PROJECT: NiMo

PROPERTY: Rich

HOLE: DDH-RI08-24

Easting	Northing	Elev.	Depth (m)
443753	7356495	609	565.71 m

Contractor: Orofino
Drill: Zinex A5 B20

SURVEY							
Depth (m)	Azimuth	Dip	Method	Depth (m)	Azimuth	Dip	Method
collar							
535.71	90	-70	compass				

Core size: HQ and NQ
Cassing depth: (m) out

Drilling dates: May 8 - May 18

Logged by: D. Gregory

Target: VTEM anomaly and/or NiMo horizon at transition from Road River to Canol formation

SUMMARY				
From (m)	To (m)	Interval	Unit	Coments
0	397.52	397.52	Imp	
397.52	565.71	168.19	DMe	

SAMPLES	
Numbers:	
Total:	
Date sent:	

COMMENTS

PROPERTY: Rich **HOLE:** RI08-24

LITHOLOGY										ALT.			MINERALS				SAMPLES							Blocks			GEOTECHNICAL							JOINTS					
Struct.																											REC		RQD										
Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:								From (m)	To (m)	Interval (m)	Sample				From (m)	To (m)	Intvl. (m)	(m)	Percent	(m)	Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling			
		0	8.97	8.97		OVBD			sand with several large pebbles															0.00	10.97	10.97					EW	VW							
		8.97	12.5	3.53		Imp			heavily fractured dark grey non-calcareous mudstone.	x clay														10.97	12.50	1.53					EW	VW							
bed	65	12.5	25.3	12.8		Imp			dark grey non-calcareous mudstone. Slightly wavy with minor <1 mm thick black carbonaceous beds. Minor (0.5%) quartz stringer @ 15 m and one 1 cm wide quartz breccia (50% sub-angular DMe fragments 2-3 mm x 1 cm) @ 50 degrees. @ 22.22 m with minor soft sediment deformation @ 23.47 m 1 cm wide quartz vein with 1imonitic stain occurring parallel to bedding.	h clay														12.50	14.02	1.52	1.27	9.058			EW	VW							
																								14.02	15.55	1.53	1.20	7.717			EW	VW							
																								15.55	18.59	3.04	2.27	12.21			HW	VW							
																								18.59	21.64	3.05	2.00	9.242			MW	VW							
																								21.64	23.17	1.53	1.19	5.136			MW	VW	4	70	5	4	A		
																								23.17	24.09	0.92	1.10	4.566			MW	VW							
		25.3	28.2	2.9		Imp			dark grey non-calcareous mudstone. Heavily fractured.	x clay														24.09	26.21	2.12	0.69	2.633			MW	VW							
																								26.21	27.74	1.53	0.76	2.74			MW	VW							
bed	65	28.2	46.23	18.03		Imp			dark grey non-calcareous mudstone. Minor carbonaceous bed @ 30.59 m. Shows some evidence of soft sediment deformation	h clay														27.74	29.26	1.52	0.86	2.939			MW	VW							
																								29.26	30.79	1.53	0.99	3.215			MW	VW							
																								30.79	32.31	1.52	0.83	2.569			MW	VW	1	70	5	4	A		
																								32.31	33.83	1.52	1.22	3.606	0.10	7	MW	VW							
																								33.83	35.36	1.53	1.14	3.224	0.00	0	MW	VW	1	70	5	4	A		
																								35.36	36.88	1.52	1.12	3.037	0.24	16	MW	W							
																								36.88	38.40	1.52	1.00	2.604	0.00	0	MW	W							
																								38.40	39.93	1.53	0.84	2.104	0.10	7	MW	W							
																								39.93	41.45	1.52	1.12	2.702	0.00	0	MW	W							
																								41.45	42.98	1.53	1.27	2.955	0.00	0	MW	W							
																								42.98	44.50	1.52	1.03	2.315	0.00	0	MW	W							
																								44.50	46.03	1.53	1.31	2.846	0.00	0	MW	W	3	70	5	4	A		
?F?	??	46.23	46.27	0.04					dark grey gauge (fault?)	x clay														46.03	47.56	1.53	1.31	2.754	0.00	0	MW	W							
bed	75	46.27	62.09	15.82		Imp			dark grey non-calcareous mudstone. Minor quartz along 15% of fractures. 3 mm wide quartz vein with ~60% sub-angular Imp clasts @ 50 m. At 48.80 m a 3 mm wide quartz vein with quartz enrichment in country rock extending 4 mm on both sides of vein. Vein has a weak comb texture. @ 54.68 m there is a 1 cm wide quartz vein with minor limonite @ 35 degrees. Dark grey material occurs at centre of vein.	h clay														47.56	49.03	1.47	1.08	2.203	0.24	16	MW	W		90					
																								49.03	50.60	1.57	1.38	2.727	0.11	7	MW	W	1	70	5	4	A		
																								50.60	52.12	1.52	1.30	2.494	0.10	7	MW	W	2	70	2	2	A		
																								52.12	53.65	1.53	1.33	2.479	0.00	0	MW	W	2	70	2	2	A		
																								53.65	56.69	3.04	2.29	4.04	0.56	18	MW	W	1	70	2	2	A		
																								56.69	59.74	3.05	2.84	4.754	0.40	13	FR	W	2	70	2	2	A		
?F?		62.09	62.15	0.06		Imp			dark grey non-calcareous mudstone. Heavily fractured and gaugey.	x clay														59.74	62.79	3.05	2.69	4.284	0.58	19	FR	W	3	70	2	2	A		
		62.15	63.89	1.74		Imp			dark grey non-calcareous mudstone.	h clay														62.79	65.84	3.05	2.71	4.116	0.46	15	FR	W	1	70	2	2	A		
?F?		63.89	63.99	0.1		Imp			dark grey gauge, possible fault, though likely just a fluid conduit.	x clay														65.84	68.89	3.05	2.72	3.948	1.09	36	FR	W	3	70	2	2	A		
		63.99	65.13	1.14		Imp			dark grey non-calcareous mudstone.	h clay														68.89	71.92	3.03	2.55	3.546	0.74	24	FR	W	2	70	2	2	A		
bed	65	65.13	71.92	6.79		Imp			dark grey non-calcareous mudstone. Rare <1 mm wide quartz veins @ 25 degrees, 1.5 cm wide quartz vein @ 70.76 m @ 58 degrees.	m clay																																	

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LITHOLOGY										ALT.			MINERALS				SAMPLES						Blocks			GEOTECHNICAL						JOINTS					
Struct.																										REC		RQD									
Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:								From (m)	To (m)	Interval (m)	Sample			From (m)	To (m)	Intvl. (m)	(m)	Percent	(m)	Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling	
bed	62	71.92	73.94	2.02		Imp			dark grey non-calcareous mudstone. < 1 mm wide quartz veinlets @ 20-30 degrees every 10-20 cm.	m clay													71.92	74.98	3.06	2.55	3.401	0.72	24	FR	W	2	70	2	2	A
bed	62	73.94	94.45	20.51		Imp			dark grey mudstone with 1-6 mm wide black beds (minor soft sediment deformation, ~2% of rock) tend to occur as a series of clusters 30-50 cm long. @ 84.13 m 1.5 cm wide crack-seal quartz vein ~ 5 crack-seal events leaving a thin coat of wall rock in the vein each time @ 89.10 m one 3 cm diameter chert nodule.	m clay															74.98	78.03	3.05	2.87	3.678	1.30	43	FR	W	2	70	2	2	A
																							78.03	81.08	3.05	2.78	3.429	1.26	41	FR	W	3	70	2	2	A
																							81.08	84.13	3.05	2.94	3.495	0.97	32	FR	W	2	70	2	2	A
																							84.13	87.17	3.04	2.74	3.143	1.02	34	FR	W	3	70	2	2	A
																							87.17	90.22	3.05	2.91	3.225	0.92	30	FR	W	1	70	2	2	A
																							90.22	93.27	3.05	2.75	2.948	1.14	37	FR	W	1	75	2	2	A
v	90	94.45	94.53	0.08					Quartz breccia zone bottom 4 cm is 85% white sugary quartz with 15% angular 6-3 mm Imp clasts and minor crack-seal texture at the base. Top 4 cm ~ 55% white quartz with 45% angular 3x5 mm to 5 mm x 2 cm Imp clasts; some clasts exhibit crack-seal texture. Breccia ripping up upper margin.															93.27	96.32	3.05	3.02	3.135	1.70	56	FR	W	2	75	2	2	A
v	70	94.53	94.82	0.29		Imp			dark grey mudstone with ~2% quartz stringer veins, occur in swarms off of one or two "feeder" veins.	m clay																												
bed	60-70	94.82	114.3	19.44		Imp			dark grey mudstone with 1-2% black <1 mm thick beds (minor soft sediment def). @ 100.05 m vein zone with several stacked 1-2 mm wide veinlets for ~ 40% quartz (rest Imp siltstone) @70-75 degrees.	m clay													96.32	99.37	3.05	2.92	2.939	1.57	51	FR	W	2	75	2	2	A
																							99.37	102.41	3.04	2.69	2.627	1.27	42	FR	W	2	75	2	2	A
																							102.41	105.46	3.05	2.80	2.655	1.85	61	FR	W	3	75	2	2	A
																							105.46	108.51	3.05	3.01	2.774	1.56	51	FR	W	1	75	2	2	A
																							108.51	111.56	3.05	2.81	2.519	1.56	51	FR	W	2	75	2	2	A
																							111.56	114.61	3.05	2.91	2.539	1.19	39	FR	W	2	75	2	2	A
bed	75	114.3	135.9	21.68		Imp			dark grey non-calcareous mudstone with rare black < 1 mm thick beds. @ 120.27 m 1.5 cm wide crack seal quartz vein (@ 80 degrees) ~70% incorporated wall rock @ 135.05 m a 1 cm wide clay gauge zone.	m clay													114.61	117.65	3.04	2.81	2.388	1.47	48	FR	W	2	75	2	2	A
																							117.65	120.70	3.05	2.88	2.386	1.63	53	FR	W	3	75	2	2	A
																							120.70	123.35	2.65	2.71	2.197	1.70	64	FR	W	3	75	2	2	A
																							123.35	126.80	3.45	2.77	2.185	2.18	63	FR	W	2	75	2	2	A
																							126.80	129.85	3.05	3.02	2.326	2.69	88	FR	W	2	75	2	2	A
																							129.85	132.89	3.04	2.85	2.145	2.41	79	FR	W	1	75	2	2	A
																							132.89	135.94	3.05	3.02	2.222	1.94	64	FR	W	2	75	2	2	A
bed	75	135.9	147.5	11.56		Imp			dark grey non-calcareous mudstone.	m clay													135.94	138.99	3.05	2.92	2.101	1.90	62	FR	W	2	75	2	2	A
																							138.99	142.04	3.05	2.76	1.943	1.59	52	FR	W	4	75	2	2	A
																							142.04	145.09	3.05	2.92	2.013	1.56	51	FR	W	3	75	2	2	A
																							145.09	148.13	3.04	2.94	1.985	1.07	35	FR	W	3	75	2	2	A
bed	50-65	147.5	151.3	3.84		Imp			dark grey non-calcareous mudstone with 2 to 25 mm wide black beds ~ 7% of rock. @ 148.4 m a 7 cm wide med grey clay gauge zone at 40 degrees.	l clay													148.13	151.18	3.05	3.05	2.017	1.37	45	FR	W	2	75	2	2	A
bed	50-65	151.3	162.6	11.25		Imp			dark grey non-calcareous mudstone with rare 2 mm - 2 cm wide black beds. @ 155.28 m a 1.5 cm wide quartz vein with minor crack-seal texture (85% quartz).	l clay													151.18	154.23	3.05	2.86	1.854	2.04	67	FR	W	2	75	2	2	A
																							154.23	157.28	3.05	2.90	1.844	1.92	63	FR	W	2	75	2	2	A

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Struct.		LITHOLOGY								ALT.			MINERALS				SAMPLES							Blocks			GEOTECHNICAL							JOINTS					
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Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:								From (m)	To (m)	Interval (m)	Sample				From (m)	To (m)	Intvl. (m)	(m)	Percent	(m)	Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling			
																								157.28	160.33	3.05	2.97	1.852	1.65	54	FR	W	3	75	2	2	A		
																								160.33	163.37	3.04	3.02	1.849	2.13	70	FR	W	2	75	2	2	A		
bed	75	162.6	184	21.43		Imp			dark grey non-calcareous mudstone with rare small clusters of 1-2 mm wide black beds (cluster >1% of total rock and ~30 cm long) 1 cluster every 3 m. These occur @ 173.4, 174.87 and 182.12 m and dip at 70, 85 and 65 degrees respectively.	t clay													163.37	166.42	3.05	2.48	1.49	2.09	69	FR	W	2	75	2	2	A		
																								166.42	169.47	3.05	3.01	1.776	1.98	65	FR	W	2	75	2	2	A		
																								169.47	172.52	3.05	3.13	1.814	2.61	86	FR	W	2	75	2	2	A		
																								172.52	175.57	3.05	3.12	1.777	2.23	73	FR	W	3	75	2	2	A		
																								175.57	178.61	3.04	2.92	1.635	2.31	76	FR	W	3	75	2	2	A		
																								178.61	181.66	3.05	3.02	1.662	2.51	82	FR	W	2	75	2	2	A		
																								181.66	184.71	3.05	2.94	1.592	2.06	68	FR	W	2	75	2	2	A		
		184	184.3	0.25		Imp			dark grey non-calcareous mudstone with 20% quartz veins and quartz breccia. Quartz veins are erratic and occur through-out the interval. Breccia occur in 2 and 3 cm wide bodies at 184.14 and 184.24 respectively. Breccia are ~ 30% quartz matrix and rest angular DMe clasts 4mmx4mm (at 85 degrees).	t clay													184.71	187.76	3.05	3.16	1.683	1.10	36	FR	W	2	75	2	2	A		
bed	70	184.3	187.5	3.24		Imp			dark grey non-calcareous mudstone. Rare 35 degree dipping quartz stringer veins occur through-out interval. A pyrite lens occurs @ 187.38 m.	t clay			pyrite																																
bed	58	187.5	204.6	17.05		Imp			interbedded dark grey/black beds of non-calcareous mudstone. ~30% black mudstone at start, decreasing to 15% by the end of the interval. Beds range from 0.1-2 cm wide with fewer thick beds at end of interval. @ 188.69m there's a 0.5 cm diameter pyrite bleb & at 191.2 m a elongate 0.5x2 cm pyrite bleb, @ 202.13 m a 0.1 cm wide pyrite bed and at 199.25 m a 0.8 cm wide pyrite clot with 4 mm clay alt on margins.	t clay			pyrite													187.76	190.81	3.05	2.82	1.478	1.62	53	FR	W	4	75	2	2	A		
																								190.81	193.85	3.04	2.98	1.537	1.93	63	FR	W	3	75	2	2	A		
																								193.85	196.90	3.05	3.00	1.524	2.57	84	FR	W	3	75	2	2	A		
																								196.90	199.96	3.06	2.92	1.46	2.45	80	FR	W	2	75	2	2	A		
																								199.96	203.00	3.04	3.02	1.488	2.14	70	FR	W	4	75	2	2	A		
bed	61	204.6	210.1	5.55		Imp			interbedded dark grey/black beds non-calcareous mudstone, ~30% black mudstone from 0.1 to 2 cm wide (black beds) with minor 1 mm wide quartz veins ~ 1 per 1.5 m dipping 60-70.	t clay													203.00	206.05	3.05	2.99	1.451	2.51	82	FR	W	3	75	2	2	A		
																								206.05	209.09	3.04	2.85	1.363	1.96	64	FR	W	4	75	2	2	A		
bed	65	210.1	219	8.86		Imp			interbedded dark grey/black beds non-calcareous mudstone, ~10-15% black mudstone in beds 0.1-2 cm wide	x clay													209.09	212.14	3.05	2.89	1.362	2.24	73	FR	W	3	75	2	2	A		
																								212.14	215.19	3.05	2.96	1.376	1.97	65	FR	W	3	75	2	2	A		
																								215.19	218.24	3.05	3.10	1.42	2.29	75	FR	W	2	75	2	2	A		
F	???	219	219.2	0.27					dark grey clayey gauge	x clay													218.24	221.28	3.04	2.82	1.274	1.67	55	FR	W	2	75	2	2	A		
bed	75	219.2	230.2	10.98		Imp			interbedded dark grey/black beds non-calcareous mudstone, ~10-15% black mudstone beds from 0.1-1.5 cm wide (black). One 3x10 mm pyrite bleb @ 221.92. Rare 1-2 mm wide quartz stringer parallel to bedding @ 212.51 m a 1 cm wide quartz vein at 80 degrees.	t clay													221.28	224.33	3.05	2.92	1.302	1.20	39	FR	W	2	75	2	2	A		
																								224.33	227.38	3.05	2.81	1.236	2.30	75	FR	W	3	75	2	2	A		
																								227.38	230.43	3.05	3.01	1.306	2.71	89	FR	W	2	75	2	2	A		

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Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:								From (m)	To (m)	Interval (m)	Sample				From (m)	To (m)	Intvl. (m)	(m)	Percent	(m)	Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling	
bed	75	230.2	251	20.75		Imp			interbedded dark grey/black beds non-calcareous mudstone, ~5% black mudstone in thin (< 1 mm wide) black beds with slightly wavy bedding. @ 236.27 m a zone of 2 (60 degree dipping) 1 mm thick quartz veins 1.5 cm apart connected by several quartz stringers occurs @ 239.5 m. From 238.75-239.25 m 1-3 mm wide quartz veins occur every 10-20 cm dipping 70-80 degrees. The entire interval shows evidence of minor soft sediment deformation. At 238.71 m minor pyrite clot (3x6 mm) - along bedding. At 250.87 m three 75 degree dipping 3-4 mm wide quartz veins occur next to each other. Small amounts (5%) void space in thickest one.	w clay																	230.43	233.48	3.05	2.88	1.234	2.51	82	FR	W	2	75	2	2	A
																								233.48	236.52	3.04	2.84	1.201	2.33	77	FR	W	2	75	2	2	A
																								236.52	239.57	3.05	3.05	1.273	2.36	77	FR	W	3	75	2	2	A
																								239.57	242.62	3.05	2.96	1.22	2.62	86	FR	W	3	70	2	2	A
																								242.62	245.67	3.05	2.98	1.213	2.55	84	FR	W	2	70	2	2	A
																								245.67	248.72	3.05	2.84	1.142	2.46	81	FR	W	2	70	2	2	A
																								248.72	251.76	3.04	2.95	1.172	2.60	86	FR	W	2	70	2	2	A
bed	75	251	261.3	10.31		Imp			dark grey non-calcareous mudstone with trace <1 mm wide black beds. @ 252.07 m a 2 cm wide crack-seal texture quartz vein with thin DMe layers between 1 mm wide quartz layers dipping 75 degrees.	t clay													251.76	254.81	3.05	2.99	1.173	2.62	86	FR	W	1	70	2	2	A
																								254.81	257.86	3.05	2.98	1.156	2.67	88	FR	W	2	70	2	2	A
																								257.86	260.91	3.05	2.97	1.138	2.71	89	FR	W	2	70	2	2	A
bed	70	261.3	261.6	0.27		Imp			med grey fine grained non-calcareous sandstone with ~10% thin black interbeds.															260.91	263.96	3.05	2.89	1.095	2.44	80	FR	W	3	70	2	2	A
bed	60	261.6	266.4	4.85		Imp			Dark grey non-calcareous mudstone with rare black interbeds	t clay													263.96	267.01	3.05	2.97	1.112	2.78	91	FR	W	2	70	2	2	A
bed	65 to	266.4	276.7	10.29		Imp			Dark grey non-calcareous mudstone with 2-3% black mudstone beds (tend to be slightly wavy, occasionally with a rip-up like fabric) rarely beds get up to 2 cm thick. From 267.5-270.0 m 4x10 mm blebs of pyrite occur every 20-50 cm. @ 275.65 m a 1 cm thick quartz vein with a crack-seal texture; 0.5-1 mm quartz layers between thin DMe layers.													267.01	270.05	3.04	3.01	1.115	2.84	93	FR	W	3	70	2	2	A
																								270.05	273.10	3.05	2.91	1.066	2.80	92	FR	W	3	70	2	2	A
																								273.10	276.15	3.05	3.00	1.086	2.75	90	FR	W	2	70	2	2	A
bed	72	276.7	291.1	14.37		Imp			Dark grey non-calcareous mudstone with rare thin black beds. @ 278.10 m a 1 cm wide crack-seal quartz vein with ~1 mm wide quartz layers. Every ~1.5 m after 280.06 m 0.5 cm thick comb textured quartz veins occur.															276.15	279.20	3.05	2.70	0.967	2.05	67	FR	W	3	70	2	2	A
																								279.20	282.25	3.05	2.96	1.049	2.17	71	FR	W	2	70	2	2	A
																								282.25	285.29	3.04	3.10	1.087	2.80	92	FR	W	2	70	2	2	A
																								285.29	288.34	3.05	2.86	0.992	2.66	87	FR	W	2	70	2	2	A
																								288.34	291.39	3.05	2.98	1.023	2.98	98	FR	W	1	70	2	2	A

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LITHOLOGY										ALT.			MINERALS				SAMPLES							Blocks			GEOTECHNICAL							JOINTS					
Struct.																											REC		RQD										
Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:								From (m)	To (m)	Interval (m)	Sample				From (m)	To (m)	Intvl. (m)	(m)	Percent	(m)	Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling			
bed	70	291.1	303.6	12.57		Imp			Dark grey non-calcareous mudstone with rare thin black beds. Interval contains minor 4x1 mm pyrite flakes (lay parallel to bedding) ~ 1 flake every 10-20 cm. Rare quartz veining along fractures. Black beds tend to get more prevalent near bottom of interval. @ 300.31-300.09 m a med grey fine grained sandy layer occurs.															291.39	294.44	3.05	2.88	0.978	2.80	92	FR	W	2	70	2	2	A		
																								294.44	297.49	3.05	3.04	1.022	2.78	91	FR	W	2	70	2	2	A		
bed	70-74	303.6	317.7	14.09		Imp			Dark grey non-calcareous mudstone with rare thin black beds with 2 cm diameter concretions/nodules at 313.65 and 314.25 m.															297.49	300.53	3.04	3.08	1.025	2.93	96	FR	W	2	70	2	2	A		
																								300.53	303.58	3.05	2.71	0.893	2.61	86	FR	W	1	70	2	2	A		
																								303.58	306.63	3.05	3.20	1.044	3.08	##	FR	W	2	70	2	2	A		
																								306.63	309.68	3.05	3.01	0.972	2.90	95	FR	W	1	70	2	2	A		
																								309.68	312.73	3.05	3.01	0.962	1.98	65	FR	W	5	70	2	2	A		
																								312.73	315.77	3.04	3.02	0.956	1.72	57	FR	W	5	70	3	3	A		
bed	50-60	317.7	321.7	4.01		Imp			Dark grey non-calcareous mudstone with 9 cm wide med grey non-calcareous mudstone beds every 1-1.5 m, increasing in frequency near the end of the interval. @ 319.02 thers is a 0.5 cm wide crack-seal texture quartz vein.															315.77	318.82	3.05	3.02	0.947	0.36	12	FR	W	10	70	2	2	A		
v	78																							318.82	321.87	3.05	2.99	0.929	0.60	20	FR	W	8	70	2	2	A		
bed	62	321.7	324.3	2.6		Imp			dark grey mudstone with rare thin black mudstone beds.															321.87	324.92	3.05	2.28	0.702	1.03	34	FR	W	3	70		2	A		
bed	60	324.3	340.3	16		Imp			dark grey non-calcareous mudstone with 2% thin black mudstone beds and 1-2 cm diameter nodules ~1 per 1 m; occur more frequently with black beds. Minor quartz vein @ 324.38 where 0.3 cm dip 10. Off shoots in quartz vein occur along bedding (offshoots contains rare subangular DMe clast). @ 324.4 & 324.83 m 0.4 cm wide quartz breccias (~15% quartz matrix rest is DMe cherty siltstone clasts) dip along bedding.															324.92	327.96	3.04	2.98	0.909	2.89	95	FR	W	1	70	2	2	A		
v	10																							327.96	331.01	3.05	3.01	0.909	2.78	91	FR	W	2	70	2	2	A		
																								331.01	334.06	3.05	2.90	0.868	2.70	89	FR	W	2	70	2	2	A		
																								334.06	337.11	3.05	3.04	0.902	2.65	87	FR	W	2	70	2	2	A		
																								337.11	340.16	3.05	3.03	0.891	2.46	81	FR	W	3	70	2	2	A		
bed	55-65	340.3	343.1	2.74		Imp			dark grey non-calcareous mudstone with minor thin black beds @ 341.42 m a 2 cm band of pinch and swelling pyrite beds for a total of 80% pyrite.				pyrite											340.16	343.21	3.05	3.03	0.883	2.58	85	FR	W	3	70	2	2	A		
bed	50-55	343.1	351.2	8.14		Imp			dark grey non-calcareous mudstone with 2% thin black beds and 4 cm wide med grey beds every 1.5 m 1x2 cm pyrite clot @ 340.94 m.				pyrite											343.21	346.25	3.04	2.85	0.823	2.07	68	FR	W	4	70	2	2	A		
																								346.25	349.28	3.03	3.03	0.867	1.95	64	FR	W	3	70	2	2	A		
																								349.28	352.30	3.02	2.88	0.817	2.60	86	FR	W	2	70	2	2	A		
bed	60	351.2	353.1	1.92		imp			dark grey non-calcareous mudstone with 5% disseminated pyrite. At beginning 11 cm of int. 90% pyrite and @ last 8 cm of int. 80% pyrite. (bed 30 at start and 45 at end)				pyrite											352.30	355.40	3.10	2.93	0.824	2.70	87	FR	W	2	70	2	2	A		
bed	45																																						
bed	55	353.1	353.8	0.71		Imp			dark grey non-calcareous mudstone with t disseminated pyrite				pyrite																													
bed	55	353.8	354	0.23		Imp			dark grey non-calcareous mudstone 4% disseminated pyrite (minor 4 mm wide horizons barren of sulphides.)				pyrite																															

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Struct.		LITHOLOGY								ALT.			MINERALS				SAMPLES							Blocks			GEOTECHNICAL								JOINTS					
																											REC		RQD											
Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:								From (m)	To (m)	Interval (m)	Sample				From (m)	To (m)	Intvl. (m)	(m)	Percent	(m)	Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling				
bed	56	354	355.4	1.36		Imp			dark grey non-calcareous mudstone with 1% disseminated pyrite and 2% 1-5 mm wide black siltstone horizons.				pyrite																													
bed	55	355.4	365.2	9.84		Imp			dark grey non-calcareous mudstone with t disseminated pyrite and 5 mm fine grained pyrite beds in groups of 1-4 every 1-1.5 m. (bedding 35 @ beginning and end of interval and 25 in the middle)				pyrite												355.40	358.44	3.04	2.86	0.798	2.36	78	FR	W	3	70	2	2	A				
	65																							358.44	361.49	3.05	2.83	0.783	2.09	69	FR	W	2	70	2	2	A				
	55																							361.49	364.54	3.05	2.89	0.793	2.44	80	FR	W	2	70	2	2	A				
bed	56	365.2	367.5	2.25		Imp			dark grey non-calcareous mudstone with 10% black siltstone beds (minor soft sediment deformation) ~1% disseminated pyrite.				pyrite												364.54	367.59	3.05	3.03	0.824	2.55	84	FR	W	2	70	2	2	A				
bed	51	367.5	371.8	4.28		Imp			dark grey non-calcareous mudstone with 2% 1-5 mm wide black beds (more prevalent at start of interval). 0.5-0.8 cm wide pyrite beds every 50 cm, changing to lines of blebs near end of interval. @ 368.37-368.49 m quartz veining parallel to bedding 3-6 mm wide for ~ 40% of rock.				pyrite												367.59	370.64	3.05	2.57	0.693	1.10	36	FR	W	5	70	2	2	A				
bed	59	371.8	377.4	5.59		Imp			Heavily fractured dark grey mudstone with minor pyrite bands. On ~25% of fractures shiny graphitic coating.				pyrite												370.64	373.69	3.05	2.19	0.586	1.02	33	FR	W	4	70	2	2	A				
																								373.69	376.73	3.04	2.05	0.544	0.00	0	FR	W	15	70	2	2	A				
bed	51	377.4	377.8	0.47		Imp			dark grey non-calcareous mudstone with 1% disseminated pyrite and 1 mm wide pyrite bands every 2-3 cm.				pyrite												376.73	379.78	3.05	2.62	0.69	0.52	17	FR	W	13	70	2	2	A				
bed	58	377.8	382.8	4.94		Imp			dark grey non-calcareous mudstone with t disseminated pyrite and 1-3 mm wide pyrite bands every 50 cm disseminated pyrite more prevalent near pyrite bands. 1-2% quartz veinlets from 379.15 to 379.28 m.																379.78	382.83	3.05	1.40	0.366	0.00	0	FR	W	17	70	2	2	A				
F?	??	382.8	383.1	0.3		Imp			dark grey highly fractured clayey fault gauge.															382.83	385.88	3.05	2.52	0.653	0.00	0	FR	W	17	70	2	2	A				
bed	57	383.1	385.7	2.64		Imp			dark grey highly fractured non-calcareous mudstone with trace disseminated pyrite and 3 mm wide pyrite bands ~ every 1.5 m. ~25% of fractures have shiny graphitic coating.				pyrite																													
bed	58	385.7	390	4.27		Imp			dark grey non-calcareous mudstone with 1% disseminated pyrite (occurring along v thin beds) with 3 mm wide pyrite beds every 10-40 cm.				pyrite												385.88	388.93	3.05	2.62	0.674	0.42	14	FR	W	10	70	2	2	A				
bed	56	390	390.2	0.24		Imp			med-dark grey calcareous siltstone with minor pyrite beds.				pyrite												388.93	391.97	3.04	2.80	0.714	0.42	14	FR	W	11	70	2	2	A				
bed	57	390.2	397	6.82		Imp			dark grey non-calcareous mudstone with t disseminated pyrite and 0.5 cm wide pyrite bands ~ every 1.5 m. Near end of the interval ~20% of fractures have shiny graphitic coating. Trace <1 mm wide calcite veining along bedding at end of interval.				pyrite												391.97	395.02	3.05	2.52	0.638	0.00	0	FR	W	14	70	2	2	A				
																								395.02	398.07	3.05	2.62	0.658	0.57	19	FR	W	10	70	2	2	A				
bed	45	397	397.5	0.48		Imp			med-dark grey calcareous siltstone interbedded with ~30% black beds.																398.07	401.12	3.05	2.70	0.673	0.32	10	FR	W	11	70	2	2	A				

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LITHOLOGY										ALT.			MINERALS				SAMPLES							Blocks			GEOTECHNICAL							JOINTS					
Struct.																											REC		RQD										
Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:								From (m)	To (m)	Interval (m)	Sample				From (m)	To (m)	Intvl. (m)	(m)	Percent	(m)	Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling			
bed	55	397.5	407.7	10.22		Dme			dark grey non-calcareous cherty siltstone. Fractures easily along bedding t disseminated pyrite and pyrite beds 2-4 mm wide every 1 m. Thickness of pyrite beds decreases to < 1mm and frequency increases to every 50 cm by end of interval. Calcite vein, apparently steeply dipping at least 0.5 cm wide just nicked by drill, @402.62 m.					pyrite												401.12	404.17	3.05	2.56	0.633	0.00	0	FR	W	17	70	2	2	A			
																								404.17	407.21	3.04	2.13	0.523	0.00	0	FR	W	21	70	2	2	A			
bed	50	407.7	408.8	1.02		Dme			med-dark grey calcareous slightly sandy siltstone with minor calcite stringers ~parallel to bedding (though slightly erratic).																407.21	410.26	3.05	2.88	0.702	0.92	30	FR	W	13	70	2	2	A			
bed	58	408.8	410.9	2.13		Dme			dark grey non-calcareous cherty siltstone with t disseminated pyrite and 0.5-1 cm wide pyrite occurring					pyrite																															
F?	???	410.9	411.3	0.4		Dme			dark grey-black heavily fractured gauge; fault?															410.26	413.31	3.05	1.20	0.29	0.00	0	FR	W	27	70	2	2	A			
bed	70	411.3	413.3	2.02		Dme			heavily fractured dark grey non-calcareous cherty siltstone																																	
bed	65	413.3	414.3	0.99		Dme			med-dark grey calcareous siltstone with rare 1 mm pyrite beds and minor calcite stringers @ 10 degrees.															413.31	416.36	3.05	2.43	0.584	0.89	29	FR	W	18	70	2	2	A			
bed	59	414.3	418.1	3.76		Dme			dark grey non-calcareous cherty siltstone with rare 1 mm wide pyrite beds.					pyrite										416.36	419.41	3.05	2.45	0.584	0.37	12	FR	W	10	70	2	2	A			
bed	59	418.1	432.2	14.13		Dme			dark grey non-calcareous cherty siltstone with t disseminated pyrite and 1-4 mm wide pyrite bands every 10-30 cm.					pyrite										419.41	422.25	2.84	2.15	0.509	0.38	13	FR	W	13	70	2	2	A			
bed	65																							422.25	425.50	3.25	2.26	0.531	0.00	0	FR	W	11	70	2	2	A			
bed	56																							425.50	428.55	3.05	2.62	0.611	0.00	0	FR	W	15	70	2	2	A			
bed	59																							428.55	431.60	3.05	2.66	0.616	0.00	0	FR	W	15	70	2	2	A			
bed	45	432.2	432.9	0.75		Dme			med-dark grey calcareous siltstone															431.60	434.65	3.05	2.95	0.679	0.72	24	FR	W	8	70	2	2	A			
bed	50	432.9	444.3	11.33		Dme			dark grey non-calcareous cherty siltstone. First 5 cm ~40% 3 mm wide calcite veins @ 80 degrees. Thin pyrite beds ~every 50-75 cm.					pyrite										434.65	437.69	3.04	2.95	0.674	0.00	0	FR	W	14	70	2	2	A			
bed	58																							437.69	440.74	3.05	2.18	0.495	0.00	0	FR	W	18	70	2	2	A			
bed	55																							440.74	443.79	3.05	2.34	0.527	0.00	0	FR	W	19	70	2	2	A			
bed	62	444.3	460.4	16.08		Dme			dark grey non-calcareous cherty siltstone with t 2 mm wide pyrite beds, heavily fractured. Concentration of pyrite beds increases with depth until ~1 every 50 cm near bottom of int.					pyrite										443.79	446.84	3.05	1.90	0.425	0.61	20	FR	W	15	70	2	2	A			
	59																							446.84	449.88	3.04	1.80	0.4	0.00	0	FR	W	13	70	2	2	A			
	56																							449.88	452.93	3.05	2.50	0.552	0.00	0	FR	W	14	70	2	2	A			
	55																							452.93	455.98	3.05	1.94	0.425	0.23	8	FR	W	9	70	2	2	A			
	55																							455.98	459.03	3.05	3.02	0.658	0.11	4	FR	W	9	60	2	2	A			
	55																							459.03	462.08	3.05	1.70	0.368	0.10	3	FR	W	15	60	2	2	A			
F?	??	460.4	460.6	0.2		Fault?			heavily fractured DMe; slightly gaugey, fault?															462.08	465.12	3.04	2.55	0.548	0.32	11	FR	W	16	60	2	2	A			
bed	58	460.6	468	7.41		Dme			dark grey non-calcareous cherty siltstone with ~1-2% 1 mm thick pyrite bands/band of blebs					pyrite										465.12	468.17	3.05	0.69	0.147	0.00	0	FR	W	7	60	2	2	A			
	75																							468.17	471.22	3.05	2.60	0.552	0.16	5	FR	W	7	70	2	2	A			
	60																																					
F?	??	468	468.2	0.21		Fault?			dark grey gauge (fault?) poor recovery in this area																																	
bed	70	468.2	468.8	0.66		Dme			dark grey non-calcareous cherty siltstone with 1-2 mm pyrite bands every 10-30 cm.					pyrite																													

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LITHOLOGY										ALT.			MINERALS				SAMPLES						Blocks			GEOTECHNICAL						JOINTS					
Struct.																										REC		RQD									
Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:								From (m)	To (m)	Interval (m)	Sample			From (m)	To (m)	Intvl. (m)	(m)	Percent	(m)	Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling	
bed	50	468.8	470.1	1.24		Dme			med-dark grey non-calcareous cherty siltstone with ~3% < 1mm wide pyrite beds ~ equally spaced (beds thicker near top of interval). Trace erratic thin calcite veins.				pyrite																									
bed	60	470.1	488.7	18.67		Dme			dark grey non-calcareous cherty siltstone with minor <1 mm wide calcite veining. 0.5% pyrite blebs along bedding.				pyrite											471.22	474.26	3.04	2.31	0.487	0.71	23	FR	W	9	60	2	2	A
v	15																							474.26	477.32	3.06	1.15	0.241	0.00	0	FR	W	5	70	2	2	A
v	60																							477.32	480.37	3.05	2.82	0.587	0.21	7	FR	W	10	70	2	2	A
																								480.37	483.41	3.04	2.61	0.54	0.59	19	FR	W	6	60	2	2	A
																								483.41	486.46	3.05	2.48	0.51	0.21	7	FR	W	4	60	2	2	A
																								486.46	489.51	3.05	2.35	0.48	0.14	5	FR	W	7	60	2	2	A
bed	60	488.7	500.6	11.83		Dme			dark grey non-calcareous cherty siltstone with ~ 2% pyrite blebs along bedding planes (blebs ~ 0.5 mm x 1 mm but can be up to 1 mm x 5 mm). Trace v thin calcite veins.				pyrite											489.51	492.56	3.05	2.97	0.603	0.00	0	FR	W	10	60	2	2	A
v	70																							492.56	495.61	3.05	2.27	0.458	0.10	3	FR	W	4	70	2	2	A
																								495.61	498.65	3.04	2.91	0.584	0.33	11	FR	W	4	70	2	2	A
		500.6	501.7	1.17		Dme			dark grey non-calcareous cherty siltstone t pyrite and extensive graphitic coating				pyrite											498.65	501.70	3.05	2.83	0.564	0.40	13	FR	W	3	70	2	2	A
bed	32	501.7	502.7	1		Dme			dark grey non-calcareous cherty siltstone with ~3% pyrite occurring as blebs along bedding planes.				pyrite											501.70	504.75	3.05	3.03	0.6	1.52	50	FR	W	3	70	2	2	A
bed	42	502.7	508.3	5.58		Dme			dark grey non-calcareous cherty siltstone with ~1% pyrite in small flakes parallel to bedding. @ 504.61 m a 0.5 cm wide calcite vein offset 1 cm by a healed fracture at 20 degrees.				pyrite																									
bed	60																							504.75	507.80	3.05	2.44	0.481	1.56	51	FR	W	7	70	2	2	A
bed	60-63	508.3	512.6	4.25		Dme			dark grey non-calcareous cherty siltstone with minor disseminated pyrite and ~2% pyrite occurring as bands of blebs through-out interval. Trace calcite veining <1 mm wide				pyrite											507.80	510.85	3.05	2.90	0.568	0.53	17	FR	W	8	70	2	2	A
v	20																							510.85	513.89	3.04	3.01	0.586	0.45	15	FR	W	6	70	2	2	A
bed	45	512.6	521.1	8.55		Dme			dark grey non-calcareous cherty siltstone with ~0.5% pyrite occurring as 1-2 mm blebs along bedding. Erratic calcite veining occurs between 512.90-513.09 m and between 518.16-518.30 m (~2% of rock) as 1 mm wide veins. Calcite coats ~10% of fractures and minor graphite coats some other fractures.				pyrite											513.89	516.94	3.05	2.43	0.47	0.21	7	FR	W	2	70	2	2	A
bed	35																							516.94	519.99	3.05	2.50	0.481	0.41	13	FR	W	5	70	2	2	A
bed	20																							519.99	521.51	1.52	1.71	0.328	0.12	8	FR	W	2	70	2	2	A
		521.1	522.4	1.24		Dme			dark grey non-calcareous cherty siltstone with erratic quartz veining (~4% of rock) veins are predominantly parallel to bedding but also cut across beds. Veins range from <1 mm to 1 cm wide. Some have a minor calcite component. Large fracture @ 521.63 m contains extensive graphitic coating. 0.5% pyrite blebs along bedding.				pyrite											521.51	523.04	1.53	1.10	0.21	0.23	15	FR	W	5	70	2	2	A
bed	65	522.4	524.3	1.9		Dme			dark grey non-calcareous cherty siltstone, highly fractured with minor disseminated pyrite.				pyrite											523.04	525.48	2.44	1.85	0.352	0.24	10	FR	W	2	70	2	2	A

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Struct.		LITHOLOGY								ALT.			MINERALS				SAMPLES						Blocks			GEOTECHNICAL							JOINTS					
																										REC		RQD										
Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:								From (m)	To (m)	Interval (m)	Sample			From (m)	To (m)	Intvl. (m)	(m)	Percent	(m)	Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling		
bed	76	524.3	527.5	3.22		Dme			dark grey non-calcareous cherty siltstone with 0.5% pyrite blebs along bedding and t. calcite on fractures. Bedding ranges from 65 degrees at the beginning to 76 degrees at end of the interval.				pyrite											525.48	528.52	3.04	2.85	0.539	0.30	10	FR	W	6	70	2	2	A		
bed	70																																				
bed	60	527.5	528.8	1.28		Dme			dark grey non-calcareous cherty siltstone with 1% pyrite blebs (1x2 mm). 3 mm wide calcite veins occur parallel to bedding every 10-20 cm. Bedding starts at 70 degrees and ends at 60 degrees.				pyrite																										
bed	65																																				
bed	59	528.8	533.9	5.17		Dme			dark grey non-calcareous cherty siltstone with 1-2% pyrite along bedding in blebs 1x3 mm.				pyrite											528.52	530.66	2.14	1.60	0.302	0.00	0	FR	W	11	70	2	2	A		
bed	57																							530.66	532.18	1.52	1.81	0.34	1.34	88	FR	W	6	70	2	2	A		
	40																							532.18	534.31	2.13	2.08	0.389	1.44	68	FR	W	4	70	2	2	A		
bed	50	533.9	538	4.05		Dme			dark grey non-calcareous cherty siltstone with 1% blebby 1 mm wide pyrite bands and 1 2% 0.5 cm wide quartz veins parallel to bedding with variable amounts of calcite (0-50%) in veinlets perpendicular to the main vein)				pyrite											534.31	535.23	0.92	0.94	0.176	0.40	43	FR	W	6	70	2	2	A		
bed	55																							535.23	538.28	3.05	3.03	0.563	1.04	34	FR	W	7	70	2	2	A		
bed	65	538	541.3	3.34		Dme			dark grey non-calcareous cherty siltstone with 2% 1-2 mm wide pyrite beds (slightly blebby) and trace calcite stringers along bedding.				pyrite											538.28	541.32	3.04	2.70	0.499	0.65	21	FR	W	8	70	2	2	A		
		541.3	541.5	0.17		Dme			fine grained med grey sandstone - calcareous															541.32	544.37	3.05	2.75	0.505	1.63	53	FR	W	4	70	2	2	A		
bed	37	541.5	549.1	7.59		Dme			dark grey non-calcareous cherty siltstone with 1% pyrite blebs and bands ~0.5-1 mm thick 1 calcite vein along bedding (top contact 55, bottom contact 65)				pyrite											544.37	547.42	3.05	2.61	0.477	1.20	39	FR	W	6	70	2	2	A		
bed	45																																				
bed	40	549.1	549.7	0.65		Dme			med-dark grey calcareous siltstone with minor erratic calcite veining @ end of interval, terminates with 0.5 cm wide irregular pyrite beds.				pyrite											547.42	550.47	3.05	2.89	0.525	0.98	32	FR	W	3	70	2	2	A		
		549.7	550.1	0.33		Dme			dark grey non-calcareous cherty siltstone				pyrite																										
bed	60	550.1	550.2	0.09		Dme			med grey fine grained calcareous sandstone that terminates in a 4 mm wide pyrite band.				pyrite											550.47	553.52	3.05	2.41	0.435	0.73	24	FR	W	6	70	2	2	A		
		550.2	551.6	1.4		Dme			dark grey non-calcareous cherty siltstone with 0.5 cm wide quartz veins parallel to bedding every 10-30 cm. One group of 4 calcite veins from <1 mm wide to 2 mm wide erratic but ~ perpendicular to bedding. @ 551.12 m ~ three 4 mm wide pyrite beds across interval.				pyrite											553.52	556.56	3.04	2.48	0.446	0.20	7	FR	W	5	70	2	2	A		
		551.6	556.9	5.34		Dme			dark grey non-calcareous cherty siltstone with ~1% pyrite blebs and bands along bedding erratic calcite stringers @ 553.52 and 554.54 m and rare 3 mm wide quartz veins along bedding				pyrite																										

PROPERTY: Rich **HOLE:** RI08-24

Struct.		LITHOLOGY								ALT.			MINERALS				SAMPLES							Blocks			GEOTECHNICAL						JOINTS					
																											REC		RQD									
Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:								From (m)	To (m)	Interval (m)	Sample				From (m)	To (m)	Intvl. (m)	(m)	Percent	(m)	Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling		
		556.9	562.5	5.62		Dme			heavily fractured dark grey non-calcareous cherty siltstone with minor pyrite along bedding and t calcite along fracture. Not gaugey.					pyrite										556.56	559.61	3.05	2.22	0.397	0.28	9	FR	W	1	70	2	2	A		
		562.5	565.7	3.2		Dme			moderately fractured dark grey cherty siltstone with t pyrite along bedding.					pyrite										559.61	562.66	3.05	1.37	0.243	0.00	0	FR	W	2	70	2	2	A		
																								562.66	565.71	3.05	2.20	0.389	0.12	4	FR	W	8	70	2	2	A		
		EOH							EOH																													