



HOBBS OCD

APR 15 2019

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Stray Cat 8-5 Fed Com No. 214H

Lea County, NM

September 20, 2018

Job No. LNM5184418

Survey Completion Report



PRODIRECTIONAL

Survey Certification Letter

September 19, 2018



HOBBS OCD

APR 15 2019

RECEIVED

Operator Name: Devon Energy Corp.
Well Name: Stray Cat 8-5 Fed Com No. 214H
County/Parish: Lea County,
State: NM
Rig Name: Cactus 126
Job Number: LNM5184418

This is to certify the surveys performed on the referenced well by Professional Directional Ent., Inc. are true and correct MWD Surveys, data provided as follows:

<u>Surveyor</u>	<u>Surveyed Depths</u>	<u>Projection to Bit</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
ProDirectional	184' MD – 20,744' MD	20,801' MD	08/18/18 – 09/12/18	MWD

Sincerely,

Mike Coats

Mike Coats
Regulatory Specialist
Professional Directional

850 Conroe Park West Drive | Conroe, TX 77303 | Phone: 936.441.7266

prodirectional.com

The Standard of Excellence in Directional Supervision



Devon Energy Corp.

Lea County, NM
Stray Cat 8-5 Fed Com
No. 214H
OH

Survey: ProDirectional

Survey Report

19 September, 2018

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ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Stray Cat 8-5 Fed Com
Well: 214H
Wellbore: OH
Design: Surveys

Local Co-ordinate Reference: Well 214H
TVD Reference: GL 3622.4'+KB 25.5' @ 3647.90usft
MD Reference: GL 3622.4'+KB 25.5' @ 3647.90usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Project Lea County, NM (NAD83)

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

Site Stray Cat 8-5 Fed Com

Site Position:		Northing:	478,367.39 usft	Latitude:	32.313472
From:	Map	Easting:	739,685.65 usft	Longitude:	-103.691288
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.34 "

Well 214H

Well Position	+N/-S	0.00 usft	Northing:	478,367.39 usft	Latitude:	32.313472
	+E/-W	0.00 usft	Easting:	739,685.65 usft	Longitude:	-103.691288
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,622.40 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	7/31/2018	6.85	60.07	48,071.90

Design Surveys

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	359.62

Survey Program Date 9/13/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
184.00	20,801.00	Survey #1 (OH)	MWD+HDGM	OWSG MWD + HDGM



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0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	478,367.39	739,685.65
184.00	0.30	136.60	184.00	-0.35	-0.35	0.33	0.48	136.60	478,367.04	739,685.98
Pro MWD First Survey: 184' MD										
246.00	0.30	139.50	246.00	-0.59	-0.59	0.55	0.81	137.18	478,366.80	739,686.20
338.00	0.40	131.30	338.00	-0.99	-0.99	0.95	1.37	136.21	478,366.40	739,686.60
430.00	0.50	138.30	429.99	-1.51	-1.50	1.45	2.09	135.86	478,365.89	739,687.10
523.00	0.50	133.30	522.99	-2.09	-2.08	2.02	2.90	135.84	478,365.31	739,687.67
615.00	0.50	127.90	614.99	-2.62	-2.60	2.63	3.70	134.71	478,364.79	739,688.28
708.00	0.60	125.80	707.98	-3.16	-3.14	3.34	4.58	133.16	478,364.25	739,688.99
800.00	0.60	125.50	799.98	-3.72	-3.70	4.13	5.54	131.86	478,363.69	739,689.78
891.00	0.60	124.50	890.97	-4.28	-4.24	4.91	6.49	130.85	478,363.15	739,690.56
983.00	0.50	120.70	982.97	-4.76	-4.72	5.65	7.36	129.89	478,362.67	739,691.30
1,163.00	0.30	91.80	1,162.96	-5.18	-5.14	6.80	8.52	127.09	478,362.25	739,692.45
1,255.00	0.40	161.20	1,254.96	-5.50	-5.45	7.14	8.98	127.35	478,361.94	739,692.79
1,346.00	1.20	183.30	1,345.95	-6.75	-6.70	7.19	9.83	132.99	478,360.69	739,692.84
1,438.00	2.60	186.90	1,437.90	-9.78	-9.73	6.88	11.92	144.74	478,357.66	739,692.53
1,530.00	3.20	190.00	1,529.78	-14.38	-14.33	6.18	15.61	156.66	478,353.06	739,691.83
1,621.00	3.60	188.40	1,620.62	-19.70	-19.66	5.33	20.37	164.84	478,347.73	739,690.98
1,715.00	3.60	179.70	1,714.44	-25.56	-25.53	4.91	26.00	169.11	478,341.86	739,690.56
1,809.00	4.10	167.80	1,808.23	-31.81	-31.77	5.64	32.26	169.94	478,335.62	739,691.29
1,903.00	4.30	167.80	1,901.97	-38.54	-38.50	7.09	39.14	169.56	478,328.89	739,692.74
1,997.00	4.10	166.80	1,995.72	-45.27	-45.21	8.60	46.02	169.23	478,322.18	739,694.25
2,091.00	4.00	167.10	2,089.49	-51.75	-51.68	10.10	52.66	168.94	478,315.71	739,695.75
2,185.00	4.30	165.80	2,183.24	-58.37	-58.29	11.70	59.46	168.65	478,309.10	739,697.35
2,279.00	4.60	164.70	2,276.96	-65.43	-65.35	13.56	66.74	168.28	478,302.04	739,699.21
2,373.00	4.40	163.70	2,370.67	-72.54	-72.44	15.56	74.09	167.87	478,294.95	739,701.21
2,467.00	4.30	163.00	2,464.40	-79.39	-79.27	17.61	81.20	167.48	478,288.12	739,703.26



ProDirectional
Survey Report



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Wellbore: OH
Design: Surveys

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Database: WellPlanner1

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2,561.00	4.20	162.00	2,558.14	-86.05	-85.92	19.70	88.15	167.09	478,281.47	739,705.35
2,655.00	4.40	165.20	2,651.87	-92.82	-92.68	21.69	95.18	166.83	478,274.71	739,707.34
2,749.00	4.40	167.80	2,745.60	-99.84	-99.69	23.37	102.39	166.81	478,267.70	739,709.02
2,843.00	4.20	170.40	2,839.33	-106.77	-106.61	24.70	109.43	166.95	478,260.78	739,710.35
2,937.00	4.40	169.10	2,933.07	-113.71	-113.54	25.86	116.47	167.12	478,253.85	739,711.61
3,031.00	4.30	170.10	3,026.80	-120.73	-120.55	27.25	123.59	167.26	478,246.84	739,712.90
3,125.00	4.30	171.20	3,120.53	-127.69	-127.51	28.39	130.63	167.45	478,239.88	739,714.04
3,219.00	4.40	169.90	3,214.26	-134.73	-134.54	29.56	137.75	167.61	478,232.85	739,715.21
3,313.00	4.70	162.60	3,307.96	-141.97	-141.76	31.35	145.19	167.53	478,225.63	739,717.00
3,407.00	4.40	154.80	3,401.67	-148.92	-148.70	34.04	152.55	167.11	478,218.69	739,719.69
3,501.00	4.60	158.40	3,495.38	-155.71	-155.47	36.96	159.80	166.63	478,211.92	739,722.61
3,595.00	5.10	166.50	3,589.04	-163.29	-163.04	39.32	167.71	166.44	478,204.35	739,724.97
3,689.00	5.10	167.40	3,682.67	-171.45	-171.18	41.21	176.07	166.46	478,196.21	739,726.86
3,783.00	4.80	166.10	3,776.32	-179.35	-179.07	43.06	184.18	166.48	478,188.32	739,728.71
3,877.00	4.90	160.60	3,869.99	-186.97	-186.68	45.34	192.10	166.35	478,180.71	739,730.99
3,971.00	5.20	155.10	3,963.62	-194.64	-194.33	48.47	200.28	165.99	478,173.06	739,734.12
4,065.00	5.30	160.50	4,057.23	-202.62	-202.28	51.71	208.79	165.66	478,165.11	739,737.36
4,159.00	4.90	168.80	4,150.86	-210.67	-210.31	53.94	217.12	165.61	478,157.08	739,739.59
4,253.00	5.10	166.60	4,244.50	-218.68	-218.32	55.69	225.31	165.69	478,149.07	739,741.34
4,347.00	5.30	162.00	4,338.11	-226.89	-226.51	58.00	233.82	165.64	478,140.88	739,743.65
4,441.00	5.20	163.60	4,431.72	-235.12	-234.72	60.54	242.41	165.54	478,132.67	739,746.19
4,536.00	4.20	167.70	4,526.40	-242.66	-242.25	62.50	250.19	165.53	478,125.14	739,748.15
4,630.00	3.90	169.40	4,620.16	-249.18	-248.76	63.82	256.81	165.61	478,118.63	739,749.47
4,724.00	3.50	168.00	4,713.97	-255.13	-254.71	65.01	262.87	165.68	478,112.68	739,750.66
4,818.00	3.50	172.20	4,807.79	-260.79	-260.36	65.99	268.59	165.78	478,107.03	739,751.64
4,912.00	3.50	174.40	4,901.62	-266.49	-266.05	66.66	274.28	165.93	478,101.34	739,752.31
5,007.00	3.30	173.10	4,996.45	-272.10	-271.66	67.27	279.86	166.09	478,095.73	739,752.92



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Survey Report



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Wellbore: OH
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5,101.00	3.70	171.40	5,090.27	-277.79	-277.34	68.05	285.57	166.21	478,090.05	739,753.70
5,195.00	4.60	173.80	5,184.03	-284.54	-284.08	68.91	292.32	166.36	478,083.30	739,754.56
5,289.00	4.90	174.60	5,277.70	-292.29	-291.83	69.70	300.04	166.57	478,075.56	739,755.35
5,384.00	4.80	172.40	5,372.36	-300.27	-299.81	70.60	308.01	166.75	478,067.58	739,756.25
5,478.00	4.60	171.90	5,466.05	-307.91	-307.44	71.66	315.68	166.88	478,059.95	739,757.31
5,572.00	4.80	165.30	5,559.73	-315.45	-314.98	73.18	323.37	166.92	478,052.41	739,758.83
5,666.00	4.70	162.90	5,653.41	-322.95	-322.46	75.31	331.14	166.85	478,044.93	739,760.96
5,759.00	4.60	161.90	5,746.10	-330.15	-329.65	77.59	338.66	166.75	478,037.74	739,763.24
5,854.00	4.60	166.00	5,840.80	-337.49	-336.96	79.70	346.26	166.69	478,030.43	739,765.35
5,948.00	4.60	167.50	5,934.49	-344.83	-344.30	81.43	353.80	166.69	478,023.09	739,767.08
6,042.00	4.40	166.70	6,028.20	-352.03	-351.49	83.07	361.17	166.70	478,015.90	739,768.72
6,136.00	4.50	169.00	6,121.92	-359.17	-358.62	84.61	368.46	166.73	478,008.77	739,770.26
6,230.00	4.40	170.20	6,215.64	-366.35	-365.79	85.92	375.75	166.78	478,001.60	739,771.57
6,324.00	4.20	169.20	6,309.37	-373.30	-372.73	87.18	382.79	166.84	477,994.66	739,772.83
6,418.00	4.60	167.40	6,403.10	-380.37	-379.79	88.65	390.00	166.86	477,987.60	739,774.30
6,512.00	4.60	168.90	6,496.79	-387.75	-387.16	90.20	397.53	166.89	477,980.23	739,775.85
6,606.00	4.50	168.10	6,590.50	-395.07	-394.47	91.68	404.99	166.92	477,972.92	739,777.33
6,700.00	4.30	167.70	6,684.22	-402.13	-401.52	93.19	412.20	166.93	477,965.87	739,778.84
6,794.00	4.60	166.30	6,777.94	-409.25	-408.63	94.84	419.49	166.93	477,958.76	739,780.49
6,888.00	4.80	166.50	6,871.62	-416.75	-416.11	96.65	427.19	166.92	477,951.28	739,782.30
6,982.00	4.60	167.80	6,965.30	-424.27	-423.62	98.36	434.89	166.93	477,943.77	739,784.01
7,076.00	4.40	168.80	7,059.01	-431.50	-430.84	99.86	442.27	166.95	477,936.55	739,785.51
7,170.00	4.80	168.80	7,152.71	-438.90	-438.24	101.32	449.80	166.98	477,929.15	739,786.97
7,264.00	5.10	169.50	7,246.36	-446.88	-446.21	102.85	457.91	167.02	477,921.18	739,788.50
7,358.00	4.90	169.40	7,340.00	-454.94	-454.26	104.35	466.09	167.06	477,913.13	739,790.00
7,451.00	4.50	169.70	7,432.69	-462.44	-461.75	105.73	473.70	167.10	477,905.64	739,791.38
7,545.00	3.90	170.60	7,526.44	-469.23	-468.54	106.91	480.58	167.15	477,898.85	739,792.56



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7,639.00	3.60	167.80	7,620.24	-475.28	-474.57	108.06	486.72	167.17	477,892.82	739,793.71
7,733.00	3.60	167.50	7,714.05	-481.05	-480.34	109.32	492.62	167.18	477,887.05	739,794.97
7,827.00	3.30	168.80	7,807.88	-486.60	-485.87	110.49	498.28	167.19	477,881.52	739,796.14
7,921.00	3.00	171.10	7,901.74	-491.69	-490.96	111.39	503.44	167.22	477,876.43	739,797.04
8,014.00	2.70	168.90	7,994.62	-498.25	-495.51	112.19	508.05	167.24	477,871.88	739,797.84
8,109.00	2.50	166.50	8,089.52	-500.46	-499.72	113.10	512.36	167.25	477,867.67	739,798.75
8,202.00	2.30	165.10	8,182.44	-504.24	-503.50	114.06	516.26	167.24	477,863.89	739,799.71
8,297.00	2.30	166.60	8,277.37	-507.95	-507.19	114.99	520.07	167.23	477,860.20	739,800.64
8,391.00	2.40	169.00	8,371.29	-511.72	-510.96	115.80	523.92	167.23	477,856.43	739,801.45
8,485.00	2.50	172.30	8,465.20	-515.69	-514.93	116.45	527.93	167.26	477,852.46	739,802.10
8,579.00	2.50	173.40	8,559.11	-519.76	-518.99	116.96	532.01	167.30	477,848.40	739,802.61
8,614.00	2.50	174.80	8,594.08	-521.28	-520.51	117.12	533.53	167.32	477,846.88	739,802.77
8,670.00	2.20	167.30	8,650.03	-523.54	-522.78	117.47	535.81	167.34	477,844.61	739,803.12
8,764.00	1.90	162.00	8,743.97	-526.79	-526.02	118.35	539.17	167.32	477,841.37	739,804.00
8,858.00	1.50	161.00	8,837.93	-529.44	-528.66	119.23	541.94	167.29	477,838.73	739,804.88
8,952.00	1.40	181.70	8,931.90	-531.76	-530.98	119.59	544.28	167.31	477,836.41	739,805.24
9,046.00	1.10	176.80	9,025.88	-533.81	-533.02	119.61	546.28	167.35	477,834.37	739,805.26
9,140.00	1.00	151.20	9,119.86	-535.43	-534.64	120.06	547.96	167.34	477,832.75	739,805.71
9,234.00	1.30	135.10	9,213.84	-536.91	-536.12	121.20	549.65	167.26	477,831.27	739,806.85
9,328.00	1.80	132.50	9,307.81	-538.67	-537.87	123.04	551.77	167.11	477,829.52	739,808.69
9,423.00	1.60	144.10	9,402.77	-540.77	-539.95	124.92	554.22	166.97	477,827.44	739,810.57
9,516.00	1.60	150.60	9,495.73	-542.96	-542.14	126.32	556.66	166.88	477,825.25	739,811.97
9,610.00	1.50	167.10	9,589.70	-545.31	-544.48	127.24	559.15	166.85	477,822.91	739,812.89
9,704.00	0.40	248.90	9,683.69	-546.63	-545.80	127.21	560.42	166.88	477,821.59	739,812.86
9,799.00	0.60	292.60	9,778.68	-546.55	-545.72	126.44	560.18	166.96	477,821.67	739,812.09
9,892.00	0.50	299.30	9,871.68	-546.16	-545.34	125.64	559.62	167.03	477,822.05	739,811.29



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Wellbore: OH
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Database: WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
9,986.00	0.80	345.30	9,965.67	-545.32	-544.50	125.11	558.69	167.06	477,822.89	739,810.76
KOP: 9986' MD / 52' FSL & 841' FEL										
10,080.00	13.30	10.00	10,058.78	-534.00	-533.17	126.83	548.05	166.62	477,834.22	739,812.48
10,174.00	25.30	11.30	10,147.34	-503.59	-502.72	132.66	519.93	165.22	477,864.67	739,818.31
10,268.00	31.00	11.20	10,230.18	-460.17	-459.24	141.31	480.49	162.90	477,908.15	739,826.96
10,362.00	35.40	7.00	10,308.83	-409.42	-408.44	149.33	434.88	159.92	477,958.95	739,834.98
10,456.00	44.60	2.40	10,380.78	-349.32	-348.30	154.05	380.85	156.14	478,019.09	739,839.70
10,550.00	53.60	359.70	10,442.27	-278.37	-277.35	155.23	317.83	150.76	478,090.04	739,840.88
10,564.00	54.89	359.42	10,450.45	-267.01	-265.99	155.14	307.93	149.75	478,101.40	739,840.79
FTP: 10564' MD / 330' FSL & 810' FEL										
10,644.00	62.30	358.00	10,492.10	-198.79	-197.77	153.58	250.40	142.17	478,169.62	739,839.23
10,738.00	74.40	356.50	10,526.72	-111.66	-110.67	149.35	185.88	126.54	478,256.72	739,835.00
10,832.00	85.00	356.00	10,543.50	-19.47	-18.52	143.30	144.49	97.36	478,348.87	739,828.95
10,886.00	91.70	359.10	10,545.06	34.44	35.37	141.00	145.37	75.92	478,402.76	739,826.65
10,978.00	92.20	359.60	10,541.93	126.38	127.32	139.95	189.20	47.71	478,494.71	739,825.60
11,070.00	91.20	359.90	10,539.20	218.34	219.27	139.55	259.91	32.47	478,586.66	739,825.20
11,162.00	90.20	359.50	10,538.07	310.33	311.26	139.07	340.92	24.07	478,678.65	739,824.72
11,255.00	90.10	359.80	10,537.83	403.33	404.26	138.50	427.33	18.91	478,771.65	739,824.15
11,348.00	89.10	359.50	10,538.48	496.33	497.26	137.93	516.03	15.50	478,864.65	739,823.58
11,440.00	88.90	359.80	10,540.09	588.32	589.24	137.37	605.04	13.12	478,956.63	739,823.02
11,531.00	88.80	358.70	10,541.91	679.29	680.21	136.18	693.71	11.32	479,047.60	739,821.83
11,623.00	89.00	358.90	10,543.68	771.27	772.17	134.25	783.76	9.86	479,139.56	739,819.90
11,716.00	90.40	358.00	10,544.17	864.24	865.14	131.74	875.11	8.66	479,232.53	739,817.39
11,808.00	90.90	358.20	10,543.12	956.20	957.08	128.69	965.69	7.66	479,324.47	739,814.34
11,899.00	90.90	358.40	10,541.69	1,047.17	1,048.03	125.99	1,055.57	6.85	479,415.42	739,811.64
11,991.00	90.50	358.80	10,540.57	1,139.15	1,139.99	123.74	1,146.69	6.20	479,507.38	739,809.39
12,084.00	90.00	358.60	10,540.16	1,232.13	1,232.97	121.63	1,238.95	5.63	479,600.36	739,807.28



ProDirectional Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Stray Cat 8-5 Fed Com
Well: 214H
Wellbore: OH
Design: Surveys

Local Co-ordinate Reference: Well 214H
TVD Reference: GL 3622.4'+KB 25.5' @ 3647.90usft
MD Reference: GL 3622.4'+KB 25.5' @ 3647.90usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
12,175.00	90.70	359.00	10,539.61	1,323.12	1,323.95	119.73	1,329.35	5.17	479,691.34	739,805.38
12,270.00	91.70	0.20	10,537.62	1,418.10	1,418.92	119.06	1,423.91	4.80	479,786.31	739,804.71
12,364.00	90.60	0.20	10,535.73	1,512.07	1,512.90	119.39	1,517.60	4.51	479,880.29	739,805.04
12,458.00	89.70	358.70	10,535.48	1,606.07	1,606.89	118.49	1,611.25	4.22	479,974.28	739,804.14
12,552.00	90.80	359.20	10,535.07	1,700.06	1,700.87	116.77	1,704.88	3.93	480,068.26	739,802.42
12,646.00	89.40	359.20	10,534.91	1,794.06	1,794.86	115.45	1,798.57	3.68	480,162.25	739,801.10
12,740.00	90.30	359.70	10,535.16	1,888.05	1,888.85	114.55	1,892.32	3.47	480,256.24	739,800.20
12,834.00	90.90	359.40	10,534.17	1,982.05	1,982.85	113.81	1,986.11	3.29	480,350.24	739,799.46
12,928.00	91.70	359.50	10,532.04	2,076.02	2,076.82	112.91	2,079.88	3.11	480,444.21	739,798.56
13,022.00	90.20	359.70	10,530.48	2,170.01	2,170.80	112.26	2,173.70	2.96	480,538.19	739,797.91
13,116.00	90.70	0.00	10,529.74	2,264.00	2,264.80	112.01	2,267.56	2.83	480,632.19	739,797.66
13,211.00	89.00	359.80	10,529.99	2,359.00	2,359.79	111.84	2,362.44	2.71	480,727.18	739,797.49
13,304.00	89.10	0.20	10,531.53	2,451.98	2,452.78	111.84	2,455.33	2.61	480,820.17	739,797.49
13,399.00	89.40	0.90	10,532.78	2,546.96	2,547.76	112.76	2,550.26	2.53	480,915.15	739,798.41
13,493.00	89.20	1.10	10,533.93	2,640.93	2,641.74	114.40	2,644.22	2.48	481,009.13	739,800.05
13,586.00	89.40	1.60	10,535.06	2,733.88	2,734.71	116.59	2,737.19	2.44	481,102.10	739,802.24
13,680.00	91.00	0.10	10,534.73	2,827.85	2,828.69	117.98	2,831.15	2.39	481,196.08	739,803.63
13,774.00	91.20	358.90	10,532.93	2,921.83	2,922.67	117.16	2,925.02	2.30	481,290.06	739,802.81
13,869.00	92.00	359.10	10,530.28	3,016.79	3,017.62	115.50	3,019.83	2.19	481,385.01	739,801.15
13,963.00	90.60	359.00	10,528.14	3,110.76	3,111.58	113.95	3,113.66	2.10	481,478.97	739,799.60
14,057.00	89.80	358.40	10,527.82	3,204.74	3,205.55	111.81	3,207.50	2.00	481,572.94	739,797.46
14,151.00	90.30	358.70	10,527.73	3,298.72	3,299.52	109.43	3,301.34	1.90	481,666.91	739,795.08
14,245.00	91.30	359.50	10,526.42	3,392.71	3,393.50	107.96	3,395.22	1.82	481,760.89	739,793.61
14,339.00	89.80	359.30	10,525.52	3,486.70	3,487.49	106.97	3,489.13	1.76	481,854.88	739,792.62
14,434.00	89.70	0.10	10,525.93	3,581.70	3,582.48	106.48	3,584.07	1.70	481,949.87	739,792.13
14,528.00	90.20	0.90	10,526.02	3,675.69	3,676.48	107.30	3,678.05	1.67	482,043.87	739,792.95
14,622.00	90.20	0.70	10,525.69	3,769.67	3,770.47	108.61	3,772.03	1.65	482,137.86	739,794.26



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Stray Cat 8-5 Fed Com
Well: 214H
Wellbore: OH
Design: Surveys

Local Co-ordinate Reference: Well 214H
TVD Reference: GL 3622.4'+KB 25.5' @ 3647.90usft
MD Reference: GL 3622.4'+KB 25.5' @ 3647.90usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
14,716.00	89.10	359.30	10,526.26	3,863.66	3,864.46	108.61	3,865.99	1.61	482,231.85	739,794.26
14,810.00	88.70	359.70	10,528.07	3,957.64	3,958.44	107.79	3,959.91	1.56	482,325.83	739,793.44
14,904.00	89.30	0.10	10,529.71	4,051.63	4,052.43	107.63	4,053.86	1.52	482,419.82	739,793.28
14,998.00	89.70	0.60	10,530.53	4,145.61	4,146.42	108.20	4,147.83	1.49	482,513.81	739,793.85
15,092.00	89.90	359.10	10,530.86	4,239.61	4,240.42	107.95	4,241.79	1.46	482,607.81	739,793.60
15,186.00	90.60	358.90	10,530.44	4,333.60	4,334.40	106.31	4,335.71	1.41	482,701.79	739,791.96
15,280.00	91.70	359.20	10,528.56	4,427.58	4,428.37	104.75	4,429.61	1.36	482,795.76	739,790.40
15,375.00	92.80	0.20	10,524.83	4,522.50	4,523.29	104.26	4,524.49	1.32	482,890.68	739,789.91
15,469.00	91.70	0.00	10,521.14	4,616.42	4,617.22	104.42	4,618.40	1.30	482,984.61	739,790.07
15,536.00	90.13	357.93	10,520.07	4,683.41	4,684.19	103.21	4,685.33	1.26	483,051.58	739,788.86
Sec. Crossing: 15536' MD / 0' FNL & 829' FEL										
15,563.00	89.50	357.10	10,520.15	4,710.39	4,711.17	102.04	4,712.27	1.24	483,078.56	739,787.69
15,657.00	89.50	356.80	10,520.97	4,804.28	4,805.03	97.04	4,806.01	1.16	483,172.42	739,782.69
15,751.00	88.60	356.80	10,522.53	4,898.15	4,898.87	91.79	4,899.73	1.07	483,266.26	739,777.44
15,845.00	90.20	357.90	10,523.52	4,992.07	4,992.76	87.45	4,993.53	1.00	483,360.15	739,773.10
15,939.00	90.80	357.90	10,522.70	5,086.02	5,086.69	84.00	5,087.39	0.95	483,454.08	739,769.65
16,034.00	91.10	358.40	10,521.12	5,180.98	5,181.63	80.94	5,182.26	0.89	483,549.02	739,766.59
16,128.00	91.40	358.50	10,519.07	5,274.94	5,275.57	78.40	5,276.16	0.85	483,642.96	739,764.05
16,222.00	89.90	359.90	10,518.00	5,368.92	5,369.55	77.08	5,370.11	0.82	483,736.94	739,762.73
16,316.00	88.30	0.20	10,519.48	5,462.91	5,463.54	77.17	5,464.08	0.81	483,830.93	739,762.82
16,410.00	87.60	0.40	10,522.84	5,556.84	5,557.48	77.66	5,558.02	0.80	483,924.87	739,763.31
16,498.00	88.10	359.40	10,526.14	5,644.77	5,645.41	77.50	5,645.94	0.79	484,012.80	739,763.15
16,592.00	89.90	358.20	10,527.79	5,738.74	5,739.37	75.54	5,739.87	0.75	484,106.76	739,761.19
16,686.00	91.00	358.60	10,527.05	5,832.72	5,833.33	72.91	5,833.79	0.72	484,200.72	739,758.56
16,781.00	91.30	358.00	10,525.14	5,927.67	5,928.27	70.09	5,928.68	0.68	484,295.66	739,755.74
16,875.00	91.70	359.40	10,522.68	6,021.63	6,022.21	67.96	6,022.59	0.65	484,389.60	739,753.61
16,969.00	90.30	0.90	10,521.04	6,115.60	6,116.19	68.21	6,116.57	0.64	484,483.58	739,753.86



ProDirectional
Survey Report



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Site: Stray Cat 8-5 Fed Com
Well: 214H
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Design: Surveys

Local Co-ordinate Reference: Well 214H
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Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
17,063.00	90.20	1.20	10,520.63	6,209.57	6,210.17	69.93	6,210.57	0.65	484,577.56	739,755.58	
17,157.00	88.50	1.60	10,521.70	6,303.52	6,304.14	72.23	6,304.55	0.66	484,671.53	739,757.88	
17,251.00	89.80	1.90	10,523.09	6,397.44	6,398.08	75.10	6,398.52	0.67	484,765.47	739,760.75	
17,345.00	90.90	2.70	10,522.52	6,491.33	6,492.00	78.87	6,492.48	0.70	484,859.39	739,764.52	
17,439.00	88.40	0.80	10,523.09	6,585.26	6,585.94	81.74	6,586.45	0.71	484,953.33	739,767.39	
17,533.00	88.70	0.60	10,525.47	6,679.21	6,679.91	82.89	6,680.42	0.71	485,047.30	739,768.54	
17,627.00	88.90	0.60	10,527.44	6,773.17	6,773.88	83.87	6,774.40	0.71	485,141.27	739,769.52	
17,721.00	89.40	0.10	10,528.83	6,867.16	6,867.87	84.45	6,868.39	0.70	485,235.26	739,770.10	
17,815.00	90.90	0.30	10,528.59	6,961.15	6,961.86	84.77	6,962.38	0.70	485,329.25	739,770.42	
17,909.00	90.30	0.00	10,527.60	7,055.14	7,055.86	85.02	7,056.37	0.69	485,423.25	739,770.67	
18,003.00	90.50	359.50	10,526.94	7,149.14	7,149.85	84.61	7,150.35	0.68	485,517.24	739,770.26	
18,098.00	90.70	359.90	10,525.95	7,244.13	7,244.85	84.11	7,245.34	0.67	485,612.24	739,769.76	
18,192.00	91.70	0.40	10,523.98	7,338.10	7,338.82	84.36	7,339.31	0.66	485,706.21	739,770.01	
18,286.00	90.90	0.10	10,521.85	7,432.07	7,432.80	84.77	7,433.28	0.65	485,800.19	739,770.42	
18,380.00	89.80	359.10	10,521.27	7,526.07	7,526.79	84.11	7,527.26	0.64	485,894.18	739,769.76	
18,474.00	89.30	358.80	10,522.01	7,620.06	7,620.77	82.39	7,621.22	0.62	485,988.16	739,768.04	
18,568.00	89.10	358.30	10,523.33	7,714.03	7,714.73	80.01	7,715.15	0.59	486,082.12	739,765.66	
18,662.00	89.00	358.60	10,524.88	7,808.00	7,808.69	77.47	7,809.07	0.57	486,176.08	739,763.12	
18,757.00	89.40	358.70	10,526.21	7,902.98	7,903.65	75.23	7,904.01	0.55	486,271.04	739,760.88	
18,851.00	89.50	358.30	10,527.11	7,996.95	7,997.61	72.77	7,997.94	0.52	486,365.00	739,758.42	
18,945.00	89.90	358.20	10,527.60	8,090.93	8,091.57	69.90	8,091.87	0.49	486,458.96	739,755.55	
19,039.00	89.90	358.40	10,527.77	8,184.90	8,185.53	67.11	8,185.80	0.47	486,552.92	739,752.76	
19,133.00	89.30	358.70	10,528.43	8,278.88	8,279.49	64.73	8,279.75	0.45	486,646.88	739,750.38	
19,227.00	90.60	359.80	10,528.51	8,372.88	8,373.48	63.50	8,373.72	0.43	486,740.87	739,749.15	
19,322.00	91.50	0.40	10,526.77	8,467.86	8,468.46	63.67	8,468.70	0.43	486,835.85	739,749.32	
19,416.00	91.20	0.10	10,524.55	8,561.82	8,562.44	64.08	8,562.68	0.43	486,929.83	739,749.73	
19,510.00	91.50	359.70	10,522.34	8,655.80	8,656.41	63.91	8,656.65	0.42	487,023.80	739,749.56	



ProDirectional Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Stray Cat 8-5 Fed Com
Well: 214H
Wellbore: OH
Design: Surveys

Local Co-ordinate Reference: Well 214H
TVD Reference: GL 3622.4'+KB 25.5' @ 3647.90usft
MD Reference: GL 3622.4'+KB 25.5' @ 3647.90usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northling (usft)	Easting (usft)
19,603.00	92.30	359.70	10,519.25	8,748.74	8,749.36	63.43	8,749.59	0.42	487,116.75	739,749.08
19,697.00	89.10	0.70	10,518.11	8,842.72	8,843.34	63.76	8,843.57	0.41	487,210.73	739,749.41
19,792.00	88.30	1.10	10,520.26	8,937.67	8,938.30	65.25	8,938.54	0.42	487,305.69	739,750.90
19,886.00	88.50	1.00	10,522.89	9,031.60	9,032.25	66.97	9,032.50	0.42	487,399.64	739,752.62
19,980.00	88.80	0.40	10,525.10	9,125.56	9,126.21	68.12	9,126.47	0.43	487,493.60	739,753.77
20,074.00	89.30	0.40	10,526.66	9,219.54	9,220.20	68.77	9,220.45	0.43	487,587.59	739,754.42
20,168.00	89.50	0.40	10,527.64	9,313.52	9,314.19	69.43	9,314.45	0.43	487,681.58	739,755.08
20,262.00	89.80	0.40	10,528.22	9,407.51	9,408.19	70.09	9,408.45	0.43	487,775.58	739,755.74
20,356.00	89.70	359.80	10,528.63	9,501.51	9,502.18	70.25	9,502.44	0.42	487,869.57	739,755.90
20,450.00	90.20	0.10	10,528.71	9,595.51	9,596.18	70.17	9,596.44	0.42	487,963.57	739,755.82
20,471.00	90.31	0.12	10,528.62	9,616.51	9,617.18	70.21	9,617.44	0.42	487,984.57	739,755.86
LTP: 20471' MD / 330' FNL & 831' FEL										
20,544.00	90.70	0.20	10,527.97	9,689.50	9,690.18	70.41	9,690.44	0.42	488,057.57	739,756.06
20,638.00	91.50	0.00	10,526.17	9,783.48	9,784.16	70.58	9,784.42	0.41	488,151.55	739,756.23
20,732.00	92.20	359.90	10,523.13	9,877.43	9,878.11	70.50	9,878.36	0.41	488,245.50	739,756.15
20,744.00	92.20	359.90	10,522.67	9,889.42	9,890.10	70.48	9,890.35	0.41	488,257.49	739,756.13
Final Survey: 20744' MD										
20,801.00	92.20	359.90	10,520.48	9,946.38	9,947.06	70.38	9,947.31	0.41	488,314.45	739,756.03
Final TD: 20801' MD / 0' FNL & 827' FEL										



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Stray Cat 8-5 Fed Com
Well: 214H
Wellbore: OH
Design: Surveys

Local Co-ordinate Reference: Well 214H
TVD Reference: GL 3622.4'+KB 25.5' @ 3647.90usft
MD Reference: GL 3622.4'+KB 25.5' @ 3647.90usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
184.00	184.00	-0.35	0.33	Pro MWD First Survey: 184' MD
9,986.00	9,965.67	-544.50	125.11	KOP: 9986' MD / 52' FSL & 841' FEL
10,564.00	10,450.45	-265.99	155.14	FTP: 10564' MD / 330' FSL & 810' FEL
15,536.00	10,520.07	4,684.19	103.21	Sec. Crossing: 15536' MD / 0' FNL & 829' FEL
20,471.00	10,528.62	9,617.18	70.21	LTP: 20471' MD / 330' FNL & 831' FEL
20,744.00	10,522.67	9,890.10	70.48	Final Survey: 20744' MD
20,801.00	10,520.48	9,947.06	70.38	Final TD: 20801' MD / 0' FNL & 827' FEL