



Mewbourne Oil Company

Eddy County, New Mexico (Nad 83)

Sec 2, T24S, R28E

Skynyrd 2 W0DM Fee #2H

Wellbore #1

30-015-44803

NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 04 2019

RECEIVED

Design: Wellbore #1

QES Survey Certification Report

19 August, 2018



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-180855	8/21/2018

Lease	Well Name	County & State
SEC 2, T-24S, R28E	Skynyrd 2 W0DM Fee #2H	Eddy County, NM

API No.	Survey Depth Range	Survey Type
30-015-44803	100 feet to 14305 feet MD	MWD

Sidetrack Information	Directional Supervisor/Surveyor
Click here to enter text.	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**

Digitally signed by Christopher
Hughes

DN: cn=Christopher Hughes, o=QES,
ou, email=Chrish@qesinc.com, c=US

Date: 2018.09.27 13:22:25 -05'00'

Christopher Hughes
MWD Compliance Manager
Quintana Energy Services



QES Survey Certification Report



Company: Mewbourne Oil Company
 Project: Eddy County, New Mexico (Nad 83)
 Site: Sec 2, T24S, R28E
 Well: Skynyrd 2 W0DM Fee #2H
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Well Skynyrd 2 W0DM Fee #2H
 TVD Reference: WELL @ 3043.0usft (Patterson #243)
 MD Reference: WELL @ 3043.0usft (Patterson #243)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

Project	Eddy County, New Mexico (Nad 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Sec 2, T24S, R28E			
Site Position:		Northing:	456,163.00 usft	Latitude: 32° 15' 13.596 N
From:	Map	Easting:	625,124.70 usft	Longitude: 104° 3' 44.254 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence: 0.14 °

Well	Skynyrd 2 W0DM Fee #2H			
Well Position	+N/-S	0.0 usft	Northing:	456,162.90 usft
	+E/-W	0.0 usft	Easting:	625,094.60 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level: 3,016.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/30/2018	7.06	60.00	47,791.58263186

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	180.80	

Survey Program	Date 8/19/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	100.0	Phoenix Technology Services (Wellbore #1	GYRO-NS	OWSG Gyrocompass Gyro	
204.0	14,305.0	QES MWD Surveys (Wellbore #1)	OWSG (Rev2) MWD	OWSG MWD - Standard	

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
100.0	0.93	351.30	100.0	0.8	-0.1	0.8	351.30	
Gyro Tie-in @ 100.0' MD / 100.0' TVD								
204.0	1.90	349.70	204.0	3.3	-0.6	3.4	350.48	
388.0	2.20	357.30	387.8	9.9	-1.3	9.9	352.66	
572.0	1.00	111.70	571.8	12.8	0.1	12.8	0.25	
759.0	0.70	133.00	758.8	11.4	2.4	11.7	11.91	
950.0	0.10	333.70	949.8	10.8	3.2	11.2	16.48	
1,140.0	0.30	339.00	1,139.8	11.4	2.9	11.8	14.46	
1,330.0	0.30	346.50	1,329.8	12.3	2.6	12.6	12.09	
1,521.0	0.50	309.30	1,520.8	13.3	1.9	13.5	8.01	
1,712.0	1.00	322.80	1,711.7	15.2	0.2	15.2	0.85	



QES Survey Certification Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Skynyrd 2 W0DM Fee #2H
Project:	Eddy County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3043.0usft (Patterson #243)
Site:	Sec 2, T24S, R28E	MD Reference:	WELL @ 3043.0usft (Patterson #243)
Well:	Skynyrd 2 W0DM Fee #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
1,840.0	0.60	324.20	1,839.7	16.6	-0.8	16.7	357.10
2,027.0	0.90	120.50	2,026.7	16.7	-0.1	16.7	359.49
2,214.0	2.40	129.40	2,213.6	13.4	4.1	14.1	17.12
2,402.0	3.50	134.00	2,401.4	7.0	11.3	13.3	58.38
2,475.0	3.00	128.00	2,474.3	4.2	14.4	15.0	73.61
2,552.0	3.30	129.60	2,551.2	1.6	17.7	17.8	84.88
2,740.0	3.30	0.90	2,739.0	3.6	22.0	22.3	80.82
2,926.0	3.80	358.50	2,924.7	15.1	21.9	26.6	55.47
3,112.0	3.80	353.90	3,110.3	27.4	21.1	34.5	37.62
3,300.0	4.20	349.50	3,297.8	40.3	19.2	44.6	25.42
3,486.0	2.20	356.90	3,483.5	50.6	17.7	53.6	19.32
3,674.0	2.10	353.60	3,671.4	57.6	17.2	60.1	16.58
3,860.0	2.40	0.10	3,857.2	64.9	16.8	67.0	14.50
4,047.0	1.70	343.70	4,044.1	71.5	16.0	73.2	12.62
4,235.0	1.60	350.80	4,232.0	76.7	14.8	78.1	10.92
4,422.0	1.50	14.30	4,419.0	81.7	15.0	83.0	10.40
4,608.0	1.60	354.60	4,604.9	86.6	15.3	88.0	10.05
4,795.0	1.70	346.40	4,791.8	91.9	14.4	93.1	8.93
4,982.0	1.70	335.60	4,978.7	97.1	12.7	98.0	7.42
5,171.0	1.50	326.80	5,167.7	101.8	10.1	102.3	5.69
5,359.0	1.40	333.90	5,355.6	105.9	7.8	106.2	4.20
5,547.0	0.90	300.50	5,543.6	108.7	5.5	108.8	2.90
5,735.0	0.40	178.80	5,731.6	108.8	4.2	108.9	2.23
5,922.0	0.50	222.10	5,918.5	107.5	3.7	107.6	1.97
6,112.0	1.10	184.30	6,108.5	105.1	3.0	105.1	1.64
6,299.0	1.10	195.70	6,295.5	101.6	2.4	101.6	1.35
6,487.0	1.60	225.60	6,483.4	98.0	0.0	98.0	0.02
6,675.0	0.50	3.00	6,671.4	97.0	-1.8	97.0	358.94
6,863.0	1.10	257.90	6,859.4	97.4	-3.5	97.5	357.93
7,051.0	1.40	286.10	7,047.4	97.7	-7.5	98.0	355.61
7,240.0	1.90	323.00	7,236.3	100.8	-11.6	101.5	353.44
7,428.0	2.50	2.00	7,424.2	107.4	-13.3	108.2	352.93
7,615.0	1.40	49.10	7,611.1	113.0	-11.5	113.6	354.21
7,803.0	1.40	358.80	7,799.0	116.8	-9.8	117.2	355.22
7,991.0	1.50	352.70	7,987.0	121.5	-10.1	122.0	355.23
8,179.0	3.00	21.90	8,174.8	128.5	-8.6	128.8	356.17
8,367.0	2.90	33.50	8,362.6	137.1	-4.2	137.1	358.26
8,555.0	1.60	8.00	8,550.4	143.6	-1.2	143.6	359.54
8,744.0	0.70	157.00	8,739.4	145.2	-0.3	145.2	359.86
8,932.0	1.40	183.90	8,927.4	141.8	-0.1	141.8	359.98
9,098.0	1.30	176.40	9,093.3	137.9	-0.1	137.9	359.97
9,154.0	1.90	170.60	9,149.3	136.4	0.1	136.4	0.05
9,185.0	5.40	170.90	9,180.2	134.4	0.4	134.4	0.19
9,216.0	9.10	183.40	9,211.0	130.5	0.5	130.5	0.23



QES Survey Certification Report



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Project:	Eddy County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3043.0usft (Patterson #243)
Site:	Sec 2, T24S, R28E	MD Reference:	WELL @ 3043.0usft (Patterson #243)
Well:	Skynyrd 2 W0DM Fee #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
9,248.0	13.20	182.40	9,242.4	124.4	0.2	124.4	0.10
9,279.0	17.20	178.10	9,272.3	116.2	0.2	116.2	0.11
9,311.0	22.30	173.70	9,302.4	105.5	1.0	105.5	0.57
9,342.0	27.60	172.90	9,330.5	92.5	2.6	92.5	1.60
9,373.0	32.80	174.40	9,357.3	77.0	4.3	77.1	3.19
9,405.0	37.80	176.70	9,383.4	58.6	5.7	58.8	5.56
9,436.0	42.90	178.50	9,407.0	38.5	6.5	39.1	9.61
9,468.0	46.40	180.40	9,429.8	16.0	6.7	17.4	22.75
9,499.0	48.70	179.70	9,450.7	-6.8	6.7	9.6	135.51
9,530.0	51.70	178.70	9,470.5	-30.6	7.0	31.4	167.05
9,562.0	54.30	177.60	9,489.8	-56.2	7.9	56.7	172.02
9,593.0	56.80	176.90	9,507.3	-81.7	9.1	82.2	173.64
9,624.0	58.60	177.30	9,523.9	-107.9	10.4	108.4	174.48
9,656.0	61.20	177.80	9,539.9	-135.5	11.6	136.0	175.10
9,687.0	64.40	178.50	9,554.1	-163.1	12.5	163.6	175.62
9,718.0	66.90	179.50	9,566.9	-191.3	13.0	191.8	176.12
9,749.0	68.30	180.90	9,578.7	-220.0	12.9	220.4	176.65
9,780.0	70.40	181.60	9,589.6	-249.0	12.3	249.3	177.18
9,811.0	73.30	181.60	9,599.3	-278.4	11.4	278.7	177.65
9,830.0	74.70	181.60	9,604.5	-296.7	10.9	296.9	177.89
9,894.0	75.20	181.30	9,621.1	-358.5	9.4	358.6	178.50
9,925.0	74.70	181.50	9,629.2	-388.4	8.6	388.5	178.73
9,957.0	75.50	181.30	9,637.4	-419.3	7.9	419.4	178.92
9,988.0	78.00	181.30	9,644.5	-449.5	7.2	449.5	179.08
10,019.0	82.40	180.90	9,649.8	-480.0	6.6	480.1	179.21
10,050.0	87.80	180.10	9,652.4	-510.9	6.3	510.9	179.29
10,113.0	91.00	179.50	9,653.1	-573.9	6.6	573.9	179.35
10,207.0	92.50	181.60	9,650.2	-667.8	5.6	667.8	179.52
10,300.0	92.30	181.30	9,646.3	-760.7	3.3	760.7	179.75
10,395.0	90.00	181.60	9,644.4	-855.6	0.9	855.6	179.94
10,488.0	89.50	182.00	9,644.8	-948.6	-2.0	948.6	180.12
10,582.0	88.90	182.40	9,646.1	-1,042.5	-5.6	1,042.5	180.31
10,676.0	88.30	182.40	9,648.4	-1,136.4	-9.6	1,136.5	180.48
10,770.0	92.80	183.90	9,647.5	-1,230.2	-14.7	1,230.3	180.69
10,864.0	89.80	181.50	9,645.4	-1,324.1	-19.2	1,324.2	180.83
10,958.0	89.80	181.50	9,645.7	-1,418.1	-21.6	1,418.2	180.87
11,051.0	88.80	180.80	9,646.9	-1,511.0	-23.5	1,511.2	180.89
11,145.0	89.50	181.80	9,648.3	-1,605.0	-25.6	1,605.2	180.91
11,239.0	90.50	183.10	9,648.3	-1,698.9	-29.6	1,699.2	181.00
11,332.0	89.70	181.50	9,648.1	-1,791.8	-33.4	1,792.1	181.07
11,426.0	91.40	183.80	9,647.2	-1,885.7	-37.7	1,886.1	181.15
11,520.0	91.50	182.90	9,644.8	-1,979.5	-43.2	1,980.0	181.25
11,614.0	90.60	179.50	9,643.1	-2,073.5	-45.2	2,074.0	181.25
11,708.0	89.30	178.80	9,643.2	-2,167.5	-43.8	2,167.9	181.16
11,802.0	89.10	179.20	9,644.5	-2,261.4	-42.1	2,261.8	181.07



QES Survey Certification Report



Company: Mewbourne Oil Company
Project: Eddy County, New Mexico (Nad 83)
Site: Sec 2, T24S, R28E
Well: Skynyrd 2 W0DM Fee #2H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Skynyrd 2 W0DM Fee #2H
TVD Reference: WELL @ 3043.0usft (Patterson #243)
MD Reference: WELL @ 3043.0usft (Patterson #243)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
11,896.0	88.30	180.10	9,646.6	-2,355.4	-41.6	2,355.8	181.01
11,990.0	90.00	179.90	9,648.0	-2,449.4	-41.6	2,449.7	180.97
12,083.0	92.90	183.20	9,645.7	-2,542.3	-44.1	2,542.7	180.99
12,177.0	90.70	181.10	9,642.7	-2,636.2	-47.6	2,636.6	181.03
12,272.0	89.90	181.10	9,642.2	-2,731.2	-49.4	2,731.6	181.04
12,366.0	89.60	181.60	9,642.6	-2,825.1	-51.6	2,825.6	181.05
12,460.0	91.40	182.70	9,641.8	-2,919.1	-55.2	2,919.6	181.08
12,554.0	90.00	182.50	9,640.7	-3,013.0	-59.4	3,013.5	181.13
12,648.0	89.40	182.00	9,641.1	-3,106.9	-63.1	3,107.5	181.16
12,742.0	89.90	182.50	9,641.7	-3,200.8	-66.8	3,201.5	181.20
12,836.0	89.80	182.70	9,642.0	-3,294.7	-71.1	3,295.5	181.24
12,931.0	88.00	179.40	9,643.8	-3,389.7	-72.8	3,390.4	181.23
13,025.0	86.10	179.50	9,648.6	-3,483.5	-71.9	3,484.3	181.18
13,119.0	90.40	179.50	9,651.5	-3,577.5	-71.1	3,578.2	181.14
13,214.0	89.20	178.00	9,651.8	-3,672.4	-69.0	3,673.1	181.08
13,307.0	92.20	178.10	9,650.7	-3,765.4	-65.9	3,765.9	181.00
13,401.0	88.90	179.00	9,649.8	-3,859.3	-63.5	3,859.8	180.94
13,496.0	89.10	177.30	9,651.5	-3,954.2	-60.4	3,954.7	180.88
13,590.0	87.50	174.10	9,654.2	-4,047.9	-53.4	4,048.3	180.76
13,685.0	92.50	171.60	9,654.2	-4,142.1	-41.5	4,142.4	180.57
13,778.0	95.30	173.70	9,647.9	-4,234.1	-29.7	4,234.3	180.40
13,873.0	95.10	177.80	9,639.3	-4,328.5	-22.7	4,328.5	180.30
13,966.0	92.40	179.00	9,633.2	-4,421.2	-20.1	4,421.3	180.26
14,060.0	88.70	180.10	9,632.3	-4,515.2	-19.3	4,515.2	180.25
14,155.0	87.40	179.90	9,635.5	-4,610.2	-19.3	4,610.2	180.24
14,250.0	85.60	179.90	9,641.3	-4,705.0	-19.2	4,705.0	180.23
14,305.0	85.60	179.90	9,645.6	-4,759.8	-19.1	4,759.8	180.23

TD @ 14305.0' MD / 9645.6' TVD

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
100.0	100.0	0.8	-0.1	Gyro Tie-in @ 100.0' MD / 100.0' TVD
14,305.0	9,645.6	-4,759.8	-19.1	TD @ 14305.0' MD / 9645.6' TVD

Checked By: _____

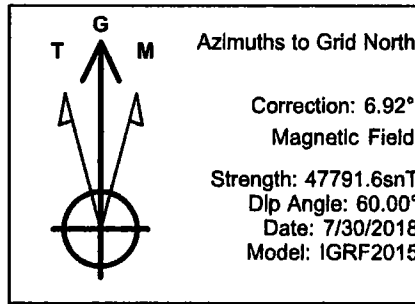
Approved By: _____

Date: _____

FEB 04 2019

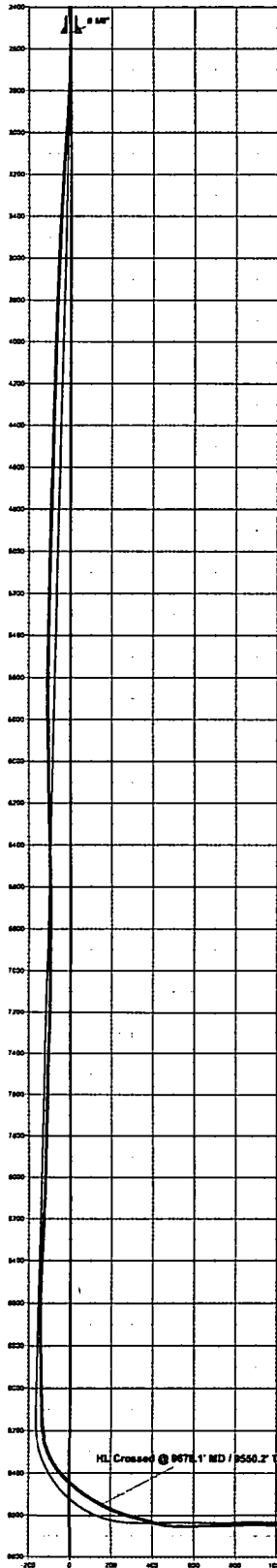
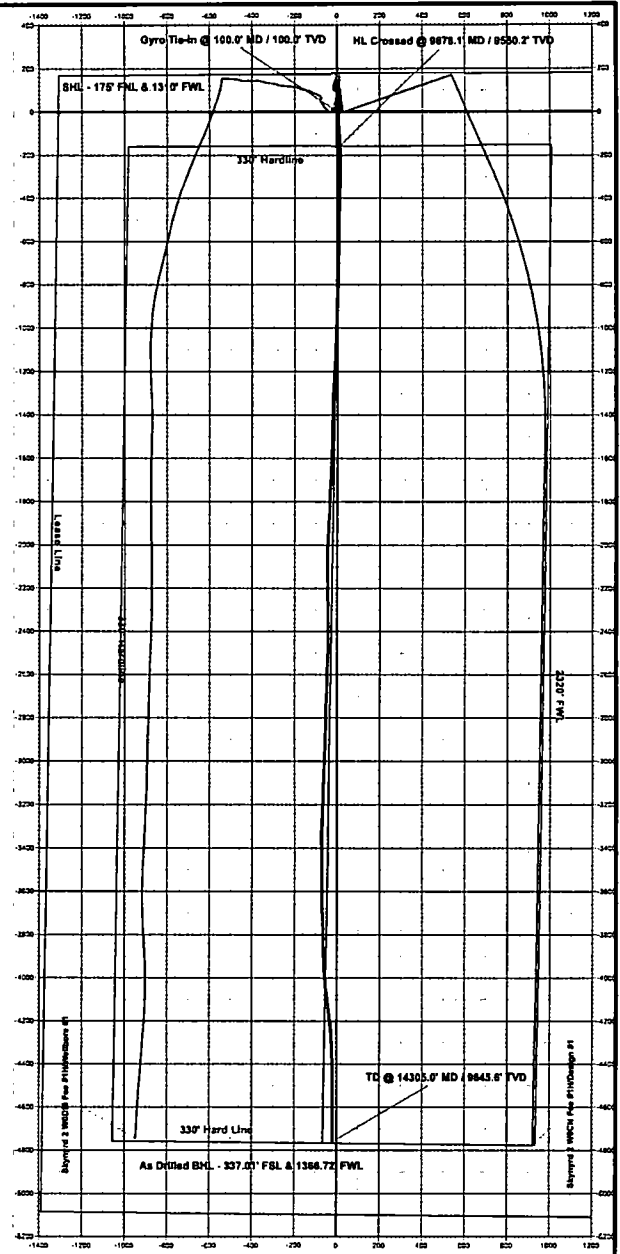
Company Name: Newbourne Oil Company
Skynyrd 2 W0DM Fee #2H
Eddy County, New Mexico (Nad 83)
Rig: Patterson #243
Created By: Shane Robbins
Date: 8/19/2018

Skynyrd 2 W0DM Fee #2H
Eddy County, New Mexico (Nad 83)
Q181024 & WT-180855
Design #2



WELL DETAILS: Skynyrd 2 W0DM Fee #2H					
W-#	E-W	Heading	Easting	Latitude	Longitude
0.0	0.0	458183.90	823094.60	33° 15' 13.008 N	104° 2' 44.806 W

PROJECT DETAILS: Eddy County, New Mexico (Nad 83)			
Geodetic System:	US State Plane 1983		
Datum:	North American Datum 1983		
Ellipsoid:	GRS 1980		
Zone:	New Mexico Eastern Zone		
System Datum:	Mean Sea Level		



ANNOTATIONS									
MD	Inc	Azi	TVD	+N-S	+E-W	Vsect	Departure	Annotation	
100.0	0.93	351.39	100.0	0.8	-0.1	-0.8	0.8	Gyro Tie-In @ 100.0' MD / 100.0' TVD	
9878.1	83.48	178.30	9550.2	-155.1	12.3	154.9	855.8	HL Crossed @ 9878.1' MD / 9550.2' TVD	
14305.0	83.60	179.90	9845.6	-4759.8	-19.1	4759.8	5182.5	TD @ 14305.0' MD / 9845.6' TVD	

Vertical Section at 180.80° (200 ush/in)