

30-025-44145



CONFIDENTIAL



Boundary Raider 6-7 Fed Com No. 211H
Lea County, NM

January 17, 2018

Job No. LNM5158717

Survey Completion Report



PRODIRECTIONAL

Survey Certification Letter

December 17, 2018



Operator Name: Devon Energy Corp.
Well Name: Boundary Raider 6-7 Fed Com No. 211H
County/Parish: Lea County,
State: NM
Rig Name: Cactus 126
Job Number: LNM5158717

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:

Surveyor	Surveyed Depths	Projection to Bit	Dates Performed	Type of Survey
ProDirectional	178' MD – 20,349' MD	20,405' MD	11/27/17 – 12/21/17	MWD

Sincerely,

Mike Coats
Regulatory Specialist
Professional Directional

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

prodirectional.com



Devon Energy Corp.

**Lea County, NM
Boundary Raider 6-7 Fed Com
No. 211H
OH**

Survey: ProDirectional

Survey Report

17 January, 2018





ProDirectional
Survey Report



Company:	Devon Energy Corp.	Local Co-ordinate Reference:	Well 211H
Project:	Lea County, NM (NAD83)	TVD Reference:	GL 3506'+KB 25' @ 3531.00usft (Cactus 126)
Site:	Boundary Raider 6-7 Fed Com	MD Reference:	GL 3506'+KB 25' @ 3531.00usft (Cactus 126)
Well:	211H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Surveys 178-20405 MD	Database:	WellPlanner1

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

Site	Boundary Raider 6-7 Fed Com		
Site Position:		Northing:	487,692.15 usft
From:	Map	Easting:	730,648.71 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.339248
		Longitude:	-103.720366
		Grid Convergence:	0.33 "

Well	211H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32.339248
		Longitude:	-103.720366
		Ground Level:	3,506.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	HDGM	11/7/2017	(°)
			6.95
			Dip Angle
			(°)
			60.17
			Field Strength
			(nT)
			48,184.50

Design	Surveys 178-20405 MD		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			179.68

Survey Program	Date 1/17/2018		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		Description
178.00	20,405.00	Survey #1 (OH)	MWD+HDGM
			OWSG MWD + HDGM



ProDirectional
Survey Report



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Project: Lea County, NM (NAD83)
Site: Boundary Raider 6-7 Fed Com
Well: 211H
Wellbore: OH
Design: Surveys 178-20405 MD

Local Co-ordinate Reference: Well 211H
TVD Reference: GL 3506'+KB 25' @ 3531.00usft (Cactus 126)
MD Reference: GL 3506'+KB 25' @ 3531.00usft (Cactus 126)
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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	487,692.15	730,648.71
178.00	0.30	115.80	178.00	0.21	-0.20	0.42	0.47	115.80	487,691.95	730,649.13
Pro MWD First Survey: 178' MD										
276.00	0.00	264.40	276.00	0.32	-0.31	0.65	0.72	115.80	487,691.84	730,649.36
368.00	0.20	120.60	368.00	0.40	-0.40	0.79	0.88	116.67	487,691.75	730,649.50
458.00	0.30	20.60	458.00	0.26	-0.26	1.01	1.04	104.25	487,691.89	730,649.72
549.00	0.20	312.80	549.00	-0.07	0.08	0.97	0.98	85.58	487,692.23	730,649.68
640.00	0.10	260.70	640.00	-0.17	0.17	0.78	0.80	77.67	487,692.32	730,649.49
731.00	0.10	220.00	731.00	-0.09	0.10	0.65	0.66	81.54	487,692.25	730,649.36
776.00	0.30	50.80	776.00	-0.14	0.14	0.72	0.73	78.85	487,692.29	730,649.43
973.00	0.20	339.00	973.00	-0.78	0.79	0.99	1.27	51.55	487,692.94	730,649.70
1,065.00	0.30	357.30	1,064.99	-1.17	1.18	0.92	1.50	38.08	487,693.33	730,649.63
1,157.00	0.30	355.40	1,156.99	-1.65	1.66	0.89	1.88	28.28	487,693.81	730,649.60
1,249.00	0.20	344.60	1,248.99	-2.05	2.05	0.83	2.22	22.02	487,694.20	730,649.54
1,341.00	0.30	2.10	1,340.99	-2.45	2.45	0.80	2.58	18.02	487,694.60	730,649.51
1,434.00	0.30	348.20	1,433.99	-2.93	2.93	0.76	3.03	14.46	487,695.08	730,649.47
1,525.00	0.20	1.30	1,524.99	-3.32	3.32	0.71	3.40	12.08	487,695.47	730,649.42
1,618.00	0.10	32.60	1,617.99	-3.55	3.55	0.76	3.63	12.05	487,695.70	730,649.47
1,711.00	0.00	24.20	1,710.99	-3.62	3.62	0.80	3.71	12.49	487,695.77	730,649.51
1,805.00	0.10	105.40	1,804.99	-3.60	3.60	0.88	3.71	13.75	487,695.75	730,649.59
1,899.00	0.20	93.10	1,898.99	-3.56	3.57	1.12	3.74	17.48	487,695.72	730,649.83
1,993.00	0.10	136.60	1,992.99	-3.49	3.50	1.34	3.75	21.00	487,695.65	730,650.05
2,087.00	0.10	139.10	2,086.99	-3.37	3.38	1.45	3.68	23.28	487,695.53	730,650.16
2,181.00	0.10	127.40	2,180.99	-3.26	3.27	1.57	3.63	25.71	487,695.42	730,650.28
2,275.00	0.00	121.40	2,274.99	-3.21	3.22	1.64	3.61	26.98	487,695.37	730,650.35
2,369.00	0.10	286.20	2,368.99	-3.23	3.24	1.56	3.60	25.70	487,695.39	730,650.27
2,463.00	0.00	226.60	2,462.99	-3.26	3.26	1.48	3.58	24.41	487,695.41	730,650.19



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Boundary Raider 6-7 Fed Com
Well: 211H
Wellbore: OH
Design: Surveys 178-20405 MD

Local Co-ordinate Reference: Well 211H
TVD Reference: GL 3508'+KB 25' @ 3531.00usft (Cactus 126)
MD Reference: GL 3508'+KB 25' @ 3531.00usft (Cactus 126)
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)
2,557.00	0.10	214.60	2,556.99	-3.19	3.20	1.43	3.50	24.17	487,695.35	730,650.14
2,651.00	0.00	196.80	2,650.99	-3.12	3.13	1.39	3.42	23.92	487,695.28	730,650.10
2,745.00	0.00	207.90	2,744.99	-3.12	3.13	1.39	3.42	23.92	487,695.28	730,650.10
2,839.00	0.10	170.40	2,838.99	-3.04	3.05	1.40	3.35	24.69	487,695.20	730,650.11
2,933.00	0.10	197.80	2,932.99	-2.88	2.89	1.39	3.21	25.69	487,695.04	730,650.10
3,027.00	0.10	200.10	3,026.99	-2.73	2.73	1.34	3.04	26.06	487,694.88	730,650.05
3,121.00	0.10	279.10	3,120.99	-2.66	2.67	1.23	2.94	24.69	487,694.82	730,649.94
3,215.00	0.20	170.30	3,214.99	-2.51	2.52	1.17	2.78	24.98	487,694.67	730,649.88
3,309.00	0.20	177.30	3,308.99	-2.19	2.20	1.21	2.51	28.85	487,694.35	730,649.92
3,404.00	0.20	179.00	3,403.99	-1.86	1.86	1.22	2.23	33.21	487,694.01	730,649.93
3,497.00	0.30	196.80	3,496.98	-1.46	1.47	1.15	1.87	38.13	487,693.62	730,649.86
3,591.00	0.10	134.50	3,590.98	-1.17	1.18	1.14	1.64	44.12	487,693.33	730,649.85
3,685.00	0.60	106.30	3,684.98	-0.97	0.98	1.67	1.94	59.61	487,693.13	730,650.38
3,779.00	1.10	122.30	3,778.97	-0.34	0.36	2.91	2.93	82.95	487,692.51	730,651.62
3,873.00	1.50	119.20	3,872.95	0.75	-0.72	4.74	4.80	98.66	487,691.43	730,653.45
3,968.00	1.60	122.80	3,967.91	2.09	-2.05	6.94	7.24	106.43	487,690.10	730,655.65
4,062.00	1.90	124.90	4,061.87	3.70	-3.65	9.32	10.01	111.38	487,688.50	730,658.03
4,156.00	2.20	124.50	4,155.81	5.63	-5.56	12.09	13.31	114.71	487,686.59	730,660.80
4,249.00	2.30	125.90	4,248.74	7.75	-7.67	15.07	16.91	116.97	487,684.48	730,663.78
4,343.00	2.20	123.30	4,342.66	9.87	-9.77	18.11	20.57	118.34	487,682.38	730,666.82
4,438.00	2.10	123.10	4,437.60	11.83	-11.72	21.09	24.13	119.06	487,680.43	730,669.80
4,532.00	2.00	126.70	4,531.54	13.77	-13.64	23.85	27.47	119.76	487,678.51	730,672.56
4,626.00	1.50	118.60	4,625.49	15.35	-15.21	26.24	30.33	120.09	487,676.94	730,674.95
4,720.00	1.30	120.70	4,719.47	16.50	-16.34	28.24	32.63	120.06	487,675.81	730,676.95
4,814.00	1.10	113.00	4,813.44	17.40	-17.24	29.99	34.59	119.89	487,674.81	730,678.70
4,908.00	1.00	108.90	4,907.43	18.03	-17.86	31.59	36.29	119.47	487,674.29	730,680.30
5,002.00	1.00	108.60	5,001.41	18.57	-18.38	33.15	37.90	119.01	487,673.77	730,681.86



ProDirectional
Survey Report



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Project: Lea County, NM (NAD83)
Site: Boundary Ralder 6-7 Fed Com
Well: 211H
Wellbore: OH
Design: Surveys 178-20405 MD

Local Co-ordinate Reference: Well 211H
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North Reference: Grid
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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)
5,096.00	0.90	102.20	5,095.40	18.99	-18.80	34.65	39.42	118.49	487,673.35	730,683.36
5,190.00	0.90	101.20	5,189.39	19.30	-19.10	36.09	40.83	117.89	487,673.05	730,684.80
5,284.00	0.90	101.00	5,283.38	19.59	-19.38	37.54	42.25	117.31	487,672.77	730,686.25
5,378.00	0.80	99.20	5,377.37	19.85	-19.63	38.91	43.58	116.77	487,672.52	730,687.62
5,472.00	0.70	109.60	5,471.36	20.15	-19.93	40.10	44.78	116.42	487,672.22	730,688.81
5,566.00	0.80	93.30	5,565.35	20.39	-20.16	41.30	45.96	116.02	487,671.99	730,690.01
5,660.00	0.80	92.80	5,659.34	20.47	-20.23	42.61	47.17	115.40	487,671.92	730,691.32
5,754.00	0.70	89.40	5,753.33	20.50	-20.25	43.84	48.29	114.80	487,671.90	730,692.55
5,848.00	0.80	101.20	5,847.33	20.63	-20.38	45.06	49.45	114.33	487,671.77	730,693.77
5,942.00	0.80	91.20	5,941.32	20.78	-20.52	46.36	50.69	113.87	487,671.63	730,695.07
5,977.00	0.80	91.20	5,976.31	20.79	-20.53	46.84	51.14	113.86	487,671.62	730,695.55
6,124.00	0.70	96.70	6,123.30	20.93	-20.65	48.76	52.96	112.95	487,671.50	730,697.47
6,218.00	1.00	9.60	6,217.29	20.19	-19.91	49.47	53.33	111.92	487,672.24	730,698.18
6,312.00	2.40	339.80	6,311.25	17.53	-17.28	48.93	51.88	109.43	487,674.89	730,697.64
6,406.00	4.20	336.20	6,405.09	12.52	-12.26	46.86	48.43	104.66	487,679.89	730,695.57
6,501.00	5.90	341.90	6,499.72	4.68	-4.43	43.94	44.16	95.76	487,687.72	730,692.65
6,595.00	6.40	343.40	6,593.18	-4.95	5.18	40.94	41.27	82.79	487,697.33	730,689.65
6,689.00	6.50	343.00	6,686.58	-15.08	15.29	37.89	40.86	68.03	487,707.44	730,686.60
6,783.00	7.30	344.40	6,779.90	-25.93	26.13	34.73	43.46	53.04	487,718.28	730,683.44
6,877.00	9.40	345.10	6,872.90	-39.13	39.30	31.15	50.14	38.40	487,731.45	730,679.86
6,971.00	9.90	345.30	6,965.57	-54.38	54.53	27.12	60.91	26.44	487,746.68	730,675.83
7,065.00	9.90	345.50	7,058.17	-70.04	70.17	23.05	73.86	18.18	487,762.32	730,671.76
7,159.00	10.00	344.50	7,150.76	-85.76	85.86	18.84	87.91	12.38	487,778.01	730,667.55
7,253.00	10.10	344.50	7,243.32	-101.59	101.67	14.46	102.69	8.09	487,793.82	730,663.17
7,347.00	10.20	345.10	7,335.84	-117.60	117.65	10.12	118.09	4.91	487,809.80	730,658.83
7,441.00	10.30	343.90	7,428.34	-133.74	133.77	5.65	133.89	2.42	487,825.92	730,654.36
7,535.00	10.20	344.00	7,520.84	-149.84	149.85	1.02	149.85	0.39	487,842.00	730,649.73



ProDirectional
Survey Report



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Project: Lea County, NM (NAD83)
Site: Boundary Raider 6-7 Fed Com
Well: 211H
Wellbore: OH
Design: Surveys 178-20405 MD

Local Co-ordinate Reference: Well 211H
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North Reference: Grid
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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)
7,629.00	10.30	345.20	7,613.34	-165.99	165.97	-3.42	166.01	358.82	487,858.12	730,645.29
7,723.00	10.40	344.50	7,705.81	-182.31	182.27	-7.83	182.44	357.54	487,874.42	730,640.88
7,817.00	10.40	345.70	7,798.27	-198.74	198.67	-12.20	199.04	356.49	487,890.82	730,636.51
7,911.00	10.80	344.80	7,890.67	-215.48	215.39	-16.60	216.03	355.59	487,907.54	730,632.11
8,005.00	9.90	345.90	7,983.14	-231.84	231.73	-20.88	232.67	354.85	487,923.88	730,627.83
8,099.00	9.10	348.40	8,075.85	-246.98	246.85	-24.34	248.04	354.37	487,939.00	730,624.37
8,193.00	9.10	354.30	8,168.67	-261.67	261.52	-26.58	262.87	354.20	487,953.67	730,622.13
8,287.00	9.60	357.90	8,261.42	-276.90	276.75	-27.60	278.13	354.30	487,968.90	730,621.11
8,381.00	9.60	354.30	8,354.10	-292.54	292.39	-28.67	293.79	354.40	487,984.54	730,620.04
8,475.00	8.80	353.50	8,446.89	-307.49	307.33	-30.26	308.82	354.38	487,999.48	730,618.45
8,569.00	8.40	353.00	8,539.83	-321.46	321.29	-31.91	322.87	354.33	488,013.44	730,616.80
8,663.00	8.70	350.40	8,632.79	-335.30	335.11	-33.93	336.83	354.22	488,027.26	730,614.78
8,757.00	9.20	352.30	8,725.65	-349.77	349.57	-36.12	351.43	354.10	488,041.72	730,612.59
8,851.00	8.80	354.70	8,818.49	-364.38	364.18	-37.80	366.13	354.07	488,056.33	730,610.91
8,945.00	6.80	352.30	8,911.61	-377.07	376.85	-39.21	378.89	354.06	488,069.00	730,609.50
9,039.00	6.30	347.30	9,005.00	-387.62	387.40	-41.09	389.57	353.95	488,079.55	730,607.62
9,133.00	5.00	348.80	9,098.54	-396.68	396.45	-43.01	398.78	353.81	488,088.60	730,605.70
9,227.00	4.30	345.70	9,192.23	-404.13	403.88	-44.68	406.35	353.69	488,096.03	730,604.03
9,321.00	3.80	340.80	9,286.00	-410.49	410.24	-46.58	412.87	353.52	488,102.39	730,602.13
9,415.00	3.30	334.80	9,379.82	-415.89	415.63	-48.75	418.48	353.31	488,107.78	730,599.96
9,509.00	2.40	334.00	9,473.70	-420.12	419.85	-50.77	422.90	353.11	488,112.00	730,597.94
9,603.00	1.70	324.90	9,567.64	-423.04	422.76	-52.43	425.99	352.93	488,114.91	730,596.28
9,697.00	1.60	321.60	9,661.60	-425.22	424.92	-54.05	428.35	352.75	488,117.07	730,594.66
9,768.00	1.40	327.10	9,732.58	-426.73	426.43	-55.14	429.98	352.63	488,118.58	730,593.57
9,792.00	1.30	332.90	9,756.57	-427.22	426.92	-55.42	430.50	352.60	488,119.07	730,593.29
9,886.00	6.90	189.50	9,850.37	-422.60	422.29	-56.84	426.10	352.33	488,114.44	730,591.87
9,980.00	17.60	185.70	9,942.10	-402.85	402.52	-59.19	406.85	351.63	488,094.67	730,589.52



ProDirectional
Survey Report



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Site: Boundary Raider 6-7 Fed Com
Well: 211H
Wellbore: OH
Design: Surveys 178-20405 MD

Local Co-ordinate Reference: Well 211H
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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)
10,037.00	23.80	183.70	9,995.39	-382.78	382.45	-60.79	387.25	350.97	488,074.60	730,587.92
10,074.00	28.00	181.20	10,028.67	-366.65	366.31	-61.45	371.43	350.48	488,058.46	730,587.26
10,121.00	34.20	180.70	10,068.89	-342.39	342.05	-61.85	347.59	349.75	488,034.20	730,586.86
10,168.00	39.80	179.30	10,106.42	-314.12	313.78	-61.82	319.81	348.85	488,005.93	730,586.89
10,215.00	46.20	178.30	10,140.77	-282.08	281.75	-61.14	288.30	347.76	487,973.90	730,587.57
10,262.00	52.20	179.40	10,171.47	-246.53	246.19	-60.44	253.50	346.21	487,938.34	730,588.27
10,309.00	57.40	178.90	10,198.55	-208.13	207.80	-59.86	216.25	343.93	487,899.95	730,588.85
10,313.00	57.83	178.94	10,200.69	-204.76	204.43	-59.80	212.99	343.69	487,896.58	730,588.91
330' FNL: 10313' MD										
10,356.00	62.50	179.40	10,222.08	-167.47	167.14	-59.26	177.33	340.48	487,859.29	730,589.45
10,403.00	66.70	180.20	10,242.24	-125.02	124.69	-59.12	138.00	334.63	487,816.84	730,589.59
10,451.00	70.90	181.20	10,259.59	-80.29	79.96	-59.67	99.77	323.27	487,772.11	730,589.04
10,498.00	74.10	181.60	10,273.72	-35.49	35.15	-60.77	70.20	300.05	487,727.30	730,587.94
10,545.00	77.00	181.70	10,285.45	9.99	-10.34	-62.08	62.93	260.54	487,681.81	730,586.63
10,601.00	79.50	181.60	10,296.85	64.78	-65.14	-63.66	91.08	224.34	487,627.01	730,585.05
10,648.00	82.60	181.30	10,304.16	111.18	-111.55	-64.83	129.02	210.17	487,580.60	730,583.88
10,693.00	85.50	181.00	10,308.83	155.92	-156.29	-65.73	169.55	202.81	487,535.86	730,582.98
10,783.00	89.10	180.80	10,313.07	245.79	-246.16	-67.14	255.16	195.26	487,445.99	730,581.57
10,874.00	89.20	180.90	10,314.42	336.76	-337.14	-68.49	344.03	191.48	487,355.01	730,580.22
10,965.00	89.40	179.40	10,315.53	427.74	-428.13	-68.73	433.62	189.12	487,264.02	730,579.98
11,056.00	89.60	179.10	10,316.32	518.74	-519.12	-67.54	523.50	187.41	487,173.03	730,581.17
11,147.00	89.70	179.20	10,316.88	609.73	-610.11	-66.19	613.69	186.19	487,082.04	730,582.52
11,239.00	89.70	178.90	10,317.36	701.73	-702.10	-64.66	705.07	185.26	486,990.05	730,584.05
11,331.00	89.50	178.90	10,318.00	793.71	-794.08	-62.90	786.57	184.53	486,898.07	730,585.81
11,423.00	89.80	179.10	10,318.56	885.71	-886.06	-61.29	888.18	183.96	486,806.09	730,587.42
11,515.00	89.60	179.00	10,319.04	977.70	-978.05	-59.77	979.87	183.50	486,714.10	730,588.94
11,608.00	90.00	178.60	10,319.37	1,070.69	-1,071.03	-57.82	1,072.59	183.09	486,621.12	730,590.89



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Boundary Raider 6-7 Fed Com
Well: 211H
Wellbore: OH
Design: Surveys 178-20405 MD

Local Co-ordinate Reference: Well 211H
TVD Reference: GL 3506'+KB 25' @ 3531.00usft (Cactus 126)
MD Reference: GL 3506'+KB 25' @ 3531.00usft (Cactus 126)
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)
11,700.00	88.00	178.50	10,320.97	1,162.65	-1,162.98	-55.49	1,164.30	182.73	486,529.17	730,593.22
11,792.00	89.20	178.80	10,323.22	1,254.61	-1,254.92	-53.32	1,256.06	182.43	486,437.23	730,595.39
11,885.00	90.00	179.00	10,323.87	1,347.59	-1,347.90	-51.54	1,348.89	182.19	486,344.25	730,597.17
11,979.00	90.60	178.90	10,323.38	1,441.59	-1,441.89	-49.82	1,442.75	181.98	486,250.26	730,598.89
12,073.00	91.00	178.70	10,322.07	1,535.56	-1,535.86	-47.85	1,536.60	181.78	486,156.29	730,600.86
12,166.00	90.70	178.20	10,320.69	1,628.53	-1,628.81	-45.33	1,629.44	181.59	486,063.34	730,603.38
12,260.00	90.60	178.10	10,319.62	1,722.49	-1,722.76	-42.30	1,723.28	181.41	485,969.39	730,606.41
12,354.00	91.00	179.60	10,318.31	1,816.47	-1,816.73	-40.41	1,817.17	181.27	485,875.42	730,608.30
12,448.00	91.60	179.70	10,316.18	1,910.45	-1,910.70	-39.84	1,911.11	181.19	485,781.45	730,608.87
12,543.00	91.80	180.40	10,313.36	2,005.40	-2,005.66	-39.92	2,006.05	181.14	485,686.49	730,608.79
12,637.00	90.50	180.60	10,311.47	2,099.37	-2,099.63	-40.74	2,100.03	181.11	485,592.52	730,607.97
12,731.00	89.50	180.90	10,311.47	2,193.35	-2,193.62	-41.97	2,194.02	181.10	485,498.53	730,606.74
12,825.00	88.50	179.70	10,313.11	2,287.33	-2,287.60	-42.46	2,288.00	181.06	485,404.55	730,606.25
12,919.00	88.70	179.30	10,315.41	2,381.30	-2,381.57	-41.64	2,381.94	181.00	485,310.58	730,607.07
13,013.00	89.90	178.70	10,316.56	2,475.29	-2,475.55	-40.00	2,475.87	180.93	485,216.60	730,608.71
13,107.00	89.80	178.40	10,316.80	2,569.27	-2,569.52	-37.62	2,569.79	180.84	485,122.63	730,611.09
13,202.00	89.60	179.00	10,317.30	2,664.25	-2,664.49	-35.47	2,664.73	180.76	485,027.66	730,613.24
13,296.00	89.60	179.30	10,317.96	2,758.25	-2,758.48	-34.07	2,758.69	180.71	484,933.67	730,614.64
13,390.00	89.80	180.00	10,318.45	2,852.24	-2,852.48	-33.50	2,852.67	180.67	484,839.67	730,615.21
13,484.00	89.80	179.70	10,318.78	2,946.24	-2,946.47	-33.25	2,946.66	180.65	484,745.68	730,615.46
13,578.00	89.50	180.30	10,319.35	3,040.24	-3,040.47	-33.25	3,040.65	180.63	484,651.68	730,615.46
13,672.00	89.40	180.30	10,320.25	3,134.23	-3,134.47	-33.75	3,134.65	180.62	484,557.68	730,614.96
13,766.00	89.60	181.00	10,321.07	3,228.21	-3,228.46	-34.81	3,228.64	180.62	484,463.69	730,613.90
13,860.00	89.70	179.80	10,321.65	3,322.20	-3,322.45	-35.47	3,322.64	180.61	484,369.70	730,613.24
13,955.00	89.80	179.70	10,322.06	3,417.20	-3,417.45	-35.05	3,417.63	180.59	484,274.70	730,613.66
14,049.00	89.70	180.30	10,322.47	3,511.20	-3,511.45	-35.05	3,511.62	180.57	484,180.70	730,613.66
14,143.00	90.90	179.50	10,321.98	3,605.19	-3,605.44	-34.89	3,605.61	180.55	484,086.71	730,613.82



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Boundary Raider 6-7 Fed Com
Well: 211H
Wellbore: OH
Design: Surveys 178-20405 MD

Local Co-ordinate Reference: Well 211H
TVD Reference: GL 3506+KB 25' @ 3531.00usft (Cactus 126)
MD Reference: GL 3506+KB 25' @ 3531.00usft (Cactus 126)
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)
14,237.00	91.40	179.10	10,320.09	3,699.17	-3,699.42	-33.74	3,699.57	180.52	483,992.73	730,614.97
14,331.00	91.30	179.70	10,317.88	3,793.14	-3,793.39	-32.76	3,793.53	180.49	483,898.76	730,615.95
14,425.00	91.60	180.20	10,315.50	3,887.11	-3,887.35	-32.68	3,887.49	180.48	483,804.80	730,616.03
14,519.00	90.40	180.30	10,313.86	3,981.09	-3,981.34	-33.09	3,981.48	180.48	483,710.81	730,615.62
14,613.00	91.10	180.80	10,312.63	4,075.07	-4,075.32	-33.99	4,075.47	180.48	483,616.83	730,614.72
14,707.00	90.20	181.20	10,311.56	4,169.04	-4,169.30	-35.63	4,169.46	180.49	483,522.85	730,613.08
14,801.00	89.70	180.40	10,311.65	4,263.02	-4,263.29	-36.94	4,263.45	180.50	483,428.86	730,611.77
14,895.00	88.80	180.00	10,312.88	4,357.01	-4,357.28	-37.27	4,357.44	180.49	483,334.87	730,611.44
14,990.00	88.60	178.90	10,315.03	4,451.98	-4,452.25	-36.36	4,452.40	180.47	483,239.90	730,612.35
15,084.00	89.80	177.60	10,316.34	4,545.94	-4,546.20	-33.49	4,546.32	180.42	483,145.95	730,615.22
15,178.00	89.90	177.90	10,316.59	4,639.88	-4,640.12	-29.80	4,640.22	180.37	483,052.03	730,618.91
15,272.00	90.00	178.00	10,316.67	4,733.84	-4,734.06	-26.43	4,734.14	180.32	482,958.09	730,622.28
15,366.00	89.90	178.20	10,316.75	4,827.81	-4,828.01	-23.32	4,828.07	180.28	482,864.14	730,625.39
15,460.00	90.00	178.70	10,316.84	4,921.78	-4,921.98	-20.78	4,922.02	180.24	482,770.17	730,627.93
15,554.00	90.00	179.00	10,316.84	5,015.77	-5,015.96	-18.89	5,015.99	180.22	482,676.19	730,629.82
15,648.00	89.90	178.90	10,316.92	5,109.77	-5,109.94	-17.17	5,109.97	180.19	482,582.21	730,631.54
15,742.00	90.90	178.90	10,316.26	5,203.75	-5,203.92	-15.36	5,203.94	180.17	482,488.23	730,633.35
15,836.00	91.00	179.10	10,314.70	5,297.73	-5,297.89	-13.72	5,297.91	180.15	482,394.26	730,634.99
15,930.00	91.20	179.70	10,312.90	5,391.72	-5,391.87	-12.74	5,391.89	180.14	482,300.28	730,635.97
16,024.00	89.30	179.90	10,312.49	5,485.71	-5,485.86	-12.41	5,485.88	180.13	482,206.29	730,636.30
16,118.00	89.80	180.10	10,313.23	5,579.71	-5,579.86	-12.41	5,579.88	180.13	482,112.29	730,636.30
16,212.00	89.70	180.50	10,313.64	5,673.70	-5,673.86	-12.90	5,673.87	180.13	482,018.29	730,635.81
16,306.00	89.40	181.00	10,314.38	5,767.68	-5,767.85	-14.13	5,767.86	180.14	481,924.30	730,634.59
16,400.00	89.40	181.10	10,315.36	5,861.65	-5,861.83	-15.85	5,861.85	180.15	481,830.32	730,632.86
16,495.00	89.40	181.40	10,316.35	5,956.61	-5,956.80	-17.93	5,956.83	180.17	481,735.35	730,630.78
16,589.00	89.90	181.90	10,316.93	6,050.55	-6,050.76	-20.63	6,050.79	180.20	481,641.39	730,628.08
16,683.00	90.30	181.50	10,316.76	6,144.49	-6,144.72	-23.42	6,144.76	180.22	481,547.43	730,625.29



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Boundary Raider 6-7 Fed Com
Well: 211H
Wellbore: OH
Design: Surveys 178-20405 MD

Local Co-ordinate Reference: Well 211H
TVD Reference: GL 3506'+KB 25' @ 3531.00usft (Cactus 126)
MD Reference: GL 3506'+KB 25' @ 3531.00usft (Cactus 126)
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)
16,777.00	88.90	180.50	10,317.42	6,238.46	-6,238.70	-25.06	6,238.75	180.23	481,453.45	730,623.65
16,871.00	89.30	180.40	10,318.90	6,332.44	-6,332.68	-25.80	6,332.73	180.23	481,359.47	730,622.91
16,965.00	89.40	180.80	10,319.98	6,426.42	-6,426.67	-26.78	6,426.73	180.24	481,265.48	730,621.93
17,059.00	88.80	179.70	10,321.44	6,520.40	-6,520.65	-27.19	6,520.71	180.24	481,171.50	730,621.52
17,148.00	88.70	180.50	10,323.38	6,609.38	-6,609.63	-27.35	6,609.69	180.24	481,082.52	730,621.36
17,242.00	89.30	179.00	10,325.02	6,703.36	-6,703.61	-26.94	6,703.67	180.23	480,988.54	730,621.77
17,336.00	89.80	178.80	10,325.76	6,797.35	-6,797.59	-25.14	6,797.64	180.21	480,894.56	730,623.57
17,430.00	90.40	178.90	10,325.60	6,891.34	-6,891.57	-23.25	6,891.61	180.19	480,800.58	730,625.46
17,525.00	90.40	178.40	10,324.93	6,986.32	-6,986.55	-21.01	6,986.58	180.17	480,705.60	730,627.70
17,619.00	89.30	178.80	10,325.18	7,080.30	-7,080.52	-18.71	7,080.54	180.15	480,611.63	730,630.00
17,713.00	89.50	179.10	10,326.16	7,174.29	-7,174.49	-16.99	7,174.51	180.14	480,517.66	730,631.72
17,807.00	89.80	179.50	10,326.74	7,268.28	-7,268.49	-15.84	7,268.50	180.12	480,423.66	730,632.87
17,901.00	89.40	179.20	10,327.39	7,362.28	-7,362.48	-14.78	7,362.49	180.11	480,329.67	730,633.93
17,995.00	89.80	179.00	10,328.05	7,456.27	-7,456.46	-13.30	7,456.47	180.10	480,235.69	730,635.41
18,089.00	90.20	179.60	10,328.05	7,550.27	-7,550.45	-12.15	7,550.46	180.09	480,141.70	730,636.56
18,183.00	90.70	179.30	10,327.31	7,644.27	-7,644.45	-11.25	7,644.46	180.08	480,047.70	730,637.46
18,277.00	91.00	179.20	10,325.92	7,738.25	-7,738.43	-10.02	7,738.44	180.07	479,953.72	730,638.69
18,371.00	90.40	178.20	10,324.77	7,832.23	-7,832.40	-7.89	7,832.40	180.06	479,859.75	730,640.82
18,467.00	90.90	178.30	10,323.68	7,928.19	-7,928.34	-4.96	7,928.35	180.04	479,763.81	730,643.75
18,561.00	90.10	177.60	10,322.86	8,022.15	-8,022.28	-1.59	8,022.28	180.01	479,669.87	730,647.12
18,655.00	89.50	177.30	10,323.19	8,116.07	-8,116.19	2.59	8,116.19	179.98	479,575.96	730,651.30
18,750.00	89.30	176.90	10,324.18	8,210.97	-8,211.06	7.40	8,211.06	179.95	479,481.09	730,656.11
18,844.00	89.80	176.90	10,324.92	8,304.86	-8,304.92	12.48	8,304.93	179.91	479,387.23	730,661.19
18,938.00	90.50	178.00	10,324.67	8,398.78	-8,398.82	16.66	8,398.84	179.89	479,293.33	730,665.37
19,032.00	90.10	178.10	10,324.18	8,492.74	-8,492.77	19.86	8,492.79	179.87	479,199.38	730,668.57
19,126.00	89.20	179.90	10,324.76	8,586.73	-8,586.75	21.50	8,586.77	179.86	479,105.40	730,670.21
19,220.00	89.90	180.00	10,325.50	8,680.73	-8,680.74	21.58	8,680.77	179.86	479,011.41	730,670.29



ProDirectional
Survey Report



Company: Devon Energy Corp.
Project: Lea County, NM (NAD83)
Site: Boundary Raider 6-7 Fed Com
Well: 211H
Wellbore: OH
Design: Surveys 178-20405 MD

Local Co-ordinate Reference: Well 211H
TVD Reference: .GL 3506'+KB 25' @ 3531.00usft (Cactus 126)
MD Reference: GL 3506'+KB 25' @ 3531.00usft (Cactus 126)
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)
19,314.00	88.70	180.70	10,326.64	8,774.71	-8,774.73	21.01	8,774.76	179.86	478,917.42	730,669.72
19,408.00	89.80	180.40	10,327.87	8,868.69	-8,868.72	20.11	8,868.74	179.87	478,823.43	730,668.82
19,502.00	90.20	181.30	10,327.87	8,962.67	-8,962.71	18.71	8,962.72	179.88	478,729.44	730,667.42
19,596.00	90.30	181.00	10,327.46	9,056.64	-9,056.69	16.82	9,056.70	179.89	478,635.46	730,665.53
19,690.00	90.20	181.10	10,327.05	9,150.61	-9,150.67	15.10	9,150.68	179.91	478,541.48	730,663.81
19,785.00	91.00	183.10	10,326.06	9,245.51	-9,245.59	11.62	9,245.60	179.93	478,446.56	730,660.33
19,879.00	90.80	183.30	10,324.58	9,339.33	-9,339.44	6.37	9,339.44	179.96	478,352.71	730,655.08
19,973.00	89.60	182.80	10,324.25	9,433.16	-9,433.30	1.37	9,433.30	179.99	478,258.85	730,650.08
20,067.00	89.00	181.80	10,325.40	9,527.05	-9,527.22	-2.40	9,527.22	180.01	478,164.93	730,646.31
20,161.00	89.10	180.30	10,326.96	9,621.01	-9,621.18	-4.12	9,621.19	180.02	478,070.97	730,644.59
20,230.00	89.39	180.01	10,327.87	9,690.00	-9,690.18	-4.31	9,690.18	180.03	478,001.97	730,644.40
330' FSL: 20230' MD										
20,255.00	89.50	179.90	10,328.11	9,715.00	-9,715.18	-4.29	9,715.18	180.03	477,976.97	730,644.42
20,349.00	90.20	179.80	10,328.36	9,809.00	-9,809.18	-4.04	9,809.18	180.02	477,882.97	730,644.67
Final Survey: 20349' MD										
20,405.00	90.20	179.80	10,328.16	9,865.00	-9,865.17	-3.84	9,865.18	180.02	477,826.98	730,644.87
Final TD: 20405' MD										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
178.00	178.00	-0.20	0.42	Pro MWD First Survey: 178' MD
10,313.00	10,200.69	204.43	-59.80	330' FNL: 10313' MD
20,230.00	10,327.87	-9,690.18	-4.31	330' FSL: 20230' MD
20,349.00	10,328.36	-9,809.18	-4.04	Final Survey: 20349' MD
20,405.00	10,328.16	-9,865.17	-3.84	Final TD: 20405' MD