

DY DRILLING

004913

DRILLHOLE LOGS 90DY01, 90DY03,
and 90DY04

DRILLHOLE LOCATION PLAN

DIAMOND DRILL CORE LOG

Date: _____

Hole Number: 90DX-01

Reference Fabric Orientation Diagram: _____

Project: _____

Location: DY PROPERTY

Claim: _____

~~Terr Plane~~
Co-ords.: 6901399.4 N

597347.3 E

Grid Co-ords: _____

Elevation: 1100.3m

All symmetry determinations looking

Total Depth: 139.3m

_____ with _____ dipping

Inclination: -45° @ 195 Az

_____ with dip azimuth _____

Purpose: LOCATE FAULT FOR DATA TO CALC 3-DY P61m.

Reason hole Terminated: INTERSECTED FAULT OF INTEREST

Logged by: J. Zbednoff

Date(s) Logged: _____

Drilling Contractor: E. CARON DRILLING

Hole Cemented: YES Steel down Hole: CASING

Size	CORE From	To	Collar Cased and Capped: <u>Present</u>
<u>CASING</u>	<u>0.0</u>	<u>2.4m</u>	
<u>NQ</u>	<u>2.4</u>	<u>139.3m</u>	

Assay Lab: _____

Certificate No's: _____

Started: _____ Completed: _____

Lithologic Log

Date: Aug 90 Logged By: J. Bechtolt

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24	26 28 30	34 35	
	0.0	2.4				CASING: Casing left in hole, pressure set at m.
	2.4	3.6			SFO	Medium grayish green moderately to strongly calcareous well laminated phyllite. Lamin. vary in size from 0.2-0.4 cm, S ₂ is poorly defined. CS ₂ surfaces are medium to medium dark greenish gray. Rock is generally medium hard, interval is strongly broken, recovery is good. Lower contact is sharp and parallel S ₂ .
	3.6	4.9			SCP (SFO) 70:30	Medium to light green weakly calcareous rock contains a poorly preserved igneous texture and a weak S ₂ fabric. 5-7% fine grained mineral (lawsonite?) occurs throughout. Rock is generally medium hard. CS ₂ surfaces are medium to medium dark green. Upper and lower contacts are sharp and parallel S ₂ . Interval contains 30% bands of SFO with moderately well preserved S ₂ . Rock is medium green, slightly calcareous and has a weak S ₂ . S ₂ surfaces are medium green. Interval is slightly broken, core recovery is good.

Lithologic Log

Date: Aug 90 Logged By: B. Zborak

Code	From		To		Recov.		No.		Unit	Description
	10	14	16	20	22	24	26	28	30	
	4.9		56.8						5BQ	<p>Medium gray unit is strongly calcareous throughout with well developed laminae from 0.1 - 1.0cm. S_g is generally well developed with CS_g surfaces medium gray. Unit hosts 1-2% cm. to dm. scale quartz calcite veins commonly oriented subparallel S_g. S_g is generally well preserved. Unit is consistent in texture and composition throughout. Rock is medium s. Core is moderately broken throughout but strongly broken and moderately weathered at 6.3-11.5. Recovery is generally good throughout, but very poor from 8.8-12.2 (47%). RQD is 0% 1.6</p>
	56.8		59.1						5BQ	<p>FAULT Medium gray, generally very weakly calcareous, locally moderately calcareous rock is very strongly broken locally crushed with minor localized gouge. Minor oxidation. Fractured and broken surfaces are rare. CS_g and fractured surfaces are medium gray. Gouge and crushed zones occur at 56.8-57.0, 58.1-58.2. Recovery is generally poor to very poor (43%). RQD is 0% 1.0</p>
	59.1		61.6						5CQ	<p>STRONGLY BROKEN Medium gray, medium grained, moderately calcareous, slightly oxidized gabbro is strongly broken with weak to moderate oxidation on fractured surfaces. Igneous texture is well preserved with a weak</p>

Lithologic Log

Date: Aug 90

Logged

By: E. Ebert

Code	From		To		Recov.		No.		Unit	Description	
	10	14	16	20	22	24	26	28			30
											PS ₂ foliation developed. Unit hosts 5-7% fine grained but mineral (leucocrone?), 1-2% calcite blebs and stringers of variable orientation. Fractured surfaces are rarely parallel S ₂ . Recovery is moderate to poor (66%) RWD is 0%. Rock is medium hard.
	61.6		66.8						5C9		Medium green, moderately to strongly calcareous, gabbro contains a very well preserved igneous texture with a very weak PS fabric overprint. Unit is locally fractured with very low angle fractures T.C.T. These fractures are open and moderately oxidized. Interval contains 2-3% calcite stringers and clots of variable orientation. Rock is generally hard slightly broken locally moderately fractured, recovery is good. Upper contact is by increase in RWD, lower contact is sharp.
	66.8		75.8						5FD (5FD) 85:15 ± Pyroxinite(?)		MIXED UNIT. Intrusive units are medium dark green contain a PS ₂ fabric of variable intensity, locally serpenitized, often display strongly chloritized mafic phenocrysts (0.5-4mm) S ₂ surfaces are dark green. Igneous texture is weakly to moderately preserved, units are weakly to moderately carbonatized and generally soft. S ₂ fabric is sporadically moderately well preserved. 5FD units are medium green, finely laminated moderately calcareous and contain a well developed PS ₂ fabric. S ₂ surfaces

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28 30	34 35		
	78.9	80.5			SCP	Medium green massive non-calcareous unit displays a very poorly preserved igneous texture and a moderate to weak PS_2 fabric. S_2 surfaces are medium to medium dark green. Rock is generally soft. Core is moderately broken recovery is good. Upper and lower contacts are sharp and parallel S_2 .
	80.5	90.2			SCP	Pyroxinite Dark green, medium grained, non-calcareous pyroxinite is moderately magnetic, medium silt and contains a moderately well preserved igneous texture. A weak PS_2 fabric is locally visible. Core is slightly broken, with rare occurrence of crushed zones less than 5cm wide, recovery is good. Upper and lower contacts are sharp and parallel S_2 .
	90.2	92.1			SCP	Medium to medium light green, massive, non-calcareous, locally very slightly calcareous rock contains a moderately well preserved igneous texture. Unit hosts 5-7% chloritoid and motic minerals (1-1.5mm x 2-5mm) elongated into a well defined PS_2 fabric. No visible leucocene. Unit is medium soft, core is very slightly broken recovery is very good. Upper and lower contacts are sharp and parallel S_2 .

Code	From	To	Recov.	No.	Unit	Description						
1	10	14	16	20	22	24	26	28	30	34	35	
	92.1	94.1			SFO	BIOTITE Medium green, locally dark greenish black, moderately calcareous, rock contains a poorly preserved igneous texture and is weakly to moderately locally strongly altered to biotite. A moderate PS_2 fabric is ubiquitous. Biotization is generally controlled by S_2 . Rock hosts 7-10% leucosene and moderate chlorination. S_2 surfaces are dark green to very dark green/black where biotization is strong. Carbonation is commonly stronger with an increase in biotite development. Rock is generally soft, core is moderately broken, recovery is good. Upper and lower contacts are sharp and parallel S_2 .						
	94.1	95.8			SFO	\pm BIOTITE Light green, finely laminated, moderately to slightly strongly calcareous phyllite contains a strong to moderate PS_2 fabric. Laminae are commonly 1-2mm in width, rare occurrences of CS_2 contain laminae up to 3-4mm. S_2 surfaces are medium green. Biotite alteration increases in intensity down hole over last meter, but where most intense is still only slightly significant. Rock is medium hard, core is moderately broken, recovery is good. Upper contact is sharp and oriented steeper than PS_2 of upper unit and also steeper than PS_2 and S_1 of this unit; contact is 24° TCA, PS_2 and S_1 above and below contact are 70° TCA. Lower contact is sharp and parallel S_1 .						

Lithologic Log

Date: Aug '90 Logged By: Z. Z. Z. Z.

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24	28 28 30	34 35	
	95.8	102.4			549	<p>Medium green, massive, generally non-calcareous, sporadically moderately calcareous near lower contact. Rock contains a poorly preserved igneous texture overprinted by a moderate PS_2 fabric. Unit hosts trace- 10% fine grained leucocrystalline elongated into S_2. S_2 surfaces are medium to medium dark green. 2-3% quartz calcite veinlets occur parallel S_2. Rock is soft, core is moderately locally slightly broken, recovery is good. Interval is strongly broken with poor recovery at 101.5 - 102.1 \Rightarrow RAD is 0% recovery is 67%. Upper and lower contacts are sharp and parallel S_2.</p>
	102.4	104.9			549 1	<p>Light greenish gray, moderately well laminated, moderate to strong calcareous phyllite contains a moderately well defined CS_2 fabric. S_2 surfaces are medium grayish green. Unit is slightly siliceous and medium hard. Laminae are variable in thickness common, 1-2mm sporadically moderately to strongly siliceous and 2-4mm thick. Core is moderately broken, recovery is good. Upper and lower contacts are sharp and parallel S_2.</p>
	104.9	106.6			549	<p>Medium green, moderately calcareous gabbro contains a</p>

Code	From		To		Recov.		No.		Unit	Description
	10	14 16	20 22	24 26	28 30	34 35				
		106.6								Moderately well preserved igneous texture and a strong PS_2 fabric. S_2 surfaces are dark to medium dark green. Unit hosts 10-15% fine grained leucovene elongated into S_2 , and 2-5% dark diffuse calcite veinlets parallel S_2 . Rock is medium soft, core is slightly to moderately broken, recovery is good. Upper and lower contacts are sharp and parallel S_2 .
	106.6	107.1							500	Medium to olive green, very fine grained, non-calcareous unit contains a strong PS_2 fabric. S_2 surfaces are olive and dark green. Rock is locally siliceous and hard, generally unit is medium soft. No distinct fabric beyond S_2 which occasionally host black bands <1mm wide. Core is strongly broken and recovery is good.
	107.1	111.4							500 (504) (80:20) ± Ankerite (?)	Generally medium green non-calcareous massive gabbro contains a weakly to moderately well preserved igneous texture. PS_2 is strong and ubiquitous and hosts 2-7% elongated chloritized mafic phenocrysts. S_2 surfaces are medium green. Unit hosts 0-7% fine grained leucovene(?). Interval below 109.4 is sporadically altered

Lithologic Log

Date: Aug 90

Logged By:

J. Z. G. [Signature]

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24	26 28	30	34 35
						to a weak yellowish color. Frequency and intensity of alteration increases down hole. Alteration is considered ankerization or siderization. Rock is generally soft and moderately broken, recovery is good. Upper contact is sharp and parallel S_2 . Lower contact is gradational and parallel S_2 . Lower contact has been selected where alteration changes from weak / locally moderate - to - generally moderately strong.
	11104	1135			1544	Ankerite (?) Medium green with moderate yellowish cast, massive slightly ankeritic (?) gabbro contains a moderately to poorly preserved igneous texture. PS_2 is strong and S_2 surfaces are buff-green. Unit hosts 5-7% elongated mafic phenocrysts, 5-7% fine grained leucocryst(?) and sporadic occurrences of moderate to strong biotization. Biotization appears to have a close relationship to cm scale quartz-dolomite veins subparallel S_2 . Most intense biotization occurs within 1-2cm of veins. Yellowish cast / alteration increases in intensity down hole. Rock is generally soft, core is slightly broken and recovery is good. Upper contact is subjective (see upper interval), lower contact is sharp and parallel S_2 .

Core	From		To		Recov.		No.		Unit	Description	
	1	10	14	18	20	22	24	26			28
		113.5		116.2					5F4	± ankerite (?) Light grayish green to sporadically olive green and chocolate brown phyllite is medium to thickly laminated with a well formed S_2 fabric. Laminae are generally 0.5-1.2 cm thick. Variable colors reflect bands and laminae of differing alteration. Ankeritization is suspect and at most is weak. No apparent rhyme nor reason for alteration distribution can be noted. S_2 surfaces are variable in color. Interval contains sporadic cm-scale quartz veins oblique to S_2 but offer no correlation to alteration. Rock is generally soft, core is moderately broken, recovery is generally good. Upper contact is sharp and parallel S_2 . Lower contact is sharp, parallel S_2 and selected on an increase in gray color.	
		116.2		118.2					5B0 (5B4) 90:10	Generally medium to light gray, locally multicolored as above unit, non-calcareous, very weakly dolomitic or ankeritic phyllite has a moderately to poorly developed S_2 fabric. S_2 surfaces are medium gray. Multicolored alteration is weak, sporadic and occurs in mm-cm scale bands. Unit hosts 5-7% mm and cm scale quartz veins parallel S_2 . Rock is medium soft, core is moderately broken, recovery is good. PS_2 dominates fabric over last 0.5m	

Lithologic Log

Date: Aug 90 Logged By: J. Zbort, Jr.

Code	From		To		Recov.		No.		Unit	Description
	10	14 16	20 22	24 26	28 30	34 35				
	118.2	119.2							5B2	FAULT Medium gray, non-calcareous, non dolomitic, unit consists of 30% strongly broken and crushed rock and 70% gouge. Broken rock displays a strong S_2 fabric at 20° TCA. Gouge supports no available fabric orientation and 1-2mm fragments of shattered quartz veins(?). Rock is generally mushy, recovery is poor. Upper and lower sections are have not been recovered.
	119.2	137.2							5B2	Dark gray, very weakly calcareous and moderately calcareous phyllite is moderately S_2 -foliated and hosts 2-5% scattered clasts of Py. Unit contains 7-10% calcite veins and veins, 0-5% quartz-carbonate veins. Rock is generally medium hard, core is generally strongly broken with good recovery. Interval at 127.8-130.3 is very strongly broken, locally weakly crushed, recovery is 80%, RW is 0%.
	137.2	139.3							5B2.1	As above with 40-50% broken quartz veins with moderate chloritization along margins and within wall rock fragments.
<u>END OF MALS</u>										

DDH 90.DY.01
2 8

CURRAGH RESOURCES INC.
Structural Log

Page _____ of _____

Date: Aug 90 Logged By: J. ZELENSKY

RALE OF

From	To	Feature	SYE	S ₀ L ₂		S ₁		S ₂		Description			
				Dip	Direct.	Dip	Direct.	Dip	Direct.				
10	14	16	20	22	24	26	28	32	34	38	40	44	
		51.6	CS2	Z	20			07	198	23			mic s.l.n (poss. M asy)
		14.1	CS2	Z	08			34	148	55			
		18.0	CS2	S	07			14	344	53			
		23.3	CS2	S	12			13	009	51			
		28.4	CS2	Z	09			37	190	58			
		33.1	CS2	S	13			27	007	49			
		38.5	CS2	M	175			07	333	67			
		48.3	CS2	Z	07			06	180	58			
		51.3	CS2	Z	20			20	166	58			
		55.6	PS2							69			
		66.5	PS2							84			
		70.8	CS2	M	018			05	152	78			
		77.1	CS2	M				03	165	76			z)
		81.5	PS2							48			
		84.0	PS2							61			
		92.5	PS2							56			
		98.0	PS2							64			
		103.9	CS2	S	118			12	350	61			
		111.2	PS2							62			
		113.0	CS2	S	08			20	015	65			
		121.4	CS2	Z	155			20	143	70			
		126.9	CS2	Z	06			22	006	70			
		132.6	CS2	Z	24			13	158	63			
		136.8	CS2		174			16	174	49			
													END OF HOLE

Fault Log

Code	FROM (m)		TO (At)		Feature	REG	UPPER Dip Direct		INTERNAL Dip Direct		LOWER Dip Direct		Description
	10	14	16	20			22	24	26	28	32	34	
	56.4		57.0										10cm recovered, strongly crushed zone, minor gouge. Crushed fragments indicate a 45° relationship with core axis. S _g just above fault is oriented at 45° to core axis. RBD 0%
	57.0		58.2										Strongly fractured to 57.2. Crushed zone with minor gouge from 57.2-58.2. 45 cm recovered over entire interval. RBD 0%
	58.8		61.6										Strongly fractured zone. Moderate circulation on fracture surfaces. Localized rubble and well rounded zones are common.
	67.6		68.9				50°	TEA	65°	TEA			Moderate break in interval gauge at 67.8, 68.5. 0.9m recovered.
	68.9		69.8										Interval supports localized strongly fractured zones. Gauge at 69.6-69.7. Recovery 100%
	80.7		80.8										Crushed zone, minor gouge.
	118.0		119.2										Upper half of interval is strongly fractured. Gauge persists over lower half. Most interval fault intervals in hole. 50% recovery.

PROJECT _____ DRILLHOLE NO. DY90-01 COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE N6 E _____ PAGE ___ of ___
 LOGGER J. Zed... INCLINATION -45' 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.		
2.4																		Cavity
3.3		0.4		0				7	F									
5.8		1.1		1.0				10	F									
6.4		0.5		0				5	E									
7.0		0.5		0				5	F									
8.2		0.8		0				6	F									
8.8		0.45		0				6	E									
10.1		0.65		0				6	E									
11.3		0.7		0				5	E									
12.4		0.7		0				7	E									
14.3		1.5		0.25				8	E									
16.2		1.8		0.65				11	F									
17.4		1.3		0.75				10	F									
19.5		1.9		1.0				10	F									
21.9		2.4		1.4				12	F									
22.9		0.85		0				6	E									
24.4		1.2		0.5				9	F									
26.5		2.4		1.5				10	F									
29.3		2.8		1.2				7	F									
30.2		0.95		0				7	E									
32.6		2.2		0.65				9	F									
33.5		0.8		0.1				7	F									
34.3		0.65		0				7	F									
35.8		1.1		0.2				9	F									
37.7		1.7		0.5				9	E									
40.6		2.6		1.1				6	F									
41.8		0.75		0				6	F									
43.6		1.65		0.5				9	F									

Fig. 1. Typical rock mechanics core log.

PROJECT _____ DRILLHOLE NO. DY90-01 COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE _____ of _____
 LOGGER J. Zberis INCLINATION _____ ELEVATION _____



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 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.	
46.0		2.4		1.0				9	F							44	
48.2		1.9		0.15				7	F							40	
50.9		2.75		1.1				9	F							39	
52.7		1.85		0.55				9	F							33	
53.5		0.6		0				7	F							13	
54.6		0.95		0.10				7	F							23	
55.8		1.15		0.2				9	F							26	
57.0		1.05		0				7	F							25	minor gouge
58.2		0.35		0				3	F							14	crushed
59.4		0.8		0.1				4	E							25	minor
60.1		0.35		0				6	E							15	strong
62.7		0.35		0				6	E							14	strong
61.9		1.05		0.15				6	E							18	broken
63.1		1.25		0				12	E							14	(fracture parallel core axis)
66.1		3.0		2.25				12	E							22	
68.9		1.35		1.0				10	F							26	minor gouge
70.4		1.7		0.35				9	F							25	minor gouge
72.2		1.8		0.5				7	F							35	
75.3		3.1		1.7				12	F							37	very minor gouge
78.3		3.0		1.0				9	F							40	
80.8		2.5		0.7				9	F							43	minor crushed zone p 30.8
82.6		1.8		0.8				9	F							32	
84.4		1.8		0.7				9	F							24	
87.5		2.7		1.7				12	F							22	
87.9		2.6		1.4				12	F							32	
93.0		3.0		2.25				9	F							20	
93.6		0.60		0.4				10	F							6	
96.0		2.4		1.1				9	F							29	

Fig. 1. Typical rock mechanics core log.

PROJECT _____ DRILLHOLE NO. DY90-01 COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE ___ of ___
 LOGGER 25 Oct 90 INCLINATION _____ ELEVATION _____



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 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.	
98.3		1.95		1.2				13	F							23	
101.5		3.0		2.0				13	F							24	
102.1		0.4		0				6	F							11	
104.9		1.75		1.4				12	F							38	
107.0		2.9		0.9				9	F							33	
110.0		3.0		1.8				10	F							33	
113.1		3.1		2.2				13	F							22	
116.1		3.0		1.6				9	F							28	
119.2		2.4		0.6				9	F							34	Failure/gauge below 119.0
121.0		1.75		0				6	F							39	
127.5		1.65		0.1				7	F							37	
125.3		2.6		0.65				9	F							49	
127.1		1.8		0.55				10	F							26	
128.6		1.45		0.5				6	F							19	Crushed below 128.2
129.2		0.5		0				4	F							60	Crushed
130.2		0.65		0				4	F							25	
131.1		0.7		0				6	F							21	
133.2		2.1		0.45				9	F							34	
135.3		2.2		0.55				9	F							37	
136.3		0.85		0.3				9	F							12	
138.1		2.0		0.9				9	F							32	
139.3		0.75		0.1				6	F							15	
END OF LOG																	

Fig. 1. Typical rock mechanics core log.

DIAMOND DRILL CORE LOG

Date: _____

Hole Number: 90 DY - 03

Reference Fabric Orientation Diagram:

Project: _____

Location: DY PROPERTY

Claim: _____

~~Terr. Plane~~
Co-ords.: 6901328.0 N

597286.0 E

Grid Co-ords: _____

Elevation: 1120.6

All symmetry determinations looking

Total Depth: 151.5 m

_____ with _____ dipping

Inclination: -90°

_____ with dip azimuth _____.

Purpose: LOCATE FAULT TO COLLECT DATA FOR 3D PBLM

Reason hole Terminated: INTERSECTED FAULT OF INTEREST

Logged by: J. Zboetna

Date(s) Logged: _____

Drilling Contractor: F. CARON DRILLING

Hole Cemented: YES Steel down Hole: CASING

Size	CORE From	To	Collar Cased and Capped:
CASING	0.0	6.7 m	<u>Pressure</u>
NQ	6.7	151.5 m	

Assay Lab: _____

Certificate No's: _____

Started: _____ Completed: _____

Lithologic Log

Date:

Logged

By: J. J. Smith

Code	From	To	Recov.	No.	Unit	Description						
1	10	4	16	20	22	24	26	28	30	34	35	
	0.0	6.7										CASING: No recovery (Assume SB2 by 1/2 near collar)
	6.7	10.0			5C3							Rock is generally medium green massive and contains a weak S ₂ fabric. 25% of interval is moderately carbonized and sporadic occurrences of a fine grained buff mineral (luciferite) is common. PS ₂ foliated. Rock is soft strongly to mudstone broken with good recovery. Lower contact is sharp & parallel S ₂ .
	10.0	13.2			5B7							Medium green, weakly to moderately calcareous, massive contains a weak to moderate S ₂ fabric and scattered remnants of S ₁ occur throughout. Clastic pyrite occurs sporadically. CS ₂ foliated. Rock is moderately soft, good recovery. Upper and lower contacts are sharp & parallel S ₂ .
	13.2	20.8			5C0	5CB	Pyroclastic (80:20)					Unit is generally dark green locally medium dark green. Rock is locally weakly calcareous. Interval hosts an estimated 15-20% carbonized siliceous. Quartz veins are rare and on the cm scale - a single occurrence of sulfide is noted within vein quartz at 13.9m. Locally unit is broken, crushed and contains minor gouge. PS ₂ foliated. Rock is soft to very soft recovery is good. Upper and lower contacts are sharp & parallel S ₂ .

Lithologic Log

Code	From	To	Recov.	No.	Unit	Description						
1	10	14	16	20	22	24	26	28	30	34	35	
	20.8	24.6			5C4	Pyroxinite (?) Medium locally medium green rock is generally massive with a weak P _S fabric. Unit becomes progressively more lighter in color as it is green at the base of interval. Lower contact is marked by a 0.6m white quartz vein with 0.4m dy. Core is moderately to strongly fractured. Rock is soft, strongly broken with sharp upper and lower contacts are sharp and parallel S ₂ .						
	24.6	27.3			5B1	B Unit has 15-20% light grayish green siliceous bands within a moderately chlorite-medium to light green non-calcareous matrix. Siliceous bands are oriented subparallel to parallel S ₂ . Locally, siliceous bands are broken, rounded and slightly contorted. Rock is medium soft moderately broken with good recovery. Upper and lower contacts are sharp marked by quartz veins and are subparallel S ₂ .						
	27.3	29.7			5CA	Medium to light green rock is moderately calcareous and contains a well defined P _S fabric. Lenses of calcareous material are well preserved. Rock soft moderately broken and fractured with good recovery. Upper and lower contacts are sharp and parallel S ₂ .						
	29.7	32.4			5B4	Medium gray, weak green coloration sporadically throughout. Non-calcareous rock contains well defined bands which are parallel P _S , of equal thickness and are of brownish gray and bluish gray in color. Lower contact is marked by a 1.0m quartz vein.						

Lithologic Log

Date:

Logged By:

Code	From	To	Recov.	No.	Unit	Description						
1	10	14	16	20	22	24	26	28	30	34	35	
	32.4	33.4			5B0	2	<p>Medium gray phyllite contains a well developed CS_2 fabric with minor concentrations of carbonaceous material. Unit is non-calcareous. S_2 surfaces are mod. to med. gray. Entire interval represents a gradation contact with upper and lower units. Rock is soft moderately to strongly broken with good recovery.</p>					
	33.4	38.2			5B2		<p>Rock is dark gray, moderately carbonaceous, non-calcareous and is commonly broken into chips and fragments along a well developed $P.S_2$. P_1 as cleats and wisps along S_2 is ubiquitous. Lower contact is very sharp. Upper contact is irregular. S_2 surfaces are dark gray and very weakly tarnish fingers.</p>					
	38.7	52.4			5B7	5B0 5B2 (85:14:1)	<p>Rock is generally medium to light green locally medium grayish green. Interval is medium to strongly calcareous with local occurrences of moderate well preserved CS_2. Rock is moderately to slightly to moderately broken with good recovery. Upper contact is gradational. Lower contact is sharp and parallel S_2.</p>					
						49.8-50.2: 5B2	<p>Narrow band of non-calcareous carbonaceous phyllite which has 5-7% calcareous material.</p>					

Lithologic Log

Date: _____ Logged By: J. B. Smith

Core	From		To		Recov.	No.	Unit	Description		
	10	14	16	20					22	24
	52.4		54.7				5B02	(5B02) 70:30 Medium gray unit is strongly to moderately calcareous CS ₂ foliated & locally moderately carbonaceous. Rock is moderately soft moderately broken with some recovery. Upper and lower contacts are sharp. S ₂ surfaces are medium and medium dark gray.		
	54.7		55.9				5B03	2 Medium to light green, locally medium to light gray rock contains minor partings of weakly carbonaceous CS ₂ planes. Interval is weakly carbonaceous and hosts 3-5% quartz-calcite veins with strongly chloritized margins. Rock is soft to medium soft moderately broken and good recovery. Upper and lower contacts are sharp and parallel S ₂ .		
	55.9		57.2				5B04	2 Medium to medium dark gray rock is non calcareous and weakly carbonaceous. S ₂ is generally well preserved with a moderately well defined CS ₂ fabric. Interval hosts 5-7% quartz-calcite veins with very weak to no chloritic alteration along margins. S ₂ surfaces are dark gray and unit hosts pyrites. Upper & lower contacts are sharp and // S ₂		

Lithologic Log

Date:

Logged By:

J. E. Ebd.

Code	From	To	Recov.	No.	Unit	Description						
1	10	14	16	20	22	24	26	28	30	34	35	
	57.2	65.6			5B2	5B02						(80:20)
												Carbonaceous phyllite is dark gray non calcareous and generally contains a well developed C_S_2 fabric. Locally intervals contain a lighter gray color and the well preserved C_S_2 fabric. 5-7% quartz-calcite veins occur throughout and is seldom associated with chloritic alteration along margins; when present is very weak. P_y is sporadic and ill. clastic. Lower contact is marked at the beginning of 0.4m quartz-calcite with weakly chloritic margins. Rock is locally broken and fractured in directions other than S_g planes. G_{aug} is rare but does occur in bands 10cm or less at 61.5 and 64.2. S_g surfaces are very dark gray and occasionally turn to fingers.
	65.6	69.4			5B0	2						
												Medium gray calcareous phyllite hosts minor carbonaceous material along well developed C_S_2 fabric. S_g is locally well preserved and contorted. 0-3% pyrite is generally cubic and lack well defined pressure shadows, P_y is also clastic and contain well defined pressure shadows.
	69.4	72.5			5B4	5B04						
												Rock is medium gray with a very slight hint of green, non-calcareous and hosts 15% quartz-calcite veins and lacks distributed chlorite. Margins of veins are very well

Lithologic Log

Date: _____ Logged By: _____

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
												carbonized. Individual is generally lacking in blue staining CS ₂ is sporadically developed Probably is considered pyritic!
	72.5		73.3								5C4	Medium gray green unit contains contorted bands (2-5 mm) of intense carbonization which are often contorted cut by a very weak developed CS ₂ and folded. Unit hosts 20-25% fine bl. ft. mineral (luciferine) occurring in folded (M symmetry) wisps and within S ₂ fabrics. In some allows for some mineral to be in contact. Unit hosts 75% calcite occurring in bands described above.
	73.3		81.2								5B4, 5C0 (98:2)	Medium gray with weak green tint. Unit is moderately carbonized, although calcite is concentrated in diffuse stringers and bands which are often moderately folded and contorted. (Z asymmetry). CS ₂ is generally marked by thin carbonized bands, S ₂ is generally weakly developed. A minor band of strongly carbonized and foliated gabbro occurs at 74.4 - 74.9.

Lithologic Log

Date:

Logged

By: Z. Z. Z. Z.

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20	22 24 26 28 30	34 35	
	81.2	84.7			5CP	
						Medium grayish green, moderately to strongly calcareous and contains a vague igneous texture. Rock hosts 20% fine grained buff mineral (Iucocene) which is often crudely aligned indicating folding. Evidence of folding is best displayed by diffuse calcareous bands (1-3 mm) (M. Synclinal?). Structural fabric is best defined when carbonated bands (S) is parallel S ₂ (?). S ₂ is sporadically developed.
	84.7	90.3			5DP	5FO 70:40
						Medium grayish green carbonation is moderate but commonly limited to fractures and diffuse bands. Both S ₁ and S ₂ are present but both are weakly developed. Chloritization is moderate and ubiquitous. Unit hosts 1-2% cm scale white quartz calcite veins oriented subparallel S ₂ (?) and contains no noticeable increase of chloritization along margins.
	90.3	92.2			5CP	
						Massive medium greenish gray unit is moderately carbonated although calcite is most commonly noted in fractures and diffuse stringers and bands. Igneous texture is moderate well preserved. Unit hosts 5-20% fine grained buff mineral (Iucocene?)

Lithologic Log

Code	From	To	Recov.	No.	Unit	Description
	10 14 16 20 22 24 26 28 30 34 35					
	92.2	93.9			5B41	5C0 (90:10) Rock is locally well laminated and very weak to weakly calcareous, in general unit is very strongly carbonated. Carbonated is generally sandstone with some shale. Diffuse bands that are gently folded or subparallel. Some weak bedding planes with intense carbonation. Unit is medium gray. Interval hosts a single band of altered material with carbonated, poorly preserved igneous texture and 15-20% fine grained lithic material (basalts).
	93.9	94.8			5C14	Medium gray unit is locally slightly greenish in color. It is generally massive non-schistose and hosts 5-7% calcareous closed fractures and cleavages. Two generations of cleavages exist: one subparallel to weak structural fabric P_{S_2} and one medium gray and very weakly pronounced. The second generation of quartz veins are white opaque and cross cut the P_{S_2} . A to poorly preserved igneous texture persists.
	94.8	95.4			5C8	Medium gray unit is locally slightly to moderately greenish, strongly network pattern, and in general has a fine grained texture. Diffuse calcareous and some P_{S_2} are present in general.

Lithologic Log

Date:

Logged

By:

J. [unclear]

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28 30	34 35		<p>CS₂</p> <p>a very weak internal \checkmark internal fabric (M)</p> <p>Lower contact is marked by a 3cm fault zone consisting of crushed rock supported by minor gouge.</p>
	954	1254			5B2	<p>Dark gray phyllite is non-carbonaceous and has 3-4 quartz veins with a rare association with pinkish carbonate. Veins are rarely associated with siliceous alteration, which present includes wall rock fragments completely surrounded by quartz.</p> <p>CS₂ is very well developed and is often shaly cross cut by quartz veins.</p> <p>Weak fault zones and slips are sporadic and minor.</p>
						116.1 - 116.2. Weak gouge zone oriented 25° to.
						123.1 - 123.15. Weak gouge zone oriented 50° to.
	1254	129.6			5B2	<p>FA117</p> <p>Dark gray phyllite supports a weak to moderate zone consisting of broken rock, commonly along S₂ planes. Locally interbed is crushed and maintains an internal shear fabric which cross cuts S₂. Quartz vein fragments are minor.</p>

Lithologic Log

Date: _____

Logged By:

J Zbezdny

Code	From		To		Recov.		No.		Unit	Description	
	10	14	16	20	22	24	26	28			30
											angular highly rotated and supported in a moderately competent host rock.
	129.6		135.6						5B2	3	Medium to dark gray sh. lite is weakly calcareous and slightly lighter in color than above and lower units. Interval is generally competent, only locally moderately to strongly broken in an orientation parallel to and cross cutting S_0 . Quartz veins consist of 2-3% of interval and only locally display angular rotated and brecciated habit. (CS_1) foliated.
	135.6		139.7						5B2		FAULT *
											Dark gray sh. lite is generally disorganized strong shear fabric which cross cuts S_0 . Numerous faults occur throughout interval are brecciated, strongly rotated and occur within a moderately competent host rock with a strong shear fabric slightly oblique to core axis. Interval supports minor sporadic gouge zones which do not exceed 10 cm in width. Unit has minor dolomite.

Lithologic Log

Date: _____

Logged By:

J. Zbeck

Core No.	From		To		Recov.	No.	Unit	Description
	10	14	18	22				
	139.7	151.5					582 3 583 (95.5)	<p>Mediate dark gray phyllite is locally weakly calcareous and has 5-7% quartz calcite veins and 5-7% calcite and clotted py blebs. Veins greater than 1-2cm often support chlorite and well fragments. CS₂ is strong and pressure well preserved.</p> <p>Interval contains 3 interbeds of strongly carbonated buff to light gray sediments at: 145.2-14.4, 147.3-148.0, and 148.5-148.9</p>
		151.5						E+10 Dr Hole

Fault Log

Code	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	
	61.5		61.6				56'				28		Gauge zone of fault with 5B2 and lower 5B2
			95.4						75				2cm band of gouge at contact of 5B7 and lower 5B2
	116.9		116.2				22'						Narrow (1-2cm) gouge zone with rubble below
			123.1								45°		Minor band of gouge
	125.4		129.6						39 (Ave)		35'		Most movement is along S ₂ or subparallel to it. Locally moderate to strong shear fabric cross cuts S ₂ and is hosted by moderately competent rock. 35-40° (moderate to weak fault zone)
	135.6		139.7						20				Strong fault zone display strong shear fabric and local bands of gouge. Quartz veins are generally broken with angular fragments highly rotated within sheared matrix. Shear angles are generally low in relation to strike axis (15-25°)
													END OF HOLE

DDH 9004-33
2 8
 metres

CURRAGH RESOURCES INC.
 Structural Log

Date: Aug 25/92 Logged By: LP

Core	From		To		Feature	S ₀ Dip Direct.	S ₁ Dip Direct.	S ₂ Dip Direct.	Description					
	10	14	16	20						22	24	26	28	32
				110	6	P S12			713					approaching C ₂ tight J.W. below c.g.
				114	8	P S12			710					micaceous foliation
				121	4	C S12 S		517	313	8	716			S ₁ - poor compositional banding S ₂ - spaced micaceous foliation
				125	0	C S12 Z		116	113	5	716			" "
				132	6	P S12					612			micaceous foliation
				142	0	C S12 S		312	141	2	618			S ₁ - compositional banding S ₂ - crenulation cleavage
				145	7	C S12 M		214	119	0	718			" "
				151	2	C S12 S		511	121	6	617			" "
				157	4	P S12					714			micaceous foliation
				164	0	C S12 M		17	120		513			S ₁ comp. banding S ₂ fol. cleavage
				167	3	C S12 D		312	110	7	717			" "
				172	6	C S12 Z		216	210	7	814			" "
				179	2	C S12 Z		114	210	4	718			" "
				188	3	P S12					718			micaceous foliation
				191	3	P S12					713			" "
				194	8	C S12 S		415	110	8	812			micaceous foliation } S ₁ S ₂
				110	4	4	C S12		10	15	717			S ₁ - comp. banding S ₂ - crenulation cleavage
				110	7	2	C S12 S		319	131	812			S ₁ comp. banding S ₂ closely spaced crenulation cleavage
				111	3	7	P S12				717			micaceous foliation
				112	0	6	C S12 S		212	10	617			S ₂ - indistinct crenulation cleavage S ₁ - compositional banding
				112	4	0	P S12				811			micaceous even. cleavage.
				113	2	7	C S12 M				710			S ₁ comp. banding S ₂ crenulation cleavage fold hinge in S ₁ (ph. 2 fold)
				113	9	6	P S12				910			micaceous cleavage.
				114	3	4	P S12				710			" "
				115	1	0	P S12				815			" "
														EOH
														cutout

PROJECT _____ DRILLHOLE NO. 90DY-03 COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE ___ of ___
 LOGGER [Signature] 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.		
6.7																		
8.2	1.5			0			7	E										
10.4	2.1			0.65			9	E										
11.3	0.9			0.4			10	F										
14.0	2.1			0.5			9	F										
16.2	1.9			0.4			9	F										
18.9	2.4			0.35			9	F										
20.4	0.7			0			6	F										
23.0	2.7			0.8			9	F										
24.3	1.3			0.3			6	F										
27.4	2.1			0.6			9	F										
28.5	0.6			0.1			7	F										
29.6	1.1			0.3			9	F										
32.6	2.7			0.95			7	F										
35.4	2.1			0			9	F										
36.6	0.8			0			6	F										
39.0	2.4			0.65			9	F										
42.1	3.1			2.1			10	F										
44.9	2.6			1.9			12	F										
47.6	3.0			2.0			10	F										
50.9	3.1			2.3			12	F										
54.0	3.1			1.45			10	F										
57.0	3.0			2.2			9	F										
60.4	2.3			0.6			5	F										
60.7	0.5			0.2			12	F										
61.6	1.2			0.2			7	F										
64.6	3.0			0.15			7	F										
65.7	1.1			0.25			7	F										

Fig. 1. Typical rock mechanics core log.

PROJECT _____ DRILLHOLE NO. 90DY-03 COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE _____ of ____
 LOGGER S. Zuber INCLINATION _____ ELEVATION _____



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 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.		
68.7		3.0		1.8				10	F							29		
71.8		3.1		0.9				9	F								44	
73.5		1.4		1.4				13	F								7	
75.0		2.5		1.1				12	F								14	
74.0		3.0		2.6				13	F								16	
75.7		0.3		0.15				7	F								4	
77.7		3.1		2.0				10	F								27	
78.4		3.0		1.9				12	F								27	
80.6		1.8		0.3				6	F								35	
80.6		3.0		1.8				10	F								32	
82.7		2.1		1.6				10	F								37	
82.7		2.0		1.5				9	F								32	
87.0		2.0		0.1				9	F								24	
89.5		3.1		1.8				9	F								38	
92.5		2.0		0.5				7	F								47	
93.4		3.1		1.2				9	F								48	
100.4		3.0		0.6				7	F								58	
102.7		3.1		0.5				9	F								59	
104.9		1.3		1.1				9	F								37	
107.0		2.7		0.1				6	F								66	
108.9		1.1		0.3				6	F								20	
121.0		2.1		0.55				6	F								54	
124.1		3.1		1.2				9	F								39	
125.9		1.8		0.85				10	F								35	Separate zone
126.8		0.8		0				6	F								33	
127.3		0.9		0				3	F								20	Separate zone
128.3		0.5		0				6	F								13	
128.3		1.4		0.3				7	F								23	

Fig. 1. Typical rock mechanics core log.

PROJECT _____ DRILLHOLE NO. 98DY-03 COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE ___ of ___
 LOGGER Z. Bertone INCLINATION _____ ELEVATION _____

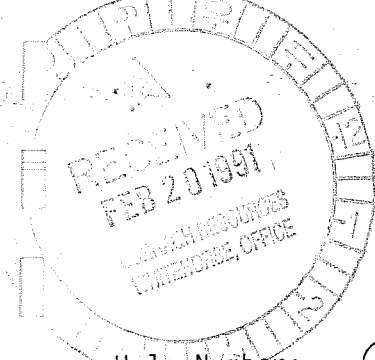


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 VANCOUVER CALGARY

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.		
131.7		0.6		0.1				7	F							14		sporadic small scale
133.2		1.5		0.6				9	F							27		
135.9		2.4		1.2				10	F							33		
136.6		1.5		0.2				9	F							17		
138.4		1.7		0.55				6	F							32		minor gouge
139.3		0.9		0				7	F							16		minor gouge and scale
142.3		3.0		0.75				7	F							48		
145.4		3.1		1.7				10	F							32		
148.4		3.0		1.7				10	F							34		
151.5		3.1		1.5				10	F							28		
END OF	HOLE																	

Fig. 1. Typical rock mechanics core log.



CURRAGH RESOURCES INC.

Page 1 of _____

DIAMOND DRILL CORE LOG

Date: AUG - DEC 1990

Hole Number: 90DY-04-DS

Reference Fabric Orientation Diagram:

Project: _____

Location: DX PROPERTY

Claim: _____

~~Top of hole~~
Co-ords.: 6901369.5 N

597305.0 E

Grid Co-ords: _____

Elevation: 1115.3

All symmetry determinations looking

Total Depth: 662.3m

_____ with _____ dipping

Inclination: -90.00

_____ with dip azimuth _____

Purpose: TO TEST ROCK QUALITY FOR PROPOSED DY SHAFT

Reason hole Terminated: COMPLICATIONS AT DEPTH

Logged by: F. Zbeetno

Date(s) Logged: AUG - OCT 1990

Drilling Contractor: E. CARON DRILLING

Hole Cemented: YES Steel down Hole: NO

	Size	From	To	Collar Cased and Capped:
PQ CASING		0.0	28.0m	_____
HQ CASING		0.0	28.0m	_____
NQ		28.0	198.7m	_____
NQ		198.7	205.7m	_____
NQ		205.7	236.2m	- No recovery
HQ		236.2	570.0m	_____
NQ		570.0	598.3m	- No recovery
NQ		598.3	662.3m	_____

Assay Lab: NAL LABS

Certificate No's: _____

Started: AUG 5 1990 Completed: OCT 1990

GYROSCOPIC DIRECTIONAL SURVEY

CURRAGH RESOURCES INC.
90DY-04-DS
REFERENCE DIRECTION IS TRUE NORTH

1990 08 22
CX-LB-00455
VERTICAL SECTION ALONG CLOSURE
DISTANCES ARE IN FEET
SURVEYOR BGG

TOTAL MEAS DEPTH	ANGLE DEG.DEC	AZIMUTH DEG.DEC	TRUE VERTICAL DEPTH	TOTAL NORTH	CO-ORDINATES EAST	VERTICAL SECTION	DLS PER 100
0.	0.46	183.20	0.00	0.00	0.00	0.00	
25.	0.55	176.63	25.00	-0.22	0.00	0.20	0.43
50.	0.51	176.35	50.00	-0.45	0.02	0.40	0.19
75.	0.51	189.00	75.00	-0.67	0.01	0.61	0.45
100.	0.65	195.40	100.00	-0.92	-0.05	0.85	0.61
125.	0.80	199.27	124.99	-1.22	-0.14	1.17	0.63
150.	0.87	203.63	149.99	-1.56	-0.28	1.53	0.39
175.	0.94	199.74	174.99	-1.93	-0.42	1.92	0.36
200.	0.90	198.58	199.98	-2.31	-0.56	2.32	0.15
225.	0.86	210.25	224.98	-2.65	-0.71	2.71	0.74
250.	1.01	211.17	249.98	-3.00	-0.92	3.11	0.60
275.	1.23	209.11	274.97	-3.43	-1.17	3.60	0.92
300.	1.28	210.58	299.97	-3.90	-1.44	4.15	0.21
325.	1.29	207.68	324.96	-4.39	-1.71	4.70	0.27
350.	1.32	203.75	349.95	-4.91	-1.96	5.27	0.38
375.	1.34	211.17	374.95	-5.42	-2.23	5.85	0.69
400.	1.34	212.29	399.94	-5.92	-2.53	6.43	0.11
425.	1.33	209.66	424.93	-6.42	-2.83	7.01	0.25
450.	1.23	213.38	449.93	-6.89	-3.12	7.56	0.52
475.	1.29	213.54	474.92	-7.35	-3.43	8.11	0.26
500.	1.30	209.67	499.92	-7.83	-3.72	8.67	0.36
525.	1.45	206.84	524.91	-8.36	-4.01	9.27	0.63
550.	1.48	202.84	549.90	-8.94	-4.27	9.91	0.43
575.	1.33	201.51	574.89	-9.50	-4.50	10.52	0.63
600.	1.49	204.11	599.89	-10.07	-4.74	11.13	0.69
625.	1.46	202.94	624.88	-10.66	-5.00	11.77	0.15
637.	1.45	203.77	636.87	-10.94	-5.12	12.08	0.21
650.	1.45	203.78	649.87	-11.24	-5.25	12.41	0.00

LAST DEPTH WAS EXTRAPOLATED ALONG LAST INC AND DIR

MINIMUM CURVATURE METHOD

HORIZONTAL DISPLACEMENT AT BOTTOM HOLE IS
12.41 FEET ALONG 205.05 DEG
RELATIVE TO WELL HEAD

VERTICAL SECTION RELATIVE TO WELL HEAD

GYROSCOPIC DIRECTIONAL SURVEY

URRAGH RESOURCES INC.
 90DY-04-DS
 REFERENCE DIRECTION IS TRUE NORTH

1990 09 21
 CX-LB-00515
 VERTICAL SECTION ALONG CLOSURE
 DISTANCES ARE IN FEET
 SURVEYOR BGG

TOTAL MEAS DEPTH	ANGLE DEG. DEC	AZIMUTH DEG. DEC	TRUE VERTICAL DEPTH	TOTAL CO-ORDINATES NORTH	EAST	VERTICAL SECTION	DLS PER 100
600.	1.49	204.11	599.89	-10.07	-4.74	-2.88	
625.	1.41	202.33	624.88	-10.65	-4.99	-3.06	0.37
650.	1.22	203.98	649.88	-11.18	-5.21	-3.23	0.77
675.	1.08	211.28	674.87	-11.62	-5.45	-3.34	0.81
700.	0.49	221.81	699.87	-11.90	-5.64	-3.37	2.42
725.	0.24	73.88	724.87	-11.97	-5.66	-3.40	2.82
750.	0.86	56.09	749.87	-11.85	-5.45	-3.48	2.55
775.	1.10	49.86	774.86	-11.59	-5.11	-3.57	1.03
800.	1.01	50.63	799.86	-11.30	-4.76	-3.65	0.36
825.	1.00	47.57	824.85	-11.01	-4.43	-3.72	0.22
850.	1.02	40.14	849.85	-10.69	-4.13	-3.75	0.54
875.	0.97	30.75	874.85	-10.34	-3.87	-3.71	0.69
900.	0.93	26.17	899.84	-9.98	-3.68	-3.63	0.34
925.	0.92	19.04	924.84	-9.60	-3.52	-3.51	0.46
950.	0.83	15.45	949.84	-9.24	-3.41	-3.36	0.45
975.	0.85	6.15	974.83	-8.88	-3.34	-3.18	0.56
1000.	0.82	4.51	999.83	-8.52	-3.30	-2.97	0.15
1025.	0.82	356.86	1024.83	-8.16	-3.30	-2.74	0.44
1050.	0.78	358.29	1049.83	-7.81	-3.32	-2.51	0.19
1075.	0.81	357.89	1074.82	-7.46	-3.33	-2.27	0.11
1100.	0.92	2.55	1099.82	-7.09	-3.32	-2.03	0.53
1125.	0.91	355.44	1124.82	-6.69	-3.33	-1.77	0.45
1150.	0.89	357.27	1149.82	-6.30	-3.36	-1.50	0.14
1175.	0.93	358.98	1174.81	-5.90	-3.37	-1.23	0.18
1200.	0.89	359.90	1199.81	-5.50	-3.37	-0.97	0.17
1225.	0.89	356.93	1224.81	-5.11	-3.38	-0.72	0.18
1250.	0.93	358.44	1249.80	-4.72	-3.40	-0.45	0.17
1275.	0.93	351.08	1274.80	-4.32	-3.44	-0.16	0.48
1300.	1.01	348.34	1299.80	-3.90	-3.51	0.17	0.36
1325.	1.02	348.25	1324.79	-3.47	-3.60	0.52	0.06
1350.	1.19	342.65	1349.79	-3.00	-3.73	0.91	0.79
1375.	1.29	341.77	1374.78	-2.48	-3.89	1.37	0.42
1400.	1.26	337.03	1399.78	-1.96	-4.09	1.85	0.44
1425.	1.18	338.86	1424.77	-1.47	-4.29	2.33	0.34
1450.	1.17	341.53	1449.76	-0.99	-4.46	2.77	0.23
1475.	1.04	342.64	1474.76	-0.53	-4.61	3.18	0.51
1500.	1.06	343.62	1499.76	-0.09	-4.74	3.56	0.10
1525.	1.18	348.08	1524.75	0.38	-4.86	3.96	0.60
1550.	1.16	345.48	1549.75	0.88	-4.98	4.37	0.22
1575.	1.21	349.46	1574.74	1.38	-5.09	4.78	0.39

GYROSCOPIC DIRECTIONAL SURVEY

CURRAGH RESOURCES INC.
 90DY-04-DS
 REFERENCE DIRECTION IS TRUE NORTH

1990 09 21
 CX-LB-00515
 VERTICAL SECTION ALONG CLOSURE
 DISTANCES ARE IN FEET
 SURVEYOR BGG

TOTAL MEAS DEPTH	ANGLE DEG.DEC	AZIMUTH DEG.DEC	TRUE VERTICAL DEPTH	TOTAL NORTH	CO-ORDINATES EAST	VERTICAL SECTION	DLS PER 100
1600.	1.32	349.37	1599.73	1.93	-5.19	5.21	0.44
1625.	1.43	351.10	1624.73	2.52	-5.29	5.67	0.44
1650.	1.50	346.34	1649.72	3.14	-5.42	6.16	0.56
1675.	1.72	347.79	1674.71	3.83	-5.57	6.73	0.90
1700.	1.73	347.59	1699.70	4.56	-5.73	7.32	0.05
1712.	1.75	345.42	1711.69	4.91	-5.82	7.62	0.57

MINIMUM CURVATURE METHOD

HORIZONTAL DISPLACEMENT AT BOTTOM HOLE IS
 7.62 FEET ALONG 310.19 DEG
 RELATIVE TO WELL HEAD

VERTICAL SECTION RELATIVE TO WELL HEAD

Code	From (meters)	To (meters)	Recov.	No.	Unit	Description
1	10	14	16	20	22 24 26 28 30	34 35
	0.0	3.7			CASING	TRICONED TO 12', No recovery. Drilling rate and head pressures while triconing suggest similar rock type from surface to 12'. Surface geology and rock type @ 12' are SB7. CASING later reamed to 26' (7.9 meters).
	3.7	11.5			5F10	(5D0)(5C0) 97:02:01 light green, moderately calcareous, well-laminated, moderately soft, chloritic phyllite. Laminae range 0.5-3.0 mm in thickness and partly defines a S2 crenulations cleavage. Contains 1-7% qtz-calcite veins ranging in thickness 2mm-4cm. Veins crudely S2 foliiform. S2 surfaces are medium to silvery green. Moderate chlorite selvages on margins of veins and within veins. One thin 5D0 band 9.95-10.2. Medium olive green, calcareous with calcite veinlets and stringers, 2% subhorizontal qtzite, moderately soft, PSE-foliated, chloritic phyllite. Preserved shadows of qtz-calcite mineral grains. S2 surfaces are gray olive green. Marginal contacts with 5F are sharp. Unit hosts 3 bands of 5C starting at 10.8-11.3. Bands are 1-5cm thick. Medium green, moderate PSE foliation. 5C associated with calcite veins up to 20%. 5C has pale tan disseminated fine bands/stringers of unidentified mineral (leucosane?). Interval 3.7-7.1 broken with 50% recovery related to top of hole // 7.1-EOI slightly broken with good recovery.

Code	From		To		Recov.			No.			Unit	Description		
	1	10	14	16	20	22	24	26	28	30			34	35
			11	5				11	2	6			15C16	<p>Medium green, generally noncalcareous, moderately soft to moderately hard, PS2 foliated chloritic unit. S2 surfaces are mottled light and dark green. Relict igneous texture generally well preserved. Mafic grains locally elongate S2. Contains 7-15% fine, buff mineral as thin small "stingers" (Kurovane?), 3-5% calcite stingers, 2% Qtz-calcite veins generally parallel S2. Minor chlorite increase marginal to veins. Lower contact is 10 cm Qtz-cc vein.</p> <p>Core slightly broken w/ good recovery</p>
			11	2	6			11	4	1			15F16	<p>±0 (5C0) 75:25</p> <p>Medium green, moderately soft, moderately laminated, CS2-foliated, generally noncalcareous chloritic phyllite. Upper 20cm is calcareous. S2 surfaces are medium to olive green. Not olive enough to be S.D. Phyllite host 3-4% calcite stingers in late fractures 3-4° from core axis.</p> <p>5C is medium green, moderately soft, PS2-foliated. Moderately well preserved igneous texture. Mafic minerals typically strongly streaked along S2. Contains 1-3% calcite in late fractures subparallel core axis. Contacts with phyllite are sharp parallel S2.</p> <p>Core slightly to moderately broken w/ good recovery</p> <p>Two quartz veins 7-10 cm. Rich w/ trace of sulphides (sp.) Moderate chloritic selvages along margins.</p>
			11	4	1			12	4	6			15C16	<p>Pyroxenite</p> <p>Dark green, soft, noncalcareous, generally massive with weak S2. Unit hosts 7-10% carbonate stingers and clots - reacts poorly to 20% HCl (dolomite + ankerite)</p> <p>Unit moderately to strongly magnetic. Carbonate clots are relict igneous texture.</p>

Lithologic Log

Date: Aug 23/96 Logged By: JAZ

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
				214	6							Unit has been serpentinized. Upper contact sharp with mylonitic gneiss S2 destroying the relict igneous texture however contact sharp crosscutting S2. Overall core moderately broken. 20.5-21.3 fractured parallel core axis with reddish brown iron oxides on fractures. Intal 22.3-24.1 strongly broken & locally gouged. Related to rock type - no major fault. Overall recovery is good.
		1214	6	1216	0						5FCO	Medium to dark green, massive, weak to moderate PS2-foliated, nonmagnetic, weakly to moderately calcareous, soft chloritic phyllite. 3% calcite stringers on these fractures randomly oriented locally some relict igneous texture weakly streaked along S2. However contact sharp parallel S2. Core moderately broken w/ good recovery S2 surface dark green to medium green
		1216	0	1217	2						5F10	(5CO) minor Medium green, moderately to strongly calcareous, moderately hard, moderately well laminated chloritic phyllite. Both PS2 and CS2 foliated - dominantly PS2. Laminar 0.1mm-2mm thick. Dark green to medium green on S2 surfaces. Unit hosts 1-2% honey-colored sphalerite in irregular stringers associated w/ calcite - 0 to trace galena - this occurs in uppermost 2.5m. Both contacts sharp. Unit hosts 5cm band of 5C @ 26.9m. 5C is dark green, very weakly calcareous, medium soft, and contains 25-30% buff mineral (knoxite?). Core moderately broken w/ good recovery. Minor rubble @ 26.8m

Code	From		To		Recov.		No.		Unit	Description
	10	14	16	20	22	24	26	28		
	27	2	128	4					SIC101	Medium green, moderately hard, moderately to strongly PS2-foliated. Relict igneous texture often elongate parallel S2. S2 surfaces are medium dark to dark green. Unit hosts 20% fine-grained buff mineral (leucosane?), 0 trace pyrite, 1% randomly orientated calcite stringers. Core slightly to moderately broken w/ good recovery. Occasional fractures are moderately oxidized.
	128	4	131	9					SIF101	Medium to light green, strongly calcareous, strongly CS2-foliated, well laminated, medium hard, chloritic phyllite. Laminae 2-5 mm thick. S2 surfaces are medium to dark green. Sporadic fine stringers of reddish brown sphalerite parallel S1 (?). Upper contact sharp parallel S2. Core moderately broken w/ good recovery.
	131	9	132	6					SF1\$	Light green, very soft, slightly dolomitic, PS2-foliated with minor CS2-intervals, strongly laminated phyllite. Laminae are 1-3 mm thick. Rock slightly oxidized to a rusty tan colour. CS2 surfaces are silvery grey and tan. Core moderately broken - strongly broken at 32.6. Recovery good.
	132	6	135	4					SF101	→ (SF\$) 60:40 Very light green, soft to very soft, CS2-foliated, laminated (1-4mm), strongly calcareous changing to dolomitic lower DDH phyllite. S2 surface silvery grey to silvery green-grey. Upper contact broken / lower contact gouged. Core moderately broken w/ good recovery. Gauge 35.2-FAE with rubble.

Lithologic Log

Date: Aug 23/90 Logged By: JAZ

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
	1315	4	1410	2							5C101\$1	<p>Pyroxenite</p> <p>Dark green, soft, dolomitic and locally calcareous, weakly to moderately PS2-foliated. S2 surfaces are very dark green. Unit hosts 2-15% calcite-dolomite veins with minor localized gouge. Unit strongly magnetic. Relict igneous texture with subhedral solution of dolomite. Unit is serpentinized. Upper contact washed by gouge. Medium green, calcareous, strongly PS2-foliated chloritic phyllite for approximately 0.4 m. Upper strain margin. Relict igneous texture largely destroyed in this interval. Lower contact is sharp. Lower contact oblique to S2. Core moderately broken. Strongly broken 35.7-36.0 and 36.9-37.3. Minor gouge in these intervals. Broken & gouged parallel S2. Recovery good.</p>
	1410	2	1413	9							5F10	<p>light green, medium hard, well laminated, CS2-foliated, calcareous chloritic phyllite. Laminae are 1-3 mm thick. S2 surfaces are medium to dark green. Unit hosts 7-10% calcite veinlets and stringers with variable orientation. Stringers pyrite often associated with veinlets. Upper contact 40.2-40.9 has strong PS2 fabric and approaches appearance of SDO - resembles SDO but not as olive green. Lower contact slightly sheared - currently broken - angle steeper than S2. Core slightly broken w/ good recovery.</p>
	1413	9	1416	8							5C11\$1	<p>Pyroxenite</p> <p>Dark green, soft, slightly magnetic, PS2-foliated, serpentinized ultramafic. Dolomite occurs as small grey clots (possibly plagioclase feldspar?). Thin scintling veinlets of calcite-gt. Relict intrusive (medium-grained) intrusive texture elongate along S2 foliation. Lowermost 1.0 m is medium green, PS2-foliated, chloritic phyllite. Igneous texture</p>

Lithologic Log

Date: Aug 24/90 Logged By: LCP

Code	From	To	Recov.	No.	Unit	Description					
1	10	14	16	20	22	24	26	28	30	34	35
		1416	8								
											<p>destroyed in this interval Not ultramafic composition in this interval lower contact has gradational appearance into SF. S2 surfaces are dark, wavy green</p> <p>Fracture/shear at TOI has orientation 35/000 Core slightly broken w/ good recovery Interval 45.5-45.8 rubble related to steep qtz-calcite veins Minor gangue present Veins 20/000 wrt S2. Recovery good.</p>
	1416	8	1514	5	SF101						
											<p>Medium green, strongly S2-foliated, thinly banded, calcareous, chloritic phyllite. S2 surfaces are shiny medium green. Unit gets progressively slightly darker green as go down DDT lower contact rapidly gradational. Microtextures texture marked by tight V-shaped folds at TOI and more open, rounded folds near EOI. Calcite occurs w/ qtz in silty bands up to 5cm thick locally. Contains white bull qtz veins which have irregular dark green chlorite selvages Veins roughly S2 foliation and up to 10cm thick. Minor very fine go.</p> <p>Core slightly broken to intact w/ good recovery</p>
	1514	5	1614	4	S1B10						
											<p>Soft, pale to medium grey, laminated, S2-foliated, calcareous phyllite. S2 surfaces are steely grey. Microtextures well defined by off-white 2mm-5cm thick qtz-calcite silty bands. Also contains some compositional banding in shades of grey in pelite-parallel S2. Lower contact very gradational with loss of carbon if increase in greenish colour. Might be considered S1B02.</p> <p>Core slightly broken w/ good recovery Excellent SB</p>

Lithologic Log

Date: Aug 24/90 Logged By: LCP

Code	From		To		Recov.		No.		Unit		Description
	10	14	16	20	22	24	26	28	30	34	
	1614	4	1615	4					5B1810		Soft, calcareous, laminated, CS2-foliated, pale to medium green chloritic phyllite. Microolithons well defined by thin qtz-calcite siltstone bands. SZ surfaces are silvery green w/ pale grey tint. Lower and upper contact are gradational. Core slightly broken w/ good recovery.
	1615	4	1618	3					5B131		Pale grey, CS2-foliated, very calcareous, laminated phyllite. Microolithons defined by pale qtz-calcite laminae up to 3cm thick. SZ surfaces are silvery grey. Upper and lower contacts are gradational. Minor tinge of green (=chlorite) on cut surface when core is wet. Unit is soft. Core slightly broken w/ good recovery.
	1618	3	1619	0					5F10	[5B80]	Moderately soft to soft, CS2-foliated, pale green, laminated, calcareous chloritic phyllite. SZ surfaces are pale to medium green. Calcite associated w/ quartz in thin grey silty bands and laminae. Microolithons tend to be V-shaped chevron style folds. Upper contact gradational, lower contact sharp w/ abundant qtz-calcite veining. Core slightly broken w/ good recovery.
	1619	0	1717	5					5C101b1		Moderately soft, slightly calcareous, poorly PS2-foliated, medium green chloritic phyllite. Massive with irregular poorly developed SZ cleavage. Medium-fine grained. Calcite disseminated in matrix as well as within thin scuttling veinlets. Minor very fine pale buff specks (leucosene?). Lower contact sharp not parallel SZ.

DDH 2004-08 DS

CURRAGH RESOURCES INC.

Lithologic Log

Page 10Date: Aug 24/90 Logged By: LCR

Code	From		To		Recov.		No.		Unit	Description
	10	14 16	20	22 24	26	28	30	34 35		
										Core slightly broken w/ good recovery however most 20cm has well developed pervasive S2 foliation.
	775		793						SF101	Moderately soft, CS2-foliated, laminated, calcareous chloritic phyllite. Pale to medium green. S2 surfaces are medium green. Marginal contacts are sharp w/ more olive-green greenstones. Isoclinal, V-shaped, chevron style microfolds defined by thin pale grey calcareous-green siltstone bands/laminae. Locally laminae have indistinct margins. Core slightly broken with excellent recovery
	779		812						5C10161	(5D0 X SF0) 95:03:02 Dominant unit is medium green, P52-foliated, soft, slightly calcareous, massive chloritic phyllite. S2 surfaces are rough medium to dark green. Contains thin S2-parallel qtz-calcite veins up to 1cm thick. Locally this unit grades into olive green, P52-foliated, calcareous phyllite. The latter is reasonable SD. 5C portions contain tiny streaks of pale buff mineral (leucosene?) Near 80.8m have 2 thin bands of medium green, thinly laminated SF chloritic phyllite. These are 10cm thick metasedimentary interbeds. P52-foliated. Calcareous. Core slightly broken w/ good recovery
	812		838						SF101	Medium green, poorly CS2-foliated, calcareous thinly banded, chloritic phyllite. S2 surfaces are medium green to silvery green. Tight, isoclinal, V-shaped microfolds. Strongly foliated S2 texture. Lower contact sharp. Core slightly broken w/ good recovery

DDH
 2 90Dy-04⁸ DS

CURRAGH RESOURCES INC.

Lithologic Log

Date: Aug 24/92 Logged By: LCP

Code	From		To		Recov.		No.		Unit	Description
	10	14	16	20	22	24	26	28		
	1813	B	1816	G					5F101	(5F0) minor Moderately soft to moderately hard, P _{S2} -foliated, calcareous, chloritic phyllite. Medium to dark green. S ₂ surfaces are dark, rough green. Relict igneous texture define by white calcite spots (former plagioclase) which now form streaks parallel S ₂ . Unit contains abundant fine specks/streaks of pale buff mineral (leucane?). Medium-fine grained intrusive texture. Interval 85.1-85.3 is soft, medium green, calcareous, P _{S2} -foliated very micaceous, chloritic phyllite. Contains one tight isoclinal fold hinge. Marginal contacts are sharp parallel S ₂ . Highly strained unit. S ₂ surfaces are smooth micaceous green. Core moderately to slightly broken w/ good recovery.
	1816	B	1817	G					5F101	Calcareous, soft, pale to medium green, thinly banded chloritic phyllite. S ₂ surfaces are smooth, micaceous silvery green to medium green. Fairly C _{S2} to P _{S2} -foliated with tight, isoclinal, chevron shaped folds. Marginal contacts with 5C are sharp parallel S ₂ Core moderately broken w/ good recovery.
	1817	G	1911	B					5F101b1	± BIOTITE ± PYROXENITE Soft, P _{S2} -foliated, slightly calcareous, medium green to dark green chloritic phyllite. S ₂ surfaces are dark, rough green. locally contains thin bands and splashes which are pale off-white and moderately calcareous (former plagioclase?). Abundant specks of pale buff mineral. Uppermost 0.5m is very dark green, very soft, serpentinized, magnetic ultramafic. Locally contains disseminated biotite specks 10-15cm near BB.B is dark brown w/ abundant disseminated biotite. Core slightly broken w/ good recovery.

Code	From	To	Recov.	No.	Unit	Description						
1	10	14	16	20	22	24	26	28	30	34	35	
	91.8	95.4			5F06	Medium green weakly calcareous moderately PS_2 foliated moderately soft. Unit hosts two 5cm quartz veins subparallel S_2 @ minor chloritic alteration along margins and strong chloritization of wall rock fragments within vein. PS_2 surfaces are medium to dark green. Upper and lower contacts are sharp and parallel S_2 . Core is slightly broken with good recovery.						
	95.4	97.0			5G16	Medium green non-calcareous/non-dolomitic weakly to moderately PS_2 foliated rock. Mafic minerals indicate well preserved igneous texture and are slightly elongated along PS_2 . Unit hosts trace - 1% irregular calcite veinlets and 3-5% fine grained buff mineral (leucosere?) throughout. PS_2 surfaces are medium to medium dark green. Core is slightly broken and recovery is good. Upper and lower contacts are sharp and parallel S_2 .						
	97.0	99.6			5C16	PYROXINITE Dark green, massive, weakly dolomitic rock is soft, contains a moderately well preserved igneous texture, and a weak PS_2 fabric. Locally unit is moderately serpentized and moderately to strongly magnetic. Interbed						

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24	26 28 30	34 35	
						Contains 2-3% quartz-calcite veins throughout - no consistent orientation noted. Upper contact is sharp, lower contact is also sharp and marked by lowest 25cm of interval hosting 40% quartz-calcite-dolomite veining at angles slightly oblique to core axis and parallel fabric in lower fault zone.
						Core is moderately broken and recovery is good.
	99.6	102.9			5C9	FAULT - PROXIMATE
						Dark green, strongly crushed, moderately calcareous rock locally contains small (1-6cm) fragments and blocks containing a well preserved igneous texture. Unit is generally strongly crushed and locally strongly broken with a well developed irregular shear fabric roughly 20-30° to core axis. Interval contains 0-2% wisps of calcite-quartz veining which generally follow shear fabric, but are also disrupted and broken by it.
						Recovery is generally good, core is very soft and very incompetent.
	102.9	106.1			5F60 5C0 (75:25)	Medium green medium soft to ^{totally} medium hard very weakly calcareous rock is generally strongly broken locally weakly crushed (along same orientation as above fault). Unit contains a

Code	From		To		Recov.		No.		Unit	Description	
	10	14	16	20	22	24	26	28	30		34
											a moderately well developed CS_2 fabric. Interval contains a single band of 5C0 at 103.6-103.89 with moderate carbonization 5-10 cm above and below dyke/sill. 0-5% 0.5-1.0 cm quartz-calcite veins are generally subparallel CS_2 . Core is generally strongly broken, locally moderately crushed, recovery is good. CS_2 surfaces are medium green 5C0: 103.6-103.89: strongly broken, medium green with well developed leopard texture and PS_2 fabric, unit is generally strongly to moderately calcareous.
	106.1	109.7							5C0	5B02 (65:35)	Medium to slightly olive green weakly to moderately calcareous rock contains a moderate PS_2 fabric and 5-7% quartz-calcite veins trending roughly parallel S_2 . Unit hosts 2-7% fine grained buff mineral (leucocrase?). PS_2 surfaces are medium to slightly olive green. Core is generally moderately to locally strongly broken with cm scale bands of gouge at 106.1 and 107.1. Recovery is good 5B02 occurs at 107.4-108.2: medium to medium dark gray, weakly calcareous rock hosts 3% quartz calcite veins and a moderate to strong PS_2 fabric. S_2 surfaces are medium silvery gray. Core is strongly broken recovery is good. Rock is moderately soft throughout interval with minor increase in hardness adjacent veins.

Code	From	To	Recov.	No.	Unit	Description					
1	10	14	16	20	22	24	26	28	30	34	35
	10.9	112.6			5B1b	<p>Medium gray with weak tint of green, non-calcareous phyllite has a moderate CS_2 fabric and hosts 5-7% quartz-Fe carbonate cm-scale veining subparallel S_2. Locally CS_2 approaches PS_2. S_2 surfaces are medium gray. Rock is generally soft. Locally unit contains bands (1-0.5 cm) of very soft loess.</p> <p>Upper contact is strongly PS_2 foliated and medium green gray, lower contact is sharp and parallel S_2. Core is moderately broken and recovery is good.</p>					
	112.6	123.7			5B1a	<p>Medium-dark gray, noncalcareous phyllite is moderately CS_2 foliated and contains 1-3% clotted Py 0-3% quartz-carbonate veins (1-20cm). Carbonate associated with vein quartz is calcite, dolomite and Fe-carbonate. Narrow margins of chloritization are common along veins. Rock is generally medium soft, approx 2% of interval is medium hard with no association to vein quartz.</p> <p>Core is generally moderately broken with good recovery, rock is strongly broken from 120.5 to 121.3 with 1cm gouge bands at 120.5 and 121.2. Upper and lower contacts are sharp and parallel S_2. S_2 surfaces are med-dark gray.</p>					
	123.7	126.5			5B0* 2	<p>Dark gray, locally strongly calcareous rock contains a moderate PS_2 fabric, 1-3% clotted and euhedral pyrite grains. Interval hosts 25% (1cm or less) bands of strongly</p>					

Code	From		To		Recov.		No.		Unit	Description			
	1	10	14	16	20	22	24	26			28	30	34
													Calcareous medium to dark gray rock distributed evenly throughout. Unit hosts 3-5% cm scale quartz-calcite veinless subparallel S_2 . S_2 surfaces are dark to medium gray. Core is slightly broken, recovery is good. Upper and lower contacts are sharp and parallel S_2 .
		126.5		127.9					5Fb	5D0* (55:45)			Medium green, slightly olive green at upper and lower ends of interval, moderately well developed CS_2 is common within phyllite. Phyllite is non-calcareous and hosts a single 7cm quartz-calcite vein with a high siliceous content below vein. Rock is soft where barren of silica. S_2 surfaces are medium green.
													5D0* at 126.5-126.8 and 127.5-127.9: Slightly olive green, moderately calcareous, strong PS_2 fabric. Upper 5D0* unit contains 20% quartz-calcite-Fe carbonate veining, lower unit contains 0-2% quartz-carb stringers. S_2 surfaces are grayish-olive green. Leucoxene (?) is common in lower unit. Rock is soft. All contacts are sharp and parallel S_2 . Core is slightly broken and recovery is good.
		127.9		131.2					5B0				Medium gray weakly to moderately calcareous phyllite contains a well developed CS_2 fabric throughout, 0-1% quartz-calcite veins (1cm) parallel S_2 . S_2 surfaces are medium gray. Rock is generally medium hard, rarely medium soft. 1-2%

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Date: Aug 90 Logged By: J. Smith

Core	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28 30	34 35		grainy and calc echolite Py is scattered throughout. Core is generally slightly better and recovery is good. Upper and lower contacts are sharp. Upper contact is parallel to lower contact is 20° steep to east.
	131.2	137.3			5B52	FAULT Medium gray weakly to moderately dolomitic unit hosts two strong fault zones separated by a moderately broken interval. Shear zone and gouge are oriented subparallel core axis. FAULT zones host strongly brecciated quartz and fragments throughout (10% of fault). Fault zone core is very soft with 20% gouge remaining good.
						Moderately broken interval occurs at 133.8 to 139.6 and contains a strong PS ₂ fabric with minor occurrences of CS ₂ . Rock is weakly dolomitic and medium calc. Box of core was split! Puzzling pieces throughout, more moderately coherent? Recovery is good.
	137.3	142.0			5F6	5D0 (85:15) Medium grayish-green with a weak mottled texture locally. Unit is generally non-calcareous, sporadically moderately calc. CS ₂ dominates foliation but is commonly strongly disrupted by well healed shear fabric generally subparallel to fault fabric above. Minor 5D0 units occur in beds commonly 10-30 cm thick, rarely as much as 1 m thick.

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
												<p>Rock is generally moderately hard, 5-10% of interval is calcareous. S_0 surfaces are medium gray green. Exact location of calcareous intervals cannot be determined with certainty; core was split and reassembly is subject to accuracy. → Great job by shift!</p>
	142.0	143.7									5B9	<p>Medium gray, upper 0.5m is moderately calcareous, lower portion is weakly calcareous. Rock contains a strong PS_2 foliation, trace 1% quartz. Calcite stringers and veins (1cm). S_0 surfaces are medium to medium dark gray. Core is moderately broken. Recov. is good. Upper and lower contacts are sharp. Upper contact is parallel S_0, lower contact is 40° steeper than S_0 and is marked by a very soft minor slip.</p>
	143.7	145.4									5B@	<p>Medium gray, tarnished yellow buff throughout, moderately ankerized pyrite is moderately PS_2 foliated and contains 3-4% quartz carbonate stringers throughout. Injected stringers are generally of random orientation. 20% of interval contains a spotted texture of finely brecciated carbonate (Fe) and quartz. Stringers along oriented into elongated trains parallel S_0. S_0 surfaces are yellow buff and medium dark gray. Rock is generally medium hard moderately broken with good recovery. Upper and lower contacts are sharp and parallel S_0.</p>

Code	From		To		Recov.		No.		Unit		Description
	10	14	16	20	22	24	26	28	30	34	
	145.7		148.3							5B01	5B01
											Medium gray moderately calcareous phyllite is moderately S_2 foliated. Locally unit is weakly ankeritic and tarnished yellow buff. Unit host 1-2% quartz calcite and calcite stringers of varying orientations. Lower 0.5m of interval is moderately ankeritic and buff yellow. Rock is generally medium soft to soft moderately to locally strongly broken, recovery is good.
											147.8 - 148.3 : strongly to moderately ankeritic - buff yellow in color.
	148.3		152.4							5B02	5B02
											Medium dark gray phyllite is weakly to moderately calcareous, S_2 foliated and contains 5-7% quartz-calcite and calcite stringers generally parallel S_2 . S_2 surfaces are medium dark gray. Unit contains trace - 1% clut. P_2 throughout. Rock is generally medium hard, moderately broken with good recovery. Upper contact is sharp, parallel S_2 and marked by a 2cm strongly crushed zone. Lower contact is sharp, parallel S_2 and marked by the beginning of a strongly to moderately broken interval of the same rock type.
	152.4		155.5							5B02	5B02
											Same as upper unit except core is markedly more broken with local crushed zones. A low angle fault occurs at

Code	From	To	Recov.	No.	Unit	Description
	10	14 16	20 22 24	26 28 30	34 35	
						153.4 to 153.8. FAULT consists of intensely crushed rock with no gouge. (19' to core axis). Rock is slightly hard locally crushed and soft. Unit hosts 2-3% clay. <i>[Signature]</i>
	155.5	161.16			5B02	SAME as upper two units with slight to moderate broken case. Rock is generally medium soft. Below 159.8 unit is moderately to strongly broken along to low angle S ₂ planes. Recovery is good. Upper contact is sharp and parallel S ₂ . Lower contact is gradual with a general trend to be more carbonaceous downhole.
	161.6	166.9			5B12	MAJOR FAULT Medium gray to medium dark gray, non-carbonaceous phyllite is very strongly broken and contains considerable gouge. Interval is slightly carbonaceous. Rock is very soft. RQD is 0% and recovery is very good. Upper contact is marked @ 160/42 w/ S ₂ and lower contact is marked 011/31 w/ S ₂ .

Code	From		To		Recov.		No.		Unit	Description
	10	14	16	20	22	24	26	28		
	166.9	177.1							5B2*	Dark gray phyllite is generally weakly calcareous and grades into moderate "calcareousishness" down hole. Carbonaceous material becomes less common down hole creating a very subreactive lower contact. Rock contains a well developed CS_2 fabric, 1-2% quartz-ankerite(?) veinlets, 1-3% clotted pyrite blobs and minor small zones of strongly broken core. S_2 surfaces are very dark to dark gray but do not generally mark fingers. Rock is generally moderately to slightly soft, core is generally moderately broken with good recovery. S_2 contact is sharp and parallel S_2 . Lower contact is gradational and marked a gradual reduction in carbonaceous content.
	177.1	181.0							5B2 2	Medium gray moderately to strongly calcareous phyllite contains sporadic increases in carbonaceous matter. In general unit has a slightly greater carbonaceous material than typical 5B2. Unit is CS_2 foliated and S_2 surfaces are dark gray and do not mark fingers. Interval contains 20% strongly bicecated bands of varying widths (0 - > 5cm). These bands are randomly oriented, very well healed in a quartz.

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34	35	
												and quartz-calcite matrix. Breccia fragments consist of phyllite andankerite(?) clasts. Rock is generally hard, core is slightly to moderately broken, recovery is good. Upper contact is sharp and marked by a 10cm gouge zone and trends 040/39 relative to S ₁ . Shear-sense plunge 47° in the fault plane. Lower contact is marked by the end of the brecciated zone bands.
	181.0	184.1									5BQ 2	Medium gray phyllite is moderately to strongly calcareous, weakly carbonaceous and contains a well developed CS ₂ fabric. S ₂ surfaces are dark gray. Laminae are 1-3mm in width. Interval hosts 0-trace clotty and grainy Po and trace-1% clotty Py. Rock is generally medium hard locally soft. Core is slightly broken recovery is good. Upper contact is noted by the end of brecciated bands of upper interval. Lower contact is parallel S ₂ and sharp.
	184.1	191.7									5BQ 2 @ (?)	Medium gray phyllite is generally moderately to strongly calcareous locally very weakly calcareous, slightly carbonaceous and generally contains CS ₂ fabric locally AS ₂ . Most diagnostic feature of unit is a moderate to weak yellow-buff discoloration

Lithologic Log

Code	From		To		Recov.		No.		Unit	Description	
	10	14	16	20	22	24	26	28			30
				191.7							with oxidation (ankerite?). Unit hosts trace clay. Rock is generally moderately hard, locally soft. Core is generally moderately to slightly broken. Interval is strongly broken at 190.9-191.7 with no gouge. Recovery is good throughout. Upper and lower contacts are sharp, parallel S ₂ and noted by the yellow-buff oxidation color.
	191.7		191.7						5B02		Medium to medium-dark gray phyllite is moderately to weakly calcareous, moderately to weakly carbonaceous and generally contains a P _{S2} fabric, locally C _{S2} . S ₂ surfaces are dark to medium dark gray. Unit hosts sporadic occurrences of clay, which constitutes less than 1% of interval. Rock is generally slightly hard, locally soft. Core is moderately broken, sporadically strongly broken with good recovery throughout. Upper contact is sharp and parallel S ₂ . Lower contact is marked by a 10cm irregular quartz vein. Vein has moderately chloritized wall rock fragments.
	197.8		205.7						5B0		INTERVAL CONSISTS OF 190 TO 198.7; NO HAS BEEN CORED AT 198.7-205.7. This interval consisted of the collar for down hole monitoring. Major interval.

Code	From		To		Recov.			No.			Unit	Description	
	10	14	16	20	22	24	26	28	30	34			35
			205.7									<p>constitutes 205.7 to 236.2. No recovery exists for this interval</p> <p>Medium gray phyllite is strongly calcareous, CS_2 foliated and contains 2% quartz calcite veins (2-30cm) oriented subparallel S_2. Veins hosts 5-10% moderately to strongly chloritized wall rock fragments. Py occurs sporadically in quartz. Trace-1% clotty Py occurs throughout unit. S_1 surfaces are medium to medium dark gray. Rock is slightly hard, core is moderate to slightly broken with good recovery. Upper contact is marked by a 10cm quartz vein oriented subparallel S_2. Lower contact exists below 205.7.</p>	
			205.7	236.2								<p>No RECOVERY</p> <p>Interval mottled, but pressures during motoring indicate sporadic intervals of soft and hard parts interpreted as gouge ^{zones} and quartz veins respectively.</p> <p>Coring below 236.2 represents HQ.</p>	
			236.2	240.2							5BQ	8	<p>Medium to medium light gray, slightly green when wet, moderately calcareous phyllite is weakly chloritic throughout. Unit is generally PS_2 foliated with local occurrences of faint CS_2. S_2 surfaces are medium to medium light gray \pm weak green color. Unit hosts 3-5% quartz calcite veins (1-5cm) often oriented subparallel S_2 and trace-1% clotty Py. Rock is moderate soft, core is</p>

Code	From	To	Recov.	No.	Unit	Description						
1	10	14	16	20	22	24	26	28	30	34	35	
		240.2										moderately broken with good recovery. Upper contact exists above 236.2. lower contact is sharp, parallel S_2 and noted by the loss of weak green color.
	240.2	245.6			5B9							Medium gray phyllite is strongly to moderately calcareous. Locally supports 10cm bands of very strongly calcareous bands. Unit hosts 1-2% .2-2cm quartz calcite veinlets generally parallel S_2 . S_2 surfaces are medium gray and represent a PS_2 fabric. Pyrite is dotty, sporadic and represents less than 1% of interval. Rock is moderately soft, core is slightly broken with good recovery. Upper contact is sharp and parallel S_2 . Lower contact is an irregular break, subparallel S_2 and marks the beginning of a strongly bedded and faulted zone.
	245.6	249.4			5B02	GLY BKN & FAULTED ZONE						Medium gray phyllite is very weakly calcareous and weakly dolomitic. PS_2 fabric is often abruptly sheared by breccia zones that are occasionally well healed with a weakly dolomitic siliceous finely crushed phyllitic matrix. S_2 surfaces are medium gray. Interval from 247.6 to 248.7 consists of gouge filled fractures. Both gouge filled

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
												and upper well healed breccia zones are oriented subparallel core axis. Recovery of gouge is poor and sporadic. Gouge is moderately to weakly calcareous. Phyllite is salt breccia zones are very hard. Breccia zones are estimated to be 1-3cm thick. Core is very strongly to strongly broken, recovery is surprisingly good.
												Occasional band and lamina (0.1-2 cm) is moderately carbonaceous
	249.4		254.6								5B60 A	Medium gray, very weakly calcareous phyllite contains a faint CS_2 fabric commonly trending to PS_2 . S_2 surfaces are medium to medium dark gray. Unit hosts 5% quartz veinlets and veins (.5-10 cm) which generally trend subparallel S_2 . Rock is generally medium salt, core is moderately to locally strongly broken with good recovery throughout. Upper contact is sharp, parallel S_2 and marked as the end of strongly broken rock of upper unit. Lower contact is sharp and parallel S_2 . Interval contains a very low concentration of calcareous material throughout. Color is slightly darker than true 5B0.
	254.2		256.7								5B9A	Medium gray phyllite is moderately calcareous PS_2 foliated with sporadic occurrences of CS_2 . S_2 surfaces are medium

Code	From		To		Recov.		No.		Unit	Description	
	10	14	16	20	22	24	26	28			30
											gray. Unit hosts 3-5% calcite and quartz calcite stringers which commonly cross cut S_2 . Common width of stringers is 2-5mm. From 255.9-256.7 the foliation is highly disturbed and texture indicates a weak "breccia" texture with stringers unaffected by disturbance. "Breccia texture" is not well developed and displays a non-fracture disturbance in fabric! Rock is moderately soft, slightly harder where S_2 is disturbed. Core is moderately locally strong, broken recovery is good. Upper and lower contacts are sharp. P_0 is not noted to exist, P_1 is very rare.
	256.7		262.8						5B0		Medium gray phyllite is moderately calcareous and contains 15-20% 0.5-1.5cm bands of "siltstone" which are moderately-strong calcareous. P_0 is noted common (0-2%) and occur in clots ranging from 2-15mm with and without proximity to quartz calcite clots and stringers. Interval is P_3 foliated with S_2 surfaces medium to medium dark gray. Unit hosts 1-2% quartz-calcite veins (1-3cm) oriented subparallel S_2 . Rock is generally medium soft, core is slightly broken recovery is good. Upper contact is sharp and parallel S_2 . Lower contact is sharp, parallel S_2 and noted as upper contact of 10cm quartz vein.

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
	262.8		270.8								589 18 (500) 90:10	
												<p>Medium gray, moderately to strongly calcareous phyllite is CS_2 foliated and hosts 3-5% 3-15cm quartz veins. Occasionally margins and wall rock fragments within quartz are moderately chloritized and often moderately calcareous. Vein contacts are irregular but generally trend subparallel S_2. S_2 surfaces are medium to medium dark gray.</p> <p>Interval contains sporadic occurrences of 500 occurring in dm to cm scale bands and a large band through 263.7-264.3. This unit is fine grained massive olive green and locally moderately to strongly calcareous.</p> <p>Interval is moderately soft to slightly hard, core is slightly to moderately broken with good recovery. Upper and lower contacts are sharp and parallel S_2.</p>
	270.8		272.6								580 (500) 95:5	161.7-2
												<p>Medium gray phyllite is strongly calcareous CS_2 foliated and contains a 10cm band of 500 (?), 1% quartz-calcite veinlets (1-3mm rarely up to 3cm) of variable orientation. S_2 surfaces are medium to medium dark gray. Rock is medium soft, core is slightly broken with good recovery. Upper and lower contacts are sharp and parallel S_2. Py is sporadic 0-1%.</p> <p>500 occurs at 161.7-161.8 and is weakly calcareous, fine grained and buff green to buff olive green in color.</p>

Code	From		To		Recov.			No.			Unit		Description
	10	14	16	20	22	24	26	28	30	34	35		
	272.6		280.9									569 189 (500) 99:1	<p>Medium gray phyllite is strongly calcareous PS_2 foliated locally CS_2 foliated and contains 7-10% 1-25cm quartz calcite veins with moderately chloritized margins and sporadic inclusions of Pb and Zn mineralization. Ve_1 chloritization along vein margins occurs in widths of 10-20cm and is occasionally calcareous. Locally chloritized margins contain a very strong resemblance to 500. Rock is moderately to slightly soft. Core is moderately broken with good recovery. Upper and lower contacts are gradational and noted as an increase and decrease in chloritization respectively.</p> <p>Highest grade of mineralization is estimated to be 2-3% combined Pb-Zn over 15cm, and is limited to inclusions within and adjacent quartz veins. Pb occurrences are sporadic.</p>
	280.9		291.2									560	<p>Medium gray phyllite is moderately to strongly calcareous, CS_2 foliated with S_2 surfaces medium to medium dark gray. Unit hosts 1-2% quartz calcite veinlets (0.2-2.0cm) of variable orientation. Pb and Po occurrences are sporadic and constitute trace-1% of interval occurring in 2-10mm clots. Rock is slightly soft, core is generally moderately locally moderately to strongly broken with good recovery throughout. Upper contact is gradational, noted as a progressive loss in chloritization along vein margins. Lower contact</p>

Code	From		To		Recov.		No.		Unit		Description
	10	14	16	20	22	24	26	28	30	34	
											is sharp and parallel S_0 .
	291.2	292.8								5B0# (5D0) 99:1	<p>Medium gray phyllite is very weakly dolomitic and often displays a disturbed PS_0 fabric. Breccia trains of quartz-calcite veinlets elongated slightly oblique to S_0 are common. A 2cm band of gouge occurs at 291.9, and a 2cm band of 5D0 occurs at 291.7. Rock is slightly soft, core is moderately broken with good recovery throughout. Breccia trains are oriented subparallel gouge zone contacts at $057/62^\circ$ relative to S_0.</p>
	292.8	293.0								5D1b (5D0) 80:20	<p>Olive green very fine grained massive non calcareous rock locally hosts dm-scale bands of 5B0. Both units are moderately PS_0 foliated with S_0 surfaces medium to dark gray and medium to medium dark olive green. Contacts between units are generally sharp and parallel S_0. Occasionally contacts are contorted and crosscut S_0 - often with quartz vein associations. 5D0 intervals are moderately hard 5B0 units are medium soft to soft. Core is moderately broken with good recovery. Upper and lower contacts are sharp and parallel S_0.</p>

Code	From		To		Recov.		No.		Unit	Description	
	1	10	14	16	20	22	24	26			28
	293.	8	294.	6					5805	Medium gray phyllite is weakly dolomitic, P ₅ foliated and contains 3-5% clotted Py. Texture at P ₂ is often distorted and moderately contorted. S ₂ surfaces are medium dark gray. Rock is moderately soft moderately to strongly broken along S ₂ planes. Recovery is good. Upper and lower contacts are sharp.	
	294.6		295.7						5806	FAULT Medium gray phyllite is weakly dolomitic strongly broken along S ₂ planes locally crushed and gouged. Crushed rock and gouge dominate interval below 295.1. Rock fragments and blocks are generally medium hard very soft where gouge persists. Core is highly broken. Recovery is good. Upper and lower contacts are sharp and parallel to subparallel S ₂ .	
	295.7		310.4						5860 (500) 98:2	Medium gray very weakly to non-calcareous phyllite is generally CS ₂ foliated and has 3% 3-30 cm quartz-calcite and less commonly quartz ankerite veins. Veins are generally subparallel S ₂ . S ₂ surfaces are medium dark gray. Interval contains kips and bands of 500 scattered throughout. Rock is generally medium hard. Core is generally moderately to slightly	

Code	From		To		Recov.			No.			Unit	Description
	10	14 16	20	22	24	26	28	30	34	35		
	312.8	313.3									5B0	FAULT Medium gray weakly calcareous phyllite is generally strongly broken. Interval consists of crushed rock and gouge at 312.8-313.0. Broken rock fragments display a S_2 fabric with S_2 surfaces. Medium dark gray. Rock fragments are soft to medium soft, core is highly broken with good recovery throughout. Upper contact is oriented $018^\circ/15'$ relative to S_2 (70°). Lower contact is sharp and oriented $015^\circ/55'$ to S_2 (82°).
	313.8	314.6									5B0	(5B0) 85:15 Olive green, massive, fine grained, calcareous unit contains scattered bands of weakly to very weakly calcareous 5B0. 5B0 is most common over upper and lower 0.4 m of interval. All units are PS_2 foliated with S_2 surfaces olive green or medium gray. All units are moderately hard, core is moderately broken with good recovery. Upper contact is oriented at $015^\circ/55'$ to S_2 . Lower contact is sharp and parallel S_2 .
	314.6	316.6									1000	(5B0) 50:50 Quartz vein is white, contains no wall rock fragments and is moderately fractured. 5B0 is strongly calcareous, medium gray and dominates lowest meter at interval. Phyllite is PS_2 foliated with medium gray S_2 surfaces. Phyllite is

Code	From	To	Recov.	No.	Unit	Description
1	10 14 16	20 22 24	26 28	30 34 35		Moderately to strongly broken, recovery is good throughout. Upper and lower contacts are sharp and parallel S_2 .
	316.6	317.5			5DPS (5BD) 90:10	Olive green to buff olive green unit is moderately dolomitic and hosts minor bands of 5BD throughout. All units are PS_2 foliated with S_2 surfaces buff olive green or medium-dark gray. Rocks are medium sand core is strongly broken with good recovery. Upper and lower contacts are sharp and parallel S_2 .
	317.5	318.5			5BPS FAULT	Interval is medium to light gray moderately dolomitic and consists of gouge, crushed rock and 7-15 blocks of phyllite with a highly disturbed S_2 fabric. Interval consists of gouge at 317.5-317.8. Phyllite blocks are soft with S_2 surfaces medium gray. Gouge hosts 15% vein quartz fragments. Recovery is good. Upper and lower contacts are sharp and appear subparallel S_2 .
	318.5	319.1			5BPS	Light gray phyllite is weakly to moderately dolomitic and contains a weakly disrupted PS_2 fabric. S_2 surfaces

Code	From		To		Recov.				No.		Unit	Description
	10	14	16	20	22	24	26	28	30	34	35	
												arc medium gray. Interval host a 2cm band at 500 est 318.9m. Rock is soft slightly to moderately broken with good recovery. Upper and lower contacts are sharp and parallel Sg.
	319.1		333.1								5B0#	Medium gray phyllite is strongly to very strongly calcareous, CS _g foliated with S _g surfaces medium gray. Unit hosts 3 gauge bands between 326.9 - 328.9. These bands do not exceed 10cm widths and are moderately to strongly calcareous. Phyllite adjacent gauge zones are strongly calcareous. Interval contains trace - 2% Pb and 0-1% As scattered throughout. Quartz calcite veins are constitute less than 1% of interval and are generally 1-2cm in width. 332.2-332.7 contains a single quartz-calcite vein with moderately chloritic and very weakly calcareous wall rock veins and fragments. Upper and lower contacts are sharp and parallel Sg.
	333.1		335.3								5B0719 (500) 60:40	Medium grayish green phyllite is moderately chloritized, locally CS _g foliated, and hosts 3-5% quartz-calcite-dolomite veins which occasionally host Pb-mineralization. Unit is

Code	From		To		Recov.		No.		Unit	Description	
	10	14	16	20	22	24	26	28			
1	10	14	16	20	22	24	26	28	30	34 35	<p>generally moderately to weakly calcareous. Qtz - carb veins which ± host mineralization in medium to light gray, 1-3cm wide and generally trend subparallel S_0. Unit hosts several 500 bands varying from 2-15cm wide. 500 units are moderately to weakly calcareous, massive, olive green, and P_5 foliated. S_2 Surfaces throughout interval are medium green and olive green. Green coloration within phyllites is interpreted as alteration along veins and alteration in proximity to 500 units. Rock is medium soft to slightly hard, core is slightly broken, recovery is good. Upper and lower contacts of interval are sharp and parallel S_0.</p>
	335.3	337.2								500	<p>Medium gray moderately to moderately strongly calcareous phyllite is CS_2 foliated, with S_2 surfaces medium dark gray. Unit hosts trace quartz-calcite veins parallel S_0. Rock is slightly hard, core is slightly broken with good recovery. Upper and lower contacts are sharp and parallel S_0.</p>
	337.2	338.9								500	<p>Olive green moderately to strongly calcareous unit is massive, fine grained P_5 foliated and hosts 3-5% quartz-calcite veins commonly .5-1 cm wide. Veins are commonly light to medium light gray.</p>

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
												parallel to subparallel S_2 , while veins are most often random oriented. Unit contains sporadic occurrences of P_1 with P_2 slightly more common. S_2 surfaces are medium to medium dark olive green. Rock is moderately hard, core is slightly broken with good recovery. Upper and lower contacts are sharp and parallel S_2 .
	338.9		344.1								500	(5B2 : 5B02) 90:8:2
												All units are moderately to sporadically strongly calcareous. All contacts are sharp and parallel S_2 , minor chloritization of phyllites occur at contacts, but is most commonly absent.
												500 units are olive green, P_5 foliated, massive and fine grained. S_2 surfaces are medium to medium dark olive green.
												5B2 and 5B02 units range in widths from 5-30 cm, are dark to medium dark gray, P_5 foliated with S_2 surfaces dark to very dark gray. Darkest S_2 surfaces have moderate lamination on fingers.
												Interval contains 3-5% quartz-calcite veins ranging from .2-3cm in width with very rare occurrences of remobilized Pb mineralization. Veins and mineralization are parallel to subparallel S_2 . Occasionally, white quartz veins, commonly .2-3cm wide are randomly oriented. Most veins are medium to light gray. P_0 and P_1 occurrences are sporadic and vary from .2-1.5 cm in size. Rock is moderately hard, slightly broken with good

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28	30	34 35	
						good recovery. Upper and lower contacts of interval are sharp and parallel S_2 .
	344.	355.9			5BP (500) 98:2	Medium gray moderately calcareous phyllite is generally CS_2 foliated with S_2 surfaces medium dark gray. Interval contains 1-2% white quartz-calcite veins commonly 1.5-3.0 cm wide oriented parallel to subparallel S_2 . Interval host two 500 bands less than 5 cm wide with sharp contacts parallel S_2 .
						At 353.1 - 353.6 interval contains a moderately strong fault zone which consists of calcareous very soft rock interspersed with calcareous gouge. Occasional quartz vein fragments present. Gouge zone is on the cm-scale thickness and wanders down the core at varying angles and orientations relative core axis.
						Interval consists of rock which varies from slightly to slightly brecciated and moderately broken with good recovery throughout. Upper and lower contacts are sharp and parallel S_2 .
	355.9	362.4			15C01 (500:5F7) 83:15:02	Medium green, massive, moderately calcareous rock contain no indication of sedimentary origin. A very weak igneous texture is interpreted to exist!!! Interval does not contain leucocene and is fine grained. Interval hosts sporadic bands and wisps of

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28 30	34 35		
	367.0	367.9			500	(5F0: 5D0) 60: 35: 5
						500 unit is medium green, moderately to strongly calcareous, massive fine grained, and contains a weakly preserved igneous texture. This unit occurs uppermost in the mixed interval.
						5D0 occurs below 500 unit and is medium olive green, slightly to moderately calcareous, fine grained weak PS_2 foliated and is intermixed with 5F0 occurring dominantly as the lowest member of the mixed package.
						5F0 is weak to moderately calcareous, medium green CS_2 foliated and is in sharp contact with all 5D0 stringers and bands. These contacts are parallel S_2 .
						All units contain sporadic occurrences of P_0 and P_1 , are moderately hard, slightly broken with good recovery. Upper contact of interval is marked as the lowest end of a 30cm gauge zone. lower contact is sharp and parallel S_2 .
	367.9	370.8			580	
						Medium gray phyllite is moderately to strongly calcareous, CS_2 foliated with S_2 surfaces medium dark gray. Interval contains 0-trace cm-scale clasts of P_0 , trace-1% .2-.5 cm-scale quartz calcite veins of variable association. Rock is moderately hard, moderately to slightly broken with good recovery. Upper and lower contacts are sharp and parallel S_2 .

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28 30	34 35		
	370.8	372.8			500	1 (500) 90:10 Olive green, weakly to moderately calcareous, fine grained massive P _{Sg} foliated rock hosts rare bands and wisps of 5B0. S _g surfaces are medium olive green and medium gray. Interval contains 5-7% .5-3cm white and medium to light gray quartz-calcite veins oriented subparallel S _g . Veins commonly host up to 3% fine grained stringers of P _o ± P _y . All rock are medium hard to hard, core is slightly to locally moderately broken, recovery is good. Upper and lower contacts are sharp and parallel S _g .
	372.8	378.0			500	1 (5B02: 5B2: 5A0) 95:4:1 Medium gray locally medium dark gray phyllite is generally moderately calcareous locally weakly calcareous, generally CS _g foliated with S _g surfaces ranging from medium gray to black. Rarely S _g surfaces strongly tarnish fingers black. Phyllite grades from 5B0 to 5B2 with no consistent pattern. Rare lamina up to 1.5cm wide (commonly .5-1.0cm) are black and designated as 5A0. Unit hosts 10-12% white and light gray quartz-calcite veins in widths from 0.5-25cm oriented subparallel S _g . Interval contains 3-7% clotted P _o 2-5mm in width. Rock is moderately hard, moderately to slightly broken, with good recovery. Upper contact is sharp and parallel S _g . Lower contact is gradational and noted as a loss in sporadic carbonaceous material.

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28 30		34 35	
	378.0	390.0			5B0	(500) 98:2 Medium gray, strongly to moderately calcareous phyllite is CS_2 foliated with medium dark S_2 surfaces. Unit hosts 1-2% wispy white and light gray quartz-calcite veins of varying orientations commonly .3-1.0cm wide, 0-2% clotty PO (2-4mm) and sporadic wisps and bands of 500. 500 units are less than 2cm wide (commonly 2-4mm) and are often contorted and discontinuous. Rock is moderately hard, rarely and locally slightly soft. Core is slightly broken and recovery is good. Upper contact is gradational, lower contact is sharp and parallel S_2 .
	390.0	395.0			5B0	(500) 55:45 Medium gray moderately to strongly calcareous phyllite is CS_2 foliated with medium dark gray S_2 surfaces. Phyllite contains trace-2% clotty PO . Intermixed with phyllite bands are several 500 bands up to 40cm thick. 500 units are olive green occasionally, medium green to olivegreen, moderately calcareous with isolated occurrences of leucocene (?) up to 15%. 500 units are massive, weakly PS_2 foliated with S_2 surfaces varying from medium olive green to medium green. Bands containing leucocene are rare, <10cm wide, and suspect to be 500. All units are slightly hard and locally slightly soft.

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34	35	
												Core is moderately, locally strongly broken. Recovery is good throughout. Upper contact is sharp and parallel S_2 . Lower contact is oriented $158/70$ relative to S_2 . Lower contact is sharp.
	395.3		401.3							5B4	(5D4) 60:40	Phyllite(?) is light grayish-olive green, moderately calcareous and contains a CS_2 fabric approaching PS_2 . S_2 surfaces are medium grayish olive green. 5D0 units are up to 1.3m thick, olive to greenish olive in color, moderately calcareous, fine grained and moderately PS_2 foliated. Locally 5D0 units are bleached buff yellow-olive green with gradual contacts. Hercynite has not been recorded to exist within any unit of the interval. All units within interval are hard, core is generally slightly broken - rarely very strongly broken over 10cm intervals, recovery is good throughout. Upper contact is oriented at $158/70$ to S_2 and is represented by a well healed cross-cutting (S_2) weak shear fabric. Shear fabric is local and is rarely reflected through the balance of interval. Lower contact is sharp and subparallel to parallel S_2 . Contact represents an increase in intensity in S_2 and slightly stronger alteration.

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28 30	34 35	5B4	<p>Buff to very light olive green phyllite is moderately to strongly calcareous, CS_2 foliated (approaching PS_2 locally) with S_2 surfaces are medium buff gray. Locally unit approaches a light gray color - most common in the lower 1/4 of interval. Interval contains trace wispy, discontinuous and randomly oriented 2-3mm calcite veinlets. 0-trace clasts Po (< 2mm). Hardness of interval varies on the cm to dm scale from hard to slightly soft. Core is slightly broken with good recovery. Upper contact is sharp and subparallel S_2. Lower contact is fault bounded with an orientation of $270/47'$ relative S_2. Dip of fault is highly variable relative to core axis: $72-30'$.</p>
	403.8	407.7			5B4	<p>FAULTED INTERVAL</p> <p>Buff to yellowish olive green phyllite is moderately to moderately strongly calcareous and generally displays a moderately well healed brecciated texture cemented with ground phyllite with \pm moderate to low calcareous content. Fragments are highly rotated and often display a CS_2 fabric. Matrix and fragments are of similar alteration color. Locally cm scale bands of crushed 5B2 occurs in open slip planes. These 5B2 filled slip planes are of variable</p>

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34	35	
												orientation relative to core axis (70-25°). S ₂ is generally overprinted by brecciated texture and localized weak shear fabric.
												Rock is generally hard locally moderately soft in cm scale bands. Core is slightly broken, locally crushed, gouged or strongly broken. Recovery is good. Upper contact is oriented 270/42° to S ₂ and is marked by a cm scale band of 5B2 filled fault. Lower contact is marked a gradational reduction in buff alteration and a gradual loss of brecciated texture.
	403.7		411.0								5B0	Medium to medium light gray strongly calcareous phyllite is CS ₂ foliated with S ₂ surfaces medium gray. Interval contains 1-2% calcite stringers (1-3mm) and 0-trace Pb. Rock is slightly hard, core is slightly broken with good recovery. Upper contact is gradational, lower contact is sharp and parallel S ₂ . CS ₂ approaches PS ₂ near lower contact
	411.0		411.8								5B4 → 5D0 (5D0) (60:40)	Olive green to buff olive green phyllite closely approaches 5D0 in color, diagnostic only by CS ₂ fabric. All units

Code	From		To		Recov.		No.		Unit	Description	
	10	14	16	20	22	24	26	28			30
											are moderately to locally strongly calcareous. Interval contains sporadic 500 units which are S_2 foliated fine grained massive, and most often on the cm-scale thickness. Interval supports 1-2% calcite stringers and two lcm calcite-quartz veins at 411.4 oriented subparallel S_2 . Rock is slightly silt, core is very strongly broken generally along S_2 with localized rough surfaced fractures oriented at $094^\circ/10$ to S_2 . S_2 is oriented at 78° to core axis. Recovery is good. Upper contact is sharp and parallel S_2 . Lower contact is fault bounded and oriented $094/22$ to S_2 . S_2 is oriented at 85° to core axis
	411.8	412.9							5B4	* FAULT 80:20	
										FAULT zone consists of 60% moderately to weakly competent dark gray matrix. Matrix is very weakly calcareous (10% HCl). Matrix hosts polymictic angular and rounded fragments of 500, 5B0, 5B4 \Rightarrow 500 and vein quartz. Matrix sporadically slightly tarnishes fingers light to medium gray. Gauge is sporadic and is in bands <10cm wide. Upper contact is with 5B4 and oriented at $094/24$ to S_2 ; S_2 is oriented 85° to core axis. Lower contact is also with 5B4 and oriented at $080/21$ relative S_2 (S_2 oriented 73° to core axis). Well developed slickensides are oriented 33° to core axis	

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28	30	34 35	
	112.9	120.5			5B4 ⇒ 5D0 (5D0) 98:02	
						Buff olive green to gray olive green phyllite is moderately locally strongly calcareous CS_2 foliated with S_2 surfaces medium to medium dark grayish olive green. Interval supports 2% 5D0 occurring parallel S_2 in bands commonly 1.0-2.0 cm, rarely up to 35 cm (at 114.25-114.50). Interval contains 1% calcite stringers and 0-2% cm scale quartz-calcite veins and trace Pb and Py. Py & Pb often occur together in clots 0.5-1.0 cm in diameter.
						Alteration which gives 5B4 the 5D0 "look" is variable in intensity, varr. from weakly moderate to moderate. Upper contact is oriented 094/82 relative S_2 (S_2 is 85° to core axis). Lower contact is sharp and parallel S_2 . Rock is slightly soft, rarely moderately soft, core is slightly broken with good recovery.
	120.5	123.7			5D0 (5B4) 60:40	
						All units are moderately to strongly calcareous. 5D0 units are olive green to buff olive green fine grained PS_2 foliated with S_2 surfaces medium olive green. 5B4 units approach 5D0 color but contain a well developed CS_2 fabric and are generally slightly more calcareous. Contacts within interval are generally sharp and parallel S_2 , occasionally

Code	From		To		Recov.			No.			Unit	Description
	10	14 16	20 22 24	26 28 30	34 35							
												irregular. Interval contains 2% quartz-calcite veins (0.2 - 3.0 cm) and is generally barren of sulphides. 504 units range from 10-30 cm thick. Rock is moderately hard and slightly broken with good recovery. Upper contact is sharp and parallel S_2 . Lower contact is gradational with a progressive loss in alteration to 5D0 color.
												A 5cm fault zone occurs at 423.9 and is oriented at $059/39^\circ$, S_2 is oriented at 59° to core axis. FAULT is similar to the type occurring at 411.8 - 412.9 with minor breccia fragments.
	423.7	425.1									5130	light gray phyllite is moderately to strongly calcareous, CS_2 foliated, with S_2 surfaces medium-light gray. Interval contains trace calcite stringers and 10-trace quartz-calcite stringers, and no visible sulphides. Rock is generally soft, locally very soft, core is moderately broken with good recovery. U_{M+T} contact is sharp and parallel S_2 . Lower contact is fault bounded with an orientation of $340/26^\circ$ relative S_2 . S_2 is oriented 71° to core axis. FAULT at basal contact is 1cm wide and consists of very weakly calcareous light gray gouge. Poorly developed slickensides with a fault plunge 17° within fault plane.

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28 30	34 35		
	425.	426.8			5B160	<p>Light gray phyllite is non-calcareous locally very weakly calcareous, CS_2 foliated with medium-light S_2 surfaces. Unit is very similar to upper interval only lacking in calcareous nature. Rock is soft locally slight. Hard case is moderately broken locally strongly broken in fractures crosscutting S_2 - variable orientations. Upper contact is sharp, jagged and described with upper unit. Lower contact is sharp and parallel S_2.</p> <p>A 1cm very weakly calcareous, graphitic gouge band occurs at 426.6. Band is orient'd $065/25^\circ$ relative S_2. S_2 is orient'd at 72° FCA. Poorly developed slickensides plunge 6° with fault plane. Gouge strongly tarnishes fingers dark gray.</p>
	426.8	431.7			5B0 (5B4)	<p>Medium to light gray phyllite is generally moderately calcareous with rare bands (less than 10cm) of strongly calcareous and non-calcareous phyllite. Unit is CS_2 foliated. Unit is very similar to upper unit but with noted higher carbonate content. Low angle 1-2cm graphitic gouge zones are sporadic throughout interval, zones are very similar to those in upper unit. Upper and lower contacts are sharp and parallel S_2. Rock is generally moderately broken locally.</p>

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24	26 28 30	34 35	
						strongly broken, core is slightly soft locally soft, recovery is good. Last meter of core within interval grades in alteration becoming stronger down hole. Alteration lightens color to a buff to buff olive green. CS_2 fabric is retained throughout altered interval.
	431.7	433.5			5B0	(5B4:5D0) 75:23:02 Medium gray phyllite is generally strongly calcareous, very weakly calcareous where altered, CS_2 foliated with S_2 surfaces medium-dark gray. Interbedded trace-1% calcite stringers of variable orientations. Upper 10cm of interval contains 5D0; buff olive green, very weakly calcareous, PS_2 foliated and massive. 5D0 contacts are sharp and parallel S_2 . 40cm of phyllite adjacent 5D0 is altered in color approaching 5D0, is weakly calcareous. PS_2 grading down hole to CS_2 foliated. Alteration decreases down hole. Rock is moderately hard, core is slightly broken with good recovery. Upper and lower contacts are sharp and parallel S_2 .
	433.5	432.2			5D60	Buff-light brown unit is massive, fine grained,

Code	From			To			Recov. No.				Unit	Description
	10	14	16	20	22	24	26	28	30	34	35	
												PS ₂ foliated, very weakly to non calcareous and hosts 2% calcite stringers with locally defined CS ₂ fabric(?) S ₂ surfaces are buff-brown. Rock is hard, case is slightly broken with good recovery. Upper and lower contacts are sharp and parallel S ₂ .
	A34.2	A36.7									5B6D2	Medium to medium dark gray phyllite is weakly to very weakly calcareous CS ₂ foliated with dark gray S ₂ surfaces which do not form tabular stringers. Interval contains 0-5% (trace overall) cm-scale quartz calcite veins oriented parallel S ₂ , 0-3% clotty Po (2-5mm). Rock is moderately soft, case is moderately to slightly broken, locally moderately-strongly broken. Recovery is good throughout. Upper and lower contacts are sharp and parallel S ₂ . Very minor (1cm) alteration of phyllite occurs at upper and lower contacts. Alteration consists of phyllite color approaching that of #500.
	A36.7	A38.5									5B4	(⇒ 500 : 500) 80:20 Buff brown to buff olive green phyllite is moderately to weakly calcareous, CS ₂ foliated locally approaching PS ₂ , with buff brown S ₂ surfaces. Alteration is 5B4 ⇒ 500 and is strong. 500 units (3-10cm) are buff brown and olive green

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24	26 28 30	34 35	
						<p>fine grained massive, PS_2 foliated and very weakly to non-calcareous. S_2 surfaces are similar in color to cut surfaces. Interval contains trace quartz-calcite veins on the cm scale - parallel S_2, and 1-2% dolomite(?) onkerite(?) (10% HCl reaction when scratched and very weak with 20% HCl on surface) stringers of variable orientation. Contacts of 500 with 5B4 are sharp and parallel S_2. Rock is slightly hard, core is moderately broken, crushed at 438.0-438.1, recovery is good throughout. Upper and lower contacts of interval are sharp and parallel S_2.</p>
	438.5	H40.2			5B02	<p>(5B4 \Rightarrow 500: 500) 55: 40: 05</p> <p>All versions of phyllite are moderately calcareous CS_2 foliated locally approaching PS_2. 500 units are very weakly calcareous to non-calcareous.</p> <p>5B02 units are medium to dark gray with dark gray S_2 surfaces coated with trace gouge which slightly tarnishes fingers light to medium gray.</p> <p>5B4 and 500 package occurs at 439.2-439.8 and is buff brown in color locally olive green with similar colors on S_2 surfaces. Contacts of package are sharp, parallel S_2 and marked by cm scale quartz-calcite veins oriented subparallel to parallel S_2.</p> <p>Rocks are slightly hard to slightly soft, core is generally moderately to strongly broken, recovery is good</p>

Code	From		To		Recov		No.		Unit	Description	
	10	14	16	20	22	24	26	28			30
											Upper and lower contacts of interval are sharp and parallel to S_0 .
	440.2		441.8						5BQ		Medium gray, moderately calcareous phyllite is $CS_2 \Rightarrow PS_2$ foliated with medium-dark S_0 surfaces. Upper 40cm is crushed and also moderately calcareous. S_0 becomes slightly contorted and reduces in angle relative to core axis below 441.6. Rock is moderately soft strongly broken, recovery is good. Upper contact is sharp and subparallel S_0 . Lower contact is sharp, parallel S_0 and noted as a reduction in carbonate content and a progressive increase in shear fabric over S_0 .
	441.8		445.4						5BQ\$	FAULT	Medium gray weakly dolomitic interval contains a moderately strong shear fabric oriented at low angles to core axis, locally fabric occurs parallel core axis. Interval is generally soft but competent, supported by phyllitic matrix. Matrix supports angular fragments of 5B4 \Rightarrow 500 (which occur above and below fault zone), rare 500, vein quartz, and dolomite \pm ankerite(?). Shear fabric also contains sporadic occurrences of quartz injection occurring parallel fabric and displaying a wispy nature. Rock is soft

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24	26 28 30	34 35	
						Slightly broken rarely strongly broken with good recovery throughout. Upper contact is gradual in shear fabric becoming dominant over S_2 , sharp with a loss of calcareous nature of upper unit. Lower contact is sharp and oriented $156^\circ/34'$ relative to S_2 . S_2 is oriented 73° to core axis.
	445.4	HH6.8			5B08	
						Medium gray phyllite is very weakly dolomitic, $CS_2 \Rightarrow PS_2$ foliated with medium to medium-dark S_2 surfaces. Interval contains trace fracture filled stringers of dolomite. Rare occurrences of moderate calcareous nature does exceed 2-3cm widths. Rock is slightly hard locally moderately soft. Core is moderately broken with dolomitic gouge at 445.95 to 446.0. Upper contact is sharp fault bound and oriented at $156^\circ/34'$ relative to S_2 . Lower contact is also sharp fault bound and oriented $143^\circ/17'$ relative to S_2 . S_2 is oriented at 73° to core axis.
	446.8	447.8			5D0 (5B4 \Rightarrow 5D0) 80:20	
						Butt brown to buff olive brown weakly to moderately calcareous rock is fine grained massive and is foliated. Calcareous nature increases down hole. Rock hosts minor bands at 5B4 strongly altered to a 5D0

Code	From		To		Recov.				No.		Unit	Description
	10	14	16	20	22	24	26	28	30	34		
												color. Rocks are slightly soft, often strongly broken with good recovery. Upper contact is faulted (2cm of crushed and gouged 5BQ) and oriented 143/17° relative S ₂ . lower contact is strongly broken but appears parallel S ₂ .
	447.8	449.1									5BQ	Medium gray phyllite is moderately calcareous, CS ₂ foliated with medium-dark S ₂ surfaces. Interval supports a weakly calcareous fault zone at 448.4-448.8. Phyllite blocks within and adjacent gouge and crushed zone are moderately calcareous. Rock is very slightly hard generally slightly to moderately broken with good recovery throughout. Upper and lower contacts are sharp and parallel S ₂ . Interval contains trace-1% calcite stringers.
	449.1	453.6									5BQ#	Medium gray phyllite is weakly to very weakly dolomitic, CS ₂ foliated with medium-dark gray S ₂ surfaces. Interval contains 1-2% dolomitic stringers and 1% cm-scale quartz-calcite veins oriented parallel S ₂ . Unit appears identical in texture color and composition to upper and lower units. Rock is very slightly hard, rare is slightly broken with good recovery. Upper and lower contacts are sharp and parallel S ₂ .

Code	From	To	Recov.	No.	Unit	Description						
1	10	14	16	20	22	24	26	28	30	34	35	
	453	466	8			5B9						
												Medium gray moderately to strongly calcareous phyllite is CS_2 foliated, PS_2 foliated adjacent sporadic concentrations of cm-scale quartz veins oriented subparallel to parallel S_2 . S_2 surfaces are medium-dark gray. Unit hosts 0-5% cm-scale quartz-calcite veins. Rock is slightly soft, rare is slightly - paral, moderately broken with good recovery throughout. Upper and lower contacts are sharp and parallel S_2 . Lower contact is marked by a 2cm quartz calcite vein oriented parallel S_2 .
	466	468	5			5B9						Shear \Rightarrow 5B2
												Medium to medium dark gray, moderate to strongly calcareous phyllite contains a strong shear fabric which strongly disrupts the CS_2 foliation. Calcite and calcite-quartz stringers are often wispy, parallel shear fabric and consist of 5-7% interval (2-3mm wide). Interval is very well healed and hosts rare blocks of 5B4 \Rightarrow 5B0. Rock is slight to moderately hard, very slightly broken with good recovery. Upper contact is marked by a 2cm quartz vein parallel S_2 . Shear fabric at upper portion of interval is oriented at $257/80$ relative to S_2 . Lower contact is sharp and oriented parallel shear fabric - 47° relative to core axis.

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28	30	34 35	
	468.5	469.5			5BH	⇒ 500 shear (500 : 5B0 ⇒ 5B02) 85 : 10 : 05 Butt to buff olive green moderately to strongly calcareous phyllite contains a strong shear fabric as upper unit. Interval contains a strongly disrupted S ₂ fabric which creates difficulty in differentiating 5B4 ⇒ 500 from 500. Shear fabric hosts 5% wisps and stretched blocks of 5B0 ⇒ 5B02. Rock is moderately hard with a very well healed shear fabric. Core is slightly broken with good recovery. Upper contact is sharp and oriented parallel shear fabric at 47° to core axis. lower contact is very sharp and consists of well healed very finely ground 5B02 oriented at 223°/33° to S ₂ . No portion of 5B0 ⇒ 5B02 tarnishes fingers
	469.5	474.7			5B0	(⇒ 5B04) 60 : 40 Medium gray locally medium buff to medium buff olive green moderately to strongly calcareous phyllite is S ₂ foliated where buff color persists unit tends to approach P ₅ . Alteration of 5B0 ⇒ 5B04 is sporadic and with generally in bands < 1.0m with gradational contacts. Locally isolated wisps of alteration is moderately strong and occurs in bands 1-2mm wide parallel S ₂ and may in fact be 500. Rock is slightly hard to slightly soft, core is moderately to slightly broken with good recovery. Upper contact with shear fabric is sharp and oriented at 223°/33° to S ₂ . lower contact represents a gradual loss of alteration

Code	From	To	Recov.	No.	Unit	Description						
	10	14	16	20	22	24	26	28	30	34	35	
												at 5B0 → 5B04 (5B04 tends to reach 5B0).
	474.	480.9										5B0
												<p>Medium gray, moderately to strongly calcareous phyllite is S_2 foliated with medium to medium dark gray S_2 surfaces. Unit hosts 2% calcite filled, well healed fractures which cross-cut S_2. Rock is slightly to moderately silty core is slightly broken with good recovery. Upper contact is gradual and lower contact is sharp and oriented $163^\circ/24^\circ$. Lower contact is noted as the beginning of a weak fault zone and contact angle measured accurate but may not be representative.</p>
	480.9	481.7										5B0 FAULT *
												<p>Medium gray, moderately calcareous phyllite is moderately to strongly crushed and locally slightly gouged. Crushed rock and gouge are weakly to moderately calcareous, occur in bands from 1-3cm wide and are of various orientations. Undisturbed blocks of phyllite are S_2 foliated. S_2 and crushed surfaces are medium-dark gray. Core is silty, recovery is good. Upper contact is oriented at $163^\circ/24^\circ$ to S_2. Lower contact is oriented at $222^\circ/46^\circ$ to S_2.</p>

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34	35	
	481.7	486.9									5B0	* ϕ Medium to light gray, strongly calcareous phyllite is S_2 foliated with medium gray S_2 surfaces. Interval hosts 10-15% dolomite filled fractures (.5-2mm x 10-20mm) oriented subparallel core axis. Frequency of dolomitic fractures gradually decreases down hole. Rock is generally moderately soft locally slightly hard. Core is moderately to slightly broken with good recovery throughout. Upper contact is sharp, oriented at 222° to S_2 ; lower contact is noted as a loss of dolomitic fractures.
	486.9	500.2									5B9	(500) 99:01 Medium gray phyllite is moderately calcareous, S_2 foliated locally approaching P_2 with medium to medium dark gray S_2 surfaces. Unit hosts rare cm-scale bands of 500-occurring parallel S_2 , 0-1% clott. P_2 and 1% cm-scale quartz-calcite veins oriented parallel S_2 . Rock is moderately soft, slightly broken and recovery is good. Upper contact is noted as a loss in dolomitic fractures of upper unit. Lower contact is sharp and parallel S_2 .
	500.2	522.2									5B01 B	(500) 98:02 Medium gray phyllite is moderately to strongly calcareous, P_2 foliated with medium-dark S_2 surfaces.

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28 30	34 35		Interval hosts 15% quartz-calcite veins, 1-2 rarely up to 4cm wide. Veins are parallel S_0 and often have moderate to weak chloritic alteration along margins. Interval also hosts 1-2% clotty P_0 often associated with veins. 500 units are rare 1-1.5cm wide and parallel S_0 . Upper and lower contacts are sharp, parallel to subparallel S_2 and marked by quartz veins and chloritic alteration. Rock is moderately hard, core is slightly broken with good recovery.
	502.2	513.9			500	(crushed and gauged*) 99:01 Medium gray, moderately to strongly calcareous phyllite is S_2 foliated with medium to medium-dark gray S_2 surfaces. Interval contains 1-3% 5-10mm clots of P_0 a 25cm quartz-calcite vein (\pm chloritic alteration) at 509.4 and calcareous crushed and gauged zones at 511.6-511.8 and 512.45-512.6. Crushed and gauged zones are moderately to strongly calcareous 2-3cm wide and orientated at low angles to core axis. Rock is slightly soft, core is moderately to slightly broken with good recovery throughout. Upper and lower contact, are sharp and parallel S_2 .

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26	28 30	34 35	
	513.9	520.6			5150	* Strongly broken Medium gray, strongly calcareous phyllite is S_2 foliated, rarely approaching PS_2 , with medium-dark gray S_2 surfaces. Interval is strongly broken along S_2 surfaces, locally weakly crushed with very rare gouge bands from 2-3cm wide. Gouge is often subparallel to parallel S_2 . Crushed and gouged intervals are moderately calcareous throughout. Rock is moderately soft, strongly broken. Recovery is good throughout. Upper and lower contacts are sharp, parallel S_2 and mark the limits of broken interval.
	520.6	524.7			5199	(5100) 99:01 Medium gray moderately to strongly calcareous phyllite is $CS_2 \Rightarrow PS_2$ foliated with medium-dark gray S_2 surfaces. Interval hosts 2-3% 2-6cm quartz calcite veins oriented parallel S_2 . Po occurs as scattered 2-5mm clots and does not exceed 1% of interval. Rock is moderately soft, core is moderately broken with good recovery. A single 1cm band of 5100 occurs at 521.6. Upper and lower contacts of interval are sharp and parallel S_2 .

Code	From		To		Recov.		No.		Unit	Description
	10	14	16	20	22	24	26	28		
	524.7		527.3						5B0	(⇒584:500) 88:10:02 Medium gray strongly to moderately calcareous phyllite displays a well developed S_2 fabric with medium-dark gray S_2 surfaces. Interval displays an increase in alteration downhole. Alteration is to a olive green color similar to 500. Alteration increase is gradual over 1.0-1.5 meters, but strong with diffuse contacts subparallel S_2 at 526.9-527.1. 500 occurs in sharp contact with 584 at 527.1. Rock is moderately to slightly salt, core is slightly to moderately broken. Upper contact is sharp and noted as first weak to very weak occurrence of 580 ⇒ 584. Lower contact is sharp and parallel S_2 .
	527.3		530.3						5B0	* Strongly broken Medium gray moderately to strongly calcareous phyllite is P_{S_2} foliated locally $P_{S_2} ⇒ CS_2$, with medium-dark gray S_2 surfaces. Interval is strongly broken with S_2 dominated fracture planes. Rarely interval hosts fractures subparallel core axis. Unit hosts a single calcareous gouge band at 527.3-527.35. Rock is salt to moderately salt, core is strongly broken with good recovery. Upper contact is marked by narrow gouge zone subparallel to parallel S_2 . Lower contact is sharp, parallel S_2 and noted by an increase in P&D.

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CURRAGH RESOURCES INC.

Lithologic Log

Page 63 of _____Date: _____ Logged By: J. ZBETINOFF

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28	30	34 35	
	530.8	532.0			5BQ	(500) 85:15 Medium gray moderately to strongly calcareous phyllite is generally CS_2 foliated, locally PS_2 , with medium-dark gray S_2 surfaces. Interval hosts sporadic occurrences of olive green non-to-very weakly calcareous SD_0 . SD_0 units do not exceed 10cm in width and are oriented parallel S_2 , rarely 1cm wide and folded parallel S_2 . Rock is slightly hard, core is slightly -locally moderately broken, recovery is good. Upper and lower contacts are sharp and parallel S_2 .
	532.0	540.2			5BQ	(5B2) 95:05 Medium gray moderately to strongly calcareous phyllite is CS_2 foliated with 5% of S_2 planes dark gray. These 1-2mm widths of increased carbonaceous material have been designated "5B2". "5B2" surfaces moderately tarnish fingers medium gray. All other S_2 surfaces are medium-dark gray. Interval contains sporadic occurrences of strongly broken and weakly crush rock. Broken intervals do not exceed 70cm, commonly 3-15cm wide and are moderately to strongly calcareous. PS_0 and PS_1 occurrences are sporadic and clotty. Rock is slightly hard, core is generally moderately to slightly broken with good recovery throughout. Upper and lower contacts are sharp and parallel S_2 .

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
	549.2	551.8									580	<p>Medium gray locally medium-light gray, strongly to moderately calcareous phyllite is CS_2 foliated with medium to medium dark gray S_2 surfaces. Interval contains 0-1% cm-scale white quartz-calcite veins 0-1% clots, Po locally CS_2 fabric is disturbed by and rock hosts 5-7% short clotted, irregular calcite fractures. Rock is slightly hard to very slightly soft core is slightly broken with good recovery. Upper and lower contacts are sharp and parallel S_2.</p>
	551.8	552.9									5802*	<p>Dark gray moderately calcareous phyllite contains a PS_2 fabric which is commonly contorted and disrupted by a post D-2 event. Calcareous nature of rock is hosted by a network of irregular discontinuous pattern of fractures closed with $CaCO_3$. Fractures constitute 10% of interval and do not exceed 2mm in width. S_2 surfaces are dark gray and very rarely weakly tarnish fingers medium gray. Interval contains 5-7% Po occurring commonly as very irregular clots and stringers, rarely in bands 0.5 cm wide. Rock is hard, core is slightly broken with good recovery. Upper and lower contacts are sharp and parallel S_2.</p>

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
	522.9	554.0									369	\$ (5802 : 500) 65:20:15 Black to very dark gray phyllite is non-calcareous, with a moderately contorted, poorly developed P_2 fabric. S_2 surfaces are black and easily furnish fingers black. Units host 0-7% dolomite-quartz and dolomite fractures and veinlets of highly variable orientation - never exceeding 1.0cm and most often oblique when over 0.5cm. Intergat contains 4-5% P_0 . 500 occurs sporadically throughout interval in bands and wisps from 0.2 - 2.0cm. Contacts are slightly irregular but parallel the contorted P_2 fabric. 5802 occurs over the lowest 40cm of interval. Unit is medium gray to medium dark gray non-calcareous and hosts 3% dolomite stringers and clots which fill narrow (1-2mm) discontinuous irregular fractures. Lowest 5cm of 5802 unit hosts a band supporting +70% P_0 . All contacts are parallel S_2 . Rock is hard, core is slightly broken with good recovery. Upper and lower contacts are sharp and parallel S_2 .
	554.0	554.3									500* (?)	Medium green massive, strongly calcareous units is P_2 foliated with a weak igneous texture preserved. Rock hosts 10% chloritized mafic minerals (1mm) and 10-15% leucosiderite(?). Rock is hard, unbroken and upper and lower contacts are sharp and parallel S_2 .

Code	From		To		Recov.		No.		Unit	Description
	10	14 16	20 22	24 26	28 30	34 35				
	554.3	555.2							A6AA	* ± 7
										Strongly mineralized unit is grayish purple and grayish yellow, moderately calcareous, strongly baritic, fine to very fine grained and well banded. Unit contains rare cm-scale bands of up to 30% Pb 3-5% scattered clots of barite 1-2mm and 0.2-1.75cm bands rich in Py. Banding dip angles relative to core axis rotate and internal folding is strongly suspected, although not readily visible. Rock is moderately hard, streaks black, core is slight, broken with excellent recovery. Upper contact is very sharp, irregular and subparallel S_2 . Banding 5cm below contact is oriented $026^\circ/69^\circ$, S_2 is oriented 75° to core axis. Lower contact is very sharp and irregular. No relationship between contact and S_2 can be established.
										ESTIMATED grade of interval is 12-15% Pb+Zn.
	555.2	555.9							AH04	6 ± 8
										Reddish brown interval is non-calcareous, strongly magnetic moderately well banded with banding progressively steepening in dip relative to S_2 of lower unit. Unit hosts 1-2% baritic clots and 0-7% calcite clots commonly 1-3mm in diameter. Banding is locally weakly contorted with Pyrite-rich bands displaying a discontinuous behavior - boudens. Interval is fine to

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26 28 30	34 35		Very fine grained. Rock is very hard, core is slightly broken with excellent recovery. Upper contact is sharp and parallel banding. Lower contact is very sharp and oriented at 303°/18° relative to S ₂ within lower unit. S ₂ of lower unit dips 74° relative to core axis.
	555.9	556.8			3602	(?) Dark bluish-gray phyllite is non-calcareous, S ₂ foliated with S ₂ surfaces defined as 1-2 mm bands of black phyllite. S ₂ surfaces slightly tarnish fingers when rubbed. Unit hosts 5-7% white and dark gray quartz veins barren of carbonate. Veins range from .2 - 2.5 cm in width, crosscut S ₂ at various relationships and contain up to 15% Pb ± Py. Rock is hard to very hard. Upper contact is oriented at 303°/18° relative to S ₂ . S ₂ is oriented at 74° to core axis. Lower contact is marked by an irregular 2cm quartz vein, roughly trending subperpendicular core axis.
	556.8	559.9			4604	Grayish-yellow and locally light gray unit is non-calcareous.

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24	26 28 30	34 35	Well banded. Orientation of banding varies greatly relative to core axis throughout interval, locally parallel core axis. Broad open fold occurs at 559.0 with axial plane oriented subperpendicular core axis. Interval consists of 30-40% fine grained Py, locally 60-70% Py, 25-30% white mineral (barite?), trace-10% galena and sphalerite combined, 10-20% quartz. Interval streaks black. Local concentrations of Py is associated with 5-7% clotty calcite blobs. Calcite is often associated with medium grained sphalerite and galena - remobilized. Rock is medium soft, core is slightly broken recovery is good throughout. Upper contact is marked by 2cm quartz vein oriented subperpendicular core axis. Lower contact is sharp and parallel contorted S ₂ fabric. Estimated grade is less than 7% Pb+Zn.
	559.9	561.4			4A04	Light gray and black, non-calcareous phyllite is P _{S2} foliated, with fabric moderately contorted. Light gray bands are dominant and very siliceous. Black bands commonly have moderate tarnish on surfaces. Mineralization consists of Py and sphalerite bands commonly 2cm wide. These mineralized bands constitute 15% of interval, and are siliceous with 15-20% Py, 2-20% sph. Siliceous bands are hard, graphitic bands are moderately soft, core is slightly broken, recovery is good. Upper

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24	26 28 30	34 35	and lower contacts are sharp, and parallel to a contorted S_2 fabric. Estimated grad. is $\approx 3\%$ N64E.
	561.4	562.0			360	<p>← (?)</p> <p>Medium to light gray, non-calcareous phyllite is CS_2 foliated with dark gray S_2 surfaces. Unit hosts 7-10% euhedral Pyrite crystals 2-10 mm in size commonly partially replaced by Py, occasionally total replaced by Py. Interval contains 2% light gray and white quartz veins .5-3.0 cm wide. Veins are parallel S_2. Rock is medium soft, slightly broken, recovery is very good. Upper and lower contacts are sharp and parallel S_2. S_2 surfaces do not tarnish fingers.</p>
	562.0	565.9			464	<p>(4644 : 460) 80:15:5</p> <p>Partic units are brassy yellowish-purple locally dark reddish-purple, non-calcareous to locally very weakly calcareous, generally well banded, moderately mineralized, locally intensely mineralized. Interval folding is common.</p> <p>460 units do not exceed 20cm in width and are light gray, soft PS_2 foliated and non-calcareous. 460 at 564.6-564.7 supports 20% strongly carbonaceous influence. Intensely mineralized intervals occur at 563.65-564.3.</p>

Code	From	To	Recov.	No.	Unit	Description
1	10	14 16	20 22 24 26	28 30	34 35	564.7 - 565.0, 565.3 - 565.9. Strongly mineralized interval at 563.65 - 564.3 contains 4hO contact parallel core axis over lowest 0.5m. Strongly mineralized intervals are estimated to contain 25 - 30% Pb+Zn. Overall grade estimate for interval is 15% Pb+Zn. Mineralization is overwhelmingly Zn dominate. Lower contact of interval is subparallel S ₂
	565.9	567.7			AAA	Very dark gray to black noncalcareous phyllite is PS ₂ foliated rarely PS ₂ ⇒ CS ₂ . S ₂ surfaces common, tarnish fingers very dark gray to black. Unit hosts 10-15% stringers clots and bands of fine grained Py often associated with very silicious bands and clots. Sphalerite and galena occurrences are rare and constitute trace of interval. A single 15cm quartz vein occurs 20cm from top of interval, vein contains 1-2% dolomite in clots. Rock is hard, core is strongly broken with good recovery. Upper and lower contacts are sharp and parallel S ₂ . Howe has been reduced to NA at 570.0m. Reduction from HQ to NA was to be used for collar for down hole motor - and is in no way reflecting rock or drilling conditions...

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
	567.7		572.6								360.1	<p>Medium gray, non-calcareous phyllite is $CS_2 \Rightarrow PS_2$ foliated with medium-dark to dark gray S_2 surfaces. Interval consists of medium to finely laminated bands, sporadically distributed 0.5-1.0 cm bands are medium to light gray, moderately siliceous. Frequency of siliceous bands increase down hole. Unit contains 5-7% clotty veins of P_0 generally subparallel S_2. Non calcareous 1.0-10cm quartz veins are subparallel S_2 and constitute 1-2% of interval, most commonly located in upper portion of interval. 10cm gouge band occurs at 571.4. A 1cm quartz vein with slip plane contacts is oriented at $210/34^\circ$ to S_2 at 570.8. Slickensides rake 04° within slip plane. Rock is generally slightly soft, locally hard where siliceous. Core is generally strongly broken along S_2 planes in both NW and NE intervals, with good recovery throughout. Upper and lower contacts are sharp and parallel S_2. S_2 planes commonly furnish fingers medium gray</p>
	572.6		575.5								360.1	<p>Medium gray, noncalcareous phyllite is $PS_2 \Rightarrow CS_2$ foliated with medium-dark to dark gray S_2 surfaces. S_2 planes. Sporadic siliceous cm-scale lamina are more common than in upper unit, and constitute 5-7% of interval. Lower meter of interval hosts 2-3mm dark gray soft porphyroblasts occurring in non-siliceous bands. Interval contains</p>

Lithologic Log

Date: _____

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Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
												Trace - 1% quartz veins and quartz ankerite stringers oriented at low angles to core axis. Rock is generally soft locally hard where siliceous. Core is strongly broken along S_2 planes with good recovery throughout. Upper and lower contacts are parallel S_2 . Unit contains 1-2% clotty P_2 .
	575.6		576.6								AGG	Medium to medium gray, non-calcareous quartzite is weakly PS_2 foliated and hosts 1-3% clotty stringers of P_2 and 3-5% finely disseminated sulphides also considered to be P_2 . Rock is hard & very siliceous. Core is slightly broken with good recovery. Upper and lower contacts are sharp and parallel S_2 .
	576.6		579.4								360 2	Medium-dark gray non-calcareous phyllite is PS_2 foliated rarely $PS_2 \Rightarrow CS_2$. Unit is poorly laminated, approaching a massive texture. S_2 surfaces are medium-dark gray and do NOT furnish stringers. Unit contains 2% cm-scale quartz veins generally oriented at low angles to core axis. Rock is slightly hard, core

Code	From	To	Recov.	No.	Unit	Description	
1	10	14	16	20	22 24 26 28 30	34 35	is slightly locally moderately broken with good recovery throughout. Upper and lower contacts are sharp and parallel S_2 . Unit contains 0- trace P_2 .
	579.6	580.1			369A	Very dark gray to black non-calcareous phyllite is weakly P_2 foliated, and tends to a massive texture. Laminae are common several cm thick. S_2 surfaces tarnish fingers very dark gray to not quite black. Unit contains 5-7% clasts and rare stringers of P_1 , and 1-2% cm-scale quartz veins. Rock is hard, slightly broken with good recovery. Upper contact is sharp, parallel S_2 and marked by cm-scale quartz vein. Lower contact has not been cored.	
	582.1	588.3			N/A	No recovery. Interval has not been cored, interval was drilled using downhole motor. See 9004-W1 which represents wedge interval drilled with coring procedures.	

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
	598.		600.3								5C4	<p>Gouge zone</p> <p>Light buff to very light gray gouge zone is very weakly calcareous (10% HCl). Gouge hosts 10% wall rock and exotic fragments. Most fragments are also buff to very light gray, angular and matrix supported. More rare are medium gray SBO fragments and localized concentrations of fuchsite within a buff matrix. Rock is very soft, and consists of gouge. RQD is 0%, recovery is fair to good.</p> <p>Upper contact has not been cored, indications by erratic nature of down hole motor and water pressure suggest gouge to begin at an estimated hole depth of 597.3m. Lower contact is crushed and intensely broken, but does appear to be subparallel to S_2 and does certainly crosscut shear fabric. No readable measurement possible.</p>
	600.3		604.1								5B6	<p>FAULT ZONE</p> <p>Medium gray non-calcareous phyllite is very strongly broken and crushed, 2-3cm gouge bands are common. Fractures are very capriciously oriented. 1-3cm blocks of phyllite often display a well developed CS_2 fabric. Fracture planes commonly host an extremely fine grained, non-lithified, bone white clay filling. Filling is non-calcareous and non-dolomitic. Sporadic intervals of crushed and broken rock (10-25cm wide) are strongly tarnished to a yellow-brown (oxidized?). Qtz in fragments are very rare. RQD is 0%, recovery is generally good, locally poor. (30% at 6035-604.1). Upper contact appears to be approximately subparallel S_2, lower contact is gouge and</p>

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34		
												intensely crushed. No attitudes available.
	604.		605.							5C4	FAULT ZONE	Very light gray-buff to buff, non-calcareous, non-dolomitic unit is generally crushed, very strongly broken and locally supports 2-7cm gouge bands. Rare occurrences of fuschite suggest a 5C0 origin for rock type. Bone white clay occurs along fractures and voids. Clay is not lithified and is extremely fine grained. Two 10-15cm blocks of 5C4 near lower contact are supported by crushed and gouged rock. These blocks are soft. Recovery is generally good. Upper contact is crushed and gouged, lower contact is oriented 55° to core axis.
	605.		605.							5B6	FAULT ZONE	Light gray phyllite is sporadically weakly to very weakly dolomitic, and strongly broken, locally crushed. Fracture orientation varies from 10° to 40° to core axis, commonly oriented 30° to core axis. Fuschite is extremely rare and is limited to clots within slip planes on fractures ⇒ exetic fragments of 5C4. RWD is 0%, 2-3cm blades of phyllite are slightly hard and very soft on fractured surfaces. Upper contact is oriented 55° to core axis and lower contact is oriented 40° to core axis.

Code	From		To		Recov.		No.		Unit	Description
	10	14	16	20	22	24	26	28		
	605.7		608.7						5C49	Broken interval Buff-brown rock is fine grained, generally massive, sporadically weakly dolomitic, moderately broken, quartz veined and locally gouged. Fuchsite has not been noted in core. Unit hosts a 40cm quartz-ankerite vein (moderately to strongly broken) at 607.3. Vein is locally weakly dolomitic. A very weakly calcareous gouge zone occurs at 608.0-608.3. Gouge is yellow buff and turns greenish buff after reacting with 10% HCl. Unit is soft and when strongly ground and scratched - powder very weakly reacts with 20% HCl - dolomite? ankerite? Upper contact is oriented 40° to core axis, lower contact is broken but hosts a minor block of 5B6 with contact oriented at 25° to core axis. 5B6 block is exotic.
	608.7		610.0						5C41B7	Buff-brown and green unit is weakly to moderately dolomitic, PS ₂ foliated and slightly to moderately broken. Buff matrix hosts 20% strongly chloritized highly stretched (1-2mm x 4-5mm) clots elongated what is interpreted as S ₂ (oriented 75° to core axis). Fuchsite is common and occurs in stringers and also as wisps parallel chloritic clots. Interval is generally slightly to moderately broken with rare gouge bands in width of 1-2cm and at varying orientations. Rock is soft and recovery is good.

Code	From		To		Recov.			No.			Unit	Description
	10	14	16	20	22	24	26	28	30	34	35	
												CS ₂ fabric and a variable calcareous nature varying from nil to weak. CS ₂ unit is medium buff green. Rock is soft, generally strongly broken, very strongly broken below 613.6. Upper contact is oriented 32° to core axis. Lower contact is obscured in strongly broken core.
	614.1		615.0								5C84	strongly broken light buff brown rock is intensely dolomitic, massive and contains a weak PS ₂ fabric. Bone white clay is common and occurs within fractures and in voids. Clay is generally competent. Rock has been replaced by dolomite. Protolith could be anything, although upper and lower units are identical 5C0 units and contain similar massive texture as this 5C84 unit. Rock is soft to very soft, and core is strongly broken. Recovery is good. Upper and lower contacts are sharp but strongly broken and no orientation is available.
	615.0		618.0								5C05	* Strongly broken and crushed light green, massive, moderately dolomitic unit. Contains a well preserved fine grained igneous texture and a weak PS ₂ fabric. Interval is strongly broken and often crushed, bone white clay is very common and generally occurs along fractures, mic rare are clots and voids.

Lithologic Log

Code	From		To		Recov.		No.		Unit		Description
	10	14 16	20 22	24 26	28 30	34 35					
											<p>hosting the clay. Calcite is fairly common and always occurs within moderately to well hooded closed fractures. Rock is soft, strongly broken - locally crushed. Recovery is good. Upper and lower contacts are strongly broken but appear to be sharp.</p>
	618.0	619.6							15CH\$	(5B0) 95:05	<p>Strongly broken. Medium to light buff brown weakly dolomitic rock is strongly broken and gouge in 0.5-1.0cm bands is very common. Unit commonly display a moderately well preserved fine grained igneous texture. 5B0 occurs in 2.0-10cm bands and is commonly crushed - orientations are variable. Bone white clay is not common and occurs as very poorly lithified fillings in fractures. Rock is soft, strongly broken with good recovery. Upper contact is sharp and strongly broken. Lower contact with intense gouge zone is sharp.</p>
	619.6	625.2							15B62	* Gouge Zone	<p>Medium to dark grey gouge zone is generally weakly calcareous and fine grain. Pyrite is very common. Gouge contains a very strong shear fabric generally oriented at very</p>

Code	From		To		Recov.		No.		Unit		Description
	10	14 16	20	22 24	26	28	30	34	35		
											low angles to core axis. Gauge supports 20-30% wall rock fragments of variable composition. Fragments are generally less in size and are 5C43, 5B0(?) 360(?) in composition. Locally gouge is medium but in core and these bands are generally 20-40 cm thick with contacts parallel shear fabric. 5B0 slip faces occasionally slightly tarnish fingers medium to light gray. Upper contact is sharp and orientated 060/54° to Sg. This dip differs greater than shear fabric which is generally 0-10° to core axis. Lower contact is gradual, noted as a progressive increase in rock competency, but RQD remains 0% throughout. Gouge is very soft and friable.
	625.0	628.3							5B62	(5C0: 5B7) 88:02:10	strongly broken + gashed + gouge
											Medium dark to dark gray phyllite is non-calcareous, rarely weakly dolomitic, PS ₂ foliated with fine laminations and hosts minor bands of 5C0 and 5B7(?). Calcite occurrences are sporadic and are limited to fractures of variable orientation. 5C0 & 5B7(?) units occur in bands 25cm wide or less, and are commonly moderately calcareous. Rock is generally strongly broken, often crushed, rarely gouged. RQD is generally 0% except for interval 626.7-627.2 where RQD is 100%. All units are soft and recovery is

Code	From		To		Recov.		No.		Unit	Description
	10	14 16	20 22	24 26	28 30	34 35				
										gand throughout. Upper contact is gradational and noted as an increase in rock competency down hole from upper unit lower contact is also gradational and noted as an increase in greenish gray alteration down hole
	628.3	635.5							15B7K (500* : 500*)	Medium to medium light greenish-gray interval is generally moderately to strongly calcareous. Interval consists of a chaotic sequence of narrow bands of 500* and 500* within a variably altered calcareous phyllite. Interval is strongly to very strongly broken with sporadic narrow crushed zones, gouge is extremely rare and limited to bands <1.0cm wide and parallel P_s fabric. Rock is slightly hard rarely very soft. RWD is <10%. Upper contact is gradational. Lower contact is sharp, parallel S_0 and marked by <1.0cm gouge band.
	635.5	649.2							3G109	Dark gray non-calcareous phyllite is generally P_s foliated often lacking in distinct laminations. Sporadic occurrences

Code	From		To		Recov.		No.		Unit	Description	
	10	14	16	20	22	24	26	28			30
											<p>of a well defined S_2 fabric with 5B6 similarities are sporadic and generally occur in 5-25 cm bands. P_0 is very common, constituting 5-7% of the interval and occurring as massive clots and stringers parallel to subparallel S_2. S_2 surfaces are black and commonly moderately furnish fingers very dark gray to black. Core is slightly broken, moderately broken over upper 0.7 meters. Rock is hard and recovery is good. Upper contact is sharp and marked by a <1.0 cm gauge band, oriented parallel S_2. Lower contact is sharp and marked by a 8cm quartz vein oriented parallel S_2.</p>
	649.2		658.5						36P1	(500x: 500) 96:03:01	<p>Medium gray non-calcareous phyllite contains a $PS_2 \Rightarrow$ S_2 fabric and rarely contains a well developed PS_2 fabric. S_2 surfaces often slightly to moderately furnish fingers light to medium light gray. Interval contains 3-5% clotted P_0 and 0-1% cm scale quartz veins generally oriented parallel to subparallel S_2. Rock is hard, moderately broken. Recovery is good throughout. Upper contact is sharp and marked by an 8cm quartz vein oriented parallel S_2. Lower contact is marked at the top of an interval containing moderate quartz injection.</p>
											<p>:500x unit occurs at 656.5-656.8, and is</p>

CODE	FROM		TO		SAMPLE		INTR.		REC (m)		UNIT		DESCRIPTION	
	1	10	14	16	20	22	26	28	30	32	34	36		40
	554.	3	555.	2	65101	0.9	0.9							
	555.	2	555.	1	65102	0.7	0.7							
	555.	9	556.	8	65103	0.9	0.9							
	556.	8	557.	8	65104	1.0	1.0							
	557.	8	558.	5	65105	0.8	0.8							
	558.	5	559.	4	65106	0.9	0.9							
	559.	4	559.	9	65107	0.5	0.5							
	559.	9	560.	6	65108	0.7	0.7							
	560.	6	561.	4	65109	0.8	0.8							
	561.	4	562.	0	65110	0.6	0.6							
	562.	0	562.	9	65111	0.9	0.9							
	562.	9	563.	9	65112	1.0	1.0							
	563.	9	564.	7	65113	0.8	0.8							
	564.	7	565.	3	65114	0.6	0.6							
	565.	3	565.	9	65115	0.6	0.6							

Fault Log

Code	FROM		TO (At)		Feature	US RES	UPPER Dip Direct.		INTERNAL Dip Direct.		LOWER Dip Direct.		Description	
	10	14	16	20			22	24	26	28	32	34		38
	99.6		102.9				1	31	?	03	?	51	284	Strongly crushed locally gouged interval. Dominant shear fabric is subparallel core axis
	131.2		133.6				2	14	343	?	?	?	?	Strongly crushed locally gouged. Dominant shear fabric subparallel core axis.
	135.5		137.3				3	19	014					Strongly crushed moderately gouged interval. Shear fabric commonly subparallel core axis.
	153.1		153.8					19	000					FAULT consists of strongly crushed rock and gouge. Well developed slickensides are oriented 87° to core axis. Breccia fragments within fault zone consist of local lithologies: phyllite and quartz carbonate cemented material.
	161.6		166.9					44	090			31	011	MAJOR FAULT: Extensive gouge and crushed rock. Sp is highly variable within blocks not crushed by fault => often subparallel core axis!
	245.6		249.4											Strongly broken locally crushed and gouged. no reliable measurements available.

Code	FROM				TO (At)				Feature	REC	UPPER		INTERNAL		LOWER		Description
	10	14	18	22	24	28	32	34			38	40	Dip	Direct	Dip	Direct	
	294.6		295.7														Interval strongly broken clay, S ₂ , moderate zones of crushed rock, minor gouge. No measurements available other than dominant S ₂ fractures.
	312.8		313.3							15	018				55	015	Strongly broken interval, minor gouge with crushed rock.
	317.5		318.5														Upper 25cm consists of gouge, lower portion is strongly to moderately broken. Fabric and contacts suggest coincident orientation with S ₂ .
	353.1		353.6														Soft rock and gouge zone upper and lower contacts are parallel S ₂ . Internal fabric of cm-scale gouge band(s) wander at variable angles, down core axis.
	403.8		407.0							47	27P						Fault zone generally consists of well healed breccia. Occasional open shear is filled with gouge and crushed SB2. Dips of open shears vary from 70-25°.

Code	FROM				TO (At)				Feature	REG	UPPER		INTERNAL		LOWER		Description
	10	14	16	20	22	24	26	28			32	34	36	40	44		
	11.8			12.9							24	094	1		22	094	Fault consists of 5B2 matrix supporting 20-30% poly metric angular fragments 0.3-1.5cm in diameter. Fault is locally moderately competent, locally gouged (50%). Fault is generally at a low angle to core axis.
	4230			423.1								39	059				Gouge of 5B2 with sharp contacts upper & lower
				425.1								26	34P				3cm gouge zone - 5B0(?)
				426a								25	065				1-2cm gouge zone 5B2
	439.2			431.7							16	047	10	024	13	326	Sporadic low angle faults of 5B2 gouge (1-3cm wide) faults are separated by moderately broken competent blocks. (Minor zone)
	449.2			449.6													Band of strongly broken, locally moderately crushed rock. No orientation available
	441.8			445.4											34	156	Low angle well healed fault zone generally consists of moderately competent rock. Local wisps or bands of gouge occur

Code	FROM		TO (At)		Feature	REG	UPPER		INTERNAL		LOWER		Description	
	Dip	Direct	Dip	Direct			Dip	Direct	Dip	Direct	Dip	Direct		
1	10	14	16	20	22	24	26	28	32	34	36	40	44	are oriented at low angles relative core axis. Gauge bands are very rare, do not exceed 5cm and are of variable orientation (// S ₂ ⇒ 20° to core axis).
	527.3		530.3											Strongly broken zone very similar to above interval (5139-5206). Gauge zones are very rare and do not exceed 5cm widths.
	532.0		532.7											Strongly broken zone, locally crushed with sporadic gouge. Trend of crushed & gouged zone is irregular oriented slightly oblique to core axis.
	598.3		605.9					21	N/A	20	N/A			MAJOR FAULT ZONE: Hanging wall contact has not been cored, fault intersected while drilling with down hole motor - no recovery. ESTIMATE beginning of gouge is 597.3 (?) ± abt. Intense gouge above 600.5 Intense crushed below 600.5

Code	FROM		TO (At)		Feature				REG				UPPER Dip Direct.		INTERNAL Dip Direct.		LOWER Dip Direct.		Description
	10	14	16	20	22	24	28	28	28	32	34	38	40	44					
																			with gouge throughout. Slickensides oriented 64° to core axis. Extremely well developed slip planes near lower contact are curved; rotating from 20° ⇒ 30° to curved axis with well formed Slickensides raking from 60° to 160° with Shear fabric plane.
	605.9		619.6																Broken zone: Interval is generally very strongly broken, locally gouge and intensely crushed, rarely only moderately broken. Fractures filled with fine white clay - ? talc, consistently oriented at very low angles to core axis are very common. Sporadic Slickensides indicate horizontal component of movement.
	619.6		626.7					48	055	05	020	20	010						Intense Gouge Zone: Dark gray matrix supports 10-20% becciated fragments occurring in very strong shear fabric as Frachs. Shear fabric is generally 0-10° to core axis, rarely upto 20°. Slickensides are not common and when located indicate

DDH 9.0.D.4-0.4 DS CURRAGH RESOURCES INC.
 metres 2 8 Structural Log

Date: Aug 26/90 Logged By: JA Z

Code	From				To				Feature	SYE	S ₀		S ₁		S ₂		Description
	10	14	16	20	22	24	26	28			Dip	Direct.	Dip	Direct.	Dip	Direct.	
S				18	3	PIS12								714			micaceous foliation
S				112	3	PIS12								611			micaceous foliation
S				113	6	PIS12								615			S ₁ = S ₂ = foliation + compositional banding
S				121	3	PIS12								619			elongated mafic grains in pyroxenite
S				1215	5	PIS12								514			elongated mafic grains in pyroxenite
S				1219	0	CIS12M					211	11410		615			S ₁ = compositional banding S ₂ = pressure striation - micaceous foliation
S				1310	7	CIS12S					217	31018		610			S ₁ = compositional banding S ₂ = micaceous foliation
S				1315	5	PIS12								312			PS2 - micaceous foliation + elongated mafic grains
																	shear just above
S				1411	0	CIS12Z					317	21010		616			S ₁ = compositional banding S ₂ = micaceous foliation
S				1413	2	CIS12S					215	31415		615			S ₁ = compositional banding S ₂ = crenulations cleavage
S				1418	2	CIS12S					316	01311		717			S ₁ = compositional banding S ₂ = micaceous foliation
S				1515	0	CIS12Z					010	01514		719			S ₁ = compositional banding S ₂ = micaceous foliation
S				1517	7	CIS12M					111	11817		617			S ₁ = compositional banding S ₂ = micaceous foliation
S				1614	6	CIS12S					115	110		711			S ₁ = compositional banding S ₂ = micaceous foliation
S				1618	6	CIS12Z					113	11913		619			" " "
S				1714	8	PIS12								614			micaceous foliation
S				1718	5	CIS12D					010	31412		812			S ₁ = comp. banding S ₂ = cren. cleavage / micaceous foliation
S				1813	0	CIS12S								714			highly stained S ₁ transposed close to S ₂ - difficult to measure
S				1816	8	PIS12								815			micaceous foliation
S				1913	0	PIS12								712			micaceous foliation
S				1916	6	PIS12								513			micaceous foliation
				1919	0	PIS12								714			breaking pattern in core. ↑ end
				1104	2	CIS12M								511			Weak micaceous foliation
				1110	3	CIS12S					73	3115		710			S ₂ non planar, micro crenulation concordant
				1113	8	CIS12S					29	01611		716			mic. foliation
				1117	3	CIS12Z					30	0138		713			mic. foliation
				1122	7	CIS12Z					22	2112		716			mic. foliation
				1126	1	CIS12Z					20	1112		712			
				1129	9	CIS12Z					19	1185		610			
				1134	9	CIS12Z					15	1416		719			irregular S ₂ surfaces
				1137	9	CIS12Z					30	1915		419			irregular S ₂ surfaces
				1142	8	CIS12Z					20	1517		714			
				1147	3	CIS12Z					26	335		810			
				1151	4	CIS12Z					27	2916		716			
				1154	5	CIS12Z					20	2111		618			

Code	From		To		Feature	SYE	S ₁		S ₂		Description
	10	14	16	20			Dip Direct.	Dip Direct.	Dip Direct.	Dip Direct.	
			158.2		PS2				52		
			160.6		CS2 Z	19	┌	23	190	39	
			168.0		CS2 S	19	┐	16	063	84	poorly defined S, suspect measurement
			171.0		CS2 Z	45	┐	38	246	82	
			176.4		CS2 Z	34	┐	31	219	62	
			178.7		PS2					78	
			183.1		CS2 S	32	┐	20	353	76	
			187.9		CS2 Z	165	┐	34	162	75	
			190.4		CS2 S	095	┐	26	097	74	
			197.5		CS2 S	11A	┐	47	335	60	
			201.4		CS2 Z	174	┐	24	175	78	
			204.0		CS2 S	54	┐	16	213	75	
											205.7 - 236.2 : interval drilled with down hole mud - no recovery
			237.0		CS2 Z	11A	┐	18	235	80	
			239.7		CS2 Z	175	┐	42	162	78	
			244.1		CS2 S	04	┐	29	031	81	
			247.0		PS2					44	
			254.0		PS2					68	
			255.0		PS2					66	
			259.7		CS2 M	123	┐	05	349	79	poorly defined CS ₂
			262.1		CS2 M	078	┐	05	014	79	
			269.3		CS2 M	173	┐	03	152	70	
			272.5		CS2 S	11	┐	17	317	84	
			274.4		CS2 Z	27	┐	11	025	71	
			284.2		PS2					74	inconsistent CS ₂ fabric!
			282.9		CS2 Z	129	┐	11	128	80	
			287.1		CS2 Z	38	┐	24	220	79	
			293.8		PS2					84	
			297.8		CS2 Z			12	222	80	S ₁ orientation is variable!
			302.1		CS2 Z			10	232	82	
			305.5		PS2					74	
			309.8		CS2 S	133		16	313	79	
			313.5		PS2					78	
			318.6		CS2 S	87		55	329	85	

Structural Log

Code	From		To		Feature	S ₁ Dip Direct.	S ₂ Dip Direct.		Description					
	10	14	16	20			22	24		26	28	32	34	38
			322.5		CS ₂	S 138		42	117	88				
			324.1		CS ₂	Z 75		15	279	71				
			331.2		CS ₂	Z 86		24	252	80				
			335.7		PS ₂					84				
			339.8		PS ₂					72				
			344.2		PS ₂					74				
			348.7		CS ₂	Z 57		33	265	89				
			351.2		CS ₂	S 38		47	048	82				
			354.7		CS ₂	S 145		08	136	75				
			359.1		PS ₂					81				
			364.3		CS ₂	Z 57		33	247	80				
			369.4		PS ₂					80				
			373.1		PS ₂					78				
			377.5		CS ₂	M 18			916	83				Highly variable S ₂ , oriented.
			383.0		CS ₂	Z 114		30	112	85				S ₂ very irregular
			386.5		CS ₂	S		22	321	77				
			390.1		CS ₂	Z 45		43	220	78				
			396.1		CS ₂	Z 62		22	228	53				
			403.0		CS ₂	S		15	094	70				
			408.2		CS ₂	S 120		20	307	75				
			419.0		CS ₂	S 071		29	052	84				
			416.6		CS ₂	Z 030		08	197	83				
			419.5		CS ₂	S 063		21	035	79				
			425.0		CS ₂	Z		15	159	68				
			429.7		CS ₂	S 63		14	049	77				
			432.5		CS ₂	S 152		13	332	83				
			435.1		CS ₂	S 159		34	010	60				
			439.1		CS ₂	Z		14	195	70				
			445.7		CS ₂	Z 38		13	201	86				
			450.5		CS ₂	Z		21	200	71				
			454.2		CS ₂	S		18	029	78				
			458.5		CS ₂	S 29		26	023	60				
			462.8		CS ₂	S		13	058	62				
			465.2		CS ₂	Z 57		22	248	73				
			470.7		CS ₂	Z 155		15	220	85				
			475.6		CS ₂	S		17	311	83				

Code	From		To		Feature	S ₁ Dip Direct.	S ₂ Dip Direct.	S ₃ Dip Direct.	Description	
	10	14	16	20						
			478.2	2	CS2 S	145	22	315	77	
			484.1	1	CS2 Z	61	21	229	76	
			486.3	3	CS2 Z	41	12	038	77	
			490.9	9	CS2 S	22	22	013	84	
			495.0	0	CS2 Z	92	14	259	79	
			499.7	7	CS2 Z	64	20	240	83	
			502.5	5	CS2 Z	28	18	188	76	
			508.1	1	CS2 Z	-	22	252	78	
			510.6	6	CS2 S	78	10	032	75	
			514.7	7	CS2 S	61	44	063	78	
			520.7	7	CS2 Z	93	22	175	73	
			525.8	8	CS2 M	73	04	062	72	
			530.9	9	CS2 Z	70	32	180	62	
			534.8	8	CS2 Z	32	30	274	64	
			537.8	8	CS2 S	90	28	040	81	Suspect S, reading!
			540.7	7	CS2 S	47	17	044	69	
			544.6	6	CS2 Z	52	26	214	72	
			550.2	2	PS2	-	-	-	79	
			554.3	3	CS2 S	-	69	026	67	Upper contact of ore
			555.9	9	CS2 S	-	18	303	-	lower ore contact
F			559.0	0	F	-	00	-	-	Broad open fold oriented @ 90° to core axis
			561.6	6	CS2 Z	149	55	149	76	S ₂ fabric relative S ₂
			569.0	0	CS2 Z	148	18	180	78	
			570.9	9	CS2 Z	121	19	164	73	
			574.8	8	PS2	-	-	-	62	
			576.6	6	PS2	-	-	-	44	
	580.1		598.3	3	-	-	-	-	-	No recovery - drilled with down hole motor
			601.0	0	PS2	-	-	-	72	
			605.2	2	PS2	-	-	-	73	
			612.0	0	CS2 S	10	08	345	75	
			618.2	2	PS2	-	-	-	60	
			619.0	0	PS2	-	-	-	78	
			627.0	0	PS2	-	-	-	53	
			631.9	9	CS2 S	-	27	009	57	

10cm long etc.

PROJECT _____ DRILLHOLE NO. 90 DV-04-DS COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE of _____
 LOGGER J. Zbeetno INCLINATION _____ ELEVATION _____ P. 97



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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.	
3.7	0.5			0.1			6	E								8	rubble
4.6	0.3			0			6	E								9	rubble
5.2	0.7			0			7	E								11	
6.1	0.85			0.1			6	E								12	
7.3	1.0			0.8			6	E								16	rubble is common
8.2	1.2			0.4			9	F								10	
9.8	1.3			0.2			9	F								18	
11.4	1.7			1.0			10	F								22	
14.6	3.2			1.1			9	F								45	
17.4	2.9			1.8			10	E								27	
18.3	0.8			0.65			10	E=F								6	
21.3	2.9			0.9			9	E								29	
24.1	2.2			0.6			7	E								17	Locally strongly broken, gouge at 23.9-24.0
25.2	0.9			0.4			10	E								8	
26.8	1.6			0.85			10	F								18	
28.5	1.6			1.0			10	E								18	
30.0	1.3			0.65			9	E								17	
32.6	2.5			1.35			10	D								29	Very soft at 31.9-32.6
33.5	0.9			0.4			10	E								9	
35.4	1.5			0.5			10	E								25	Gouge and rubble at 34.8-35.4
36.0	0.5			0.15			9	E								8	
39.0	3.0			1.3			12	E								29	
40.8	1.8			1.0			10	E								25	
43.9	3.0			1.75			10	E								36	
47.1	3.2			2.1			12	E								26	
50.3	3.2			2.5			10	E								21	
53.3	3.0			2.9			13	E								11	
54.9	1.6			1.4			12	E								8	

Fig. 1. Typical rock mechanics core log.

PROJECT _____ DRILLHOLE NO. 90DY-04-DS COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE 1 of 1
 LOGGER J. Zheer INCLINATION _____ ELEVATION _____ P. 9B



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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.			
57.9		3.0		2.6				13	F								20		
61.0		3.1		2.6				14	F									16	
64.0		3.0		2.3				12	F									26	
67.1		3.1		2.6				13	F									16	
70.1		3.1		2.4				13	F									24	
73.2		3.0		2.8				14	F									12	
76.2		3.0		2.9				14	F									10	
79.3		3.1		2.65				13	F									14	
82.3		3.0		2.1				13	F									13	
85.3		2.9		2.2				12	F									26	
88.4		3.1		1.85				12	F									22	
91.4		3.0		2.9				14	F									14	
94.5		3.1		2.1				13	F									21	
97.5		3.0		2.2				12	F									22	
100.1		2.3		1.2				10	F									N/A	Very soft - gauge below 99.6
101.2		2.4		1.0				2	F									N/A	Very soft - fault zone
102.3		1.1		0				2	F									N/A	" " fault zone
103.7		1.4		0.1				2	F									N/A	very soft - fault zone above 102.9
106.1		1.8		1.1				9	F									20	
106.9		0.5		0.1				7	F									12	
109.7		1.6		1.0				9	F									23	locally strongly broken - gauge
112.6		2.9		0.95				9	F									46	
114.9		2.2		1.05				10	F									25	
115.8		0.9		0.6				10	F									11	
118.6		2.9		1.6				10	F									30	
121.8		3.2		1.25				7	F									46	strongly broken from 120.5 - 121.4
125.0		3.2		1.9				10	F									37	
128.0		3.0		2.6				12	F									14	

Fig. 1. Typical rock mechanics core log.

PROJECT _____ DRILLHOLE NO. 90DY04-DS COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE 1 of ____
 LOGGER J. Zbecl INCLINATION _____ ELEVATION _____



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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.		
131.1		3.1		2.4				12	F									
134.1		3.0		0.1				3	F									Fault Subpara 141 core axis (crushed)
136.6		2.5		1.0				10	E									horizontal fault gouge & crushed rock
139.8		3.1		2.0				12	F									Local " " " "
142.8		3.0		2.45				13	F									
143.3		0.5		0.3				10	F									
146.3		3.0		1.9				10	F									
149.4		3.1		1.3				9	F									
152.4		3.0		1.6				9	F									
152.7		0.3		0				9	F									strongly crushed @ 153.4 - 153.8
155.5		2.8		0.2				7	F									
157.4		1.9		0.8				10	F									
158.5		1.1		0.4				9	F									
159.9		1.4		0.1				9	F									
161.5		1.4		0.3				7	F									
162.9		1.2		0				1	F									Fault - Gouge with occasional crushed rock
164.6		1.4		0				2	F									Fault Gouge and crushed rock
165.8		1.1		0.1				6	F									minor crushed zones > 10cm
167.5		1.6		0				6	F									Spurious gouge zones upto 10cm
170.7		3.2		0.4				7	F									
173.7		3.0		1.9				12	F									
175.6		1.9		1.35				12	F									
178.8		3.1		2.35				12	F									minor crushed zones @ 177.2 & 178.5
182.0		3.2		3.1				13	F									
185.2		3.2		2.8				10	F									
185.9		0.7		0.7				13	F									
189.0		3.1		1.85				12	F									

Fig. 1. Typical rock mechanics core log.

PROJECT _____ DRILLHOLE NO. 90-DY-04-105 COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE HQ/NQ E _____ PAGE _____ of _____
 LOGGER J. Zbrodka INCLINATION _____ ELEVATION _____ P.100



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 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.			
191.7	2.7			1.0				9	F								38	Strongly broken & crushed 190.9-191.7	
192.0	0.3			0.1				6	F									8	
193.2	1.1			0.95				13	F									4	
195.1	1.8			0.8				9	F									27	Strongly broken at 193.8-194.6
198.1	3.0			1.65				10	F	↑								34	
198.7	0.5			0.35				12	F	HQ								3	
201.2	2.5			1.6				10	F	NQ								25	
203.3	2.3			1.0				10	F	NQ								27	
205.7	2.3			1.0				9	F	NQ								24	205.7-236.2 - drilled with downhole moly - no recovery
237.7	1.5			0.55				9	F	HQ								19	
240.5	2.9			1.35				10	F									31	
242.3	1.8			1.3				12	F	↓								18	
243.5	1.2			1.2				13	F									4	
246.1	2.6			1.5				12	F									29	strongly broken below 245.6
247.7	1.6			0.5				7	F									30	strongly broken interval
248.4	0.7			0.1				6	F									16	locally very strongly broken, local gouge
249.8	1.4			0				6	F									37	Very strongly broken and crushed above 249.2
251.9	2.1			0.65				7	F									38	
255.1	3.2			1.6				9	F									46	
255.9	0.5			0				7	F									14	strongly broken interval
259.1	3.2			1.6				12	F									39	
262.1	3.0			2.2				12	F									23	
265.2	3.1			2.85				12	F									29	
268.2	3.0			2.1				12	F									28	
271.3	3.1			2.15				13	F									27	
273.0	2.7			1.2				12	F									18	
274.3	1.3			0.7				10	F									12	

Fig. 1. Typical rock mechanics core log.

PROJECT _____
 LOCATION _____
 LOGGER J. Zbe...

DRILLHOLE NO. 90DY0412S COORDINATES: N _____ DATE _____ 19__
 HOLE SIZE HQ E _____ PAGE _____ of _____
 INCLINATION _____ ELEVATION _____

P.101



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 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.	
276.3		1.9		1.0				12	F							22	
279.4		3.1		1.9				13	F							24	
282.5		3.1		2.5				13	F							26	
285.8		3.2		1.9				10	F							35	
289.0		3.2		1.7				9	F							31	
292.2		3.0		1.15				9	F							36	minor local gouges < 5cm
295.1		2.9		1.45				9	F							34	crushed zone below 294.6
298.4		3.2		2.2				10	F							25	gouges crushed zone above 295.7
301.6		2.3		2.2				10	F							27	
304.8		2.7		1.4				7	F							35	local moderately broken intervals
307.8		3.2		1.7				10	F							25	
310.9		3.1		1.85				10	F							26	
313.9		3.0		1.1				9	F							45	strongly broken with gouges 312.8 - 313.3
314.9		1.0		0.3				9	F							11	
316.1		1.2		0.1				9	F							22	
316.4		0.3		0				7	F							5	
317.6		1.2		0				7	F							21	Gouge below 317.4
320.0		2.4		0.65				9	F							29	Gouge and strongly broken above 318.5
323.1		3.1		1.9				12	F							33	
326.1		3.0		2.2				12	F							15	
329.2		3.1		1.3				10	F							43	sporadic gouges zone < 10cm thick
332.2		3.0		2.5				12	F							20	
335.3		3.1		1.4				12	F							20	
338.3		3.0		2.9				12	F							9	
340.6		2.3		1.7				10	F							21	
341.4		0.8		0.6				12	F							3	
344.4		3.0		2.6				12	F							17	
347.5		3.1		2.75				10	F							15	

Fig. 1. Typical rock mechanics core log. 130

PROJECT _____ DRILLHOLE NO. 900704 DS COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE _____ of _____
 LOGGER J. Zeehoff INCLINATION _____ ELEVATION _____ P. 102



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 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.		
350.5		3.0		1.8				9	F								25	
353.6		3.1		1.35				9	F								+29	broken gauge below 353.1
356.6		3.0		2.15				12	F								26	
359.7		3.1		3.1				14	F								4	
362.7		3.0		2.8				12	F								12	
365.8		3.1		2.3				10	F								20	
368.8		3.0		1.65				9	F								+31	crushed and gauged at 366.6-367.0
371.9		3.1		1.4				7	F								41	
374.9		3.0		1.7				9	F								26	
375.5		0.6		0.5				14	F								3	
381.0		3.0		1.3				10	F								34	
384.1		3.1		2.5				12	F								23	
387.1		3.0		2.75				12	F								19	
390.1		3.0		2.8				12	F								14	
393.2		3.1		1.65				9	F								35	
396.2		3.0		1.9				12	F								37	
399.3		3.1		2.0				10	F								30	
402.3		3.0		1.6				12	F								25	
405.4		5.1		1.15				10	F								36	sporadic low angle faults < 2cm thick
408.4		3.0		1.9				12	F								25	crushed at 405.65-408.8
411.5		3.1		2.25				12	F								30	crushed below 411.3
414.5		3.0		1.5				6	F								+36	gauged and crushed above 413.0
417.6		3.1		2.9				14	F								13	
420.6		3.0		2.7				14	F								21	
378.0		2.5		1.3				10	F								26	
423.7		3.1		2.5				12	F								15	

Fig. 1. Typical rock mechanics core log.

PROJECT _____ DRILLHOLE NO. _____ COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE ___ of ___
 LOGGER _____ INCLINATION _____ ELEVATION _____

P.103



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 VANCOUVER CALGARY
 GEOTECHNICAL CORE LOG

DEPTH (TD)	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.			
426.7		3.0		0.4				6	F								52		
429.8		3.1		1.3				10	E									33	
432.8		3.0		0.7				6	E									46	Locally strongly broken
435.9		3.1		2.3				12	F									18	
438.9		3.0		1.6				10	E									33	
441.5		2.6		0.5				6	F									40	Crushed at 440.2 - 440.6
444.7		3.2		1.7				10	F									25	well healed fault
447.8		3.0		0.7				9	F									39	
451.0		3.2		1.5				10	F									35	gauge at 448.4 - 448.8
454.2		3.2		2.3				10	F									22	
457.2		3.0		2.6				14	F									12	
460.2		3.0		1.6				12	F									28	Locally strongly broken
463.3		3.1		2.8				14	F									14	
466.3		3.0		1.5				10	F									33	
469.4		3.1		1.95				10	F									18	
472.4		3.0		1.3				10	F									31	
475.5		3.1		1.6				10	F									32	
478.5		3.0		2.6				14	F									13	
481.6		3.0		1.75				12	F									27	Crushed and gouged below 480.9
484.6		3.0		0.6				9	F									32	
487.7		3.1		2.75				14	F									17	
490.7		3.0		2.8				14	F									14	
493.8		3.1		2.4				12	F									15	
496.8		3.0		2.5				12	F									16	
499.9		3.1		2.3				12	F									21	
501.7		1.8		1.4				12	F									6	
504.8		3.1		1.9				12	F									26	

Fig. 1. Typical rock mechanics core log.

PROJECT _____ DRILLHOLE NO. 90DY0405 COORDINATES: N _____ DATE _____ 19__
 LOCATION _____ HOLE SIZE _____ E _____ PAGE ___ of ___
 LOGGER J. Zbeatnik / L.S. INCLINATION _____ ELEVATION _____



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GEOTECHNICAL CORE LOG

P.107

DEPTH (TO)	LENGTH OF RUN	BORE 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.			
507.8	3.0	3.0		2.3			10	12	F								18		
510.8	3.0	3.0		1.5				9	F									32	
513.9	3.1	3.1		1.1				9	F									32	minor bands of gouge (<10cm)
516.6	2.7	2.7		0.3				6	F									71	
519.7	3.1	3.1		0.5				7	F									59	
522.7	3.0	3.0		1.2				9	F									38	
524.0		1.3		0.2				6	F									21	
527.2		3.2		2.2				10	F									26	
530.1		1.9		0				6	F									53	
532.2		2.1		0.8				9	F									41	
535.4		3.2		0.7				6	F									49	Crushed to 532.7
538.6		3.2		1.2				6	F									51	Crushed at 537.8-538.0
541.8		3.2		2.4				12	F									23	
545.0		3.2		2.35				10	F									27	
547.8		2.8		2.7				14	F									14	
551.1		3.3		3.2				14	F									17	
554.0		2.9		2.7				14	F									17	
554.7		0.7		0.7				14	F									1	
557.8		3.1		3.0				13	F									9	
560.8		3.0		2.9				14	F									8	
563.9		3.1		2.5				10	F									23	
566.9		3.0		1.8				10	F									28	
570.0		3.1		0.6				7	F									59	
571.9		1.7		0.4				7	F									26	
574.0		2.0		0.5				9	F									35	
576.1		2.6		0.7				10	F									24	
577.0		0.9		0.65				12	F									10	

Fig. 1. Typical rock mechanics core log.

PROJECT _____
 LOCATION _____
 LOGGER J. Zbeckhoff

DRILLHOLE NO. 90DY0403 COORDINATES: N _____ DATE _____ 19__
 HOLE SIZE NQ for this interval E _____ PAGE ___ of ___
 INCLINATION _____ ELEVATION _____

NQ core only
P.105



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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.	
583.1		2.8		2.0				12	F	NQ						30	
X																	580.1 - 598.3 has been drilled with down hole motor - no recovery
598.3																	
598.9		0.35		0				1	F	NQ							N/A
599.2		0.3		0				1	F								N/A
600.5		0.7		0				2	F								N/A
601.4		0.6		0				3	F								N/A
602.1		0.4		0				3	E								N/A
603.5		0.6		0.1				3	F								N/A
604.1		0.3		0				2	F								N/A
605.3		1.1		0				3	F								22 Common gouge
605.9		0.5		0.3				3	E								12 Sporadic gouge
607.5		1.4		0				9	E								26 Minor crushed rock
608.7		1.2		0.55				11	F								13
610.1		1.3		0.45				9	F								20
610.7		0.6		0				2	F								N/A
613.6		2.8		0.6				7	F								52 gouge - very common crushed rock
616.0		2.4		0				7	F								35 Clay filled fractures and gouge common
616.9		0.8		0				7	F								29 Sporadic crushed zones
618.4		1.5		0				6	F								31 crushed rock very common sporadic gouge
620.0		1.5		0				6	F								30 gouge crushed rock below 619.5
622.1		1.7		0.25				1	F								N/A
623.6		1.5		0				1	F								N/A
624.5		0.7		0				1	F								N/A
625.8		1.0		0				7	F								22 gouge above 625.2
626.7		1.5		0				3	F								N/A

Fig. 1. Typical rock mechanics core log.

PROJECT _____
 LOCATION _____
 LOGGER J. Zechner

DRILLHOLE NO. 9010415 COORDINATES: N _____ DATE _____ 19____
 HOLE SIZE NA this interval E _____ PAGE _____ of _____
 INCLINATION _____ ELEVATION _____

(NA only)
 P. 106



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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.		
628.5		1.3		0.5				6	F	NA							25	Sporadic crushed rock
630.3		1.45		0.15				6	F								46	crushed rock common
631.9		1.3		0.2				9	F								26	
634.3		2.4		0.4				7	F								43	Sporadic crushed rock
634.9		0.6		0				6	F								23	
636.1		1.1		0.1				9	F								31	gauge bands less than 2 cm common
638.0		1.8		1.1				12	F								22	
641.0		2.9		1.8				12	F								37	
644.0		3.0		2.7				10	F								24	
647.1		3.1		1.7				10	F								30	
650.1		3.0		1.3				9	F								48	
653.2		3.1		1.8				10	F								43	
656.2		3.0		2.5				12	F								23	
659.3		0.9		2.2				10	F								20	
662.3		3.0		1.6				9	F	V							36	
—	END OF HOLE																	END OF HOLE

Fig. 1. Typical rock mechanics core log.