

# **PDC ENERGY**

**WELD COUNTY, COLORADO  
NE SE SEC. 7 T6N R64W 6th P.M.  
CARLSON 7S-204**

**ORIGINAL WELLBORE**

**03 March, 2016**

**Plan: PROPOSAL #1**





Project: WELD COUNTY, COLORADO  
Site: NE SE SEC. 7 T6N R64W 6th P.M.  
Well: CARLSON 7S-204  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

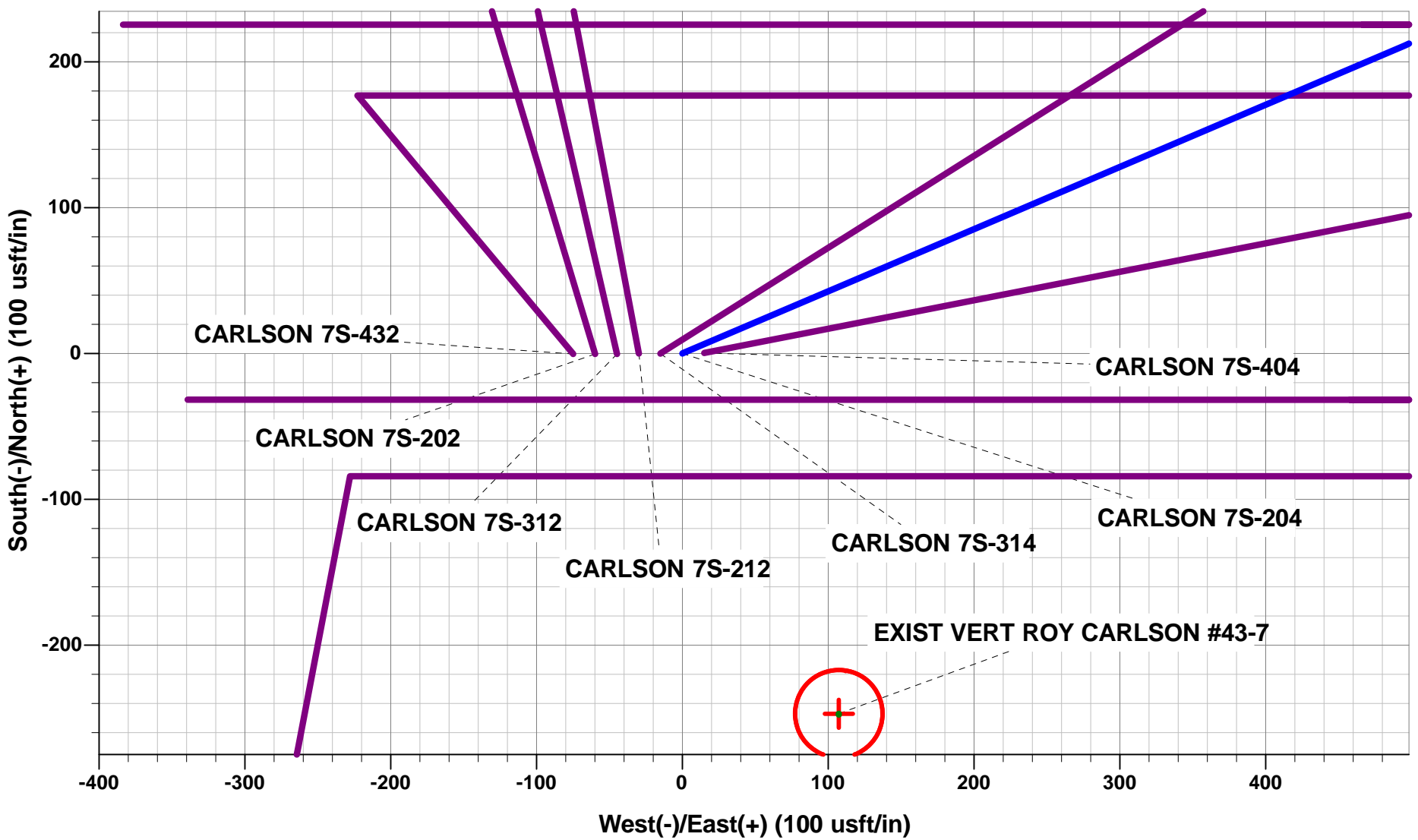


ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 2220ft FSL & 728ft FEL of Sec 7
1160.0	1160.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2011.3	2024.3	17.29	66.91	50.7	119.0	-112.3	129.4	EOB TO 17.29° INC
5284.5	5452.4	17.29	66.91	450.3	1056.1	-996.5	1148.0	END OF TANGENT
6135.8	6316.7	0.00	0.00	501.0	1175.1	-1108.8	1277.4	EOD TO VERTICAL
6165.8	6346.7	0.00	0.00	501.0	1175.1	-1108.8	1277.4	KOP (8°/100ft BUR)
6882.0	7471.8	90.00	270.00	501.0	458.9	-397.4	1993.6	7" ICP *NEW*: 2542.3ft FNL & 270ft FEL of Sec 7
6882.0	12203.7	90.00	270.00	501.0	-4273.1	4302.4	6725.6	BHL: 2505ft FNL & 0ft FWL of Sec 7

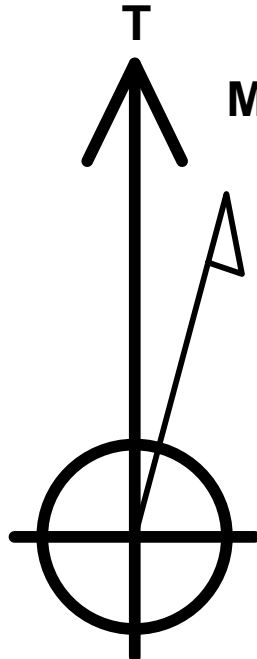
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - CARLSON 7S-204	6165.8	501.0	1175.1	40.500743	-104.582081
7" ICP *NEW* - CARLSON 7S-204	6882.0	501.0	458.9	40.500743	-104.584656
BHL - CARLSON 7S-204	6882.0	501.0	-4273.1	40.500742	-104.601671



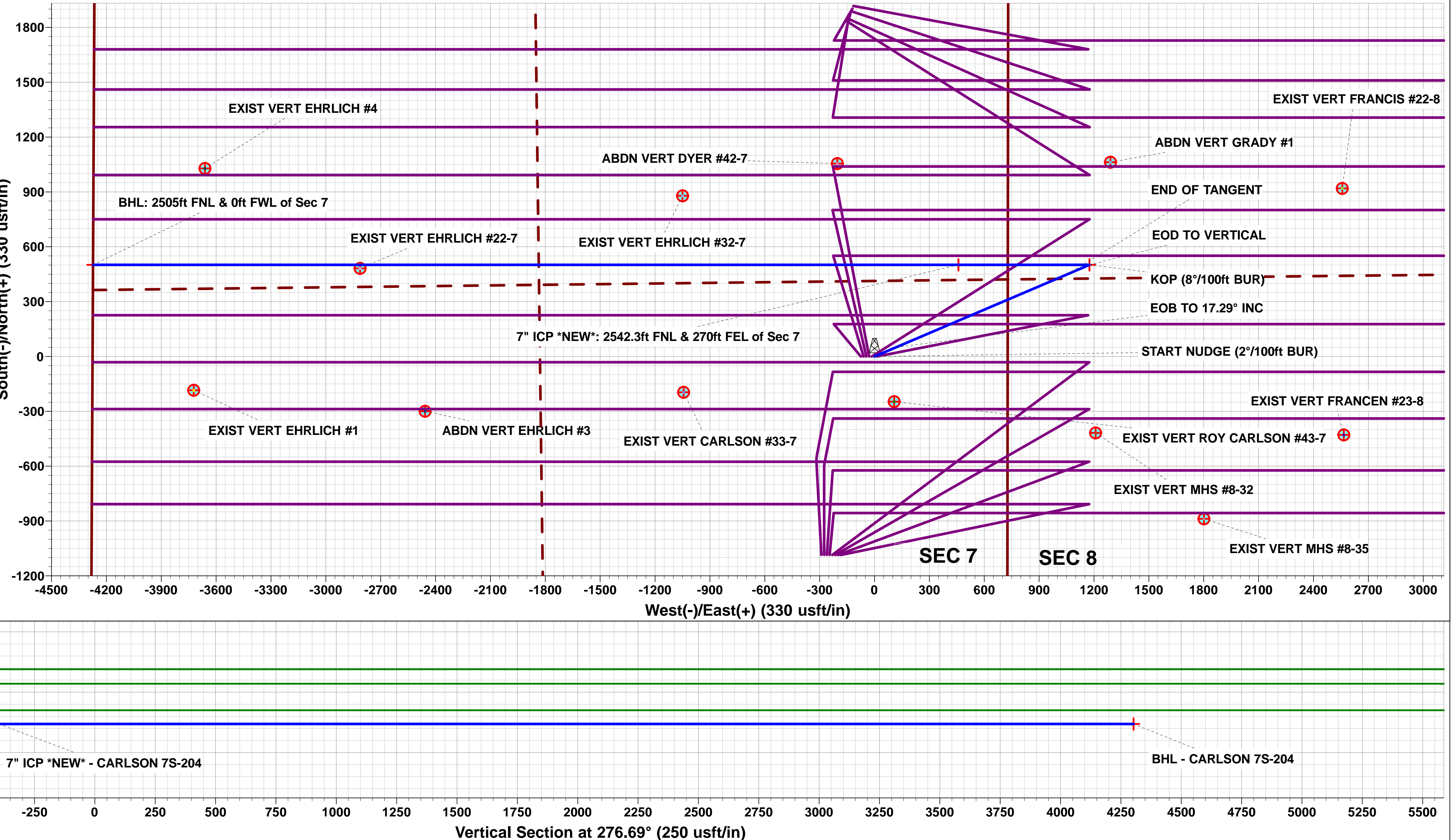
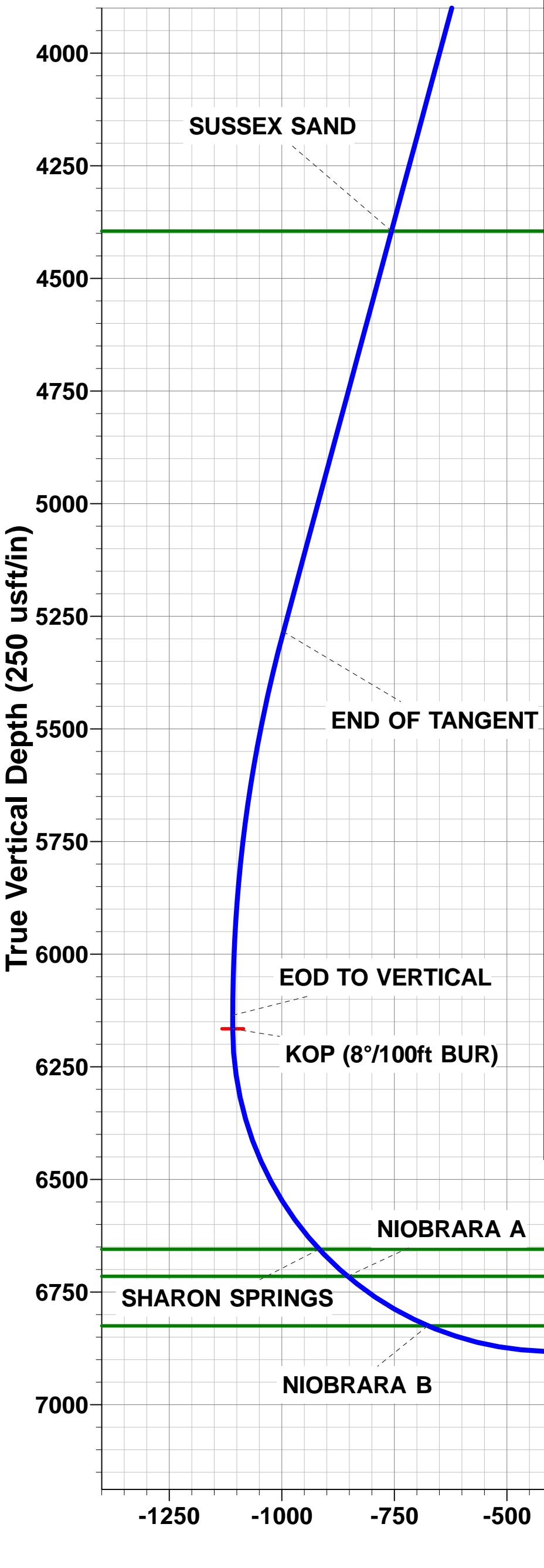
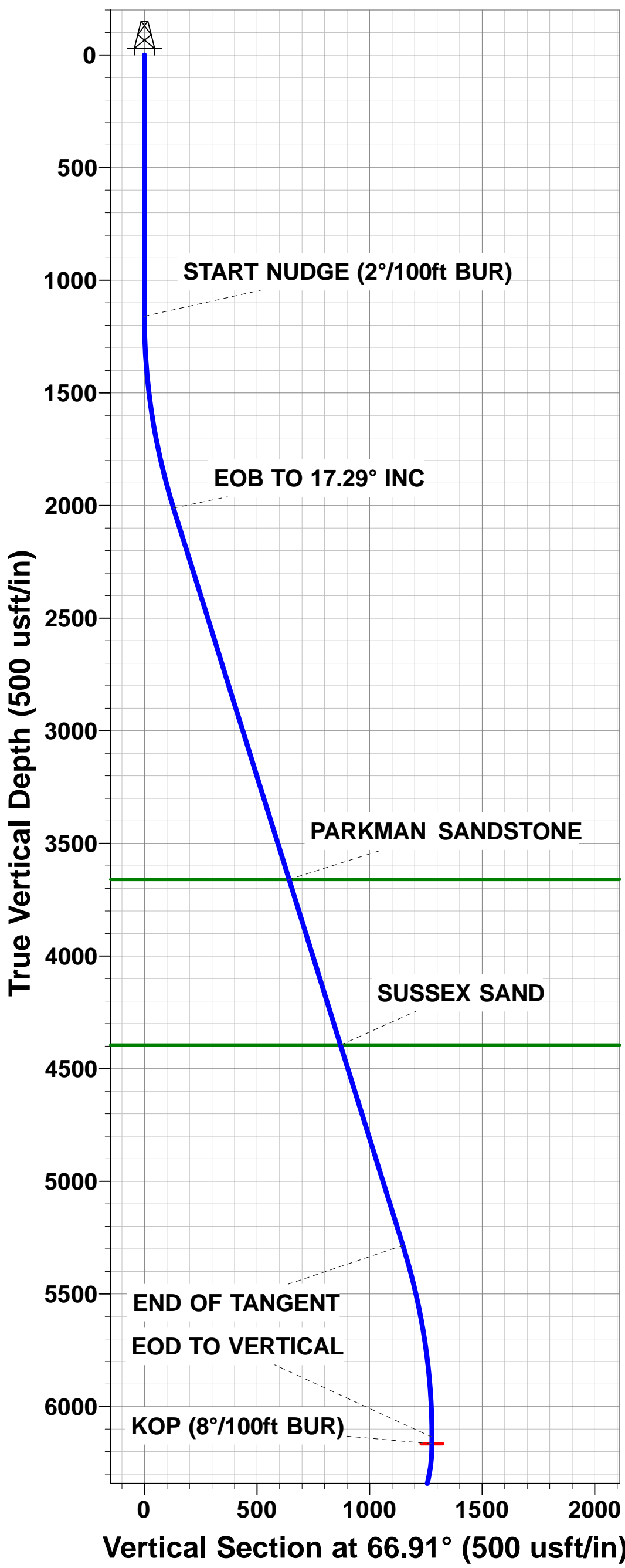
PROPOSED LOCAL COORDINATES:

SHL: 2220ft FSL & 728ft FEL of Sec 7  
7" ICP \*NEW\*: 2542.3ft FNL & 270ft FEL of Sec 7  
BHL: 2505ft FNL & 0ft FWL of Sec 7



Azimuths to True North  
Magnetic North: 8.26°

Magnetic Field  
Strength: 52611.0snT  
Dip Angle: 66.99°  
Date: 01/03/2016  
Model: IGRF2015



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CARLSON 7S-204
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4762.0usft
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4762.0usft
<b>Site:</b>	NE SE SEC. 7 T6N R64W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CARLSON 7S-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

<b>Project</b>	WELD COUNTY, COLORADO		
<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

<b>Site</b>	NE SE SEC. 7 T6N R64W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,426,069.05 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,254,065.99 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.499368
		<b>Longitude:</b>	-104.586413
		<b>Grid Convergence:</b>	0.59 °

<b>Well</b>	CARLSON 7S-204		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>
	<b>+E/-W</b>	29.8 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<b>Wellbore</b>	ORIGINAL WELLBORE				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	01/03/2016	8.26	66.99	52,611

<b>Design</b>	PROPOSAL #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	6,882.0	0.0	0.0	276.69

<b>Plan Sections</b>											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100usf)	Turn Rate (°/100usf)	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,762.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,160.0	0.00	0.00	1,160.0	-3,602.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,024.3	17.29	66.91	2,011.3	-2,750.7	50.7	119.0	2.00	2.00	0.00	66.91	
5,452.4	17.29	66.91	5,284.5	522.5	450.3	1,056.1	0.00	0.00	0.00	0.00	
6,316.7	0.00	0.00	6,135.8	1,373.8	501.0	1,175.1	2.00	-2.00	0.00	180.00	
6,346.7	0.00	0.00	6,165.8	1,403.8	501.0	1,175.1	0.00	0.00	0.00	0.00	KOP - CARLSON 7
7,471.8	90.00	270.00	6,882.0	2,120.0	501.0	458.9	8.00	8.00	-8.00	270.00	7" ICP *NEW* - CA
12,203.7	90.00	270.00	6,882.0	2,120.0	501.0	-4,273.1	0.00	0.00	0.00	0.00	BHL - CARLSON 7

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CARLSON 7S-204
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4762.0usft
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4762.0usft
<b>Site:</b>	NE SE SEC. 7 T6N R64W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CARLSON 7S-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>SHL: 2220ft FSL &amp; 728ft FEL of Sec 7</b>										
0.0	0.00	0.00	0.0	4,762.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,662.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,562.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,462.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,362.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,262.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,162.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,062.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,962.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,862.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,762.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,662.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
1,160.0	0.00	0.00	1,160.0	3,602.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.80	66.91	1,200.0	3,562.00	0.1	0.3	-0.2	2.00	2.00	0.00
1,300.0	2.80	66.91	1,299.9	3,462.06	1.3	3.1	-3.0	2.00	2.00	0.00
1,400.0	4.80	66.91	1,399.7	3,362.28	3.9	9.2	-8.7	2.00	2.00	0.00
1,500.0	6.80	66.91	1,499.2	3,262.80	7.9	18.5	-17.5	2.00	2.00	0.00
1,600.0	8.80	66.91	1,598.3	3,163.73	13.2	31.0	-29.3	2.00	2.00	0.00
1,700.0	10.80	66.91	1,696.8	3,065.19	19.9	46.7	-44.0	2.00	2.00	0.00
1,800.0	12.80	66.91	1,794.7	2,967.31	27.9	65.5	-61.8	2.00	2.00	0.00
1,900.0	14.80	66.91	1,891.8	2,870.20	37.3	87.4	-82.5	2.00	2.00	0.00
2,000.0	16.80	66.91	1,988.0	2,773.98	48.0	112.5	-106.1	2.00	2.00	0.00
<b>EOB TO 17.29° INC</b>										
2,024.3	17.29	66.91	2,011.3	2,750.74	50.7	119.0	-112.3	2.00	2.00	0.00
2,100.0	17.29	66.91	2,083.5	2,678.47	59.6	139.7	-131.8	0.00	0.00	0.00
2,200.0	17.29	66.91	2,179.0	2,582.99	71.2	167.1	-157.6	0.00	0.00	0.00
2,300.0	17.29	66.91	2,274.5	2,487.50	82.9	194.4	-183.4	0.00	0.00	0.00
2,400.0	17.29	66.91	2,370.0	2,392.02	94.5	221.7	-209.2	0.00	0.00	0.00
2,500.0	17.29	66.91	2,465.5	2,296.54	106.2	249.1	-235.0	0.00	0.00	0.00
2,600.0	17.29	66.91	2,560.9	2,201.06	117.8	276.4	-260.8	0.00	0.00	0.00
2,700.0	17.29	66.91	2,656.4	2,105.57	129.5	303.7	-286.6	0.00	0.00	0.00
2,800.0	17.29	66.91	2,751.9	2,010.09	141.1	331.1	-312.4	0.00	0.00	0.00
2,900.0	17.29	66.91	2,847.4	1,914.61	152.8	358.4	-338.2	0.00	0.00	0.00
3,000.0	17.29	66.91	2,942.9	1,819.12	164.5	385.7	-364.0	0.00	0.00	0.00
3,100.0	17.29	66.91	3,038.4	1,723.64	176.1	413.1	-389.7	0.00	0.00	0.00
3,200.0	17.29	66.91	3,133.8	1,628.16	187.8	440.4	-415.5	0.00	0.00	0.00
3,300.0	17.29	66.91	3,229.3	1,532.67	199.4	467.7	-441.3	0.00	0.00	0.00
3,400.0	17.29	66.91	3,324.8	1,437.19	211.1	495.1	-467.1	0.00	0.00	0.00
3,500.0	17.29	66.91	3,420.3	1,341.71	222.7	522.4	-492.9	0.00	0.00	0.00
3,600.0	17.29	66.91	3,515.8	1,246.22	234.4	549.7	-518.7	0.00	0.00	0.00
3,700.0	17.29	66.91	3,611.3	1,150.74	246.0	577.1	-544.5	0.00	0.00	0.00
<b>PARKMAN SANDSTONE</b>										
3,751.0	17.29	66.91	3,660.0	1,102.00	252.0	591.0	-557.7	0.00	0.00	0.00
3,800.0	17.29	66.91	3,706.7	1,055.26	257.7	604.4	-570.3	0.00	0.00	0.00
3,900.0	17.29	66.91	3,802.2	959.77	269.3	631.7	-596.1	0.00	0.00	0.00
4,000.0	17.29	66.91	3,897.7	864.29	281.0	659.1	-621.9	0.00	0.00	0.00
4,100.0	17.29	66.91	3,993.2	768.81	292.6	686.4	-647.7	0.00	0.00	0.00
4,200.0	17.29	66.91	4,088.7	673.32	304.3	713.7	-673.4	0.00	0.00	0.00
4,300.0	17.29	66.91	4,184.2	577.84	316.0	741.1	-699.2	0.00	0.00	0.00
4,400.0	17.29	66.91	4,279.6	482.36	327.6	768.4	-725.0	0.00	0.00	0.00
4,500.0	17.29	66.91	4,375.1	386.87	339.3	795.7	-750.8	0.00	0.00	0.00
<b>SUSSEX SANDSTONE</b>										

# Planning Report



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<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4762.0usft
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4762.0usft
<b>Site:</b>	NE SE SEC. 7 T6N R64W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CARLSON 7S-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>4,520.8</b>	<b>17.29</b>	<b>66.91</b>	<b>4,395.0</b>	<b>367.00</b>	<b>341.7</b>	<b>801.4</b>	<b>-756.2</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,600.0	17.29	66.91	4,470.6	291.39	350.9	823.1	-776.6	0.00	0.00	0.00
4,700.0	17.29	66.91	4,566.1	195.91	362.6	850.4	-802.4	0.00	0.00	0.00
4,800.0	17.29	66.91	4,661.6	100.42	374.2	877.7	-828.2	0.00	0.00	0.00
4,900.0	17.29	66.91	4,757.1	4.94	385.9	905.1	-854.0	0.00	0.00	0.00
5,000.0	17.29	66.91	4,852.5	-90.54	397.5	932.4	-879.8	0.00	0.00	0.00
5,100.0	17.29	66.91	4,948.0	-186.03	409.2	959.7	-905.6	0.00	0.00	0.00
5,200.0	17.29	66.91	5,043.5	-281.51	420.8	987.1	-931.4	0.00	0.00	0.00
5,300.0	17.29	66.91	5,139.0	-376.99	432.5	1,014.4	-957.1	0.00	0.00	0.00
5,400.0	17.29	66.91	5,234.5	-472.47	444.1	1,041.7	-982.9	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>5,452.4</b>	<b>17.29</b>	<b>66.91</b>	<b>5,284.5</b>	<b>-522.54</b>	<b>450.3</b>	<b>1,056.1</b>	<b>-996.5</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,500.0	16.33	66.91	5,330.1	-568.07	455.7	1,068.7	-1,008.4	2.00	-2.00	0.00
5,600.0	14.33	66.91	5,426.5	-664.51	466.0	1,093.1	-1,031.4	2.00	-2.00	0.00
5,700.0	12.33	66.91	5,523.8	-761.81	475.1	1,114.3	-1,051.4	2.00	-2.00	0.00
5,800.0	10.33	66.91	5,621.9	-859.85	482.8	1,132.3	-1,068.4	2.00	-2.00	0.00
5,900.0	8.33	66.91	5,720.5	-958.52	489.1	1,147.3	-1,082.5	2.00	-2.00	0.00
6,000.0	6.33	66.91	5,819.7	-1,057.70	494.1	1,159.0	-1,093.6	2.00	-2.00	0.00
6,100.0	4.33	66.91	5,919.3	-1,157.26	497.8	1,167.6	-1,101.7	2.00	-2.00	0.00
6,200.0	2.33	66.91	6,019.1	-1,257.09	500.1	1,172.9	-1,106.7	2.00	-2.00	0.00
6,300.0	0.33	66.91	6,119.1	-1,357.05	501.0	1,175.1	-1,108.7	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>6,316.7</b>	<b>0.00</b>	<b>0.00</b>	<b>6,135.8</b>	<b>-1,373.80</b>	<b>501.0</b>	<b>1,175.1</b>	<b>-1,108.8</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
<b>KOP (8°/100ft BUR)</b>										
<b>6,346.7</b>	<b>0.00</b>	<b>0.00</b>	<b>6,165.8</b>	<b>-1,403.80</b>	<b>501.0</b>	<b>1,175.1</b>	<b>-1,108.8</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,400.0	4.26	270.00	6,219.0	-1,457.00	501.0	1,173.1	-1,106.8	8.00	8.00	0.00
6,500.0	12.26	270.00	6,317.9	-1,555.89	501.0	1,158.8	-1,092.5	8.00	8.00	0.00
6,600.0	20.26	270.00	6,413.8	-1,651.81	501.0	1,130.8	-1,064.8	8.00	8.00	0.00
6,700.0	28.26	270.00	6,504.9	-1,742.90	501.0	1,089.7	-1,024.0	8.00	8.00	0.00
6,800.0	36.26	270.00	6,589.4	-1,827.40	501.0	1,036.4	-971.0	8.00	8.00	0.00
<b>SHARON SPRINGS</b>										
<b>6,885.3</b>	<b>43.08</b>	<b>270.00</b>	<b>6,655.0</b>	<b>-1,893.00</b>	<b>501.0</b>	<b>982.0</b>	<b>-917.0</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
6,900.0	44.26	270.00	6,665.6	-1,903.65	501.0	971.8	-906.9	8.00	8.00	0.00
<b>NIOBRARA A</b>										
<b>6,972.6</b>	<b>50.07</b>	<b>270.00</b>	<b>6,715.0</b>	<b>-1,953.00</b>	<b>501.0</b>	<b>918.6</b>	<b>-854.0</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,000.0	52.26	270.00	6,732.2	-1,970.17	501.0	897.3	-832.8	8.00	8.00	0.00
7,100.0	60.26	270.00	6,787.7	-2,025.67	501.0	814.2	-750.3	8.00	8.00	0.00
<b>NIOBRARA B</b>										
<b>7,184.1</b>	<b>66.99</b>	<b>270.00</b>	<b>6,825.0</b>	<b>-2,063.00</b>	<b>501.0</b>	<b>738.9</b>	<b>-675.5</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,200.0	68.26	270.00	6,831.1	-2,069.06	501.0	724.2	-660.9	8.00	8.00	0.00
7,300.0	76.26	270.00	6,861.5	-2,099.50	501.0	629.0	-566.4	8.00	8.00	0.00
7,400.0	84.26	270.00	6,878.4	-2,116.41	501.0	530.5	-468.6	8.00	8.00	0.00
<b>7" ICP *NEW*: 2542.3ft FNL &amp; 270ft FEL of Sec 7</b>										
<b>7,471.8</b>	<b>90.00</b>	<b>270.00</b>	<b>6,882.0</b>	<b>-2,120.00</b>	<b>501.0</b>	<b>458.9</b>	<b>-397.4</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,500.0	90.00	270.00	6,882.0	-2,120.00	501.0	430.7	-369.4	0.00	0.00	0.00
7,600.0	90.00	270.00	6,882.0	-2,120.00	501.0	330.7	-270.1	0.00	0.00	0.00
7,700.0	90.00	270.00	6,882.0	-2,120.00	501.0	230.7	-170.7	0.00	0.00	0.00
7,800.0	90.00	270.00	6,882.0	-2,120.00	501.0	130.7	-71.4	0.00	0.00	0.00
7,900.0	90.00	270.00	6,882.0	-2,120.00	501.0	30.7	27.9	0.00	0.00	0.00
8,000.0	90.00	270.00	6,882.0	-2,120.00	501.0	-69.3	127.2	0.00	0.00	0.00
8,100.0	90.00	270.00	6,882.0	-2,120.00	501.0	-169.3	226.5	0.00	0.00	0.00
8,200.0	90.00	270.00	6,882.0	-2,120.00	501.0	-269.3	325.9	0.00	0.00	0.00
8,300.0	90.00	270.00	6,882.0	-2,120.00	501.0	-369.3	425.2	0.00	0.00	0.00



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CARLSON 7S-204
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4762.0usft
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4762.0usft
<b>Site:</b>	NE SE SEC. 7 T6N R64W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CARLSON 7S-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,400.0	90.00	270.00	6,882.0	-2,120.00	501.0	-469.3	524.5	0.00	0.00	0.00
8,500.0	90.00	270.00	6,882.0	-2,120.00	501.0	-569.3	623.8	0.00	0.00	0.00
8,600.0	90.00	270.00	6,882.0	-2,120.00	501.0	-669.3	723.1	0.00	0.00	0.00
8,700.0	90.00	270.00	6,882.0	-2,120.00	501.0	-769.3	822.5	0.00	0.00	0.00
8,800.0	90.00	270.00	6,882.0	-2,120.00	501.0	-869.3	921.8	0.00	0.00	0.00
8,900.0	90.00	270.00	6,882.0	-2,120.00	501.0	-969.3	1,021.1	0.00	0.00	0.00
9,000.0	90.00	270.00	6,882.0	-2,120.00	501.0	-1,069.3	1,120.4	0.00	0.00	0.00
9,100.0	90.00	270.00	6,882.0	-2,120.00	501.0	-1,169.3	1,219.7	0.00	0.00	0.00
9,200.0	90.00	270.00	6,882.0	-2,120.00	501.0	-1,269.3	1,319.1	0.00	0.00	0.00
9,300.0	90.00	270.00	6,882.0	-2,120.00	501.0	-1,369.3	1,418.4	0.00	0.00	0.00
9,400.0	90.00	270.00	6,882.0	-2,120.00	501.0	-1,469.3	1,517.7	0.00	0.00	0.00
9,500.0	90.00	270.00	6,882.0	-2,120.00	501.0	-1,569.3	1,617.0	0.00	0.00	0.00
9,600.0	90.00	270.00	6,882.0	-2,120.00	501.0	-1,669.3	1,716.3	0.00	0.00	0.00
9,700.0	90.00	270.00	6,882.0	-2,120.00	501.0	-1,769.3	1,815.6	0.00	0.00	0.00
9,800.0	90.00	270.00	6,882.0	-2,120.00	501.0	-1,869.3	1,915.0	0.00	0.00	0.00
9,900.0	90.00	270.00	6,882.0	-2,120.00	501.0	-1,969.3	2,014.3	0.00	0.00	0.00
10,000.0	90.00	270.00	6,882.0	-2,120.00	501.0	-2,069.3	2,113.6	0.00	0.00	0.00
10,100.0	90.00	270.00	6,882.0	-2,120.00	501.0	-2,169.3	2,212.9	0.00	0.00	0.00
10,200.0	90.00	270.00	6,882.0	-2,120.00	501.0	-2,269.3	2,312.2	0.00	0.00	0.00
10,300.0	90.00	270.00	6,882.0	-2,120.00	501.0	-2,369.3	2,411.6	0.00	0.00	0.00
10,400.0	90.00	270.00	6,882.0	-2,120.00	501.0	-2,469.3	2,510.9	0.00	0.00	0.00
10,500.0	90.00	270.00	6,882.0	-2,120.00	501.0	-2,569.3	2,610.2	0.00	0.00	0.00
10,600.0	90.00	270.00	6,882.0	-2,120.00	501.0	-2,669.3	2,709.5	0.00	0.00	0.00
10,700.0	90.00	270.00	6,882.0	-2,120.00	501.0	-2,769.3	2,808.8	0.00	0.00	0.00
10,800.0	90.00	270.00	6,882.0	-2,120.00	501.0	-2,869.3	2,908.2	0.00	0.00	0.00
10,900.0	90.00	270.00	6,882.0	-2,120.00	501.0	-2,969.3	3,007.5	0.00	0.00	0.00
11,000.0	90.00	270.00	6,882.0	-2,120.00	501.0	-3,069.3	3,106.8	0.00	0.00	0.00
11,100.0	90.00	270.00	6,882.0	-2,120.00	501.0	-3,169.3	3,206.1	0.00	0.00	0.00
11,200.0	90.00	270.00	6,882.0	-2,120.00	501.0	-3,269.3	3,305.4	0.00	0.00	0.00
11,300.0	90.00	270.00	6,882.0	-2,120.00	501.0	-3,369.3	3,404.8	0.00	0.00	0.00
11,400.0	90.00	270.00	6,882.0	-2,120.00	501.0	-3,469.3	3,504.1	0.00	0.00	0.00
11,500.0	90.00	270.00	6,882.0	-2,120.00	501.0	-3,569.3	3,603.4	0.00	0.00	0.00
11,600.0	90.00	270.00	6,882.0	-2,120.00	501.0	-3,669.3	3,702.7	0.00	0.00	0.00
11,700.0	90.00	270.00	6,882.0	-2,120.00	501.0	-3,769.3	3,802.0	0.00	0.00	0.00
11,800.0	90.00	270.00	6,882.0	-2,120.00	501.0	-3,869.3	3,901.4	0.00	0.00	0.00
11,900.0	90.00	270.00	6,882.0	-2,120.00	501.0	-3,969.3	4,000.7	0.00	0.00	0.00
12,000.0	90.00	270.00	6,882.0	-2,120.00	501.0	-4,069.3	4,100.0	0.00	0.00	0.00
12,100.0	90.00	270.00	6,882.0	-2,120.00	501.0	-4,169.3	4,199.3	0.00	0.00	0.00
12,200.0	90.00	270.00	6,882.0	-2,120.00	501.0	-4,269.3	4,298.6	0.00	0.00	0.00
<b>BHL: 2505ft FNL &amp; 0ft FWL of Sec 7</b>										
<b>12,203.7</b>	<b>90.00</b>	<b>270.00</b>	<b>6,882.0</b>	<b>-2,120.00</b>	<b>501.0</b>	<b>-4,273.1</b>	<b>4,302.4</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,751.0	3,660.0	PARKMAN SANDSTONE				
4,520.8	4,395.0	SUSSEX SANDSTONE				
6,885.3	6,655.0	SHARON SPRINGS				
6,972.6	6,715.0	NIOBRARA A				
7,184.1	6,825.0	NIOBRARA B				

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CARLSON 7S-204
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4762.0usft
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4762.0usft
<b>Site:</b>	NE SE SEC. 7 T6N R64W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CARLSON 7S-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL: 2220ft FSL & 728ft FEL of Sec 7
1,160.0	1,160.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,024.3	2,011.3	50.7	119.0	EOB TO 17.29° INC
5,452.4	5,284.5	450.3	1,056.1	END OF TANGENT
6,316.7	6,135.8	501.0	1,175.1	EOD TO VERTICAL
6,346.7	6,165.8	501.0	1,175.1	KOP (8°/100ft BUR)
7,471.8	6,882.0	501.0	458.9	7" ICP *NEW*: 2542.3ft FNL & 270ft FEL of Sec 7
12,203.7	6,882.0	501.0	-4,273.1	BHL: 2505ft FNL & 0ft FWL of Sec 7