

OPERATOR
WELL/LEASE
COUNTY

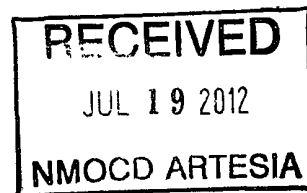
MEWBOURNE OIL COMPANY
LONG DRAW 10 FED COM 1H
EDDY

101-0107

STATE OF NEW MEXICO
DEVIATION REPORT

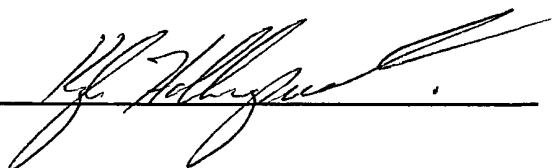
30-015-37079

220	0.10
630	0.81
1,050	0.25
1,457	0.84

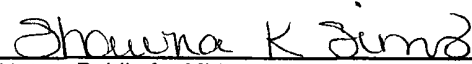


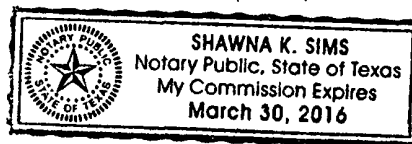
STATE OF TEXAS

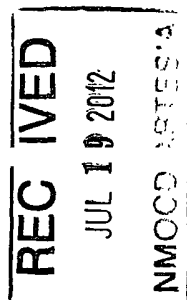
COUNTY OF MIDLAND

BY: 

The foregoing instrument was acknowledged before me on 6/28/12, by
Kyle Hollingsworth on behalf of Patterson-UTI Drilling Company LLC.


Notary Public for Midland County, Texas
My Commission Expires:





Company: MEWBOURNE OIL COMPANY
Lease/Well: LONG DRAW 10 NC FED COM/NO. 001H

Rig Name: PATTERSON 101
State/County: NEW MEXICO/EDDY

Latitude: 32.58
GRID North is 0.08 Degrees West of True North
VS-Azi: 0.45 Degrees



DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: longdraw 10nc fed com 1h_ed.ut

Minimum Curvature Method

Report Date/Time: 6/14/2012 / 12:47

VAUGHN ENERGY SERVICES

CORPUS CHRISTI, TX

1-800-606-4976

SURVEYOR: ADAM GWYN

LONG DRAW 10 NC FED COM NO. 001 / API 30-015-37079

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.39	234.52	100.00	-0.20	-0.28	-0.20	0.34	234.52	0.39
200.00	0.43	254.11	200.00	-0.50	-0.91	-0.50	1.04	241.44	0.14
300.00	0.33	257.52	299.99	-0.66	-1.56	-0.67	1.69	246.96	0.10
400.00	0.36	258.90	399.99	-0.79	-2.15	-0.80	2.29	249.94	0.03
500.00	0.57	264.40	499.99	-0.90	-2.96	-0.92	3.09	253.14	0.21
600.00	0.34	223.28	599.99	-1.16	-3.66	-1.19	3.84	252.35	0.38
700.00	0.72	239.49	699.98	-1.70	-4.41	-1.74	4.72	248.87	0.41
800.00	0.67	248.54	799.97	-2.24	-5.49	-2.28	5.93	247.84	0.12
900.00	0.72	224.62	899.97	-2.90	-6.48	-2.95	7.09	245.90	0.29
1000.00	0.70	231.08	999.96	-3.73	-7.39	-3.79	8.28	243.24	0.08
1100.00	0.71	224.35	1099.95	-4.55	-8.30	-4.62	9.47	241.25	0.08
1200.00	0.38	187.40	1199.95	-5.32	-8.77	-5.39	10.26	238.76	0.47
1300.00	0.82	243.11	1299.94	-5.98	-9.46	-6.05	11.19	237.72	0.69
1400.00	0.78	207.01	1399.93	-6.90	-10.41	-6.99	12.49	236.44	0.50
1500.00	0.79	243.46	1499.92	-7.82	-11.33	-7.90	13.76	235.40	0.49
1600.00	0.59	168.20	1599.92	-8.62	-11.84	-8.72	14.65	233.94	0.85
1618.00	0.62	182.36	1617.92	-8.81	-11.83	-8.90	14.75	233.32	0.85



Stryker Energy Services

SURVEY CALCULATION REPORT Minimum Curvature Calculations

Operator: Mewbourne Oil
Lease Name: Long Draw 10 NC Federal Com #1
Job Number:
Comments: Tie-In to Stryker Gyro Multi-Shot
Survey Company: Stryker MWD

Target TVD: 2,551.00 Feet
Target Angle: 90.25 Degrees
Section Plane: 0.45 Degrees
Declination Corrected to Grid: 7.9896 E Degrees
Bit to Survey Offset: 47 Feet

Survey No.	Measured Depth	Drift (Degrees)	Azimuth (Degrees)	Course Length	TVD (Feet)	Vertical Section	+N/-S (Feet)	+E/-W (Feet)	BUR	DLS	KBTVD	+Above -Below Target
T/I	1,618	0.6	182.4	N/A	1,617.9	-8.9	-8.8	-11.8	N/A	N/A	1617.9	936.7
1	1,720	0.6	1.1	102	1,719.9	-8.9	-8.8	-11.8	0.0	1.2	1719.9	834.7
2	1,752	2.9	7.0	32	1,751.9	-7.9	-7.8	-11.7	7.2	7.2	1751.8	802.7
3	1,783	5.7	4.5	31	1,782.8	-5.6	-5.5	-11.5	9.0	9.1	1782.8	771.8
4	1,815	8.9	359.6	32	1,814.5	-1.5	-1.5	-11.4	10.0	10.2	1814.5	740.0
5	1,847	11.1	357.0	32	1,846.0	4.0	4.1	-11.6	6.9	7.0	1846.1	708.5
6	1,879	13.1	355.3	32	1,877.3	10.7	10.8	-12.1	6.3	6.3	1877.4	677.2
7	1,910	14.3	355.6	31	1,907.4	18.0	18.1	-12.6	3.9	3.9	1907.5	647.0
8	1,942	15.3	359.2	32	1,938.4	26.2	26.3	-13.0	3.1	4.2	1938.5	616.0
9	1,974	17.1	3.2	32	1,969.1	35.1	35.2	-12.8	5.6	6.6	1969.3	585.3
10	2,006	19.2	5.0	32	1,999.5	45.0	45.1	-12.1	6.6	6.8	1999.7	554.8
11	2,037	21.3	5.0	31	2,028.6	55.7	55.8	-11.1	6.8	6.8	2028.8	525.7
12	2,069	23.3	4.2	32	2,058.2	67.8	67.9	-10.2	6.3	6.3	2058.5	496.0
13	2,101	25.8	3.0	32	2,087.3	81.1	81.2	-9.3	7.8	8.0	2087.7	466.9
14	2,133	27.8	2.4	32	2,115.9	95.5	95.6	-8.7	6.3	6.3	2116.3	438.2
15	2,165	30.2	2.0	32	2,143.9	111.0	111.1	-8.1	7.5	7.5	2144.3	410.2
16	2,197	32.6	2.0	32	2,171.2	127.7	127.8	-7.5	7.5	7.5	2171.7	382.8
17	2,229	34.9	1.7	32	2,197.8	145.5	145.5	-6.9	7.2	7.2	2198.4	356.1
18	2,260	37.1	1.5	31	2,222.8	163.7	163.7	-6.4	7.1	7.1	2223.6	331.0
19	2,291	39.4	1.7	31	2,247.2	182.9	182.9	-5.9	7.4	7.4	2248.0	306.5
20	2,323	41.6	1.9	32	2,271.5	203.7	203.7	-5.2	6.9	6.9	2272.4	282.1
21	2,354	44.0	2.0	31	2,294.3	224.7	224.7	-4.5	7.7	7.7	2295.2	259.3
22	2,386	46.1	2.1	32	2,316.9	247.3	247.4	-3.7	6.6	6.6	2318.0	236.6
23	2,417	48.4	1.6	31	2,337.9	270.1	270.1	-3.0	7.4	7.5	2339.1	215.4
24	2,449	50.6	1.2	32	2,358.7	294.4	294.5	-2.4	6.9	6.9	2360.0	194.5
25	2,474	52.3	1.5	25	2,374.3	314.0	314.0	-1.9	6.8	6.9	2375.6	178.9
26	2,506	54.5	1.2	32	2,393.4	339.7	339.7	-1.3	6.9	6.9	2394.8	159.7
27	2,538	57.4	1.0	32	2,411.3	366.2	366.2	-0.8	9.1	9.1	2412.9	141.7
28	2,569	59.7	1.3	31	2,427.4	392.6	392.6	-0.3	7.4	7.5	2429.2	125.4
29	2,600	61.5	1.5	31	2,442.7	419.6	419.6	0.4	5.8	5.8	2444.5	110.0
30	2,632	62.9	1.4	32	2,457.6	447.9	447.9	1.1	4.4	4.4	2459.5	95.0
31	2,663	64.4	1.7	31	2,471.3	475.7	475.7	1.9	4.8	4.9	2473.4	81.1
32	2,694	66.7	1.4	31	2,484.2	503.9	503.9	2.6	7.4	7.5	2486.4	68.2
33	2,726	69.3	1.5	32	2,496.2	533.6	533.6	3.4	8.1	8.1	2498.5	56.0



Stryker Energy Services

SURVEY CALCULATION REPORT

Minimum Curvature Calculations

Operator: Mewbourne Oil
 Lease Name: Long Draw 10 NC Federal Com #1
 Job Number:
 Comments: Tie-In to Stryker Gyro Multi-Shot
 Survey Company: Stryker MWD

Target TVD: 2,551.00 Feet
 Target Angle: 90.25 Degrees
 Section Plane: 0.45 Degrees
 Declination Corrected to Grid: 7.9896 E Degrees
 Bit to Survey Offset: 47 Feet

Survey No.	Measured Depth	Drift (Degrees)	Azimuth (Degrees)	Course Length	TVD (Feet)	Vertical Section	+N/-S (Feet)	+E/-W (Feet)	BUR	DLS	KBTVD	Target
34	2,757	72.0	1.3	31	2,506.4	562.8	562.8	4.1	8.7	8.7	2508.9	45.6
35	2,788	73.9	1.3	31	2,515.5	592.4	592.4	4.8	6.1	6.1	2518.1	36.4
36	2,820	76.4	1.4	32	2,523.7	623.4	623.3	5.5	7.8	7.8	2526.4	28.1
37	2,852	78.9	1.0	32	2,530.6	654.6	654.6	6.2	7.8	7.9	2533.4	21.1
38	2,883	80.8	0.8	31	2,536.0	685.1	685.1	6.6	6.1	6.2	2539.0	15.5
39	2,913	82.3	0.5	30	2,540.4	714.8	714.8	7.0	5.0	5.1	2543.6	11.0
40	2,944	83.7	1.0	31	2,544.2	745.6	745.5	7.4	4.5	4.8	2547.5	7.1
41	2,973	85.4	1.0	29	2,547.0	774.4	774.4	7.9	5.9	5.9	2550.3	4.2
42	3,001	87.2	0.9	28	2,548.8	802.4	802.3	8.3	6.4	6.4	2552.3	2.3
43	3,033	88.4	0.3	32	2,550.0	834.4	834.3	8.7	3.8	4.2	2553.6	0.9
44	3,065	90.2	0.1	32	2,550.4	866.3	866.3	8.8	5.6	5.7	2554.2	0.4
45	3,096	90.0	359.7	31	2,550.3	897.3	897.3	8.7	-0.6	1.4	2554.3	0.3
46	3,160	89.6	359.6	64	2,550.6	961.3	961.3	8.3	-0.6	0.6	2554.8	-0.2
47	3,222	90.5	0.4	62	2,550.5	1023.3	1,023.3	8.3	1.5	1.9	2555.0	-0.4
48	3,285	90.3	1.0	63	2,550.1	1086.3	1,086.3	9.1	-0.3	1.0	2554.8	-0.3
49	3,348	89.8	0.7	63	2,550.0	1149.3	1,149.3	10.0	-0.8	0.9	2555.0	-0.5
50	3,412	89.5	0.8	64	2,550.4	1213.3	1,213.3	10.9	-0.5	0.5	2555.7	-1.2
51	3,475	90.1	0.8	63	2,550.6	1276.3	1,276.3	11.8	1.0	1.0	2556.2	-1.7
52	3,539	89.8	0.5	64	2,550.7	1340.3	1,340.3	12.5	-0.5	0.7	2556.5	-2.0
53	3,602	90.9	0.3	63	2,550.3	1403.3	1,403.3	12.9	1.7	1.8	2556.4	-1.9
54	3,665	90.5	0.3	63	2,549.5	1466.3	1,466.3	13.3	-0.6	0.6	2555.9	-1.4
55	3,729	90.1	0.4	64	2,549.2	1530.3	1,530.3	13.6	-0.6	0.6	2555.9	-1.3
56	3,792	89.6	0.0	63	2,549.4	1593.3	1,593.3	13.9	-0.8	1.0	2556.3	-1.8
57	3,856	92.5	0.2	64	2,548.2	1657.3	1,657.2	14.0	4.5	4.5	2555.4	-0.9
58	3,919	91.2	0.1	63	2,546.1	1720.3	1,720.2	14.1	-2.1	2.1	2553.7	0.9
59	3,983	90.7	359.7	64	2,545.1	1784.2	1,784.2	14.0	-0.8	1.0	2552.9	1.7
60	4,046	90.4	359.6	63	2,544.5	1847.2	1,847.2	13.6	-0.5	0.5	2552.5	2.0
61	4,109	89.9	359.6	63	2,544.3	1910.2	1,910.2	13.2	-0.8	0.8	2552.7	1.9
62	4,172	89.8	359.3	63	2,544.5	1973.2	1,973.2	12.6	-0.2	0.5	2553.1	1.4
63	4,236	89.8	359.1	64	2,544.7	2037.2	2,037.2	11.7	0.0	0.3	2553.6	0.9
64	4,300	89.7	358.8	64	2,545.0	2101.2	2,101.2	10.5	-0.2	0.5	2554.2	0.4
65	4,363	89.9	0.2	63	2,545.2	2164.2	2,164.2	10.0	0.3	2.2	2554.6	-0.1
66	4,426	89.6	359.9	63	2,545.5	2227.2	2,227.2	10.0	-0.5	0.7	2555.2	-0.7
67	4,490	90.1	1.6	64	2,545.6	2291.2	2,291.1	10.9	0.8	2.8	2555.6	-1.1



Stryker Energy Services

SURVEY CALCULATION REPORT

Minimum Curvature Calculations

Operator: Mewbourne Oil

Lease Name: Long Draw 10 NC Federal Com #1

Job Number:

Comments: Tie-In to Stryker Gyro Multi-Shot

Survey Company: Stryker MWD

Target TVD: 2,551.00 Feet

Target Angle: 90.25 Degrees

Section Plane: 0.45 Degrees

Declination Corrected to Grid: 7.9896 E Degrees

Bit to Survey Offset: 47 Feet

Survey No.	Measured Depth	Drift (Degrees)	Azimuth (Degrees)	Course Length	TVD (Feet)	Vertical Section	+N/-S (Feet)	+E/-W (Feet)	BUR	DLS	KBTVD	+Above -Below Target
68	4,553	89.7	1.6	63	2,545.8	2354.2	2,354.1	12.6	-0.6	0.6	2556.0	-1.5
69	4,617	90.5	2.1	64	2,545.6	2418.1	2,418.1	14.7	1.3	1.5	2556.2	-1.7
70	4,680	90.3	1.6	63	2,545.2	2481.1	2,481.1	16.7	-0.3	0.9	2556.0	-1.5
71	4,743	89.8	1.5	63	2,545.2	2544.1	2,544.0	18.4	-0.8	0.8	2556.3	-1.7
72	4,807	90.8	1.0	64	2,544.8	2608.1	2,608.0	19.8	1.6	1.7	2556.2	-1.7
73	4,870	90.6	1.1	63	2,544.0	2671.1	2,671.0	21.0	-0.3	0.4	2555.7	-1.2
74	4,934	90.4	0.7	64	2,543.5	2735.1	2,735.0	22.0	-0.3	0.7	2555.4	-0.9
75	4,997	90.1	0.4	63	2,543.2	2798.1	2,798.0	22.6	-0.5	0.7	2555.4	-0.9
76	5,060	89.5	0.2	63	2,543.4	2861.1	2,861.0	22.9	-1.0	1.0	2555.9	-1.4
77	5,124	90.5	1.2	64	2,543.4	2925.1	2,925.0	23.7	1.6	2.2	2556.2	-1.7
78	5,187	90.1	1.0	63	2,543.1	2988.1	2,988.0	24.9	-0.6	0.7	2556.1	-1.6
79	5,250	91.1	1.3	63	2,542.4	3051.1	3,050.9	26.2	1.6	1.7	2555.8	-1.2
80	5,314	90.7	0.8	64	2,541.4	3115.0	3,114.9	27.4	-0.6	1.0	2555.0	-0.5
81	5,377	90.3	0.7	63	2,540.9	3178.0	3,177.9	28.2	-0.6	0.7	2554.8	-0.2
82	5,441	90.2	0.4	64	2,540.6	3242.0	3,241.9	28.8	-0.2	0.5	2554.8	-0.2
83	5,505	89.9	0.4	64	2,540.6	3306.0	3,305.9	29.2	-0.5	0.5	2555.0	-0.4
84	5,568	91.1	0.5	63	2,540.0	3369.0	3,368.9	29.7	1.9	1.9	2554.7	-0.2
85	5,631	90.7	0.6	63	2,539.0	3432.0	3,431.9	30.3	-0.6	0.7	2554.0	0.5
86	5,694	90.2	0.4	63	2,538.5	3495.0	3,494.9	30.9	-0.8	0.9	2553.8	0.8
87	5,758	89.7	0.6	64	2,538.6	3559.0	3,558.9	31.5	-0.8	0.8	2554.1	0.4
88	5,821	89.4	0.5	63	2,539.1	3622.0	3,621.9	32.1	-0.5	0.5	2554.9	-0.3
89	5,885	90.6	1.2	64	2,539.1	3686.0	3,685.9	33.0	1.9	2.2	2555.2	-0.6
90	5,948	90.5	0.8	63	2,538.5	3749.0	3,748.9	34.1	-0.2	0.7	2554.8	-0.3
91	6,010	90.3	0.9	62	2,538.0	3811.0	3,810.9	35.0	-0.3	0.4	2554.7	-0.1
92	6,071	90.0	0.3	61	2,537.9	3872.0	3,871.8	35.7	-0.5	1.1	2554.8	-0.2
93	6,131	89.9	0.1	60	2,537.9	3932.0	3,931.8	35.9	-0.2	0.4	2555.1	-0.6
94	6,193	90.8	1.0	62	2,537.5	3994.0	3,993.8	36.5	1.5	2.1	2555.0	-0.4
95	6,254	90.7	0.7	61	2,536.7	4055.0	4,054.8	37.4	-0.2	0.5	2554.4	0.1
96	6,316	90.3	0.8	62	2,536.2	4117.0	4,116.8	38.2	-0.6	0.7	2554.2	0.4
97	6,378	89.9	1.0	62	2,536.1	4179.0	4,178.8	39.2	-0.6	0.7	2554.3	0.2
98	6,441	90.5	0.4	63	2,535.9	4242.0	4,241.8	39.9	1.0	1.3	2554.4	0.1
99	6,502	90.5	0.1	61	2,535.3	4303.0	4,302.8	40.2	0.0	0.5	2554.1	0.4
100	6,563	90.3	359.8	61	2,534.9	4364.0	4,363.8	40.1	-0.3	0.6	2554.0	0.6
101	6,625	89.8	359.9	62	2,534.9	4426.0	4,425.8	40.0	-0.8	0.8	2554.2	0.4



Stryker Energy Services

SURVEY CALCULATION REPORT

Minimum Curvature Calculations

Operator: Mewbourne Oil

Lease Name: Long Draw 10 NC Federal Com #1

Job Number:

Comments: Tie-In to Stryker Gyro Multi-Shot

Survey Company: Stryker MWD

Target TVD: 2,551.00 Feet

Target Angle: 90.25 Degrees

Section Plane: 0.45 Degrees

Declination Corrected to Grid: 7.9896 E Degrees

Bit to Survey Offset: 47 Feet

Survey No.	Measured Depth	Drift (Degrees)	Azimuth (Degrees)	Course Length	TVD (Feet)	Vertical Section	+N/-S (Feet)	+E/-W (Feet)	BUR	DLS	KBTVD	+Above -Below Target
102	6,688	91.0	359.4	63	2,534.4	4489.0	4,488.8	39.6	1.9	2.1	2554.0	0.5
103	6,752	90.7	358.9	64	2,533.5	4552.9	4,552.8	38.6	-0.5	0.9	2553.3	1.2
104	6,815	90.6	358.1	63	2,532.8	4615.9	4,615.8	37.0	-0.2	1.3	2552.9	1.6
105	6,879	91.2	0.3	64	2,531.8	4679.9	4,679.7	36.1	0.9	3.6	2552.2	2.4
106	6,942	91.2	0.3	63	2,530.4	4742.9	4,742.7	36.4	0.0	0.0	2551.1	3.4
107	7,006	90.3	0.3	64	2,529.6	4806.9	4,806.7	36.8	-1.4	1.4	2550.6	4.0
108	7,069	89.9	0.0	63	2,529.5	4869.9	4,869.7	36.9	-0.6	0.8	2550.7	3.8
109	7,132	89.7	359.4	63	2,529.7	4932.8	4,932.7	36.6	-0.3	1.0	2551.2	3.3
110	7,195	89.6	359.5	63	2,530.1	4995.8	4,995.7	36.0	-0.2	0.2	2551.9	2.6
111	7,258	90.0	0.7	63	2,530.3	5058.8	5,058.7	36.1	0.6	2.0	2552.4	2.1
112	7,321	89.7	0.7	63	2,530.5	5121.8	5,121.7	36.9	-0.5	0.5	2552.8	1.7
113	7,385	89.6	0.4	64	2,530.9	5185.8	5,185.7	37.5	-0.2	0.5	2553.5	1.0
114	7,448	89.4	0.7	63	2,531.4	5248.8	5,248.7	38.1	-0.3	0.6	2554.3	0.2
115	7,511	89.5	0.5	63	2,532.0	5311.8	5,311.7	38.8	0.2	0.4	2555.2	-0.7
116	7,575	89.3	0.5	64	2,532.7	5375.8	5,375.7	39.3	-0.3	0.3	2556.2	-1.6
Bit/Td	7,622	89.3	0.1	47	2,533.3	5422.8	5,422.7	39.6	0.0	0.9	2556.9	-2.4