

Database:	WellPlanner1	Local Co-ordinate Reference:	Well Van Doo Dah 21-33 Fed Com 233H
Company:	Devon Energy Corp.	TVD Reference:	RKB @ 3405.00usft
Project:	Lea County, NM (NAD83)	MD Reference:	RKB @ 3405.00usft
Site:	Van Doo Dah/Marwari	North Reference:	Grid
Well:	Van Doo Dah 21-33 Fed Com 233H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim A		

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		Van Doo Dah/Marwari			
Site Position:		Northing:	404,059.28 usft	Latitude:	32° 6' 33.0230 N
From:	Map	Easting:	742,415.57 usft	Longitude:	103° 41' 2.0574 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.35 °

Well	Van Doo Dah 21-33 Fed Com 233H					
Well Position	+N/-S	0.00 usft	Northing:	404,059.28 usft	Latitude:	32° 6' 33.0230 N
	+E/-W	0.00 usft	Easting:	742,415.57 usft	Longitude:	103° 41' 2.0574 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,382.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	2/23/2018	6.80	59.78	47,922.30

Design	Prelim A			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	180.00

Plan Survey Tool Program	Date	2/27/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,424.17 Prelim A (OH)	MWD+HDGM	
			OWSG MWD + HDGM	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,657.04	0.00	0.00	9,657.04	0.00	0.00	0.00	0.00	0.00	0.00	
10,557.04	90.00	165.50	10,230.00	-554.71	143.46	10.00	10.00	0.00	165.50	
11,281.86	90.00	180.00	10,230.00	-1,271.81	234.71	2.00	0.00	2.00	90.00	
20,424.17	90.00	180.00	10,230.00	-10,414.12	235.28	0.00	0.00	0.00	0.00	BHL - VDD 233H



Pro Directional
Planning Report



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Wellbore:	OH		
Design:	Prelim A		

Planned 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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
790.00	0.00	0.00	790.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,160.00	0.00	0.00	1,160.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,336.00	0.00	0.00	4,336.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt									
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,570.00	0.00	0.00	4,570.00	0.00	0.00	0.00	0.00	0.00	0.00



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Wellbore:	OH		
Design:	Prelim A		

Planned 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)
Delaware									
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,330.00	0.00	0.00	8,330.00	0.00	0.00	0.00	0.00	0.00	0.00
L Brushy Canyon									
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,540.00	0.00	0.00	8,540.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spring									
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,675.00	0.00	0.00	8,675.00	0.00	0.00	0.00	0.00	0.00	0.00
Leonard 'A'									
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,035.00	0.00	0.00	9,035.00	0.00	0.00	0.00	0.00	0.00	0.00

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Wellbore:	OH		
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Planned 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)
Leonard 'B'									
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,280.00	0.00	0.00	9,280.00	0.00	0.00	0.00	0.00	0.00	0.00
Leonard 'C'									
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,545.00	0.00	0.00	9,545.00	0.00	0.00	0.00	0.00	0.00	0.00
1st BSPG Sand									
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,657.04	0.00	0.00	9,657.04	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 10.00									
9,700.00	4.30	165.50	9,699.96	-1.56	0.40	1.56	10.00	10.00	0.00
9,750.00	9.30	165.50	9,749.59	-7.28	1.88	7.28	10.00	10.00	0.00
9,800.00	14.30	165.50	9,798.52	-17.18	4.44	17.18	10.00	10.00	0.00
9,850.00	19.30	165.50	9,846.37	-31.16	8.06	31.16	10.00	10.00	0.00
9,900.00	24.30	165.50	9,892.78	-49.13	12.71	49.13	10.00	10.00	0.00
9,950.00	29.30	165.50	9,937.40	-70.95	18.35	70.95	10.00	10.00	0.00
10,000.00	34.30	165.50	9,979.88	-96.44	24.94	96.44	10.00	10.00	0.00
10,050.00	39.30	165.50	10,019.91	-125.43	32.44	125.43	10.00	10.00	0.00
10,063.16	40.61	165.50	10,030.00	-133.61	34.55	133.61	10.00	10.00	0.00
2nd BSPG Lime									
10,100.00	44.30	165.50	10,057.17	-157.68	40.78	157.68	10.00	10.00	0.00
10,150.00	49.30	165.50	10,091.39	-192.95	49.90	192.95	10.00	10.00	0.00
10,200.00	54.30	165.50	10,122.31	-230.98	59.74	230.98	10.00	10.00	0.00
10,250.00	59.30	165.50	10,149.68	-271.47	70.21	271.47	10.00	10.00	0.00
10,300.00	64.30	165.50	10,173.30	-314.12	81.24	314.12	10.00	10.00	0.00
10,350.00	69.30	165.50	10,193.00	-358.60	92.74	358.60	10.00	10.00	0.00
10,400.00	74.30	165.50	10,208.61	-404.57	104.63	404.57	10.00	10.00	0.00
10,450.00	79.30	165.50	10,220.03	-451.68	116.81	451.68	10.00	10.00	0.00
10,500.00	84.30	165.50	10,227.16	-499.58	129.20	499.58	10.00	10.00	0.00
10,550.00	89.30	165.50	10,229.95	-547.89	141.69	547.89	10.00	10.00	0.00
10,557.04	90.00	165.50	10,230.00	-554.71	143.46	554.71	10.00	10.00	0.00
Start DLS 2.00 TFO 90.00 - 2nd BSPG Sand									
10,600.00	90.00	166.36	10,230.00	-596.38	153.90	596.38	2.00	0.00	2.00
10,700.00	90.00	168.36	10,230.00	-693.95	175.78	693.95	2.00	0.00	2.00
10,800.00	90.00	170.36	10,230.00	-792.23	194.25	792.23	2.00	0.00	2.00
10,900.00	90.00	172.36	10,230.00	-891.08	209.27	891.08	2.00	0.00	2.00
11,000.00	90.00	174.36	10,230.00	-990.41	220.84	990.41	2.00	0.00	2.00
11,100.00	90.00	176.36	10,230.00	-1,090.08	228.93	1,090.08	2.00	0.00	2.00
11,200.00	90.00	178.36	10,230.00	-1,189.96	233.53	1,189.96	2.00	0.00	2.00
11,281.86	90.00	180.00	10,230.00	-1,271.81	234.71	1,271.81	2.00	0.00	2.00
Start 9142.31 hold at 11281.86 MD									
11,300.00	90.00	180.00	10,230.00	-1,289.95	234.71	1,289.95	0.00	0.00	0.00
11,400.00	90.00	180.00	10,230.00	-1,389.95	234.71	1,389.95	0.00	0.00	0.00
11,500.00	90.00	180.00	10,230.00	-1,489.95	234.72	1,489.95	0.00	0.00	0.00
11,600.00	90.00	180.00	10,230.00	-1,589.95	234.73	1,589.95	0.00	0.00	0.00
11,700.00	90.00	180.00	10,230.00	-1,689.95	234.73	1,689.95	0.00	0.00	0.00
11,800.00	90.00	180.00	10,230.00	-1,789.95	234.74	1,789.95	0.00	0.00	0.00
11,900.00	90.00	180.00	10,230.00	-1,889.95	234.75	1,889.95	0.00	0.00	0.00
12,000.00	90.00	180.00	10,230.00	-1,989.95	234.75	1,989.95	0.00	0.00	0.00
12,100.00	90.00	180.00	10,230.00	-2,089.95	234.76	2,089.95	0.00	0.00	0.00

Database:	WellPlanner1	Local Co-ordinate Reference:	Well Van Doo Dah 21-33 Fed Com 233H
Company:	Devon Energy Corp.	TVD Reference:	RKB @ 3405.00usft
Project:	Lea County, NM (NAD83)	MD Reference:	RKB @ 3405.00usft
Site:	Van Doo Dah/Marwari	North Reference:	Grid
Well:	Van Doo Dah 21-33 Fed Com 233H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim A		

Planned 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)	
12,200.00	90.00	180.00	10,230.00	-2,189.95	234.76	2,189.95	0.00	0.00	0.00	
12,300.00	90.00	180.00	10,230.00	-2,289.95	234.77	2,289.95	0.00	0.00	0.00	
12,400.00	90.00	180.00	10,230.00	-2,389.95	234.78	2,389.95	0.00	0.00	0.00	
12,500.00	90.00	180.00	10,230.00	-2,489.95	234.78	2,489.95	0.00	0.00	0.00	
12,600.00	90.00	180.00	10,230.00	-2,589.95	234.79	2,589.95	0.00	0.00	0.00	
12,700.00	90.00	180.00	10,230.00	-2,689.95	234.80	2,689.95	0.00	0.00	0.00	
12,800.00	90.00	180.00	10,230.00	-2,789.95	234.80	2,789.95	0.00	0.00	0.00	
12,900.00	90.00	180.00	10,230.00	-2,889.95	234.81	2,889.95	0.00	0.00	0.00	
13,000.00	90.00	180.00	10,230.00	-2,989.95	234.82	2,989.95	0.00	0.00	0.00	
13,100.00	90.00	180.00	10,230.00	-3,089.95	234.82	3,089.95	0.00	0.00	0.00	
13,200.00	90.00	180.00	10,230.00	-3,189.95	234.83	3,189.95	0.00	0.00	0.00	
13,300.00	90.00	180.00	10,230.00	-3,289.95	234.83	3,289.95	0.00	0.00	0.00	
13,400.00	90.00	180.00	10,230.00	-3,389.95	234.84	3,389.95	0.00	0.00	0.00	
13,500.00	90.00	180.00	10,230.00	-3,489.95	234.85	3,489.95	0.00	0.00	0.00	
13,600.00	90.00	180.00	10,230.00	-3,589.95	234.85	3,589.95	0.00	0.00	0.00	
13,700.00	90.00	180.00	10,230.00	-3,689.95	234.86	3,689.95	0.00	0.00	0.00	
13,800.00	90.00	180.00	10,230.00	-3,789.95	234.87	3,789.95	0.00	0.00	0.00	
13,900.00	90.00	180.00	10,230.00	-3,889.95	234.87	3,889.95	0.00	0.00	0.00	
14,000.00	90.00	180.00	10,230.00	-3,989.95	234.88	3,989.95	0.00	0.00	0.00	
14,100.00	90.00	180.00	10,230.00	-4,089.95	234.88	4,089.95	0.00	0.00	0.00	
14,200.00	90.00	180.00	10,230.00	-4,189.95	234.89	4,189.95	0.00	0.00	0.00	
14,300.00	90.00	180.00	10,230.00	-4,289.95	234.90	4,289.95	0.00	0.00	0.00	
14,400.00	90.00	180.00	10,230.00	-4,389.95	234.90	4,389.95	0.00	0.00	0.00	
14,500.00	90.00	180.00	10,230.00	-4,489.95	234.91	4,489.95	0.00	0.00	0.00	
14,600.00	90.00	180.00	10,230.00	-4,589.95	234.92	4,589.95	0.00	0.00	0.00	
14,700.00	90.00	180.00	10,230.00	-4,689.95	234.92	4,689.95	0.00	0.00	0.00	
14,800.00	90.00	180.00	10,230.00	-4,789.95	234.93	4,789.95	0.00	0.00	0.00	
14,900.00	90.00	180.00	10,230.00	-4,889.95	234.93	4,889.95	0.00	0.00	0.00	
15,000.00	90.00	180.00	10,230.00	-4,989.95	234.94	4,989.95	0.00	0.00	0.00	
15,100.00	90.00	180.00	10,230.00	-5,089.95	234.95	5,089.95	0.00	0.00	0.00	
15,200.00	90.00	180.00	10,230.00	-5,189.95	234.95	5,189.95	0.00	0.00	0.00	
15,300.00	90.00	180.00	10,230.00	-5,289.95	234.96	5,289.95	0.00	0.00	0.00	
15,400.00	90.00	180.00	10,230.00	-5,389.95	234.97	5,389.95	0.00	0.00	0.00	
15,500.00	90.00	180.00	10,230.00	-5,489.95	234.97	5,489.95	0.00	0.00	0.00	
15,600.00	90.00	180.00	10,230.00	-5,589.95	234.98	5,589.95	0.00	0.00	0.00	
15,700.00	90.00	180.00	10,230.00	-5,689.95	234.98	5,689.95	0.00	0.00	0.00	
15,800.00	90.00	180.00	10,230.00	-5,789.95	234.99	5,789.95	0.00	0.00	0.00	
15,900.00	90.00	180.00	10,230.00	-5,889.95	235.00	5,889.95	0.00	0.00	0.00	
16,000.00	90.00	180.00	10,230.00	-5,989.95	235.00	5,989.95	0.00	0.00	0.00	
16,100.00	90.00	180.00	10,230.00	-6,089.95	235.01	6,089.95	0.00	0.00	0.00	
16,200.00	90.00	180.00	10,230.00	-6,189.95	235.02	6,189.95	0.00	0.00	0.00	
16,300.00	90.00	180.00	10,230.00	-6,289.95	235.02	6,289.95	0.00	0.00	0.00	
16,400.00	90.00	180.00	10,230.00	-6,389.95	235.03	6,389.95	0.00	0.00	0.00	
16,500.00	90.00	180.00	10,230.00	-6,489.95	235.03	6,489.95	0.00	0.00	0.00	
16,600.00	90.00	180.00	10,230.00	-6,589.95	235.04	6,589.95	0.00	0.00	0.00	
16,700.00	90.00	180.00	10,230.00	-6,689.95	235.05	6,689.95	0.00	0.00	0.00	
16,800.00	90.00	180.00	10,230.00	-6,789.95	235.05	6,789.95	0.00	0.00	0.00	
16,900.00	90.00	180.00	10,230.00	-6,889.95	235.06	6,889.95	0.00	0.00	0.00	
17,000.00	90.00	180.00	10,230.00	-6,989.95	235.07	6,989.95	0.00	0.00	0.00	
17,100.00	90.00	180.00	10,230.00	-7,089.95	235.07	7,089.95	0.00	0.00	0.00	
17,200.00	90.00	180.00	10,230.00	-7,189.95	235.08	7,189.95	0.00	0.00	0.00	
17,300.00	90.00	180.00	10,230.00	-7,289.95	235.08	7,289.95	0.00	0.00	0.00	
17,400.00	90.00	180.00	10,230.00	-7,389.95	235.09	7,389.95	0.00	0.00	0.00	
17,500.00	90.00	180.00	10,230.00	-7,489.95	235.10	7,489.95	0.00	0.00	0.00	

Database:	WellPlanner1	Local Co-ordinate Reference:	Well Van Doo Dah 21-33 Fed Com 233H
Company:	Devon Energy Corp.	TVD Reference:	RKB @ 3405.00usft
Project:	Lea County, NM (NAD83)	MD Reference:	RKB @ 3405.00usft
Site:	Van Doo Dah/Marwari	North Reference:	Grid
Well:	Van Doo Dah 21-33 Fed Com 233H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim A		

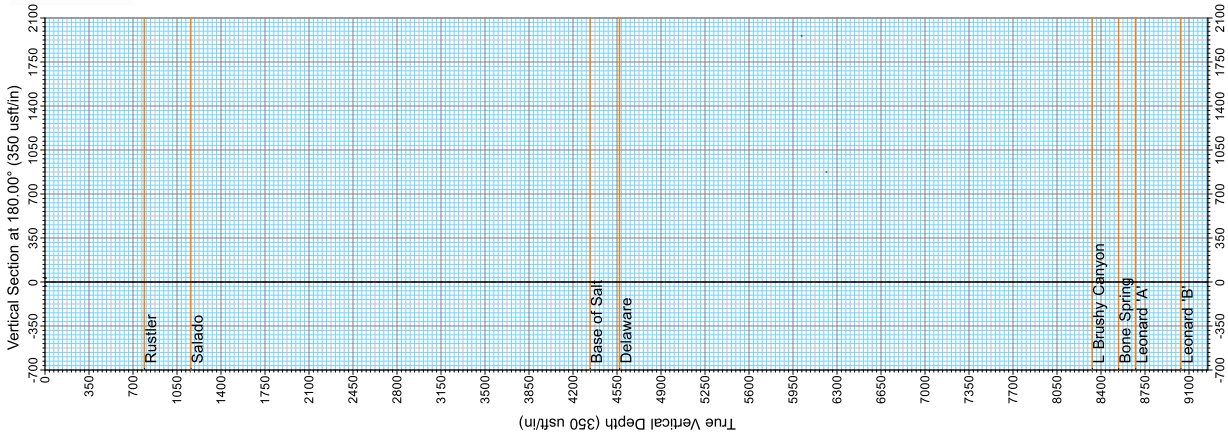
Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
17,600.00	90.00	180.00	10,230.00	-7,589.95	235.10	7,589.95	0.00	0.00	0.00	
17,700.00	90.00	180.00	10,230.00	-7,689.95	235.11	7,689.95	0.00	0.00	0.00	
17,800.00	90.00	180.00	10,230.00	-7,789.95	235.12	7,789.95	0.00	0.00	0.00	
17,900.00	90.00	180.00	10,230.00	-7,889.95	235.12	7,889.95	0.00	0.00	0.00	
18,000.00	90.00	180.00	10,230.00	-7,989.95	235.13	7,989.95	0.00	0.00	0.00	
18,100.00	90.00	180.00	10,230.00	-8,089.95	235.13	8,089.95	0.00	0.00	0.00	
18,200.00	90.00	180.00	10,230.00	-8,189.95	235.14	8,189.95	0.00	0.00	0.00	
18,300.00	90.00	180.00	10,230.00	-8,289.95	235.15	8,289.95	0.00	0.00	0.00	
18,400.00	90.00	180.00	10,230.00	-8,389.95	235.15	8,389.95	0.00	0.00	0.00	
18,500.00	90.00	180.00	10,230.00	-8,489.95	235.16	8,489.95	0.00	0.00	0.00	
18,600.00	90.00	180.00	10,230.00	-8,589.95	235.17	8,589.95	0.00	0.00	0.00	
18,700.00	90.00	180.00	10,230.00	-8,689.95	235.17	8,689.95	0.00	0.00	0.00	
18,800.00	90.00	180.00	10,230.00	-8,789.95	235.18	8,789.95	0.00	0.00	0.00	
18,900.00	90.00	180.00	10,230.00	-8,889.95	235.18	8,889.95	0.00	0.00	0.00	
19,000.00	90.00	180.00	10,230.00	-8,989.95	235.19	8,989.95	0.00	0.00	0.00	
19,100.00	90.00	180.00	10,230.00	-9,089.95	235.20	9,089.95	0.00	0.00	0.00	
19,200.00	90.00	180.00	10,230.00	-9,189.95	235.20	9,189.95	0.00	0.00	0.00	
19,300.00	90.00	180.00	10,230.00	-9,289.95	235.21	9,289.95	0.00	0.00	0.00	
19,400.00	90.00	180.00	10,230.00	-9,389.95	235.22	9,389.95	0.00	0.00	0.00	
19,500.00	90.00	180.00	10,230.00	-9,489.95	235.22	9,489.95	0.00	0.00	0.00	
19,600.00	90.00	180.00	10,230.00	-9,589.95	235.23	9,589.95	0.00	0.00	0.00	
19,700.00	90.00	180.00	10,230.00	-9,689.95	235.23	9,689.95	0.00	0.00	0.00	
19,800.00	90.00	180.00	10,230.00	-9,789.95	235.24	9,789.95	0.00	0.00	0.00	
19,900.00	90.00	180.00	10,230.00	-9,889.95	235.25	9,889.95	0.00	0.00	0.00	
20,000.00	90.00	180.00	10,230.00	-9,989.95	235.25	9,989.95	0.00	0.00	0.00	
20,100.00	90.00	180.00	10,230.00	-10,089.95	235.26	10,089.95	0.00	0.00	0.00	
20,200.00	90.00	180.00	10,230.00	-10,189.95	235.27	10,189.95	0.00	0.00	0.00	
20,300.00	90.00	180.00	10,230.00	-10,289.95	235.27	10,289.95	0.00	0.00	0.00	
20,400.00	90.00	180.00	10,230.00	-10,389.95	235.28	10,389.95	0.00	0.00	0.00	
20,424.17	90.00	180.00	10,230.00	-10,414.12	235.28	10,414.12	0.00	0.00	0.00	
TD at 20424.17										

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
790.00	790.00	Rustler		0.00		
1,160.00	1,160.00	Salado		0.00		
4,336.00	4,336.00	Base of Salt		0.00		
4,570.00	4,570.00	Delaware		0.00		
8,330.00	8,330.00	L Brushy Canyon		0.00		
8,540.00	8,540.00	Bone Spring		0.00		
8,675.00	8,675.00	Leonard 'A'		0.00		
9,035.00	9,035.00	Leonard 'B'		0.00		
9,280.00	9,280.00	Leonard 'C'		0.00		
9,545.00	9,545.00	1st BSPG Sand		0.00		
10,063.16	10,030.00	2nd BSPG Lime		0.00		
10,557.04	10,230.00	2nd BSPG Sand		0.00		



Database:	WellPlanner1	Local Co-ordinate Reference:	Well Van Doo Dah 21-33 Fed Com 233H
Company:	Devon Energy Corp.	TVD Reference:	RKB @ 3405.00usft
Project:	Lea County, NM (NAD83)	MD Reference:	RKB @ 3405.00usft
Site:	Van Doo Dah/Marwari	North Reference:	Grid
Well:	Van Doo Dah 21-33 Fed Com 233H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Prelim A		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,657.04	9,657.04	0.00	0.00	Start Build 10.00
10,557.04	10,230.00	-554.71	143.46	Start DLS 2.00 TFO 90.00
11,281.86	10,230.00	-1,271.81	234.71	Start 9142.31 hold at 11281.86 MD
20,424.17	10,230.00	-10,414.12	235.28	TD at 20424.17



Devon Energy Corp.
Lea County, NM (NAD83)
Van Doo Dah/Marwari
Van Doo Dah 21-33 Fed Com 233H
Prelim A



RKB Elevation: RKB @ 3405.00usft

	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
	0.00	0.00	404059.28	742415.57	32° 6' 33.0230 N	103° 41' 2.0574 W	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
BHL - VDD 233H	10230.00	-10414.12	235.28	393645.16	742650.85

True Vertical Depth (350 usf/in)

SECTION DETAILS

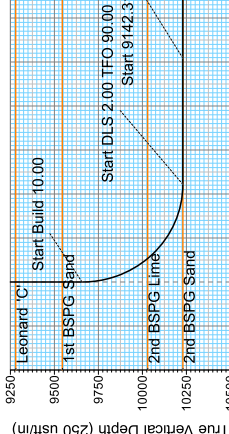
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dip	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	9657.04	0.00	0.00	9657.04	0.00	0.00	0.00	0.00	
3	10557.04	90.00	165.50	10230.00	-554.71	143.46	10.00	554.71	
4	11281.86	90.00	180.00	10230.00	-1271.81	234.71	2.00	1271.81	
5	20424.17	90.00	180.00	10230.00	-10414.12	235.28	0.00	10414.12	BHL - VDD 233H

FORMATION TOP DETAILS

TVDPath	Formation
790.00	Rustler
1160.00	Salado
4336.00	Base of Salt
4570.00	Delaware
8330.00	L Brushy Canyon
8330.00	Bone Spring
8675.00	Leonard 'A'
8675.00	Leonard 'B'
9035.00	Leonard 'C'
9280.00	1st BSPG Sand
9545.00	2nd BSPG Sand
10030.00	10063.16
10230.00	10557.04

CASING DETAILS

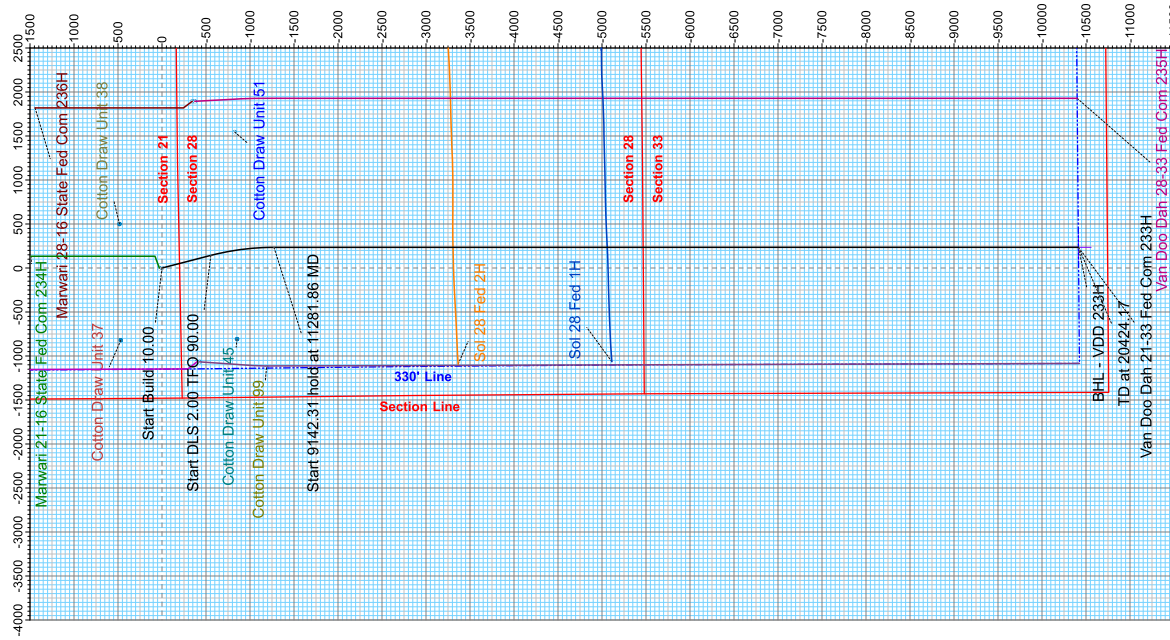
No casing data is available



36" x 48"

Vertical Section at 180.00° (250 usf/in)

West(-)/East(+) (500 usf/in)



West(-)/East(+) (500 usf/in)

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone
Local Origin: Well Van Doo Dah 21-33 233H, Grid North
Latitude: 32° 6' 33.0230 N
Longitude: 103° 41' 2.0574 W
Grid East: 742415.57
Grid North: 404059.28
Scale Factor: 1.000
Geomagnetic Model: HDGM
Sample Date: 23-Feb-18
Magnetic Declination: 6.80°
Dip Angle from Horizontal: 59.78°
Magnetic Field Strength: 47922.30nT
To convert a Magnetic Direction to a Grid Direction, Add 6.45°
To convert a Magnetic Direction to a True Direction, Add 6.80° East
To convert a True Direction to a Grid Direction, Subtract 0.35°

BHL - VDD 233H

TD at 20424.17