

OPERATOR MEWBOURNE OIL COMPANY
WELL/LEASE LONG DRAW 9 AP FED COM 1H
COUNTY EDDY

101-0106

STATE OF NEW MEXICO
DEVIATION REPORT

30-015-38310

390	1.14
885	1.41
1,140	3.75
1,552	2.00

STATE OF TEXAS

COUNTY OF MIDLAND

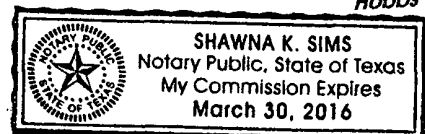
BY: Kyle Hollingsworth

Received

The foregoing instrument was acknowledged before me on 6/4/12, by JUN 08 2012
Kyle Hollingsworth on behalf of Patterson-UTI Drilling Company LLC.

Shawna K. Sims
Notary Public for Midland County, Texas
My Commission Expires:

Mewbourne Oil Company
Hobbs



Company: **Mewbourne**Field: **(Long) Sec 4, T20S, R25E**County: **Eddy NM**Job Number: **4649485**Magnetic Decl: **8.01**Grid Corr: **0.08**Proposed Azimuth: **181.23**Target Inclination: **89.82**TVD: **2531.00****INTEQ**Well Name: **Long Draw 9 AP Fed #1H**Rig: **Patterson #101**Total Survey Corr: **8.09**Date Printed: **27-May-12**BRN From Survey: **-0.10**

Offset		50'	Must Enter**												
No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Quadrant	Course Lgth(ft)	TVD (ft)	VS (ft)	Coordinates		Closure		DLS (%/100')	Bld Rate (%/100')	Wik Rate (%/100')
0	Tie	1685	2.68	100.04			1683.91	6.31	6.54 S	51.28 E			0.00		
1	MWD	1922	2.80	108.50	S 71.50 E	237	1920.64	8.00	9.34 S	62.23 E	62.92	98.54	0.18	0.05	3.57
2	MWD	1929	2.60	106.40	S 73.60 E	7	1927.63	8.10	9.44 S	62.54 E	63.25	98.59	3.19	-2.86	-30.00
3	MWD	1961	2.50	113.60	S 66.40 E	32	1959.60	8.55	9.93 S	63.88 E	64.64	98.83	1.05	-0.31	22.50
4	MWD	1993	5.50	161.40	S 18.60 E	32	1991.53	10.26	11.66 S	65.01 E	66.04	100.17	13.26	9.38	149.38
5	MWD	2024	10.40	172.20	S 7.80 E	31	2022.22	14.43	15.84 S	65.86 E	67.74	103.53	16.46	15.81	34.84
6	MWD	2056	15.40	173.90	S 6.10 E	32	2053.40	21.50	22.93 S	66.70 E	70.54	108.97	15.67	15.63	5.31
7	MWD	2087	19.60	174.50	S 5.50 E	31	2082.96	30.75	32.21 S	67.64 E	74.92	115.46	13.56	13.55	1.94
8	MWD	2119	23.00	176.40	S 3.60 E	32	2112.77	42.31	43.79 S	68.55 E	81.34	122.57	10.84	10.63	5.94
9	MWD	2151	26.60	178.30	S 1.70 E	32	2141.82	55.70	57.20 S	69.15 E	89.74	129.59	11.52	11.25	5.94
10	MWD	2182	30.00	179.20	S 0.80 E	31	2169.11	70.38	71.89 S	69.47 E	99.97	135.98	11.05	10.97	2.90
11	MWD	2214	30.10	179.00	S 1.00 E	32	2196.81	86.39	87.91 S	69.72 E	112.20	141.58	0.44	0.31	-0.62
12	MWD	2246	32.30	178.90	S 1.10 E	32	2224.18	102.96	104.48 S	70.02 E	125.78	146.17	6.88	6.87	-0.31
13	MWD	2278	35.00	178.80	S 1.20 E	32	2250.81	120.67	122.21 S	70.38 E	141.03	150.06	8.44	8.44	-0.31
14	MWD	2309	35.10	179.20	S 0.80 E	31	2276.19	138.46	140.01 S	70.69 E	156.84	153.21	0.81	0.32	1.29
15	MWD	2341	37.30	179.70	S 0.30 E	32	2302.01	157.35	158.91 S	70.87 E	173.99	155.96	6.94	6.87	1.56
16	MWD	2373	40.20	180.30	S 0.30 W	32	2326.96	177.37	178.93 S	70.86 E	192.46	158.39	9.14	9.06	1.88
17	MWD	2405	43.20	180.30	S 0.30 W	32	2350.85	198.65	200.22 S	70.75 E	212.35	160.54	9.38	9.38	0.00
18	MWD	2436	46.20	180.00	S 0.00 W	31	2372.89	220.45	222.02 S	70.70 E	233.01	162.34	9.70	9.68	-0.97
19	MWD	2469	48.60	179.70	S 0.30 E	33	2395.22	244.73	246.31 S	70.76 E	256.27	163.97	7.30	7.27	-0.91
20	MWD	2500	52.00	179.40	S 0.60 E	31	2415.02	268.57	270.16 S	70.95 E	279.32	165.28	10.99	10.97	-0.97
21	MWD	2531	55.90	178.20	S 1.80 E	31	2433.26	293.61	295.21 S	71.48 E	303.74	166.39	12.96	12.58	-3.87
22	MWD	2563	58.70	177.40	S 2.60 E	32	2450.55	320.48	322.12 S	72.52 E	330.18	167.31	9.00	8.75	-2.50
23	MWD	2595	60.60	177.50	S 2.50 E	32	2466.72	348.04	349.70 S	73.75 E	357.39	168.09	5.94	5.94	0.31
24	MWD	2627	63.30	178.30	S 1.70 E	32	2481.76	376.23	377.92 S	74.78 E	385.25	168.81	8.72	8.44	2.50
25	MWD	2659	67.70	179.20	S 0.80 E	32	2495.03	405.31	407.02 S	75.41 E	413.95	169.50	13.99	13.75	2.81
26	MWD	2690	72.70	178.30	S 1.70 E	31	2505.53	434.44	436.18 S	76.05 E	442.76	170.11	16.36	16.13	-2.90
27	MWD	2722	76.80	178.70	S 1.30 E	32	2513.94	465.27	467.03 S	76.86 E	473.31	170.65	12.87	12.81	1.25
28	MWD	2754	77.80	179.20	S 0.80 E	32	2520.98	496.47	498.24 S	77.43 E	504.22	171.17	3.48	3.13	1.56
29	MWD	2786	79.40	179.40	S 0.60 E	32	2527.30	527.82	529.61 S	77.81 E	535.29	171.64	5.04	5.00	0.63
30	MWD	2818	80.00	180.30	S 0.30 W	32	2533.02	559.29	561.09 S	77.89 E	566.47	172.10	3.34	1.87	2.81
31	MWD	2850	81.30	180.10	S 0.10 W	32	2538.22	590.86	592.67 S	77.78 E	597.75	172.52	4.11	4.06	-0.63
32	MWD	2881	83.80	180.00	S 0.00 W	31	2542.24	621.59	623.40 S	77.76 E	628.23	172.89	8.07	8.06	-0.32
33	MWD	2913	85.40	179.80	S 0.20 E	32	2545.25	653.44	655.26 S	77.81 E	659.86	173.23	5.04	5.00	-0.62
34	MWD	2945	86.00	179.70	S 0.30 E	32	2547.65	685.34	687.17 S	77.95 E	691.58	173.53	1.90	1.87	-0.31
35	MWD	2977	87.40	180.80	S 0.80 W	32	2549.49	717.28	719.11 S	77.81 E	723.31	173.82	5.56	4.38	3.44
36	MWD	3040	89.00	181.00	S 1.00 W	63	2551.47	780.24	782.07 S	76.82 E	785.84	174.39	2.56	2.54	0.32
37	MWD	3104	89.20	181.00	S 1.00 W	64	2552.48	844.23	846.05 S	75.71 E	849.44	174.89	0.31	0.31	0.00
38	MWD	3167	90.30	180.90	S 0.90 W	63	2552.75	907.23	909.04 S	74.66 E	912.11	175.30	1.75	1.75	-0.16
39	MWD	3230	91.20	181.30	S 1.30 W	63	2551.93	970.23	972.03 S	73.45 E	974.80	175.68	1.56	1.43	0.63

Company: **Mewbourne**Field: **(Long) Sec 4, T20S, R25E**County: **Eddy NM**Job Number: **4649485**Magnetic Decl: **8.01**Grid Corr: **0.08**Proposed Azimuth: **181.23**Target Inclination: **89.82**TVD: **2531.00****INTEQ**Well Name: **Long Draw 9 AP Fed #1H**Total Survey Corr: **8.09**BRN From Survey: **-0.10**Rig: **Patterson #101**Date Printed: **27-May-12**

Offset		50'	Must Enter**													
	Tool	Survey	Incl	Azimuth	Quadrant	Course	TVD	VS	Coordinates		Closure		DLS	Bld Rate	Wlk Rate	
No.	Type	Depth (ft)	(°)	(°)		Lgth(ft)	(ft)	(ft)	N/S (ft)	E/W (ft)	Dist (ft)	Ang (°)	(%/100')	(%/100')	(%/100')	
40	MWD	3294	90.70	180.80	S 0.80 W	64	2550.87	1034.22	1036.01 S	72.28 E	1038.53	176.01	1.10	-0.78	-0.78	
41	MWD	3358	89.90	180.50	S 0.50 W	64	2550.53	1098.21	1100.00 S	71.55 E	1102.33	176.28	1.33	-1.25	-0.47	
42	MWD	3422	89.60	181.60	S 1.60 W	64	2550.81	1162.21	1163.99 S	70.38 E	1166.11	176.54	1.78	-0.47	1.72	
43	MWD	3485	89.60	182.20	S 2.20 W	63	2551.25	1225.20	1226.95 S	68.29 E	1228.85	176.81	0.95	0.00	0.95	
44	MWD	3548	91.00	182.40	S 2.40 W	63	2550.92	1288.19	1289.90 S	65.77 E	1291.57	177.08	2.24	2.22	0.32	
45	MWD	3612	91.20	182.40	S 2.40 W	64	2549.69	1352.17	1353.83 S	63.09 E	1355.30	177.33	0.31	0.31	0.00	
46	MWD	3675	90.90	182.10	S 2.10 W	63	2548.54	1415.14	1416.77 S	60.61 E	1418.07	177.55	0.67	-0.48	-0.48	
47	MWD	3739	90.70	182.30	S 2.30 W	64	2547.65	1479.13	1480.72 S	58.16 E	1481.86	177.75	0.44	-0.31	0.31	
48	MWD	3802	90.10	182.00	S 2.00 W	63	2547.21	1542.12	1543.67 S	55.79 E	1544.68	177.93	1.06	-0.95	-0.48	
49	MWD	3866	89.60	182.10	S 2.10 W	64	2547.37	1606.11	1607.63 S	53.50 E	1608.52	178.09	0.80	-0.78	0.16	
50	MWD	3929	89.30	181.90	S 1.90 W	63	2547.98	1669.10	1670.59 S	51.30 E	1671.38	178.24	0.57	-0.48	-0.32	
51	MWD	3993	89.20	182.00	S 2.00 W	64	2548.82	1733.09	1734.55 S	49.13 E	1735.24	178.38	0.22	-0.16	0.16	
52	MWD	4056	88.50	181.00	S 1.00 W	63	2550.08	1796.08	1797.51 S	47.48 E	1798.14	178.49	1.94	-1.11	-1.59	
53	MWD	4119	88.90	180.40	S 0.40 W	63	2551.51	1859.06	1860.49 S	46.71 E	1861.08	178.56	1.14	0.63	-0.95	
54	MWD	4183	89.90	180.00	S 0.00 W	64	2552.18	1923.04	1924.49 S	46.49 E	1925.05	178.62	1.68	1.56	-0.63	
55	MWD	4246	89.90	180.40	S 0.40 W	63	2552.29	1986.03	1987.48 S	46.27 E	1988.02	178.67	0.63	0.00	0.63	
56	MWD	4310	90.90	179.60	S 0.40 E	64	2551.84	2050.02	2051.48 S	46.27 E	2052.00	178.71	2.00	1.56	-1.25	
57	MWD	4373	90.40	179.70	S 0.30 E	63	2551.13	2112.99	2114.48 S	46.65 E	2114.99	178.74	0.81	-0.79	0.16	
58	MWD	4437	91.00	180.60	S 0.60 W	64	2550.35	2176.97	2178.47 S	46.48 E	2178.97	178.78	1.69	0.94	1.41	
59	MWD	4501	90.60	180.60	S 0.60 W	64	2549.45	2240.96	2242.46 S	45.81 E	2242.93	178.83	0.63	-0.63	0.00	
60	MWD	4564	89.60	179.80	S 0.20 E	63	2549.34	2303.95	2305.46 S	45.59 E	2305.91	178.87	2.03	-1.59	-1.27	
61	MWD	4628	90.60	181.20	S 1.20 W	64	2549.23	2367.94	2369.45 S	45.03 E	2369.88	178.91	2.69	1.56	2.19	
62	MWD	4692	90.50	181.20	S 1.20 W	64	2548.62	2431.94	2433.44 S	43.69 E	2433.83	178.97	0.16	-0.16	0.00	
63	MWD	4779	89.70	181.10	S 1.10 W	87	2548.46	2518.94	2520.42 S	41.95 E	2520.77	179.05	0.93	-0.92	-0.11	
64	MWD	4842	89.30	180.60	S 0.60 W	63	2549.01	2581.93	2583.41 S	41.01 E	2583.73	179.09	1.02	-0.63	-0.79	
65	MWD	4905	88.80	180.70	S 0.70 W	63	2550.06	2644.92	2646.40 S	40.30 E	2646.70	179.13	0.81	-0.79	0.16	
66	MWD	4969	88.30	180.40	S 0.40 W	64	2551.68	2708.90	2710.37 S	39.68 E	2710.66	179.16	0.91	-0.78	-0.47	
67	MWD	5032	89.80	180.90	S 0.90 W	63	2552.72	2771.88	2773.36 S	38.97 E	2773.63	179.19	2.51	2.38	0.79	
68	MWD	5095	91.30	182.00	S 2.00 W	63	2552.12	2834.88	2836.33 S	37.38 E	2836.58	179.25	2.95	2.38	1.75	
69	MWD	5159	91.20	182.40	S 2.40 W	64	2550.72	2898.85	2900.27 S	34.92 E	2900.48	179.31	0.64	-0.16	0.63	
70	MWD	5222	90.50	182.60	S 2.60 W	63	2549.79	2961.83	2963.20 S	32.17 E	2963.38	179.38	1.16	-1.11	0.32	
71	MWD	5286	89.70	182.10	S 2.10 W	64	2549.68	3025.82	3027.15 S	29.55 E	3027.29	179.44	1.47	-1.25	-0.78	
72	MWD	5349	89.10	182.30	S 2.30 W	63	2550.34	3088.80	3090.10 S	27.13 E	3090.22	179.50	1.00	-0.95	0.32	
73	MWD	5413	90.30	182.20	S 2.20 W	64	2550.67	3152.79	3154.05 S	24.62 E	3154.14	179.55	1.88	1.88	-0.16	
74	MWD	5474	90.80	182.60	S 2.60 W	61	2550.08	3213.77	3214.99 S	22.06 E	3215.06	179.61	1.05	0.82	0.66	
75	MWD	5535	90.00	182.70	S 2.70 W	61	2549.66	3274.75	3275.92 S	19.24 E	3275.98	179.66	1.32	-1.31	0.16	
76	MWD	5596	89.40	183.00	S 3.00 W	61	2549.98	3335.73	3336.84 S	16.21 E	3336.88	179.72	1.10	-0.98	0.49	
77	MWD	5658	90.30	180.80	S 0.80 W	62	2550.14	3397.72	3398.81 S	14.15 E	3398.84	179.76	3.83	1.45	-3.55	
78	MWD	5717	90.10	179.90	S 0.10 E	59	2549.93	3456.71	3457.80 S	13.79 E	3457.83	179.77	1.56	-0.34	-1.53	
79	MWD	5779	90.10	178.70	S 1.30 E	62	2549.83	3518.67	3519.80 S	14.55 E	3519.83	179.76	1.94	0.00	-1.94	

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Offset		50'	Must Enter**												
	Tool	Survey	Incl	Azimuth	Quadrant	Course	TVD	VS	Coordinates		Closure		DLS	Bld Rate	Wlk Rate
No.	Type	Depth (ft)	(°)	(°)		Lgth(ft)	(ft)	(ft)	N/S (ft)	E/W (ft)	Dist (ft)	Ang (°)	(%/100')	(%/100')	(%/100')
80	MWD	5841	89.60	179.00	S 1.00 E	62	2549.99	3580.62	3581.79 S	15.80 E	3581.82	179.75	0.94	-0.81	0.48
81	MWD	5903	89.00	179.50	S 0.50 E	62	2550.75	3642.58	3643.77 S	16.61 E	3643.81	179.74	1.26	-0.97	0.81
82	MWD	5964	88.90	179.90	S 0.10 E	61	2551.86	3703.55	3704.76 S	16.93 E	3704.80	179.74	0.68	-0.16	0.66
83	MWD	6025	90.30	180.00	S 0.00 W	61	2552.29	3764.53	3765.76 S	16.98 E	3765.80	179.74	2.30	2.30	0.16
84	MWD	6088	91.90	180.80	S 0.80 W	63	2551.08	3827.51	3828.74 S	16.54 E	3828.78	179.75	2.84	2.54	1.27
85	MWD	6152	91.60	181.20	S 1.20 W	64	2549.13	3891.48	3892.71 S	15.42 E	3892.74	179.77	0.78	-0.47	0.62
86	MWD	6215	91.10	181.10	S 1.10 W	63	2547.64	3954.46	3955.67 S	14.16 E	3955.70	179.79	0.81	-0.79	-0.16
87	MWD	6279	91.10	181.70	S 1.70 W	64	2546.41	4018.45	4019.64 S	12.60 E	4019.66	179.82	0.94	0.00	0.94
88	MWD	6342	89.50	180.60	S 0.60 W	63	2546.08	4081.44	4082.63 S	11.33 E	4082.64	179.84	3.08	-2.54	-1.75
89	MWD	6405	88.60	180.40	S 0.40 W	63	2547.13	4144.43	4145.62 S	10.78 E	4145.63	179.85	1.46	-1.43	-0.32
90	MWD	6469	88.50	180.80	S 0.80 W	64	2548.75	4208.40	4209.59 S	10.11 E	4209.60	179.86	0.64	-0.16	0.63
91	MWD	6533	88.00	181.30	S 1.30 W	64	2550.70	4272.37	4273.55 S	8.94 E	4273.56	179.88	1.10	-0.78	0.78
92	MWD	6595	87.60	181.60	S 1.60 W	62	2553.08	4334.33	4335.48 S	7.37 E	4335.49	179.90	0.81	-0.65	0.48
93	MWD	6659	88.60	181.20	S 1.20 W	64	2555.20	4398.29	4399.43 S	5.81 E	4399.43	179.92	1.68	1.56	-0.63
94	MWD	6723	89.20	180.60	S 0.60 W	64	2556.43	4462.28	4463.41 S	4.80 E	4463.41	179.94	1.33	0.94	-0.94
95	MWD	6786	91.00	181.00	S 1.00 W	63	2556.32	4525.27	4526.40 S	3.93 E	4526.40	179.95	2.93	2.86	0.63
96	MWD	6849	91.90	181.30	S 1.30 W	63	2554.73	4588.25	4589.37 S	2.66 E	4589.37	179.97	1.51	1.43	0.48
97	MWD	6913	91.10	181.20	S 1.20 W	64	2553.05	4652.23	4653.33 S	1.27 E	4653.33	179.98	1.26	-1.25	-0.16
98	MWD	6977	90.60	181.40	S 1.40 W	64	2552.10	4716.22	4717.30 S	0.19 W	4717.30	180.00	0.84	-0.78	0.31
99	MWD	7040	90.10	182.10	S 2.10 W	63	2551.72	4779.22	4780.27 S	2.11 W	4780.27	180.03	1.37	-0.79	1.11
100	MWD	7103	88.70	183.30	S 3.30 W	63	2552.38	4842.19	4843.20 S	5.08 W	4843.20	180.06	2.93	-2.22	1.90
101	MWD	7167	88.40	183.30	S 3.30 W	64	2554.00	4906.13	4907.07 S	8.76 W	4907.08	180.10	0.47	-0.47	0.00
102	MWD	7230	87.90	183.30	S 3.30 W	63	2556.03	4969.05	4969.93 S	12.39 W	4969.95	180.14	0.79	-0.79	0.00
103	MWD	7294	88.10	182.20	S 2.20 W	64	2558.27	5032.99	5033.82 S	15.45 W	5033.84	180.18	1.75	0.31	-1.72
104	MWD	7357	88.30	181.90	S 1.90 W	63	2560.24	5095.95	5096.75 S	17.71 W	5096.78	180.20	0.57	0.32	-0.48
105	MWD	7420	90.40	182.00	S 2.00 W	63	2560.96	5158.94	5159.70 S	19.85 W	5159.74	180.22	3.34	3.33	0.16
106	MWD	7480	91.80	181.80	S 1.80 W	60	2559.81	5218.92	5219.66 S	21.84 W	5219.70	180.24	2.36	2.33	-0.33
107	TD	7530	91.80	181.80	S 1.80 W	50	2558.24	5268.90	5269.61 S	23.41 W	5269.66	180.25	0.00	0.00	0.00



Company: Mewbourne Oil Company
 Lease/Well: Long Draw 9 AP Fedcom/#1H
 Location: Sec 004 T-20S R-25E
 Rig Name: Patterson 101
 State/County: New Mexico /Eddy
 Latitude: 32.60, Longitude: -104.48
 GRID North is 0.08 Degrees West of True North
 VS-Azi: 180.25 Degrees



Depth Reference : RKB 17.5 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ... draw 9 ap fedcom #1_ed_ed.ut

Minimum Curvature Method

Report Date/Time: 5/17/2012 / 03:23

Vaughn Energy Services

Shreveport, LA

318-549-3860

Surveyor: Billy James

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	0.38	77.05	100.00	0.07	0.32	-0.08	0.33	77.05	0.38
200.00	0.42	89.98	200.00	0.15	1.01	-0.15	1.03	81.67	0.10
300.00	1.24	64.91	299.99	0.61	2.36	-0.62	2.44	75.60	0.87
400.00	1.33	61.47	399.96	1.62	4.36	-1.64	4.65	69.63	0.12
500.00	0.88	82.87	499.94	2.27	6.14	-2.29	6.55	69.73	0.60
600.00	1.52	72.49	599.92	2.76	8.17	-2.80	8.62	71.32	0.67
700.00	1.66	83.43	699.88	3.33	10.87	-3.37	11.37	72.98	0.33
800.00	1.42	84.32	799.85	3.61	13.53	-3.67	14.01	75.04	0.24
900.00	1.17	97.60	899.82	3.60	15.77	-3.67	16.18	77.14	0.39
1000.00	2.03	93.50	999.78	3.36	18.55	-3.44	18.86	79.74	0.87
1100.00	2.36	100.02	1099.71	2.89	22.35	-2.99	22.54	82.63	0.42
1200.00	3.82	113.24	1199.56	1.22	27.44	-1.34	27.47	87.46	1.62
1300.00	2.91	109.97	1299.39	-0.96	32.89	0.82	32.91	91.68	0.93
1400.00	3.03	102.67	1399.25	-2.41	37.86	2.25	37.94	93.64	0.40
1500.00	2.85	111.42	1499.12	-3.90	42.75	3.71	42.93	95.21	0.48
1600.00	2.77	108.11	1599.00	-5.56	47.36	5.35	47.69	96.69	0.18
1685.00	2.68	100.04	1683.91	-6.54	51.27	6.32	51.69	97.27	0.46

HORIZONTAL DISPLACEMENT IS
 51.69 FEET AT 97.27 DEGREES



Company: Mewbourne Oil Company
Lease/Well: Long Draw 9 AP Federal Com/No. 001H
Location: Sec 004 T-20S R-25E
Rig Name: Patterson 101
State/County: New Mexico /Eddy
Latitude: 32.60
GRID North is 0.08 Degrees West of True North
VS-Azi: 180.25 Degrees



Depth Reference : RKB 17.5 F'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ... draw 9 ap fedcom #1_ed_ed.ut

Minimum Curvature Method

Report Date/Time: 5/24/2012 / 11:20

Vaughn Energy Services

Shreveport, LA

318-549-3860

Surveyor: Billy James

Long Draw 9 AP Federal Com No. 001H / API 30-015-38310

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	0.38	77.05	100.00	0.07	0.32	-0.08	0.33	77.05	0.38
200.00	0.42	89.98	200.00	0.15	1.01	-0.15	1.03	81.67	0.10
300.00	1.24	64.91	299.99	0.61	2.36	-0.62	2.44	75.60	0.87
400.00	1.33	61.47	399.96	1.62	4.36	-1.64	4.65	69.63	0.12
500.00	0.88	82.87	499.94	2.27	6.14	-2.29	6.55	69.73	0.60
600.00	1.52	72.49	599.92	2.76	8.17	-2.80	8.62	71.32	0.67
700.00	1.66	83.43	699.88	3.33	10.87	-3.37	11.37	72.98	0.33
800.00	1.42	84.32	799.85	3.61	13.53	-3.67	14.01	75.04	0.24
900.00	1.17	97.60	899.82	3.60	15.77	-3.67	16.18	77.14	0.39
1000.00	2.03	93.50	999.78	3.36	18.55	-3.44	18.86	79.74	0.87
1100.00	2.36	100.02	1099.71	2.89	22.35	-2.99	22.54	82.63	0.42
1200.00	3.82	113.24	1199.56	1.22	27.44	-1.34	27.47	87.46	1.62
1300.00	2.91	109.97	1299.39	-0.96	32.89	0.82	32.91	91.68	0.93
1400.00	3.03	102.67	1399.25	-2.41	37.86	2.25	37.94	93.64	0.40
1500.00	2.85	111.42	1499.12	-3.90	42.75	3.71	42.93	95.21	0.48
1600.00	2.77	108.11	1599.00	-5.56	47.36	5.35	47.69	96.69	0.18
1685.00	2.68	100.04	1683.91	-6.54	51.27	6.32	51.69	97.27	0.46



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outside Mewbourne Oil Company

Completion
Final

Prepared for Mr. Mickey Young	Company Mewbourne Oil Company	Date 24-May-12
Well Name Long Draw 9 AP Fed Com #1H	Type of Installation 18-Stage 4 1/2" StackFRAC*HD	Location Eddy County, NM

Depth	Drawing	Description	OD(in)	D(in)	Length
REV_					
KOP 1903'					
TOL 1691.94' 64 8 bbls					
7" Shoe 1903'					
2215.25'					
3038.39'					
Stage 18 3131.91' 87.1 bbls					
3268.49'					
Stage 17 3362.07' 90.7 bbls					
3498.75'					
Stage 16 3592.32' 94.3 bbls					
3686.27'					

Drillable FracPORT's to be shipped without handling pups

Latched Seal Assembly
7" 23-32 ppf x 3.875" Lower Bore x 4.75" Upper Bore SF Liner Hanger Packer
PN: 108425-000004 (Shear Pins: 2 @ 482 plus 1 @ 241 : 1,205 psi setting pressure)
SF Bottom Guide
3' x 4-1/2" 11.60# L-80 BTC X LTC Pup Joint
7" 26# L-80 LT&C Casing

4-1/2" 11.60# J-55 LTC LINER JOINTS: 12
6' x 4-1/2" 11 60# L-80 LTC Pup Joint
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer
PN: 104485-000001 SN: EA3019437 (6 shear pins at 324 psi each: 1,944 psi setting pressure) L-80 Mat'l
3' x 4-1/2" 11 60# L-80 LTC Pup Joint

4-1/2" 11.60# J-55 LTC LINER JOINTS: 19
6' x 4-1/2" 11.60# L-80 LTC Pup Joint
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer
PN: 121332-000024 SN: EA1022043 (6 shear pins at 324 psi each: 1,944 psi setting pressure) L-80 Mat'l
3' x 4-1/2" 11.60# L-80 LTC Pup Joint
4-1/2" 11.60# J-55 LTC LINER JOINTS: 2
Packers Plus 4-1/2" Drillable FracPORT™ with 3.625" Seat for 3.750" High Pressure Ball
PN: 121332-000024 SN: EA1022043 (5 shear pins at 315 psi each: 1,575 psi opening pressure)
4-1/2" 11.60# J-55 LTC LINER JOINTS: 3
6' x 4-1/2" 11.60# L-80 LTC Pup Joint
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer
PN: 104485-000001 SN: EA3019431 (6 shear pins at 324 psi each: 1,944 psi setting pressure) L-80 Mat'l
3' x 4-1/2" 11.60# L-80 LTC Pup Joint
4-1/2" 11.60# J-55 LTC LINER JOINTS: 2
Packers Plus 4-1/2" Drillable FracPORT™ with 3.500" Seat for 3.625" High Pressure Ball
PN: 121332-000023-000019 SN: EA1024443 (5 shear pins at 315 psi each: 1,575 psi opening pressure)
4-1/2" 11.60# J-55 LTC LINER JOINTS: 3
6' x 4-1/2" 11.60# L-80 LTC Pup Joint
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer
PN: 104485-000001 SN: EA3019430 (6 shear pins at 324 psi each: 1,944 psi setting pressure) L-80 Mat'l
3' x 4-1/2" 11.60# L-80 LTC Pup Joint
4-1/2" 11.60# J-55 LTC LINER JOINTS: 2
Packers Plus 4-1/2" Drillable FracPORT™ with 3.375" Seat for 3.500" High Pressure Ball
PN: 108481-000020 SN: EM0040542 (5 shear pins at 315 psi each: 1,575 psi opening pressure)
4-1/2" 11.60# J-55 LTC LINER JOINTS: 2
6' x 4-1/2" 11.60# L-80 LTC Pup Joint
Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer
PN: 104485-000001 SN: EA2010481 (6 shear pins at 324 psi each: 1,944 psi setting pressure) L-80 Mat'l
3' x 4-1/2" 11 60# L-80 LTC Pup Joint
4-1/2" 11.60# J-55 LTC LINER JOINTS: 3

Page 1 of 3

Service Center Telephone Contact
Midland, TX 432-563-8024 Scott Mabry

Telephone
Chad Williams 405-255-3223



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Completion
Final

Prepared for		Company	Date		
Mr. Mickey Young		Mewbourne Oil Company	24-May-12		
Well Name		Type of Installation	Location		
Long Draw 9 AP Fed Com #1H		18-Stage 4 1/2" StackFRAC®HD	Eddy County, NM		
Depth	Drawing	Description	OD(in)	ID(in)	Length
REV_					
Stage 15			Page 2 of 3		
3822.21'		Packers Plus 4-1/2" Drillable FracPORT™ with 3.250" Seat for 3.375" High Pressure Ball	5 630"	3.250	2 65
97.8 bbls		PN: 108481-000019 SN: EM0040800 (5 shear pins at 315 psi each: 1,575 psi opening pressure)		3.720	
		4-1/2" 11.60# J-55 LTC LINER	4 500"	4.000	42 67
		JOINTS: 1	4 500"	4 000	6 04
3873.57'		6' x 4-1/2" 11 60# L-80 LTC Pup Joint	5 750"	3.750	5.25
		Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer			
		PN: 104485-000001 SN: EA3024454 (6 shear pins at 324 psi each: 1,944 psi setting pressure) L-80 Mat'l			
		3' x 4-1/2" 11.60# L-80 LTC Pup Joint	4 500"	4 000	3.04
		4-1/2" 11.60# J-55 LTC LINER	4 500"	4.000	85.01
		JOINTS: 2	5 630"	3.125	2 65
Stage 14		Packers Plus 4-1/2" Drillable FracPORT™ with 3.125" Seat for 3.250" High Pressure Ball		3.720	
3966.87'		PN: 108481-000018 SN: EM0043430 (5 shear pins at 315 psi each: 1,575 psi opening pressure)	4.500"	4.000	213.29
100.1 bbls		4-1/2" 11.60# J-55 LTC LINER	4 500"	4 000	5 99
		JOINTS: 5	5 750"	3.750	5.25
4188.80'		6' x 4-1/2" 11 60# L-80 LTC Pup Joint			
		Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer	4 500"	4 000	3 00
		PN: 104485-000001 SN: EA2010489 (6 shear pins at 324 psi each: 1,944 psi setting pressure) L-80 Mat'l	4 500"	4 000	255.82
		3' x 4-1/2" 11 60# L-80 LTC Pup Joint	5 630"	3.000	2 65
		4-1/2" 11.60# J-55 LTC LINER		3.720	
Stage 13		Packers Plus 4-1/2" Drillable FracPORT™ with 3.000" Seat for 3.125" High Pressure Ball	4 500"	4 000	84 53
4452.87'		PN: 108481-000017 SN: EM0040530 (5 shear pins at 315 psi each: 1,575 psi opening pressure)	4.500"	4 000	6 02
107.6 bbls		4-1/2" 11.60# J-55 LTC LINER	5 750"	3.750	5 25
		JOINTS: 2			
4546.07'		6' x 4-1/2" 11 60# L-80 LTC Pup Joint	4.500"	4 000	3.05
		Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer	4.500"	4.000	84 64
		PN: 104485-000001 SN: EA3024455 (6 shear pins at 324 psi each: 1,944 psi setting pressure) L-80 Mat'l	5 630"	2.875	2 65
		3' x 4-1/2" 11 60# L-80 LTC Pup Joint		3.720	
		4-1/2" 11.60# J-55 LTC LINER	4 500"	4.000	85.32
Stage 12		Packers Plus 4-1/2" Drillable FracPORT™ with 2.875" Seat for 3.000" High Pressure Ball	4 500"	4 000	6 01
4639.01'		PN: 108481-000016 SN: EM0043421 (5 shear pins at 315 psi each: 1,575 psi opening pressure)	5.750"	3.750	5 25
110.5 bbls		4-1/2" 11.60# J-55 LTC LINER			
		JOINTS: 2	4.500"	4 000	3 04
4732.99'		6' x 4-1/2" 11 60# L-80 LTC Pup Joint	4.500"	4.000	84.57
		Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer	5.630"	2.625	2.65
		PN: 104485-000001 SN: EA2010438 (6 shear pins at 324 psi each: 1,944 psi setting pressure) L-80 Mat'l		3.720	
		3' x 4-1/2" 11 60# L-80 LTC Pup Joint	4 500"	4 000	85.32
		4-1/2" 11.60# J-55 LTC LINER	4 500"	4 000	6 01
Stage 11		Packers Plus 4-1/2" Drillable FracPORT™ with 2.750" Seat for 2.875" High Pressure Ball	5.750"	3.750	5 25
4825.85'		PN: 108481-000015 SN: EM0040500 (5 shear pins at 315 psi each: 1,575 psi opening pressure)			
113.4 bbls		4-1/2" 11.60# J-55 LTC LINER	4.500"	4 000	42.68
		JOINTS: 1	4.500"	4 000	6.00
4877.18'		6' x 4-1/2" 11 60# L-80 LTC Pup Joint	5 750"	3.750	5.25
		Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer			
		PN: 104485-000001 SN: EA3019433 (6 shear pins at 324 psi each: 1,944 psi setting pressure) L-80 Mat'l	4.500"	4.000	3.03
		3' x 4-1/2" 11 60# L-80 LTC Pup Joint	4.500"	4.000	85.34
		4-1/2" 11.60# J-55 LTC LINER	5.630"	2.625	2.65
Stage 10		Packers Plus 4-1/2" Drillable FracPORT™ with 2.625" Seat for 2.750" High Pressure Ball		3.720	
4970.80'		PN: 108481-000014 SN: EM0054925 (5 shear pins at 315 psi each: 1,575 psi opening pressure)	4.500"	4 000	85.37
115.6 bbls		4-1/2" 11.60# J-55 LTC LINER	4.500"	4 000	6.03
		JOINTS: 2	5 750"	3.750	5.25
5064.85'		6' x 4-1/2" 11.60# L-80 LTC Pup Joint			
		Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer	4 500"	4.000	3.03
		PN: 104485-000001 SN: EA3019436 (6 shear pins at 324 psi each: 1,944 psi setting pressure) L-80 Mat'l	4.500"	4.000	85.36
		3' x 4-1/2" 11.60# L-80 LTC Pup Joint	5.630"	2.500	2.65
		4-1/2" 11.60# J-55 LTC LINER		3.720	
Stage 9		Packers Plus 4-1/2" Drillable FracPORT™ with 2.500" Seat for 2.625" High Pressure Ball	4.500"	4.000	84.36
5158.49'		PN: 108481-000013 SN: EM0052931 (5 shear pins at 315 psi each: 1,575 psi opening pressure)	4 500"	4.000	6.02
118.5 bbls		4-1/2" 11.60# J-55 LTC LINER	5.750"	3.750	5.25
		JOINTS: 2			
5251.52'		6' x 4-1/2" 11 60# L-80 LTC Pup Joint	4 500"	4.000	3.04
		Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer	4.500"	4.000	84.49
		PN: 104485-000001 SN: EA2010479 (6 shear pins at 324 psi each: 1,944 psi setting pressure) L-80 Mat'l	5 630"	2.375	2 65
		3' x 4-1/2" 11.60# L-80 LTC Pup Joint		3.720	
		4-1/2" 11.60# J-55 LTC LINER	4.500"	4.000	254.41
Stage 8		Packers Plus 4-1/2" Drillable FracPORT™ with 2.375" Seat for 2.500" High Pressure Ball			
5344.30'		PN: 108481-000012 SN: EM0054921 (5 shear pins at 315 psi each: 1,575 psi opening pressure)			
121.4 bbls		4-1/2" 11.60# J-55 LTC LINER			
		JOINTS: 6			
Service Center		Telephone	Telephone		
Midland, TX		432-563-8024	Scott Mabry		
		Contact	Chad Williams 405-255-3223		



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Completion
Final

Prepared for Mr. Mickey Young		Company Mewbourne Oil Company		Date 24-May-12		
Well Name Long Draw 9 AP Fed Com #1H		Type of Installation 18-Stage 4 1/2" StackFRAC®HD		Location Eddy County, NM		
Depth	Drawing	Description		OD(in)	ID(in)	Length
				Page 3 of 3		
REV_		6' x 4-1/2" 11 60# L-80 LTC Pup Joint		4 500"	4 000	6.03
5607.39'		Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 104485-000001 SN: EA2010478 (6 shear pins at 324 psi each; 1,944 psi setting pressure) L-80 Mat'l		5 750"	3.750	5 25
		3' x 4-1/2" 11.60# L-80 LTC Pup Joint		4 500"	4.000	3 03
		4-1/2" 11.60# J-55 LTC LINER		4.500"	4.000	297 93
		JOINTS: 7		5 630"	2.250	2 65
Stage 7		Packers Plus 4-1/2" Drillable FracPORT™ with 2.250" Seat for 2.375" High Pressure Ball PN: 108481-000011 SN: EM0045706 (5 shear pins at 315 psi each; 1,575 psi opening pressure)		4 500"	4.000	85 28
5913.60'		4-1/2" 11.60# J-55 LTC LINER		4 500"	4 000	6 04
130.2 bbls		JOINTS: 2		5 750"	3.750	5 25
		6' x 4-1/2" 11 60# L-80 LTC Pup Joint		4 500"	4 000	3 05
6007.57'		Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 104485-000001 SN: EA3019439 (6 shear pins at 324 psi each; 1,944 psi setting pressure) L-80 Mat'l		4.500"	4.000	85.37
		3' x 4-1/2" 11 60# L-80 LTC Pup Joint		5 630"	2.125	2 65
		4-1/2" 11.60# J-55 LTC LINER		4 500"	4.000	168.56
		JOINTS: 4		4 500"	4.000	6 03
Stage 6		Packers Plus 4-1/2" Drillable FracPORT™ with 2.125" Seat for 2.250" High Pressure Ball PN: 108481-000010 SN: EM0054910 (5 shear pins at 315 psi each; 1,575 psi opening pressure)		5 750"	3.875	5.25
6101.24'		4-1/2" 11.60# J-55 LTC LINER		4.500"	4.000	3 02
133.1 bbls		JOINTS: 5		4.500"	4.000	213.41
		6' x 4-1/2" 11.60# L-80 LTC Pup Joint		5 630"	2.000	2 65
6278.48'		Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 104485-000001 SN: EA3019438 (6 shear pins at 324 psi each; 1,944 psi setting pressure) L-80 Mat'l		4 500"	4.000	168.48
		3' x 4-1/2" 11.60# L-80 LTC Pup Joint		4 500"	4.000	6 04
		4-1/2" 11.60# J-55 LTC LINER		5 750"	3.750	5 25
	JOINTS: 5		4 500"	4.000	3 04	
Stage 5	Packers Plus 4-1/2" Drillable FracPORT™ with 2.000" Seat for 2.125" High Pressure Ball PN: 108481-000009 SN: EM0046406 (5 shear pins at 315 psi each; 1,575 psi opening pressure)		4.500"	4.000	213.27	
6500.16'	4-1/2" 11.60# J-55 LTC LINER		5 630"	1.875	2 65	
139.3 bbls	JOINTS: 4		4 500"	4.000	85.20	
	6' x 4-1/2" 11 60# L-80 LTC Pup Joint		4 500"	4.000	6.00	
6677.33'	Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 104485-000001 SN: EA3019435 (6 shear pins at 324 psi each; 1,944 psi setting pressure) L-80 Mat'l		5 750"	3.750	5 25	
	3' x 4-1/2" 11.60# L-80 LTC Pup Joint		4.500"	4.000	3 04	
	4-1/2" 11.60# J-55 LTC LINER		4.500"	4.000	213.27	
	JOINTS: 5		5.630"	1.875	2 65	
Stage 4	Packers Plus 4-1/2" Drillable FracPORT™ with 1.875" Seat for 2.000" High Pressure Ball PN: 108481-000008 SN: EM0043165 (5 shear pins at 315 psi each; 1,575 psi opening pressure)		4 500"	4.000	85.20	
6898.89'	4-1/2" 11.60# J-55 LTC LINER		4 500"	4.000	6.00	
145.5 bbls	JOINTS: 2		5 750"	3.750	5 25	
	6' x 4-1/2" 11.60# L-80 LTC Pup Joint		4.500"	4 000	3.00	
6992.74'	Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 104485-000001 SN: EA3019434 (6 shear pins at 324 psi each; 1,944 psi setting pressure) L-80 Mat'l		4.500"	4.000	85.11	
	3' x 4-1/2" 11.60# L-80 LTC Pup Joint		5.630"	1.750	2.65	
	4-1/2" 11.60# J-55 LTC LINER		4 500"	4.000	127.11	
	JOINTS: 3		4.500"	4.000	6.05	
Stage 3	Packers Plus 4-1/2" Drillable FracPORT™ with 1.750" Seat for 1.875" High Pressure Ball PN: 108481-000007 EA: EM0057669 (5 shear pins at 315 psi each; 1,575 psi opening pressure)		5.750"	3.750	5.25	
7086.10'	4-1/2" 11.60# J-55 LTC LINER		4.500"	4.000	3.08	
148.4 bbls	JOINTS: 2		4.500"	4.000	84.59	
	6' x 4-1/2" 11.60# L-80 LTC Pup Joint		5.630"	1.625	2 65	
7221.91'	Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 104485-000001 SN: EA3024457 (6 shear pins at 324 psi each; 1,944 psi setting pressure) L-80 Mat'l		4.500"	4.000	84.89	
	3' x 4-1/2" 11.60# L-80 LTC Pup Joint		4.500"	4.000	6 03	
	4-1/2" 11.60# J-55 LTC LINER		5 750"	3.750	5 25	
	JOINTS: 2		4 500"	4.000	3 02	
Stage 2	Packers Plus 4-1/2" Drillable FracPORT™ with 1.625" Seat for 1.750" High Pressure Ball PN: 108481-000006 SN: EM0034468 (5 shear pins at 315 psi each; 1,575 psi opening pressure)		4.500"	4.000	85.33	
7314.83'	4-1/2" 11.60# J-55 LTC LINER		4.500"	4.000	3 00	
151.9 bbls	JOINTS: 2					
	6' x 4-1/2" 11 60# L-80 LTC Pup Joint					
7408.40'	Packers Plus 7" x 4-1/2" RockSEAL® II 10K Centralized Hydraulic Set Open Hole Packer PN: 104485-000001 SN: EA2010480 (6 shear pins at 324 psi each; 1,944 psi setting pressure) L-80 Mat'l					
	3' x 4-1/2" 11 60# L-80 LTC Pup Joint					
	4-1/2" 11.60# J-55 LTC LINER					
	JOINTS: 2					
Stage 1	Customer 4-1/2" Pump Off Sub (Pinned above 4000 PSI)					
7502.00'						
154.8 bbls						
EOT						
7505' MD						
TMD						
7530' MD						
TVD						
2552'						
Service Center Midland, TX		Telephone 432-563-8024		Contact Scott Mabry		Telephone Chad Williams 405-255-3223