

MAP NO.: ASSESSMENT REPORT X
105 K 3 PROSPECTUS
CONFIDENTIAL X
OPEN FILE

DOCUMENT NO: 092839
MINING DISTRICT: Whitehorse
TYPE OF WORK: Diamond drilling

REPORT FILED UNDER: Curragh Resources Incorporated

DATE PERFORMED: April, 1989

DATE FILED: MAY 9, 1990

LOCATION: LAT.: 62°15'N

AREA: FARO

LONG.: 133°04'W

VALUE \$:

CLAIM NAME & NO.: DY 43-46
DY 183-186
GALE 13-16

WORK DONE BY: J.H. Davis

WORK DONE FOR: Curragh Resources Incorporated

DATE TO GOOD STANDING:

REMARKS: Drilling done for control pending shaft.
Two attempts were made to drill 914 m hole to test
groundwater conditions on DY deposit. Both holes
abandoned at <500 m due to bad ground conditions.



DY SHAFT PILOT HOLE

1989



092839

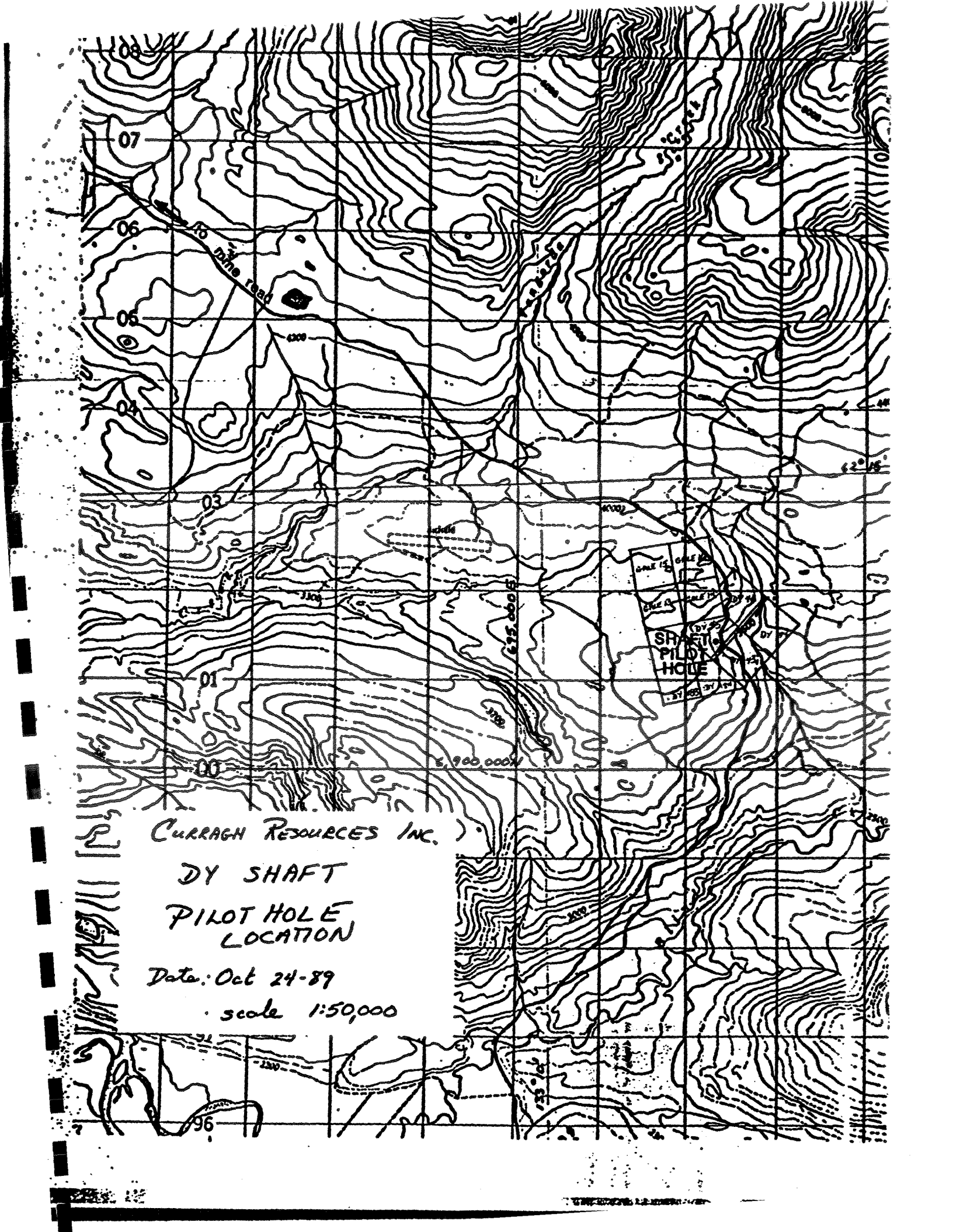
SUMMARY

In April, 1989 a program was undertaken to drill a vertical 914 meter (3,000 foot) deep pilot hole in the location of the proposed shaft for the Dy deposit, to assess the geotechnical and groundwater conditions of the locale. Controlled drilling was required to meet the specifications requiring a vertical hole not to deviate more than 2.44 meters (8 feet) from its collar over the total depth.

Arctic Diamond Drilling was contracted for the drilling. The first hole was abandoned at 452 meters (1,493 feet) after the second wedge was stuck in the hole and sheared off. A second hole was abandoned at 392.3 meters (1,287 feet) when continued caving in a fault zone at a depth of 128 meters (420 feet) prevented setting a second wedge deeper in the hole. The program was put on hold until more appropriate drilling methods in maintaining minimal deviation could be planned. It is expected that the program will continue in 1990.

STATEMENT OF COSTS

=====	=====	=====	=====	=====
DY PILOT HOLE 1989 EXPLORATION	MAY	JUNE	JULY	TOTAL
=====	=====	=====	=====	=====
GEOLOGIST (J. DAVIS)	\$2,934	\$4,600	\$0	\$7,534
MEALS/ACCOMMODATION/TRAVEL	\$597	\$500	\$34	\$1,131
FIELD OFFICE SUPPLIES	\$173	\$42	\$0	\$215
DRILLING (ARCTIC DIAMOND DRILL.)	\$80,000	\$97,378	\$0	\$177,378
MISCELLANEOUS	\$84	\$26	\$0	\$110
TOTAL	\$83,788	\$102,546	\$34	\$186,368
=====	=====	=====	=====	=====



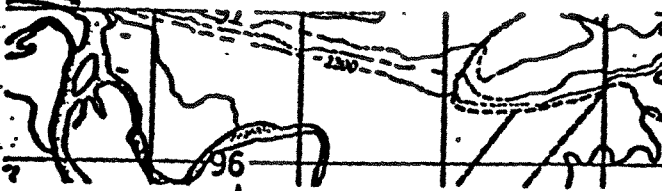
CURRAGH RESOURCES INC.

DY SHAFT

PILOT HOLE
LOCATION

Date: Oct 24-89

scale 1:50,000



DIAMOND DRILL CORE LOG

Date: MAY / 89

Hole Number: DS 89-01

Reference Fabric Orientation Diagram:

Project: DY

Location: DY SHAFT

Claim:

True Plane Co-ords: UTM 6,901,388.5 N UTM

597,335.6 E UTM

Grid Co-ords:

Elevation: 1105.8 M.

All symmetry determinations looking

Total Depth: 1483'

NW with S₂ dipping

Inclination: -90°

SW with dip azimuth 225 decl antarp

Purpose: To drill DY SHAFT

Reason hole Terminated: Hole abandoned after losing wedge #2 at 690'

Logged by: J. H. DAVIS Date(s) Logged: MAY 4/89 - MAY 30/89

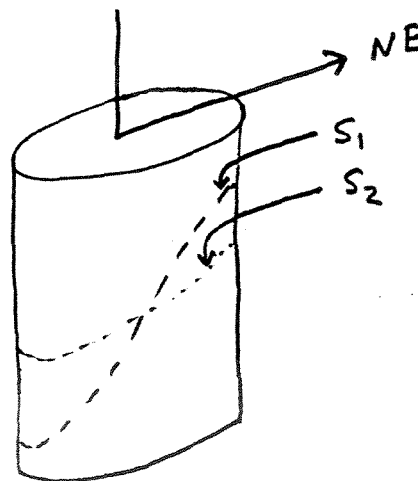
Drilling Contractor: Arctic Diamond Drilling Ltd.

Hole Cemented: NO Steel down Hole: NW 40-583' Size CORE From To Collar Cased and Capped: NO

Assay Lab:

Certificate No's:

Started: Apr. 130/89 ABANDONED Completed: MAY 30/89



CURRAGH RESOURCES INC.

DDH D.S. 8.9. - 0.1
2 8

Diamond Drill Core Log

Date: MAY/89

Logged By: J.H. DAVIS

Code	Drillhole	Elevation	Northing	Easting	Units (feet/metres)	R.F.E						
1	2	8	10	16	17	24	25	32	34	39	41	42
T	D.S. 8.9. - 0.1	0	00	00	00	feet	S2					

Code	Drillhole	Depth	Zenith Angle	True Azimuth	Comments					
1	2	8	10	14	22	26	28	32	34	56
*	R D.S. 8.9. - 0.1	0	180.0	0.0	A.T. COLLAR					
	R D.S. 8.9. - 0.1	57	180.0	0.0						
	R D.S. 8.9. - 0.1	100	180.0	0.0						
	R D.S. 8.9. - 0.1	150	180.0	0.0						
*	R D.S. 8.9. - 0.1	187	180.0	0.0	S.P.E.R.R.Y.					
	R D.S. 8.9. - 0.1	200	180.0	0.0						
	R D.S. 8.9. - 0.1	250	180.0	0.0						
*	R D.S. 8.9. - 0.1	287	180.0	0.0	S.P.E.R.R.Y.					
	R D.S. 8.9. - 0.1	300	180.0	0.0						
	R D.S. 8.9. - 0.1	350	180.0	0.0						
	R D.S. 8.9. - 0.1	400	180.0	0.0						
*	R D.S. 8.9. - 0.1	437	180.0	0.0	S.P.E.R.R.Y.					
	R D.S. 8.9. - 0.1	450	180.0	0.0						
	R D.S. 8.9. - 0.1	500	180.0	0.0						
	R D.S. 8.9. - 0.1	550	180.0	0.0						
*	R D.S. 8.9. - 0.1	594	180.0	0.0	S.P.E.R.R.Y.					
	R D.S. 8.9. - 0.1	600	180.0	0.0						
	R D.S. 8.9. - 0.1	607	180.0	0.0						
*	R D.S. 8.9. - 0.1	644	178.7	094.0	POSSIBLE PYRRHOTITE					
	R D.S. 8.9. - 0.1	657	180.0	0.0						
	R D.S. 8.9. - 0.1	707	180.0	0.0						
	R D.S. 8.9. - 0.1	750	180.0	0.0						
*	R D.S. 8.9. - 0.1	784	178.0	066.0	POSSIBLE PYRRHOTITE					
	R D.S. 8.9. - 0.1	800	179.0	9.0	ROTO					

Code	Drillhole	Comments, Errant Remarks, Snivellings and / or Lewd Suggestions		
1	2	8	10	56
	C D.S. 8.9. - 0.1	HOLE RECORDED 583-647 due to setting ca		
	C D.S. 8.9. - 0.1	sing through major fault zone		
	C D.S. 8.9. - 0.1	7.92-8.14.6 should be assayed		

DDH D.S. 89 - 01
2 8

Diamond Drill Core Log

Date: May/89 Logged By: J.H. DAVIS

Code	Drillhole	Elevation	Northing	Easting	Units (feet/metres)	R.F.E						
I	2	8	10	16	17	24	25	32	34	39	41	42
T	D.S. 89 - 01	0	0	0	0	0	0	0	0	0	0	0
						feet				52		

Code	Drillhole	Depth	Zenith Angle	True Azimuth	Comments					
I	2	8	10	14	22	26	28	32	34	56
R										
R	D.S. 89 - 01	8.570	180.0	0.0						
R	D.S. 89 - 01	9.000	180.0	0.0						
* R	D.S. 89 - 01	9.370	178.3	018.0	POSSIBLE PYRRHOTITE					
R	D.S. 89 - 01	9.500	180.0	0.0						
R	D.S. 89 - 01	10.000	179.5	0.0	ACID					
R	D.S. 89 - 01	11.010	180.0	0.0						
R	D.S. 89 - 01	11.170	180.0	0.0						
* R	D.S. 89 - 01	11.240	178.2	003.0	POSSIBLE PYRRHOTITE					
R	D.S. 89 - 01	11.370	180.0	0.0						
* R	D.S. 89 - 01	11.540	178.5	063.0	POSSIBLE PYRRHOTITE					
R	D.S. 89 - 01	11.670	180.0	0.0						
* R	D.S. 89 - 01	11.840	179.0	001.0	POSSIBLE PYRRHOTITE					
R	D.S. 89 - 01	11.870	179.5	0.0	ROTO					
R	D.S. 89 - 01	12.070	180.0	0.0						
* R	D.S. 89 - 01	12.140	178.7	052.0	POSSIBLE PYRRHOTITE					
R	D.S. 89 - 01	12.270	180.0	0.0						
* R	D.S. 89 - 01	12.440	180.0	0.0	SPEERRY					
R	D.S. 89 - 01	12.470	179.0	0.0	ROTO					
R	D.S. 89 - 01	12.670	178.5	0.0	ROTO					
* R	D.S. 89 - 01	12.740	178.8	055.0	POSSIBLE PYRRHOTITE					
R	D.S. 89 - 01	12.870	180.0	0.0	R+A					
* R	D.S. 89 - 01	13.040	179.5	055.0	POSSIBLE PYRRHOTITE					
R	D.S. 89 - 01	13.070	180.0	0.0						

Code	Drillhole	Comments, Errant Remarks, Snivellings and / or Lewd Suggestions		
I	2	8	10	56
		NOI KIE I AB AND IOWIE DI WIE IWI 2 ^N P WEDIGIE I SITWIKI		

CURRAGH RESOURCES INC.

DDH D.S.89-01
2 8

Diamond Drill Core Log

Date: May/89 Logged By: J.H. PAULS

Code	Drillhole	Elevation	Northing	Easting	Units (feet/metres)	R.F.E
I	2	8 10	16 17	24 25	32 34	39 41 42
T	D.S.89-01	0	0	0	0 feet	SZ

Code	Drillhole	Depth	Zenith Angle	True Azimuth	Comments
I	2	8 10 14 22 26 28 32 34 56			
R					AT COLLAR
R	D.S.89-01	13.27	180.0	10.0	
* R	D.S.89-01	13.34	179.5	353.0	POSSIBLE PYRRHOTITE
R	D.S.89-01	13.47	180.0	10.0	
* R	D.S.89-01	13.64	177.9	320.0	SPEERRY
R	D.S.89-01	13.67	180.0	9.0	
R	D.S.89-01	13.87	180.0	0.0	
* R	D.S.89-01	13.94	177.5	323.0	SPEERRY
R	D.S.89-01	14.07	179.0	10.0	ACID
* R	D.S.89-01	14.24	177.4	323.0	SPEERRY
R	D.S.89-01	14.27	178.5	10.0	ROTO
R	D.S.89-01	14.47	178.5	10.0	ROTO
R	D.S.89-01	14.57	177.0	10.0	ACID
R	D.S.89-01	14.77	176.0	10.0	ACID
R	D.S.89-01	14.44	176.5	128.0	SPEERRY, AZIMUTH ERROR
R					
R					
R					
R					
R					
R					
R					
R					
R					

Code	Drillhole	Comments, Errant Remarks, Snivellings and / or Lewd Suggestions
I	2	8 10 56
C	D.S.89-01	WEDGE #1 AT 1457
C	D.S.89-01	AFTER WEDGE DRILL TO 1483 MOVE UP HOLE
C	D.S.89-01	LOST WEDGE #2 AT 690 ABANDON HOLE
C	D.S.89-01	SPEERRY, CLOCK 3 MINUTES SLOW

Code	From	To	Recov.	No.	Unit	Description
1	10 14	16 20	22 24	26 28	30 34	36
	10 0	12 0		11		TICONED - No recovery
	12 0	13 70		12	51C101	(5C4*) (5B7680) [5 D FIELD] 50:45:05 TOI - 32 is dark green, very soft, noncalcareous metabasite. Nonmagnetic. Contains coarse mottled, redist igneous texture. Unit called a pyroxenite in 89DS-02. Lowermost 5' is green "fuchsite" chloritic phyllite w/ tan streaks alternating w/ bright green streaks. 32 - 37 Noncalcareous to calcareous, thinly banded, P _{S2} -foliated, pale green chloritic phyllite. Banding in shades of pale green and tan brown on scale of 1cm or less. Contains thin interbands of highly altered metabasite. Core is rubble w/ numerous small gouges - especially in the altered metabasites. Abundant pebbles and some regressed cores. Recovery averages about 50% for interval.
	13 70	11 314 0		13	51B101	#2 (5D0) MINOR Moderately soft, calcareous, C _{S2} -foliated, pale to medium grey phyllite. Thinly banded w/ banding defined by pale grey gte-calcite laminae and bands. S ₂ surfaces are shiny steel grey and do not mark fingers. S ₂ surfaces typically have partial weathering coat of rust orange-brown - as also do cross-cutting gte-calcite fracture/fracture margins. Short intervals 2-3cm are very dark grey. Minor 10-15 cm calcareous, pale olive, moderately soft chloritic phyllite @ 119.5 and 120.5. S ₂ surfaces are pale waxy olive. At 120.5 the band forms core of phase 2 fill nose. Marginal contacts are sharp. TOI - 57 core med. broken & pale chippy. About 1' core loss between 47-57. 57-63 core med. broken w/ good recovery. Sharp gte-calcite irregular fracture has orientation 00/000 during this entire interval.

Lithologic Log

Date: June 25/89 Logged By: MCP

Code	From		To		Recov.	No.	Unit	Description		
	10	14	16	20					22	24
								63-99 Core mod. broken and rather chippy Recovery OK		
								99-108 Core mod. broken & rather chippy w/ short rubble intervals associated w/ qtz veins Recovery OK		
								108-128 Core slightly broken to intact w/ good recovery		
								128-EOT Core very broken w/ short rubble intervals. Rubble associated w/ qtz veins. Recovery appears reasonable		
	11314	0	11415	5		14	51D101	(580) (5870 [5D FIELD]) 40:20:40		
								Mixed unit. Pale olive green, calcareous, homogeneous, chloritic phyllite. S2 surfaces are waxy pale green. Contains minor thin qtz-calcic veins. Margins are sharp against moderately soft, pale olive green, calcareous, thinly bedded chloritic phyllite. Laminar & bands strongly marked by alternating pale grey and pale green bands. S2 surfaces are silvery green. Some intervals of pale to medium grey, calcareous, CS2-foliated, moderately soft phyllite. S2 surfaces are silvery grey to steel grey.		
								108-137 Mod. broken & rather chippy w/ about 0.5' core missing		
								137-138 Very broken and rubble. Recovery OK		
								138-EOT Core slightly broken w/ good recovery		
								Have S2 fold nose centered @ 144' (within 5D phyllite)		
	11415	5	11515	7		15	51B101			
								Moderately soft, calcareous, PS2-foliated, pale to medium grey phyllite. S2 surfaces are shaly, steel grey. Thinly bedded w/ beds defined by pale grey and dark grey variations. Upper contact sharp and lower contact very gradational. Mottled orange crust on S2 surfaces		
								Core intact to slightly broken w/ good recovery		

Code	From		To		Recov.	No.	Unit	Description		
	10	14	16	20					22	24
	121413	0	121712	0		119	51B10121	<p>→ (5B07) 50:50</p> <p>Moderately soft, C52-foliated, calcareous, thinly banded phyllitic. Banding delineated by thin (≤1cm) pale grey gts-calcite, silty appearing bands. Unit ranges from medium to medium dark grey at TOI to pale grey at EOI. Lighter portions of interval has greenish tinge on cut surface. S2 surfaces are shiny grey to silvery grey. Contains scattered pegmatitic white ball gts veins. Scattered porphyroblasts of anhedral quartz. Minor probably developed orange coat staining on S2 surfaces and on weathering fractures. However contact gradational.</p> <p>TOI - 255 Moderately broken & gater chippy Recovery OK</p> <p>255 - 265.5 Moderately broken w/ local rubble Recovery OK</p> <p>265.5 - 269.5 Slightly broken Recovery OK</p> <p>269.5 - EOI Very broken and rubble Recovery OK</p>		
	121712	0	121817	0		110	51B10171	<p>Moderately soft, C52-foliated, calcareous, thinly banded phyllitic. Banding delineated by pale grey calcite-quartz bands/laminae up to 1cm thick. S2 surfaces are pale shiny grey; locally they have a greenish mottling. Cut surface pale grey w/ medium green tinge when wet. Both upper and lower contacts are gradational.</p> <p>TOI - 273 Rubble w/ good recovery</p> <p>273 - EOI Mod. to slightly broken w/ slight gater chippiness. Recovery good</p>		
L	121817	0	121919	4		111	51B17101	<p>[SD FIELD]</p> <p>Moderately soft, slightly calcareous, C52-foliated, pale olive green, thinly banded phyllitic. S2 surfaces are smooth pale olive green. Banding defined by 1-3mm thick pale grey to white gts-calcite bands and laminae. Upper contact gradational; lower contact marked by sharp change across 10cm ball gts vein. Core slightly broken w/ good recovery</p>		

Code	From		To		Recov.		No.		Unit		Description
	10	14	16	20	22	24	26	28	30	34	
L	121919	4	131016	0					1112	51B101	<p>Moderately soft, S2-foliated, calcareous, medium pale gray phyllite. Thinly banded w/ microlithons defined by slightly coarser, pale gray qtz-calcite bands & laminae. S2 surfaces shiny to silvery gray. Contains scattered subbedded pyrite protopyroblasts. Lower contact gradational into next unit.</p> <p>Core slightly below, minor gaps chippy interval Recovery OK</p>
	131016	0	131189	9					1113	51B17101	<p>[5D FIELD]</p> <p>Pale olive green, slightly calcareous, S2 and P2 foliated phyllite. Moderately hard. Thinly banded in shades of green w/ thin bands & laminae of slightly bedded, very pale green quartz & calcite. Bands < 1cm thick and range from 50% to 10% of unit. S2 surfaces are waxy pale olive green. Internal shat darker green & gets lighter and more uniformly green as go down D.D.H. Lower contact sharp against homogeneous, soft, chloritic phyllite. Core intact w/ good recovery</p>
L	131189	9	131310	0					1114	51C161	<p>R & B# (5B76) 70:30</p> <p>Soft, homogeneous, medium to medium dark green, noncalcareous chloritic phyllite locally slightly calcareous and/or dolomitic. S2 surfaces are dark chloritic green. Locally fine mottled to spotted texture interpreted as relict igneous. Locally has disseminated, fine, noncalcareous tan specks.</p> <p>Interbedded w/ moderately hard, P2-foliated, thinly bedded, pale green phyllite. Noncalcareous. Banding defined by thin pale green, qtz bands and laminae less than 1cm thick. S2 surfaces are pale to silvery green. Contacts between these 2 lithologies are sharp and subparallel S2.</p> <p>Core med. to slightly below w/ good recovery</p>

Core S	From		To		Recov.		No.		Unit	Description	
	10	14	16	20	22	24	26	28	30		34
	131310	0	131316	5					115	5C161	8.3
											Homogeneous, moderately soft, P2-foliated, medium to dark green chloritic phyllite. Calcite present in matrix only very locally. Contains overall a fine equigranular to mottled relict igneous texture in shades of green & grey. SA surfaces only poorly developed - they are dark chloritic green. Apparent contact sharp / lower contact very gradual. Core intact w/ good recovery.
L	131316	5	131417	0					116	5C181	
											Dark greenish black, noncalcareous, very soft, homogeneous, massive pyroxenite (?) Core serpentinized - slightly magnetic. Mottled relict igneous texture w/ subrounded pale green phenocrysts / porphyroblasts in a dark green-black matrix. Minor quartz-calcite veining along late stage fractures. Bitum surfaces are very dark green. SA not readily visible.
											TOE-351 Core made broken w/ short very bitum & rubble intervals. About 1 foot core missing between 337-347.
											351-357 Very bitum & rubble because of qt-calcite fracture essentially going down the core axis.
											357-EQF Very bitum & rubble
L	131617	0	131712	0					117	5C181	GAUGE
											Dark green, very soft, noncalcareous chloritic phyllite. Same as above Unit # 16 (336.5-367) only extremely bitum w/ rubble and gauge. Larger pieces have mottled relict igneous texture. Recovery seems good. About 40% and 60% broken pieces. Most gauge up near top of interval.

Lithologic Log

Date: June 26/89 Logged By: KCP

Code	From	To	Recov.	No.	Unit	Description
1	10 14 16	20 22 24	26 28 30	34 35		
	131712 0	141014 5		118	5TC161	<p>~ \$ 3#</p> <p>Moderately soft, medium to medium dark green, P52-foliated, chloritic phyllitic. S2 surfaces are dark chloritic green. Locally calcareous and/or dolomitic. The fine equigranular relict igneous texture giving it a speckled gray-green appearance. S2-folds, however, is well-developed locally slightly porous w/ calcite weathering recessively.</p> <p>TOI-383 Very broken w abundant rubble & mud gouge. Gouges most significant @ 374-375 and 382-383. Recovery looks OK</p> <p>383- EOI Mod. broken & porous chippy w/ minor incipient rubble & gouge. Again recovery looks OK</p>
	141014 5	141110 0		119	5TC161	<p>[5F6]</p> <p>Soft, medium green, P52-foliated, noncalcareous chloritic phyllitic. S2 surfaces are silvery green. Contains small dark green chloritic streaks within S2. Contains very minor interbeds of Unit # 18 (372-404.5) and Unit # 20 (410-416). Core made broken w/ incipient gouges. Recovery OK.</p>
	141110 0	141116 0		120	5TB1710	<p>[5D FIELD]</p> <p>Moderately hard, slightly calcareous, CS2-foliated, thinly bedded, pale olive green chloritic phyllite. S2 surfaces are shiny olive green. Banding defined by thin Qtz + calcite bands & laminae. Typically there are slightly beaded (locally irregular) S2 deformations. Marginal contacts are sharp. All bands are generally fine grained. Some coarse, dark green chloritic associated with pegmatitic white Qtz veins.</p> <p>Core very broken & rubble w/ short gouge intervals. Gouges about 10cm long. Recovery OK.</p>

Code	From		To		Recov.	No.	Unit	Description		
	10	14	16	20					22	24
	14116	0	14124	0		121	51C10131	[5F03] Pale to medium green, calcareous, homogeneous, both CS2-foliated and PS2-foliated chloritic phyllite. Moderately soft. Calcite on thin diffuse bands and stringers. Contains dark green chlorite streaks both in S1 and S2 cleavages. Upper and lower contacts sharp subparallel S2. Core intact w/ excellent recovery. S2 surfaces are pale waxy green.		
L	14124	0	14134	6		1212	51B17101	[5D FIELD] (5C03 [5F03]) 60:40 Major unit is moderately hard, slightly calcareous, pale green, thinly banded, fine-grained phyllite. Banding defined by 1cm or less variations in shades of pale green. Cut surface has smooth feel and appearance. S2 surfaces are pale silvery green. Dominantly CS2-foliated w/ minor PS2-foliated intervals. Tabular bedded w/ rock similar to Unit # 21 (416-424) Pale to medium green, PS2-foliated, slightly calcareous, homogeneous, moderately soft phyllite. Dark green streaks in S2-fiber visible on cut surface. S2 surfaces are pale green. Marginal contacts are sharp parallel S2. TOI-432 Core intact to slightly biten. Recovery OK. 432-EOT Core very biten w/ rubble. Recovery OK.		
	14134	6	14145	0		1213	51C10131	8 f Soft, pale green, PS2-foliated, moderately calcareous, chloritic phyllite locally slightly dolomitic instead of calcareous. Relict igneous texture defined by pepper and salt spotted appearance on cut surface. Also contains dark green streaks in S2 fiber. Scattered very small, non-calcareous, pale tan streaks parallel S2. Marginal contacts sharp parallel S2. Core very biten w/ short rubble intervals & limonite gouge near EOT. Recovery OK.		

Lithologic Log

Date: June 27/89 Logged By: KCP

Code	From			To			Recov.	No.	Unit	Description
	10	14	16	20	22	24				
	141415	0	141517	0				1214	51B17101	→ (537\$) 75:25 Moderately soft, pale olive green, finely banded, moderately calcareous, chloritic phyllite. Banding delineated in shades of green. S2 surfaces are pale silvery green. Generally CS2-foliated. With depth, becomes dolomitic and weathers to a very pale tan. At same time, becomes dominantly PS2-foliated. Upper contact hidden in minor gouge & rubble. Lower contact marked by colour change & start of rubble. Core not below & slightly poken chippy. Recovery OK.
	141517	0	141811	0				1215	51B121\$1	→ (504\$ [504\$]) 65:35 Top of unit is moderately soft, medium grey, dolomitic, CS2-foliated phyllite. S2 surfaces are shiny grey. Dolomite in thin, tan-weathering bands associated w/ quartz. At about 471' unit changes to moderately soft, dolomitic, pale tan to pale green, PS2-foliated phyllite. Massive, homogeneous appearance. One piece contains a spot of bright green "fuchsiste". S2 surfaces are silvery beige or silvery pale green. Difficult to see through. Attention to know if unit originally SD or SS. Core rubble w/ only minor gouge. TOI-472 recovery OK / 472-477 only 2.5' core / 477-EOT 2.5' core.
	141811	0	151415	0				1216	G101416E	Silvery grey, calcareous, mud gouge. Contains fragments up to 2-3 cm thick of typical SB & phyllite. S2 surfaces of pieces silvery grey. Upper contact hidden in rubble. Lower contact also rubble w/ rounded pebbles. Major fault TOI-482 1' core / 482-487 3' core / 487-494 4' core / 494-500 3.5' core / 500-507 6' core / 507-513 1.5' core / 513-517 4' core / 517-533 0.7' core / 533-537 2' core / 537-544 2' core / 544-EOT 0.5' core Recovery bad

Code	From		To		Recov.		No.		Unit		Description
	10	14	16	20	22	24	26	28	30	34	
	151415	0	151615	0					1217	57B10181F	<p>Moderately soft, calcareous, CS2-foliated, pale medium gray phyllite. Unit locally dolomitic as well as calcareous. Dolomitic intervals weather to a pale tan. Thinly banded w/ bands defined by pale gray carbonate-gt intervals/bands. Thickness ranges from 1-2 mm to 2-3 cm. Scattered subhedral pyrite porphyroblasts up to 1 cm across. S2 surfaces are steely to shiny gray.</p> <p>Core mod broken. TOT - 561 // 561 - EOT mod broken & pale cherty.</p> <p>Recovery OK.</p>
	151615	0	151712	0					1218	57B10181F	<p>Rubble Gauge</p> <p>Same as Unit # 27 (545-565) CS2 foliated, moderately soft, calcareous & locally dolomitic, medium gray phyllite. Scattered pyrite porphyroblasts. More extensive gt-carbonate veining. Thinly banded. Not a major fault.</p> <p>Rock very broken & rubble w/ some gauge. Gauge possibly washed away. Most rubble in gt-vein intervals. Between 567-572 only 4' core.</p>
	151712	0	161417	0					1219	57B10181F	<p>Pale to medium gray, CS2-foliated, moderately soft, moderately calcareous phyllite. Locally dolomitic; these intervals weather w/ pale tan. Thinly banded w/ bands defining pale gray gt-carbonate microlithons and S2 parallel bands. Thickness of bands ranges 1-2 mm - 2-3 cm. Scattered pyrite porphyroblasts. S2 surface shiny gray.</p> <p>Core slightly broken w/ good recovery.</p> <p>REAMED CASING DOWN - in process hole deviated slightly so some core uprated.</p>

Code	From	To	Recov.	No.	Unit	Description
	10 14	16 20	22 24	26 28	30 34	35
	1518130	1618120		1310	51B101\$1	<p>Moderately soft, P52 to possibly C52-foliated, pale gray, calcareous and/or dolomitic, phyllitic. S2 surfaces are shiny medium gray. Thinly banded w/ banding defined by pale gray carbonate-gt silty intervals 2mm - 2cm thick. Bands parallel S2 and defining poor microlithons. Gray gt-carbonate weathers pale tan where dolomite abundant. Scattered pyrite porphyroblasts. Minor gt-carbonate. Small gt veins are crudely foliaform.</p> <p>TOE - 593 Made below w/ local rubble. Recovery OK</p> <p>593 - 594.5 Calcic cemented bre w/ randomly oriented phyllitic angular clasts up to 1cm across. Core rubble. Contacts lost in rubble. Recovery OK</p> <p>594.5 - EOT Core slightly broken w/ short made below intervals. Total 647-652 about 1' core missing. Elsewhere recovery OK</p>
	1618120	1618170		1311	51B101\$1	<p>GAUGE</p> <p>Same as Unit #30 (583-682) only rubble w/ minor gauge. Thinly banded calcareous & dolomitic, pale gray, moderately soft phyllitic. Contains abundant gt-calcic veins locally the veins are weathering very recessively - especially along scuffing fractures. Not a major/significant fault.</p> <p>Core rubble. Between 677-687 have 1.5' core missing - probably in this interval.</p>
L	1618170	176170		1312	51B101\$1	<p>Moderately soft, pale to medium gray, C52-foliated, calcareous and locally/possibly dolomitic, phyllitic. Thinly banded w/ bands defined by pale gray gt-carbonate interls up to 2cm thick. Dolomitic silty bands weather to a very pale tan. S2 surfaces are shiny to waxy gray. Scattered pyrite porphyroblasts up to 1cm across.</p>

CURRAGH RESOURCES INC.
Lithologic Log

Date: June 20/89 Logged By: LCP

Code	From	To	Recov.	No.	Unit	Description
	10 14 16 20 22 24 26 28 30 34 35					
				1312		<p>TOI- 717 Mod. below w/ local galena chippy intervals Recovery OK</p> <p>717- 720 Below chippy w/ small visible intervals. Recovery OK</p> <p>720- 767 Core slightly below Recovery excellent</p>
	17167 0	181010 0		1313	5181\$1	<p>Moderately soft, poorly CS2-foliated, medium grey, dolomitic phyllite. Dolomite associated w/ gts are pale grey bands and laminae up to 2cm thick. Bands parallel S2 and also defining micro-lithons. Typically the bands weather beige to pale orange. S2 surfaces are shiny/froxy grey. Scattered pyrite porphyroblasts. Steep gts-carbonate fractures are locally waxy w/ shiny, rounded moulds of crystals growing inward from fracture walls.</p> <p>TOI- 771 Very below & rubblely Recovery not 100% but OK</p> <p>771- 782 Very below w short rubblely intervals. Recovery OK</p> <p>782- EOI Mod. below w/ good recovery. 10cm rubble @ 797.</p>
	18100 0	181150 0		1314	5101\$191 (5B2\$) 70:30	<p>Moderately soft, PS2-foliated, pale olive green, homogeneous chloritic phyllite. S2 surfaces are silvery pale olive green. Weather w/ even beige/pale tan colour. Contains foliation gts veins w/ abundant irregular large red zonalite and galena. Sulphide look like fracture infillings w/in gts vein. Overall grade low because of extensive dilution.</p> <p>Ink-banded w/ medium dark grey, med. soft, CS2-foliated, dolomitic phyllite. S2 surfaces are dark shiny grey. Dolomite associated w/ gts in silty bands defining micro-lithons and parallel S2.</p> <p>Core slightly to moderately below B02.5-804 rubblely in association w/ gts vein and steep fracture. Recovery OK.</p>

Lithologic Log

Date: June 29/89 Logged By: LCP

Core	From	To	Recov.	No.	Unit	Description
1	10 14 16	20 22 24 26 28 30	34 35			
	18115 0	18127 5		1315	5181\$1	
						Medium gray, CS2-foliated, moderately soft, dolomitic phyllite. Dolomite w/ st in silty bands defining S1 microlithons and parallel S2. Silty bands weather orange-beige. S2 surfaces are medium dark shiny gray. Lower contact gradational w/ decrease in string tan weathering aspect. Scattered pyritic prophyroblasts. Core intact - recovery good.
	18127 5	19107 0		1316	518101±\$	
						Moderately soft, CS2-foliated, medium gray, calcareous phyllite. Locally dolomitic w/ dolomitic intervals weathering pale tan. S2 surfaces are shiny gray. Thinly banded w/ banding defined by st-carbonate silty intervals up to 2cm thick parallel S1 and S2. Scattered pyritic and pyrochroite prophyroblasts. Both upper and lower contacts gradational. Core slightly biten w/ good recovery. Short rubble intervals @ 843.0-843.2, 848.0-848.4, 865.5-867.0, 882.0-884.5, 896-897.
	19107 0	19147 7		1317	51810171 ±\$	(506 ±\$) minor
						Medium gray, calcareous, CS2-foliated, moderately soft, thinly banded phyllite. S2 surfaces are silvery gray. Locally silty bands are dolomitic rather than calcareous. Cut surface has definite medium green tinge in pelitic intervals. Both pg and po as scattered prophyroblasts - po dominant. Minor vuggy features w/ inward growing crystals near TOE. Near EOE very minor pale green, soft, homogeneous, PS2-foliated, non-calcareous to dolomitic chloritic phyllite. Core slightly biten w/ good recovery. Short rubble zones @ 912, 914.5, 922.5.
	19147 7	191812 5		1318	51810171	(500) 80:20
						Thinly banded, moderately soft, CS2-foliated, calcareous, medium pale gray phyllite. S2 surfaces are silvery gray. Cut surface has medium green tinge through the gray. Contains interbeds

Lithologic Log

Date: June 28/89 Logged By: KCP

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24	26 28	30 34 38	
		1918125		1318		of homogeneous, P52-foliated, pale olive green, calcareous phyllite. S2 surfaces are pale waxy green. Bands range from 3cm to 50cm thick. Marginal contacts sharp and subparallel S2. Interbands occur dominantly in top 1/2 of unit. Contains diffuse small qtz-calcite veinlets parallel S2. Pelite contains scattered py & po grains. Unit slightly below w/ good recovery. Rubby for 984-985.5 w/ qtz vein.
L	1918125	11012170		1319	51D101	(5B70) 65:35 Pale green, moderately soft, calcareous phyllite. S2 surfaces are pale silvery green. Scattered pyrite and pyrobitic porphyroblasts. Intimately interbedded homogeneous phyllite and C52-foliated, microlithoid phyllite. Homogeneous phyllite P52-foliated although locally it has diffuse white laminae. Difficult to distinguish between known 5D and known 5B7. Marginal contacts locally sharp but also locally appears gradational. Core intact to slightly below with good recovery.
L	11012170	11019120		1410	51B10171	(5D0)(5B20) 70:20:10 Dominant unit is medium gray, calcareous, moderately soft, thinly banded phyllite. C52-foliated (locally P52-foliated) w/ banding and microlithons defined by pale gray quartz-calcite bands & laminae up to 2cm thick. Cut surface has a medium green tinge through carbon gray. S2 surfaces are shiny gray. Contains scattered py and po porphyroblasts. Most of this type is in bottom 1/2 of DDH interval. Interbedded dark gray, thinly banded, calcareous phyllite and pale olive green, calcareous, homogeneous, P52-foliated, chlorite phyllite make up rest of interval. These 2 types occur mainly in top 1/2 of interval. Chlorite phyllite contains faint white qtz-calcite laminae locally. Marginal contacts of chlorite phyllite are sharp w/

Stratigraphic Log

Date: June 29/89 Logged By: LCP

Code	From		To		Recov.		No.		Unit		Description
	10	14	16	20	22	24	26	28	30	34	
	1101270		11019120				1410				<p>small scale interfingering along S2. Thickness of chloritic phyllite ranges from 5cm. to 50cm.</p> <p>TOI - 1033 Moder. broken w/ good recovery</p> <p>1033 - 1034 Very broken w/ numerous steep qtz-carbonate infilled veinlets/ fractures Dolomite instead of calcite as dominant carbonate. Recovery OK</p> <p>1034 - 1041 Core slightly broken w/ good recovery</p> <p>1041 - 1043 Very broken w/ local rubble & gouge. Associated w/ fracture systems w/ laminae contact of 35/1000 w/ S2. Dolomite instead of calcite as the dominant carbonate. Recovery OK</p> <p>1043 - EOT Slightly broken w/ local galena chippy intervals Recovery OK</p>
	11019120		1111130				1411	512101			<p>(5870) 80:20</p> <p>Moderately soft, calcareous, olive green, P52-foliated, homogeneous chloritic phyllite. locally veinlets and diffuse laminae of white qtz-calcite up to 5mm thick. Cut surface has rough silty aspect. locally cut surface has bluish green tinge S2 surface silvery green to medium green. locally core thinly banded w/ well developed microlithons. Generally a slightly darker green, more micaceous aspect. S2 surfaces silvery green. Breaks w/ more galena chippy aspect.</p> <p>Some scattered pyrophyllite. locally vuggy along steep fractures w/ crystals growing inward from fracture walls.</p> <p>TOI - EOT Slightly broken to intact w/ excellent recovery</p>
	1111130		1115100				1412	51817101			<p>(500) 50:50</p> <p>Similar lithologies as last unit # 41 (1092-1113) only proportions differ. Scattered py and pyrophyllite. S2 surfaces of 5B silvery pale green. Marginal contact between units sharp parallel S2. Locally difficult to distinguish between</p>

Code	From		To		Recov.		No.		Unit		Description
	10	14	16	20	22	24	26	28	30	34	
	111113	0	111150	0					1412		<p>The two units. SB7 more dominant in top 1/2 of interval.</p> <p>TOI - 1146 Mod. broken w/ good recovery</p> <p>1146 - EOI Very broken & rubble 1147-1150 has 1' core loss - probably in this broken interval.</p>
	111150	0	111812	0					1413	5181\$1	<p>Moderately soft, CS2-foliated, thinly banded, medium grey, dolomitic phyllite. S2 surfaces stealy grey. Weathers w/ pale beige - especially in pb-carbonate bands which define the S1 microtextures. Unit slightly darker than typical SB - but only slightly.</p> <p>Scattered pyroclastic porphyroblasts</p> <p>TOI - 1157 Very broken w/ OK recovery</p> <p>1157 - EOI Mod. broken w/ good recovery</p>
L	111812	0	111817	0					1414	518101	<p>Same as last Unit # 43 (1150-1182) only carbonate in pale grey pb-carbonate bands and laminae is calcite instead of dolomite. S2 surfaces are silvery to stealy grey. Core slightly better to intact w/ reasonable recovery.</p>
L	111817	0	112018	5					1415	518101	<p>(5830)(5820) 50130:20</p> <p>Dominant unit is moderately soft, olive green, calcareous, homogeneous to diffusely laminated, largely PS2-foliated chloritic phyllite. Diffuse microtextures locally defined by thin white calcite-pb laminae. S2 surfaces are waxy olive green. Marginal contacts w/ other units sharp and generally parallel S2 but locally microtextured along S1. Intervals are 10cm to 50cm thick.</p> <p>Second most common unit is moderately soft, CS2-foliated, thinly banded, calcareous, medium greenish grey to medium green phyllite. S2 surfaces generally a silvery grey.</p>

Lithologic Log

Date: Jun 29/89 Logged By: LCP

Core No.	From		To		Recov.			No.			Unit			Description
	10	14	16	20	22	24	26	28	30	34	38			
	111817	6	112101	5					1415					Distinguished from previous unit by microlithon texture and by gray argill to S2 surfaces. Final unit is medium dark gray, CS2-foliated, calcareous, moderately soft, thinly banded phyllite. S2 surfaces are dark steely gray and do not mark fingers. Scattered po and py porphyroblasts in all 3 units. SB20 contains small void, dark gray to black, hard "clerty" concretions (?). Core slightly broken w/ good recovery.
	112101	5	112114	2					1416	510141	1			(SB20 ±) 80:20 PS2-foliated to CS2-foliated, moderately soft, pale gray, dolomitic, muscovite-qtz phyllite. S2 surfaces are silvery gray to white. Weathers to a pale tan. CS2-foliated intervals may be altered SB. Interbedded on 5-30cm scale w/ moderately soft, dark gray, thinly banded, CS2-foliated, dolomitic phyllite. S2 surfaces are dark shiny gray. Similar to last unit - extension of last unit - only dominant carbonate is dolomite and chlorite appears altered to muscovite. Core slightly broken and recovery is good.
	112114	2	112141	0					1417	510101	1			(SB20 ±) 80:20 Moderately soft, calcareous and/or dolomitic, pale olive green, homogeneous chloritic phyllite. Dominantly PS2-foliated; locally laminated and CS2-foliated. Contains slight tan weathering tinge - especially in more dolomitic intervals. S2 surfaces silvery olive to silvery cream. 10-100cm interbeds of calcareous and/or dolomitic, dark gray, CS2-foliated, thinly banded phyllite. S2 surfaces are steely gray. Marginal contacts are sharp and parallel S1. This unit dominantly in upper 1/2 of interval. Lower contact gradational & marked by increasing alteration. Core slightly broken - recovery good.

Code	From	To	Recov.	No.	Unit	Description
1	10 14 16	20 22 24 26 28	30 34 35			
	112141	112147		1418	5D141\$1	Moderately soft, P52-foliated, pale cream, slightly dolomitic, muscovite - qtz phyllite. Contains thin white qtz-bands & laminae similar to classic "5D core". Also locally has faint olive green tinge on cut surface locally. S2 surfaces are silvery cream. locally qtz veins are green because of carbonate weathering out. Core very rubbly No gauge Recovery OK
L	112147	112166		1419	5B121\$1	(5D4\$)(5B\$) 60:25:15 ± Gauge Dark grey, moderately soft, thinly banded, C52-foliated phyllite. Dolomitic and locally calcareous S2 surfaces dark steely grey and do not mark fingers. Occurs dominantly near lower 1/2 of interval Thinly banded pale grey w/ olive tinge, moderately soft, P52-foliated, slightly dolomitic, chlorite-muscovite-qtz phyllite. S2 surfaces are silvery cream Intervals 3cm - 100cm Lower pale grey, C52-foliated, moderately soft, thinly banded, dolomitic phyllite. S2 surfaces silvery grey Occurs dominantly in middle 1/2 of interval TGI-1250 Very broken & rubbly w/ gauge Upper contact 25/1000 wrt S2 lower contact hidden in rubble Recovery looks OK 1250-1253 Mod. broken & pale chippy Recovery OK 1253-1263 Very broken & rubbly & pale chippy Only incipient gauge Recovery OK 1263-EOI Tectonic bxa and gauge Interval fabric dips @ 30° lower contact 40/1000 wrt S2 Upper contact hidden in rubble Recovery seems reasonable Could be a significant fault

Core No.	From	To	Recov.	No.	Unit	Description
1	10	14	16	20	22 24 26 28 30	34 35
	1121616	1121713	5	150	5181213	(5048) 80:20
						Moderately soft, CS2-foliated, medium dark grey, dolomitic phyllite. Thinly banded w/ banding parallel S1 and S2 - bands are pale grey dolomite-gt and weather pale tan. S2 surfaces are steely grey. Upper 2' core contains 2 bands of moderately soft, PS2 foliated, pale cream muscovite-gt-dolomitic phyllite weather to a pale tan, S2 surfaces are silvery cream. Margins are sharp parallel S1 and generally conformable w/ S2. Lower contact is gradational into unit w/ calcite as dominant carbonate. Scattered po porphyroblasts. Tubercle intact to slightly broken w/ excellent recovery.
L	1121713	1131213	8	151	51810121	(500) 90:10
						Moderately soft, medium to medium dark grey, calcareous, thinly banded, CS2-foliated phyllite. Calcareous bands up to 2cm thick display S1 microlithons. S2 surfaces are shiny, steely grey. Minor interbeds of homogeneous, PS2-foliated, slightly calcareous, olive green chloritic phyllite. S2 surfaces are silvery olive green. Moderately soft. Locally has diffuse, poorly defined laminae and microlithons. These bands are up to 1cm thick; they occur largely near top of interval. Scattered po porphyroblasts and 1 py porphyroblast w/ irregular po rim. Core slightly broken w/ good recovery.
	1131213	1131616	5	152	510101	(5820) (5807) 50:20:30
						Moderately soft, largely PS2-foliated, calcareous, pale olive green chloritic phyllite. S2 surfaces waxy to silvery olive green. Contains thin white gt-calcite veins which are parallel S2 and define S1 microlithons. Marginal contacts sharp parallel S1 - Photo of folded contact @ 1361'. Tubercle range from 1cm thick to smaller.

Code	From		To		Recov.		No.		Unit		Description
	10	14	16	20	22	24	26	28	30	34	
	1131213		1131616				1572				<p>thens 1.5m. thick</p> <p>Interbedded w/ SD are shaly intervals of medium dark gray, moderately soft, calcareous, finely banded phyllite. CS2-foliated w/ microlithons defined by pale gray qtz-calcite siltstone bands and laminae up to 2cm thick. SD surfaces steely gray and do not mark fingers. At 1335' base 1.5cm thick dark gray-black band, spherical "chert" nodules. Carbonaceous bands generally 10cm-50cm thick and occur mainly near TOI</p> <p>Interbedded w/ other unit are medium gray, CS2-foliated, calcareous, finely banded phyllite. SD surfaces are silvery gray. Cut surface has definite medium green tinge and micaceous bands where wet. Distinguished from SD by microlithon texture and by gray on SD surfaces. Occurs dominantly in lower 1/2 of unit.</p> <p>Some scattered pp graphroblasts. Minor dolomite in SB near gauge & rubble @ 1346'</p> <p>TOI- 1332.5 Slightly to moderately better w/ good recovery</p> <p>1332.5-1340.0 Very better & takes chippy local incipient gauge. Recovery good</p> <p>No major fault</p> <p>1340.0-1346. Slightly to moderately better. Recovery good</p> <p>1346-1342 Rubby tarry better w/ incipient gauge. Upper contact gradual SD. Recovery good</p> <p>1342-EOT Mod better. Recovery good</p>
	1131616		1131917			1573	57B10171				<p>± f</p> <p>Medium gray, CS2-foliated, finely banded, moderately soft phyllite. SD surfaces silvery gray to greenish gray. Cut surface has medium green tinge where wet. Upper contact gradational & marked by decrease in carbon. Lower contact gradational & marked by further carbon decrease and appearance of SD bands. Scattered pp graphroblasts. Banding defined by pale gray qtz-carbonate. Interval 1373.5-1376.5 primary carbonate is</p>

Code	From		To		Recov.			No.			Unit			Description
	10	14	16	20	22	24	26	28	30	34	35			
	11316	165	11319	175					1513					<p>dolomite rather than calcite Dolomitic interval weathers pale tan and is marginal to a 1 foot thick gouge zone.</p> <p>TOE - 1374 Slightly below w/ good recovery</p> <p>1374 - 1375 Mud gouge. Upper contact 20/000 w/ S2 lower contact parallel S2 Recovery good</p> <p>1375 - 1376.5 Healed fractured bra. Orientation 20/000 w/ S2 Recovery good. Core intact</p> <p>1376.5 - EOT Core intact w/ good recovery.</p>
	11319	175	11412	150					1514	51B17A01	(500)	95:05		<p>Moderately soft, calcareous, CS2-foliated, pale greenish gray, finely banded phyllitic. S2 surfaces waxy gray w/ greenish tinge. Cut surface strongly microlithed and banded w/ pale gray pt-calcite and medium green chlorite-muscovite banding locally pressure solution shales are a slightly darker gray. Banding is on scale 1-3cm.</p> <p>Contains subbands of homogeneous, pale olive green, PS2-foliated, calcareous, chloritic phyllitic. S2 surfaces are waxy olive green. Thickest band is about 30cm.</p> <p>Marginal contacts are steep, parallel S1 which in many cases is subparallel S2. Interval contains scattered quartzitic porphyroblasts.</p> <p>TOE - 1401.0 Intact w/ excellent recovery</p> <p>1401.0 - 1402.0 Mod below & rubble on steep fracture going down core axis</p> <p>1402.0 - 1423.5 Mod below w/ reasonable recovery.</p> <p>1423.5 - 1424.5 Gouge and pale shaly rubble in SB lower contact has fracturing parallel S1 and S2. Recovery seems OK.</p>

Code	From		To		Recov.	No.	Unit	Description		
	10	14	16	20					22	24
	1141215	150	1141517	0		155	51B17101	<p>Moderately soft, calcareous, finely banded, CS2-foliated, pale greenish gray phyllite. Banding on scale 1-3 cm S2 surfaces waxy greenish gray. Wet surface grey-green when wet. Strong colour banding between pale grey and medium grey-green on wet cut surface. Excellent microlithon texture developed. Scattered porphyroblasts.</p> <p>Interval intact w/ excellent recovery.</p> <p>WEDGE SET @ 1447' for top of wedge.</p>		
	1141417	0	1141614	0		156	51B17101	<p>Same as Unit # 55 (1425-1457). Interval recuts some of previous unit from top of wedge (at 1447'). Wet cut surface is medium green, CS2-foliated w/ abundant to sparse pale grey calcite-quartz microlithons. Scattered po porphyroblasts. Core intact w/ good recovery.</p>		
	1141614	0	1141813	0		157	51B17101	<p>(500) 95:05</p> <p>Pelitic in exactly same as last 2 units # 55 (1425-1457) and # 58 (1447-1464.89). Medium green (wet), moderately soft, CS2-foliated, calcareous phyllite. S2 surfaces are waxy grey w/ greenish tinge.</p> <p>Contains interbeds of calcareous, homogeneous, moderately soft, PS2-foliated, olive green phyllite. Thickest bands 20cm. Sharp marginal contacts parallel S1 and folded by S2. See these bands going around PS2 fold hinges.</p> <p>Core slightly broken & gaben chippy w/ excellent recovery.</p>		

Case	FROM		TO (At)		Feature	REG	UPPER Dip Direct		INTERNAL Dip Direct		LOWER Dip Direct		Description
	10	14	16	20			22	24	26	28	32	34	
F	87	40	87	42	Q								cofolial
F	87	65	87	70	Q								"
F	87	90	87	95	Q								"
F	88	15	88	24	2RQ								"
F	88	85	88	87	Q								"
F	89	47	89	50	Q								"
F	90	30	90	39	Q								irregular patchy
F	90	45	90	48	Q								cofolial
F	91	00	91	12	Q								irregular patchy
F	94	06	94	14	Q								cofolial
F	97	74	97	76	Q								"
F	98	40	98	72	1RQ								cofolial + patchy 50% veining
F	98	80	98	83	Q								cofolial
F	84	80	84	84	T								
F	86	67	86	69	T								
F	88	10	88	35	Q,R								
F			89	43	J				19	180			
F			89	66	J				30	900			
F	102	53	102	55	Q	35	180				77	990	patchy vein
F	103	27	103	37	T,R								
F	103	80	103	82	Q								cofolial
F	104	00	104	16	J				12				foliation horizontal
F	104	31	104	36	G								
F	104	82	104	91	Q								cofolial
F	105	89	105	94	T								
F	107	70	107	75	R								
F	109	20	109	30	J				08	000			
F	111	50	111	53	Q								cofolial
F	111	46	111	56	5R,T								20% cofolial veins
F	117	35	117	40	T								showing cofolial & random
F	117	97	118	00	R								
F	119	20	119	23	Q								cofolial
F	124	10	126	60	TR								"
F	127	10	127	15	Q								"
F	128	83	128	86	Q								"
F	128	90	128	97	Q								"

PROJECT DY-SHAFT
 LOCATION DS 89-01
 LOGGED J. H. PAULS

WELL/PILE NO. _____ COORDINATES: N _____
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PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

feet

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		RQD		Hardness (MORSE)	Rock Break		Degree of Weariness	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		Joints - joints		COMMENTS
		LENGTH	%	LENGTH	%		DEGREE OF BREAKAGE CATEGORY	NO.			DEPTH	ANGLE	NO.	FRAC.	NO.	FRAC.	
27	7	6.1		0													
37	10	4.0		0													20' overburden
47	10	10.0		2.9													
57	10	8.5		0													
67	10	9.5		4.7													
77	10	10		6.5													vert frac soln brecc 57-63'
87	10	10		2.7													
97	10	10		0.9													
100	3	3		0													
107	7	7		0													
117	10	10		2.5													
127	10	10		7.7													
137	10	10		1.7													
147	10	10		3.6													
157	10	10		5.0													
167	10	10		6.8													
177	10	10		7.1													
187	10	9.2		2.9													
197	10	10		3.4													
207	10	10		1.5													
217	10	9.6		3.2													
225	8	8		4.6													
235	10	10		7.3													
245	10	10		2.0													
255	10	10		1.6													
265	10	10		0.4													

Fig. 1. Typical rock mechanics core log.

PROJECT 04-SHAFT
 LOCATION DS 89-01
 LOGGED J.H. DAVIS

BOLEHOLE NO. _____ COORDINATES: N _____ E _____
 HOLE SIZE _____
 DECLINATION _____ ELEVATION _____

DATE MAY/89
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PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

feet

DEPTH (10)	LENGTH OF RUN	CORE RECOVERY		RDP		BONDNESS	DEGREE OF BREAKAGE		DEGREE OF WEAKNESS	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CRACK JOINTS		COMMENTS
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
273	8	7.7		0.4													
283	10	10		4.9													
287	4	4		1.4													
297	10	10		6.9													
306	9	9		2.8													
313	7	7		1.5													
323	10	10		8.4													
327	4	4		2.7													
337	10	10		7.4													
347	10	8.7		3.3													
357	10	10		5.1													
367	10	10		3.2													
375	8	8		0													
380	5	5		0													
387	7	7		3.9													
397	10	10		2.6													
407	10	10		0													
417	10	10		2.6													
427	10	10		6.8													
436	9	9		2.5													
443	7	7		0.5													
449	6	6		0													
457	8	6.7		0													
463	6	2		0													
469	6	3.7		0.4													
472	3	3		0													

Fig. 1. Typical rock mechanics core log.

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PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF CORE	CORE RECOVERY		DIP		DIRECTION	DEGREE OF BREAKAGE EXHIBIT NO.	DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CRACK JOINTS		COMMENTS
		LENGTH	%	LENGTH	%					DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
687	10	8.8		2.9												
697	10	10		3.7												
707	10	10		2.6												
717	10	10		3.0												
720	3	2.6		0												
727	7	7		2.7												
737	10	10		3.2												
747	10	10		4.6												
757	10	10		5.0												
767	10	10		6.3												
772	5	4.5		0												
777	5	5		0												
787	10	10		0												
797	10	10		3.2												
807	10	10		3.3												
817	10	10		6.4												
827	10	10		3.9												
837	10	10		5.3												
847	10	10		7.7												
857	10	10		4.5												
867	10	10		2.6												
877	10	10		1.4												
887	10	9.3		2.5												
897	10	10		1.0												
907	10	10		7.8												
917	10	10		4.6												

Fig. 1. Typical rock mechanics core log.

PROJECT DY SHAFT SERIAL NO. _____ COORDINATES: N _____ DATE MAY/89
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PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		RDP		HARDNESS	DEGREE OF BREAKAGE (CORRECTION NO.)		DEGREE OF WEARINESS	ROCK TYPE	BEDDING DEP.		BEDDING JOINTS		CRACK JOINTS		COMMENTS
		LENGTH	%	LENGTH	%		DEPTH	ANGLE			NO.	FREQ.	NO.	FREQ.			
927	10	10		6.0													
937	10	10		6.7													
947	10	10		6.5													
957	10	10		4.8													
967	10	10		7.0													
977	10	10		5.0													
987	10	10		5.6													
997	10	10		4.7													
1007	10	10		3.6													
1017	10	10		5.1													
1027	10	8.7		2.1													
1037	10	10		1.1													
1047	10	10		0.4													
1057	10	10		5.8													
1067	10	10		5.8													
1077	10	10		7.6													
1087	10	10		5.3													
1097	10	10		7.1													
1101	4	4		3.4													
1107	6	6		3.2													
1117	10	10		5.5													
1127	10	10		7.8													
1137	10	10		8.3													
1147	10	10		4.7													
1157	10	8.8		0													
1167	10	10		6.9													

Fig. 1. Typical rock mechanics core log.

PROJECT DY SHAFT SERIAL NO. _____ COORDINATES: N _____ DATE MAY/89
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PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		DIP		DIRECTION	DEGREE OF BREAKAGE		ROCK TYPE	DIPPING DIP		DIPPING JOINTS		CRACK JOINTS		COMMENTS
		LENGTH	%	LENGTH	%		CENTIMETER	NO.		DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
1177	10	10		6.4												
1187	10	10		5.7												
1197	10	10		5.4												
1207	10	10		7.3												
1217	10	10		5.9												
1227	10	10		8.2												
1237	10	10		1.1												
1247	10	10		0												
1256	9	9		0.5												
1266	10	10		0												
1277	11	11		4.0												
1287	10	10		8.2												
1297	10	10		6.4												
1307	10	10		4.6												
1317	10	10		7.5												
1327	10	10		6.0												
1337	10	10		3.3												
1347	10	10		2.2												
1357	10	10		3.2												
1367	10	10		6.9												
1377	10	10		2.8												
1387	10	10		5.5												
1397	10	10		5.1												
1407	10	10		4.3												
1417	10	10		3.5												
1423	6	5.6		0												

Fig. 1. Typical rock mechanics core log.

PROJECT DY-SHAFT
 LOCATION _____
 LOGGER Reznik & Keibler

DRILLHOLE NO. 89 DS01 COORDINATES: N _____ DATE _____ 19__
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PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		ROD		HARDNESS	DEGREE OF BREAKAGE		DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CROSS JOINTS		COMMENTS
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
27	7	5.5	—	0	—	—	3	—	C	—	—	—	—	—	—	—	
37	10	3.9	—	0	—	—	3	—	C	—	—	—	—	—	—	—	
47	10	9.7	—	1.3	—	—	6	—	D	—	—	—	—	—	—	—	
57	10	7.3	—	0.3	—	—	6	—	D	—	—	—	—	—	—	—	
67	10	9.2	—	4.7	—	—	7	—	D	—	—	—	—	—	—	—	
77	10	10.0	—	6.5	—	—	8	—	D	—	—	—	—	—	—	—	
87	10	10.0	—	2.8	—	—	7	—	D	—	—	—	—	—	—	—	
97	10	10.0	—	1.3	—	—	6	—	D	—	—	—	—	—	—	—	
100	3	3	—	0.35	—	—	6	—	D	—	—	—	—	—	—	—	
107	7	7	—	.9	—	—	6	—	D	—	—	—	—	—	—	—	
117	10	9.1	—	2.60	—	—	6	—	D	—	—	—	—	—	—	—	
127	10	10	—	6.65	—	—	15	—	F	—	—	—	—	—	—	—	
137	7	7	—	—	—	—	6	—	—	—	—	—	—	—	—	—	
147	13	13	—	5.3	—	—	8	—	D	—	—	—	—	—	—	—	
157	10	10	—	4.1	—	—	7	—	E	—	—	—	—	—	—	—	
167	10	10	—	5.45	—	—	7	—	E	—	—	—	—	—	—	—	
177	10	10	—	5.7	—	—	4	—	E	—	—	—	—	—	—	—	
187	10	9.2	—	2.35	—	—	7	—	F	—	—	—	—	—	—	—	
197	10	9.85	—	3.15	—	—	7	—	F	—	—	—	—	—	—	—	
207	10	10	—	.7	—	—	6	—	E	—	—	—	—	—	—	—	
217	10	8.8	—	1.9	—	—	6	—	E	—	—	—	—	—	—	—	
225	8	8.0	—	4.3	—	—	6	—	D	—	—	—	—	—	—	—	
235	10	10	—	5.95	—	—	7	—	E	—	—	—	—	—	—	—	
245	10	10	—	2.3	—	—	6	—	E	—	—	—	—	—	—	—	
255	10	10	—	1.35	—	—	6	—	D	—	—	—	—	—	—	—	
265	10	9.5	—	1.25	—	—	6	—	D	—	—	—	—	—	—	—	
273	8	7.1	—	1.30	—	—	6	—	D	—	—	—	—	—	—	—	
283	10	9.5	—	3.75	—	—	7	—	E	—	—	—	—	—	—	—	

Fig. 1. Typical rock mechanics core log.

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PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		RQD		HARDNESS	DEGREE OF BREAKAGE		DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CROSS JOINTS		COMMENTS
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
287	4	4		1.60			7		F							0	
297	10	10		5.55			7		E							1	
306	9	8.65		2.65			6		E							3	
313	7	7		2.45			6		E							3	
323	10	10		6.15			9		F							3	
327	4	3.8		2.35			7		F							0	
337	10	10		6.15			10		F							1	
347	10	8.65		3.50			7		E							2	
357	10	10		2.30			7		D							6	
367	10	10		1.1			5		D							6	
375	8	8		.35			5		E							2	
380	5	4.7		.35			5		E							3	
387	7	7		3-30			7		E							1	
397	10	10		3.4			7		E							7	
407	10	10		0			6		E							4	
417	10	9.8		2.35			6		E							5	
427	10	10		6.15			10		E							6	
436	9	7.9		3.05			7		E							5	
443	7	7		1.45			6		E							3	
449	6	6		0.35			6		E							3	
457	8	6.2		0.85			6		E							3	
463	6	2.15		0			6		E							1	
469	6	3.75		.4			6		E							1	
477	8	5.65		0			6		E							2	
482	5	3.4		0			5		E							1	
487	5	3.5		0			1		E							0	
494	7	4.05		0			1		E							0	
500	6	3.5		0			1		E							0	

Fig. 1. Typical rock mechanics core log.

PROJECT DY-SHAFT.
 LOCATION _____
 LOGGER Reznik + Kerbey

DRILLHOLE NO. 89 DS-01 COORDINATES: N _____ DATE _____ 19__
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PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		RQD		HARDNESS	DEGREE OF BREAKAGE		DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CROSS JOINTS		COMMENTS	
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.		
507	7	6.3		0			1		E							0		
513	6	1.7		0			2		E							0		
517	4	2.1		0			2		E							0		
533	16	0.8		0			2		E							0		
537	4	2		0			2		E							0		
544	7	1.95		0			2		E							0		
550	6	6		1.75			6		D							1		
557	7	7		2			6		D							0		
567	10	10		2.7			6		E							3		
572	5	4		0			6		E							2		
582	10	10		5.9			9		E							1		
591	9	9		3.85			8		D							4		
597	6	5.9		1.0			6		D							2		
601	4	4.0		1.85			7		E							2		
607	6	5.4		4.05			11		E							2		
617	10	9.5		6.0			8		E							0		
627	10	10.0		3.65			7		E							5		
637	10	10		6.50			10		E							2		
647	10	9.9		3.25			7		E							1		
588	?	5.1		0.70			6		E							0		
597	9	9		1.05			6		E							0		
607	10	10		5.3			7		E							2		
617	10	10		7.35			9		E							0		
627	10	10		2.55			7		E							2		
637	10	10		7.55			8		E							1		
647	10	10		5.65			9		E							1		
657	10	9.1		2.8			7		E							1		

Fig. 1. Typical rock mechanics core log.

PROJECT DY-SHAFT
 LOCATION _____
 LOGGER Reznik & Kerber

DRILLHOLE NO. 89 DS 01 COORDINATES: N _____ DATE _____ 19__
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PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		ROD		HARDNESS	DEGREE OF BREAKAGE		DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CROSS JOINTS		COMMENTS
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
667	10	10		5.65			8		E								
677	10	10		4.75			7		E							1	1
687	10	9.5		2.25			6		D							3	
697	10	10		6.2			7		D							2	
707	10	10		5.75			7		D							1	
717	10	10		2.35			6		D							2	
720	3	2.5		0.35			6		D							1	
727	7	6.65		3.25			7		D							1	
737	10	10		4.15			7		D							2	
747	10	10		5.15			7		D							4	
757	10	10		5.15			7		D							1	
767	10	10		7.85			8		D							2	
770	5	4.7		0			6		D							3	
777	5	5		0.4			6		D							2	
787	10	10		0.7			6		D							3	
797	10	10		3.85			7		D							3	
807	10	10		3.5			7		D							4	
817	10	9.9		5.85			9		D							4	
827	10	10		4.65			7		D							2	
837	10	10		5.7			7		D							1	
847	10	10		8.2			7		D							1	
857	10	9.8		5.05			6		D							0	
867	10	9		2.85			6		D							3	
877	10	10		5.55			7		D							4	
887	10	9.4		2.65			6		D							2	
897	10	10		2.1			7		E							4	
907	10	10		6			7		E							0	
917	10	9.4		4.4			7		E							1	

Fig. 1. Typical rock mechanics core log.

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PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		ROD		HARDNESS	DEGREE OF BREAKAGE		DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CROSS JOINTS		COMMENTS
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
927	10	10		6			8		E							2	
937	10	10		6.3			9		E							0	
947	10	10		6.55			7		E							1	
957	10	10		4.65			7		E							0	
967	10	10		6.75			9		E							0	
977	10	10		6.45			9		E							0	
987	10	9.9		5.2			9		E							1	
997	10	10		5.55			9		E							1	
1007	10	10		3.8			7		E							2	
1017	10	9.95		5.65			9		E							0	
1027	10	8.2		2.6			7		E							0	
1037	10	10		2.85			7		E							3	
1047	10	10		1.74			7		D							4	
1057	10	10		6.15			9		E							0	
1067	10	9.7		5.25			7		E							1	
1077	10	9.8		6.85			10		E							0	
1087	10	10		5			9		E							0	
1089	2	1.55		.4			7		E							0	
1097	8	8		5.8			8		E							1	
1101	4	4		3			10		D							0	
1107	6	5.5		2.9			9		E							0	
1117	10	10		6.25			10		E							0	
1127	10	9.8		6.6			10		E							0	
1137	10	9.9		8.35			10		E							0	
1147	10	10		4.8			8		E							1	
1157	10	8.8		0			6		D							2	
1167	10	10		6			10		D							1	
1177	10	9.9		6			10		D							1	

Fig. 1. Typical rock mechanics core log.

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PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		RQD		HARDNESS	DEGREE OF BREAKAGE		DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CROSS JOINTS		COMMENTS
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
1187	10	10		5.7			9		D							2	
1197	10	9.7		4.95			10		D							2	
1207	10	9.9		6.75			10		D							2	
1217	10	9.7		5.75			10		D							1	
1227	10	9.8		8.25			10		D							0	
1237	10	9.6		3.55			8		D							0	
1247	10	10		.35			6		D							2	
1255	8.5	8.5		.45			5		D							0	
1265	10	10		.35			5		D							2	
1276.5	11	10.7		4.55			7		D							0	
1286.5	10	10		7.75			10		E							0	
1296.5	10	10		6.65			10		E							0	
1306.5	10	9.7		5.6			9		D							1	
1316.5	10	9.9		6.35			9		E							0	
1327	10.5	9.8		5.5			10		E							0	
1337	10	9.4		4.55			9		E							2	
1347	10	9.5		2.35			6		E							0	
1357	10	10		3.55			8		E							1	
1367	10	9.9		7.2			9		E							0	
1377	10	10		5.45			9		D							2	
1387	10	10		6.65			10		D							2	
1397	10	10		5.52			10		E							1	
1407	10	10		2.95			9		E							1	
1417	10	9.5		4.35			7		E							3	
1423	6	5.4		.7			7		E							1	
1430	7	7		2.3			7		E							0	
1437	7	7		4.4			9		E							0	
1447	10	10		7.55			10		E							2	

Fig. 1. Typical rock mechanics core log.

DIAMOND DRILL CORE LOG

Date: _____

Hole Number: 89DS-02

Reference Fabric Orientation Diagram:

Project: Dy

Location: _____

Claim: _____

Terr. Plane
Co-ords: UTM 5,901,358.9 N

597,337.9 E

Grid
Co-ords: _____

Elevation: 1107.8M

All symmetry determinations looking

Total Depth: 1287 ft.

NW with 52 dipping

Inclination: -90° vertical

SW with dip azimuth _____

Purpose: PILOT HOLE for Dy shaft

Reason hole Terminated: _____

Logged by: LCP

Date(s) Logged: _____

Drilling Contractor: ARCTIC DIAMOND

Hole Cemented: _____ Steel down Hole: _____

Size	CORE From	To	Collar Cased and Capped: _____
Hw	0	28'	
HQ	7	291'	
NQ	291'	1287'	

Assay Lab: _____

Certificate No's: _____

Started: June 2/89 Completed: _____

DDH 89.D.S.-0.2
2 8

Diamond Drill Core Log

Date: _____ Logged By: _____

Code	Drillhole	Elevation	Northing	Easting	Units (feet/metres)	R.F.E						
I	2	8	10	16	17	24	25	32	34	39	41	42
T	89D51-1012											

FEET

Code	Drillhole	Depth	Zenith Angle	True Azimuth	Comments					
I	2	8	10	14	22	26	28	32	34	56
* R	89D51-1012	10	-91.0	10	AT COLLAR					
* R	89D51-1012	1354	-189.4	211.6	SUPERIOR-SUM SINGLE SKIRT					
R	89D51-1012	1414	-188.7	251.0	SUPERIOR-SUM					
R	89D51-1012	1414	-188.0	255.0	SUPERIOR-SUM					
* R	89D51-1012	1414	-188.4	253.0	INTERVAL OF ABOVE 2					
* R	89D51-1012	1454	-188.2	196.0	SUPERIOR-SUM					
* R	89D51-1012	1524	-188.5	219.0	SUPERIOR-SUM					
R		1524	-89.0	106.0	SUPERIOR-SUM					
* R		1597	-189.5	077.0	SUPERIOR-SUM					
* R		1701	-189.0	156.0	SUPERIOR-SUM					
R		1800	-89.5	181.0	SUPERIOR-SUM					
R		1897	-189.5	051.0	SUPERIOR-SUM					
R		1963	-189.2	299.0	SUPERIOR-SUM					
R		11017	-188.5	256.0	SUPERIOR-SUM					
R		11023	-189.0	351.0						
R		11083	-189.5	306.0						
R		11100	-188.0	354.0						
R		11143	-188.0	331.0						
R		11197	-188.5	351.0						
R		11244	-188.0	341.0						
R										
R										
R										

Code	Drillhole	Comments, Errant Remarks, Snivellings and / or Lewd Suggestions		
I	2	8	10	56

Code	From	To	Recov.	No.	Unit	Description						
1	10	14	16	20	22	24	26	28	30	34	35	
	100	170			1	*						Triconed - No recovery
	170	1254			2	51981						8# [5F] Very soft, fissile, green, homogeneous, massive chloritic phyllite. Strongly P _{S2} and C _{S2} foliated. Cut surface medium to pale green dry and medium dark green wet. S ₂ surfaces are light silvery green. Nonmagnetic. Contains small randomly scattered chlorite(?) phanocysts. Calcite locally disseminated as small grains. Strongly foliated chloritic phyllite = highly deformed metabasite. Very locally S ₂ surfaces have orange brown mottling from weathering. Minor S ₂ -parallel qtz veins @ 16.9 and 22.5. TOI - 7.5 reground core & pebbles of metabasite 7.5 - EOI moderately broken and paker chippy TOI - 17 recovery OK / 17-22 have only 3.2 feet core / 22-EOI recovery OK
	1254	13150			3	51181						8# (5876) 80:20 [5CB 8# (5D FIELD)] Major unit similar to last unit (7.0-25.4). Very soft, medium to medium dark green, fissile chloritic phyllite. Dominantly P _{S2} foliated - locally C _{S2} foliated. Contains small white calcite as disseminated specks locally - generally noncalciferous. S ₂ surfaces are silvery green. Contains 0.5-1.0 foot interbeds of soft, laminated green phyllite. Noncalciferous laminae 1mm-5mm thick locally cut and S ₂ surfaces have silvery gray to dark gray surfaces. Minor quartz vein at 32 feet TOI-32 moderately broken / 32 too rubble & reground core 26-32 only 4 feet core - likely missing @ 32. / 32-EOI moderately broken w/ good recovery

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24	26 28 30	34 35	
	13.15	17.33 22.3		14	5TC18151	<p>8 MAGNETITE & BIOTITE</p> <p>Very soft, dark green to almost green-black, chlorite phyllite. P52-foliated. S2 surfaces are dark green. General mottled appearance with pale grey to off-white subrounded dolomite up to 2mm across. Mottling occurs in distinct bands. locally weathered with rusty brown cast on fractures. locally contains minor disseminated biotite. Intervals are magnetic - general mottled appearance and magnetic core suggests portions are serpenulized and therefore have ultramafic parent (possible pyroxenite). Relict mottling of former plagioclase and is best preserved in centre of unit. Fractures are orange-rust weathered</p>
						<p>foliated. Minor quartz-calcite veins subparallel S2. Contains two small zones of moderately hard, thinly bedded, noncalcareous, green phyllite @ 73.3 and 78.5 feet. locally has speckled texture w/ small calcite and/or dolomite disseminated as light coloured spots. Main distinction from previous unit is general lack of mottling and presence of 2 thin bands which may be metabediments. Contacts of these bands generally parallel S2.</p> <p>TOI - 74.7 very broken w/ gauge and rubble 74.7 - 78 moderately broken 78 - EOI very broken w/ a few thin gauged intervals } recovery OK</p>
	18.27	110.68 32.6		16	5TC18161	<p>8 MAGNETITE</p> <p>Similar to Unit #4 (35-73.3)</p> <p>Very soft, dark green, noncalcareous, chlorite phyllite. P52 foliated. Locally slightly to moderately magnetic. Fractures weather w/ orange-rust coating. Coarse grained</p>

Code	From	To	Recov.	No.	Unit	Description
1	10	14	16	20	22 24 26 28 30 34 36	
						<p>matting of subrounded dark green pyroxenite in medium dark green matrix Softness, matting, and fine magnetite suggests serpentinized ultramafic/pyroxenite Core very broken w/ local rubble intervals TOI has reground core EOI also has reground core TOI-92 has 7' core / 92-102 has 6' core / 102-EOI has 1.5' core w/ reground core ends. Generally poor recovery for this material.</p>
	11016B	11216 3 8		17	51C18161	<p>(5B76) [SD field] 95:0.5 Moderately soft to soft, pale olive green, noncalcareous, P52 foliated, chlorite phyllite. Contains scattered dark green, spots flattened in S2 foliation. Minor quartz-calcite veining S2 surfaces are light olive grey Interval 118-119 is medium to dark green, finely laminated, noncalcareous, moderately hard, chlorite phyllite. Contact w/ chlorite homogeneous phyllite is sharp and generally parallel S2. TOI-118.5 rubble w/ abundant intervals of reground core. Highly fractured qtz vein material near 117 TOI-112 has 3' core / 112-117 has 4' core. 118.5-EOI moderately broken w/ reasonable recovery</p>
	112165	11311 4 0 2		18	51D101	<p>Pale olive green, thinly laminated, moderately soft, calcareous chlorite phyllite. C52- foliated. Diffusely laminated in lower 1 cm slab in shades of olive green & grey. Minor qb-calcite cutting fractures. S2 surfaces are pale olive green TOI-EOI moderately to very broken. Recovery OK Upper contact hidden in rubble lower contact parallel S2 - gradual over 2-3 cm w/ dramatic increase in grey = carbon content</p>

Code	From		To		Recov.	No.	Unit	Description		
	10	14	16	20					22	24
	11311	8	11415	8		119	5182101	<p>Moderately soft, dark steel grey, calcareous phyllitic CS2-foliated with thin light grey to off-white calcite-quartz bands and laminae. S2 surfaces are dark steel grey. Commonly S2 has mottled rust-brown weathering pattern. Upper contact parallel S2 // lower contact tilted in small rubble and gouge.</p> <p>Interval very broken to rubble. Minor gouge @ TOI and EOI. Tends to be rather chippy along CS2. 142-147 has only 4' core recovered.</p>		
	11415	8	11815	4		116	516101	<p>±# ±\$</p> <p>Moderately hard, dark to medium green, non-calcareous to dolomitic to slightly calcareous chlorite phyllitic. Poorly PS2 foliated. S2 surfaces are dark green. Minor quartz-calcite veins dominantly in cutting fractures. Contains relict equigranular diabasic texture, speckled between green and dark green. Locally has fine subhedral tan specks which do not react to acid. However, 2 feet becomes progressively more strongly PS2 foliated. Weathering fractures have brown-rust weathering surfaces. Lower contact sharp and parallel S2. Massive, homogeneous.</p> <p>Overall core intact w/ good recovery. Interval 151.5-153.5 in used to very broken on steep fractures.</p>		
	11815	4	11817	4		111	519101	<p>Moderately soft, pale olive green, thinly laminated, calcareous chloritic phyllitic. Diffusely laminated in shades of green and grey. Dominantly PS2 foliated although minor folds are locally visible. S2 surfaces are pale olive green. Core intact. Upper and lower contacts are sharp, parallel S2. Minor qb-calcite veins and bands parallel S2.</p>		

Lithologic Log

Date: June 19/89 Logged By: LCP

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24	26 28 30	34 35	
	118174	119170 60 0		1112	5TC101	"ZEBRA Rock" Medium green to medium dark green, soft, calcareous, chlorite phyllite. Strongly foliated - both P _{S2} and C _{S2} foliated. Calcite forms thin discontinuous white bands defining both S ₁ and S ₂ foliations. Locally has incipient zebra rock texture. As go down DDH zebra striping becomes less and instead get dark green flattened spots in S ₂ foliations. Upper contact sharp. Lower contact looks sharp but actual contact hidden in rubble. S ₂ surfaces are medium green. Upper zebra-textured portion contains pale tan, noncalcareous, spots and specks. Core intact and recovery good.
	119170	1210155 62 0		1113	5TC151	Very soft, very dark green, slightly dolomitic, P _{S2} -foliated chloritic phyllite. Poorly preserved relic mottling with shaly vague grey specks and streaks. Nonmagnetic. Dark green colour and soft character suggests unit serpentinized. Fractures and some S ₂ surfaces have rust brown weathering coat. S ₂ surfaces are dark green. Some quartz-calcite veins. Lower & upper contacts gradational over very short interval. Core very broken and rubble w/ minor thin gouges. Recovery OK.
	1210155	1212165 69 0		1114	5TC101	I# I B10 [5FO I# I B10] Moderately soft to soft, noncalcareous to locally calcareous, medium green, homogeneous chloritic phyllite. Dominantly P _{S2} foliated. Contains disseminated, scattered pale tan specks and dark brown limonite specks. Calcite locally as thin bands. Lower contact is very gradational. Core moderately to slightly broken. Minor incipient gouge locally. Recovery OK.

Code	From		To		Recov.		No.		Unit		Description
	10	14	16	20	22	24	26	28	30	34	
	121216	5	131014	2					115	51C161	I ♀ MINOR ± BIOTITE ± MAGNETITE
			92	7							Dark green to blackish green, very soft, noncalcareous, homogeneous, massive chlorite phyllite. Commonly slightly magnetic. Contains relict mottled texture of irregular greyish-green subrounded phenocrysts (?) in a dark green matrix. Poorly PS2 foliated. Phenocrysts are locally slightly dolomitic. Bottom 4 feet is singly PS2 foliated, medium green, with scattered biotite porphyroblasts. S2 surfaces are medium to dark green. Dark green sections are slightly to moderately magnetic. Suggest interval is dominantly sergotitized ultramafic (pyroxenite?) - some asbestos veining present (25%)
	1301	2									TOI - 232.0 intact w/ good recovery
											232.0 - 240.0 slightly broken to med. broken w/ good recovery
											240.0 - 259.0 med. broken to very broken. Some quartz veins up to 20cm thick. Recovery OK
											259.0 - 262.0 intact - yet 260-262 only has 1.5' core
											262 - 269.0 slightly broken to intact w/ good recovery
											269.0 - 289.0 intact w/ good recovery
											At 289.5 changes to NQ core. 289 - 289.5 is very broken
											289.5 - EOI intact w/ good recovery
	131014	2	131019	9					116	51B17161	[SD field]
			94	5							Moderately hard to hard, thinly bedded, noncalcareous, PS2-foliated, pale olive green phyllite. S2 surfaces are medium olive green. Banded on scale of 1cm to 1mm. Contains numerous steep fractures - locally w/ qtz-calcite-pyrite infillings. Upper & lower contacts appear concordant w/ S2. Upper contact offset along steep fracture.
											Core intact to slightly broken - recovery good

Lithologic Log

Date: June 20/89 Logged By: LCP

Code	From		To		Recov.		No.		Unit		Description
	10	14	16	20	22	24	26	28	30	34	
	131019	9	131113	0			117		JC10131		Moderately hard, dark olive green, massive chloritic phyllite. Moderately calcareous to very calcareous. PS2-foliated. Contains abundant tiny noncalcareous iron specks on cut surface. Some late steep fractures. Core moderately broken w/ good recovery.
L	131113	0	131115	4			118		5181761		[5D field] Same as Unit # 16 (304.2 - 309.9) Thinly banded on 1mm - 1cm scale. PS2-foliated. Noncalcareous, moderately hard, dark olive green. S2 surfaces are dark green. Upper & lower contacts lost in rubble. Core moderately broken to very broken. Extensive steep fractures w/ thin pyrite beads occurring along fractures.
L	131115	4	131319	1			119		JC101#14		(5876 [5D FIELD]) 90:10 Moderately soft to soft, pale green to medium green, calcareous & slightly chloritic chlorite phyllite. Strongly PS2 foliated and fissile - locally CS2-foliated. Striated mottled texture w/ numerous dark green chlorite streaks up to 1cm long strongly flattened in S2. Calcic in matrix and in pl-calcite veins. Upper 1/2 contains some intervals of medium to dark green, PS2-foliated, thinly banded chlorite phyllite. Moderately hard. Lower contact of metabasite subparallel S2. S2 surfaces pale to medium green. TOI - 325 very broken, no rubble, recovery OK 325 - 329 med broken, recovery OK 329 - EOI slightly broken to intact, recovery OK

Lithologic Log

Date: June 20/89 Logged By: LCP

Code	From		To		Recov.		No.		Unit		Description
	10	14	16	20	22	24	26	28	30	34	
	131319	1	131415	6			1210	5181716			<p>{SD FIELD}</p> <p>Noncalcareous, thinly bedded, medium green to pale green, chlorite phyllite. Bedding on scale 1mm to 1cm. Dominantly P_{S2}-foliated although locally C_{S2}-foliated. Moderately soft. Upper contact sharp and parallel S₂ however contact very gradual w/ increase of grey over 10-20 cm interval. S₂ surfaces pale green with silvery tint. Core moderately broken w/ good recovery.</p>
L	131415	0	131419	0			1211	5181712			<p>7 MINOR (SD 6) MINOR</p> <p>Moderately soft, C_{S2}-foliated, medium dark grey, slightly dolomitic phyllite. Contains tinge of olive green on cut surface. S₂ surfaces are shiny, staley grey to dark grey. Thin quartz-calcite bands from poorly to well developed microlithons. TOI has 3cm interval of noncalcareous, soft, pale olive green chlorite phyllite. Contacts are sharp parallel S₂. Lower contact of unit characterized by beginning of calcite. Core moderately broken - recovery good. Scattered pyritic euhedral porphyroblasts up to 1cm across.</p>
L	131419	0	131518	3			1212	5181210			<p>(SD 0) 95:05 [5802]</p> <p>Moderately soft, C_{S2}-foliated, medium dark grey, calcareous phyllite. Microlithons defined by thin quartz-calcite bands and laminae. S₂ surfaces are medium to dark staley grey. At TOI have 0.5 feet of calcareous, pale olive green, soft, chlorite phyllite. Chlorite phyllite contains thin quartz-calcite "veins" and beads parallel S₂. Scattered euhedral pyritic porphyroblasts up to 1cm across. Contact w/ chloritic phyllite sharp parallel S₂. Core moderately broken and slightly pacer chippy. Recovery looks OK.</p>

8 1	From		To		Recov.		No.		Unit	Description	
	10	14	16	20	22	24	26	28			30
L	1315	183	1316	157					1213	51C1\$1	± # (5B7\$ & #) 50:50 [5D field]
				1115							Internal unit of dolomitic and calcareous metabasite rimmed by laminated green chloritic phyllite. Metabasite soft, slightly dolomitic to calcareous, pale olive green phyllite. Contains thin dark green chlorite streaks parallel S2 giving it a mottled appearance. S2 surfaces olive green w/ dark green spots. Metabasite rimmed by pale green, CS2-foliated, finely-banded, dolomitic to calcareous chloritic phyllite. S2 surfaces are silvery olive green. Laminar 1mm-1cm thick. Contacts between the units are hidden in rubble. Unit used between to very below Gauge and rubble @ 359-360. Interval 356-366 has only 7.5' core - likely lost @ 359-360 interval.
L	1316	157	1410	145					1214	51B1216	± # MINOR
				1,2,3 3							Moderately soft, noncalcareous, dark grey phyllite. PS2-foliated or CS2-foliated approximating PS2-foliated. Microlithons poorly defined by thin pale grey bands and/or quartz veins. Very micaceous internal. S2 surfaces are dark steely grey. Minor small, euhedral pyrite porphyroblasts. Core moderately broken to piker chippy. Minor gauge & rubble @ 387 with about 0.5' core loss. 0.5 feet calcareous mud gauge @ EOI. Gauge contains angular clasts of qtz vein material. Upper contact lost in rubble, lower contact parallel S2. Probably 0.5' core loss here.
L	1410	145	1411	142					1215	51B121\$1	
				1,2,6 2							Dark grey, moderately soft, CS2-foliated, dolomitic phyllite. S2 surfaces are dark steely to shiny grey. Microlithons defined by thin pale grey dolomite-quartz bands to laminae. Scattered euhedral pyrite phenocrysts up to 1cm across. Minor qtz-dolomite.

Lithologic Log

Date: June 2/89 Logged By: LCP

Core	From		To		Recov.			No.		Unit	Description
	10	14	16	20	22	24	26	28	30		
L											veining both parallel S2 and in low cutting fractures Interval moderately broken and paker chippy Interval 412 - EOT very broken, paker chippy, rubbly lower contact lost in rubble Recovery looks good
	1411	142	1420	2			1216	512	141	1	(582) 50:50
			128								Pale tan, slightly dolomitic, PS2-foliated, muscovite-dolomite phyllite. S2 surfaces are pale tan. locally contains very minor "fishite" streaks parallel S2. Upper contact lost in rubble. Lower contact sharp parallel S2. Minor large subhedral pyrite porphyroblasts occur in intervals TOI - 415.6 and 419.7 - 420.2 lower interval terminated by fault
											Tabbed off moderately soft, PS2 to poorly CS2-foliated, dark grey, slightly dolomitic phyllite. S2 surfaces are dark steel to shiny grey S2 does not mark fingers. Contains large scattered pyrite subhedral porphyroblasts. TOI - 415 rubble. } recovery looks good
											415 - EOT intact to slightly broken }
L	1420	2	1420	0			1217	FIA	UNT		[5B GOUGE]
			130								Medium dark grey, moderately calcareous mud gouge. Contains clasts of vein quartz, 5B phyllite, subhedral pyrite. Uppermost 0.5' is calcareous breccia rather than fault gouge. Upper contact 25/1000 w/ S2 however contact 40/1000 w/ S2. Recovery reasonable, interval 425 - 427 has 1.8 feet mud gouge. Fault is steeper than S2.

Lithologic Log

Date: June 21/89 Logged By: LCP

Code	From		To		Recov.		No.		Unit		Description	
	10	14	16	20	22	24	26	28	30	34		38
	141218	0	141416	4				1218	518	21	\$	Dark grey, moderately soft, P22-foliated, slightly dolomitic phyllite. SZ surfaces are dark steely grey and only slightly mark fingers. Scattered unbedded pyrite porphyroblasts. Veins of qtz-dolomite-calcite are vuggy because carbonate has weathered out. Interval slightly to moderately broken. Recovery OK.
L	141416	4	141818	9				1219	1101E19	1	\$	[10E ALTERED] Hard, massive, pale tan to pale green feldspar-quartz porphyry. Contains clear quartz and white feldspar phenocrysts in a fine-grained matrix. Larger feldspar phenocrysts up to 1.5cm long and show concentric zoning. Cut surface rough because of alteration of feldspars to clays & carbonation. Upper contact 60/090 west SZ. Contact is sharp. Phenocrysts about 40% of rock however contact gradational over short interval. Massive w/ no visible foliation. TOI-455 intact w/ good recovery 455-465.4 moderately broken - recovery OK. Minor rubble of qtz vein - grey phyllite at 463'. 465.4 - FOI intact w/ good recovery
L	141818	9	141916	5				1310	1101E10	9	\$	Small qtz-biotite-feldspar phenocrysts in an aphanitic pale green to pale tan matrix. Unit hard. Slightly dolomitic. Only 2% white concentric zoned feldspar phenocrysts. Biotite commonly relict to slightly altered. Core intact recovery good. Lower contact 10° west core axis. SZ contorted into near-parallelism w/ contact - very steep west core axis. Massive w/ no visible foliation.

Code	From		To		Recov.		No.		Unit	Description
	10	14 16	20	22 24	26 28	30	34 35			
L	1419165	1512170					1311	51B12151	8 #	<p>Moderately soft, medium dark grey, dolomitic phyllite locally calcareous and has abundant calcite-quartz veins infilling fractures CS2-foliated. Minor banding in shades of grey parallel S2. Scattered pyritic porphyroblasts - noted one on porphyroblast. S2 surfaces shiny, steely grey and do not mark fingers.</p> <p>TOI-507 very broken & rubble. S2 steep, subparallel intrusions contact 497-505 only 4.5 feet of core.</p> <p>507-EOI slightly broken, recovery good</p> <p>WEDGE SET AT 527 feet</p>
L	1516150	1515170					1312	51B12151	8 #	<p>Medium dark grey to dark grey, moderately soft, dolomitic and locally calcareous phyllite. Carbonate occurs in association w/ qtz in pale grey, slightly coarser grained bands. Abundant calcite also in cutting fractures. S2 surfaces steely grey and only slightly mark fingers. Banding parallel S2 in 1cm - 3cm scale caused by variations in shades of grey. Poorly CS2-foliated to PS2-foliated. Core moderately to slightly broken w/ good recovery.</p> <p>TOI-508.5 very broken & shows wedge as cores in new directions. baseless contact very gradual and arbitrary</p>
L	1515170	1612100					1313	51B101	R7 & 8 BOTH MINOR	<p>Medium to pale grey, calcareous, CS2-foliated, moderately soft phyllite. S2 surfaces are silvery grey to steely grey but surface has faint tinge of light green from chlorite. Scattered subbedial pyritic porphyroblasts up to 1cm across</p>

Code	From		To		Recov.	No.	Unit	Description
	10	14	16	20				
						1313		<p>Bandings defined by pale grey qtz-calcite intervals forming micro-lithons and 52-parallel bands. Locally there are medium & thin grey marble (i.e. very calcite-rich). Both upper and lower contacts are very gradational and arbitrary.</p> <p>TOI-573 Slightly broken w/ overall good recovery Gauge for 10cm at 565'</p> <p>573-580 Very broken w/ minor gauge @ 578' Recovery OK</p> <p>580-607 Slightly broken to intact recovery OK</p> <p>607-610 Mod. broken to very broken - pale chippy - recovery OK</p> <p>610-EOE Mod. broken to slightly broken - recovery OK</p>
	16210		17165			1314	518101	<p>2 MINOR & 7 MINOR</p> <p>Moderately soft, calcareous, poorly CS2-foliated, medium grey phyllite. Slightly darker than above unit # 33 (557-620) locally cut surface has a faint greenish tinge from chlorite. 52 surfaces are silty grey to shiny grey & do not mark fingers. Micro-lithons defined by laminae and bands of pale grey qtz-calcite. Again upper and lower contacts are gradational and arbitrary. Scattered euhedral to subhedral pyrite prophyroblasts. Begin to see the occasional pyroclastic prophyroblast - like @ 717' and 742' & 757'</p> <p>TOI-633.5 Mod. broken, slightly pale chippy - recovery OK</p> <p>633.5-636 Very broken & rubble Only 1' core recovered</p> <p>636-647 Slightly broken - recovery OK</p> <p>647-665 Mod. broken & pale chippy - recovery OK</p> <p>665-735 Slightly broken w/ local short rubble zones associated w/ qtz veins. recovery OK</p> <p>735-737 Pale chippy recovery OK</p>

Lithologic Log

Date: June 21/89 Logged By: LCP

Code	From	To	Recov.	No.	Unit	Description
1	10 14 16	20 22 24	26 28 30	34 35		
	161210 0	171615 0		1314		737- EOI. Mod. broken w/ local shaly intervals. Recovery of 762-765 have incipient creckle brn w/ hairline veins of pt-calcite. Sfs, laminae & bands are slightly obscured.
	171615 0	181410 0 256 0		1315	5B101	7 MINOR Pale grey to medium grey, calcareous, moderately soft, poorly CS2-foliated phyllite. S2 surfaces are shiny grey. Unit slightly lighter than previous unit # 34 (620-765). Poorly defined thick bands in shades of grey parallel S2. Minor pt-calcite veins up to 30cm thick. Pt-calcite forms thin grey bands & laminae defining P52 and S1 micro-lithons. Uggan contact gradational. Core intact to slightly broken. Recovery OK.
	181410 0	181514 5 260 5		1316	15B101	22 MINOR (500) 60:40 Major unit is medium to pale grey, calcareous, moderately soft phyllite. S2 surfaces are shiny grey. Dominantly P52-foliated with lesser intervals of poorly visible CS2 foliation. Calcite-pt forms slightly coarser, pale grey bands and laminae. Banding in shades of grey parallel S2. Contains interbands of moderately soft, pale olive green chlorite phyllite. S2 surfaces are silvery olive and locally have grey patches. Contains thin veins of quartz-calcite. Calcareous. Marginal contacts parallel S2. Range from sharp to gradational w/ increase of grey. Thicknesses range from 3cm to 60cm. Core slightly broken w/ good recovery. Both pa and py scattered subhedral porphyroblasts. Have not seen mixed porphyroblasts yet in this DDH.

Code	From		To		Recov.		No.		Unit	Description
	10	14	16	20	22	24	26	28		
	181514	5	181616	0			1317		15101	(580) (10 & 9) (py, sphat, ga, po) 50:40:10 Similar to last Unit # 36 (840 - 854.5) Major unit is calcareous, pale olive, homogeneous, PS2-foliated, chloritic phyllite. Contains thin qtz-calcite veins along S1 and S2. S2 surfaces silvery olive. Marginal contacts generally sharp. Interbedded in medium to pale grey, PS2-foliated to poorly CS2-foliated, calcareous phyllite. S2 surfaces are shiny grey. Qtz-calcite in thin bands and laminae. Contains 10cm qtz veins with infillings of sphalerite, galena, chalcocite, pyrrhotite. Very sparsely w/ sulphides forming irregular stringers / fracture fillings / subhedral aggregates within qtz veins. Sphalerite look red. Overall estimated grade 3-4% (Pb+Zn) (or less because of dilution). Scattered po and py pyrophyllite in gyl. TOI - 858.5 slightly broken w/ good recovery 858.5 - 860.5 - more broken and rubble recovery good 860.5 - EOT slightly broken w/ good recovery
L	181616	0	191311	2			1318		578101	Z MINOR (50) TRACE Moderately soft, medium to pale grey, dominantly PS2-foliated, calcareous phyllite. S2 surfaces are shiny grey. Locally cut surface has medium greenish druse when wet. Contains very minor thin bands of homogeneous, massive, pale olive green phyllite. Both po and py cuboidal pyrophyllite. Core moderately broken w/ good recovery. Interval 885.5 - 887.5 in incipient crackle box w/ abundant thin qtz-calcite veinlet.
L	191311	2	191315	7			1319		510101	(5870 & 3) 70:30 Moderately soft, calcareous, pale olive green, PS2-foliated chloritic phyllite. S2 surfaces are silvery olive green. Contains diffuse internal thin bands / laminae of qtz-calcite. Marginal contacts appear gradational over very short interval.

Lithologic Log

Date: June 21/89 Logged By: LCP

Code	From			To			Recov.	No.	Unit	Description	
	10	14	16	20	22	24					26
	191311	2	191315	7				1319			Contains thin interbands of moderately soft, P52- and C52- foliated, medium to medium dark grey, calcareous phyllite. Locally very calcareous. Cut surface has dark green chlorite tinge when wet. Large subhedral pyrite porphyroblasts. Minor qtz-calcite veining parallel S2. Core intact w/ good recovery S2 surfaces are shiny grey.
L	191315	7	191613	0				1410	518101		Moderately soft, calcareous, pale grey, P52-foliated phyllite. Thin bands parallel S2 of pale grey qtz-calcite. S2 surfaces are shiny grey. Contains isolated po and py porphyroblasts. At 957' have one combined po+py porphyroblast. Very faint greenish tinge visible locally on cut surface. Core intact w/ good recovery.
	191613	0	191619	3				1411	1109181#	(580) 50:50	Abundant pegmatitic white hull qtz veins containing calcite and dark green chlorite. Veins are crudely S2 foliaform. Minor vugginess from leaching of calcite. Interbands of pale grey, calcareous, moderately soft, P52-foliated phyllite. S2 surfaces are silvery grey. Core intact w/ good recovery.
	191619	3	191815	0				1412	518101	(500)	Dominantly P52-foliated, calcareous, medium pale grey, moderately soft phyllite. S2 surfaces are light shiny grey. Very very faint green tinge on cut surface. Interval 982.3-983.3 consists of calcareous, homogeneous, pale olive, moderately soft chloritic phyllite. Upper contact sharp & lower contact more gradational. S2 surface very pale green. Core slightly broken/recovery OK/intervals 982-983, 984-985 are very broken.

Code	From	To	Recov.	No.	Unit	Description
1	10 14	16 20	22 24	26 28	30 34 36	
	191815	191817 300		1413	518171	Moderately soft, medium pale grey, dolomitic, P52-foliated phyllite. Thinly banded w/ pale grey dolomite-gtz bands which weathers to a pale tan. Banding on scale 1cm or so. Cut surface has dark green tinge. S2 surfaces are shiny grey. Core med. broken w/ good recovery.
L	191817	191913 302		1414	5181971	Moderately soft, medium grey, calcareous, P52-foliated phyllite. Thinly banded w/ calcite-quartz-actinolite bands within a grey micaceous matrix. S2 surfaces are shiny grey. NB the disseminated green actinolite (?) in the calcareous bands giving a distinct green tinge to cut surface. Both pa and py as separate scattered porphyroblasts. Core med. broken w/ good recovery.
L	191913	1121018 307		1415	51D101 (5870) 60140	Moderately soft, pale olive green, calcareous phyllite. Contains thin gtz-calcite bands and laminae. S2 surfaces are olive to silvery olive. These are diffuse. Contains interbeds of green to greenish grey, thinly banded, calcareous moderately soft, C52- and P52-foliated phyllite. Difficult to differentiate between these two units. 5870 suggested because of abundant thin laminae. Core intact w/ good recovery. Extra core @ 1003 and 1003.5 consists of numerous rounded pebbles - this is considered core.
L	1101018	1101120 308		1416	51B171	Pale grey, P52-foliated, thinly banded, moderately soft, dolomitic phyllite. Thin gtz-dolomite bands weather to pale tan. S2 surfaces are shiny grey. Core med. broken except for interval 1007-1009 which is very broken. Recovery OK.

Lithologic Log

Date: June 23/89 Logged By: LCP

Code	From	To	Recov.	No.	Unit	Description
	10 14 16	20 22 24	26 28 30	34 36		
	1101120	1101650 3246		1417	51B101	(5B 5) 70:30 Pak grey, PS2-foliated to poorly CS2-foliated, moderately soft phyllite. Calcareous at top & bottom & dolomitic in central portion of unit. Dolomitic intervals weather pale blue & have waxy nature because of carbonation weathering out. S2 surfaces are shiny grey. Both pp and py on scattered porphyroblasts in phyllite. TOI - 1037 intact w/ good recovery 1037-1057.5 mod. broken & paker chippy good recovery 1057.5- EOT mod. broken & paker chippy Minor mud gouges @ 1057.5 & 1060
L	1101650	1101887 3318		1418	51D101	(5B02 X 5B70) 60:25:15 Moderately soft, calcareous, PS2- to CS2-foliated, pale druse phyllite. Homogeneous with some scattered quartz-calcite "veins" with diffuse margins. Marginal contacts are sharp to diffuse. Intervals range from 1-2 cm to 70 cm in thickness. Interbedded w/ dark grey, calcareous, CS2-foliated, moderately soft phyllite. S2 surfaces are dark shiny grey. Contains py porphyroblast w/ small incomplete rims of pp. Thinly bedded w/ 1/2-1cm bands of pale grey grt-calcite - silty appearing. Also interbedded with CS2-foliated, medium green, moderately soft, calcareous phyllite. S2 surfaces silvery grey w/ green tint. Well developed green or micaceous intervals on cut surface. Bedding delineated by thin pale grey grt-calcite bands. Core intact - recovery good.

Code	From				To				Recov.	No.	Unit	Description
	10	14	16	20	22	24	26	28				
I	10818	7	111617							149	15181017	<p>Moderately soft, CS2-foliated, pale grey, calcareous phyllite. SZ surfaces are pale silvery grey. Cut surface pale grey when dry and grey-green when wet. Thinly banded with discontinuous, poorly defined microlithons delineated by pale grey quartz-calcite bands up to 1cm across. Scattered subequal pyrite grains up to 1mm across. Commonly these grains have a pressure shadow of quartz.</p> <p>TOT-1146.5 Core intact w/ good recovery</p> <p>1146.5-1149.5 Moderately broken and panned chipping local rubble zones 1149 has incipient fracture zone infilled w/ qtz-calcite w/ orientation 25/000 wrt SZ. Recovery OK</p> <p>1149.5-EOT Core intact w/ good recovery</p>
L	111617		111712	0						1510	51D101	<p>Moderately soft, calcareous, pale olive green chlorite phyllite. Cut surface has silty roughness to it. Locally thin intervals are very micaceous. Generally P52-foliated w/ minor intervals of poorly & irregularly CS2-foliated phyllite. SZ surfaces are pale green, locally with a silvery grey to grey tint. Core intact w/ good recovery. Scattered py pyrophyllite through interval.</p>
L	111712	0	111911							1511	51810171	<p>Pale grey, moderately soft, dominantly P52-foliated, calcareous phyllite. Cut surface has medium green tinge when wet. SZ surfaces silvery grey w/ slight "wet" green tinge. Thinly banded w/ banding defined by variations in shades of grey-green and by thin grey qtz-calcite bands. Scattered py pyrophyllite. Interval 1185-1187.5 a pyroclastic white buff qtz veins locally SZ foliated. Interval and below of good recovery.</p>

Code	From		To		Recov.	No.	Unit	Description
	10	14 16	20	22 24				
	111911	5	112111	6		1512	51B1210	<p>Moderately soft, dark grey, mainly P₅₂-foliated, calcareous phyllite. Thinly banded w/ 1 cm qb-calcite grey bands. Qt-calcite intervals less green tint from disseminated hornblende/actinolite (?). Scattered subhedral porphyroblasts are dominantly qz w/ lesser py. S₂ surfaces are shiny to stately grey. Minor banding in shades of grey based on carbon content. Upper contact gradational. Lower contact sharp.</p> <p>Core intact w/ good recovery. Locally unit C₅₂-foliated.</p>
	112117	0	112121	0		1513	51D10	<p>(5870) 70:30</p> <p>Moderately soft, P₅₂-foliated, homogeneous, calcareous, olive chloritic phyllite. Cut surface has silty feel & appearance. Thin diffuse bands & streaks of white quartz-calcite. S₂ surfaces are silvery olive-green.</p> <p>Contains at least 1 interbedded interval of moderately soft, C₅₂-foliated, pale grey, calcareous phyllite. Cut surface medium green when wet. S₂ surfaces are pale silvery grey. Distinguished from 5D on basis of numerous microlithons and silvery grey S₂ surfaces. Proportions difficult to determine.</p> <p>TOI- 1217 med. broken w/ good recovery</p> <p>1217 - EOE very broken w/ local rubble & incipient gouge. Recovery good.</p>
	112121	10	112141	8		1514	51D10	<p>Moderately soft, P₅₂-foliated, calcareous, pale olive green, phyllite. Cut surface has silty feel and appearance. Contains thin bands and laminae of white calcite-quartz parallel S₂. Thin bands are "beaded" and streaky. S₂ surfaces are shiny dark chloritic green or pale milky olive green.</p> <p>Core totally intact w/ excellent recovery.</p>

Code	From	To	Feature	SYN	S ₀ Dip Direct.	S ₁ Dip Direct.	S ₂ Dip Direct.	Description
	10	14 16 20 22 24 26 28			32 34	38 40	44	
		120	CIS2S			30 010	69	Lithons + Micaceous Foliation
		129	CFSR S			53 010	81	" " "
		1418	PIS2				518	Micaceous foliation in gabbro
		167	PIS2				416	" " " "
		178	PIS2				416	" " " "
		185	PIS2				414	Chlorite foliation in gabbro
		1122	PIS2				514	Chlorite foliation in metabasite
		11312	CIS2Z				512	Chlorite foliation in SD - minor fold has Z-symmetry
		11417	PIS2				515	Chlorite fltn & streaking in metabasite
		11618	PIS2				613	Chlorite streaking in metabasite
		11911	CIS2S			41 31219	711	Zebra striping in metabasite
		12107	PIS2				514	Chlorite fltn in metabasite
		12116	PIS2				715	Chlorite fltn in metabasite
		12124	PIS2				615	Chlorite fltn in metabasite
		12165	PIS2				519	Chlorite fltn in metabasite
		131015	PIS2				317	Chlorite fltn in SD field
		13127	PIS2				410	Chlorite fltn in metabasite
		131310	CIS2S			217 31215	518	Chlorite fltns in metabasite
		131618	CIS2Z			713 01010	616	CS2 approaching PS2 // S2 mica fltn // S1 silty bands
		1318175	PIS2				812	Micaceous fltn.
		131917	PIS2				710	Micaceous fltn
		14110	CIS2			210 21619	715	Micaceous fltn
		141317	PIS2				612	Micaceous fltn
		151015	PIS2				211	Micaceous fltn - disrupted immediately beneath dyke
		15117						
		15117	CIS2S			212 31210	815	Micaceous foliation
		151113	CIS2				814	Micaceous fltn - below wedge
		151216	CIS2S			210 61317	710	Micaceous fltn - comp. banding
		151419	CIS2			411 11210	615	Micaceous fltn // comp. banding
		151713	CIS2			419 01910	718	Micaceous fltn // comp. banding
		151911	CIS2				818	Micaceous fltn - comp. banding
		16111	CIS2			315 21516	716	Micaceous fltn - comp. banding
		16119	CIS2			210 31115	518	Micaceous fltn - comp. banding
		161412	CIS2				816	Micaceous fltn - comp. banding

Structural Log

Date: June 23/89 Logged By: LCP

Code	From				To				Feature	SYM	S ₀		S ₁		S ₂		Description
	10	14	16	20	22	24	26	28			32	34	38	40	44		
				161617	CIS12	S					115	31315	716			Micaceous fltn - comp banding	
				1619130	CIS12	Z					210	11310	618			Micaceous fltn - comp banding	
				1710160	CIS12						418	21912	715			Micaceous fltn - comp banding	
				1712130	CIS12	S					119	01010	810			Micaceous fltn - comp banding	
				1714140	CIS12						215	21117	714			Micaceous fltn - comp banding	
				1716190	CIS12						410	01715	713			Micaceous fltn - comp banding	
				1718110	CIS12						214	31212	614			Micaceous fltn - comp banding	
				180110	CIS12	S					117	31217	815			Micaceous fltn - comp banding	
				1811190	PIS12								719			Micaceous fltn	
				1813130	CIS12	S					118	01511	713			Micaceous fltn - comp banding	
				1815140	CIS12	S					315	31318	717			Micaceous fltn - comp banding	
				1817120	CIS12	S					218	31113	612			Micaceous fltn - comp banding	
				1819190	PIS12								813			Micaceous fltn - PS2 approaching	
																CS2 of gte vein microfolds	
				1912140	CIS12	S					314	31412	618			Micaceous fltn - comp banding	
				1913130	CIS12	S					217	31314	716			Micaceous fltn - comp banding	
																CS2 approaching PS2	
				1915170	PIS12								816			Micaceous fltn - PS2 approaching CS2	
				1918100	CIS12	S					214	31413	810			Micaceous fltn - comp banding	
																partly marked by gte veins	
				1919180	CIS12	S					216	31415	617			Micaceous fltn - diffuse comp banding	
				11011130	CIS12						416	31115	717			Micaceous fltn - comp banding	
				11013140	CIS12	Z					216	11810	715			Micaceous fltn - comp banding	
				11015120	CIS12	M					114	21610	618			Micaceous fltn - comp banding	
				11016130	CIS12	M					114	11710	811			Micaceous fltn - comp banding	
				11016190	CIS12	M										Phase 2 fold closure	
				11019110	CIS12	M					116	000	716			Micaceous fltn - comp banding	
				11110155	CIS12	S					213	01215	618			Micaceous fltn - comp banding	
				11019160	CIS12	M										Phase 2 fold nose in phyllite	
				1112160	PIS12								713			Micaceous fltn	
				1112160	CIS13						315	01010	713			Micaceous fltn + crinkle lin	
				1113170	CIS12	M					00	000	811			Micaceous fltn - comp banding	
				1116170	CIS12	S					513	000	810			Micaceous fltn - comp banding	
				1117180	CIS12	M					010	000	719			Micaceous fltn - comp banding	
				11210120	CIS12	M					115	2135	713			Micaceous fltn - comp banding	

PROJECT DY SHAFT

LOCATION DS 27-02

LOGGED J. H. DAVIS

BOULDER NO. _____

PILE SIZE _____

REDUCTION _____

COORDINATES: N _____

E _____

ELEVATION _____

DATE June 189

PAGE of



PITEAU & ASSOCIATES
GEOTECHNICAL CONSULTANTS

VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		SD		SOUNDNESS	DEGREE OF BREAKAGE CONCERN %	DEGREE OF WEARINESS	ROCK TYPE	BEDDING DEP		BEDDING JOINTS		CRACK JOINTS		COMMENTS
		LENGTH	%	LENGTH	%					DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
7	7	0		0												
17	10	9.7		0.5												
22	5	3.4		0.5												
26	4	3.1		0												
32	6	4.1		0.8												
37	5	5		0.4												
42	5	5		0.7												
47	5	5		2.8												
52	5	5		0.4												
57	5	5		0.5												
62	5	5		2.5												
67	5	5		2.5												
72	5	4.5		2.1												
77	5	5		10												
82	5	5		0												
92	10	7.2		0.5												
102	10	6		0.5												
112	10	6		0												
117	5	5		0												
127	10	10		10												
137	10	10		0.5												
142	5	5		0												
147	5	5		0.5												
152	5	5		3.5												
157	5	5		3.7												
162	5	5		2.4												

Fig. 1. Typical rock mechanics core log.

LONGEST DAY OF THE YEAR!

PROJECT _____ DRILLHOLE NO. DS99-02 COORDINATES: N _____ DATE June 21 1989
 LOCATION _____ HOLE SIZE _____ E _____ PAGE of
 LOGGER Reznik & Kerber INCLINATION _____ ELEVATION _____



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 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

Start: 7.75 ft.

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		ROD		HARDNESS	DEGREE OF BREAKAGE		DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CROSS JOINTS		COMMENTS
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
17	9.25	9.25		0			6		D								
22	15	3.25		0.4			6		D							3	
26	4	3.15		0			6		D							2	
32	4	3.95		1.8			7		D							0	
37	5	5		1.1			7		D							1	
42	5	5		0.7			7		D							4	
47	5	5		3.1			9		D							2	
52	5	5		0.7			6		D							2	
57	5	4.65		1			7		D							2	
62	5	5		2.25			7		D							1	
67	5	5		2.25			7		D							1	
72	5	4.35		0.4			8		D							3	
77	5	4.6		1.35			7		D							2	
82	5	5		0			6		D							2	
92	10	7.3		1.7			6		D							2	
102	10	6.15		1.4			6		D							2	
107	5	1.95		0			6		D							7	
112	5	3.35		0.45			6		D							0	
117	5	4.85		0.35			6		D							1	
128	11	11		3.25			7		D							2	
132	4	4		1.1			7		D							2	
137	5	4.1		0.35			6		D							2	
142	5	5		0			6		D							2	
147	5	4.35		0.55			6		D							2	
152	5	5		2.85			8		D							2	
157	5	5		3.1			9		D							2	
162	5	5		2.1			9		D							2	
167	5	5		2.45			10		D							2	

Fig. 1. Typical rock mechanics core log.

PROJECT _____ DRILLHOLE NO 89-DS-02 COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____
 LOGGER REZNIK & KERBEL INCLINATION _____ ELEVATION _____



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 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		ROD		HARDNESS	DEGREE OF BREAKAGE		DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CROSS JOINTS		COMMENTS
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
177	10	10		4.65			9		D								
182	5	5		2.75			7		D							5	
187	5	4.75		3.95			9		D							2	
192	5	5		3.55			9		D							0	
197	5	4.35		2.1			9		D							1	
202	5	4.4		0			6		D							3	
212	10	10		3.45			7		D							1	
222	10	10		3.3			7		D							3	
232	10	10		4.75			8		D							2	
241	9	9		2.95			9		D							2	
252	11	11		1.15			6		D							2	
260	8	8		3.25			7		D							2	
262	2	1.65		1.35			10		D							2	
267	5	4.95		0			7		D							1	
272	5	5		1.3			7		D							1	
282	10	10		4.7			9		D							1	
287	5	5		4.65			10		D							2	
293.5	6.5	5		1.25			7		D							0	
303.5	10	9.35		5.7			9		D							2	
313.5	10	9.8		1.95			7		D							1	
317	3.5	3.5		0.4			6		D							2	
325	8	8		0.7			6		D							1	
335.5	10.5	10.5		2.4			8		E							2	
341	5.5	5.5		1.4			7		E							1	
347	6	5.9		1.5			7		E							0	
356	9	9		0.35			6		E							2	
366	10	7.5		0.35			6		D							2	
376.5	10.5	10		2.1			6		D							1	

Fig. 1. Typical rock mechanics core log.

PROJECT _____ DRILLHOLE NO. 89-D5-02 COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE ___ of ___
 LOGGER Reznik & Kerber INCLINATION _____ ELEVATION _____



PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		ROD		HARDNESS	DEGREE OF BREAKAGE		DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CROSS JOINTS		COMMENTS
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
387	10.5	9.45		1.05			6		E							2	
397	10	10		2.4			7		E							1	
407	10	9.6		2.65			7		E							0	
415	8	7.5		.75			7		E							0	
425	10	9.4		6.55			3		E							1	
427	2	1.8		.8			1		E							0	
427	10	9.3		4.1			9		D							0	
446	9	9.2		2.1			7		E							3	
457	11	10.8		5.75			9		E							4	
463	6	6		0			6		E							4	
473	10	10		5.95			10		E							5	
483	10	8.7		5.6			10		E							4	
493	10	10		7.55			11		E							2	
497	4	4		3.8			12		E							1	
505	8	4.3		1.2			6		E							1	
515	10	10		2.95			7		E							4	
527	12	11.4		4.8			7		E							2	
505	Wedge																
511	6	5		.4			6		E							1	
522	10	9.9		5.75			8		E							1	
527	5	4.9		2.2			9		E							2	
537	10	10		1.45			7		E							2	
547	10	9.9		5.35			8		E							0	
557	10	10		2.75			8		E							1	
567	10	9.6		3.85			9		E							2	
577	10	10		6.8			9		E							2	
580	3	2.5		0			6		E							2	
587	7	7		1.2			6		E							1	

Fig. 1. Typical rock mechanics core log.

PROJECT _____
 LOCATION _____
 LOGGER Reznik & Kerber

DRILLHOLE NO. DS-89-02 COORDINATES: N _____ DATE _____ 19__
 HOLE SIZE _____ E _____ PAGE ___ of ___
 INCLINATION _____ ELEVATION _____



PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		ROD		HARDNESS	DEGREE OF BREAKAGE		DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CROSS JOINTS		COMMENTS	
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.		
597	10	10		4.35			7		E									
607	10	10		1.65			7		E									1
617	10	10		2.95			8		E									3
627	10	10		3.8			7		E									1
637	10	8.6		1.95			7		E									0
647	10	10		2			7		E									2
655	8	6.7		.35			6		E									4
665	10	10		1.2			7		E									2
675	10	9.7		3.8			7		E									2
685	10	10		3.85			8		E									1
695	12	10		6.65			9		E									0
705	10	10		5.95			10		E									0
715	10	9.9		3.91			10		E									1
727	12	12		7.10			9		E									0
737	10	9.3		2.40			6		E									0
747	10	9.60		1.90			7		E									0
756	9	9		2.45			7		E									1
765	10.5	10		2.15			7		E									2
777	11.5	10.6		7.45			10		E									0
787	10	10		5.55			10		E									0
797	10	10		5.45			9		E									1
807	10	9.35		4.15			7		E									1
817	10	10		3.65			8		E									1
827	10	10		6.2			10		E									0
837	10	9.7		8.00			10		E									1
847	10	10		8.00			10		E									0
857	10	9.5		3.6			8		E									0
867	10	9.7		5			9		E									1

Fig. 1. Typical rock mechanics core log.

PROJECT _____ DRILLHOLE NO. 89 DS09, COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE ___ of ___
 LOGGER Rennik & Kerber INCLINATION _____ ELEVATION _____



PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		ROD		HARDNESS	DEGREE OF BREAKAGE		DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CROSS JOINTS		COMMENTS	
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.		
877	10	10		3.95		8		E										
887	10	9.4		1.15		7		E										0
897	10	10		5.25		9		E										1
907	10	10		4.35		7		E										0
917	10	9.9		4.65		10		E										0
927	10	9.8		7.9		9		E										0
937	10	10		8.3		11		E										0
947	10	9.8		8.2		13		E										0
957	10	9.6		5.1		12		E										0
964	7	6.7		5.55		12		E										0
969	5	5		2.8		7		E										1
972	3	2		.35		7		E										0
982	10	9.9		2.9		7		F										0
992	10	10		4.1		10		E										1
1003	11	10.65		7.41		10		E										2
1003.5	0.5	0.5		0		6		D										0
1004	0.5	0.5		0		6		E										0
1005	1	1		0.7		7		F										0
1011	6	6		4.25		7		D										3
1027	16	10.4		4.35		10		E										4
1037	10	10		7.1		10		F										1
1047	10	10		2.6		7		E										6
1054	7	7		0.7		7		E										2
1064	10	10		2.4		6		F										0
1074.6	10.6	10.8		7.95		12		E										0
1085	10.4	10.4		6.2		10		E										1
1085	10	10		6.3		12		F										0
1106	11	10.75		6.4		11		E										1

Fig. 1. Typical rock mechanics core log.

PROJECT _____
 LOCATION _____
 LOGGER Reznick & Kerby

DRILLHOLE NO. 91-DS-02 COORDINATES: N _____ E _____
 HOLE SIZE _____ INCLINATION _____ ELEVATION _____

DATE _____ 19__
 PAGE ___ of ___



PITEAU & ASSOCIATES
 GEOTECHNICAL CONSULTANTS
 VANCOUVER CALGARY

GEOTECHNICAL CORE LOG

DEPTH (TO)	LENGTH OF RUN	CORE RECOVERY		ROD		HARDNESS	DEGREE OF BREAKAGE		DEGREE OF WEATHERING	ROCK TYPE	BEDDING DIP		BEDDING JOINTS		CROSS JOINTS		COMMENTS
		LENGTH	%	LENGTH	%		CATEGORY	NO.			DEPTH	ANGLE	NO.	FREQ.	NO.	FREQ.	
1116	10	10		6.7			10		E								
1127	11	10.35		4.65			9		E							1	
1136	9	8.95		4.4			6		E							1	
1140.5	4.5	4.5		3.2			7		E							1	
1154	13.5	8.2		.35			7		E							2	
1164	10	10		4.05			10		E							3	
1175	11	9.7		5.5			12		E							2	
1185	10	10		3.1			9		E							0	
1187.5	2.5	2.5		2.05			10		E							1	
1197	10.5	9.5		5.55			10		E							0	
1207	10	10		6.6			12		E							3	
1217	10	9		4.1			10		E							0	
1227	10	10		5.8			13		E							1	
1237	10	9.6		8.6			13		E							0	
1247	10	10		8.35			13		E							1	
1257	10	10		8.35			12		E							1	
1267	10	9.8		7.30			13		E							1	
1277	10	9.7		8.0			12		E							0	
to be cont.																0	
1287	10	10.0		5.1			10		E							1	

Fig. 1. Typical rock mechanics core log.



ARCTIC DIAMOND DRILLING LTD.

184 Industrial Road, Whitehorse, Yukon Y1A 2V1 (403) 667-6434

May 19, 1989
INVOICE # 2633

Curragh Resources
117 Industrial Rd.
Whitehorse Yukon
Y1A 2T8

Drilling charges for the period April 21 - May 15, 1989.

Mobilization:

To Highway Point as per Clause 13 1/2 of \$6000.00	✓ 3000.00
Moving + Setting Up on First Hole 304 man hours @ \$33.50 per man hour	10184.00

Hole #1	-90xNQ	
<u>Overburden</u>		
0-20=20 ft @ \$20.00 per foot	400.00	
<u>Reaming Casing</u>		
20-583=563 ft @ \$15.00 per foot	8445.00	
<u>Core Drilling</u>		
20-997=977 ft @ \$25.00 per foot	24425.00	
<u>Reaming Cave</u>		
106 Man hours @ \$33.50 per hour	3551.00	
53 Machine hrs @ \$15.00 per hour	795.00	
<u>Testing</u>		
49 man hours @ \$33.50 per hour	1641.50	
24.5 machine hrs @ \$15.00 per hour	367.50	39625.00

Equipment Supplied

Roto - Dip Rental @ \$975.00 (2 mons. Min.) + 10%	2145.00
D-6 Tractor Rental - April 21- May 15 = 25 days @ \$240.00 per day	6000.00
150 NQ Coreboxes @ \$8.00 per box	1200.00
25 NQ Corebox Lids @ \$3.00	75.00

Total Amount Due This Invoice \$62,229.00

CODE	JH1230-321
APPROVED	<i>[Signature]</i>
DATE	June 27 1989



ARCTIC DIAMOND DRILLING LTD.

184 Industrial Road, Whitehorse, Yukon Y1A 2V1 (403) 667-6434

June 21, 1989
INVOICE # 2645

Curragh Resources
117 Industrial Road,
Whitehorse Yukon
Y1A 2T8

Drilling charges for the period from May 16 - 31, 1989 (962)

Hole #1 -90xNQ

Core Drilling

997-1000 = 3 ft @ \$25.00 per foot 75.00
1000-1483 = 483 ft @ \$26.50 per foot 12799.50

Wedging

#1 82 man hours @ \$33.50 per hour 2747.00
41 machine hrs @ \$15.00 per hour 615.00

#2 70 man hours @ \$33.50 per hour 2345.00
35 machine hrs @ \$15.00 per hour 525.00
1 Wedge @ \$698.17 + 10% 767.99

Cementing

12 man hours @ \$33.50 per hour 402.00
6 machine hrs @ \$15.00 per hour 90.00

Testing

35.5 man hours @ \$33.50 per hour 1189.25
17.75 machine hrs @ \$15.00 per hour 266.25

Standby Time

18 man hours @ \$26.30 per hour 473.40

Material and Equipment Charges

D-6 Dozer Rental - May 16-31 =
16 days @ \$240.00 per day 3840.00
54 10' NW Wedges @ \$698.17 + 10% 7522.42
2 NQ Wedges @ \$698.17 each + 10% 1535.98
35,193.79

Hole #2 90xHQ/NQ

Moving

78 man hours @ \$33.50 per hour 2613.00 2,613.00

Total Amount Due This Invoice.....\$37,806.79

CODE	JH1230 -321
APPROVED	<i>[Signature]</i>
DATE	July 21 89



ARCTIC DIAMOND DRILLING LTD.

184 Industrial Road, Whitehorse, Yukon Y1A 2V1 (403) 667-6434

June 21, 1989
INVOICE #2646

Curragh Resources
117 Industrial Rd.,
Whitehorse Yukon
Y1A 2T8

Drilling charges for the period from June 1-15, 1989 (962)

Hole #2 -90xNQ

Moving

31 man hours @ \$33.50 per hour 1038.50

Overburden

0-10=10feet @ \$20.00 per foot 200.00

Reaming Casing

10-42=32 feet @ \$15.00 per foot 480.00

Core Drilling

10-291=281 feet @ \$29.00 per foot HQ 8149.00

291-887=596 feet @ \$25.00 per foot NQ 14900.00

Wedging

42 man hours @ \$33.50 per hour 1407.00

17 machine hours @ \$15.00 per hour 255.00

Mud - Seal

9 man hours @ \$33.50 per hour 301.50

4.5 machine hours @ \$15.00 per hour 67.50

Testing

47.5 man hours @ \$33.50 per hour 1591.25

23.75 machine hrs @ \$15.00 per hour 356.25

Water Supply

4 man hours @ \$33.50 per hour 134.00

Standby Time

8 man hours @ \$26.50 per hour 210.40

Material and Equipment Charges

D-6 Dozer Rental June 1-15 =

15 days @ \$240.00 per day 3600.00

50 HQ Coreboxes @ \$8.00 each 400.00

33,090.40

Total Amount Due This Invoice.....\$33,090.40

CODE	JH1230-321
APPROVED	<i>[Signature]</i>
DATE	Aug 5 / 89

3 Pails 20Kg Universal Resin @ \$270.00 + 10% 891.00
 1 Litre Accelerator @ \$22.00 + 10% 24.20
 2 4 litre Pump Cleaner @ \$25.00 + 10 % 55.00
 4 (or 5) NQ Displacement Plugs @ \$12.00 ea 48.00
 - Freight - no charges rec'd yet- to follow----

4,817.31

TOTAL AMOUNT DUE THIS INVOICE

\$29,535.61

SEND TO:		TORONTO <input type="checkbox"/>
		FARO <input checked="" type="checkbox"/>
CODE	AMOUNT	
TH1230-321	29535.61	
APPROVED	DATE	
<i>[Signature]</i>	Aug 5/89	

ARCTIC DIAMOND DRILLING LTD.
DAILY SHIFT REPORT SUMMARY

JOB # 8962 COMPANY Cumagh Resources

LOCATION D4

DRILL 285-56 #33 DATE Jun 1-15/89

DATE	SHIFT	MOVING		CASTING		CORE DRILLING		7 1/2 FEET CODE NEW CORE DRILLING MACHINER		REWORKING CORE		MAINTENANCE REPAIRS		USE OF MUD		TESTING OR WEDGING		WATER SUPPLY		TRAVELLING TIME PAID		STANDBY TIME		TIME NOT ACCOUNTED FOR		TOTALS		OVERBURDEN	CORE DRILLING	REWORKING CASTING	
		MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN	MACH				
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ARCTIC DIAMOND DRILLING LTD.

184 Industrial Road, Whitehorse, Yukon Y1A 2V1 (403) 667-6434

July 10, 1989
INVOICE #2649

Curragh Resources
117 Industrial Road
Whitehorse Y.T.
Y1A 2T8

Drilling charges for the period June 16-June 30, 1989.(DY - 962) Drill 56 #33

<u>Hole #2 90xNQ</u>	
<u>Core Drilling</u>	
887-1000=113 feet @ \$25.00 per foot	2825.00
1000-1287=287 feet @ \$26.50 per foot	7605.50
<u>Reaming Cave</u>	
81 man hours @ \$33.50 per hour	2713.50
40.5 machine hrs @ \$15.00 per hour	607.50
<u>Cementing</u>	
142 man hours @ \$33.50 per hour	4757.00
71 machine hrs @ \$15.00 per hour	1065.00
<u>Testing</u>	
28 man hours @ \$33.50 per hour	938.00
14 machine hrs @ \$15.00 per hour	210.00
<u>Wedging</u>	
10 man hours @ \$33.50 per hour	335.00
5 machine hrs @ \$15.00 per hour	75.00
<u>Standby Time</u>	
116 man hours @ \$26.30 per hour	3050.80
<u>Relocate & Repair Power Plant</u>	
16 man hours @ \$33.50 per hour	536.00
	24,718.30

Material and Equipment Charges

D-6 Dozer Rental - June 16-19 = 4 days	
@ \$240.00 per Day	960.00
Roto Dip Rental @ \$975.00 per month - no	
charges received yet - to follow	--- --
2 Bags Fondu Cement @ \$57.60 + 10%	126.72
7 Bags Cal Seal @ \$98.90 +10%	761.53
6 Bags Permafrost Cement @ \$57.60	345.60
3 VK Grout Plugs @ \$97.77 + 10%	322.47
1 Bypass Wedge @ \$698.17 ea + 10%	767.99
1 NQ Bit #11578/4 @ \$468.00 + 10%	514.80
1 HQ W/L Bit (Hobic) #9Q441	n/c
2 Pails 20kg Universal Resin	n/c
1 litre Accelerator	n/c
2 4 Litre Pump Cleaner	n/c
4 NQ Displacement Plugs	n/c
- Freight	n/c

1000 - 1000 STREET
LANGLEY, B.C.
V3R 4P8

5074

SOLD TO Arctic Diamond Drilling
184 Industrial Rd.
Whitehorse, YT

SHIP TO SAME

SALES REP J.C. **TERMS** Net 30 **SHIPPED VIA** AWB # C.A.In'l 01831420712 **FOB** Langley **DATE** June 27/89

	QUANTITY ORDERED	QUANTITY SHIPPED	DESCRIPTION	UNIT PRICE	AMOUNT
1	2	2	20 Kg. Universal Resin	--	--
2	1	1	1 Litre Universal Accelerator	--	--
3	2	2	4 Litre Pails D.O.P. Pump Cleaner	--	--
4					
5			TRIAL SAMPLES ONLY		N/C
6					
7					
8					
9					
10					

REDIFORM

7S021E
TRIP

INVOICE

2

SPEEDIPLY PAT'D MCP PAT'D

rec'd July 24



ARCTIC DIAMOND DRILLING LTD.

184 Industrial Road, Whitehorse, Yukon Y1A 2V1 (403) 667-6434

July 25, 1989
Invoice #2652

Curragh Resources
117 Industrial Road,
Whitehorse Yukon
Y1A 2T8

DJ

Drilling charges for the period July 01-11, 1989. Drill(56)#33 Job 962.

Hole #2	90xNQ		
	<u>Moving</u>		
35 man hours @ \$33.50 per hour		1172.50	
	<u>Reaming Cave</u>		
48 man hours @ \$33.50 per hour		1608.00	
24 machine hours @ \$15.00 per hour		360.00	
	<u>Cementing</u>		
78 man hours @ \$33.50 per hour		2613.00	
39 machine hrs @ \$15.00 per hour		585.00	
	<u>Testing</u>		
3 man hours @ \$33.50 per hour		100.50	
1 1/2 machine hrs @ \$15.00 per hour		22.50	
	<u>Standby Time</u>		
170 man hours @ \$26.50 per hour		4471.00 ✓	
	<u>Travelling Time</u>		
16 man hours @ \$26.30 per hour		420.80	
	<u>Material Left in Hole</u>		11353.30
3 - 10 ft NW Casing @ \$108.45		325.35	
6 - 5 ft HW Casing @ \$ 95.25		571.50	
7 - 10 ft H W/L Rods @ 151.50 ← <i>excavating?</i>		1060.50	
1 - 5 ft HQ outer-tube Assembly		425.35	2382.70

Total Due This Invoice.....\$13,736.00

SEND TO:		TORONTO <input type="checkbox"/>
		FARO <input checked="" type="checkbox"/>
CODE	AMOUNT	
JH#1230-321	13,736.00	
APPROVED	DATE	
<i>[Signature]</i>	July 5/89	

ARCTIC DIAMOND DRILLING LTD.

DAILY SHIFT REPORT SUMMARY

JOB # 8962 COMPANY CUREAGH

LOCATION DY

DRILL 56 # 33 DATE 01-15 JUL 1971

DATE	SHIFT	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16			
		MOVING		CASING		CORE DRILLING		NON CORE DRILLING		REWORKING CORE		MAINTENANCE REPAIRS		CEMENTING		USE OF MUD		TESTING OR WEDGING		WATER SUPPLY		TRAVELLING TIME PAID		STANDBY TIME		TIME NOT ACCOUNTED FOR		TOTALS		OVERBURDEN		CORE DRILLING		REWORKING CASING	
		MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE	MAN HOURS	MACHINE
HOLE #	2	90° X N 2																																	
JULY 11 D																																		1287	
01 N										16		8														16		8				1287			
02 D																				16						16						1287			
02 N																										16		8				1287			
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04 N																				16						16						1287			
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05 N																				16						16						1287			
06 D																				16						16						1287			
06 N										6		3								6						12		3				1287			
07 D										24		12														24		12				1287			
07 N										8		4								8						16		4				1287			
08 D (4)										8		4								4						12		4				1287			
09 D										24		12								24						28						1287			
09 N										24		12														24		12				1287			
10 D 79																3		1 1/2								24		1 1/2				1287			
10 N		18		(7)		(2)																				24		1 1/2				1287			
11 D 16																				16						18						1287			
T 35		18		(2)				48		24				78		59		3		1 1/2				16		170				374		64 1/2		1287 @ DRILLED	



ARCTIC DIAMOND DRILLING LTD.

184 Industrial Road, Whitehorse, Yukon Y1A 2V1 (403) 667-6434

August 28, 1989
Invoice # 2660

Curragh Resources
117 Industrial Road
Whitehorse Yukon
Y1A 2T8

Drilling charges for the period July 01-11, 1989. (962) Drill 56/#33

Hole #2 90xNQ

Freight charges for Universal Resin and Accelerator 260.48

Rental of Rotodip - June 20 to July 13, 1989. 720.00

Total Amount Due this Invoice \$980.48

TORONTO	<input type="checkbox"/>	FARO	<input checked="" type="checkbox"/>
CODE	AMOUNT		
JH1230-321	980.48		
APPROVED	DATE		
<i>[Signature]</i>	22 6/89		

Shipper's Name and Address
MIESSEN TERRACRETE SYSTEMS LTD
 1663 199A STREET LANGLEY, B.C.

Not negotiable
Air Waybill*
 (Air Consignment note)
 Issued by
CANADIAN AIRLINES INTL
CALGARY, ALBERTA

Consignee's Name and Address
80389 T
ARCTIC DRILLING
184 INDUSTRIAL ROAD
WHITEHORSE, YUKON

Consignee's account Number
12560009

Copies 1, 2 and 3 of this Air Waybill are originals and have the same validity

It is agreed that the goods described herein are accepted in apparent good order and condition (except as noted) for carriage SUBJECT TO THE CONDITIONS OF CONTRACT ON THE REVERSE HEREOF. THE SHIPPERS ATTENTION IS DRAWN TO THE NOTICE CONCERNING CARRIERS LIMITATION OF LIABILITY. Shipper may increase such limitation of liability by declaring a higher value for carriage and paying a supplemental charge if required.

Shipping Carrier's Agent Name and City
CANADIAN AIRLINES INTL YVRFF

Accounting Information
CT ARCTIC DIAMOND DRILLING 184
INDUSTRIAL RD WHITEHORSE, YT Y1A2V1
PRO PU ZON XX DL ZON XX

Carrier's IATA Code
51 9 9185

Account No.

Point of Departure (Addr. of first Carrier) and requested Routing
VANCOUVER

By first Carrier	ROUTING AND DESTINATION	to	by	to	by	Currency	CHGS	WT/VAL	Other	Declared Value for Carriage	Declared Value for Customs
XY	CANADIAN AIRLINES					CC		X	X	NVD	NCV
Airport of Destination		Flight/Date		Flight/Date		Amount of Insurance		INSURANCE - If Carrier offers insurance, and such insurance is requested in accordance with the conditions on reverse hereof, indicate amount to be insured in figures in box marked 'Amount of insurance'.			
WHITEHORSE		621/0507				XXXXX					

NOTED DANGEROUS GOODS AS PER ATTACHED SHIPPERS DEC

No. of pieces	Gross Weight	kg	Rate Class	Commodity Item No.	Chargeable Weight	Rate / Charge	Total	Nature and Quantity of Goods
6	86.0K	Q			86.0	2.68	230.48	DANGEROUS GOODS
	84.0K							CNTNR NBR- AVEB135CP
6	86.0K						230.48	TIME ACCEPT 16:21

Prepaid	Weight Charge	Collect	Other Charges	RAC 30.00
		230.48		
Valuation Charge				
Tax				
Total other Charges Due Agent				
Total other Charges Due Carrier		30.00		
Total prepaid			260.48	
Total collect				260.48
Currency Conversion Rates	cc charges in Dest. Currency		04 JUL 89	YVR
			Executed on (date)	at (place)
			Signature of issuing Carrier or its Agent	
For Carriers Use Only at Destination	Charges at Destination	Total collect Charges	260.48	

INVOICE COPY