NiMo PROJECT

PROPERTY: PE

HOLE: PE07-06

Easting	Northing	Elev.	Depth (m)
452507	7315113	510	152.40

Contractor: North Star
Drill: MD-002

SURVEY							
Depth (m)	Azimuth	Dip	Method	Depth (m)	Azimuth	Dip	Method
collar	025°	-70°	compass				

Core size: BTW
Cassing depth: 3.66 (m) out

Drilling dates: July 10 to 11, 2007

Logged by: D. MacDonald

Target: Adjusted angle to pass through fault encountered in PE07-05

SUMMARY				
From (m)	To (m)	Interval	Unit	Coments
0.00	152.40	152.40	DMI	bedrock from collar

SAMPLES	
Numbers:	C385550 - C385554
Total:	5
Date sent:	July 23, 2007

COMMENTS

PROPERTY: PE **HOLE:** PE07-06

LITHOLOGY										ALT.			MINERALS				SAMPLES								Blocks			GEOTECHNICAL							JOINTS				
Struct.																												REC		RQD									
Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:				Ca	Sx	Fe		From (m)	To (m)	Interval (m)	Sample	Ni (ppm)	Zn (ppm)	Mo (ppm)	From (m)	To (m)	Intvl. (m)	(m)	Percent	(m)	Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling
BD	85	0.00	152.40	152.40	SHL		Fx	BK	0 - 12.97 m Finely laminar, highly fissile + friable grey-black shale with extensive limonite on most fracture surfaces; uncommon Fe-oxyhydroxide/Fe-clay-rich nodules up 10 1 - 2 cm diam.	s					+									0.00	6.10	6.10	1.20	20	0.00	0	MW	VW	30	M	2	2	Li
																								6.10	9.14	3.04	1.02	34	0.00	0	MW	VW	30	M	3	3	Li
																								9.14	12.19	3.05	2.37	78	0.10	3.3	MW	VW	30	M	3	3	Li
																								12.19	15.24	3.05	1.27	42	0.00	0	MW	VW	30	M	3	3	Li
BD	80				SHL		Fx	BK	12.97 - 39.60 m Same BK-GY SHL as in previous interval, but slightly more competent and less fractured; common, vfg rusty orange-brown, lenses, beds and nodules ranging from 3 mm to almost 10 cm thick, with a concentric, layered colour zonation (margin: lighter yellow-brown 0.5 cm thick; core: darker orange-brown (4 cm diam.). Uncommonly, these nodules have jet-black, earthy cores that are soft and vfg. About 40% of the nodules have jet-black, organic-rich, thin, wavy laminar stringers within a few cm of said nodules. Rare, vfg flecks of Sx (Py) occur in this interval. Uncommon, finely laminar, low angle X-bedded fg SS beds up to 10 cm thick are found in the last few metres of this interval, having generally sharp erosional contacts at bases of beds.	s				+	+							15.24	18.28	3.04	2.92	96	0.91	30	MW	VW	30	M	3	3	Li
																								18.28	21.35	3.07	1.79	58	0.00	0	MW	VW	30	M	3	3	Li
																								21.35	24.38	3.03	2.98	98	0.45	15	MW	VW	30	M	3	3	Li
																								24.38	27.43	3.05	3.01	99	0.22	7.2	MW	VW	30	M	3	3	Li
																								27.43	30.48	3.05	3.02	99	0.78	26	MW	VW	30	M	3	3	Li
																								30.48	33.53	3.05	2.86	94	1.46	48	MW	VW	30	M	3	3	Li
																								33.53	36.58	3.05	3.06	100	1.17	38	SW	VW	30	M	3	3	Li
																								36.58	39.62	3.04	3.00	99	1.06	35	SW	VW	30	M	3	3	Li
BD	85				SHL		LA	BK	39.60 - 54.84 m Poor overall recovery in this interval, and the black-grey shale beds are very soft + clayey in texture, crumbling with light-to-medium hand pressure. Interbedded with black shale are thinly laminar fg grey SS beds up to 10 cm thick, which beds become more common towards the end of the interval. Reddish-orange and dark, rusty-red Fe-oxides and oxyhydroxides are ubiquitous coating on fracture surfaces. Rare blebs of disseminated Sx (Py) that are commonly altered (to bornite?). No oxidized-Fe-rich nodules in this interval.	ex				+	+							39.62	42.67	3.05	2.42	79	0.31	10	SW	VW	30	M	3	3	Li
																								42.67	45.72	3.05	2.70	89	0.73	24	SW	VW	30	M	3	3	Li
																								45.72	48.77	3.05	2.81	92	0.14	4.6	SW	VW	30	M	3	3	Li
																								48.77	51.82	3.05	2.86	94	1.50	49	SW	VW	30	M	3	3	Li
																								51.82	54.87	3.05	3.08	101	0.37	12	SW	W	30	M	3	3	Li
BD	85				SHL		LA	BK	54.84 - 89.20 m Thick beds (5 - 15 m) of finely laminar, black-grey, clayey shale, very friable both parallel and perpendicular to BD, earthy texture and smell and small, poorly lithified; SHL interbedded with fg silty SS beds (5 cm - 100 cm thick) that exhibit mild bioturbation and wavy-laminar-to-cross-bedding with erosional basal contacts; rare, fg Sx laminae and lenses; almost no limonite or Fe-staining in the interval; SS beds more common and thicker towards base of interval. This interval ends in fairly laminar black	m				+								54.87	57.91	3.04	2.40	79	0.57	19	SW	W	30	M	3	3	Li
																								57.91	60.93	3.02	2.42	80	0.37	12	SW	W	30	M	3	3	Li
																								60.93	64.01	3.08	2.38	77	0.25	8.1	SW	W	30	M	3	3	Li
																								64.01	67.06	3.05	2.20	72	0.53	17	SW	W	30	M	3	3	Li

PROPERTY: PE **HOLE:** PE07-06

Struct. Type	Struct. Attitude	LITHOLOGY From (m)	LITHOLOGY To (m)	LITHOLOGY Interval (m)	LITHOLOGY Type	LITHOLOGY Unit	LITHOLOGY Texture	LITHOLOGY Modifier	Notes:	ALT.			MINERALS Ca	MINERALS Sx	MINERALS Fe		SAMPLES From (m)	SAMPLES To (m)	SAMPLES Interval (m)	SAMPLES Sample	SAMPLES Ni (ppm)	SAMPLES Zn (ppm)	SAMPLES Mo (ppm)	Blocks From (m)	Blocks To (m)	Blocks Intvl. (m)	GEOTECHNICAL REC (m)	GEOTECHNICAL REC Percent	GEOTECHNICAL RQD (m)	GEOTECHNICAL RQD Percent	GEOTECHNICAL Weathering	GEOTECHNICAL Hardness	JOINTS Frequency	JOINTS Attitude	JOINTS Shape	JOINTS Roughness	JOINTS Infilling
									shale.																													
																								67.06	70.10	3.04	2.10	69	0.27	8.9	SW	W	30	M	3	3	Li
																								70.10	73.15	3.05	2.88	94	0.00	0	SW	W	30	M	3	3	Li
																								73.15	76.20	3.05	2.06	68	0.37	12	SW	W	30	M	3	3	Li
																								76.20	79.25	3.05	2.59	85	0.38	12	SW	W	30	M	3	3	Li
																								79.25	82.30	3.05	2.96	97	0.79	26	SW	W	30	M	3	3	Li
																								82.30	85.34	3.04	2.61	86	1.38	45	SW	W	30	M	3	3	Li
																								85.34	88.39	3.05	2.81	92	0.80	26	SW	W	30	M	3	3	Li
BD	85				SHL		LA	BK	89.20 - 128.47 m Gradational contact over 20 cm into Py-rich black shale, interbedded with 1 m thick fg silty SS near top contact; black shale becomes harder and more competent, with visible, fg, disseminated Sx (Py), and common pyrite lenses/nodules and laminae/beds (up to 2 cm thick); Sx banding is generally parallel to BD and is more common at the top of the interval (distinguishing feature between this interval and the one above). Slight increase in grainsize with depth; common, thin laminae and beds of fg grey SS (silty) show rare, low-angle X-bedding. Black shale darkens slightly; interval ends with thick fg SS beds near last 20 m of interval.	w			+														88.39	91.44	3.05	2.99	98	0.30	9.8	SW	W	30	M	3	3	Li
																								91.44	94.49	3.05	2.93	96	0.14	4.6	SW	W	30	M	2	3	Li
																								94.49	97.54	3.05	2.85	93	0.37	12	FR	MS	10	75	2	2	Gyp
																								97.54	100.58	3.04	2.94	97	0.55	18	FR	MS	15	75	2	2	Gyp
																								100.58	103.63	3.05	2.87	94	0.33	11	FR	MS	20	15	2	2	Gyp
																	102.21	102.51	0.30	C385550	95.1	1510	16.25	103.63	106.68	3.05	2.92	96	0.22	7.2	FR	W	14	15	2	2	Gyp
																	102.51	102.81	0.30	C385551	114.0	1885	16.85														
																	102.81	102.84	0.03	C385552	112.5	94	4.46														
																	102.84	103.14	0.30	C385553	104.0	537	10.20	106.68	109.73	3.05	2.56	84	0.30	9.8	FR	W	11	10	2	2	Gyp
																	103.14	103.44	0.30	C385554	211.0	223	22.80														
																								109.73	112.78	3.05	2.99	98	0.50	16	FR	MS	8	80	2	2	Gyp
																								112.78	115.83	3.05	2.90	95	0.10	3.3	FR	MS	20	75	1	2	Gyp
																								115.83	118.87	3.04	3.12	103	0.11	3.7	FR	MS	15	75	1	2	Gyp
																								118.87	121.92	3.05	2.69	88	0.00	0	FR	MS	20	5	1	2	Gyp
																								121.92	124.97	3.05	3.02	99	0.10	3.3	FR	MS	15	70	1	2	Gyp
																								124.97	128.17	3.20	2.92	91	0.19	5.9	FR	MS	12	5	1	2	Gyp

PROPERTY: PE **HOLE:** PE07-06

Struct.		LITHOLOGY								ALT.			MINERALS				SAMPLES							Blocks			GEOTECHNICAL						JOINTS				
																											REC		RQD									
Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:				Ca	Sx	Fe		From (m)	To (m)	Interval (m)	Sample	Ni (ppm)	Zn (ppm)	Mo (ppm)	From (m)	To (m)	Intvl. (m)	(m)	Percent	(m)	Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling
BD	80				SS		LA	GY	128.47 - 129.75 m Finely laminar, grey, carbonate-rich, fg SS (fining downward trend overall with local fining upwards cycles within individual beds), moderately finely bedded with rare, high-angle calcite veinlets (50 degrees tca, up to 1 mm wise); BD angle changes to 75 degrees near middle of interval, then back to 80 degrees at the base of the silty SS (no Sx present in SS) Interval fizzes with HCl	w			+												128.01	131.06	3.05	2.95	97	1.79	59	FR	MS	3	5	1	2	Gyp
BD	80				SHL		LA	BK	129.75 - 134.52 m same as BK SHL above, in interval 89.20 - 128.47 m	w				+																							
																								131.06	134.11	3.05	2.88	94	0.93	30	FR	MS	9	85	1	2	Gyp
BD	75				SS		LA	GY	134.52 - 135.32 m Same SS as in interval 128.47 - 129.75 m, except that in the current interval, the SS is slightly finer-grained and more uniform in grainsize distribution; no Sx bands, and interval fizzes with HCl.	w			+											134.11	137.16	3.05	2.77	91	0.87	29	FR	MS	13	80	1	2	Gyp
BD	80				SHL		LA	BK	135.32 - 149.17 m Same BK SHL as in interval 129.75 - 134.52 m, except Py bands are slightly narrower (2 - 4 mm); slight colour change to darker grey-black than SHL in previous intervals.(No fizzing with HCl)	w				+																									
																								137.16	140.21	3.05	2.91	95	1.66	54	FR	MS	4	80	1	2	Gyp
																								140.21	143.26	3.05	2.90	95	1.28	42	FR	MS	10	5	1	2	Gyp
																								143.26	146.30	3.04	3.03	100	1.33	44	FR	MS	12	85	1	2	Gyp
																								146.30	149.30	3.00	2.81	94	0.15	5	FR	MS	9	5	1	2	Gyp
BD	80				SS		LA	GY	SS beds above, except that the grainsize is slightly smaller in the SS in the current interval (vfg SS to sandy silt). Fizzes with HCl.	w			+											149.35	152.40	3.05	0.47	15	0.20	6.6	FR	MS	2	85	1	2	Cb
		152.40							END OF HOLE																													