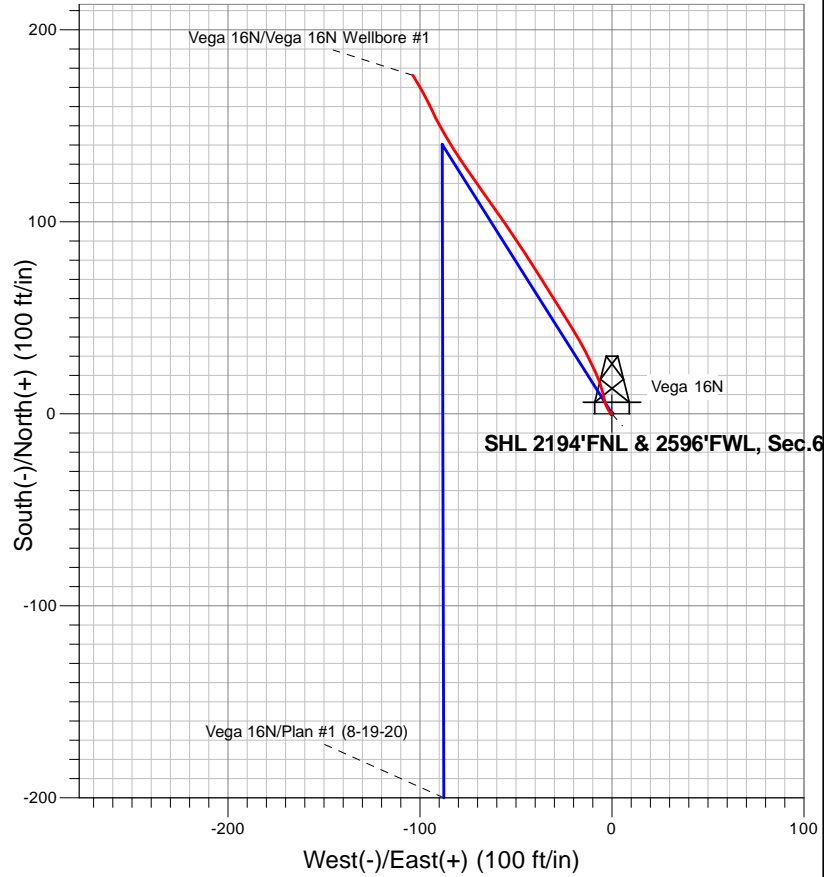
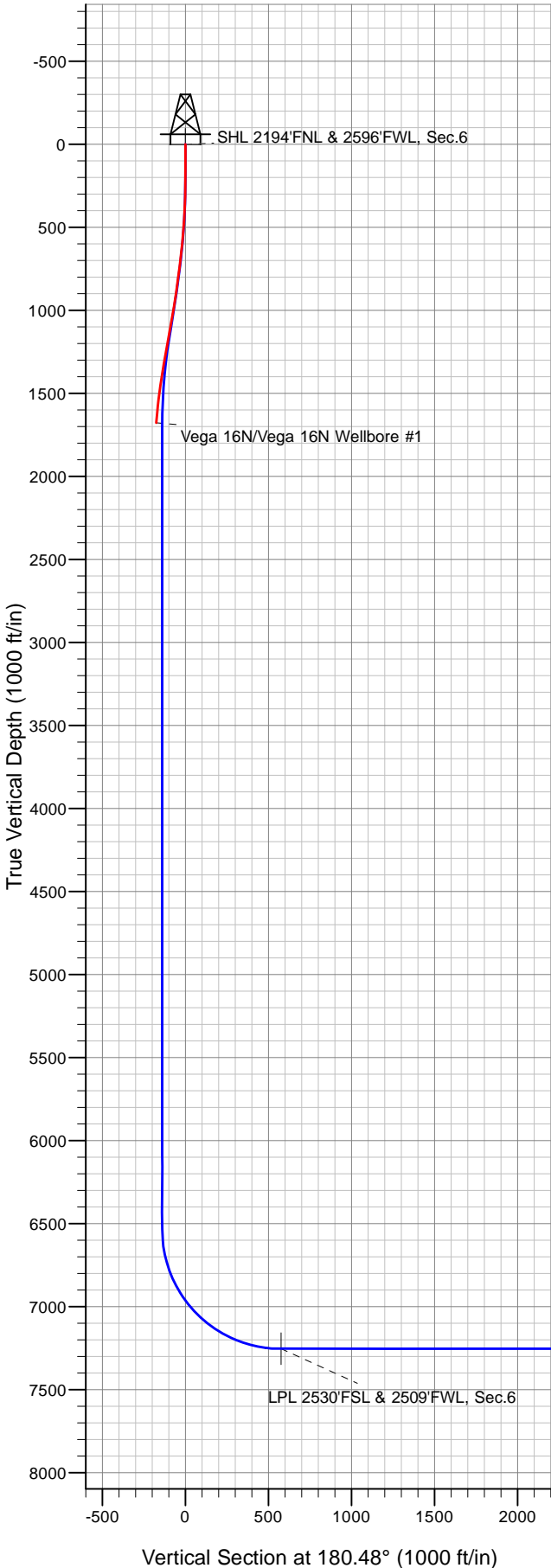


## PDC Energy Inc. DJ Basin



### LEGEND

- ✕ Vega 16N, Vega 16N Wellbore #1, Plan #1 (8-19-20) V0
- ✕ Vega 16N Wellbore #1

## Final Survey Plot

Project: SEC.6-T3N-R65W  
 Site: Vega 3N65W06 1-16 Pad  
 Well: Vega 16N  
 Plan: Vega 16N Wellbore #1



## **PDC Energy Inc. DJ Basin**

**SEC.6-T3N-R65W**

**Vega 3N65W06 1-16 Pad**

**Vega 16N**

**Vega 16N Wellbore #1**

**Design: Vega 16N Wellbore #1**

## **Standard Survey Report**

**02 December, 2020**

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Vega 16N
<b>Project:</b>	SEC.6-T3N-R65W	<b>TVD Reference:</b>	WELL @ 4988.0ft (Original Well Elev)
<b>Site:</b>	Vega 3N65W06 1-16 Pad	<b>MD Reference:</b>	WELL @ 4988.0ft (Original Well Elev)
<b>Well:</b>	Vega 16N	<b>North Reference:</b>	True
<b>Wellbore:</b>	Vega 16N Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Vega 16N Wellbore #1	<b>Database:</b>	US_EDM

<b>Project</b>	SEC.6-T3N-R65W		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site		Vega 3N65W06 1-16 Pad							
Site Position:		Northing:	1,336,847.37	usft	Latitude:	40.255324			
From:	Lat/Long	Easting:	3,221,506.77	usft	Longitude:	-104.706356			
Position Uncertainty:		0.0	ft	Slot Radius:	13-3/16	"	Grid Convergence:	0.51	°

Well	Vega 16N					
Well Position	+N/-S	0.0 ft	Northing:	1,336,967.31 usft	Latitude:	40.255653
	+E/-W	0.0 ft	Easting:	3,221,505.25 usft	Longitude:	-104.706358
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,975.0 ft

<b>Wellbore</b>	Vega 16N Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	08/19/2020	7.98	66.62	52,045

<b>Design</b>	Vega 16N Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	180.48	

<b>Survey Program</b>	<b>Date</b>	12/02/2020			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
148.0	1,694.0	Survey #1 (Vega 16N Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
148.0	0.00	0.00	148.0	0.0	0.0	0.0	0.00	0.00	0.00	
240.0	0.79	305.23	240.0	0.4	-0.5	-0.4	0.86	0.86	0.00	
331.0	1.93	326.85	331.0	2.0	-1.9	-2.0	1.35	1.25	23.76	
450.0	3.43	346.36	449.8	7.1	-3.8	-7.1	1.46	1.26	16.39	
540.0	4.92	344.43	539.6	13.5	-5.5	-13.4	1.66	1.66	-2.14	
629.0	6.95	335.28	628.1	22.1	-8.8	-22.0	2.51	2.28	-10.28	
718.0	7.65	332.65	716.4	32.2	-13.7	-32.1	0.87	0.79	-2.96	
807.0	8.79	328.96	804.5	43.3	-20.0	-43.1	1.41	1.28	-4.15	
897.0	10.64	327.55	893.2	56.2	-28.0	-56.0	2.07	2.06	-1.57	

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Vega 16N
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<b>Well:</b>	Vega 16N	<b>North Reference:</b>	True
<b>Wellbore:</b>	Vega 16N Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Vega 16N Wellbore #1	<b>Database:</b>	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
985.0	10.90	327.90	979.6	70.1	-36.7	-69.8	0.30	0.30	0.40
1,071.0	11.52	327.20	1,064.0	84.2	-45.7	-83.8	0.74	0.72	-0.81
1,161.0	11.96	325.79	1,152.1	99.5	-55.8	-99.0	0.58	0.49	-1.57
1,251.0	12.49	323.51	1,240.1	115.0	-66.9	-114.4	0.80	0.59	-2.53
1,340.0	11.78	326.50	1,327.1	130.3	-77.6	-129.7	1.07	-0.80	3.36
1,430.0	10.64	329.66	1,415.4	145.2	-86.9	-144.4	1.44	-1.27	3.51
1,520.0	8.27	334.93	1,504.1	158.2	-93.8	-157.4	2.80	-2.63	5.86
1,634.0	6.07	329.13	1,617.2	170.8	-100.4	-169.9	2.03	-1.93	-5.09
1,694.0	6.07	329.13	1,676.9	176.2	-103.6	-175.4	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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