

HOBBS OCD

APR 01 2019

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Devon

SURVEY REPORT

Stray Cat 8-5 Fed Com 212Y

Cactus 167

10/01/2018



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

Alfredo Zavala

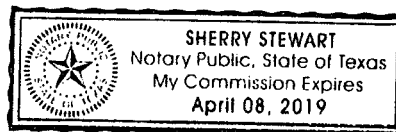
Notarized this date 12th of November, 2018.

Sherry Stewart

Notary Signature

County of Midland

State of Texas



The Ultimate Partner In Wellbore Placement

Devon Energy

Lea County, NM (NAD83 NME)

Stray Cat 8-5 Fed Com

212Y

OH

Survey: SDI Survey #1

Standard Survey Report

01 October, 2018



www.scientificdrilling.com

Scientific Drilling, Intl

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 212Y
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Well:	212Y	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	Stray Cat 8-5 Fed Com				
Site Position:		Northing:	478,343.18 usft	Latitude:	32° 18' 48.389 N
From:	Map	Easting:	737,462.36 usft	Longitude:	103° 41' 54.544 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.34 °

Well	212Y					
Well Position	+N/-S	0.00 usft	Northing:	478,313.18 usft	Latitude:	32° 18' 48.092 N
	+E/-W	0.00 usft	Easting:	737,462.36 usft	Longitude:	103° 41' 54.546 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,599.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/27/2018	6.85	60.07	48,063

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	359.50	

Survey Program	Date	10/1/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
150.00	20,768.00	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
150.00	0.83	171.67	149.99	-1.07	0.16	-1.08	0.55	0.55	0.00
241.00	1.01	171.78	240.98	-2.52	0.37	-2.52	0.20	0.20	0.12
333.00	0.84	179.91	332.97	-4.00	0.48	-4.00	0.23	-0.18	8.84
423.00	1.01	183.40	422.96	-5.45	0.44	-5.45	0.20	0.19	3.88
514.00	0.89	183.15	513.95	-6.96	0.35	-6.96	0.13	-0.13	-0.27
605.00	1.04	183.18	604.93	-8.49	0.27	-8.49	0.16	0.16	0.03
695.00	1.02	177.60	694.92	-10.10	0.26	-10.10	0.11	-0.02	-6.20
785.00	1.07	186.38	784.90	-11.74	0.20	-11.74	0.19	0.06	9.76
878.00	0.88	179.14	877.89	-13.31	0.11	-13.31	0.24	-0.20	-7.78

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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)
969.00	0.74	174.31	968.88	-14.60	0.18	-14.60	0.17	-0.15	-5.31
1,146.00	0.59	138.87	1,145.87	-16.42	0.89	-16.43	0.24	-0.08	-20.02
1,237.00	0.67	158.73	1,236.87	-17.27	1.39	-17.28	0.25	0.09	21.82
1,329.00	0.57	168.31	1,328.86	-18.22	1.68	-18.23	0.16	-0.11	10.41
1,420.00	0.71	174.95	1,419.85	-19.22	1.82	-19.24	0.17	0.15	7.30
1,511.00	0.48	179.87	1,510.85	-20.17	1.87	-20.18	0.26	-0.25	5.41
1,602.00	0.75	163.37	1,601.84	-21.12	2.04	-21.14	0.35	0.30	-18.13
1,694.00	0.60	172.74	1,693.84	-22.17	2.28	-22.19	0.20	-0.16	10.18
1,788.00	0.34	147.25	1,787.83	-22.90	2.49	-22.92	0.35	-0.28	-27.12
1,884.00	0.20	157.43	1,883.83	-23.29	2.71	-23.31	0.15	-0.15	10.60
1,979.00	0.54	141.62	1,978.83	-23.80	3.05	-23.82	0.37	0.36	-16.64
2,074.00	0.51	140.66	2,073.83	-24.47	3.60	-24.50	0.03	-0.03	-1.01
2,169.00	0.33	103.67	2,168.82	-24.86	4.13	-24.90	0.33	-0.19	-38.94
2,265.00	0.33	112.11	2,264.82	-25.03	4.65	-25.07	0.05	0.00	8.79
2,360.00	0.44	124.20	2,359.82	-25.34	5.21	-25.39	0.14	0.12	12.73
2,455.00	0.70	125.88	2,454.82	-25.89	5.98	-25.94	0.27	0.27	1.77
2,551.00	0.66	141.47	2,550.81	-26.66	6.80	-26.72	0.20	-0.04	16.24
2,645.00	0.50	143.03	2,644.80	-27.41	7.39	-27.48	0.17	-0.17	1.66
2,741.00	0.59	128.94	2,740.80	-28.06	8.02	-28.13	0.17	0.09	-14.68
2,837.00	0.68	271.48	2,836.80	-28.36	7.84	-28.42	1.25	0.09	148.48
2,932.00	1.14	281.49	2,931.79	-28.15	6.35	-28.21	0.51	0.48	10.54
3,028.00	1.12	286.48	3,027.77	-27.70	4.51	-27.73	0.10	-0.02	5.20
3,123.00	1.10	289.20	3,122.75	-27.13	2.76	-27.16	0.06	-0.02	2.86
3,218.00	1.04	275.58	3,217.73	-26.75	1.04	-26.76	0.27	-0.06	-14.34
3,313.00	0.86	263.31	3,312.72	-26.75	-0.53	-26.74	0.28	-0.19	-12.92
3,408.00	1.18	270.77	3,407.70	-26.82	-2.21	-26.80	0.36	0.34	7.85
3,504.00	1.14	269.35	3,503.69	-26.82	-4.16	-26.78	0.05	-0.04	-1.48
3,599.00	0.89	258.92	3,598.67	-26.97	-5.82	-26.92	0.33	-0.26	-10.98
3,695.00	0.81	258.54	3,694.66	-27.25	-7.22	-27.18	0.08	-0.08	-0.40
3,790.00	0.30	290.51	3,789.66	-27.29	-8.11	-27.22	0.61	-0.54	33.65
3,885.00	0.54	162.67	3,884.65	-27.63	-8.21	-27.56	0.80	0.25	-134.57
3,981.00	0.59	155.45	3,980.65	-28.51	-7.87	-28.45	0.09	0.05	-7.52
4,077.00	2.01	115.55	4,076.62	-29.69	-6.15	-29.64	1.67	1.48	-41.56
4,172.00	2.45	117.09	4,171.55	-31.33	-2.84	-31.31	0.47	0.46	1.62
4,268.00	2.83	126.95	4,267.45	-33.69	0.88	-33.70	0.62	0.40	10.27
4,363.00	2.89	124.38	4,362.33	-36.45	4.74	-36.49	0.15	0.06	-2.71
4,458.00	3.30	134.97	4,457.19	-39.74	8.65	-39.81	0.74	0.43	11.15
4,554.00	3.60	149.30	4,553.02	-44.28	12.14	-44.39	0.95	0.31	14.93
4,650.00	5.01	151.74	4,648.75	-50.57	15.66	-50.70	1.48	1.47	2.54
4,745.00	6.08	152.35	4,743.30	-58.68	19.96	-58.85	1.13	1.13	0.64
4,840.00	5.61	151.95	4,837.81	-67.23	24.48	-67.44	0.50	-0.49	-0.42
4,935.00	5.06	149.64	4,932.40	-74.95	28.78	-75.19	0.62	-0.58	-2.43
5,031.00	4.94	152.43	5,028.03	-82.26	32.83	-82.55	0.28	-0.13	2.91
5,126.00	4.82	150.49	5,122.69	-89.36	36.69	-89.68	0.21	-0.13	-2.04

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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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)
5,222.00	5.33	149.71	5,218.31	-96.72	40.93	-97.08	0.54	0.53	-0.81
5,317.00	6.37	154.80	5,312.81	-105.30	45.40	-105.69	1.22	1.09	5.36
5,413.00	6.90	152.25	5,408.17	-115.22	50.35	-115.66	0.63	0.55	-2.66
5,507.00	6.48	157.63	5,501.53	-125.13	55.00	-125.60	0.80	-0.45	5.72
5,603.00	5.61	164.62	5,597.00	-134.66	58.31	-135.16	1.19	-0.91	7.28
5,698.00	5.66	167.07	5,691.54	-143.70	60.59	-144.23	0.26	0.05	2.58
5,794.00	5.52	164.27	5,787.08	-152.76	62.90	-153.30	0.32	-0.15	-2.92
5,889.00	5.44	163.33	5,881.65	-161.47	65.43	-162.04	0.13	-0.08	-0.99
5,984.00	5.37	162.69	5,976.23	-170.03	68.04	-170.62	0.10	-0.07	-0.67
6,080.00	5.08	161.81	6,071.83	-178.36	70.70	-178.97	0.31	-0.30	-0.92
6,175.00	4.80	163.42	6,166.47	-186.16	73.15	-186.79	0.33	-0.29	1.69
6,270.00	5.39	162.80	6,261.10	-194.23	75.61	-194.89	0.62	0.62	-0.65
6,366.00	6.00	156.28	6,356.63	-203.14	78.96	-203.82	0.93	0.64	-6.79
6,461.00	5.89	153.97	6,451.11	-212.06	83.09	-212.78	0.28	-0.12	-2.43
6,556.00	6.32	158.90	6,545.58	-221.32	87.12	-222.07	0.71	0.45	5.19
6,652.00	6.64	161.34	6,640.96	-231.51	90.79	-232.29	0.44	0.33	2.54
6,747.00	6.62	163.98	6,735.33	-241.98	94.06	-242.79	0.32	-0.02	2.78
6,843.00	6.25	163.72	6,830.72	-252.31	97.05	-253.15	0.39	-0.39	-0.27
6,938.00	6.24	164.01	6,925.16	-262.24	99.93	-263.10	0.03	-0.01	0.31
7,034.00	6.31	163.91	7,020.58	-272.32	102.83	-273.21	0.07	0.07	-0.10
7,129.00	6.08	162.32	7,115.03	-282.13	105.80	-283.04	0.30	-0.24	-1.67
7,225.00	6.04	162.69	7,210.49	-291.80	108.85	-292.74	0.06	-0.04	0.39
7,320.00	5.58	163.60	7,305.00	-301.00	111.64	-301.96	0.49	-0.48	0.96
7,415.00	5.60	165.31	7,399.55	-309.91	114.12	-310.90	0.18	0.02	1.80
7,511.00	5.71	165.75	7,495.09	-319.07	116.48	-320.08	0.12	0.11	0.46
7,605.00	5.50	162.53	7,588.64	-327.90	118.98	-328.93	0.40	-0.22	-3.43
7,700.00	5.90	164.78	7,683.17	-336.96	121.63	-338.01	0.48	0.42	2.37
7,795.00	5.45	162.83	7,777.70	-345.98	124.25	-347.05	0.52	-0.47	-2.05
7,890.00	5.55	165.41	7,872.26	-354.73	126.74	-355.83	0.28	0.11	2.72
7,986.00	6.11	167.57	7,967.77	-364.22	129.00	-365.33	0.63	0.58	2.25
8,081.00	6.13	168.42	8,062.23	-374.12	131.11	-375.25	0.10	0.02	0.89
8,177.00	6.29	165.17	8,157.66	-384.23	133.49	-385.38	0.40	0.17	-3.39
8,273.00	6.16	165.76	8,253.10	-394.30	136.10	-395.48	0.15	-0.14	0.61
8,368.00	5.67	165.56	8,347.59	-403.79	138.52	-404.98	0.52	-0.52	-0.21
8,463.00	6.04	168.17	8,442.09	-413.23	140.72	-414.44	0.48	0.39	2.75
8,558.00	5.96	172.36	8,536.57	-423.01	142.40	-424.23	0.47	-0.08	4.41
8,654.00	5.59	177.04	8,632.09	-432.62	143.30	-433.85	0.62	-0.39	4.88
8,689.00	5.23	178.44	8,666.93	-435.91	143.43	-437.15	1.10	-1.03	4.00
8,848.00	4.96	178.21	8,825.30	-450.03	143.85	-451.27	0.17	-0.17	-0.14
8,944.00	5.60	170.57	8,920.90	-458.80	144.74	-460.04	0.99	0.67	-7.96
9,038.00	5.67	170.95	9,014.44	-467.91	146.22	-469.16	0.08	0.07	0.40
9,134.00	4.67	161.37	9,110.05	-476.29	148.22	-477.57	1.37	-1.04	-9.98
9,229.00	3.09	155.77	9,204.83	-482.29	150.51	-483.59	1.71	-1.66	-5.89

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9,325.00	2.81	170.26	9,300.71	-486.97	151.97	-488.28	0.83	-0.29	15.09
9,419.00	3.05	183.64	9,394.58	-491.74	152.20	-493.05	0.77	0.26	14.23
9,515.00	3.01	204.36	9,490.45	-496.58	150.99	-497.88	1.14	-0.04	21.58
9,610.00	2.90	225.31	9,585.33	-500.55	148.26	-501.82	1.14	-0.12	22.05
9,706.00	2.42	211.48	9,681.23	-503.98	145.47	-505.23	0.83	-0.50	-14.41
9,801.00	1.15	180.68	9,776.18	-506.65	144.41	-507.89	1.63	-1.34	-32.42
9,873.00	0.65	171.81	9,848.17	-507.77	144.46	-509.01	0.72	-0.69	-12.32
9,991.00	5.47	7.80	9,966.01	-502.86	145.32	-504.11	5.17	4.08	-138.99
10,086.00	17.20	1.29	10,059.00	-484.26	146.26	-485.52	12.40	12.35	-6.85
10,131.00	22.04	359.20	10,101.37	-469.16	146.29	-470.42	10.87	10.76	-4.64
10,182.00	28.08	357.76	10,147.55	-447.58	145.69	-448.83	11.90	11.84	-2.82
10,227.00	33.52	356.55	10,186.19	-424.58	144.52	-425.82	12.17	12.09	-2.69
10,277.00	38.67	358.53	10,226.58	-395.16	143.29	-396.39	10.56	10.30	3.96
10,322.00	38.88	2.79	10,261.67	-366.99	143.62	-368.23	5.95	0.47	9.47
10,366.69	41.26	4.10	10,295.86	-338.28	145.36	-339.54	5.66	5.33	2.94
FTP[SCI212Y]									
10,373.00	41.60	4.28	10,300.60	-334.12	145.66	-335.37	5.66	5.35	2.78
10,418.00	45.26	4.10	10,333.27	-303.27	147.92	-304.55	8.14	8.13	-0.40
10,467.00	49.44	3.89	10,366.46	-267.32	150.43	-268.63	8.54	8.53	-0.43
10,512.00	51.87	4.00	10,394.99	-232.61	152.82	-233.93	5.40	5.40	0.24
10,562.00	55.40	4.55	10,424.63	-192.46	155.83	-193.82	7.12	7.06	1.10
10,607.00	59.46	1.82	10,448.85	-154.61	157.91	-155.98	10.37	9.02	-6.07
10,658.00	65.50	1.73	10,472.41	-109.43	159.31	-110.81	11.84	11.84	-0.18
10,703.00	72.37	1.05	10,488.57	-67.47	160.32	-68.87	15.33	15.27	-1.51
10,753.00	78.34	0.17	10,501.21	-19.12	160.83	-20.52	12.06	11.94	-1.76
10,809.00	85.84	358.78	10,508.91	36.30	160.32	34.90	13.62	13.39	-2.48
10,899.00	87.82	358.65	10,513.89	126.14	158.30	124.75	2.20	2.20	-0.14
10,990.00	87.11	0.23	10,517.91	217.04	157.42	215.66	1.90	-0.78	1.74
11,081.00	88.86	0.01	10,521.11	307.98	157.61	306.59	1.94	1.92	-0.24
11,173.00	91.41	0.38	10,520.90	399.97	157.92	398.58	2.80	2.77	0.40
11,264.00	90.81	1.00	10,519.13	490.95	159.02	489.54	0.95	-0.66	0.68
11,355.00	92.11	2.06	10,516.81	581.88	161.44	580.45	1.84	1.43	1.16
11,446.00	92.08	2.87	10,513.49	672.74	165.35	671.27	0.89	-0.03	0.89
11,542.00	91.01	3.54	10,510.90	768.55	170.72	767.03	1.31	-1.11	0.70
11,637.00	90.91	2.23	10,509.31	863.41	175.50	861.85	1.38	-0.11	-1.38
11,733.00	91.08	0.07	10,507.64	959.38	177.43	957.79	2.26	0.18	-2.25
11,828.00	91.38	358.25	10,505.60	1,054.34	176.04	1,052.76	1.94	0.32	-1.92
11,924.00	91.18	357.30	10,503.46	1,150.24	172.31	1,148.69	1.01	-0.21	-0.99
12,019.00	90.91	357.48	10,501.72	1,245.13	167.98	1,243.61	0.34	-0.28	0.19
12,115.00	90.47	356.79	10,500.57	1,341.00	163.19	1,339.52	0.85	-0.46	-0.72
12,210.00	90.67	357.31	10,499.62	1,435.87	158.30	1,434.43	0.59	0.21	0.55
12,306.00	91.18	357.93	10,498.07	1,531.77	154.31	1,530.37	0.84	0.53	0.65
12,401.00	91.28	358.66	10,496.03	1,626.71	151.48	1,625.32	0.78	0.11	0.77
12,496.00	91.41	358.93	10,493.80	1,721.66	149.49	1,720.29	0.32	0.14	0.28

Scientific Drilling, Intl

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 212Y
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Well:	212Y	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)
12,591.00	91.44	359.40	10,491.44	1,816.62	148.10	1,815.26	0.50	0.03	0.49
12,687.00	90.61	359.56	10,489.72	1,912.60	147.23	1,911.24	0.88	-0.86	0.17
12,781.00	90.27	359.97	10,489.00	2,006.60	146.85	2,005.24	0.57	-0.36	0.44
12,877.00	89.63	0.38	10,489.08	2,102.60	147.14	2,101.23	0.79	-0.67	0.43
12,971.00	89.26	0.88	10,490.00	2,196.59	148.17	2,195.21	0.66	-0.39	0.53
13,065.00	88.25	359.41	10,492.04	2,290.56	148.41	2,289.18	1.90	-1.07	-1.56
13,161.00	88.62	359.95	10,494.66	2,386.52	147.88	2,385.14	0.68	0.39	0.56
13,256.00	88.59	359.56	10,496.97	2,481.49	147.47	2,480.11	0.41	-0.03	-0.41
13,350.00	89.06	0.00	10,498.90	2,575.47	147.11	2,574.09	0.68	0.50	0.47
13,445.00	89.16	359.73	10,500.38	2,670.46	146.88	2,669.08	0.30	0.11	-0.28
13,540.00	89.80	0.39	10,501.24	2,765.45	146.98	2,764.07	0.97	0.67	0.69
13,636.00	90.44	0.38	10,501.04	2,861.45	147.63	2,860.05	0.67	0.67	-0.01
13,731.00	91.01	0.65	10,499.83	2,956.44	148.48	2,955.03	0.66	0.60	0.28
13,826.00	91.68	1.45	10,497.60	3,051.40	150.22	3,049.97	1.10	0.71	0.84
13,922.00	91.45	1.36	10,494.98	3,147.33	152.58	3,145.88	0.26	-0.24	-0.09
14,017.00	91.11	0.99	10,492.86	3,242.29	154.52	3,240.82	0.53	-0.36	-0.39
14,112.00	90.84	0.17	10,491.24	3,337.27	155.49	3,335.78	0.91	-0.28	-0.86
14,206.00	90.94	358.82	10,489.78	3,431.25	154.66	3,429.77	1.44	0.11	-1.44
14,302.00	91.14	358.23	10,488.04	3,527.20	152.19	3,525.74	0.65	0.21	-0.61
14,396.00	91.81	358.48	10,485.62	3,621.13	149.49	3,619.69	0.76	0.71	0.27
14,491.00	91.58	358.48	10,482.81	3,716.06	146.97	3,714.63	0.24	-0.24	0.00
14,586.00	90.13	358.11	10,481.39	3,811.00	144.14	3,809.60	1.58	-1.53	-0.39
14,681.00	89.19	357.71	10,481.96	3,905.94	140.68	3,904.56	1.08	-0.99	-0.42
14,776.00	89.73	358.38	10,482.85	4,000.87	137.44	3,999.52	0.91	0.57	0.71
14,871.00	89.60	358.60	10,483.41	4,095.84	134.94	4,094.51	0.27	-0.14	0.23
14,967.00	90.23	358.75	10,483.55	4,191.81	132.72	4,190.50	0.67	0.66	0.16
15,061.00	91.11	359.49	10,482.45	4,285.79	131.27	4,284.49	1.22	0.94	0.79
15,156.00	90.20	358.78	10,481.37	4,380.78	129.84	4,379.48	1.21	-0.96	-0.75
15,251.00	89.60	359.11	10,481.53	4,475.76	128.09	4,474.47	0.72	-0.63	0.35
15,346.00	90.27	359.73	10,481.64	4,570.75	127.13	4,569.47	0.96	0.71	0.65
15,442.00	91.01	0.03	10,480.57	4,666.75	126.93	4,665.46	0.83	0.77	0.31
15,536.00	90.13	359.73	10,479.63	4,760.74	126.73	4,759.45	0.99	-0.94	-0.32
15,631.00	89.70	359.83	10,479.77	4,855.74	126.36	4,854.45	0.46	-0.45	0.11
15,726.00	90.00	359.95	10,480.02	4,950.74	126.18	4,949.45	0.34	0.32	0.13
15,822.00	90.64	0.27	10,479.49	5,046.74	126.37	5,045.44	0.75	0.67	0.33
15,917.00	91.11	0.27	10,478.04	5,141.72	126.81	5,140.42	0.49	0.49	0.00
16,013.00	89.06	0.22	10,477.89	5,237.72	127.22	5,236.41	2.14	-2.14	-0.05
16,109.00	88.82	0.50	10,479.67	5,333.70	127.83	5,332.38	0.38	-0.25	0.29
16,204.00	89.40	0.57	10,481.14	5,428.68	128.71	5,427.35	0.61	0.61	0.07
16,298.00	89.43	0.29	10,482.10	5,522.68	129.42	5,521.34	0.30	0.03	-0.30
16,394.00	89.87	0.01	10,482.69	5,618.67	129.67	5,617.33	0.54	0.46	-0.29
16,489.00	89.90	359.84	10,482.88	5,713.67	129.55	5,712.33	0.18	0.03	-0.18
16,584.00	89.66	358.70	10,483.25	5,808.66	128.34	5,807.32	1.23	-0.25	-1.20

Scientific Drilling, Intl

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 212Y
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Well:	212Y	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)
16,679.00	90.00	359.35	10,483.53	5,903.65	126.72	5,902.32	0.77	0.36	0.68
16,775.00	90.20	0.23	10,483.36	5,999.65	126.37	5,998.32	0.94	0.21	0.92
16,869.00	90.54	359.96	10,482.75	6,093.64	126.52	6,092.31	0.46	0.36	-0.29
16,964.00	90.54	0.37	10,481.86	6,188.64	126.80	6,187.30	0.43	0.00	0.43
17,058.00	90.20	0.04	10,481.25	6,282.64	127.13	6,281.29	0.50	-0.36	-0.35
17,153.00	90.44	359.45	10,480.72	6,377.63	126.71	6,376.29	0.67	0.25	-0.62
17,249.00	89.09	358.11	10,481.11	6,473.61	124.67	6,472.27	1.98	-1.41	-1.40
17,345.00	88.89	357.16	10,482.81	6,569.51	120.71	6,568.21	1.01	-0.21	-0.99
17,440.00	88.89	356.99	10,484.65	6,664.37	115.86	6,663.10	0.18	0.00	-0.18
17,536.00	89.39	357.30	10,486.09	6,760.24	111.08	6,759.01	0.61	0.52	0.32
17,631.00	89.26	356.51	10,487.21	6,855.09	105.95	6,853.91	0.84	-0.14	-0.83
17,726.00	89.83	356.07	10,487.96	6,949.89	99.80	6,948.75	0.76	0.60	-0.46
17,822.00	90.20	356.06	10,487.94	7,045.66	93.21	7,044.58	0.39	0.39	-0.01
17,917.00	90.23	355.73	10,487.58	7,140.42	86.41	7,139.39	0.35	0.03	-0.35
18,013.00	90.54	355.56	10,486.93	7,236.14	79.12	7,235.17	0.37	0.32	-0.18
18,108.00	89.76	356.08	10,486.69	7,330.88	72.20	7,329.97	0.99	-0.82	0.55
18,204.00	89.63	357.80	10,487.20	7,426.74	67.08	7,425.87	1.80	-0.14	1.79
18,299.00	89.93	358.14	10,487.56	7,521.68	63.71	7,520.84	0.48	0.32	0.36
18,394.00	89.83	357.58	10,487.76	7,616.61	60.16	7,615.80	0.60	-0.11	-0.59
18,490.00	89.97	357.52	10,487.93	7,712.53	56.06	7,711.74	0.16	0.15	-0.06
18,584.00	90.34	357.68	10,487.67	7,806.44	52.12	7,805.69	0.43	0.39	0.17
18,679.00	90.44	357.13	10,487.03	7,901.34	47.82	7,900.63	0.59	0.11	-0.58
18,774.00	90.81	359.68	10,485.99	7,996.29	45.18	7,995.59	2.71	0.39	2.68
18,869.00	90.98	0.41	10,484.51	8,091.28	45.25	8,090.58	0.79	0.18	0.77
18,965.00	91.04	0.40	10,482.81	8,187.26	45.93	8,186.55	0.06	0.06	-0.01
19,060.00	90.30	1.11	10,481.70	8,282.25	47.18	8,281.52	1.08	-0.78	0.75
19,155.00	89.33	2.31	10,482.01	8,377.20	50.02	8,376.45	1.62	-1.02	1.26
19,251.00	87.99	1.73	10,484.26	8,473.11	53.40	8,472.32	1.52	-1.40	-0.60
19,347.00	88.59	1.43	10,487.12	8,569.03	56.05	8,568.22	0.70	0.63	-0.31
19,442.00	89.09	1.33	10,489.04	8,663.99	58.33	8,663.15	0.54	0.53	-0.11
19,538.00	89.16	1.32	10,490.51	8,759.95	60.55	8,759.09	0.07	0.07	-0.01
19,633.00	89.33	0.66	10,491.76	8,854.93	62.19	8,854.05	0.72	0.18	-0.69
19,728.00	89.19	0.98	10,492.99	8,949.91	63.55	8,949.01	0.37	-0.15	0.34
19,823.00	88.82	0.27	10,494.64	9,044.89	64.59	9,043.98	0.84	-0.39	-0.75
19,919.00	88.79	359.98	10,496.64	9,140.87	64.80	9,139.95	0.30	-0.03	-0.30
20,014.00	89.43	359.71	10,498.12	9,235.85	64.54	9,234.94	0.73	0.67	-0.28
20,109.00	91.04	359.59	10,497.73	9,330.85	63.96	9,329.94	1.70	1.69	-0.13
20,204.00	90.91	359.01	10,496.11	9,425.83	62.80	9,424.92	0.63	-0.14	-0.61
20,300.00	91.18	358.80	10,494.36	9,521.79	60.97	9,520.90	0.36	0.28	-0.22
20,395.00	90.67	358.61	10,492.82	9,616.76	58.82	9,615.88	0.57	-0.54	-0.20
20,468.63	91.16	358.27	10,491.65	9,690.34	56.82	9,689.48	0.81	0.67	-0.46
BHL[SC1212Y]									
20,491.00	91.31	358.17	10,491.17	9,712.70	56.12	9,711.84	0.81	0.67	-0.46

Scientific Drilling, Intl

Survey Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 212Y
Project:	Lea County, NM (NAD83 NME)	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Well:	212Y	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)
20,586.00	91.44	357.99	10,488.89	9,807.62	52.94	9,806.79	0.23	0.14	-0.19
20,679.30	92.13	358.12	10,485.98	9,900.82	49.77	9,900.01	0.75	0.74	0.14
LTP(SC212Y)									
20,682.00	92.15	358.12	10,485.88	9,903.52	49.69	9,902.71	0.75	0.74	0.14
20,703.00	92.42	358.18	10,485.04	9,924.49	49.01	9,923.69	1.32	1.29	0.29
FINAL MWD Survey (20703.00' MD)									
20,768.00	92.42	358.18	10,482.30	9,989.40	46.95	9,988.61	0.00	0.00	0.00
FINAL Proj. to Bit (20768.00' MD)									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
20,703.00	10,485.04	9,924.49	49.01	FINAL MWD Survey (20703.00' MD)
20,768.00	10,482.30	9,989.40	46.95	FINAL Proj. to Bit (20768.00' MD)

Checked By: _____	Approved By: _____	Date: _____
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