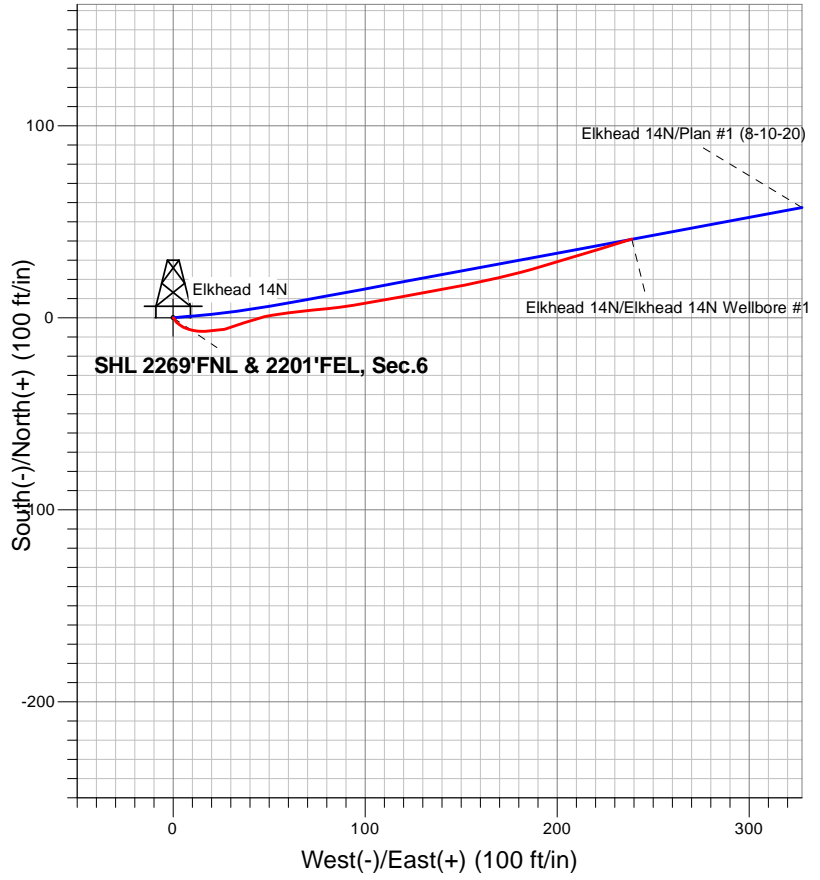
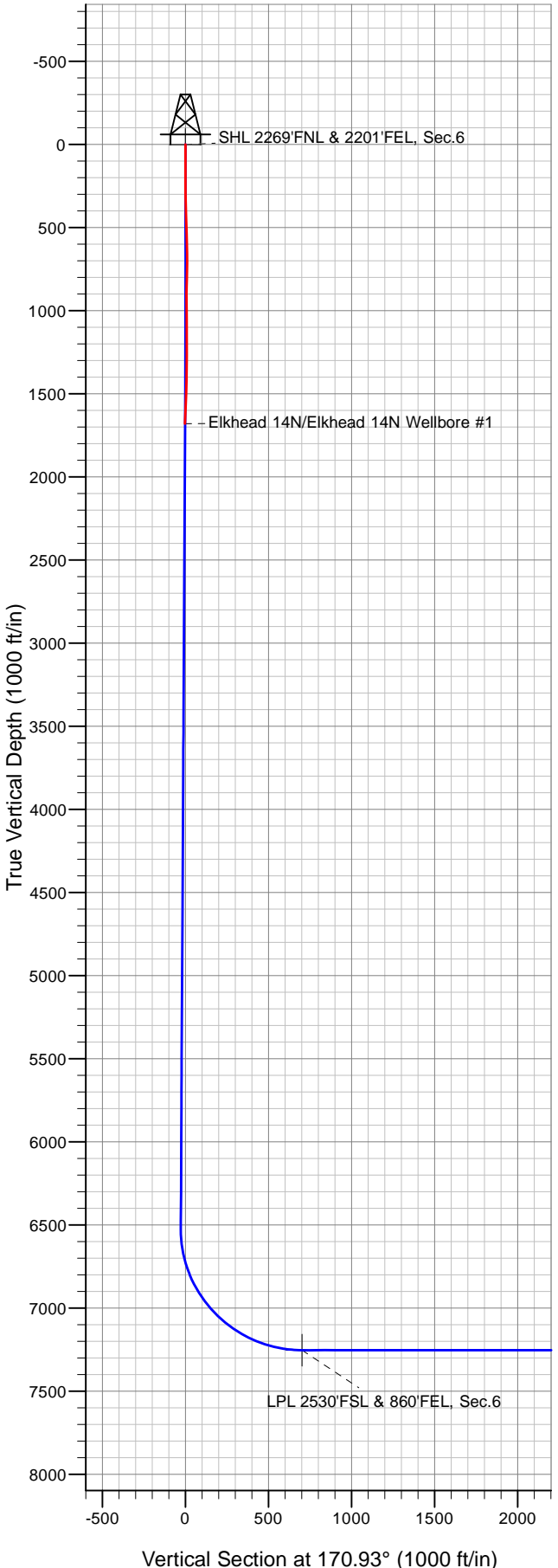


PDC Energy Inc. DJ Basin



LEGEND

- ▲ Elkhead 14N, Elkhead 14N Wellbore #1, Plan #1 (8-10-20) VO
- Elkhead 14N Wellbore #1

Final Survey Plot

Project: SEC.6-T3N-R65W
 Site: Elkhead 03N65W06 1-16 Pad
 Well: Elkhead 14N
 Plan: Elkhead 14N Wellbore #1



PDC Energy Inc. DJ Basin

SEC.6-T3N-R65W

Elkhead 03N65W06 1-16 Pad

Elkhead 14N

Elkhead 14N Wellbore #1

Design: Elkhead 14N Wellbore #1

Standard Survey Report

19 November, 2020



Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Elkhead 14N
Project:	SEC.6-T3N-R65W	TVD Reference:	WELL @ 4988.0ft (Original Well Elev)
Site:	Elkhead 03N65W06 1-16 Pad	MD Reference:	WELL @ 4988.0ft (Original Well Elev)
Well:	Elkhead 14N	North Reference:	True
Wellbore:	Elkhead 14N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Elkhead 14N Wellbore #1	Database:	US_EDM

Project	SEC.6-T3N-R65W		
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	Elkhead 03N65W06 1-16 Pad				
Site Position:		Northing:	1,336,763.37 usft	Latitude:	40.255081
From:	Lat/Long	Easting:	3,222,007.75 usft	Longitude:	-104.704564
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.51 °

Well	Elkhead 14N					
Well Position	+N/-S	0.0 ft	Northing:	1,336,898.32 usft	Latitude:	40.255452
	+E/-W	0.0 ft	Easting:	3,222,006.04 usft	Longitude:	-104.704566
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,975.0 ft

Wellbore	Elkhead 14N Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	08/10/2020	7.98	66.62	52,047

Design	Elkhead 14N 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 (°)	
	7,253.0	0.0	0.0	170.93	

Survey Program	Date	11/19/2020			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
147.0	1,708.0	Survey #1 (Elkhead 14N 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	
147.0	0.35	125.05	147.0	-0.3	0.4	0.3	0.24	0.24	0.00	
239.0	0.62	145.62	239.0	-0.8	0.9	1.0	0.34	0.29	22.36	
330.0	0.53	165.83	330.0	-1.6	1.3	1.8	0.24	-0.10	22.21	
450.0	2.55	126.46	449.9	-3.8	3.5	4.3	1.81	1.68	-32.81	
539.0	4.13	108.18	538.8	-5.9	8.2	7.2	2.12	1.78	-20.54	
628.0	6.68	91.65	627.4	-7.1	16.4	9.6	3.33	2.87	-18.57	
717.0	6.86	75.48	715.8	-5.9	26.7	10.1	2.14	0.20	-18.17	
806.0	7.21	68.98	804.1	-2.6	37.1	8.4	0.98	0.39	-7.30	
896.0	7.21	78.17	893.4	0.6	47.9	6.9	1.28	0.00	10.21	

Company:	PDC Energy Inc. DJ Basin	Local Co-ordinate Reference:	Well Elkhead 14N
Project:	SEC.6-T3N-R65W	TVD Reference:	WELL @ 4988.0ft (Original Well Elev)
Site:	Elkhead 03N65W06 1-16 Pad	MD Reference:	WELL @ 4988.0ft (Original Well Elev)
Well:	Elkhead 14N	North Reference:	True
Wellbore:	Elkhead 14N Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Elkhead 14N 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)	
985.0	8.79	82.86	981.5	2.6	60.1	6.9	1.92	1.78	5.27	
1,070.0	10.90	84.97	1,065.3	4.1	74.5	7.7	2.52	2.48	2.48	
1,161.0	13.63	80.93	1,154.2	6.6	93.7	8.3	3.14	3.00	-4.44	
1,250.0	14.60	79.70	1,240.5	10.2	115.1	8.1	1.14	1.09	-1.38	
1,339.0	15.21	79.52	1,326.5	14.3	137.6	7.5	0.69	0.69	-0.20	
1,429.0	16.44	78.29	1,413.1	19.1	161.7	6.7	1.42	1.37	-1.37	
1,519.0	17.06	74.25	1,499.3	25.2	186.9	4.5	1.47	0.69	-4.49	
1,648.0	16.53	72.49	1,622.8	35.9	222.6	-0.4	0.57	-0.41	-1.36	
1,708.0	16.53	72.49	1,680.3	41.0	238.9	-2.9	0.00	0.00	0.00	

Checked By: _____ Approved By: _____ Date: _____