

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Form C-102

Energy, Minerals & Natural Resources Department

Revised August 1, 2011

OIL CONSERVATION DIVISION

Submit one copy to appropriate

1220 South St. Francis Dr.

District Office

Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-46052	² Pool Code 98094	³ Pool Name BOBCAT DRAW-UPR WOLFCAMP <i>KZ</i>
⁴ Property Code	⁵ Property Name GREEN WAVE 20-32 FED STATE COM	⁶ Well Number 10H
⁷ OGRID No. 6137	⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	⁹ Elevation 3343.1

¹⁰ Surface Location

UL or lot no. I	Section 20	Township 26 S	Range 34 E	Lot Idn	Feet from the 2424	North/South line SOUTH	Feet from the 299	East/West line EAST	County LEA
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. 1	Section 32	Township 26 S	Range 34 E	Lot Idn	Feet from the 2380	North/South line NORTH	Feet from the 313	East/West line EAST	County LEA
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¹² Dedicated Acres 1264.64	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

	¹⁷ OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> <i>Rebecca Deal</i> 5/13/2020 Signature _____ Date _____ Rebecca Deal, Regulatory Analyst Printed Name _____ rebecca.deal@dvn.com E-mail Address _____ ¹⁸ SURVEYOR CERTIFICATION <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i> JULY 18, 2018 Date of Survey _____ <i>ALIMON F. JARAMILLO</i> Signature and Seal of Professional Surveyor: _____ Certificate Number: 12797 NEW MEXICO PROFESSIONAL SURVEYOR NO. 6412
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Intent

☐

As Drilled

☒ XX

API #

30-025-46052

Operator Name: DEVON ENERGY PRODUCTION COMPANY, L.P.	Property Name: GREEN WAVE 20-32 FED STATE COM	Well Number 10H
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Kick Off Point (KOP)

UL I	Section 20	Township 26S	Range 34E	Lot	Feet 2566	From N/S SOUTH	Feet 446	From E/W EAST	County LEA
Latitude 32.0287213					Longitude 103.4847929				NAD 83

First Take Point (FTP)

UL I	Section 20	Township 26S	Range 34E	Lot	Feet 2146	From N/S SOUTH	Feet 411	From E/W EAST	County LEA
Latitude 32.0275677					Longitude 103.4846787				NAD 83

Last Take Point (LTP)

UL H	Section 32	Township 26S	Range 34E	Lot 1	Feet 2256	From N/S NORTH	Feet 315	From E/W EAST	County LEA
Latitude 32.0009539					Longitude 103.4843466				NAD 83

Is this well the defining well for the Horizontal Spacing Unit?

☐ N

Is this well an infill well?

☐ Y

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

30-025-46050

Operator Name: DEVON ENERGY PRODUCTION COMPANY, L.P.	Property Name: GREEN WAVE 20-32 FED STATE COM	Well Number 8H
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KZ 06/29/2018

STATE OF NEW MEXICO
COUNTY OF LEA

I, **Seth Crawley**, certify that; I am employed by **Skyline Directional Drilling, LLC**; that I did on the day(s) of **12/14/2019 to 2/19/2020** conduct or supervise the taking of MWD surveys from a depth of **121 feet to a depth of 22,865 feet**; that the data is true, correct, complete and within the limitations of the tool as set forth by **Skyline Directional Drilling, LLC**; that I am authorized and qualified to make this report; that this survey was conducted at the request of **Devon Energy Production Co.** for the **GREEN WAVE 20-32 FED STATE COM 10H**, with the **API #30-025-46051** in **Bobcat Draw/Upper Wolcamp** field of **Lea County, New Mexico**; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by **Skyline Directional Drilling, LLC**.

A handwritten signature in cursive script that reads 'Seth Crawley'. The signature is written in black ink and is positioned above a horizontal line.

Seth Crawley
Senior Well Planner



Devon Energy Production Company, L.P.

Lea Co, New Mexico (NAD-83)

Green Wave 20-32 Fed State Com 10H

Green Wave 20-32 Fed State Com 10H

30-025-46042

Lateral #1

Design: Lateral #1

Standard Survey Report

25 March, 2020



Company:	Devon Energy Production Company, L.P.	Local Co-ordinate Reference:	Site Green Wave 20-32 Fed State Com 10H
Project:	Lea Co, New Mexico (NAD-83)	TVD Reference:	3343.1+24 @ 3367.1usft (Cactus 168)
Site:	Green Wave 20-32 Fed State Com 10H	MD Reference:	3343.1+24 @ 3367.1usft (Cactus 168)
Well:	Green Wave 20-32 Fed State Com 10H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	Compass_DSN

Project	Lea Co, New Mexico (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Green Wave 20-32 Fed State Com 10H				
Site Position:		Northing:	375,079.16 usft	Latitude:	32° 1' 41.990 N
From:	Map	Easting:	804,444.99 usft	Longitude:	103° 29' 3.550 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "		

Well	Green Wave 20-32 Fed State Com 10H					
Well Position	+N/-S	0.0 usft	Northing:	375,079.16 usft	Latitude:	32° 1' 41.990 N
	+E/-W	0.0 usft	Easting:	804,444.99 usft	Longitude:	103° 29' 3.550 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,343.1 usft
Grid Convergence:		0.45 °				

Wellbore	Lateral #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/14/2019	6.64	59.86	47,608.66065231

Design	Lateral #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	179.51	

Survey Program	Date	3/25/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
121.0	22,865.0	Survey #1 (Lateral #1)	MWD	MWD - Skyline	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
121.0	0.30	12.70	121.0	0.3	0.1	-0.3	0.25	0.25	0.00	
First Survey										
212.0	0.10	7.10	212.0	0.6	0.1	-0.6	0.22	-0.22	-6.15	
302.0	0.70	300.90	302.0	1.0	-0.3	-1.0	0.74	0.67	-73.56	
393.0	0.80	303.10	393.0	1.6	-1.3	-1.6	0.11	0.11	2.42	
485.0	0.50	289.10	485.0	2.1	-2.3	-2.1	0.37	-0.33	-15.22	
576.0	0.90	307.00	576.0	2.7	-3.2	-2.7	0.50	0.44	19.67	
667.0	1.00	308.20	667.0	3.6	-4.4	-3.6	0.11	0.11	1.32	
758.0	1.00	313.50	757.9	4.6	-5.6	-4.7	0.10	0.00	5.82	

Company:	Devon Energy Production Company, L.P.	Local Co-ordinate Reference:	Site Green Wave 20-32 Fed State Com 10H
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Site:	Green Wave 20-32 Fed State Com 10H	MD Reference:	3343.1+24 @ 3367.1usft (Cactus 168)
Well:	Green Wave 20-32 Fed State Com 10H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	Compass_DSN

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
973.0	0.40	295.50	972.9	6.2	-7.6	-6.3	0.29	-0.28	-8.37
1,064.0	0.80	307.70	1,063.9	6.8	-8.4	-6.8	0.46	0.44	13.41
1,156.0	1.00	298.60	1,155.9	7.5	-9.6	-7.6	0.27	0.22	-9.89
1,247.0	0.80	312.30	1,246.9	8.3	-10.8	-8.4	0.32	-0.22	15.05
1,338.0	0.80	344.20	1,337.9	9.4	-11.4	-9.5	0.48	0.00	35.05
1,430.0	0.50	316.80	1,429.9	10.3	-11.9	-10.4	0.46	-0.33	-29.78
1,524.0	0.50	352.10	1,523.9	11.0	-12.2	-11.1	0.32	0.00	37.55
1,618.0	0.50	296.80	1,617.9	11.6	-12.7	-11.7	0.49	0.00	-58.83
1,713.0	0.70	256.50	1,712.9	11.6	-13.6	-11.8	0.48	0.21	-42.42
1,807.0	0.30	293.20	1,806.9	11.6	-14.4	-11.7	0.52	-0.43	39.04
1,902.0	0.40	290.00	1,901.9	11.8	-14.9	-11.9	0.11	0.11	-3.37
1,996.0	0.20	247.00	1,995.9	11.9	-15.4	-12.0	0.31	-0.21	-45.74
2,091.0	0.30	243.10	2,090.9	11.7	-15.8	-11.8	0.11	0.11	-4.11
2,185.0	0.30	225.00	2,184.9	11.4	-16.1	-11.5	0.10	0.00	-19.26
2,280.0	0.50	188.30	2,279.9	10.8	-16.4	-10.9	0.33	0.21	-38.63
2,375.0	0.70	196.70	2,374.9	9.8	-16.6	-10.0	0.23	0.21	8.84
2,470.0	0.70	190.40	2,469.9	8.7	-16.9	-8.9	0.08	0.00	-6.63
2,563.0	0.80	181.90	2,562.8	7.5	-17.0	-7.7	0.16	0.11	-9.14
2,658.0	0.90	160.20	2,657.8	6.1	-16.8	-6.3	0.35	0.11	-22.84
2,752.0	1.10	184.80	2,751.8	4.6	-16.6	-4.7	0.50	0.21	26.17
2,846.0	1.20	179.10	2,845.8	2.7	-16.7	-2.8	0.16	0.11	-6.06
2,940.0	1.30	186.30	2,939.8	0.6	-16.8	-0.8	0.20	0.11	7.66
3,034.0	1.30	209.20	3,033.8	-1.4	-17.4	1.2	0.55	0.00	24.36
3,128.0	1.70	209.00	3,127.7	-3.5	-18.6	3.4	0.43	0.43	-0.21
3,223.0	2.20	221.60	3,222.7	-6.1	-20.5	5.9	0.69	0.53	13.26
3,317.0	1.10	286.60	3,316.6	-7.2	-22.5	7.0	2.13	-1.17	69.15
3,411.0	1.70	331.40	3,410.6	-5.7	-24.1	5.5	1.28	0.64	47.66
3,505.0	2.60	4.20	3,504.5	-2.4	-24.6	2.2	1.58	0.96	34.89
3,598.0	2.50	26.50	3,597.5	1.5	-23.5	-1.7	1.07	-0.11	23.98
3,692.0	2.10	42.00	3,691.4	4.7	-21.5	-4.8	0.78	-0.43	16.49
3,786.0	3.60	22.60	3,785.3	8.7	-19.2	-8.8	1.88	1.60	-20.64
3,880.0	3.30	22.90	3,879.1	13.9	-17.0	-14.0	0.32	-0.32	0.32
3,973.0	3.40	31.80	3,971.9	18.7	-14.5	-18.8	0.57	0.11	9.57
4,066.0	3.50	35.00	4,064.8	23.4	-11.4	-23.5	0.23	0.11	3.44
4,161.0	3.60	50.80	4,159.6	27.6	-7.4	-27.7	1.03	0.11	16.63
4,255.0	3.70	24.60	4,253.4	32.2	-3.9	-32.3	1.76	0.11	-27.87
4,349.0	4.70	26.80	4,347.2	38.4	-0.9	-38.4	1.08	1.06	2.34
4,444.0	2.90	352.30	4,442.0	44.3	0.5	-44.3	2.98	-1.89	-36.32
4,538.0	2.40	352.10	4,535.8	48.6	0.0	-48.6	0.53	-0.53	-0.21
4,632.0	1.90	344.00	4,629.8	52.1	-0.7	-52.1	0.62	-0.53	-8.62
4,725.0	1.10	327.30	4,722.8	54.3	-1.7	-54.3	0.97	-0.86	-17.96
4,820.0	0.40	100.30	4,817.7	55.0	-1.8	-55.0	1.48	-0.74	140.00
4,913.0	0.60	325.00	4,910.7	55.3	-1.8	-55.3	1.00	0.22	-145.48

Company:	Devon Energy Production Company, L.P.	Local Co-ordinate Reference:	Site Green Wave 20-32 Fed State Com 10H
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Site:	Green Wave 20-32 Fed State Com 10H	MD Reference:	3343.1+24 @ 3367.1usft (Cactus 168)
Well:	Green Wave 20-32 Fed State Com 10H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	Compass_DSN

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,007.0	1.50	322.40	5,004.7	56.7	-2.8	-56.7	0.96	0.96	-2.77
5,101.0	1.00	264.60	5,098.7	57.6	-4.4	-57.6	1.37	-0.53	-61.49
5,195.0	2.50	299.80	5,192.7	58.6	-7.0	-58.6	1.89	1.60	37.45
5,290.0	2.70	308.70	5,287.6	61.0	-10.5	-61.1	0.47	0.21	9.37
5,383.0	2.30	300.10	5,380.5	63.3	-13.8	-63.4	0.59	-0.43	-9.25
5,477.0	3.00	326.30	5,474.4	66.3	-16.8	-66.4	1.47	0.74	27.87
5,571.0	3.20	330.20	5,568.2	70.6	-19.5	-70.8	0.31	0.21	4.15
5,667.0	2.80	333.10	5,664.1	75.0	-21.9	-75.2	0.45	-0.42	3.02
5,762.0	2.60	327.30	5,759.0	78.9	-24.1	-79.1	0.36	-0.21	-6.11
5,856.0	2.70	319.40	5,852.9	82.4	-26.7	-82.6	0.40	0.11	-8.40
5,950.0	2.70	322.50	5,946.8	85.8	-29.5	-86.1	0.16	0.00	3.30
6,044.0	2.60	319.30	6,040.7	89.2	-32.2	-89.5	0.19	-0.11	-3.40
6,139.0	2.70	326.80	6,135.6	92.7	-34.9	-93.0	0.38	0.11	7.89
6,233.0	2.60	331.40	6,229.5	96.4	-37.1	-96.7	0.25	-0.11	4.89
6,327.0	2.60	328.20	6,323.4	100.1	-39.2	-100.4	0.15	0.00	-3.40
6,421.0	2.40	335.30	6,417.3	103.7	-41.2	-104.0	0.39	-0.21	7.55
6,515.0	2.10	328.80	6,511.2	107.0	-42.9	-107.3	0.42	-0.32	-6.91
6,610.0	2.50	324.10	6,606.2	110.1	-45.0	-110.5	0.47	0.42	-4.95
6,703.0	2.30	333.10	6,699.1	113.4	-47.1	-113.8	0.46	-0.22	9.68
6,797.0	2.30	331.60	6,793.0	116.8	-48.8	-117.2	0.06	0.00	-1.60
6,891.0	2.30	322.30	6,886.9	119.9	-50.9	-120.4	0.40	0.00	-9.89
6,985.0	2.50	324.30	6,980.8	123.1	-53.2	-123.5	0.23	0.21	2.13
7,079.0	2.10	324.50	7,074.8	126.2	-55.4	-126.6	0.43	-0.43	0.21
7,173.0	2.10	320.80	7,168.7	128.9	-57.5	-129.4	0.14	0.00	-3.94
7,267.0	1.90	317.90	7,262.7	131.4	-59.6	-131.9	0.24	-0.21	-3.09
7,361.0	2.00	317.10	7,356.6	133.7	-61.8	-134.3	0.11	0.11	-0.85
7,456.0	1.80	311.50	7,451.5	135.9	-64.0	-136.5	0.29	-0.21	-5.89
7,550.0	1.80	319.20	7,545.5	138.0	-66.1	-138.6	0.26	0.00	8.19
7,643.0	1.80	315.20	7,638.5	140.2	-68.1	-140.8	0.14	0.00	-4.30
7,738.0	1.60	312.40	7,733.4	142.1	-70.1	-142.7	0.23	-0.21	-2.95
7,832.0	2.30	337.30	7,827.4	144.8	-71.8	-145.4	1.15	0.74	26.49
7,925.0	2.30	342.10	7,920.3	148.3	-73.1	-148.9	0.21	0.00	5.16
8,019.0	1.90	337.00	8,014.2	151.5	-74.3	-152.1	0.47	-0.43	-5.43
8,113.0	1.80	327.10	8,108.2	154.2	-75.7	-154.8	0.36	-0.11	-10.53
8,208.0	1.80	334.40	8,203.1	156.8	-77.2	-157.4	0.24	0.00	7.68
8,302.0	1.50	320.30	8,297.1	159.0	-78.6	-159.7	0.53	-0.32	-15.00
8,395.0	1.20	325.10	8,390.1	160.8	-79.9	-161.4	0.34	-0.32	5.16
8,490.0	1.40	320.50	8,485.0	162.5	-81.2	-163.2	0.24	0.21	-4.84
8,584.0	1.10	304.90	8,579.0	163.9	-82.7	-164.6	0.48	-0.32	-16.60
8,678.0	1.00	317.40	8,673.0	165.0	-84.0	-165.7	0.27	-0.11	13.30
8,772.0	1.10	296.80	8,767.0	166.0	-85.4	-166.7	0.41	0.11	-21.91
8,866.0	1.00	290.70	8,861.0	166.7	-86.9	-167.4	0.16	-0.11	-6.49
8,960.0	0.90	296.20	8,955.0	167.3	-88.4	-168.1	0.14	-0.11	5.85

Company:	Devon Energy Production Company, L.P.	Local Co-ordinate Reference:	Site Green Wave 20-32 Fed State Com 10H
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Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	Compass_DSN

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,055.0	0.60	300.30	9,049.9	167.9	-89.5	-168.7	0.32	-0.32	4.32
9,149.0	0.80	270.90	9,143.9	168.2	-90.5	-168.9	0.43	0.21	-31.28
9,243.0	0.90	251.40	9,237.9	167.9	-91.9	-168.7	0.32	0.11	-20.74
9,337.0	0.60	269.70	9,331.9	167.7	-93.1	-168.5	0.40	-0.32	19.47
9,432.0	0.90	243.30	9,426.9	167.4	-94.2	-168.2	0.47	0.32	-27.79
9,525.0	0.90	255.30	9,519.9	166.8	-95.6	-167.7	0.20	0.00	12.90
9,620.0	0.80	225.60	9,614.9	166.2	-96.8	-167.0	0.47	-0.11	-31.26
9,714.0	1.00	226.40	9,708.9	165.2	-97.9	-166.0	0.21	0.21	0.85
9,808.0	1.10	217.00	9,802.9	163.9	-99.0	-164.7	0.21	0.11	-10.00
9,902.0	1.10	229.00	9,896.8	162.6	-100.2	-163.4	0.24	0.00	12.77
9,997.0	1.10	230.00	9,991.8	161.4	-101.6	-162.3	0.02	0.00	1.05
10,091.0	1.10	224.90	10,085.8	160.2	-102.9	-161.0	0.10	0.00	-5.43
10,186.0	1.60	261.70	10,180.8	159.3	-104.9	-160.2	1.03	0.53	38.74
10,280.0	1.90	269.70	10,274.7	159.1	-107.8	-160.0	0.41	0.32	8.51
10,375.0	1.90	271.10	10,369.7	159.2	-110.9	-160.1	0.05	0.00	1.47
10,469.0	1.80	263.40	10,463.6	159.0	-113.9	-160.0	0.28	-0.11	-8.19
10,564.0	1.80	265.20	10,558.6	158.7	-116.9	-159.7	0.06	0.00	1.89
10,658.0	1.30	253.80	10,652.6	158.3	-119.4	-159.3	0.62	-0.53	-12.13
10,753.0	1.40	266.60	10,747.5	157.9	-121.6	-159.0	0.33	0.11	13.47
10,841.0	1.40	257.70	10,835.5	157.6	-123.7	-158.7	0.25	0.00	-10.11
10,942.0	1.30	243.80	10,936.5	156.9	-125.9	-157.9	0.34	-0.10	-13.76
11,035.0	1.30	246.30	11,029.5	156.0	-127.9	-157.1	0.06	0.00	2.69
11,129.0	1.60	246.90	11,123.4	155.0	-130.0	-156.1	0.32	0.32	0.64
11,224.0	1.60	249.20	11,218.4	154.0	-132.5	-155.2	0.07	0.00	2.42
11,317.0	1.80	249.40	11,311.3	153.1	-135.1	-154.2	0.22	0.22	0.22
11,412.0	1.40	252.20	11,406.3	152.2	-137.6	-153.4	0.43	-0.42	2.95
11,506.0	1.90	237.70	11,500.3	151.0	-140.0	-152.2	0.69	0.53	-15.43
11,601.0	1.90	230.70	11,595.2	149.2	-142.5	-150.4	0.24	0.00	-7.37
11,696.0	1.50	220.80	11,690.2	147.2	-144.6	-148.5	0.52	-0.42	-10.42
11,790.0	1.50	208.30	11,784.1	145.2	-146.0	-146.5	0.35	0.00	-13.30
11,885.0	1.30	204.40	11,879.1	143.1	-147.0	-144.4	0.23	-0.21	-4.11
12,007.0	1.30	202.50	12,001.1	140.6	-148.1	-141.9	0.04	0.00	-1.56
12,101.0	1.40	101.00	12,095.1	139.4	-147.4	-140.6	2.23	0.11	-107.98
12,196.0	1.70	209.30	12,190.1	137.9	-146.9	-139.2	2.65	0.32	114.00
12,290.0	1.80	216.20	12,284.0	135.5	-148.5	-136.8	0.25	0.11	7.34
12,384.0	7.10	195.40	12,377.7	128.7	-150.9	-130.0	5.80	5.64	-22.13
12,430.0	14.10	186.30	12,422.9	120.4	-152.3	-121.7	15.60	15.22	-19.78
12,477.0	21.10	175.10	12,467.7	106.3	-152.2	-107.6	16.48	14.89	-23.83
12,525.0	24.00	171.60	12,512.0	88.0	-150.0	-89.3	6.65	6.04	-7.29
12,572.0	30.10	171.70	12,553.8	66.9	-146.9	-68.1	12.98	12.98	0.21
12,619.0	32.80	172.30	12,593.9	42.6	-143.5	-43.8	5.78	5.74	1.28
12,666.0	36.90	174.20	12,632.5	15.9	-140.4	-17.1	9.02	8.72	4.04
12,759.0	43.90	172.10	12,703.3	-43.9	-133.1	42.7	7.67	7.53	-2.26
12,854.0	52.50	172.90	12,766.5	-114.0	-123.9	113.0	9.07	9.05	0.84

Company:	Devon Energy Production Company, L.P.	Local Co-ordinate Reference:	Site Green Wave 20-32 Fed State Com 10H
Project:	Lea Co, New Mexico (NAD-83)	TVD Reference:	3343.1+24 @ 3367.1usft (Cactus 168)
Site:	Green Wave 20-32 Fed State Com 10H	MD Reference:	3343.1+24 @ 3367.1usft (Cactus 168)
Well:	Green Wave 20-32 Fed State Com 10H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	Compass_DSN

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,948.0	60.30	174.90	12,818.5	-191.8	-115.7	190.8	8.48	8.30	2.13	
13,042.0	75.50	176.50	12,853.8	-278.4	-109.2	277.5	16.25	16.17	1.70	
13,136.0	86.60	173.40	12,868.4	-370.7	-101.0	369.9	12.25	11.81	-3.30	
13,230.0	89.40	177.90	12,871.7	-464.4	-93.9	463.6	5.64	2.98	4.79	
13,323.0	89.30	174.10	12,872.7	-557.1	-87.4	556.4	4.09	-0.11	-4.09	
13,417.0	90.50	170.80	12,872.9	-650.3	-75.1	649.6	3.74	1.28	-3.51	
13,512.0	89.60	171.70	12,872.8	-744.2	-60.6	743.7	1.34	-0.95	0.95	
13,605.0	89.70	176.30	12,873.4	-836.7	-50.9	836.2	4.95	0.11	4.95	
13,700.0	90.70	179.20	12,873.0	-931.6	-47.2	931.1	3.23	1.05	3.05	
13,820.0	92.20	179.30	12,870.0	-1,051.5	-45.6	1,051.1	1.25	1.25	0.08	
13,915.0	92.20	179.00	12,866.4	-1,146.4	-44.2	1,146.0	0.32	0.00	-0.32	
14,010.0	91.10	179.20	12,863.6	-1,241.4	-42.7	1,241.0	1.18	-1.16	0.21	
14,104.0	91.10	179.20	12,861.8	-1,335.4	-41.4	1,335.0	0.00	0.00	0.00	
14,198.0	90.40	179.60	12,860.6	-1,429.3	-40.4	1,429.0	0.86	-0.74	0.43	
14,293.0	89.20	178.00	12,860.9	-1,524.3	-38.4	1,523.9	2.11	-1.26	-1.68	
14,387.0	88.20	176.50	12,863.1	-1,618.2	-33.9	1,617.8	1.92	-1.06	-1.60	
14,481.0	90.00	178.80	12,864.5	-1,712.1	-30.0	1,711.8	3.11	1.91	2.45	
14,575.0	89.30	178.20	12,865.1	-1,806.1	-27.6	1,805.7	0.98	-0.74	-0.64	
14,669.0	91.60	180.10	12,864.4	-1,900.0	-26.2	1,899.7	3.17	2.45	2.02	
14,763.0	91.40	180.10	12,861.9	-1,994.0	-26.3	1,993.7	0.21	-0.21	0.00	
14,858.0	90.80	179.00	12,860.1	-2,089.0	-25.6	2,088.7	1.32	-0.63	-1.16	
14,952.0	89.20	178.30	12,860.1	-2,182.9	-23.4	2,182.7	1.86	-1.70	-0.74	
15,044.0	88.60	178.60	12,861.8	-2,274.9	-20.9	2,274.6	0.73	-0.65	0.33	
15,138.0	90.60	180.30	12,862.5	-2,368.9	-20.0	2,368.6	2.79	2.13	1.81	
15,192.9	90.83	180.94	12,861.8	-2,423.8	-20.6	2,423.5	1.25	0.43	1.17	
Cross Sec 20 to 29: 15192.9' MD; 341' FEL										
15,232.0	91.00	181.40	12,861.2	-2,462.9	-21.4	2,462.6	1.25	0.43	1.17	
15,326.0	89.40	178.10	12,860.9	-2,556.8	-21.0	2,556.6	3.90	-1.70	-3.51	
15,421.0	89.80	178.70	12,861.5	-2,651.8	-18.3	2,651.5	0.76	0.42	0.63	
15,516.0	91.50	177.70	12,860.4	-2,746.7	-15.3	2,746.5	2.08	1.79	-1.05	
15,610.0	91.30	179.30	12,858.1	-2,840.7	-12.9	2,840.5	1.71	-0.21	1.70	
15,704.0	89.40	178.50	12,857.6	-2,934.7	-11.1	2,934.5	2.19	-2.02	-0.85	
15,799.0	90.00	179.90	12,858.1	-3,029.6	-9.8	3,029.4	1.60	0.63	1.47	
15,893.0	89.70	179.90	12,858.3	-3,123.6	-9.6	3,123.4	0.32	-0.32	0.00	
15,987.0	89.90	180.30	12,858.6	-3,217.6	-9.8	3,217.4	0.48	0.21	0.43	
16,081.0	89.60	179.30	12,859.1	-3,311.6	-9.4	3,311.4	1.11	-0.32	-1.06	
16,176.0	91.30	182.10	12,858.3	-3,406.6	-10.6	3,406.4	3.45	1.79	2.95	
16,269.0	90.70	181.40	12,856.7	-3,499.6	-13.4	3,499.3	0.99	-0.65	-0.75	
16,364.0	90.10	182.10	12,856.0	-3,594.5	-16.3	3,594.2	0.97	-0.63	0.74	
16,457.0	90.60	183.60	12,855.5	-3,687.4	-20.9	3,687.1	1.70	0.54	1.61	
16,551.0	89.40	183.70	12,855.5	-3,781.2	-26.9	3,780.8	1.28	-1.28	0.11	
16,645.0	89.30	183.50	12,856.5	-3,875.0	-32.8	3,874.6	0.24	-0.11	-0.21	
16,739.0	90.00	182.40	12,857.1	-3,968.9	-37.7	3,968.4	1.39	0.74	-1.17	

Company:	Devon Energy Production Company, L.P.	Local Co-ordinate Reference:	Site Green Wave 20-32 Fed State Com 10H
Project:	Lea Co, New Mexico (NAD-83)	TVD Reference:	3343.1+24 @ 3367.1usft (Cactus 168)
Site:	Green Wave 20-32 Fed State Com 10H	MD Reference:	3343.1+24 @ 3367.1usft (Cactus 168)
Well:	Green Wave 20-32 Fed State Com 10H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	Compass_DSN

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
16,833.0	89.80	181.00	12,857.3	-4,062.8	-40.5	4,062.3	1.50	-0.21	-1.49	
16,928.0	90.60	179.70	12,856.9	-4,157.8	-41.0	4,157.3	1.61	0.84	-1.37	
17,022.0	89.70	176.80	12,856.7	-4,251.8	-38.2	4,251.3	3.23	-0.96	-3.09	
17,115.0	91.30	178.50	12,855.9	-4,344.7	-34.4	4,344.2	2.51	1.72	1.83	
17,209.0	90.30	175.70	12,854.6	-4,438.5	-29.6	4,438.1	3.16	-1.06	-2.98	
17,303.0	90.40	174.00	12,854.0	-4,532.2	-21.2	4,531.8	1.81	0.11	-1.81	
17,397.0	90.50	174.10	12,853.2	-4,625.6	-11.4	4,625.4	0.15	0.11	0.11	
17,491.0	90.00	174.30	12,852.8	-4,719.2	-1.9	4,719.0	0.57	-0.53	0.21	
17,585.0	88.60	176.40	12,854.0	-4,812.8	5.7	4,812.7	2.68	-1.49	2.23	
17,679.0	88.00	179.20	12,856.8	-4,906.7	9.3	4,906.6	3.05	-0.64	2.98	
17,772.0	89.00	180.10	12,859.2	-4,999.7	9.9	4,999.6	1.45	1.08	0.97	
17,865.0	90.60	180.80	12,859.5	-5,092.7	9.1	5,092.6	1.88	1.72	0.75	
17,959.0	90.00	182.20	12,859.0	-5,186.6	6.7	5,186.5	1.62	-0.64	1.49	
18,052.0	90.00	182.90	12,859.0	-5,279.5	2.5	5,279.4	0.75	0.00	0.75	
18,146.0	90.30	183.50	12,858.8	-5,373.4	-2.7	5,373.2	0.71	0.32	0.64	
18,240.0	91.50	184.90	12,857.3	-5,467.1	-9.6	5,466.9	1.96	1.28	1.49	
18,334.0	89.80	183.60	12,856.3	-5,560.9	-16.6	5,560.5	2.28	-1.81	-1.38	
18,429.0	90.50	185.00	12,856.0	-5,655.6	-23.7	5,655.2	1.65	0.74	1.47	
18,523.0	90.70	183.70	12,855.0	-5,749.3	-30.8	5,748.8	1.40	0.21	-1.38	
18,617.0	91.20	183.30	12,853.5	-5,843.1	-36.5	5,842.6	0.68	0.53	-0.43	
18,711.0	91.40	186.10	12,851.3	-5,936.8	-44.2	5,936.2	2.99	0.21	2.98	
18,805.0	90.00	185.60	12,850.2	-6,030.3	-53.8	6,029.6	1.58	-1.49	-0.53	
18,900.0	88.90	181.70	12,851.1	-6,125.1	-59.9	6,124.3	4.27	-1.16	-4.11	
18,994.0	87.80	178.00	12,853.8	-6,219.0	-59.6	6,218.3	4.10	-1.17	-3.94	
19,089.0	88.40	176.90	12,856.9	-6,313.9	-55.4	6,313.2	1.32	0.63	-1.16	
19,184.0	87.80	176.30	12,860.1	-6,408.6	-49.8	6,408.0	0.89	-0.63	-0.63	
19,278.0	89.30	175.60	12,862.5	-6,502.4	-43.1	6,501.8	1.76	1.60	-0.74	
19,372.0	89.30	174.40	12,863.6	-6,596.0	-34.9	6,595.5	1.28	0.00	-1.28	
19,466.0	92.30	178.30	12,862.3	-6,689.8	-29.0	6,689.3	5.23	3.19	4.15	
19,560.0	91.40	177.20	12,859.3	-6,783.6	-25.3	6,783.2	1.51	-0.96	-1.17	
19,654.0	90.00	173.10	12,858.1	-6,877.3	-17.3	6,876.9	4.61	-1.49	-4.36	
19,749.0	92.00	176.50	12,856.5	-6,971.9	-8.7	6,971.5	4.15	2.11	3.58	
19,843.0	91.50	176.20	12,853.6	-7,065.6	-2.7	7,065.3	0.62	-0.53	-0.32	
19,938.0	89.00	177.20	12,853.2	-7,160.5	2.7	7,160.2	2.83	-2.63	1.05	
20,031.0	92.00	181.30	12,852.4	-7,253.4	4.0	7,253.2	5.46	3.23	4.41	
20,124.0	91.90	182.10	12,849.2	-7,346.3	1.2	7,346.1	0.87	-0.11	0.86	
20,219.0	90.10	181.20	12,847.6	-7,441.3	-1.5	7,441.0	2.12	-1.89	-0.95	
20,313.0	90.10	180.50	12,847.4	-7,535.2	-2.9	7,534.9	0.74	0.00	-0.74	
20,407.0	91.10	181.30	12,846.4	-7,629.2	-4.4	7,628.9	1.36	1.06	0.85	
20,481.5	91.10	181.06	12,845.0	-7,703.7	-5.9	7,703.4	0.32	0.00	-0.32	
Cross Sec 29 to 32: 20481.5' MD; 373' FEL										
20,502.0	91.10	181.00	12,844.6	-7,724.2	-6.3	7,723.9	0.32	0.00	-0.32	
20,596.0	89.50	179.00	12,844.1	-7,818.2	-6.3	7,817.8	2.72	-1.70	-2.13	
20,690.0	89.30	178.30	12,845.1	-7,912.2	-4.1	7,911.8	0.77	-0.21	-0.74	

Company:	Devon Energy Production Company, L.P.	Local Co-ordinate Reference:	Site Green Wave 20-32 Fed State Com 10H
Project:	Lea Co, New Mexico (NAD-83)	TVD Reference:	3343.1+24 @ 3367.1usft (Cactus 168)
Site:	Green Wave 20-32 Fed State Com 10H	MD Reference:	3343.1+24 @ 3367.1usft (Cactus 168)
Well:	Green Wave 20-32 Fed State Com 10H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Lateral #1	Database:	Compass_DSN

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
20,784.0	89.10	178.30	12,846.4	-8,006.1	-1.3	8,005.8	0.21	-0.21	0.00	
20,878.0	92.50	176.60	12,845.1	-8,100.0	2.9	8,099.7	4.04	3.62	-1.81	
20,973.0	92.90	175.90	12,840.6	-8,194.7	9.1	8,194.5	0.85	0.42	-0.74	
21,067.0	92.20	175.70	12,836.4	-8,288.3	16.0	8,288.2	0.77	-0.74	-0.21	
21,161.0	91.70	175.00	12,833.2	-8,382.0	23.6	8,381.9	0.91	-0.53	-0.74	
21,256.0	92.80	178.60	12,829.5	-8,476.7	28.9	8,476.7	3.96	1.16	3.79	
21,350.0	92.00	178.30	12,825.5	-8,570.6	31.4	8,570.6	0.91	-0.85	-0.32	
21,444.0	91.90	178.70	12,822.3	-8,664.5	33.9	8,664.5	0.44	-0.11	0.43	
21,538.0	89.50	178.80	12,821.2	-8,758.5	35.9	8,758.5	2.56	-2.55	0.11	
21,632.0	89.40	178.70	12,822.1	-8,852.5	38.0	8,852.5	0.15	-0.11	-0.11	
21,726.0	90.10	179.40	12,822.5	-8,946.4	39.5	8,946.5	1.05	0.74	0.74	
21,820.0	90.10	178.80	12,822.4	-9,040.4	41.0	9,040.4	0.64	0.00	-0.64	
21,915.0	89.40	177.40	12,822.8	-9,135.4	44.2	9,135.4	1.65	-0.74	-1.47	
22,009.0	90.00	177.80	12,823.3	-9,229.3	48.1	9,229.4	0.77	0.64	0.43	
22,103.0	90.90	177.40	12,822.5	-9,323.2	52.0	9,323.3	1.05	0.96	-0.43	
22,197.0	88.90	179.50	12,822.7	-9,417.2	54.6	9,417.3	3.09	-2.13	2.23	
22,291.0	89.30	179.80	12,824.2	-9,511.1	55.1	9,511.3	0.53	0.43	0.32	
22,386.0	89.70	179.00	12,825.0	-9,606.1	56.1	9,606.3	0.94	0.42	-0.84	
22,481.0	91.10	177.10	12,824.3	-9,701.1	59.4	9,701.2	2.48	1.47	-2.00	
22,574.0	90.60	177.60	12,822.9	-9,794.0	63.7	9,794.1	0.76	-0.54	0.54	
22,669.0	90.10	177.80	12,822.4	-9,888.9	67.5	9,889.1	0.57	-0.53	0.21	
22,762.0	90.50	178.50	12,821.9	-9,981.8	70.5	9,982.1	0.87	0.43	0.75	
22,818.0	90.50	179.10	12,821.4	-10,037.8	71.7	10,038.1	1.07	0.00	1.07	
Last Survey										
22,865.0	90.50	179.10	12,821.0	-10,084.8	72.4	10,085.1	0.00	0.00	0.00	
PTB: 22865' MD; 312' FEL, 123' FCL of Sec 32 - PBHL - TD (G W 20-32 FSC 10H)b										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
15,192.9	12,861.8	-2,423.8	-20.6	Cross Sec 20 to 29: 15192.9' MD; 341' FEL	
20,481.5	12,845.0	-7,703.7	-5.9	Cross Sec 29 to 32: 20481.5' MD; 373' FEL	
22,818.0	12,821.4	-10,037.8	71.7	Last Survey	
22,865.0	12,821.0	-10,084.8	72.4	PTB: 22865' MD; 312' FEL, 123' FCL of Sec 32	

Checked By: _____ Approved By: _____ Date: _____