

HOBBS 0000
JAN 1

Devon

Big Cat 16-9 State Fed Com 215H

Cactus 167

This survey is correct to the best of my knowledge and is supported by actual field data.

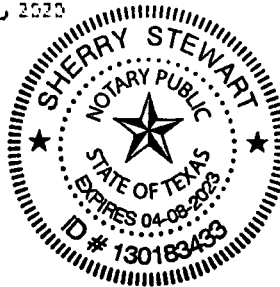
Notarized this data 14th of January 2020

Sherry Stewart

Notary Signature

County of Midland

State of Texas



Scientific Drilling

The

In Wellbore Placement

Devon Energy

**Lea County, NM (NAD83 NME)
Big Cat 16-9 State Fed Com
215H**

OH

Survey: SDI Survey #1

Standard Survey Report

30 May, 2019



www.scientificdrilling.com

Scientific Drilling, Intl

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 215H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 23' @ 3712.00usft (Cactus 167)
Site:	Big Cat 16-9 State Fed Com	MD Reference:	KB = 23' @ 3712.00usft (Cactus 167)
Well:	215H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Project	Lea County, NM (NAD83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone	Using geodetic scale factor	

Site	Big Cat 16-9 State Fed Com				
Site Position:		Northing:	474,852.81 usft	Latitude:	32° 18' 13.417 N
From:	Map	Easting:	744,740.62 usft	Longitude:	103° 40' 29.985 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.35 °

Well	215H					
Well Position	+N/-S	0.00 usft	Northing:	474,842.73 usft	Latitude:	32° 18' 13.376 N
	+E/-W	0.00 usft	Easting:	743,770.94 usft	Longitude:	103° 40' 41.283 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,689.00 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/27/2019	6.77	60.02	47,998

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 (bearing)	
	0.00	0.00	0.00	359.22	

Survey Program	Date 5/30/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
266.00	18,861.00	SDI Survey #1 (OH)	MWD+HDGM	OWSG MWD + HDGM

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	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	
100.00	0.35	2.70	100.00	0.30	0.01	0.30	0.35	0.35	0.00	
200.00	0.69	2.70	200.00	1.21	0.06	1.21	0.35	0.35	0.00	
300.00	0.86	4.16	299.98	2.66	0.13	2.66	0.17	0.17	1.46	
400.00	0.76	8.20	399.97	4.03	0.29	4.02	0.11	-0.10	4.05	
500.00	0.81	11.47	499.97	5.37	0.51	5.36	0.06	0.05	3.27	
600.00	0.78	13.91	599.96	6.76	0.83	6.75	0.04	-0.03	2.45	
700.00	0.67	12.72	699.95	8.00	1.14	7.98	0.11	-0.11	-1.20	
800.00	0.63	17.72	799.94	9.08	1.42	9.06	0.07	-0.04	5.00	
900.00	0.59	16.00	899.94	10.10	1.74	10.08	0.05	-0.04	-1.72	

Scientific Drilling, Intl

Survey Report

Company: Devon Energy
Project: Lea County, NM (NAD83 NME)
Site: Big Cat 16-9 State Fed Com
Well: 215H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well 215H
TVD Reference: KB = 23' @ 3712.00usft (Cactus 167)
MD Reference: KB = 23' @ 3712.00usft (Cactus 167)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.59	16.38	999.93	11.10	2.04	11.07	0.00	0.00	0.38
1,100.00	0.49	357.69	1,099.93	12.02	2.12	11.99	0.20	-0.10	-18.69
1,200.00	0.28	357.90	1,199.92	12.73	2.15	12.70	0.20	-0.20	0.21
1,300.00	0.02	253.87	1,299.92	12.97	2.12	12.94	0.29	-0.26	-104.04
1,400.00	0.11	194.67	1,399.92	12.81	2.07	12.78	0.10	0.09	-59.19
1,500.00	0.27	313.84	1,499.92	12.81	1.92	12.78	0.34	0.15	119.16
1,600.00	0.49	318.25	1,599.92	13.32	1.45	13.30	0.23	0.23	4.41
1,700.00	0.37	321.62	1,699.92	13.91	0.95	13.90	0.12	-0.12	3.37
1,800.00	1.04	217.54	1,799.91	13.39	0.20	13.39	1.19	0.67	-104.08
1,900.00	1.47	219.98	1,899.88	11.63	-1.26	11.65	0.44	0.43	2.45
2,000.00	1.17	212.64	1,999.86	9.80	-2.61	9.84	0.35	-0.30	-7.34
2,100.00	1.03	207.67	2,099.84	8.12	-3.58	8.17	0.17	-0.14	-4.97
2,200.00	0.83	206.16	2,199.83	6.69	-4.28	6.75	0.20	-0.20	-1.51
2,300.00	0.77	206.47	2,299.82	5.46	-4.94	5.53	0.07	-0.07	0.30
2,400.00	0.64	193.00	2,399.81	4.28	-5.38	4.35	0.20	-0.12	-13.46
2,500.00	0.49	190.17	2,499.80	3.33	-5.49	3.40	0.16	-0.16	-2.83
2,600.00	0.39	200.04	2,599.80	2.60	-5.74	2.67	0.12	-0.10	9.87
2,700.00	0.31	190.86	2,699.80	2.03	-5.90	2.11	0.09	-0.08	-9.18
2,800.00	0.38	169.11	2,799.80	1.47	-5.91	1.55	0.15	0.07	-21.75
2,900.00	0.27	148.71	2,899.80	0.86	-5.69	0.93	0.16	-0.11	-20.40
3,000.00	0.17	108.02	2,999.79	0.64	-5.43	0.72	0.18	-0.10	-40.69
3,100.00	0.33	83.91	3,099.79	0.63	-5.04	0.70	0.19	0.16	-24.11
3,200.00	0.44	102.07	3,199.79	0.62	-4.35	0.68	0.16	0.10	18.15
3,300.00	0.50	117.57	3,299.79	0.34	-3.59	0.38	0.14	0.07	15.50
3,400.00	0.62	135.26	3,399.78	-0.25	-2.81	-0.21	0.21	0.12	17.70
3,500.00	1.80	178.31	3,499.76	-2.15	-2.37	-2.12	1.41	1.18	43.05
3,600.00	2.51	179.73	3,599.69	-5.91	-2.27	-5.88	0.71	0.71	1.42
3,700.00	3.41	195.63	3,699.56	-10.93	-3.06	-10.89	1.21	0.90	15.90
3,800.00	4.59	202.54	3,799.31	-17.55	-5.50	-17.48	1.28	1.18	6.91
3,900.00	4.95	201.26	3,898.95	-25.36	-8.64	-25.24	0.38	0.36	-1.28
4,000.00	4.85	199.93	3,998.59	-33.33	-11.62	-33.17	0.15	-0.10	-1.33
4,100.00	4.72	198.70	4,098.23	-41.28	-14.43	-41.08	0.17	-0.13	-1.23
4,200.00	4.62	195.98	4,197.92	-48.88	-16.82	-48.64	0.24	-0.10	-2.72
4,300.00	5.16	194.03	4,297.55	-57.09	-18.97	-56.82	0.56	0.54	-1.95
4,400.00	5.33	194.16	4,397.12	-66.17	-21.23	-65.87	0.18	0.18	0.13
4,500.00	5.45	193.94	4,496.69	-75.07	-23.50	-74.74	0.12	0.12	-0.22
4,600.00	5.14	202.23	4,596.23	-84.26	-26.10	-83.89	0.83	-0.31	8.30
4,700.00	4.52	213.40	4,695.89	-91.54	-30.16	-91.12	1.12	-0.62	11.17
4,800.00	4.17	209.52	4,795.60	-97.82	-34.30	-97.34	0.46	-0.35	-3.88
4,900.00	3.97	200.68	4,895.35	-104.24	-37.29	-103.72	0.66	-0.19	-8.84
5,000.00	3.57	200.87	4,995.13	-110.49	-39.52	-109.94	0.41	-0.41	0.19
5,100.00	3.62	203.32	5,094.94	-116.20	-41.85	-115.62	0.16	0.05	2.45
5,200.00	4.17	202.05	5,194.71	-122.42	-44.48	-121.80	0.56	0.55	-1.27
5,300.00	5.10	201.49	5,294.38	-129.90	-47.46	-129.25	0.93	0.93	-0.56

Scientific Drilling, Intl Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 215H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 23' @ 3712.00usft (Cactus 167)
Site:	Big Cat 16-9 State Fed Com	MD Reference:	KB = 23' @ 3712.00usft (Cactus 167)
Well:	215H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	5.21	200.91	5,393.98	-138.32	-50.72	-137.62	0.12	0.11	-0.59
5,500.00	5.33	199.83	5,493.55	-146.94	-53.92	-146.19	0.16	0.12	-1.08
5,600.00	5.31	198.41	5,593.12	-155.72	-56.94	-154.93	0.13	-0.02	-1.42
5,700.00	5.05	199.44	5,692.71	-164.22	-59.88	-163.39	0.27	-0.26	1.03
5,800.00	5.05	198.08	5,792.33	-172.56	-62.69	-171.70	0.12	0.00	-1.36
5,900.00	5.07	198.37	5,891.94	-180.93	-65.46	-180.03	0.03	0.02	0.29
6,000.00	5.10	198.22	5,991.54	-189.37	-68.23	-188.42	0.03	0.03	-0.15
6,100.00	5.11	199.05	6,091.15	-197.76	-71.05	-196.78	0.07	0.01	0.83
6,200.00	5.26	198.91	6,190.74	-206.29	-74.04	-205.27	0.15	0.15	-0.14
6,300.00	5.28	198.08	6,290.31	-215.09	-76.92	-214.02	0.08	0.02	-0.83
6,400.00	5.22	197.97	6,389.89	-223.74	-79.79	-222.63	0.06	-0.06	-0.11
6,500.00	5.19	198.01	6,489.48	-232.42	-82.55	-231.28	0.03	-0.03	0.04
6,600.00	5.19	197.60	6,589.07	-240.98	-85.36	-239.79	0.04	0.00	-0.41
6,700.00	5.08	196.86	6,688.66	-249.60	-88.01	-248.38	0.13	-0.11	-0.74
6,800.00	4.95	196.21	6,788.28	-257.95	-90.50	-256.70	0.14	-0.13	-0.65
6,900.00	4.89	195.99	6,887.92	-266.20	-92.86	-264.91	0.06	-0.06	-0.21
7,000.00	4.75	196.21	6,987.56	-274.29	-95.20	-272.97	0.15	-0.15	0.22
7,100.00	4.80	196.09	7,087.22	-282.25	-97.51	-280.89	0.05	0.05	-0.12
7,200.00	4.69	196.32	7,186.87	-290.22	-99.82	-288.84	0.11	-0.11	0.23
7,300.00	4.59	196.81	7,286.54	-297.97	-102.12	-296.55	0.11	-0.10	0.49
7,400.00	4.20	196.16	7,386.25	-305.33	-104.31	-303.89	0.39	-0.39	-0.64
7,500.00	3.69	196.46	7,486.01	-311.94	-106.24	-310.47	0.51	-0.51	0.30
7,600.00	3.35	198.48	7,585.82	-317.79	-108.08	-316.29	0.37	-0.35	2.02
7,700.00	3.16	197.81	7,685.66	-323.16	-109.82	-321.64	0.19	-0.19	-0.66
7,800.00	3.01	200.04	7,785.51	-328.34	-111.64	-326.79	0.19	-0.15	2.22
7,900.00	2.23	196.71	7,885.41	-332.64	-113.08	-331.07	0.80	-0.78	-3.33
8,000.00	1.71	192.64	7,985.35	-335.90	-113.94	-334.32	0.53	-0.52	-4.07
8,100.00	1.58	191.47	8,085.31	-338.65	-114.49	-337.06	0.14	-0.13	-1.17
8,200.00	1.65	190.17	8,185.27	-341.43	-115.08	-339.83	0.09	0.08	-1.30
8,300.00	1.56	186.92	8,285.23	-344.27	-115.45	-342.66	0.13	-0.10	-3.25
8,400.00	1.41	188.00	8,385.20	-346.78	-115.80	-345.17	0.15	-0.15	1.08
8,500.00	1.46	189.37	8,485.17	-349.22	-116.15	-347.61	0.06	0.05	1.37
8,600.00	1.56	189.35	8,585.13	-351.82	-116.60	-350.20	0.10	0.10	-0.02
8,700.00	1.52	189.45	8,685.10	-354.51	-117.03	-352.88	0.04	-0.04	0.10
8,800.00	1.27	194.29	8,785.06	-356.93	-117.51	-355.30	0.28	-0.25	4.84
8,900.00	0.31	323.79	8,885.06	-357.94	-117.98	-356.30	1.49	-0.96	129.51
9,000.00	1.93	335.40	8,985.03	-356.17	-118.76	-354.52	1.63	1.62	11.61
9,100.00	1.45	331.91	9,084.98	-353.40	-120.11	-351.73	0.50	-0.48	-3.49
9,200.00	2.27	342.16	9,184.93	-350.37	-121.36	-348.68	0.89	0.82	10.25
9,300.00	2.40	6.27	9,284.85	-346.41	-121.63	-344.72	0.98	0.13	24.11
9,400.00	2.73	356.82	9,384.75	-341.89	-121.48	-340.20	0.53	0.33	-9.45
9,500.00	2.64	337.46	9,484.64	-337.32	-122.54	-335.62	0.91	-0.09	-19.36
9,600.00	2.43	327.61	9,584.54	-333.64	-124.75	-331.91	0.48	-0.21	-9.85

Scientific Drilling, Intl

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 215H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 23' @ 3712.00usft (Cactus 167)
Site:	Big Cat 16-9 State Fed Com	MD Reference:	KB = 23' @ 3712.00usft (Cactus 167)
Well:	215H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,700.00	2.99	355.69	9,684.44	-329.32	-126.29	-327.57	1.42	0.56	28.08
9,800.00	3.84	18.49	9,784.24	-323.23	-125.09	-321.49	1.58	0.85	22.80
9,900.00	3.39	22.39	9,884.04	-317.32	-122.82	-315.62	0.51	-0.44	3.90
10,000.00	4.19	12.34	9,983.87	-311.89	-120.81	-310.21	1.03	0.79	-10.05
10,100.00	12.81	4.51	10,082.97	-299.36	-119.54	-297.71	8.69	8.63	-7.83
10,200.00	25.40	6.20	10,177.04	-266.18	-116.60	-264.57	12.60	12.59	1.69
10,300.00	33.55	3.84	10,263.97	-217.15	-111.91	-215.61	8.23	8.15	-2.36
10,400.00	41.38	359.37	10,343.32	-156.45	-110.75	-154.93	8.29	7.84	-4.47
10,500.00	49.67	359.42	10,413.36	-85.21	-111.70	-83.68	8.29	8.29	0.05
10,600.00	56.84	1.21	10,472.86	-4.93	-111.10	-3.41	7.31	7.17	1.80
10,700.00	59.33	0.06	10,525.37	80.16	-109.63	81.64	2.68	2.49	-1.15
10,800.00	66.54	358.34	10,571.66	168.69	-111.58	170.19	7.38	7.21	-1.72
10,900.00	74.86	359.56	10,604.63	262.99	-113.24	264.51	8.40	8.32	1.23
11,000.00	80.38	359.56	10,625.72	360.70	-113.87	362.22	5.52	5.52	0.00
11,100.00	80.72	359.73	10,641.86	459.39	-114.50	460.91	0.38	0.34	0.17
11,200.00	83.83	359.63	10,655.41	558.46	-115.03	559.97	3.11	3.11	-0.10
11,300.00	89.30	359.02	10,661.14	658.24	-116.41	659.76	5.50	5.47	-0.61
11,400.00	91.49	0.52	10,660.27	758.22	-116.66	759.74	2.65	2.19	1.50
11,500.00	91.78	0.88	10,657.05	858.17	-115.51	859.66	0.46	0.28	0.36
11,600.00	90.34	1.75	10,655.55	958.13	-113.29	959.58	1.68	-1.44	0.87
11,700.00	90.68	2.82	10,654.67	1,058.04	-109.23	1,059.43	1.12	0.34	1.07
11,800.00	90.91	2.80	10,653.19	1,157.88	-103.88	1,159.19	0.23	0.23	-0.02
11,900.00	91.15	2.06	10,651.59	1,257.80	-100.11	1,259.04	0.77	0.24	-0.73
12,000.00	90.99	1.72	10,649.24	1,357.70	-96.31	1,358.88	0.37	-0.16	-0.34
12,100.00	90.40	0.77	10,648.42	1,457.67	-94.46	1,458.82	1.13	-0.59	-0.96
12,200.00	90.73	0.88	10,647.42	1,557.66	-93.14	1,558.78	0.35	0.33	0.12
12,300.00	90.20	1.04	10,646.28	1,657.64	-91.37	1,658.73	0.56	-0.53	0.16
12,400.00	88.91	359.70	10,647.03	1,757.62	-90.27	1,758.69	1.87	-1.29	-1.35
12,500.00	89.42	359.00	10,649.03	1,857.59	-91.84	1,858.67	0.86	0.51	-0.69
12,600.00	90.23	359.39	10,649.19	1,957.58	-93.32	1,958.67	0.91	0.82	0.39
12,700.00	90.26	359.00	10,648.64	2,057.57	-94.53	2,058.66	0.40	0.03	-0.40
12,800.00	90.66	357.81	10,647.93	2,157.53	-97.23	2,158.65	1.25	0.40	-1.18
12,900.00	90.77	357.35	10,646.63	2,257.42	-101.55	2,258.60	0.47	0.10	-0.46
13,000.00	90.70	357.39	10,645.34	2,357.31	-106.17	2,358.54	0.07	-0.06	0.03
13,100.00	90.87	357.36	10,643.98	2,457.20	-110.75	2,458.48	0.17	0.17	-0.03
13,200.00	91.33	358.05	10,642.03	2,557.10	-114.74	2,558.42	0.83	0.46	0.69
13,300.00	91.12	358.25	10,639.92	2,657.02	-117.95	2,658.38	0.30	-0.21	0.20
13,400.00	91.19	358.25	10,637.90	2,756.96	-120.97	2,758.35	0.08	0.08	0.00
13,500.00	91.00	358.55	10,635.78	2,856.88	-124.14	2,858.31	0.35	-0.19	0.29
13,600.00	90.09	0.53	10,635.20	2,956.87	-124.51	2,958.29	2.18	-0.91	1.98
13,700.00	90.90	0.80	10,634.24	3,056.86	-123.61	3,058.26	0.86	0.81	0.27
13,800.00	90.77	1.66	10,632.44	3,156.82	-121.20	3,158.17	0.87	-0.13	0.86
13,900.00	89.70	1.14	10,632.14	3,256.78	-118.48	3,258.09	1.19	-1.07	-0.52

Scientific Drilling, Intl

Survey Report

Company: Devon Energy
 Project: Lea County, NM (NAD83 NME)
 Site: Big Cat 16-9 State Fed Com
 Well: 215H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well 215H
 TVD Reference: KB = 23' @ 3712.00usft (Cactus 167)
 MD Reference: KB = 23' @ 3712.00usft (Cactus 167)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: Midland District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,000.00	89.41	0.54	10,633.13	3,356.76	-117.38	3,358.05	0.67	-0.30	-0.60
14,100.00	89.15	0.45	10,634.16	3,456.75	-116.30	3,458.02	0.27	-0.25	-0.09
14,200.00	89.07	0.02	10,636.00	3,556.74	-115.94	3,557.98	0.44	-0.08	-0.44
14,300.00	89.07	359.85	10,637.43	3,656.72	-116.11	3,657.97	0.17	0.00	-0.17
14,400.00	89.51	359.69	10,638.93	3,756.71	-116.49	3,757.95	0.47	0.44	-0.16
14,500.00	89.18	359.32	10,639.73	3,856.70	-117.31	3,857.94	0.49	-0.32	-0.37
14,600.00	90.53	359.82	10,640.53	3,956.69	-118.30	3,957.94	1.44	1.35	0.50
14,700.00	92.08	0.01	10,638.12	4,056.66	-118.31	4,057.90	1.56	1.55	0.19
14,800.00	91.63	0.90	10,634.61	4,156.59	-117.66	4,157.81	0.99	-0.45	0.89
14,900.00	91.60	1.36	10,631.89	4,256.54	-115.62	4,257.72	0.46	-0.03	0.46
15,000.00	91.35	0.79	10,629.29	4,356.48	-113.67	4,357.63	0.62	-0.25	-0.57
15,100.00	89.30	1.86	10,628.67	4,456.45	-111.42	4,457.55	2.32	-2.06	1.07
15,200.00	88.96	2.54	10,630.24	4,556.36	-107.55	4,557.40	0.76	-0.33	0.68
15,300.00	89.46	2.33	10,631.57	4,656.26	-103.20	4,657.23	0.54	0.50	-0.20
15,400.00	89.29	1.04	10,632.53	4,756.21	-100.22	4,757.13	1.30	-0.17	-1.29
15,500.00	88.55	359.64	10,634.63	4,856.18	-99.73	4,857.09	1.59	-0.74	-1.40
15,600.00	89.31	358.73	10,636.73	4,956.15	-101.12	4,957.06	1.19	0.76	-0.91
15,643.12	89.89	358.36	10,637.03	4,999.25	-102.22	5,000.18	1.60	1.35	-0.85
T1[BC1215H]									
15,700.00	90.66	357.88	10,636.48	5,056.09	-104.20	5,057.04	1.60	1.35	-0.85
15,800.00	90.97	357.47	10,635.05	5,156.00	-108.26	5,157.00	0.51	0.30	-0.41
15,900.00	91.59	357.31	10,632.99	5,255.87	-112.94	5,256.92	0.64	0.62	-0.16
16,000.00	91.85	358.39	10,629.58	5,355.72	-117.11	5,356.82	1.11	0.26	1.08
16,100.00	91.44	359.52	10,626.88	5,455.67	-118.46	5,456.78	1.19	-0.41	1.12
16,200.00	91.25	359.82	10,624.46	5,555.64	-119.14	5,556.75	0.36	-0.19	0.30
16,300.00	91.15	359.79	10,622.46	5,655.62	-119.31	5,656.72	0.10	-0.10	-0.03
16,400.00	91.64	0.14	10,620.16	5,755.60	-119.59	5,756.69	0.60	0.49	0.35
16,500.00	91.97	0.68	10,616.92	5,855.54	-118.83	5,856.61	0.63	0.33	0.54
16,600.00	92.47	1.12	10,613.12	5,955.45	-117.25	5,956.50	0.67	0.50	0.44
16,700.00	90.35	1.21	10,610.19	6,055.38	-115.15	6,056.39	2.12	-2.12	0.09
16,800.00	89.48	1.17	10,610.59	6,155.36	-113.07	6,156.33	0.87	-0.87	-0.04
16,900.00	90.69	0.59	10,610.59	6,255.34	-111.48	6,256.28	1.34	1.20	-0.59
17,000.00	91.18	359.75	10,608.92	6,355.33	-111.18	6,356.25	0.97	0.49	-0.84
17,100.00	91.16	359.38	10,606.89	6,455.30	-111.93	6,456.23	0.37	-0.02	-0.37
17,200.00	91.49	359.03	10,604.56	6,555.27	-113.32	6,556.20	0.48	0.34	-0.35
17,300.00	91.64	358.85	10,601.84	6,655.21	-115.24	6,656.16	0.24	0.15	-0.19
17,400.00	91.88	358.98	10,598.77	6,755.15	-117.02	6,756.11	0.27	0.24	0.13
17,500.00	91.71	358.63	10,595.32	6,855.06	-119.24	6,856.05	0.38	-0.17	-0.34
17,600.00	90.57	359.38	10,593.62	6,955.03	-121.25	6,956.03	1.36	-1.14	0.74
17,700.00	90.54	0.69	10,592.64	7,055.02	-120.92	7,056.01	1.32	-0.03	1.32
17,800.00	90.48	1.02	10,591.75	7,155.00	-119.36	7,155.96	0.34	-0.07	0.33
17,900.00	90.41	0.90	10,590.98	7,254.98	-117.55	7,255.91	0.14	-0.07	-0.12
18,000.00	90.27	0.77	10,590.36	7,354.97	-116.26	7,355.87	0.19	-0.14	-0.13
18,100.00	90.23	0.90	10,590.00	7,454.96	-114.76	7,455.83	0.13	-0.04	0.13

Scientific Drilling, Intl **Survey Report**

Company:	Devon Energy	Local Co-ordinate Reference:	Well 215H
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 23' @ 3712.00usft (Cactus 167)
Site:	Big Cat 16-9 State Fed Com	MD Reference:	KB = 23' @ 3712.00usft (Cactus 167)
Well:	215H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	Midland District

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,144.20	90.27	0.70	10,589.80	7,499.15	-114.14	7,500.01	0.45	0.11	-0.44
T2[BC\215H]									
18,200.00	90.33	0.46	10,589.51	7,554.95	-113.41	7,555.79	0.45	0.11	-0.44
18,300.00	90.39	0.07	10,588.86	7,654.95	-113.06	7,655.78	0.39	0.06	-0.38
18,400.00	90.27	0.04	10,588.24	7,754.94	-113.00	7,755.76	0.12	-0.12	-0.03
18,500.00	90.07	0.22	10,587.93	7,854.94	-112.80	7,855.75	0.27	-0.20	0.18
18,600.00	90.21	0.13	10,587.75	7,954.94	-112.44	7,955.74	0.17	0.14	-0.10
18,700.00	90.20	0.03	10,587.36	8,054.94	-112.31	8,055.72	0.10	0.00	-0.10
18,794.00	90.30	359.92	10,586.96	8,148.94	-112.35	8,149.72	0.15	0.10	-0.11
FINAL MWD Survey (18794.00' MD)									
18,800.00	90.30	359.92	10,586.93	8,154.94	-112.36	8,155.71	0.00	0.00	0.00
BHL[BC\215H]									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
18,794.00	10,586.96	8,148.94	-112.35	FINAL MWD Survey (18794.00' MD)
18,861.00	10,586.61	8,215.94	-112.45	FINAL Proj. to Bit (18861.00' MD)

Checked By: _____ Approved By: _____ Date: _____