

# **PDC ENERGY**

**WELD COUNTY, COLORADO  
NE SW SEC. 21 T4N R67W 6th P.M.  
SHARON 210-234**

## **ORIGINAL WELLBORE**

**27 March, 2016**

**Plan: PROPOSAL #1**



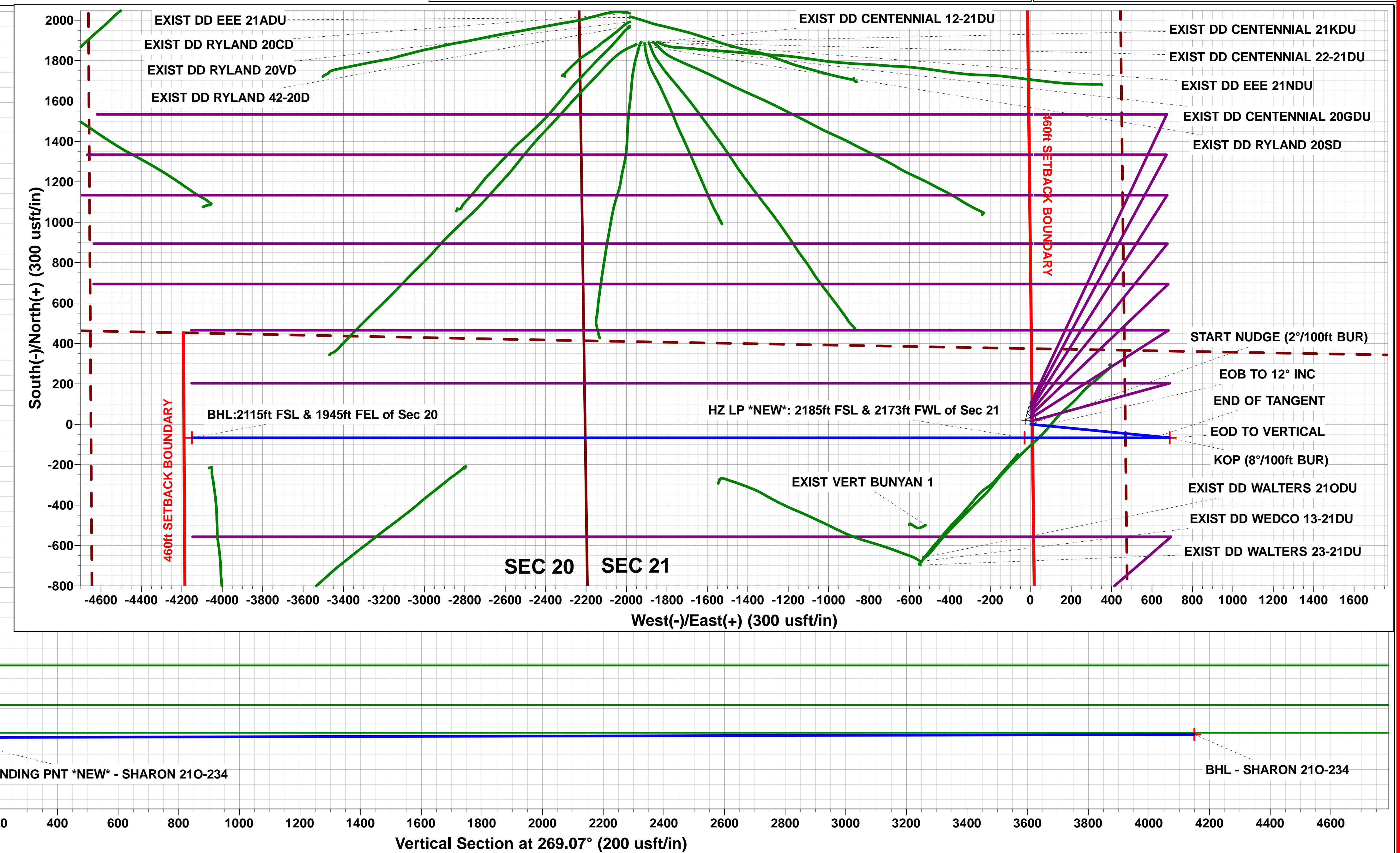
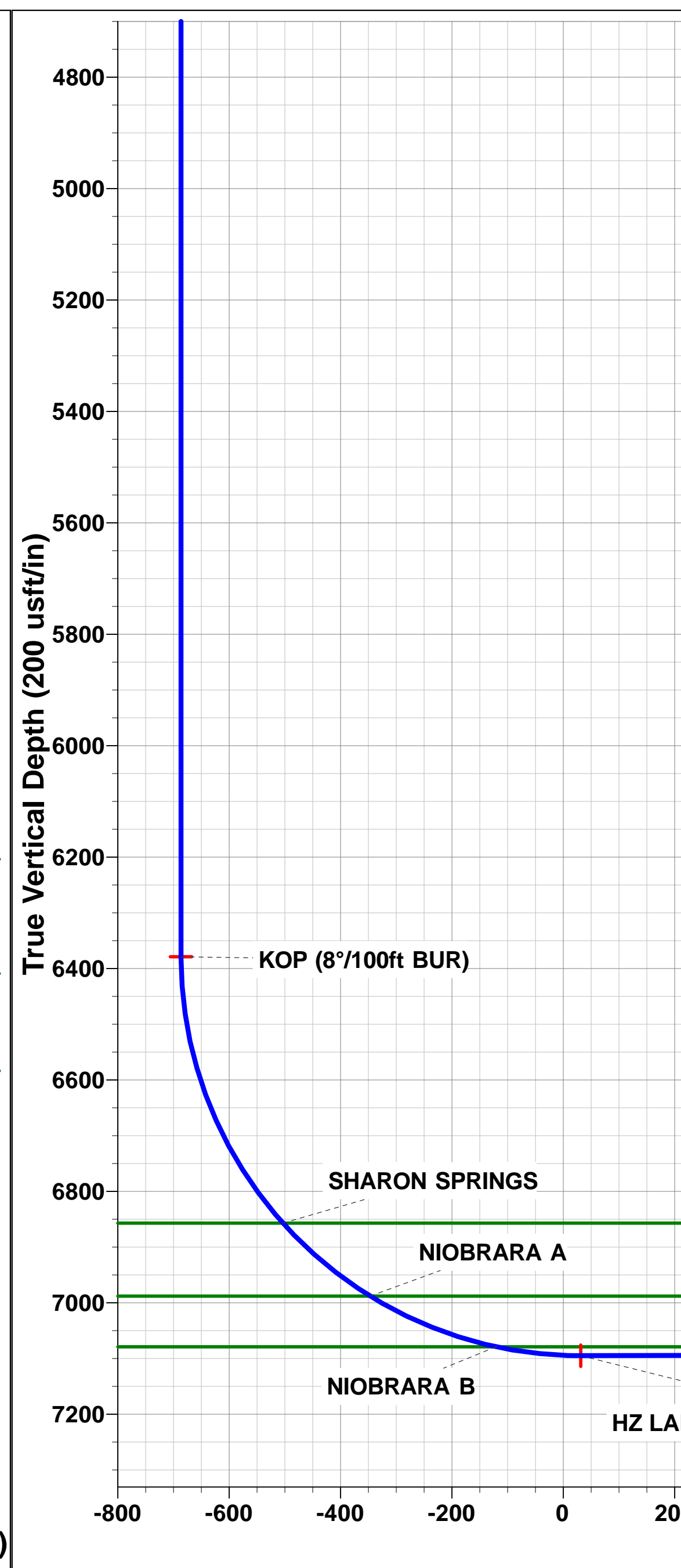
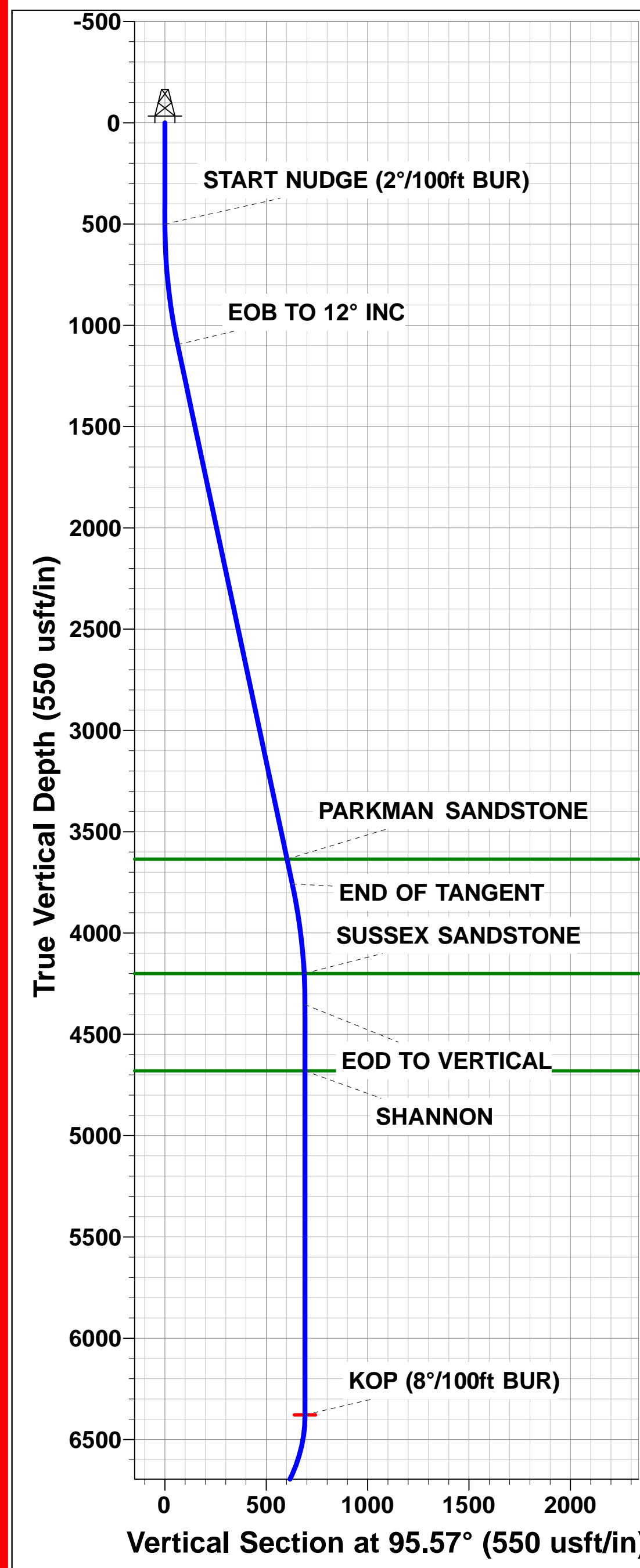
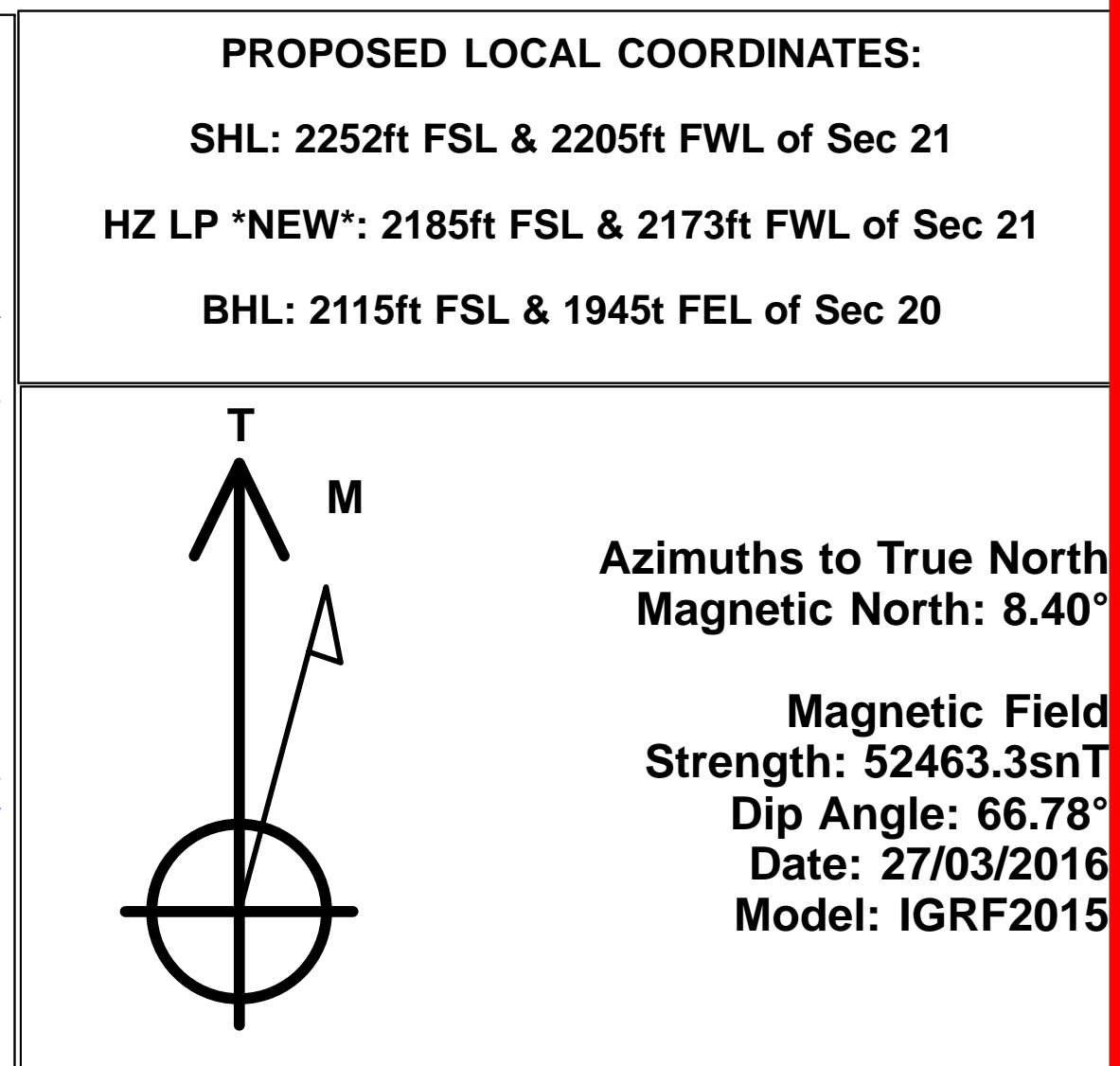
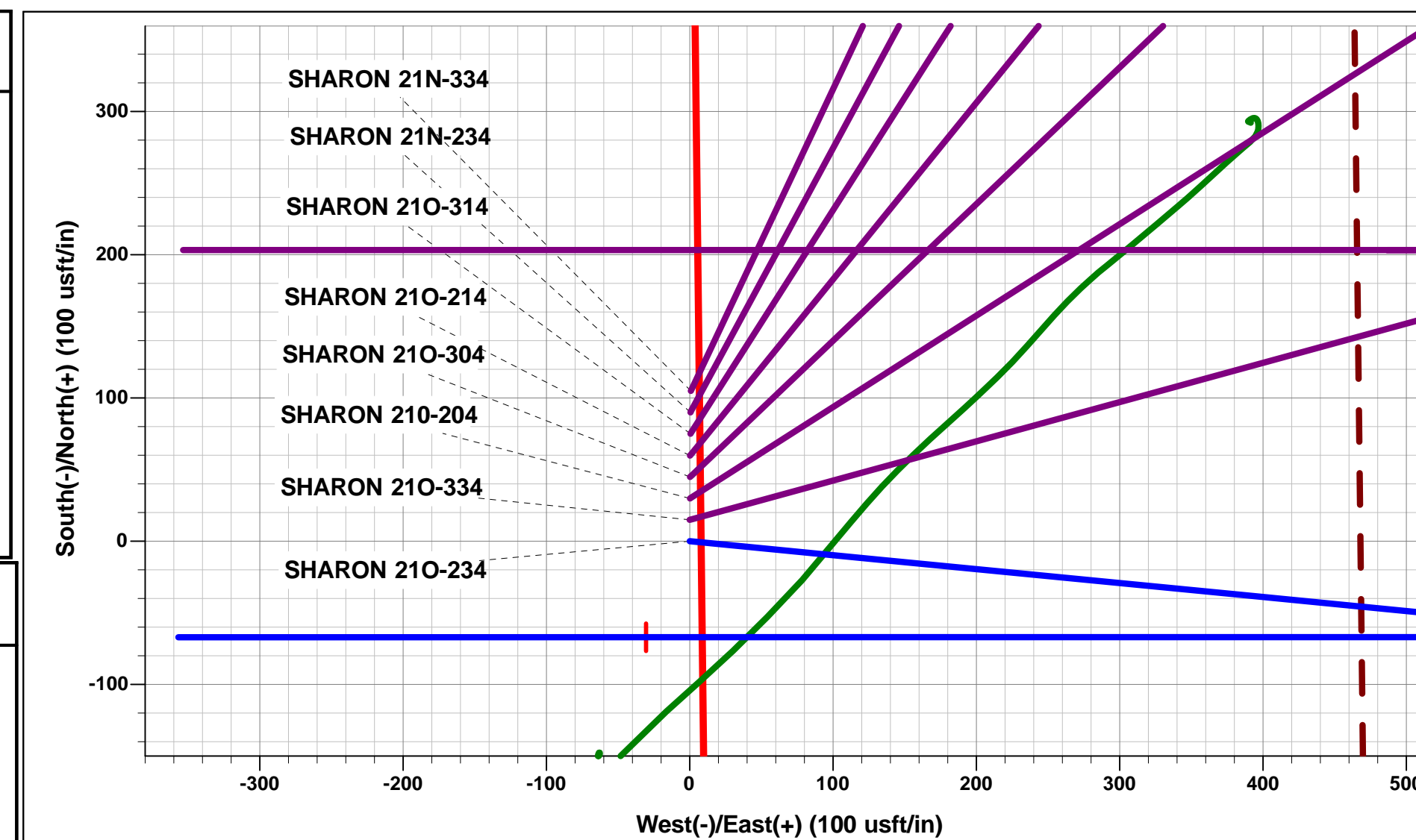


Project: WELD COUNTY, COLORADO  
Site: NE SW SEC. 21 T4N R67W 6th P.M.  
Well: SHARON 210-234  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1



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: 2252ft FSL & 2205ft FWL of Sec 21
500.0	500.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1095.4	1099.8	12.00	95.57	-6.1	62.3	-62.2	62.6	EOB TO 12° INC
3757.4	3821.2	12.00	95.57	-60.9	625.2	-624.2	628.2	END OF TANGENT
4352.8	4421.0	0.00	0.00	-67.0	687.5	-686.3	690.8	EOD TO VERTICAL
6378.8	6447.0	0.00	0.00	-67.0	687.5	-686.3	690.8	KOP (8°/100ft BUR)
7095.0	7573.7	90.14	270.00	-67.0	-30.4	31.5	1408.7	HZ LP *NEW*: 2185ft FSL & 2173ft FWL of Sec 21
7085.0	11692.6	90.14	270.00	-67.0	-4149.3	4149.8	5527.6	BHL:2115ft FSL & 1945ft FEL of Sec 20

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - SHARON 210-234	6378.8	-67.0	687.5	40.297109	-104.895137
HZ LANDING PNT *NEW* - SHARON 210-234	7095.0	-67.0	-30.4	40.297109	-104.897711
BHL - SHARON 210-234	7085.0	-67.0	-4149.3	40.297108	-104.912477



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SHARON 21O-234
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4950.5usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4950.5usft (Original Well Elev)
<b>Site:</b>	NE SW SEC. 21 T4N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	SHARON 21O-234	<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 SW SEC. 21 T4N R67W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,351,715.69 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,168,026.97 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.297293
		<b>Longitude:</b>	-104.897602
		<b>Grid Convergence:</b>	0.39 °

<b>Well</b>	SHARON 21O-234		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	40.297293
		<b>Longitude:</b>	-104.897602
		<b>Ground Level:</b>	4,937.0 usft

<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	27/03/2016	8.40	66.78	52,463

<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>
	7,085.0	0.0	0.0	269.07

<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	-4,950.5	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	-4,450.5	0.0	0.0	0.00	0.00	0.00	0.00	
1,099.8	12.00	95.57	1,095.4	-3,855.1	-6.1	62.3	2.00	2.00	0.00	95.57	
3,821.2	12.00	95.57	3,757.4	-1,193.1	-60.9	625.2	0.00	0.00	0.00	0.00	
4,421.0	0.00	0.00	4,352.8	-597.7	-67.0	687.5	2.00	-2.00	0.00	180.00	
6,447.0	0.00	0.00	6,378.8	1,428.3	-67.0	687.5	0.00	0.00	0.00	0.00	KOP - SHARON 21
7,573.7	90.14	270.00	7,095.0	2,144.5	-67.0	-30.4	8.00	8.00	-7.99	270.00	HZ LANDING PNT
11,692.6	90.14	270.00	7,085.0	2,134.5	-67.0	-4,149.3	0.00	0.00	0.00	-13.24	BHL - SHARON 21

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SHARON 210-234
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4950.5usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4950.5usft (Original Well Elev)
<b>Site:</b>	NE SW SEC. 21 T4N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	SHARON 210-234	<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: 2252ft FSL &amp; 2205ft FWL of Sec 21</b>										
0.0	0.00	0.00	0.0	4,950.50	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,850.50	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,750.50	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,650.50	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,550.50	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
500.0	0.00	0.00	500.0	4,450.50	0.0	0.0	0.0	0.00	0.00	0.00
600.0	2.00	95.57	600.0	4,350.52	-0.2	1.7	-1.7	2.00	2.00	0.00
700.0	4.00	95.57	699.8	4,250.66	-0.7	6.9	-6.9	2.00	2.00	0.00
800.0	6.00	95.57	799.5	4,151.05	-1.5	15.6	-15.6	2.00	2.00	0.00
900.0	8.00	95.57	898.7	4,051.80	-2.7	27.7	-27.7	2.00	2.00	0.00
1,000.0	10.00	95.57	997.5	3,953.03	-4.2	43.3	-43.2	2.00	2.00	0.00
<b>EOB TO 12° INC</b>										
1,099.8	12.00	95.57	1,095.4	3,855.06	-6.1	62.3	-62.2	2.00	2.00	0.00
1,100.0	12.00	95.57	1,095.6	3,854.88	-6.1	62.3	-62.2	0.00	0.00	0.00
1,200.0	12.00	95.57	1,193.4	3,757.06	-8.1	83.0	-82.9	0.00	0.00	0.00
1,300.0	12.00	95.57	1,291.3	3,659.24	-10.1	103.7	-103.5	0.00	0.00	0.00
1,400.0	12.00	95.57	1,389.1	3,561.43	-12.1	124.4	-124.2	0.00	0.00	0.00
1,500.0	12.00	95.57	1,486.9	3,463.61	-14.1	145.1	-144.8	0.00	0.00	0.00
1,600.0	12.00	95.57	1,584.7	3,365.80	-16.2	165.7	-165.5	0.00	0.00	0.00
1,700.0	12.00	95.57	1,682.5	3,267.98	-18.2	186.4	-186.1	0.00	0.00	0.00
1,800.0	12.00	95.57	1,780.3	3,170.16	-20.2	207.1	-206.8	0.00	0.00	0.00
1,900.0	12.00	95.57	1,878.2	3,072.35	-22.2	227.8	-227.4	0.00	0.00	0.00
2,000.0	12.00	95.57	1,976.0	2,974.53	-24.2	248.5	-248.1	0.00	0.00	0.00
2,100.0	12.00	95.57	2,073.8	2,876.72	-26.2	269.2	-268.7	0.00	0.00	0.00
2,200.0	12.00	95.57	2,171.6	2,778.90	-28.2	289.9	-289.4	0.00	0.00	0.00
2,300.0	12.00	95.57	2,269.4	2,681.08	-30.3	310.5	-310.0	0.00	0.00	0.00
2,400.0	12.00	95.57	2,367.2	2,583.27	-32.3	331.2	-330.7	0.00	0.00	0.00
2,500.0	12.00	95.57	2,465.0	2,485.45	-34.3	351.9	-351.3	0.00	0.00	0.00
2,600.0	12.00	95.57	2,562.9	2,387.64	-36.3	372.6	-372.0	0.00	0.00	0.00
2,700.0	12.00	95.57	2,660.7	2,289.82	-38.3	393.3	-392.6	0.00	0.00	0.00
2,800.0	12.00	95.57	2,758.5	2,192.00	-40.3	414.0	-413.3	0.00	0.00	0.00
2,900.0	12.00	95.57	2,856.3	2,094.19	-42.4	434.7	-433.9	0.00	0.00	0.00
3,000.0	12.00	95.57	2,954.1	1,996.37	-44.4	455.4	-454.6	0.00	0.00	0.00
3,100.0	12.00	95.57	3,051.9	1,898.55	-46.4	476.0	-475.2	0.00	0.00	0.00
3,200.0	12.00	95.57	3,149.8	1,800.74	-48.4	496.7	-495.9	0.00	0.00	0.00
3,300.0	12.00	95.57	3,247.6	1,702.92	-50.4	517.4	-516.5	0.00	0.00	0.00
3,400.0	12.00	95.57	3,345.4	1,605.11	-52.4	538.1	-537.2	0.00	0.00	0.00
3,500.0	12.00	95.57	3,443.2	1,507.29	-54.5	558.8	-557.8	0.00	0.00	0.00
3,600.0	12.00	95.57	3,541.0	1,409.47	-56.5	579.5	-578.5	0.00	0.00	0.00
<b>PARKMAN SANDSTONE</b>										
3,696.1	12.00	95.57	3,635.0	1,315.50	-58.4	599.4	-598.3	0.00	0.00	0.00
3,700.0	12.00	95.57	3,638.8	1,311.66	-58.5	600.2	-599.1	0.00	0.00	0.00
3,800.0	12.00	95.57	3,736.7	1,213.84	-60.5	620.9	-619.8	0.00	0.00	0.00
<b>END OF TANGENT</b>										
3,821.2	12.00	95.57	3,757.4	1,193.14	-60.9	625.2	-624.2	0.00	0.00	0.00
3,900.0	10.42	95.57	3,834.7	1,115.81	-62.4	640.5	-639.4	2.00	-2.00	0.00
4,000.0	8.42	95.57	3,933.3	1,017.16	-64.0	656.8	-655.7	2.00	-2.00	0.00
4,100.0	6.42	95.57	4,032.5	918.01	-65.3	669.6	-668.5	2.00	-2.00	0.00
4,200.0	4.42	95.57	4,132.0	818.46	-66.2	679.0	-677.9	2.00	-2.00	0.00
<b>SUSSEX SANDSTONE</b>										
4,268.1	3.06	95.57	4,200.0	750.50	-66.6	683.4	-682.3	2.00	-2.00	0.00



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SHARON 210-234
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4950.5usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4950.5usft (Original Well Elev)
<b>Site:</b>	NE SW SEC. 21 T4N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	SHARON 210-234	<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)
4,300.0	2.42	95.57	4,231.9	718.64	-66.8	685.0	-683.8	2.00	-2.00	0.00
4,400.0	0.42	95.57	4,331.8	618.68	-67.0	687.4	-686.3	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>4,421.0</b>	<b>0.00</b>	<b>0.00</b>	<b>4,352.8</b>	<b>597.70</b>	<b>-67.0</b>	<b>687.5</b>	<b>-686.3</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
4,500.0	0.00	0.00	4,431.8	518.68	-67.0	687.5	-686.3	0.00	0.00	0.00
4,600.0	0.00	0.00	4,531.8	418.68	-67.0	687.5	-686.3	0.00	0.00	0.00
4,700.0	0.00	0.00	4,631.8	318.68	-67.0	687.5	-686.3	0.00	0.00	0.00
<b>SHANNON</b>										
<b>4,748.2</b>	<b>0.00</b>	<b>0.00</b>	<b>4,680.0</b>	<b>270.50</b>	<b>-67.0</b>	<b>687.5</b>	<b>-686.3</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,800.0	0.00	0.00	4,731.8	218.68	-67.0	687.5	-686.3	0.00	0.00	0.00
4,900.0	0.00	0.00	4,831.8	118.68	-67.0	687.5	-686.3	0.00	0.00	0.00
5,000.0	0.00	0.00	4,931.8	18.68	-67.0	687.5	-686.3	0.00	0.00	0.00
5,100.0	0.00	0.00	5,031.8	-81.32	-67.0	687.5	-686.3	0.00	0.00	0.00
5,200.0	0.00	0.00	5,131.8	-181.32	-67.0	687.5	-686.3	0.00	0.00	0.00
5,300.0	0.00	0.00	5,231.8	-281.32	-67.0	687.5	-686.3	0.00	0.00	0.00
5,400.0	0.00	0.00	5,331.8	-381.32	-67.0	687.5	-686.3	0.00	0.00	0.00
5,500.0	0.00	0.00	5,431.8	-481.32	-67.0	687.5	-686.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,531.8	-581.32	-67.0	687.5	-686.3	0.00	0.00	0.00
5,700.0	0.00	0.00	5,631.8	-681.32	-67.0	687.5	-686.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,731.8	-781.32	-67.0	687.5	-686.3	0.00	0.00	0.00
5,900.0	0.00	0.00	5,831.8	-881.32	-67.0	687.5	-686.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,931.8	-981.32	-67.0	687.5	-686.3	0.00	0.00	0.00
6,100.0	0.00	0.00	6,031.8	-1,081.32	-67.0	687.5	-686.3	0.00	0.00	0.00
6,200.0	0.00	0.00	6,131.8	-1,181.32	-67.0	687.5	-686.3	0.00	0.00	0.00
6,300.0	0.00	0.00	6,231.8	-1,281.32	-67.0	687.5	-686.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,331.8	-1,381.32	-67.0	687.5	-686.3	0.00	0.00	0.00
<b>KOP (8°/100ft BUR)</b>										
<b>6,447.0</b>	<b>0.00</b>	<b>0.00</b>	<b>6,378.8</b>	<b>-1,428.30</b>	<b>-67.0</b>	<b>687.5</b>	<b>-686.3</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,500.0	4.24	270.00	6,431.8	-1,481.27	-67.0	685.5	-684.4	8.00	8.00	0.00
6,600.0	12.24	270.00	6,530.7	-1,580.16	-67.0	671.2	-670.0	8.00	8.00	0.00
6,700.0	20.24	270.00	6,626.6	-1,676.09	-67.0	643.3	-642.1	8.00	8.00	0.00
6,800.0	28.24	270.00	6,717.7	-1,767.20	-67.0	602.2	-601.1	8.00	8.00	0.00
6,900.0	36.24	270.00	6,802.2	-1,851.71	-67.0	548.9	-547.8	8.00	8.00	0.00
<b>SHARON SPRINGS</b>										
<b>6,970.6</b>	<b>41.89</b>	<b>270.00</b>	<b>6,857.0</b>	<b>-1,906.50</b>	<b>-67.0</b>	<b>504.5</b>	<b>-503.3</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,000.0	44.24	270.00	6,878.5	-1,927.98	-67.0	484.4	-483.2	8.00	8.00	0.00
7,100.0	52.24	270.00	6,945.0	-1,994.53	-67.0	409.9	-408.7	8.00	8.00	0.00
<b>NIORARA A</b>										
<b>7,175.4</b>	<b>58.28</b>	<b>270.00</b>	<b>6,988.0</b>	<b>-2,037.50</b>	<b>-67.0</b>	<b>347.9</b>	<b>-346.8</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,200.0	60.24	270.00	7,000.6	-2,050.05	-67.0	326.8	-325.7	8.00	8.00	0.00
7,300.0	68.24	270.00	7,044.0	-2,093.48	-67.0	236.8	-235.7	8.00	8.00	0.00
7,400.0	76.24	270.00	7,074.5	-2,123.95	-67.0	141.6	-140.5	8.00	8.00	0.00
<b>NIORARA B</b>										
<b>7,420.3</b>	<b>77.87</b>	<b>270.00</b>	<b>7,079.0</b>	<b>-2,128.50</b>	<b>-67.0</b>	<b>121.8</b>	<b>-120.7</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,500.0	84.24	270.00	7,091.4	-2,140.89	-67.0	43.2	-42.1	8.00	8.00	0.00
<b>HZ LP *NEW*: 2185ft FSL &amp; 2173ft FWL of Sec 21</b>										
<b>7,573.7</b>	<b>90.14</b>	<b>270.00</b>	<b>7,095.0</b>	<b>-2,144.50</b>	<b>-67.0</b>	<b>-30.4</b>	<b>31.5</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,600.0	90.14	270.00	7,094.9	-2,144.44	-67.0	-56.7	57.8	0.00	0.00	0.00
7,700.0	90.14	270.00	7,094.7	-2,144.20	-67.0	-156.7	157.8	0.00	0.00	0.00
7,800.0	90.14	270.00	7,094.5	-2,143.96	-67.0	-256.7	257.8	0.00	0.00	0.00
7,900.0	90.14	270.00	7,094.2	-2,143.72	-67.0	-356.7	357.8	0.00	0.00	0.00
8,000.0	90.14	270.00	7,094.0	-2,143.48	-67.0	-456.7	457.7	0.00	0.00	0.00
8,100.0	90.14	270.00	7,093.7	-2,143.25	-67.0	-556.7	557.7	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SHARON 210-234
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4950.5usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4950.5usft (Original Well Elev)
<b>Site:</b>	NE SW SEC. 21 T4N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	SHARON 210-234	<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)
8,200.0	90.14	270.00	7,093.5	-2,143.01	-67.0	-656.7	657.7	0.00	0.00	0.00
8,300.0	90.14	270.00	7,093.3	-2,142.77	-67.0	-756.7	757.7	0.00	0.00	0.00
8,400.0	90.14	270.00	7,093.0	-2,142.53	-67.0	-856.7	857.7	0.00	0.00	0.00
8,500.0	90.14	270.00	7,092.8	-2,142.29	-67.0	-956.7	957.7	0.00	0.00	0.00
8,600.0	90.14	270.00	7,092.5	-2,142.05	-67.0	-1,056.7	1,057.7	0.00	0.00	0.00
8,700.0	90.14	270.00	7,092.3	-2,141.81	-67.0	-1,156.7	1,157.6	0.00	0.00	0.00
8,800.0	90.14	270.00	7,092.1	-2,141.57	-67.0	-1,256.7	1,257.6	0.00	0.00	0.00
8,900.0	90.14	270.00	7,091.8	-2,141.32	-67.0	-1,356.7	1,357.6	0.00	0.00	0.00
9,000.0	90.14	270.00	7,091.6	-2,141.08	-67.0	-1,456.7	1,457.6	0.00	0.00	0.00
9,100.0	90.14	270.00	7,091.3	-2,140.84	-67.0	-1,556.7	1,557.6	0.00	0.00	0.00
9,200.0	90.14	270.00	7,091.1	-2,140.60	-67.0	-1,656.7	1,657.6	0.00	0.00	0.00
9,300.0	90.14	270.00	7,090.9	-2,140.36	-67.0	-1,756.7	1,757.6	0.00	0.00	0.00
9,400.0	90.14	270.00	7,090.6	-2,140.12	-67.0	-1,856.7	1,857.6	0.00	0.00	0.00
9,500.0	90.14	270.00	7,090.4	-2,139.87	-67.0	-1,956.7	1,957.5	0.00	0.00	0.00
9,600.0	90.14	270.00	7,090.1	-2,139.63	-67.0	-2,056.7	2,057.5	0.00	0.00	0.00
9,700.0	90.14	270.00	7,089.9	-2,139.39	-67.0	-2,156.7	2,157.5	0.00	0.00	0.00
9,800.0	90.14	270.00	7,089.6	-2,139.15	-67.0	-2,256.7	2,257.5	0.00	0.00	0.00
9,900.0	90.14	270.00	7,089.4	-2,138.90	-67.0	-2,356.7	2,357.5	0.00	0.00	0.00
10,000.0	90.14	270.00	7,089.2	-2,138.66	-67.0	-2,456.7	2,457.5	0.00	0.00	0.00
10,100.0	90.14	270.00	7,088.9	-2,138.42	-67.0	-2,556.7	2,557.5	0.00	0.00	0.00
10,200.0	90.14	270.00	7,088.7	-2,138.17	-67.0	-2,656.7	2,657.4	0.00	0.00	0.00
10,300.0	90.14	270.00	7,088.4	-2,137.93	-67.0	-2,756.7	2,757.4	0.00	0.00	0.00
10,400.0	90.14	270.00	7,088.2	-2,137.68	-67.0	-2,856.7	2,857.4	0.00	0.00	0.00
10,500.0	90.14	270.00	7,087.9	-2,137.44	-67.0	-2,956.7	2,957.4	0.00	0.00	0.00
10,600.0	90.14	270.00	7,087.7	-2,137.19	-67.0	-3,056.7	3,057.4	0.00	0.00	0.00
10,700.0	90.14	270.00	7,087.4	-2,136.95	-67.0	-3,156.7	3,157.4	0.00	0.00	0.00
10,800.0	90.14	270.00	7,087.2	-2,136.70	-67.0	-3,256.7	3,257.4	0.00	0.00	0.00
10,900.0	90.14	270.00	7,087.0	-2,136.46	-67.0	-3,356.7	3,357.4	0.00	0.00	0.00
11,000.0	90.14	270.00	7,086.7	-2,136.21	-67.0	-3,456.7	3,457.3	0.00	0.00	0.00
11,100.0	90.14	270.00	7,086.5	-2,135.96	-67.0	-3,556.7	3,557.3	0.00	0.00	0.00
11,200.0	90.14	270.00	7,086.2	-2,135.72	-67.0	-3,656.7	3,657.3	0.00	0.00	0.00
11,300.0	90.14	270.00	7,086.0	-2,135.47	-67.0	-3,756.7	3,757.3	0.00	0.00	0.00
11,400.0	90.14	270.00	7,085.7	-2,135.22	-67.0	-3,856.7	3,857.3	0.00	0.00	0.00
11,500.0	90.14	270.00	7,085.5	-2,134.98	-67.0	-3,956.7	3,957.3	0.00	0.00	0.00
11,600.0	90.14	270.00	7,085.2	-2,134.73	-67.0	-4,056.7	4,057.3	0.00	0.00	0.00
<b>BHL:2115ft FSL &amp; 1945ft FEL of Sec 20</b>										
<b>11,692.6</b>	<b>90.14</b>	<b>270.00</b>	<b>7,085.0</b>	<b>-2,134.50</b>	<b>-67.0</b>	<b>-4,149.3</b>	<b>4,149.8</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,696.1	3,635.0	PARKMAN SANDSTONE				
4,268.1	4,200.0	SUSSEX SANDSTONE				
4,748.2	4,680.0	SHANNON				
6,970.6	6,857.0	SHARON SPRINGS				
7,175.4	6,988.0	NIOBRARA A				
7,420.3	7,079.0	NIOBRARA B				

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SHARON 21O-234
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4950.5usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4950.5usft (Original Well Elev)
<b>Site:</b>	NE SW SEC. 21 T4N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	SHARON 21O-234	<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: 2252ft FSL & 2205ft FWL of Sec 21
500.0	500.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,099.8	1,095.4	-6.1	62.3	EOB TO 12° INC
3,821.2	3,757.4	-60.9	625.2	END OF TANGENT
4,421.0	4,352.8	-67.0	687.5	EOD TO VERTICAL
6,447.0	6,378.8	-67.0	687.5	KOP (8°/100ft BUR)
7,573.7	7,095.0	-67.0	-30.4	HZ LP *NEW*: 2185ft FSL & 2173ft FWL of Sec 21
11,692.6	7,085.0	-67.0	-4,149.3	BHL:2115ft FSL & 1945ft FEL of Sec 20