

PDC ENERGY

**WELD COUNTY, COLORADO
NE SW SEC. 21 T4N R67W 6th P.M.
SHARON 210-334**

ORIGINAL WELLBORE

28 March, 2016

Plan: PROPOSAL #1





Project: WELD COUNTY, COLORADO
Site: NE SW SEC. 21 T4N R67W 6th P.M.
Well: SHARON 210-334
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

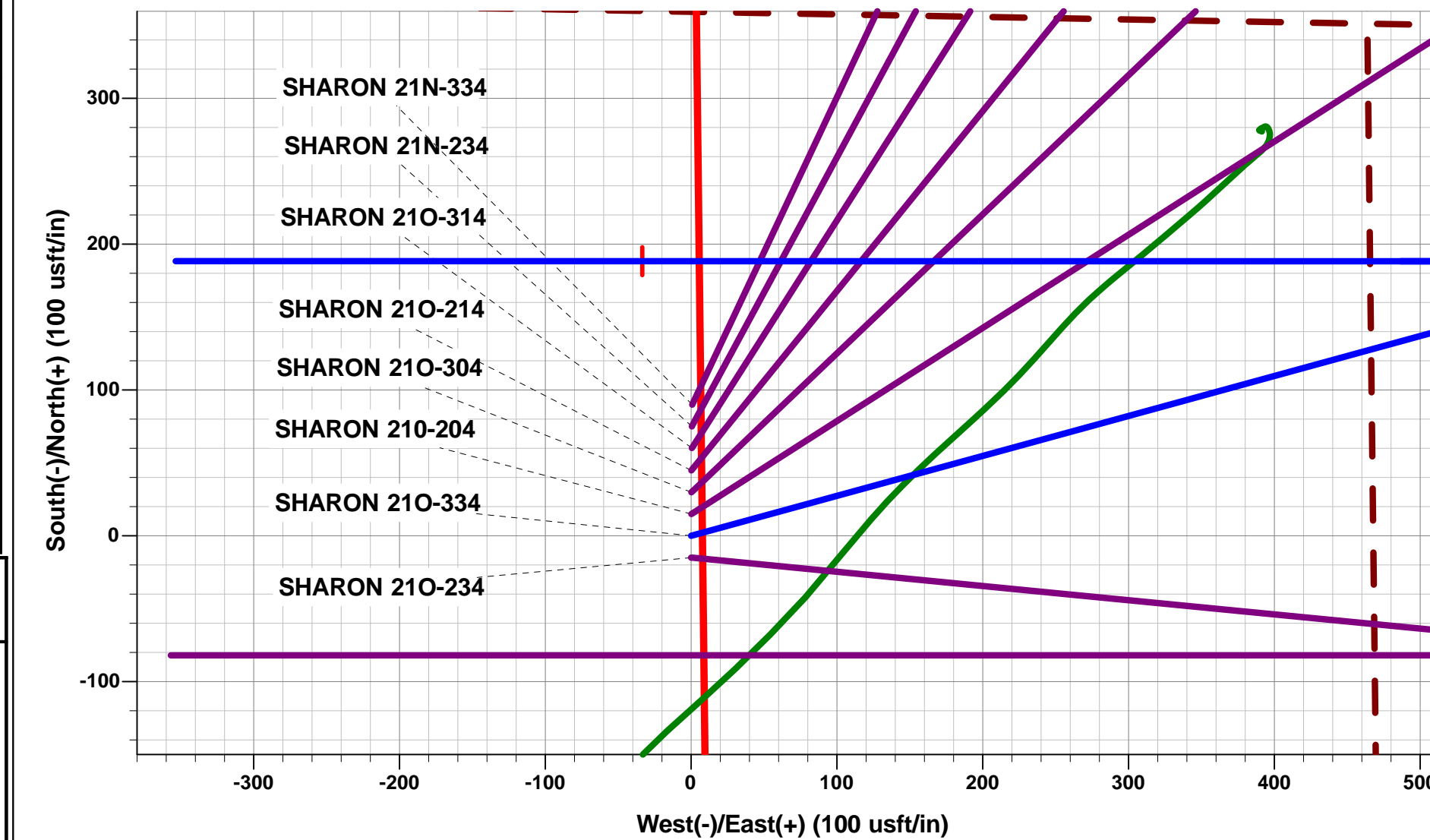


ANNOTATIONS

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: 2267ft FSL & 2205ft FWL of Sec 21
900.0	900.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1495.7	1500.1	12.00	74.68	16.5	60.4	-59.6	62.6	EOB TO 12° INC
4259.1	4325.2	12.00	74.68	171.8	627.0	-618.6	650.1	END OF TANGENT
4854.8	4925.3	0.00	0.00	188.3	687.4	-678.2	712.7	EOD TO VERTICAL
6479.8	6550.3	0.00	0.00	188.3	687.4	-678.2	712.7	KOP (8°/100ft BUR)
7196.0	7680.0	90.37	270.00	188.3	-33.5	42.0	1433.6	HZ LP *NEW*: 2455.3ft FSL & 2173ft FWL of Sec 21
7169.0	11797.6	90.38	270.00	188.3	-4150.9	4155.2	5551.1	BHL: 2385ft FSL & 1943ft FEL of Sec 20

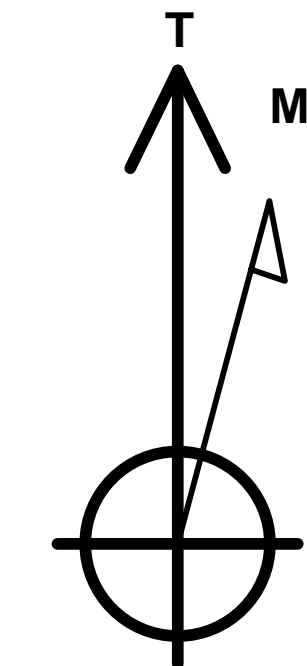
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - SHARON 210-334	6479.8	188.3	687.4	40.297851	-104.895138
HZ LANDING PNT *NEW* - SHARON 210-334	7196.0	188.3	-33.5	40.297851	-104.897722
BHL - SHARON 210-334	7169.0	188.3	-4150.9	40.297850	-104.912483



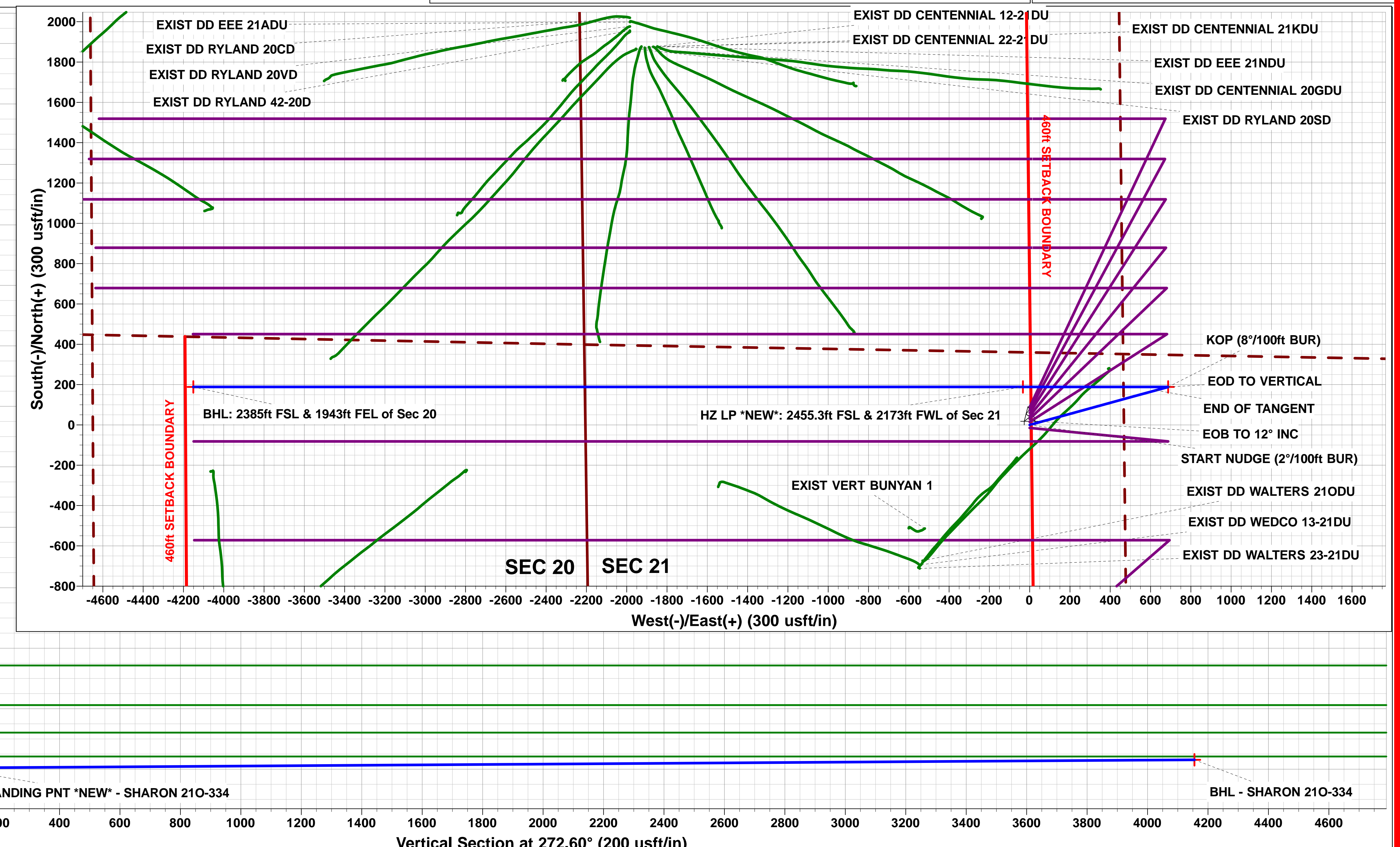
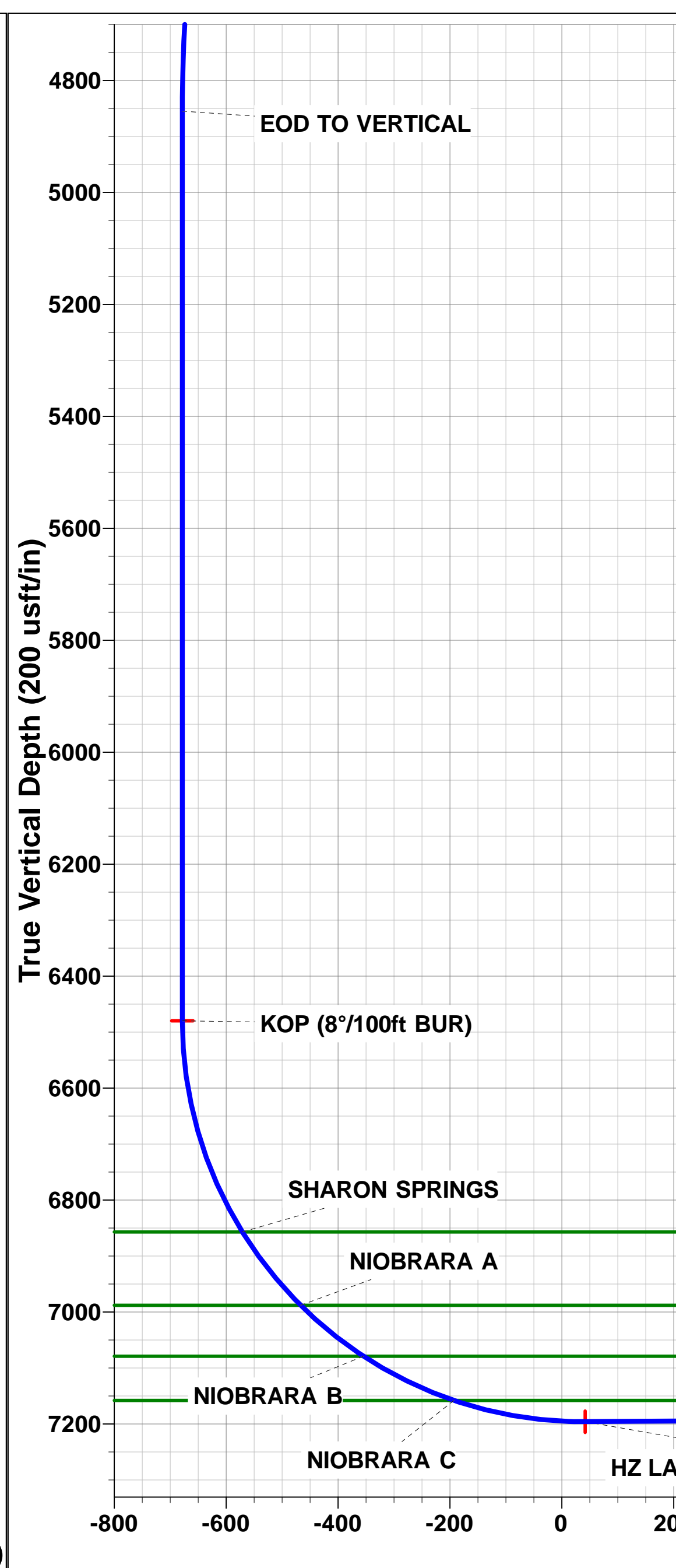
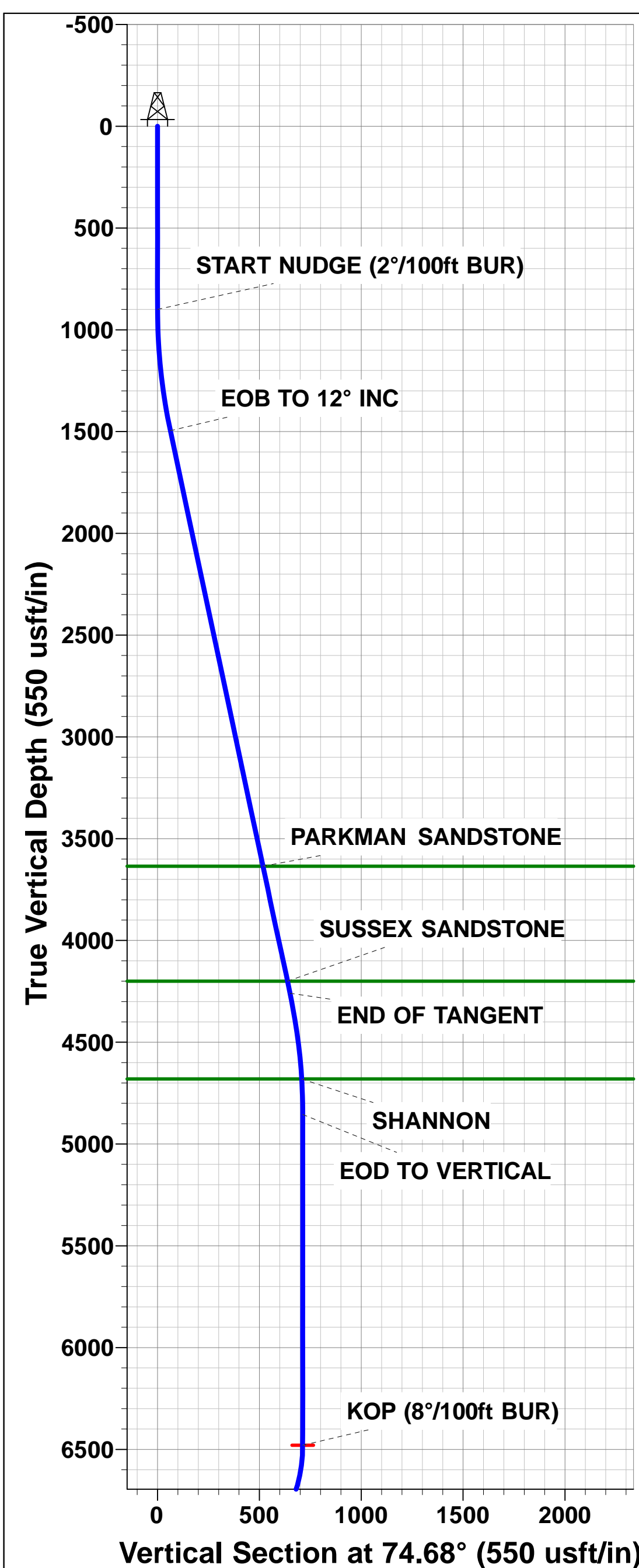
PROPOSED LOCAL COORDINATES:

SHL: 2267ft FSL & 2205ft FWL of Sec 21
HZ LP *NEW*: 2455.3ft FSL & 2173ft FWL of Sec 21
BHL: 2385ft FSL & 1943ft FEL of Sec 20



Azimuths to True North
Magnetic North: 8.40°

Magnetic Field
Strength: 52463.0snT
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 21O-334
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4950.5usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4950.5usft (Original Well Elev)
Site:	NE SW SEC. 21 T4N R67W 6th P.M.	North Reference:	True
Well:	SHARON 21O-334	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 21O-334		
Well Position	+N/-S	14.9 usft	Northing:
	+E/-W	0.0 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	272.60	

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	-4,950.5	0.0	0.0	0.00	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	-4,050.5	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.1	12.00	74.68	1,495.7	-3,454.8	16.5	60.4	2.00	2.00	0.00	74.68	
4,325.2	12.00	74.68	4,259.1	-691.4	171.8	627.0	0.00	0.00	0.00	0.00	
4,925.3	0.00	0.00	4,854.8	-95.7	188.3	687.4	2.00	-2.00	0.00	180.00	
6,550.3	0.00	0.00	6,479.8	1,529.3	188.3	687.4	0.00	0.00	0.00	0.00	KOP - SHARON 21
7,680.0	90.37	270.00	7,196.0	2,245.5	188.3	-33.5	8.00	8.00	-7.97	270.00	HZ LANDING PNT
11,797.6	90.38	270.00	7,169.0	2,218.5	188.3	-4,150.9	0.00	0.00	0.00	9.72	BHL - SHARON 21

Planning Report



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Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4950.5usft (Original Well Elev)
Site:	NE SW SEC. 21 T4N R67W 6th P.M.	North Reference:	True
Well:	SHARON 210-334	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: 2267ft FSL & 2205ft FWL of Sec 21										
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
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	0.00	0.00	600.0	4,350.50	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,250.50	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	4,150.50	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
900.0	0.00	0.00	900.0	4,050.50	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	2.00	74.68	1,000.0	3,950.52	0.5	1.7	-1.7	2.00	2.00	0.00
1,100.0	4.00	74.68	1,099.8	3,850.66	1.8	6.7	-6.6	2.00	2.00	0.00
1,200.0	6.00	74.68	1,199.5	3,751.05	4.1	15.1	-14.9	2.00	2.00	0.00
1,300.0	8.00	74.68	1,298.7	3,651.80	7.4	26.9	-26.5	2.00	2.00	0.00
1,400.0	10.00	74.68	1,397.5	3,553.03	11.5	42.0	-41.4	2.00	2.00	0.00
1,500.0	12.00	74.68	1,495.6	3,454.88	16.5	60.4	-59.6	2.00	2.00	0.00
EOB TO 12° INC										
1,500.1	12.00	74.68	1,495.7	3,454.77	16.5	60.4	-59.6	2.00	2.00	0.00
1,600.0	12.00	74.68	1,593.4	3,357.06	22.0	80.4	-79.4	0.00	0.00	0.00
1,700.0	12.00	74.68	1,691.3	3,259.25	27.5	100.5	-99.1	0.00	0.00	0.00
1,800.0	12.00	74.68	1,789.1	3,161.43	33.0	120.5	-118.9	0.00	0.00	0.00
1,900.0	12.00	74.68	1,886.9	3,063.62	38.5	140.6	-138.7	0.00	0.00	0.00
2,000.0	12.00	74.68	1,984.7	2,965.81	44.0	160.7	-158.5	0.00	0.00	0.00
2,100.0	12.00	74.68	2,082.5	2,867.99	49.5	180.7	-178.3	0.00	0.00	0.00
2,200.0	12.00	74.68	2,180.3	2,770.18	55.0	200.8	-198.1	0.00	0.00	0.00
2,300.0	12.00	74.68	2,278.1	2,672.36	60.5	220.8	-217.9	0.00	0.00	0.00
2,400.0	12.00	74.68	2,375.9	2,574.55	66.0	240.9	-237.6	0.00	0.00	0.00
2,500.0	12.00	74.68	2,473.8	2,476.74	71.5	260.9	-257.4	0.00	0.00	0.00
2,600.0	12.00	74.68	2,571.6	2,378.92	77.0	281.0	-277.2	0.00	0.00	0.00
2,700.0	12.00	74.68	2,669.4	2,281.11	82.5	301.0	-297.0	0.00	0.00	0.00
2,800.0	12.00	74.68	2,767.2	2,183.30	88.0	321.1	-316.8	0.00	0.00	0.00
2,900.0	12.00	74.68	2,865.0	2,085.48	93.5	341.2	-336.6	0.00	0.00	0.00
3,000.0	12.00	74.68	2,962.8	1,987.67	98.9	361.2	-356.4	0.00	0.00	0.00
3,100.0	12.00	74.68	3,060.6	1,889.85	104.4	381.3	-376.1	0.00	0.00	0.00
3,200.0	12.00	74.68	3,158.5	1,792.04	109.9	401.3	-395.9	0.00	0.00	0.00
3,300.0	12.00	74.68	3,256.3	1,694.23	115.4	421.4	-415.7	0.00	0.00	0.00
3,400.0	12.00	74.68	3,354.1	1,596.41	120.9	441.4	-435.5	0.00	0.00	0.00
3,500.0	12.00	74.68	3,451.9	1,498.60	126.4	461.5	-455.3	0.00	0.00	0.00
3,600.0	12.00	74.68	3,549.7	1,400.78	131.9	481.6	-475.1	0.00	0.00	0.00
PARKMAN SANDSTONE										
3,687.2	12.00	74.68	3,635.0	1,315.50	136.7	499.0	-492.3	0.00	0.00	0.00
3,700.0	12.00	74.68	3,647.5	1,302.97	137.4	501.6	-494.9	0.00	0.00	0.00
3,800.0	12.00	74.68	3,745.3	1,205.16	142.9	521.7	-514.7	0.00	0.00	0.00
3,900.0	12.00	74.68	3,843.2	1,107.34	148.4	541.7	-534.4	0.00	0.00	0.00
4,000.0	12.00	74.68	3,941.0	1,009.53	153.9	561.8	-554.2	0.00	0.00	0.00
4,100.0	12.00	74.68	4,038.8	911.71	159.4	581.8	-574.0	0.00	0.00	0.00
4,200.0	12.00	74.68	4,136.6	813.90	164.9	601.9	-593.8	0.00	0.00	0.00
SUSSEX SANDSTONE										
4,264.8	12.00	74.68	4,200.0	750.50	168.4	614.9	-606.6	0.00	0.00	0.00
4,300.0	12.00	74.68	4,234.4	716.09	170.4	621.9	-613.6	0.00	0.00	0.00
END OF TANGENT										

Planning Report



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Site:	NE SW SEC. 21 T4N R67W 6th P.M.	North Reference:	True
Well:	SHARON 210-334	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)
4,325.2	12.00	74.68	4,259.1	691.43	171.8	627.0	-618.6	0.00	0.00	0.00
4,400.0	10.51	74.68	4,332.4	618.08	175.6	641.1	-632.5	2.00	-2.00	0.00
4,500.0	8.51	74.68	4,431.0	519.45	180.0	657.0	-648.2	2.00	-2.00	0.00
4,600.0	6.51	74.68	4,530.2	420.32	183.4	669.6	-660.6	2.00	-2.00	0.00
4,700.0	4.51	74.68	4,629.7	320.78	186.0	678.9	-669.7	2.00	-2.00	0.00
SHANNON										
4,750.4	3.50	74.68	4,680.0	270.50	186.9	682.3	-673.1	2.00	-2.00	0.00
4,800.0	2.51	74.68	4,729.5	220.98	187.6	684.8	-675.6	2.00	-2.00	0.00
4,900.0	0.51	74.68	4,829.5	121.02	188.3	687.3	-678.1	2.00	-2.00	0.00
EOD TO VERTICAL										
4,925.3	0.00	0.00	4,854.8	95.70	188.3	687.4	-678.2	2.00	-2.00	0.00
5,000.0	0.00	0.00	4,929.5	21.02	188.3	687.4	-678.2	0.00	0.00	0.00
5,100.0	0.00	0.00	5,029.5	-78.98	188.3	687.4	-678.2	0.00	0.00	0.00
5,200.0	0.00	0.00	5,129.5	-178.98	188.3	687.4	-678.2	0.00	0.00	0.00
5,300.0	0.00	0.00	5,229.5	-278.98	188.3	687.4	-678.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,329.5	-378.98	188.3	687.4	-678.2	0.00	0.00	0.00
5,500.0	0.00	0.00	5,429.5	-478.98	188.3	687.4	-678.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,529.5	-578.98	188.3	687.4	-678.2	0.00	0.00	0.00
5,700.0	0.00	0.00	5,629.5	-678.98	188.3	687.4	-678.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,729.5	-778.98	188.3	687.4	-678.2	0.00	0.00	0.00
5,900.0	0.00	0.00	5,829.5	-878.98	188.3	687.4	-678.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,929.5	-978.98	188.3	687.4	-678.2	0.00	0.00	0.00
6,100.0	0.00	0.00	6,029.5	-1,078.98	188.3	687.4	-678.2	0.00	0.00	0.00
6,200.0	0.00	0.00	6,129.5	-1,178.98	188.3	687.4	-678.2	0.00	0.00	0.00
6,300.0	0.00	0.00	6,229.5	-1,278.98	188.3	687.4	-678.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,329.5	-1,378.98	188.3	687.4	-678.2	0.00	0.00	0.00
6,500.0	0.00	0.00	6,429.5	-1,478.98	188.3	687.4	-678.2	0.00	0.00	0.00
KOP (8°/100ft BUR)										
6,550.3	0.00	0.00	6,479.8	-1,529.30	188.3	687.4	-678.2	0.00	0.00	0.00
6,600.0	3.97	270.00	6,529.4	-1,578.94	188.3	685.7	-676.4	8.00	8.00	0.00
6,700.0	11.97	270.00	6,628.4	-1,677.90	188.3	671.8	-662.6	8.00	8.00	0.00
6,800.0	19.97	270.00	6,724.5	-1,773.96	188.3	644.3	-635.1	8.00	8.00	0.00
6,900.0	27.97	270.00	6,815.8	-1,865.26	188.3	603.7	-594.6	8.00	8.00	0.00
SHARON SPRINGS										
6,947.6	31.78	270.00	6,857.0	-1,906.50	188.3	580.0	-570.9	8.00	8.00	0.00
7,000.0	35.97	270.00	6,900.5	-1,950.02	188.3	550.8	-541.7	8.00	8.00	0.00
7,100.0	43.97	270.00	6,977.1	-2,026.59	188.3	486.6	-477.6	8.00	8.00	0.00
NIORARA A										
7,115.3	45.20	270.00	6,988.0	-2,037.50	188.3	475.9	-466.8	8.00	8.00	0.00
7,200.0	51.97	270.00	7,044.0	-2,093.48	188.3	412.4	-403.4	8.00	8.00	0.00
NIORARA B										
7,260.1	56.78	270.00	7,079.0	-2,128.50	188.3	363.5	-354.6	8.00	8.00	0.00
7,300.0	59.97	270.00	7,099.9	-2,149.39	188.3	329.6	-320.7	8.00	8.00	0.00
7,400.0	67.97	270.00	7,143.7	-2,193.24	188.3	239.8	-231.0	8.00	8.00	0.00
NIORARA C										
7,440.9	71.25	270.00	7,158.0	-2,207.50	188.3	201.4	-192.7	8.00	8.00	0.00
7,500.0	75.97	270.00	7,174.7	-2,224.16	188.3	144.8	-136.1	8.00	8.00	0.00
7,600.0	83.97	270.00	7,192.1	-2,241.56	188.3	46.4	-37.8	8.00	8.00	0.00
HZ LP *NEW*: 2455.3ft FSL & 2173ft FWL of Sec 21										
7,680.0	90.37	270.00	7,196.0	-2,245.50	188.3	-33.5	42.0	8.00	8.00	0.00
7,700.0	90.37	270.00	7,195.9	-2,245.37	188.3	-53.5	62.0	0.00	0.00	0.00
7,800.0	90.37	270.00	7,195.2	-2,244.72	188.3	-153.5	161.8	0.00	0.00	0.00
7,900.0	90.37	270.00	7,194.6	-2,244.07	188.3	-253.5	261.7	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SHARON 210-334
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4950.5usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4950.5usft (Original Well Elev)
Site:	NE SW SEC. 21 T4N R67W 6th P.M.	North Reference:	True
Well:	SHARON 210-334	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)
8,000.0	90.37	270.00	7,193.9	-2,243.42	188.3	-353.5	361.6	0.00	0.00	0.00
8,100.0	90.37	270.00	7,193.3	-2,242.77	188.3	-453.5	461.5	0.00	0.00	0.00
8,200.0	90.37	270.00	7,192.6	-2,242.11	188.3	-553.5	561.4	0.00	0.00	0.00
8,300.0	90.37	270.00	7,192.0	-2,241.46	188.3	-653.5	661.3	0.00	0.00	0.00
8,400.0	90.37	270.00	7,191.3	-2,240.81	188.3	-753.5	761.2	0.00	0.00	0.00
8,500.0	90.37	270.00	7,190.7	-2,240.16	188.3	-853.5	861.1	0.00	0.00	0.00
8,600.0	90.37	270.00	7,190.0	-2,239.51	188.3	-953.5	961.0	0.00	0.00	0.00
8,700.0	90.37	270.00	7,189.4	-2,238.85	188.3	-1,053.4	1,060.9	0.00	0.00	0.00
8,800.0	90.37	270.00	7,188.7	-2,238.20	188.3	-1,153.4	1,160.8	0.00	0.00	0.00
8,900.0	90.37	270.00	7,188.0	-2,237.55	188.3	-1,253.4	1,260.7	0.00	0.00	0.00
9,000.0	90.37	270.00	7,187.4	-2,236.89	188.3	-1,353.4	1,360.6	0.00	0.00	0.00
9,100.0	90.37	270.00	7,186.7	-2,236.24	188.3	-1,453.4	1,460.5	0.00	0.00	0.00
9,200.0	90.37	270.00	7,186.1	-2,235.58	188.3	-1,553.4	1,560.4	0.00	0.00	0.00
9,300.0	90.38	270.00	7,185.4	-2,234.93	188.3	-1,653.4	1,660.3	0.00	0.00	0.00
9,400.0	90.38	270.00	7,184.8	-2,234.28	188.3	-1,753.4	1,760.2	0.00	0.00	0.00
9,500.0	90.38	270.00	7,184.1	-2,233.62	188.3	-1,853.4	1,860.1	0.00	0.00	0.00
9,600.0	90.38	270.00	7,183.5	-2,232.97	188.3	-1,953.4	1,960.0	0.00	0.00	0.00
9,700.0	90.38	270.00	7,182.8	-2,232.31	188.3	-2,053.4	2,059.9	0.00	0.00	0.00
9,800.0	90.38	270.00	7,182.2	-2,231.65	188.3	-2,153.4	2,159.7	0.00	0.00	0.00
9,900.0	90.38	270.00	7,181.5	-2,231.00	188.3	-2,253.4	2,259.6	0.00	0.00	0.00
10,000.0	90.38	270.00	7,180.8	-2,230.34	188.3	-2,353.4	2,359.5	0.00	0.00	0.00
10,100.0	90.38	270.00	7,180.2	-2,229.68	188.3	-2,453.4	2,459.4	0.00	0.00	0.00
10,200.0	90.38	270.00	7,179.5	-2,229.03	188.3	-2,553.4	2,559.3	0.00	0.00	0.00
10,300.0	90.38	270.00	7,178.9	-2,228.37	188.3	-2,653.4	2,659.2	0.00	0.00	0.00
10,400.0	90.38	270.00	7,178.2	-2,227.71	188.3	-2,753.4	2,759.1	0.00	0.00	0.00
10,500.0	90.38	270.00	7,177.6	-2,227.06	188.3	-2,853.4	2,859.0	0.00	0.00	0.00
10,600.0	90.38	270.00	7,176.9	-2,226.40	188.3	-2,953.4	2,958.9	0.00	0.00	0.00
10,700.0	90.38	270.00	7,176.2	-2,225.74	188.3	-3,053.4	3,058.8	0.00	0.00	0.00
10,800.0	90.38	270.00	7,175.6	-2,225.08	188.3	-3,153.4	3,158.7	0.00	0.00	0.00
10,900.0	90.38	270.00	7,174.9	-2,224.42	188.3	-3,253.4	3,258.6	0.00	0.00	0.00
11,000.0	90.38	270.00	7,174.3	-2,223.76	188.3	-3,353.4	3,358.5	0.00	0.00	0.00
11,100.0	90.38	270.00	7,173.6	-2,223.11	188.3	-3,453.4	3,458.4	0.00	0.00	0.00
11,200.0	90.38	270.00	7,172.9	-2,222.45	188.3	-3,553.4	3,558.3	0.00	0.00	0.00
11,300.0	90.38	270.00	7,172.3	-2,221.79	188.3	-3,653.4	3,658.2	0.00	0.00	0.00
11,400.0	90.38	270.00	7,171.6	-2,221.13	188.3	-3,753.4	3,758.1	0.00	0.00	0.00
11,500.0	90.38	270.00	7,171.0	-2,220.47	188.3	-3,853.4	3,858.0	0.00	0.00	0.00
11,600.0	90.38	270.00	7,170.3	-2,219.81	188.3	-3,953.4	3,957.9	0.00	0.00	0.00
11,700.0	90.38	270.00	7,169.6	-2,219.14	188.3	-4,053.4	4,057.8	0.00	0.00	0.00
BHL: 2385ft FSL & 1943ft FEL of Sec 20										
11,797.6	90.38	270.00	7,169.0	-2,218.50	188.3	-4,150.9	4,155.2	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SHARON 21O-334
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4950.5usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4950.5usft (Original Well Elev)
Site:	NE SW SEC. 21 T4N R67W 6th P.M.	North Reference:	True
Well:	SHARON 21O-334	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,687.2	3,635.0	PARKMAN SANDSTONE			
4,264.8	4,200.0	SUSSEX SANDSTONE			
4,750.4	4,680.0	SHANNON			
6,947.6	6,857.0	SHARON SPRINGS			
7,115.3	6,988.0	NIOBRARA A			
7,260.1	7,079.0	NIOBRARA B			
7,440.9	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: 2267ft FSL & 2205ft FWL of Sec 21
900.0	900.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,500.1	1,495.7	16.5	60.4	EOB TO 12° INC
4,325.2	4,259.1	171.8	627.0	END OF TANGENT
4,925.3	4,854.8	188.3	687.4	EOD TO VERTICAL
6,550.3	6,479.8	188.3	687.4	KOP (8°/100ft BUR)
7,680.0	7,196.0	188.3	-33.5	HZ LP *NEW*: 2455.3ft FSL & 2173ft FWL of Sec 21
11,797.6	7,169.0	188.3	-4,150.9	BHL: 2385ft FSL & 1943ft FEL of Sec 20