

PDC ENERGY

**WELD COUNTY, COLORADO
NE SW SEC. 21 T4N R67W 6th P.M.
SHARON 210-314**

ORIGINAL WELLBORE

28 March, 2016

Plan: PROPOSAL #1



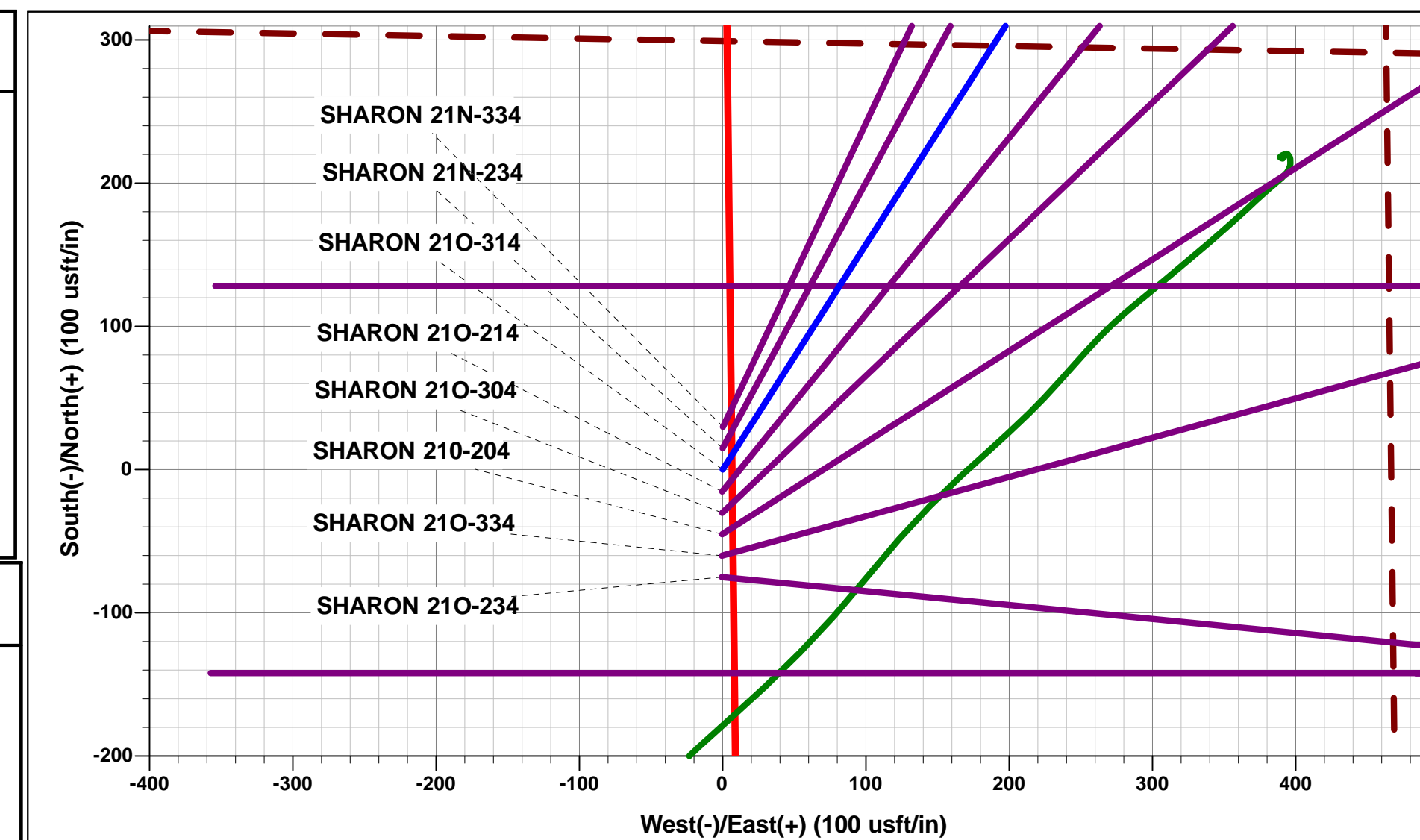


Project: WELD COUNTY, COLORADO
Site: NE SW SEC. 21 T4N R67W 6th P.M.
Well: SHARON 210-314
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Dep	Annotation	
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 2327ft FSL & 2206ft 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)	
1163.0	1169.1	13.38	32.51	65.6	41.8	-30.9	77.8	EOB TO 13.38° INC	
5786.8	5921.9	13.38	32.51	993.2	633.0	-467.4	1177.8	END OF TANGENT	
6449.8	6591.0	0.00	0.00	1058.8	674.8	-498.3	1255.6	EOD TO VERTICAL	
6479.8	6621.0	0.00	0.00	1058.8	674.8	-498.3	1255.6	KOP (8°/100ft BUR)	
7196.0	7748.9	90.24	270.00	1058.8	-44.4	211.7	1974.7	HZ LP *NEW*: 1867.8ft FNL & 2175ft FWL of Sec 21	
7169.0	14295.0	90.24	270.00	1058.8	-6590.3	6674.8	8520.7	BHL: 1990ft FNL & 500ft FEL of Sec 21	

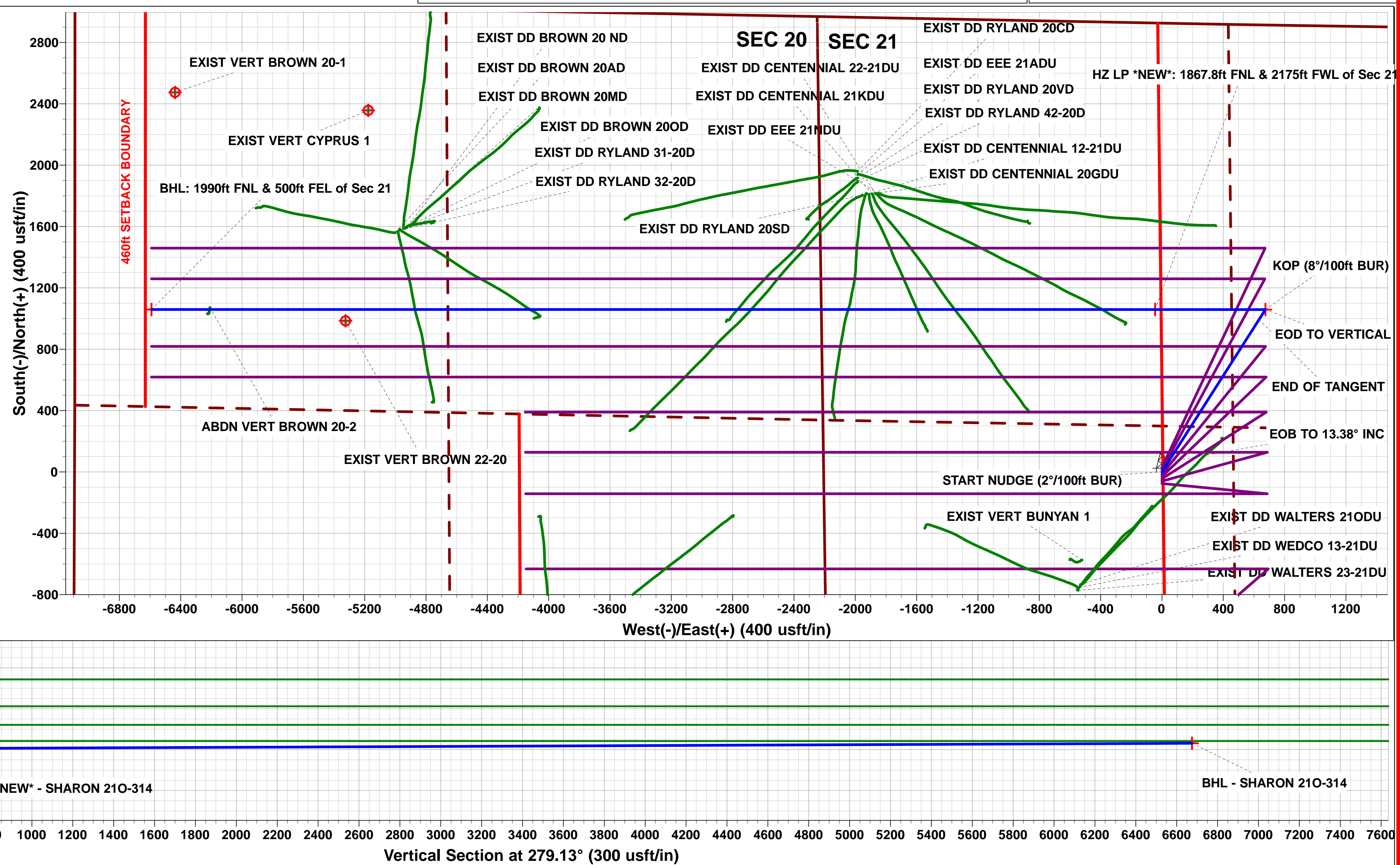
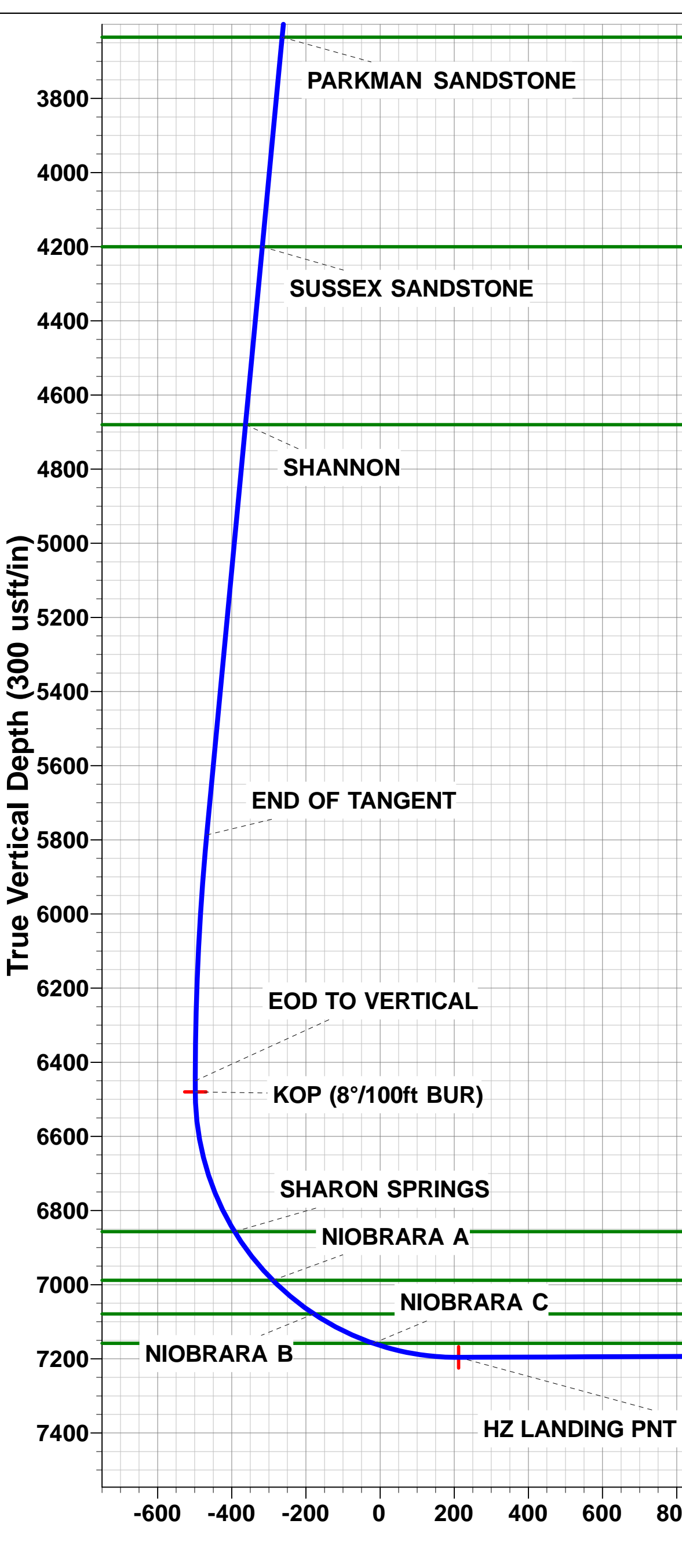
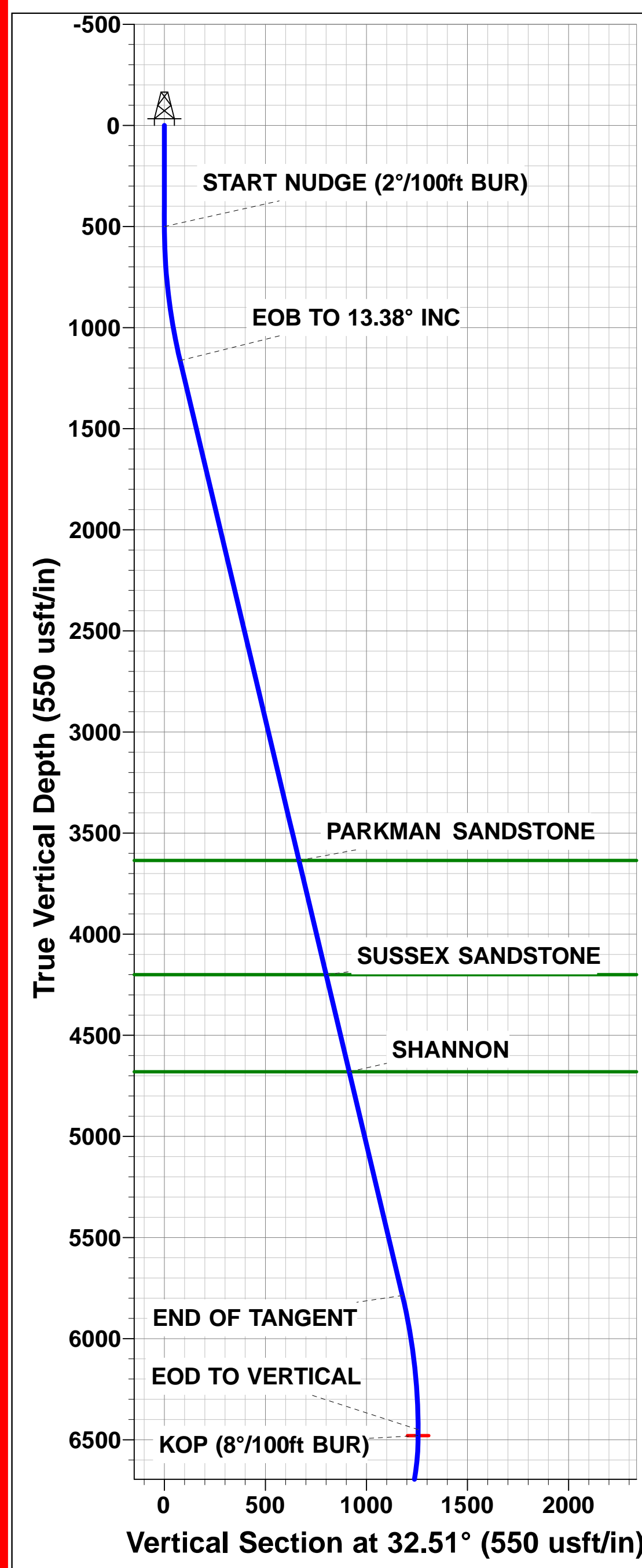
WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - SHARON 210-314	6479.8	1058.8	674.8	40.300405	-104.895181
HZ LANDING PNT *NEW* - SHARON 210-314	7196.0	1058.8	-44.4	40.300405	-104.897759
BHL - SHARON 210-314	7169.0	1058.8	-6590.3	40.300403	-104.921227



PROPOSED LOCAL COORDINATES:
SHL: 2327ft FSL & 2206ft FWL of Sec 21
HZ LP *NEW*: 1867.8ft FNL & 2175ft FWL of Sec 21
BHL: 1990ft FNL & 500ft FWL of Sec 20

Azimuths to True North
Magnetic North: 8.40°

Magnetic Field
Strength: 52463.1snT
Dip Angle: 66.78°
Date: 28/03/2016
Model: IGRF2015



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SHARON 210-314
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4951.5usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4951.5usft (Original Well Elev)
Site:	NE SW SEC. 21 T4N R67W 6th P.M.	North Reference:	True
Well:	SHARON 210-314	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Project	WELD COUNTY, COLORADO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	NE SW SEC. 21 T4N R67W 6th P.M.		
Site Position:		Northing:	1,351,715.69 usft
From:	Lat/Long	Easting:	3,168,026.97 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.297293
		Longitude:	-104.897602
		Grid Convergence:	0.39 °

Well	SHARON 210-314		
Well Position	+N/-S	75.0 usft	Northing:
	+E/-W	0.6 usft	Easting:
Position Uncertainty		0.0 usft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	28/03/2016	8.40	66.78	52,463

Design	PROPOSAL #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	7,169.0	0.0	0.0	279.13

Plan Sections											
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	-4,951.5	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	-4,451.5	0.0	0.0	0.00	0.00	0.00	0.00	
1,169.1	13.38	32.51	1,163.0	-3,788.5	65.6	41.8	2.00	2.00	0.00	32.51	
5,921.9	13.38	32.51	5,786.8	835.3	993.2	633.0	0.00	0.00	0.00	0.00	
6,591.0	0.00	0.00	6,449.8	1,498.3	1,058.8	674.8	2.00	-2.00	0.00	180.00	
6,621.0	0.00	0.00	6,479.8	1,528.3	1,058.8	674.8	0.00	0.00	0.00	0.00	KOP - SHARON 21
7,748.9	90.24	270.00	7,196.0	2,244.5	1,058.8	-44.4	8.00	8.00	-7.98	270.00	HZ LANDING PNT
14,295.0	90.24	270.00	7,169.0	2,217.5	1,058.8	-6,590.3	0.00	0.00	0.00	17.28	BHL - SHARON 21

Planning Report



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Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4951.5usft (Original Well Elev)
Site:	NE SW SEC. 21 T4N R67W 6th P.M.	North Reference:	True
Well:	SHARON 210-314	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
SHL: 2327ft FSL & 2206ft FWL of Sec 21										
0.0	0.00	0.00	0.0	4,951.50	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,851.50	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,751.50	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,651.50	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,551.50	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
500.0	0.00	0.00	500.0	4,451.50	0.0	0.0	0.0	0.00	0.00	0.00
600.0	2.00	32.51	600.0	4,351.52	1.5	0.9	-0.7	2.00	2.00	0.00
700.0	4.00	32.51	699.8	4,251.66	5.9	3.8	-2.8	2.00	2.00	0.00
800.0	6.00	32.51	799.5	4,152.05	13.2	8.4	-6.2	2.00	2.00	0.00
900.0	8.00	32.51	898.7	4,052.80	23.5	15.0	-11.1	2.00	2.00	0.00
1,000.0	10.00	32.51	997.5	3,954.03	36.7	23.4	-17.3	2.00	2.00	0.00
1,100.0	12.00	32.51	1,095.6	3,855.88	52.8	33.6	-24.8	2.00	2.00	0.00
EOB TO 13.38° INC										
1,169.1	13.38	32.51	1,163.0	3,788.47	65.6	41.8	-30.9	2.00	2.00	0.00
1,200.0	13.38	32.51	1,193.1	3,758.41	71.6	45.6	-33.7	0.00	0.00	0.00
1,300.0	13.38	32.51	1,290.4	3,661.12	91.1	58.1	-42.9	0.00	0.00	0.00
1,400.0	13.38	32.51	1,387.7	3,563.84	110.7	70.5	-52.1	0.00	0.00	0.00
1,500.0	13.38	32.51	1,484.9	3,466.55	130.2	83.0	-61.3	0.00	0.00	0.00
1,600.0	13.38	32.51	1,582.2	3,369.27	149.7	95.4	-70.4	0.00	0.00	0.00
1,700.0	13.38	32.51	1,679.5	3,271.98	169.2	107.8	-79.6	0.00	0.00	0.00
1,800.0	13.38	32.51	1,776.8	3,174.70	188.7	120.3	-88.8	0.00	0.00	0.00
1,900.0	13.38	32.51	1,874.1	3,077.41	208.2	132.7	-98.0	0.00	0.00	0.00
2,000.0	13.38	32.51	1,971.4	2,980.13	227.8	145.2	-107.2	0.00	0.00	0.00
2,100.0	13.38	32.51	2,068.7	2,882.84	247.3	157.6	-116.4	0.00	0.00	0.00
2,200.0	13.38	32.51	2,165.9	2,785.56	266.8	170.0	-125.6	0.00	0.00	0.00
2,300.0	13.38	32.51	2,263.2	2,688.27	286.3	182.5	-134.7	0.00	0.00	0.00
2,400.0	13.38	32.51	2,360.5	2,590.99	305.8	194.9	-143.9	0.00	0.00	0.00
2,500.0	13.38	32.51	2,457.8	2,493.70	325.3	207.4	-153.1	0.00	0.00	0.00
2,600.0	13.38	32.51	2,555.1	2,396.42	344.9	219.8	-162.3	0.00	0.00	0.00
2,700.0	13.38	32.51	2,652.4	2,299.13	364.4	232.2	-171.5	0.00	0.00	0.00
2,800.0	13.38	32.51	2,749.7	2,201.85	383.9	244.7	-180.7	0.00	0.00	0.00
2,900.0	13.38	32.51	2,846.9	2,104.56	403.4	257.1	-189.9	0.00	0.00	0.00
3,000.0	13.38	32.51	2,944.2	2,007.28	422.9	269.5	-199.0	0.00	0.00	0.00
3,100.0	13.38	32.51	3,041.5	1,909.99	442.5	282.0	-208.2	0.00	0.00	0.00
3,200.0	13.38	32.51	3,138.8	1,812.71	462.0	294.4	-217.4	0.00	0.00	0.00
3,300.0	13.38	32.51	3,236.1	1,715.42	481.5	306.9	-226.6	0.00	0.00	0.00
3,400.0	13.38	32.51	3,333.4	1,618.14	501.0	319.3	-235.8	0.00	0.00	0.00
3,500.0	13.38	32.51	3,430.6	1,520.85	520.5	331.7	-245.0	0.00	0.00	0.00
3,600.0	13.38	32.51	3,527.9	1,423.57	540.0	344.2	-254.2	0.00	0.00	0.00
3,700.0	13.38	32.51	3,625.2	1,326.28	559.6	356.6	-263.3	0.00	0.00	0.00
PARKMAN SANDSTONE										
3,710.1	13.38	32.51	3,635.0	1,316.50	561.5	357.9	-264.3	0.00	0.00	0.00
3,800.0	13.38	32.51	3,722.5	1,229.00	579.1	369.1	-272.5	0.00	0.00	0.00
3,900.0	13.38	32.51	3,819.8	1,131.71	598.6	381.5	-281.7	0.00	0.00	0.00
4,000.0	13.38	32.51	3,917.1	1,034.43	618.1	393.9	-290.9	0.00	0.00	0.00
4,100.0	13.38	32.51	4,014.4	937.14	637.6	406.4	-300.1	0.00	0.00	0.00
4,200.0	13.38	32.51	4,111.6	839.86	657.1	418.8	-309.3	0.00	0.00	0.00
SUSSEX SANDSTONE										
4,290.8	13.38	32.51	4,200.0	751.50	674.9	430.1	-317.6	0.00	0.00	0.00
4,300.0	13.38	32.51	4,208.9	742.57	676.7	431.3	-318.5	0.00	0.00	0.00
4,400.0	13.38	32.51	4,306.2	645.29	696.2	443.7	-327.6	0.00	0.00	0.00
4,500.0	13.38	32.51	4,403.5	548.00	715.7	456.1	-336.8	0.00	0.00	0.00

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Well:	SHARON 210-314	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
4,600.0	13.38	32.51	4,500.8	450.72	735.2	468.6	-346.0	0.00	0.00	0.00
4,700.0	13.38	32.51	4,598.1	353.43	754.7	481.0	-355.2	0.00	0.00	0.00
SHANNON										
4,784.2	13.38	32.51	4,680.0	271.50	771.2	491.5	-362.9	0.00	0.00	0.00
4,800.0	13.38	32.51	4,695.4	256.15	774.2	493.4	-364.4	0.00	0.00	0.00
4,900.0	13.38	32.51	4,792.6	158.86	793.8	505.9	-373.6	0.00	0.00	0.00
5,000.0	13.38	32.51	4,889.9	61.58	813.3	518.3	-382.8	0.00	0.00	0.00
5,100.0	13.38	32.51	4,987.2	-35.71	832.8	530.8	-391.9	0.00	0.00	0.00
5,200.0	13.38	32.51	5,084.5	-132.99	852.3	543.2	-401.1	0.00	0.00	0.00
5,300.0	13.38	32.51	5,181.8	-230.28	871.8	555.6	-410.3	0.00	0.00	0.00
5,400.0	13.38	32.51	5,279.1	-327.56	891.4	568.1	-419.5	0.00	0.00	0.00
5,500.0	13.38	32.51	5,376.3	-424.84	910.9	580.5	-428.7	0.00	0.00	0.00
5,600.0	13.38	32.51	5,473.6	-522.13	930.4	593.0	-437.9	0.00	0.00	0.00
5,700.0	13.38	32.51	5,570.9	-619.41	949.9	605.4	-447.0	0.00	0.00	0.00
5,800.0	13.38	32.51	5,668.2	-716.70	969.4	617.8	-456.2	0.00	0.00	0.00
5,900.0	13.38	32.51	5,765.5	-813.98	988.9	630.3	-465.4	0.00	0.00	0.00
END OF TANGENT										
5,921.9	13.38	32.51	5,786.8	-835.27	993.2	633.0	-467.4	0.00	0.00	0.00
6,000.0	11.82	32.51	5,863.0	-911.51	1,007.6	642.2	-474.2	2.00	-2.00	0.00
6,100.0	9.82	32.51	5,961.2	-1,009.72	1,023.4	652.2	-481.6	2.00	-2.00	0.00
6,200.0	7.82	32.51	6,060.0	-1,108.54	1,036.3	660.5	-487.7	2.00	-2.00	0.00
6,300.0	5.82	32.51	6,159.3	-1,207.82	1,046.3	666.9	-492.4	2.00	-2.00	0.00
6,400.0	3.82	32.51	6,259.0	-1,307.47	1,053.4	671.4	-495.8	2.00	-2.00	0.00
6,500.0	1.82	32.51	6,358.8	-1,407.34	1,057.6	674.0	-497.7	2.00	-2.00	0.00
EOD TO VERTICAL										
6,591.0	0.00	0.00	6,449.8	-1,498.30	1,058.8	674.8	-498.3	2.00	-2.00	0.00
6,600.0	0.00	0.00	6,458.8	-1,507.32	1,058.8	674.8	-498.3	0.00	0.00	0.00
KOP (8°/100ft BUR)										
6,621.0	0.00	0.00	6,479.8	-1,528.30	1,058.8	674.8	-498.3	0.00	0.00	0.00
6,700.0	6.32	270.00	6,558.7	-1,607.16	1,058.8	670.4	-494.0	8.00	8.00	0.00
6,800.0	14.32	270.00	6,657.0	-1,705.47	1,058.8	652.5	-476.3	8.00	8.00	0.00
6,900.0	22.32	270.00	6,751.8	-1,800.32	1,058.8	621.1	-445.3	8.00	8.00	0.00
7,000.0	30.32	270.00	6,841.4	-1,889.88	1,058.8	576.8	-401.6	8.00	8.00	0.00
SHARON SPRINGS										
7,018.2	31.78	270.00	6,857.0	-1,905.50	1,058.8	567.4	-392.3	8.00	8.00	0.00
7,100.0	38.32	270.00	6,923.9	-1,972.40	1,058.8	520.5	-345.9	8.00	8.00	0.00
NIOBRARA A										
7,186.0	45.20	270.00	6,988.0	-2,036.50	1,058.8	463.3	-289.4	8.00	8.00	0.00
7,200.0	46.32	270.00	6,997.8	-2,046.28	1,058.8	453.2	-279.5	8.00	8.00	0.00
7,300.0	54.32	270.00	7,061.6	-2,110.07	1,058.8	376.3	-203.6	8.00	8.00	0.00
NIOBRARA B										
7,330.8	56.79	270.00	7,079.0	-2,127.50	1,058.8	350.9	-178.5	8.00	8.00	0.00
7,400.0	62.32	270.00	7,114.0	-2,162.55	1,058.8	291.3	-119.6	8.00	8.00	0.00
7,500.0	70.32	270.00	7,154.2	-2,202.68	1,058.8	199.8	-29.3	8.00	8.00	0.00
NIOBRARA C										
7,511.6	71.25	270.00	7,158.0	-2,206.50	1,058.8	188.8	-18.5	8.00	8.00	0.00
7,600.0	78.32	270.00	7,181.2	-2,229.68	1,058.8	103.6	65.7	8.00	8.00	0.00
7,700.0	86.32	270.00	7,194.5	-2,243.03	1,058.8	4.6	163.5	8.00	8.00	0.00
HZ LP *NEW*: 1867.8ft FNL & 2175ft FWL of Sec 21										
7,748.9	90.24	270.00	7,196.0	-2,244.50	1,058.8	-44.4	211.7	8.00	8.00	0.00
7,800.0	90.24	270.00	7,195.8	-2,244.29	1,058.8	-95.4	262.2	0.00	0.00	0.00
7,900.0	90.24	270.00	7,195.4	-2,243.88	1,058.8	-195.4	360.9	0.00	0.00	0.00
8,000.0	90.24	270.00	7,195.0	-2,243.47	1,058.8	-295.4	459.6	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SHARON 210-314
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4951.5usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4951.5usft (Original Well Elev)
Site:	NE SW SEC. 21 T4N R67W 6th P.M.	North Reference:	True
Well:	SHARON 210-314	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
8,100.0	90.24	270.00	7,194.6	-2,243.06	1,058.8	-395.4	558.4	0.00	0.00	0.00
8,200.0	90.24	270.00	7,194.1	-2,242.65	1,058.8	-495.4	657.1	0.00	0.00	0.00
8,300.0	90.24	270.00	7,193.7	-2,242.23	1,058.8	-595.4	755.8	0.00	0.00	0.00
8,400.0	90.24	270.00	7,193.3	-2,241.82	1,058.8	-695.4	854.6	0.00	0.00	0.00
8,500.0	90.24	270.00	7,192.9	-2,241.41	1,058.8	-795.4	953.3	0.00	0.00	0.00
8,600.0	90.24	270.00	7,192.5	-2,241.00	1,058.8	-895.4	1,052.0	0.00	0.00	0.00
8,700.0	90.24	270.00	7,192.1	-2,240.59	1,058.8	-995.4	1,150.8	0.00	0.00	0.00
8,800.0	90.24	270.00	7,191.7	-2,240.18	1,058.8	-1,095.4	1,249.5	0.00	0.00	0.00
8,900.0	90.24	270.00	7,191.3	-2,239.77	1,058.8	-1,195.4	1,348.2	0.00	0.00	0.00
9,000.0	90.24	270.00	7,190.9	-2,239.35	1,058.8	-1,295.4	1,447.0	0.00	0.00	0.00
9,100.0	90.24	270.00	7,190.4	-2,238.94	1,058.8	-1,395.4	1,545.7	0.00	0.00	0.00
9,200.0	90.24	270.00	7,190.0	-2,238.53	1,058.8	-1,495.4	1,644.4	0.00	0.00	0.00
9,300.0	90.24	270.00	7,189.6	-2,238.12	1,058.8	-1,595.4	1,743.2	0.00	0.00	0.00
9,400.0	90.24	270.00	7,189.2	-2,237.71	1,058.8	-1,695.4	1,841.9	0.00	0.00	0.00
9,500.0	90.24	270.00	7,188.8	-2,237.30	1,058.8	-1,795.4	1,940.6	0.00	0.00	0.00
9,600.0	90.24	270.00	7,188.4	-2,236.88	1,058.8	-1,895.4	2,039.4	0.00	0.00	0.00
9,700.0	90.24	270.00	7,188.0	-2,236.47	1,058.8	-1,995.4	2,138.1	0.00	0.00	0.00
9,800.0	90.24	270.00	7,187.6	-2,236.06	1,058.8	-2,095.4	2,236.8	0.00	0.00	0.00
9,900.0	90.24	270.00	7,187.1	-2,235.65	1,058.8	-2,195.4	2,335.6	0.00	0.00	0.00
10,000.0	90.24	270.00	7,186.7	-2,235.24	1,058.8	-2,295.4	2,434.3	0.00	0.00	0.00
10,100.0	90.24	270.00	7,186.3	-2,234.82	1,058.8	-2,395.4	2,533.0	0.00	0.00	0.00
10,200.0	90.24	270.00	7,185.9	-2,234.41	1,058.8	-2,495.4	2,631.8	0.00	0.00	0.00
10,300.0	90.24	270.00	7,185.5	-2,234.00	1,058.8	-2,595.4	2,730.5	0.00	0.00	0.00
10,400.0	90.24	270.00	7,185.1	-2,233.59	1,058.8	-2,695.4	2,829.2	0.00	0.00	0.00
10,500.0	90.24	270.00	7,184.7	-2,233.17	1,058.8	-2,795.4	2,928.0	0.00	0.00	0.00
10,600.0	90.24	270.00	7,184.3	-2,232.76	1,058.8	-2,895.4	3,026.7	0.00	0.00	0.00
10,700.0	90.24	270.00	7,183.9	-2,232.35	1,058.8	-2,995.4	3,125.4	0.00	0.00	0.00
10,800.0	90.24	270.00	7,183.4	-2,231.94	1,058.8	-3,095.4	3,224.2	0.00	0.00	0.00
10,900.0	90.24	270.00	7,183.0	-2,231.53	1,058.8	-3,195.4	3,322.9	0.00	0.00	0.00
11,000.0	90.24	270.00	7,182.6	-2,231.11	1,058.8	-3,295.4	3,421.6	0.00	0.00	0.00
11,100.0	90.24	270.00	7,182.2	-2,230.70	1,058.8	-3,395.4	3,520.4	0.00	0.00	0.00
11,200.0	90.24	270.00	7,181.8	-2,230.29	1,058.8	-3,495.4	3,619.1	0.00	0.00	0.00
11,300.0	90.24	270.00	7,181.4	-2,229.88	1,058.8	-3,595.4	3,717.8	0.00	0.00	0.00
11,400.0	90.24	270.00	7,181.0	-2,229.46	1,058.8	-3,695.4	3,816.6	0.00	0.00	0.00
11,500.0	90.24	270.00	7,180.6	-2,229.05	1,058.8	-3,795.4	3,915.3	0.00	0.00	0.00
11,600.0	90.24	270.00	7,180.1	-2,228.64	1,058.8	-3,895.4	4,014.0	0.00	0.00	0.00
11,700.0	90.24	270.00	7,179.7	-2,228.22	1,058.8	-3,995.4	4,112.8	0.00	0.00	0.00
11,800.0	90.24	270.00	7,179.3	-2,227.81	1,058.8	-4,095.4	4,211.5	0.00	0.00	0.00
11,900.0	90.24	270.00	7,178.9	-2,227.40	1,058.8	-4,195.4	4,310.2	0.00	0.00	0.00
12,000.0	90.24	270.00	7,178.5	-2,226.99	1,058.8	-4,295.4	4,409.0	0.00	0.00	0.00
12,100.0	90.24	270.00	7,178.1	-2,226.57	1,058.8	-4,395.4	4,507.7	0.00	0.00	0.00
12,200.0	90.24	270.00	7,177.7	-2,226.16	1,058.8	-4,495.4	4,606.4	0.00	0.00	0.00
12,300.0	90.24	270.00	7,177.2	-2,225.75	1,058.8	-4,595.4	4,705.2	0.00	0.00	0.00
12,400.0	90.24	270.00	7,176.8	-2,225.33	1,058.8	-4,695.4	4,803.9	0.00	0.00	0.00
12,500.0	90.24	270.00	7,176.4	-2,224.92	1,058.8	-4,795.4	4,902.6	0.00	0.00	0.00
12,600.0	90.24	270.00	7,176.0	-2,224.51	1,058.8	-4,895.4	5,001.3	0.00	0.00	0.00
12,700.0	90.24	270.00	7,175.6	-2,224.10	1,058.8	-4,995.4	5,100.1	0.00	0.00	0.00
12,800.0	90.24	270.00	7,175.2	-2,223.68	1,058.8	-5,095.4	5,198.8	0.00	0.00	0.00
12,900.0	90.24	270.00	7,174.8	-2,223.27	1,058.8	-5,195.4	5,297.5	0.00	0.00	0.00
13,000.0	90.24	270.00	7,174.4	-2,222.86	1,058.8	-5,295.4	5,396.3	0.00	0.00	0.00
13,100.0	90.24	270.00	7,173.9	-2,222.44	1,058.8	-5,395.4	5,495.0	0.00	0.00	0.00
13,200.0	90.24	270.00	7,173.5	-2,222.03	1,058.8	-5,495.4	5,593.7	0.00	0.00	0.00
13,300.0	90.24	270.00	7,173.1	-2,221.62	1,058.8	-5,595.4	5,692.5	0.00	0.00	0.00
13,400.0	90.24	270.00	7,172.7	-2,221.20	1,058.8	-5,695.4	5,791.2	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SHARON 210-314
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4951.5usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4951.5usft (Original Well Elev)
Site:	NE SW SEC. 21 T4N R67W 6th P.M.	North Reference:	True
Well:	SHARON 210-314	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
13,500.0	90.24	270.00	7,172.3	-2,220.79	1,058.8	-5,795.4	5,889.9	0.00	0.00	0.00
13,600.0	90.24	270.00	7,171.9	-2,220.37	1,058.8	-5,895.4	5,988.7	0.00	0.00	0.00
13,700.0	90.24	270.00	7,171.5	-2,219.96	1,058.8	-5,995.4	6,087.4	0.00	0.00	0.00
13,800.0	90.24	270.00	7,171.0	-2,219.55	1,058.8	-6,095.4	6,186.1	0.00	0.00	0.00
13,900.0	90.24	270.00	7,170.6	-2,219.13	1,058.8	-6,195.4	6,284.9	0.00	0.00	0.00
14,000.0	90.24	270.00	7,170.2	-2,218.72	1,058.8	-6,295.4	6,383.6	0.00	0.00	0.00
14,100.0	90.24	270.00	7,169.8	-2,218.31	1,058.8	-6,395.4	6,482.3	0.00	0.00	0.00
14,200.0	90.24	270.00	7,169.4	-2,217.89	1,058.8	-6,495.4	6,581.1	0.00	0.00	0.00
BHL: 1990ft FNL & 500ft FEL of Sec 21										
14,295.0	90.24	270.00	7,169.0	-2,217.50	1,058.8	-6,590.3	6,674.8	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,710.1	3,635.0	PARKMAN SANDSTONE			
4,290.8	4,200.0	SUSSEX SANDSTONE			
4,784.2	4,680.0	SHANNON			
7,018.2	6,857.0	SHARON SPRINGS			
7,186.0	6,988.0	NIOBRARA A			
7,330.8	7,079.0	NIOBRARA B			
7,511.6	7,158.0	NIOBRARA C			

Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL: 2327ft FSL & 2206ft FWL of Sec 21
500.0	500.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,169.1	1,163.0	65.6	41.8	EOB TO 13.38° INC
5,921.9	5,786.8	993.2	633.0	END OF TANGENT
6,591.0	6,449.8	1,058.8	674.8	EOD TO VERTICAL
6,621.0	6,479.8	1,058.8	674.8	KOP (8°/100ft BUR)
7,748.9	7,196.0	1,058.8	-44.4	HZ LP *NEW*: 1867.8ft FNL & 2175ft FWL of Sec 21
14,295.0	7,169.0	1,058.8	-6,590.3	BHL: 1990ft FNL & 500ft FEL of Sec 21