



NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 05 2019

RECEIVED

September 27, 2018

Devon Energy Production Company, LP
Well: Turquoise PWU 27 9H
County/Parish: Eddy County, NM

30-015-44983

LEAM MWD: (OH) from 424' MD – 14,080' MD
Projection; 14,155' MD

This Borehole Survey taken between 09/13/18 and 09/24/18 had been conducted and calculated according to the highest professional standards and complies with all known State and Federal requirements.

Reviewed and Approved:

Date: September 27, 2018



Survey Certification Form

State of New Mexico

Eddy County

I, Randy W. Rakowitz, certify that; I am employed by LEAM Drilling Services, that I did on the day(s) of 09/13/2018 through 09/24/2018, conduct or supervise the taking of MWD Survey from a depth of 424' MD to 14,155' MD; that the data is true, correct, complete and within the limitations of the tools as set forth by LEAM Drilling Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Devon Energy Production Company, LP for the Turquoise PWU 27 9H in Eddy County, New Mexico; and that I reviewed this report and find that it conforms to the principals and procedures as set forth by LEAM Drilling Services.

A handwritten signature in black ink, appearing to read 'Randy W. Rakowitz', is written over a horizontal line.

Randy W. Rakowitz
MWD Operations Coordinator

LEAM Drilling Services

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Turquoise PWU 27 9H
Project:	Eddy County, NM (NAD-83)	TVD Reference:	3344.70' GE + 26' KB @ 3370.70usft
Site:	Turquoise	MD Reference:	3344.70' GE + 26' KB @ 3370.70usft
Well:	Turquoise PWU 27 9H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi User Db

Project	Eddy County, NM (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	Turquoise				
Site Position:		Northing:	593,931.03 usft	Latitude:	32° 37' 56.9788 N
From:	Lat/Long	Easting:	621,732.64 usft	Longitude:	104° 4' 19.8333 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.14 °

Well	Turquoise PWU 27 9H					
Well Position	+N-S	0.00 usft	Northing:	595,319.97 usft	Latitude:	32° 38' 10.7221 N
	+E-W	0.00 usft	Easting:	621,766.42 usft	Longitude:	104° 4' 19.3983 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,344.70 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/22/2018	7.37	60.45	48,074

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0.00	0.00	0.00	89.90	

Survey Program	Date	10/4/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
67.75	307.00	Survey #1 (OH)	VES GyroFlex V2		
424.00	14,080.00	Survey #2 (OH)	LEAM MWD+HDGM	MWD+HDGM	
14,155.00	14,155.00	Survey #3 (OH)	Project	Projection	

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
67.75	0.33	127.48	67.75	-0.12	0.15	0.15	0.49	0.49	0.00	
147.50	0.51	115.02	147.50	-0.41	0.66	0.66	0.25	0.23	-15.62	
227.25	0.81	102.79	227.24	-0.68	1.53	1.53	0.41	0.38	-15.34	
307.00	0.92	93.78	306.98	-0.85	2.72	2.72	0.22	0.14	-11.30	
424.00	0.88	72.27	423.97	-0.64	4.51	4.51	0.29	-0.03	-18.38	
516.00	0.88	74.91	515.96	-0.24	5.87	5.87	0.04	0.00	2.87	
609.00	1.32	67.52	608.94	0.36	7.55	7.55	0.50	0.47	-7.95	
701.00	1.49	81.41	700.91	0.94	9.71	9.71	0.41	0.18	15.10	

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Well:	Turquoise PWU 27 9H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Multi 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)
794.00	1.41	72.97	793.88	1.46	12.00	12.00	0.24	-0.09	-9.08
886.00	1.41	94.59	885.86	1.70	14.21	14.21	0.57	0.00	23.50
978.00	1.41	79.12	977.83	1.82	16.45	16.45	0.41	0.00	-16.82
1,071.00	1.23	109.36	1,070.81	1.70	18.51	18.52	0.76	-0.19	32.52
1,163.00	1.49	84.75	1,162.78	1.49	20.64	20.64	0.69	0.28	-26.75
1,256.00	1.32	84.40	1,255.75	1.70	22.91	22.91	0.18	-0.18	-0.38
1,348.00	1.06	33.77	1,347.73	2.51	24.43	24.44	1.14	-0.28	-55.03
1,441.00	0.88	35.18	1,440.72	3.81	25.32	25.33	0.20	-0.19	1.52
1,533.00	0.62	353.69	1,532.71	4.88	25.68	25.68	0.64	-0.28	-45.10
1,626.00	0.53	44.14	1,625.71	5.69	25.92	25.93	0.53	-0.10	54.25
1,721.00	0.62	35.35	1,720.71	6.43	26.52	26.53	0.13	0.09	-9.25
1,815.00	0.79	20.94	1,814.70	7.45	27.05	27.06	0.26	0.18	-15.33
1,910.00	0.88	1.08	1,909.69	8.79	27.30	27.31	0.32	0.09	-20.91
2,004.00	0.79	341.57	2,003.68	10.12	27.11	27.12	0.32	-0.10	-20.76
2,098.00	0.62	24.11	2,097.67	11.20	27.11	27.13	0.57	-0.18	45.28
2,193.00	0.79	349.30	2,192.66	12.32	27.20	27.22	0.48	0.18	-36.64
2,287.00	0.79	346.84	2,286.66	13.58	26.93	26.95	0.04	0.00	-2.82
2,382.00	0.26	352.29	2,381.65	14.44	26.75	26.78	0.58	-0.56	5.74
2,476.00	0.53	326.10	2,475.65	15.01	26.48	26.51	0.34	0.29	-27.86
2,570.00	1.14	355.80	2,569.84	16.30	26.17	26.20	0.78	0.65	31.60
2,664.00	2.37	14.09	2,663.59	19.12	26.57	26.61	1.42	1.31	19.46
2,758.00	2.46	3.36	2,757.51	23.02	27.17	27.21	0.49	0.10	-11.41
2,853.00	3.34	11.98	2,852.39	27.78	27.86	27.81	1.03	0.93	9.07
2,947.00	3.25	6.70	2,946.23	33.09	28.74	28.80	0.34	-0.10	-5.62
3,042.00	3.86	12.68	3,041.05	38.96	29.77	29.84	0.84	0.75	6.29
3,135.00	4.04	13.73	3,133.82	45.28	31.26	31.33	0.12	0.09	1.13
3,230.00	5.01	13.38	3,228.52	52.56	33.01	33.10	1.02	1.02	-0.37
3,325.00	5.01	9.16	3,323.16	60.69	34.63	34.74	0.39	0.00	-4.44
3,360.00	5.28	12.15	3,358.02	63.78	35.21	35.32	1.08	0.77	8.54
3,505.00	5.10	9.48	3,502.42	76.66	37.68	37.81	0.21	-0.12	-1.84
3,599.00	5.01	7.54	3,596.06	84.85	38.90	39.05	0.21	-0.10	-2.06
3,694.00	4.84	4.90	3,690.71	92.95	39.79	39.95	0.30	-0.18	-2.78
3,788.00	4.75	2.62	3,784.38	100.79	40.31	40.48	0.22	-0.10	-2.43
3,882.00	4.66	0.16	3,878.06	108.50	40.50	40.69	0.24	-0.10	-2.62
3,976.00	4.48	355.06	3,971.76	115.97	40.19	40.39	0.47	-0.19	-5.43
4,071.00	4.75	357.87	4,066.46	123.60	39.72	39.94	0.37	0.28	2.96
4,165.00	4.84	15.28	4,160.13	131.31	40.63	40.85	1.55	0.10	18.52
4,259.00	4.92	28.28	4,253.79	138.69	43.58	43.82	1.18	0.09	13.83
4,354.00	5.10	25.65	4,348.43	146.08	47.34	47.59	0.31	0.19	-2.77
4,448.00	5.54	26.70	4,442.03	153.90	51.19	51.45	0.48	0.47	1.12
4,542.00	5.01	34.61	4,535.63	161.34	55.56	55.84	0.96	-0.56	8.41
4,636.00	5.28	38.30	4,629.25	168.11	60.57	60.86	0.45	0.29	3.93
4,730.00	4.40	34.61	4,722.91	174.47	65.30	65.60	0.99	-0.94	-3.93

LEAM Drilling Services

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Survey

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4,825.00	4.57	33.91	4,817.62	180.61	69.48	69.79	0.19	0.18	-0.74
4,919.00	5.01	34.79	4,911.29	187.09	73.91	74.24	0.47	0.47	0.94
5,014.00	3.69	20.73	5,008.02	193.36	77.36	77.70	1.78	-1.39	-14.80
5,108.00	3.34	12.64	5,099.85	198.86	79.03	79.37	0.64	-0.37	-8.61
5,202.00	4.48	10.71	5,193.62	205.14	80.31	80.67	1.22	1.21	-2.05
5,297.00	4.84	8.24	5,288.31	212.75	81.57	81.94	0.43	0.38	-2.60
5,391.00	4.75	9.48	5,381.98	220.51	82.78	83.17	0.15	-0.10	1.32
5,485.00	4.75	7.72	5,475.66	228.21	83.95	84.34	0.16	0.00	-1.87
5,579.00	4.84	25.12	5,569.34	235.65	86.15	86.56	1.54	0.10	18.51
5,674.00	4.92	29.87	5,663.99	242.82	89.88	90.31	0.43	0.08	5.00
5,768.00	4.40	31.45	5,757.68	249.39	93.77	94.21	0.57	-0.55	1.68
5,862.00	4.48	30.39	5,851.40	255.63	97.51	97.96	0.12	0.09	-1.13
5,956.00	4.40	24.42	5,945.12	262.08	100.86	101.32	0.50	-0.09	-8.35
6,050.00	4.40	19.49	6,038.84	268.76	103.55	104.02	0.40	0.00	-5.24
6,144.00	4.04	16.15	6,132.58	275.34	105.68	106.16	0.46	-0.38	-3.55
6,238.00	3.96	14.57	6,226.36	281.66	107.41	107.91	0.14	-0.09	-1.68
6,332.00	4.92	22.99	6,320.07	288.52	109.80	110.31	1.23	1.02	8.96
6,426.00	4.92	22.29	6,413.73	295.96	112.91	113.42	0.06	0.00	-0.74
6,520.00	4.75	22.11	6,507.39	303.29	115.90	116.43	0.18	-0.18	-0.19
6,615.00	3.96	22.81	6,602.12	309.96	118.65	119.19	0.83	-0.83	0.74
6,709.00	3.17	18.60	6,695.94	315.42	120.74	121.29	0.88	-0.84	-4.48
6,803.00	3.87	20.18	6,789.76	320.86	122.66	123.22	0.75	0.74	1.68
6,897.00	3.43	11.92	6,883.57	326.59	124.34	124.91	0.73	-0.47	-8.79
6,991.00	4.04	24.92	6,977.37	332.34	126.32	126.90	1.11	0.65	13.83
7,085.00	4.13	27.03	7,071.13	338.38	129.25	129.84	0.19	0.10	2.24
7,180.00	3.96	28.26	7,165.89	344.30	132.36	132.96	0.20	-0.18	1.29
7,272.00	3.78	36.17	7,257.68	349.54	135.65	136.26	0.61	-0.20	8.60
7,366.00	3.34	32.48	7,351.50	354.35	138.95	139.57	0.53	-0.47	-3.93
7,459.00	3.69	25.80	7,444.33	359.33	141.71	142.33	0.58	0.38	-7.18
7,554.00	4.13	18.24	7,539.11	365.33	144.11	144.75	0.71	0.46	-7.96
7,648.00	3.25	4.18	7,632.91	371.21	145.36	146.01	1.34	-0.94	-14.96
7,742.00	3.08	335.00	7,726.78	376.15	144.49	145.15	1.70	-0.18	-31.04
7,836.00	2.37	17.89	7,820.68	380.29	144.02	144.68	2.23	-0.76	45.63
7,930.00	3.78	39.16	7,914.54	384.54	146.57	147.24	1.91	1.50	22.63
8,024.00	2.99	49.88	8,008.38	388.53	150.40	151.08	1.07	-0.84	11.40
8,118.00	1.76	60.43	8,102.30	390.82	153.54	154.22	1.38	-1.31	11.22
8,213.00	2.29	71.86	8,197.24	392.13	156.61	157.29	0.70	0.56	12.03
8,334.00	1.93	65.00	8,318.16	393.74	160.75	161.44	0.36	-0.30	-5.67
8,406.00	3.34	48.13	8,390.08	395.66	163.41	164.10	2.21	1.86	-23.43
8,501.00	15.04	24.22	8,483.72	408.79	170.56	171.27	12.70	12.32	-25.17
8,549.00	21.90	21.06	8,529.22	422.84	176.34	177.07	14.44	14.29	-8.58
8,597.00	27.61	21.94	8,572.79	441.53	183.71	184.48	11.92	11.90	1.83
8,644.00	30.86	30.90	8,613.82	461.99	193.98	194.79	11.58	6.91	19.06

LEAM Drilling Services

Survey Report

Company: Devon Energy
Project: Eddy County, NM (NAD-83)
Site: Turquoise
Well: Turquoise PWU 27 9H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well Turquoise PWU 27 9H
TVD Reference: 3344.70' GE + 26' KB @ 3370.70usft
MD Reference: 3344.70' GE + 26' KB @ 3370.70usft
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8,692.00	30.60	42.85	8,655.12	481.53	208.63	209.47	12.72	-0.54	24.90
8,739.00	28.99	56.74	8,695.75	488.76	226.81	227.47	14.94	-1.30	29.55
8,787.00	31.57	67.64	8,737.02	508.13	248.28	249.16	12.06	3.29	22.71
8,835.00	34.91	74.14	8,777.17	516.67	273.12	274.02	10.17	6.96	13.54
8,881.00	37.37	76.08	8,814.32	523.62	299.34	300.25	5.90	5.35	4.22
8,928.00	40.19	76.78	8,850.98	530.53	327.95	328.88	6.07	6.00	1.49
8,976.00	43.53	76.78	8,886.70	537.85	359.13	360.07	6.96	6.96	0.00
9,023.00	48.72	77.66	8,919.26	545.33	382.16	393.11	11.12	11.04	1.87
9,070.00	53.64	78.19	8,948.72	552.98	427.96	428.93	10.50	10.47	1.13
9,116.00	58.21	77.31	8,974.48	561.07	465.18	466.16	10.06	9.93	-1.91
9,164.00	62.78	78.19	8,998.12	569.93	508.00	508.99	9.65	9.52	1.83
9,211.00	66.74	79.77	9,018.16	578.04	547.72	548.73	8.96	8.43	3.36
9,259.00	69.73	81.88	9,035.95	585.14	591.72	592.74	7.45	6.23	4.40
9,306.00	72.19	85.04	9,051.29	590.19	635.85	636.88	6.23	5.23	6.72
9,353.00	76.33	86.10	9,064.04	593.68	680.94	681.98	9.07	8.81	2.26
9,400.00	81.16	88.21	9,073.21	595.96	726.96	728.00	11.18	10.28	4.49
9,448.00	85.74	88.91	9,078.68	597.16	774.62	775.66	9.65	9.54	1.48
9,495.00	87.23	89.08	9,081.56	597.98	821.53	822.57	3.19	3.17	0.36
9,562.00	89.87	88.91	9,083.26	599.15	888.49	889.53	3.95	3.94	-0.25
9,655.00	89.34	89.79	9,083.90	600.21	981.48	982.53	1.10	-0.57	0.95
9,750.00	89.43	89.96	9,084.92	600.42	1,076.47	1,077.52	0.20	0.09	0.18
9,845.00	88.37	89.96	9,086.74	600.48	1,171.45	1,172.50	1.12	-1.12	0.00
9,939.00	89.16	89.96	9,088.77	600.55	1,265.43	1,266.48	0.84	0.84	0.00
10,033.00	88.64	90.49	9,090.57	600.18	1,359.41	1,360.46	0.79	-0.55	0.56
10,127.00	88.90	90.49	9,092.59	599.38	1,453.39	1,454.43	0.28	0.28	0.00
10,221.00	89.78	90.31	9,093.68	598.72	1,547.38	1,548.42	0.86	0.94	-0.19
10,316.00	89.08	91.02	9,094.62	597.62	1,642.37	1,643.41	1.05	-0.74	0.75
10,411.00	89.87	90.31	9,095.49	598.51	1,737.35	1,738.39	1.12	0.83	-0.75
10,505.00	89.60	90.14	9,095.93	598.14	1,831.35	1,832.39	0.34	-0.29	-0.18
10,600.00	90.75	89.96	9,095.64	596.06	1,926.35	1,927.39	1.23	1.21	-0.19
10,695.00	90.66	90.84	9,094.47	595.40	2,021.34	2,022.38	0.93	-0.09	0.93
10,790.00	89.08	91.37	9,094.68	593.57	2,116.32	2,117.35	1.75	-1.86	0.56
10,884.00	89.87	91.19	9,095.54	591.47	2,210.29	2,211.32	0.86	0.84	-0.19
10,978.00	89.96	91.54	9,095.68	589.23	2,304.26	2,305.29	0.38	0.10	0.37
11,072.00	88.90	91.72	9,096.62	586.55	2,398.22	2,399.24	1.14	-1.13	0.18
11,166.00	89.16	91.02	9,098.21	584.31	2,492.18	2,493.19	0.79	0.28	-0.74
11,261.00	89.52	90.84	9,099.30	582.77	2,587.16	2,588.17	0.42	0.38	-0.19
11,355.00	89.08	89.44	9,100.45	582.54	2,681.15	2,682.16	1.56	-0.47	-1.49
11,449.00	89.60	88.91	9,101.53	583.89	2,775.13	2,776.15	0.79	0.55	-0.56
11,543.00	90.75	89.08	9,101.25	585.54	2,869.12	2,870.13	1.24	1.22	0.18
11,637.00	90.13	88.91	9,100.53	587.19	2,963.10	2,964.12	0.68	-0.66	-0.18
11,731.00	89.43	88.73	9,100.89	589.12	3,057.08	3,058.10	0.77	-0.74	-0.19
11,825.00	90.04	88.73	9,101.32	591.21	3,151.05	3,152.08	0.65	0.65	0.00
11,919.00	89.60	89.08	9,101.62	593.00	3,245.04	3,246.07	0.60	-0.47	0.37

LEAM Drilling Services

Survey Report

Company: Devon Energy
Project: Eddy County, NM (NAD-83)
Site: Turquoise
Well: Turquoise PWU 27 9H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well Turquoise PWU 27 9H
TVD Reference: 3344.70' GE + 26' KB @ 3370.70usft
MD Reference: 3344.70' GE + 26' KB @ 3370.70usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Multi 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)
12,014.00	88.90	88.91	9,102.86	594.67	3,340.01	3,341.04	0.76	-0.74	-0.18
12,108.00	89.87	88.56	9,103.87	596.74	3,433.98	3,435.02	1.10	1.03	-0.37
12,203.00	91.28	88.73	9,102.92	598.99	3,528.95	3,529.99	1.49	1.48	0.18
12,305.00	91.19	88.38	9,100.72	601.56	3,630.89	3,631.94	0.35	-0.09	-0.34
12,399.00	89.08	87.85	9,100.50	604.65	3,724.84	3,725.89	2.31	-2.24	-0.56
12,494.00	88.02	88.56	9,102.90	607.63	3,819.76	3,820.81	1.34	-1.12	0.75
12,588.00	87.05	88.56	9,106.94	609.99	3,913.64	3,914.70	1.03	-1.03	0.00
12,682.00	87.23	88.56	9,111.63	612.35	4,007.49	4,008.55	0.19	0.19	0.00
12,777.00	87.67	88.91	9,115.86	614.44	4,102.37	4,103.44	0.59	0.46	0.37
12,871.00	88.11	88.91	9,119.32	616.23	4,196.29	4,197.36	0.47	0.47	0.00
12,965.00	89.25	89.44	9,121.49	617.58	4,290.26	4,291.33	1.34	1.21	0.56
13,059.00	87.14	88.56	9,124.45	619.22	4,384.19	4,385.26	2.43	-2.24	-0.94
13,154.00	86.35	88.03	9,129.84	622.04	4,478.99	4,480.07	1.00	-0.83	-0.56
13,248.00	86.70	89.44	9,135.54	624.11	4,572.80	4,573.88	1.54	0.37	1.50
13,342.00	87.85	89.96	9,140.01	624.61	4,666.69	4,667.77	1.34	1.22	0.55
13,437.00	88.02	90.31	9,143.43	624.38	4,761.62	4,762.71	0.41	0.18	0.37
13,531.00	88.02	90.49	9,146.68	623.73	4,855.57	4,856.65	0.19	0.00	0.19
13,625.00	88.37	90.67	9,149.64	622.77	4,949.51	4,950.59	0.42	0.37	0.19
13,719.00	88.81	91.02	9,151.95	621.39	5,043.47	5,044.55	0.60	0.47	0.37
13,813.00	88.90	91.02	9,153.83	619.72	5,137.44	5,138.51	0.10	0.10	0.00
13,907.00	89.25	91.37	9,155.35	617.76	5,231.41	5,232.48	0.53	0.37	0.37
14,001.00	89.87	91.72	9,156.07	615.22	5,325.37	5,326.44	0.76	0.66	0.37
14,080.00	90.48	92.07	9,155.83	612.61	5,404.33	5,405.39	0.88	0.77	0.44
14,155.00	90.48	92.07	9,155.20	609.90	5,479.27	5,480.33	0.00	0.00	0.00
Projection									

Devon Energy

Project: Eddy County, NM (NAD-83)
Site: Turquoise
Well: Turquoise PWU 27 9H
Wellbore: OH
Design: OH

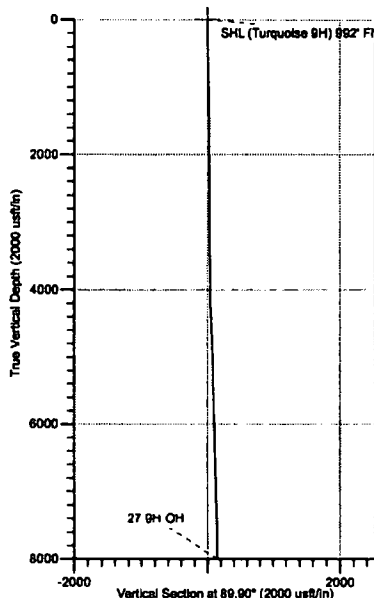


Azimuths to Grid North
True North: -0.14°
Magnetic North: 7.23°

Magnetic Field
Strength: 48074.2mT
Dip Angle: 60.45°
Date: 8/22/2018
Model: HDGM

PROJECT DETAILS: Eddy County, NM (NAD-83)

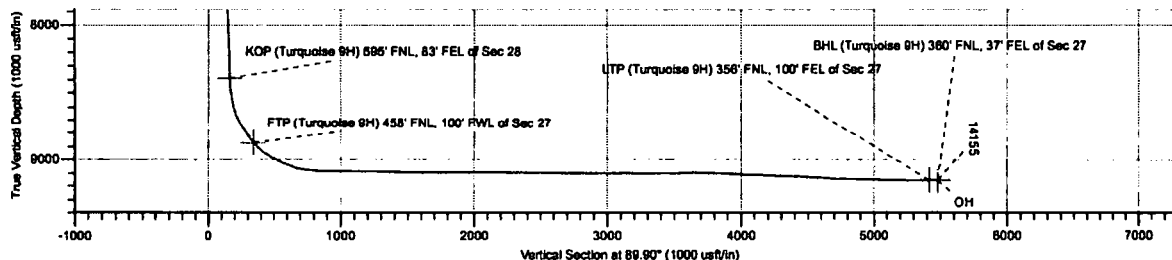
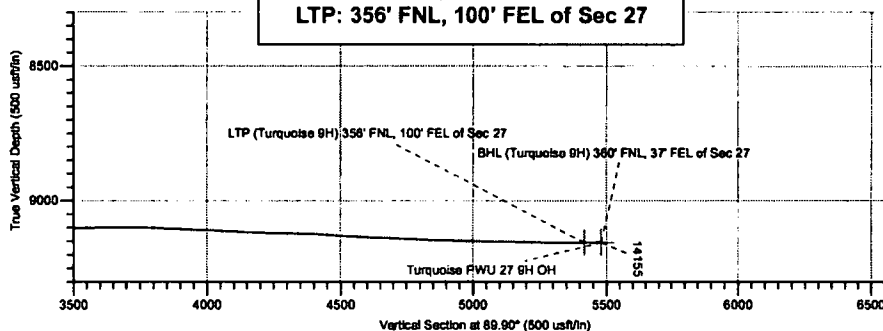
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
Datum: 3344.70' GE + 26' KB @ 3370.70usft



Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL (Turquoise 9H)	9155.20	809.80	5479.27	595929.87	827245.88	32° 38' 16.6193 N	104° 3' 15.3011 W
FTP (Turquoise 9H)	8871.27	534.58	345.22	595854.89	822111.84	32° 38' 16.0035 N	104° 4' 15.3458 W
KOP (Turquoise 9H)	8380.08	365.68	183.41	595715.83	821929.83	32° 38' 14.8333 N	104° 4' 17.4756 W
LTP (Turquoise 9H)	9155.73	612.19	5415.63	595932.16	827182.25	32° 38' 16.6438 N	104° 3' 16.0430 W
SHL (Turquoise 9H)	0.00	0.00	0.00	595319.97	821786.42	32° 38' 10.7221 N	104° 4' 19.3983 W

DESIGN TARGET DETAILS

ACTUAL LINE CALLS
SHL: 992' FNL, 243' FEL of Sec 28
BHL: 360' FNL, 37' FEL of Sec 27
KOP: 595' FNL, 83' FEL of Sec 28
FTP: 458' FNL, 100' FWL of Sec 27
LTP: 356' FNL, 100' FEL of Sec 27



LEAM DRILLING SERVICES
2010 East Davis, Conroe, Texas 77301
Phone: 936/756-7818, Fax: 936/756-7595

Design: OH (Turquoise PWU 27 9H OH)
Created By: Dustin Ault
Date: 10/01, October 03 2018
Approved: _____ Date: _____