

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-171232	1/31/2018

Lease	Well Name	County & State
SEC 22, T-23S, R30E	Forty Niner Ridge Unit / 106H	Eddy County, NM

API No.	Survey Depth Range	Survey Type
35-015-44204	435 feet to 19580 feet MD	MWD

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

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: 2018.01.31 14:06:56 -06'00'

Christopher Hughes
MWD Compliance Manager
Quintana Energy Services

A large, stylized handwritten signature in black ink, which appears to be 'CHRISTOPHER HUGHES', is written over a horizontal line.



RECEIVED
FEB 06 2018
MEWBOURNE OIL CO.,
PERRYTON, TEXAS

Mewbourne Oil Company

Eddy County, New Mexico (Nad 83)

Sec 22, T23S, R30E

Forty Niner Ridge Unit #106H

Wellbore #1

Design: Wellbore #1

QES Survey Certification Report

30 November, 2017





QES Survey Certification Report



Company: Mewbourne Oil Company
Project: Eddy County, New Mexico (Nad 83)
Site: Sec 22, T23S, R30E
Well: Forty Niner Ridge Unit #106H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Forty Niner Ridge Unit #106H
TVD Reference: WELL @ 3287.0usft (Patterson #230)
MD Reference: WELL @ 3287.0usft (Patterson #230)
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 22, T23S, R30E

Site Position:		Northing:	467,607.04 usft	Latitude:	32° 17' 4.725 N
From:	Map	Easting:	687,029.17 usft	Longitude:	103° 51' 42.776 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.25 °

Well Forty Niner Ridge Unit #106H

Well Position	+N/-S	0.0 usft	Northing:	467,607.04 usft	Latitude:	32° 17' 4.725 N
	+E/-W	0.0 usft	Easting:	687,029.17 usft	Longitude:	103° 51' 42.776 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level:	3,260.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/28/2017	7.06	60.07	47,915.43620682

Design Wellbore #1

Audit Notes:

Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
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Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	356.02

Survey Program Date 11/30/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
127.0	435.0	Mewbourne Surveys (Wellbore #1)	MWD default	MWD - Standard
482.0	19,580.0	QES MWD (Wellbore #1)	MWD default	MWD - Standard

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
435.0	0.40	302.00	435.0	3.4	-2.8	4.4	320.47
Tie-In @ 435.0' MD / 435.0' TVD							
482.0	0.40	282.80	482.0	3.5	-3.1	4.7	318.62
571.0	0.40	279.10	571.0	3.7	-3.7	5.2	314.44
695.0	0.40	264.90	695.0	3.7	-4.6	5.9	308.79
755.0	0.20	293.20	755.0	3.7	-4.9	6.1	307.17
853.0	0.20	189.80	853.0	3.6	-5.1	6.2	305.39
947.0	0.10	180.50	947.0	3.4	-5.1	6.1	303.37
1,043.0	0.10	27.00	1,043.0	3.4	-5.1	6.1	303.49
1,138.0	0.10	321.50	1,138.0	3.5	-5.1	6.2	304.49
1,233.0	0.30	354.30	1,233.0	3.8	-5.2	6.4	306.41



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North Reference:
Survey Calculation Method:
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Well Forty Niner Ridge Unit #106H
WELL @ 3287.0usft (Patterson #230)
WELL @ 3287.0usft (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 (°)
1,328.0	0.10	347.10	1,328.0	4.1	-5.2	6.6	308.47
1,423.0	360.00	286.80	1,423.0	4.2	-5.2	6.7	308.91
1,518.0	0.20	49.30	1,518.0	4.3	-5.1	6.7	310.31
1,613.0	0.40	55.00	1,613.0	4.6	-4.7	6.6	314.53
1,708.0	0.40	60.60	1,708.0	5.0	-4.1	6.5	320.25
1,803.0	0.40	51.10	1,803.0	5.3	-3.6	6.4	326.12
1,899.0	0.50	54.10	1,899.0	5.8	-3.0	6.5	332.75
1,995.0	0.50	38.30	1,994.9	6.4	-2.4	6.8	339.46
2,089.0	0.40	41.40	2,088.9	6.9	-1.9	7.2	344.56
2,184.0	0.40	14.50	2,183.9	7.5	-1.6	7.7	347.87
2,278.0	0.50	342.20	2,277.9	8.2	-1.7	8.4	348.60
2,373.0	0.50	359.10	2,372.9	9.0	-1.8	9.2	348.78
2,468.0	0.80	355.90	2,467.9	10.1	-1.8	10.3	349.65
2,563.0	0.80	338.00	2,562.9	11.4	-2.1	11.6	349.35
2,657.0	0.70	346.80	2,656.9	12.5	-2.5	12.8	348.66
2,751.0	0.80	349.40	2,750.9	13.8	-2.8	14.0	348.62
2,846.0	0.80	357.00	2,845.9	15.1	-2.9	15.3	349.01
2,940.0	1.00	2.20	2,939.9	16.5	-2.9	16.8	349.96
3,035.0	0.60	43.90	3,034.9	17.7	-2.6	17.9	351.81
3,129.0	0.80	58.30	3,128.9	18.4	-1.7	18.5	354.88
3,223.0	1.60	79.10	3,222.8	19.0	0.2	19.0	0.59
3,318.0	1.80	76.80	3,317.8	19.6	2.9	19.8	8.55
3,412.0	2.70	77.60	3,411.7	20.4	6.5	21.4	17.78
3,507.0	1.90	114.40	3,506.7	20.3	10.2	22.7	26.66
3,601.0	1.80	130.40	3,600.6	18.7	12.7	22.6	34.28
3,682.0	1.80	133.90	3,681.6	16.9	14.6	22.4	40.74
3,803.0	1.60	127.70	3,802.5	14.6	17.3	22.6	49.85
3,898.0	1.50	131.60	3,897.5	13.0	19.3	23.2	56.10
3,992.0	1.50	130.70	3,991.5	11.3	21.1	24.0	61.79
4,086.0	1.50	129.70	4,085.4	9.8	23.0	25.0	67.04
4,181.0	1.20	127.00	4,180.4	8.4	24.8	26.1	71.35
4,275.0	1.10	129.50	4,274.4	7.2	26.2	27.2	74.68
4,370.0	1.20	127.70	4,369.4	6.0	27.7	28.4	77.79
4,464.0	1.20	131.10	4,463.3	4.8	29.3	29.6	80.77
4,559.0	1.20	131.80	4,558.3	3.4	30.8	30.9	83.62
4,653.0	1.10	132.00	4,652.3	2.2	32.2	32.2	86.12
4,748.0	0.90	139.00	4,747.3	1.0	33.3	33.3	88.27
4,842.0	0.80	138.80	4,841.3	0.0	34.2	34.2	90.08
4,936.0	0.80	146.20	4,935.3	-1.1	35.0	35.1	91.77
5,031.0	0.80	148.30	5,030.3	-2.2	35.8	35.8	93.52
5,126.0	0.90	150.20	5,125.2	-3.4	36.5	36.6	95.34
5,220.0	0.80	144.80	5,219.2	-4.6	37.2	37.5	97.03
5,315.0	0.70	159.40	5,314.2	-5.7	37.8	38.2	98.54
5,409.0	0.60	151.10	5,408.2	-6.6	38.2	38.8	99.85



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Well: Forty Niner Ridge Unit #106H
Wellbore: Wellbore #1
Design: Wellbore #1

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

Well Forty Niner Ridge Unit #106H
WELL @ 3287.0usft (Patterson #230)
WELL @ 3287.0usft (Patterson #230)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	Closure Distance (usft)	Closure Azimuth (°)
5,504.0	0.70	154.60	5,503.2	-7.6	38.7	39.5	101.10
5,598.0	0.80	157.60	5,597.2	-8.7	39.2	40.2	102.54
5,693.0	0.90	160.40	5,692.2	-10.0	39.7	41.0	104.19
5,787.0	0.90	160.80	5,786.2	-11.4	40.2	41.8	105.87
5,881.0	1.00	163.10	5,880.2	-12.9	40.7	42.7	107.61
5,975.0	1.00	164.80	5,974.2	-14.5	41.2	43.6	109.40
6,070.0	0.80	170.60	6,069.1	-15.9	41.5	44.4	111.03
6,164.0	0.80	172.40	6,163.1	-17.2	41.7	45.1	112.48
6,259.0	0.90	184.50	6,258.1	-18.6	41.7	45.7	114.09
6,354.0	0.80	194.00	6,353.1	-20.0	41.5	46.1	115.78
6,448.0	0.90	205.10	6,447.1	-21.3	41.0	46.2	117.49
6,542.0	0.90	203.70	6,541.1	-22.7	40.4	46.3	119.31
6,636.0	0.90	206.70	6,635.1	-24.0	39.8	46.5	121.13
6,731.0	0.90	205.10	6,730.1	-25.4	39.1	46.6	122.95
6,825.0	0.90	201.90	6,824.1	-26.7	38.5	46.9	124.73
6,920.0	1.00	200.50	6,919.0	-28.2	38.0	47.3	126.59
7,014.0	1.10	194.70	7,013.0	-29.8	37.5	47.9	128.53
7,108.0	1.10	190.50	7,107.0	-31.6	37.1	48.7	130.44
7,203.0	1.10	189.60	7,202.0	-33.4	36.7	49.6	132.26
7,297.0	1.20	188.40	7,296.0	-35.2	36.4	50.7	134.04
7,392.0	1.30	190.50	7,390.9	-37.3	36.1	51.9	135.92
7,486.0	1.50	186.10	7,484.9	-39.6	35.8	53.3	137.87
7,581.0	0.50	173.60	7,579.9	-41.2	35.7	54.5	139.10
7,676.0	0.60	188.20	7,674.9	-42.1	35.7	55.2	139.74
7,770.0	0.80	171.20	7,768.9	-43.2	35.7	56.1	140.46
7,865.0	1.30	181.20	7,863.9	-45.0	35.8	57.5	141.50
7,960.0	1.60	165.50	7,958.8	-47.3	36.1	59.5	142.68
8,055.0	1.30	182.90	8,053.8	-49.7	36.4	61.6	143.81
8,149.0	1.60	199.50	8,147.8	-52.0	35.9	63.2	145.40
8,244.0	1.50	221.30	8,242.8	-54.2	34.6	64.3	147.43
8,338.0	1.30	245.30	8,336.7	-55.6	32.8	64.5	149.42
8,433.0	1.30	242.50	8,431.7	-56.5	30.9	64.4	151.33
8,527.0	1.00	250.10	8,525.7	-57.3	29.2	64.3	153.01
8,622.0	1.10	222.70	8,620.7	-58.2	27.8	64.5	154.50
8,716.0	1.20	208.80	8,714.6	-59.8	26.7	65.4	155.93
8,810.0	1.40	198.20	8,808.6	-61.7	25.9	66.9	157.26
8,905.0	1.90	195.10	8,903.6	-64.3	25.1	69.1	158.70
8,999.0	1.40	179.30	8,997.5	-67.0	24.7	71.4	159.76
9,037.0	1.30	178.70	9,035.5	-67.9	24.7	72.2	160.00
9,073.0	1.50	178.00	9,071.5	-68.8	24.7	73.1	160.21
9,104.0	0.30	173.60	9,102.5	-69.2	24.8	73.5	160.32
9,136.0	2.60	357.50	9,134.5	-68.6	24.7	72.9	160.17
9,167.0	6.30	351.20	9,165.4	-66.2	24.4	70.6	159.74
9,199.0	10.30	346.40	9,197.1	-61.7	23.5	66.0	159.15
9,230.0	13.90	340.80	9,227.4	-55.5	21.6	59.6	158.71



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Site: Sec 22, T23S, R30E
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Well Forty Niner Ridge Unit #106H
WELL @ 3287.0usft (Patterson #230)
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Grid
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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)
9,262.0	18.90	335.50	9,258.1	-47.1	18.2	50.5	158.87
9,293.0	23.50	331.80	9,287.0	-37.1	13.2	39.4	160.41
9,325.0	27.30	328.70	9,315.9	-25.2	6.4	26.0	165.81
9,356.0	31.90	325.50	9,342.8	-12.4	-2.0	12.5	188.99
9,388.0	34.50	322.30	9,369.6	1.8	-12.3	12.4	278.13
9,419.0	36.80	322.20	9,394.8	16.0	-23.4	28.3	304.48
9,450.0	39.70	322.00	9,419.1	31.2	-35.1	47.0	311.58
9,482.0	43.80	320.80	9,443.0	47.8	-48.4	68.1	314.63
9,514.0	48.10	320.10	9,465.2	65.6	-63.1	91.0	316.10
9,545.0	53.40	320.10	9,484.8	84.0	-78.5	114.9	316.93
9,576.0	57.80	321.10	9,502.4	103.7	-94.7	140.5	317.60
9,608.0	61.80	322.20	9,518.4	125.4	-111.9	168.0	318.27
9,639.0	67.20	323.20	9,531.8	147.7	-128.8	195.9	318.90
9,671.0	72.50	323.20	9,542.8	171.7	-146.8	225.9	319.47
9,702.0	76.20	323.90	9,551.2	195.7	-164.5	255.7	319.95
9,734.0	77.80	322.90	9,558.4	220.7	-183.1	286.8	320.32
9,765.0	80.00	322.20	9,564.3	244.9	-201.6	317.2	320.54
9,795.0	83.40	322.20	9,568.7	268.4	-219.8	346.9	320.68
9,927.0	89.20	323.20	9,577.2	373.1	-299.6	478.5	321.24
10,021.0	90.40	326.60	9,577.5	450.0	-353.6	572.3	321.84
10,116.0	91.50	330.10	9,575.9	530.8	-403.5	666.8	322.76
10,210.0	90.80	334.10	9,574.0	613.9	-447.4	759.6	323.91
10,305.0	90.40	337.10	9,573.0	700.4	-486.7	852.9	325.21
10,399.0	90.50	340.30	9,572.3	787.9	-520.8	944.5	326.54
10,494.0	90.00	342.90	9,571.9	878.1	-550.8	1,036.5	327.90
10,588.0	89.80	346.10	9,572.1	968.6	-575.9	1,126.9	329.27
10,683.0	90.00	349.90	9,572.2	1,061.5	-595.7	1,217.2	330.70
10,777.0	90.80	352.60	9,571.6	1,154.4	-610.0	1,305.7	332.15
10,872.0	91.40	354.70	9,569.7	1,248.8	-620.5	1,394.5	333.58
10,966.0	89.20	355.70	9,569.3	1,342.5	-628.3	1,482.3	334.92
11,061.0	89.30	357.00	9,570.5	1,437.3	-634.4	1,571.1	336.18
11,155.0	89.20	356.80	9,571.7	1,531.1	-639.5	1,659.3	337.33
11,250.0	89.30	357.30	9,573.0	1,626.0	-644.3	1,749.0	338.38
11,344.0	89.90	357.80	9,573.6	1,719.9	-648.4	1,838.1	339.35
11,439.0	90.30	358.00	9,573.5	1,814.9	-651.8	1,928.4	340.24
11,533.0	90.10	358.40	9,573.1	1,908.8	-654.8	2,018.0	341.07
11,628.0	90.00	358.70	9,573.1	2,003.8	-657.2	2,108.8	341.84
11,722.0	90.50	359.40	9,572.6	2,097.8	-658.8	2,198.8	342.57
11,816.0	90.70	0.10	9,571.7	2,191.8	-659.2	2,288.7	343.26
11,910.0	91.20	0.80	9,570.1	2,285.7	-658.4	2,378.7	343.93
12,005.0	89.30	359.30	9,569.7	2,380.7	-658.3	2,470.1	344.54
12,100.0	89.40	0.50	9,570.8	2,475.7	-658.5	2,561.8	345.10
12,194.0	89.50	0.50	9,571.7	2,569.7	-657.7	2,652.5	345.64
12,289.0	90.20	1.20	9,571.9	2,664.7	-656.3	2,744.3	346.16



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12,384.0	91.20	2.10	9,570.8	2,759.7	-653.5	2,836.0	346.68
12,479.0	90.40	0.80	9,569.4	2,854.6	-651.1	2,927.9	347.15
12,573.0	89.90	1.20	9,569.2	2,948.6	-649.5	3,019.3	347.58
12,667.0	89.80	0.80	9,569.4	3,042.6	-647.9	3,110.8	347.98
12,762.0	89.90	0.00	9,569.7	3,137.6	-647.2	3,203.6	348.34
12,857.0	90.40	359.80	9,569.4	3,232.6	-647.4	3,296.8	348.68
12,952.0	90.90	359.60	9,568.3	3,327.6	-647.9	3,390.1	348.98
13,047.0	91.10	0.00	9,566.7	3,422.6	-648.2	3,483.4	349.28
13,141.0	90.70	359.80	9,565.2	3,516.5	-648.4	3,575.8	349.55
13,236.0	90.20	359.60	9,564.5	3,611.5	-648.9	3,669.4	349.81
13,331.0	90.40	0.00	9,564.0	3,706.5	-649.2	3,763.0	350.07
13,425.0	90.70	0.70	9,563.1	3,800.5	-648.6	3,855.5	350.31
13,520.0	91.40	1.20	9,561.3	3,895.5	-647.0	3,948.9	350.57
13,615.0	89.20	358.50	9,560.8	3,990.5	-647.3	4,042.6	350.79
13,709.0	89.40	358.90	9,562.0	4,084.5	-649.4	4,135.8	350.97
13,804.0	90.70	358.70	9,561.9	4,179.4	-651.4	4,229.9	351.14
13,899.0	90.00	358.40	9,561.3	4,274.4	-653.8	4,324.1	351.30
13,993.0	90.60	358.40	9,560.8	4,368.4	-656.4	4,417.4	351.45
14,088.0	89.30	358.20	9,560.9	4,463.3	-659.3	4,511.7	351.60
14,183.0	90.70	359.30	9,560.9	4,558.3	-661.3	4,606.0	351.74
14,277.0	90.90	0.30	9,559.6	4,652.3	-661.7	4,699.1	351.91
14,372.0	91.40	358.50	9,557.7	4,747.3	-662.7	4,793.3	352.05
14,467.0	89.90	358.40	9,556.6	4,842.2	-665.2	4,887.7	352.18
14,561.0	90.90	359.60	9,556.0	4,936.2	-666.9	4,981.0	352.31
14,655.0	89.60	358.90	9,555.5	5,030.2	-668.1	5,074.3	352.43
14,749.0	87.50	358.70	9,557.9	5,124.1	-670.1	5,167.7	352.55
14,844.0	87.90	359.10	9,561.7	5,219.0	-671.9	5,262.1	352.66
14,938.0	88.50	358.70	9,564.7	5,313.0	-673.7	5,355.5	352.77
15,032.0	89.20	359.30	9,566.6	5,406.9	-675.3	5,448.9	352.88
15,127.0	89.50	359.60	9,567.6	5,501.9	-676.2	5,543.3	352.99
15,221.0	90.30	0.00	9,567.8	5,595.9	-676.6	5,636.7	353.11
15,315.0	91.10	359.80	9,566.7	5,689.9	-676.7	5,730.0	353.22
15,410.0	91.60	0.50	9,564.4	5,784.9	-676.5	5,824.3	353.33
15,505.0	88.50	359.10	9,564.3	5,879.9	-676.8	5,918.7	353.43
15,600.0	88.90	359.60	9,566.5	5,974.8	-677.9	6,013.2	353.53
15,694.0	90.10	0.00	9,567.3	6,068.8	-678.2	6,106.6	353.62
15,789.0	90.70	0.50	9,566.7	6,163.8	-677.8	6,201.0	353.72
15,883.0	91.80	0.50	9,564.6	6,257.8	-677.0	6,294.3	353.83
15,978.0	92.40	0.80	9,561.1	6,352.7	-675.9	6,388.6	353.93
16,073.0	90.10	0.80	9,559.1	6,447.7	-674.6	6,482.9	354.03
16,167.0	90.70	1.20	9,558.4	6,541.7	-672.9	6,576.2	354.13
16,262.0	89.70	1.20	9,558.1	6,636.6	-671.0	6,670.5	354.23
16,356.0	89.20	1.20	9,559.0	6,730.6	-669.0	6,763.8	354.32
16,451.0	89.50	1.90	9,560.0	6,825.6	-666.4	6,858.0	354.42



QES Survey Certification Report



Company: Mewbourne Oil Company
Project: Eddy County, New Mexico (Nad 83)
Site: Sec 22, T23S, R30E
Well: Forty Niner Ridge Unit #106H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Forty Niner Ridge Unit #106H
TVD Reference: WELL @ 3287.0usft (Patterson #230)
MD Reference: WELL @ 3287.0usft (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 (°)
16,546.0	89.40	1.40	9,561.0	6,920.5	-663.7	6,952.3	354.52
16,642.0	88.30	1.20	9,562.9	7,016.5	-661.5	7,047.6	354.61
16,737.0	90.40	0.50	9,564.0	7,111.5	-660.1	7,142.0	354.70
16,832.0	92.30	1.50	9,561.7	7,206.4	-658.4	7,236.4	354.78
16,928.0	88.80	0.70	9,560.8	7,302.4	-656.6	7,331.8	354.86
17,023.0	88.80	1.20	9,562.8	7,397.4	-655.0	7,426.3	354.94
17,119.0	91.40	0.30	9,562.6	7,493.3	-653.8	7,521.8	355.01
17,214.0	93.60	359.10	9,558.5	7,588.2	-654.3	7,616.4	355.07
17,309.0	90.50	358.00	9,555.1	7,683.1	-656.7	7,711.1	355.11
17,404.0	90.50	357.70	9,554.3	7,778.1	-660.2	7,806.0	355.15
17,499.0	90.70	357.80	9,553.3	7,873.0	-664.0	7,900.9	355.18
17,594.0	91.80	358.50	9,551.2	7,967.9	-667.0	7,995.8	355.21
17,689.0	87.90	358.50	9,551.4	8,062.9	-669.5	8,090.6	355.25
17,785.0	90.30	359.80	9,552.9	8,158.8	-670.9	8,186.4	355.30
17,880.0	94.50	6.80	9,549.0	8,253.5	-665.5	8,280.3	355.39
17,975.0	90.00	7.70	9,545.2	8,347.6	-653.5	8,373.2	355.52
18,071.0	88.60	5.90	9,546.4	8,443.0	-642.1	8,467.3	355.65
18,166.0	93.50	4.00	9,544.7	8,537.6	-633.9	8,561.1	355.75
18,260.0	87.80	0.80	9,543.6	8,631.4	-630.0	8,654.4	355.83
18,356.0	83.20	358.00	9,551.1	8,727.1	-631.0	8,749.9	355.86
18,451.0	83.80	356.60	9,561.9	8,821.4	-635.4	8,844.2	355.88
18,546.0	88.00	356.80	9,568.7	8,915.9	-640.9	8,938.9	355.89
18,641.0	90.60	356.80	9,569.8	9,010.8	-646.2	9,033.9	355.90
18,735.0	90.80	357.00	9,568.7	9,104.6	-651.3	9,127.9	355.91
18,831.0	91.30	357.30	9,566.9	9,200.5	-656.1	9,223.9	355.92
18,926.0	92.50	357.90	9,563.8	9,295.4	-660.0	9,318.8	355.94
19,021.0	91.30	357.70	9,560.6	9,390.2	-663.7	9,413.7	355.96
19,116.0	91.00	357.00	9,558.7	9,485.1	-668.1	9,508.6	355.97
19,211.0	91.90	357.50	9,556.3	9,580.0	-672.6	9,603.6	355.98
19,306.0	91.90	356.80	9,553.2	9,674.8	-677.3	9,698.5	356.00
19,401.0	93.20	359.40	9,548.9	9,769.6	-680.5	9,793.3	356.02
19,496.0	89.80	358.90	9,546.5	9,864.6	-681.9	9,888.1	356.05
19,530.0	90.60	359.40	9,546.3	9,898.6	-682.4	9,922.1	356.06
19,580.0	90.60	359.40	9,545.8	9,948.6	-682.9	9,942.9	356.07

TD @ 19580.0' MD / 9545.8' TVD



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North Reference: Grid
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Database: EDM 5000.1 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
435.0	435.0	3.4	-2.8	Tie-In @ 435.0' MD / 435.0' TVD
19,580.0	9,545.8	9,948.6	-682.9	TD @ 19580.0' MD / 9545.8' TVD

Checked By: _____ Approved By: _____ Date: _____