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Mewbourne Oil Company .

Eddy County, New Mexico

Section 7-20S-30E Two Mesas 7 MP

Two Mesas 7 MP Federal #1H

Original Hole

Design: Original Hole

Standard Survey Report

02 December, 2013





Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Two Mesas 7 MP Federal #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3314 + 20 @ 3334.0usft (Patterson #41)
Site:	Section 7-20S-30E Two Mesas 7 MP	MD Reference:	GL 3314 + 20 @ 3334.0usft (Patterson #41)
Well:	Two Mesas 7 MP Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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:	Section 7-20S-30E Two Mesas 7 MP		
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Site Position:		Northing:	575,453.88 usft	Latitude:	32° 34' 53.886 N
From:	Map	Easting:	596,908.58 usft	Longitude:	104° 1' 7.385 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.17 °

Well:	Two Mesas 7 MP Federal #1H				
Well Position	+N/-S	0.0 usft	Northing:	575,453.88 usft	Latitude: 32° 34' 53.886 N
	+E/-W	0.0 usft	Easting:	596,908.58 usft	Longitude: 104° 1' 7.385 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level: 3,314.0 usft

Wellbore:	Original Hole				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/19/2013	7.52	60.38	48,540

Survey Program		Date 12/2/2013			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	7,728.0	VES Gyro Survey #1 (Original Hole)	MWD	MWD - Standard	
7,827.0	12,770.0	Survey #2 (Original Hole)	MWD	MWD - Standard	

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	0.16	220.33	100.0	-0.1	-0.1	-0.1	0.16	0.16	0.00
200.0	0.61	328.41	200.0	0.2	-0.5	-0.5	0.68	0.45	108.08
300.0	0.68	313.01	300.0	1.1	-1.2	-1.2	0.19	0.07	-15.40
400.0	0.51	323.44	400.0	1.9	-1.9	-1.9	0.20	-0.17	10.43
500.0	0.87	321.01	500.0	2.8	-2.6	-2.6	0.36	0.36	-2.43
600.0	0.66	306.59	600.0	3.7	-3.6	-3.5	0.28	-0.21	-14.42
700.0	0.76	354.74	700.0	4.7	-4.1	-4.1	0.59	0.10	48.15
800.0	1.82	51.83	799.9	6.4	-2.9	-2.9	1.54	1.06	57.09
900.0	2.88	81.98	899.9	7.7	0.8	0.9	1.59	1.06	30.15
1,000.0	3.07	76.91	999.7	8.7	5.9	6.0	0.32	0.19	-5.07
1,100.0	3.07	74.25	1,099.6	10.0	11.1	11.1	0.14	0.00	-2.66
1,200.0	2.98	67.89	1,199.4	11.7	16.1	16.1	0.35	-0.09	-6.36
1,300.0	2.99	62.58	1,299.3	13.9	20.8	20.9	0.28	0.01	-5.31
1,400.0	3.34	64.44	1,399.2	16.4	25.8	25.8	0.36	0.35	1.86
1,500.0	3.67	67.86	1,499.0	18.8	31.4	31.4	0.39	0.33	3.42



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Site:	Section 7-20S-30E Two Mesas 7 MP	MD Reference:	GL 3314 + 20 @ 3334.0usft (Patterson #41)
Well:	Two Mesas 7 MP Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)
1,600.0	3.71	62.41	1,598.8	21.5	37.2	37.2	0.35	0.04	-5.45
1,700.0	3.88	60.74	1,698.5	24.7	43.0	43.1	0.20	0.17	-1.67
1,800.0	3.92	54.70	1,798.3	28.3	48.8	48.8	0.41	0.04	-6.04
1,900.0	3.29	61.98	1,898.1	31.6	54.1	54.1	0.78	-0.63	7.28
2,000.0	3.34	51.24	1,997.9	34.8	58.9	59.0	0.62	0.05	-10.74
2,100.0	2.96	48.40	2,097.8	38.3	63.1	63.2	0.41	-0.38	-2.84
2,200.0	2.54	55.73	2,197.7	41.3	66.9	66.9	0.55	-0.42	7.33
2,300.0	2.43	70.83	2,297.6	43.2	70.7	70.8	0.66	-0.11	15.10
2,400.0	2.04	61.59	2,397.5	44.8	74.3	74.3	0.53	-0.39	-9.24
2,500.0	1.31	66.98	2,497.5	46.1	76.9	77.0	0.75	-0.73	5.39
2,600.0	1.49	86.02	2,597.4	46.6	79.2	79.3	0.50	0.18	19.04
2,700.0	1.54	53.25	2,697.4	47.5	81.6	81.7	0.86	0.05	-32.77
2,800.0	1.38	31.29	2,797.4	49.3	83.3	83.4	0.58	-0.16	-21.96
2,900.0	1.24	24.27	2,897.3	51.4	84.4	84.5	0.21	-0.14	-7.02
3,000.0	1.12	13.20	2,997.3	53.3	85.0	85.1	0.26	-0.12	-11.07
3,100.0	1.07	4.05	3,097.3	55.2	85.3	85.4	0.18	-0.05	-9.15
3,200.0	0.78	37.15	3,197.3	56.7	85.8	85.9	0.60	-0.29	33.10
3,300.0	0.87	40.55	3,297.3	57.8	86.7	86.8	0.10	0.09	3.40
3,400.0	0.80	30.14	3,397.3	59.0	87.6	87.7	0.17	-0.07	-10.41
3,500.0	0.69	36.44	3,497.3	60.0	88.3	88.4	0.14	-0.11	6.30
3,600.0	0.71	35.86	3,597.3	61.0	89.0	89.1	0.02	0.02	-0.58
3,700.0	0.66	29.65	3,697.2	62.0	89.6	89.7	0.09	-0.05	-6.21
3,800.0	0.63	28.73	3,797.2	63.0	90.2	90.3	0.03	-0.03	-0.92
3,900.0	0.62	22.53	3,897.2	64.0	90.7	90.8	0.07	-0.01	-6.20
4,000.0	0.83	27.99	3,997.2	65.1	91.2	91.3	0.22	0.21	5.46
4,100.0	0.87	33.86	4,097.2	66.4	92.0	92.1	0.10	0.04	5.87
4,200.0	1.09	41.93	4,197.2	67.7	93.0	93.1	0.26	0.22	8.07
4,300.0	1.23	43.20	4,297.2	69.2	94.4	94.5	0.14	0.14	1.27
4,400.0	1.42	50.18	4,397.2	70.8	96.1	96.2	0.25	0.19	6.98
4,500.0	1.41	50.91	4,497.1	72.4	98.0	98.1	0.02	-0.01	0.73
4,600.0	1.47	37.00	4,597.1	74.2	99.7	99.8	0.35	0.06	-13.91
4,700.0	1.38	40.06	4,697.1	76.1	101.3	101.4	0.12	-0.09	3.06
4,800.0	1.30	36.70	4,797.0	78.0	102.7	102.8	0.11	-0.08	-3.36
4,900.0	1.32	31.74	4,897.0	79.8	104.0	104.1	0.12	0.02	-4.96
5,000.0	1.35	29.99	4,997.0	81.8	105.2	105.3	0.05	0.03	-1.75
5,100.0	1.31	24.39	5,097.0	83.9	106.2	106.4	0.14	-0.04	-5.60
5,200.0	1.19	17.69	5,196.9	85.9	107.0	107.2	0.19	-0.12	-6.70
5,300.0	0.93	18.38	5,296.9	87.7	107.6	107.8	0.26	-0.26	0.69
5,400.0	1.22	15.23	5,396.9	89.5	108.1	108.3	0.30	0.29	-3.15
5,500.0	0.89	17.91	5,496.9	91.3	108.7	108.8	0.33	-0.33	2.68
5,600.0	0.94	8.50	5,596.9	92.8	109.0	109.2	0.16	0.05	-9.41
5,700.0	0.96	4.16	5,696.9	94.5	109.2	109.4	0.07	0.02	-4.34
5,800.0	1.07	4.05	5,796.8	96.2	109.3	109.5	0.11	0.11	-0.11
5,900.0	1.14	0.52	5,896.8	98.1	109.4	109.6	0.10	0.07	-3.53



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Design:	Original Hole	Database:	EDM 5000.1 Single User Db.

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)
6,000.0	0.92	11.68	5,996.8	99.9	109.6	109.8	0.30	-0.22	11.16
6,100.0	0.54	16.03	6,096.8	101.2	109.9	110.0	0.38	-0.38	4.35
6,200.0	0.16	32.38	6,196.8	101.7	110.1	110.3	0.39	-0.38	16.35
6,300.0	0.08	261.32	6,296.8	101.8	110.1	110.3	0.22	-0.08	-131.06
6,400.0	0.33	231.93	6,396.8	101.7	109.8	110.0	0.26	0.25	-29.39
6,500.0	0.67	238.71	6,496.8	101.2	109.1	109.2	0.34	0.34	6.78
6,600.0	0.73	241.35	6,596.8	100.6	108.0	108.2	0.07	0.06	2.64
6,700.0	0.88	240.25	6,696.8	99.9	106.8	106.9	0.15	0.15	-1.10
6,800.0	0.63	237.63	6,796.8	99.2	105.6	105.8	0.25	-0.25	-2.62
6,900.0	0.87	240.17	6,896.8	98.5	104.5	104.7	0.24	0.24	2.54
7,000.0	1.41	239.24	6,996.7	97.5	102.8	103.0	0.54	0.54	-0.93
7,100.0	2.05	239.01	7,096.7	96.0	100.2	100.4	0.64	0.64	-0.23
7,200.0	2.26	227.43	7,196.6	93.7	97.2	97.4	0.48	0.21	-11.58
7,300.0	2.75	218.06	7,296.5	90.5	94.3	94.5	0.64	0.49	-9.37
7,400.0	3.09	210.41	7,396.4	86.3	91.5	91.6	0.52	0.34	-7.65
7,500.0	2.98	220.92	7,496.3	82.0	88.4	88.5	0.57	-0.11	10.51
7,600.0	2.47	220.36	7,596.1	78.4	85.3	85.4	0.51	-0.51	-0.56
7,700.0	2.22	218.72	7,696.1	75.2	82.7	82.8	0.26	-0.25	-1.64
7,728.0	2.34	212.90	7,724.0	74.3	82.0	82.2	0.93	0.43	-20.79
7728 MD VES Gyro Survey									
7,827.0	3.10	154.50	7,822.9	70.2	82.1	82.2	2.76	0.77	-58.99
7,859.0	6.30	127.00	7,854.8	68.4	83.9	84.0	11.96	10.00	-85.94
7,890.0	10.00	117.10	7,885.5	66.1	87.6	87.7	12.72	11.94	-31.94
7,922.0	13.80	112.20	7,916.8	63.4	93.6	93.7	12.28	11.88	-15.31
7,953.0	16.00	111.60	7,946.8	60.5	101.0	101.1	7.11	7.10	-1.94
7,985.0	17.80	109.20	7,977.4	57.2	109.7	109.8	6.03	5.63	-7.50
8,017.0	21.30	106.70	8,007.5	53.9	119.9	120.0	11.24	10.94	-7.81
8,048.0	24.70	104.50	8,036.1	50.7	131.6	131.7	11.31	10.97	-7.10
8,080.0	28.30	101.80	8,064.7	47.5	145.5	145.6	11.86	11.25	-8.44
8,111.0	30.80	99.50	8,091.7	44.7	160.5	160.6	8.85	8.06	-7.42
8,143.0	33.50	96.50	8,118.8	42.3	177.4	177.5	9.80	8.44	-9.38
8,174.0	36.50	94.10	8,144.2	40.7	195.1	195.2	10.65	9.68	-7.74
8,206.0	39.60	92.10	8,169.4	39.6	214.8	214.8	10.42	9.69	-6.25
8,237.0	43.50	91.70	8,192.6	38.9	235.3	235.4	12.61	12.58	-1.29
8,269.0	47.50	91.00	8,215.0	38.4	258.1	258.2	12.60	12.50	-2.19
8,300.0	50.50	90.60	8,235.3	38.1	281.5	281.6	9.73	9.68	-1.29
8,332.0	53.10	90.40	8,255.1	37.9	306.7	306.7	8.14	8.13	-0.63
8,363.0	56.80	90.40	8,272.9	37.7	332.0	332.1	11.94	11.94	0.00
8,395.0	60.00	90.90	8,289.7	37.4	359.3	359.4	10.09	10.00	1.56
8,426.0	62.40	91.00	8,304.6	36.9	386.5	386.5	7.75	7.74	0.32
8,458.0	64.70	91.40	8,318.9	36.3	415.1	415.2	7.27	7.19	1.25
8,489.0	67.40	90.30	8,331.4	35.9	443.4	443.5	9.29	8.71	-3.55
8,521.0	69.20	89.60	8,343.3	35.9	473.2	473.2	5.98	5.63	-2.19



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Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)
8,552.0	71.20	89.30	8,353.8	36.2	502.3	502.4	6.52	6.45	-0.97
8,584.0	75.20	89.50	8,363.0	36.5	532.9	533.0	12.51	12.50	0.63
8,616.0	79.20	89.30	8,370.1	36.9	564.1	564.2	12.51	12.50	-0.63
8,647.0	81.80	89.30	8,375.2	37.2	594.7	594.8	8.39	8.39	0.00
8,679.0	83.60	89.30	8,379.3	37.6	626.4	626.5	5.63	5.63	0.00
8,710.0	86.20	89.20	8,382.0	38.0	657.3	657.4	8.39	8.39	-0.32
8,725.0	87.30	89.20	8,382.9	38.2	672.3	672.4	7.33	7.33	0.00
8,814.0	89.40	91.70	8,385.5	37.5	761.2	761.3	3.67	2.36	2.81
8,846.0	88.50	91.70	8,386.0	36.6	793.2	793.3	2.81	-2.81	0.00
8,877.0	88.10	91.30	8,387.0	35.8	824.2	824.3	1.82	-1.29	-1.29
8,909.0	87.20	90.50	8,388.3	35.3	856.2	856.2	3.76	-2.81	-2.50
8,940.0	85.80	90.20	8,390.2	35.1	887.1	887.2	4.62	-4.52	-0.97
8,972.0	85.40	90.20	8,392.6	35.0	919.0	919.1	1.25	-1.25	0.00
9,003.0	85.20	89.80	8,395.2	35.0	949.9	950.0	1.44	-0.65	-1.29
9,035.0	85.50	90.30	8,397.8	35.0	981.8	981.9	1.82	0.94	1.56
9,066.0	85.70	90.60	8,400.1	34.7	1,012.7	1,012.8	1.16	0.65	0.97
9,098.0	85.40	90.60	8,402.6	34.4	1,044.6	1,044.7	0.94	-0.94	0.00
9,129.0	85.90	90.40	8,405.0	34.1	1,075.5	1,075.6	1.74	1.61	-0.65
9,161.0	86.50	90.20	8,407.1	33.9	1,107.5	1,107.5	1.98	1.88	-0.63
9,193.0	86.00	90.20	8,409.2	33.8	1,139.4	1,139.4	1.56	-1.56	0.00
9,225.0	85.60	90.00	8,411.5	33.8	1,171.3	1,171.4	1.40	-1.25	-0.63
9,256.0	86.20	90.10	8,413.7	33.7	1,202.2	1,202.3	1.96	1.94	0.32
9,288.0	87.00	90.50	8,415.6	33.6	1,234.2	1,234.2	2.79	2.50	1.25
9,319.0	87.80	90.70	8,417.0	33.3	1,265.1	1,265.2	2.66	2.58	0.65
9,351.0	87.50	90.30	8,418.4	33.0	1,297.1	1,297.2	1.56	-0.94	-1.25
9,382.0	87.40	90.10	8,419.7	32.9	1,328.1	1,328.1	0.72	-0.32	-0.65
9,414.0	86.90	90.00	8,421.3	32.8	1,360.0	1,360.1	1.59	-1.56	-0.31
9,445.0	87.50	89.70	8,422.8	32.9	1,391.0	1,391.0	2.16	1.94	-0.97
9,477.0	88.70	88.90	8,423.9	33.3	1,423.0	1,423.0	4.51	3.75	-2.50
9,509.0	89.80	88.50	8,424.3	34.0	1,455.0	1,455.0	3.66	3.44	-1.25
9,540.0	89.50	88.00	8,424.5	35.0	1,485.9	1,486.0	1.88	-0.97	-1.61
9,572.0	89.40	88.70	8,424.8	35.9	1,517.9	1,518.0	2.21	-0.31	2.19
9,635.0	88.40	88.10	8,426.0	37.7	1,580.9	1,581.0	1.85	-1.59	-0.95
9,698.0	88.00	88.40	8,428.0	39.6	1,643.8	1,643.9	0.79	-0.63	0.48
9,762.0	88.00	90.60	8,430.2	40.1	1,707.8	1,707.9	3.44	0.00	3.44
9,825.0	90.20	91.60	8,431.2	38.9	1,770.8	1,770.8	3.84	3.49	1.59
9,888.0	88.90	90.30	8,431.7	37.9	1,833.7	1,833.8	2.92	-2.06	-2.06
9,919.0	89.20	89.50	8,432.2	37.9	1,864.7	1,864.8	2.76	0.97	-2.58
9,951.0	90.30	89.50	8,432.4	38.2	1,896.7	1,896.8	3.44	3.44	0.00
9,983.0	90.50	88.80	8,432.2	38.7	1,928.7	1,928.8	2.27	0.63	-2.19
10,014.0	90.00	88.90	8,432.0	39.3	1,959.7	1,959.8	1.64	-1.61	0.32
10,078.0	90.30	91.50	8,431.9	39.1	2,023.7	2,023.8	4.09	0.47	4.06
10,109.0	90.00	91.30	8,431.8	38.3	2,054.7	2,054.8	1.16	-0.97	-0.65



Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Two Mesas 7 MP Federal #1H
Project:	Eddy County, New Mexico	TVD Reference:	GL 3314 + 20 @ 3334.0usft (Patterson #41)
Site:	Section 7-20S-30E, Two Mesas 7 MP	MD Reference:	GL 3314 + 20 @ 3334.0usft (Patterson #41)
Well:	Two Mesas 7 MP Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

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)
10,141.0	89.80	91.00	8,431.8	37.7	2,086.7	2,086.8	1.13	-0.63	-0.94
10,204.0	90.20	90.80	8,431.8	36.7	2,149.7	2,149.8	0.71	0.63	-0.32
10,267.0	89.90	91.00	8,431.8	35.7	2,212.7	2,212.7	0.57	-0.48	0.32
10,299.0	90.80	91.00	8,431.6	35.2	2,244.7	2,244.7	2.81	2.81	0.00
10,362.0	90.00	91.00	8,431.1	34.1	2,307.7	2,307.7	1.27	-1.27	0.00
10,425.0	89.30	90.80	8,431.5	33.1	2,370.7	2,370.7	1.16	-1.11	-0.32
10,488.0	90.20	90.80	8,431.8	32.2	2,433.7	2,433.7	1.43	1.43	0.00
10,552.0	91.10	91.40	8,431.1	31.0	2,497.6	2,497.7	1.69	1.41	0.94
10,615.0	90.00	91.20	8,430.5	29.5	2,560.6	2,560.7	1.77	-1.75	-0.32
10,679.0	92.10	92.30	8,429.3	27.6	2,624.6	2,624.6	3.70	3.28	1.72
10,742.0	92.50	92.10	8,426.8	25.2	2,687.5	2,687.5	0.71	0.63	-0.32
10,805.0	91.80	92.10	8,424.4	22.9	2,750.4	2,750.4	1.11	-1.11	0.00
10,868.0	90.60	92.70	8,423.1	20.2	2,813.3	2,813.3	2.13	-1.90	0.95
10,900.0	88.90	91.70	8,423.2	19.0	2,845.3	2,845.3	6.16	-5.31	-3.13
10,932.0	87.80	91.10	8,424.1	18.2	2,877.3	2,877.3	3.92	-3.44	-1.88
10,963.0	87.40	90.10	8,425.4	17.9	2,908.2	2,908.3	3.47	-1.29	-3.23
11,026.0	87.60	89.90	8,428.2	17.9	2,971.2	2,971.2	0.45	0.32	-0.32
11,090.0	88.30	89.90	8,430.5	18.0	3,035.1	3,035.2	1.09	1.09	0.00
11,153.0	89.90	90.80	8,431.5	17.6	3,098.1	3,098.2	2.91	2.54	1.43
11,216.0	89.50	91.40	8,431.8	16.4	3,161.1	3,161.1	1.14	-0.63	0.95
11,280.0	89.00	91.00	8,432.6	15.1	3,225.1	3,225.1	1.00	-0.78	-0.63
11,343.0	88.80	91.10	8,433.8	13.9	3,288.1	3,288.1	0.35	-0.32	0.16
11,375.0	89.20	90.80	8,434.4	13.4	3,320.1	3,320.1	1.56	1.25	-0.94
11,438.0	89.80	90.30	8,435.0	12.8	3,383.1	3,383.1	1.24	0.95	-0.79
11,469.0	91.20	89.50	8,434.7	12.8	3,414.1	3,414.1	5.20	4.52	-2.58
11,533.0	89.90	89.10	8,434.1	13.6	3,478.0	3,478.1	2.13	-2.03	-0.63
11,596.0	90.50	88.70	8,433.8	14.8	3,541.0	3,541.1	1.14	0.95	-0.63
11,690.0	90.00	89.10	8,433.4	16.6	3,635.0	3,635.0	0.68	-0.53	0.43
11,786.0	91.10	89.50	8,432.5	17.8	3,731.0	3,731.0	1.22	1.15	0.42
11,881.0	89.50	87.70	8,432.0	20.1	3,826.0	3,826.0	2.54	-1.68	-1.89
11,975.0	90.50	87.40	8,432.0	24.1	3,919.9	3,919.9	1.11	1.06	-0.32
12,102.0	89.80	87.50	8,431.7	29.8	4,046.8	4,046.8	0.56	-0.55	0.08
12,197.0	89.80	88.80	8,432.0	32.8	4,141.7	4,141.7	1.37	0.00	1.37
12,292.0	88.30	88.30	8,433.6	35.3	4,236.7	4,236.7	1.66	-1.58	-0.53
12,387.0	90.10	89.50	8,434.9	37.1	4,331.6	4,331.7	2.28	1.89	1.26
12,482.0	88.50	88.80	8,436.1	38.5	4,426.6	4,426.7	1.84	-1.68	-0.74
12,577.0	91.30	90.90	8,436.2	38.7	4,521.6	4,521.6	3.68	2.95	2.21
12,671.0	89.60	91.30	8,435.5	36.9	4,615.6	4,615.6	1.86	-1.81	0.43
12,710.0	89.90	91.70	8,435.7	35.9	4,654.5	4,654.6	1.28	0.77	1.03
12,770.0	89.90	91.70	8,435.8	34.1	4,714.5	4,714.6	0.00	0.00	0.00
12770 MD Projected to Bit									



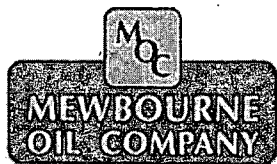
Stryker Directional Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Two Mesas 7 MP Federal #1H
Project:	Eddy County New Mexico	TVD Reference:	GL 3314 + 20 @ 3334.0usft (Patterson #41)
Site:	Section 7-20S-30E Two Mesas 7 MP	MD Reference:	GL 3314 + 20 @ 3334.0usft (Patterson #41)
Well:	Two Mesas 7 MP Federal #1H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,728.0	7,724.0	74.3	82.0	7728' MD VES Gyro Survey
12,770.0	8,435.8	34.1	4,714.5	12770' MD Projected to Bit



Company: Mewbourne Oil
Lease/Well: Two Mesas 7 MP Federal/No. 001H
Location: S7, T20, R30
Rig Name: Patterson 41
State/County: New Mexico/Eddy
Latitude: 32.58, Longitude: -104.02
GRID North is 0.17 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB - 17

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ...p federal #1h gyro survey].ut

Minimum Curvature Method

Report Date/Time: 12/10/2013 / 08:58

Vaughn Energy Services

Midland, TX

432-563-5444

Surveyor: Chris Ellis

Two Mesas 7 MP Federal No. 001H / API 30-015-41420

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	0.16	220.33	100.00	-0.11	-0.09	-0.11	0.14	220.33	0.16
200.00	0.61	328.41	200.00	0.24	-0.46	0.24	0.52	297.09	0.68
300.00	0.68	313.01	299.99	1.09	-1.17	1.09	1.60	312.96	0.18
400.00	0.51	323.44	399.99	1.85	-1.87	1.85	2.63	314.74	0.20
500.00	0.87	321.01	499.98	2.80	-2.62	2.80	3.83	316.99	0.36
600.00	0.66	306.59	599.97	3.74	-3.56	3.74	5.16	316.43	0.29
700.00	0.76	354.74	699.96	4.74	-4.08	4.74	6.25	319.28	0.58
800.00	1.82	51.83	799.94	6.38	-2.89	6.38	7.00	335.63	1.55
900.00	2.88	81.98	899.86	7.71	0.85	7.71	7.76	6.27	1.59
1000.00	3.07	76.91	999.72	8.67	5.95	8.67	10.51	34.45	0.33
1100.00	3.07	74.25	1099.58	10.00	11.14	10.00	14.97	48.07	0.14
1200.00	2.98	67.89	1199.44	11.71	16.13	11.71	19.93	54.02	0.35
1300.00	2.99	62.58	1299.30	13.89	20.85	13.89	25.06	56.33	0.28
1400.00	3.34	64.44	1399.15	16.35	25.80	16.35	30.55	57.64	0.37
1500.00	3.67	67.86	1498.96	18.82	31.40	18.82	36.61	59.07	0.39
1600.00	3.71	62.41	1598.76	21.52	37.23	21.52	43.01	59.97	0.35
1700.00	3.88	60.74	1698.54	24.67	43.05	24.67	49.62	60.18	0.21
1800.00	3.92	54.70	1798.31	28.31	48.80	28.31	56.41	59.88	0.41



COMPANY: Mewbourne Oil Company
 WELL: Two Mesas 7 MP Federal #1H
 COUNTY: Eddy County, New Mexico
 DATUM: NAD 1927 (NADCON CONUS)
 RIG: Patterson #41



GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 7.35°

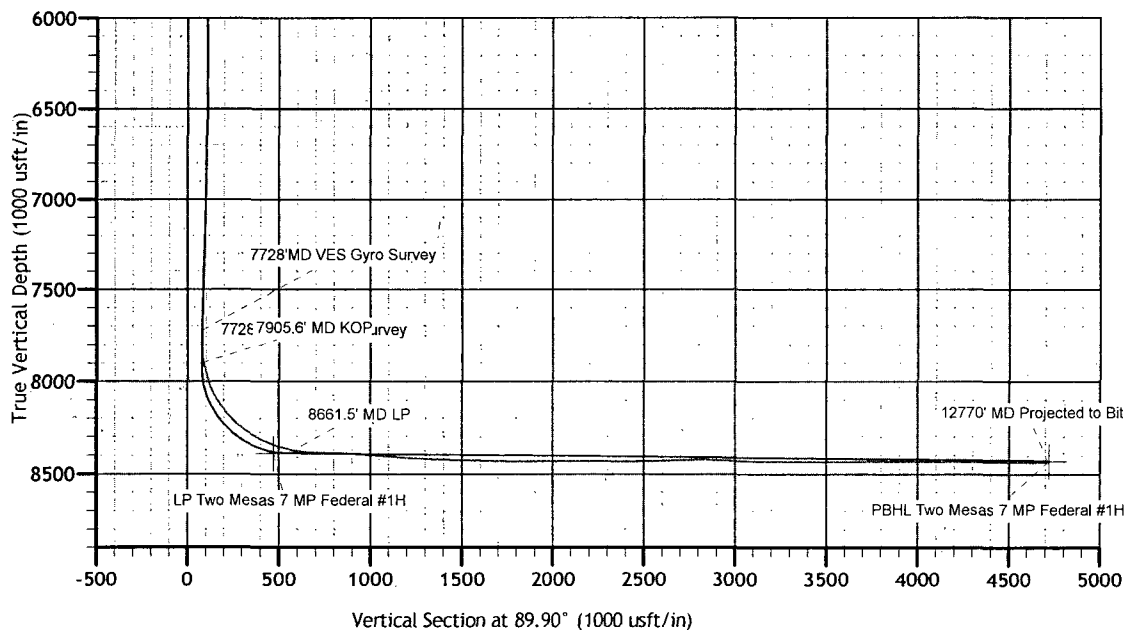
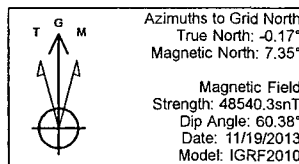
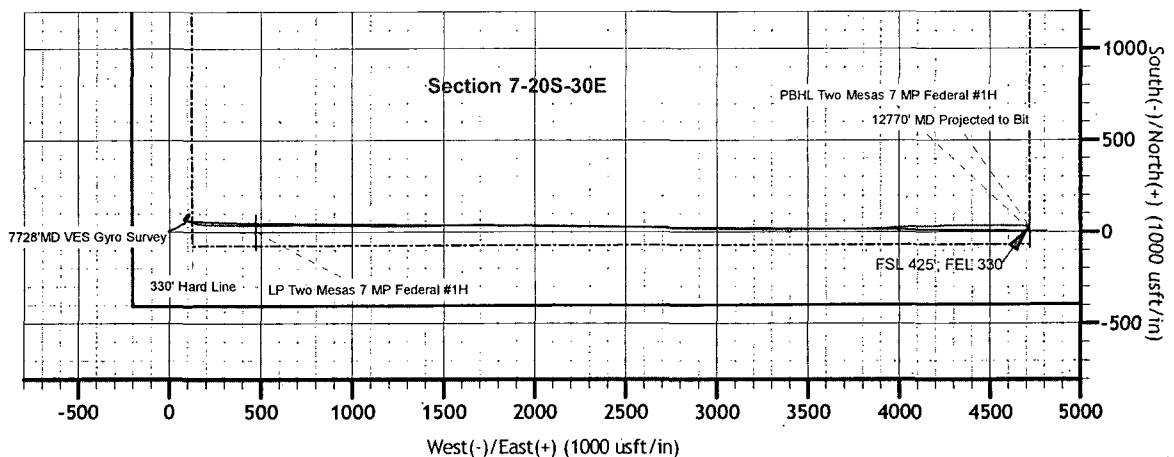
OFFICE: 936.582.7296

GEODETTIC ZONE: New Mexico East 3001
 GL 3314 + 20 @ 3334.0usft (Patterson #41)
 GROUND ELEVATION: 3314.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	575453.88	596908.57	32° 34' 53.886 N	104° 1' 7.385 W	

PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	7728.0	2.34	212.90	7724.0	74.3	82.0	0.00	0.00	82.2	
2	7905.6	2.34	212.90	7901.5	68.2	78.1	0.00	0.00	78.2	
3	8661.5	89.45	90.54	8389.1	47.1	550.7	12.00	-122.36	550.8	
4	12831.9	89.45	90.54	8429.0	8.0	4720.8	0.00	0.00	4720.8	PBHL Two Mesas 7 MP Federal #1H



Operating Company Mewbourne Oil Co.
 Well Name & Number Two Mesas 7 MP Fed #1H
 Sales Ticket Number 5985228
 Date 11/29/2013

Company Rep Josh Procise
 Field
 BOT Service Rep Joseph Haynes
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse	
Casings	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	8,788.00	9,960	6,230	
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,220.96	12,410	10,680	
Bott Liner											
TVD		8435.00		KOP		7827.00		Open Hole	6.125	Casing Vol. (bbl)	325.9
Carry Fluid Weight (ppg)			8.4		Propant Content (ppa)				Max Drill Out Size		0

Comm. Number	Description	Depth	Length	OD	ID	Ball Seat ID	Shear Press.	Max Rate (BPM)	Displ. (BBL)
Liner Top 1	JR Sleeve S3 Hyd Set Packer	8516.77	8.65						

Zone Length									
		4-1/2-13.5 LTC Nipple	8525.42	8.06	5.813	3.875			
		8 Joints of 4-1/2-13.5 LTC Casing	8533.48	316.42	4.500	3.920			
20		3.625 EX Frac Sleeve	8849.90	2.40	5.750		3.525	2286	
		3 Joint of 4-1/2-13.5 LTC Casing	8852.30	119.77	4.500	3.920			
		Baker Open Hole Packer	8872.07	3.89	5.820	3.875		2154	
		2 Joints of 4-1/2-13.5 LTC Casing	8975.96	79.05	4.500	3.920			
19		3.500 EX Frac Sleeve	9055.01	2.40	5.750		3.400	2286	
		3 Joint of 4-1/2-13.5 LTC Casing	9057.41	117.95	4.500	3.920			
		Baker Open Hole Packer	9175.36	3.89	5.820	3.875		2154	
		2 Joints of 4-1/2-13.5 LTC Casing	9179.25	77.80	4.500	3.920			
18		3.375 EX Frac Sleeve	9257.05	2.40	5.750		3.275	2286	
		3 Joint of 4-1/2-13.5 LTC Casing	9259.45	120.28	4.500	3.920			
		Baker Open Hole Packer	9379.73	3.89	5.820	3.875		2154	
		2 Joints of 4-1/2-13.5 LTC Casing	9383.62	78.38	4.500	3.920			
17		3.250 EX Frac Sleeve	9462.00	2.40	5.750		3.150	2286	
		3 Joint of 4-1/2-13.5 LTC Casing	9464.40	119.96	4.500	3.920			
		Baker Open Hole Packer	9584.36	3.89	5.820	3.875		2154	
		2 Joints of 4-1/2-13.5 LTC Casing	9588.25	78.44	4.500	3.920			
16		3.125 EX Frac Sleeve	9666.69	2.40	5.750		3.025	2286	
		3 Joints of 4-1/2-13.5 LTC Casing	9669.09	117.20	4.500	3.920			
		Baker Open Hole Packer	9786.29	3.89	5.820	3.875		2154	
		2 Joints of 4-1/2-13.5 LTC Casing	9790.18	80.16	4.500	3.920			

Operating Company Mewbourne Oil Co.
 Well Name & Number Two Mesas 7 MP Fed #1H
 Sales Ticket Number 5985228
 Date 11/29/2013

Company Rep Josh Prorise
 Field
 BOT Service Rep Joseph Haynes
 District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse		
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	8,788.00	9,960	6,230		
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,220.96	12,410	10,680		
Bott Liner												
TVD		8435.00		KOP		7827.00		Open Hole		6.125	Casing Vol. (bbl)	325.9
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	3.000 EX Frac sleeve	9870.34	2.40	5.750		2.900	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	9872.74	119.05	4.500	3.920				
		Baker Open Hole Packer	9891.79	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	9995.68	78.57	4.500	3.920				
	14	2.875 EX Frac Sleeve	10074.25	2.40	5.750		2.775	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	10076.65	117.72	4.500	3.920				
		Baker Open Hole Packer	10194.37	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	10198.26	82.23	4.500	3.920				
	13	2.750 EX Frac Sleeve	10280.49	2.40	5.750		2.650	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	10282.89	120.06	4.500	3.920				
		Baker Open Hole Packer	10402.95	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	10406.84	77.55	4.500	3.920				
	12	2.625 EX Frac Sleeve	10484.39	2.40	5.750		2.525	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	10486.79	117.82	4.500	3.920				
		Baker Open Hole Packer	10604.61	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	10608.50	78.04	4.500	3.920				
	11	2.500 EX Frac Sleeve	10686.54	2.40	5.750		2.400	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	10688.94	121.35	4.500	3.920				
		Baker Open Hole Packer	10810.29	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	10814.18	76.16	4.500	3.920				
	10	2.375 EX Frac Sleeve	10890.34	2.40	5.750		2.275	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	10892.74	118.67	4.500	3.920				
		Baker Open Hole Packer	11011.41	3.89	5.820	3.875		2154		
		2 Joint of 4-1/2-13.5 LTC Casing	11015.30	78.32	4.500	3.920				
	9	2.250 EX Frac Sleeve	11093.62	2.40	5.750		2.150	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	11096.02	122.61	4.500	3.920				

Operating Company Mewbourne Oil Co.
Well Name & Number Two Mesas 7 MP Fed #1H
Sales Ticket Number 5985228
Date 11/29/2013

Company Rep Josh Procise
Field
BOT Service Rep Joseph Haynes
District Location Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	8,788.00	9,960	6,230
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,220.96	12,410	10,680
Bott Liner										
TVD	8435.00		KOP	7827.00		Open Hole	6.125	Casing Vol. (bbl)	325.9	
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)
		Baker Open Hole Packer	11218.63	3.89	5.820	3.875		2154		
		2 Joint of 4-1/2-13.5 LTC Casing	11222.52	77.22	4.500	3.920				
8		2.125 EX Frac Sleeve	11299.74	2.40	5.750		2.025	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	11302.14	119.29	4.500	3.920				
		Baker Open Hole Packer	11421.43	3.89	5.820	3.875		2154		
		2 Joint of 4-1/2-13.5 LTC Casing	11425.32	78.79	4.500	3.920				
7		2.000 EX Frac Sleeve	11504.11	2.40	5.750		1.900	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	11506.51	117.17	4.500	3.920				
		Baker Open Hole Packer	11623.68	3.89	5.820	3.875		2154		
		3 Joint of 4-1/2-13.5 LTC Casing	11627.57	118.61	4.500	3.920				
6		1.875 EX Frac Sleeve	11746.18	2.40	5.750		1.775	2286		
		2 Joints of 4-1/2-13.5 LTC Casing	11748.58	77.22	4.500	3.920				
		Baker Open Hole Packer	11825.60	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	11829.69	78.81	4.500	3.920				
5		1.750 EX Frac Sleeve	11908.50	2.40	5.750		1.650	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	11910.90	116.03	4.500	3.920				
		Baker Open Hole Packer	12026.93	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	12030.82	80.39	4.500	3.920				
4		1.625 EX Frac Sleeve	12111.21	2.40	5.750		1.525	2286		
		3 Joints of 4-1/2-13.5 LTC Casing	12113.61	120.36	4.500	3.920				
		Baker Open Hole Packer	12233.97	3.89	5.820	3.875		2154		
		2 Joints of 4-1/2-13.5 LTC Casing	12237.86	78.77	4.500	3.920				
3		1.500 DBL Ball Frac Sleeve	12316.63	2.40	5.750		1.400	2286		
		3 Joint of 4-1/2-13.5 LTC Casing	12319.03	119.13	4.500	3.920				
		Baker Open Hole Packer	12438.16	3.89	5.820	3.875		2154		
		3 Joints of 4-1/2-13.5 LTC Casing	12442.05	117.75	4.500	3.920				

Company Rep	Josh Procise
Field	
BOT Service Rep	Joseph Haynes
District Location	Odessa, TX



	Size	Weight	Grade	ID	Drift	Thread	Capacity	Length	Burst	Collapse		
Casing	7.000	26.00	110000	6.276	6.151	LTC / 8RD	0.03826	8,788.00	9,960	6,230		
Top Liner	4.500	13.50	110000	3.920	3.795	LTC / 8RD	0.01492	4,220.96	12,410	10,680		
Bott Liner												
TVD		8435.00		KOP		7827.00		Open Hole		6.125	Casing Vol. (bbl)	325.9
Carry Fluid Weight (ppg)			8.4		Propant Content (ppa)				Max Drill Out Size		0	

[illegible]