

Mewbourne Oil Company

SURVEY CALCULATION REPORT Minimum Curvature Calculations

Operator: Mewbourne Oil Company
Lease Name: Ruger 6 Fed Com 4H
KOP 8344.04
SL: 150 FNL & 1755 FEL Sec 6-20S-29E
BHL: 330 FSL & 2130 FEL Sec 6-20S-29E

Target KBTVD: 8,917 Feet 8917.00
Target Angle: 88.95 Degrees 88.95
Section Plane: 181.17 Degrees
Declination Corrected to True North: 6.63 Degrees
Bit to Survey Offset: 44 Feet

Survey No.	Measured Depth-ft	Drift (Deg.)	Azimuth (Deg.)	Course Length	TVD (Feet)	Vertical Section	+N/-S (Feet)	+E/-W (Feet)	Closure Distance	Closure Direction	BUR	DLS	KBTVD	+Above -Below Target	DRIFT RADIANS	AZIMUTH (RADIANS)
T/I	8344.04	0.00	181.17	N/A	8344.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	8344.0	573.0	1E-12	3.16 #VALUE!
1	8432.99	8.90	181.17	88.951	8432.6	6.9	-6.9	-0.1	6.9	181.2	10.0	10.0	8432.5	484.5	0.15525	3.16 0.155248
2	8521.94	17.79	181.17	88.951	8519.1	27.4	-27.4	-0.6	27.4	181.2	10.0	10.0	8518.6	398.4	0.3105	3.16 0.155248
3	8610.89	26.69	181.17	88.951	8601.4	61.0	-61.0	-1.2	61.0	181.2	10.0	10.0	8600.2	316.8	0.46574	3.16 0.155248
4	8699.84	35.58	181.17	88.951	8677.4	107.0	-106.9	-2.2	107.0	181.2	10.0	10.0	8675.5	241.5	0.62099	3.16 0.155248
5	8788.79	44.48	181.17	88.951	8745.5	164.1	-164.1	-3.3	164.1	181.2	10.0	10.0	8742.5	174.5	0.77624	3.16 0.155248
6	8877.75	53.37	181.17	88.951	8803.8	231.1	-231.1	-4.7	231.1	181.2	10.0	10.0	8799.6	117.4	0.93149	3.16 0.155248
7	8966.70	62.27	181.17	88.951	8851.2	306.3	-306.3	-6.2	306.3	181.2	10.0	10.0	8845.6	71.4	1.08674	3.16 0.155248
8	9055.65	71.16	181.17	88.951	8886.3	387.9	-387.9	-7.9	387.9	181.2	10.0	10.0	8879.2	37.8	1.24198	3.16 0.155248
9	9144.60	80.06	181.17	88.951	8908.4	474.0	-473.9	-9.7	474.0	181.2	10.0	10.0	8899.7	17.3	1.39723	3.16 0.155248
10	9233.55	88.95	181.17	88.951	8916.9	562.5	-562.3	-11.5	562.5	181.2	10.0	10.0	8906.6	10.4	1.55248	3.16 0.155248
11	9300.00	88.95	181.17	66.453	8918.1	628.9	-628.8	-12.8	628.9	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
12	9400.00	88.95	181.17	100	8920.0	728.9	-728.7	-14.9	728.9	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
13	9500.00	88.95	181.17	100	8921.8	828.9	-828.7	-16.9	828.9	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
14	9600.00	88.95	181.17	100	8923.6	928.9	-928.7	-18.9	928.9	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
15	9700.00	88.95	181.17	100	8925.4	1028.8	-1028.6	-21.0	1028.8	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
16	9800.00	88.95	181.17	100	8927.3	1128.8	-1128.6	-23.0	1128.8	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
17	9900.00	88.95	181.17	100	8929.1	1228.8	-1228.5	-25.1	1228.8	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
18	10000.00	88.95	181.17	100	8930.9	1328.8	-1328.5	-27.1	1328.8	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
19	10100.00	88.95	181.17	100	8932.8	1428.8	-1428.5	-29.1	1428.8	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
20	10200.00	88.95	181.17	100	8934.6	1528.8	-1528.4	-31.2	1528.8	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
21	10300.00	88.95	181.17	100	8936.4	1628.7	-1628.4	-33.2	1628.7	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
22	10400.00	88.95	181.17	100	8938.3	1728.7	-1728.4	-35.2	1728.7	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
23	10500.00	88.95	181.17	100	8940.1	1828.7	-1828.3	-37.3	1828.7	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
24	10600.00	88.95	181.17	100	8941.9	1928.7	-1928.3	-39.3	1928.7	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
25	10700.00	88.95	181.17	100	8943.8	2028.7	-2028.2	-41.4	2028.7	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
26	10800.00	88.95	181.17	100	8945.6	2128.7	-2128.2	-43.4	2128.7	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
27	10900.00	88.95	181.17	100	8947.4	2228.6	-2228.2	-45.4	2228.6	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
28	11000.00	88.95	181.17	100	8949.3	2328.6	-2328.1	-47.5	2328.6	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
29	11100.00	88.95	181.17	100	8951.1	2428.6	-2428.1	-49.5	2428.6	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
30	11200.00	88.95	181.17	100	8952.9	2528.6	-2528.1	-51.6	2528.6	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
31	11300.00	88.95	181.17	100	8954.8	2628.6	-2628.0	-53.6	2628.6	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
32	11400.00	88.95	181.17	100	8956.6	2728.6	-2728.0	-55.6	2728.6	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
33	11500.00	88.95	181.17	100	8958.4	2828.5	-2827.9	-57.7	2828.5	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
34	11600.00	88.95	181.17	100	8960.2	2928.5	-2927.9	-59.7	2928.5	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
35	11700.00	88.95	181.17	100	8962.1	3028.5	-3027.9	-61.7	3028.5	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
36	11800.00	88.95	181.17	100	8963.9	3128.5	-3127.8	-63.8	3128.5	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
37	11900.00	88.95	181.17	100	8965.7	3228.5	-3227.8	-65.8	3228.5	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
38	12000.00	88.95	181.17	100	8967.6	3328.5	-3327.8	-67.9	3328.5	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
39	12100.00	88.95	181.17	100	8969.4	3428.4	-3427.7	-69.9	3428.4	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
40	12200.00	88.95	181.17	100	8971.2	3528.4	-3527.7	-71.9	3528.4	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
41	12300.00	88.95	181.17	100	8973.1	3628.4	-3627.6	-74.0	3628.4	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
42	12400.00	88.95	181.17	100	8974.9	3728.4	-3727.6	-76.0	3728.4	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
43	12500.00	88.95	181.17	100	8976.7	3828.4	-3827.6	-78.1	3828.4	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
44	12600.00	88.95	181.17	100	8978.6	3928.4	-3927.5	-80.1	3928.4	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
45	12700.00	88.95	181.17	100	8980.4	4028.3	-4027.5	-82.1	4028.3	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
46	12800.00	88.95	181.17	100	8982.2	4128.3	-4127.5	-84.2	4128.3	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
47	12900.00	88.95	181.17	100	8984.1	4228.3	-4227.4	-86.2	4228.3	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
48	13000.00	88.95	181.17	100	8985.9	4328.3	-4327.4	-88.2	4328.3	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
49	13100.00	88.95	181.17	100	8987.7	4428.3	-4427.3	-90.3	4428.3	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
50	13200.00	88.95	181.17	100	8989.6	4528.3	-4527.3	-92.3	4528.3	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
51	13300.00	88.95	181.17	100	8991.4	4628.2	-4627.3	-94.4	4628.2	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
52	13400.00	88.95	181.17	100	8993.2	4728.2	-4727.2	-96.4	4728.2	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
53	13500.00	88.95	181.17	100	8995.0	4828.2	-4827.2	-98.4	4828.2	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
54	13600.00	88.95	181.17	100	8996.9	4928.2	-4927.2	-100.5	4928.2	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
55	13611.04	88.95	181.17	11.041	8997.1	4939.2	-4938.2	-100.7	4939.2	181.2	0.0	0.0	8906.6	10.4	1.55248	3.16 1E-10
56	13611.04	88.95	181.17	0	8997.1	4939.2	-4938.2	-100.7	4939.2	181.2	#DIV/0!	#DIV/0!	8906.6	10.4	1.55248	3.16 1E-10

Well Name	Ruger 6 Fed Com 4H
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Estimated Survey Calculator

LP TVD		8917.00
PBH TVD		8997.00
BH North Offset		-4938.93
BH East Offset		-100.72
Build Rate		10.00
Radius to 90 deg		572.96
KOP =		8344.04
LP/ Start Reach		562.46
BH Displacement from SL		4939.96
Lateral Length from 90 deg		4367.00
Lateral Length from LP		4377.49
Inclination		88.95
Azi		181.17
Calc LP North Offset		-562.35
Calc LP East Offset		-11.47
Calc LP TVD		8917.00
Calc LP MD		9233.55
TD =		13611.04

Fill in the Blue Boxes

Yellow Boxes are Calculated

Survey Measured Drift Azimuth
No. Depth-ft (Deg.) (Deg.)

KOP		8344.04	0.00	181.17
	1.00	8432.99	8.90	181.17
	2.00	8521.94	17.79	181.17
	3.00	8610.89	26.69	181.17
	4.00	8699.84	35.58	181.17
	5.00	8788.79	44.48	181.17
	6.00	8877.75	53.37	181.17
	7.00	8966.70	62.27	181.17
	8.00	9055.65	71.16	181.17
	9.00	9144.60	80.06	181.17
LP	10.00	9233.55	88.95	181.17
	11.00	9300.00	88.95	181.17
	12.00	9400.00	88.95	181.17
	13.00	9500.00	88.95	181.17
	14.00	9600.00	88.95	181.17
	15.00	9700.00	88.95	181.17
	16.00	9800.00	88.95	181.17
	17.00	9900.00	88.95	181.17
	18.00	10000.00	88.95	181.17
	19.00	10100.00	88.95	181.17
	20.00	10200.00	88.95	181.17
	21.00	10300.00	88.95	181.17
	22.00	10400.00	88.95	181.17
	23.00	10500.00	88.95	181.17
	24.00	10600.00	88.95	181.17
	25.00	10700.00	88.95	181.17
	26.00	10800.00	88.95	181.17
	27.00	10900.00	88.95	181.17
	28.00	11000.00	88.95	181.17
	29.00	11100.00	88.95	181.17
	30.00	11200.00	88.95	181.17
	31.00	11300.00	88.95	181.17
	32.00	11400.00	88.95	181.17
	33.00	11500.00	88.95	181.17
	34.00	11600.00	88.95	181.17
	35.00	11700.00	88.95	181.17
	36.00	11800.00	88.95	181.17
	37.00	11900.00	88.95	181.17
	38.00	12000.00	88.95	181.17
	39.00	12100.00	88.95	181.17
	40.00	12200.00	88.95	181.17
	41.00	12300.00	88.95	181.17
	42.00	12400.00	88.95	181.17
	43.00	12500.00	88.95	181.17
	44.00	12600.00	88.95	181.17
	45.00	12700.00	88.95	181.17
	46.00	12800.00	88.95	181.17
	47.00	12900.00	88.95	181.17
	48.00	13000.00	88.95	181.17
	49.00	13100.00	88.95	181.17
	50.00	13200.00	88.95	181.17
	51.00	13300.00	88.95	181.17
	52.00	13400.00	88.95	181.17
	53.00	13500.00	88.95	181.17
	54.00	13600.00	88.95	181.17
	55.00	13611.04	88.95	181.17
	56.00	13611.04	88.95	181.17

Horizontal Planning Worksheet

Well Name:		<i>Ruger 6 Fed Com 4H</i>	
Surface Location:		150 FNL & 1755 FEL	
State/ County		NM/Eddy	
S-T-R or Section-Block-Survey (Texas)		Section 6/ 20S/ 29E	
Elevation of SL			
Ground Level:		3294	
Height of KB:		18	
KB Elevation:		3312	
Landing Point			
Footings Calls		712 FNL & 1766 FEL Sec 6/20S/29E	
Subsea Depth		-5605	
TVD =		8917	
PBHL			
Footings Calls		330 FSL & 2130 FEL Sec 6/20S/29E	
Subsea Depth		-5685	
TVD =		8997	
Lateral Length:		4377.49	
Estimated KOP:		8344.04	
Est. Total Depth:		13611.04	

PBHL Offsets =	-4938.93	NS
	-100.72	EW