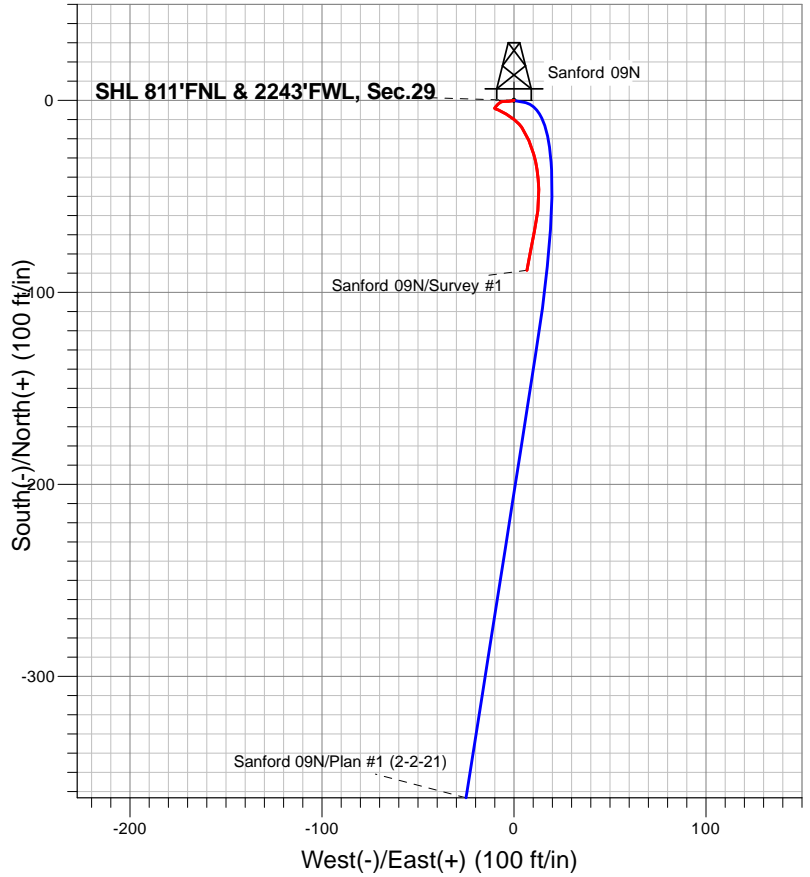


PDC Energy Inc. DJ Basin

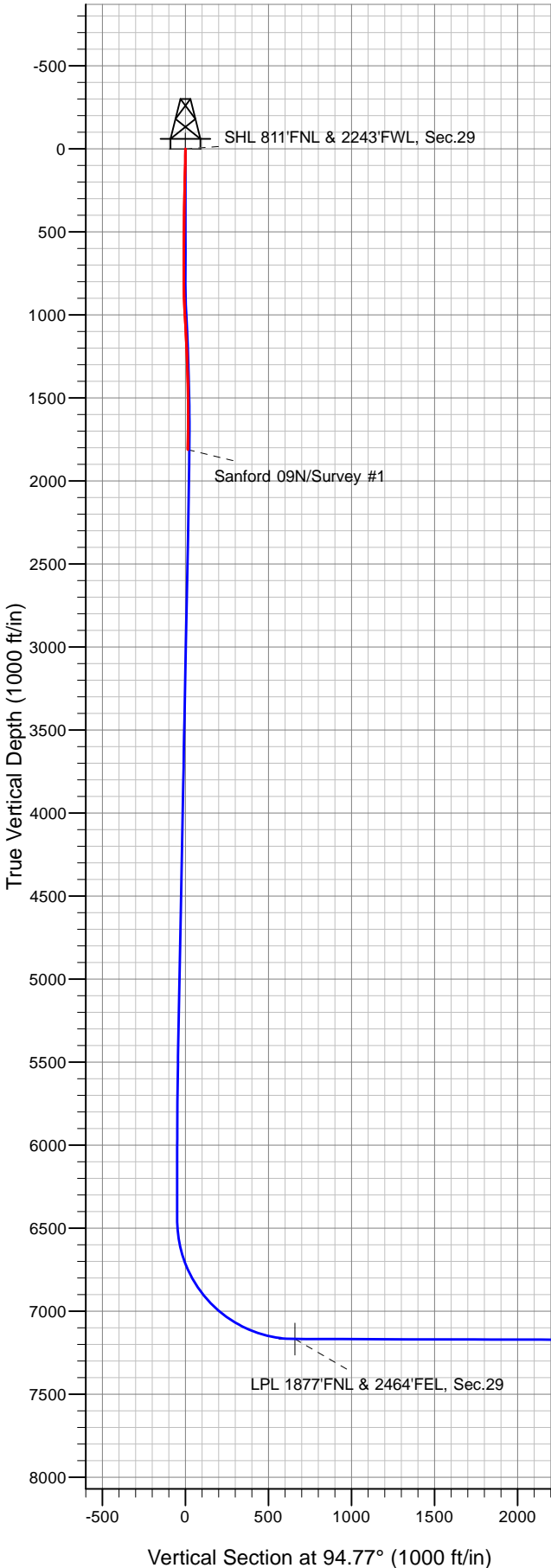


LEGEND

- ◆ Sanford 09N, Sanford 09N Wellbore #1, Plan #1 (2-2-21) V0
- Sanford 09N Wellbore #1
- Survey #1

Final Survey Plot

Project: SEC.29-T5N-R66W
 Site: Sanford 5N65W29 1-12 Pad Sec.29-T5N-R66W
 Well: Sanford 09N
 Plan: Sanford 09N Wellbore #1





PDC Energy Inc. DJ Basin

SEC.29-T5N-R66W

Sanford 5N65W29 1-12 Pad Sec.29-T5N-R66W

Sanford 09N

Sanford 09N Wellbore #1

Survey: Survey #1

Standard Survey Report

01 March, 2021

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Sanford 09N
Project:	SEC.29-T5N-R66W	TVD Reference:	WELL @ 4918.0ft (Ensign 122 RKB - 13')
Site:	Sanford 5N65W29 1-12 Pad Sec.29-T5N-R66W	MD Reference:	WELL @ 4918.0ft (Ensign 122 RKB - 13')
Well:	Sanford 09N	North Reference:	True
Wellbore:	Sanford 09N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Sanford 09N Wellbore #1	Database:	US_EDM

Project	SEC.29-T5N-R66W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Sanford 5N65W29 1-12 Pad Sec.29-T5N-R66W				
Site Position:		Northing:	1,380,603.61 usft	Latitude:	40.376075
From:	Lat/Long	Easting:	3,193,654.99 usft	Longitude:	-104.804914
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.45 °

Well	Sanford 09N					
Well Position	+N/-S	0.0 ft	Northing:	1,380,403.62 usft	Latitude:	40.375526
	+E/-W	0.0 ft	Easting:	3,193,657.95 usft	Longitude:	-104.804909
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,905.0 ft

Wellbore	Sanford 09N Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	02/02/2021	8.07	66.70	52,030

Design	Sanford 09N Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	94.77	

Survey Program	Date	03/01/2021			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
87.0	1,818.0	Survey #1 (Sanford 09N Wellbore #1)	MWD	MWD - Standard	

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
87.0	1.32	260.67	87.0	-0.2	-1.0	-1.0	1.52	1.52	0.00
178.0	1.41	266.29	178.0	-0.4	-3.1	-3.1	0.18	0.10	6.18
269.0	1.49	265.59	268.9	-0.6	-5.4	-5.4	0.09	0.09	-0.77
361.0	0.70	232.89	360.9	-1.0	-7.1	-7.0	1.06	-0.86	-35.54
447.0	0.79	230.96	446.9	-1.7	-8.0	-7.8	0.11	0.10	-2.24
536.0	0.79	222.17	535.9	-2.5	-8.8	-8.6	0.14	0.00	-9.88
626.0	0.79	220.24	625.9	-3.5	-9.7	-9.3	0.03	0.00	-2.14
715.0	0.18	184.91	714.9	-4.1	-10.1	-9.7	0.73	-0.69	-39.70
804.0	0.26	101.76	803.9	-4.3	-9.9	-9.5	0.33	0.09	-93.43

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Sanford 09N
Project:	SEC.29-T5N-R66W	TVD Reference:	WELL @ 4918.0ft (Ensign 122 RKB - 13')
Site:	Sanford 5N65W29 1-12 Pad Sec.29-T5N-R66W	MD Reference:	WELL @ 4918.0ft (Ensign 122 RKB - 13')
Well:	Sanford 09N	North Reference:	True
Wellbore:	Sanford 09N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Sanford 09N Wellbore #1	Database:	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)	
893.0	1.85	112.84	892.9	-4.9	-8.4	-7.9	1.79	1.79	12.45	
976.0	3.17	118.99	975.8	-6.5	-5.1	-4.6	1.62	1.59	7.41	
1,065.0	4.40	126.72	1,064.6	-9.7	-0.2	0.6	1.49	1.38	8.69	
1,154.0	4.48	146.23	1,153.3	-14.6	4.4	5.6	1.69	0.09	21.92	
1,244.0	4.57	157.13	1,243.1	-20.9	7.8	9.5	0.96	0.10	12.11	
1,333.0	5.10	163.64	1,331.7	-27.9	10.3	12.6	0.86	0.60	7.31	
1,419.0	5.98	171.02	1,417.3	-36.0	12.1	15.0	1.31	1.02	8.58	
1,509.0	7.30	178.40	1,506.7	-46.4	12.9	16.8	1.74	1.47	8.20	
1,599.0	6.86	187.37	1,596.1	-57.4	12.4	17.1	1.32	-0.49	9.97	
1,685.0	7.91	190.88	1,681.3	-68.3	10.6	16.3	1.33	1.22	4.08	
1,758.0	9.23	190.88	1,753.5	-79.0	8.6	15.1	1.81	1.81	0.00	
1,818.0	9.23	190.88	1,812.7	-88.5	6.8	14.1	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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