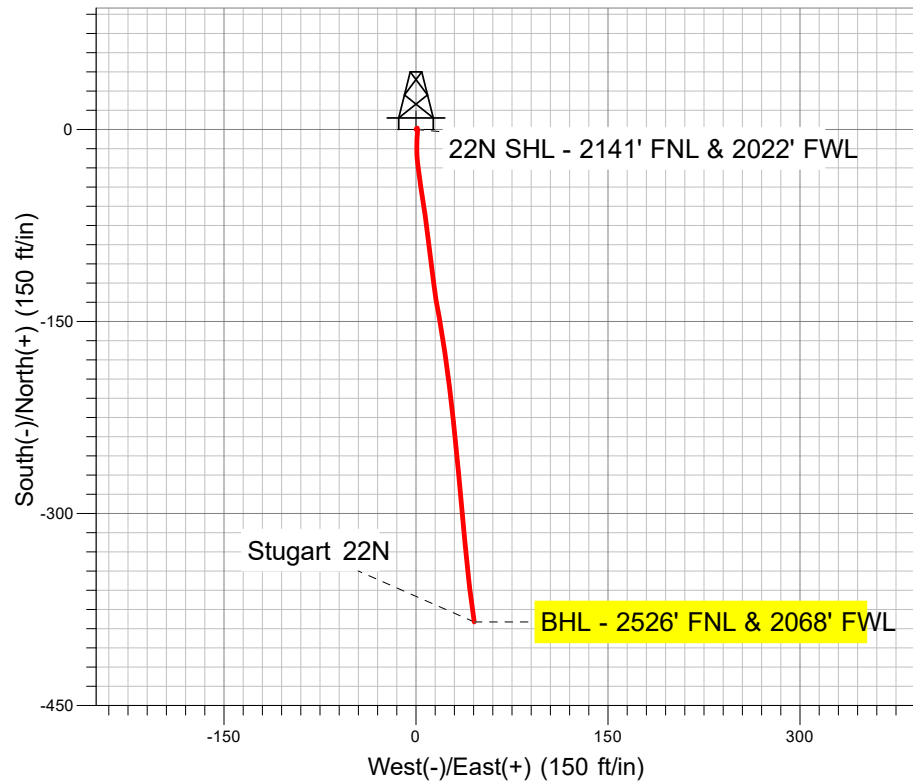
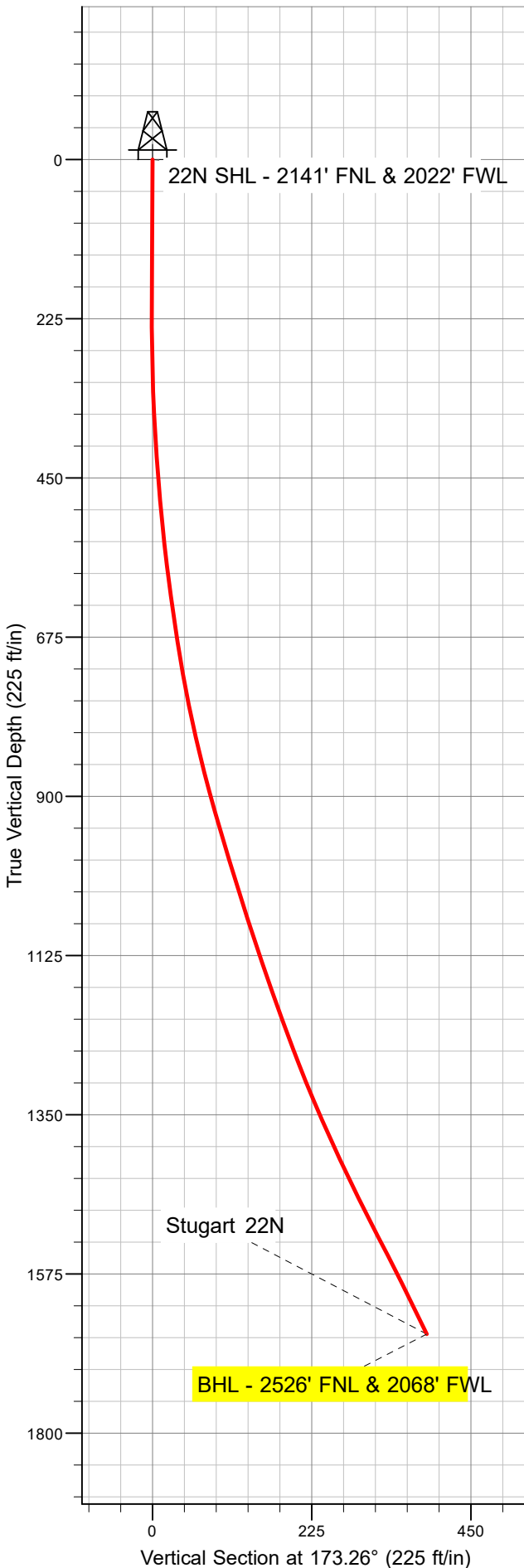




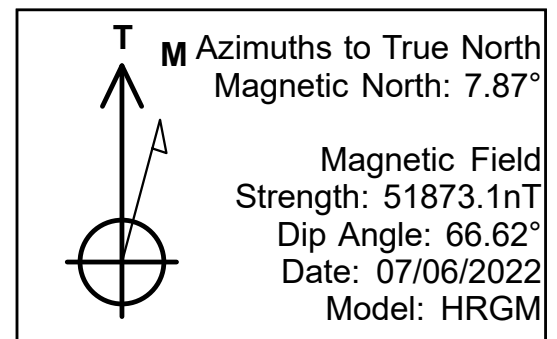
Well Name: Stugart 22N  
Surface Location: Stugart State 6-20  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
Ground Elevation: 4885.0  
+N/-S +E/-W Northing Easting Latitude Longitude  
0.0 0.0 1384366.39 3193360.40 40.38642 -104.80588  
Ensign 122 - RKB 13' WELL @ 4898.0ft (Ensign 122 - RKB 13')

## PDC Energy Inc. DJ Basin

# Final Survey Plot



Project: SEC.20-T5N-R66W  
Site: Stugart State 6-20  
Well: Stugart 22N  
Plan: Stugart 22N





# **PDC Energy Inc. DJ Basin**

**SEC.20-T5N-R66W**

**Stugart State 6-20**

**Stugart 22N**

**Stugart 22N**

**Design: Stugart 22N**

## **Standard Survey Report**

**26 July, 2022**

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Stugart 22N
<b>Project:</b>	SEC.20-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4898.0ft (Ensign 122 - RKB 13')
<b>Site:</b>	Stugart State 6-20	<b>MD Reference:</b>	WELL @ 4898.0ft (Ensign 122 - RKB 13')
<b>Well:</b>	Stugart 22N	<b>North Reference:</b>	True
<b>Wellbore:</b>	Stugart 22N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Stugart 22N	<b>Database:</b>	US_EDM

<b>Project</b>	SEC.20-T5N-R66W		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site	Stugart State 6-20				
Site Position:		Northing:	1,384,531.67 usft	Latitude:	40.386863
From:	Lat/Long	Easting:	3,193,390.47 usft	Longitude:	-104.805753
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.45 °

Well	Stugart 22N					
Well Position	+N/-S	0.0 ft	Northing:	1,384,366.39 usf	Latitude:	40.38642
	+E/-W	0.0 ft	Easting:	3,193,360.40 usf	Longitude:	-104.80588
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,885.0 ft

<b>Wellbore</b>	Stugart 22N				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HRGM	07/06/2022	7.87	66.62	51,873.11787086

<b>Design</b>	Stugart 22N				
<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	173.26	

<b>Survey Program</b>	<b>Date</b>	07/26/2022			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
145.0	1,728.0	Survey #1 (Stugart 22N)	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	
145.0	0.79	23.87	145.0	0.9	0.4	-0.9	0.54	0.54	0.00	
237.0	0.35	134.78	237.0	1.3	0.9	-1.2	1.06	-0.48	120.55	
328.0	2.20	178.55	328.0	-0.6	1.1	0.8	2.16	2.03	48.10	
444.0	4.57	185.06	443.8	-7.5	0.8	7.5	2.07	2.04	5.61	
531.0	5.98	179.08	530.4	-15.5	0.5	15.4	1.74	1.62	-6.87	
618.0	7.83	173.63	616.8	-25.9	1.2	25.8	2.25	2.13	-6.26	
702.0	9.23	172.23	699.8	-38.2	2.8	38.3	1.68	1.67	-1.67	
787.0	11.87	171.17	783.4	-53.6	5.1	53.9	3.11	3.11	-1.25	
872.0	14.33	172.58	866.2	-72.7	7.8	73.1	2.92	2.89	1.66	

<b>Company:</b>	PDC Energy Inc. DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Stugart 22N
<b>Project:</b>	SEC.20-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4898.0ft (Ensign 122 - RKB 13')
<b>Site:</b>	Stugart State 6-20	<b>MD Reference:</b>	WELL @ 4898.0ft (Ensign 122 - RKB 13')
<b>Well:</b>	Stugart 22N	<b>North Reference:</b>	True
<b>Wellbore:</b>	Stugart 22N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Stugart 22N	<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)	
958.0	16.53	172.75	949.1	-95.4	10.7	96.0	2.56	2.56	0.20	
1,044.0	17.32	172.75	1,031.3	-120.2	13.8	121.0	0.92	0.92	0.00	
1,129.0	18.55	169.94	1,112.2	-146.1	17.8	147.2	1.77	1.45	-3.31	
1,217.0	19.52	171.52	1,195.4	-174.4	22.4	175.9	1.25	1.10	1.80	
1,304.0	21.19	172.93	1,277.0	-204.4	26.5	206.1	2.00	1.92	1.62	
1,389.0	23.83	173.98	1,355.5	-236.7	30.2	238.6	3.14	3.11	1.24	
1,476.0	25.41	175.39	1,434.6	-272.8	33.5	274.9	1.94	1.82	1.62	
1,562.0	27.61	174.51	1,511.5	-311.1	36.9	313.2	2.60	2.56	-1.02	
1,647.0	26.56	173.63	1,587.2	-349.6	40.9	351.9	1.32	-1.24	-1.04	
1,668.0	25.85	172.40	1,606.0	-358.8	42.0	361.2	4.26	-3.38	-5.86	
1,728.0	25.85	172.40	1,660.0	-384.7	45.5	387.4	0.00	0.00	0.00	
BHL - 2526' FNL & 2068' FWL										

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,728.0	1,660.0	-384.7	45.5	BHL - 2526' FNL & 2068' FWL	

Checked By: _____	Approved By: _____	Date: _____
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