NiMo PROJECT

PROPERTY: EL

HOLE: EL07-19

Easting	Northing	Elev.	Depth (m)
468107	7301784		182.88

Contractor: North Star
Drill: MD-001

SURVEY							
Depth (m)	Azimuth	Dip	Method	Depth (m)	Azimuth	Dip	Method
collar	050°	-70°	compass				

Core size: BTW
Casing depth: 4.57 (m) out

Drilling dates: July 11 to 13, 2007

Logged by: J. Lane

Target: NiMo horizon east of EL07-17

SUMMARY				
From (m)	To (m)	Interval	Unit	Comments
0.00	4.57	4.57	OVB	
4.57	83.36	78.79	DME	
83.36	83.37	0.01	NiMo	
83.37	182.88	99.51	OSR	

SAMPLES	
Numbers:	C385540 - C385549
Total:	10
Date sent:	July 23, 2007

COMMENTS

PROPERTY: EL **HOLE:** EL07-19

Struct.		LITHOLOGY								ALT.			MINERALS				SAMPLES							Blocks			GEOTECHNICAL						JOINTS				
																											REC		RQD									
Type	Attitude	From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:	car	lim		py				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
		0.00	4.57	4.57					overburden																											
BD	80	4.57	21.84	17.27	SHL	DME	FG	BK	Core is black, medium soft, and broken into many .5-2cm tick pieces. Fractures and bedding are coated in yellow limonite (quite thick mm's thick in places).		m													4.57	6.10	1.53	0.60	39	0.00	0	SW	MS	30	10	3	2	Li
FX	5																																				
																								6.10	9.14	3.04	2.90	95	0.00	0	SW	MS	30	90	2	2	
																																					Li
																								9.14	12.19	3.05	2.95	97	0.00	0	SW	MS	30	90	2	2	Li
																								12.19	15.24	3.05	2.70	89	0.00	0	SW	W	30	15	2	2	Li
																								15.24	18.29	3.05	3.01	99	0.00	0	SW	MS	30	90	2	2	Li
																								18.29	21.34	3.05	2.81	92	0.00	0	SW	MS	30	10	3	2	Li
		21.84	22.59	0.75	CBR	DME	FG	GY	Medium grey coloured quite hard carbonate rich rock	st														21.34	24.38	3.04	2.99	98	0.49	16	SW	MS	30	5	3	2	Li
		22.59	32.68	10.09	SHL	DME	FG	BK	Similar shale as above		m													24.38	27.43	3.05	3.02	99	0.11	4	SW	MS	30	90	2	2	Li
																								27.43	30.48	3.05	3.10	102	0.00	0	SW	MS	30	90	2	2	Li
																								30.48	33.53	3.05	2.83	93	0.31	10	SW	MS	30	90	3	2	Li/Cb
		32.68	33.54	0.86					carbonate rich rock, medium grey in colour with white carbonate vein running ~ 70 deg to ca, also see very bright orange powder on fractures which does not fizz with acid.	I																													
		33.54	36.01	2.47	SHL	DME	FG	BK	Similar shale as above, although it becomes quite soft.		m													33.53	36.58	3.05	3.11	102	0.20	7	SW	W	30	5	3	2	Li
		36.01	36.17	0.16	CBR	DME	FG	GY	Medium grey coloured, medium hard carbonate rock	st														36.58	39.62	3.04	3.00	99	0.67	22	SW	W	30	5	1	2	Li
		36.17	40.13	3.96	SHL	DME	FG	BK	Similar shale as above		m													39.62	42.67	3.05	2.98	98	0.38	12	SW	W	30	90	1	2	Li
		40.13	40.42	0.29	CBR	DME	FG	GY	Medium grey coloured, medium hard carbonate rock	st																											
BD	80	40.42	46.40	5.98	SHL	DME	FG	BK	Similar shale as above		m																										
FX	5																							42.67	45.72	3.05	2.60	85	0.00	0	SW	W	30	90	2	2	Li
																								45.72	48.77	3.05	3.00	98	0.00	0	SW	VW	30	90	2	2	Li
		46.40	46.63	0.23	CBR	DME	FG	GY	Medium grey coloured, medium hard carbonate rock	st																											
BD	80	46.63	51.82	5.19	SHL	DME	FG	BK	Similar shale as above																											
FX	5																							48.77	51.82	3.05	3.03	99	0.00	0	SW	VW	30	90	2	2	Li
BD	80	51.82	54.76	2.94	SHL	DME	FG	BK	core is interlayered with very dark black quite		m													51.82	54.06	2.24	3.03	135	0.00	0	SW	VW	30	90	2	2	Li

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Struct. Type	Struct. Attitude	LITHOLOGY From (m)	To (m)	Interval (m)	Type	Unit	Texture	Modifier	Notes:	ALT. car	ALT. lim	MINERALS py				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
									soft shale with dark grey medium hard shale, the layers generally being 2-5cm thick.																												
BD	80	54.76	60.99	6.23	SHL	DME	FG	GY	similar dark grey- black shale that hosted the carbonate rich sections above.		m												54.06	57.91	3.85	2.99	78	0.00	0	SW	W	30	90	2	2	Li
																							57.91	60.96	3.05	3.01	99	0.00	0	SW	MS	25	90	2	2	Li
		60.99	61.26	0.27	CBR	DME	FG	GY	carbonate rock with tention gashes filled with thin carbonate stringers running ~60 deg to ca.	st	m												60.96	64.01	3.05	3.05	100	0.54	18	FR	MS	12	85	2	2	gyp
BD	80	61.26	68.16	6.90	SHL	DME	FG	GY	similar shale as above becoming slightly harder and more compitent at ~ 64.00m		m																									
																							64.01	67.06	3.05	3.01	99	0.22	7	FR	MS	13	85	2	2	gyp
																							67.06	70.10	3.04	3.10	102	1.26	41	FR	MS	10	85	2	2	gyp
		68.16	68.30	0.14	CBR	DME	FG	GY	similar carbonate rock as above sections.	st																									
BD	80	68.30	76.24	7.94	SHL	DME	FG	GY	similar shale as above. Start to see a pyrite lense 1cm thick at 72.26. In general the shale is quite uniform black, medium hard, with very little visible sulfides and occasionally contains a thin carbonate stringer.		m	tr																								
		76.24	76.69	0.45	CBR	DME	FG	GY	similar carbonate rock as above.	st													70.10	73.15	3.05	2.88	94	0.98	32	FR	MS	8	85	2	2	gyp
BD	80	76.69	83.36	6.67	SHL	DME	FG	GY	similar shale as above.		m																									
																78.70	80.35	1.65	C385540	187.0	638	68.2	73.15	76.20	3.05	2.99	98	0.90	30	FR	MS	8	85	2	2	gyp
																80.35	81.85	1.50	C385541	173.0	1160	46.8														
																81.85	82.86	1.01	C385542	171.0	463	54.2	76.20	79.25	3.05	3.18	104	1.61	53	FR	MS	7	5	2	2	gyp
																82.86	83.36	0.50	C385543	158.0	311	44.8														
		83.36	83.37	0.01	MSX	NiMo			1cm banded slightly bioturbated sulfide layer (NiMo). Upper and lower contacts are quite sharp. NOTE: not as bright looking as it has been in other holes.							83.36	83.37	0.01	C385544	4.83%	1.71%	2340															
BD	80	83.37	84.27	0.90	SHL	OSR	FG	BK	black shale not obviously calcareous, medium soft containing 2-3 cm thick barite nodules (nodullar shale) however the nodules are quite spaced out every 20-30 cm, there is also very little visible sulfides including pyrite.							83.37	83.87	0.50	C385546	334.0	922	86.4	79.25	82.30	3.05	2.96	97	0.70	23	FR	MS	10	5	2	2	gyp
		84.27	99.68	15.41	SHL	OSR	FG	GY	calcareous shale dark grey in colour containing the occasional barite nodule and the occasional stringer vein generally running parallel to bedding, core is medium hard. There is a carbonate breccia from 92.65-92.70 that is not typical of a limestone ball but thatcontains medium grey calcareous slightly angluar clasts bordered by white carbonate. Down section the grey barite becomes more apparent around 95.00, the core is very heavy with up to 5cm thick barite sections.	l		tr				83.87	84.87	1.00	C385547	334.0	762	47.5														
																84.87	86.37	1.50	C385548	131.5	275	30.2														
																86.37	87.78	1.41	C385549	168.5	363	40.6	82.30	85.34	3.04	3.00	99	1.13	37	FR	MS	8	85	2	2	gyp
																BLANK			C385545	1.3	17	0.36														
																							85.34	88.39	3.05	3.08	101	1.60	52	FR	MS	3	85	2	2	C
																							88.39	91.44	3.05	2.97	97	2.08	68	FR	MS	3	10	2	2	Cb
																							91.44	94.49	3.05	3.07	101	1.44	47	FR	MS	3	80	2	2	Cb
																							94.49	97.45	2.96	3.10	105	3.06	103	FR	MS	2	85	2	2	Cb
																							97.45	100.58	3.13	2.97	95	2.68	86	FR	MS	2	85	2	2	Cb

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Struct. Type	Struct. Attitude	LITHOLOGY From (m)	LITHOLOGY To (m)	LITHOLOGY Interval (m)	LITHOLOGY Type	LITHOLOGY Unit	LITHOLOGY Texture	LITHOLOGY Modifier	Notes:	ALT. car	ALT. lim	ALT.	MINERALS py	MINERALS	MINERALS	MINERALS	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
BD	80	99.68	116.19	16.51	SHL	OSR	FG	GY	Nodular shale with nodules becoming oblong-rounded structures as though they have been stretched giving it a gneiss like appearance, these appear around 122.29, and 123.71-125.64. Some medium grainedrocks occur from 123.80-123.95 showing a fining up sequence, this also occurs from 124.06-124.25. These sections are light grey in colour and are very hard (harder than the surrounding rocks). Crinoids appear in the core at 129.17-130.85 varying in density but hosted in a very hard light grey calareous carbonate rich shale with the occasional carbonate stringer vein <1mm-3mm thick running in general parallel to bedding, core has become very hard and may be recryatallized. From 109.75-1110.23 there is a light grey section of very heavy carbonaceous rock (barite?)	I																															
FX	5																							100.58	103.62	3.04	3.04	100	2.40	79	FR	S	3	85	1	1	Cb
																								103.62	106.68	3.06	3.07	100	2.73	89	FR	S	4	85	1	1	Cb
																								106.68	109.73	3.05	3.07	101	2.40	79	FR	MS	4	80	1	1	Cb
																								109.73	112.77	3.04	3.04	100	2.61	86	FR	MS	3	85	1	1	Cb
																								112.77	115.82	3.05	3.08	101	2.77	91	FR	MS	1	85	1	1	Cb
																								115.82	118.87	3.05	3.10	102	2.14	70	FR	MS	2	5	2	2	Cb
BD	80	116.19	139.65	23.46	SHL	OSR	FG	GY		I																												
																								118.87	121.92	3.05	3.06	100	2.51	82	FR	S	2	70	1	1	Cb
																								121.92	124.79	2.87	3.04	106	2.96	103	FR	S	1	85	1	1	Cb
																								124.79	128.02	3.23	3.07	95	2.63	81	FR	S	2	5	1	1	Cb
																								128.02	131.06	3.04	3.17	104	2.35	77	FR	MS	4	10	1	1	Cb
																								131.06	134.11	3.05	3.05	100	2.83	93	FR	MS	1	20	3	1	Cb
																								134.11	137.11	3.00	2.98	99	2.28	76	FR	MS	1	10	1	1	Cb
																								137.11	140.21	3.10	2.86	92	2.70	87	FR	MS	1	40	1	1	Cb
		139.65	182.88	43.23	SHL	OSR	FG	bk	core is very compitent, medium hard, intensely chalcareous, black with the occasional lighter grey 2-3cm layer- however these decrease in abundance down hole. These is next to no sulfides in the core and only trace carbonate veins occur rarely	I																										
																								140.21	143.26	3.05	3.09	101	2.40	79	FR	MS	2	25	3	1	Cb
																								143.26	146.30	3.04	3.05	100	2.56	84	FR	MS	1	25	1	1	Cb
																								146.30	149.35	3.05	2.93	96	2.57	84	FR	MS	1	30	1	1	Cb
																								149.35	152.40	3.05	2.95	97	2.19	72	FR	MS	2	45	1	1	Cb
																								152.40	155.53	3.13	3.20	102	2.71	87	FR	MS	1	80	1	1	Cb
																								155.53	158.50	2.97	2.99	101	1.80	61	FR	MS	3	40	3	1	Cb
																								158.50	161.54	3.04	3.08	101	2.63	87	FR	MS	1	35	3	1	Cb
																								161.54	164.60	3.06	3.03	99	2.92	95	FR	MS	1	85	1	1	Cb

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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:	car	lim		py				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	
																								164.60	167.64	3.04	2.83	93	2.14	70	FR	MS	1	15	2	1	Cb
																								167.64	170.69	3.05	3.04	100	3.00	98	FR	MS	1	85	2	1	Cb
																								170.69	173.74	3.05	3.03	99	2.30	75	FR	MS	1	30	2	1	Cb
																								173.74	176.78	3.04	3.09	102	2.80	92	FR	MS	1	40	1	1	Cb
																								176.78	179.83	3.05	3.06	100	2.33	76	FR	MS	2	40	1	1	Cb
																								179.83	182.88	3.05	3.10	102	2.95	97	FR	MS	1	43	1	1	Cb
		182.88							END OF HOLE																												