

**NM OIL CONSERVATION
ARTESIA DISTRICT**

AUG 03 2018

RECEIVED

Devon Energy

Eddy County, New Mexico (NAD 83)

Lusitano 27-34 FED COM

718H

OH

30.015-44429

Design: OH

Standard Survey Report

01 August, 2018

Survey Report

Company: Devon Energy	Local Co-ordinate Reference: Well 718H
Project: Eddy County, New Mexico (NAD 83)	TVD Reference: GL 3336 + 26' KB @ 3362.00usft (ICD217)
Site: Lusitano 27-34 FED COM	MD Reference: GL 3336 + 26' KB @ 3362.00usft (ICD217)
Well: 718H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: OH	Database: EDM 5000.14 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	Lusitano 27-34 FED COM				
Site Position:		Northing:	403,270.15 usft	Latitude:	32.107364
From:	Map	Easting:	719,382.96 usft	Longitude:	-103.758304
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.31 °

Well	718H					
Well Position	+N-S	0.00 usft	Northing:	403,469.73 usft	Latitude:	32.107913
	+E-W	0.00 usft	Easting:	719,322.99 usft	Longitude:	-103.758495
Position Uncertainty		0.00 usft	Wellhead Elevation:	3,362.00 usft	Ground Level:	3,336.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/8/2017	6.99	59.92	47,809.41887216

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	340.74	

Survey Program	Date	8/1/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
148.00	982.00	Invictus MWD (OH)	MWD	OWSG MWD - Standard	
1,069.00	21,852.00	#2 Legacy MWD (OH)	MWD	OWSG MWD - Standard	

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
148.00	0.60	8.72	148.00	0.77	0.12	0.68	0.41	0.41	0.00
240.00	0.50	30.72	239.99	1.59	0.40	1.37	0.25	-0.11	23.91
334.00	0.60	3.72	333.99	2.43	0.64	2.08	0.29	0.11	-28.72
429.00	0.50	9.72	428.98	3.34	0.74	2.91	0.12	-0.11	6.32
514.00	1.00	355.72	513.98	4.44	0.75	3.95	0.62	0.59	-16.47
617.00	0.70	328.72	616.97	5.88	0.35	5.43	0.48	-0.29	-26.21
805.00	0.70	301.72	804.95	7.46	-1.22	7.45	0.17	0.00	-14.36
982.00	1.00	316.72	981.93	9.15	-3.20	9.70	0.21	0.17	8.47
1,069.00	1.73	319.42	1,068.91	10.70	-4.57	11.61	0.84	0.84	3.10

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1,162.00	2.50	334.33	1,161.84	13.60	-6.37	14.94	1.01	0.83	16.03
1,253.00	3.39	339.81	1,252.72	17.91	-8.15	19.60	1.02	0.98	6.02
1,346.00	3.77	354.82	1,345.54	23.54	-9.38	25.31	1.08	0.41	16.14
1,439.00	4.68	5.66	1,438.29	30.36	-9.28	31.72	1.30	0.98	11.66
1,533.00	4.97	6.93	1,531.96	38.22	-8.41	38.85	0.33	0.31	1.35
1,628.00	4.91	5.88	1,626.61	46.35	-7.50	46.22	0.11	-0.06	-1.11
1,722.00	4.52	5.94	1,720.29	54.03	-6.70	53.22	0.41	-0.41	0.06
1,817.00	4.08	7.30	1,815.02	61.11	-5.89	59.63	0.48	-0.46	1.43
1,912.00	4.56	357.69	1,909.75	68.23	-5.61	66.26	0.91	0.51	-10.12
2,007.00	4.53	355.13	2,004.45	75.74	-6.08	73.51	0.22	-0.03	-2.69
2,102.00	4.25	354.18	2,099.17	82.98	-6.76	80.57	0.30	-0.29	-1.00
2,197.00	4.30	351.34	2,193.91	90.01	-7.65	87.49	0.23	0.05	-2.99
2,292.00	4.71	354.07	2,288.62	97.41	-8.59	94.79	0.49	0.43	2.87
2,387.00	4.61	354.25	2,383.30	105.09	-9.37	102.29	0.11	-0.11	0.19
2,483.00	4.51	354.53	2,479.00	112.68	-10.12	109.71	0.11	-0.10	0.29
2,578.00	5.73	352.01	2,573.62	121.10	-11.13	117.99	1.31	1.28	-2.65
2,673.00	5.56	354.89	2,668.16	130.38	-12.20	127.10	0.35	-0.18	3.03
2,768.00	5.05	358.68	2,762.75	139.14	-12.71	135.54	0.65	-0.54	3.99
2,863.00	4.82	358.78	2,857.40	147.31	-12.89	143.32	0.24	-0.24	0.11
2,958.00	4.51	356.96	2,952.08	155.03	-13.17	150.70	0.36	-0.33	-1.92
3,053.00	4.17	358.46	3,046.81	162.21	-13.47	157.57	0.38	-0.36	1.58
3,148.00	4.22	347.60	3,141.56	169.08	-14.31	164.33	0.84	0.05	-11.43
3,243.00	4.21	344.90	3,236.30	175.86	-15.97	171.28	0.21	-0.01	-2.84
3,338.00	4.78	356.04	3,331.01	183.18	-17.15	178.58	1.09	0.60	11.73
3,433.00	4.80	350.21	3,425.68	191.04	-18.10	186.32	0.51	0.02	-6.14
3,528.00	5.24	351.78	3,520.31	199.25	-19.39	194.49	0.49	0.46	1.65
3,623.00	4.61	350.29	3,614.96	207.31	-20.66	202.52	0.68	-0.66	-1.57
3,719.00	3.21	355.95	3,710.74	213.79	-21.50	208.92	1.51	-1.46	5.90
3,814.00	3.54	352.21	3,805.57	219.35	-22.08	214.36	0.42	0.35	-3.94
3,909.00	2.68	353.22	3,900.43	224.46	-22.74	219.40	0.91	-0.91	1.06
4,004.00	1.16	354.87	3,995.38	227.63	-23.09	222.50	1.60	-1.60	1.74
4,099.00	0.23	56.44	4,090.37	228.69	-23.02	223.48	1.13	-0.98	64.81
4,194.00	0.26	100.06	4,185.37	228.76	-22.65	223.42	0.19	0.03	45.92
4,290.00	0.29	70.15	4,281.37	228.80	-22.21	223.32	0.15	0.03	-31.16
4,385.00	0.39	93.66	4,376.36	228.86	-21.66	223.19	0.18	0.11	24.75
4,480.00	0.46	87.72	4,471.36	228.86	-20.95	222.96	0.09	0.07	-6.25
4,575.00	0.58	85.52	4,566.36	228.91	-20.09	222.72	0.13	0.13	-2.32
4,670.00	0.48	86.63	4,661.35	228.97	-19.22	222.49	0.11	-0.11	1.17
4,765.00	0.38	89.00	4,756.35	229.00	-18.50	222.28	0.11	-0.11	2.49
4,859.00	0.31	52.12	4,850.35	229.16	-17.99	222.27	0.24	-0.07	-39.23
4,955.00	0.18	77.24	4,946.35	229.35	-17.64	222.33	0.17	-0.14	26.17
5,050.00	0.30	66.97	5,041.35	229.48	-17.27	222.33	0.13	0.13	-10.81
5,145.00	0.09	89.28	5,136.35	229.58	-16.96	222.32	0.23	-0.22	23.48

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5,240.00	0.28	56.93	5,231.35	229.71	-16.69	222.36	0.22	0.20	-34.05
5,335.00	0.31	29.38	5,326.35	230.06	-16.37	222.58	0.15	0.03	-29.00
5,431.00	0.20	55.56	5,422.34	230.38	-16.11	222.80	0.16	-0.11	27.27
5,526.00	0.08	306.05	5,517.34	230.51	-16.02	222.89	0.25	-0.13	-115.27
5,622.00	0.09	51.52	5,613.34	230.60	-16.02	222.97	0.14	0.01	109.86
5,716.00	0.19	60.02	5,707.34	230.73	-15.83	223.03	0.11	0.11	9.04
5,811.00	0.22	46.48	5,802.34	230.93	-15.56	223.13	0.06	0.03	-14.25
5,907.00	0.09	303.22	5,898.34	231.10	-15.49	223.27	0.27	-0.14	-107.56
6,002.00	0.21	282.21	5,993.34	231.18	-15.72	223.42	0.14	0.13	-22.12
6,097.00	0.24	316.27	6,088.34	231.36	-16.03	223.69	0.14	0.03	35.85
6,192.00	0.34	276.90	6,183.34	231.53	-16.44	223.99	0.23	0.11	-41.44
6,287.00	0.44	252.50	6,278.34	231.46	-17.07	224.13	0.20	0.11	-25.68
6,382.00	0.42	255.78	6,373.34	231.26	-17.76	224.17	0.03	-0.02	3.45
6,477.00	0.47	206.17	6,468.33	230.83	-18.27	223.93	0.40	0.05	-52.22
6,572.00	0.48	195.34	6,563.33	230.09	-18.54	223.33	0.09	0.01	-11.40
6,667.00	0.42	196.36	6,658.33	229.38	-18.75	222.72	0.06	-0.06	1.07
6,763.00	0.72	176.62	6,754.32	228.44	-18.81	221.85	0.37	0.31	-20.56
6,858.00	0.83	223.01	6,849.31	227.34	-19.24	220.96	0.65	0.12	48.83
6,953.00	0.74	330.29	6,944.31	227.37	-20.02	221.24	1.33	-0.09	112.93
7,048.00	0.81	333.03	7,039.30	228.50	-20.63	222.51	0.08	0.07	2.88
7,143.00	0.52	302.81	7,134.29	229.33	-21.29	223.51	0.47	-0.31	-31.81
7,238.00	0.49	300.63	7,229.29	229.77	-22.01	224.17	0.04	-0.03	-2.29
7,334.00	0.29	270.15	7,325.29	229.98	-22.60	224.56	0.29	-0.21	-31.75
7,429.00	0.40	250.00	7,420.29	229.87	-23.15	224.64	0.17	0.12	-21.21
7,523.00	0.48	224.72	7,514.28	229.48	-23.74	224.46	0.22	0.09	-26.89
7,619.00	0.15	255.69	7,610.28	229.16	-24.14	224.29	0.37	-0.34	32.26
7,715.00	0.25	200.66	7,706.28	228.93	-24.34	224.14	0.21	0.10	-57.32
7,810.00	0.72	10.92	7,801.28	229.32	-24.30	224.50	1.02	0.49	179.22
7,905.00	0.64	21.88	7,896.27	230.40	-23.99	225.42	0.16	-0.08	11.54
8,000.00	0.58	17.80	7,991.27	231.35	-23.64	226.20	0.08	-0.06	-4.29
8,095.00	0.17	4.55	8,086.27	231.95	-23.49	226.71	0.44	-0.43	-13.95
8,185.00	0.26	341.38	8,176.27	232.28	-23.54	227.04	0.14	0.10	-25.74
8,280.00	0.14	355.88	8,271.27	232.60	-23.62	227.37	0.14	-0.13	15.26
8,376.00	0.23	187.95	8,367.26	232.52	-23.65	227.31	0.38	0.09	-174.93
8,471.00	0.68	2.27	8,462.26	232.90	-23.66	227.66	0.96	0.47	183.49
8,566.00	0.40	252.33	8,557.26	233.36	-23.95	228.20	0.95	-0.29	-115.73
8,661.00	1.25	233.60	8,652.25	232.65	-25.10	227.90	0.93	0.89	-19.72
8,756.00	1.08	318.25	8,747.24	232.70	-26.53	228.42	1.66	-0.18	89.11
8,852.00	1.19	307.10	8,843.22	233.97	-27.93	230.09	0.26	0.11	-11.61
8,947.00	0.12	336.40	8,938.21	234.66	-28.75	231.01	1.14	-1.13	30.84
9,042.00	0.46	35.78	9,033.21	235.06	-28.57	231.33	0.43	0.36	62.51
9,137.00	0.38	181.00	9,128.21	235.06	-28.35	231.25	0.84	-0.08	152.86
9,232.00	0.68	210.41	9,223.20	234.25	-28.64	230.59	0.42	0.32	30.96

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9,327.00	1.12	188.48	9,318.19	232.85	-29.07	229.40	0.58	0.46	-23.08
9,422.00	0.52	180.15	9,413.18	231.50	-29.21	228.17	0.64	-0.63	-8.77
9,517.00	1.10	172.72	9,508.18	231.98	-29.18	228.62	1.71	0.61	-187.82
9,612.00	1.67	354.31	9,603.15	234.27	-29.29	230.82	0.63	0.60	-7.80
9,708.00	0.79	279.51	9,699.13	235.77	-30.08	232.49	1.72	-0.92	-77.92
9,802.00	1.57	222.32	9,793.11	234.93	-31.59	232.19	1.41	0.83	-60.84
9,897.00	1.96	201.58	9,888.07	232.45	-33.06	230.35	0.78	0.41	-21.83
9,992.00	1.51	191.60	9,983.03	229.72	-33.91	228.04	0.57	-0.47	-10.51
10,087.00	0.14	196.66	10,078.01	228.38	-34.19	226.87	1.44	-1.44	5.33
10,182.00	0.10	24.44	10,173.01	228.34	-34.19	226.84	0.25	-0.04	-181.28
10,276.00	1.18	250.68	10,267.01	228.10	-35.07	226.90	1.33	1.15	-142.30
10,372.00	2.17	246.71	10,362.96	227.05	-37.68	226.77	1.04	1.03	-4.14
10,467.00	2.04	275.12	10,457.90	226.49	-41.01	227.34	1.10	-0.14	29.91
10,562.00	1.77	333.23	10,552.86	227.95	-43.36	229.49	1.96	-0.28	61.17
10,658.00	4.11	346.23	10,648.73	232.62	-44.84	234.39	2.52	2.44	13.54
10,753.00	2.41	346.78	10,743.57	237.87	-46.11	239.76	1.79	-1.79	0.58
10,848.00	1.43	333.53	10,838.52	240.88	-47.10	242.93	1.13	-1.03	-13.95
10,943.00	1.48	327.12	10,933.48	242.97	-48.29	245.30	0.18	0.05	-6.75
11,038.00	1.23	325.22	11,028.46	244.83	-49.54	247.47	0.27	-0.26	-2.00
11,134.00	1.25	306.63	11,124.44	246.31	-50.97	249.33	0.42	0.02	-19.36
11,229.00	1.07	308.80	11,219.42	247.48	-52.49	250.94	0.20	-0.19	2.28
11,279.00	1.07	311.08	11,269.41	248.08	-53.20	251.74	0.09	0.00	4.56
11,324.00	1.09	287.57	11,314.40	248.48	-53.93	252.36	0.98	0.04	-52.24
KOP 11324'MD / 11314.40'TVD									
11,420.00	4.09	196.43	11,410.31	245.48	-55.77	250.13	4.43	3.13	-94.94
11,515.00	15.57	186.69	11,503.77	229.51	-58.22	235.87	12.17	12.08	-10.25
11,610.00	27.36	182.70	11,592.03	194.92	-60.74	204.04	12.50	12.41	-4.20
11,658.00	33.24	179.99	11,633.45	170.72	-61.26	181.37	12.57	12.25	-5.65
11,705.00	37.87	177.18	11,671.68	143.41	-60.55	155.36	10.44	9.85	-5.98
11,753.00	42.15	176.30	11,708.44	112.61	-58.78	125.70	8.99	8.92	-1.83
11,800.00	43.91	177.68	11,742.79	80.59	-57.11	94.91	4.25	3.74	2.94
11,895.00	50.63	175.27	11,807.22	10.99	-52.74	27.77	7.31	7.07	-2.54
11,990.00	59.73	179.76	11,861.43	-66.82	-49.53	-46.74	10.33	9.58	4.73
12,022.70	61.75	180.25	11,877.41	-95.35	-49.53	-73.66	6.31	6.18	1.49
FTP 12022.70'MD / 11877.41'TVD - FTP - 718H									
12,049.31	63.39	180.63	11,889.67	-118.96	-49.72	-95.90	6.31	6.18	1.44
LP - 718H									
12,121.00	67.83	181.61	11,919.27	-184.23	-51.00	-157.08	6.31	6.19	1.37
12,164.00	73.43	182.15	11,933.52	-224.75	-52.33	-194.90	13.08	13.02	1.26
12,213.00	79.00	180.65	11,945.19	-272.31	-53.49	-239.41	11.75	11.37	-3.06
12,259.00	82.41	177.45	11,952.62	-317.68	-52.73	-282.50	10.10	7.41	-6.96
12,353.00	84.81	176.06	11,963.09	-410.94	-47.44	-372.28	2.95	2.55	-1.48
12,448.00	92.52	179.91	11,965.30	-505.77	-44.11	-462.90	9.07	8.12	4.05
12,541.00	90.81	181.28	11,962.60	-598.72	-45.08	-550.32	2.36	-1.84	1.47

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Local Co-ordinate Reference: Well 718H
TVD Reference: GL 3336 + 26' KB @ 3362.00usft (ICD217)
MD Reference: GL 3336 + 26' KB @ 3362.00usft (ICD217)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14 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)
12,636.00	91.12	180.69	11,961.00	-693.69	-46.71	-639.44	0.70	0.33	-0.62
12,731.00	86.86	179.46	11,962.67	-788.65	-46.83	-729.04	4.67	-4.48	-1.29
12,825.00	86.91	179.80	11,967.78	-882.51	-46.23	-817.85	0.37	0.05	0.36
12,919.00	92.66	180.17	11,968.13	-976.47	-46.20	-906.55	6.13	6.12	0.39
13,014.00	95.42	180.60	11,961.44	-1,071.22	-46.84	-995.79	2.94	2.91	0.45
13,108.00	89.22	178.89	11,957.63	-1,165.10	-46.42	-1,084.55	6.84	-6.60	-1.82
13,202.00	89.19	178.44	11,958.94	-1,259.06	-44.23	-1,173.97	0.48	-0.03	-0.48
13,297.00	91.68	179.88	11,958.22	-1,354.04	-42.84	-1,264.09	3.03	2.62	1.52
13,390.00	90.67	178.70	11,956.31	-1,447.01	-41.68	-1,352.24	1.67	-1.09	-1.27
13,484.00	91.99	177.83	11,954.13	-1,540.94	-38.84	-1,441.84	1.68	1.40	-0.93
13,579.00	91.88	178.55	11,950.92	-1,635.83	-35.84	-1,532.42	0.77	-0.12	0.76
13,673.00	89.83	179.38	11,949.52	-1,729.80	-34.14	-1,621.69	2.35	-2.18	0.88
13,768.00	89.78	181.66	11,949.84	-1,824.79	-35.00	-1,711.07	2.40	-0.05	2.40
13,863.00	91.29	183.29	11,948.95	-1,919.69	-39.11	-1,799.31	2.34	1.59	1.72
13,958.00	90.87	181.89	11,947.16	-2,014.58	-43.40	-1,887.46	1.54	-0.44	-1.47
14,055.00	88.77	182.20	11,947.47	-2,111.51	-46.86	-1,977.82	2.19	-2.16	0.32
14,150.00	87.81	181.03	11,950.30	-2,206.43	-49.54	-2,066.54	1.59	-1.01	-1.23
14,245.00	91.71	178.92	11,950.70	-2,301.40	-49.49	-2,156.22	4.67	4.11	-2.22
14,340.00	91.12	178.16	11,948.36	-2,396.34	-47.07	-2,246.64	1.01	-0.62	-0.80
14,434.00	88.71	176.14	11,948.49	-2,490.21	-42.40	-2,336.80	3.35	-2.56	-2.15
14,528.00	88.09	174.70	11,951.12	-2,583.87	-34.90	-2,427.69	1.67	-0.66	-1.53
14,622.00	91.63	176.57	11,951.35	-2,677.58	-27.75	-2,518.51	4.26	3.77	1.99
14,717.00	93.39	181.13	11,947.19	-2,772.44	-25.84	-2,608.69	5.14	1.85	4.80
14,811.00	90.11	178.60	11,944.32	-2,866.38	-25.62	-2,697.44	4.41	-3.49	-2.69
14,905.00	92.97	182.06	11,941.79	-2,960.32	-26.15	-2,785.94	4.77	3.04	3.68
15,000.00	92.13	180.90	11,937.56	-3,055.19	-28.61	-2,874.69	1.51	-0.88	-1.22
15,094.00	87.25	180.79	11,938.07	-3,149.15	-29.99	-2,962.93	5.19	-5.19	-0.12
15,188.00	91.46	181.37	11,939.13	-3,243.11	-31.76	-3,051.04	4.52	4.48	0.62
15,283.00	92.94	181.70	11,935.48	-3,338.00	-34.31	-3,139.78	1.60	1.56	0.35
15,377.00	92.38	181.80	11,931.12	-3,431.85	-37.17	-3,227.44	0.61	-0.60	0.11
15,471.00	89.22	180.51	11,929.81	-3,525.81	-39.07	-3,315.51	3.63	-3.36	-1.37
15,565.00	88.82	181.32	11,931.42	-3,619.78	-40.57	-3,403.73	0.96	-0.43	0.86
15,660.00	86.86	180.52	11,935.00	-3,714.70	-42.09	-3,492.82	2.23	-2.06	-0.84
15,753.00	88.91	180.10	11,938.43	-3,807.63	-42.59	-3,580.38	2.25	2.20	-0.45
15,847.00	91.37	181.35	11,938.20	-3,901.61	-43.78	-3,668.71	2.94	2.62	1.33
15,942.00	87.81	180.33	11,938.88	-3,996.58	-45.18	-3,757.91	3.90	-3.75	-1.07
16,036.00	91.74	178.15	11,939.25	-4,090.55	-43.93	-3,847.02	4.78	4.18	-2.32
16,130.00	87.65	176.58	11,939.75	-4,184.43	-39.61	-3,937.07	4.66	-4.35	-1.67
16,224.00	88.35	175.87	11,943.03	-4,278.16	-33.42	-4,027.60	1.06	0.74	-0.76
16,317.00	94.49	177.88	11,940.72	-4,370.95	-28.36	-4,116.86	6.95	6.60	2.16
16,412.00	92.49	176.49	11,934.94	-4,465.65	-23.70	-4,207.80	2.56	-2.11	-1.46
16,506.00	89.75	175.75	11,933.10	-4,559.41	-17.34	-4,298.40	3.02	-2.91	-0.79
16,600.00	90.67	178.28	11,932.76	-4,653.27	-12.45	-4,388.62	2.86	0.98	2.69

Survey Report

Company: Devon Energy
 Project: Eddy County, New Mexico (NAD 83)
 Site: Lusitano 27-34 FED COM
 Well: 718H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well 718H
 TVD Reference: GL 3336 + 26' KB @ 3362.00usft (ICD217)
 MD Reference: GL 3336 + 26' KB @ 3362.00usft (ICD217)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14 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)
16,694.00	93.50	181.51	11,929.34	-4,747.19	-12.27	-4,477.34	4.57	3.01	3.44
16,789.00	92.80	180.87	11,924.12	-4,842.02	-14.24	-4,566.21	1.00	-0.74	-0.67
16,883.00	88.29	183.88	11,923.22	-4,935.90	-18.14	-4,653.55	5.77	-4.80	3.20
16,977.00	89.55	190.17	11,925.00	-5,029.13	-29.62	-4,737.77	6.82	1.34	6.69
17,072.00	89.69	193.42	11,925.63	-5,122.11	-49.04	-4,819.14	3.42	0.15	3.42
17,166.00	87.00	184.47	11,928.35	-5,214.82	-63.64	-4,901.85	9.94	-2.86	-9.52
17,260.00	88.74	179.16	11,931.84	-5,308.67	-66.61	-4,989.46	5.94	1.85	-5.65
17,355.00	87.90	177.02	11,934.63	-5,403.57	-63.45	-5,080.09	2.42	-0.88	-2.25
17,449.00	92.86	178.54	11,934.01	-5,497.47	-59.81	-5,169.93	5.52	5.28	1.62
17,453.04	92.87	178.51	11,933.80	-5,501.50	-59.70	-5,173.77	0.71	0.15	-0.69
Inflection Pt 718H									
17,544.00	93.00	177.88	11,929.15	-5,592.30	-56.84	-5,260.43	0.71	0.15	-0.69
17,638.00	90.64	174.34	11,926.16	-5,686.01	-50.47	-5,351.00	4.52	-2.51	-3.77
17,732.00	92.86	176.13	11,923.29	-5,779.63	-42.66	-5,441.95	3.03	2.36	1.90
17,826.00	91.57	177.41	11,919.66	-5,873.41	-37.37	-5,532.23	1.93	-1.37	1.36
17,920.00	92.35	177.52	11,916.45	-5,967.26	-33.22	-5,622.19	0.84	0.83	0.12
18,015.00	87.11	173.95	11,916.89	-6,061.95	-26.16	-5,713.91	6.67	-5.52	-3.76
18,111.00	90.31	176.66	11,919.05	-6,157.58	-18.30	-5,806.78	4.37	3.33	2.82
18,205.00	89.52	177.42	11,919.19	-6,251.46	-13.45	-5,897.00	1.17	-0.84	0.81
18,299.00	88.57	179.39	11,920.76	-6,345.40	-10.83	-5,986.54	2.33	-1.01	2.10
18,393.00	90.87	182.10	11,921.22	-6,439.38	-12.06	-6,074.86	3.78	2.45	2.88
18,488.00	90.31	179.16	11,920.24	-6,534.36	-13.10	-6,164.17	3.15	-0.59	-3.09
18,581.00	95.95	181.04	11,915.17	-6,627.18	-13.26	-6,251.74	6.39	6.06	2.02
18,675.00	90.92	182.17	11,909.53	-6,720.94	-15.89	-6,339.39	5.48	-5.35	1.20
18,769.00	91.29	186.98	11,907.72	-6,814.59	-23.38	-6,425.33	5.13	0.39	5.12
18,864.00	87.79	177.41	11,908.49	-6,909.40	-27.02	-6,513.62	10.72	-3.68	-10.07
18,958.00	91.54	179.05	11,909.03	-7,003.33	-24.11	-6,603.25	4.35	3.99	1.74
19,052.00	92.74	179.94	11,905.52	-7,097.26	-23.29	-6,692.19	1.59	1.28	0.95
19,146.00	91.93	178.72	11,901.69	-7,191.17	-22.19	-6,781.21	1.56	-0.86	-1.30
19,240.00	88.12	178.37	11,901.65	-7,285.12	-19.80	-6,870.69	4.07	-4.05	-0.37
19,334.00	91.23	179.89	11,902.19	-7,379.10	-18.37	-6,959.87	3.68	3.31	1.62
19,429.00	85.80	177.03	11,904.65	-7,473.98	-15.83	-7,050.29	6.46	-5.72	-3.01
19,523.00	91.96	177.16	11,906.49	-7,567.80	-11.07	-7,140.42	6.55	6.55	0.14
19,617.00	88.88	175.88	11,905.80	-7,661.61	-5.36	-7,230.86	3.55	-3.28	-1.36
19,711.00	88.26	178.55	11,908.14	-7,755.46	-0.79	-7,320.97	2.92	-0.66	2.84
19,805.00	87.78	181.96	11,911.39	-7,849.39	-1.21	-7,409.50	3.66	-0.51	3.63
19,899.00	89.78	181.78	11,913.39	-7,943.31	-4.28	-7,497.15	2.14	2.13	-0.19
19,994.00	87.90	181.31	11,915.32	-8,038.26	-6.84	-7,585.93	2.04	-1.98	-0.49
20,088.00	91.96	182.32	11,915.43	-8,132.19	-9.82	-7,673.62	4.45	4.32	1.07
20,182.00	92.41	182.25	11,911.85	-8,226.04	-13.56	-7,760.99	0.48	0.48	-0.07
20,276.00	91.37	181.50	11,908.75	-8,319.94	-16.63	-7,848.61	1.36	-1.11	-0.80
20,371.00	91.06	181.43	11,906.73	-8,414.89	-19.06	-7,937.44	0.33	-0.33	-0.07
20,465.00	94.24	180.81	11,902.39	-8,508.76	-20.90	-8,025.45	3.45	3.38	-0.66
20,559.00	95.03	181.02	11,894.79	-8,602.44	-22.40	-8,113.39	0.87	0.84	0.22

Survey Report

Company: Devon Energy
Project: Eddy County, New Mexico (NAD 83)
Site: Lusitano 27-34 FED COM
Well: 718H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well 718H
TVD Reference: GL 3336 + 26' KB @ 3362.00usft (ICD217)
MD Reference: GL 3336 + 26' KB @ 3362.00usft (ICD217)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14 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)
20,653.00	90.87	177.58	11,889.95	-8,696.27	-21.24	-8,202.35	5.74	-4.43	-3.66
20,747.00	91.56	176.72	11,887.96	-8,790.13	-16.57	-8,292.50	1.17	0.73	-0.91
20,842.00	87.76	177.19	11,888.52	-8,884.98	-11.53	-8,383.70	4.03	-4.00	0.49
20,936.00	90.93	188.22	11,889.60	-8,978.71	-15.96	-8,470.72	12.21	3.37	11.73
21,030.00	89.08	185.19	11,889.59	-9,072.05	-26.93	-8,555.22	3.78	-1.97	-3.22
21,124.00	86.89	180.50	11,892.90	-9,165.85	-31.59	-8,642.22	5.50	-2.33	-4.99
21,218.00	86.16	177.71	11,898.60	-9,259.65	-30.13	-8,731.26	3.06	-0.78	-2.97
21,312.00	86.78	177.69	11,904.39	-9,353.40	-26.36	-8,821.00	0.66	0.66	-0.02
21,406.00	87.28	177.20	11,909.26	-9,447.18	-22.18	-8,910.91	0.74	0.53	-0.52
21,500.00	88.07	177.30	11,913.07	-9,540.99	-17.67	-9,000.95	0.85	0.84	0.11
21,591.00	86.78	175.45	11,917.16	-9,631.71	-11.93	-9,088.49	2.48	-1.42	-2.03
21,688.00	92.02	176.76	11,918.17	-9,728.45	-5.34	-9,181.98	5.57	5.40	1.35
21,783.00	95.22	176.73	11,912.18	-9,823.09	0.04	-9,273.10	3.37	3.37	-0.03
Last Survey 21783'MD / 11912.18'TVD									
21,852.00	95.22	176.73	11,905.90	-9,891.69	3.96	-9,339.16	0.00	0.00	0.00
PTB 21852'MD / 11905.90'TVD - BHL - 718H									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP - 718H	0.00	0.00	11,877.41	-95.35	-49.53	403,374.38	719,273.45	32.107652	-103.758656
- hit/miss target									
- Shape									
- actual wellpath hits target center									
- Point									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,324.00	11,314.40	248.48	-53.93	KOP 11324'MD / 11314.40'TVD
12,022.70	11,877.41	-95.35	-49.53	FTP 12022.70'MD / 11877.41'TVD
21,783.00	11,912.18	-9,823.09	0.04	Last Survey 21783'MD / 11912.18'TVD
21,852.00	11,905.90	-9,891.69	3.96	PTB 21852'MD / 11905.90'TVD

Checked By: _____ Approved By: _____ Date: _____