

OPERATOR MEWBOURNE OIL COMPANY
WELL/LEASE Rattlesnake 13 PM State 1H
COUNTY EDDY

046-0099

STATE OF NEW MEXICO
DEVIATION REPORT

15-41227

403	0.66
799	0.43
1,233	0.80
1,647	1.05
2,029	0.42
2,443	0.71
2,856	0.62
3,270	1.65
3,653	1.46
4,036	1.79
4,451	2.68
4,959	2.79
5,214	2.06
5,550	1.96
5,760	1.98
5,982	2.16
6,237	1.84
6,460	0.53
6,715	0.15

NM OIL CONSERVATION

ARTESIA DISTRICT

OCT 15 2014

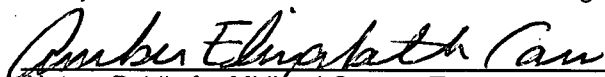
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BY: 

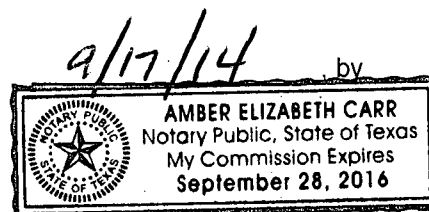
STATE OF TEXAS

COUNTY OF MIDLAND

The foregoing instrument was acknowledged before me on
Daisy Carrillo on behalf of Patterson-UTI Drilling Company LLC.


Notary Public for Midland County, Texas

My Commission Expires:





Job Number: SVMO-141116
 Company: Mewbourne Oil & Gas
 Lease/Well: Rattlesnake 13PM State 1H
 Location: Eddy County, NM
 Rig Name: Patterson #46
 RKB: 20.5'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.40°
 Grid: East To Grid North
 File name: S:\2014SU~1\MEWBOU~1\MOIRATTLE~1\1H.SVY
 Date/Time: 18-Aug-14 / 14:46
 Curve Name: Surface - 7120' M.D. (Rate Gyro)

NM OIL CONSERVATION
 ARTESIA DISTRICT
 OCT 15 2014
 RECEIVED

MS SURVEY

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 269.21
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 7120' MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.
 Curtis Bingham 8/18/14
 MS Energy Services Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.40	280.18	100.00	.06	-.34	.34	.35	280.18	.40
200.00	.52	316.78	200.00	.45	-1.00	.99	1.10	294.47	.31
300.00	.38	330.48	299.99	1.07	-1.47	1.46	1.82	306.10	.18
400.00	.26	280.38	399.99	1.40	-1.86	1.84	2.33	307.04	.29
500.00	.14	228.44	499.99	1.36	-2.17	2.15	2.57	302.09	.21
600.00	.25	210.83	599.99	1.09	-2.38	2.36	2.62	294.72	.12
700.00	.37	92.53	699.99	.89	-2.17	2.15	2.34	292.40	.54
800.00	.67	124.78	799.99	.54	-1.36	1.36	1.47	291.79	.41
900.00	.60	124.49	899.98	-.09	-.45	.45	.46	259.31	.07

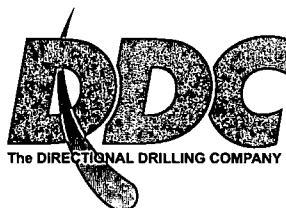
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
1000.00	.36	154.39	999.98	-.66	.12	-.11	.68	170.08	.34
1100.00	.42	302.46	1099.98	-.75	-.06	.07	.75	184.35	.75
1200.00	.50	3.57	1199.97	-.12	-.34	.34	.36	250.62	.47
1300.00	.31	99.12	1299.97	.27	-.05	.04	.28	350.65	.61
1400.00	.48	56.48	1399.97	.46	.57	-.58	.73	51.06	.33
1500.00	.97	60.33	1499.96	1.11	1.66	-1.67	1.99	56.12	.49
1600.00	.99	54.98	1599.95	2.03	3.10	-3.13	3.70	56.81	.09
1700.00	.75	68.56	1699.93	2.76	4.42	-4.45	5.21	57.98	.31
1800.00	.44	56.11	1799.93	3.22	5.34	-5.39	6.24	58.97	.33
1900.00	.32	39.18	1899.93	3.65	5.84	-5.89	6.88	58.02	.16
2000.00	.79	9.73	1999.92	4.54	6.13	-6.19	7.63	53.47	.54
2100.00	.90	28.91	2099.91	5.91	6.63	-6.71	8.88	48.28	.30
2200.00	.89	38.74	2199.90	7.20	7.49	-7.59	10.39	46.14	.15
2300.00	.45	24.69	2299.89	8.16	8.14	-8.26	11.53	44.93	.47
2400.00	.65	3.71	2399.89	9.09	8.34	-8.47	12.34	42.56	.28
2500.00	.89	14.54	2499.88	10.41	8.58	-8.72	13.48	39.50	.28
2600.00	.91	38.43	2599.87	11.78	9.26	-9.43	14.99	38.19	.37
2700.00	.64	59.50	2699.86	12.68	10.24	-10.41	16.30	38.91	.39
2800.00	.26	36.00	2799.85	13.15	10.85	-11.03	17.05	39.53	.41
2900.00	.47	359.39	2899.85	13.75	10.98	-11.17	17.59	38.63	.30
3000.00	.68	25.02	2999.85	14.69	11.23	-11.43	18.49	37.39	.33
3100.00	.86	34.60	3099.84	15.85	11.91	-12.12	19.82	36.92	.22
3200.00	.75	50.19	3199.83	16.89	12.84	-13.07	21.21	37.24	.24
3300.00	.64	25.93	3299.82	17.81	13.58	-13.83	22.40	37.34	.31
3400.00	1.47	3.41	3399.80	19.59	13.90	-14.17	24.02	35.36	.91
3500.00	1.61	1.12	3499.77	22.27	14.01	-14.31	26.31	32.16	.15
3600.00	1.66	351.28	3599.73	25.11	13.81	-14.16	28.66	28.82	.28
3700.00	1.97	333.61	3699.68	28.08	12.83	-13.22	30.87	24.56	.64
3800.00	2.13	343.16	3799.61	31.40	11.53	-11.96	33.45	20.16	.38

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
3900.00	1.79	333.18	3899.56	34.57	10.29	-10.76	36.07	16.57	.48
4000.00	1.88	324.57	3999.50	37.30	8.63	-9.14	38.29	13.03	.29
4100.00	2.19	316.34	4099.44	40.02	6.36	-6.91	40.52	9.03	.43
4200.00	2.29	313.51	4199.37	42.78	3.59	-4.18	42.93	4.80	.15
4300.00	1.91	318.56	4299.30	45.40	1.04	-1.67	45.42	1.31	.42
4400.00	2.07	310.27	4399.24	47.82	-1.44	.78	47.84	358.27	.33
4500.00	2.46	308.00	4499.16	50.31	-4.51	3.82	50.51	354.88	.40
4600.00	2.86	310.69	4599.05	53.26	-8.09	7.36	53.87	351.36	.42
4700.00	3.05	315.83	4698.92	56.79	-11.84	11.05	58.01	348.23	.33
4800.00	2.94	323.47	4798.78	60.76	-15.22	14.38	62.64	345.94	.41
4900.00	2.58	320.17	4898.67	64.55	-18.19	17.29	67.06	344.27	.39
5000.00	2.57	318.20	4998.57	67.95	-21.12	20.18	71.16	342.73	.09
5100.00	2.31	324.84	5098.47	71.27	-23.78	22.79	75.13	341.55	.38
5200.00	2.21	325.17	5198.40	74.50	-26.04	25.01	78.92	340.73	.10
5300.00	2.34	319.86	5298.32	77.64	-28.46	27.38	82.69	339.87	.25
5400.00	1.99	295.27	5398.25	79.94	-31.34	30.24	85.87	338.59	.98
5500.00	2.17	302.13	5498.18	81.69	-34.52	33.39	88.69	337.10	.31
5600.00	1.95	308.42	5598.12	83.76	-37.45	36.29	91.75	335.91	.32
5700.00	2.06	294.05	5698.06	85.55	-40.43	39.24	94.62	334.71	.51
5800.00	1.84	304.28	5798.00	87.18	-43.39	42.19	97.39	333.54	.41
5900.00	2.04	302.30	5897.94	89.04	-46.23	44.99	100.32	332.56	.21
6000.00	2.07	307.90	5997.88	91.10	-49.16	47.89	103.51	331.65	.20
6100.00	1.81	318.19	6097.82	93.39	-51.63	50.34	106.71	331.06	.43
6200.00	1.66	325.31	6197.78	95.75	-53.51	52.18	109.69	330.80	.26
6300.00	1.23	326.47	6297.74	97.84	-54.93	53.57	112.20	330.69	.43
6400.00	.73	353.04	6397.73	99.37	-55.60	54.22	113.86	330.77	.66
6500.00	.10	347.24	6497.73	100.08	-55.69	54.31	114.54	330.91	.63
6600.00	.17	233.13	6597.73	100.08	-55.83	54.45	114.60	330.84	.23
6700.00	.39	218.69	6697.72	99.73	-56.16	54.78	114.45	330.61	.23

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
6800.00	.89	198.04	6797.72	98.72	-56.62	55.25	113.80	330.17	.54
6900.00	1.38	203.17	6897.70	96.88	-57.33	55.99	112.57	329.38	.50
7000.00	1.66	201.48	6997.66	94.42	-58.34	57.03	110.99	328.29	.28
7100.00	.59	187.63	7097.64	92.56	-58.93	57.65	109.73	327.52	1.10
Last Survey Depth Recorded									
7120.00	.50	194.45	7117.64	92.38	-58.97	57.69	109.59	327.45	.55

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

Mewbourne Oil Company



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
 +N/-S +E/-W Northing Easting Latitude Longitude
 0.0 0.0 602245.80 565064.60 32° 39' 19.787 N 104° 7' 15.935 W



Azimuths to Grid North

Magnetic North: 7.37°

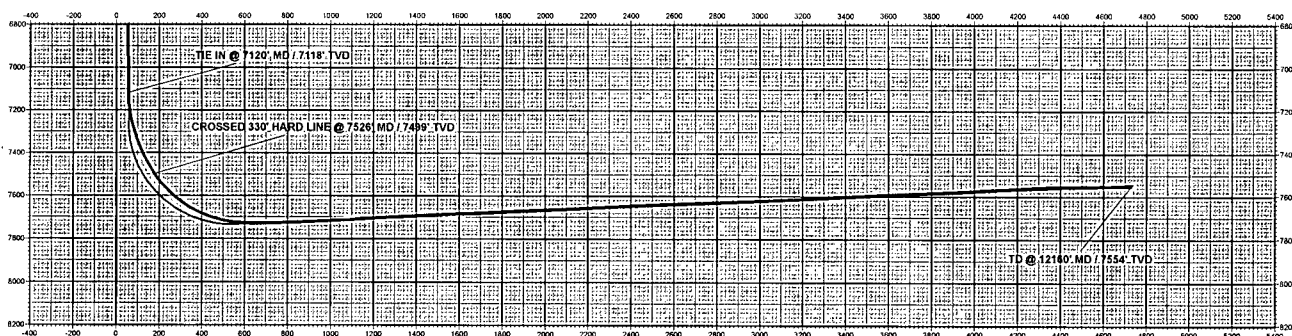
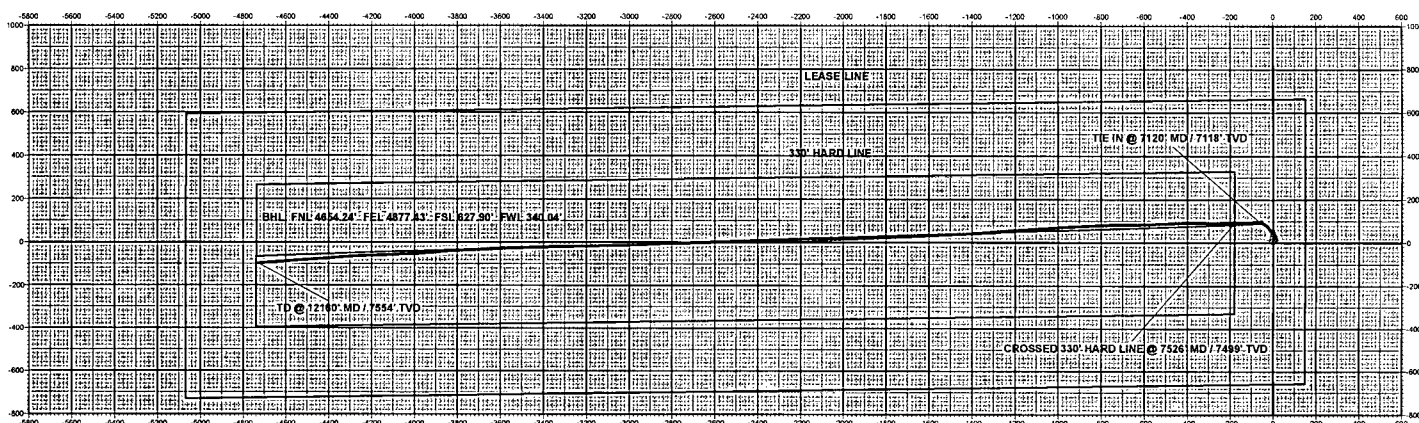
Magnetic Field
 Strength: 48500.3snT
 Dip Angle: 60.41°
 Date: 8/11/2014
 Model: IGRF2010

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	602179.98	560327.14	32° 39' 19.228 N	104° 8' 14.359 W
- plan hits target center							

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
7120.0	0.50	194.45	7117.6	92.4	-59.0	57.7	153.1	TIE IN @ 7120' MD / 7118' TVD
7525.7	33.41	269.31	7499.8	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)

Mewbourne Oil Co

Eddy County, New Mexico

Sec 13, T19S, R28E

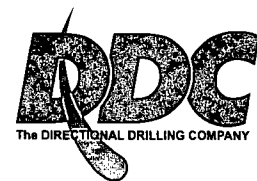
Rattlesnake 13 PM State #1H

Wellbore #1

Design: Wellbore #1

DDC Survey Report

10 September, 2014



Survey Report



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

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

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

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

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

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.40	280.18	100.0	0.1	-0.3	0.3	0.40	0.40	0.00
200.0	0.52	316.78	200.0	0.5	-1.0	1.0	0.31	0.12	36.60
300.0	0.38	330.48	300.0	1.1	-1.5	1.5	0.18	-0.14	13.70
400.0	0.26	280.38	400.0	1.4	-1.9	1.8	0.29	-0.12	-50.10
500.0	0.14	228.44	500.0	1.4	-2.2	2.2	0.21	-0.12	-51.94
600.0	0.25	210.83	600.0	1.1	-2.4	2.4	0.12	0.11	-17.61
700.0	0.37	92.53	700.0	0.9	-2.2	2.2	0.54	0.12	-118.30
800.0	0.67	124.78	800.0	0.5	-1.4	1.4	0.41	0.30	32.25
900.0	0.60	124.49	900.0	-0.1	-0.5	0.5	0.07	-0.07	-0.29

Survey Report



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)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.0	0.36	154.39	1,000.0	-0.7	0.1	-0.1	0.34	-0.24	29.90
1,100.0	0.42	302.46	1,100.0	-0.8	-0.1	0.1	0.75	0.06	148.07
1,200.0	0.50	3.57	1,200.0	-0.1	-0.3	0.3	0.47	0.08	61.11
1,300.0	0.31	99.12	1,300.0	0.3	0.0	0.0	0.61	-0.19	95.55
1,400.0	0.48	56.48	1,400.0	0.5	0.6	-0.6	0.33	0.17	-42.64
1,500.0	0.97	60.33	1,500.0	1.1	1.7	-1.7	0.49	0.49	3.85
1,600.0	0.99	54.98	1,599.9	2.0	3.1	-3.1	0.09	0.02	-5.35
1,700.0	0.75	68.56	1,699.9	2.8	4.4	-4.5	0.31	-0.24	13.58
1,800.0	0.44	56.11	1,799.9	3.2	5.3	-5.4	0.33	-0.31	-12.45
1,900.0	0.32	39.18	1,899.9	3.6	5.8	-5.9	0.16	-0.12	-16.93
2,000.0	0.79	9.73	1,999.9	4.5	6.1	-6.2	0.54	0.47	-29.45
2,100.0	0.90	28.91	2,099.9	5.9	6.6	-6.7	0.30	0.11	19.18
2,200.0	0.89	38.74	2,199.9	7.2	7.5	-7.6	0.15	-0.01	9.83
2,300.0	0.45	24.69	2,299.9	8.2	8.1	-8.3	0.47	-0.44	-14.05
2,400.0	0.65	3.71	2,399.9	9.1	8.3	-8.5	0.28	0.20	-20.98
2,500.0	0.89	14.54	2,499.9	10.4	8.6	-8.7	0.28	0.24	10.83
2,600.0	0.91	38.43	2,599.9	11.8	9.3	-9.4	0.37	0.02	23.89
2,700.0	0.64	59.50	2,699.9	12.7	10.2	-10.4	0.39	-0.27	21.07
2,800.0	0.26	36.00	2,799.9	13.2	10.9	-11.0	0.41	-0.38	-23.50
2,900.0	0.47	359.39	2,899.9	13.7	11.0	-11.2	0.30	0.21	-36.61
3,000.0	0.68	25.02	2,999.8	14.7	11.2	-11.4	0.33	0.21	25.63
3,100.0	0.86	34.60	3,099.8	15.8	11.9	-12.1	0.22	0.18	9.58
3,200.0	0.75	50.19	3,199.8	16.9	12.8	-13.1	0.24	-0.11	15.59
3,300.0	0.64	25.93	3,299.8	17.8	13.6	-13.8	0.31	-0.11	-24.26
3,400.0	1.47	3.41	3,399.8	19.6	13.9	-14.2	0.91	0.83	-22.52
3,500.0	1.61	1.12	3,499.8	22.3	14.0	-14.3	0.15	0.14	-2.29
3,600.0	1.66	351.28	3,599.7	25.1	13.8	-14.2	0.28	0.05	-9.84
3,700.0	1.97	333.61	3,699.7	28.1	12.8	-13.2	0.64	0.31	-17.67
3,800.0	2.13	343.16	3,799.6	31.4	11.5	-12.0	0.38	0.16	9.55
3,900.0	1.79	333.18	3,899.6	34.6	10.3	-10.8	0.48	-0.34	-9.98
4,000.0	1.88	324.57	3,999.5	37.3	8.6	-9.1	0.29	0.09	-8.61
4,100.0	2.19	316.34	4,099.4	40.0	6.4	-6.9	0.43	0.31	-8.23
4,200.0	2.29	313.51	4,199.4	42.8	3.6	-4.2	0.15	0.10	-2.83
4,300.0	1.91	318.56	4,299.3	45.4	1.0	-1.7	0.42	-0.38	5.05
4,400.0	2.07	310.27	4,399.2	47.8	-1.4	0.8	0.33	0.16	-8.29
4,500.0	2.46	308.00	4,499.2	50.3	-4.5	3.8	0.40	0.39	-2.27
4,600.0	2.86	310.69	4,599.1	53.3	-8.1	7.4	0.42	0.40	2.69
4,700.0	3.05	315.83	4,698.9	56.8	-11.8	11.1	0.33	0.19	5.14
4,800.0	2.94	323.47	4,798.8	60.8	-15.2	14.4	0.41	-0.11	7.64
4,900.0	2.58	320.17	4,898.7	64.6	-18.2	17.3	0.39	-0.36	-3.30
5,000.0	2.57	318.20	4,998.6	68.0	-21.1	20.2	0.09	-0.01	-1.97
5,100.0	2.31	324.84	5,098.5	71.3	-23.8	22.8	0.38	-0.26	6.64
5,200.0	2.21	325.17	5,198.4	74.5	-26.0	25.0	0.10	-0.10	0.33

Survey Report



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)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	2.34	319.86	5,298.3	77.6	-28.5	27.4	0.25	0.13	-5.31
5,400.0	1.99	295.27	5,398.2	79.9	-31.3	30.2	0.98	-0.35	-24.59
5,500.0	2.17	302.13	5,498.2	81.7	-34.5	33.4	0.31	0.18	6.86
5,600.0	1.95	308.42	5,598.1	83.8	-37.5	36.3	0.32	-0.22	6.29
5,700.0	2.06	294.05	5,698.1	85.5	-40.4	39.2	0.51	0.11	-14.37
5,800.0	1.84	304.28	5,798.0	87.2	-43.4	42.2	0.41	-0.22	10.23
5,900.0	2.04	302.30	5,897.9	89.0	-46.2	45.0	0.21	0.20	-1.98
6,000.0	2.07	307.90	5,997.9	91.1	-49.2	47.9	0.20	0.03	5.60
6,100.0	1.81	318.19	6,097.8	93.4	-51.6	50.3	0.43	-0.26	10.29
6,200.0	1.66	325.31	6,197.8	95.8	-53.5	52.2	0.26	-0.15	7.12
6,300.0	1.23	326.47	6,297.7	97.8	-54.9	53.6	0.43	-0.43	1.16
6,400.0	0.73	353.04	6,397.7	99.4	-55.6	54.2	0.66	-0.50	26.57
6,500.0	0.10	347.24	6,497.7	100.1	-55.7	54.3	0.63	-0.63	-5.80
6,600.0	0.17	233.13	6,597.7	100.1	-55.8	54.4	0.23	0.07	-114.11
6,700.0	0.39	218.69	6,697.7	99.7	-56.2	54.8	0.23	0.22	-14.44
6,800.0	0.89	198.04	6,797.7	98.7	-56.6	55.3	0.54	0.50	-20.65
6,900.0	1.38	203.17	6,897.7	96.9	-57.3	56.0	0.50	0.49	5.13
7,000.0	1.66	201.48	6,997.7	94.4	-58.3	57.0	0.28	0.28	-1.69
7,100.0	0.59	187.63	7,097.6	92.6	-58.9	57.7	1.10	-1.07	-13.85
TIE IN @ 7120' MD / 7118' TVD									
7,120.0	0.50	194.45	7,117.6	92.4	-59.0	57.7	0.55	-0.45	34.10
7,167.0	2.60	278.80	7,164.6	92.3	-60.1	58.8	5.53	4.47	179.47
7,198.0	8.10	277.70	7,195.5	92.7	-62.9	61.7	17.74	17.74	-3.55
7,230.0	11.80	276.70	7,227.0	93.4	-68.4	67.1	11.57	11.56	-3.13
7,262.0	15.10	274.20	7,258.1	94.1	-75.8	74.5	10.47	10.31	-7.81
7,294.0	16.70	267.20	7,288.9	94.2	-84.6	83.3	7.80	5.00	-21.88
7,326.0	18.60	261.50	7,319.4	93.2	-94.2	92.9	8.02	5.94	-17.81
7,357.0	20.40	261.90	7,348.6	91.7	-104.5	103.2	5.82	5.81	1.29
7,389.0	22.40	266.50	7,378.4	90.6	-116.1	114.8	8.15	6.25	14.38
7,421.0	25.00	270.00	7,407.7	90.2	-128.9	127.7	9.23	8.13	10.94
7,450.0	28.10	271.00	7,433.6	90.3	-141.9	140.6	10.80	10.69	3.45
7,485.0	30.30	270.70	7,464.2	90.6	-159.0	157.7	6.30	6.29	-0.86
7,517.0	32.40	269.60	7,491.5	90.6	-175.6	174.3	6.80	6.56	-3.44
CROSSED 330' HARD LINE @ 7526' MD / 7499' TVD									
7,525.7	33.41	269.31	7,498.8	90.6	-180.3	179.1	11.70	11.55	-3.35
7,549.0	36.10	268.60	7,518.0	90.3	-193.6	192.3	11.70	11.57	-3.04
7,581.0	39.80	268.90	7,543.2	89.9	-213.3	212.0	11.58	11.56	0.94
7,613.0	43.30	268.90	7,567.1	89.5	-234.5	233.2	10.94	10.94	0.00
7,645.0	47.20	269.60	7,589.7	89.2	-257.2	256.0	12.29	12.19	2.19
7,676.0	49.60	270.70	7,610.2	89.2	-280.4	279.1	8.18	7.74	3.55
7,708.0	53.10	270.30	7,630.2	89.5	-305.4	304.1	10.98	10.94	-1.25
7,740.0	57.00	270.00	7,648.5	89.5	-331.6	330.3	12.21	12.19	-0.94
7,772.0	62.30	270.00	7,664.7	89.5	-359.2	357.9	16.56	16.56	0.00
7,804.0	66.00	270.00	7,678.7	89.5	-388.0	386.7	11.56	11.56	0.00

Survey Report



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)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,836.0	68.60	268.90	7,691.0	89.2	-417.5	416.2	8.72	8.13	-3.44
7,868.0	71.40	268.20	7,702.0	88.5	-447.6	446.3	8.99	8.75	-2.19
7,900.0	74.80	267.90	7,711.3	87.4	-478.2	476.9	10.66	10.63	-0.94
7,932.0	78.10	267.50	7,718.8	86.2	-509.2	508.0	10.38	10.31	-1.25
7,963.0	82.00	267.20	7,724.1	84.8	-539.7	538.5	12.62	12.58	-0.97
8,002.0	86.60	267.50	7,728.0	83.0	-578.5	577.3	11.82	11.79	0.77
8,078.0	90.30	270.30	7,730.0	81.5	-654.4	653.2	6.10	4.87	3.68
8,173.0	91.50	268.20	7,728.5	80.3	-749.4	748.2	2.55	1.26	-2.21
8,268.0	92.20	267.50	7,725.5	76.7	-844.3	843.2	1.04	0.74	-0.74
8,363.0	92.70	266.50	7,721.4	71.8	-939.1	938.0	1.18	0.53	-1.05
8,458.0	93.80	266.50	7,716.0	66.0	-1,033.7	1,032.7	1.16	1.16	0.00
8,552.0	93.40	266.50	7,710.1	60.2	-1,127.4	1,126.4	0.43	-0.43	0.00
8,647.0	93.30	265.80	7,704.6	53.9	-1,222.0	1,221.1	0.74	-0.11	-0.74
8,742.0	93.30	265.40	7,699.1	46.6	-1,316.6	1,315.8	0.42	0.00	-0.42
8,837.0	92.70	266.50	7,694.1	39.9	-1,411.2	1,410.5	1.32	-0.63	1.16
8,931.0	92.60	268.20	7,689.8	35.6	-1,505.0	1,504.4	1.81	-0.11	1.81
9,026.0	92.40	267.50	7,685.6	32.0	-1,599.8	1,599.2	0.77	-0.21	-0.74
9,121.0	92.00	267.20	7,682.0	27.6	-1,694.7	1,694.1	0.53	-0.42	-0.32
9,216.0	93.30	267.90	7,677.6	23.5	-1,789.5	1,789.0	1.55	1.37	0.74
9,310.0	92.40	267.90	7,672.9	20.1	-1,883.3	1,882.8	0.96	-0.96	0.00
9,405.0	92.20	267.50	7,669.1	16.3	-1,978.1	1,977.7	0.47	-0.21	-0.42
9,500.0	92.40	268.20	7,665.3	12.7	-2,073.0	2,072.6	0.77	0.21	0.74
9,595.0	93.10	268.60	7,660.7	10.1	-2,167.8	2,167.5	0.85	0.74	0.42
9,689.0	93.10	268.60	7,655.7	7.8	-2,261.7	2,261.4	0.00	0.00	0.00
9,784.0	93.30	268.90	7,650.4	5.7	-2,356.5	2,356.2	0.38	0.21	0.32
9,879.0	92.00	268.60	7,646.0	3.7	-2,451.4	2,451.1	1.40	-1.37	-0.32
9,974.0	92.20	268.60	7,642.5	1.3	-2,546.3	2,546.0	0.21	0.21	0.00
10,069.0	92.40	268.60	7,638.7	-1.0	-2,641.2	2,641.0	0.21	0.21	0.00
10,163.0	92.20	268.20	7,634.9	-3.6	-2,735.1	2,734.9	0.48	-0.21	-0.43
10,258.0	92.20	268.20	7,631.3	-6.6	-2,830.0	2,829.8	0.00	0.00	0.00
10,353.0	91.80	267.90	7,627.9	-9.8	-2,924.8	2,924.7	0.53	-0.42	-0.32
10,448.0	92.90	268.20	7,624.0	-13.0	-3,019.7	3,019.6	1.20	1.16	0.32
10,542.0	92.90	268.90	7,619.3	-15.4	-3,113.6	3,113.5	0.74	0.00	0.74
10,637.0	92.70	268.60	7,614.6	-17.5	-3,208.4	3,208.4	0.38	-0.21	-0.32
10,732.0	92.70	268.60	7,610.2	-19.8	-3,303.3	3,303.2	0.00	0.00	0.00
10,827.0	93.10	268.60	7,605.4	-22.1	-3,398.1	3,398.1	0.42	0.42	0.00
10,922.0	92.90	268.20	7,600.4	-24.8	-3,493.0	3,493.0	0.47	-0.21	-0.42
11,016.0	92.70	267.50	7,595.8	-28.3	-3,586.8	3,586.8	0.77	-0.21	-0.74
11,111.0	92.40	266.80	7,591.6	-33.0	-3,681.6	3,681.7	0.80	-0.32	-0.74
11,206.0	92.40	267.90	7,587.6	-37.4	-3,776.4	3,776.5	1.16	0.00	1.16
11,300.0	92.40	265.10	7,583.7	-43.1	-3,870.1	3,870.4	2.98	0.00	-2.98
11,395.0	92.90	266.10	7,579.3	-50.4	-3,964.7	3,965.1	1.18	0.53	1.05
11,490.0	93.60	267.50	7,573.9	-55.7	-4,059.4	4,059.8	1.65	0.74	1.47

Survey Report



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)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,584.0	93.30	268.60	7,568.2	-58.9	-4,153.2	4,153.6	1.21	-0.32	1.17
11,679.0	94.00	266.80	7,562.2	-62.7	-4,247.9	4,248.4	2.03	0.74	-1.89
11,774.0	91.00	265.80	7,558.0	-68.8	-4,342.6	4,343.2	3.33	-3.16	-1.05
11,868.0	90.60	265.40	7,556.7	-76.0	-4,436.4	4,437.0	0.60	-0.43	-0.43
11,963.0	91.10	266.80	7,555.3	-82.5	-4,531.1	4,531.8	1.56	0.53	1.47
12,058.0	90.40	265.80	7,554.1	-88.6	-4,625.9	4,626.7	1.28	-0.74	-1.05
12,107.0	90.10	264.70	7,553.9	-92.7	-4,674.7	4,675.6	2.33	-0.61	-2.24
TD @ 12160' MD / 7554' TVD									
12,160.0	90.10	264.70	7,553.8	-97.6	-4,727.5	4,728.4	0.00	0.00	0.00

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: _____

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
+N/-S +E/-W Northing Easting Latitude Longitude
0.0 0.0 602245.60 555564.60 32° 39' 19.787 N 104° 7' 18.335 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



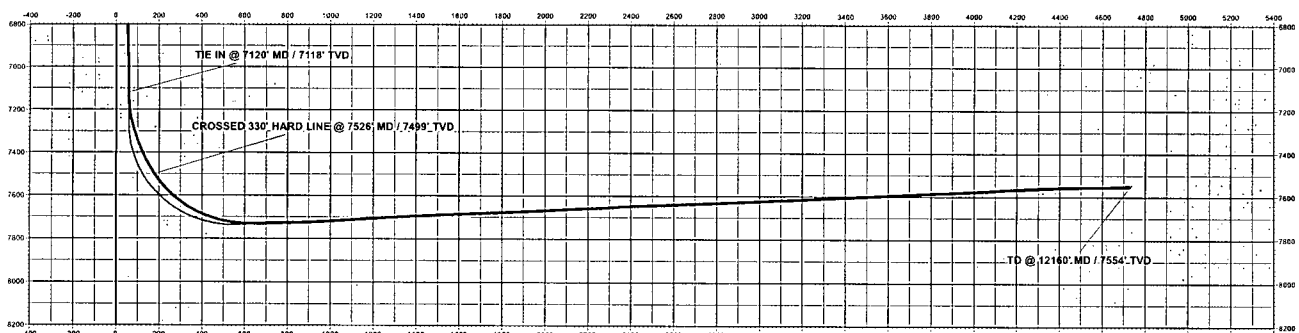
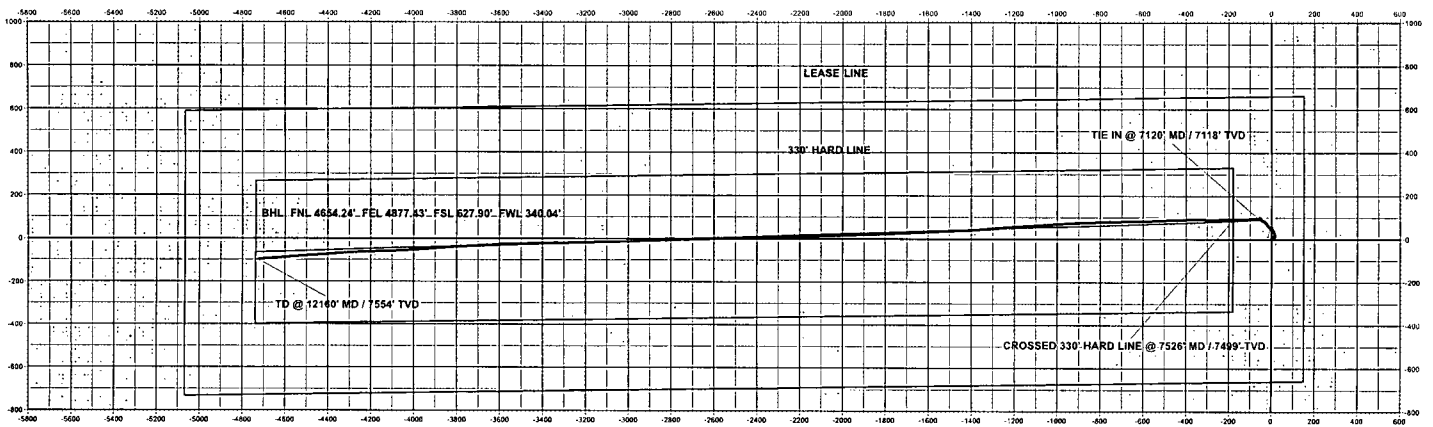
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL Rattlesnake 13 PM State #1H	7545.0	-65.6	-4737.5	602179.98	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	0.50	194.45	7117.6	92.4	-59.0	57.7	153.1	TIE IN @ 7120' MD / 7118' TVD
7525.7	33.41	269.31	7498.8	90.8	-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 usf/in)

Operating Company Mewbourne Oil Co.
 Well Name & Number ATTLESNAKE 13 PM State #1 H
 Sales Ticket Number 0
 Date 8/24/2014

Company Rep Larry Sutton
 Field 0
 BOT Service Rep John Davis
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P-110	6.276	6.151	LTC / 8RD	0.03826	8,052.00	9,960	6,230
Top Liner	4.500	13.50	P-110	3.920	3.795	LTC / 8RD	0.01492	4,286.29	12,410	10,680
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-

TVD	7553.00	KOP	7158.00	Open Hole	6.125	Casing Vol. (bbl)	299.2
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Carry Fluid Weight (ppg)	8.4	Propant Content (ppa)		Max Drill Out Size	0
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	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
Liner Top	1	10292414	JR SLV W/ 4.750" ALT Seal Bore ID	7820.21	4.00	5.750	5.125			

Zone Length										
	H409400008	S3 Hyd Set Packer	7824.21	4.63	5.875	3.875				
	H299900281	Combo Collar 4.5x4.5 LTC	7828.84	0.59	5.000	3.920				
20	H299710014	4-1/2-13.5 LTC Nipple	7829.43	6.88	5.000	3.920				
		6 Joints of 4-1/2-13.5 LTC Casing	7836.31	269.83	5.000	3.920	3.525			
	H810090200	3.500" Express SLV (Zone 20)	8106.14	2.40	5.750		3.448	2286		
19		3 Joints of 4-1/2-13.5 LTC Casing	8108.54	136.03	5.000	3.920				
	H409360008	OH PACKER # 19	8244.57	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	8248.46	90.59	5.000	3.920				
18	H810090199	3.438" Express SLV (Zone 19)	8339.05	2.40	5.750		3.385	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	8341.45	135.89	5.000	3.920				
	H409360008	OH PACKER # 18	8477.34	3.89	5.820			2154		
17		2 Joints of 4-1/2-13.5 LTC Casing	8481.23	90.63	5.000	3.920				
	H810090198	3.375" Express SLV (Zone 18)	8571.86	2.40	5.750		3.323	2286		
		2 Joints of 4-1/2-13.5 LTC Casing	8574.26	90.91	5.000	3.920				
16	H409360008	OH PACKER # 17	8665.17	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	8669.06	90.66	5.000	3.920				
	H810090197	3.313" Express SLV (Zone 17)	8759.72	2.40	5.750		3.260	2286		
16		3 Joints of 4-1/2-13.5 LTC Casing	8762.12	135.98	5.000	3.920				
	H409360008	OH PACKER # 16	8898.10	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	8901.99	90.66	5.000	3.920				
16	H810090196	3.250" Express SLV (Zone 16)	8992.65	2.40	5.750		3.198	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	8995.05	135.59	5.000	3.920				

Operating Company Mewbourne Oil Co.
 Well Name & Number ATTLESNAKE 13 PM State #
 Sales Ticket Number 0
 Date 8/24/2014

Company Rep Larry Sutton
 Field 0
 BOT Service Rep John Davis
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse		
Casing	7.000	26.00	P-110	6.276	6.151	LTC / 8RD	0.03826	8,052.00	9,960	6,230		
Top Liner	4.500	13.50	P-110	3.920	3.795	LTC / 8RD	0.01492	4,286.29	12,410	10,680		
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-		
TVD		7553.00		KOP		7158.00		Open Hole		6.125	Casing Vol. (bbl)	299.2
Carry Fluid Weight (ppg)			8.4		Propan Content (ppa)				Max Drill Out Size		0	

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
15	H409360008	OH PACKER # 15	9130.64	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	9134.53	90.64	5.000	3.920				
	H810090195	3.188." Express SLV (Zone 15)	9225.17	2.40	5.750		3.135	2286		
14		2 Joints of 4-1/2-13.5 LTC Casing	9227.57	90.63	5.000	3.920				
	H409360008	OH PACKER # 14	9318.20	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	9322.09	90.61	5.000	3.920				
13	H810090194	3.125." Express SLV (Zone 14)	9412.70	2.40	5.750		3.073	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	9415.10	135.97	5.000	3.920				
	H409360008	OH PACKER # 13	9551.07	3.89	5.820			2154		
12		2 Joints of 4-1/2-13.5 LTC Casing	9554.96	90.63	5.000	3.920				
	H810090193	3.063." Express SLV (Zone 13)	9645.59	2.40	5.750		3.010	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	9647.99	135.90	5.000	3.920				
11	H409360008	OH PACKER # 12	9783.89	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	9787.78	90.33	5.000	3.920				
	H810090192	3.000." Express SLV (Zone 12)	9878.11	2.40	5.750		2.948	2286		
10		2 Joints of 4-1/2-13.5 LTC Casing	9880.51	90.57	5.000	3.920				
	H409360008	OH PACKER # 11	9971.08	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	9974.97	90.62	5.000	3.920				
9	H810090191	2.938" Express SLV (Zone 11)	10065.59	2.40	5.750		2.885	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	10067.99	135.99	5.000	3.920				
	H409360008	OH PACKER # 10	10203.98	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	10207.87	90.65	5.000	3.920				
	H810090190	2.875" Express SLV (Zone 10)	10298.52	2.40	5.750		2.823	2286		
		2 Joints of 4-1/2-13.5 LTC Casing	10300.92	90.63	5.000	3.920				
	H409360008	OH PACKER # 9	10391.55	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	10395.44	88.76	5.000	3.920				

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	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	P-110	6.276	6.151	LTC / 8RD	0.03826	8,052.00	9,960	6,230
Top Liner	4.500	13.50	P-110	3.920	3.795	LTC / 8RD	0.01492	4,286.29	12,410	10,680
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-

TVD	7553.00	KOP	7158.00	Open Hole	6.125	Casing Vol. (bbl)	299.2
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Carry Fluid Weight (ppg)	8.4	Propan Content (ppa)		Max Drill Out Size	0
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	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
8	H810090189	2.813" Express SLV (Zone 9)	10484.20	2.40	5.750		2.760	2286		
		2 Joints of 4-1/2-13.5 LTC Casing	10486.60	90.62	5.000	3.920				
	H409360008	OH PACKER # 8	10577.22	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	10581.11	90.63	5.000	3.920				
7	H810090188	2.750" Express SLV (Zone 8)	10671.74	2.40	5.750		2.698	2286		
		2 Joints of 4-1/2-13.5 LTC Casing	10674.14	90.59	5.000	3.920				
	H409360008	OH PACKER # 7	10764.73	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	10768.62	90.63	5.000	3.920				
6	H810090187	2.688" Express SLV (Zone 7)	10859.25	2.40	5.750		2.635	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	10861.65	135.89	5.000	3.920				
	H409360008	OH PACKER # 6	10997.54	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11001.43	90.62	5.000	3.920				
5	H810090186	2.625" Express SLV (Zone 6)	11092.05	2.40	5.750		2.573	2286		
		2 Joints of 4-1/2-13.5 LTC Casing	11094.45	90.60	5.000	3.920				
	H409360008	OH PACKER # 5	11185.05	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11188.94	90.55	5.000	3.920				
4	H810090185	2.563" Express SLV (Zone 5)	11279.49	2.40	5.750		2.510	2286		
		2 Joints of 4-1/2-13.5 LTC Casing	11281.89	90.63	5.000	3.920				
	H409360008	OH PACKER # 4	11372.52	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11376.41	90.63	5.000	3.920				
3	H810090184	2.500" Express SLV (Zone 4)	11467.04	2.40	5.750		2.448	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	11469.44	134.97	5.000	3.920				
	H409360008	OH PACKER # 3	11604.41	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11608.30	90.62	5.000	3.920				
	H810090183	2.438" Express SLV (Zone 3)	11698.92	2.40	5.750		2.386	2286		
		2 Joints of 4-1/2-13.5 LTC Casing	11701.32	90.57	5.000	3.920				

Operating Company Mewbourne Oil Co.
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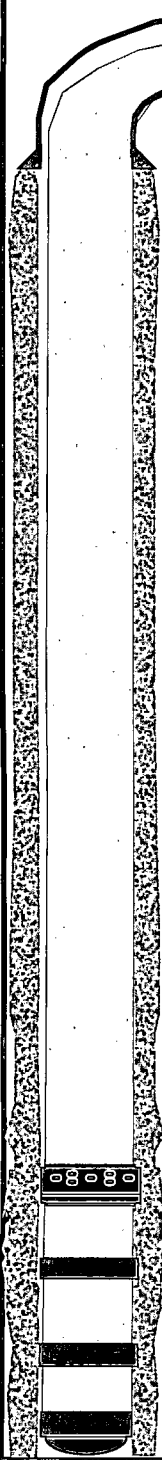
Company Rep Larry Sutton
 Field 0
 BOT Service Rep John Davis
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casing	7.000	26.00	P-110	6.276	6.151	LTC / 8RD	0.03826	8,052.00	9,960	6,230	
Top Liner	4.500	13.50	P-110	3.920	3.795	LTC / 8RD	0.01492	4,286.29	12,410	10,680	
Bott Liner	0.000	0.00	0	0.000	0.000	0	0.00000	-	-	-	
TVD		7553.00		KOP		7158.00		Open Hole	6.125	Casing Vol. (bbl)	299.2
Carry Fluid Weight (ppg)			8.4		Propan Content (ppa)				Max Drill Out Size		0

	Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
2	H409360008	OH PACKER # 2	11791.89	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11795.78	90.64	5.000	3.920				
1	H810090182	2.375" Express SLV (Zone 2)	11886.42	2.40	5.750		2.323	2286		
		2 Joints of 4-1/2-13.5 LTC Casing	11888.82	90.61	5.000	3.920				
	H409360008	OH PACKER # 1	11979.43	3.89	5.820			2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11983.32	90.63	5.000	3.920				
	HES	4-1/2" Casing Sub	12073.95	6.05	4.500	3.920				
	HES	4-1/2" RSI CT (Zone 1)	12080.00	5.74	5.750	3.635		4971		
	HES	4-1/2" Casing Sub	12085.74	3.03	4.500	3.920				
	HES	Shut Off Collar	12088.77	1.48	5.000	0.000				
	HES	4-1/2" Casing Sub	12090.25	3.06	4.500	3.920				
	HES	Float Collar	12093.31	1.63	5.040	3.985				
	HES	4-1/2" Casing Sub	12094.94	10.06	4.500	3.920				
	HES	Float Shoe	12105.00	1.50	5.020	4.025				
		Distance Off Bottom	12106.50	53.50						
			12160.00							

HALLIBURTON**Mewbourne**Rattlesnake 13 PM State #1H
Eddy, NM
26-Aug-14Paul Noseff
J.Rey
901599896**Proposed Installation**

Installation	Depth	Length	Jts.	Description	OD	ID
	7,820.00	4,253.95	91	91 Jts 4 1/2" 13.5# P-110 Casing with Baker Sleeves and Packers Spaced out to Baker Liner Hanger @ 7,820' 7" 26# P-110 Intermediate @ 8,052' 6 1/8" OH	4.500	3.920
	12,073.95	6.05	1	4 1/2" 13.5# P-110 Casing Sub	4.500	3.920
	12,080.00	5.74		4 1/2" 13.5# RSI CT with 10 Pins, Min-4,392psi, Nom-4,971psi, Max-5,549	5.740	3.635
	12,085.74	3.03	1	4 1/2" 13.5# P-110 Casing Sub	4.500	3.920
	12,088.77	1.48		4 1/2" 13.5# SOC for 1.25" Ball	5.000	
	12,090.25	3.06	1	4 1/2" 13.5# P-110 Casing Sub	4.500	3.920
	12,093.31	1.63		4 1/2" 13.5# FC	5.040	3.985
	12,094.94	10.06	1	4 1/2" 13.5# P-110 Casing Sub	4.500	3.920
	12,105.00	1.50		4 1/2" 13.5# FS	5.020	4.025
	12,106.50			End of Tools - 12,106.5'		