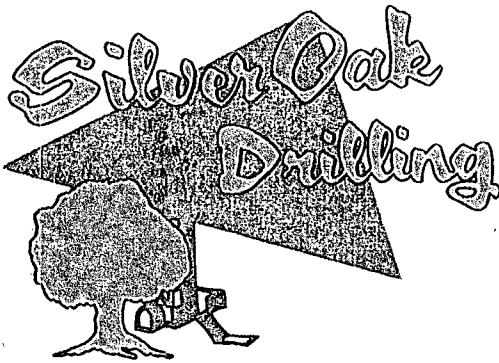


PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

August 13, 2012

Mack Energy Corporation
PO Box 960
Artesia, NM 88211-0960

RE: Knight Federal Com #1
330' FSL & 660' FWL
Sec. 3, T23S, R23E
Eddy County, New Mexico

15-40305

Dear Sir,

The attached is the Deviation Survey for the above captioned well.

Very truly yours,

Chris Graham
Drilling Superintendent

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 13th day of August, 2012.

Notary Public



Knight Federal Com #1

Date	Depth	Dev	Dir	TVD
7/11/2012	327	0.6		
7/15/2012	537	0.6		
7/15/2012	810	0.7		
7/16/2012	1064	0.7		
7/16/2012	1349	1.0		
7/16/2012	1505	0.3		
7/18/2012	1719	0.8		
7/19/2012	2069	0.4		
7/19/2012	2386	0.2		
7/19/2012	2703	0.7		
7/20/2012	2989	0.2		
7/20/2012	3307	0.1		
7/20/2012	3592	0.6		
7/21/2012	3910	0.1		
7/21/2012	4030	0.4		
7/30/2012	1596	2.0	348.53	1596.00
7/30/2012	1688	16.8	2.86	1685.79
7/30/2012	1750	23.5	4.80	
7/31/2012	1781	26.5	5.62	1772.08
7/31/2012	1812	29.5	5.56	1799.45
7/31/2012	1843	32.0	5.31	1826.10
7/31/2012	1874	33.9	4.27	1852.11
7/31/2012	1905	35.6	3.38	1887.58
7/31/2012	1936	36.8	2.30	1902.61
7/31/2012	1967	37.9	1.59	1927.26
7/31/2012	1998	39.5	1.21	1951.46
7/31/2012	2029	41.6	0.72	1975.02
7/31/2012	2060	44.0	0.46	1977.77
7/31/2012	2040	46.8	0.97	2018.00
7/31/2012	2121	49.2	1.89	2039.60
8/1/2012	2183	54.1	3.13	2078.11
8/1/2012	2214	56.8	3.10	2095.70
8/1/2012	2245	59.9	2.53	2111.95
8/1/2012	2276	62.7	1.23	2136.83
8/1/2012	2307	65.5	1.08	2140.38
8/1/2012	2337	68.2	1.67	2152.16
8/1/2012	2368	71.0	2.14	2162.95
8/1/2012	2399	74.0	2.62	2172.27
8/2/2012	2430	6.4	3.04	2180.21
8/2/2012	2461	78.1	288.00	2187.05
8/2/2012	2492	79.8	1.59	2193.03
8/2/2012	2523	82.2	1.35	2197.90
8/2/2012	2554	85.2	0.88	2201.31

Date	Depth	Dev	Dir	TVD
8/3/2012	2639	88.0	0.29	2205.63
8/4/2012	2670	88.0	0.47	2206.73
8/4/2012	2701	88.8	0.56	2207.60
8/4/2012	2732	89.0	0.71	2268.20
8/4/2012	2763	89.0	1.12	2208.74
8/4/2012	2794	89.5	1.70	2209.03
8/4/2012	2856	91.2	2.00	2206.09
8/4/2012	3041	90.9	0.79	2205.55
8/4/2012	3072	91.3	1.17	2204.97
8/4/2012	3134	90.2	0.13	2204.00
8/4/2012	3165	90.8	0.28	2204.20
8/5/2012	3350	89.1	358.03	2203.99
8/5/2012	3381	89.0	357.76	2205.00
8/5/2012	3412	89.3	357.76	2204.99
8/5/2012	3443	89.5	357.49	2205.33
8/5/2012	3474	89.5	357.46	2205.62
8/5/2012	3505	89.3	357.48	2205.94
8/6/2012	3566	89.5	358.62	2206.68
8/6/2012	3597	90.0	359.07	2206.80
8/6/2012	3628	90.4	359.16	2206.68
8/6/2012	3659	90.8	359.44	2206.34
8/6/2012	3690	90.9	359.67	2205.88
8/6/2012	3721	91.0	359.56	2205.36
8/6/2012	3752	91.0	359.54	2204.81
8/6/2012	3783	90.7	359.39	2204.00
8/6/2012	3876	90.0	359.83	2204.12
8/6/2012	3938	90.1	359.58	2204.00
8/6/2012	4124	90.4	359.79	2203.41
8/6/2012	4155	90.2	359.99	2203.26
8/7/2012	4217	90.7	0.03	2202.84
8/7/2012	4248	90.9	359.89	2202.40
8/7/2012	4278	91.0	359.91	2201.89
8/7/2012	4309	90.2	359.45	2201.58
8/7/2012	4340	90.9	359.86	2201.29
8/8/2012	4363	91.0	359.63	2200.91
8/8/2012	4394	90.7	353.02	2200.43
8/8/2012	4425	90.3	358.86	2200.16
8/8/2012	4456	90.7	358.96	2199.00
8/8/2012	6410	91.0	359.67	2199.44
8/8/2012	4672	91.2	359.53	2198.00
8/8/2012	4765	90.4	359.22	2196.00
8/9/2012	4857	90.7	358.89	2195.76
8/9/2012	4888	90.7	358.84	2195.36
8/9/2012	5012	89.7	359.78	2195.21
8/9/2012	5104	90.2	359.49	2195.00

Date	Depth	Dev	Dir	TVD
8/9/2012	5166	90.3	359.19	2195.00
8/9/2012	5322	89.9	358.41	2195.00
8/9/2012	5415	90.5	359.57	2194.00
8/10/2012	5477	91.4	359.58	2193.08
8/10/2012	5539	91.1	359.50	2191.85

RECEIVED

JAN 23 2013

NMOCD ARTESIA

Mack Energy Corporation

EDDY COUNTY, NEW MEXICO (NAD 27)

Sec. 3-T23S-R23E

Knight Fed Com #1H

Plan A Rev 1

Survey: Sperry MWD Field Surveys

Sperry Drilling Services Standard Report

24 August, 2012

Well Coordinates: 482,543.10 N, 419,461.00 E (32° 19' 34.89" N, 104° 35' 38.65" W)
Ground Level: 4,148.00 ft

Local Coordinate Origin:

Centered on Well Knight Fed Com #1H

Viewing Datum:

RKB 17.5 FT. @ 4165.50ft (Silver Oak Rig #2)

TVDs to System:

N

North Reference:

Grid

Unit System:

API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 2003.16 Build: 431

HALLIBURTON

Survey Report for Knight Fed Com #1H - Sperry MWD Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
1,500.00	0.87	201.89	1,499.77	11.94	-9.76	11.96	0.00
Tie-On to VES Gyro Surveys @ 1500.00 ft.							
1,627.00	8.17	359.18	1,626.38	20.09	-10.25	20.10	7.07
First Sperry MWD Survey @ 1627.00 ft.							
1,657.00	13.15	2.45	1,655.85	25.63	-10.13	25.65	16.72
1,688.00	16.83	2.86	1,685.79	33.64	-9.76	33.65	11.88
1,719.00	19.98	3.64	1,715.20	43.41	-9.20	43.42	10.19
1,750.00	23.52	4.80	1,743.99	54.86	-8.34	54.88	11.50
1,781.00	26.53	5.62	1,772.08	67.92	-7.15	67.93	9.77
1,812.00	29.46	5.56	1,799.45	82.40	-5.73	82.41	9.45
1,843.00	31.95	5.31	1,826.10	98.16	-4.23	98.16	8.04
1,874.00	33.94	4.27	1,852.11	114.96	-2.83	114.96	6.67
1,905.00	35.57	3.38	1,877.58	132.59	-1.65	132.59	5.51
1,936.00	36.75	2.30	1,902.61	150.85	-0.75	150.86	4.33
1,967.00	37.91	1.59	1,927.26	169.64	-0.11	169.64	3.99
1,998.00	39.48	1.21	1,951.45	189.02	0.36	189.02	5.12
2,029.00	41.57	0.72	1,975.02	209.16	0.70	209.15	6.82
2,060.00	43.99	0.46	1,997.77	230.21	0.91	230.21	7.83
2,090.00	46.76	0.97	2,018.84	251.55	1.18	251.55	9.31
2,121.00	49.16	1.89	2,039.60	274.57	1.76	274.57	8.05
2,152.00	51.56	2.69	2,059.37	298.42	2.71	298.41	7.99
2,183.00	54.05	3.13	2,078.11	323.08	3.97	323.07	8.11
2,214.00	56.81	3.10	2,095.70	348.57	5.36	348.56	8.90
2,245.00	59.94	2.53	2,111.95	374.93	6.65	374.92	10.22
2,276.00	62.69	1.23	2,126.83	402.10	7.54	402.09	9.60
2,307.00	65.49	1.08	2,140.38	429.98	8.10	429.97	9.04
2,337.00	68.24	1.67	2,152.16	457.56	8.76	457.54	9.34
2,368.00	71.01	2.14	2,162.95	486.60	9.73	486.58	9.05
2,399.00	73.98	2.62	2,172.28	516.13	10.96	516.11	9.69
2,430.00	76.35	3.04	2,180.21	546.06	12.44	546.04	7.76
2,461.00	78.07	2.88	2,187.08	576.25	14.00	576.23	5.57
2,492.00	79.75	1.59	2,193.04	606.65	15.19	606.62	6.79
2,523.00	82.20	1.35	2,197.90	637.25	15.97	637.22	7.94
2,554.00	85.18	0.88	2,201.31	668.05	16.57	668.03	9.73
2,577.00	87.14	0.34	2,202.85	691.00	16.81	690.97	8.84
2,608.00	87.31	0.04	2,204.35	721.96	16.92	721.93	1.11
2,639.00	87.95	0.29	2,205.63	752.94	17.01	752.91	2.22
2,670.00	87.98	0.47	2,206.73	783.92	17.21	783.89	0.59
2,701.00	88.79	0.56	2,207.61	814.90	17.49	814.87	2.63
2,732.00	88.99	0.71	2,208.21	845.89	17.83	845.86	0.81
2,763.00	89.03	1.12	2,208.74	876.89	18.33	876.85	1.33
2,794.00	89.90	1.78	2,209.03	907.87	19.11	907.84	3.52
2,825.00	90.17	1.89	2,209.01	938.86	20.11	938.82	0.94
2,856.00	91.17	2.00	2,208.65	969.84	21.16	969.80	3.25
2,886.00	90.87	1.82	2,208.12	999.82	22.16	999.78	1.17
2,917.00	90.74	2.20	2,207.68	1,030.79	23.24	1,030.75	1.30
2,948.00	91.01	1.01	2,207.21	1,061.78	24.11	1,061.74	3.94
2,979.00	91.01	0.68	2,206.66	1,092.77	24.57	1,092.73	1.06
3,010.00	91.11	0.81	2,206.09	1,123.76	24.97	1,123.72	0.53
3,041.00	90.87	0.79	2,205.55	1,154.75	25.41	1,154.71	0.78

Survey Report for Knight Fed Com #1H - Sperry MWD Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
3,072.00	91.28	1.17	2,204.97	1,185.74	25.94	1,185.70	1.80
3,103.00	90.20	0.13	2,204.57	1,216.74	26.29	1,216.69	4.84
3,134.00	90.20	0.13	2,204.46	1,247.74	26.36	1,247.69	0.00
3,165.00	90.78	0.28	2,204.20	1,278.74	26.47	1,278.69	1.93
3,196.00	90.67	359.85	2,203.80	1,309.73	26.50	1,309.69	1.43
3,227.00	89.93	359.30	2,203.64	1,340.73	26.27	1,340.69	2.97
3,258.00	89.77	359.02	2,203.72	1,371.73	25.82	1,371.68	1.04
3,288.00	89.97	358.74	2,203.79	1,401.72	25.23	1,401.68	1.15
3,319.00	90.13	358.36	2,203.76	1,432.71	24.45	1,432.67	1.33
3,350.00	89.06	358.03	2,203.98	1,463.70	23.47	1,463.66	3.61
3,381.00	88.99	357.76	2,204.51	1,494.67	22.33	1,494.63	0.90
3,412.00	89.26	357.76	2,204.98	1,525.64	21.12	1,525.61	0.87
3,443.00	89.46	357.49	2,205.33	1,556.61	19.84	1,556.58	1.08
3,474.00	89.50	357.46	2,205.61	1,587.58	18.47	1,587.55	0.16
3,505.00	89.30	357.48	2,205.94	1,618.55	17.10	1,618.52	0.65
3,536.00	89.23	358.37	2,206.33	1,649.53	15.98	1,649.50	2.88
3,566.00	89.50	358.62	2,206.67	1,679.52	15.19	1,679.49	1.23
3,597.00	90.03	359.07	2,206.79	1,710.51	14.57	1,710.48	2.24
3,628.00	90.44	359.16	2,206.67	1,741.51	14.09	1,741.48	1.35
3,659.00	90.81	359.44	2,206.33	1,772.50	13.71	1,772.48	1.50
3,690.00	90.91	359.67	2,205.86	1,803.50	13.47	1,803.47	0.81
3,721.00	91.01	359.56	2,205.34	1,834.49	13.26	1,834.47	0.48
3,752.00	91.01	359.54	2,204.80	1,865.49	13.02	1,865.46	0.06
3,783.00	90.71	359.39	2,204.33	1,896.48	12.73	1,896.46	1.08
3,814.00	90.13	359.32	2,204.10	1,927.48	12.38	1,927.45	1.88
3,845.00	89.93	359.71	2,204.09	1,958.48	12.12	1,958.45	1.41
3,876.00	90.00	359.83	2,204.11	1,989.48	11.99	1,989.45	0.45
3,907.00	89.97	359.44	2,204.11	2,020.48	11.80	2,020.45	1.26
3,938.00	90.07	359.58	2,204.10	2,051.47	11.53	2,051.45	0.55
3,969.00	90.23	359.65	2,204.02	2,082.47	11.32	2,082.45	0.56
3,999.00	90.10	0.03	2,203.94	2,112.47	11.24	2,112.45	1.34
4,031.00	90.13	359.76	2,203.87	2,144.47	11.18	2,144.45	0.85
4,062.00	90.20	359.85	2,203.78	2,175.47	11.07	2,175.45	0.37
4,093.00	90.44	359.93	2,203.61	2,206.47	11.01	2,206.45	0.82
4,124.00	90.37	359.79	2,203.39	2,237.47	10.94	2,237.45	0.50
4,155.00	90.17	359.99	2,203.24	2,268.47	10.88	2,268.45	0.91
4,186.00	90.37	359.59	2,203.10	2,299.47	10.77	2,299.45	1.44
4,217.00	90.67	0.03	2,202.82	2,330.47	10.66	2,330.45	1.72
4,248.00	90.94	359.89	2,202.38	2,361.47	10.64	2,361.44	0.98
4,278.00	91.01	359.91	2,201.87	2,391.46	10.59	2,391.44	0.24
4,309.00	90.17	359.45	2,201.55	2,422.46	10.42	2,422.44	3.09
4,340.00	90.91	359.86	2,201.26	2,453.46	10.23	2,453.44	2.73
4,363.00	90.97	359.63	2,200.88	2,476.45	10.13	2,476.43	1.03
4,425.00	90.34	358.86	2,200.17	2,538.44	9.31	2,538.42	1.60
4,456.00	90.67	358.96	2,199.90	2,569.44	8.72	2,569.42	1.11
4,487.00	90.87	358.94	2,199.48	2,600.43	8.15	2,600.41	0.65
4,518.00	89.63	359.04	2,199.35	2,631.42	7.61	2,631.41	4.01
4,548.00	89.33	359.37	2,199.62	2,661.42	7.19	2,661.40	1.49
4,579.00	90.13	359.71	2,199.77	2,692.42	6.94	2,692.40	2.80
4,610.00	91.01	359.67	2,199.46	2,723.41	6.77	2,723.40	2.84
4,641.00	91.01	359.46	2,198.91	2,754.41	6.54	2,754.39	0.68

Survey Report for Knight Fed Com #1H - Sperry MWD Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4,672.00	91.21	359.53	2,198.31	2,785.40	6.26	2,785.39	0.68
4,703.00	91.65	359.36	2,197.54	2,816.39	5.96	2,816.38	1.52
4,734.00	90.94	359.43	2,196.84	2,847.38	5.64	2,847.37	2.30
4,765.00	90.44	359.22	2,196.46	2,878.38	5.27	2,878.36	1.75
4,795.00	90.24	359.00	2,196.29	2,908.37	4.81	2,908.36	0.99
4,826.00	90.47	358.84	2,196.09	2,939.37	4.22	2,939.35	0.90
4,857.00	90.74	358.89	2,195.77	2,970.36	3.61	2,970.35	0.89
4,888.00	90.74	358.84	2,195.37	3,001.35	2.99	3,001.34	0.16
4,919.00	90.84	358.74	2,194.94	3,032.34	2.34	3,032.33	0.46
4,950.00	89.73	359.33	2,194.78	3,063.33	1.82	3,063.33	4.06
4,981.00	89.50	359.39	2,194.99	3,094.33	1.47	3,094.32	0.77
5,012.00	89.70	359.78	2,195.21	3,125.33	1.25	3,125.32	1.41
5,043.00	89.77	359.42	2,195.35	3,156.33	1.03	3,156.32	1.18
5,073.00	89.83	359.38	2,195.46	3,186.33	0.72	3,186.32	0.24
5,104.00	90.20	359.49	2,195.45	3,217.33	0.41	3,217.32	1.25
5,135.00	90.17	359.38	2,195.35	3,248.32	0.10	3,248.32	0.37
5,166.00	90.27	359.19	2,195.23	3,279.32	-0.28	3,279.32	0.69
5,197.00	89.70	359.11	2,195.24	3,310.32	-0.74	3,310.31	1.86
5,228.00	89.90	359.02	2,195.35	3,341.31	-1.25	3,341.31	0.71
5,259.00	89.70	358.95	2,195.45	3,372.31	-1.80	3,372.31	0.68
5,291.00	89.53	358.45	2,195.67	3,404.30	-2.52	3,404.30	1.65
5,322.00	89.87	358.41	2,195.83	3,435.29	-3.37	3,435.29	1.10
5,353.00	90.34	358.73	2,195.78	3,466.28	-4.15	3,466.28	1.83
5,384.00	91.11	359.46	2,195.38	3,497.27	-4.64	3,497.27	3.42
5,415.00	91.45	359.57	2,194.69	3,528.26	-4.90	3,528.26	1.15
5,446.00	91.58	359.59	2,193.87	3,559.25	-5.13	3,559.25	0.42
5,477.00	91.41	359.58	2,193.06	3,590.24	-5.35	3,590.24	0.55
5,508.00	91.01	359.60	2,192.41	3,621.23	-5.57	3,621.23	1.29
5,539.00	91.10	359.50	2,191.84	3,652.22	-5.82	3,652.23	0.43
5,570.00	90.60	359.79	2,191.38	3,683.22	-6.01	3,683.22	1.86
Final Sperry MWD Survey @ 5570.00 ft.							
5,625.00	90.60	359.79	2,190.80	3,738.22	-6.21	3,738.22	0.00
Straight Line Projection to TD @ 5625.00 ft.							

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
1,500.00	1,499.77	11.94	-9.76	Tie-On to VES Gyro Surveys @ 1500.00 ft.
1,627.00	1,626.38	20.09	-10.25	First Sperry MWD Survey @ 1627.00 ft.
5,570.00	2,191.38	3,683.22	-6.01	Final Sperry MWD Survey @ 5570.00 ft.
5,625.00	2,190.80	3,738.22	-6.21	Straight Line Projection to TD @ 5625.00 ft.

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (ft)	+E/-W (ft)	Start TVD (ft)
User	No Target (Freehand)	359.90	Slot	0.00	0.00	0.00

Survey Report for Knight Fed Com #1H - Sperry MWD Field Surveys

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
100.00	1,500.00	Vaughn Energy Services (Gyro Surveys)	NS-GYRO-MS
1,500.00	5,625.00	Sperry MWD Field Surveys	MWD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Knight Federal Com	0.00	0.00	0.00	0.12	0.11	482,543.22	419,461.11	32° 19' 34.889 N	104° 35' 38.645 W
- survey misses target center by 1499.85ft at 1500.00ft MD (1499.77 TVD, 11.94 N, -9.76 E)									
- Polygon									
Knight Federal Com	0.00	360.00	2,178.00	4,604.08	6.80	487,146.80	419,467.80	32° 20' 20.447 N	104° 35' 38.697 W
- survey misses target center by 866.06ft at 5625.00ft MD (2190.80 TVD, 3738.22 N, -6.21 E)									
- Point									
Knight Federal Com	0.00	0.00	0.00	0.12	0.11	482,543.22	419,461.11	32° 19' 34.889 N	104° 35' 38.645 W
- survey misses target center by 1499.85ft at 1500.00ft MD (1499.77 TVD, 11.94 N, -9.76 E)									
- Polygon									
Knight Federal Com	0.00	0.00	0.00	0.00	0.00	482,543.10	419,461.00	32° 19' 34.888 N	104° 35' 38.646 W
- survey misses target center by 1499.85ft at 1500.00ft MD (1499.77 TVD, 11.94 N, -9.76 E)									
- Point									

North Reference Sheet for Sec. 3-T23S-R23E - Knight Fed Com #1H - Plan A Rev 1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to RKB 17.5 FT. @ 4165.50ft (Silver Oak Rig #2). Northing and Easting are relative to Knight Fed Com #1H

Coordinate System is US State Plane 1927 (Exact solution) New Mexico East 3001 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is 104° 20' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:0° 0' 0.000 N°

False Easting: 500,000.00ft, False Northing: 0.00ft, Scale Reduction: 0.99991652

Grid Coordinates of Well: 482,543.10 ft N, 419,461.00 ft E

Geographical Coordinates of Well: 32° 19' 34.89" N, 104° 35' 38.65" W

Grid Convergence at Surface is: -0.14°

Based upon Minimum Curvature type calculations, at a Measured Depth of 5,625.00ft
the Bottom Hole Displacement is 3,738.22ft in the Direction of 359.90° (Grid).

Magnetic Convergence at surface is: -8.15° (19 July 2012, BGGM2011)

