

Company Name: Mewbourne Oil Company
 Mad Dog 26 B3PA State #1H
 Lea County, New Mexico
 Rig: Patterson #243
 Created By: Shane Robbins
 Date: 7/11/2017

Mad Dog 26 B3PA State #1H
 Lea County, New Mexico
 Q170741 & WT-170619
 Design #1



PROJECT DETAILS: Lea 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: Mad Dog 26 B3PA State #1H

Ground Level:		3419.0	
+N/-S	+E/-W	North	East
0.0	0.0	482643.10	777699.20
		32° 16' 7.393 N	103° 26' 2.148 W

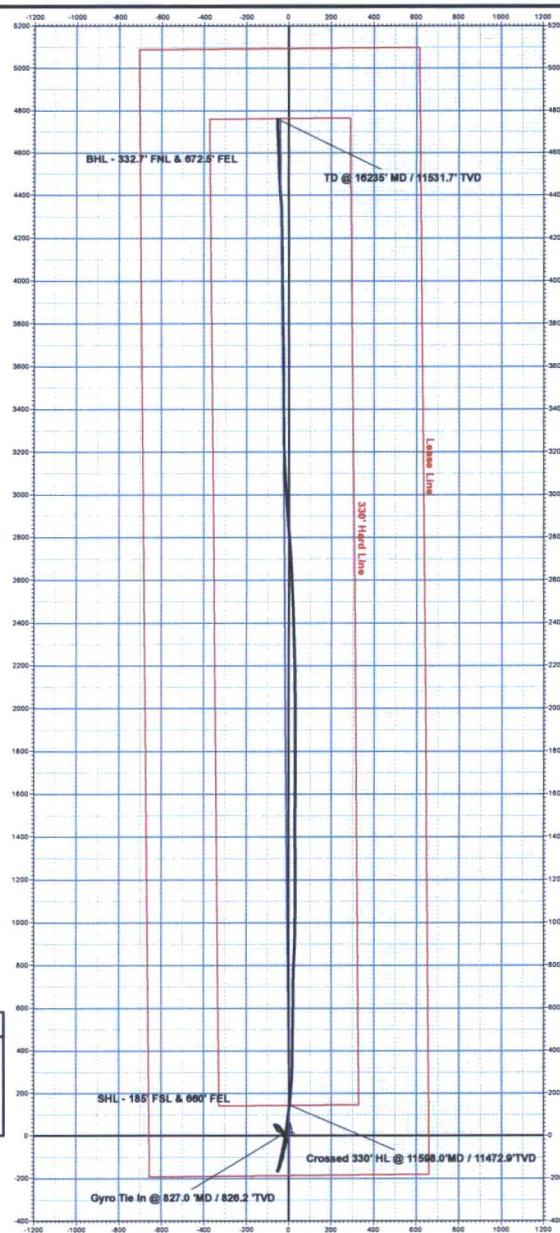
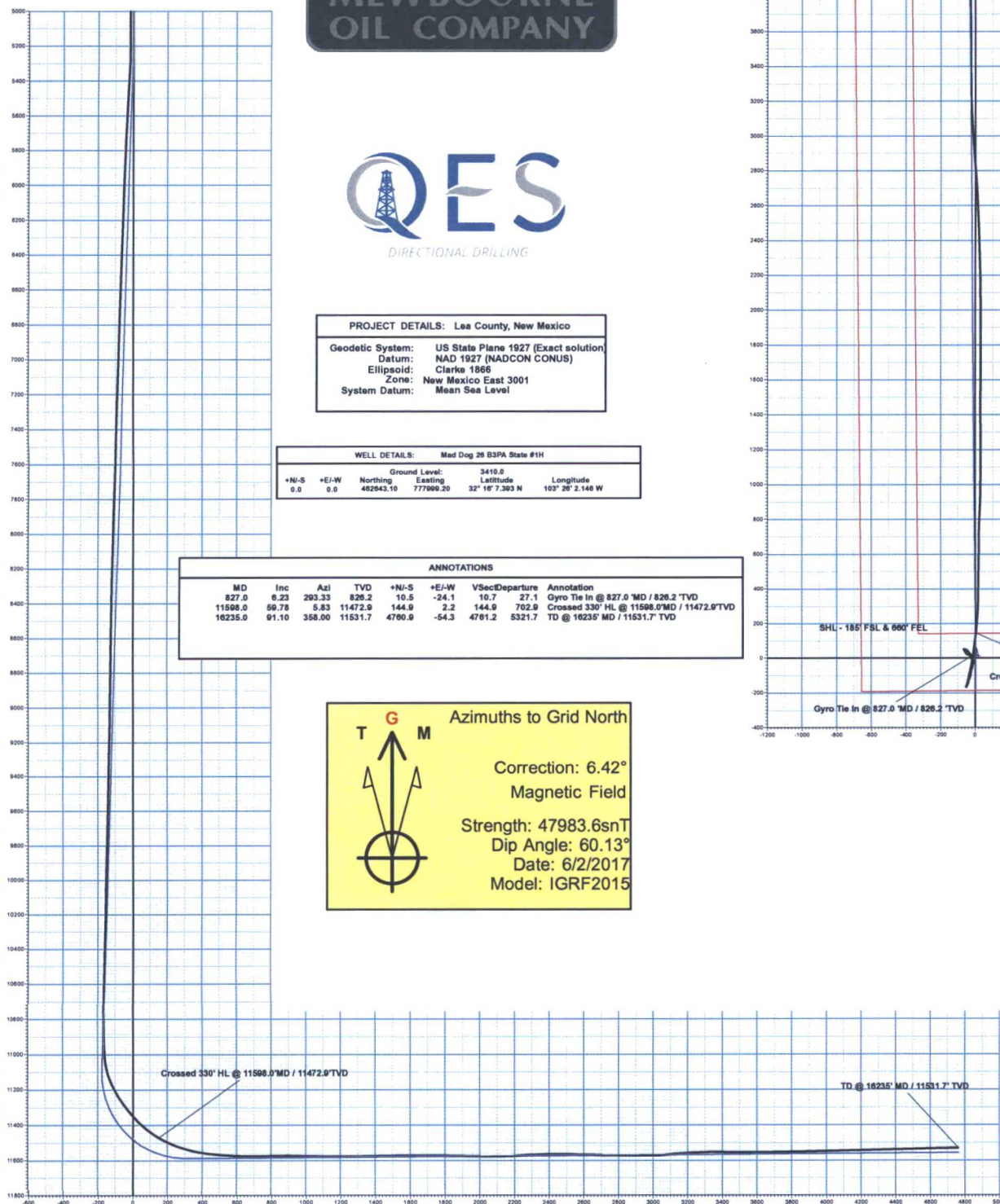
ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
827.0	6.23	293.33	826.2	10.5	-24.1	10.7	27.1	Gyro Tie In @ 827.0 MD / 826.2 TVD
11598.0	59.78	5.83	11472.9	144.9	2.2	144.9	702.9	Crossed 330° HL @ 11598.0 MD / 11472.9 TVD
16235.0	91.10	358.00	11531.7	4760.9	-54.3	4761.2	5321.7	TD @ 16235 MD / 11531.7 TVD

Azimuths to Grid North



Correction: 6.42°
 Magnetic Field
 Strength: 47983.6snT
 Dip Angle: 60.13°
 Date: 6/2/2017
 Model: IGRF2015





HOBBS OCD
AUG 07 2017
RECEIVED

Mewbourne Oil Company

Lea County, New Mexico

Sec 26, T23S, R34E

Mad Dog 26 B3PA State #1H

Wellbore #1

Design: Wellbore #1

QES Survey Report

11 July, 2017





Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Mad Dog 26 B3PA State #1H
Project:	Lea County, New Mexico	TVD Reference:	WELL @ 3437.0usft (Patterson #243)
Site:	Sec 26, T23S, R34E	MD Reference:	WELL @ 3437.0usft (Patterson #243)
Well:	Mad Dog 26 B3PA State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

Project	Lea 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 26, T23S, R34E			
Site Position:		Northing:	462,643.10 usft	Latitude:	32° 16' 7.393 N
From:	Map	Easting:	777,999.20 usft	Longitude:	103° 26' 2.146 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.48 °

Well	Mad Dog 26 B3PA State #1H					
Well Position	+N/-S	0.0 usft	Northing:	462,643.10 usft	Latitude:	32° 16' 7.393 N
	+E/-W	0.0 usft	Easting:	777,999.20 usft	Longitude:	103° 26' 2.146 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,410.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/2/2017	6.90	60.13	47,984

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	359.50	

Survey Program	Date 7/11/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	827.0	Gyros (Wellbore #1)	GYRO-NS	OWSG Gyrocompass Gyro
896.0	16,235.0	MWD Surveys (Wellbore #1)	MWD default	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	0.04	163.14	100.0	0.0	0.0	0.0	0.04	0.04	0.00	
200.0	0.64	230.69	200.0	-0.4	-0.4	-0.4	0.63	0.60	67.55	
300.0	0.49	287.54	300.0	-0.6	-1.3	-0.6	0.55	-0.15	56.85	
400.0	1.44	300.52	400.0	0.1	-2.7	0.1	0.97	0.95	12.98	
500.0	1.71	293.71	499.9	1.4	-5.2	1.4	0.33	0.27	-6.81	
600.0	2.55	299.72	599.9	3.1	-8.5	3.1	0.87	0.84	6.01	
700.0	3.99	296.22	699.7	5.7	-13.5	5.8	1.45	1.44	-3.50	
800.0	6.02	293.80	799.3	9.4	-21.5	9.5	2.04	2.03	-2.42	

Gyro Tie In @ 827.0 'MD / 826.2 'TVD



Survey Report



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Project:	Lea County, New Mexico	TVD Reference:	WELL @ 3437.0usft (Patterson #243)
Site:	Sec 26, T23S, R34E	MD Reference:	WELL @ 3437.0usft (Patterson #243)
Well:	Mad Dog 26 B3PA State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
827.0	6.23	293.33	826.2	10.5	-24.1	10.7	0.80	0.78	-1.74
896.0	7.50	292.60	894.7	13.7	-31.7	14.0	1.84	1.84	-1.06
959.0	6.80	293.60	957.2	16.8	-38.9	17.1	1.13	-1.11	1.59
1,022.0	5.10	298.60	1,019.8	19.6	-44.8	20.0	2.82	-2.70	7.94
1,085.0	4.20	303.00	1,082.6	22.2	-49.2	22.7	1.54	-1.43	6.98
1,148.0	2.50	319.00	1,145.5	24.5	-52.0	25.0	3.05	-2.70	25.40
1,211.0	2.40	328.50	1,208.5	26.7	-53.6	27.1	0.66	-0.16	15.08
1,274.0	2.20	329.70	1,271.4	28.8	-54.9	29.3	0.33	-0.32	1.90
1,337.0	2.30	331.10	1,334.4	31.0	-56.1	31.5	0.18	0.16	2.22
1,400.0	2.40	324.40	1,397.3	33.2	-57.5	33.7	0.46	0.16	-10.63
1,463.0	2.50	327.80	1,460.3	35.4	-59.0	35.9	0.28	0.16	5.40
1,526.0	2.50	332.30	1,523.2	37.8	-60.4	38.3	0.31	0.00	7.14
1,588.0	2.40	332.10	1,585.1	40.1	-61.6	40.7	0.16	-0.16	-0.32
1,651.0	2.50	325.10	1,648.1	42.4	-63.0	43.0	0.50	0.16	-11.11
1,746.0	2.50	331.60	1,743.0	46.0	-65.2	46.5	0.30	0.00	6.84
1,809.0	2.60	327.80	1,805.9	48.4	-66.6	48.9	0.31	0.16	-6.03
1,903.0	1.10	34.40	1,899.9	50.9	-67.2	51.5	2.54	-1.60	70.85
1,997.0	1.70	97.80	1,993.9	51.5	-65.3	52.0	1.66	0.64	67.45
2,091.0	1.70	97.50	2,087.8	51.1	-62.6	51.6	0.01	0.00	-0.32
2,185.0	1.60	92.40	2,181.8	50.9	-59.9	51.4	0.19	-0.11	-5.43
2,278.0	2.70	108.20	2,274.7	50.1	-56.5	50.6	1.33	1.18	16.99
2,372.0	3.50	119.10	2,368.6	48.0	-51.9	48.5	1.05	0.85	11.60
2,466.0	2.70	132.60	2,462.4	45.1	-47.8	45.6	1.15	-0.85	14.36
2,560.0	2.70	146.30	2,556.3	41.8	-44.9	42.2	0.68	0.00	14.57
2,653.0	2.90	139.50	2,649.2	38.2	-42.2	38.6	0.42	0.22	-7.31
2,747.0	2.70	143.70	2,743.1	34.6	-39.3	34.9	0.30	-0.21	4.47
2,841.0	2.50	151.10	2,837.0	31.0	-37.0	31.3	0.42	-0.21	7.87
2,935.0	2.90	141.40	2,930.9	27.4	-34.5	27.7	0.64	0.43	-10.32
3,028.0	2.70	149.00	3,023.8	23.7	-31.9	23.9	0.45	-0.22	8.17
3,122.0	2.60	131.80	3,117.7	20.3	-29.2	20.6	0.85	-0.11	-18.30
3,216.0	3.30	129.30	3,211.6	17.2	-25.5	17.4	0.76	0.74	-2.66
3,309.0	2.30	137.60	3,304.5	14.1	-22.2	14.3	1.16	-1.08	8.92
3,404.0	2.00	193.80	3,399.4	11.1	-21.3	11.3	2.15	-0.32	59.16
3,498.0	1.90	195.00	3,493.4	8.0	-22.1	8.2	0.11	-0.11	1.28
3,592.0	1.90	179.40	3,587.3	4.9	-22.5	5.1	0.55	0.00	-16.60
3,686.0	1.90	195.70	3,681.3	1.9	-22.9	2.1	0.57	0.00	17.34
3,780.0	2.10	180.10	3,775.2	-1.3	-23.3	-1.1	0.61	0.21	-16.60
3,874.0	1.80	157.40	3,869.1	-4.4	-22.7	-4.2	0.87	-0.32	-24.15
3,967.0	2.10	144.90	3,962.1	-7.2	-21.2	-7.0	0.56	0.32	-13.44
4,061.0	2.00	148.60	4,056.0	-10.0	-19.4	-9.8	0.18	-0.11	3.94
4,155.0	2.50	112.10	4,150.0	-12.1	-16.6	-12.0	1.58	0.53	-38.83
4,248.0	3.50	100.50	4,242.8	-13.4	-11.9	-13.3	1.25	1.08	-12.47
4,342.0	3.60	125.10	4,336.7	-15.6	-6.7	-15.6	1.61	0.11	26.17

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Well:	Mad Dog 26 B3PA State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
4,436.0	3.30	173.60	4,430.5	-20.0	-4.0	-20.0	3.03	-0.32	51.60
4,530.0	3.80	202.10	4,524.3	-25.6	-4.8	-25.6	1.93	0.53	30.32
4,624.0	1.50	221.60	4,618.2	-29.4	-6.8	-29.3	2.59	-2.45	20.74
4,717.0	3.10	335.80	4,711.2	-28.0	-8.7	-27.9	4.26	1.72	122.80
4,811.0	3.20	340.80	4,805.0	-23.2	-10.6	-23.1	0.31	0.11	5.32
4,905.0	0.90	332.70	4,899.0	-20.1	-11.8	-20.0	2.46	-2.45	-8.62
4,998.0	0.40	94.00	4,992.0	-19.5	-11.8	-19.4	1.25	-0.54	130.43
5,070.0	0.30	167.80	5,064.0	-19.7	-11.5	-19.6	0.59	-0.14	102.50
5,179.0	0.30	308.90	5,173.0	-19.8	-11.7	-19.7	0.52	0.00	129.45
5,366.0	2.70	189.60	5,359.9	-23.8	-12.8	-23.7	1.53	1.28	-63.80
5,553.0	2.80	192.00	5,546.7	-32.6	-14.5	-32.5	0.08	0.05	1.28
5,741.0	2.70	189.90	5,734.5	-41.5	-16.2	-41.3	0.08	-0.05	-1.12
5,929.0	2.60	192.90	5,922.3	-50.0	-17.9	-49.8	0.09	-0.05	1.60
6,117.0	2.30	198.20	6,110.1	-57.7	-20.0	-57.6	0.20	-0.16	2.82
6,305.0	1.90	196.60	6,298.0	-64.3	-22.1	-64.1	0.22	-0.21	-0.85
6,492.0	1.70	191.90	6,484.9	-70.0	-23.6	-69.8	0.13	-0.11	-2.51
6,680.0	1.80	196.80	6,672.8	-75.5	-25.0	-75.3	0.10	0.05	2.61
6,867.0	1.80	191.20	6,859.7	-81.2	-26.4	-81.0	0.09	0.00	-2.99
7,055.0	1.90	189.80	7,047.6	-87.2	-27.5	-87.0	0.06	0.05	-0.74
7,243.0	1.80	183.30	7,235.5	-93.2	-28.2	-93.0	0.12	-0.05	-3.46
7,429.0	1.90	186.80	7,421.4	-99.2	-28.7	-98.9	0.08	0.05	1.88
7,617.0	1.70	196.80	7,609.3	-105.0	-29.9	-104.7	0.20	-0.11	5.32
7,805.0	1.90	200.00	7,797.2	-110.6	-31.8	-110.3	0.12	0.11	1.70
7,994.0	1.50	204.90	7,986.1	-115.7	-33.9	-115.4	0.22	-0.21	2.59
8,181.0	1.30	194.10	8,173.1	-120.0	-35.4	-119.7	0.18	-0.11	-5.78
8,369.0	1.10	191.00	8,361.0	-123.9	-36.3	-123.5	0.11	-0.11	-1.65
8,556.0	0.90	199.80	8,548.0	-127.0	-37.1	-126.7	0.13	-0.11	4.71
8,744.0	1.10	220.00	8,736.0	-129.8	-38.8	-129.4	0.21	0.11	10.74
8,931.0	0.90	195.00	8,923.0	-132.6	-40.3	-132.2	0.25	-0.11	-13.37
9,119.0	0.80	183.10	9,110.9	-135.3	-40.8	-135.0	0.11	-0.05	-6.33
9,307.0	1.10	167.10	9,298.9	-138.4	-40.5	-138.0	0.21	0.16	-8.51
9,494.0	1.40	205.20	9,485.9	-142.2	-41.0	-141.8	0.46	0.16	20.37
9,682.0	1.60	196.60	9,673.8	-146.8	-42.8	-146.4	0.16	0.11	-4.57
9,869.0	1.60	201.40	9,860.7	-151.7	-44.5	-151.3	0.07	0.00	2.57
10,056.0	1.90	223.70	10,047.6	-156.4	-47.6	-156.0	0.39	0.16	11.93
10,244.0	1.30	222.50	10,235.6	-160.2	-51.2	-159.8	0.32	-0.32	-0.64
10,431.0	1.10	192.40	10,422.5	-163.5	-53.0	-163.1	0.35	-0.11	-16.10
10,619.0	1.60	199.60	10,610.5	-167.8	-54.2	-167.3	0.28	0.27	3.83
10,773.0	1.10	54.80	10,764.5	-168.9	-53.8	-168.5	1.67	-0.32	-94.03
10,960.0	1.00	37.70	10,951.4	-166.6	-51.3	-166.2	0.18	-0.05	-9.14
10,991.0	1.70	22.80	10,982.4	-166.0	-50.9	-165.5	2.51	2.26	-48.06
11,022.0	4.50	9.90	11,013.4	-164.4	-50.6	-163.9	9.25	9.03	-41.61
11,056.0	8.30	7.80	11,047.2	-160.6	-50.0	-160.2	11.20	11.18	-6.18



Survey Report



Company: Mewbourne Oil Company
Project: Lea County, New Mexico
Site: Sec 26, T23S, R34E
Well: Mad Dog 26 B3PA State #1H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Mad Dog 26 B3PA State #1H
TVD Reference: WELL @ 3437.0usft (Patterson #243)
MD Reference: WELL @ 3437.0usft (Patterson #243)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5002

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)
11,087.0	13.40	12.00	11,077.6	-154.9	-48.9	-154.4	16.64	16.45	13.55
11,119.0	16.90	14.00	11,108.5	-146.7	-47.0	-146.3	11.06	10.94	6.25
11,151.0	20.90	14.30	11,138.7	-136.7	-44.5	-136.3	12.50	12.50	0.94
11,182.0	24.50	12.60	11,167.3	-125.1	-41.7	-124.7	11.80	11.61	-5.48
11,214.0	27.70	12.60	11,196.1	-111.3	-38.7	-111.0	10.00	10.00	0.00
11,245.0	30.40	12.00	11,223.2	-96.6	-35.5	-96.3	8.76	8.71	-1.94
11,277.0	33.50	12.00	11,250.3	-80.0	-31.9	-79.8	9.69	9.69	0.00
11,308.0	36.20	11.70	11,275.8	-62.7	-28.3	-62.5	8.73	8.71	-0.97
11,340.0	38.40	11.70	11,301.2	-43.7	-24.4	-43.5	6.88	6.88	0.00
11,371.0	40.30	10.50	11,325.2	-24.4	-20.6	-24.3	6.60	6.13	-3.87
11,403.0	41.80	9.20	11,349.3	-3.7	-17.0	-3.6	5.39	4.69	-4.06
11,434.0	44.30	9.10	11,372.0	17.2	-13.6	17.3	8.07	8.06	-0.32
11,465.0	47.40	8.00	11,393.6	39.1	-10.3	39.2	10.32	10.00	-3.55
11,496.0	50.40	7.80	11,413.9	62.3	-7.1	62.3	9.69	9.68	-0.65
11,527.0	53.10	6.60	11,433.1	86.4	-4.1	86.5	9.22	8.71	-3.87
11,559.0	55.10	6.20	11,451.9	112.2	-1.2	112.2	6.33	6.25	-1.25
11,590.0	58.80	5.70	11,468.8	138.0	1.5	138.0	12.01	11.94	-1.61
Crossed 330' HL @ 11598.0'MD / 11472.9'TVD									
11,598.0	59.78	5.83	11,472.9	144.9	2.2	144.9	12.34	12.26	1.66
11,621.0	62.60	6.20	11,484.0	164.9	4.3	164.9	12.34	12.26	1.60
11,652.0	66.20	6.20	11,497.3	192.7	7.3	192.6	11.61	11.61	0.00
11,754.0	72.10	2.20	11,533.6	287.7	14.2	287.6	6.85	5.78	-3.92
11,785.0	74.80	1.90	11,542.5	317.4	15.3	317.3	8.76	8.71	-0.97
11,816.0	77.20	1.10	11,550.0	347.5	16.1	347.3	8.14	7.74	-2.58
11,847.0	79.30	0.80	11,556.3	377.8	16.6	377.7	6.84	6.77	-0.97
11,879.0	81.40	1.00	11,561.7	409.4	17.1	409.2	6.59	6.56	0.63
11,910.0	83.90	0.80	11,565.6	440.1	17.6	439.9	8.09	8.06	-0.65
11,941.0	85.90	0.60	11,568.4	471.0	17.9	470.8	6.48	6.45	-0.65
11,972.0	86.70	0.40	11,570.4	501.9	18.2	501.7	2.66	2.58	-0.65
12,066.0	86.30	0.60	11,576.1	595.7	19.0	595.5	0.48	-0.43	0.21
12,161.0	91.00	1.00	11,578.4	690.7	20.3	690.5	4.97	4.95	0.42
12,254.0	90.60	2.20	11,577.1	783.6	22.9	783.4	1.36	-0.43	1.29
12,348.0	90.80	1.90	11,575.9	877.5	26.3	877.3	0.38	0.21	-0.32
12,442.0	88.60	1.90	11,576.4	971.5	29.4	971.2	2.34	-2.34	0.00
12,537.0	88.70	0.40	11,578.6	1,066.4	31.3	1,066.1	1.58	0.11	-1.58
12,631.0	89.90	359.90	11,579.8	1,160.4	31.6	1,160.1	1.38	1.28	-0.53
12,725.0	90.60	359.70	11,579.4	1,254.4	31.2	1,254.1	0.77	0.74	-0.21
12,818.0	91.10	359.60	11,578.0	1,347.4	30.7	1,347.1	0.55	0.54	-0.11
12,912.0	90.60	359.90	11,576.6	1,441.4	30.3	1,441.1	0.62	-0.53	0.32
13,006.0	91.10	0.40	11,575.2	1,535.4	30.5	1,535.1	0.75	0.53	0.53
13,099.0	90.40	1.00	11,574.0	1,628.4	31.7	1,628.0	0.99	-0.75	0.65
13,193.0	89.50	359.20	11,574.1	1,722.4	31.8	1,722.0	2.14	-0.96	-1.91
13,287.0	89.50	359.60	11,574.9	1,816.4	30.8	1,816.0	0.43	0.00	0.43
13,381.0	88.90	359.60	11,576.2	1,910.4	30.2	1,910.0	0.64	-0.64	0.00



Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Mad Dog 26 B3PA State #1H
Project:	Lea County, New Mexico	TVD Reference:	WELL @ 3437.0usft (Patterson #243)
Site:	Sec 26, T23S, R34E	MD Reference:	WELL @ 3437.0usft (Patterson #243)
Well:	Mad Dog 26 B3PA State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
13,474.0	89.20	0.20	11,577.7	2,003.3	30.0	2,003.0	0.72	0.32	0.65
13,568.0	88.60	359.90	11,579.5	2,097.3	30.1	2,097.0	0.71	-0.64	-0.32
13,662.0	94.70	358.00	11,576.8	2,191.2	28.4	2,190.9	6.80	6.49	-2.02
13,756.0	92.40	358.20	11,571.0	2,285.0	25.3	2,284.7	2.46	-2.45	0.21
13,851.0	90.70	358.20	11,568.5	2,379.9	22.3	2,379.6	1.79	-1.79	0.00
13,945.0	90.20	357.60	11,567.7	2,473.8	18.8	2,473.6	0.83	-0.53	-0.64
14,039.0	87.70	358.20	11,569.4	2,567.7	15.4	2,567.5	2.74	-2.66	0.64
14,132.0	89.90	356.40	11,571.4	2,660.6	11.0	2,660.4	3.06	2.37	-1.94
14,226.0	88.00	355.90	11,573.1	2,754.4	4.7	2,754.2	2.09	-2.02	-0.53
14,320.0	89.80	355.40	11,574.9	2,848.1	-2.4	2,848.0	1.99	1.91	-0.53
14,414.0	89.40	356.80	11,575.6	2,941.9	-8.8	2,941.8	1.55	-0.43	1.49
14,507.0	93.40	356.00	11,573.3	3,034.6	-14.7	3,034.6	4.39	4.30	-0.86
14,602.0	96.00	356.80	11,565.5	3,129.1	-20.6	3,129.2	2.86	2.74	0.84
14,696.0	92.60	358.90	11,558.5	3,222.8	-24.1	3,222.9	4.25	-3.62	2.23
14,790.0	90.10	359.70	11,556.3	3,316.7	-25.3	3,316.8	2.79	-2.66	0.85
14,883.0	89.80	359.90	11,556.3	3,409.7	-25.6	3,409.8	0.39	-0.32	0.22
14,977.0	89.40	0.30	11,557.0	3,503.7	-25.4	3,503.8	0.60	-0.43	0.43
15,071.0	90.80	359.60	11,556.8	3,597.7	-25.5	3,597.8	1.67	1.49	-0.74
15,165.0	90.00	359.20	11,556.2	3,691.7	-26.5	3,691.8	0.95	-0.85	-0.43
15,260.0	91.40	358.90	11,555.0	3,786.7	-28.1	3,786.8	1.51	1.47	-0.32
15,353.0	91.20	359.00	11,552.9	3,879.6	-29.8	3,879.8	0.24	-0.22	0.11
15,447.0	91.40	359.60	11,550.8	3,973.6	-30.9	3,973.7	0.67	0.21	0.64
15,541.0	91.60	359.70	11,548.3	4,067.6	-31.5	4,067.7	0.24	0.21	0.11
15,634.0	91.50	359.00	11,545.8	4,160.5	-32.5	4,160.7	0.76	-0.11	-0.75
15,728.0	91.40	358.70	11,543.4	4,254.5	-34.4	4,254.6	0.34	-0.11	-0.32
15,823.0	91.30	358.70	11,541.2	4,349.4	-36.6	4,349.6	0.11	-0.11	0.00
15,916.0	91.40	355.40	11,539.0	4,442.3	-41.4	4,442.5	3.55	0.11	-3.55
16,010.0	91.40	358.00	11,536.7	4,536.1	-46.8	4,536.3	2.77	0.00	2.77
16,104.0	91.40	358.20	11,534.4	4,630.0	-49.9	4,630.3	0.21	0.00	0.21
16,180.0	91.10	358.00	11,532.7	4,705.9	-52.4	4,706.2	0.47	-0.39	-0.26
TD @ 16235' MD / 11531.7' TVD									
16,235.0	91.10	358.00	11,531.7	4,760.9	-54.3	4,761.2	0.00	0.00	0.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
827.0	826.2	10.5	-24.1	Gyro Tie In @ 827.0 'MD / 826.2 'TVD
11,598.0	11,472.9	144.9	2.2	Crossed 330' HL @ 11598.0'MD / 11472.9'TVD
16,235.0	11,531.7	4,760.9	-54.3	TD @ 16235' MD / 11531.7' TVD

Checked By: _____ Approved By: _____ Date: _____



HOBBS OCD

AUG 07 2017

RECEIVED

Mewbourne Oil Company

Lea County, New Mexico

Sec 26, T23S, R34E

Mad Dog 26 B3PA State #1H

Wellbore #1

Survey: MWD Surveys

QES Survey Report

19 July, 2017



Quintana Energy Services

11390 FM 830
Willis, TX 77318
Phone: (936) 856-4332
Fax: (936) 856-8678



Survey Certification Sheet

Company	Job Number	Date
Mewbourne Oil Company	WT-170619	7/12/2017

Lease	Well Name	County & State
Sec26,T23S,R34E	Mad Dog 26 B3PA State #1H	Lea, New Mexico

API No.	Survey Depth Range	Survey Type
30-025-43590	827 feet to 16235 feet MD	MWD

Sidetrack Information	Directional Supervisor/Surveyor
N/A	Brad Reed

Certification Statement

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by Quintana Energy Services (QES). This report represents a true and correct directional survey of this well based on the original data obtained at the well site. Wellbore coordinates are calculated using minimum curvature.

Christopher Hughes

A handwritten signature in black ink, appearing to read 'C. Hughes', is written over the printed name 'Christopher Hughes'.

Christopher Hughes
MWD Compliance Manager
Quintana Energy Services

Digitally signed by Christopher Hughes
DN: cn=Christopher Hughes, o=QES,
ou=compliance, email=chrish@qeslp.com, c=US
Date: 2017.07.19 10:22:29 -05'00'

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Mad Dog 26 B3PA State #1H
Project:	Lea County, New Mexico	TVD Reference:	WELL @ 3437.0usft (Patterson #243)
Site:	Sec 26, T23S, R34E	MD Reference:	WELL @ 3437.0usft (Patterson #243)
Well:	Mad Dog 26 B3PA State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

Project	Lea 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 26, T23S, R34E		
Site Position:		Northing:	462,643.10 usft
From:	Map	Easting:	777,999.20 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 16' 7.393 N
		Longitude:	103° 26' 2.146 W
		Grid Convergence:	0.48 °

Well	Mad Dog 26 B3PA State #1H		
Well Position	+N/-S	0.0 usft	Northing: 462,643.10 usft
	+E/-W	0.0 usft	Easting: 777,999.20 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 16' 7.393 N
		Longitude:	103° 26' 2.146 W
		Ground Level:	3,410.0 usft

Wellbore	Wellbore #1		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/2/2017	6.90	60.13	47,984

Design	Wellbore #1		
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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	359.50

Survey Program		Date 7/11/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	827.0	Gyros (Wellbore #1)	GYRO-NS	OWSG Gyrocompass Gyro
896.0	16,235.0	MWD Surveys (Wellbore #1)	MWD default	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)
Gyro Tie In @ 827.0 'MD / 826.2 'TVD									
827.0	6.23	293.33	826.2	10.5	-24.1	10.7	0.00	0.00	0.00
896.0	7.50	292.60	894.7	13.7	-31.7	14.0	1.84	1.84	-1.06
959.0	6.80	293.60	957.2	16.8	-38.9	17.1	1.13	-1.11	1.59
1,022.0	5.10	298.60	1,019.8	19.6	-44.8	20.0	2.82	-2.70	7.94
1,085.0	4.20	303.00	1,082.6	22.2	-49.2	22.7	1.54	-1.43	6.98
1,148.0	2.50	319.00	1,145.5	24.5	-52.0	25.0	3.05	-2.70	25.40
1,211.0	2.40	328.50	1,208.5	26.7	-53.6	27.1	0.66	-0.16	15.08
1,274.0	2.20	329.70	1,271.4	28.8	-54.9	29.3	0.33	-0.32	1.90
1,337.0	2.30	331.10	1,334.4	31.0	-56.1	31.5	0.18	0.16	2.22

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Mad Dog 26 B3PA State #1H
Project:	Lea County, New Mexico	TVD Reference:	WELL @ 3437.0usft (Patterson #243)
Site:	Sec 26, T23S, R34E	MD Reference:	WELL @ 3437.0usft (Patterson #243)
Well:	Mad Dog 26 B3PA State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)	
1,400.0	2.40	324.40	1,397.3	33.2	-57.5	33.7	0.46	0.16	-10.63	
1,463.0	2.50	327.80	1,460.3	35.4	-59.0	35.9	0.28	0.16	5.40	
1,526.0	2.50	332.30	1,523.2	37.8	-60.4	38.3	0.31	0.00	7.14	
1,588.0	2.40	332.10	1,585.1	40.1	-61.6	40.7	0.16	-0.16	-0.32	
1,651.0	2.50	325.10	1,648.1	42.4	-63.0	43.0	0.50	0.16	-11.11	
1,746.0	2.50	331.60	1,743.0	46.0	-65.2	46.5	0.30	0.00	6.84	
1,809.0	2.60	327.80	1,805.9	48.4	-66.6	48.9	0.31	0.16	-6.03	
1,903.0	1.10	34.40	1,899.9	50.9	-67.2	51.5	2.54	-1.60	70.85	
1,997.0	1.70	97.80	1,993.9	51.5	-65.3	52.0	1.66	0.64	67.45	
2,091.0	1.70	97.50	2,087.8	51.1	-62.6	51.6	0.01	0.00	-0.32	
2,185.0	1.60	92.40	2,181.8	50.9	-59.9	51.4	0.19	-0.11	-5.43	
2,278.0	2.70	108.20	2,274.7	50.1	-56.5	50.6	1.33	1.18	16.99	
2,372.0	3.50	119.10	2,368.6	48.0	-51.9	48.5	1.05	0.85	11.60	
2,466.0	2.70	132.60	2,462.4	45.1	-47.8	45.6	1.15	-0.85	14.36	
2,560.0	2.70	146.30	2,556.3	41.8	-44.9	42.2	0.68	0.00	14.57	
2,653.0	2.90	139.50	2,649.2	38.2	-42.2	38.6	0.42	0.22	-7.31	
2,747.0	2.70	143.70	2,743.1	34.6	-39.3	34.9	0.30	-0.21	4.47	
2,841.0	2.50	151.10	2,837.0	31.0	-37.0	31.3	0.42	-0.21	7.87	
2,935.0	2.90	141.40	2,930.9	27.4	-34.5	27.7	0.64	0.43	-10.32	
3,028.0	2.70	149.00	3,023.8	23.7	-31.9	23.9	0.45	-0.22	8.17	
3,122.0	2.60	131.80	3,117.7	20.3	-29.2	20.6	0.85	-0.11	-18.30	
3,216.0	3.30	129.30	3,211.6	17.2	-25.5	17.4	0.76	0.74	-2.66	
3,309.0	2.30	137.60	3,304.5	14.1	-22.2	14.3	1.16	-1.08	8.92	
3,404.0	2.00	193.80	3,399.4	11.1	-21.3	11.3	2.15	-0.32	59.16	
3,498.0	1.90	195.00	3,493.4	8.0	-22.1	8.2	0.11	-0.11	1.28	
3,592.0	1.90	179.40	3,587.3	4.9	-22.5	5.1	0.55	0.00	-16.60	
3,686.0	1.90	195.70	3,681.3	1.9	-22.9	2.1	0.57	0.00	17.34	
3,780.0	2.10	180.10	3,775.2	-1.3	-23.3	-1.1	0.61	0.21	-16.60	
3,874.0	1.80	157.40	3,869.1	-4.4	-22.7	-4.2	0.87	-0.32	-24.15	
3,967.0	2.10	144.90	3,962.1	-7.2	-21.2	-7.0	0.56	0.32	-13.44	
4,061.0	2.00	148.60	4,056.0	-10.0	-19.4	-9.8	0.18	-0.11	3.94	
4,155.0	2.50	112.10	4,150.0	-12.1	-16.6	-12.0	1.58	0.53	-38.83	
4,248.0	3.50	100.50	4,242.8	-13.4	-11.9	-13.3	1.25	1.08	-12.47	
4,342.0	3.60	125.10	4,336.7	-15.6	-6.7	-15.6	1.61	0.11	26.17	
4,436.0	3.30	173.60	4,430.5	-20.0	-4.0	-20.0	3.03	-0.32	51.60	
4,530.0	3.80	202.10	4,524.3	-25.6	-4.8	-25.6	1.93	0.53	30.32	
4,624.0	1.50	221.60	4,618.2	-29.4	-6.8	-29.3	2.59	-2.45	20.74	
4,717.0	3.10	335.80	4,711.2	-28.0	-8.7	-27.9	4.26	1.72	122.80	
4,811.0	3.20	340.80	4,805.0	-23.2	-10.6	-23.1	0.31	0.11	5.32	
4,905.0	0.90	332.70	4,899.0	-20.1	-11.8	-20.0	2.46	-2.45	-8.62	
4,998.0	0.40	94.00	4,992.0	-19.5	-11.8	-19.4	1.25	-0.54	130.43	
5,070.0	0.30	167.80	5,064.0	-19.7	-11.5	-19.6	0.59	-0.14	102.50	
5,179.0	0.30	308.90	5,173.0	-19.8	-11.7	-19.7	0.52	0.00	129.45	

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Mad Dog 26 B3PA State #1H
Project:	Lea County, New Mexico	TVD Reference:	WELL @ 3437.0usft (Patterson #243)
Site:	Sec 26, T23S, R34E	MD Reference:	WELL @ 3437.0usft (Patterson #243)
Well:	Mad Dog 26 B3PA State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
5,366.0	2.70	189.60	5,359.9	-23.8	-12.8	-23.7	1.53	1.28	-63.80
5,553.0	2.80	192.00	5,546.7	-32.6	-14.5	-32.5	0.08	0.05	1.28
5,741.0	2.70	189.90	5,734.5	-41.5	-16.2	-41.3	0.08	-0.05	-1.12
5,929.0	2.60	192.90	5,922.3	-50.0	-17.9	-49.8	0.09	-0.05	1.60
6,117.0	2.30	198.20	6,110.1	-57.7	-20.0	-57.6	0.20	-0.16	2.82
6,305.0	1.90	196.60	6,298.0	-64.3	-22.1	-64.1	0.22	-0.21	-0.85
6,492.0	1.70	191.90	6,484.9	-70.0	-23.6	-69.8	0.13	-0.11	-2.51
6,680.0	1.80	196.80	6,672.8	-75.5	-25.0	-75.3	0.10	0.05	2.61
6,867.0	1.80	191.20	6,859.7	-81.2	-26.4	-81.0	0.09	0.00	-2.99
7,055.0	1.90	189.80	7,047.6	-87.2	-27.5	-87.0	0.06	0.05	-0.74
7,243.0	1.80	183.30	7,235.5	-93.2	-28.2	-93.0	0.12	-0.05	-3.46
7,429.0	1.90	186.80	7,421.4	-99.2	-28.7	-98.9	0.08	0.05	1.88
7,617.0	1.70	196.80	7,609.3	-105.0	-29.9	-104.7	0.20	-0.11	5.32
7,805.0	1.90	200.00	7,797.2	-110.6	-31.8	-110.3	0.12	0.11	1.70
7,994.0	1.50	204.90	7,986.1	-115.7	-33.9	-115.4	0.22	-0.21	2.59
8,181.0	1.30	194.10	8,173.1	-120.0	-35.4	-119.7	0.18	-0.11	-5.78
8,369.0	1.10	191.00	8,361.0	-123.9	-36.3	-123.5	0.11	-0.11	-1.65
8,556.0	0.90	199.80	8,548.0	-127.0	-37.1	-126.7	0.13	-0.11	4.71
8,744.0	1.10	220.00	8,736.0	-129.8	-38.8	-129.4	0.21	0.11	10.74
8,931.0	0.90	195.00	8,923.0	-132.6	-40.3	-132.2	0.25	-0.11	-13.37
9,119.0	0.80	183.10	9,110.9	-135.3	-40.8	-135.0	0.11	-0.05	-6.33
9,307.0	1.10	167.10	9,298.9	-138.4	-40.5	-138.0	0.21	0.16	-8.51
9,494.0	1.40	205.20	9,485.9	-142.2	-41.0	-141.8	0.46	0.16	20.37
9,682.0	1.60	196.60	9,673.8	-146.8	-42.8	-146.4	0.16	0.11	-4.57
9,869.0	1.60	201.40	9,860.7	-151.7	-44.5	-151.3	0.07	0.00	2.57
10,056.0	1.90	223.70	10,047.6	-156.4	-47.6	-156.0	0.39	0.16	11.93
10,244.0	1.30	222.50	10,235.6	-160.2	-51.2	-159.8	0.32	-0.32	-0.64
10,431.0	1.10	192.40	10,422.5	-163.5	-53.0	-163.1	0.35	-0.11	-16.10
10,619.0	1.60	199.60	10,610.5	-167.8	-54.2	-167.3	0.28	0.27	3.83
10,773.0	1.10	54.80	10,764.5	-168.9	-53.8	-168.5	1.67	-0.32	-94.03
10,960.0	1.00	37.70	10,951.4	-166.6	-51.3	-166.2	0.18	-0.05	-9.14
10,991.0	1.70	22.80	10,982.4	-166.0	-50.9	-165.5	2.51	2.26	-48.06
11,022.0	4.50	9.90	11,013.4	-164.4	-50.6	-163.9	9.25	9.03	-41.61
11,056.0	8.30	7.80	11,047.2	-160.6	-50.0	-160.2	11.20	11.18	-6.18
11,087.0	13.40	12.00	11,077.6	-154.9	-48.9	-154.4	16.64	16.45	13.55
11,119.0	16.90	14.00	11,108.5	-146.7	-47.0	-146.3	11.06	10.94	6.25
11,151.0	20.90	14.30	11,138.7	-136.7	-44.5	-136.3	12.50	12.50	0.94
11,182.0	24.50	12.60	11,167.3	-125.1	-41.7	-124.7	11.80	11.61	-5.48
11,214.0	27.70	12.60	11,196.1	-111.3	-38.7	-111.0	10.00	10.00	0.00
11,245.0	30.40	12.00	11,223.2	-96.6	-35.5	-96.3	8.76	8.71	-1.94
11,277.0	33.50	12.00	11,250.3	-80.0	-31.9	-79.8	9.69	9.69	0.00
11,308.0	36.20	11.70	11,275.8	-62.7	-28.3	-62.5	8.73	8.71	-0.97
11,340.0	38.40	11.70	11,301.2	-43.7	-24.4	-43.5	6.88	6.88	0.00

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Mad Dog 26 B3PA State #1H
Project:	Lea County, New Mexico	TVD Reference:	WELL @ 3437.0usft (Patterson #243)
Site:	Sec 26, T23S, R34E	MD Reference:	WELL @ 3437.0usft (Patterson #243)
Well:	Mad Dog 26 B3PA State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)	
11,371.0	40.30	10.50	11,325.2	-24.4	-20.6	-24.3	6.60	6.13	-3.87	
11,403.0	41.80	9.20	11,349.3	-3.7	-17.0	-3.6	5.39	4.69	-4.06	
11,434.0	44.30	9.10	11,372.0	17.2	-13.6	17.3	8.07	8.06	-0.32	
11,465.0	47.40	8.00	11,393.6	39.1	-10.3	39.2	10.32	10.00	-3.55	
11,496.0	50.40	7.80	11,413.9	62.3	-7.1	62.3	9.69	9.68	-0.65	
11,527.0	53.10	6.60	11,433.1	86.4	-4.1	86.5	9.22	8.71	-3.87	
11,559.0	55.10	6.20	11,451.9	112.2	-1.2	112.2	6.33	6.25	-1.25	
11,590.0	58.80	5.70	11,468.8	138.0	1.5	138.0	12.01	11.94	-1.61	
11,621.0	62.60	6.20	11,484.0	164.9	4.3	164.9	12.34	12.26	1.61	
11,652.0	66.20	6.20	11,497.3	192.7	7.3	192.6	11.61	11.61	0.00	
11,754.0	72.10	2.20	11,533.6	287.7	14.2	287.6	6.85	5.78	-3.92	
11,785.0	74.80	1.90	11,542.5	317.4	15.3	317.3	8.76	8.71	-0.97	
11,816.0	77.20	1.10	11,550.0	347.5	16.1	347.3	8.14	7.74	-2.58	
11,847.0	79.30	0.80	11,556.3	377.8	16.6	377.7	6.84	6.77	-0.97	
11,879.0	81.40	1.00	11,561.7	409.4	17.1	409.2	6.59	6.56	0.63	
11,910.0	83.90	0.80	11,565.6	440.1	17.6	439.9	8.09	8.06	-0.65	
11,941.0	85.90	0.60	11,568.4	471.0	17.9	470.8	6.48	6.45	-0.65	
11,972.0	86.70	0.40	11,570.4	501.9	18.2	501.7	2.66	2.58	-0.65	
12,066.0	86.30	0.60	11,576.1	595.7	19.0	595.5	0.48	-0.43	0.21	
12,161.0	91.00	1.00	11,578.4	690.7	20.3	690.5	4.97	4.95	0.42	
12,254.0	90.60	2.20	11,577.1	783.6	22.9	783.4	1.36	-0.43	1.29	
12,348.0	90.80	1.90	11,575.9	877.5	26.3	877.3	0.38	0.21	-0.32	
12,442.0	88.60	1.90	11,576.4	971.5	29.4	971.2	2.34	-2.34	0.00	
12,537.0	88.70	0.40	11,578.6	1,066.4	31.3	1,066.1	1.58	0.11	-1.58	
12,631.0	89.90	359.90	11,579.8	1,160.4	31.6	1,160.1	1.38	1.28	-0.53	
12,725.0	90.60	359.70	11,579.4	1,254.4	31.2	1,254.1	0.77	0.74	-0.21	
12,818.0	91.10	359.60	11,578.0	1,347.4	30.7	1,347.1	0.55	0.54	-0.11	
12,912.0	90.60	359.90	11,576.6	1,441.4	30.3	1,441.1	0.62	-0.53	0.32	
13,006.0	91.10	0.40	11,575.2	1,535.4	30.5	1,535.1	0.75	0.53	0.53	
13,099.0	90.40	1.00	11,574.0	1,628.4	31.7	1,628.0	0.99	-0.75	0.65	
13,193.0	89.50	359.20	11,574.1	1,722.4	31.8	1,722.0	2.14	-0.96	-1.91	
13,287.0	89.50	359.60	11,574.9	1,816.4	30.8	1,816.0	0.43	0.00	0.43	
13,381.0	88.90	359.60	11,576.2	1,910.4	30.2	1,910.0	0.64	-0.64	0.00	
13,474.0	89.20	0.20	11,577.7	2,003.3	30.0	2,003.0	0.72	0.32	0.65	
13,568.0	88.60	359.90	11,579.5	2,097.3	30.1	2,097.0	0.71	-0.64	-0.32	
13,662.0	94.70	358.00	11,576.8	2,191.2	28.4	2,190.9	6.80	6.49	-2.02	
13,756.0	92.40	358.20	11,571.0	2,285.0	25.3	2,284.7	2.46	-2.45	0.21	
13,851.0	90.70	358.20	11,568.5	2,379.9	22.3	2,379.6	1.79	-1.79	0.00	
13,945.0	90.20	357.60	11,567.7	2,473.8	18.8	2,473.6	0.83	-0.53	-0.64	
14,039.0	87.70	358.20	11,569.4	2,567.7	15.4	2,567.5	2.74	-2.66	0.64	
14,132.0	89.90	356.40	11,571.4	2,660.6	11.0	2,660.4	3.06	2.37	-1.94	
14,226.0	88.00	355.90	11,573.1	2,754.4	4.7	2,754.2	2.09	-2.02	-0.53	
14,320.0	89.80	355.40	11,574.9	2,848.1	-2.4	2,848.0	1.99	1.91	-0.53	
14,414.0	89.40	356.80	11,575.6	2,941.9	-8.8	2,941.8	1.55	-0.43	1.49	



Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Mad Dog 26 B3PA State #1H
Project:	Lea County, New Mexico	TVD Reference:	WELL @ 3437.0usft (Patterson #243)
Site:	Sec 26, T23S, R34E	MD Reference:	WELL @ 3437.0usft (Patterson #243)
Well:	Mad Dog 26 B3PA State #1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM5002

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)
14,507.0	93.40	356.00	11,573.3	3,034.6	-14.7	3,034.6	4.39	4.30	-0.86
14,602.0	96.00	356.80	11,565.5	3,129.1	-20.6	3,129.2	2.86	2.74	0.84
14,696.0	92.60	358.90	11,558.5	3,222.8	-24.1	3,222.9	4.25	-3.62	2.23
14,790.0	90.10	359.70	11,556.3	3,316.7	-25.3	3,316.8	2.79	-2.66	0.85
14,883.0	89.80	359.90	11,556.3	3,409.7	-25.6	3,409.8	0.39	-0.32	0.22
14,977.0	89.40	0.30	11,557.0	3,503.7	-25.4	3,503.8	0.60	-0.43	0.43
15,071.0	90.80	359.60	11,556.8	3,597.7	-25.5	3,597.8	1.67	1.49	-0.74
15,165.0	90.00	359.20	11,556.2	3,691.7	-26.5	3,691.8	0.95	-0.85	-0.43
15,260.0	91.40	358.90	11,555.0	3,786.7	-28.1	3,786.8	1.51	1.47	-0.32
15,353.0	91.20	359.00	11,552.9	3,879.6	-29.8	3,879.8	0.24	-0.22	0.11
15,447.0	91.40	359.60	11,550.8	3,973.6	-30.9	3,973.7	0.67	0.21	0.64
15,541.0	91.60	359.70	11,548.3	4,067.6	-31.5	4,067.7	0.24	0.21	0.11
15,634.0	91.50	359.00	11,545.8	4,160.5	-32.5	4,160.7	0.76	-0.11	-0.75
15,728.0	91.40	358.70	11,543.4	4,254.5	-34.4	4,254.6	0.34	-0.11	-0.32
15,823.0	91.30	358.70	11,541.2	4,349.4	-36.6	4,349.6	0.11	-0.11	0.00
15,916.0	91.40	355.40	11,539.0	4,442.3	-41.4	4,442.5	3.55	0.11	-3.55
16,010.0	91.40	358.00	11,536.7	4,536.1	-46.8	4,536.3	2.77	0.00	2.77
16,104.0	91.40	358.20	11,534.4	4,630.0	-49.9	4,630.3	0.21	0.00	0.21
16,180.0	91.10	358.00	11,532.7	4,705.9	-52.4	4,706.2	0.47	-0.39	-0.26
TD @ 16235' MD / 11531.7' TVD									
16,235.0	91.10	358.00	11,531.7	4,760.9	-54.3	4,761.2	0.00	0.00	0.00

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
827.0	826.2	10.5	-24.1	Gyro Tie In @ 827.0 'MD / 826.2 'TVD
16,235.0	11,531.7	4,760.9	-54.3	TD @ 16235' MD / 11531.7' TVD

Checked By: _____	Approved By: _____	Date: _____
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