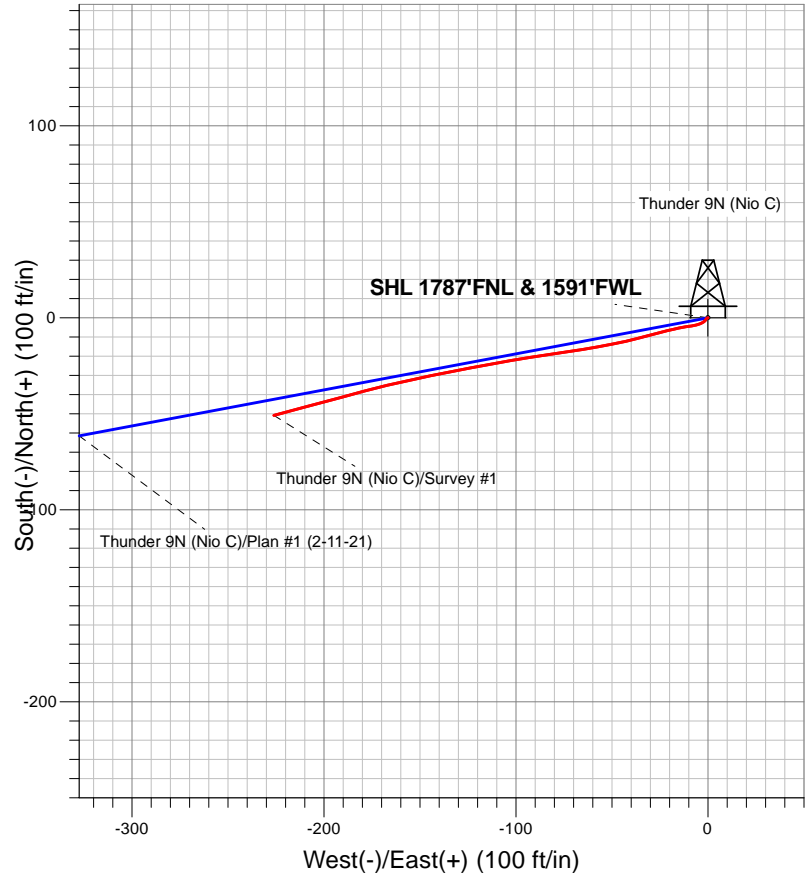


PDC Energy Inc. DJ Basin

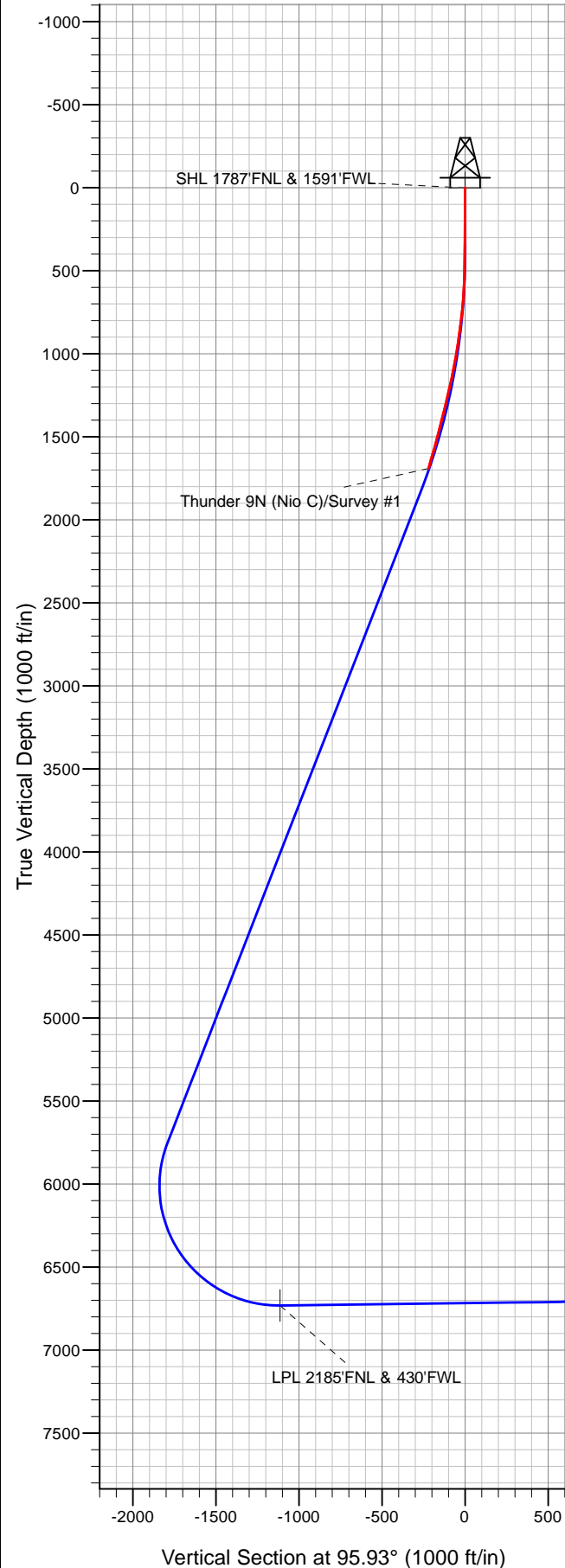


LEGEND

- Thunder 9N (Nio C), Thunder 9N Wellbore #1, Plan #1 (2-11-21) VO
- Thunder 9N Wellbore #1
- Survey #1

Final Survey Plot

Project: SEC.3-T5N-R64W
 Site: Thunder 5N64W02 1-10 Pad Sec.3-T5N-R64W
 Well: Thunder 9N (Nio C)
 Plan: Thunder 9N Wellbore #1





PDC Energy Inc. DJ Basin

SEC.3-T5N-R64W

Thunder 5N64W02 1-10 Pad Sec.3-T5N-R64W

Thunder 9N (Nio C)

Thunder 9N Wellbore #1

Survey: Survey #1

Standard Survey Report

02 March, 2021

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Thunder 9N (Nio C)
Project:	SEC.3-T5N-R64W	TVD Reference:	WELL @ 4634.0ft (Ensign 122 RKB - 13')
Site:	Thunder 5N64W02 1-10 Pad Sec.3-T5N-R64W	MD Reference:	WELL @ 4634.0ft (Ensign 122 RKB - 13')
Well:	Thunder 9N (Nio C)	North Reference:	True
Wellbore:	Thunder 9N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Thunder 9N Wellbore #1	Database:	US_EDM

Project	SEC.3-T5N-R64W, Weld County, Colorado		
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	Thunder 5N64W02 1-10 Pad Sec.3-T5N-R64W				
Site Position:		Northing:	1,401,281.16 usft	Latitude:	40.430948
From:	Lat/Long	Easting:	3,267,229.64 usft	Longitude:	-104.540047
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.62 °

Well	Thunder 9N (Nio C)					
Well Position	+N/-S	0.0 ft	Northing:	1,401,161.12 usft	Latitude:	40.430619
	+E/-W	0.0 ft	Easting:	3,267,230.44 usft	Longitude:	-104.540049
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,621.0 ft

Wellbore	Thunder 9N Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	02/11/2021	7.70	66.82	51,972

Design	Thunder 9N 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 (°)	
	6,674.0	0.0	0.0	95.93	

Survey Program	Date	03/02/2021			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
86.0	1,717.0	Survey #1 (Thunder 9N 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
86.0	0.35	253.97	86.0	-0.1	-0.3	-0.2	0.41	0.41	0.00
177.0	0.44	230.59	177.0	-0.4	-0.8	-0.7	0.20	0.10	-25.69
266.0	0.44	198.25	266.0	-0.9	-1.2	-1.1	0.28	0.00	-36.34
361.0	0.26	226.90	361.0	-1.4	-1.4	-1.3	0.26	-0.19	30.16
450.0	0.97	230.59	450.0	-2.0	-2.2	-1.9	0.80	0.80	4.15
540.0	2.11	246.59	540.0	-3.2	-4.3	-3.9	1.34	1.27	17.78
626.0	3.69	261.53	625.8	-4.2	-8.5	-8.0	2.02	1.84	17.37
712.0	5.36	259.24	711.6	-5.4	-15.1	-14.5	1.95	1.94	-2.66
798.0	7.47	255.55	797.0	-7.5	-24.5	-23.6	2.50	2.45	-4.29

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Thunder 9N (Nio C)
Project:	SEC.3-T5N-R64W	TVD Reference:	WELL @ 4634.0ft (Ensign 122 RKB - 13')
Site:	Thunder 5N64W02 1-10 Pad Sec.3-T5N-R64W	MD Reference:	WELL @ 4634.0ft (Ensign 122 RKB - 13')
Well:	Thunder 9N (Nio C)	North Reference:	True
Wellbore:	Thunder 9N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Thunder 9N 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)
888.0	8.18	255.02	886.2	-10.6	-36.4	-35.1	0.79	0.79	-0.59
977.0	9.41	258.72	974.1	-13.7	-49.6	-47.9	1.52	1.38	4.16
1,066.0	11.17	260.83	1,061.7	-16.5	-65.3	-63.2	2.02	1.98	2.37
1,156.0	12.57	261.88	1,149.8	-19.2	-83.6	-81.1	1.57	1.56	1.17
1,241.0	13.54	260.12	1,232.6	-22.3	-102.5	-99.7	1.23	1.14	-2.07
1,330.0	14.25	259.42	1,319.0	-26.1	-123.5	-120.2	0.82	0.80	-0.79
1,415.0	14.68	258.54	1,401.3	-30.1	-144.4	-140.5	0.57	0.51	-1.04
1,505.0	15.39	256.43	1,488.2	-35.2	-167.2	-162.6	1.00	0.79	-2.34
1,594.0	16.97	254.50	1,573.7	-41.4	-191.2	-185.9	1.88	1.78	-2.17
1,657.0	17.15	255.02	1,633.9	-46.3	-209.0	-203.1	0.37	0.29	0.83
1,717.0	17.15	255.02	1,691.2	-50.9	-226.1	-219.6	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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