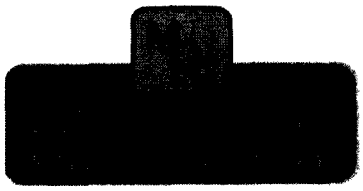

Mewbourne Oil Company

Eddy County, New Mexico
Sec 7, T24S, R28E
Boston 7 W2MP FEE 1H 30-015-43155

Wellbore #1

Survey: MWD Surveys

QES Survey Report

23 February, 2017

QES

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-170158	3/7/2017

Lease	Well Name	County & State
Sec7,T24S,R28E	Boston 7 W2MP FEE 1H	Eddy, New Mexico

API No.	Survey Depth Range	Survey Type
30-015-43155	9120 feet to 14525 feet MD	MWD

Sidetrack Information	Directional Supervisor/Surveyor
	Agee Combs

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

Digitally signed by Christopher Hughes
DN: cn=Christopher Hughes, o=QES, ou=compliance, email=chrish@qeslp.com, c=US
Date: 2017.03.07 15:49:48 -06'00'

Christopher Hughes
MWD Compliance Manager
Quintana Energy Services

Company:	Mewbourne Oil Company	**Local Co-ordinate Reference:**	Well Boston 7 W2MP FEE 1H
Project:	Eddy County, New Mexico	**TVD Reference:**	WELL @ 3114.0usft (Patterson #243)
Site:	Sec 7, T24S, R28E	**MD Reference:**	WELL @ 3114.0usft (Patterson #243)
Well:	Boston 7 W2MP FEE 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)
9,558.0	27.40	81.70	9,546.3	-30.7	-11.7	-11.9	13.77	13.55	5.81
9,589.0	32.10	83.40	9,573.2	-28.7	3.5	3.4	15.40	15.16	5.48
9,621.0	34.10	85.60	9,600.0	-27.1	20.9	20.8	7.29	6.25	6.88
9,652.0	34.90	85.60	9,625.6	-25.7	38.4	38.3	2.58	2.58	0.00
9,683.0	36.50	86.30	9,650.7	-24.4	56.5	56.3	5.33	5.16	2.26
9,714.0	39.30	85.90	9,675.2	-23.1	75.5	75.3	9.07	9.03	-1.29
9,745.0	42.40	85.60	9,698.6	-21.6	95.7	95.6	10.02	10.00	-0.97
9,777.0	47.60	84.50	9,721.3	-19.7	118.2	118.1	16.43	16.25	-3.44
9,808.0	52.40	83.80	9,741.2	-17.2	141.8	141.7	15.58	15.48	-2.26
9,839.0	54.70	83.10	9,759.6	-14.4	166.6	166.5	7.64	7.42	-2.26
9,870.0	57.10	83.10	9,777.0	-11.3	192.1	192.0	7.74	7.74	0.00
9,901.0	58.90	83.10	9,793.4	-8.2	218.2	218.1	5.81	5.81	0.00
9,932.0	60.40	82.70	9,809.1	-4.9	244.7	244.7	4.97	4.84	-1.29
9,964.0	61.90	82.40	9,824.5	-1.2	272.5	272.5	4.76	4.69	-0.94
9,995.0	63.60	82.70	9,838.7	2.4	299.8	299.9	5.55	5.48	0.97
10,026.0	65.40	83.10	9,852.0	5.8	327.6	327.6	5.92	5.81	1.29
10,057.0	67.40	84.10	9,864.5	9.0	355.8	355.9	7.10	6.45	3.23
10,089.0	68.50	84.50	9,876.5	11.9	385.4	385.4	3.63	3.44	1.25
10,120.0	70.00	84.80	9,887.4	14.6	414.2	414.3	4.92	4.84	0.97
10,145.0	71.90	84.80	9,895.6	16.8	437.7	437.8	7.60	7.60	0.00
10,225.0	74.10	88.40	9,919.0	21.3	514.1	514.2	5.11	2.75	4.50
10,256.0	74.00	87.50	9,927.5	22.4	543.9	544.0	2.81	-0.32	-2.90
10,288.0	73.40	87.80	9,936.5	23.6	574.6	574.7	2.08	-1.88	0.94
10,319.0	75.60	86.60	9,944.8	25.1	604.4	604.5	8.02	7.10	-3.87
10,350.0	77.60	86.30	9,952.0	26.9	634.5	634.7	6.52	6.45	-0.97
10,381.0	80.70	86.10	9,957.8	29.0	664.9	665.0	10.02	10.00	-0.65
10,413.0	83.40	86.10	9,962.2	31.1	696.5	696.7	8.44	8.44	0.00
10,444.0	83.30	86.30	9,965.8	33.2	727.2	727.4	0.72	-0.32	0.65
10,475.0	83.20	86.10	9,969.5	35.2	757.9	758.1	0.72	-0.32	-0.65
10,506.0	84.30	86.10	9,972.8	37.3	788.7	788.9	3.55	3.55	0.00
10,537.0	85.80	86.30	9,975.5	39.3	819.5	819.7	4.88	4.84	0.65
10,569.0	86.20	86.40	9,977.7	41.4	851.4	851.6	1.29	1.25	0.31
10,600.0	87.40	86.40	9,979.5	43.3	882.2	882.5	3.87	3.87	0.00
10,631.0	88.00	86.40	9,980.7	45.3	913.2	913.4	1.94	1.94	0.00
10,662.0	87.80	86.30	9,981.9	47.2	944.1	944.3	0.72	-0.65	-0.32
10,756.0	87.80	87.30	9,985.5	52.5	1,037.9	1,038.1	1.06	0.00	1.06
10,850.0	87.50	87.70	9,989.3	56.6	1,131.7	1,132.0	0.53	-0.32	0.43
10,943.0	87.00	87.30	9,993.8	60.6	1,224.5	1,224.8	0.69	-0.54	-0.43
11,037.0	86.00	87.70	9,999.5	64.7	1,318.2	1,318.6	1.15	-1.06	0.43
11,130.0	87.30	89.40	10,005.0	67.1	1,411.0	1,411.4	2.30	1.40	1.83
11,224.0	86.50	89.60	10,010.0	67.9	1,504.9	1,505.3	0.88	-0.85	0.21
11,317.0	88.80	89.90	10,013.9	68.3	1,597.8	1,598.2	2.49	2.47	0.32
11,411.0	89.40	90.10	10,015.3	68.3	1,691.8	1,692.2	0.67	0.64	0.21

Company:	Mewbourne Oil Company	**Local Co-ordinate Reference:**	Well Boston 7 W2MP FEE 1H
Project:	Eddy County, New Mexico	**TVD Reference:**	WELL @ 3114.0usft (Patterson #243)
Site:	Sec 7, T24S, R28E	**MD Reference:**	WELL @ 3114.0usft (Patterson #243)
Well:	Boston 7 W2MP FEE 1H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM5002

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 7, T24S, R28E

Site Position:		**Northing:**	445,917.70 usft	**Latitude:**	32° 13' 32.838 N
From:	Map	**Easting:**	561,513.20 usft	**Longitude:**	104° 8' 3.881 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.11 °

Well Boston 7 W2MP FEE 1H

Well Position	**+N/-S**	0.0 usft	**Northing:**	445,917.70 usft	**Latitude:**	32° 13' 32.838 N
	+E/-W	0.0 usft	**Easting:**	561,513.20 usft	**Longitude:**	104° 8' 3.881 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,089.0 usft

Wellbore Wellbore #1

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	2/1/2017	7.25	59.98	47,919

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	89.66

Survey Program **Date** 2/23/2017

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
100.0	9,120.0	Gyro (Wellbore #1)	Good_gyro	Good Gyro
9,287.0	14,525.0	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 @ 9120' MD / 9116' TVD									
9,120.0	1.12	169.16	9,115.8	-36.1	-58.8	-59.0	0.00	0.00	0.00
9,287.0	1.20	185.40	9,282.8	-39.5	-58.7	-58.9	0.20	0.05	9.72
9,340.0	0.60	155.20	9,335.8	-40.3	-58.6	-58.9	1.41	-1.13	-56.98
9,371.0	3.10	78.90	9,366.8	-40.3	-57.7	-58.0	9.72	8.06	-246.13
9,402.0	6.70	76.10	9,397.7	-39.7	-55.1	-55.4	11.64	11.61	-9.03
9,433.0	10.40	76.40	9,428.3	-38.6	-50.7	-50.9	11.94	11.94	0.97
9,465.0	13.90	75.70	9,459.6	-36.9	-44.1	-44.4	10.95	10.94	-2.19
9,496.0	18.70	77.50	9,489.3	-34.9	-35.7	-35.9	15.57	15.48	5.81
9,527.0	23.20	79.90	9,518.3	-32.8	-24.8	-25.0	14.77	14.52	7.74

[redacted]

Survey Report

QES

Company:	Mewbourne Oil Company	**Local Co-ordinate Reference:**	Well Boston 7 W2MP FEE 1H
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Site:	Sec 7, T24S, R28E	**MD Reference:**	WELL @ 3114.0usft (Patterson #243)
Well:	Boston 7 W2MP FEE 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)
11,504.0	91.10	89.60	10,014.9	68.5	1,784.8	1,785.2	1.91	1.83	-0.54
11,599.0	86.10	88.70	10,017.2	69.9	1,879.7	1,880.1	5.35	-5.26	-0.95
11,692.0	89.40	90.80	10,020.9	70.3	1,972.6	1,973.0	4.20	3.55	2.26
11,786.0	86.30	91.00	10,024.4	68.9	2,066.5	2,066.9	3.30	-3.30	0.21
11,880.0	86.60	91.20	10,030.2	67.1	2,160.3	2,160.7	0.38	0.32	0.21
11,971.0	87.10	91.20	10,035.2	65.2	2,251.2	2,251.5	0.55	0.55	0.00
12,065.0	85.90	91.50	10,041.0	63.0	2,345.0	2,345.3	1.32	-1.28	0.32
12,159.0	88.60	91.50	10,045.5	60.5	2,438.8	2,439.1	2.87	2.87	0.00
12,252.0	88.50	91.20	10,047.8	58.3	2,531.8	2,532.1	0.34	-0.11	-0.32
12,346.0	87.70	91.30	10,051.0	56.3	2,625.7	2,626.0	0.86	-0.85	0.11
12,440.0	89.50	91.20	10,053.3	54.2	2,719.6	2,719.9	1.92	1.91	-0.11
12,533.0	87.80	90.30	10,055.4	53.0	2,812.6	2,812.9	2.07	-1.83	-0.97
12,627.0	87.30	89.90	10,059.5	52.8	2,906.5	2,906.8	0.68	-0.53	-0.43
12,720.0	87.70	88.70	10,063.5	54.0	2,999.4	2,999.7	1.36	0.43	-1.29
12,815.0	87.90	88.40	10,067.2	56.4	3,094.3	3,094.6	0.38	0.21	-0.32
12,909.0	88.80	88.70	10,069.9	58.7	3,188.3	3,188.5	1.01	0.96	0.32
13,002.0	88.30	88.70	10,072.2	60.9	3,281.2	3,281.5	0.54	-0.54	0.00
13,096.0	87.10	88.90	10,076.0	62.8	3,375.1	3,375.4	1.29	-1.28	0.21
13,190.0	87.70	89.10	10,080.3	64.5	3,469.0	3,469.3	0.67	0.64	0.21
13,283.0	87.70	89.60	10,084.0	65.5	3,561.9	3,562.2	0.54	0.00	0.54
13,377.0	87.10	90.70	10,088.3	65.3	3,655.8	3,656.1	1.33	-0.64	1.17
13,471.0	90.90	89.60	10,089.9	65.0	3,749.8	3,750.1	4.21	4.04	-1.17
13,564.0	92.40	89.20	10,087.2	66.0	3,842.7	3,843.1	1.67	1.61	-0.43
13,658.0	92.30	89.20	10,083.4	67.3	3,936.6	3,937.0	0.11	-0.11	0.00
13,752.0	90.70	89.20	10,080.9	68.6	4,030.6	4,030.9	1.70	-1.70	0.00
13,846.0	87.30	85.40	10,082.5	73.0	4,124.4	4,124.8	5.42	-3.62	-4.04
13,938.0	86.80	84.70	10,087.3	81.0	4,216.0	4,216.4	0.93	-0.54	-0.76
14,031.0	89.70	85.20	10,090.1	89.1	4,308.6	4,309.0	3.16	3.12	0.54
14,126.0	87.30	83.10	10,092.6	98.8	4,403.0	4,403.5	3.36	-2.53	-2.21
14,220.0	91.10	84.00	10,093.9	109.4	4,496.4	4,497.0	4.15	4.04	0.96
14,314.0	92.90	83.80	10,090.6	119.4	4,589.8	4,590.4	1.93	1.91	-0.21
14,408.0	91.90	83.10	10,086.7	130.1	4,683.1	4,683.8	1.30	-1.06	-0.74
14,455.0	92.00	83.10	10,085.1	135.7	4,729.7	4,730.5	0.21	0.21	0.00
TD @ 14525' MD / 10083' TVD									
14,525.0	92.00	83.10	10,082.7	144.1	4,799.2	4,800.0	0.00	0.00	0.00

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
9,120.0	9,115.8	-36.1	-58.8	Gyro Tie In @ 9120' MD / 9116' TVD
14,525.0	10,082.7	144.1	4,799.2	TD @ 14525' MD / 10083' TVD

Company:	Mewbourne Oil Company	**Local Co-ordinate Reference:**	Well Boston 7 W2MP FEE 1H
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Well:	Boston 7 W2MP FEE 1H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM5002

Checked By: _____ Approved By: _____ Date: _____