NiMo PROJECT

PROPERTY: EL

HOLE: EL07-08

Easting	Northing	Elev.	Depth (m)
460487	7305083	317	131.07

Contractor: North Star
Drill: MD-001

SURVEY							
Depth (m)	Azimuth	Dip	Method	Depth (m)	Azimuth	Dip	Method
collar	030°	-70°	compass				

Core size: BTW
Casing depth: 10.67 (m) out

Drilling dates: June 18 to 21, 2007

Logged by: D. MacDonald

Target: NiMo horizon west of EL07-05

SUMMARY				
From (m)	To (m)	Interval	Unit	Comments
0.00	11.74	11.74	OVB	
11.74	91.30	79.56	DME	
91.30	91.32	0.02	NiMo	Intersection found during splitting
91.32	131.07	39.75	OSR	

SAMPLES	
Numbers:	C385351 -C385374
	C385403
Total:	25
Date sent:	July 7, 2007

COMMENTS

NiMo horizon orriginaly mistaken at 88.10 to 88.17 m, sulphide banding. Actual horizon found durring splitting at 91.30 m, NiMo sample taken from within existing sample interval C385362

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Struct. Type	Struct. Attitude	LITHOLOGY From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:	ALT.	MINERALS Ca	Sx	Qz	SAMPLES From (m)	To (m)	Interval (m)	Sample	Ni (ppm)	Zn (ppm)	Mo (ppm)	Blocks From (m)	To (m)	Intvl. (m)	GEOTECHNICAL REC (m)	REC Percent	RQD (m)	RQD Percent	Weathering	Hardness	JOINTS Frequency	Attitude	Shape	Roughness	Infilling
		0.00	11.74	11.74	OVB																												
BD	80	11.74	88.10	76.36	SHL	DME	LA	BK	Highly fissile black shale with thin laminae;	m	+		+																				
VT	80								localized quartz veinlets < 1mm diam. (6											11.74	12.19	0.45	0.45	100	0.00	0	SW	MS	10	30	3	3	Qz
									VT/m); core becomes more competent with											12.19	12.80	0.61	0.30	49	0.00	0	SW	MS	10	10	3	3	Qz
									depth; rare calcite veinlets almost parallel to											12.80	15.24	2.44	1.54	63	0.88	36	FR	MS	5	15	2	2	Qz
									core axis (VT 5)											15.24	18.28	3.04	2.13	70	0.45	15	FR	MS	4	10	3	3	Qz
																					18.28	21.35	3.07	2.47	80	1.70	55	FR	MS	3	5	2	2	Qz
																					21.35	24.38	3.03	2.70	89	0.86	28	FR	MS	3	10	3	3	Qz
BD	85				SHL		LA	BK	22.9 - 23.2 Moderately thick, flat laminar beds (10 cm max.) of grey limestone/calcareous shale interbedded with black shale	f																							
					SHL		LA	BK	23.53 - 37.9 Black shale decreasing in	w		+	+																			
									fissility, decreasing frequency of limestone/											24.38	27.43	3.05	2.68	88	1.41	46	FR	MS	2	10	3	3	Qz
									calcareous shale; rare quartz veinlets < 1mm																								
									diam. Roughly parallel to BD; shale becomes																								
									darker with thin sulfide (Py-rich) laminae											27.43	30.48	3.05	2.83	93	2.55	84	FR	MS	1	10	2	3	Qz
									(2mm diam); no fizzing with HCl, but exudes																								
									moderately strong H2S odour with HCl.											30.48	33.53	3.05	3.06	100	2.45	80	FR	MS	2	10	3	2	Qz
																					33.53	36.58	3.05	2.85	93	2.03	67	FR	MS	1	10	3	2	Qz
																					36.58	39.62	3.04	2.88	95	1.01	33	FR	MS	10	10	3	3	Qz
BD	80				SHL		LS	BK	37.8 - 37.81 Isolated lens of pyrite 3 mm x 10 mm			+																				
BD	85				SHL		LA	BK	37.9 - 37.92 Calcite-rich lens 2 cm thick, yields strong H2S odour (sulfides inferred)		+	+																					
BD	85				SHL		LS	BK	37.92 - 42.39 Black shale continued	w										39.62	42.67	3.05	2.97	97	1.55	51	FR	MS	3	5	3	5	Qz
BD	85				SHL		LS	BK	42.39 - 42.42 Calcite-rich lens 2 cm thick, yields strong H2S odour, rare sulfide-rich laminae over next 5 cm	w	+	+								42.67	45.72	3.05	2.67	88	0.62	20	FR	MS	10	5	3	2	Qz
BD	85				SHL		LA	BK	42.5 - 47.4 Black shale becomes less competent over next 3.5 m with rare, high-angle quartz veinlets of quartz; shale is very fissile and shows common 'peacock' alteration on broken surfaces (possible bornite), yields strong H2S odour with HCl	w		+	+																		
																					45.72	48.77	3.05	2.87	94	1.21	40	FR	MS	2	10	5	3	Qz
VT	5				SHL		LA	BK	47.4 - 49.6 High-angle quartz veinlets in laminar black shale; veinlets occur with at a frequency of 1 VT/50 cm.				+																			
BD	80				SHL		LA	BK	49.6 - 52.9 Black shale continued	w										48.77	51.82	3.05	2.95	97	2.06	68	FR	MS	2	10	5	3	Qz
																					51.82	54.87	3.05	2.85	93	1.33	44	FR	MS	1	10	5	3	Qz

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Struct.		LITHOLOGY								ALT.			MINERALS				SAMPLES							Blocks			GEOTECHNICAL						JOINTS				
Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:				Ca	Sx	Qz		From (m)	To (m)	Interval (m)	Sample	Ni (ppm)	Zn (ppm)	Mo (ppm)	From (m)	To (m)	Intvl. (m)	REC (m)	REC Percent	RQD (m)	RQD Percent	Weathering	Hardness	Frequency	Attitude	Shape	Roughness	Infilling
SH	var				SHL		LA	BK	52.90 - 53.28 Zone of slightly sheared/tectonized black shale with common, thin quartz veinlets at both high and low angle to BD, rare infilling of small fractures by calcite	m			+		+																							
Bx					SHL		BX	BK	53.28 - 53.37, and again at 54.12 - 54.17 Intensely brecciated black shale with open fractures up to 1 cm across, with angular shale fragments projecting into void space; fractures partially filled with sulfide (Py?) + fibrous, vfg dusky-green mineral growing perpendicular to direction of dilation	m			+	+	+																							
BD	85				SHL		LA	BK	54.17 - 54.30 Black shale continued															54.87	57.91	3.04	3.07	101	2.07	68	FR	MS	2	10	5	3	Qz
VT	0/90				SHL		LA	BK	common veinlets of quartz and flecks of sulfide	w				+	+																						
																								57.91	60.93	3.02	2.99	99	1.80	60	FR	MS	2	10	3	2	Qz
																								60.93	64.01	3.08	3.04	99	2.20	71	FR	S	2	20	3	2	Qz
VT	90				SHL		LA	BK	61.38 - 67.00 Fissile black shale increases in overall hardness (silicification); rare calcite-rich laminae exude H_2S odour with HCl	w			+	+	+																						
																								64.01	67.06	3.05	2.98	98	1.98	65	FR	MS	2	15	3	2	Qz
VT	5				SHL		LA	BK	67.00 - 76.45 Laminar, flat-bedded black shale with common flecks of and small lenses (1mm x 4mm) of sulfide; black shale commonly interbedded with calcareous black shale, where calcareous beds are up to 15 cm thick; rare high-angle quartz veinlet	w			+	+	+									67.06	70.10	3.04	3.00	99	1.47	48	FR	S	3	10	5	3	Qz
																								70.10	73.15	3.05	2.98	98	1.92	63	FR	MS	3	10	5	3	Qz
																								73.15	76.20	3.05	3.01	99	0.91	30	FR	MS	3	15	3	3	Qz
Bx					SHL		BX	BK	quartz veinlets; in brecciated zones (10cm - 80 cm thick) shale is v. strongly weathered, and competent shale increases in calcite content	s			+	+	+		77.48	78.98	1.50	C385351	173.0	1175	60.20	76.20	79.25	3.05	2.87	94	0.37	12	FR	MS	10	15	5	4	Qz
																	78.98	80.48	1.50	C385352	140.0	851	47.00														
																	80.48	81.98	1.50	C385353	181.5	590	52.60														
																	81.98	83.48	1.50	C385354	176.0	469	67.30	79.25	82.30	3.05	2.73	90	0.78	26	FR	MS	10	10	3	3	Qz
																	83.48	84.48	1.00	C385355	173.5	1175	49.50														
																	84.48	85.48	1.00	C385356	175.5	1520	47.90														
																	85.48	86.48	1.00	C385357	183.5	896	52.90	82.30	85.34	3.04	2.67										
																	86.48	86.98	0.50	C385358	176.0	627	56.40														
																	86.98	87.48	0.50	C385359	158.5	535	53.10														
																	87.48	87.98	0.50	C385360	130.0	266	44.80	85.34	88.39	3.05	2.75	90	0.69	23	FR	MS	10	25	3	5	Qz
					SHL		LA	BK	86.85 - 88.10 Black shale continues								87.98	88.32	0.34	C385362	180.5	391	63.20														
BD	85	88.10	88.17	0.07	SHL		LA	BK	Possible NiMo contact zone, I.e., shales after this point are calcareous with discrete, lighter-coloured beds up to several cm thick.	w							88.32	88.82	0.50	C385363	138.0	280	53.30														
BD	85	88.17	89.92	1.75	SHL	DME	LA	BK	Black calcareous shale thinly laminated, with both disseminated sulfide and discrete laminae/lenses of sulfide (2 mm thick)	w			+	+			88.82	89.32	0.50	C385364	162.5	584	46.20	88.39	91.44	3.05	2.87	94	1.32	43	FR	MS	5	20	3	5	Cb
Bx		89.92	90.52	0.60	LST	DME	ND	GY	Limestone ball, heavily brecciated and with numerous calcite veinlets	w			+				89.32	89.92	0.60	C385365	222.0	678	62.90														
Bx		90.52	91.30	0.78	SHL	DME	LA	BK	Calcareous black shale with moderate amount of bioturbation and rare-to-common calcite veinlets and disseminated sulfides; several zones of strongly brecciated calcareous shale and interbedded limestone - breccia has angular fragments of shale/limestone in calcite rich matrix; some pinching and swelling of light grey limestone	m			+	+			89.92	90.46	0.54	C385366	33.3	132	8.96														
																	90.46	91.46	1.00	C385367	227.0	602	61.80	91.44	94.49	3.05	2.92	96	1.02	33	FR	MS	10	20	3	2	Go
		91.30	91.32	0.02	SHL	NiMo	LA	BK									91.46	92.46	1.00	C385368	246.0	755	56.90														
		91.32	110.00	18.68	SHL	OSR	LA	BK									92.46	93.46	1.00	C385369	278.0	598	48.60														
																	93.46	94.96	1.50	C385370	307.0	1230	43.50	94.49	97.54	3.05	2.80	92	0.00	0	FR	MS	20	15	3	3	Go
																	94.96	96.46	1.50	C385371	337.0	1620	46.40														
																	96.46	97.96	1.50	C385372	324.0	1520	49.70														

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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:				Ca	Sx	Qz		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			
									beds up to several cm thick.								97.96	99.46	1.50	C385374	157.5	434	41.30	97.54	100.58	3.04	2.97	98	1.81	60	FR	VS	3	5	5	3	Go		
																	BLANK			C385361	2.2	17	0.56																
																	BLANK			C385373	3.6	23	0.52	100.58	103.63	3.05	2.85	93	1.28	42	FR	S	10	10	5	3	Cb		
																								103.63	106.68	3.05	3.00	98	2.26	74	FR	S	1	10	3	3	Cb		
																	91.30	91.32	0.02	C385403	4.26%	1.01%	2720																
																	* sample taken from within C385367							106.68	109.73	3.05	3.07	101	1.81	59	FR	S	2	10	5	4	Cb		
																								109.73	112.78	3.05	2.97	97	2.07	68	FR	S	2	5	5	3	Cb		
BD	85	110.00	114.48	4.48	SHL		LA	BK	(beds and lenses) and calcareous black shale, ending with breccia of angular limestone fragments supported by a calcite matrix	w			+		+								112.78	115.83	3.05	3.04	100	2.73	90	FR	S	1	30	2	2	Cb		
BD	80	114.48	131.17	16.69	SHL		LA	BK	114.48 - 131.17 Calcareous and carbonaceous black shale that is thinly bedded with only rare calcite veinlets mostly parallel to BD; overall v. uniform texture; fizzes with HCl and exudes strong H2S odour; sulfides generally cryptic and rarely in narrow (<1 mm diam) bands parallel to BD	w			+		+								115.83	118.87	3.04	2.98	98	2.00	66	FR	MS	3	30	5	3	Cb		
																								118.87	121.92	3.05	3.01	99	2.61	86	FR	MS	1	15	3	2	Cb		
																								121.92	124.97	3.05	2.98	98	2.98	98	FR	MS	0						
																								124.97	128.17	3.20	2.99	93	2.81	88	FR	MS	1	30	3	3	Cb		
																								128.01	131.17	3.16	3.09	98	2.90	92	FR	MS	1	30	2	3	Cb		
		131.17							END OF HOLE																															