

NM OIL CONSERVATION
ARTESIA DISTRICT

SEP 25 2019

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30-05-43411

Mewbourne Oil Company

Eddy County, New Mexico (Nad 83)

Sec 18,T20S,R29E

Glock 17-16 W0DA Fed Com #3H

Wellbore #1

Design: Wellbore #1

QES Survey Report

19 June, 2019



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Glock 17-16 W0DA Fed Com #3H
Project:	Eddy County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3292.0usft (Patterson #250)
Site:	Sec 18,T20S,R29E	MD Reference:	WELL @ 3292.0usft (Patterson #250)
Well:	Glock 17-16 W0DA Fed Com #3H	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 18,T20S,R29E	
Site Position:		Northing:	574,535.70 usft
From:	Map	Easting:	606,553.80 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 34' 45.389 N
		Longitude:	104° 7' 17.790 W
		Grid Convergence:	0.11 °

Well	Glock 17-16 W0DA Fed Com #3H				
Well Position	+N/-S	0.0 usft	Northing:	574,263.90 usft	Latitude: 32° 34' 42.612 N
	+E/-W	0.0 usft	Easting:	610,845.20 usft	Longitude: 104° 6' 27.642 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level: 3,265.0 usft

Wellbore		Wellbore #1			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/13/2019	7.22	60.33	47,985.20000000

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	92.43	

Survey Program		Date	6/19/2019	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	468.0	Surface Gyros - Phoenix (Wellbore #1)	Good_gyro	Good Gyro
569.0	19,935.0	QES MWD Surveys (Wellbore #1)	OWSG (Rev2) MWD	OWSG 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	0.26	16.07	100.0	0.2	0.1	0.1	0.26	0.26	0.00
200.0	0.43	318.90	200.0	0.7	-0.1	-0.2	0.36	0.17	-57.17
300.0	1.00	17.99	300.0	1.8	-0.1	-0.2	0.86	0.57	59.09
400.0	2.01	8.14	400.0	4.4	0.4	0.2	1.04	1.01	-9.85
Gyro Tie-in @ 468.0' MD / 467.9' TVD									
468.0	2.32	349.25	467.9	6.9	0.3	0.0	1.14	0.46	-27.78
569.0	3.30	33.30	568.8	11.4	1.5	1.1	2.27	0.97	43.61
757.0	6.30	80.00	756.2	17.7	14.7	13.9	2.50	1.60	24.84
920.0	3.90	119.80	918.6	16.5	28.3	27.6	2.54	-1.47	24.42

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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)
1,059.0	4.30	125.90	1,057.2	11.1	36.6	36.1	0.43	0.29	4.39
1,247.0	3.40	124.00	1,244.8	3.8	47.0	46.8	0.48	-0.48	-1.01
1,436.0	2.50	79.00	1,433.6	1.5	55.7	55.5	1.27	-0.48	-23.81
1,625.0	3.20	86.90	1,622.3	2.6	65.0	64.8	0.42	0.37	4.18
1,817.0	3.40	84.10	1,814.0	3.4	76.0	75.8	0.13	0.10	-1.46
2,003.0	4.70	79.20	1,999.5	5.4	89.0	88.6	0.72	0.70	-2.63
2,189.0	5.40	75.80	2,184.8	9.0	104.9	104.4	0.41	0.38	-1.83
2,376.0	6.90	80.20	2,370.7	13.1	124.5	123.9	0.84	0.80	2.35
2,563.0	5.60	91.10	2,556.6	14.8	144.7	144.0	0.94	-0.70	5.83
2,749.0	3.90	92.00	2,742.0	14.4	160.1	159.4	0.91	-0.91	0.48
2,936.0	4.00	94.80	2,928.5	13.6	173.0	172.2	0.12	0.05	1.50
3,005.0	3.20	106.10	2,997.4	12.9	177.2	176.5	1.54	-1.16	16.38
3,194.0	4.50	98.80	3,186.0	10.3	189.6	189.0	0.73	0.69	-3.86
3,381.0	5.10	150.20	3,372.4	2.0	201.0	200.7	2.24	0.32	27.49
3,566.0	4.80	150.70	3,556.7	-11.9	208.9	209.2	0.16	-0.16	0.27
3,753.0	3.30	172.50	3,743.2	-24.1	213.4	214.2	1.14	-0.80	11.66
3,941.0	3.30	173.60	3,930.9	-34.8	214.7	216.0	0.03	0.00	0.59
4,127.0	3.90	180.10	4,116.6	-46.5	215.3	217.1	0.39	0.32	3.49
4,314.0	6.30	192.40	4,302.8	-62.8	213.1	215.6	1.40	1.28	6.58
4,501.0	5.80	195.50	4,488.8	-82.0	208.4	211.6	0.32	-0.27	1.66
4,687.0	5.30	196.40	4,673.9	-99.3	203.4	207.4	0.27	-0.27	0.48
4,873.0	5.20	196.60	4,859.1	-115.6	198.6	203.3	0.05	-0.05	0.11
5,058.0	5.00	198.70	5,043.4	-131.3	193.6	199.0	0.15	-0.11	1.14
5,244.0	4.80	196.20	5,228.7	-146.4	188.8	194.9	0.16	-0.11	-1.34
5,431.0	6.00	178.30	5,414.9	-163.7	186.9	193.7	1.10	0.64	-9.57
5,617.0	5.00	184.30	5,600.0	-181.5	186.6	194.2	0.62	-0.54	3.23
5,802.0	4.00	195.20	5,784.5	-195.8	184.3	192.5	0.71	-0.54	5.89
5,987.0	4.00	173.60	5,969.0	-208.4	183.4	192.0	0.81	0.00	-11.68
6,171.0	6.90	164.80	6,152.2	-225.4	187.0	196.4	1.64	1.58	-4.78
6,358.0	5.40	163.40	6,338.1	-244.7	192.4	202.6	0.81	-0.80	-0.75
6,544.0	7.90	168.30	6,522.8	-265.6	197.5	208.6	1.38	1.34	2.63
6,730.0	6.60	174.10	6,707.3	-288.8	201.2	213.3	0.80	-0.70	3.12
6,916.0	5.50	178.30	6,892.3	-308.3	202.6	215.5	0.64	-0.59	2.26
7,102.0	5.20	190.30	7,077.5	-325.5	201.3	215.0	0.62	-0.16	6.45
7,288.0	5.40	206.40	7,262.7	-341.7	195.9	210.2	0.80	0.11	8.66
7,474.0	3.90	207.30	7,448.1	-355.1	189.1	204.0	0.81	-0.81	0.48
7,659.0	3.50	215.00	7,632.7	-365.3	183.0	198.3	0.34	-0.22	4.16
7,845.0	4.50	176.40	7,818.3	-377.3	180.2	196.1	1.51	0.54	-20.75
8,030.0	5.20	180.60	8,002.6	-392.9	180.6	197.1	0.42	0.38	2.27
8,216.0	5.70	196.80	8,187.8	-410.2	177.8	195.1	0.87	0.27	8.71
8,401.0	2.90	162.80	8,372.3	-423.4	176.6	194.4	1.98	-1.51	-18.38
8,588.0	2.60	131.50	8,559.1	-430.8	181.1	199.2	0.81	-0.16	-16.74
8,774.0	2.90	131.90	8,744.9	-436.7	187.8	206.1	0.16	0.16	0.22

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Survey

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8,787.0	2.90	131.50	8,757.8	-437.1	188.3	206.7	0.16	0.00	-3.08
8,826.0	3.10	129.80	8,796.8	-438.5	189.8	208.3	0.56	0.51	-4.36
8,857.0	5.40	106.60	8,827.7	-439.4	191.9	210.3	9.12	7.42	-74.84
8,887.0	9.30	94.30	8,857.5	-440.0	195.6	214.1	13.95	13.00	-41.00
8,918.0	13.00	90.60	8,887.9	-440.2	201.6	220.1	12.15	11.94	-11.94
8,949.0	17.60	91.50	8,917.8	-440.4	209.8	228.3	14.86	14.84	2.90
8,980.0	22.30	91.80	8,946.9	-440.7	220.4	238.9	15.16	15.16	0.97
9,011.0	26.50	92.20	8,975.1	-441.2	233.2	251.7	13.56	13.55	1.29
9,042.0	31.70	94.40	9,002.2	-442.0	248.2	266.7	17.12	16.77	7.10
9,073.0	36.30	96.40	9,027.9	-443.7	265.5	284.0	15.27	14.84	6.45
9,104.0	41.00	95.90	9,052.1	-445.8	284.7	303.4	15.19	15.16	-1.61
9,135.0	46.30	95.00	9,074.5	-447.8	306.0	324.7	17.21	17.10	-2.90
9,166.0	49.20	93.40	9,095.4	-449.5	328.9	347.7	10.10	9.35	-5.16
9,197.0	51.30	92.70	9,115.2	-450.7	352.7	371.5	6.99	6.77	-2.26
9,228.0	53.60	92.20	9,134.1	-451.8	377.2	396.1	7.53	7.42	-1.61
9,259.0	56.60	92.70	9,151.8	-452.9	402.6	421.5	9.77	9.68	1.61
9,290.0	59.10	93.60	9,168.3	-454.3	428.8	447.7	8.43	8.06	2.90
9,321.0	62.20	94.10	9,183.5	-456.1	455.8	474.7	10.10	10.00	1.61
9,352.0	65.00	94.30	9,197.3	-458.2	483.5	502.5	9.05	9.03	0.65
9,383.0	67.60	94.40	9,209.7	-460.3	511.8	530.8	8.39	8.39	0.32
9,415.0	70.60	93.90	9,221.1	-462.5	541.6	560.7	9.49	9.38	-1.56
9,446.0	73.20	93.20	9,230.8	-464.3	571.0	590.2	8.66	8.39	-2.26
Cross LL @ 9458.7' MD / 9234.4' TVD									
9,458.7	74.10	93.31	9,234.4	-465.0	583.2	602.4	7.13	7.08	0.85
9,518.0	78.30	93.80	9,248.5	-468.6	640.6	659.9	7.13	7.08	0.83
9,549.0	80.30	92.00	9,254.3	-470.1	671.1	690.4	8.61	6.45	-5.81
Cross 100' FWL @ 9561.3' MD / 9256.3' TVD									
9,561.3	80.34	91.37	9,256.3	-470.5	683.2	702.5	5.10	0.32	-5.16
9,580.0	80.40	90.40	9,259.4	-470.7	701.6	720.9	5.10	0.33	-5.16
9,611.0	83.50	90.40	9,263.8	-471.0	732.3	751.6	10.00	10.00	0.00
9,642.0	86.30	89.70	9,266.5	-471.0	763.2	782.5	9.31	9.03	-2.26
9,673.0	88.30	90.20	9,268.0	-471.0	794.1	813.4	6.65	6.45	1.61
9,766.0	89.30	90.20	9,270.0	-471.3	887.1	906.3	1.08	1.08	0.00
9,859.0	89.70	90.10	9,270.8	-471.5	980.1	999.2	0.44	0.43	-0.11
9,953.0	90.60	89.90	9,270.5	-471.5	1,074.1	1,093.1	0.98	0.96	-0.21
10,046.0	90.80	89.90	9,269.4	-471.4	1,167.1	1,186.0	0.22	0.22	0.00
10,139.0	89.20	90.90	9,269.4	-472.0	1,260.1	1,279.0	2.03	-1.72	1.08
10,233.0	89.20	91.10	9,270.7	-473.6	1,354.1	1,372.9	0.21	0.00	0.21
10,326.0	89.20	90.60	9,272.0	-475.0	1,447.1	1,465.9	0.54	0.00	-0.54
10,419.0	87.20	89.70	9,274.9	-475.3	1,540.0	1,558.8	2.36	-2.15	-0.97
10,512.0	88.70	89.50	9,278.2	-474.6	1,632.9	1,651.6	1.63	1.61	-0.22
10,605.0	89.70	90.40	9,279.5	-474.5	1,725.9	1,744.5	1.45	1.08	0.97
10,699.0	89.10	90.20	9,280.5	-475.0	1,819.9	1,838.4	0.67	-0.64	-0.21
10,791.0	89.30	90.20	9,281.8	-475.4	1,911.9	1,930.3	0.22	0.22	0.00

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10,884.0	89.10	90.10	9,283.1	-475.6	2,004.9	2,023.3	0.24	-0.22	-0.11
10,977.0	88.30	89.50	9,285.2	-475.3	2,097.9	2,116.1	1.08	-0.86	-0.65
11,070.0	90.10	89.40	9,286.5	-474.4	2,190.9	2,209.0	1.94	1.94	-0.11
11,163.0	89.90	89.00	9,286.5	-473.1	2,283.9	2,301.9	0.48	-0.22	-0.43
11,256.0	88.80	88.10	9,287.6	-470.7	2,376.8	2,394.6	1.53	-1.18	-0.97
11,349.0	89.30	89.00	9,289.1	-468.4	2,469.8	2,487.4	1.11	0.54	0.97
11,441.0	89.30	90.40	9,290.2	-467.9	2,561.8	2,579.3	1.52	0.00	1.52
11,534.0	88.30	89.40	9,292.2	-467.7	2,654.7	2,672.2	1.52	-1.08	-1.08
11,628.0	90.90	92.90	9,292.8	-469.6	2,748.7	2,766.1	4.64	2.77	3.72
11,721.0	91.50	93.20	9,290.9	-474.6	2,841.5	2,859.1	0.72	0.65	0.32
11,814.0	91.30	91.80	9,288.6	-478.6	2,934.4	2,952.1	1.52	-0.22	-1.51
11,907.0	90.90	91.80	9,286.8	-481.5	3,027.4	3,045.1	0.43	-0.43	0.00
12,000.0	89.20	91.30	9,286.8	-484.1	3,120.3	3,138.0	1.91	-1.83	-0.54
12,093.0	88.20	90.80	9,288.9	-485.8	3,213.3	3,231.0	1.20	-1.08	-0.54
12,186.0	89.50	90.40	9,290.7	-486.7	3,306.3	3,323.9	1.46	1.40	-0.43
12,279.0	89.00	90.80	9,291.9	-487.7	3,399.2	3,416.9	0.69	-0.54	0.43
12,372.0	88.90	91.10	9,293.6	-489.2	3,492.2	3,509.8	0.34	-0.11	0.32
12,465.0	89.60	90.90	9,294.9	-490.9	3,585.2	3,602.8	0.78	0.75	-0.22
12,558.0	89.70	91.10	9,295.4	-492.5	3,678.2	3,695.7	0.24	0.11	0.22
12,651.0	87.90	90.20	9,297.4	-493.5	3,771.1	3,788.7	2.16	-1.94	-0.97
12,744.0	87.10	89.70	9,301.4	-493.5	3,864.1	3,881.5	1.01	-0.86	-0.54
12,837.0	87.10	89.20	9,306.1	-492.6	3,956.9	3,974.3	0.54	0.00	-0.54
12,931.0	87.10	87.60	9,310.9	-490.0	4,050.8	4,067.9	1.70	0.00	-1.70
13,023.0	88.70	86.40	9,314.3	-485.1	4,142.6	4,159.4	2.17	1.74	-1.30
13,116.0	89.50	86.00	9,315.7	-479.0	4,235.4	4,251.9	0.96	0.86	-0.43
13,209.0	91.40	87.80	9,315.0	-474.0	4,328.2	4,344.4	2.81	2.04	1.94
13,302.0	89.30	86.50	9,314.4	-469.3	4,421.1	4,437.0	2.66	-2.26	-1.40
13,395.0	89.30	87.80	9,315.6	-464.7	4,514.0	4,529.6	1.40	0.00	1.40
13,488.0	91.10	90.10	9,315.2	-463.0	4,606.9	4,622.4	3.14	1.94	2.47
13,581.0	90.00	89.40	9,314.4	-462.6	4,699.9	4,715.3	1.40	-1.18	-0.75
13,675.0	91.20	89.70	9,313.4	-461.9	4,793.9	4,809.2	1.32	1.28	0.32
13,767.0	91.50	90.20	9,311.2	-461.8	4,885.9	4,901.1	0.63	0.33	0.54
13,860.0	88.20	89.50	9,311.4	-461.5	4,978.9	4,994.0	3.63	-3.55	-0.75
13,953.0	93.60	92.50	9,310.0	-463.2	5,071.8	5,086.9	6.64	5.81	3.23
14,046.0	92.30	92.70	9,305.2	-467.4	5,164.6	5,179.8	1.41	-1.40	0.22
14,139.0	89.90	90.90	9,303.4	-470.3	5,257.5	5,272.7	3.23	-2.58	-1.94
14,232.0	89.50	91.10	9,303.9	-471.9	5,350.5	5,365.7	0.48	-0.43	0.22
14,326.0	88.50	90.90	9,305.5	-473.6	5,444.5	5,459.7	1.08	-1.06	-0.21
14,419.0	87.60	89.70	9,308.7	-474.0	5,537.4	5,552.5	1.61	-0.97	-1.29
14,512.0	85.90	89.00	9,314.0	-473.0	5,630.3	5,645.2	1.98	-1.83	-0.75
14,605.0	86.50	88.80	9,320.1	-471.2	5,723.0	5,737.9	0.68	0.65	-0.22
14,699.0	87.30	89.70	9,325.2	-470.0	5,816.9	5,831.6	1.28	0.85	0.96
14,792.0	89.30	89.70	9,328.0	-469.5	5,909.8	5,924.4	2.15	2.15	0.00



Survey Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Glock 17-16 W0DA Fed Com #3H
Project:	Eddy County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3292.0usft (Patterson #250)
Site:	Sec 18,T20S,R29E	MD Reference:	WELL @ 3292.0usft (Patterson #250)
Well:	Glock 17-16 W0DA Fed Com #3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
14,885.0	91.60	89.40	9,327.3	-468.8	6,002.8	6,017.3	2.49	2.47	-0.32
14,978.0	89.10	87.90	9,326.7	-466.6	6,095.8	6,110.1	3.13	-2.69	-1.61
15,096.0	86.70	89.00	9,331.0	-463.4	6,213.7	6,227.7	2.24	-2.03	0.93
15,189.0	89.00	88.70	9,334.5	-461.5	6,306.6	6,320.5	2.49	2.47	-0.32
15,282.0	88.60	88.70	9,336.4	-459.4	6,399.5	6,413.2	0.43	-0.43	0.00
15,375.0	88.40	88.50	9,338.9	-457.1	6,492.5	6,506.0	0.30	-0.22	-0.22
15,467.0	88.30	88.80	9,341.5	-455.0	6,584.4	6,597.8	0.34	-0.11	0.33
15,560.0	88.40	91.30	9,344.2	-455.0	6,677.3	6,690.6	2.69	0.11	2.69
15,654.0	86.60	90.40	9,348.3	-456.4	6,771.2	6,784.5	2.14	-1.91	-0.96
15,747.0	88.90	91.30	9,352.0	-457.8	6,864.2	6,877.4	2.66	2.47	0.97
15,840.0	88.70	91.50	9,353.9	-460.1	6,957.1	6,970.4	0.30	-0.22	0.22
15,934.0	88.10	90.90	9,356.5	-462.1	7,051.0	7,064.3	0.90	-0.64	-0.64
16,027.0	88.80	90.40	9,359.0	-463.1	7,144.0	7,157.2	0.92	0.75	-0.54
16,119.0	91.20	89.90	9,359.0	-463.4	7,236.0	7,249.1	2.66	2.61	-0.54
16,212.0	90.30	88.10	9,357.8	-461.7	7,329.0	7,342.0	2.16	-0.97	-1.94
16,305.0	93.70	88.80	9,354.6	-459.2	7,421.9	7,434.7	3.73	3.66	0.75
16,402.0	93.90	88.80	9,348.2	-457.2	7,518.6	7,531.3	0.21	0.21	0.00
16,497.0	93.10	88.70	9,342.4	-455.1	7,613.4	7,625.9	0.85	-0.84	-0.11
16,591.0	92.80	90.10	9,337.5	-454.1	7,707.3	7,719.6	1.52	-0.32	1.49
16,686.0	88.30	90.40	9,336.6	-454.6	7,802.3	7,814.5	4.75	-4.74	0.32
16,782.0	87.90	90.80	9,339.8	-455.6	7,898.2	7,910.4	0.59	-0.42	0.42
16,876.0	86.40	90.10	9,344.5	-456.3	7,992.1	8,004.3	1.76	-1.60	-0.74
16,971.0	85.00	89.90	9,351.6	-456.3	8,086.8	8,098.9	1.49	-1.47	-0.21
17,066.0	88.70	89.40	9,356.8	-455.7	8,181.7	8,193.6	3.93	3.89	-0.53
17,162.0	88.70	89.40	9,359.0	-454.7	8,277.6	8,289.5	0.00	0.00	0.00
17,256.0	93.10	90.90	9,357.5	-455.0	8,371.6	8,383.4	4.95	4.68	1.60
17,351.0	90.80	92.00	9,354.3	-457.4	8,466.5	8,478.3	2.68	-2.42	1.16
17,446.0	90.70	92.20	9,353.0	-460.8	8,561.4	8,573.3	0.24	-0.11	0.21
17,541.0	86.50	90.80	9,355.4	-463.3	8,656.3	8,668.2	4.66	-4.42	-1.47
17,635.0	88.00	91.30	9,359.9	-465.0	8,750.2	8,762.1	1.68	1.60	0.53
17,730.0	88.40	90.20	9,362.8	-466.3	8,845.2	8,857.0	1.23	0.42	-1.16
17,825.0	88.30	89.70	9,365.6	-466.2	8,940.1	8,951.8	0.54	-0.11	-0.53
17,920.0	91.40	90.40	9,365.8	-466.3	9,035.1	9,046.8	3.35	3.26	0.74
18,014.0	89.20	90.20	9,365.3	-466.8	9,129.1	9,140.7	2.35	-2.34	-0.21
18,110.0	90.60	90.20	9,365.5	-467.1	9,225.1	9,236.6	1.46	1.46	0.00
18,204.0	88.60	89.70	9,366.2	-467.0	9,319.1	9,330.5	2.19	-2.13	-0.53
18,299.0	90.00	88.80	9,367.3	-465.8	9,414.1	9,425.4	1.75	1.47	-0.95
18,394.0	89.80	89.90	9,367.5	-464.7	9,509.1	9,520.2	1.18	-0.21	1.16
18,489.0	90.30	90.10	9,367.4	-464.7	9,604.1	9,615.1	0.57	0.53	0.21
18,584.0	86.70	90.10	9,369.9	-464.9	9,699.0	9,710.0	3.79	-3.79	0.00
18,679.0	87.10	90.20	9,375.0	-465.1	9,793.9	9,804.8	0.43	0.42	0.11
18,774.0	87.80	91.10	9,379.3	-466.2	9,888.8	9,899.6	1.20	0.74	0.95
18,868.0	89.30	92.30	9,381.6	-469.0	9,982.7	9,993.6	2.04	1.60	1.28

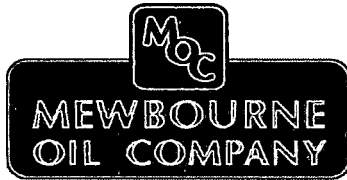
Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Glock 17-16 W0DA Fed Com #3H
Project:	Eddy County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3292.0usft (Patterson #250)
Site:	Sec 18,T20S,R29E	MD Reference:	WELL @ 3292.0usft (Patterson #250)
Well:	Glock 17-16 W0DA Fed Com #3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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)
18,963.0	90.00	93.10	9,382.2	-473.5	10,077.6	10,088.6	1.12	0.74	0.84
19,058.0	90.90	92.70	9,381.5	-478.3	10,172.5	10,183.6	1.04	0.95	-0.42
19,152.0	91.00	92.70	9,379.9	-482.7	10,266.3	10,277.6	0.11	0.11	0.00
19,247.0	91.40	93.20	9,377.9	-487.6	10,361.2	10,372.6	0.67	0.42	0.53
19,341.0	92.30	91.80	9,374.9	-491.7	10,455.1	10,466.5	1.77	0.96	-1.49
19,436.0	92.60	92.20	9,370.8	-495.0	10,549.9	10,561.4	0.53	0.32	0.42
19,531.0	91.60	92.30	9,367.3	-498.7	10,644.8	10,656.3	1.06	-1.05	0.11
19,625.0	91.40	93.10	9,364.9	-503.2	10,738.6	10,750.3	0.88	-0.21	0.85
19,721.0	90.80	93.10	9,363.0	-508.3	10,834.5	10,846.3	0.63	-0.63	0.00
19,816.0	91.20	92.90	9,361.4	-513.3	10,929.3	10,941.3	0.47	0.42	-0.21
19,865.0	90.90	92.70	9,360.5	-515.7	10,978.3	10,990.3	0.74	-0.61	-0.41
TD @ 19935.0' MD / 9359.4' TVD									
19,935.0	90.90	92.70	9,359.4	-519.0	11,048.2	11,060.2	0.00	0.00	0.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
468.0	467.9	6.9	0.3	Gyro Tie-in @ 468.0' MD / 467.9' TVD
9,458.7	9,234.4	-465.0	583.2	Cross LL@ 9458.7' MD / 9234.4' TVD
9,561.3	9,256.3	-470.5	683.2	Cross 100' FWL@ 9561.3' MD / 9256.3' TVD
19,935.0	9,359.4	-519.0	11,048.2	TD @ 19935.0' MD / 9359.4' TVD



Mewbourne Oil Company

Eddy County, New Mexico (Nad 83)

Sec 18,T20S,R29E

Glock 17-16 W0DA Fed Com #3H

Wellbore #1

Design: Wellbore #1

QES Survey Certification Report

19 June, 2019



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-190745	6/25/2019

Lease	Well Name	County & State
SEC18,T20S,R29E	Glock17-16W0DA Fed Com 3H	Eddy County, New Mexico

API No.	Survey Depth Range	Survey Type
30-015-43411	468 feet to 19935 feet MD	MWD

Sidetrack Information	Directional Supervisor/Surveyor
Click here to enter text.	Bradley 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=compliance,
email=chrish@qeslp.com, c=US
Date: 2019.06.25 11:43:05 -05'00'

Christopher Hughes
MWD Compliance Manager
Quintana Energy Services



QES Survey Certification Report



Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Glock 17-16 W0DA Fed Com #3H
Project:	Eddy County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3292.0usft (Patterson #250)
Site:	Sec 18,T20S,R29E	MD Reference:	WELL @ 3292.0usft (Patterson #250)
Well:	Glock 17-16 W0DA Fed Com #3H	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 18,T20S,R29E		
Site Position:		Northing:	574,535.70 usft
From:	Map	Easting:	606,553.80 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"
		Latitude:	32° 34' 45.389 N
		Longitude:	104° 7' 17.790 W
		Grid Convergence:	0.11 °

Well	Glock 17-16 W0DA Fed Com #3H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 34' 42.612 N
		Longitude:	104° 6' 27.642 W
		Ground Level:	3,265.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	5/13/2019	7.22
			Dip Angle
			(°)
			60.33
			Field Strength
			(nT)
			47,985.20000000

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			92.43

Survey Program	Date 6/19/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.0	468.0	Surface Gyros - Phoenix (Wellbore #1)	Good_gyro
569.0	19,935.0	QES MWD Surveys (Wellbore #1)	OWSG (Rev2) MWD
			Description
			Good Gyro
			OWSG MWD - Standard

Survey			
MD	Inc	Azi (azimuth)	TVD
(usft)	(°)	(°)	(usft)
468.0	2.32	349.25	467.9
			N/S
			(usft)
			E/W
			(usft)
			Closure Distance
			(usft)
			Closure Azimuth
			(°)
			2.74
Gyro Tie-in @ 468.0' MD / 467.9' TVD			
569.0	3.30	33.30	568.8
757.0	6.30	80.00	756.2
920.0	3.90	119.80	918.6
1,059.0	4.30	125.90	1,057.2
1,247.0	3.40	124.00	1,244.8
1,436.0	2.50	79.00	1,433.6
1,625.0	3.20	86.90	1,622.3
1,817.0	3.40	84.10	1,814.0
2,003.0	4.70	79.20	1,999.5
			6.9
			0.3
			6.9
			11.5
			23.0
			32.8
			38.3
			47.1
			55.7
			65.0
			76.1
			89.1
			7.75
			39.70
			59.79
			73.17
			85.34
			88.48
			87.75
			87.42
			86.51

Company:	Mewbourne Oil Company	Local Co-ordinate Reference:	Well Glock 17-16 W0DA Fed Com #3H
Project:	Eddy County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3292.0usft (Patterson #250)
Site:	Sec 18,T20S,R29E	MD Reference:	WELL @ 3292.0usft (Patterson #250)
Well:	Glock 17-16 W0DA Fed Com #3H	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 (°)	
2,189.0	5.40	75.80	2,184.8	9.0	104.9	105.3	85.10	
2,376.0	6.90	80.20	2,370.7	13.1	124.5	125.2	84.01	
2,563.0	5.60	91.10	2,556.6	14.8	144.7	145.5	84.16	
2,749.0	3.90	92.00	2,742.0	14.4	160.1	160.8	84.86	
2,936.0	4.00	94.80	2,928.5	13.6	173.0	173.5	85.49	
3,005.0	3.20	106.10	2,997.4	12.9	177.2	177.7	85.83	
3,194.0	4.50	98.80	3,186.0	10.3	189.6	189.9	86.89	
3,381.0	5.10	150.20	3,372.4	2.0	201.0	201.0	89.44	
3,566.0	4.80	150.70	3,556.7	-11.9	208.9	209.2	93.26	
3,753.0	3.30	172.50	3,743.2	-24.1	213.4	214.8	96.44	
3,941.0	3.30	173.60	3,930.9	-34.8	214.7	217.5	99.21	
4,127.0	3.90	180.10	4,116.6	-46.5	215.3	220.3	102.18	
4,314.0	6.30	192.40	4,302.8	-62.8	213.1	222.2	106.43	
4,501.0	5.80	195.50	4,488.8	-82.0	208.4	223.9	111.48	
4,687.0	5.30	196.40	4,673.9	-99.3	203.4	226.4	116.01	
4,873.0	5.20	196.60	4,859.1	-115.6	198.6	229.8	120.20	
5,058.0	5.00	198.70	5,043.4	-131.3	193.6	233.9	124.14	
5,244.0	4.80	196.20	5,228.7	-146.4	188.8	238.9	127.79	
5,431.0	6.00	178.30	5,414.9	-163.7	186.9	248.5	131.21	
5,617.0	5.00	184.30	5,600.0	-181.5	186.6	260.3	134.20	
5,802.0	4.00	195.20	5,784.5	-195.8	184.3	268.9	136.72	
5,987.0	4.00	173.60	5,969.0	-208.4	183.4	277.6	138.66	
6,171.0	6.90	164.80	6,152.2	-225.4	187.0	292.9	140.33	
6,358.0	5.40	163.40	6,338.1	-244.7	192.4	311.3	141.82	
6,544.0	7.90	168.30	6,522.8	-265.6	197.5	331.0	143.37	
6,730.0	6.60	174.10	6,707.3	-288.8	201.2	352.0	145.13	
6,916.0	5.50	178.30	6,892.3	-308.3	202.6	368.9	146.69	
7,102.0	5.20	190.30	7,077.5	-325.5	201.3	382.8	148.26	
7,288.0	5.40	206.40	7,262.7	-341.7	195.9	393.9	150.17	
7,474.0	3.90	207.30	7,448.1	-355.1	189.1	402.3	151.96	
7,659.0	3.50	215.00	7,632.7	-365.3	183.0	408.6	153.39	
7,845.0	4.50	176.40	7,818.3	-377.3	180.2	418.1	154.47	
8,030.0	5.20	180.60	8,002.6	-392.9	180.6	432.4	155.32	
8,216.0	5.70	196.80	8,187.8	-410.2	177.8	447.1	156.56	
8,401.0	2.90	162.80	8,372.3	-423.4	176.6	458.8	157.37	
8,588.0	2.60	131.50	8,559.1	-430.8	181.1	467.3	157.19	
8,774.0	2.90	131.90	8,744.9	-436.7	187.8	475.4	156.73	
8,787.0	2.90	131.50	8,757.8	-437.1	188.3	476.0	156.70	
8,826.0	3.10	129.80	8,796.8	-438.5	189.8	477.8	156.59	
8,857.0	5.40	106.60	8,827.7	-439.4	191.9	479.5	156.41	
8,887.0	9.30	94.30	8,857.5	-440.0	195.6	481.5	156.03	
8,918.0	13.00	90.60	8,887.9	-440.2	201.6	484.2	155.39	
8,949.0	17.60	91.50	8,917.8	-440.4	209.8	487.8	154.53	
8,980.0	22.30	91.80	8,946.9	-440.7	220.4	492.7	153.43	
9,011.0	26.50	92.20	8,975.1	-441.2	233.2	499.0	152.14	



QES Survey Certification Report



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Project:	Eddy County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3292.0usft (Patterson #250)
Site:	Sec 18,T20S,R29E	MD Reference:	WELL @ 3292.0usft (Patterson #250)
Well:	Glock 17-16 W0DA Fed Com #3H	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 (°)	
9,042.0	31.70	94.40	9,002.2	-442.0	248.2	507.0	150.68	
9,073.0	36.30	96.40	9,027.9	-443.7	265.5	517.0	149.11	
9,104.0	41.00	95.90	9,052.1	-445.8	284.7	528.9	147.43	
9,135.0	46.30	95.00	9,074.5	-447.8	306.0	542.4	145.65	
9,166.0	49.20	93.40	9,095.4	-449.5	328.9	556.9	143.81	
9,197.0	51.30	92.70	9,115.2	-450.7	352.7	572.3	141.96	
9,228.0	53.60	92.20	9,134.1	-451.8	377.2	588.6	140.14	
9,259.0	56.60	92.70	9,151.8	-452.9	402.6	606.0	138.36	
9,290.0	59.10	93.60	9,168.3	-454.3	428.8	624.7	136.65	
9,321.0	62.20	94.10	9,183.5	-456.1	455.8	644.8	135.02	
9,352.0	65.00	94.30	9,197.3	-458.2	483.5	666.1	133.46	
9,383.0	67.60	94.40	9,209.7	-460.3	511.8	688.3	131.97	
9,415.0	70.60	93.90	9,221.1	-462.5	541.6	712.2	130.49	
9,446.0	73.20	93.20	9,230.8	-464.3	571.0	736.0	129.11	
9,518.0	78.30	93.80	9,248.5	-468.6	640.6	793.7	126.18	
9,549.0	80.30	92.00	9,254.3	-470.1	671.1	819.3	125.01	
9,580.0	80.40	90.40	9,259.4	-470.7	701.6	844.9	123.86	
9,611.0	83.50	90.40	9,263.8	-471.0	732.3	870.7	122.75	
9,642.0	86.30	89.70	9,266.5	-471.0	763.2	896.8	121.68	
9,673.0	88.30	90.20	9,268.0	-471.0	794.1	923.3	120.67	
9,766.0	89.30	90.20	9,270.0	-471.3	887.1	1,004.5	117.98	
9,859.0	89.70	90.10	9,270.8	-471.5	980.1	1,087.6	115.69	
9,953.0	90.60	89.90	9,270.5	-471.5	1,074.1	1,173.1	113.70	
10,046.0	90.80	89.90	9,269.4	-471.4	1,167.1	1,258.7	111.99	
10,139.0	89.20	90.90	9,269.4	-472.0	1,260.1	1,345.6	110.53	
10,233.0	89.20	91.10	9,270.7	-473.6	1,354.1	1,434.5	109.28	
10,326.0	89.20	90.60	9,272.0	-475.0	1,447.1	1,523.0	108.17	
10,419.0	87.20	89.70	9,274.9	-475.3	1,540.0	1,611.7	107.15	
10,512.0	88.70	89.50	9,278.2	-474.6	1,632.9	1,700.5	106.21	
10,605.0	89.70	90.40	9,279.5	-474.5	1,725.9	1,790.0	105.37	
10,699.0	89.10	90.20	9,280.5	-475.0	1,819.9	1,880.9	104.63	
10,791.0	89.30	90.20	9,281.8	-475.4	1,911.9	1,970.1	103.96	
10,884.0	89.10	90.10	9,283.1	-475.6	2,004.9	2,060.5	103.34	
10,977.0	88.30	89.50	9,285.2	-475.3	2,097.9	2,151.0	102.76	
11,070.0	90.10	89.40	9,286.5	-474.4	2,190.9	2,241.6	102.22	
11,163.0	89.90	89.00	9,286.5	-473.1	2,283.9	2,332.3	101.70	
11,256.0	88.80	88.10	9,287.6	-470.7	2,376.8	2,423.0	101.20	
11,349.0	89.30	89.00	9,289.1	-468.4	2,469.8	2,513.8	100.74	
11,441.0	89.30	90.40	9,290.2	-467.9	2,561.8	2,604.1	100.35	
11,534.0	88.30	89.40	9,292.2	-467.7	2,654.7	2,695.6	99.99	
11,628.0	90.90	92.90	9,292.8	-469.6	2,748.7	2,788.5	99.70	
11,721.0	91.50	93.20	9,290.9	-474.6	2,841.5	2,880.9	99.48	
11,814.0	91.30	91.80	9,288.6	-478.6	2,934.4	2,973.2	99.26	
11,907.0	90.90	91.80	9,286.8	-481.5	3,027.4	3,065.4	99.04	



QES Survey Certification Report



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Project:	Eddy County, New Mexico (Nad 83)	TVD Reference:	WELL @ 3292.0usft (Patterson #250)
Site:	Sec 18,T20S,R29E	MD Reference:	WELL @ 3292.0usft (Patterson #250)
Well:	Glock 17-16 W0DA Fed Com #3H	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 (°)
12,000.0	89.20	91.30	9,286.8	-484.1	3,120.3	3,157.6	98.82
12,093.0	88.20	90.80	9,288.9	-485.8	3,213.3	3,249.8	98.60
12,186.0	89.50	90.40	9,290.7	-486.7	3,306.3	3,341.9	98.37
12,279.0	89.00	90.80	9,291.9	-487.7	3,399.2	3,434.0	98.16
12,372.0	88.90	91.10	9,293.7	-489.2	3,492.2	3,526.3	97.98
12,465.0	89.60	90.90	9,294.9	-490.9	3,585.2	3,618.6	97.80
12,558.0	89.70	91.10	9,295.4	-492.5	3,678.2	3,711.0	97.63
12,651.0	87.90	90.20	9,297.4	-493.6	3,771.1	3,803.3	97.46
12,744.0	87.10	89.70	9,301.4	-493.5	3,864.1	3,895.4	97.28
12,837.0	87.10	89.20	9,306.1	-492.6	3,956.9	3,987.5	97.10
12,931.0	87.10	87.60	9,310.9	-490.0	4,050.8	4,080.3	96.90
13,023.0	88.70	86.40	9,314.3	-485.1	4,142.6	4,170.9	96.68
13,116.0	89.50	86.00	9,315.7	-479.0	4,235.4	4,262.4	96.45
13,209.0	91.40	87.80	9,315.0	-474.0	4,328.2	4,354.1	96.25
13,302.0	89.30	86.50	9,314.4	-469.3	4,421.1	4,445.9	96.06
13,395.0	89.30	87.80	9,315.6	-464.7	4,514.0	4,537.8	95.88
13,488.0	91.10	90.10	9,315.2	-463.0	4,606.9	4,630.1	95.74
13,581.0	90.00	89.40	9,314.4	-462.6	4,699.9	4,722.6	95.62
13,675.0	91.20	89.70	9,313.4	-461.9	4,793.9	4,816.1	95.50
13,767.0	91.50	90.20	9,311.2	-461.8	4,885.9	4,907.7	95.40
13,860.0	88.20	89.50	9,311.4	-461.5	4,978.9	5,000.2	95.30
13,953.0	93.60	92.50	9,310.0	-463.2	5,071.8	5,092.9	95.22
14,046.0	92.30	92.70	9,305.2	-467.4	5,164.6	5,185.7	95.17
14,139.0	89.90	90.90	9,303.4	-470.3	5,257.5	5,278.5	95.11
14,232.0	89.50	91.10	9,303.9	-471.9	5,350.5	5,371.3	95.04
14,326.0	88.50	90.90	9,305.5	-473.6	5,444.5	5,465.0	94.97
14,419.0	87.60	89.70	9,308.7	-474.0	5,537.4	5,557.7	94.89
14,512.0	85.90	89.00	9,314.0	-473.0	5,630.3	5,650.1	94.80
14,605.0	86.50	88.80	9,320.1	-471.2	5,723.0	5,742.4	94.71
14,699.0	87.30	89.70	9,325.2	-470.0	5,816.9	5,835.8	94.62
14,792.0	89.30	89.70	9,328.0	-469.5	5,909.8	5,928.5	94.54
14,885.0	91.60	89.40	9,327.3	-468.8	6,002.8	6,021.1	94.47
14,978.0	89.10	87.90	9,326.7	-466.6	6,095.8	6,113.6	94.38
15,096.0	86.70	89.00	9,331.0	-463.4	6,213.7	6,230.9	94.26
15,189.0	89.00	88.70	9,334.5	-461.5	6,306.6	6,323.4	94.19
15,282.0	88.60	88.70	9,336.4	-459.4	6,399.5	6,416.0	94.11
15,375.0	88.40	88.50	9,338.9	-457.1	6,492.5	6,508.5	94.03
15,467.0	88.30	88.80	9,341.5	-455.0	6,584.4	6,600.1	93.95
15,560.0	88.40	91.30	9,344.2	-455.0	6,677.3	6,692.8	93.90
15,654.0	86.60	90.40	9,348.3	-456.4	6,771.2	6,786.6	93.86
15,747.0	88.90	91.30	9,352.0	-457.8	6,864.2	6,879.4	93.82
15,840.0	88.70	91.50	9,353.9	-460.1	6,957.1	6,972.3	93.78
15,934.0	88.10	90.90	9,356.5	-462.1	7,051.0	7,066.2	93.75
16,027.0	88.80	90.40	9,359.0	-463.1	7,144.0	7,159.0	93.71



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Site:	Sec 18,T20S,R29E	MD Reference:	WELL @ 3292.0usft (Patterson #250)
Well:	Glock 17-16 W0DA Fed Com #3H	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 (°)	
16,119.0	91.20	89.90	9,359.0	-463.4	7,236.0	7,250.8	93.66	
16,212.0	90.30	88.10	9,357.8	-461.7	7,329.0	7,343.5	93.60	
16,305.0	93.70	88.80	9,354.6	-459.2	7,421.9	7,436.1	93.54	
16,402.0	93.90	88.80	9,348.2	-457.2	7,518.6	7,532.5	93.48	
16,497.0	93.10	88.70	9,342.4	-455.1	7,613.4	7,627.0	93.42	
16,591.0	92.80	90.10	9,337.5	-454.1	7,707.3	7,720.7	93.37	
16,686.0	88.30	90.40	9,336.6	-454.6	7,802.3	7,815.5	93.33	
16,782.0	87.90	90.80	9,339.8	-455.6	7,898.2	7,911.3	93.30	
16,876.0	86.40	90.10	9,344.5	-456.3	7,992.1	8,005.1	93.27	
16,971.0	85.00	89.90	9,351.6	-456.3	8,086.8	8,099.7	93.23	
17,066.0	88.70	89.40	9,356.8	-455.7	8,181.7	8,194.3	93.19	
17,162.0	88.70	89.40	9,359.0	-454.7	8,277.6	8,290.1	93.14	
17,256.0	93.10	90.90	9,357.5	-455.0	8,371.6	8,383.9	93.11	
17,351.0	90.80	92.00	9,354.3	-457.4	8,466.5	8,478.8	93.09	
17,446.0	90.70	92.20	9,353.0	-460.8	8,561.4	8,573.8	93.08	
17,541.0	86.50	90.80	9,355.4	-463.3	8,656.3	8,668.7	93.06	
17,635.0	88.00	91.30	9,359.9	-465.0	8,750.2	8,762.6	93.04	
17,730.0	88.40	90.20	9,362.8	-466.3	8,845.2	8,857.4	93.02	
17,825.0	88.30	89.70	9,365.6	-466.2	8,940.1	8,952.3	92.99	
17,920.0	91.40	90.40	9,365.8	-466.3	9,035.1	9,047.1	92.95	
18,014.0	89.20	90.20	9,365.3	-466.8	9,129.1	9,141.0	92.93	
18,110.0	90.60	90.20	9,365.5	-467.1	9,225.1	9,236.9	92.90	
18,204.0	88.60	89.70	9,366.2	-467.0	9,319.1	9,330.8	92.87	
18,299.0	90.00	88.80	9,367.3	-465.8	9,414.1	9,425.6	92.83	
18,394.0	89.80	89.90	9,367.5	-464.7	9,509.1	9,520.4	92.80	
18,489.0	90.30	90.10	9,367.4	-464.7	9,604.1	9,615.3	92.77	
18,584.0	86.70	90.10	9,369.9	-464.9	9,699.0	9,710.1	92.74	
18,679.0	87.10	90.20	9,375.0	-465.1	9,793.9	9,804.9	92.72	
18,774.0	87.80	91.10	9,379.3	-466.2	9,888.8	9,899.8	92.70	
18,868.0	89.30	92.30	9,381.6	-469.0	9,982.7	9,993.7	92.69	
18,963.0	90.00	93.10	9,382.2	-473.5	10,077.6	10,088.7	92.69	
19,058.0	90.90	92.70	9,381.5	-478.3	10,172.5	10,183.7	92.69	
19,152.0	91.00	92.70	9,379.9	-482.7	10,266.3	10,277.7	92.69	
19,247.0	91.40	93.20	9,377.9	-487.6	10,361.2	10,372.7	92.69	
19,341.0	92.30	91.80	9,374.9	-491.7	10,455.1	10,466.6	92.69	
19,436.0	92.60	92.20	9,370.8	-495.0	10,549.9	10,561.5	92.69	
19,531.0	91.60	92.30	9,367.3	-498.7	10,644.8	10,656.4	92.68	
19,625.0	91.40	93.10	9,364.9	-503.2	10,738.6	10,750.4	92.68	
19,721.0	90.80	93.10	9,363.0	-508.3	10,834.5	10,846.4	92.69	
19,816.0	91.20	92.90	9,361.4	-513.3	10,929.3	10,941.4	92.69	
19,865.0	90.90	92.70	9,360.5	-515.7	10,978.3	10,990.4	92.69	
19,935.0	90.90	92.70	9,359.4	-519.0	11,048.2	11,060.4	92.69	
TD @ 19935.0' MD / 9359.4' TVD								



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Site:	Sec 18,T20S,R29E	MD Reference:	WELL @ 3292.0usft (Patterson #250)
Well:	Glock 17-16 W0DA Fed Com #3H	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)	
468.0	467.9	6.9	0.3	Gyro Tie-in @ 468.0' MD / 467.9' TVD
19,935.0	9,359.4	-519.0	11,048.2	TD @ 19935.0' MD / 9359.4' TVD