

30-025 42831



Weatherford

Evaluation, Drilling & Intervention

10000 West County Rd. 116

P.O. Box 61028

Midland, TX USA 79711

Tel. (432) 561-8892 Fax (432) 561-8895

Devon Energy
333 W. Sheridan Ave
Oklahoma City, OK, 73102

Date: December 18, 2015

Attention: Ryan Dzurisin

Re: Devon Energy
Well: North Thistle 2-35 Fed 1H
Lea County, New Mexico

HOBBS OCD

JAN 05 2018

RECEIVED

Enclosed, please find the original survey performed on the referenced well by Precision Energy Services, Inc. (P-5 No. 676004), a Weatherford company. Other information required by your office is as follows:

Name & Title Of Surveyor	Well Number	Surveyed Depths	Dates Performed	Type of Survey
Shane Slater	1H	1246 MD	12/4/2015	Measurement
MWD Supervisor		16265 MD	12/15/2015	While Drilling

A notarized plan vs. actual is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

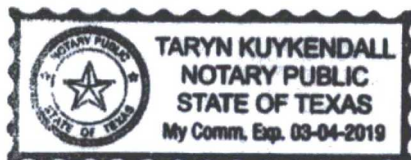
JZ

Jonathan Leger
MWD Ops Coordinator

On this, the 23rd day of August, 2016, before me a notary public, the undersigned officer, personally appeared Jonathan Leger, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Taryn Kuykendall
Notary Public



**5D Survey Report**

Devon Energy

Field Name: *Lea Co, NM Nad 83 NMEZ*
Site Name: *North Thistle 2-35 Fed 1H*
Well Name: *North Thistle 2-35 Fed 1H*
Survey: *Definitive survey*

16 December 2015





North Thistle 2-35 Fed 1H

Field Name:	Map Units: US ft		Company Name: Devon Energy	
Lea Co, NM Nad 83 NMEZ	Vertical Reference Datum (VRD): Mean Sea Level			
	Projected Coordinate System: NAD83 / New Mexico East (ftUS)			
	Comment:			
Site:	Units: US ft	North Reference: Grid	Convergence Angle: 0.42	
	Position:	Northing: 488168.96US ft	Latitude: 32° 20' 22.42"	
		Easting: 785940.52US ft	Longitude: -103° 32' 28.82"	
North Thistle 2-35 Fed 1H	Elevation above MSL: 3515.00 US ft			
	Comment:			
Slot:	Position (Relative to Site Centre)			
	+N/-S: 0.00US ft	Northing: 488168.96US ft	Latitude: 32°20'22.42"	
	+E/-W: 0.00US ft	Easting: 785940.52US ft	Longitude: -103°32'28.82"	
	Slot TVD Reference: Ground Elevation			
	Elevation above MSL: 3515.00US ft			
	Comment:			
Well:	Type: Main well		UWI:	
	File Number:	Comment:		
	Closure Distance: 5557.4US ft	Closure Azimuth: 357.38°		
	Vertical Section: Position of Origin (Relative to Slot centre)			
	+N/-S: 0.00US ft	+E/-W: 0.00US ft	Az: 358.06°	
Drill floor: Survey Name: Definitive Survey				
Rig Height (Kelly Bushing): 23.50us ft		Elevation above MSL: 3538.50us ft	Inclination: 0.00°	Azimuth: 0.00°
Survey Name: Definitive Survey				
Date: 23/Nov/2015	Survey Tool: See Survey Tool Ranges below.		Comment:	Company:
Magnetic Model:				
Model Name: bggm2015	Date: 15/Dec/2015	Field Strength: 48267.5nT	Declination: 7.20°	Dip: 60.25°
Tie Point:				
MD: 0.00 US ft	Inclination: 0.00°	Azimuth: 0.00°	TVD: -0.00 US ft	North Offset: 0.00 US ft East Offset: 0.00 US ft
Survey Tool Ranges:				
Name	Start MD(USFt)	End MD(USFt)	Source Survey	
MWD	0.00	1068.00	Extreme Svys	
MWD	1068.00	16265.00	Wrt MWD Svy	
Wellpath created using minimum curvature.				

SD Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Kelly Bushing)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	VS (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
0.00	0.00	0.00	-0.00	0.00	0.00	0.00	0.00	488168.96	785940.52	
169.00	0.22	359.85	169.00	0.32	-0.00	0.32	0.13	488169.28	785940.52	
329.00	0.31	327.15	329.00	1.00	-0.24	1.00	0.11	488169.96	785940.28	
513.00	0.62	331.13	512.99	2.29	-0.99	2.32	0.17	488171.25	785939.53	
698.00	1.01	331.13	697.97	4.59	-2.26	4.66	0.21	488173.55	785938.26	
882.00	1.32	323.86	881.93	7.72	-4.29	7.86	0.19	488176.68	785936.23	
1068.00	2.29	2.05	1067.85	13.17	-5.42	13.34	0.80	488182.13	785935.10	Tie-on Extreme
1246.00	2.74	14.22	1245.68	20.84	-4.25	20.98	0.39	488189.80	785936.27	First Wft Svy
1430.00	2.50	28.67	1429.48	28.63	-1.24	28.65	0.38	488197.59	785939.28	
1522.00	1.05	45.90	1521.44	30.98	0.32	30.95	1.66	488199.94	785940.84	
1706.00	1.07	58.22	1705.41	33.05	3.00	32.93	0.12	488202.01	785943.52	
1897.00	0.65	25.03	1896.39	34.97	4.97	34.79	0.33	488203.93	785945.49	
2088.00	0.53	49.41	2087.38	36.53	6.10	36.30	0.14	488205.49	785946.62	
2279.00	1.69	25.09	2278.34	39.66	7.96	39.36	0.64	488208.62	785948.48	
2471.00	1.63	20.21	2470.26	44.78	10.11	44.41	0.08	488213.74	785950.63	
2661.00	1.49	12.27	2660.19	49.73	11.57	49.31	0.14	488218.69	785952.09	
2853.00	1.66	29.76	2852.12	54.59	13.48	54.10	0.26	488223.55	785954.00	
3043.00	1.47	40.07	3042.05	58.84	16.41	58.25	0.18	488227.80	785956.93	
3235.00	1.33	38.77	3233.99	62.46	19.39	61.77	0.07	488231.42	785959.91	
3330.00	0.75	0.24	3328.97	63.94	20.09	63.23	0.92	488232.90	785960.61	
3426.00	0.30	13.86	3424.97	64.82	20.15	64.10	0.48	488233.78	785960.67	
3521.00	0.07	314.25	3519.97	65.10	20.17	64.38	0.29	488234.06	785960.69	
3617.00	0.29	166.47	3615.97	64.90	20.18	64.18	0.37	488233.86	785960.70	
3712.00	0.69	166.38	3710.96	64.11	20.37	63.39	0.42	488233.07	785960.89	
3808.00	0.91	203.12	3806.96	62.85	20.21	62.13	0.57	488231.81	785960.73	
3904.00	0.66	202.36	3902.95	61.64	19.70	60.93	0.26	488230.60	785960.22	
3999.00	0.47	154.88	3997.94	60.78	19.66	60.08	0.51	488229.74	785960.18	
4095.00	0.91	123.40	4093.94	60.00	20.46	59.28	0.59	488228.96	785960.98	
4191.00	1.41	107.29	4189.92	59.23	22.23	58.45	0.62	488228.19	785962.75	
4286.00	1.15	82.79	4284.89	59.00	24.29	58.15	0.63	488227.96	785964.81	
4382.00	1.49	59.03	4380.87	59.77	26.31	58.84	0.66	488228.73	785966.83	
4477.00	1.40	46.44	4475.84	61.20	28.21	60.21	0.35	488230.16	785968.73	
4573.00	1.89	28.28	4571.80	63.40	29.81	62.36	0.74	488232.36	785970.33	
4669.00	2.73	18.50	4667.72	66.97	31.29	65.87	0.96	488235.93	785971.81	
4764.00	2.19	348.26	4762.64	70.89	31.64	69.78	1.46	488239.85	785972.16	
4860.00	2.50	331.00	4858.56	74.52	30.25	73.45	0.80	488243.48	785970.77	
4956.00	2.36	324.43	4954.47	77.96	28.08	76.96	0.32	488246.92	785968.60	
5019.00	2.10	328.06	5017.42	79.99	26.72	79.04	0.47	488248.95	785967.24	
5151.00	2.32	324.22	5149.32	84.21	23.88	83.35	0.20	488253.17	785964.40	
5246.00	2.47	321.72	5244.24	87.38	21.48	86.60	0.19	488256.34	785962.00	
5342.00	2.67	327.36	5340.15	90.88	19.00	90.19	0.34	488259.84	785959.52	
5438.00	3.12	323.02	5436.02	94.85	16.22	94.25	0.52	488263.81	785956.74	
5533.00	3.40	307.59	5530.87	98.64	12.43	98.16	0.97	488267.60	785952.95	
5629.00	4.05	298.84	5626.67	102.01	7.21	101.71	0.90	488270.97	785947.73	
5724.00	4.48	292.11	5721.41	105.02	0.83	104.94	0.69	488273.98	785941.35	
5820.00	4.32	279.61	5817.12	107.04	-6.21	107.19	1.01	488276.00	785934.31	
5915.00	4.28	275.14	5911.86	107.95	-13.27	108.34	0.36	488276.91	785927.25	
6011.00	4.36	275.11	6007.58	108.60	-20.47	109.23	0.08	488277.56	785920.05	
6106.00	4.22	273.86	6102.32	109.16	-27.55	110.03	0.18	488278.12	785912.97	
6202.00	4.30	276.33	6198.05	109.79	-34.65	110.90	0.21	488278.75	785905.87	
6297.00	4.33	276.05	6292.78	110.56	-41.76	111.91	0.04	488279.52	785898.76	
6488.00	4.28	277.64	6483.25	112.27	-55.99	114.10	0.07	488281.23	785884.53	
6679.00	4.15	278.93	6673.73	114.29	-69.89	116.59	0.08	488283.25	785870.63	
6870.00	3.95	275.94	6864.25	116.04	-83.26	118.80	0.15	488285.00	785857.26	
7061.00	3.42	275.32	7054.86	117.25	-95.47	120.42	0.28	488286.21	785845.05	
7252.00	3.23	272.04	7245.54	117.97	-106.52	121.51	0.14	488286.93	785834.00	
7443.00	3.14	269.55	7436.24	118.12	-117.13	122.02	0.09	488287.08	785823.39	

SD Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Kelly Bushing)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	VS (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
7634.00	2.51	268.15	7627.01	117.95	-126.54	122.16	0.33	488286.91	785813.98	
7825.00	2.31	259.78	7817.84	117.13	-134.51	121.62	0.21	488286.09	785806.01	
8016.00	1.69	241.73	8008.72	115.11	-140.78	119.81	0.46	488284.07	785799.74	
8207.00	1.61	231.76	8199.64	112.12	-145.37	116.97	0.16	488281.08	785795.15	
8398.00	1.49	229.67	8390.57	108.85	-149.37	113.84	0.07	488277.81	785791.15	
8589.00	1.39	212.35	8581.52	105.28	-152.50	110.39	0.23	488274.24	785788.02	
8780.00	1.19	216.39	8772.47	101.73	-154.92	106.92	0.11	488270.69	785785.60	
8971.00	1.50	219.78	8963.41	98.21	-157.69	103.50	0.17	488267.17	785782.83	
9162.00	1.22	209.88	9154.36	94.53	-160.31	99.90	0.19	488263.49	785780.21	
9353.00	1.27	213.83	9345.31	91.01	-162.50	96.46	0.05	488259.97	785778.02	
9544.00	0.91	215.48	9536.28	88.01	-164.56	93.53	0.19	488256.97	785775.96	
9735.00	1.22	263.21	9727.25	86.54	-167.45	92.16	0.47	488255.50	785773.07	
9927.00	1.57	259.54	9919.19	85.82	-172.07	91.60	0.19	488254.78	785768.45	
10118.00	1.99	273.24	10110.10	85.53	-177.96	91.51	0.31	488254.49	785762.56	
10309.00	1.69	263.98	10301.00	85.42	-184.07	91.61	0.22	488254.38	785756.45	
10460.00	2.24	271.01	10451.91	85.24	-189.23	91.60	0.40	488254.20	785751.29	
10488.00	2.39	270.42	10479.89	85.26	-190.36	91.65	0.54	488254.22	785750.16	
10551.00	5.25	321.16	10542.76	87.51	-193.49	94.01	6.62	488256.47	785747.03	
10583.00	8.89	342.91	10574.52	91.02	-195.13	97.57	13.93	488259.98	785745.39	
10615.00	13.69	350.75	10605.89	97.12	-196.47	103.72	15.71	488266.08	785744.05	
10646.00	18.04	354.09	10635.70	105.52	-197.55	112.15	14.33	488274.48	785742.97	
10678.00	21.33	358.93	10665.83	116.27	-198.17	122.92	11.47	488285.23	785742.35	
10725.00	25.26	0.51	10708.99	134.85	-198.24	141.49	8.47	488303.81	785742.28	
10772.00	30.32	1.54	10750.56	156.76	-197.83	163.36	10.81	488325.72	785742.69	
10820.00	35.78	1.46	10790.77	182.91	-197.15	189.48	11.38	488351.87	785743.37	
10867.00	41.64	1.81	10827.43	212.28	-196.31	218.81	12.48	488381.24	785744.21	
10915.00	46.76	1.25	10861.83	245.72	-195.42	252.20	10.70	488414.68	785745.10	
10962.00	51.94	1.23	10892.44	281.36	-194.65	287.79	11.02	488450.32	785745.87	
11009.00	57.18	1.18	10919.68	319.63	-193.84	326.01	11.15	488488.59	785746.68	
11057.00	61.55	1.59	10944.14	360.91	-192.84	367.23	9.13	488529.87	785747.68	
11104.00	65.42	1.63	10965.12	402.94	-191.66	409.20	8.23	488571.90	785748.86	
11151.00	70.59	1.61	10982.71	446.49	-190.43	452.68	11.00	488615.45	785750.09	
11199.00	76.31	2.48	10996.38	492.45	-188.78	498.56	12.04	488661.41	785751.74	
11246.00	79.24	2.95	11006.33	538.33	-186.61	544.34	6.31	488707.29	785753.91	
11288.00	83.41	1.72	11012.67	579.80	-184.92	585.73	10.34	488748.76	785755.60	
11320.00	87.48	1.63	11015.21	611.68	-183.99	617.56	12.72	488780.64	785756.53	
11415.00	88.60	359.98	11018.46	706.61	-182.65	712.39	2.10	488875.57	785757.87	
11511.00	91.12	357.02	11018.69	802.56	-185.16	808.37	4.05	488971.52	785755.36	
11547.49	91.41	356.48	11017.88	838.98	-187.23	844.84	1.68	489007.94	785753.29	Cross Prod Box
11606.00	91.89	355.60	11016.20	897.33	-191.27	903.29	1.71	489066.29	785749.25	
11702.00	92.66	355.72	11012.39	992.98	-198.53	999.13	0.81	489161.94	785741.99	
11797.00	91.96	355.58	11008.56	1087.63	-205.73	1093.97	0.75	489256.59	785734.79	
11893.00	92.17	354.61	11005.10	1183.21	-213.93	1189.78	1.03	489352.17	785726.59	
11988.00	92.10	355.90	11001.56	1277.82	-221.79	1284.59	1.36	489446.78	785718.73	
12083.00	91.96	357.17	10998.20	1372.58	-227.52	1379.50	1.34	489541.54	785713.00	
12179.00	91.12	358.94	10995.62	1468.49	-230.78	1475.46	2.04	489637.45	785709.74	
12275.00	89.37	359.48	10995.21	1564.47	-232.10	1571.44	1.91	489733.43	785708.42	
12370.00	89.23	359.64	10996.37	1659.46	-232.83	1666.40	0.22	489828.42	785707.69	
12465.00	88.95	2.39	10997.88	1754.43	-231.15	1761.25	2.91	489923.39	785709.37	
12561.00	88.53	2.43	10999.99	1850.32	-227.12	1856.95	0.44	490019.28	785713.40	
12656.00	88.60	2.04	11002.37	1945.22	-223.41	1951.67	0.42	490114.18	785717.11	
12752.00	88.25	1.95	11005.00	2041.12	-220.07	2047.40	0.38	490210.08	785720.45	
12847.00	90.42	0.82	11006.11	2136.08	-217.78	2142.23	2.58	490305.04	785722.74	
12943.00	91.26	0.13	11004.70	2232.07	-216.98	2238.13	1.13	490401.03	785723.54	
13038.00	92.45	358.93	11001.62	2327.01	-217.76	2333.05	1.78	490495.97	785722.76	
13134.00	93.85	358.65	10996.35	2422.84	-219.78	2428.89	1.49	490591.80	785720.74	
13229.00	91.61	0.79	10991.82	2517.72	-220.24	2523.73	3.26	490686.68	785720.28	
13325.00	92.59	0.57	10988.31	2613.65	-219.11	2619.57	1.05	490782.61	785721.41	

5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Kelly Bushing)										Comment
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (%/100US ft)	Northing (US ft)	Easting (US ft)	
13420.00	91.33	359.21	10985.06	2708.59	-219.29	2714.46	1.95	490877.55	785721.23	
13516.00	90.91	358.35	10983.18	2804.55	-221.33	2810.43	1.00	490973.51	785719.19	
13611.00	91.26	357.30	10981.38	2899.46	-224.94	2905.41	1.16	491068.42	785715.58	
13707.00	91.12	358.91	10979.39	2995.38	-228.11	3001.39	1.68	491164.34	785712.41	
13802.00	91.40	358.81	10977.30	3090.34	-230.00	3096.36	0.31	491259.30	785710.52	
13898.00	91.47	358.47	10974.89	3186.28	-232.28	3192.32	0.36	491355.24	785708.24	
13994.00	90.42	359.62	10973.31	3282.26	-233.88	3288.29	1.62	491451.22	785706.64	
14089.00	89.09	359.87	10973.72	3377.25	-234.30	3383.25	1.42	491546.21	785706.22	
14185.00	90.21	359.37	10974.30	3473.25	-234.94	3479.21	1.28	491642.21	785705.58	
14280.00	90.35	0.00	10973.84	3568.24	-235.46	3574.17	0.68	491737.20	785705.06	
14375.00	91.33	358.72	10972.45	3663.22	-236.52	3669.13	1.70	491832.18	785704.00	
14471.00	92.24	357.03	10969.46	3759.11	-240.08	3765.08	2.00	491928.07	785700.44	
14566.00	91.96	357.76	10965.97	3853.94	-244.39	3860.01	0.82	492022.90	785696.13	
14662.00	92.24	358.04	10962.46	3949.81	-247.91	3955.94	0.41	492118.77	785692.61	
14757.00	92.17	358.47	10958.80	4044.70	-250.80	4050.87	0.46	492213.66	785689.72	
14853.00	91.82	358.24	10955.46	4140.60	-253.55	4146.81	0.44	492309.56	785686.97	
14949.00	91.40	358.00	10952.76	4236.51	-256.70	4242.77	0.50	492405.47	785683.82	
15044.00	90.84	358.19	10950.91	4331.44	-259.86	4337.76	0.62	492500.40	785680.66	
15140.00	91.40	358.82	10949.03	4427.39	-262.36	4433.73	0.88	492596.35	785678.16	
15235.00	91.05	1.02	10947.00	4522.36	-262.49	4528.66	2.34	492691.32	785678.03	
15331.00	89.72	1.28	10946.35	4618.34	-260.57	4624.51	1.41	492787.30	785679.95	
15427.00	88.81	2.38	10947.58	4714.28	-257.50	4720.29	1.49	492883.24	785683.02	
15522.00	89.72	1.68	10948.80	4809.21	-254.14	4815.06	1.21	492978.17	785686.38	
15618.00	89.93	1.48	10949.10	4905.17	-251.49	4910.87	0.30	493074.13	785689.03	
15714.00	90.42	1.02	10948.80	5001.15	-249.40	5006.72	0.70	493170.11	785691.12	
15809.00	89.30	2.58	10949.04	5096.10	-246.41	5101.52	2.02	493265.06	785694.11	
15905.00	88.95	1.75	10950.50	5192.02	-242.79	5197.26	0.94	493360.98	785697.73	
16000.00	88.39	359.32	10952.71	5286.98	-241.90	5292.14	2.62	493455.94	785698.62	
16096.00	88.67	357.72	10955.17	5382.91	-244.38	5388.10	1.69	493551.87	785696.14	
16168.44	88.83	356.54	10956.75	5455.24	-248.00	5460.51	1.64	493624.20	785692.52	Cross Prod Box
16190.00	88.88	356.18	10957.18	5476.75	-249.37	5482.06	1.69	493645.71	785691.15	Last Wft Svy
16265.00	88.88	356.18	10958.65	5551.57	-254.37	5557.00	0.00	493720.53	785686.15	Proj to Bit