 F_2 not visible	40	3	1.4/1.5	B307	24.4	25.9	1.5	1.10	1.48	15.09			2.58	"	
		39.0 F_1 = 20 F_2 = 30 @ 50° to F_1	40	3	1.4/1.5	B308	25.9	27.4	1.5	1.93	1.85	20.23			3.78	"	
		42.0 F_1 = 30 F_2 = 30	30	3	1.5/1.5	B309	27.4	29.0	1.6	0.98	2.05	31.20			3.03	"	
		Scattered Cpy throughout.	30	2	1.5/1.5	B310	29.0	30.5	1.5	0.60	1.33	8.23	✓				
		Traces of magnetite locally	25	Tr	0.8/1.5	B311	30.5	32.0	1.5	1.63	2.93	22.29	✓				
			40	3	1.5/1.5	B312	32.0	33.5	1.5	1.03	1.68	14.06	✓				
51.0	55.9	Breccia MX_M	30	2	1.6/1.6	B313	33.5	35.1	1.6	0.33	1.25	9.94	✓				
		Angular fragments of phyllite	20	Tr	1.5/1.5		35.1	36.6	1.5								
		and sulphides in a sulphide	20	Tr	1.5/1.5		36.6	38.1	1.5								
		ground mass	20	Tr	1.5/1.5		38.1	39.6	1.5								
			20	Tr	1.5/1.5		39.6	41.1	1.5								
55.9	64.2	Fault Gouge.	20	Tr	1.6/1.6		41.1	42.7	1.6								
		Dark grey. Plastic	30	Tr	1.5/1.5		42.7	44.2	1.5								
			30	Tr	1.5/1.5		44.2	45.7	1.5								
			40	2	1.5/1.5	B314	45.7	47.2	1.5	0.47	4.90	7.20	✓				
			40	2	1.6/1.6	B315	47.2	48.8	1.6	0.05	1.33	5.14			1.38	Pb Zn	
			40	2	1.5/1.5	B316	48.8	50.3	1.5	0.03	0.93	5.14			0.96		
			60	3	1.3/1.5	B317	50.3	51.8	1.5	0.04	2.35	9.94			2.39		

LOGGED BY _____ D.D.H. Nº U-187 PAGE 3 of 3

Interval From	Interval To	DESCRIPTION	Py	Pb Zn	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
64.2	72.0	Quartz Sericite Calcite Phyllite (S_K)	70	5	0.5/1.5	B318	51.8	53.3	1.5	0.04	5.00	8.23			5.04	Pb Zn	
		Dark grey color.	70	5	1.4/1.6	B319	53.3	54.9	1.6	0.10	2.13	8.91		2.23	2.23	"	
		Folded F_1 subparallel to F_2	50	5	1.5/1.5	B320	54.9	56.4	1.5	0.09	2.08	12.00		2.17	2.17	"	
		F_2 = 0°-30°	60	5	1.2/1.5	B321	56.4	57.9	1.5	0.13	1.95	10.97		2.08	2.08	"	
			70	8	0.9/1.5	B322	57.9	59.4	1.5	0.28	1.80	8.91		2.08	2.08	"	
72.0	91.4	Quartz Chlorite Calcite Phyllite (C_K)	80	8	0.9/0.9	B323	59.4	60.3	0.9	1.95	3.98	42.51	✓				
		Grey green color.															
		F_2 = 15° Local short sections of															
		graphitic phyllite				WT. AV.	16.8	19.8	3.0	1.01	Pb Zn						
						"	19.8	22.9	3.1	2.29	3.21	30.7			7.10	9.96	95.09
		Drag folded F_2 noted toward				"	22.9	29.0	6.1	2.99	"						
		the end of section				"	47.2	50.3	3.1	1.18	"						
						"	50.3	59.4	9.1	2.66	"						
	91.4	End of hole				"	22.9	33.5	10.6	3.02	PZ.						

DIAMOND DRILL RECORD

LOGGED BY ALEXANDER YOUNG-PO D.D.H. Nº 76-U-188 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE 10,933.918mN 82W STARTED OCTOBER 3, 1976

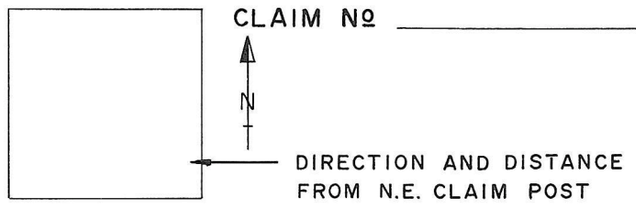
DEPARTURE 7,412.987m 3N COMPLETED OCTOBER 4, 1976

ELEVATION 1.106.243 PROPOSED DEPTH

ULTIMATE DEPTH 275 - 83.8m

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR	43° 06'	-0° 23'

CLAIM Nº



DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 95.6%

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	1.5	QUARTZ-SULFIDE (P). Broken, pebbly core. Extremely low	0.05		0	1.5	1.5	5 PZ,	est.						
		core recovery. No sample taken. PY: 30 PBZN: 5%.													
1.5	3.0	BLEACHED SERICITE PHYLLITE WITH CHLORITIC INTERVAL (Sbc).	1.5		1.5	3.0	1.5								
		Competent. Light gray to silvery white and with green stripe													
		/spots. Foliation F_2 = 15-20°; F_1 = 65° sub-perpendicular to													
		F_2. Broad F_2 fold nose closure.													
		3.0: Sharp clean contact with weakly mineralized Quartz-													
		Sericite-Sulfide Phyllite (S-P).		W.Av.	3.0	9.0	6.0	2.65	PbZn				15.87	PbZn	
				W.Av.	15.2	18.2	3.0	1.78	3.32	26.75			5.34	9.95	80.24
3.0	15.2	WEAKLY MINERALIZED QUARTZ-SERICITE-SULFIDE PHYLLITE (S-P).													
		Competent. Foliation F_2 = 35-40°; F_1 perpendicular to F_2.													
		Sulfide as thin widely spaced and erratically distribu- 10 2	3.0	945B	3.0	6.0	3.0	0.98	2.10	13.03			3.08	PbZn	
		ted laminae. Clots/blebs of Po. 5 3	3.0	946B	6.0	9.0	3.0	0.73	1.48	8.91			2.21	PbZn	
		15.2: Gradual change to Quartz-Sulfide with decrease 5 1	3.0		9.0	12.0	3.0	1 PZ,	est.						
		in Sericite and increase in sulfides. 5 1	3.0		12.0	15.2	3.2								
15.2	22.8	QUARTZ-SULFIDE (P). Competent. Foliation F = 25-30°; 5 3	1.3	947B	15.2	16.7	1.5	1.38	2.98	21.26			2.07	4.47	31.89

LOGGED BY _____ D.D.H. Nº 76-U-188 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		F_1 is perpendicular to F_2. 5 9	1.4	948B	16.7	18.2	1.5	2.18	3.65	32.23			3.27	5.48	48.35
		Sulfides evenly distributed. Zn + Pb > Py. 10 12	1.3	949B	18.2	19.7	1.5	2.78	5.00	40.46			4.17	7.50	60.69
		20.0-20.2: Bleached Sericite interval (Sb). Light 8 12	1.4	950B	19.7	21.2	1.5	2.28	4.05	33.26			3.42	6.08	49.89
		gray to buff. Contacts abrupt - broken 15 7	1.5	991B	21.2	22.7	1.5	1.78	3.33	27.43					
		ground. 10 7	1.5	992B	22.7	24.2	1.5	3.58	5.90	50.40					
		22.8: Gradual change to Mineralized Graphitic Phyll. 10 3	2.8	993B	24.2	27.2	3.0	0.45	0.85	7.20			1.30	PbZn	
		(PG) with introduction of graphite as thin 12 3	3.0	994B	27.2	30.2	3.0	0.50	0.63	8.23			1.13	PbZn	
		laminae - graphite = 15%. 15 3	3.0	995B	30.2	33.2	3.0	0.35	0.70	9.94			1.05	PbZn	
22.8	32.2	MINERALIZED GRAPHITIC PHYLLITE (PG). Competent. 15 4	3.0	996B	33.2	36.2	3.0	0.68	1.30	19.20			1.98	PbZn	
		F_2 = 15-20°; F_1 = 0-5° @ 22.9-29.0. 15 4	3.0	997B	36.2	39.2	3.0	0.40	0.93	8.23			1.33	PbZn	
		29-33.0: F_2 = 25-30°; F_1 = 80-85°. 10 4	3.0	998B	39.2	42.2	3.0	0.93	1.68	12.00			2.79	5.04	36.00
		Sulfides evenly distributed in both foliations. 30 6	2.8	999B	42.2	45.0	2.8	1.88	3.75	31.20			5.26	10.50	8.36
		32.2: Gradual change to Quartz-Sulfide.													
32.2	41.0	QUARTZ-SULFIDE (P). Competent. Very siliceous groundmass.		W.Av.	18.2	24.2	6.0	2.61	4.57	37.90			7.59	13.58	110.58
		F_2 = 15-20°; F_1 is perpendicular to F_2.		W.Av.	24.2	39.2	15.0	1.36	PbZn				20.37	PbZn	
		37-37.4: Bleached Sericite. Buff. Foliation = 25° F_1;		W.Av.	39.2	45.0	5.8	1.39	2.68	21.3			8.05	15.54	123.36
		F_2 is perpendicular to F_1. Both contacts gradual.		W.Av.	39.7	45.0	5.3	1.43	2.77	22.1			7.59	14.70	117.36
		41.1: Gradual change to Mineralized Graphitic Phyllite.													
41.0	45.0	MINERALIZED GRAPHITIC PHYLLITE (PG). Competent.													
		F_2 = 10-15°; F_1 is perpendicular to F_2 @ 41.1-44.													
		At 44.5 - F_2 is parallel to F_1 = 75°.													
		45.0: Abrupt change to Sericite Phyllite (S). Contact broken ground.													

LOGGED BY _____ D.D.H. Nº 76-U-188 PAGE 3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
45.0	83.8	SERICITE PHYLLITE (S). Competent. Foliation F_2 = 35-40°;	10.3		45.0	56.0	11.0								
		F_2 = 75-80° @ 45-49.													
		F_1 53.3-64.0: Foliation F_2 more regular = 40-45° with no distinct F noted.													
		F_1 55.3-56.0: Bleached Sericite Phyllite (Sb) with biotite laminae. Generally buff with brown-pinkish laminae. Foliation = 30°. Contacts gradual.													
		56-57.9: Quartz-Sulfide (P). Competent. F_2 = 45° 25 3 marked by sulfides. No distinct F_1.	1.9	1000B	56.0	57.9	1.9	0.68	0.90	8.91					
		68.6-68.9: F_2 = 40-45°; F_1 = 0-5°.	25.0		57.9	83.4	25.5								
		75.8-76.0: Bleached Sericite interval. Contacts - irregular Slow build-up in Bleached material with general = 10° trend following an open fissure.													
		83.4: F_2 = 25°; F_1/F_2 relationship not distinct, F_1 poorly developed.													
	83.4	END OF HOLE.													

calcs checked Jan. 27/77 JL Calculations ✓

DIAMOND DRILL RECORD

LOGGED BY J. Paxton

PROPERTY GRUM JOINT VENTURE

D.D.H. No. U-189 PAGE 1 of 5

LATITUDE 2N BEARING OF HOLE ≈ 51°28'31" 044° STARTED Sept 10/76

DEPARTURE 67W DIP OF HOLE ≈ -43°56' -45° COMPLETED Sept 12/76

ELEVATION ____ DIP TESTS None DEPTH Proposed: Ultimate: 123.4 m.

CLAIM No. ____

N ← DIRECTION AND DISTANCE FROM NE. CLAIM POST

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0.0	15.7	Quartz Sericite Chlorite Phyllite (Sc) Dark grey-green color F_1 destroyed. Strong F_2 at 45° Numerous irregular masses of quartz up to 30 cm. No calcite. Gouge 4.9-4.9	14.0/15.7												
15.7	17.0	Bleached Sericite (Sb) Occasional wisps of pyrite 16.5-16.8 Flecked with mariposite													
17.0	17.5	Quartz Chlorite Phyllite (Sc) Augen texture of quartz (10 mm) separated by large flakes of dark green chlorite. Foliation at 45°													

LOGGED BY _____ D.D.H. No U-189 PAGE 2 of 5

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
17.5	18.8	Bleached Siliceous Phyllite (S_s) Pale cream color. Scattered 1-5 mm bands of sulphides (5% Py)													
18.8	20.6	Bleached Sericite Phyllite (Sb_m) Kaolinized phyllite with numerous flecks of green manipposite													
20.6	25.9	Bleached Siliceous Phyllite (S_s) Scattered bands of pyrite (10%)													
25.9	27.4	Fault Gouge. Black & graphitic													
27.4	36.6	Bleached Siliceous Phyllite (S_s) Similar to previous													
36.6	43.0	Quartz Sulphide with Graphite (P_G) Contorted quartz sulphide and graphitic phyllite bands cut by F_2 at 60°. Grades into graphitic phyllite toward end of section. (Py: 15, Pb-Zn: 2)	1.5/1.5	B398	36.6	38.1	1.5	0.04	0.10	4.11			0.14	Pb-Zn	
			1.5/1.5	B399	38.1	39.6	1.5	0.04	0.05	3.09			0.09	"	
				WT. Av.	36.6	39.6	3.0	0.12	Pb-Zn						

LOGGED BY _____ D.D.H. No U-189 PAGE 3 of 5

Interval From	Interval To	DESCRIPTION	Py	Pb Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
43.0	46.0	Bleached Sericite Phyllite with Chlorite (Sc)															
		Pale green color. Earthy.															
		F_2 = 50°															
46.0	56.4	Quartz Sulphide with Graphite (Pc)															
		48.0 F_1 subparalled to F_2 at 50°															
		52.0 F_1 destroyed F_2 at 70°	15	1	1.2/1.2	B400	46.0	47.2	1.2	0.03	0.20	2.06			0.23	Pb Zn	
		53.5 F_1 0°-30° F_2 at 70°	15	2	1.6/1.6	B401	47.2	48.8	1.6	0.02	0.08	2.06			0.10	"	
			15	2	1.5/1.5	B402	48.8	50.3	1.5	0.05	0.20	3.09			0.25	"	
56.4	58.4	Massive Sulphide (M)	15	2	1.4/1.5	B403	50.3	51.8	1.5	0.05	0.15	3.09			0.20	"	
		Very fine grained. Numerous	10	1	1.4/1.5	B404	51.8	53.3	1.5	0.03	0.13	3.09			0.16	"	
		cracks and cavities lined with	15	2	1.3/1.6	B405	53.3	54.9	1.6	0.05	0.38	5.14			0.43	"	
		chert deposited by ground water	10	Tr	1.0/1.5	B406	54.9	56.4	1.5	0.01	0.50	1.03			0.51	"	
			70	10	1.8/2.0	B407	56.4	58.4	2.0	2.65	5.40	32.23			5.30	10.80	64.46
58.4	60.4	Quartz Sulphide with Graphite (Pc)															
							↓	↓									
60.4	61.0	Massive Sulphide (M)	70	30	1.3/2.0	B408	(58.4) 58.4	59.4 60.4	(1.0) 2.0	1.18	3.40	21.26			1.18 2.36	3.40 6.80	21.26 42.52
		Similar to 56.4-58.4	70	10	0.6/0.6	B409	60.4	61.0	0.6	1.05	1.80	25.37	✓				
			Nil	?	1.5/1.5	B410	61.0	62.5	1.5	0.18	1.10	3.09	✓				
61.0	62.5	Bleached Sericite (Sb)															
		Grey-brown color. No sulphide				WT. AV.	46.0	56.4	10.4	0.27	Pb Zn						
		Assay for secondary zinc minerals				"	56.4 58.4	60.4 59.4	4.0 3.0	1.92 2.16	4.4 4.73	26.75 28.6			7.66 6.48	17.60 14.20	106.98 85.72

LOGGED BY _____ D.D.H. Nº U-189 PAGE 4 of 5

Interval From	Interval To	DESCRIPTION	Py	Pb-Zn	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
62.5	72.2	Quartz Sericite Phyllite (S) Dark grey color. $F_2 = 80°$															
72.2	73.7	Bleached Quartz Sericite Phyllite (Sb) Several bands of massive pyrrholite with some sphalerite.				Wt.Av.	82.9	85.9	3.0	2.78	1.61	26.5	✓		8.33	4.83	79.61
						Wt.Av.	85.3	88.4	3.1	1.79	Pb-Zn						
						"	88.4	93.9	5.4	3.06	"						
						"	93.9	97.8	3.9	1.21	"						
73.7	77.7	Quartz Sericite Phyllite (S) Dark grey color $F_2 = 80°$				"	97.8 97.8	105.2 103.6	7.4 5.8	2.67 2.72	1.99 1.82	25.98 25.1		—	19.77 15.80	14.75 10.34	192.23 145.61
						"	103.6	106.7	3.1	3.44	3.75	47.72			10.65	11.64	147.93
						"	108.2	112.8	4.6	1.02	Pb-Zn						
77.7	78.6	Bleached Quartz Sericite Phyllite (Sb) Several bands of porous pyrite				"	114.3	123.4	9.1	0.41	"						
78.6	82.9 88.9	Quartz Graphite Phyllite (G) Black color. Traces of pyrite $F_2 = 85°$. 10cm of breccia and gouge at contact.															
82.9	97.0	Massive Sulphide (M)	Py	Pb-Zn													
		Locally brecciated (MXm)	80	10	2.4/2.4	B411	82.9	85.3	2.4	3.20	1.80	29.14	✓		7.68	4.32	69.94
		Much lost and ground core	80	10	2.0/2.2	B412	(85.3 85.3	85.9 87.5	(0.6) 2.2	1.08	0.85	16.11			0.65 1.93	0.51 Pb-Zn	9.67
			80	10	0.8/0.9	B413	87.5	88.4	0.9	0.55	0.90	14.06			1.45	"	
			80	10	1.5/1.5	B414	88.4	89.9	1.5	1.03	1.43	18.17			2.46	"	

LOGGED BY _____ D.D.H. Nº U-189 PAGE 5 of 5

Interval From	Interval To	DESCRIPTION	Py	PbZn	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
97.0	114.1	Massive Sulphide (MB)	80	10	0.7/0.9	B415	89.9	90.8	0.9	1.25	1.23	17.14			2.48	Pt Zn	
		Massive sulphide with streaky	80	10	1.9/2.1	B416	90.8	93.0	2.1	1.85	2.15	27.43			4.00	"	
		banding of chert, sphalerite	80	10	0.2/0.9	B417	93.0	93.9	0.9	1.05	1.43	12.00			2.48	"	
		and pyrite at 80° Locally	80	10	1.5/1.5	B418	93.9	95.4	1.5	0.40	0.38	8.23			0.78	"	
		grades into bleached quartz sulphide.	80	10	0.5/0.9	B419	95.4	96.3	0.9	0.53	0.85	5.14			1.38	"	
		Scattered blebs of magnetite	70	10	1.5/1.5	B420	96.3	97.8	1.5	0.55	0.98	6.17			1.53	"	
114.1	123.4	Bleached Quartz Sulphide (PSb)	60	12	1.6/2.5	B421	97.8	100.3	2.5	2.78	2.13	24.34			6.95	5.33	60.85
		Pale grey siliceous phyllite	60	12	1.4/1.5	B422	100.3	101.8	1.5	3.68	2.03	32.23			5.52	3.05	48.35
		with bands and streaks of	50	8	1.7/1.8	B423	101.8	103.6	1.8	1.85	1.20	20.23			3.33	2.16	36.41
		sulphide up to 20 cm.	70	12	1.6/1.6	B424	103.6	105.2	1.6	2.48	2.63	29.14		-	3.97	4.21	46.62
		Banding and foliation at 85°	70	15	1.5/1.5	B425	105.2	106.7	1.5	4.45	4.95	67.54			6.68	7.43	101.31
		Scattered blebs of chalcopyrite	50	8	1.5/1.5	B426	106.7	108.2	1.5	1.53	1.13	25.37	✓				
			70	12	1.5/1.5	B427	108.2	109.7	1.5	1.03	0.83	15.09			1.86	Pt Zn	
			70	15	1.6/1.6	B428	109.7	111.3	1.6	0.30	0.33	9.94			0.63	"	
			60	8	1.5/1.5	B429	111.3	112.8	1.5	0.25	0.35	9.94			0.60	"	
	123.4	End of hole	70	12	1.5/1.5	B430	112.8	114.3	1.5	2.03	2.65	36.34	✓				
			70	12	1.5/1.5	B431	114.3	115.8	1.5	0.38	0.45	7.20			0.83	"	
			30	6	1.5/1.5	B432	115.8	117.3	1.5	0.20	0.35	12.00			0.55	"	
			50	8	1.6/1.6	B433	117.3	118.9	1.6	0.10	0.20	5.14			0.30	"	
			30	6	1.5/1.5	B434	118.9	120.4	1.5	0.20	0.40	3.09			0.60	"	
			30	6	1.5/1.5	B435	120.4	121.9	1.5	0.05	0.05	1.03			0.10	"	
			30	6	1.5/1.5	B436	121.9	123.4	1.5	0.05	0.05	1.03			0.10	"	

Cont. next page

Calc'n checked Jan 18/77 [initials]   calculated ✓

DIAMOND DRILL RECORD

LOGGED BY [signature]

PROPERTY: GRUM JOINT VENTURE

D.D.H. No. 76-U-190   PAGE 1/4

	CO-ORDS	GRID				
LATITUDE*	10 932.854	82 W	BEARING OF HOLE	044*	STARTED	Oct. 4, 1976
DEPARTURE*	7411.116	3 N	DIP OF HOLE	-70*	COMPLETED	Oct. 6, 1976
ELEVATION*	1105.050		DIP TESTS	(see below)	DEPTH	Proposed: / Ultimate: 350' - 106.7

* Layout.

T. Pt.	AZIMUTH	DIP
COLLAR*	044	-70
73.1m	072	-81
103.6m	112	-87

CLAIM No.

DIRECTION AND DISTANCE FROM NE. CLAIM POST

TOTAL CORE RECOVERY: 96.2%

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Py	Zn+Pb	Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	4.26	CASING - NO CORE RECOVERED															
4.2	15.2	Qtz - sulfide (P). Competent siliceous grdmass.	15	6	2.6	007C	4.2	7.2	3.0	0.83	1.55	10.97			2.38	Pb+Zn	
		F2 ≈ 35~45° F1 ≈ 10~15°	20	6	2.9	008C	7.2	10.2	3.0	1.58	1.60	16.11			3.18	"	
		sulfides in both foliation.	15	9	3.0	009C	10.2	13.2	3.0	2.65	1.98	32.23			4.63	"	
		10.8 ~ 13.5 - (Mineralized) qtz-sulfide w/ bleached	10	4	2.0	010C	13.2	15.2	2.0	0.88	1.48	12.00			2.36	"	
		sericite laminae (P-Sb). Competent.															
		F2 ≈ 40° ; F1 ≈ 15°. Contacts				WT. AV.	4.2	15.2	11.0	3.21	Pb+Zn						
		gradual															
		15.2 - Gradual change to dark sericite															
		phyllite (S).															
15.2	27.5	Dark sericite phyllite (S). Competent.	1	1	12.0	/	15.2	27.5	12.3								
		F2 ≈ 40~45 F1 ≈ 0~10															
		20.8 ~ 21 - FAULT. Sericite flakes w/ gougy material.															
		27.5 - Abrupt change to bleached sericite phyllite (Sb).															
		Contact clean and sharp ≈ 50°															
27.5	28.0	Bleached sericite phyllite (Sb). Competent. Buff			0.5	/	27.5	28.0	0.5								
		to white. F2 = 45~50° F1 ≈ 0~5															

LOGGED BY Alexander (GS) D.D.H. Nº 76-U-190 PAGE 2/4

Interval From	Interval To	DESCRIPTION			Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		28.0 - gradual change to mineralized Bleached sulfide (P-Sb).															
28.0	30	Mineralized bleached sericite phyllite (P-Sb).	10	8	3.	011C	28.0	31.0	3.0	1.78	3.23	23.31	✓				
		Competent. Silvery white w/ laminae of	10	4	3	012C	31.0	34.0	3.0	1.03	0.73	13.03			1.76	Pb-Zn	
		reddish sulfides (sph). F2 ≈ 45°; F1	10	3	3.0	013C	34.0	37.0	3.0	0.78	1.35	9.94			2.13	"	
		≈ 0 to 5°.	10	3	3.0	014C	37.0	40.0	3.0	0.25	0.48	6.17			0.73	"	
		30 - gradual change to graphitic Qtz-sulfide (PG)	10	2	3.0	015C	40.0	43.0	3.0	0.39	1.08	8.91			1.47	"	
30	33	Graphitic Qtz-sulfide (PG). Competent.	15	3	3.0	016C	43.0	46.0	3.0	1.05	2.03	18.17	✓				
		Graphite on thin laminae ≈ 10%. Foliation	25	5	1.4	017C	46.0	47.5	1.5	1.25	3.28	25.37			1.88	4.92	38.06
		F2 ≈ 50° F1 ≈ 0°. Series of small	35	12	1.5	018C	47.5	49.0	1.5	4.90	8.59	65.49			7.36	12.89	98.24
		F1 fold noses observed.	30	10	1.5	019C	49.0	50.5	1.5	1.13	1.13	27.43	✓				
		33 - gradual change to Qtz-sulfide (P).	30	8	1.5	020C	50.5	52.0	1.5	0.93	0.93	20.23			1.86	Pb-Zn	
33	38.1	Qtz-Sulfide (P). Competent. Foliation	30	6	1.5	021C	52.0	53.5	1.5	0.78	1.00	15.09			1.78	"	
		F2 ≈ 50° F1 ≈ 0 to 5	30	5	1.5	022C	53.5	55.0	1.5	0.85	0.93	26.40			1.78	"	
		36.5 - 37 - Bleached sericite interval.	45	7	1.5	023C	55.0	56.5	1.5	1.40	1.83	28.46	✓				
		Buff. F2 ≈ 50° F1 ≈ 0°.	70	10	1.5	024C	56.5	58.0	1.5	7.98	11.51	116.92			11.97	17.27	175.38
		Contacts gradual	65	12	1.5	025C	58.0	59.5	1.5	5.35	8.28	90.86			8.03	12.42	136.29
		38.1 - Sharp clean contact w/ chloritic bleached	65	10	1.5	026C	59.5	61.0	1.5	6.35	7.40	92.92			9.53	11.10	139.38
		sericite phyllite (Sbc) ≈ 45°.	65	10	1.5	027C	61.0	62.5	1.5	4.93	7.28	79.54			7.40	10.92	119.31
38.1	38.5	Chloritic bleached sericite phyllite (Sbc). Competent.	70	7	1.5	028C	62.5	64.0	1.5	4.90	9.05	68.57			7.35	13.58	102.86
		White w/ green stripes. Foliation ≈ 40°	70	10	1.5	029C	64.0	65.5	1.5	2.75	3.60	34.29			4.13	5.40	51.44
		38.5 - Abrupt change to mineralized bleached	70	9	1.5	030C	65.5	67.0	1.5	3.98	7.55	56.57			5.97	11.33	84.86

LOGGED BY _____ D.D.H. Nº '76-11-190 PAGE 3/4

Interval From	Interval To	DESCRIPTION			Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		Sericite phyllite (P-Sb). Contact is uncomformable	60	12	1.5	031C	67.0	68.5	1.5	6.50	10.66	91.89			9.75	15.99	137.84
		and sharp ≈ 85°. Contact plane truncates the foliation	65	9	1.5	032C	68.5	70.0	1.5	4.48	7.73	76.80			6.72	11.60	115.20
		of the P-Sb unit = 	65	10	1.5	033C	70.0	71.5	1.5	4.15	6.52	73.71			6.23	9.78	110.57
			65	10	1.5	034C	71.5	73.0	1.5	6.31	9.55	83.66			9.47	14.33	125.49
38.5	45.4	Mineralized bleached sericite phyllite (P-Sb). Compe-	50	10	1.5	035C	73.0	74.5	1.5	5.04	6.24	79.54			7.56	9.36	119.31
		tent. Buff to light grey. Sulphides as thin laminae	65	12	1.5	036C	74.5	76.0	1.5	6.20	8.92	93.44			9.30	13.38	140.91
		marking the foliations. F_2 ≈ 65~70; F_1 ≈ 0~	65	10	1.5	037C	76.0	77.5	1.5	5.24	8.39	113.14			7.86	12.59	169.71
		5°.	65	10	1.0	038C	77.5	78.5	1.0	6.40	10.14	98.74			6.20	10.14	98.74
		45.4 - Abrupt change to mineralized gra-															
		phitic phyllite (PG). Contact broken grd.															
45.4	55.5	Mineralized graphitic phyllite (PG). Competent.				WT. AV.	31.0	43.0	12.0	1.52	Pb-Zn				18.27	Pb-Zn	
		Varying foliation trends				11	46.0	49.0	3.0	3.08	5.94	45.43	-		9.24	17.81	136.30
		45.4 ~ 47.2 F_2 ≈ 55~60 ~ F_1 ≈ 0~5				11	50.5	55.0	4.5	1.81	Pb-Zn	-	-		8.13	Pb-Zn	
		47.2 ~ 50 F_2 ≈ 45~50 F_1 - 0°				11	56.5	78.5	22.0	5.34	8.15	83.06	-		117.47	179.19	1827.29
		50 ~ 54.9 - F_2 ≈ 20~25 F_1 // F_2 (?)				11	64.0	67.0	3.0	3.37	5.58	45.43			10.10	16.73	136.30
		(wavy foliation ~~regular~~ uniformly spaced laminae 															
		55.5 ~ Gradual build up of mineralization. Rx															
		becoming massive sulphide.															
55.5	78.5	Massive sulphides, structureless (M), banded (MB),															
		w/ barite (Mb) varieties. Competent.															
		57.9 ~ 58.3 - Porous. Voids aligned ~ 75°															
		58.7 ~ 59.7 - Compositional banding sph/Py ≈ 80°															

LOGGED BY [illegible] D.D.H. Nº '76-11-190 PAGE 4/4

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		73 ~ 73.3 - Chloritic bleached sericite phyllite (Sbc). Foliation ≈ 35°. Contacts sharp and clean: 1st ≈ 30°; 2nd ≈ 75°													
		78.5 - Clean sharp contact w/ graphitic phyllite (G) ≈ 80°													
78.5	91.4	Graphitic phyllite (G). Competent. Foliation F_2 ≈ 40~45° $F_1 \perp F_2$.	11.5	/	78.5	91.4	12.9								
		80.6 ~ 81.2 - Calcitic Bleached ser. phyl unit (Sbk). Competent. Buff w/ white stripe. F_2 ≈ 45°. Contacts abrupt ≈ 45°													
		83.8 - Introduction of calcite as thin laminae following F_2 foliation.													
		91.4 - Gradual change to calcitic sericite phyllite w/ trace graphite (SKG).													
91.4	106.7	Calcitic sericite phyllite w/ trace graphite (SKG). Competent. F_2 ≈ 70~80 F_1 ≈ 0~15	14.8	/	91.4	106.7	15.3								
		94~ shear.													
		103.6 ~ 103.9 - Bleached sericite w/ biotite (SbK+bio). Foliation ≈ 65°. Competent. Light gray w/ pinkish to dark red laminae (bio.). Contacts ≈ 65°.													
106.7		END OF HOLE (GOOD DRILLING)													

DIAMOND DRILL RECORD

LOGGED BY ALEXANDER YOUNG-PO D.D.H. Nº 76-U-191 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE 10,602.50 67W STARTED SEPTEMBER 12, 1976

DEPARTURE 7,725.70 2N COMPLETED SEPTEMBER 13, 1976

ELEVATION 1,178.89 PROPOSED DEPTH

ULTIMATE DEPTH 200' - 61.0m

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR	258° 37'	+88° 31'

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 70.8%

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	6.1	BLEACHED PHYLLITE (Sb). Competent. Buff with pro- 2 1	4.3		0	6.1	6.1	0.5 PZ, est.							
		minent fuchsite laminae. Foliation = 80-85°. 25 3	2.3	B439	6.1	9.1	3.0	0.45	0.80	9.94			1.25	PbZn	
		Weakly mineralized Py: 2%, PbZn: 1%. 25 4	3.0	B440	9.1	12.2	3.1	0.60	1.30	25.37			1.90	PbZn	
		4.1-4.7: Shear zone. Rx - mineralized graphitic 35 9	1.4	B441	12.2	13.7	1.5	3.35	3.75	50.40					
		phyllite (PG). Contacts broken ground. 35 15	1.5	B442	13.7	15.2	1.5	7.15	12.83	94.63			10.73	19.25	141.95
		6.1: Abrupt change to Mineralized Graphitic Phyllite 70 15	1.6	B443	15.2	16.8	1.6	5.00	9.60	83.66			8.00	15.36	133.86
		(PG). Contact broken ground. 70 15	1.4	B444	16.8	18.3	1.5	6.62	12.28	86.74			9.93	18.42	130.11
6.1	13.7	MINERALIZED GRAPHITIC PHYLLITE (PG). Competent. 60 15	1.1	B445	18.3	19.8	1.5	6.85	13.69	103.9			10.28	20.54	155.84
		Foliation = 70-75°; F_2 appears parallel to F_1. 60 15	1.1	B446	19.8	21.3	1.5	8.96	14.71	126.2			13.44	22.07	189.26
		Sulfides parallel to foliation sometimes show compo- 60 15	1.2	B447	21.3	24.3	3.0	6.95	12.53	109.0			20.85	37.59	327.09
		sitional banding Py/Sph.													
		13.7: Gradual change to Massive sulfides (M).		W.Av.	6.1	12.2	6.1	1.58	PbZn						
13.7	24.3	MASSIVE SULFIDE OF BANDED (MB), POROUS (MV), AND STRUCTURE-		W.Av.	13.7	24.3	10.6	6.91	12.57	101.7			73.23	133.23	1078.1
		LESS VARIETIES. Broken, blocky core. Compositional banding													
		= 75-80°.													
		16.8-18.0: Porous sulfides. Voids = 80-85°.													
		21.5: Po laminae = 75°.													

LOGGED BY _____ D.D.H. Nº 76-U-191 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		24.3: Abrupt change to Bleached Sericite Phyllite (Sb).													
		Contact broken ground.													
24.3	25.9	BLEACHED SERICITE PHYLLITE (Sb). Broken ground. Poor re-	0.4		24.3	25.9	1.6								
		covery. Silvery white sericite flakes/white clay (Kaolin?)													
		25.9: Abrupt change to Sericite Phyllite (S). Contact													
		broken ground.													
25.9	50.3	SERICITE PHYLLITE (S). Blocky core ranging from flakes to	20.1		25.9	50.3	24.4								
		3cm. long. Foliation F_2 = 65-70°; F_1 = 0-5° (change in													
		foliation prominent in 38.2-39m).													
		44.0-44.6: FAULT. Gray thick gouge with phyllite fragments.													
		45.7-50.3: Pebbly core. No gouge. Sheared.													
		50.3: Abrupt change to Massive sulfide (M). Contact broken													
		ground.													
50.3	57.9	MASSIVE SULFIDE (M) W/BANDED AND BRECCIA VARIETIES 50 8	1.2	B448	50.3	53.3	3.0	5.33	15.46	75.77			15.99	46.38	227.31
		(MB + MXs). Compositional banding = 50-55°. 50 8	1.1	B449	53.3	56.4	3.1	4.40	13.20	67.54			13.64	40.92	209.37
		51.6-52; 55-56: Intercalated Bleached Sericite 60 10	0.9	B450	56.4	57.9	1.5	7.05	16.45	114.2			10.58	24.68	171.26
		Phyllite (Sb). Contacts abrupt broken													
		ground.		W.Av.	50.3	57.9	7.6	5.29	14.73	79.99			40.21	111.98	607.94
		57.9: Abrupt change to Graphitic Phyllite (G). Contact													
		broken ground.													

LOGGED BY _____ D.D.H. Nº 76-U-191 PAGE 3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
57.9	61.0	GRAPHITIC PHYLLITE (G). Broken, flakey core. No foliation	0.6		57.9	61.0	3.1								
		determination possible.													
	61.0	END OF HOLE.													

Calcn. checked Feb. 13/77 JL calculations ✓

DIAMOND DRILL RECORD

LOGGED BY [illegible]

PROPERTY GRUM JOINT VENTURE

D.D.H. No. 76-U-192 PAGE 1/5

LATITUDE 7W BEARING OF HOLE 044 / -70 STARTED Oct. 6, 1976

DEPARTURE 3N DIP OF HOLE COMPLETED Oct. 7, 1976

ELEVATION DIP TESTS DEPTH Proposed: Ultimate: 400' - 121.9m

CLAIM No.

DIRECTION AND DISTANCE FROM NE. CLAIM POST

Total Core Recovery: 95.4%

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION			Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	3.8	Mineralized graphitic phyllite (Pg). Competent	25	8	1.1	052C	0	1.9	1.9	2.13	4.10	27.43	✓		4.05	7.79	52.12
		Fa ≈ 65 ~ 70° Fi ≈ 15 ~ 20° almost ⊥ Fa	25	7	1.7	053C	1.9	3.8	1.9	2.93	2.70	35.31			3.22 / 5.57	2.97 / 5.13	38.89 / 67.09
		Sulfides following mostly Fi foliation.	20	4	1.4	054C	3.8	5.3	1.5	0.85	1.18	9.94			1.28	1.77	14.91
		3.8 - Abrupt change to bleached sericite	25	7	1.5	055C	5.3	6.8	1.5	1.93	2.50	22.29			2.90	3.75	33.44
		phyllite, mineralized (P-Sb) ≈ 65°	15	4	1.5	056C	6.8	8.3	1.5	1.10	1.05	13.03			2.15	Ptzn	
3.8	24.4	Mineralized bleached phyllite w/ intervals of	10	2	1.5	057C	8.3	9.8	1.5	0.95	1.43	9.94			2.38	"	
		calcitic - chloritic varieties (P-Sb; Sbp-c).	7	2	1.5	058C	9.8	11.3	1.5	1.03	1.48	13.03			2.51	"	
		Competent. Buff w/ greenish hue. Foliation	5	2	1.5		11.3	12.8	1.5								
		Fa ≈ 65 ~ 70° Fi ≈ 0 ~ 15 marked by	3	tr.	2.2	/	12.8	15.0	2.2								
		Sulfides.	10	8	1.4	059C	15	16.5	1.5	2.48	3.25	35.31			3.72	4.88	52.97
		7 - 7.6; 11 - 12; 14 - 15 - Calcitic chloritic variety	10	6	1.5	060C	16.5	18.0	1.5	1.93	2.80	22.29			2.90	4.20	33.44
		Green - white stripes. Fa ≈ 65° Fi ≈ 0 ~ 5°.	10	7	1.5	061C	18	19.5	1.5	1.50	2.00	17.14			2.25	3.00	25.71
		Barren.	10	8	1.5	062C	19.5	21.0	1.5	2.05	2.93	24.34			3.08	4.40	36.51
		22.9 - 24.4 - Chloritic unit w/ trace calcite. Competent.	10	8	1.5	063C	21.0	22.5	1.5	2.08	2.85	25.37			3.12	4.28	38.06
		Green/white stripes. Fa ≈ 70° Fi ≈ 0 - 5°.	5	7	1.5	/	22.5	24.4	1.9								
		Trace biotite. Tuffaceous looking.				WT. Av.	0	3.0	3.0	2.42	3.59	30.32	✓		7.27	10.76	90.96
						WT. Av.	1.9	6.8	4.9	1.99	2.17	23.56			9.75	10.65	115.44
		24.4 - Gradual change to graphitic sericite phyl (SiG)				"	6.8	12.8	6.0	2.39	Ptzn	~					
						"	15.0	22.5	7.5	2.01	2.77	24.89	~		15.07	20.76	186.69
							0	3.8	3.8	2.53	3.40	31.37			9.62	12.92	119.21

LOGGED BY _____ D.D.H. No 76-U-192 PAGE 2/5

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
24.4	27.4	Graphitic sericite phyllite (SG). Competent. Foliation $F_2 \approx 60 \sim 65$ $F_1 \approx 0 \sim 10°$. Prominent clots / blebs and clusters of Po. 24.4 - abrupt change to mineralized bleached sericite phyllite (P-Sb). Contact - sharp $\approx 60°$	3.0	/	24.4	27.4	3.0								
27.4	29.0	Mineralized bleached sericite phyllite (P-Sb). Competent. $F_2 \approx 50 \sim 55°$ $F_1 \approx 0 \sim 5°$ sulfides in both foliation. Clots Po 29.0 - sharp change to graphitic sericite phyllite (SG) $\approx 75°$.	1.6	/	27.4	29.0	1.6								
29.0	29.5	Graphitic sericite phyllite (SG). Competent. $F_2 \approx 65 \sim 70$ $F_1 \approx 0 \sim 15°$ prominent Po clusters. 29.5 - Gradual change to bleached sericite phyllite (Sb).	0.5	/	29.0	29.5	0.5								
29.5	47.2	Bleached sericite phyllite (Sb). Competent. $F_2 \approx 70 \sim 75°$ $F_1 \approx 0-5$ Prominent Po clusters and isolated blebs. 31.5 - 33 - chloritic interval. $F_2 \approx 75 \sim 80$; $F_1 \approx 0$ w/ small F_1 fold nose closures. 34 - 36 - graphitic sericite phyllite interval. $F_2 \approx 75$ $F_1 \approx 10°$. Contacts gradual.	16.9	/	29.5	47.2	17.7								

LOGGED BY _____ D.D.H. Nº 76-11-192 PAGE 3/5

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		36.9 - 38.1 - Sulfide showing Py : 3 Pb+Zn : 1													
		39.5 - 40.6 - Graphitic sericite interval													
		contacts sharp ≈ 55°													
		43.8 - 45 - Sulfide showing Py : 2 Pb/Zn : 1													
		47.2 - Abrupt change to graphitic sericite													
		phyllite (SG). Contact ≈ 75° - marked													
		by bull qtz.													
47.2	53	Graphitic sericite phyllite (SG). Fissile	5.5	/	47.2	53.0	5.8								
		easily breaks into poker chips. Graphite ≈ 20%													
		Foliation ≈ 70 ∿ 75° Fz ; F1 ≈ 0 ∿ 5°.													
		53 - Sharp clean contact w/ bleached sericite													
		phyllite (SG).													
53.	60.7	Bleached sericite phyllite (SG) w/ intervals showing	7.1	/	53.0	60.7	7.7								
		chlorite constituents (SGc). Competent.													
		Buff w/ green hue from 53 ∿ 56.4.													
		56.4 - 59.4 - Chlorite. Buff to velvety white													
		with green stripes													
		Foliation Fz ≈ 70 ∿ 75 ; F1 ≈ 0 ∿ 5°.													
		Weakly mineralized : Py : 2% Pb+Zn : Tr.													
		60.7 - Sharp clean contact w/ mineralized													
		graphitic phyllite (PG) ≈ 80°.													
60.7	69.0	Mineralized graphitic phyllite (PG). Broken blocky													

LOGGED BY _____ D.D.H. Nº 76-U-192 PAGE 4/5

Interval From	Interval To	DESCRIPTION			Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		Core. Fa ≈ 85 ~ 90 Fi ≈ 0 ~ 10°.	25	3	2.8	64C	60.7	63.7	3.0	0.35	0.83	8.91	✓				
		Sulfides in both foliation. Graphite ≈ 15%	30	5	2.6	65C	63.7	66.7	3.0	1.38	2.20	22.29	✓				
		69.0 - Gradual increase in sulfide. Rx becoming	30	5	2.0	66C	66.7	69	2.3	0.03	0.43	1.20	✓				
		massive sulfide unit (M)	70	10	1.5	67C	69.0	70.5	1.5	3.93	5.25	65.49			5.90	7.88	98.24
69	91.2	Massive sulfide, porous (MV), w/barite (MB)	65	12	1.5	68C	70.5	72.0	1.5	3.18	7.78	57.60			4.77	11.67	86.4
		and bx varieties. Competent.	65	15	1.5	69C	72.0	73.5	1.5	4.50	8.24	65.49			6.75	12.36	98.24
		69.5 - 70 - porous - voids aligned ≈ 85°	65	10	1.5	70C	73.5	75.0	1.5	2.63	4.60	33.26	—		3.95	6.90	49.89
		74 - 74.2 - Bleached sericite. Contacts sharp	15	12	1.5	71C	75.0	76.5	1.5	1.13	3.18	17.14			1.70	4.77	25.71
		≈ 30°	70	8	1.5	72C	76.5	78.0	1.5	1.10	2.93	12.00			1.65	4.40	18.00
		73 - 73.2 - Sulfide Bx. fragments Q ≈ 1.5 mm	70	10	1.5	73C	78.0	79.5	1.5	3.23	6.01	50.40			4.85	9.02	75.60
		to 1 cm. cemented by sulfides w/trace calcite	65	9	1.5	74C	79.5	81.0	1.5	5.85	11.16	85.72			8.78	16.74	128.58
		85.7 - 88.6 - interval of alternating bands of	70	7	1.5	75C	81.0	82.5	1.5	4.65	3.35	50.40			6.98	5.03	75.60
		bleached ser. phy (SB) and massive sulfide (M).	70	8	1.5	76C	82.5	84.0	1.5	2.20	1.75	29.14	✓		3.30	2.63	43.71
		Broken grd. Contacts sharp ≈ 70°. Bleached	70	8	1.5	77C	84.0	85.5	1.5	3.28	4.40	51.43		↓	4.92	6.60	77.15
		unit is buff w/ prominent fuchsite laminae.	30	4	1.2	78C	85.5	87.0	1.5	4.08	6.25	62.40			6.12	9.38	93.60
		86.9 - Shear.	35	4	1.3	79C	87.0	88.5	1.5	1.05	2.13	15.09	✓	✓	1.58	3.2	22.64
		91.2 - Abrupt change to graphitic qtz-sulfide	70	10	1.5	80C	88.5	90.0	1.5	4.78	7.17	62.40			7.17	10.76	93.6
		(PG). Contact broken grd.	80	9	1.4	81C	90.0	91.5	1.5	3.90	7.88	60.34			5.85	11.82	90.51
91.2		Graphitic qtz-sulfide (PG). Competent.	40	5	1.3	82C	91.5	93.0	1.5	0.88	1.30	16.11	✓	✓	1.32	1.95	24.17
		Graphite as thin laminae ≈ 15%. Qtz	65	12	1.5	83C	93.0	94.5	1.5	4.05	7.73	60.34			6.08	11.60	90.51
		laminae characterized by "ribbony" structure.	35	7	1.5	84C	94.5	96.0	1.5	3.00	4.60	44.23			4.50	6.90	66.35
		Fa ≈ 65 ~ 70° Fi ≈ not distinct.	40	9	1.5	85C	96.0	97.5	1.5	2.75	5.56	40.46			4.13	8.34	60.69

LOGGED BY [illegible] D.D.H. Nº 76-1-192 PAGE 5/5

Interval From	Interval To	DESCRIPTION			Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		93.2 – 94.4 - massive sulphide interval. Structure-	30	7	1.5	086c	97.5	99.0	1.5	0.93	1.43	29.14	✓	✓	1.4	2.15	43.71
		less. Contacts sharp and plane ≈ 70°	40	10	1.5	087c	99.0	100.5	1.5	3.00	6.54	51.43		‡	4.50	9.81	77.15
		107.2 – 108 - sulfide in along healed fracture.	35	10	1.5	088c	100.5	102.0	1.5	4.03	7.42	62.40			6.05	11.13	93.60
		Fracture sub-11 to core axis corrected by	40	12	1.5	089c	102.0	103.5	1.5	2.05	3.68	32.23			3.08	5.52	48.35
		barite and SiO2.	35	10	1.5	090c	103.5	105.0	1.5	4.70	4.70	61.37			7.05	7.05	92.06
		109 – 117.3 - Foliation changes:	30	5	1.5	091c	105.0	106.5	1.5	0.45	0.33	16.11			0.78	"	
		Fa ≈ 85~90 Fi ≈ 0~15°	30	4	1.5	092c	106.5	108.0	1.5	0.08	1.38	8.23			1.46	"	
		117.3 - Abrupt change to graphitic sericite	30	4	1.5	093c	108.0	109.5	1.5	0.13	1.15	10.97			1.28	"	
		phyllite. Contact marked by 3 cm long	30	4	1.5	094c	109.5	111.0	1.5	0.10	0.30	9.94			0.40	"	
		Bull qtz. Plane ≈ 90°	35	4	1.5	095c	111.0	112.5	1.5	0.08	0.25	13.03			0.33	"	
117.3	121.9	Graphitic sericite phyllite (SG). Competent.	35	5	1.5	096c	112.5	114.0	1.5	0.08	0.53	12.00			0.61	"	
		Fa ≈ 80~85 Fi ≈ indistinct.	30	5	1.5	097c	114.0	115.5	1.5	0.15	1.03	12.00			1.18	"	
		118.9 - Shear.	30	3	1.5	098c	115.5	117.3	1.8	0.48	1.30	16.11			1.78	"	
					4.4	/	117.3	121.9	4.6								
121.9		END OF HOLE. Good DRILLING															

LOGGED BY _____ D.D.H. Nº _____ PAGE _____

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
				WT. Av.	69.0	75.0	6.0	3.56	6.47	55.46	✓		21.37	38.81	332.77
				〃	69.0	73.5	4.5	3.97	7.09	62.9	✓		17.72	31.91	282.88
				〃	70.5	73.5	3.0	3.84	8.01				11.52	24.03	
				〃	75.0	78.0	3.0	1.12	3.06	14.57	✓		3.35	9.17	43.71
				〃	78.0	82.5	4.5	4.58	6.84	62.17	✓		20.61	30.79	279.78
				〃	78.0	81.0	3.0	4.54	8.59	68.06	✓		13.63	25.76	204.18
				〃	84.0	87.0	3.0	3.68	5.33	56.92	✓	✓	11.04	15.98	170.75
				〃	88.5	91.5	3.0	4.34	7.53	61.37	✓	✓	13.02	22.58	184.11
				〃	93.0	97.5	4.5	3.27	5.96	48.34	✓	✓	14.71	26.84	217.55
				〃	99.0	105.0	6.0	3.45	5.59	51.86		✓	20.68	33.51	311.16
				〃	99.0	102.0	3.0	3.52	6.98	56.92	✓				
				〃	105.0	117.3	12.3	1.00	Pb Zn				12.27	Pb Zn	
				〃	84.0	105.0	21.0	3.04	5.06	46.4	✓		63.75	106.21	974.09

DIAMOND DRILL RECORD

LOGGED BY ALEXANDER YOUNG-PO D.D.H. Nº 76-U-193 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE 10,633.59 69W STARTED SEPTEMBER 14, 1976

DEPARTURE 7,671.35 2N COMPLETED SEPTEMBER 14, 1976

ELEVATION 1,166.24 PROPOSED DEPTH

ULTIMATE DEPTH 250' - 76.2

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR	226° 14'	+1° 41'

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 92.7%

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	35.1	SERICITE PHYLLITE (S). Competent. Foliation F_1 = 0-5°,	33.2		0	35.1	35.1								
		wavy with series of fold nose closures. F_2 = 85-90°. Drill													
		must be parallel to F_2 and perpendicular to F_1. Trace cal-													
		cite in groundmass and as short discontinuous stringers often													
		time marking the F_1 foliation.													
		30.0: Foliation changing = 60-65°.													
		35.1: Abrupt change to Graphitic Phyllite (G). Contact													
		broken ground.													
35.1	36.5	GRAPHITIC PHYLLITE (G). Broken to blocky core.	1.0		35.1	36.5	1.4								
		35.1-35.4: FAULT. Black sticky gouge.													
		36.5: Abrupt change to Massive sulfide. Contact marked by		W.Av.	36.5	42.7	6.2	6.14	9.94	82.77			38.06	61.63	513.15
		bull quartz.													
36.5	42.7	MASSIVE SULFIDE - banded and barite-in-groundmass 65 12	1.6	B451	36.5	38.1	1.6	7.55	10.60	100.8			12.08	16.96	161.28
		varieties (MB + Mb). Compositional banding = 25-30° 60 15	1.5	B452	38.1	39.6	1.5	4.10	9.75	50.40			6.15	14.63	75.60
		@ 37.1-38.3 then changes to 40-45° @ 40-41m. 60 15	1.4	B453	39.6	41.1	1.5	6.55	10.21	78.86			9.83	15.32	118.29
		42.3-42.5: Bleached Phyllite interval. Greenish to 65 10	1.6	B454	41.1	42.7	1.6	6.25	9.20	98.74			10.0	14.72	157.98
		silvery white. Prominent fuchsite flakes/spots. Foliation													

LOGGED BY _____ D.D.H. Nº 76-U-193 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		= 40-45°. Contacts sharp and clean = 35-40°.													
		42.7: Sharp contact with Graphitic Phyllite (G). Contact													
		= 55°.													
42.7	54.9	GRAPHITIC PHYLLITE (G). Fissile, easily breaks into poker	11.5		42.7	54.9	12.2								
		chips. Foliation erratic and changing. With intercalated													
		interval of mineralized bleached phyllite (Sb).													
		42.7-44.2: F_2 = 45-50°; F_1 = 0-5°.													
		44.4-45.0: FAULT. Dark gray sticky gouge.													
		47.2-49.0: Mineralized Bleached Phyllite (P-Sb). Buff to													
		silvery white. Sulfides as laminae following													
		general foliation = 25°. PY: 4%, PbZn: 1%.													
		50.3-51.8: F_2 = 0-10°; F_1 = 85-90°.													
		54.9: Gradual change to Calcitic-chloritic phyllite (Sc+K).													
		Contact arbitrary.													
54.9	73.2	CALCITIC-CHLORITIC SERICITE PHYLLITE (SK+C). Competent.	17.8		54.9	73.2	18.3								
		Greenish in general appearance with white calcitic laminae.													
		Calcite usually marking F_1 foliation. F_2 = 0-10°; F_1 = 85-90													
		70.1-73.2: F_2 = 25-30°; F_1 = 80-85°.													
		73.2: Gradual change to normal sericite phyllite with trace													
		calcite (SK). Contact arbitrary.													
73.2	76.2	SERICITE PHYLLITE WITH TRACE CALCITE (SK). Fissile - flakey													
		core. Light gray in colour in contrast with preceeding run.													

LOGGED BY _____ D.D.H. Nº 76-U-193 PAGE 3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		F = 40-45° = fissility. No clear F noted.													
		F_2 F_1													
		76-76.2: Fragmented flakes - shear (?).													
	76.2	END OF HOLE.													

Calc. checked Feb. 13/77 JS calculated

DIAMOND DRILL RECORD

LOGGED BY: [signature]

PROPERTY: GRUM JOINT VENTURE

D.D.H. No. 76-11-194 PAGE 1/6

LATITUDE: 75W BEARING OF HOLE: - STARTED: OCT. 7, 1976

CLAIM No.:

DEPARTURE: 3N DIP OF HOLE: -90 COMPLETED: OCT. 8, 1976

DIRECTION AND DISTANCE FROM NE. CLAIM POST

ELEVATION: DIP TESTS:

Test Pt.	Azimuth	Dip
Collar	-	-90
61 m	272	-85
118.9 m	252	-86

DEPTH Proposed: Ultimate: 420' / 128 m

TOTAL CORE RECOVERY: 93.2%

Footage From	Footage To	Description	Py	Sp Pb	Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	1.2	Casing - No core recovered.															
1.2	4.0	Mineralized graphitic phyllite (PG). Broken bloc-	30	7	2.3	201C	1.2	4.0	2.8	2.35	3.00	28.46			6.58	8.40	79.69
		ky core. Foliation ≈ 75~85° wavy (F1/F2?)	7	6	1.5	202C	4.0	5.5	1.5	1.55	0.93	19.20		x.0.2	0.31 3.72	0.19 PbZn	3.84
		2.9~3.0 = F2 ≈ 85° F1 ≈ 0~5°	6	6	1.4	3C	5.5	7.0	1.5	1.03	1.40	10.97			3.65	PbZn	
		Sulfides in both foliation.	7	9	1.5	4C	7.0	8.5	1.5	1.98	3.10	27.43	✓				
		4.0 ~ Gradual change to mineralized bleached-	5	7	1.5	5C	8.5	10.0	1.5	0.90	1.80	9.94			4.05	"	
		sericite phyllite (P-Sb).	7	8	1.4	6C	10.0	11.5	1.5	1.28	1.60	12.00			4.32	"	
4.0	14.2	Mineralized bleached sericite phyllite (P-Sb).	5	6	1.5	7C	11.5	13.0	1.5	0.93	1.30	8.91			3.35	"	
		Competent. Light milky white w/ buff laminae.	7	4	1.3	8C	13.0	14.5	1.5	0.95	0.63	10.97	✓				
		F2 ≈ 75~80° F1 ≈ 0~10°	10	4	2.7	9C	14.5	17.5	3.0	2.33	2.55	33.26	·		6.99	7.65	99.78
		Sulfides more asso. w/ F2. Sph-Pb > Py	15	6	~~2.7~~	210C	17.5	19.8	~~2.8~~	2.05	2.75	28.46			5.74	7.70	79.69
		9.1~9.4 - prominent fuchsite laminae. Sulfides			2.3				2.3								
		in clots. F2 ≈ 75°.				①	1.2	4.2	3.0	2.30	2.86	27.84			6.89	8.59	83.53
		14.2 - Abrupt change to mineralized graphitic				②	4.0	7.0	3.0	2.46	PbZn				7.37	PbZn	
		phyllite (PG). Contact broken gnd.				③	8.5	13.0	4.5	2.60	"				11.72	"	
14.2	19.8	Mineralized graphitic phyllite (PG). Competent.				④	14.5	19.8	5.8	2.19	2.65	30.94			12.73	15.35	179.47
		F2 ≈ 80~85 F1 ≈ 0~5°															

LOGGED BY _____ D.D.H. Nº 176-U-194 PAGE 2/6

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		14.9 - 15.3 - Sulfide bx. ∅ ≤ 1mm ~ 1.5 cm. Cemented by graphite.													
		19.8 - Abrupt change to bleached sericite phyllite (Sb) ≥ 85°.													
19.8	20.6	Bleached Sericite phyllite (Sb). Competent. Buff w/ prominent fuchsite laminae. Fa ≥ 75~85° Fi ≥ 5-15°	0.8	✓	19.8	20.6	0.8								
		20.6 - Gradual change to Sericite phyllite (S).													
20.6	22.7	Sericite phyllite (S). Competent. Light grey. Has fine sulfide dissemination in groundmass Fa ≥ 85~90° Fi ≥ 0~5 Py: 1 Pb Zn: Tr.	2.0	✓	20.6	22.7	2.1								
		22.7 - Gradual change to bleached Sericite phyllite (Sb).													
~~22.7~~															
22.7	27.2	Bleached sericite phyllite w/ chloritic intervals (Sbc). Competent. Buff w/ chlorite and fuchsite laminae/stripes. Fa ≥ 75~85° Fi ≥ 5~15°	4.2	✓	22.7	27.2	4.5								
		22.9 - 23.5 - Chloritic													
		25.9 ~ 26.5 ~ Sulfide showing Py: 1% Pb Zn: Tr.													
		27.2 - Abrupt change to graphitic sericite phyllite (SG). Contact marked by 5 cm. bull qtz.													
27.2	29.5	Graphitic Sericite phyllite (Sg). Competent. Fa ≥ 85~90° Fi ≥ 0~10°	2.3	✓	27.2	29.5	2.3								

LOGGED BY [signature] D.D.H. No 76-U-194 PAGE 3/6

Interval		DESCRIPTION			Recovery	Sample	Interval		Sample	Assay					Assay x		
From	To					No	From	To	Length	Pb	Zn	Ag	Au	Cu	Pb	Zn	Ag
		run characterized by prominent wide intervals of bull qtz.															
		29.5 - Abrupt change to bleached sericite phyllite (Sb).															
		Contact marked by bull qtz ≈ 80°															
29.5	39.5	Bleached Sericite phyllite (Sb + Sbc-K) w/ chloritic and calcitic			9.3	✓	29.5	39.5	10								
		intervals. Competent. Buff to silvery white and															
		intervals w/ green-white stripes.															
		Foliation F2 ≈ 75~85° F1 ≈ 5~10°															
		29.6 ~ 30.4 - Calcitic chloritic.															
		30.5 ~ 33.5 - w/ sulfide showing Py 2% Pb/Zn ≈ <1%															
		33.7 ~ 35.1 - Chloritic unit. Felsic minerals															
		"ribbony" in appearance.															
		39.5 - Abrupt change to mineralized graphitic phyllite					39.5	48.5	9.0	1.49	PbZn.				13.43	PbZn.	
		(Pg). Contact ≈ 80°															
39.5	53.4	Mineralized graphitic phyllite (PG). Competent.															
		F2 ≈ 55~90° F1 ≈ 0~10°	20	3	1.5	211c	39.5	41.0	1.5	0.40	1.00	8.43			2.1	PbZn	
		Sulfides in both foliations.	25	4	1.4	212c	41.0	42.5	1.5	1.08	2.28	20.23			5.04	"	
		45 ~ 46 - mineralized bleached sericite	25	4	1.4	213c	42.5	44.0	1.5	0.53	1.13	12.00			2.49	"	
		interval. F2 ≈ 90° F1 ≈ 0°. Contacts	20	4	1.5	214c	44.0	45.5	1.5	0.23	0.78	6.17			1.52	"	
		gradual (!).	25	5	1.5	215c	45.5	47.0	1.5	0.23	0.73	7.20			1.44	"	
		50.7 - 52.3 - Massive sulfide interval. Porous	20	3	1.5	216c	47.0	48.5	1.5	0.13	0.43	7.20			0.84	"	
		variety. Voids aligned ≈ 65~70°	30	6	1.3	217c	48.5	50.0	1.5	1.90	3.90	34.29	✓				
		53.4 - Abrupt change to graphitic phyllite (G). Contact	40	9	1.5	218c	50.0	51.5	1.5	3.65	7.20	68.57			5.48	10.80	102.86

LOGGED BY _____ D.D.H. No 76-11-194 PAGE 4/6

Interval From	Interval To	DESCRIPTION			Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		broken grd.	40	9	1.7	219c	51.5	53.4	1.9	3.23	5.82	59.31			6.14	11.06	112.69
53.4	57.2	Graphitic phyllite (G). Fissile easily breaks	1	mil	3.5	/	53.4	57.2	3.8	NIL							
		into poker chips. F2 ≈ 60≈65° F1 ≈ 0≈10°	40	8	1.4	220c	57.2	58.7	1.5	3.00	4.25	58.63	✓		4.50	6.38	87.95
		57.2 - Abrupt change to massive sulfides.	60	12	1.5	221c	58.7	60.2	1.5	8.97	11.07	114.86			13.46	16.61	172.29
		Contact ≈ 75°.	50	8	1.3	222c	60.2	61.7	1.5	4.23	7.93	96.69			6.35	11.90	145.04
57.2		Massive sulfides - banded (MB), w/ qtz inclusions	80	10	1.4	223c	61.7	63.2	1.5	3.28	5.48	58.63			4.92	8.22	87.95
		(MBa) and barite (MBb) varieties. Competent.	70	6	1.5	224c	63.2	64.7	1.5	3.38	5.71	48.34			5.07	8.57	72.51
		Compositional banding Sph-Pb/Py ≈ 75≈80°;	65	8	1.5	225c	64.7	66.2	1.5	4.90	6.57	81.60			7.35	9.86	12.24
		Sulfides/Ba ≈ 70≈75°.	65	12	1.4	226c	66.2	67.7	1.5	3.20	6.90	80.57			4.80	10.35	120.86
		57.5≈58.2 - Bleached sericite unit. Competent	70	10	1.4	227c	67.7	69.2	1.5	4.13	9.21	74.74			6.20	13.82	112.11
		buff w/ prominent fuchsite laminae. Foliation	65	12	1.3	228c	69.2	70.7	1.5	5.00	8.26	84.69			7.50	12.39	127.04
		≈ 85°. Both contacts abrupt ≈ 85°.	65	10	1.5	229c	70.7	72.2	1.5	3.93	4.00	57.60			5.90	6.00	86.40
		61.3 - 61.8 - Sericite phyllite interval (S).	65	10	1.2	230c	72.2	73.7	1.5	2.70	1.50	43.54		x0.5	1.35 4.05	0.75 2.25	21.77 65.31
		Foliation ≈ 75°. Contacts sharp ≈ 75°	65	15	1.5	231c	73.7	75.2	1.5	4.94	5.91	78.86			7.41	8.87	118.29
		75.9 - 76.2 - wide Pb band.	60	7	1.0	232c	75.2	76.2	1.0	3.90	5.05	78.86			3.90	5.05	78.86
		76.2 - Abrupt change to bleached Sericite				(7) WT. AV.	50.0	53.4	3.45	3.42	6.43	63.40	✓		11.62	21.86	215.55
		phyllite (Sb).				(5)	58.7	70.7	12.0	4.64	7.64	70.84	✓		55.65	91.72	850.04
76.2	78	Bleached sericite phyllite (Sb). Competent.			1.8	/	76.2	78.0	1.8								
		Silvery white. Foliation ≈ 15≈20°.				(1)	58.7	61.7	3.0	6.60	9.50	105.78	✓		19.81	28.51	317.33
		Sporadic sulfide showing Py: 1% Pb/Zn: tr.				(2)	61.7	64.7	3.0	3.33	5.60	53.49	✓		9.99	16.79	160.46
		78 - Gradual change to sericite phyllite.				(3)	64.7	67.7	3.0	4.05	6.74	44.37	✓		12.15	20.21	133.10
						(4)	67.7	70.7	3.0	4.57	8.74	79.72	✓		13.70	26.21	239.15
						(6)	57.2	76.2	19.0	4.28	6.33	67.73	✓		81.41	120.27	1286.85

LOGGED BY [illegible] D.D.H. No 76-11-194 PAGE 5/6

Interval From	Interval To	DESCRIPTION			Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
78	85.3	Sericite phyllite (S). Broken flaky core.			7.0	/	78	85.3	7.3								
		Foliation: 40 ~ 45° @ 82.3 ~ 83.8.				(8)	70.7	76.2	5.5	3.87	4.03	63.43	✓		21.26	22.17	348.86
		84 - 85.3 - Foliation: 65° ~ 70°				(10)	73.2	76.2	3.0	4.22	4.89	72.97	✓		12.66	14.67	218.92
		81 - 81.5: FAULT. Thick black gouge.				(9)	70.7	73.2	2.5	3.44	3.00	51.98	✓		8.60	7.50	129.94
		85.3 - Abrupt change to graphitic phyllite (G).															
		Contact broken gnd.															
85.3	87.2	Graphitic phyllite (G). Fissile, easily breaks			1.6	/	85.3	87.2	1.9								
		into poker chips. Foliation: 75 ~ 80° (F2);				WT. AV.	87.2	91.7	4.5	1.31	13.41	110.52	✓		32.91	60.35	497.33
		F1 ≈ indistinct.					87.2	93.2	6.0	6.17	11.32	93.77	✓		37.01	67.93	562.64
		87.2 - Sharp clean contact w/ massive sulfide (M) ≈					96.2	99.2	3.0	2.63	4.34	42.35			7.88	13.01	127.04
		80°.															
87.2	102.2	Massive sulfide. Banded (MB), structureless (M)	60	18	1.5	233c	87.2	88.7	1.5	9.71	18.19	147.09			14.57	27.29	220.64
		w/ qtz inclusions (MIQ) varieties. Competent.	65	12	1.5	234c	88.7	90.2	1.5	6.99	14.00	104.92			10.49	21.00	157.38
		Compositional banding sph/py ≈ 70 ~ 80; sulfide/	65	12	1.5	235c	90.2	91.7	1.5	5.23	8.04	79.54			7.85	12.06	119.31
		gangue - Felsics ≈ 80 ~ 85 (@ 100.6 ~ 102.2	70	8	1.5	236c	91.7	93.2	1.5	2.73	5.05	43.54			4.10	7.58	65.31
		102.2 - gradual change to qtz-sulfide (P)	70	7	1.5	237c	93.2	94.7	1.5	0.55	1.05	15.09	✓				
102.2	111.4	Qtz-sulfide (P). Competent. Foliation	70	8	1.5	238c	94.7	96.2	1.5	0.88	1.93	17.14	✓				
		≈ 75 ~ 85°. Compositional banding in	65	10	1.5	239c	96.2	97.7	1.5	4.25	6.19	63.43			6.38	9.29	95.15
		broader sulfide bands sph-Pb/py ≈ 80°	65	9	1.5	240c	97.7	99.2	1.5	1.00	2.48	21.26			1.50	3.72	31.89
		108 - 108.2 - fissure lined w/ CaCO3. sub-11	60	8	1.5	241c	99.2	100.7	1.5	1.43	2.98	26.40	✓				
		to core axis.	60	6	1.5	242c	100.7	102.2	1.5	1.05	1.28	25.37	✓				
		111.4 - Abrupt change to Bleached Ser. phyl (SG)	35	6	1.5	243c	102.2	103.7	1.5	0.13	0.65	18.14			1.17	Pb-Zn	

LOGGED BY [illegible] D.D.H. No 76-4-194 PAGE 6/6

Interval From	Interval To	DESCRIPTION			Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		Contact plane ≈ 80°.	30	6	1.5	244c	103.7	105.2	1.5	0.48	0.50	18.17			1.47	Pb Zn	
111.4	112.0	Bleached sericite phyllite (SG). Buff. Competent. Intervals of short to thin sulfide laminae (see estimate). Foliation ≈ 75° ∩ 80°. Contacts w/ sulfide sharp and clean	35	8	1.5	245c	105.2	106.7	1.5	2.28	2.80	37.37			3.42	4.20	56.06
			30	9	1.5	246c	106.7	108.2	1.5	3.88	5.00	60.34			5.82	7.50	90.51
			25	4	1.5	247c	108.2	109.7	1.5	0.70	1.63	25.37	V				
			25	5	1.5	248c	109.7	111.4	1.7	2.08	1.93	34.29	V				
		// to foliation.	10	2	0.6	/	111.4	112.0	0.6								
		112 - Sharp contact w/ graphitic sericite phyllite (SG) ≈ 50°.															
112.0	116	Graphitic sericite phyllite (SG). Fissile, easily breaks into poker chips/flakes. Foliation ≈ 80 ∩ 90°. No distinct F1 developed.			3.1	/	112.0	116.0	4.0								
						WT. Au	102.2	105.2	3.0	0.88	Pb Zn				2.64	Pb Zn	
							105.2	108.2	3.0	3.08	3.9	48.86			9.24	11.7	146.57
		116 - Gradual decrease in graphitic constituent. Rx becoming normal sericite phyllite (S)															
116	128	Sericite phyllite (S). Competent. Foliation ≈ 80 ∩ 90°			10.1	/	116.0	128.0	12								
		116.7 ∩ 117 - Fault. Dark grey thick gouge w/ phyllite fragments and sericite flakes.															
		117.3 - 118 - Bleached sericite interval w/ prominent Po blebs. Po ≈ 3%.															
		127 - 127.5 - Bleached sericite phyllite. Buff. Competent. F2 ≈ 75 ∩ 80° F1 ≈ 5°															
128		END OF HOLE															

DIAMOND DRILL RECORD

LOGGED BY ALEXANDER YOUNG-PO D.D.H. Nº 76-U-195 PAGE 1

PROPERTY GRUM JOINT VENTURE

LATITUDE 10,636.80 69W STARTED SEPTEMBER 15, 1976

DEPARTURE 7,674.84 2N COMPLETED SEPTEMBER 15, 1976

ELEVATION 1,166,36 PROPOSED DEPTH

ULTIMATE DEPTH 300' - 91.4m

HOLE SURVEY:		
DEPTH	BEARING	DIP
COLLAR	48° 57'	+1° 41'

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 79.9%

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	4.0	BLEACHED SERICITE PHYLLITE (Sb). Broken, flakey core. Buff-	0.9		0	4.0	4.0								
		silvery white. Foliation = 40° (?) based on short blocks.													
		3.5: Shear.													
4.0	7.8	DARK SERICITE PHYLLITE WITH TRACE GRAPHITE (SG). Broken,	1.2		4.0	7.8	3.8								
		fragmented flakes. Could be shear zone. Flakes wavy.													
7.8	9.0	BLEACHED SERICITE PHYLLITE (Sb). Broken, flakey core.	0.7		7.8	9.0	1.2								
		Buff-silvery white. Similar to 0-4 run.													
9.0	9.4	QUARTZ-SULPHIDE (P). Blocky core. Foliation = 25°. Trace	0.4		9.0	9.4	0.4								
		calcite in groundmass.													
9.4	16.8	SERICITE PHYLLITE (S) W/SHORT INTERVALS OF BLEACHED SERICITE													
		(Sb). Broken core - with sheared intervals. Foliation =													
		35-40°.													
		15.2-16.8: FAULT. Dark gray gouge with sericite flakes.													
		16.8: Abrupt change to Massive sulfides (M). Contact broken													
		ground.													

LOGGED BY _____ D.D.H. Nº 76-U-195 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
16.8	30.5	MASSIVE SULFIDES OF POROUS (MV), BANDED (MB), AND W/ 65 12	1.2	B458	16.8	18.3	1.5	3.95	10.08	57.60			5.93	15.12	86.40
		QUARTZ INCLUSION VARIETIES (MIq). 65 10	1.4	B459	18.3	19.8	1.5	4.33	11.32	59.31			6.50	16.98	88.97
		Generally competent except for the friable porous 70 12	1.4	B460	19.8	21.3	1.5	5.80	12.98	91.89			2.70	19.47	137.84
		type. Compositional banding = 10-25°. Voids in 60 15	1.5	B461	21.3	22.9	1.6	6.92	15.01	108.0			11.07	24.02	172.80
		porous varieties aligned = 25°. 60 15	1.5	B462	22.9	24.4	1.5	3.40	7.80	50.40			5.10	11.70	75.60
		19-19.3: Short bleached phyllite interval (Sb). Buff 60 18	1.3	B463	24.4	25.9	1.5	7.67	14.91	114.9			11.51	22.37	172.29
		Contacts abrupt - broken ground. 60 15	1.5	B464	25.9	27.4	1.5	7.94	17.86	114.9			11.91	26.79	172.29
		30.5: Abrupt change to Mineralized Graphitic 60 18	1.0	B465	27.4	29.0	1.6	6.95	14.29	96.69			11.12	22.86	154.70
		Phyllite (PG). Contact broken ground. 50 10	1.2	B466	29.0	30.5	1.5	6.15	7.99	84.69			9.23	11.99	127.04
30.5	33.5	MINERALIZED GRAPHITIC PHYLLITE (PG). Broken ground. 20 4	1.0	B467	30.5	33.5	3.0	0.05	0.13	6.17					
		Foliation = 40-45°; F_1 sub-parallel to F_2.													
		32-33.5: Pebbly core. Poor recovery 0.06/1.5.		W.Av.	16.8	30.5	13.7	5.92	12.50	86.71			81.07	171.30	1187.9
		33.5: Abrupt change to Bleached Phyllite (Sb). Contact													
		broken ground.													
33.5	36.8	BLEACHED SERICITE PHYLLITE. Competent. Buff with greenish	2.5		33.5	36.8	3.3								
		hue. Foliation = 0-5° with series of fold nose closure.													
		Sulfide showing Py: 1% PbZn 1%.													
		36.8: Gradual change to Sericite Phyllite (S).													
36.8	91.4	SERICITE PHYLLITE (S). Fissile-easily breaks into poker	51.3		36.8	91.4	54.6								
		chips. Foliation varies.													
		36.6-42.7: Foliation = 0-10°.													
		42.7: Foliation = 35-40°.													

LOGGED BY _____ D.D.H. Nº 76-U-195 PAGE 3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		50.3-51.8: F_2 = 50°; F_1 = 10-15°.													
		60.7-61.3: Bleached Sericite Phyllite. Brownish colour-													
		biotite flakes with sericite (?) F_2 = 45-50°;													
		F_1 = 0-5°. Contacts broken ground.													
		62.5-63.0: FAULT. Bleached sericite phyllite material in													
		gouge.													
		64-68.6: Foliation changed to 0-5°.													
		70.1-71.6: FAULT. Light gray mud/sand.													
		76.2-77.7: Bleached sericite interval. Buff to light gray.													
		Foliation = 0-5° (could be F_2).													
		82.3-82.6: Brownish groundmass. Biotite. Fold nose closure													
		@ 82.5.													
		88.4-89.0: Bleached Sericite Phyllite (Sb). Foliation = 25°													
		Buff with greenish hue. Contacts broken ground.													
	91.4	END OF HOLE.													

Calc'n. checked 26.8.77 JC

calculated

DIAMOND DRILL RECORD

LOGGED BY Alexander Rose

PROPERTY GRUM JOINT VENTURE

D.D.H. No. '76-4-196 PAGE 1/4

LATITUDE 3N 75W BEARING OF HOLE — STARTED OCT. 9, 1976

DEPARTURE — DIP OF HOLE -65° CLAIM No. —

ELEVATION — DIP TESTS

Test Pt.	AZIMUTH	DIP
Collar	224	-65
61	229	-73
100.6	245	-75

COMPLETED OCT. 11, 1976

Proposed:
DEPTH Ultimate: 425'-129.5m.

N

DIRECTION AND DISTANCE FROM NE. CLAIM POST

TOTAL CORE RECOVERY: 90.2%

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION			Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	36.6	Mineralized graphitic phyllite (PG). Competent.	30	7	1.6	249C	0	3	3.0	1.80	1.70	20.23			10.5	Pb-Zn	
		Foliation $F_2 \approx 70 \sim 85°$ $F_1 \approx 5 \sim 10$ except at	30	7	1.4	250C	3.	4.5	1.5	1.95	2.93	26.40			7.32	"	
		9-10 where $F_1 // F_2 \approx 70°$. Sulfides asso.	25	6	1.3	251C	4.5	6.0	1.5	1.63	1.63	22.29			4.89	"	
		w/ F_1 more than in F_2.	25	5	1.5	252C	6.0	7.5	1.5	1.60	0.88	22.29			3.72	"	
		6.2 ~ 8.9 - mineralized bleached sericite phyl (PSb)	20	4	1.4	253C	7.5	9.0	1.5	0.88	0.35	12.00	✓				
		Competent. Buff w/ sulfides along F_1.	20	4	1.3	254C	9.0	10.5	1.5	2.20	2.00	32.23			3.30	3.00	48.35
		$F_2 \approx 80 \sim 90$ $F_1 \approx 0 \sim 10°$. Contacts	30	8	1.3	255C	10.5	12.0	1.5	2.88	2.55	36.34			4.32	3.83	54.51
		abrupt - broken grd.	35	10	1.3	256C	12.0	13.5	1.5	2.70	2.95	32.23			4.05	4.43	48.35
		22.9-24 - Bx. Felsic fragment $\phi \approx 1mm - 1cm$	30	8	1.2	257C	13.5	15.0	1.5	2.80	1.25	30.17			4.20	1.88	45.26
		cemented by graphite.	25	7	1.5	258C	15.0	16.5	1.5	3.10	1.85	31.20			4.65	2.78	46.80
		36.6 - Gradual increase in mineralization. Rx	25	6	1.3	259C	16.5	18.0	1.5	2.70	0.80	26.40	✓				
		becoming banded massive sulfide (MB	25	4	1.5	260C	18.0	19.5	1.5	0.13	0.55	3.09			1.02	Pb-Zn	
36.6	40.3	Banded massive sulfide (MB). Competent.	25	4	1.5	261C	19.5	21.0	1.5	0.10	0.10	6.17			0.30	"	
		Compositional banding Sph/Py $\approx 80 \sim 85°$;	20	4	1.5	362C	21	22.5	1.5	0.14	0.35	6.17			0.74	"	
		Sulfides/gangue (Qtz; G; Sb) $\approx 80 \sim 90°$.	20	3	1.3	363C	22.5	24.0	1.5	0.75	0.73	8.91			4.44	"	
		Foliation in included Sb @ 39.7 $\approx F_2 \approx 85$; $F_1 \approx 0°$	20	3	1.4		24.0	25.5	1.5								
		40.3 - Sharp clean contact w/ bleached phyllite (Sb) $\approx 80°$	20	3	2.8	364C	25.5	28.5	3.0	0.18	0.40	3.09			1.74	"	

LOGGED BY _____ D.D.H. No '76-U-196 PAGE 2/4

Interval From	Interval To	DESCRIPTION	Py	Pb Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
40.3	40.5	Bleached Sericite phyllite (Sb). Competent.	25	4	2.8	265C	28.5	31.5	3.0	0.13	0.93	3.09			3.18	Pbzn	
		Buff w/ prominent fuchsite laminae/spots	25	4	3.0	266C	31.5	34.5	3.0	0.53	1.23	8.91			5.28	"	
		Foliation F2 ≈ 85° ; F1 ≈ indistinct	25	4	2.0	267C	34.5	36.6	2.1	1.95	3.40	30.17	✓				
		40.5 ~ Abrupt contact w/ graphitic phyl. (G) ≈ 85°	70	8	1.5	268C	36.6	38.1	1.5	2.58	4.15	41.49	✓	x0.8	2.06	3.32	33.19
40.5	62.5	Graphitic phyllite (G). Very felsic, breaking	70	8	1.5	269C	38.1	39.6	1.5	6.23	8.77	92.92			9.35	13.16	139.38
		easily into poker chips/flakes.	65	9	0.7	270C	39.6	40.3	0.7	6.10	8.44	102.86			4.27	5.93	72.00
		F2 ≈ 80~85° F1 ≈ 0~5°	/	/	0.2	/	40.3	40.5	0.2								
		Sporadic sulfide showing Py ≈ 1%			20.8	/	40.5	62.5	22.0								
		62.5 - Clean sharp contact w/ massive sulfide.					0	7.5	7.5	3.52	Pbzn				26.43	Pbzn	
		Contact marked by 5 cm. bleached sericite					9.0	16.5	7.5	2.74	2.12	32.44	✓		20.52	15.92	243.27
		phyl (Sb) ≈ 75°					18.0	34.5	16.5	1.01	Pbzn				16.70	Pbzn	
62.5	71.5	Massive sulfide of the structureless (M) and w/					37.3	40.3	3.0	5.23	7.47	81.52	-		15.68	22.41	244.57
		associated barite (M6) varieties. Ba ≈ 10%	60	6	1.5	271C	62.5	64.0	1.5	5.00	8.21	93.94			7.50	12.32	140.91
		in grdmass.	65	10	1.5	272C	64.0	65.5	1.5	6.85	5.10	184.46			10.28	7.65	276.69
		Faint sulfide/ba banding ≈ 75°	65	10	1.5	273C	65.5	67.0	1.5	5.70	8.06	108.0			8.55	12.09	162.00
		69.8 ~ 69.9 - Bleached sericite phyllite (Sb).	60	10	1.5	274C	67.0	68.5	1.5	4.00	6.80	69.60			6.00	10.20	104.4
		sharp contacts ≈ 65°.	60	15	1.5	275C	68.5	70.0	1.5	5.00	8.49	82.63			1.50	12.74	123.95
		71.5 - sharp clean contact w/ graphitic phyllite	60	15	1.5	276C	70.0	71.5	1.5	4.35	7.50	76.80			6.53	11.25	115.20
		(G) ≈ 75°															
71.5	77.7	Graphitic phyllite (G). Broken blocky core.			5.8	~~71.5~~	71.5 ~~77.7~~	77.7	6.2								
		F2 ≈ 75~85° F1 ≈ 0~5°					62.5	71.5	9.0	5.15	7.36	102.57			46.36	66.25	923.15
		77.7 - Gradual decrease in graphite. Rx becoming															

LOGGED BY _____ D.D.H. Nº 76-U-196 PAGE 3/4

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		sericite phyllite w/ trace graphite.													
77.7	89.0	Sericite phyllite w/ trace graphite (SG). Broken blocky core. F2 ≈ 80~85° F1 ≈ 5~10°	9.8	/	77.7	89.0	11.3								
		78-79.5 - Bleached sericite phyl interval. Competent. Buff. F2 ≈ 80~85; F1 ≈ 0~5													
		1st contact broken grd.. 2nd Contact ≈ 80°													
		89 - Gradual change to normal sericite phyllite.													
89	93	Sericite phyllite (S). Competent. Light gray. F2 ≈ 45~50° F1 ≈ 0~15°. Sometime indistinct over long intervals.	3.6	/	89.0	93.0	4.0								
		91.4~91.6 - Massive Po band. Contacts ≈ 35°													
		93 - Abrupt change to graphitic phyl (G). Contact broken grd.													
93	94.5	Graphitic phyllite (G). Broken blocky core. F2 ≈ 40~45° F1 ≈ indistinct.	0.9	/	93.0	94.5	1.5								
		94~94.5 ≈ FAULT. DARK grey sticky thick gouge.													
		Contact w/ massive sulfide. 60 18	0.5	277C	94.5	96.0	1.5	4.28	19.19	61.37			6.42	28.79	92.06
94.5	111.0	Massive sulfide (M). Structureless and bx varieties. With intervals of sericite phyllite. 60 18	1.2	278C	96.0	97.5	1.5	9.02	20.34	150.17			13.53	30.51	225.26
		30 8	1.2	279C	97.5	99.0	1.5	2.53	5.65	42.51	-		3.80	8.48	63.77
		97.5~98 - Soft, sericite phyllite. Broken core. 30 6	1.3	280C	99.0	100.5	1.5	2.03	4.55	36.34	-		3.05	6.83	54.51
		100~100.6 - Gouge sub // to core axis. 55 15	1.3	281C	100.5	102.0	1.5	4.65	8.31	70.63	-		6.98	12.47	105.95
		Sulfide / Sulfide gouge Thick, grey sticky gouge w/ Sulfide, sericite fragments. 50 8	1.2	312C	102.0	103.5	1.5	1.05	3.68	25.37			1.58	5.52	38.06

LOGGED BY [illegible] D.D.H. Nº 76-11-196 PAGE 4/4

Interval From	Interval To	DESCRIPTION			Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		102 - 102.6 - Sulfide bx. Sulfide fragments	70	6	1.4	313C	103.5	105.0	1.5	2.23	3.15	39.43			3.35	4.73	59.15
		Ø ≈ 1mm - 1.5 cm well cemented by finer grained	70	8	1.3	314C	105	106.5	1.5	1.63	4.03	30.17			2.45	6.05	45.26
		Sulfides, dark siliceous material and w/trace	70	6	1.1	315C	106.5	108.	1.5	1.20	3.18	25.37			1.80	4.77	38.06
		calcite.	35	8	0.9	316C	108	109.5	1.5	2.58	2.75	45.26			3.87	4.13	67.89
		106.9 - 107.2 - Dark sandy sticky gouge. FAULT.	45	9	0.5	317C	109.5	111.0	1.5	3.25	4.85	48.34			4.88	7.28	72.51
		Gouge material could be partly grounded sulfides.															
		109.7 - 110.1 - Broken core. Poor recovery.				WT. Au ⊕	94.5	97.5	3.0	6.65	19.77	105.77	✓		19.95	59.30	317.32
		111.0 - Sharp clean contact w/ graphitic phyllite				WT.Au ②	97.5	100.5	3.0	2.28	5.10	39.43	✓		6.85	15.31	118.28
		(G) ≈ 45°.				WT.Au / WT.Au	97.5 / 94.5	102.0 / 102.0	4.5 / 7.5	3.07 / 4.50	6.17 / 11.61	49.83 / 72.21	✓ ✓		33.78	81.08	541.55
111.0	112.8	Graphitic phyllite (G). Fissile, broken blocky to			1.7	/	111.0	112.8	1.8								
		flaky core. F2 ≈ 40 to 45° F1 ≈ 0 to 5°				WT.Au / WT.Au	102.0 / 102.0	108.0 / 109.5	6.0 / 7.5	1.53 / 1.74	3.51 / 3.36	30.09 / 33.12	✓ ✓		13.05	25.20	248.42
		111.2 - 111.3 - FAULT. Thick sticky black				WT.Au ⑤	108.0	111.0	3.0	2.92	3.80	46.8	✓		8.75	11.41	140.40
		gouge.															
		112.4 - 112.6 - FAULT. Similar to 111.2 - 111.3.															
		112.8 - Abrupt change to Sericite phyllite (S)															
		≈ 40°															
112.8	129.5	Sericite phyllite (S). Competent.			16.5	/	112.8 ~~129.5~~	129.5	16.7								
		F2 ≈ 70 to 75 F1 ≈ 5 - 15°															
		122 - 122.4 - Bleached sericite unit (Sb). Competent															
		Very light gray. Contacts ≈ 55°															
129.5		END OF HOLE															

Calc. Checked Jan 27/77

No SAMPLES

DIAMOND DRILL RECORD

LOGGED BY ALEXANDER YOUNG PO

D.D.H. Nº 76-U-197 PAGE 1/2

PROPERTY GRUM JOINT VENTURE

LATITUDE 69W STARTED Sept. 16, 1976

DEPARTURE 2N COMPLETED Sept. 16, 1976

ELEVATION PROPOSED DEPTH

NOTE: HOLE ABANDONED ULTIMATE DEPTH 115' - 35.1

HOLE SURVEY:		
DEPTH	~~BEARING~~	DIP
collar	224	-45

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 13 %

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	1.5	SHOTCRETE													
1.5	2.1	Bleached sericite phyllite (Sb). Broken blocky core. $F_2 = 85 \sim 90°$.	0.4	✓	1.5	2.1	0.6								
		2.1 - Abrupt change to sericite phyllite. Contact broken grad.													
2.1	19.7	Sericite phyllite (S). Broken flaky core. No foliation observation possible.	1.2		2.1	19.7	17.6								
		19.7 - Abrupt change to massive sulfide (M)													
19.7	20.1	Massive Sulfide (M). Broken core - pebbly. Appear to have ftz inclusions (MIQ).	70	4 0.3	✓	19.7	20.1	0.4	4 PZ, est.						
		20.1 - Abrupt change to Bleached sericite phyl (Sb)													
20.1	22	Bleached Sericite phyllite (Sb). Soft fissile core. $F_2 \sim 75°$. White w/ green fuchsite laminae.	0.7	✓	20.1	22.0	0.9								
		22 - Abrupt change to Sericite phyl w/ trace graphite (SG). Contact broken grd.													
22	35.1	Sericite phyl w/ trace graphite (SG). Broken ground. Core made up of flakes / pebble.	1.9	✓	22.0	35.1	13.1								

LOGGED BY Alexander y. Po D.D.H. No 76-4-197 PAGE 2

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		33.5 ± 34 - Fault - sand/gouge.													
35.1		END OF HOLE:													
		HOLE ACTUALLY ABANDONED													
		DUE TO BAD GROUND.													
		RETURN WATER ~~FLOWS~~ LEAKING													
		THROUGH SHOTCRETED BACK													
		OF RAMP!													

calculated

DIAMOND DRILL RECORD

LOGGED BY Alyard Gl

PROPERTY GRUM JOINT VENTURE

D.D.H. No. 76-C1-198 PAGE 1/6

LATITUDE No. 1 sb BEARING OF HOLE

STARTED

CLAIM No.

DEPARTURE 76 W DIP OF HOLE

TEST PT.	AZIMUTH	DIP
COLLAR	032	-57
10.7 m	033	-56
56.4 m	033	-60
102.1 m	033	-66
150.9 m	023	-71

COMPLETED Oct. 14, 1976

DIRECTION AND DISTANCE FROM NE. CLAIM POST

ELEVATION DIP TESTS

Proposed:
DEPTH Ultimate: 505 - 153.9 m

TOTAL CORE RECOVERY: 94.3%

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	3.9	Massive sulfide (M). Broken blocky core. Poor reco-	0.05	/	0	3.9	3.9								
		very - there were only four pieces of core showing re-													
		drilling or grinding marks. Py: 70 Pb+Zn: 5. PROBABLY MUCK.													
		3.9 - Abrupt change to Sericite phyllite (S). Contact													
		broken grd.													
3.9	27	Sericite phyllite (S). Broken blocky / flaky core.	19.7	/	3.9	27.0	23.1								
		Foliation ≈ 75~80° (F2); F1 - not very distinct													
		but some "S"-crenulations suggest ≈ 0~5° (?)													
		18 - 18.6 - Calcific-chloritic bleached sericite unit.													
		Contacts gradual (Sbk+c).													
		19.6 - 21.6 - Similar to 18~18.6. More calcite in grdmass.													
		Rx has green laminae / spots.													
		25 - 27 - Bleached sericite phyllite. Buff. Foliation ≈ 85-90°													
		Has weak sulfide showing mostly Po laminae. Py ≈ 1%													
		27 - Abrupt change to massive sulfide contact broken grd.													
27	27.4	Massive sulfide (M). Broken grd. Mostly pebbles. Very	0.20	/	27	27.4	0.4								
		poor core recovery. No gouge. Py: 70 Pb+Zn: 6 %													

LOGGED BY _____ D.D.H. No 76-U-198 PAGE 2/6

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		27.4 - Abrupt change to sericite phyllite (S). Contact ≈ 75°													
27.4	35.1	Sericite phyllite (S). Competent. With intervals of dark graphitic sericite phyllite (SG). F2 ≈ 75-85 F1 ≈ 0-5	7.5	1	27.4	35.1	7.7								
		31.5-32 - Graphitic phyllite (G). Fissile easily breaking into poker chips. F2 ≈ 85 ∿ 90°; F1 = indistinct.													
		33.5 ∿ 34.8 - Graphitic phyllite (G). Similar to 31.5-32 run. 1st contact - Shear. 2nd Contact marked by bull qtz.. plane ≈ 85°.													
		35.1 - Change to Bleached sericite phyllite. Contact marked by bull qtz. Contact bet. bull qtz and bleached sericite unit ≈ 80 - w/ irregular wavy plane.													
35.1	42.7	Bleached sericite phyllite. Competent. Buff w/ greenish hue. Foliation ≈ 70 ∿ 75°	7.1	1	35.1	42.7	7.6								
		40 ∿ 40.2 - Po/Mgtt band ≈ 75°													
		40.3 - 40.7 - Graphitic phyllite interval. Flakes.													
		42.7 - Sharp clean contact w/ massive sulfide (M).		WT. Av.	42.7	45.7	3.0	0.88	Pt-Zn						
42.7	49	Massive sulfide, structureless (M), banded (MB) and with barite (MB). Competent. Prominent laminae of Po/Mgtt @ 42.7 ∿ 45.5. Compositional banding Po-Mgtt/Py ≈ 70 ∿ 80; Sulfide/ba ≈ 80 ∿ 90													
		70 3	1.5	318C	42.7	44.2	1.5	0.88	0.33	25.37			1.21	Pt-Zn	
		65 3	1.5	319C	44.2	45.7	1.5	0.45	0.10	17.14			0.55	"	
		65 3	1.5	320C	45.7	47.2	1.5	2.20	1.15	39.43	✓				

LOGGED BY Alfredo (G2) D.D.H. No '76-U-198 PAGE 3/6

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		Sph-Pb/py ≈ 70-75. 43.1-43.2 - Chloritic unit 65 3	1.8	321C	47.2	49.0	1.8	2.88	1.85	42.51	✓				
		48.3 - 48.4 - Bleached sericite unit (Sb).													
		Foliation ≈ 30°. 1st contact very irregular													
		interlounging of sulfides/bleached sericite. 2nd													
		contact - clean and sharp ≈ 30°													
		49 - sharp, clean contact w/ bleached sericite (Sb)													
		≈ 80°													
49	49.5	Bleached sericite phyllite (Sb). Competent.	0.5	/	49	49.5	0.5								
		Foliation 65-70°. No distinct F1/F2 relationship noted.													
		49.5 - Gradual change to calcitic sericite phyllite (Sk).													
49.5	62	Calcitic Sericite phyllite w/ trace chlorite. Competent.	12.0	/	49.5	62.0	12.5								
		Foliation F2 ≈ 65-70° F1 ≈ 0													
		Calcite in both foliation.													
		62 - Decrease in calcitic constituent. Rx becoming													
		normal sericite phyllite (S)													
62	70.1	Sericite phyllite (S). Competent. Foliation w	8.0	/	62.0	70.1	8.1								
		F2 ≈ 30-35° F1 ≈ 5-10°													
		Sporadic blebs/clots of Po.													
		70.1 - Abrupt change to graphitic phyllite (G).													
		Contact marked by calcite seamlets. Plane													
		not very clean ≈ approximately 25°.													
70.1	88.9	Graphitic phyllite (G). Competent. Foliation ≈	18.5	/	70.1	88.9	18.8								

LOGGED BY Alexander (GS) D.D.H. No '76-11-198 PAGE 4/6

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		$F_2 \approx 45 \sim 50°$ $F_1 \approx$ Not distinct. $\approx 0 \sim 5$ (?)													
		72 ~ shear													
		87 - 88 - $F_2 \approx 75 \sim 80°$ $F_1 \approx 5 \sim 15°$													
		88.9 - Abrupt change to chloritic ~~sericite~~ bleached sericite phyllite (Sbc). Contact broken grd.													
88.9	90.5	Chloritic Bleached Sericite phyllite (Sbc). Competent.	1.5	/	88.9	90.5	1.6								
		Silvery white w/ green stripes/spots. Foliation													
		$F_2 \approx 75 \sim 80°$ $F_1 \approx 0 \sim 5°$													
		90.4 - 90.5 - prominent fuchsite laminae > chlorite.													
		90.5 - Sharp clean contact w/ massive sulfide $\approx 45°$													
90.5	94.7	Massive banded (MB) and w/ asso. barite sulfide unit. Competent. Compositional banding Sph-Pb/py $\approx 65-70°$; Sulfides/ba $\approx 50°$ Ba $\approx 15°$.	1.5	322C	90.5	92.0	1.5	5.76	8.04	101.83			8.64	12.06	152.75
			1.5	323C	92.0	93.5	1.5	6.65	9.70	123.09			9.98	14.55	184.64
			1.2	324C	93.5	94.7	1.2	5.44	9.70	91.89			6.53	11.64	110.27
		94.7 - Fault contact w/ sericite phyllite (S). Fault characterized by 6 cm (long) run of grey thick sticky gouge w/ phyllite fragments and sulfide grains.		WT. AVG	90.5	94.7	4.2	5.99	9.11	106.59			25.15	38.25	447.66
94.7	117.3	Dark sericite phyllite (S). Competent.	22.3	/	94.7	117.3	22.6								
		Foliation $F_2 \approx 80 \sim 85°$ (w/ kink folding $\approx 10°$)													
		$F_1 \approx 0 \sim 10°$													

LOGGED BY Alexander D.D.H. No 76-11-198 PAGE 5/6

Interval From	Interval To	DESCRIPTION		Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		97.5 - 99.4 - chlorite - calcitic bleached sericite phyllite. Fissile. Buff w/ green stripes/spots. Foliation ≈ 85∿90°; F_1 ≈ 0∿5°. Contacts gradual														
		115 - 116.1 - chloritic - calcitic unit. Similar to 97.5-99.4.														
		117.3 - Rx gradually changing to calcitic - graphitic sericite phyllite (SG+K)														
117.3	132.6	Calcitic - graphitic sericite phyllite (SG+K). Dark colored w/ white spots/laminae. Fissile. F_2 ≈ 70∿75 F_1 ≈ 0∿10 Calcite ~~usually~~ usually making F_1. Graphite in grdmass as broad laminae 2mm∿1cm. Graphite ≈ 25% $CaCO_3$ ≈ 25% 132.6 - decrease in calcitic constituent. Rx becoming graphitic sericite phyllite.		N.1	✓	117.3	132.6	15.3								
132.6	134.1	Graphitic sericite phyllite (SG). Competent. F_2 ≈ 85∿90 F_1 ≈ 0∿5° 134.1 - gradual build up of mineralization. Rx becoming mineralized graphitic phyllite (PG)		1.5	✓	132.6	134.1	1.5								
134.1		Mineralized graphitic phyllite (PG) Competent.	25 5	1.5	325C	134.1	135.6	1.5	2.88	2.85	36.34	✓				
		F_2 ≈ 80∿85° F_1 ≈ 0∿5.	15 3	1.5	326C	135.6	137.1	1.5	0.88	0.88	13.03			1.76	Pb-Zn	
		Uneven mineralization w/ long intervals of almost	20 3	1.5	327C	137.1	138.6	1.5	0.08	0.10	4.11			0.18	"	

LOGGED BY _____ D.D.H. No 76-4-198 PAGE 6/6

Interval From	Interval To	DESCRIPTION			Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		barren grd. Sulfides in both foliation. Po/mgt clots	15	3	1.5	328c	138.6	140.1	1.5	0.20	0.28	5.14			0.48	Pf Zn	
		150.9 – 152.4 – Transition zone into graphitic	10	3	1.5		140.1	141.6	1.5								
		Sericite phyllite (SG). Gradual decrease in	1	NIL	2.1	/	141.6	143.9	2.3								
		mineralization	10	4	1.4	329c	143.9	145.4	1.5	0.43	0.63	8.91	✓				
152.4	153.9	GRAPHITIC Sericite phyllite (SG). Competent.	"	"	1.5		145.4	146.9	1.5								
		F2 ± 80 a 85 F1 ± 0 a 5.	20	4	1.5	330c	146.9	148.4	1.5	1.28	1.50	20.23			2.78	Pf Zn	
		Graphite ± 30% . Trace calcite in F1 .	15	3	1.3	331c	148.4	149.9	1.5	0.18	0.70	4.20			0.88	"	
			15	4	1.5	332c	149.9	151.4	1.5	1.18	1.33	23.31			2.51	"	
153.9		END OF HOLE	5	1	1.0	/	151.4	152.4	1.0								
					1.5	/	152.4	153.9	1.5								
						WT. RK.	135.6	141.6	6.0	0.73	Pf Zn						
						"	146.9	151.4	4.5	2.06	"						

Colon checked Jan. 28/77 JR calculations ✓

DIAMOND DRILL RECORD

LOGGED BY Alexander Young PO

D.D.H. Nº 76-U-199 PAGE 1/4

PROPERTY GRUM JOINT VENTURE

LATITUDE 10,677.070 2N STARTED SEPT 17, 1976

DEPARTURE 7,629.42/ 71W COMPLETED SEPT 19, 1976

ELEVATION _____ PROPOSED DEPTH 131.1

ULTIMATE DEPTH ~~435'~~ 132.6m

HOLE SURVEY:		
DEPTH	BEARING	DIP
collar	224	0
67 m	(See	0
124.9m	NOTE - END OF LOG)	0

CLAIM Nº _____

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 90.3%

Interval From	Interval To	DESCRIPTION		Recovery		Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	24.1	Massive sulfide (M), also with barite-in-grdmass	/	/	0	/	0	2.1	2.1	(partly shotcrete)							
		variety (Mb). Competent w/ some short intervals	60	10	0.9	B 468	2.1	3.6	1.5	8.39	12.65	124.12			12.59	18.98	186.18
		of broken core. Faint compositional banding 0 ~	65	10	1.3	B 469	3.6	5.1	1.5	7.40	10.21	114.17			11.10	15.32	171.26
		5°.	65	12	1.4	B 470	5.1	6.6	1.5	6.40	8.85	92.92			9.60	13.28	139.38
		10.6 - 11 · Broken pebbly sulfide - sheared (?)	60	15	1.5	B 471	6.6	8.1	1.5	7.85	10.31	113.14			11.78	15.47	169.71
		13 - 15 - Broken pebbly mixture of sulfides and	65	15	1.2	B 472	8.1	9.6	1.5	6.50	8.95	75.77			9.75	13.43	113.66
		greenish bleached sericite phyllite w/ fuchsite.	50	10	1.0	B 473	9.6	11.1	1.5	6.75	10.15	76.80			10.13	15.23	115.20
		19 - 19.8 · Foliation 5 ~ 10°	60	8	1.0	B 474	11.1	12.6	1.5	6.97	8.69	104.92			10.46	13.04	157.38
		24.1' Abrupt change to graphitic phyllite (G).	40	8	1.0	B 475	12.6	14.1	1.5	3.60	8.16	46.29			5.40	12.24	69.44
		Contact broken ground	40	8	0.8	B 476	14.1	15.6	1.5	3.03	3.35	47.31			4.55	5.03	70.97
24.1	27.0	Graphitic phyllite (G). Flaky appear to be a	65	10	1.3	B 477	15.6	17.1	1.5	6.75	6.52	97.72			10.13	9.78	146.58
		shear zone. Foliation ± 0 ~ 10 · wavy.	50	10	1.4	B 478	17.1	18.6	1.5	8.60	11.52	156.34			12.90	17.28	234.51
		Showing of sulfides	50	10	1.2	B 479	18.6	20.1	1.5	7.40	9.93	114.17			11.10	14.90	171.26
		27.0 - Abrupt change to massive sulfide (M).	50	10	1.4	B 480	20.1	21.6	1.5	7.00	9.70	93.94			10.50	14.55	140.91
		Contact broken grd.. Sulfide adjacent contact	40	12	0.9	B 481	21.6	23.1	1.5	7.20	9.65	101.83			10.80	14.48	152.75
		is friable porous.	35	10	0.8	B 482	23.1	24.6	1.5	4.18	6.31	79.54			6.27	9.47	119.31
27.0	36.	Massive sulfide (M) with porous (MV) and barite	3	<1	2.3	~	24.6	27.0	2.4	<1% Pb-Zn, est			Use	Nil for Cde.	0	0	0

LOGGED BY Alexander Young Po D.D.H. No '76-U-199 PAGE 2/4

Interval From	Interval To	DESCRIPTION	Recovery			Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		an - groundmass varieties. Competent. Compositional	60	12	1.5	B483	27.0	28.5	1.5	6.10	10.21	108.00			9.15	15.32	162.00
		banding (sulphides / barite) ≈ 25 ∿ 30°.	55	15	1.4	B484	28.5	30.0	1.5	5.40	9.55	98.74			8.10	14.33	148.11
		35.1 ∿ 36 - transitional zone w/ bleached sericite	60	12	1.5	B485	30.0	31.5	1.5	6.20	9.85	139.20			9.30	14.78	208.80
		phyllite. Contact sub-// to core axis w/ sulphides	50	12	1.5	B486	31.5	33.0	1.5	6.40	9.25	104.92			9.60	13.88	157.38
		at one side and bleached sericite phyllite on the	50	10	1.3	B487	33.0	34.5	1.5	5.10	9.78	85.72			7.65	14.67	128.58
		opposite side.	40	10	1.1	B488	34.5	36.0	1.5	4.95	9.18	62.40			6.83	13.77	93.6
		36 - gradual change to normal sericite phyllite (S).															
36	39.6	Sericite phyllite (S). Competent. Slight trace	/	/	3.2	/	36.0	39.6	3.6								
		of graphite and calcite. Foliation F_2 ≈ 40 ∿ 45°				Wt.Av.	2.1	36.0	33.9	5.83	8.53	90.2			197.69	289.23	3056.97
		changing to 20 ∿ 25 fr. 38.1. F_1 ≈ F_2 (?) - not				Wt.Av	2.1	23.1	21.0	6.70	9.19	97.1	/		140.79	193.01	2039.19
		very clear relationship based @ 37.5m.				Wt.Av.	2.1	24.6	22.5	6.54	9.00	95.93		✓	147.06	202.48	2158.50
		39.6 - Abrupt change to Calcitic-chloritic sericite				//	12.6	17.1	4.5	4.46	6.01	63.78			20.08	27.05	286.99
		phyllite (Sx+c). Contact broken ground.				//	27.0	36.0	9.0	5.63	9.64	99.83	/	/	50.63	86.75	898.47
39.6	93.0	Calcitic-chloritic sericite phyllite (Sx+c).	51.8			/	39.6	93.0	53.4								
		Competent. Greenish groundmass w/ white calcite				//	33.0	36.0	3.0	4.83	9.48	74.06			14.48	28.44	222.18
		laminae (F_1). F_2 ≈ 25-30° ; F_1 ≈ 75-90°.															
		47.2 - 59.4 - F_2 ≈ 0 ∿ 10 ; F_1 ≈ 85 ∿ 90°															
		61. - Shear															
		61.3 - 61.6 - Bleached phyllite, tuffaceous looking.															
		Rosy-buff. Contacts abrupt, broken grd.. Siliceous															
		non-Calcitic except for short secondary stringers.															
		71.7 - 73 - Shear. Sericite flakes / sand.															

LOGGED BY *Alexander Young Po アレキサンダー ヤング ポー* D.D.H. Nº *76-U-199* PAGE *3/4*

Interval From	Interval To	DESCRIPTION			Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		77.5-77.7 - $F_2 \approx 0°$; F_1 sub-∥ F_2															
		82.3-88.8 - $F_2 \approx 25°$; $F_1 \approx 55\sim60$ w/ broad ellipsoidal fold nose closures.															
		88.2-88.4 - Pebble/sand - sheared?															
		91.4-93 - $F_2 \approx 30°$ $F_1 \approx 85\sim90°$															
		93 - gradual change to sericite phyl w/ trace calcite (SK)															
93	102.4	Sericite phyl w/ trace calcite (SK). Competent. Foliation $F_2 \approx 30°$; $F_1 \approx$ Not well developed $\approx 60°$ @ 98 m.			8.8	/	93	102.4	9.4								
		102.4 - Abrupt change to bleached sericite phyllite. Contact broken grd.															
102.4	103.0	Bleached sericite phyllite (Sb). Competent. Buff with greenish hue. Foliation $\approx 30°\sim45°$. Sulfide showing Py: 2% Pb+Zn: Tr.															
		103.0 - Abrupt clean contact w/ massive	2	tr	0.6	/	102.4	103.0	0.6	Trace ..., est							
		sulfides $\approx 65°$	65	12	1.4	B489	103.0	104.5	1.5	3.90	3.65	49.37					
103.0	110.5	Massive sulfides of the porous (MV), banded	70	8	1.5	B490	104.5	106.0	1.5	1.83	1.05	29.14					
		(MB) and w/ qtz inclusions (MIQ) varieties.	50	6	1.1	B491	106.0	107.5	1.5	1.13	0.30	27.43					
		Competent. Compositional banding $\approx 60\sim65°$.	65	15	1.5	B492	107.5	109.0	1.5	6.80	6.47	68.57					
		Short porous intervals w/ voids $\approx 55\sim60°$	45	5	1.3	B493	109.0	110.5	1.5	1.95	1.73	23.31					
		109 ~ 109.7 - mgt w/ Po asso w/ py laminae.	5	1	1.2	/	110.5	111.7	1.2	1 PZ, est		(Use 0.5 est)					
		109.4 ~ 109.7 - [redacted] interval with bleached sericite grdmass.				Wt. Av Wt. Av	103.0 107.5	106.0 110.5	3.0 3.0	2.87 4.38	2.35 4.10	39.36 45.9					

LOGGED BY Alexander Young Po D.D.H. Nº 76-U-199 PAGE 4/4

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		110.5 - Gradual change to bleached sericite phyllite (S6). Contact is arbitrary. Change is w/ decrease in mineralization and ~~and~~ increase of bleached sericite in grdmass.													
110.5	111.7	Bleached Sericite phyllite w/ minor sulfide showing (P-S6). Competent. Foliation 15°~25°. Sulfides following foliation as well as isolated clusters/clots in grdmass. 111.7 - Abrupt change to graphitic phyllite (G). Contact broken grd.													
111.7	131.1	GRAPHITIC SERICITE Phyllite (G). Competent. Foliation F2 ≈ 35~40° F1 ≈ 5~10° @ 111.7~115.8 interval. 117.~117.3 ~ Foliation changed to F2 ≈ 50~60° F1 ≈ 0~10° 116~116.5~ FAULT. DARK STICKY gouge	18.3	/	111.7	131.1	19.4								
131.1		END OF HOLE													
		NOTE: D & B survey hampered by high pressure water. Result of survey is questionable.													

Calcs checked Jan. 28/77 SL calculations ✓

DIAMOND DRILL RECORD

LOGGED BY Alexander Young P.O.

PROPERTY GRUM JOINT VENTURE

D.D.H. No. '76-U-200 PAGE 1/3

LATITUDE 10,673.002 7W BEARING OF HOLE Approx 46° 12' 35" 044 STARTED Sept 19, 1976

DEPARTURE 7,640.151 2N DIP OF HOLE ⊗ +0° 43' COMPLETED Sept 20, 1976

ELEVATION 1,158.248 Approx. DIP TESTS None DEPTH Proposed: Ultimate: 150 - 457

N ← DIRECTION AND DISTANCE FROM NE. CLAIM POST

CLAIM No.

TOTAL CORE RECOVERY: 82 %

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Rec. Ft.		Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	6	Graphitic phyllite (G). Soft flaky core. Weakly mineralized Py: 2% Pb+Zn: 1% Foliation ± 40 ~ 45°. Fix 0 ~ 5 Sulfides in both foliation	4.2		/	0	6	6								
		6.0 - Abrupt change to massive sulfide (M). Contact broken grd.			W.Av.	6.0	20.0	14.0	7.57	12.62	115.90	✓		105.91	176.74	1622.57
6	20	Massive sulfide, porous variety w/ some structureless unit (M+MV). Broken friable (porous) to hard and brittle (structureless type). Voids aligned ± 30° ~ 35°.	65	12	619B	6.0	7.9	1.9	7.95	15.80	126.17			15.11	30.02	239.72
			65	15	620B	7.9	9.4	1.5	9.17	16.40	138.17			13.76	24.60	207.26
			65	12	621B	9.4	10.9	1.5	8.88	14.23	122.06			13.32	21.35	183.09
			60	15	622B	10.9	12.4	1.5	9.94	11.45	147.09			14.91	17.18	220.64
		13.7 - 15.5 - Alternating intervals of graphitic phyllite and sulfides (G - M). Contacts broken ground.	40	8	623B	12.4	13.9	1.5	6.30	10.43	100.80			9.45	15.65	151.2
			20	4	624B	13.9	15.4	1.5	0.88	2.38	16.11			1.32	3.57	24.17
		13.7 - 14 - Sheared.	65	8	625B	15.4	16.9	1.5	6.63	11.55	110.06			9.95	17.33	165.09
9		20 - Abrupt contact w/ mineralized graphitic phyllite (PG). Contact broken ground - FAULT CONTACT.	65	10	626B	16.9	18.4	1.5	9.52	15.70	162.52			14.28	23.55	243.78
			65	10	627B	18.4	20.0	1.6	8.63	14.68	117.26			13.81	23.49	187.62
		Black thick sticky gouge	3	ft	1.3 /	20.0	21.3	1.3	(Bull core)							
20	27.0	Mineralized graphitic phyllite (PG). Competent	15	3	15	628B	21.3	22.9	1.6	2.33	1.10	31.20					

LOGGED BY Alexander Young Po D.D.H. Nº 76-11-200 PAGE 2/3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		21.3 - 23 - Bx. Phyllite fragments well healed by graphite. Fragments (felsic minerals + graphitic phyllite fragments) ∅ ≈ 1 x 2 cm in random orientation, some of which show mineralization. Sulfides also acts as cementing material in short intervals i.e. 22.9 ≈ 23.	30 9 1.5	629B	22.9	24.4	1.5	2.50	4.30	43.54					
			25 6 1.4	630B	24.4	27.0	2.6	2.05	3.45	30.17					
				WT Av.	22.9	25.9	3.0	2.28	3.88	36.86					
		23 ≈ 24.4 - Core appear solid w/ F_2 ≈ 0 ≈ 10 F_1 ≈ 45 ≈ 50° w/ sulfides in both foliation													
		25.9 ≈ 27 - F_2 ≈ 30° F_2 ≈ 0°.													
		27 - Abrupt change to bleached Sericite phyllite. Contact ≈ 50° wavy.													
27	34.1	Bleached Sericite phyllite (S6). Competent. Buff w/ green (fuchsite) spots / laminae. foliation ≈ 25 ≈ 30° (F_2?). Weakly mineralized Py: 4% Pb+Zn x 1 ≈ 2% in sporadic distribution.	6.9	/	27	34.1	7.1								
		34.1 - start of transition to sericite phyllite (S).													
34.1	38.3	Transition zone between bleached sericite phyllite (S6) and Sericite phyllite (S). Competent. Contact sub-// to core axis ≈ wavy with broad ellipsoidal fold nose closure. One side is bleached sericite and opposite is sericite phyllite.	4.1	/	34.1	38.3	4.2								

LOGGED BY Alexander young Pb D.D.H. Nº '76-4-200 PAGE 3/3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
38.3	45.7	Sericite phyllite (S). Competent. Foliation F2 ∧ 10∼20° F1 ∧ 85∼90° Sulfide (Py) with qtz healed fracture @ 45∼45.4.	7.1	1	38.3	45.7	7.4								
45.7		END OF HOLE													

calculations ✓

DIAMOND DRILL RECORD

LOGGED BY Alexander Young P.O. D.D.H. Nº 76-U-201 PAGE 1/2

PROPERTY GRUM JOINT VENTURE

LATITUDE 72W STARTED Sept. 21, 1976

DEPARTURE 4N COMPLETED Sept 21, 1976

ELEVATION ____ PROPOSED DEPTH ____

ULTIMATE DEPTH 180' ~ 54.9m

HOLE SURVEY:		
DEPTH	~~BEARING~~ AZIMUTH	DIP
collar	(164) 162	0

CLAIM Nº ____

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 80.1 %

Interval From	Interval To	DESCRIPTION	Recovery			Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	3.5	Bleached Sericite. Buff with prominent fuchsite laminae. Trace calcite. Foliation ∠ 5~10°			1.4		0	3.5	3.5								
						WTAV.	3.5	9.5	6.0	3.20	3.98	40.46			19.20	23.85	242.76
		0 - 2.1 - Pebbly. Low core recovery.				"	9.5	15.5	6.0	2.44	Pt-Zn						
		3.5 - Abrupt change to mineralized graphitic				"	18.5	27.5	9.0	4.32	6.51	52.46			38.87	58.58	472.12
		phyllite (PG). Contact broken gnd.				"	21.5	26.0	4.5	4.97	7.26	59.54			22.37	32.69	267.95
3.5	35.0	Mineralized graphitic phyllite (PG). Competent.	20	7	2.8	631B	3.5	6.5	3.0	4.05	4.10	53.49			12.15	12.30	160.47
		Foliation F2 ∠ 5~10° F1 ∠ 75~85°	25	6	3.0	632B	6.5	9.5	3.0	2.35	3.85	27.43			7.05	11.55	82.29
		Sulphides in both foliation.	15	4	2.8	633B	9.5	12.5	3.0	1.63	0.50	16.11			2.13	Pt-Zn	
		9~9.2 ~ Shear.	20	4	3.0	634B	12.5	15.5	3.0	1.60	1.15	16.11			2.75	"	
		24.5 ~ increasing sulfide showing. Wider sulfide	20	5	2.7	635B	15.5	18.5	3.0	2.88	4.05	35.31	✓				
		bands.	15	8	3.0	636B	18.5	21.5	3.0	3.18	6.29	38.40			9.54	18.87	115.20
		35.0 ~ 35.3 - FAULT. BLACK sticky thick gouge.	15	8	3.0	637B	21.5	24.5	3.0	4.33	6.75	50.40			12.99	20.25	151.20
		Contact w/ porous massive sulfide (MV).	30	8	1.5	638B	24.5	26.0	1.5	6.25	8.29	77.83			9.38	12.44	116.75
35	42.7	Porous Massive sulfide (MV). Friable broken core.	40	9	1.5	639B	26.0	27.5	1.5	4.64	4.68	59.31			6.96	7.02	88.97
		Some solid short core show barite in groundmass	40	6	1.5	640B	27.5	29.0	1.5	1.26	0.58	23.31			1.84	Pt-Zn	
		~ 25%. Voids aligned 35° ~ 45°.	40	4	1.5	641B	29.0	30.5	1.5	0.38	0.63	12.00			1.01	"	

LOGGED BY Alexander y. Po — D.D.H. Nº '76-4-201 — PAGE 2/2

Interval From	Interval To	DESCRIPTION		Recovery		Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		42.7 - change to barite-in-groundmass sulfides	35	4	1.4	642B	30.5	32.0	1.5	0.60	0.65	13.03			1.25	Pb+Zn	
		variety (~~MB~~). Contact broken grd.	40	8	1.3	643B	32.0	33.5	1.5	2.03	2.80	25.37	✓				
42.7	52.4	Massive sulfide in barite groundmass (MB+MV)	30	12	1.0	644B	33.5	36.6	3.1	4.94	9.68	87.77			15.31	30.01	272.09
		and short runs of porous variety. Generally	65	15	0.8	645B	36.6	38.1	1.5	4.50	9.96	79.54			6.75	14.94	119.31
		competent except for the friable porous inter-	65	12	1.0	646B	38.1	~~42.7~~ 41.1	3.0	4.47	8.11	72.69			13.41	24.33	218.07
		val @ 45.1 ~ 45.2 ; 49.8 ~ 50.	50	12	1.5	647B	41.1	44.2	3.1	4.69	9.35	93.94			15.54	28.99	291.21
		45.5 ~ 45.7 - Sulfide bx (MX$_3$). Sulfide	60	15	1.4	648B	44.2	45.7	1.5	5.65	10.04	102.86			8.48	15.06	154.29
		fragments Ø ≈ 1 mm ~ 1.5 cm cemented by sulfides	60	15	1.3	649B	45.7	47.2	1.5	5.70	11.00	105.94			8.55	16.5	158.91
		Compositional band ba/sulfides ≈ 15-20°	50	12	1.0	650B	47.2	48.8	1.6	5.90	10.97	104.92			9.44	17.55	167.87
		52.4 - Sharp clean contact w/ bleached sericite	50	12	1.3	651B	48.8	50.3	1.5	5.80	10.16	109.03			8.70	15.24	163.55
		phyllite (SB) ≈ 15°	45	10	2.3	652B	50.3	52.8	2.5	3.78	8.14	98.74			9.45	20.35	246.85
52.4	52.8	Bleached sericite phyllite (SB). Competent. Silvery															
		white. Soft core near first contact ~ sheared.				WT. AV.	33.5	52.8	19.3	4.95	9.48	92.86			95.63	182.97	1792.15
		Foliation ≈ 20°.				〃	44.2	50.3	6.1	5.77	10.55	105.68			35.17	64.35	644.62
		52.8 - Sharp contact w/ graphitic phyllite (G).				〃	27.5	32.0	4.5	1.37	Pb+Zn						
		Contact ≈ 35°.															
52.8	54.9	Graphitic phyllite (G). Broken flaky core.			2.0	~~52.8~~	52.8	54.9	2.1								
		Foliation ≈ fissility ≈ 5 ~ 10°															
		Py in clusters and/or isolated blebs Py ≈ 3%															
		Pb+Zn: Trace.															
54.9		END OF HOLE															

NO SAMPLES.

DIAMOND DRILL RECORD

LOGGED BY Alexander Young Po

PROPERTY GRUM JOINT VENTURE

D.D.H. No. 76-U-202 PAGE 1/2

LATITUDE 72W AZIMUTH BEARING OF HOLE (120) 118 STARTED Sept. 21, 1976

DEPARTURE AN DIP OF HOLE 0 COMPLETED Sept. 22, 1976

ELEVATION ____ DIP TESTS ____ DEPTH Proposed: Ultimate: 150' - 45.7

CLAIM No. ____

N ← DIRECTION AND DISTANCE FROM NE. CLAIM POST

TOTAL CORE RECOVERY: 86.2 %

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	1.8	Bleached Sericite phyllite (Sb). Competent. Silvery white. Foliation Fa ≈ 5~10°; Fi ≈ 75~80°	1.1	/	0	1.8	1.8								
		1.8 - sharp contact with graphitic phyllite (G). Contact plane broken ground													
1.8	3.2	Graphitic phyllite (G). Competent. Foliation Fa ≈ 0~15°; Fi ≈ 85~90 (very faint crenulations bet. Fa). Minor sulfide showing Py: 1% Pb+Zn ≈ 1%	1.4	/	1.8	3.2	1.4								
		3.2 - Abrupt change to Bleached Sericite phyllite (Sb). Fault contact pp. 3.2~3.4.													
3.2	6.4	Bleached Sericite phyllite (Sb). Competent. Buff w/ greenish hue. Foliation ≈ 25°~30° (Fa?)	3.1	/	3.2	6.4	3.2								
		Minor sulfide showing Py: 1% Pb+Zn: trace													
		6.4~ gradual change to Chloritic Bleached phyllite unit													
6.4	12.8	~~Bleached~~ Chloritic Bleached phyllite Unit (Sbc). Competent. White w/ green stripes/spots. Foliation Fa ≈ 25°	6.1	/	6.4	12.8	6.4								
		Sporadic clots of po.													
		12.8 - Change to graphitic sericite phyl (SG). Contact													

LOGGED BY Alexander Young PD — D.D.H. Nº '76-U-208 PAGE 2/2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		marked by Bull qtz.													
12.8	19.9	Graphitic sericite phyllite (SG). Competent. Foliation F2 ≈ 0 ∿ 10° F1 ≈ 85 ∿ 80° Weak showing of sulfides Py: 2% Pb+Zn ≈ 1% 19.9 - Decrease in graphitic constituent. Rx becoming dark sericite phyllite (S).	6.9	1	12.8	19.9	7.1								
19.9	45.7	Dark sericite phyllite (S). Competent. Foliation F2 ≈ 0 ∿ 10° w/ series of broad ellipsoidal fold nose closure. 25.7 - 28.5 - Bleached sericite phyllite interval. Competent. Buff. F2 ≈ 0 ∿ 5°. Contacts gradual. 28.5 ∿ 28.6 - Small fault. Light grey to silvery white gouge w/ sericite flakes. 38.1 - 41.1 - Bleached sericite phyllite (SG) w/ short sericite phyllite run. Broken blocky core. Buff w/ greenish hue. Foliation ≈ 10 ∿ 15. Has Bull qtz w/ sulfide showing at 40 ∿ 41.1 Py: 2% Pb+Zn 1% 42.5 ∿ 42.7 - Fault. Grey sticky gouge w/ phyllite fragments. 42.7 ∿ 45.7 - Broken pebbly core - extremely low core recovery.	20.8	6	19.9	45.7	25.8								
45.7		END OF HOLE													

calculations ✓

DIAMOND DRILL RECORD

LOGGED BY J. Paxton

PROPERTY GRUM JOINT VENTURE

D.D.H. No. U-203 PAGE 1 of 3

LATITUDE 4N BEARING OF HOLE 100° STARTED Sept 22/76

DEPARTURE 72W DIP OF HOLE 0° COMPLETED Sept. 22/76

ELEVATION ____ DIP TESTS ____ DEPTH Proposed: Ultimate: 73.2

CLAIM No. ____

N ← DIRECTION AND DISTANCE FROM NE. CLAIM POST

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0.0	14.0	Quartz Sericite Phyllite (S) Dark grey color F_2 shear planes parallel to core axis and slicing through very fine well defined F_1 laminae trending at a steep angle to core axis. Scattered irregular quartz veins. Gouge - 7.7 - 8.0													
14.0	14.5	Quartz Chlorite Phyllite (Sc) Pale grey green colour. F_1 at 70°. F_2 not identifiable.													
14.5	30.0	Quartz Sericite Phyllite (S) F_2 shear planes parallel to core axis and at right angles to very fine F_1 laminae. Similar to section 0.0-14.0 Fault - 5cm sticky fault gouge at 30.0													

LOGGED BY _____ D.D.H. No U-203 PAGE 2 of 3

Interval From	Interval To	DESCRIPTION	Py	Pb Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
30.0	51.8	Mixed Sericite Phyllite and Quartz Sulphide (S-P)															
		The sericite phyllite of the previous section becomes more siliceous but structure remains the same. Occasional bands of coarse granular quartz-sulphide material. Numerous very irregular intruded veinlets (?) of massive															
		sulphide following F_1 or F_2 or	10	3	1.4/1.5	654B	36.6	38.1	1.5	0.80	0.40	17.14	✓				
		intruding dilation zones.	15	5	1.5/1.5	655B	38.1	39.6	1.5	2.48	1.45	34.29			4.17	2.18	51.44
		F_2 at 25°-30°	15	6	1.5/1.5	656B	39.6	41.1	1.5	2.88	1.25	24.00			4.32	1.88	36.00
		F_1 generally at rt. angles to F_2	10	2	1.5/1.5	657B	41.1	42.7	1.6	3.05	2.60	41.49			4.88	4.16	66.38
			10	2	1.5/1.5	658B	42.7	44.2	1.5	4.90	3.88	63.43	✓				
51.8	52.5	Bleached Sericite Phyllite (SL)	10	2	1.5/1.5	659B	44.2	45.7	1.5	3.18	2.00	43.54	✓				
		F_2 at 30° and F_1 at 80° to it.	20	8	1.5/1.5	660B	45.7	47.2	1.5	6.87	5.00	101.83			10.31	7.50	152.75
			20	6	1.6/1.6	661B	47.2	48.8	1.6	6.97	4.96	106.97			11.15	7.94	171.15
52.5	57.9	Breccia (P+MX$_Q$) Rec.= 4.5/5.4	15	5	1.5/1.5	662B	48.8	50.3	1.5	0.98	2.53	12.00	✓				
		Traces of mud and gouge.	10	3	1.5/1.5	663B	50.3	51.8	1.5	1.15	3.58	14.06	✓				
		Angular fragments of pyrite and quartz sulphide in siliceous groundmass.				WT. AV.	38.1	47.7	4.6	2.91	1.79	33.44			13.37	8.22	153.82
		57.6-57.9 - White quartz				"	45.7	48.8	3.1	6.92	4.98	104.48			21.46	15.44	323.90

LOGGED BY _____ D.D.H. Nº U-203 PAGE 3 of 3

Interval From	Interval To	DESCRIPTION	Py	Pb Zn	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
			20	Tr	0.8/0.8	664B	52.5	53.3	0.8	1.53	0.23	24.34			1.76	Pb-Zn	
			20	Tr	1.5/1.6	665B	53.3	54.9	1.6	0.93	0.80	13.03			1.73	"	
			20	Tr	1.3/1.5	666B	54.9	56.4	1.5	0.38	2.23	7.20			2.61	"	
			10	Tr	1.1/1.5	667B	56.4	57.9	1.5	1.13	1.28	13.03			2.41	"	
57.9	73.2	Quartz Sulphide Breccia (PX_M)	15	Tr	1.5/1.5	668B	57.9	59.4	1.5	1.88	2.23	26.40			2.82	3.35	39.60
		59.0 - F_2 at 60 F_1 at rt. angles to F_2	15	3	1.6/1.6	669B	59.4	61.0	1.6	2.75	2.55	38.40			4.40	4.08	61.44
		59.8 - 73.2 Appears to be	20	3	1.5/1.5	670B	61.0	62.5	1.5	2.93	4.00	49.37	✓				
		irregular masses 5-20 cm	20	6	1.5/1.5	671B	62.5	64.0	1.5	3.33	4.85	47.31			5.00	7.28	70.97
		of quartz sulphide in a sulphide	30	12	1.5/1.5	672B	64.0	66.5	1.5	6.01	8.72	73.71			9.02	13.08	110.57
		groundmass. Boundaries are	20	3	1.3/1.6	673B	66.5	67.1	1.6	1.68	3.10	23.31	✓				
		indistinct	20	5	1.4/1.5	674B	67.1	68.6	1.5	0.93	2.33	17.14	✓				
		68.8 - 70.0 Bleached Sericite	10	2	1.2/1.5	675B	68.6	70.1	1.5	0.53	5.56	8.23			0.80	8.34	12.35
		plus white quartz.	15	5	1.2/1.5	676B	70.1	71.6	1.5	1.88	5.72	33.26			2.82	8.58	49.89
			20	8	1.6/1.6	677B	71.6	73.2	1.6	3.80	5.99	53.49			6.08	9.58	85.58
	73.2	End of hole				WT. AV.	52.5	54.9	2.4	1.74	Pb-Zn						
						"	54.9	57.9	3.0	2.51	"						
						"	57.9	61.0	3.1	2.33	2.40	32.59			7.22	7.43	101.04
						"	62.5	66.5	3.0	4.67	6.79	60.51			14.02	20.36	181.54
						"	68.6	73.2	4.6	2.11	5.76	32.13			9.70	26.50	145.82

calculations ✓

DIAMOND DRILL RECORD

LOGGED BY ALEXANDER YOUNG PO

D.D.H. Nº '76-U-204 PAGE 1/2

PROPERTY GRUM JOINT VENTURE

LATITUDE 71W STARTED Sept 24, 1976

DEPARTURE 6N COMPLETED Sept. 25, 1976

ELEVATION _____ PROPOSED DEPTH _____

ABANDONED HOLE ULTIMATE DEPTH 120' - 36.6 m

HOLE SURVEY:		
DEPTH	BEARING	DIP
Collar	224	-90

CLAIM Nº _____

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 70.3%

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	3	MINERALIZED GRAPHITIC PHYLLITE (PG). Broken core, pebbly. EXTREME LOW RECOVERY - NO SENSE SAMPLING. 3 - Abrupt change to sericite phyl w/trace graphite (SG)	10 4 0.02	/	0	3	3								
3	15.3	Sericite phyllit w/trace graphite (SG). Broken flaky to blocky core. Foliation ≈ 70 ∿ 75° (FS) F, ≈ 0 ∿ 5°. 13.5 ∿ 13.6 - Shear. 15.3 - Abrupt change to bleached sericite phyllite (SB). Contact broken grd.	10.1	/	3	15.3	12.3								
15.3	19.8	Bleached Sericite phyllite (SB). Broken flaky core. Silvery white. Foliation ≈ 70 ∿ 75° 19.8 - Abrupt change to massive sulfide. Contact broken grd.	2.7	/	15.3	19.8	4.5								
19.8	30.7	Massive sulfides of the pyrrhotite (MV), qtz. inclusion (MIQ) and Bx'ed (MXS) varieties.	40 12 1.2	688B	19.8	21.3	1.5	7.32	12.90	102.86			10.98	19.35	154.29
			50 15 1.2	689B	21.3	22.9	1.6	6.48	13.51	89.83			10.37	21.62	143.73

LOGGED BY Alexander young Pe D.D.H. Nº 76-4-204 PAGE 2/2

Interval From	Interval To	DESCRIPTION		Recovery		Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		19.8 ~ 21.5 - gf2 inclusion in massive sulfide.	65	10	1.5	690B	22.9	24.4	1.5	2.33	8.26	59.31			3.50	12.39	88.97
		Broken blocky to pebbly core.	70	8	0.9	691B	24.4	25.9	1.5	3.45	9.60	49.03			5.18	14.4	73.55
		21.5 - 24.5 - porous variety. Voids aligned ≈ 75°	45	12	1.4	692B	25.9	27.4	1.5	5.51	9.37	72.69			8.27	14.06	109.04
		24.5 - 27.5 - Sulfide Bx. Fragments @ 1 / 1.5 cm. cemented	60	15	1.4	693B	27.4	29.0	1.6	11.45	17.33	150.17			18.32	27.73	240.27
		by sulfide grains.	60	15	1.6	694B	29.0	30.7	1.7	7.25	10.67	114.17			12.33	18.14	194.09
		27.5 - 30.7 - Porous sulfide. Voids aligned ≈ 70°.	30	10	1.3	695B	30.7	32.2	1.5	1.60	2.90	26.40	✓				
		30.7 - Abrupt change to mineralized graphitic phyllite															
		(Pg). Contact Broken ground				WT. AV.	22.9	27.4	4.5	3.77	9.08	60.35			16.95	40.85	271.56
30.7	32.2	Mineralized graphitic phyllite (Pg). Broken blocky				"	19.8	30.7	10.9	6.33	11.71	92.10			68.95	127.69	1003.94
		core. Foliation ≈ 70° followed by sulfides.															
		32.2 - Abrupt change to bleached sericite phyllite															
		(Sb). Contact broken ground.															
32.2	36.6	Bleached sericite phyllite (Sb). Broken blocky		2.3		✓	32.2	36.6	4.4								
		core. Foliation ≈ 65 ~ 75°. Buff w/															
		prominent fuchsite laminae.															
		33.5 ~ 35.1 - pebbly to flaky poor core recovery 0.4/1.6															
		36.0 ~ 36.2 - flaky - sheared (?)															
36.6		END OF HOLE - ABANDONED HOLE SQUEEZED. LOST RODS.															

calc's checked Jan. 29/77 JL NO SAMPLES.

DIAMOND DRILL RECORD

LOGGED BY Alexander Young PO

D.D.H. Nº 76-U-205 PAGE 1/3

PROPERTY GRUM JOINT VENTURE

LATITUDE 71W STARTED Sept. 24, 1976

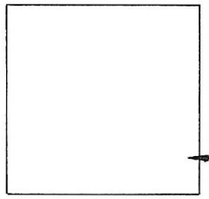
DEPARTURE 6N COMPLETED Sept. 25, 1976

ELEVATION PROPOSED DEPTH 350' - 106.7 m

ULTIMATE DEPTH 350' - 106.7 m

CLAIM Nº

HOLE SURVEY:		
DEPTH	BEARING	DIP
collar	044	0
82.3 m	041	-6



DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY : 88 %

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	3.2	Bleached sericite phyllite (Sb). Competent. Buff to silvery white color. Foliation F2 = 5 ~ 10°; F1 ≥ 85 ~ 90°. 3.2 - Gradual change to sericite phyllite (S).	1.9	/	0	3.2	3.2								
3.2	22.9	Sericite phyllite (S). Competent but has flaky intervals. Foliation at 3.2 - 16.8 m ≥ 0 ~ 10 w/ series of broad elipsoidal fold noses closures. 16.6 - Shear 16.8 - 19.8 F2 ≥ 25 ~ 30° F1 ≥ not clear 22. - 22.9 - FAULT. Gray thick sticky gouge w/ sericite flakes and phyllite pagments. 22.9 - Abrupt change to graphitic phyllite (G).	18.2	/	3.2	22.9	19.7								
22.9	62.5	Graphitic phyllite (G). Fissile. Easily breaks onto poker chips / flakes. Foliation ≥ 10 ~ 15° 24. ~ 24.4 - sandy / flaky 25.6 - 29 - Bleached sericite phyllite (Sb). Competent. Foliation ≥ 15°. Trace calcite. 1st con-	32.8	/	22.9	62.5	39.6								

LOGGED BY Alexander Young Po D.D.H. No 76-1-205 PAGE 2/3

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		fast sharp and clean subparallel to core axis. 2nd contact abrupt - broken ground.													
		34 - 35.5 - Alternating bleached sericite phyllite and graphitic unit. Contacts ≈ 15°. Appears to be undulating to ≈ Contact. Foliation ≈ 15°													
		53.3 ~ 54 - Shear zone. Fine graphite flakes.													
		57.7 - 61 - Alternating intervals of bleached sericite and graphitic phyllite. Bleached unit is competent; Buff w/prominent fuchsite. Foliation ≈ 30°													
		Contact w/ graphite clean and sharp sub-11 to core axis. Graphite oftentimes occupy core of broad synsordal fold nose closure.													
		61 - 64 - Fault Zone. Grey, sticky thick gouge w/ qtz, sericite and phyllite fragments.													
		62.1 - 62.5 - Massive sulfide bx (MXs). Angular sulfide fragments Ø ≈ 1 mm ≈ 1 cm well cemented by finer grain sulfides and trace calcite. Py: 55% Zn + Pb: 3 %			(62.1	62.5)	≈ 3	Pz. est.							
		62.5 - Abrupt change to Bleached sericite phyllite (Sb).													
62.5	72.8	Bleached sericite phyllite (Sb). Broken flaky core. Buff w/ green (fuchsite) spots.	9.1	1	62.5	72.8	10.3								
		67.2 - 67.4 - Fault. White to light grey sticky thick gouge.													

LOGGED BY Alexander Young Pb D.D.H. Nº '76-11-205 PAGE 3/3

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		68.6 - 72.8 - Foliation ≈ 35∿40°.													
		72.8 - Gradual change to sericite phyllite (S).													
72.8	103.7	Sericite phyllite (S). Broken blocky to flaky core. Foliation F2 ≈ 35∿40°; F1 ≈ 0∿10°.	29.1	/	72.8	103.7	30.9								
		83.8 - 89.6 - Chlorite w/ some narrow biotite laminae.													
		89.6 - 93 - Bleached sericite phyllite. Silvery white. Flaky. Foliation 15-20°.													
		92.4 - 92.6 - Shear. Flaky core.													
		103.7 - Gradual change to bleached sericite phyllite (Sb).													
103.7	106.7	Bleached sericite phyllite (Sb). Broken blocky core. Buff to silvery grey colour. Foliation ≈ 70∿75°.	2.6	/	103.7	106.7	3.0								
		105.5 - Small fault (5 cm. long gouge).													
106.7		END OF HOLE													

Calcs checked Jan. 28/77 JL   calculations ✓

DIAMOND DRILL RECORD

LOGGED BY J. Paxton   D.D.H. № U-206   PAGE 1 of 3

PROPERTY Grum Joint Venture

LATITUDE* 10,766   6N   STARTED Sept. 26/76

DEPARTURE* 7716   71W   COMPLETED Sept 27/76

ELEVATION* 1159.6   PROPOSED DEPTH

*Approx survey to be re-calc.   ULTIMATE DEPTH 106.7

HOLE SURVEY:		
DEPTH	BEARING	DIP
Collar	~~0~~ ~~164°~~ X	~~+90~~ +87°26'
No Sperry Sun survey		

CLAIM №

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

Interval From	Interval To	DESCRIPTION	Py	PbZn	Recovery	Sample №	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0.0	1.4	Ground Core															
1.4	56.4	Quartz Sulphide with Massive Bands (P-M	20	10	1.4/1.5	696B	1.5	3.0	1.5	4.35	8.98	66.51			6.53	13.47	99.77
		Typical coarse grained type P	20	8	1.4/1.6	697B	3.0	4.6	1.6	3.45	4.60	45.26			5.52	7.36	72.42
		Local F_1 banding visible at 60°	15	8	1.5/1.5	698B	4.6	6.1	1.5	5.70	4.00	67.54			8.55	6.00	101.31
		cut at rt. angles by F_2 at 45°	45	15	1.3/1.5	699B	6.1	7.6	1.5	9.75	6.33	114.17			14.63	9.50	171.26
		P is interspersed with irregular bands	20	10	1.4/1.5	700B	7.6	9.1	1.5	4.78	4.25	58.63			7.17	6.38	87.95
		of massive sulphide which have	20	10	1.6/3.1	801B	9.1	12.2	~~1.6~~ 3.1	3.65	4.20	43.54			11.32	13.02	134.97
		indistinct contacts but appear to	20	12	1.5/1.5	802B	12.2	13.7	1.5	6.50	2.50	69.60			9.75	3.75	104.4
		mainly follow the F_2 direction	50	15	1.5/1.5	803B	13.7	15.2	1.5	8.50	4.40	89.83			12.75	6.60	134.75
		The M bands range up to 15 cm	15	8	1.5/1.6	804B	15.2	16.8	1.6	4.03	2.03	46.29			6.45	3.25	74.06
		in width and contain partially	30	6	1.5/1.5	805B	16.8	18.3	1.5	5.04	2.33	55.54			7.56	3.50	83.31
		digested inclusions of P	30	6	1.5/1.5	806B	18.3	19.8	1.5	4.85	1.63	55.54			7.28	2.45	83.31
		15.0-20.0 - F_1 rolling parallel to core axis	30	8	1.5/1.5	807B	19.8	21.3	1.5	5.70	1.48	64.46			8.55	2.22	96.69
		30.0-32.0 - F_1 parallel to F_2 = 60° to core Ax	30	12	1.6/1.6	808B	21.3	22.9	1.6	8.55	7.52	83.66			13.68	12.03	133.86
		28.5 - 28.7 Bleched (Sb). Sharp contacts	30	8	1.5/1.5	809B	22.9	24.4	1.5	3.70	2.70	41.49			5.55	4.05	62.24
		at 60°															

LOGGED BY _____ D.D.H. Nº U-206 PAGE 2 of 3

Interval From	Interval To	DESCRIPTION	Py	Pb+Zn	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		35.0 - 40.0 F_2 = 85	20	8	1.5/1.5	810B	24.4	25.9	1.5	3.33	4.10	47.31			5.00	6.15	70.97
		40 - 45 F_1 = 60 F_2 = 85 F_1 30° to F_2	15	5	1.2/1.5	811B	25.9	27.4	1.5	2.15	4.66	37.37			3.23	6.99	56.06
			10	5	1.5/1.6	812B	27.4	29.0	1.6	2.38	5.00	44.23			3.81	8.00	70.77
			15	5	1.4/1.5	813B	29.0	30.5	1.5	2.15	4.76	40.46			3.23	7.14	60.69
			15	8	1.5/1.5	814B	30.5	32.0	1.5	1.90	3.95	39.43			2.85	5.93	59.15
56.4	57.9	Fault Gouge.	15	5	1.5/1.5	815B	32.0	33.5	1.5	1.60	3.73	33.26			2.40	5.60	49.89
		Broken core plus sticky	15	5	1.5/1.5	816B	33.5	35.1	1.6	1.90	4.68	39.43			3.04	7.49	63.09
		fault gouge.	15	5	1.5/1.5	817B	35.1	36.6	1.5	1.75	2.53	31.20			2.63	3.80	46.8
			15	5	1.5/1.5	818B	36.6	38.1	1.5	3.35	6.48	57.60			5.03	9.72	86.4
57.9	65.5	Quartz Sulphide (P)	15	5	1.5/1.5	819B	38.1	39.6	1.5	2.48	4.06	46.29			3.72	6.09	69.44
		Similar to section 0-56.4	10	3	1.5/1.5	820B	39.6	41.1	1.5	3.30	7.44	66.51			4.95	11.16	99.77
		F_2 = 80°	10	3	1.6/1.6	821B	41.1	42.7	1.6	1.80	3.30	29.14		-	2.88	5.28	46.62
			10	3	1.5/1.5	822B	42.7	44.2	1.5	1.15	1.40	15.09		-	1.73	2.10	22.64
			10	3	1.5/1.5	823B	44.2	45.7	1.5	1.40	2.88	23.31			2.10	4.32	34.97
			10	2	1.5/1.5	824B	45.7	47.2	1.5	1.38	3.25	26.40			2.07	4.88	39.6
			10	2	1.6/1.6	825B	47.2	48.8	1.6	1.68	4.18	30.17			2.69	6.69	48.27
			10	2	1.4/1.4	826B	48.8	50.3	1.5	1.43	3.18	21.26			2.15	4.77	31.89
			10	2	1.5/1.5	827B	50.3	51.8	1.5	1.50	3.00	24.34			2.25	4.50	36.51
			10	2	0.8/1.5	828B	51.8	53.3	1.5	1.58	4.20	27.43			2.37	6.30	41.15
			10	2	0.8/1.6	829B	53.3	54.9	1.6	1.70	2.48	26.40			2.72	3.97	42.24
			10	Tr	0.5/1.5	830B	54.9	56.4	1.5	0.63	1.30	10.97			0.95	1.95	16.46
					11.5		56.4	57.9		No ?							

LOGGED BY _____ D.D.H. No 11-206 PAGE 3 of 3

Interval From	Interval To	DESCRIPTION	Py	Pb Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
			10	2	0.8/1.5	831B	57.9	59.4	1.5	1.83	2.40	24.34			2.76	3.60	36.51
			10	2	1.6/1.6	832B	59.4	61.0	1.6	2.20	5.50	30.17			3.52	8.80	48.27
			10	2	0.5/1.5	833B	61.0	62.5	1.5	1.35	2.88	21.26			2.03	4.32	31.89
			10	2	1.5/1.5	834B	62.5	64.0	1.5	5.42	7.70	67.54			8.13	11.55	101.31
			10	2	0.9/1.5	841B	64.0	65.5	1.5	6.65	10.55	80.57			9.98	15.83	120.86
65.5	68.5	Massive Sulphide M	50	20	1.4/1.6	842B	65.5	67.1	1.6	7.61	11.66	102.86			12.18	18.66	164.58
		Brown high grade sulphide	30	20	0.5/1.4	843B	67.1	68.5	1.4	9.89	16.00	138.17			13.85	22.40	193.44
		with irregular inclusions of quartz				WT. AV.	1.5	7.6	6.1	5.78	5.96	72.9	✓		35.23	36.33	444.76
						WT. AV.	7.6	15.2	7.6	5.39	3.91	60.8	–		40.99	29.75	462.07
		sericite phyllite. Much lost core				WT. AV.	1.5 / 1.5	15.2 / 4.6	13.7 / 3.1	5.56 / 3.89	4.82 / 6.72	66.19 / 55.5	✓		76.22 / 12.05	66.08 / 20.83	906.83 / 172.19
		Broken pieces of porous bleached				"	4.6 / 3.0	7.6 / 6.1	3.0 / 3.1	7.73 / 4.54	5.17 / 4.31	90.9 / 56.04	– ✓		14.07	13.36	173.73
		solid fault gouge.				"	15.2 / 12.2	30.5 / 15.2	15.3 / 3.0	4.21 / 7.50	3.65 / 3.45	51.76 / 79.7	✓ ✓	–	64.34	55.78	791.96
						"	30.5	36.6	6.1	1.79	3.74	35.89	–		10.92	22.82	218.93
68.5	88.4	Quartz - Calcite - Sericite Phyllite				"	36.6	41.1	4.5	3.04	5.99	56.80	✓		13.70	26.97	255.61
		Dark grey colour. Drag folded				"	41.1	62.5	21.4	1.41	2.87	23.29			30.21	61.48	477.02
		F. bands 1-2mm sliced by				"	62.5	68.5	6.0	7.36	11.41	96.70			44.14	68.44	580.19
		strong F_2 planes at 70°				"	19.8	22.9	3.1	7.17	4.60	74.37	–		22.23	14.25	230.56
						"	41.1	54.9	13.8	1.52	3.10	24.9	✓	✓	20.96	42.81	343.89
						"	54.9	62.5	7.6	1.22	2.46	17.5	–		9.25	18.67	133.13
88.4	106.7	Quartz - Calcite - Chlorite Phyllite				"	57.9	62.5	4.6	1.80	3.63	25.4	–		8.30	16.72	116.67
						"	15.2	19.8	4.6	4.63	2.00	52.3	–		21.29	9.20	240.68
		Similar to above but with grey-green				"	22.9	30.5	7.6	2.74	4.25	42.2	✓		20.82	32.33	320.73
						"	44.2	54.9	10.7	1.53	3.31	25.7			16.35	35.43	274.63
		chloritic zones. F_2 = 70°															
	106.7	End of hole.															

calcn. checked Jan. 29/77 ZL

calculated ✓

DIAMOND DRILL RECORD

LOGGED BY Alexander Young Po

D.D.H. Nº '76-4-207 PAGE 1/2

PROPERTY GRUM - JOINT - VENTURE

	CO-ORDS	GRID
LATITUDE*	10.811 approx	73W
DEPARTURE*	7674 "	6N
ELEVATION*	1150.4 "	

survey to be re-calc.

STARTED Sept. 28, 1976

COMPLETED Sept. 28, 1976

PROPOSED DEPTH 150' - 45.7m

ULTIMATE DEPTH 150' - 45.7m

HOLE SURVEY:		
DEPTH	BEARING	DIP
collar	~~094~~	0°
	51° approx	
No Sperry-Sun survey		

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

TOTAL CORE RECOVERY: 77.2 %

Interval From	Interval To	DESCRIPTION	Pb	Pb .120	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0	20.4	Mineralized graphitic phyl (Pg). Competent. Foliation 5~10° with series of broad ellipsoidal fold nose closures.	50	8	1.5	854 B	0	4.6	4.6	4.80	8.78	82.63			22.08	40.39	380.10
		6.1-7.6 - Bleached sericite phyllite (Sb). Silvery white. Flaky core. Foliation ≈ fissility ≈ 10°	40	12	1.4	855 B	4.6	6.1	1.5	4.10	7.87	63.43			6.15	11.81	95.15
			1	1	1.3	/	6.1	7.6	1.5	/	es ✓		✓				
		Contacts broken grd.	25	10	1.2	856 B	7.6	9.1	1.5	3.00	6.67	59.31			4.50	10.01	88.97
		16.8-17 - FAULT. White thick sticky gouge	35	10	1.5	857 B	9.1	10.6	1.5	2.15	4.00	38.40			3.23	6.00	57.60
		w/ qtz/phyllite pebbles. 17-20.4 - Sulfide bx (MXg)	35	9	1.5	858 B	10.6	12.1	1.5	3.10	4.56	54.51			4.65	6.84	81.77
		20.4 - Abrupt change to bleached Sericite	35	12	1.5	859 B	12.1	13.6	1.5	2.95	5.56	52.46		-	4.43	8.34	78.69
		phyllite (Sb). Contact broken grd.	25	10	1.2	860 B	13.6	15.1	1.5	3.00	5.00	45.26		-	4.50	7.5	67.89
			20	6	1.0	861 B	15.1	16.7	1.6	2.90	7.98	43.54			4.64	12.77	69.66
20.4	23.5	Bleached Sericite phyllite (Sb). Broken flaky.	20	6	1.0	862 B	16.7	18.2	1.5	2.68	3.90	35.31			4.02	5.85	52.97
		Core. Silvery white. Flakes appear sub-11	35	15	2.1	863 B	18.2	20.4	2.2	3.90	8.48	59.31			8.58	18.66	130.48
		to core axis.	1	1	2.0	/	20.4	23.5	3.1		1.es ✓						
		21.9 - 22.8 - FAULT. WHITE sticky gouge.				WT. Av.	7.6 0	15.1 6.1	7.5 6.1	2.84 4.63	5.46 8.56	50. 97.91	/		21.31 28.23	38.69 52.20	374.92 475.25
		23.5~ Abrupt change to Sericite phyllite				"	7.6 9.1	12.1 12.1	4.5 3.0	2.75 2.63	5.08 4.28	50.7 46.46			12.38 7.88	22.85 12.84	228.34 139.37
		(S). Contact broken grd.				"	12.1 ~~7.6~~ 12.1	15.1 20.4 20.4	3.0 12.8 8.3	2.98 3.01 3.15	5.28 5.94 6.40	49.9 49.06 48.2		-	8.93 38.55 26.17	13.64 75.97 53.12	146.50 628.03 399.69
						"	15.1	20.4	5.3	3.25 ✓	7.03	47.76 ✓		-	17.24	37.28	253.11

LOGGED BY ALEXANDER YOUNG Po D.D.H. Nº '76-U-207 PAGE 2/2

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
23.5	45.7	Sericite phyllite (S). Dark gray to light gray. Competent except near fault zone. Changing foliation trend.	18.1	/	23.5	45.7	22.2								
		23.5 ~ 25.7 - Foliation 0 ~ 15°													
		25.7 - 30.5 - Alternating grey sticky gouge and sericite phyllite blocks. FAULT ZONE.													
		32 ~ 32.2 - Po band. Contacts sharp @ 20°													
		32.5 ~ 35.1 F2 ∠ 15 ~ 20° F1 ∠ 85 ~ 90°													
		36 ~ 41.1 F2 ∠ 35 ~ 40° F1 ∠ 0 ~ 10°													
		42 ~ 44.2 - Alternating grey flaky phyl w/ gouge and solid short blocks of sericite phyl. - FAULT ZONE.													
		44.2 ~ 45.7 - Foliation ≈ 45°. No clearly defined F1/F2 relationship noted.													
45.7		END OF HOLE													
		NOTE: No problem in drilling despite of the big fault zone.													

calcs. checked Feb. 1/77 J.G. calculated ✓

DIAMOND DRILL RECORD

LOGGED BY J. PAXTON D.D.H. Nº U-208 PAGE 1 of 6

PROPERTY GRUM JOINT VENTURE

LATITUDE 73W STARTED Sept 28/76

DEPARTURE 6N COMPLETED Sept 30/76

ELEVATION PROPOSED DEPTH

ULTIMATE DEPTH 140.2

HOLE SURVEY:		
DEPTH	BEARING	DIP
Collar	044°	-69°
66.5	061°	-74°
126.5	066°	-71°

CLAIM Nº

N

DIRECTION AND DISTANCE FROM N.E. CLAIM POST

Interval From	Interval To	DESCRIPTION	Py	Pb Zn	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
0.0	7.5	Breccia (PX$_M$ + MX$_M$)	25	8	0.6/1.5	753B	0.0	1.5	1.5	6.52	8.88	75.77			9.78	13.32	113.66
		Irregular masses of partially	40	10	1.5/1.5	754B	1.5	3.0	1.5	3.58	7.32	55.54			5.37	10.98	83.31
		dissolved quartz-sphalerite material	40	10	1.5/1.6	755B	3.0	4.6	1.6	4.60	6.87	60.34			7.36	10.99	96.54
		up to 10cm in a groundmass of	40	12	1.5/1.5	756B	4.6	6.1	1.5	4.25	8.78	66.51			6.38	13.17	99.77
		pyritic sulphide. Locally the	30	8	1.3/1.4	757B	6.1	7.5	1.4	2.80	7.47	47.31			3.92	10.46	66.23
		pyritic sulphide is brecciated also.															
					/1.0		7.5	8.5	1.0	NIL					0	0	0
7.6	8.5	Fault gouge															
		Black and graphitic															
8.5	9.9	Massive Sulphide (MI)	20	5	1.3/1.4	758B	8.5	9.9	1.4	5.00	11.51	68.57			7.00	16.11	96.00
		Massive sulphide with irregular				Wt. Av.	0	6.1	6.1	4.74	7.94	64.5	✓		28.89	48.46	393.28
		white inclusions. 9.1-9.5 mainly yellow				Wt. Av.	0	7.5	7.5	4.37	7.86	61.27	✓		32.81	58.92	459.51
		cherty siliceous material				"	0	9.9	9.9	4.02	7.58	56.11	✓		39.81	75.03	555.51
						"	7.5	9.9	2.4	2.92	6.71	40.0	✓				
9.9	10.7	Sticky plastic fault gouge.															

LOGGED BY _____ D.D.H. Nº 11-208 PAGE 2 of 6

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
10.7	12.2	Sericite Phyllite (S) Grey color. Friable. Low quartz													
12.2	15.2	Bleached Sericite Phyllite (Sb) $F_2 = 60°$ Buff color													
15.2	18.3	Quartz Sericite Phyllite (S) $F_2 = 50°$ Grey color													
18.3	19.5	Bleached Sericite Phyllite (Sb) Buff color													
19.5	23.5	Quartz Sericite Phyllite (S) Grey color													
23.5	25.7	Bleached Sericite Phyllite (Sb) $F_2 = 45°$													
25.7	27.5	Quartz Sericite Phyllite (S) Grey color													
27.5	30.3	Bleached Sericite Phyllite (Sb)													
30.3	32.0	Quartz Sericite Phyllite (S)													
32.0	33.0	Bleached Sericite Phyllite (Sb)													

LOGGED BY _____ D.D.H. No U-208 PAGE 3 of 6

Interval From	Interval To	DESCRIPTION	Py	Pb-Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
33.0	35.0	Quartz Sulphide. Streaky foliation at 70° Py 30 Pb-Zn 6			0.9/1.0	759B	33.0	34.0	1.0	1.85	4.88	27.43	✓				
35.0	36.6	Fault gouge. 36.5-36.6 sticky gouge.			1.6/1.6												
36.6	42.7	Quartz Sericite Phyllite (S) Soft and friable. Numerous masses of white quartz. $F_2 = 90°$			6.1/6.1												
42.7	45.7	Fault Gouge plus sulphide bands.			2.8/3.0												
45.7	55.5	Massive Sulphide (Mb)	Py	Pb-Zn													
		Fine grained. 20% interstitial	50	12	1.3/1.5	760B	45.7	47.2	1.5	4.98	6.16	74.74			7.47	9.24	112.11
		white barite. Faint composition	60	12	1.0/1.6	761B	47.2	48.8	1.6	8.50	15.65	112.12			13.6	25.04	179.39
		banding at 45°. Local small	60	15	1.5/1.5	762B	48.8	50.3	1.5	4.90	8.98	85.42			7.35	13.47	128.58
		zones of porous material where	60	15	1.5/1.5	763B	50.3	51.8	1.5	5.75	8.13	90.86			8.63	12.20	136.29
		the barite appears to have been	60	15	1.5/1.5	764B	51.8	53.3	1.5	4.28	4.55	63.43			6.42	6.83	95.15
		leached out.	60	15	2.2/2.2	765B	53.3	55.5	2.2	4.65	7.12	81.60			10.23	15.66	179.52
			10	5	1.6/1.6	766B	55.5	57.1	1.6	1.53	2.68	25.37	✓				
55.5	60.0	Quartz Sulphide (PF)		?	/2.9		57.1	60.0	~~2.9~~	?							
		Beaded, augen texture.				WT. AV.	47.2	51.8	4.6	6.43	11.02	96.58	✓		29.58	50.71	444.26
		$F_2 = 80°$ 57.6-57.9 Grey-green				"	51.8	55.5	3.7	4.50	6.08	74.24	✓		16.65	22.49	274.67
		fault gouge.				"	45.7	55.5	9.8	5.48	8.41	84.8	✓		53.70	82.44	831.04

LOGGED BY _____ D.D.H. No U-208 PAGE 4 of 6

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
60.0	88.5	Quartz Sericite Phyllite (S) Dark grey color possibly due to talc or chlorite. Not graphitic. $F_2 = F_1$? = 70° 60.0 - 70.0 F_2 = 30° 70.0 - 75.0 F_2 = 90° 75.0 86.7-86.8 Fault gouge.	27.5/28.5												
88.5	91.5	Bleached Sericite Phyllite (Sb) Pale grey green color. Much quartz and quartz breccia. Scattered blebs of Py and Po.	3.0/3.0												
91.5	108.2	Quartz Sericite Phyllite (S) F_2 = 70°-80°. Occasional small F_1 fold noses. Fault gouge 100.6 - 100.9	5.5/6.7												
108.2	113.3	Graphitic Phyllite (G) 108.2-109.5 Fault gouge & lost core 109.5 - 110.0 Broken pieces of quartz Sulphide 110.0 - 113.3 Black graphitic phyllite	1.5/3.1												

LOGGED BY _____ D.D.H. No U-208 PAGE 5 of 6

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
111.3	113.0	Quartz Sericite Phyllite (S) Pale grey color. F_2 = 70° Fault Gouge 111.7 - 111.85													
113.0	123.5	Bleached Quartz Sericite Phyllite (Sb) Cream colored. Siliceous. Scattered blebs and grains of sulphides. F_2 at 70° 113.1 – 113.4 Massive sulphide fragments of broken core.													
123.5	125.5	Quartz Sericite Phyllite (S)													
125.5	129.8	Quartz Graphite Phyllite (G) Black color. Drag folded F_1 bands cut by F_2 at 45° Local short sections of massive sulphide up to 5 cm.													

LOGGED BY _____ D.D.H. No U-208 PAGE 6 of 6

Interval From	Interval To	DESCRIPTION	Py	Pb-Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
129.8	140.2	Massive Sulphide (M6)															
		Fine grained with scattered															
		irregular cavities filled with barite	70	12	1.3/1.3	767B	129.8	131.1	1.3	3.25	3.20	41.49	✓		4.23	4.16	53.94
		gypsum? and calcite. Local high	70	12	1.5/1.5	768B	131.1	132.6	1.5	1.93	0.75	19.20	✓		2.9	1.13	28.80
		sphalerite streaky bands at 70°	60	15	1.5/1.5	769B	132.6	134.1	1.5	4.38	5.68	65.49	✓		6.57	8.52	98.24
		Also local blebs and grains of	60	10	1.5/1.5	770B	134.1	135.6	1.5	0.58	0.93	14.06			1.51	PtZn	
		magnetite. Most of the sulphide	60	10	1.5/1.5	771B	135.6	137.2	1.5	0.33	0.50	8.91			0.83	"	
		contains fine interstitial barite.	50	8	1.5/1.5	772B	137.2	138.7	1.5	0.63	0.45	9.94			1.08	"	
		Local zones of brecciated and	50	8	1.5/1.5	773B	138.7	140.2	1.5	0.65	1.63	9.94	✓				
		recemented sulphides MXm.															
		Past 137.0 numerous bands and				WT. AV.	134.1	138.7	4.5	1.14	PtZn		✓				
		masses of white quartz				WT. AV.	129.8	134.1	4.3	3.19	3.21	42.1			13.70	13.81	180.98
		Hole was stopped in ore due to cave.															
	140.2	End of hole															

Calc'n. checked Feb. 1/77 JG calculated.

DIAMOND DRILL RECORD

LOGGED BY Alexandra Young Po

PROPERTY GRUM JOINT VENTURE

D.D.H. No. '76-U-209 PAGE 1/5

LATITUDE T3W BEARING OF HOLE — CLAIM No.

DEPARTURE 6N DIP OF HOLE -90 COMPLETED Oct. 2, 1976 DIRECTION AND DISTANCE FROM

ELEVATION DIP TESTS STARTED Oct. 1, 1976 Proposed: DEPTH Ultimate: 97.5 m NE. CLAIM POST

T.P.	AZIMUTH	DIP
collar	0	-90
38.3	002	-86

TOTAL CORE RECOVERY = 78.1 %

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Pg	Zn Pg	Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	26.0	INTERVALS of mineralized graphitic phyllite (Pg)	60	8	1.4	910B	0	3	3	4.90	3.55	48.34			14.70	10.65	145.02
		and banded massive sulfides (MB), Competent.	60	8	1.5	911B	3	4.5	1.5	4.28	3.08	49.37			6.42	4.62	74.06
		0 ~ 4.6 - Graphite as thin lamnae. Foliation ∠	65	15	1.5	912B	4.5	6.0	1.5	4.45	9.52	66.51			6.68	14.28	99.77
		75° ~ 85°	65	10	0.8	913B	6.0	7.5	1.5	1.68	5.45	27.43			2.52	8.18	41.15
		4.6 ~ 10.7 - Banded massive sulfide · Compositional	70	10	0.7	914B	7.5	9.0	1.5	2.55	5.73	39.43			3.83	8.60	59.15
		banding Sph-Gal/Py ∠ 80° w/ bleached	65	12	1.3	915B	9.0	10.5	1.5	6.98	10.80	122.06			10.47	16.20	183.09
		phyllite interval at 6 ~ 6.1. Contacts sharp	1	tr.	2.3	/	10.5	13.8	3.3								
		and clean ∠ 85°.	35	10	1.7	916B	13.8	16.8	3.0	5.33	10.49	89.83			15.99	31.47	269.49
		6.1 ~ 6.6 - Sulfide 6x cemented by graphite (MXG)	65	12	1.4	917B	16.8	18.3	1.5	6.04	13.42	93.94			9.06	20.13	140.91
		Fragments Ø ∠ 1 ~ 2 cm.	30	7	0.6	918B	18.3	19.8	1.5	3.55	8.91	53.49			5.33	13.37	80.24
		6.5 - 8 bleached	1	n.i	1.3	/	19.8	21.3	1.5								
		10.5 - 13.8 - Bleached sericite phyllite interval. Soft	30	10	1.4	919B	21.3	22.8	1.5	5.53	9.01	78.86			8.30	13.52	118.29
		broken core. Buff. Foliation 70°. Weakly mineralized	65	15	1.5	920B	22.8	24.3	1.5	6.98	13.58	102.86			10.47	20.37	154.29
		18.6 - 21.3 - Bleached sericite (Sb). Blocky to flaky.	70	8	1.6	921B	29.3	26.0	1.7	10.25	19.77	217.37			17.43	33.61	369.53
		Silvery white - F2 ∠ 70°; F1 ∠ 0 ~ 5°				WT.A	0	4.5	4.5	4.69	3.39	48.7			21.12	15.27	219.08
						WT.B	0	9.0	9.0	3.79	5.15	46.57			34.15	46.83	419.15
		26 - clean contact w/ bleached Sericite (Sb).				"	7.5	10.5	3.0	4.77	8.27	80.75	-	-	14.30	24.8	242.24
		Contact marked by Py/Mgtt laminae (5 mm ~ 1 cm thick) ∠ 80°				"	0	10.5	10.5	4.25	5.96	57.36	-		44.62	62.53	602.24
						"	4.5	10.5	6.0	3.92	7.86	63.9			23.50	47.16	383.16
						"	3.0	6.0	3.0	4.37	6.30	57.9					

LOGGED BY Alexander Young PD D.D.H. Nº 76-U-209 PAGE 2/5

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
26	30	Bleached Sericite phyllite (Sb). Broken blocky core. Buff to silvery white. Weakly mineralized Foliation ≈ 75°. Py: 3 Pb+Zn ≈ 1%	3.2/4	✓	26	30	✗	1	PZ, est	.					
				WT. Av.	13.8	19.8	6.0	5.06	10.83	81.77	✓		30.38	64.97	490.64
		27.6 ~ 28 - Fault. Light gray sticky thick gouge.		11	21.3	26.0	4.7	7.70	14.36	136.62	✓		36.20	67.50	642.11
		30 - Abrupt change to dark Sericite phyllite (S+G)		11	13.8	26.0	12.2	5.46	10.86	92.85	✓		66.58	132.47	1132.75
		w/ trace graphite. Contact broken grd.													
30	33.5	Dark Sericite phyllite w/ trace graphite (S+G).	3.2	✓	30	33.5	3.5								
		Broken blocky core. Fa ≈ 75~80°; Fi 0~5°.													
		33.5 - Abrupt change to mineralized graphitic													
		phyllite (PG). Contact broken grd.													
33.5	35.1	Mineralized graphitic phyllite (PG). Broken blocky core. Foliation Fa ≈ 85°; Fi - not clearly defined. Rx appear to be disturbed.	30 8 | 1.2	922B	33.5	35.1	1.6	4.70	6.92	65.49	✓				
		33.6 - 33.8 - Sulfide & qtz Bx cemented by fine grained siliceous material.													
		35.1 - Abrupt change to Sericite phyllite (S). Contact broken grd.													
35.1	39.4	Sericite phyllite (S). Broken soft blocky core. Weakly mineralized Py: 1 Pb+Zn: Tr-0 < 1%	4.1	✓	35.1	39.4	4.3	0.3	PZ, est						
		Fa ≈ 70~75°; Fi ≈ 0~10 - w/ small fold nose closures													
		39.4 - Abrupt change to mineralized graphitic phyllite (PG).													

LOGGED BY [signature] D.D.H. No '76-11-209 PAGE 3/5

Interval From	Interval To	DESCRIPTION	Py	Zn/Pb	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		Contact broken grd.															
39.4	42.7	Mineralized graphitic phyllite (PG). Competent.	35	8	1.6	923B	39.4	41.1	1.7	3.90	4.55	52.46	✓		6.63	7.74	89.18
		Foliation ≈ 40°. Compositional banding w/in	10	3	1.5	924B	41.1	42.7	1.6	2.78	2.90	40.46	✓		4.45	4.64	64.74
		broad sulfide zone Sph-Pb/py ≈ 40°.															
		40.5 ~ 40.7 – Bleached sericite phyl (Sb). Light gray to				WT. AV.	39.4	42.7	3.3	3.36	3.25	46.6	✓		11.08	12.38	153.92
		buff. Foliation ≈ 45°. Contacts sharp and clean ≈ 40°															
		41 ~ 42.7 – Alternating interval of PG and Sb. Broken															
		soft core. Po band at 41.0 ~ 41.1															
		42.3 ~ 42.6 – FAULT. Light grey sticky gouge w/															
		silvery white sericite flakes.															
		42.7 – ABUPT change to Massive porous sulfides (MV).															
		Contact broken grd.															
42.7	50.2	Massive porous and banded sulfides (MBV). Broken and	65	15	0.7	925B	42.7	44.2	1.5	6.23	10.29	130.97			9.35	15.44	196.46
		friable core. Faint compositional banding between	65	15	1.1	926B	44.2	45.7	1.5	5.67	8.75	97.72			8.51	13.13	146.58
		amber sph/py ≈ 75 ~ 80°. Voids in porous unit	65	12	1.0	927B	45.7	47.2	1.5	6.49	10.25	108.00			9.74	15.38	162.00
		aligned ≈ 80°.	65	12	0.9	928B	47.2	48.7	1.5	4.55	6.41	69.60			6.83	9.62	104.4
		50.2 ~ Sharp clean contact w/ mineralized	70	8	0.8	929B	48.7	50.2	1.5	3.48	5.30	48.34		✓	5.22	7.95	72.51
		graphitic phyllite (PG) ≈ 25°	30	5	1.0	930B	50.2	51.9	1.7	1.05	1.90	16.11	✓				
50.2	51.9	Mineralized graphitic phyllite (PG). Broken blocky to															
		flaky core. Fissile. F2 ≈ 80 ~ 85°. No clear F1.				WT. AV.	42.7	50.2	7.5	5.29	8.20	90.87	✓	✓	39.65	61.52	681.55
		51.9 – Abrupt change to bleached sericite phyllite				"	47.2	50.2	3.0	4.02	5.86	58.97	✓		12.05	17.57	176.91
		(Sb). Contact broken grd.				"	42.7	48.7	6.0	5.94	8.93	101.5	✓		34.43	53.57	609.04

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Interval From	Interval To	DESCRIPTION	Recovery	Sample №	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
51.9	57.9	Bleached sericite phyllite (Sb). Broken blocky to flaky core. Buff to silvery white. Prominent fuchsite in some short intervals @ 55.9~56; 56.2~56.4. Foliation ≈ 70°~75°. Sulfide showing Py: 3%, Min ≈2% unevenly distributed. No clear F1 57-57.2 - FAULT. Phyllite, qtz, sericite fragments w/ white sticky gouge. 57.9 - Abrupt change to mineralized graphitic phyl (PG) Contact broken grd.	4.8	✓	51.9	57.9	6.0	.1	[illegible]						
57.9	59.4	Mineralized graphitic phyl (PG). Broken blocky core. [30 | 9] foliation Fa ≈ 65~70 (?) F1 ≈ 0~10 (?) Note: This run has a bx'ted appearance @ 58.5~59. Apparently was a disturbed grd. healed by graphite, sulfide and some dark siliceous fine grain material. Fragments are sulfides, mineral impregnated qtz, and ~~qt~~ laminated qtz-sulfides (P). Ø ≈ 5mm ~ 1.5 cm. 59.4 - Abrupt change to bleached sericite phyllite (Sb). Contact broken grd.	1.3	931B	57.9	59.4	1.5	1.98	2.83	22.29	✓				
59.4	62.5	Bleached sericite phyl (Sb). Broken flaky core Foliation ≈ 30° (?) based on short solid cores.	0.9	✓	59.4	62.5	3.1								

LOGGED BY _____ D.D.H. No '76-11-209 PAGE 5/5

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		60- Fault. Thick sticky gouge until 60.5 (?).													
		62.5- Abrupt change to Sericite phyllite (S).													
62.5	97.5	Sericite phyllite (S). Competent.	29.6	/	62.5	97.5	35.0								
		Fa ≈ 80 ~ 90° Fi ≈ 0 ~ 10°													
		64 - 67.1 - w/ alternating bands of buff bleached													
		Sericite phyllite (S6). Contacts gradual.													
		66.4 - 66.5 ~ FAULT. Sticky buff gouge w/ qtz/phyl													
		fragments and bands.													
		73.3 - Shear													
		75 - 75.3 ≈ Bleached sericite w/ trace biotite. Contacts													
		≈ 70°.													
		91. ~ 91.4 - FAULT. Light grey thick gouge.													
		94.5 - 97.5 - Low recovery. Core looks good.													
		Core must be being ground during drilling? 0.9/30													
97.5		END OF HOLE													
		NOTE: DRILLER REPORTED 325' ≈ 99.1 m.													
		total footage. Actual footage is only 97.5 m													
		or 320'. HELPER MIS-blocked 60' ~ 70' run.													

Calcs. checked Feb 2/77 JG. calculated ✓

DIAMOND DRILL RECORD

LOGGED BY [illegible]

PROPERTY GRUM JOINT VENTURE

D.D.H. No. 76-U-210 PAGE 1/6

LATITUDE 75W BEARING OF HOLE 224 STARTED Oct. 3, 1976

DEPARTURE 6N DIP OF HOLE (-70) -67 COMPLETED Oct 4, 1976

ELEVATION ____ DIP TESTS

T. P.	AZIMUTH	DIP
COLLAR	224	-67
109.1	217	-77

DEPTH Proposed: Ultimate: 395' - 120.4

CLAIM No. ____

N ↑ ← DIRECTION AND DISTANCE FROM NE. CLAIM POST

TOTAL CORE RECOVERY: 85.5 %

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Fg	Pb Zn	Rec. Ft.	Sample No.	Sample Footage From	Sample Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	12.4	Qtz-Sulfide (P) w/ trace graphite as thin laminae.	35	6	0.7	951B	0	3	3.0	6.42	4.55	71.66			19.26	13.65	214.98
		Broken blocky core. Foliation ≈ 70~75°	30	4	1.3	952B	3.0	4.5	1.5	0.85	2.70	14.06			1.28	4.05	21.09
		Sulfides distributed along foliation as well as	35	10	1.2	953B	4.5	6.0	1.5	3.73	8.11	56.57			5.60	12.17	84.86
		disseminated in gudmass. Graphite ≈ 5%	30	10	1.5	954B	6.0	7.5	1.5	3.70	7.90	53.49			5.55	11.85	80.24
		3.5~4.0 ~ Alternating intervals of qtz-sulfide (P)	20	4	0.8	955B	7.5	9.0	1.5	2.30	4.80	33.26			3.45	7.20	49.89
		and bleached sericite phyllite (Slt). Contacts	30	10	1.4	956B	9.0	10.5	1.5	3.78	6.90	58.63			5.67	10.35	87.95
		between units are sharp ≈ 70°. Bleached	30	8	1.1	957B	10.5	12.0	1.5	3.20	6.55	46.29			4.80	9.83	69.44
		unit buff to silvery white.	25	10	1.1	958B	12.0	13.5	1.5	2.90	5.30	48.34			4.35	7.95	72.51
		7.6~9.1 - Similar to 3.5~4.0 unit. FAULT @	35	15	1.5	959B	13.5	15.0	1.5	3.82	9.05	68.57	↓		5.73	13.58	102.86
		.8~8.5 - buff thick sticky gouge.	30	12	1.3	960B	15.0	16.5	1.5	4.13	9.01	78.86			6.20	13.52	118.29
		12~12.4 - Fault. White gouge w/ silvery white	20	8	1.1	961B	16.5	18.0	1.5	1.38	3.13	23.31		+	2.07	4.70	34.97
		sericite flakes.	20	12	0.9	962B	18.0	19.5	1.5	2.88	6.92	50.40			4.32	10.38	75.6
		12.4 - Contact w/ Sulfide Breccia (MXc+s).	30	15	1.5	963B	19.5	21.	1.5	7.83	13.57	125.14			11.75	20.36	187.71
12.4	16.4	Sulfide bx (MXc+s) - Competent. Sulfide fragments	30	12	1.5	964B	21.0	22.5	1.5	5.00	9.74	80.57	↑		7.50	14.61	120.86
		ϕ ≈ 1mm ~ 2cm, angular well cemented	25	6	1.5	965B	22.5	24.0	1.5	2.63	5.63	42.51		-	3.95	8.45	63.77
		by graphite and finer grained sulfides.	20	4	1.5	966B	24.0	25.5	1.5	0.53	0.25	8.23	✓				
		15~15.3 - FAULT. Grey sticky gouge w/ qtz ~	15	3	1.5	967B	25.5	27.1	1.6	1.75	1.48	27.43	✓				

LOGGED BY Alexander Young Po — D.D.H. Nº 76-11-210 PAGE 2/6

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		sulfide fragments. *Note: FAULT plane is sub-ll		WT. Av.	10.5	13.5	3.0	3.05	5.93	47.32	✓	✓	9.15	17.78	141.95
		to core axis. It appears that the drill hit the		ll	13.5	16.5	3.0	3.98	9.03	73.72			11.93	27.10	221.15
		plane tangentially.		ll	18.0	24.0	6.0	4.59	8.97	74.66			27.52	53.80	447.94
		16.4 - change to graphitic qtz-sulfide (PG). gra-		ll	0	24.0	24.0	3.81	6.78	57.71	✓		91.48	162.65	1385.02
		phite becoming a prominent constituent as		" "	0 4.5	4.5 10.5	4.5 6.0	4.56 3.38	3.93 6.93	52.5 50.5	✓ ✓	✓ ✓	20.54 20.27	17.70 41.57	236.07 302.93
		wider laminae than above runs.		" "	13.5 0	22.5 13.5	9.0 13.5	4.17 3.70	8.57 5.71	71.1 50.4	✓		37.56 49.96	77.13 77.05	640.28 680.95
16.4	27.1	Graphitic qtz-sulfide (PG). Competent. Foliation													
		F_2 ≈ 65~70°; $F_1 \perp F_2$. Series of small													
		oblate ellipsoidal F_1 fold nose closures.													
		sulfides in both foliation.													
		23.5~24.5 - Bleached sericite phyllite interval (Sb).													
		Competent. Buff. Foliation ≈ 75°. Weak sulfide													
		showing. Contacts sharp and clean ≈ 80°													
		27.1 - Decrease in mineralization. Rx becoming													
		dark sericite phyllite (S).													
27.1	29.8	Dark sericite phyllite (S). Broken blocky core.	1.7?/2.7	/	27.1	29.8	~~2.7~~		< 1 PZ,	est.					
		Foliation ≈ 80~85 F_2; F_1 ≈ 10~15°.													
		With isolated blebs of Py. Py ≈< 1%													
		29.8 - Abrupt change to Qtz-sulfide (P). Contact													
		broken gnd.													
29.8	32.0	Qtz-sulfide (P). Competent. Foliation 40 15	2.2	968B	29.8	32.0	2.2	7.68	16.70	140.23	✓				
		≈ 80~85° F_2; F_1 ≈ 5~10°.													

LOGGED BY Alexander GFB D.D.H. Nº 76-U-210 PAGE 3/6

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		faint Compositional banding 3ph: Pb/py ± 75~80°													
		32 - Abrupt change to dark sericite phyllite (S).													
		Contact marked by 4 cm long bleached sericite													
		phyllite interval. Cont contact plane ± 80°.													
32	36.4	Dark Sericite phyllite (S). Competent. Has	4.3	/	32.0	36.4	4.4								
		short intervals of bleached sericite units (Sb) ± 3-													
		4 cm long. Contacts bet. units sub-// to													
		F2 foliation ± 75° à 85°; F1 ± 5°													
		36.4 - Gradual build-up in mineralization and													
		introduction of Graphite. Rx becoming graphitic													
		Qtz-sulfides (PG).													
36.4	38.4	Graphitic Qtz-sulfide (PG). Broken block core. 15 10	1.8	969B	36.4	38.4	2.0	6.19	7.87	79.54	✓				
		Graphite ± 5%. Foliation ± 55~60°. No													
		clear F1/F2 relationship noted.													
		Sulfides as laminae // to foliation.													
		38.4 - Abrupt change to dark Sericite phyllite (S).													
		Contact broken grd.													
38.4	59.4	Dark Sericite phyllite (S). Broken blocky core.	17.3	/	38.4	59.4	21.0								
		Foliation F2 ± 45~50°; F1 ⊥ F2													
		44.5~45.5 - Bleached sericite phyl interval. Broad. F2 ± 45°													
		No clear F1. Contacts broken grd.													
		46.3~47.3 - FAULT. Sericite flakes/sand w/white gouge													

LOGGED BY Lloyd GS D.D.H. No 76-6-210 PAGE 4/6

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		54.8-57 - Buff gtz w/ sulfide stringers Py: 2% Po: 1% tr.													
		59.4 - Abrupt change to massive sulfide. Contact marked by 10 cm. long bleached sericite intervval. Broken grd.													
59.4	64.5	Massive sulfide, porous, banded and w/ barite varieties (MBV+MB). Competent. Compositional banding Sph/Py and sulfide/ba ≈ 75°-85°. Vugs in porous intervals aligned ≈ 80-85°. Py 70 12	1.5	970B	59.4	60.9	1.5	6.22	9.59	88.80			9.33	14.39	133.2
		Py 70 12	1.5	971B	60.9	62.4	1.5	4.87	7.52	71.66			7.31	11.28	107.49
		Py 70 12	1.5	972B	62.4	63.9	1.5	5.00	7.70	69.60			7.50	11.55	104.4
		Py 55 10	1.5	973B	63.9	65.4	1.5	5.63	10.60	81.60			8.45	15.9	122.4
		64.5 - Gradual change to graphitic gtz-sulfide (PG). Py 35 5	1.1	974B	65.4	66.9	1.5	1.13	1.45	15.09	✓				
64.5	66.0	Graphitic gtz-sulfide (PG). Competent. Foliation ≈ 80-85°. Sulfides more asso. w/ the gtz laminae w/c is in turn characterized by "Boudin"-like or pinchong alignment 		WT. Av.	59.4	65.4	6.0	5.43	8.85	77.92			32.59	53.12	467.49
		66 - Abrupt clean change to bleached sericite phyl (S6) ≈ 80°.													
66.0	71.5	Bleached sericite phyllite (S6). Broken blocky grd. Buff w/ prominent graphite laminae and sporadic sulfide showing. Foliation ≈ 75-85° Py 3 tr	4.3	✓	66.9	71.5	4.6								
		71.5 - Abrupt change to dark sericite phyllite (S). Contact broken grd.													

LOGGED BY Alexander Y. Go D.D.H. № 76-U-210 PAGE 5/6

Interval From	Interval To	DESCRIPTION			Recovery	Sample №	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
71.5	89.9	Dark Sericite phyllite (S). Competent. Foliation			17.3	/	71.5	89.9	18.4								
		F2 ≈ 80~85° F1 ≈ 0~10°															
		79.5 ~ 80.6 - Bleached sericite interval. Broken blocky															
		core. Buff w/ fuchsite spots. Foliation ≈ 85°.															
		84 ~ 84.5 (?) - Pebbly core of sulfides, qtz and															
		phyllite. Core show evidence of re-grinding, no gouge.															
		85.9 ~ 86.2 - FAULT. Grey sticky thick gouge					/										
		w/ qtz and sericite fragments.															
		89.9 - Change to mineralized graphitic phyllite (PG).															
		Contact marked by 5 cm long bleached sericite.															
		Actual contact broken grd.															
89.9	109.9	Mineralized graphitic phyllite (PG). Broken blocky	25	4	1.7	981B	89.9	92.9	3.0	0.58	0.73	13.03			1.31	Pb+Zn	
		core. Fissile, easily breaks into poker chips/	30	4	1.5	982B	92.9	94.4	1.5	0.18	0.65	14.06			0.83	"	
		flakes. Foliation ≈ 80~85° F2; F1 ≈ 0~5°	30	3	1.1	983B	94.4	95.9	1.5	0.15	0.28	8.23			0.43	"	
		109.5 ~ 109.7 - Sulfide bx (MXQ+S). Sub-angular	30	2	2.1	984B	95.9	98.9	3.0	0.33	1.08	8.23			1.41	"	
		sulfides Ø 3 5 mm ~ 1.5 cm well cemented by Qtz & Sulfide	40	5	1.5	985B	98.9	100.4	1.5	0.73	1.35	13.03			2.08	"	
		109.9 - Abrupt change to graphitic sericite	25	2	1.3	986B	100.4	101.9	1.5	0.05	0.45	3.09			0.50	"	
		phyllite (SG). Contact broken grd.	30	3	2.2	987B	101.9	104.9	3.0	0.05	0.33	5.14			0.38	"	
109.9	120.4	Graphitic sericite phyllite. Broken core - from	20	2	2.9	988B	104.9	107.9	3.0	0.07	1.05	4.11			1.12	"	
		flaky to blocky. Foliation ≈ 80 ~ 85°	30	4	2.0	989B	107.9	109.9	2.0	1.00	1.63	23.31					
		109.9 - shear. Flakes of graphite / sericite. No gouge.	/	/	3.0	/	109.9	113.2	3.3								
		112.1 ~ 112.9 - Bleached sericite phyl interval (Sb).				WT. Av.	89.9	107.9	18.0	1.02	Pb+Zn						

LOGGED BY _____ D.D.H. Nº 76-11-210 PAGE 6/6

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		Foliation ± 75-80°. 1st contact: gradual													
		2nd contact: sharp and clean ± 75°													
		113.2 - 114.4 - Massive banded sulfide w/porous gangue (MBV). Banding ± 80°. Porous unit has voids aligned ± 80°. Competent solid hard core. Pb clots asso. w/qz band. 1st contact ± 80°; 2nd contact ± 80° (w/bull qtz. plane not as sharp and clean like first contact). 60 15	1.2	9903	113.2	114.4	1.2	6.99	12.52	98.74	V				
			5.1	/	114.4	120.4	6.0								
		117.5 - shear													
	120.4	END OF HOLE													

Calc'n. checked Feb. 2/77 SL. calculations ✓

DIAMOND DRILL RECORD

LOGGED BY [illegible]

PROPERTY CARIBOU JOINT VENTURE

D.D.H. No. 76-C-211 PAGE 1/4

LATITUDE 73W BEARING OF HOLE

STARTED OCT. 9, 1976

CLAIM No.

DEPARTURE 3N DIP OF HOLE

TEST PT.	AZIMUTH	DIP
COLLAR*	222	-64
62.5	221	-65
108.2	217	-71

COMPLETED OCT. 10, 1976

DIRECTION AND DISTANCE FROM NE. CLAIM POST

ELEVATION DIP TESTS

DEPTH Proposed: Ultimate: 375'-114.3m

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION			Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	1.2	CASING. No core RECOVERED															
1.2	25.9	Mineralized graphitic phyllite (PG). Broken	25	7	1.1	282C	1.2	4.6	3.4	1.58	2.55	22.29	✓				
		blocky core. F2 ≈ 75 ∿ 85°; F1 ≈ 0 ∿ 10°	25	6	1.6	283C	4.6	7.6	3.0	1.13	0.88	14.06			2.01	Pb Zn	
		8-8.2 - Shear.	25	6	1.3	284C	7.6	9.1	1.5	1.68	1.53	20.23			3.21	"	
		Series of small F1 fold nose closures	15	4	1.1	285C	9.1	10.6	1.5	1.03	1.83	14.06			2.86	"	
		25.9 - Change to banded massive sulfide (MB).	15	3	0.9	286C	10.6	13.6	3.0	0.90	0.93	9.94			1.83	"	
		Contact broken core.	15	7	1.2	287C	13.6	16.6	3.0	1.53	0.75	19.20			2.28	"	
25.9	28.1	Massive sulfide, banded (MB) w/ short porous	30	10	1.1	288C	16.6	19.6	3.0	4.50	6.55	59.31		-	13.50	19.65	177.93
		intervals (MV). Compositional banding	25	9	1.0	289C	19.6	21.1	1.5	1.90	3.35	26.40		-	2.85	5.03	39.6
		Sph/Py ≈ 75°. Porous interval has voids	30	12	0.9	290C	21.1	22.6	1.5	3.58	4.48	45.26			5.37	11.22	67.89
		aligned ≈ 70 ∿ 75°.	30	12	0.8	291C	22.6 (1.5)	24.1	1.5	3.93	4.54	51.43			5.90	11.31	77.15
		27.9 - 28 - Bleached sericite phyllite (SG).	25	8	0.8	292C	24.1	25.9	1.8	1.08	2.95	18.17			1.94	5.31	32.71
		Buff w/ prominent fuchsite laminae ≈ 70°.	60	15	1.5	293C	(25.1) 25.9	27.4	(0.8) 1.5	8.99	15.07	159.43		✓	0.86 13.49	2.36 22.61	14.54 239.15
		Contacts sharp ≈ 70°.	60	15	0.7	294C	27.4	28.1	0.7	6.43	9.22	110.06			4.50	6.45	77.04
		28.1 - Sharp clean contact w/ graphitic				WT. Av.	4.6	16.6	12.0	2.29	Pb Zn						
		phyllite ≈ 70°				"	16.6	28.1	11.5	4.13	7.09	61.87		-	17.55	81.58	711.47
							16.6	21.1	4.5	3.63	5.48	48.3		-	16.35	24.68	217.53
28.1	35.4	Graphitic phyllite (G). Fissile, easily breaks into			6.9	/	21.1 28.1	28.1 35.4	7.0 7.3	4.46	8.13	70.6			31.20	56.90	493.94
						"	25.9	28.1	2.2	8.18	13.21	143.72		-	17.99	29.06	316.19
						"	25.1	28.1	3.0	6.28	10.47	110.2			18.85	31.42	330.73

LOGGED BY _____ D.D.H. Nº 76-1-211 PAGE 2/4

Interval From	Interval To	DESCRIPTION			Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		poker chips. F2 ≈ 70∿75° F1 ≈ 5-15°															
~~35~~		Sporadic showing of sulfides as clusters and															
		as isolated blebs Py ≤ 1%															
		35.4 - Abrupt change to banded sulfides (MB) and															
		w/ barite (Mb). Plane ≈ 80°															
35.4	44.3	Massive banded (MB) and w/ barite sulfides (Mb).	55	7	1.5	295c	35.4	36.9	1.5	2.63	4.85	59.31			3.95	7.28	88.97
		Competent. Faint Compositional banding of sph-Pb	60	10	1.5	296c	36.9	38.4	1.5	4.48	8.19	69.60			6.72	12.29	104.4
		Py ≈ 70°; Sulfides/ba ≈ 70∿75°. Ba ≈ 15%	70	12	1.5	297c	38.4	39.5	1.1 ~~1.5~~	3.40	7.16	72.69			3.74	7.88	79.96
		36.5 - 36.6 - Bleached sericite phyllite (Sb).	60	15	1.5	298c	39.5	41.0	1.5	4.50	7.24	75.77			6.75	10.86	113.66
		Contacts sharp and clean ≈ 35°.	~~65~~	12	1.5	299c	41.0	42.5	1.5	5.00	7.87	74.74			7.50	11.81	112.11
		44.3 - Sharp contact w/ Graphitic phyllite (G).	70	6	1.7	300c	42.5	44.3	1.8	2.85	3.20	60.34			5.13	5.76	108.61
		≈ 80°															
44.2	53.3	Graphitic phyllite (G). Fissile.			8.5	✓	44.3	53.3	9.0								
		F2 ≈ 70∿75° F1 ≈ 0∿10°															
		Minor sulfide showing asso. w/ qtz veinlets				WT. Av.	35.4	44.3	8.9	3.80	6.28	68.28	✓		33.79	55.88	607.71
		in random orientation.				" "	36.9	39.5	2.6	4.02	7.76	70.9	✓		10.46	20.17	184.36
						" "	39.5	42.5	3.0	4.75	7.56	75.3	✓		14.25	22.67	225.77
						" "	36.9	42.5	5.6	4.41	7.65	73.2	✓		24.71	42.84	410.13
		53.3 - Gradual decrease in graphite. Rx becoming															
		to be sericite phyllite w/ trace graphite (SG)															
53.3	71.6	Sericite phyllite w/ trace graphite (SG).			16.8	✓	53.3	70.5	17.2								
		Fissile, easily breaks into poker chips / flakes.															
		F2 ≈ 70∿75° F1 ≈ 5∿10°															
		69 - 69.5 - Fault zone. Mixture of sericite flakes,															

LOGGED BY [signature] D.D.H. No '76-U-211 PAGE 3/4

Interval From	Interval To	DESCRIPTION			Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		phyllite fragments and sandy gauge.															
		69.9 - 70.1 - massive sulfide interval. Reddish															
		color, structureless. Contacts broken grd. Py:20 [illegible]:30															
		70.3 - 70.5 - FAULT. Similar to 69-69.5 Run.															
		70.5 - 71.6 - Transition zone to massive sulfide.															
		Mineralization gradually increasing.															
71.6	74.5	Banded Massive Sulfide (MB) and Sulfide	60	8	1.5	301C	71.6	73.1	1.5	4.33	6.44	64.46	✓				
		bx (MXs). Competent. Compositional banding	50	6	1.5	302C	73.1	74.6	1.5	1.80	2.15	33.26	✓				
		Sph/py ≈ 70°.	35	9	1.4	303C	74.6	76.1	1.5	2.68	4.45	42.51	✓				
		73.5 - 74.5 - Sulfide bx cemented by fine grain	30	8	1.5	304C	76.1	77.6	1.5	2.43	2.60	46.29	✓				
		sulfides w/ trace calcite. Bx'tion appear	35	5	1.5	305C	77.6	79.1	1.5	0.25	0.53	10.97			0.78	Pb Zn	
		confined along plane ≈ 5°.	30	4	1.4	306C	~~80~~ 79.1	80.6	1.5	0.40	0.80	15.09			1.20	"	
		74.5 - change to qtz-sulfide. Contact gradual.	30	3	1.4	307C	80.6	82.1	1.5	0.05	0.55	9.94			0.60	"	
74.5	88.1	Qtz-sulfide (P). Competent. Very siliceous	35	3	1.5	308C	82.1	83.6	1.5	0.30	0.65	13.03			0.95	"	
		groundmass. Some intervals have trace gra-	35	2	1.5	309C	83.6	85.1	1.5	0.25	0.65	12.00			0.90	"	
		phite @ 76 ~ 76.4; 79.7 ~ 80.6	30	4	1.5	310C	85.1	86.6	1.5	0.80	2.00	24.34	✓				
		F_2 ≈ 75 ~ 80° F_1 ≈ 5 ~ 10°	35	12	1.5	311C	86.6	88.1	1.5	5.56	6.56	73.71	✓				
		Small F_1 fold nose closures.															
		81.2 - 81.7 - Sulfide bx along well healed fracture.				WT. AV.	77.6	85.1	7.5	0.89	Pb Zn						
		Fx is sub-// to C.A. Sulfide fragments Ø ≈ 5mm -				" " " "	71.6 85.1	76.1 88.1	4.5 3.0	2.94 3.18	4.45 4.28	46.7 49.0	✓ ✓				
		1 cm. cemented by barite.															
		86 - 86.1 - Barite prisms along fissure walls. Fx ≈ 5°															

LOGGED BY [illegible] D.D.H. No '76-U-211 PAGE 4/4

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		86.1- Sharp contact w/ graphitic sericite phyllite (SG) ≈ 70°													
86.1	100.3	Graphitic sericite phyllite (SG). Fissile, broken blocky/flaky core. F_2 ≈ 70~75°; F_1 ≈ 0~5°. 89.-89.3- Fault. Black sticky thick gouge. 97.6 - Shear. 100.3 - Introduction of calcite in grdmass. Rx becoming calcitic sericite phyllite (SK)	13.8	✓	86.1	100.3	14.2								
100.3	114.3	Calcitic sericite phyllite (SK). Competent. F_2 ≈ 70~75 F_1 ≈ 5~10° Calcite as thin laminae on both F_1 & F_2. 103.8 - 104.1 - Trace chlorite and biotite. 105.~105.3 - Chloritic-calcitic unit. Contacts gradual.	13.7	✓	100.3	114.3	14								
114.3		END OF HOLE													

Calc's checked Feb. 12/77 JE calculated.

DIAMOND DRILL RECORD

LOGGED BY J. PAXTON

PROPERTY GRUM JOINT VENTURE

D.D.H. No. U-212 PAGE 1/4

LATITUDE 73W BEARING OF HOLE — STARTED Oct. 10, 1976

DEPARTURE 3N DIP OF HOLE -90° COMPLETED Oct. 11, 1976

ELEVATION — DIP TESTS No DEPTH Proposed: Ultimate: 70.2

CLAIM No. —

N ← DIRECTION AND DISTANCE FROM NE. CLAIM POST

HOLE STOPPED. Rods stuck and abandoned in hole.

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Py	Pb-Zn	Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0.0	4.3	Casing															
4.3	6.1	Quartz Sulphide (P) Siliceous. Py 10 - Pb Zn-2 Broken core and lost core			0.8/1.8												
6.1	10.7	Fault Gouge and Breccia (PXG) Local short sections of black graphitic material.			2.0/4.6												
			10	15n	0.5/0.5	131c	10.7	11.2	0.5	1.30	2.73	15.09			2.02	Pb-Zn	
10.7	22.9	Siliceous Quartz Sulphide (P) Similar to typical P but with pale grey cherty laminae rather than phyllite. Sulphide portion is red-brown high sphalerite type. F_1 is folded and trends parallel to the core. F_2 = 80°	10	5	1.0/1.0	132c	11.2	12.2	1.0	1.48	1.93	19.20			3.41	"	
			6	3	1.5/1.5	133c	12.2	13.7	1.5	2.15	1.60	24.34			5.63	"	
			10	5	1.3/1.5	134c	13.7	15.2	1.5	3.40	3.00	40.46			5.10	4.50	60.69
			10	5	1.5/1.6	135c	15.2	16.8	1.6	2.60	3.55	32.23			4.16	5.68	51.57
			10	5	1.2/1.5	136c	16.8	18.3	1.5	2.23	2.75	28.46			3.35	4.13	42.69
			10	5	1.5/1.5	137c	18.3	19.8	1.5	1.68	2.65	20.23			2.52	3.98	30.35
			5	3	1.5/1.5	138c	19.8	21.3	1.5	0.40	0.63	5.14	✓				
			8	3	1.0/1.6	139c	21.3	22.9	1.6	1.48	2.00	20.23	✓				

* wt. assay on page 2

LOGGED BY _____ D.D.H. No U-212 PAGE 2 14

Interval From	Interval To	DESCRIPTION	Py	Pb-Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
22.9	30.0	Bleached Sericite Phyllite (Sbm) Tan colored. $F_2 = 60°$ Local friable zones with flakes of mariposite and blebs of pyrite. Also contains several short sections of white quartz.				WT.Av.	10.7	13.7	3.0	3.69	Pb Zn				11.06	Pb Zn	
						WT.Av.	13.7	16.8	3.1	2.99	3.28	36.21	✓		9.26	10.18	112.26
						WT.Av.	16.8	19.8	3.0	1.96	2.70	24.35	✓		5.87	8.11	73.04
30.0	32.0	Bleached Siliceous Quartz Sulphide (Pss) White color with irregular bands of sericite and sulphide material at 70° Very siliceous	10	3	2.0/2.0	140c	30.0	32.0	2.0	0.50	0.78	8.23			2.56	Pb Zn	
			15	5	1.5/1.5	141c	32.0	33.5	1.5	0.33	1.18	6.17			2.27	"	
			15	5	2.5/2.5	142c	33.5	36.0	2.5	1.88	3.73	29.14		x0.9	1.69	3.36	26.23
			80	15	2.0/2.1	143c	(35.1 36.0	36.0 38.1	0.9) 2.1	8.05	15.78	118.97			16.91	33.14	249.84
32.0	38.0	Graphitic Quartz Sulphide (Pc) Typical coarse granular quartz sulphide. Graphite on F_2 planes at 70°				WT.Av.	30.0	33.5	3.5	1.38	Pb Zn						
						WT.Av.	35.1	38.1	3.0	6.20	12.17	92.02	✓		18.60	36.50	276.07
38.0	38.1	Massive Sulphide (MV) Massive with local bands of porous vuggy material at 60° Occasional large 5cm inclusions of ~~rock~~ ~~f~~ wall rock.															

LOGGED BY _____ D.D.H. No U-212 PAGE 3/4

Interval From	Interval To	DESCRIPTION	Py	PbZn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
38.1	41.9	Bleached Sericite Chlorite Phyllite (Sbcm) Earthy kaolinitic phyllite with bent contorted F_2. Contains blebs of MV, flakes of dark green chlorite and flakes and streaks of maniposite. 5cm gouge at 40.6															
41.9	53.3	Massive Sulphide (MB6) Fine grained. Locally up to 50% barite in indistinct bands up to 5mm. at 50°-80°	70	25	0.8/0.8	144c	41.9	42.7	0.8	7.39	9.26	114.52			5.91	7.41	91.62
			70	20	1.5/1.5	145c	42.7	44.2	1.5	5.75	6.01	118.97			8.63	9.02	178.46
			60	15	1.5/1.5	146c	44.2	45.7	1.5	4.53	7.53	87.77			6.80	11.30	131.66
			60	15	1.5/1.5	147c	45.7	47.2	1.5	4.68	8.60	68.57			7.02	12.90	102.86
			60	10	1.5/1.6	148c	47.2	48.8	1.6	5.30	8.88	81.60			8.48	14.21	130.56
			60	10	1.5/1.5	149c	48.8	50.3	1.5	2.56	5.89	41.49			3.84	8.84	62.24
			60	10	1.5/1.5	150c	50.3	51.8	1.5	3.70	6.65	59.31			5.55	9.98	88.97
			70	20	1.8/1.3	151c	51.8	53.3	1.5	4.95	7.30	68.57			7.43	10.95	102.86
						Wt Av	41.9	48.8	6.9	5.34	7.95	92.05	✓		36.84	54.84	635.16
						" "	48.8	53.3	4.5	3.74	6.62	56.46	✓		16.82	29.77	254.07
53.3	54.9	Fault Gouge Sticky clay			1.6/	" "	41.9	53.3	11.4	4.71	7.42	78.00	✓		53.66	84.61	889.23

LOGGED BY _____ D.D.H. Nº U-212 PAGE 4/4

Interval From	Interval To	DESCRIPTION	Py	Pb Zn	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		Massive Sulphide (M6)	65	15	0.8/1.5	152C	54.9	56.4	1.5	3.15	6.06	51.43			4.73	9.09	77.15
		54.9 - 59.2 Blocky broken muddy	65	15	1.0/2.7	153C	56.4	59.1	2.7	4.20	8.04	80.54			11.34	21.71	217.54
		core plus bits of grey gouge.	65	15	1.9/1.9	154C	59.1	61.0	1.9	6.29	12.70	93.94			11.95	24.13	178.49
		59.2 - 61.0 Sulphide plus 20%	65	15	1.5/1.5	155C	61.0	62.5	1.5	4.00	3.60	57.60			6.00	5.40	86.40
		barite. Banding at 45°	65	25	1.5/1.5	156C	62.5	64.0	1.5	9.15	15.98	118.63			13.73	23.97	177.95
		61.0 - 62.3 Very fine grained	70	20	1.5/1.5	157C	64.0	65.5	1.5	3.85	4.15	46.29			5.78	6.23	69.44
		pyritic sulphide. Open fractures	80	5	1.5/1.6	158C	65.5	67.1	1.6	2.80	1.70	39.77			4.48	2.72	63.63
		No visible barite. No banding	70	20	1.4/1.5	159C	67.1	68.6	1.5	7.58	14.12	127.89			11.37	21.18	191.84
		62.3 - 65.0 Red-brown fine	65	15	1.5/1.6	160C	68.6	70.2	1.6	3.38	3.80	47.31			5.41	6.08	75.70
		grained sulphide. 10% barite.															
		Weak banding at 70°				Wt. Av.	56.4	64.0	7.6	5.66	9.90	86.89	✓		43.02	75.21	660.36
						" "	64.0	68.6	4.6	4.70	6.55	70.63	-		21.63	30.13	324.91
						" "	56.4	68.6	12.2	5.30	8.63	80.76	✓		64.65	105.34	985.29
		65.0 - 67.1 Similar to 61.0 - 62.3				" "	41.9	68.6	26.7	4.61	1.45	42.71	✓		123.04	199.04	1140.44
		67.1 - 70.2 Similar to 59.2 - 61.0				" "	41.9	70.2	28.3	4.54	1.25	42.97			128.45	205.12	1216.14
		Banding at 80°. Barite 20%															
70.2		Rods stuck due to caving of hole. Rods abandonned in hole. End.															

Calcn. checked Feb. 12/77 JR calculated. OK

DIAMOND DRILL RECORD

LOGGED BY [illegible]

PROPERTY GRUM JOINT VENTURE

D.D.H. No. 76-U-213 PAGE 1/4

LATITUDE 73W BEARING OF HOLE

DEPARTURE 3N DIP OF HOLE

ELEVATION DIP TESTS

T.B	AZIMUTH	DIP
COLLAR	044	-66
73.2 m	043	-68
118.9 m	030	-73

STARTED Oct. 13, 1976

COMPLETED Oct. 14, 1976

Proposed:

DEPTH Ultimate: 400-121.9

CLAIM No.

DIRECTION AND DISTANCE FROM NE. CLAIM POST

TOTAL CORE RECOVERY: 82.6 %

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	16	CASING. FIRST CORE RECOVERED at 2.4m.													
2.4	3.0	Mineralized graphitic phyllite (PG). Broken pebbly core. Foliation ≈ 80°. Poor recovery. 15 2	0.3	/	2.4	3.0	0.6								
		3 - Abrupt change to sericite phyllite (S). Contact marked by 10 cm. bleached ~~schist~~ sericite phyllite. Broken grd.													
3.0	51.2	Sericite phyllite (S). Competent. Light grey color. F_2 ≈ 60 ∿ 65° w/ kink folds ≈ 0°: F_1 ≈ 5-10°.	43.1	/	3.	51.2	48.2								
		3.2 ∿ 3.3 - FAULT. Grey thick sticky gouge													
		13.7 - shear													
		14.9 - 15.2 - Bleached sericite unit. Buff w/ dark reddish brown stripes that appear like fine grained biotite. 1st contact sharp & clean ≈ 80°; 2nd contact - broken grd.													
		46 - 48.1 - Broken pebbly bull qtz.													
		50.0 ∿ 50.3 - Fault. Black sticky gouge w/ phyllite fragments.													
		50.3 ∿ 51.2 - Bleached sericite phyllite (Sb). White w/ prominent													

LOGGED BY _____ D.D.H. Nº 76-V-213 PAGE 2/4

Interval From	Interval To	DESCRIPTION			Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		fracture in groundmass + trace calcite.															
		51.2 - Abrupt change to Massive Sulfide (M) Contact broken pebbly core (both SB and M).															
51.2	70.1	Massive sulfide of the banded and porous (MB+MV)	70	8	1.1	333 C	51.2	52.7	1.5	3.83	6.86	63.43			5.75	10.29	95.15
		and partly w/ barite (MB). Generally competent	65	8	1.2	334 c	52.7	54.2	1.5	2.58	4.45	41.49			3.87	6.68	62.24
		except in the porous friable parts.	65	10	1.4	335c	54.2	55.7	1.5	4.23	7.70	58.63			6.35	11.55	87.95
		Compositional banding Sph-Pb/py ≈ 65-70°	65	10	1.1	336c	55.7	57.2	1.5	3.23	6.12	54.51			4.85	9.18	81.77
		Sulfides/ba ≈ 75~80°	65	10	1.2	337c	57.2	58.7	1.5	4.08	7.05	71.66			6.12	10.58	107.49
		53.5 ~ 53.7 - Bleached Sericite phyllite. Buff	65	10	0.9	338c	58.7	60.2	1.5	5.97	9.17	94.63			8.96	13.76	141.95
		w/ prominent maripositic strips ≈ 30~35°.	65	9	0.9	339c	60.2	61.7	1.5	3.85	6.70	50.40			5.78	10.05	75.60
		Contacts broken ground.	65	9	0.9	340c	61.7	63.2	1.5	5.79	8.39	78.86			8.69	12.59	118.29
		57.9 - 68.6 - interval of alternating porous (MV) and	70	7	1.1	341c	63.2	64.7	1.5	1.50	1.63	31.20			4.70	PbZn	
		barite sulfide (MB). Core is broken - blocky to	70	7	0.8	342c	64.7	66.2	1.5	1.28	1.20	30.17			3.72	"	
		sandy. No sticky gouge.	70	8	1.0	343c	66.2	67.7	1.5	2.75	4.60	52.46			4.13	6.90	78.69
		70.1 - Changed to mineralized graphitic phyllite	70	8	1.1	344c	67.7	69.2	1.5	1.53	2.45	28.46			2.30	3.68	42.69
		(PG). Contact broken gnd.	65	8	1.0	345c	69.2	70.7	1.5	2.93	5.00	46.29			4.40	7.50	69.44
70.1	102.	Mineralized graphitic phyllite (PG). Broken	30	6	1.0	346c	70.7	72.2	1.5	0.85	1.53	17.14			1.28	2.30	25.71
		blocky core. Mineralization unevenly	20	3	0.7	347c	72.2	73.7	1.5	1.83	4.40	24.34			2.75	6.60	36.51
		distributed w/ lean and rich intervals.	20	4	0.9	348c	73.7	75.2	1.5	0.85	1.83	13.03			1.28	2.75	19.55
		Fol ≈ 65-75° ~ Fl ≈ 0~10°	25	4	0.9	349c	75.2	76.7	1.5	0.83	1.03	16.11	✓				
		73.2 - 74.7 - Bleached sericite unit.	30	4	1.0	350c	76.7	78.2	1.5	1.10	1.88	27.43	✓				
		White w/ sulfide spots/thin laminae.	35	5	1.0	351c	78.2	79.7	1.5	9.14	15.62	120.00			13.71	23.43	180.00

LOGGED BY _____ D.D.H. Nº '76-11-213 PAGE 3/4

Interval From	Interval To	DESCRIPTION			Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		F2 ± 85 F1 ± 0° - Contacts broken grd.	40	6	1.0	352c	79.7	81.2	1.5	4.58	8.31	68.57			6.87	12.47	102.86
		88 - 88.2 - Sulfide bx Angular sulfide	35	5	1.3	353c	81.2	82.7	1.5	0.88	1.38	28.11			1.32	2.07	42.17
		fragments 1 cm x 1.5 cm cemented by yellow	35	5	1.3	354c	82.7	84.2	1.5	0.18	0.80	12.00			0.27	1.20	18.00
		argillaceous material.	45	12	1.3	355c	84.2	85.7	1.5	6.37	13.89	88.80			9.56	20.84	133.20
		94.6 x 95 - Sulfide/phyllite bx cemented by graphite	45	12	1.3	356c	85.7	87.2	1.5	5.70	11.23	70.63			8.55	16.85	105.95
		and fewer grained sulfides. Fragments 1/2 mm - 1 cm.	35	10	1.5	357c	87.2	88.7	1.5	2.43	4.45	33.26			3.65	6.68	49.89
		100 - Decrease in graphitic constituents. Bx becoming	30	6	1.5	358c	88.7	90.2	1.5	0.68	1.30	20.23		(2.97 Pb%)	1.02	1.95	30.35
		8% sulfides w/ bleached sericite intervals (P.86).	25	5	1.4	359c	90.2	91.7	1.5	0.45	1.28	17.14			2.63	PbZn	
102	104.2	Qtz - sulfides c/ bleached sericite intervals (P.86).	25	4	1.3	360c	91.7	93.2	1.5	0.30	1.00	13.03			1.95	"	
		Competent. Bleached sericite - buff to silvery	25	4	1.3	361c	93.2	94.7	1.5	0.18	0.98	12.00			1.76	"	
		white 2 x 2 cm. Sulfides following both	25	4	1.5	362c	94.7	96.2	1.5	0.20	1.28	6.17			2.22	"	
		F1 - F2 foliation and partly also disseminated	25	5	1.5	363c	96.2	97.7	1.5	0.88	1.68	12.00			3.84	"	
		in groundmass. F2 ± 80 x 85°; F1 ± 0 x 5°	15	2	1.4	364c	97.7	99.2	1.5	0.43	2.53	10.97			4.44	"	
		104.2 - Abrupt change to mineralized graphitic	15	3	1.0	365c	99.2	100.7	1.5	0.05	0.85	9.94			1.35	"	
		phyllite (PG). Contact broken grd.	15	4	1.0	366c	100.7	102.2	1.5	0.05	1.03	9.94			1.62	"	
104.2	108.9	Mineralized graphitic phyllite (PG). Competent.	25	4	1.5	367c	102.2	103.7	1.5	0.02	0.43	8.91			0.63	"	
		F2 ± 70 x 75 F1 ± 0 x 5°	20	3	1.5	368c	103.7	105.2	1.5	0.03	1.00	7.89			1.55	"	
		Sulfides in laminae following mostly F2	25	4	1.5	369c	105.2	106.7	1.5	0.02	0.75	5.14			1.16	"	
		107.1 x 107.2 - phyllite/sulfide bx cemented by	50	8	2.2	370c	106.7	108.9	2.2	1.28	1.63	29.14	✓				
		barite and trace calcite.					106.7	108.9	2.2								
		108.9 - Sharp clean contact w/ graphitic phyllite.				*	WT.A. on page 4										
		Contact @ 65°.															

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Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
108.9	110	Graphitic phyllite (G). Broken blocky/flaky core. Fissile. Fa ≈ 70 to 75°; Fi ≈ 0 to 5°	1.0	✓	108.9	110.0	1.1								
		110.0 – Gradual decrease in graphite. RX becoming dark sericite phyllite (S).													
110	121.9	Dark sericite phyllite (SG). Competent. Trace graphite Fa ≈ 70 to 75° Fi ≈ 0 to 5	3.2	✓	110	113.9	3.9								
		113.9 – 114.7 – Massive banded sulfide w/ barite. 50 15	0.8	371C	113.9	114.7	0.8	6.75	12.22	88.80	✓				
		Competent. Ba ≈ 20%. Compositional banding Sulfides/ba ≈ 75°.	6.8	✓	114.7	121.9	7.2								
		Contacts – abrupt, broken gnd.													
		119.4 – 119.5 – Fault. White to light gray blocky gouge.													
		120.7 – Shear.													
121.9		~~121~~ END OF HOLE.													
				WT. AV.	51.2	54.2	3.0	3.21	5.66	52.46	✓		9.62	16.97	157.39
				" "	54.2	58.7	4.5	3.85	6.96	61.60	✓		17.32	31.31	277.21
				" "	58.7	63.2	4.5	5.21	8.09 ✓	74.63 ✓	✓		23.43 ✓	36.40	335.84
				" "	54.2	63.2	9.0	4.53	7.52	68.12			40.75	67.71	613.05
				" "	51.2	63.2	12.0	4.20	7.06	64.20	✓		50.37	84.68	770.44
				" "	63.2	66.2	3.0	2.81	Pb Zn		✓		8.42	Pb Zn	
				" "	66.2	70.7	4.5	2.41	4.02	42.40	✓		10.83	18.08	190.82
				" "	70.7	73.7	3.0	1.34	2.97	90.74	✓		4.03	8.90	62.22
				" "	72.2	75.2	3.0	1.34	3.12	18.69	✓		4.03	9.35	56.06
				" "	78.2	81.2	3.0	6.86	11.97	94.29	✓		20.58	35.90	282.86
				" "	84.2	87.2	3.0	6.04	12.56	79.72	✓		18.11	37.69	239.15
				" "	78.2	87.2	9.0	4.48	8.54	64.69	✓		40.28	76.86	582.18
				" "	87.2	90.2	3.0	1.56	2.88	26.75	✓		4.67	8.63	80.24
				" "	88.7	96.2	7.5	1.54 ~~3~~	Pb Zn		✓		11.53	Pb Zn	
				" "	96.2	99.2	3.0	2.76	"	✓			8.28	"	
				" "	99.2	106.7	7.5	0.84 5.	"		✓		6.31	"	

Calc'n checked Feb 2/77 calculated ✓

DIAMOND DRILL RECORD

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PROPERTY GRUM JOINT VENTURE

D.D.H. No. 76-U-214 PAGE 1/2

LATITUDE 75W BEARING OF HOLE 044 STARTED Oct. 4, 1976

DEPARTURE 6½N DIP OF HOLE FLAT COMPLETED Oct. 5, 1976

ELEVATION DIP TESTS DEPTH Proposed: 100' - 30.5 Ultimate: 100' - 30.5

CLAIM No.

DIRECTION AND DISTANCE FROM NE. CLAIM POST

N

TOTAL CORE RECOVERY: 84.2 %

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION			Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	3	Sericite phyllite (S). Broken flaky. Appear to be sheared. Foliation 10°. Low core recovery			0.5	✓	0	3									
		3 - Abrupt change to graphitic qtz-sulfide (PG). Contact broken core.															
3.0	12.2	Graphitic Qtz-sulfide (PG). Broken blocky core.	35	9	1.3	001C	3	4.5	1.5	2.88	5.10	43.54			4.32	7.65	65.31
		3~7.0 - Foliation ≈ 0~15° F2 ; F1 ≈ 80~85°	35	12	1.5	002C	4.5	6.0	1.5	4.45	5.20	63.43			7.13	7.80	95.15
		7~10.7 - F2 ≈ 40~45 ; F1 ~ NOT distinct	25	7	1.3	003C	6.0	7.5	1.5	3.20	3.95	38.40			4.80	5.93	57.6
		7.4 - 7.7 ; 8.6~8.9 - Bleached sericite interval	30	9	1.4	004C	7.5	9.0	1.5	4.25	9.52	58.63			6.38	14.28	87.95
		Very light grey to buff. Broken grd.	35	12	1.0	005C	9.0	10.5	1.5	5.00	10.09	75.77			7.50	15.14	113.66
		12.2 - Abrupt change to graphitic phyllite (G). Contact broken grd.	30	10	0.9	006C	10.5	12.2	1.7	3.40	8.79	60.34			5.78	14.94	102.58
12.2	15.2	Graphitic phyllite (G). Broken flaky core. F2 ≈ 0~5° F1 ≈ 85~90°			2.8	✓	12.2	15.2	3.0								
		15.2 - Abrupt change to dark sericite phyllite (S)				WT. AV.	3.0	7.5	4.5	3.61	4.75	48.46	✓		16.25	21.38	218.06
		Contact broken grd. and marked by a short bleached				"	7.5	12.2	4.7	4.18	9.44	64.72	✓		19.66	44.36	304.19
		sericite phyllite interval.				"	3.0	12.2	9.2	3.90	7.15	56.77	✓		35.91	65.74	522.25
15.2	30.5	Dark Sericite phyllite (S). Competent. Foliation F1 ≈ 5~15°			15.0	✓	15.2	30.5	15.3								

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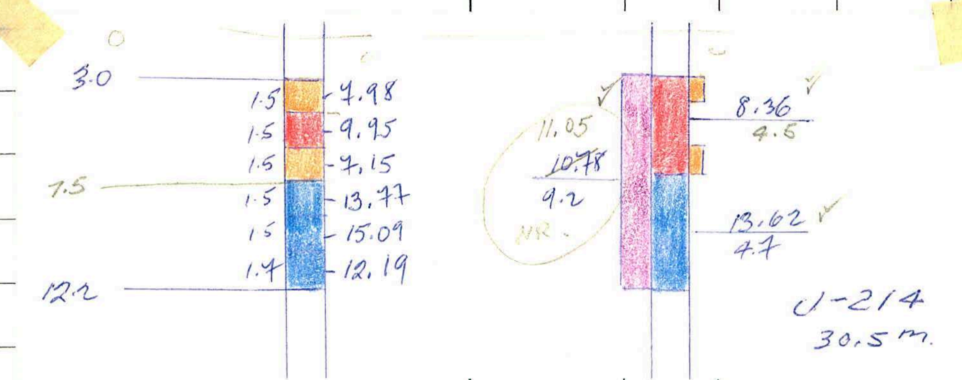
Interval		DESCRIPTION	Recovery	Sample	Interval		Sample	Assay					Assay x		
From	To			№	From	To	Length	Pb	Zn	Ag	Au	Cu	Pb	Zn	Ag
		F2 ∠ 80~90°													
		21.3 ~ 21.5 - Flaky core. No gouge - sheared.													
30.5		END OF HOLE													



Calc'n. checked Feb. 2/77 JG. calculated ✓

DIAMOND DRILL RECORD

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PROPERTY Grum Joint Ventures

D.D.H. No. 76-U-215 PAGE 1/4

LATITUDE 10 859.16 75W BEARING OF HOLE 044 STARTED Oct. 5, 1976

DEPARTURE 7635.77 6N½ DIP OF HOLE (−60 proposed) −62 Actual COMPLETED Oct. 7, 1976

ELEVATION 1137.91 DIP TESTS azimuth: 64°18' DEPTH Proposed: Ultimate: 455-138.7'

CLAIM No.

DIRECTION AND DISTANCE FROM NE. CLAIM POST

Total core recovery: 87.6 %

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION			Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	4.2	CASING - NO CORE RECOVERED															
4.2	6	Qtz-sulfide (P). Broken blocky core. Foliation	30	12	0.7	039C	4.2	6.0	1.8	2.95	6.14	53.49	✓				
		≈ 90°. No clear F1/F2 relationship noted.															
		Very minor trace of graphite as thin laminae ≤ 1%															
		6 - Abrupt change to sericite phyllite (S).															
		Contact broken flaky grd. — shear (?).															
6.0	7.8	Sericite phyllite (S). Competent. Foliation	\	\	1.5	/	6.0	7.8	1.8								
		≈ 85 ~ 90°.															
		7.3 ~ 7.5 - Bleached sericite phyllite (Sb). Buff. Compe-															
		tent. Foliation 75°. Contacts sharp ≈ 75°.															
		7.8 - Abrupt change to graphitic qtz-sulfide (PG). Contact															
		broken grd.															
7.8	12.0	Graphitic qtz-sulfide (PG). Broken blocky core.	25	4	1.4	040C	7.8	9.3	1.5	1.28	2.10	23.31			3.38	Pt-Zn	
		Foliation 75 ~ 80°. Sulfides generally confined	27	6	1.5	041C	9.3	10.8	1.5	1.58	2.33	25.37			3.91	"	
		w/in ~~along~~ felsic laminae but sometime also distributed	15	6	1.2	042C	10.8	12.0	1.2	1.33	2.70	25.37	✓				
		in the whole mass as fine dissemination.				WT-NV	7.8	10.8	3.0	3.65	Pt-Zn		✓				

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Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		8-8.3 - Bx. Sulfide and phyllite fragments ϕ 3 / mm ~ 1 cm. well cemented by SiO_2 and finer grained Sulfide plus trace calcite.													
		12 - Sharp clean contact w/ graphitic phyllite (G) ≈ 80°													
12	16.8	Graphitic phyllite (G). Broken blocky to flaky core. Fissile, easily breaking into poker chips. F2 ≈ 75~80° F1 ≈ 5~10°	4.5	/	12.0	16.8	4.8								
		16.8 - Gradual decrease in graphite. Rk becoming dark sericite phyllite w/ trace graphite (SG)													
16.8	44.5	Dark sericite phyllite w/ trace graphite (S+G). Competent. Foliation F2 ≈ 75~85°; F1 ≈ 5-10°	26.8	/	16.8	44.5	27.7								
		18 - 18.3 - Small fault. Black sticky gouge w/ graphite flakes.													
		325 ~ 33 ~ FAULT. Sericite flakes / phyllite w/ grey gouge.													
		36.3 ~ Shear													
		44.2 - 44.5 - FAULT. Black thick sticky gouge													
		44.5 - Abrupt change to graphitic phyllite (G)													
44.5	47.5	Graphitic phyllite (G). Fissile, easily breaks into poker chips. F2 ≈ 80~85; F1 ≈ 5~10°	2.8	/	44.5	47.5	3.0								
		47.5 - Abrupt change to sericite phyllite (S) ≈ 75°													

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Interval From	Interval To	DESCRIPTION			Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
47.5	64	Sericite phyllite (S). Competent. Foliation:			15.3	✓	47.5	64.0	16.5								
		F_2 ∡ 75~80° F_1 ∡ 0~10°															
		54.9 - 56.0 - Graphitic phyllite interval. Broken ground.															
		57, 59 - Shear															
		64 - Abrupt change to massive sulfide (M). Contact broken grd.															
64.0	69.6	Massive Sulfide w/ barite (M16). Competent.	70	10	1.0	043C	64.0	67.1	3.1	5.99	9.17	84.69			18.57	28.43	262.54
		Compositional banding Sul/ba ∡ 70~75°	65	12	1.2	044C	67.1	68.4	1.3	5.10	9.25	86.74			7.65	13.88	130.11
		64 - 65.5 - MISLATCH. Poor recovery	60	10	1.2	045C	68.6	70.1	1.5	3.63	6.14	59.31			5.45	9.21	88.97
		65.7 - 67.1 - FAULT. DARK Grey to brown thick sticky gouge w/ prominent sulfide grains.													31.67	51.52	351.51
						WT. AV.	64.0	70.1	6.1	5.19	8.45	57.62	✓				
						" "	64.0	68.6	4.6	5.70	9.2	85.6	✓		26.22	42.31	393.65
		69.6 - Abrupt change to mineralized bleached sericite ~~cut~~ phyllite ∡ 75°															
69.6	70.1	Mineralized bleached sericite phyllite (P-Sb). Competent. F_2 ∡ 60~65; No distinct F_1/F_2 relationship. Buff color w/ metallic black stripes.															
		70.1 - Abrupt change to Sericite phyllite. Contact fault zone.															
70.1	100.4	Sericite phyllite (S). Competent. Light gray.			29.1	✓	70.1	100.4	30.5								
		F_2 ∡ 75~80° F_1 ∡ 0~10°															

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Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		70.1 ± 70.3 - FAULT. Grey sticky gouge w/ phyllite flakes.													
		73.2 - 76 - Bleached sericite phyllite interval. Buff to dark punkish brown. Competent. Foliation ≈ 70 ∿ 75°. Trace biotite as thin laminae. Contacts sharp ≈ 1st contact: abrupt, broken gd. 2nd contact ≈ 75°.													
		82 - 82.2 - FAULT. white sticky gouge w/ bleached sericite flakes.													
		83.8 - 84.5 - Bleached sericite phyll (SG). Competent. Buff. Foliation ≈ 75°. Contacts sharp and clean ≈ 75°.													
		94.1 ∿ 94.5 - FAULT. Grey thick Sticky gouge w/ sericite flakes.													
		100.6 - change to mineralized graphitic phyllite (PG). Contact marked by 5 cm long bleached sericite phyllite. Plane sharp and clean ≈ 80°													
100.6	108.2	Mineralized graphitic phyllite (PG). Competent. 10 2	3.0	046C	100.6	103.6	3.0	0.05	0.18	2.06			0.23	Pb Zn	
		F2 ≈ 80° F1 ≈ 0 ∿ 5 marked by sulfides 10 2	2.6	047C	103.6	106.7	3.1	0.05	0.38	3.09			0.43	"	
		103.8 - 104.0; 105.2 - 105.4 - Bleached sericite 5 1	1.1	/	106.7	108.2	1.5	Trace, est.							
		interval. Buff w/ prominent fuchsite laminae. Contacts sharp ≈ 75°.		WT. AV.	100.6	106.7	6.1	0.33	Pb Zn				2.02	"	

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Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		108.2 - Decrease in mineralization. Rx becoming	1.4	✓	108.2	109.7	1.5								
		normal graphitic phyllite (G).													
108.2	109.7	Graphitic phyllite (G). Fissile, easily breaking													
		into poker chips. F2 ≈ 75~80°; F1 0~5°													
		109.7 - Gradual change to sericite phyllite (S)													
109.7	117.3	Sericite phyllite (S). Competent. Light	7.4	✓	109.7	117.3	7.6								
		gray. F2 ≈ 75~80° F1 ≈ 0~10°.													
		117 - 117.3 - Bleached sericite phyllite w/													
		chloritic laminae (Sbc). Competent.													
		Buff w/ green stripes. Chlorite marking													
		F1 foliation. F2 ≈ 75~80° F1 ≈ 0~5°													
		contacts sharp and clean ≈ 85°.													
		117.3 - Sharp clean contact w/ mineralized graphitic													
		phyllite (PG). ≈ 80°													
117.3	120.4	Mineralized graphitic phyllite (PG). Compe- 30 8	1.5	048C	117.3	118.8	1.5	2.23	4.00	38.40	✓		3.35	6.00	57.60
		tent. Foliation ≈ F2 ≈ 80~85°; F1 ≈ 0~5 30 6	1.5	049C	118.8	120.4	1.6	1.55	2.93	20.23	✓		2.48	4.69	32.37
		Sulfides in both foliation. Clots of Po·Mgtt													
		asso. w/ py laminae.		WT.AV.	117.3	120.4	3.1	1.88	3.45	29.0	✓		5.83	10.69	89.97
		120.4 - Sharp contact w/ bleached sericite													
		phyllite (Sb) ≈ 85°													
120.4	134.2	Bleached sericite phyllite (Sb). Competent.													
		Buff w/ greenish hue. Foliation F2 ≈ 75~80°													

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Interval From	Interval To	DESCRIPTION			Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		120 - 129.5 - Fault. Qtz / phyllite pebble cemented by gouge.			9.0	✓	120.4	129.5	9.1								
		129.5 - 132.6 - Massive Sulfide. Pebble size. Very poor core recovery. No gouge - MISLATCH	70	10	0.20	050C	129.5	131.1	1.6	5.96	4.07	71.66	✓		9.54	6.51	114.66
			30	5	0.15	051C	131.1	132.6	1.5	2.43	2.60	32.23	✓		3.65	3.90	48.35
		134.2 - Abrupt change to sericite phyllite (S).			1.6	✓	132.6	134.2	1.6								
		Contact sharp and clean @ 75°.				Wt. Av.	129.5	132.6	3.1	4.25	3.36	52.6	✓		13.19	10.41	163.00
134.2	138.7	Sericite phyllite (S). Competent. Gray.			4.0	✓	134.2	138.7	4.5								
		F2 @ 72 ∿ 80° F1 ∿ 0 ∿ 5°															
		Very minor sulfide showing (py ≤ 1%).															
138.7		END OF HOLE															

Cabin checked. Feb. 13/77 JC. calculated.

DIAMOND DRILL RECORD

LOGGED BY J. PAXTON

PROPERTY GRUM JOINT VENTURE

D.D.H. No. U-216 PAGE 1 of 7

LATITUDE 75W BEARING OF HOLE

DEPARTURE 6½N DIP OF HOLE

	Collar	61.0	121.9
DIP OF HOLE	-84	-82	-82
DIP TESTS Corr. Az		204°	157°

STARTED Oct 7/76

COMPLETED Oct 8/76

DEPTH Proposed: Ultimate: 138.7

ELEVATION

CLAIM No.

DIRECTION AND DISTANCE FROM NE. CLAIM POST

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Py	Pb Zn	Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0.0	1.2	Casing			0.2/1.2												
1.2	12.5	Quartz Sulphide	15	8	0.4/1.5	099C	0.0	1.5	1.5	3.88	5.57	65.49			5.82	8.36	98.24
		Siliceous grey phyllite with	15	8	1.5/1.5	100C	1.5	3.0	1.5	1.90	4.30	37.37			2.85	6.45	56.06
		folded F_1 laminae cut by F_2	15	10	1.6/1.6	101C	3.0	4.6	1.6	2.93	6.17	56.57			4.69	9.87	90.51
		at 60-70°. Red-brown sphalerite-	20	10	1.5/1.5	102C	4.6	6.1	1.5	3.95	7.21	70.63			5.93	10.82	105.95
		pyrite-galena mixture follows both	20	10	1.5/1.5	103C	6.1	7.6	1.5	5.00	10.06	80.57			7.50	15.09	120.86
		F_1 and F_2. F_1 Nose at 4.3	10	5	1.5/1.5	104C	7.6	9.1	1.5	2.58	5.46	41.49			3.87	8.19	62.24
		7.7-12.5 Irregular white quartz vein & breccia	8	3	1.6/1.6	105C	9.1	10.7	1.6	2.75	6.70	45.26			4.4	10.72	72.42
12.5	13.7	Fault Gouge. Soft, grey, sticky.	8	3	1.7/1.8	106C	10.7	12.5	1.8	1.48	4.38	26.40	✓				
13.7	35.1	Quartz Sericite Phyllite				VII. Av.	0 ✓	4.6 ✓	4.6	2.90 ✓	5.37 ✓	53.2?	✓		13.36	24.68	244.81
		Medium grey color. Well defined				"	4.6	7.6	3.0	4.48	8.64	75.60	✓		13.43	25.91	226.81
		1-2 mm F_1 laminae tightly folded				"	7.6 ✓	10.7 ✓	3.1 ✓	2.67 ✓	6.1 ✓	43.44	✓		8.27	18.91	134.66
		and cut by F_2 at 70°. Angle				✓	0	10.7	10.7	3.28	6.50	56.66			35.06	69.50	606.28
		between F_1 and F_2 generally near 90°															
		29.5-30.0 Zone of fine grained yellowish															
		granitic material. Specimen taken															

LOGGED BY _____ D.D.H. No U-216 PAGE 2 of 7

Interval From	Interval To	DESCRIPTION	Py	Pb Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
35.1	39.6	Massive Sulphide (M I)															
		Reddish Brown, fine grained	70	25	1.5/1.5	107C	35.1	36.6	1.5	9.57	19.93	138.17			14.36	29.90	207.26
		Pyrite-Sphalerite-galena mixture with	70	25	1.5/1.5	108C	36.6	38.1	1.5	13.40	21.48	215.66			20.1	32.22	323.49
		white "inclusions" that definately appear	70	25	1.5/1.5	109C	38.1	39.6	1.5	10.43	18.62	191.66			15.65	27.93	287.49
		To be pore fillings plus partially															
		dissolved wall rock fragments.					351	39.6	4.5	11.14	20.01	181.83	✓		50.11	90.05	818.24
		Also faint irregular flow banding															
39.6	46.1	Quartz Sericite Phyllite (S)															
		Grey color. Strong $F_2 = 80°$															
		41.3 - 41.4 Massive sulphide with															
		partially absorbed inclusions of															
		wall rock															
		41.5 - 42.0 Interbands of graphitic phyllite															
		42.0 - 42.5 Fault gouge and															
		muddy broken core.															

LOGGED BY _____ D.D.H. No U-216 PAGE 3 of 7

Interval From	Interval To	DESCRIPTION	Py	Pb3m	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
46.1	47.0	Massive Sulphide (MI)															
		Numerous rounded 1-2 cm white	50	20	2.0/2.0	110 C	46.1	48.1	2.0	5.55	9.52	96.69					
		inclusions. Faint composition banding			/1.7		48.1	49.8	/	Nil							
		(flow?) at 70°. 1st contact sharp at 45°	20	10	2.0/2.0	111 C	49.8	51.8	2.0	3.48	3.75	50.40					
			10	3	1.5/1.5	112 C	51.8	53.3	1.5	1.05	1.35	17.14					
47.0	48.0	Quartz Sulphide (P)															
		Strong F_2 = 70°				Wt.Av.	46.1	49.1	3.0	3.70	6.35	64.46					
		Mineralization parallel to F_2				Wt.Av.	49.1	51.8	2.7	2.80	2.78	37.33					
48.0	49.6	Quartz Sericite Phyllite (S)															
		F_2 = 70°															
49.6	51.2	Quartz Sulphite (P)															
		Cherty F_1 bands sub-parallel															
		to core. F_2 very faint at 90°															
51.2	54.9	Quartz graphite Sulphide PG															
		Black color. Sulphides															
		follow F_2 at 90°. Folded F_1															
		trends parallel to core.															
54.9	60.5	Quartz Sericite Phyllite (S)															
		Local masses of white quartz. F_2 = 80															
		Local short sections of graphitic material															

LOGGED BY _____ D.D.H. Nº U-216 PAGE 4 of 7

Interval From	Interval To	DESCRIPTION	Py	Pb-Zn	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
60.5	62.8	Fault Zone. Soft sticky gouge plus muddy broken core!															
62.8	66.0	Massive Sulphide (MV)	70	15	1.2/1.2	113c	62.8	64.0	1.2	1.68	2.80	30.17	✓				
		Fine grained massive pyritic	75	15	1.5/1.5	114c	64.0	65.5	1.5	5.00	6.30	77.83			1.5	9.45	116.75
		sulphide with 2-5 mm vuggy	60	10	1.6/1.6	115c	65.5	67.1	1.6	4.15	6.93	61.37			6.64	11.09	98.19
		porous bands and streaks at	20	5	1.4/1.5	116c	67.1	68.6	1.5	2.23	2.05	28.46	✓				
		60° to core. Trace of barite	20	5	1.4/1.5	117c	68.6	70.1	1.5	1.55	1.83	20.23	✓				
			75	20	1.3/1.5	118c	70.1	71.6	1.5	5.60	10.17	70.63			8.40	15.26	105.95
66.0	70.1	Quartz Sulphide (PG)	40	12	2.0/2.0	119c	71.6	73.6	2.0	3.50	6.25	52.46			7.00	12.50	104.92
		Coarse granular quartz															
		and pyrite with strong F_2					64.0	67.1	3.1	4.66	6.63	69.34	✓		14.14	20.54	214.94
		foliation at 80°. Graphite					70.1	73.6	3.5	4.40	7.93	60.25	✓		15.4	27.76	210.87
		on the F_2 planes.															
70.1	72.5	Massive Sulphide (MB)															
		Faint composition banding															
		at 80°. Occasional inclusions															
		of quartz sulphide															
72.5	73.6	Quartz Sulphide (P)															
		More sericite than typical															
		F_2 = 80°															

LOGGED BY _____ D.D.H. No U-216 PAGE 5 of 7

Interval From	Interval To	DESCRIPTION	Py	Pb-Zn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
73.6	94.0	Quartz Sericite Phyllite (S) Very dark grey. Well developed F_2 at 70°. Soft and brittle. Chloritic? Scattered pyrite. 76.5 - 77.7 Fault gouge. Muddy, blocky core. 79.3 - 79.5 Muddy broken core 83.8 - 85.3 Bleached. 89.0 - Seam of fault gouge running parallel to core.															
94.0	106.7	Graphitic Quartz Sulphide (G-P)					94.0	106.7	12.7	0.47	PbZn				6.03	PbZn	
		Dragfolded F_1 bands	15	5	1.9/2.0	120 C	94.0	96.0	2.0	0.13	0.35	5.14			1.16	PbZn	
		cut by strong F_2 at 60°	10	3	1.5/1.5	121 C	96.0	97.5	1.5	0.45	1.20	7.20			2.48	"	
		99.3 - 100.5 Soft plastic sticky grey fault gouge.	10	2	1.4/1.6	122 C	97.5	99.1	1.6	0.08	0.30	2.06			0.61	"	
		102.1 - 103.6 Fault gouge													Nil		
		plus blocky muddy core.	10	2	1.4/1.5	123 C	100.6	102.1	1.5	0.18	0.30	3.09			0.72	"	
															Nil		
		105.2 Mistatch	10	2	1.4/1.6	124 C	103.6	105.2	1.6	0.08	0.10	2.06			0.29	"	
			10	2	1.4/1.5	125 C	105.2	106.7	1.5	0.08	0.43	2.06			0.77	"	

LOGGED BY _____ D.D.H. No U-216 PAGE 6 of 7

Interval From	Interval To	DESCRIPTION	Py	PbZn	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
106.7	108.2	Massive Sulphide (M)															
		Interbanded with quartz sulphide	60	15	0.5/1.5	126c	106.7	108.2	1.5	3.88	7.34	45.26					
		Contacts and F_2 foliation = 55°	20	5	1.0/1.5	127c	108.2	109.7	1.5	0.30	0.88	5.14					
					/.6		109.7	123.3	—								
108.2	112.8	Graphitic Quartz Sulphide (G-P)	70	25	0.5/0.5	128c	123.3	123.8	0.5	9.40	9.30	90.86					
		Muddy broken core.															
						Wt. Av.	106.7	109.7	3.0	2.09	4.11	25.2	—				
112.8	117.3	Fault Gouge plus Quartz Sericite Phyllite (S)															
		Short sections of sticky gouge,															
		crushed and broken core, and phyllite.															
117.3	123.3	Bleached Sericite Phyllite (S_b)															
		Pale grey-green color. F_2 = 60															
		Local bands of quartz sulphide															
		Scattered blebs of pyrite															
123.3	123.8	Massive Sulphide (M)															
		Contains numerous indistinct															
		partially absorbed inclusions. 2%															
		magnetite in blebs. Contacts															
		sharp at 50°															

LOGGED BY _____ D.D.H. No U-216 PAGE 7 of 7

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
123.8	126.6	Bleached Sericite Phyllite (Sb) Grey-green color. F_1 bands in open folds. F_2 = 80° Scattered blebs and bands of sulphides Py 10 / PbZn 3													
126.6	129.8	Quartz Sulphide (P_{S_6}) Interbanded with bleached phyllite F_2 = 80°. F_1 bands in open folds about F_2 axial planes. Py 10 / PbZn 5	1.5/1.5	129C	126.5	128.0	1.5	1.88	1.93	18.17			2.82	2.90	27.26
			1.5/1.5	130C	128.0	129.5	1.5	2.75	2.35	30.17			4.13	3.58	45.26
					126.6	129.5	3.0	2.32	2.14	24.17	–		6.95	6.43	72.52
129.8	130.8	Bleached Sericite Phyllite (Sb)													
130.8	135.8	Quartz Sericite Phyllite (S) Dark grey color Only traces of F_1 visible Strong F_2 at 90°													
135.8	138.7	Quartz ± Sericite Graphite Phyllite (S_G) Dark grey to black F_2 = 90°													
	138.7	End of hole.													

Calcin. made Feb. 1977

DIAMOND DRILL RECORD

LOGGED BY [illegible]

PROPERTY GRUM JOINT VENTURES

D.D.H. No. '76-U-217 PAGE 1/5

	Co-ords	Grid			
LATITUDE*	10,708	SB #1	BEARING OF HOLE	STARTED	Oct 13, 1976
DEPARTURE*	7467.9	76W	DIP OF HOLE	COMPLETED	OCT. 14, 1976
ELEVATION*	1172.8		DIP TESTS	DEPTH	Proposed: [redacted] Ultimate: 405.5' - 123.6 M.

* Approximated.

DIP TESTS	T.P	AZIMUTH	DIP
	Collar *	244° Layout	-82
	12.2 m	288	-82
	73.1	357	-87
	118.9	(?)	-90 (?)

CLAIM No.

DIRECTION AND DISTANCE FROM NE. CLAIM POST

TOTAL CORE RECOVERY: 94.2 %

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	33.5	Sericite phyllite (S). Broken blocky core.	29.8	/	0	33.5	33.5								
		Ground appear badly disturbed.													
		Foliation: Fa ≈ 40↘45; Fi ≈ 0↘5 - based on													
		blocks from 3↘7.6 m.													
		0 - 0.5 (?) - massive sulfide Py: 70 / Cpy+Po: 10 > could be muck fill.													
		6 - 6.2 - FAULT. White sticky thick gouge.													
		13.7 - 16.5 - FAULT. Run characterized by broken													
		phyllite / qtz fragments - pebbles cemented by													
		grey and buff thick sticky gouge.													
		18.5 - 21.3 - Bleached sericite phyllite. White to buff.													
		Fault at 19.5↘19.8 w/ buff to light grey													
		thick sticky gouge.													
		23 - 23.7 - Bleached sericite phyllite. Buff. To in													
		laminae. Contacts gradual.													
		27.2 - 29 - Calcitic bleached sericite phyllite (SBK).													
		Competent. Fa ≈ 85↘90; Fi - indistinct.													
		Contacts: Abrupt broken ground													

LOGGED BY _____ D.D.H. No 76-U-217 PAGE 25

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		33.5 - Gradual increase in graphite constituent.													
		Rx becoming graphitic sericite phyllite (Sg)													
33.5	44.8	Graphitic sericite phyllite (Sg). Fissile.	10.7	✓	33.5	44.8	11.3								
		Fa ≈ 75 ∿ 80 ; Fi ≈ 0-5°													
		Trace calcite in grdmass. Sporadic sulfide													
		showing < 1%													
		44.8 - Sharp clean contact w/ bleached sericite													
		phyllite (Sb) ≈ 70°													
44.8	46.1	Bleached Sericite phyllite (Sb). Competent.	1.3	✓	44.8	46.1	1.3								
		Buff w/ greenish hue to silvery white.													
		Foliation 80 ∿ 85. Sulfides showing of													
		Pb asso. w/ py as 2 cm. wide band @ 47-8													
		46.1 - change to transition zone bet. Sb and													
		massive sulfide (M).													
46.1	47.3	Transition between bleached sericite to massive	1.2	✓	46.1	47.3	1.2								
		sulfide unit. Zone characterized by gradual													
		increase in sulfide bands. Contacts bet. bands													
		≈ 40 ∿ 50°													
		47.3 - Final contact to massive sulfide ≈ 40°.													
47.3	53.7	Massive sulfide (M). Structureless to having 70 4	1.5	372c	47.3	48.8	1.5	6.45	3.68	74.74					
		faint compositional banding (MB). Competent. 70 4	1.5	373c	48.8	50.3	1.5	2.85	1.85	56.57					
		Compositional banding Sph/Py 70° @ 50.2 ∿ 50.3 70 4	1.5	374c	50.3	51.8	1.5	0.88	0.70	24.34					
			Wt. Ave:					3.39	2.07	51.8					

LOGGED BY _____ D.D.H. No 76-4-317 PAGE 3/5

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		Po-mgtt/py ∠ 50∿60°. Po-mgtt occuring as thin wispy laminae. 70 4	1.9	375C	51.8	53.7	1.9	1.93	1.43	31.20					
				WT.AV.	47.3	50.3	3.0	4.65	2.77	65.8					
		53.7 - Sharp clean contact w/ calcitic sericite phyllite ∠ 75°.													
53.7	66.9	Calcitic sericite w/ trace chlorite (SK+c).	12.9	/	53.7	66.9	13.2								
		Competent. Fa ∠ 80∿90°; Fi ∠ 5-10°.													
		Calcite in both foliation. Rx has greenish													
		appearance													
		57.9 - pebbly core. No gouge													
		65.6∿65.7 - Shear													
		66.8 - 66.9 - flaky core. No gouge. Shear.													
		66.9 - Gradual decrease in calcite. Rx becoming													
		normal sericite phyllite (S).													
66.9	70.1	Sericite phyllite (S). Competent. Light	3.2	/	66.9	70.1	3.2								
		grey colour. Fa ∠ 70∿75°; Fi ∠ indistinct.													
		70.1 ∿ change back to calcitic sericite phyllite (SK)													
		Contact gradational.													
70.1	74	Calcitic sericite phyllite (SK). Competent. Similar	3.9	/	70.1	74.0	3.9								
		to 53.7-66.9 zone. Rx also has greenish hue													
		but not as strong as the former.													
		Fa ∠ 75-80 Fi ∠ 0∿5.													
		74 - Abrupt change to dark sericite phyl (S). Contact													

LOGGED BY _____ D.D.H. Nº 76-4-217 PAGE 4/5

Interval From	Interval To	DESCRIPTION	Recovery	Sample Nº	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		broken grd. Contact is apparently clean and sharp as shown by some broken fragments.													
74	83	Dark Sericite phyllite (S). Fissile.	8.6	/	74.0	83.0	9.0								
		Fx ≈ 80 ∿ 85 Fi ≈ 0 ∿ 5°													
		80 ∿ 80.2 - Flaky core. No gouge - Shear.													
		83. - Abrupt change to Calcitic sericite													
		phyllite (Sk). Contact broken grd -													
		flaky.													
83	109.6	Calcitic sericite phyllite (Sk). Competent.	25.1	/	83	109.6	26.6								
		Fx ≈ 85 - 90° Fi ≈ 0 ∿ 5													
		Calcite in both foliation and usually													
		strongly mark the Fi.													
		Groundmass has greenish hue. Could be													
		inter-stacked chlorite of sericite.													
		96.1 - Shear.													
		109.6 - Abrupt change to normal sericite													
		phyllite. Contact ≈ 80. Contact marked													
		by 1 cm. ball qtz. w/ calcite along fx.													
109.6	113.4	Sericite phyllite (S). Broken blocky	3.8	/	109.6	113.4	3.8								
		core. Fx ≈ 75 ∿ 80° Fi ≈ indistinct.													
		113.4 - Abrupt change to bleached													
		Sericite phyllite ≈ 85°													

LOGGED BY [signature] D.D.H. No 76-U-217 PAGE 5/5

Interval From	Interval To	DESCRIPTION	Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
113.4	117.2	Bleached Sericite phyllite (Sb). Broken	3.2	/	113.4	117.2	3.8								
		blocky core. F2 ≈ 80~85; F1 = indistinct.													
		Buff to ashing white color.													
		116-116.2 - FAULT. Gray gouge w/ phyllite/													
		qtz fragments.													
		116.8-117 - short graphitic unit interval.													
		F2 ≈ 80° w/ kink folds 50°; F1 ≈ indistinct													
		117.2 - Sharp contact w/ massive sulfide ≈ 50°													
117.2	120.3	Massive sulfide - banded, porous variety (MBV). 15 10	1.5	3760	117.2	118.7	1.5	4.73	5.60	63.43					
		Competent. Compositional banding sph/py 65 8	1.5	3770	118.7	120.2	1.5	2.58	2.80	36.34					
		≈ 85~90°. Voids in porous unit aligned 35 5	1.5	3780	120.2	121.7	1.5	0.55	0.63	10.63					
		≈ 80~85°. 25 4	1.3	3790	121.7	123.0	1.3	0.80	0.88	13.03					
		118.9 - 119.5 - Po/Mgt assoc. w/ py.													
		120.3 - Gradual change to graphitic qtz -		WT. AV. WT. AV	117.2 120.2	120.2 123.0	3.0 2.8	3.66 1.41 PZ	4.20	49.9					
		sulfide (PG).													
120.3	123	Graphitic qtz-sulfide (PG). Competent.													
		Foliation ≈ 85~90°; F ≈ 5-10°													
		Graphite as thin laminae ~ 15%													
		123. - Gradual decrease in mineralization. Rx													
		becoming graphitic phyllite (G). Contact arbitrary													
123	123.6	Graphitic phyllite (G). Fissile. F2 ≈ 65~70°; F1 ≈ 0~10	0.4/0.6	/	123	123.6	~~0.4~~								
123.6		END OF HOLE													

Calc's checked Feb 2/77 JK calculated ✓

DIAMOND DRILL RECORD

LOGGED BY [illegible]

PROPERTY Grew Joint Venture

D.D.H. No. '76-U-218 PAGE 1/2

LATITUDE 10,956.369 (Coords) | 83W+18m (Grid) BEARING OF HOLE ~~224~~ 231°22'37" STARTED Oct. 2, 1976

DEPARTURE 7382.507 | 3N DIP OF HOLE ~~-20~~ -23°05' COMPLETED Oct. 3, 1976

ELEVATION 1100.517 DIP TESTS None DEPTH Proposed: 250' - 76.2m Ultimate: 150' - 45.7

CLAIM No.

DIRECTION AND DISTANCE FROM NE. CLAIM POST

TOTAL CORE RECOVERY: 86.6%

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	Py	Zn+Pb	Rec. Ft.	Sample No.	Footage From	Footage To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Feet Pb	Assay x Feet Zn	Assay x Feet Ag
0	29.1	Mineralized graphitic phyllite (Pg) w/ intervals of	60	15	1.5	932B	0	3	3	7.70	11.71	135.09			23.1	35.13	405.27
		broad banded massive sulfides (MB). Competent.	60	12	1.4	933B	3	4.5	1.5	5.55	10.09	97.72			8.33	15.14	146.58
		Foliation varying. Compositional banding Sph/Py	45	12	1.5	934B	4.5	6.0	1.5	4.95	8.60	88.80			7.43	12.9	133.2
		∠ 40~45°	45	10	1.5	935B	6.0	7.5	1.5	2.10	5.25	40.46			3.15	7.88	60.69
		4.6~4.8 — F2 ~ 40~45° F1 ~ 10~15°	35	9	1.5	936B	7.5	9.0	1.5	1.53	3.93	29.14			2.30	5.90	43.71
		8.0~9.1 — F2 ~ 75-80° F1 ~ 0~5°	35	9	1.5	937B	9.0	10.5	1.5	2.60	5.35	47.31			3.90	8.03	70.97
		14~15 — Dominant foliation ∠ 0° w/ broad elliptical fold nose closure (F1?)	40	10	1.5	938B	10.5	12.0	1.5	4.15	6.75	68.57			6.23	10.13	102.86
			40	12	1.4	939B	12	13.5	1.5	6.27	9.99	90.86			9.41	14.99	136.29
		14.6 - 17 — Bx. Qtz fragment Ø ∠ 1 cm cemented	30	15	1.5	940B	13.5	15.0	1.5	3.85	7.65	50.40			5.78	11.48	75.6
		by sulfide, graphite w/ spots of fuchsite	30	10	1.3	941B	15.0	16.5	1.5	2.70	5.68	40.46			4.05	8.52	60.69
		along enterfaces and in some of the	35	18	1.5	942B	16.5	18	1.5	5.09	6.61	85.72			7.64	9.92	128.58
		bx fragments.	45	10	1.5	943B	18	19.5	1.5	3.90	4.60	64.46			5.85	6.90	96.69
		25.6 - 27.1 - Interval of alternating massive sulfides and	30	10	1.5	944B	19.5	21.0	1.5	2.445	3.50	49.03			3.68	5.25	73.55
		bleached sericite band (M-SB). Competent. Bleached	60	12	0.8	975B	21.0	22.5	1.5	5.79	6.91	93.94			8.69	10.37	140.91
		unit Buff green w/ foliation ∠ 35. Massive unit has	65	15	0.9	976B	22.5	24.0	1.5	7.43	11.15	141.26			11.15	16.73	211.89
		compositional banding ∠ 25°. Contacts sharp and	30	8	1.5	977B	24.0	25.5	1.5	4.20	6.44	66.51			6.30	9.66	99.77
		clean ∠ 45°. Each band ∠ 10 cm long.	50	9	1.5	978B	25.5	27.0	1.5	6.32	11.25	98.74			9.48	16.88	148.11

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Interval From	Interval To	DESCRIPTION			Recovery	Sample No	Interval From	Interval To	Sample Length	Assay Pb	Assay Zn	Assay Ag	Assay Au	Assay Cu	Assay x Pb	Assay x Zn	Assay x Ag
		29.1 - abrupt change to bleached sericite phyllite (SB). Contact sharp and clean ≈ 55°	40	9	2.1	979B	27.0	29.1 ~~29.1~~	2.1 ~~2.1~~	5.00	8.52	77.83			10.5	17.89	163.44
29.1	32-	Bleached sericite phyllite (SB). Buff to light grey w/ prominent fuchsite lamnae/spots foliation F_2 ≈ 30° ; F_1 ≈ 0°	1	to	2.5	/	29.1	32.0	2.9								
						WT. AV.	0	6.0	6.0	6.48	10.53	114.18	x		38.86	63.17	685.05
						"	6.0	10.5	4.5	2.08	4.85	38.97	/		9.35	21.81	175.37
		31 ≈ 31.8 - Chloritic. Chlorite in both foliation				"	15.0	19.5	4.5	3.90	5.63	63.55			17.54	25.34	286.96
		F_2 ≈ 35° $F_1 \perp F_2$. Change between				"	21.0	24.0	3.0	6.61	9.03	117.6	x		19.84	27.10	352.80
		the fuchsite and chloritic unit is gradual.				"	25.0	29.1	3.6	5.55	9.66	86.54	x		19.98	34.77	311.55
		32 - Sharp clean contact w/ massive sulfid ≈ 60°				"	0	29.1	29.1	4.71	7.69	79.00	✓		136.97	223.70	2298.80
32	34.1	Massive sulfide w/ qtz inclusions (MIQ). Competent.	70	7	2.0	980B	32.0	34.1	2.1	2.43	5.60	63.43					
		faint compositional sph/py banding @ 32.3-32.4 ≈ 35°.															
		34.1 - Sharp change to graphitic phyllite (G) ≈ 65°.															
34.1	45.7	Graphitic phyllite (G). Broken flaky to blocky			1.4	/	34.1	35.5	1.4								
		core. Foliation ≈ 40 ≈ 45° ; F_1 ≈ 0 ≈ 10	75	1	0.7	/	35.5	36.2	0.7								
		35.5 - 36.2 - Massive sulfide (M). Structureless.			7.1	/	36.2	45.7	9.5								
		Contacts sharp and clean : 1st ≈ 35° ; 2nd ≈ 80°															
		42.7 - 45.7 - FAULT ZONE: Intervals of black sticky															
		gouge, graphite flakes, and graphitic phyllite blocks.															
45.7		END OF HOLE.															