

NM OIL CONSERVATION

ARTESIA DISTRICT

SEP 15 2014

RECEIVED

15-41727

Company Name: Mewbourne Oil Co
Rattlesnake 13 PM State #1H
Eddy County, New Mexico
Rig: Patterson UTI #46
Created By: James Dawson
Date: 9/10/2014

Rattlesnake 13 PM State #1H
Eddy County, New Mexico
Q140849 & WT-140802
Design #2

PROJECT DETAILS: Eddy County, New Mexico
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

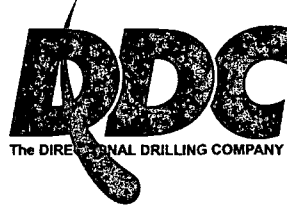
WELL DETAILS: Rattlesnake 13 PM State #1H

Ground Level: 3375.0
Northing: 602245.80 Easting: 565064.60
Latitude: 32° 39' 19.228" N Longitude: 104° 8' 14.350" W



Azimuths to Grid North
Magnetic North: 7.37°
Magnetic Field
Strength: 48500.3snT
Dip Angle: 60.41°
Date: 8/11/2014
Model: IGRF2010

Mewbourne Oil Company

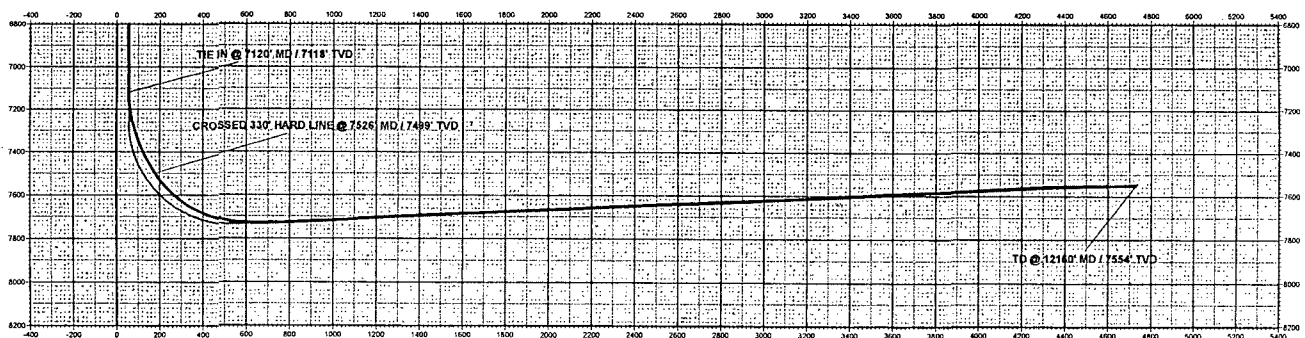
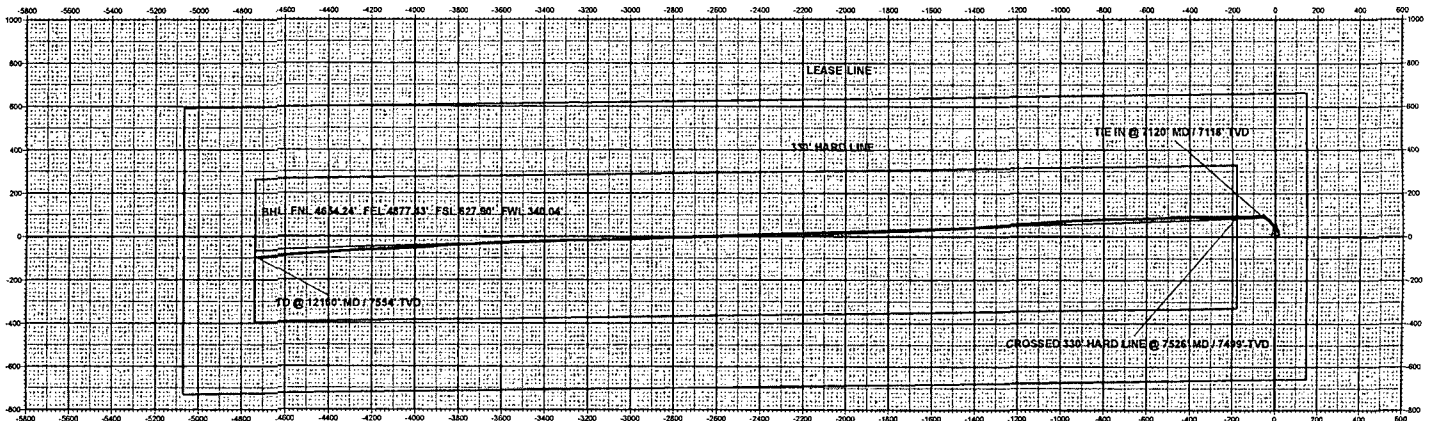


DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL Rattlesnake 13 PM State #1H	7545.0	-65.6	-4737.5	602179.93	560327.14	32° 39' 19.228" N	104° 8' 14.350" W
- plan hits target center							

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
7120.0	0.69	194.45	7117.6	92.4	-89.0	57.7	153.1	TIE IN @ 7120' MD / 7118' TVD
7525.7	33.41	269.31	7498.8	90.6	-180.3	179.1	275.2	CROSSED 330' HARD LINE @ 7526' MD / 7499' TVD
12160.0	90.10	264.70	7553.8	-97.6	-4727.5	4728.4	4827.1	TD @ 12160' MD / 7554' TVD



Vertical Section at 269.21° (200 usft/in)

Provide signature page for survey

Mewbourne Oil Co

Eddy County, New Mexico

Sec 13, T19S, R28E

Rattlesnake 13 PM State #1H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

10 September, 2014



Survey Report - Geographic



Company:	Mewbourne Oil Co.	Local Co-ordinate Reference:	Well: Rattlesnake 13 PM State #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3395.0usft (Patterson, UTI #46)
Site:	Sec-13, T19S, R28E	MD Reference:	WELL @ 3395.0usft (Patterson, UTI #46)
Well:	Rattlesnake 13 PM State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM Compass

Project:	Eddy County, New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Sec-13, T19S, R28E				
Site Position:		Northing:	602,245.60 usft	Latitude:	32° 39' 19.787 N
From:	Map	Easting:	565,064.60 usft	Longitude:	104° 7' 18.935 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.11 °

Well	Rattlesnake 13 PM State #1H					
Well Position	+N/-S	0.0 usft	Northing:	602,245.60 usft	Latitude:	32° 39' 19.787 N
	+E/-W	0.0 usft	Easting:	565,064.60 usft	Longitude:	104° 7' 18.935 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,375.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/11/2014	7.48	60.41	48,500

Design: Wellbore #1				
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	269.21

Survey Program	Date	9/10/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	7,120.0	GYRO (Wellbore #1)	Good_gyro	Good Gyro
7,167.0	12,160.0	MWD (Wellbore #1)	MWD default	MWD - Standard

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	602,245.60	565,064.60	32° 39' 19.787 N	104° 7' 18.935 W
100.0	0.40	280.18	100.0	0.1	-0.3	602,245.67	565,064.26	32° 39' 19.788 N	104° 7' 18.939 W
200.0	0.52	316.78	200.0	0.5	-1.0	602,246.06	565,063.60	32° 39' 19.792 N	104° 7' 18.947 W
300.0	0.38	330.48	300.0	1.1	-1.5	602,246.68	565,063.13	32° 39' 19.798 N	104° 7' 18.952 W
400.0	0.26	280.38	400.0	1.4	-1.9	602,247.01	565,062.74	32° 39' 19.801 N	104° 7' 18.957 W
500.0	0.14	228.44	500.0	1.4	-2.2	602,246.97	565,062.43	32° 39' 19.801 N	104° 7' 18.960 W
600.0	0.25	210.83	600.0	1.1	-2.4	602,246.70	565,062.23	32° 39' 19.798 N	104° 7' 18.963 W
700.0	0.37	92.53	700.0	0.9	-2.2	602,246.50	565,062.44	32° 39' 19.796 N	104° 7' 18.960 W
800.0	0.67	124.78	800.0	0.5	-1.4	602,246.15	565,063.24	32° 39' 19.793 N	104° 7' 18.951 W
900.0	0.60	124.49	900.0	-0.1	-0.5	602,245.52	565,064.15	32° 39' 19.787 N	104° 7' 18.940 W
1,000.0	0.36	154.39	1,000.0	-0.7	0.1	602,244.94	565,064.72	32° 39' 19.781 N	104° 7' 18.934 W

Survey Report - Geographic



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Rattlesnake 13 PM State #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3395'0usft (Patterson) UTI #46
Site:	Sec 13 T19S R28E	MD Reference:	WELL @ 3395'0usft (Patterson) UTI #46
Well:	Rattlesnake 13 PM State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM Compass

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,100.0	0.42	302.46	1,100.0	-0.8	-0.1	602,244.85	565,064.55	32° 39' 19.780 N	104° 7' 18.936 W
1,200.0	0.50	3.57	1,200.0	-0.1	-0.3	602,245.48	565,064.26	32° 39' 19.786 N	104° 7' 18.939 W
1,300.0	0.31	99.12	1,300.0	0.3	0.0	602,245.88	565,064.56	32° 39' 19.790 N	104° 7' 18.935 W
1,400.0	0.48	56.48	1,400.0	0.5	0.6	602,246.07	565,065.17	32° 39' 19.792 N	104° 7' 18.928 W
1,500.0	0.97	60.33	1,500.0	1.1	1.7	602,246.72	565,066.26	32° 39' 19.798 N	104° 7' 18.916 W
1,600.0	0.99	54.98	1,599.9	2.0	3.1	602,247.63	565,067.70	32° 39' 19.807 N	104° 7' 18.899 W
1,700.0	0.75	68.56	1,699.9	2.8	4.4	602,248.37	565,069.02	32° 39' 19.815 N	104° 7' 18.883 W
1,800.0	0.44	56.11	1,799.9	3.2	5.3	602,248.82	565,069.95	32° 39' 19.819 N	104° 7' 18.872 W
1,900.0	0.32	39.18	1,899.9	3.6	5.8	602,249.25	565,070.44	32° 39' 19.823 N	104° 7' 18.867 W
2,000.0	0.79	9.73	1,999.9	4.5	6.1	602,250.15	565,070.73	32° 39' 19.832 N	104° 7' 18.863 W
2,100.0	0.90	28.91	2,099.9	5.9	6.6	602,251.51	565,071.23	32° 39' 19.846 N	104° 7' 18.857 W
2,200.0	0.89	38.74	2,199.9	7.2	7.5	602,252.81	565,072.10	32° 39' 19.859 N	104° 7' 18.847 W
2,300.0	0.45	24.69	2,299.9	8.2	8.1	602,253.77	565,072.75	32° 39' 19.868 N	104° 7' 18.839 W
2,400.0	0.65	3.71	2,399.9	9.1	8.3	602,254.69	565,072.95	32° 39' 19.877 N	104° 7' 18.837 W
2,500.0	0.89	14.54	2,499.9	10.4	8.6	602,256.01	565,073.18	32° 39' 19.890 N	104° 7' 18.834 W
2,600.0	0.91	38.43	2,599.9	11.8	9.3	602,257.38	565,073.87	32° 39' 19.904 N	104° 7' 18.826 W
2,700.0	0.64	59.50	2,699.9	12.7	10.2	602,258.29	565,074.84	32° 39' 19.913 N	104° 7' 18.815 W
2,800.0	0.26	36.00	2,799.9	13.2	10.9	602,258.75	565,075.46	32° 39' 19.917 N	104° 7' 18.808 W
2,900.0	0.47	359.39	2,899.9	13.7	11.0	602,259.35	565,075.59	32° 39' 19.923 N	104° 7' 18.806 W
3,000.0	0.68	25.02	2,999.8	14.7	11.2	602,260.30	565,075.83	32° 39' 19.933 N	104° 7' 18.803 W
3,100.0	0.86	34.60	3,099.8	15.8	11.9	602,261.45	565,076.51	32° 39' 19.944 N	104° 7' 18.795 W
3,200.0	0.75	50.19	3,199.8	16.9	12.8	602,262.49	565,077.44	32° 39' 19.954 N	104° 7' 18.784 W
3,300.0	0.64	25.93	3,299.8	17.8	13.6	602,263.41	565,078.19	32° 39' 19.963 N	104° 7' 18.776 W
3,400.0	1.47	3.41	3,399.8	19.6	13.9	602,265.19	565,078.51	32° 39' 19.981 N	104° 7' 18.772 W
3,500.0	1.61	1.12	3,499.8	22.3	14.0	602,267.88	565,078.61	32° 39' 20.008 N	104° 7' 18.771 W
3,600.0	1.66	351.28	3,599.7	25.1	13.8	602,270.71	565,078.42	32° 39' 20.036 N	104° 7' 18.773 W
3,700.0	1.97	333.61	3,699.7	28.1	12.8	602,273.69	565,077.43	32° 39' 20.065 N	104° 7' 18.784 W
3,800.0	2.13	343.16	3,799.6	31.4	11.5	602,277.00	565,076.13	32° 39' 20.098 N	104° 7' 18.799 W
3,900.0	1.79	333.18	3,899.6	34.6	10.3	602,280.18	565,074.89	32° 39' 20.129 N	104° 7' 18.814 W
4,000.0	1.88	324.57	3,999.5	37.3	8.6	602,282.91	565,073.23	32° 39' 20.156 N	104° 7' 18.833 W
4,100.0	2.19	316.34	4,099.4	40.0	6.4	602,285.63	565,070.96	32° 39' 20.183 N	104° 7' 18.860 W
4,200.0	2.29	313.51	4,199.4	42.8	3.6	602,288.38	565,068.19	32° 39' 20.211 N	104° 7' 18.892 W
4,300.0	1.91	318.56	4,299.3	45.4	1.0	602,291.01	565,065.64	32° 39' 20.237 N	104° 7' 18.922 W
4,400.0	2.07	310.27	4,399.2	47.8	-1.4	602,293.42	565,063.16	32° 39' 20.261 N	104° 7' 18.951 W
4,500.0	2.46	308.00	4,499.2	50.3	-4.5	602,295.91	565,060.09	32° 39' 20.285 N	104° 7' 18.986 W
4,600.0	2.86	310.69	4,599.1	53.3	-8.1	602,298.86	565,056.51	32° 39' 20.315 N	104° 7' 19.028 W
4,700.0	3.05	315.83	4,698.9	56.8	-11.8	602,302.40	565,052.76	32° 39' 20.350 N	104° 7' 19.072 W
4,800.0	2.94	323.47	4,798.8	60.8	-15.2	602,306.36	565,049.38	32° 39' 20.389 N	104° 7' 19.111 W
4,900.0	2.58	320.17	4,898.7	64.6	-18.2	602,310.15	565,046.42	32° 39' 20.427 N	104° 7' 19.146 W
5,000.0	2.57	318.20	4,998.6	68.0	-21.1	602,313.55	565,043.48	32° 39' 20.460 N	104° 7' 19.180 W
5,100.0	2.31	324.84	5,098.5	71.3	-23.8	602,316.87	565,040.83	32° 39' 20.493 N	104° 7' 19.211 W
5,200.0	2.21	325.17	5,198.4	74.5	-26.0	602,320.10	565,038.56	32° 39' 20.525 N	104° 7' 19.238 W
5,300.0	2.34	319.86	5,298.3	77.6	-28.5	602,323.25	565,036.15	32° 39' 20.556 N	104° 7' 19.266 W
5,400.0	1.99	295.27	5,398.2	79.9	-31.3	602,325.55	565,033.26	32° 39' 20.579 N	104° 7' 19.300 W
5,500.0	2.17	302.13	5,498.2	81.7	-34.5	602,327.30	565,030.09	32° 39' 20.597 N	104° 7' 19.337 W
5,600.0	1.95	308.42	5,598.1	83.8	-37.5	602,329.36	565,027.15	32° 39' 20.617 N	104° 7' 19.371 W
5,700.0	2.06	294.05	5,698.1	85.5	-40.4	602,331.15	565,024.18	32° 39' 20.635 N	104° 7' 19.406 W
5,800.0	1.84	304.28	5,798.0	87.2	-43.4	602,332.79	565,021.21	32° 39' 20.651 N	104° 7' 19.440 W
5,900.0	2.04	302.30	5,897.9	89.0	-46.2	602,334.64	565,018.38	32° 39' 20.669 N	104° 7' 19.474 W
6,000.0	2.07	307.90	5,997.9	91.1	-49.2	602,336.70	565,015.45	32° 39' 20.690 N	104° 7' 19.508 W
6,100.0	1.81	318.19	6,097.8	93.4	-51.6	602,338.99	565,012.97	32° 39' 20.713 N	104° 7' 19.537 W
6,200.0	1.66	325.31	6,197.8	95.8	-53.5	602,341.36	565,011.09	32° 39' 20.736 N	104° 7' 19.559 W
6,300.0	1.23	326.47	6,297.7	97.8	-54.9	602,343.44	565,009.68	32° 39' 20.757 N	104° 7' 19.575 W
6,400.0	0.73	353.04	6,397.7	99.4	-55.6	602,344.97	565,009.01	32° 39' 20.772 N	104° 7' 19.583 W
6,500.0	0.10	347.24	6,497.7	100.1	-55.7	602,345.69	565,008.91	32° 39' 20.779 N	104° 7' 19.584 W

Survey Report - Geographic



Company:	Mewbourne Oil Co.	Local Co-ordinate Reference:	Well Rattlesnake 13 PM State #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3395.0usft (Patterson UTI #46)
Site:	Sec.13, T19S, R28E	MD Reference:	WELL @ 3395.0usft (Patterson UTI #46)
Well:	Rattlesnake 13 PM State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM Compass

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,600.0	0.17	233.13	6,597.7	100.1	-55.8	602,345.68	565,008.77	32° 39' 20.779 N	104° 7' 19.586 W
6,700.0	0.39	218.69	6,697.7	99.7	-56.2	602,345.33	565,008.44	32° 39' 20.775 N	104° 7' 19.590 W
6,800.0	0.89	198.04	6,797.7	98.7	-56.6	602,344.32	565,007.99	32° 39' 20.765 N	104° 7' 19.595 W
6,900.0	1.38	203.17	6,897.7	96.9	-57.3	602,342.48	565,007.27	32° 39' 20.747 N	104° 7' 19.603 W
7,000.0	1.66	201.48	6,997.7	94.4	-58.3	602,340.02	565,006.27	32° 39' 20.723 N	104° 7' 19.615 W
7,100.0	0.59	187.63	7,097.6	92.6	-58.9	602,338.17	565,005.67	32° 39' 20.705 N	104° 7' 19.622 W
7,120.0	0.50	194.45	7,117.6	92.4	-59.0	602,337.98	565,005.63	32° 39' 20.703 N	104° 7' 19.623 W
TIE IN @ 7120 MD / 7118 TVD									
7,167.0	2.60	278.80	7,164.6	92.3	-60.1	602,337.94	565,004.53	32° 39' 20.702 N	104° 7' 19.635 W
7,198.0	8.10	277.70	7,195.5	92.7	-62.9	602,338.34	565,001.67	32° 39' 20.706 N	104° 7' 19.669 W
7,230.0	11.80	276.70	7,227.0	93.4	-68.4	602,339.03	564,996.18	32° 39' 20.713 N	104° 7' 19.733 W
7,262.0	15.10	274.20	7,258.1	94.1	-75.8	602,339.72	564,988.77	32° 39' 20.720 N	104° 7' 19.820 W
7,294.0	16.70	267.20	7,288.9	94.2	-84.6	602,339.80	564,980.02	32° 39' 20.721 N	104° 7' 19.922 W
7,326.0	18.60	261.50	7,319.4	93.2	-94.2	602,338.82	564,970.38	32° 39' 20.712 N	104° 7' 20.035 W
7,357.0	20.40	261.90	7,348.6	91.7	-104.5	602,337.33	564,960.14	32° 39' 20.697 N	104° 7' 20.155 W
7,389.0	22.40	266.50	7,378.4	90.6	-116.1	602,336.17	564,948.53	32° 39' 20.686 N	104° 7' 20.290 W
7,421.0	25.00	270.00	7,407.7	90.2	-128.9	602,335.79	564,935.68	32° 39' 20.683 N	104° 7' 20.441 W
7,450.0	28.10	271.00	7,433.6	90.3	-141.9	602,335.91	564,922.72	32° 39' 20.684 N	104° 7' 20.592 W
7,485.0	30.30	270.70	7,464.2	90.6	-159.0	602,336.17	564,905.65	32° 39' 20.687 N	104° 7' 20.792 W
7,517.0	32.40	269.60	7,491.5	90.6	-175.6	602,336.20	564,889.00	32° 39' 20.687 N	104° 7' 20.987 W
7,525.7	33.41	269.31	7,498.8	90.6	-180.3	602,336.16	564,884.28	32° 39' 20.687 N	104° 7' 21.042 W
CROSSED 330' HARD LINE @ 7526 MD / 7499 TVD									
7,549.0	36.10	268.60	7,518.0	90.3	-193.6	602,335.91	564,871.00	32° 39' 20.685 N	104° 7' 21.197 W
7,581.0	39.80	268.90	7,543.2	89.9	-213.3	602,335.49	564,851.33	32° 39' 20.681 N	104° 7' 21.427 W
7,613.0	43.30	268.90	7,567.1	89.5	-234.5	602,335.08	564,830.11	32° 39' 20.678 N	104° 7' 21.676 W
7,645.0	47.20	269.60	7,589.7	89.2	-257.2	602,334.79	564,807.39	32° 39' 20.675 N	104° 7' 21.941 W
7,676.0	49.60	270.70	7,610.2	89.2	-280.4	602,334.85	564,784.21	32° 39' 20.676 N	104° 7' 22.213 W
7,708.0	53.10	270.30	7,630.2	89.5	-305.4	602,335.07	564,759.23	32° 39' 20.679 N	104° 7' 22.505 W
7,740.0	57.00	270.00	7,648.5	89.5	-331.6	602,335.13	564,733.00	32° 39' 20.680 N	104° 7' 22.812 W
7,772.0	62.30	270.00	7,664.7	89.5	-359.2	602,335.13	564,705.40	32° 39' 20.680 N	104° 7' 23.134 W
7,804.0	66.00	270.00	7,678.7	89.5	-388.0	602,335.13	564,676.60	32° 39' 20.681 N	104° 7' 23.471 W
7,836.0	68.60	268.90	7,691.0	89.2	-417.5	602,334.85	564,647.09	32° 39' 20.679 N	104° 7' 23.817 W
7,868.0	71.40	268.20	7,702.0	88.5	-447.6	602,334.09	564,617.03	32° 39' 20.672 N	104° 7' 24.168 W
7,900.0	74.80	267.90	7,711.3	87.4	-478.2	602,333.04	564,586.43	32° 39' 20.662 N	104° 7' 24.526 W
7,932.0	78.10	267.50	7,718.8	86.2	-509.2	602,331.79	564,555.36	32° 39' 20.650 N	104° 7' 24.890 W
7,963.0	82.00	267.20	7,724.1	84.8	-539.7	602,330.38	564,524.86	32° 39' 20.637 N	104° 7' 25.246 W
8,002.0	86.60	267.50	7,728.0	83.0	-578.5	602,328.59	564,486.10	32° 39' 20.620 N	104° 7' 25.700 W
8,078.0	90.30	270.30	7,730.0	81.5	-654.4	602,327.13	564,410.17	32° 39' 20.607 N	104° 7' 26.588 W
8,173.0	91.50	268.20	7,728.5	80.3	-749.4	602,325.89	564,315.19	32° 39' 20.597 N	104° 7' 27.699 W
8,268.0	92.20	267.50	7,725.5	76.7	-844.3	602,322.33	564,220.31	32° 39' 20.563 N	104° 7' 28.809 W
8,363.0	92.70	266.50	7,721.4	71.8	-939.1	602,317.36	564,125.53	32° 39' 20.516 N	104° 7' 29.918 W
8,458.0	93.80	266.50	7,716.0	66.0	-1,033.7	602,311.57	564,030.86	32° 39' 20.460 N	104° 7' 31.025 W
8,552.0	93.40	266.50	7,710.1	60.2	-1,127.4	602,305.84	563,937.22	32° 39' 20.406 N	104° 7' 32.120 W
8,647.0	93.30	265.80	7,704.6	53.9	-1,222.0	602,299.48	563,842.60	32° 39' 20.344 N	104° 7' 33.227 W
8,742.0	93.30	265.40	7,699.1	46.6	-1,316.6	602,292.20	563,748.04	32° 39' 20.274 N	104° 7' 34.334 W
8,837.0	92.70	266.50	7,694.1	39.9	-1,411.2	602,285.50	563,653.41	32° 39' 20.210 N	104° 7' 35.441 W
8,931.0	92.60	268.20	7,689.8	35.6	-1,505.0	602,281.16	563,559.61	32° 39' 20.169 N	104° 7' 36.538 W
9,026.0	92.40	267.50	7,685.6	32.0	-1,599.8	602,277.60	563,464.77	32° 39' 20.135 N	104° 7' 37.647 W
9,121.0	92.00	267.20	7,682.0	27.6	-1,694.7	602,273.21	563,369.94	32° 39' 20.094 N	104° 7' 38.757 W
9,216.0	93.30	267.90	7,677.6	23.5	-1,789.5	602,269.15	563,275.13	32° 39' 20.055 N	104° 7' 39.866 W
9,310.0	92.40	267.90	7,672.9	20.1	-1,883.3	602,265.71	563,181.31	32° 39' 20.023 N	104° 7' 40.963 W
9,405.0	92.20	267.50	7,669.1	16.3	-1,978.1	602,261.90	563,086.46	32° 39' 19.987 N	104° 7' 42.073 W
9,500.0	92.40	268.20	7,665.3	12.7	-2,073.0	602,258.34	562,991.61	32° 39' 19.954 N	104° 7' 43.182 W
9,595.0	93.10	268.60	7,660.7	10.1	-2,167.8	602,255.69	562,896.75	32° 39' 19.929 N	104° 7' 44.292 W
9,689.0	93.10	268.60	7,655.7	7.8	-2,261.7	602,253.40	562,802.92	32° 39' 19.908 N	104° 7' 45.390 W

Survey Report - Geographic



Company:	Mewbourne Oil Co.	Local Co-ordinate Reference:	Well: Rattlesnake 13 PM State #1H
Project:	Eddy County, New Mexico	TVD Reference:	WELL @ 3395.0usft (Patterson UTI #46)
Site:	Sec.13, T19S, R28E	MD Reference:	WELL @ 3395.0usft (Patterson UTI #46)
Well:	Rattlesnake 13 PM State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM Compass

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,784.0	93.30	268.90	7,650.4	5.7	-2,356.5	602,251.33	562,708.09	32° 39' 19.890 N	104° 7' 46.499 W
9,879.0	92.00	268.60	7,646.0	3.7	-2,451.4	602,249.26	562,613.22	32° 39' 19.871 N	104° 7' 47.609 W
9,974.0	92.20	268.60	7,642.5	1.3	-2,546.3	602,246.94	562,518.31	32° 39' 19.850 N	104° 7' 48.719 W
10,069.0	92.40	268.60	7,638.7	-1.0	-2,641.2	602,244.62	562,423.41	32° 39' 19.829 N	104° 7' 49.829 W
10,163.0	92.20	268.20	7,634.9	-3.6	-2,735.1	602,242.00	562,329.53	32° 39' 19.805 N	104° 7' 50.927 W
10,258.0	92.20	268.20	7,631.3	-6.6	-2,830.0	602,239.02	562,234.64	32° 39' 19.777 N	104° 7' 52.037 W
10,353.0	91.80	267.90	7,627.9	-9.8	-2,924.8	602,235.78	562,139.76	32° 39' 19.747 N	104° 7' 53.147 W
10,448.0	92.90	268.20	7,624.0	-13.0	-3,019.7	602,232.55	562,044.89	32° 39' 19.716 N	104° 7' 54.257 W
10,542.0	92.90	268.90	7,619.3	-15.4	-3,113.6	602,230.18	561,951.04	32° 39' 19.695 N	104° 7' 55.355 W
10,637.0	92.70	268.60	7,614.6	-17.5	-3,208.4	602,228.11	561,856.18	32° 39' 19.676 N	104° 7' 56.464 W
10,732.0	92.70	268.60	7,610.2	-19.8	-3,303.3	602,225.79	561,761.31	32° 39' 19.655 N	104° 7' 57.574 W
10,827.0	93.10	268.60	7,605.4	-22.1	-3,398.1	602,223.47	561,666.46	32° 39' 19.634 N	104° 7' 58.683 W
10,922.0	92.90	268.20	7,600.4	-24.8	-3,493.0	602,220.82	561,571.63	32° 39' 19.609 N	104° 7' 59.793 W
11,016.0	92.70	267.50	7,595.8	-28.3	-3,586.8	602,217.30	561,477.81	32° 39' 19.576 N	104° 8' 0.890 W
11,111.0	92.40	266.80	7,591.6	-33.0	-3,681.6	602,212.58	561,383.02	32° 39' 19.531 N	104° 8' 1.999 W
11,206.0	92.40	267.90	7,587.6	-37.4	-3,776.4	602,208.19	561,288.21	32° 39' 19.490 N	104° 8' 3.108 W
11,300.0	92.40	265.10	7,583.7	-43.1	-3,870.1	602,202.46	561,194.48	32° 39' 19.435 N	104° 8' 4.205 W
11,395.0	92.90	266.10	7,579.3	-50.4	-3,964.7	602,195.18	561,099.86	32° 39' 19.364 N	104° 8' 5.312 W
11,490.0	93.60	267.50	7,573.9	-55.7	-4,059.4	602,189.89	561,005.16	32° 39' 19.314 N	104° 8' 6.419 W
11,584.0	93.30	268.60	7,568.2	-58.9	-4,153.2	602,186.69	560,911.39	32° 39' 19.284 N	104° 8' 7.516 W
11,679.0	94.00	266.80	7,562.2	-62.7	-4,247.9	602,182.89	560,816.66	32° 39' 19.248 N	104° 8' 8.624 W
11,774.0	91.00	265.80	7,558.0	-68.8	-4,342.6	602,176.76	560,721.96	32° 39' 19.189 N	104° 8' 9.732 W
11,868.0	90.60	265.40	7,556.7	-76.0	-4,436.4	602,169.55	560,628.25	32° 39' 19.119 N	104° 8' 10.829 W
11,963.0	91.10	266.80	7,555.3	-82.5	-4,531.1	602,163.09	560,533.48	32° 39' 19.057 N	104° 8' 11.937 W
12,058.0	90.40	265.80	7,554.1	-88.6	-4,625.9	602,156.96	560,438.69	32° 39' 18.998 N	104° 8' 13.046 W
12,107.0	90.10	264.70	7,553.9	-92.7	-4,674.7	602,152.91	560,389.86	32° 39' 18.959 N	104° 8' 13.617 W
12,160.0	90.10	264.70	7,553.8	-97.6	-4,727.5	602,148.01	560,337.09	32° 39' 18.911 N	104° 8' 14.235 W
TD @ 12160' MD / 7554' TVD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,120.0	7,117.6	92.4	-59.0	TIE IN @ 7120' MD / 7118' TVD
7,525.7	7,498.8	90.6	-180.3	CROSSED 330' HARD LINE @ 7526' MD / 7499' TVD
12,160.0	7,553.8	-97.6	-4,727.5	TD @ 12160' MD / 7554' TVD

Checked By: _____ Approved By: _____ Date: _____