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Mewbourne Oil Company

Eddy County, New Mexico (Nad 83)

Sec 25, T23S, R26E

Ghostrider 25/36 W0AP Federal Com #2H

Wellbore #1

30-015-44461

Design: Wellbore #1

QES Survey Certification Report

24 June, 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-180528	6/26/2018

Lease	Well Name	County & State
SEC 25, T-23S, R26E	Ghostrider 25/36 WOAP Federal Com #2H	Eddy County, NM

API No.	Survey Depth Range	Survey Type
30-015-44461	126 feet to 18900 feet MD	MWD

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

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: 2018.06.26 13:48:42 -05'00'

Christopher Hughes
MWD Compliance
Manager

A large, stylized handwritten signature in black ink, which appears to be 'CHRISTOPHER HUGHES', is written over the printed name and extends across the right side of the page.

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Quintana Energy Services

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ghost rider 25/36 W0AP Federal Com #2H
Project:	Eddy County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3248.0usft (Patterson #230)
Site:	Sec 25, T23S, R26E	MD Reference:	WELL @ 3248.0usft (Patterson #230)
Well:	Ghost rider 25/36 W0AP Federal Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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 25, T23S, R26E				
Site Position:		Northing:	466,454.50 usft	Latitude:	32° 16' 56.362 N
From:	Map	Easting:	570,342.40 usft	Longitude:	104° 14' 22.117 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.05 °

Well	Ghost rider 25/36 W0AP Federal Com #2H					
Well Position	+N/-S	0.0 usft	Northing:	466,454.50 usft	Latitude:	32° 16' 56.362 N
	+E/-W	0.0 usft	Easting:	570,342.40 usft	Longitude:	104° 14' 22.117 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,221.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/2/2018	7.17	60.00	47,812.68356636

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	184.59

Survey Program Date 6/24/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
126.0	18,900.0	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 (°)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00
126.0	0.30	39.20	126.0	0.3	0.2	0.3	39.20
First MWD Survey @ 126.0' MD / 126.0' TVD							
183.0	0.40	1.40	183.0	0.6	0.3	0.6	28.35
243.0	0.70	102.80	243.0	0.7	0.7	1.0	43.82
304.0	1.10	79.70	304.0	0.7	1.6	1.8	65.89
366.0	0.90	72.00	366.0	1.0	2.7	2.8	69.81
426.0	0.80	49.30	426.0	1.4	3.4	3.7	67.82
484.0	1.20	41.10	484.0	2.1	4.1	4.6	62.85
577.0	0.90	69.00	576.9	3.1	5.5	6.3	60.27
666.0	1.40	73.40	665.9	3.7	7.1	8.0	62.79
757.0	1.40	80.90	756.9	4.2	9.3	10.2	65.88



QES Survey Certification Report



Company: Mewbourne Oil Company
Project: Eddy County, New Mexico (Nad 83)
Site: Sec 25, T23S, R26E
Well: Ghost rider 25/36 W0AP Federal Com #2H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Ghost rider 25/36 W0AP Federal Com #2H
TVD Reference: WELL @ 3248.0usft (Patterson #230)
MD Reference: WELL @ 3248.0usft (Patterson #230)
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 (°)
855.0	1.50	79.00	854.9	4.6	11.8	12.6	68.61
949.0	0.30	254.80	948.9	4.8	12.7	13.6	69.44
1,043.0	0.30	48.80	1,042.9	4.9	12.7	13.6	68.97
1,137.0	1.00	133.90	1,136.9	4.5	13.4	14.2	71.64
1,232.0	0.10	316.50	1,231.9	3.9	14.0	14.5	74.23
1,326.0	0.30	216.10	1,325.9	3.8	13.8	14.3	74.55
1,420.0	0.90	93.80	1,419.8	3.6	14.4	14.8	76.09
1,514.0	0.80	111.50	1,513.8	3.3	15.7	16.1	78.24
1,608.0	0.80	152.30	1,607.8	2.5	16.6	16.8	81.62
1,702.0	1.00	222.30	1,701.8	1.3	16.4	16.4	85.60
1,803.0	0.90	224.90	1,802.8	0.0	15.2	15.2	89.82
1,906.0	1.60	292.90	1,905.8	0.0	13.3	13.3	89.85
2,000.0	4.90	303.30	1,999.6	2.8	8.8	9.2	72.60
2,095.0	5.50	303.30	2,094.2	7.5	1.6	7.6	11.93
2,189.0	6.10	295.60	2,187.8	12.1	-6.7	13.8	331.09
2,284.0	6.20	292.20	2,282.2	16.2	-16.0	22.8	315.42
2,378.0	6.60	289.30	2,375.6	19.9	-25.8	32.6	307.70
2,472.0	6.40	288.40	2,469.0	23.4	-35.9	42.8	303.09
2,566.0	4.80	279.60	2,562.6	25.7	-44.7	51.6	299.87
2,660.0	4.60	278.70	2,656.2	26.9	-52.3	58.8	297.22
2,754.0	4.60	276.10	2,749.9	27.9	-59.8	66.0	295.00
2,848.0	4.20	287.70	2,843.7	29.3	-66.8	73.0	293.70
2,942.0	4.20	290.00	2,937.4	31.5	-73.3	79.8	293.28
3,037.0	4.40	289.80	3,032.2	34.0	-80.0	86.9	293.00
3,132.0	4.20	287.10	3,126.9	36.2	-86.8	94.0	292.66
3,226.0	4.10	287.30	3,220.6	38.2	-93.3	100.8	292.29
3,320.0	4.20	284.30	3,314.4	40.1	-99.8	107.6	291.88
3,415.0	4.00	285.20	3,409.1	41.8	-106.4	114.3	291.46
3,509.0	4.30	284.00	3,502.9	43.5	-113.0	121.1	291.07
3,604.0	4.30	284.90	3,597.6	45.3	-119.9	128.1	290.71
3,698.0	4.10	282.60	3,691.4	46.9	-126.6	135.0	290.35
3,793.0	4.50	277.60	3,786.1	48.2	-133.6	142.0	289.84
3,887.0	4.40	279.60	3,879.8	49.3	-140.8	149.1	289.29
3,982.0	4.90	298.40	3,974.5	51.8	-147.9	156.7	289.30
4,076.0	4.80	297.50	4,068.2	55.5	-155.0	164.6	289.72
4,171.0	4.80	295.00	4,162.9	59.0	-162.1	172.5	290.02
4,266.0	4.80	293.60	4,257.5	62.3	-169.3	180.4	290.21
4,361.0	4.60	293.80	4,352.2	65.4	-176.5	188.2	290.35
4,455.0	4.60	294.50	4,445.9	68.5	-183.3	195.7	290.50
4,551.0	4.70	291.70	4,541.6	71.6	-190.5	203.5	290.60
4,645.0	4.40	294.40	4,635.3	74.5	-197.4	210.9	290.68
4,740.0	4.10	291.90	4,730.0	77.3	-203.8	218.0	290.76
4,835.0	3.90	290.80	4,824.8	79.7	-210.0	224.6	290.78
4,930.0	4.00	290.70	4,919.6	82.0	-216.1	231.1	290.78

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Site: Sec 25, T23S, R26E
Well: Ghost rider 25/36 W0AP Federal Com #2H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well Ghost rider 25/36 W0AP Federal Com #2H
 WELL @ 3248.0usft (Patterson #230)
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 Grid
 Minimum Curvature
 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 (°)
5,024.0	3.80	292.40	5,013.4	84.3	-222.1	237.5	290.80
5,119.0	3.40	288.70	5,108.2	86.5	-227.6	243.5	290.80
5,214.0	3.30	291.40	5,203.0	88.4	-232.9	249.1	290.78
5,309.0	4.20	285.20	5,297.8	90.3	-238.8	255.2	290.71
5,403.0	4.50	284.30	5,391.5	92.1	-245.7	262.3	290.55
5,498.0	4.30	283.80	5,486.2	93.8	-252.7	269.6	290.37
5,586.0	3.90	284.10	5,574.0	95.4	-258.8	275.8	290.23
5,681.0	3.70	287.10	5,668.8	97.0	-264.9	282.1	290.12
5,775.0	3.30	288.00	5,762.6	98.8	-270.4	287.8	290.07
5,870.0	4.80	280.10	5,857.4	100.3	-276.9	294.5	289.92
5,964.0	4.80	278.40	5,951.1	101.6	-284.6	302.2	289.64
6,058.0	4.90	275.90	6,044.7	102.6	-292.5	310.0	289.32
6,153.0	4.50	281.30	6,139.4	103.7	-300.2	317.6	289.06
6,247.0	4.50	279.90	6,233.1	105.1	-307.5	324.9	288.87
6,341.0	4.40	279.80	6,326.8	106.3	-314.7	332.1	288.67
6,436.0	4.10	280.60	6,421.6	107.6	-321.6	339.1	288.49
6,531.0	4.00	287.50	6,516.3	109.2	-328.1	345.8	288.41
6,625.0	5.40	285.40	6,610.0	111.3	-335.5	353.5	288.36
6,720.0	5.40	284.30	6,704.6	113.6	-344.1	362.4	288.28
6,814.0	4.60	286.60	6,798.2	115.8	-352.0	370.6	288.21
6,908.0	5.40	288.00	6,891.9	118.3	-359.8	378.8	288.19
7,002.0	5.60	285.90	6,985.5	120.9	-368.4	387.8	288.16
7,097.0	4.80	285.00	7,080.1	123.2	-376.7	396.4	288.10
7,191.0	4.00	284.00	7,173.8	125.0	-383.7	403.6	288.04
7,286.0	4.80	285.40	7,268.5	126.8	-390.8	410.8	287.98
7,381.0	6.10	284.90	7,363.1	129.2	-399.5	419.9	287.92
7,475.0	5.10	282.40	7,456.6	131.4	-408.4	429.0	287.83
7,570.0	5.70	278.50	7,551.2	133.0	-417.2	437.9	287.68
7,664.0	4.30	276.20	7,644.8	134.1	-425.3	445.9	287.49
7,759.0	4.30	290.30	7,739.6	135.7	-432.2	453.0	287.43
7,854.0	5.70	295.90	7,834.2	139.0	-439.8	461.2	287.54
7,948.0	6.80	296.10	7,927.6	143.5	-449.0	471.3	287.72
8,043.0	6.70	299.10	8,022.0	148.6	-458.9	482.3	287.95
8,138.0	5.20	304.20	8,116.5	153.7	-467.3	491.9	288.21
8,232.0	4.60	298.20	8,210.1	157.9	-474.1	499.7	288.42
8,303.0	4.10	294.90	8,280.9	160.3	-478.9	505.0	288.51
8,351.0	4.70	273.80	8,328.8	161.2	-482.4	508.6	288.47
8,383.0	8.60	263.20	8,360.6	161.0	-486.1	512.1	288.32
8,415.0	14.30	253.40	8,391.9	159.6	-492.3	517.5	287.96
8,445.0	20.00	244.30	8,420.6	156.3	-500.5	524.3	287.34
8,476.0	25.30	237.20	8,449.2	150.4	-510.8	532.5	286.41
8,510.0	32.00	229.10	8,479.0	140.5	-523.8	542.3	285.02
8,542.0	38.30	222.30	8,505.2	127.6	-536.9	551.8	283.37
8,573.0	42.70	217.20	8,528.8	112.2	-549.7	561.0	281.53
8,604.0	45.60	214.40	8,551.0	94.6	-562.3	570.2	279.55



QES Survey Certification Report



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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
8,635.0	46.40	208.90	8,572.5	75.7	-574.0	579.0	277.51
8,666.0	46.30	202.60	8,593.9	55.5	-583.7	586.4	275.43
8,698.0	46.60	198.90	8,616.0	33.8	-591.9	592.9	273.27
8,730.0	47.80	197.70	8,637.7	11.5	-599.3	599.4	271.10
8,761.0	49.70	196.10	8,658.2	-10.8	-606.1	606.2	268.98
8,793.0	52.50	194.90	8,678.3	-34.8	-612.7	613.7	266.75
8,824.0	55.70	193.60	8,696.5	-59.1	-618.9	621.7	264.54
8,856.0	58.90	193.80	8,713.7	-85.3	-625.3	631.1	262.23
8,887.0	62.20	194.50	8,729.0	-111.5	-631.9	641.6	260.00
8,919.0	65.40	194.70	8,743.1	-139.2	-639.1	654.1	257.71
8,951.0	67.80	194.50	8,755.8	-167.7	-646.5	667.9	255.46
8,982.0	69.30	194.30	8,767.1	-195.6	-653.7	682.3	253.34
9,013.0	70.90	194.30	8,777.7	-223.8	-660.9	697.8	251.29
9,045.0	71.90	194.70	8,787.9	-253.2	-668.5	714.8	249.25
9,077.0	73.80	194.70	8,797.3	-282.8	-676.2	733.0	247.31
9,108.0	76.10	194.70	8,805.4	-311.7	-683.8	751.5	245.49
9,140.0	78.80	194.50	8,812.3	-342.0	-691.7	771.6	243.69
9,150.0	79.70	194.30	8,814.2	-351.5	-694.2	778.1	243.15
9,217.0	83.00	194.30	8,824.3	-415.7	-710.5	823.2	239.67
9,249.0	86.30	193.10	8,827.3	-446.6	-718.1	845.6	238.12
9,280.0	89.60	191.90	8,828.4	-476.8	-724.8	867.6	236.66
9,312.0	90.00	191.30	8,828.5	-508.2	-731.2	890.5	235.20
9,343.0	90.00	191.00	8,828.5	-538.6	-737.2	913.0	233.85
9,374.0	90.30	190.80	8,828.4	-569.0	-743.1	935.9	232.55
9,406.0	90.30	190.80	8,828.2	-600.5	-749.1	960.0	231.28
9,437.0	90.00	190.50	8,828.2	-630.9	-754.8	983.8	230.11
9,469.0	90.00	190.10	8,828.2	-662.4	-760.5	1,008.6	228.94
9,500.0	89.90	190.30	8,828.2	-692.9	-766.0	1,032.9	227.87
9,532.0	90.00	190.10	8,828.2	-724.4	-771.7	1,058.4	226.81
9,563.0	90.50	190.10	8,828.1	-754.9	-777.1	1,083.4	225.83
9,626.0	90.10	189.80	8,827.7	-817.0	-788.0	1,135.1	223.96
9,721.0	87.90	184.10	8,829.4	-911.2	-799.5	1,212.2	221.26
9,816.0	92.50	179.20	8,829.1	-1,006.1	-802.2	1,286.8	218.57
9,911.0	90.90	179.40	8,826.3	-1,101.1	-801.0	1,361.6	216.04
10,005.0	91.30	179.90	8,824.5	-1,195.1	-800.5	1,438.4	213.81
10,100.0	89.00	179.40	8,824.2	-1,290.1	-799.9	1,517.9	211.80
10,195.0	88.50	180.10	8,826.3	-1,385.0	-799.5	1,599.2	209.99
10,289.0	90.00	180.40	8,827.5	-1,479.0	-799.9	1,681.5	208.41
10,385.0	88.80	179.70	8,828.5	-1,575.0	-800.0	1,766.5	206.93
10,479.0	90.00	179.90	8,829.5	-1,669.0	-799.6	1,850.7	205.60
10,573.0	89.30	179.70	8,830.1	-1,763.0	-799.3	1,935.7	204.39
10,668.0	89.30	179.60	8,831.2	-1,858.0	-798.7	2,022.4	203.26
10,763.0	92.20	180.10	8,830.0	-1,953.0	-798.5	2,109.9	202.24
10,857.0	91.30	179.90	8,827.1	-2,046.9	-798.5	2,197.2	201.31

Company: Mewbourne Oil Company
Project: Eddy County, New Mexico (Nad 83)
Site: Sec 25, T23S, R26E
Well: Ghost rider 25/36 W0AP Federal Com #2H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference:
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North Reference:
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Well Ghost rider 25/36 W0AP Federal Com #2H
 WELL @ 3248.0usft (Patterson #230)
 WELL @ 3248.0usft (Patterson #230)
 Grid
 Minimum Curvature
 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 (°)
10,952.0	89.90	180.40	8,826.1	-2,141.9	-798.7	2,286.0	200.45
11,047.0	89.40	179.70	8,826.7	-2,236.9	-798.8	2,375.3	199.65
11,142.0	92.30	179.20	8,825.3	-2,331.9	-797.9	2,464.6	198.89
11,237.0	91.40	178.90	8,822.2	-2,426.8	-796.3	2,554.2	198.17
11,331.0	91.50	179.60	8,819.8	-2,520.8	-795.1	2,643.2	197.51
11,426.0	92.90	181.50	8,816.2	-2,615.7	-796.0	2,734.2	196.93
11,521.0	90.00	183.10	8,813.8	-2,710.6	-799.8	2,826.1	196.44
11,616.0	87.90	183.40	8,815.5	-2,805.4	-805.2	2,918.7	196.01
11,711.0	86.30	181.70	8,820.3	-2,900.2	-809.4	3,011.0	195.59
11,806.0	86.70	180.40	8,826.1	-2,995.0	-811.2	3,102.9	195.15
11,900.0	88.50	179.60	8,830.1	-3,088.9	-811.2	3,193.7	194.71
11,995.0	92.90	179.90	8,828.9	-3,183.9	-810.8	3,285.5	194.29
12,090.0	90.70	179.40	8,825.9	-3,278.8	-810.2	3,377.4	193.88
12,185.0	89.40	178.30	8,825.9	-3,373.8	-808.3	3,469.3	193.47
12,280.0	91.80	178.00	8,824.9	-3,468.8	-805.2	3,561.0	193.07
12,374.0	90.70	178.00	8,822.8	-3,562.7	-801.9	3,651.8	192.69
12,469.0	92.00	178.50	8,820.6	-3,657.6	-799.0	3,743.9	192.32
12,564.0	90.10	177.80	8,818.8	-3,752.5	-796.0	3,836.0	191.98
12,659.0	89.30	177.60	8,819.3	-3,847.4	-792.1	3,928.1	191.63
12,754.0	89.40	177.80	8,820.4	-3,942.4	-788.3	4,020.4	191.31
12,849.0	89.10	177.80	8,821.6	-4,037.3	-784.7	4,112.8	191.00
12,943.0	90.40	181.00	8,822.1	-4,131.3	-783.7	4,204.9	190.74
13,038.0	87.30	179.90	8,824.0	-4,226.2	-784.4	4,298.4	190.52
13,133.0	88.70	181.10	8,827.3	-4,321.2	-785.3	4,391.9	190.30
13,228.0	89.30	181.00	8,828.9	-4,416.1	-787.0	4,485.7	190.10
13,322.0	93.00	180.10	8,827.0	-4,510.1	-787.9	4,578.4	189.91
13,417.0	90.80	179.40	8,823.9	-4,605.0	-787.5	4,671.9	189.70
13,511.0	90.50	181.10	8,822.8	-4,699.0	-787.9	4,764.6	189.52
13,606.0	90.80	180.80	8,821.8	-4,794.0	-789.5	4,858.6	189.35
13,701.0	88.80	180.30	8,822.1	-4,889.0	-790.4	4,952.5	189.18
13,795.0	90.80	181.70	8,822.4	-4,983.0	-792.0	5,045.5	189.03
13,889.0	90.00	181.10	8,821.8	-5,076.9	-794.3	5,138.7	188.89
13,984.0	90.10	181.50	8,821.7	-5,171.9	-796.5	5,232.9	188.75
14,079.0	88.90	180.80	8,822.5	-5,266.9	-798.4	5,327.1	188.62
14,173.0	88.30	179.70	8,824.8	-5,360.9	-798.8	5,420.0	188.48
14,268.0	89.70	180.40	8,826.5	-5,455.8	-798.9	5,514.0	188.33
14,363.0	93.30	181.30	8,824.0	-5,550.8	-800.3	5,608.2	188.20
14,457.0	93.80	181.70	8,818.2	-5,644.6	-802.8	5,701.4	188.09
14,552.0	92.20	183.10	8,813.2	-5,739.4	-806.7	5,795.8	188.00
14,647.0	90.90	182.20	8,810.6	-5,834.2	-811.1	5,890.3	187.91
14,741.0	86.40	181.10	8,812.8	-5,928.1	-813.8	5,983.7	187.82
14,835.0	86.50	181.00	8,818.6	-6,021.9	-815.5	6,076.9	187.71
14,929.0	86.90	181.50	8,824.1	-6,115.7	-817.6	6,170.2	187.61
15,024.0	89.70	181.30	8,826.9	-6,210.7	-819.9	6,264.6	187.52



QES Survey Certification Report



Company: Mewbourne Oil Company
Project: Eddy County, New Mexico (Nad 83)
Site: Sec 25, T23S, R26E
Well: Ghost rider 25/36 W0AP Federal Com #2H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Ghost rider 25/36 W0AP Federal Com #2H
TVD Reference: WELL @ 3248.0usft (Patterson #230)
MD Reference: WELL @ 3248.0usft (Patterson #230)
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 (°)
15,119.0	88.60	180.10	8,828.3	-6,305.6	-821.1	6,358.9	187.42
15,213.0	88.50	178.50	8,830.7	-6,399.6	-819.9	6,451.9	187.30
15,308.0	93.50	180.30	8,829.0	-6,494.6	-818.9	6,546.0	187.19
15,403.0	93.30	179.90	8,823.4	-6,589.4	-819.1	6,640.1	187.09
15,497.0	92.80	180.30	8,818.4	-6,683.3	-819.3	6,733.3	186.99
15,592.0	92.30	178.70	8,814.1	-6,778.2	-818.4	6,827.4	186.88
15,686.0	92.20	178.90	8,810.5	-6,872.1	-816.5	6,920.4	186.78
15,781.0	90.50	179.20	8,808.2	-6,967.0	-814.9	7,014.5	186.67
15,875.0	88.70	178.20	8,808.9	-7,061.0	-812.8	7,107.6	186.57
15,970.0	88.00	178.20	8,811.6	-7,155.9	-809.8	7,201.6	186.46
16,064.0	88.90	178.30	8,814.1	-7,249.8	-806.9	7,294.6	186.35
16,159.0	91.00	178.50	8,814.2	-7,344.8	-804.2	7,388.7	186.25
16,254.0	90.20	177.80	8,813.2	-7,439.7	-801.2	7,482.7	186.15
16,349.0	90.80	177.80	8,812.4	-7,534.6	-797.5	7,576.7	186.04
16,443.0	91.20	178.50	8,810.8	-7,628.6	-794.5	7,669.8	185.95
16,538.0	91.40	179.70	8,808.6	-7,723.5	-793.0	7,764.1	185.86
16,633.0	90.10	181.30	8,807.4	-7,818.5	-793.8	7,858.7	185.80
16,727.0	88.30	181.50	8,808.7	-7,912.5	-796.1	7,952.4	185.75
16,822.0	90.50	184.50	8,809.7	-8,007.3	-801.1	8,047.3	185.71
16,916.0	90.30	186.10	8,809.0	-8,100.9	-809.8	8,141.3	185.71
17,011.0	92.40	186.60	8,806.8	-8,195.3	-820.3	8,236.3	185.72
17,105.0	91.20	186.90	8,803.8	-8,288.6	-831.3	8,330.2	185.73
17,197.0	91.90	185.70	8,801.3	-8,380.0	-841.4	8,422.2	185.73
17,291.0	89.80	183.60	8,799.9	-8,473.7	-849.0	8,516.1	185.72
17,374.0	90.70	183.60	8,799.6	-8,556.5	-854.3	8,599.1	185.70
17,436.0	88.30	182.90	8,800.1	-8,618.4	-857.8	8,661.0	185.68
17,499.0	87.80	181.90	8,802.3	-8,681.3	-860.4	8,723.9	185.66
17,594.0	87.80	179.70	8,805.9	-8,776.2	-861.7	8,818.4	185.61
17,688.0	87.20	179.00	8,810.0	-8,870.1	-860.7	8,911.8	185.54
17,782.0	86.40	179.00	8,815.3	-8,964.0	-859.0	9,005.0	185.47
17,877.0	85.80	179.20	8,821.7	-9,058.7	-857.5	9,099.2	185.41
17,971.0	86.50	178.20	8,828.0	-9,152.5	-855.4	9,192.4	185.34
18,065.0	87.90	176.20	8,832.6	-9,246.3	-850.8	9,285.3	185.26
18,158.0	90.00	175.90	8,834.3	-9,339.0	-844.4	9,377.1	185.17
18,252.0	92.30	176.20	8,832.4	-9,432.8	-837.9	9,469.9	185.08
18,346.0	92.80	177.30	8,828.3	-9,526.5	-832.6	9,562.9	184.99
18,441.0	92.30	176.80	8,824.0	-9,621.3	-827.7	9,656.9	184.92
18,535.0	91.40	177.60	8,821.0	-9,715.2	-823.2	9,750.0	184.84
18,629.0	87.60	175.90	8,821.8	-9,809.0	-817.8	9,843.0	184.77
18,724.0	86.70	176.10	8,826.5	-9,903.6	-811.2	9,936.8	184.68
18,818.0	85.70	176.20	8,832.8	-9,997.2	-804.9	10,029.6	184.60
18,845.0	86.20	174.30	8,834.7	-10,024.1	-802.7	10,056.1	184.58
18,900.0	86.20	174.30	8,838.3	-10,078.7	-797.2	10,110.1	184.52

TD @ 18900.0' MD / 8838.3' TVD



QES Survey Certification Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Ghost rider 25/36 W0AP Federal Com #2H
Project:	Eddy County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3248.0usft (Patterson #230)
Site:	Sec 25, T23S, R26E	MD Reference:	WELL @ 3248.0usft (Patterson #230)
Well:	Ghost rider 25/36 W0AP Federal Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
126.0	126.0	0.3	0.2	First MWD Survey @ 126.0' MD / 126.0' TVD
18,900.0	8,838.3	-10,078.7	-797.2	TD @ 18900.0' MD / 8838.3' TVD

Checked By: _____	Approved By: _____	Date: _____
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