

PDC ENERGY

**WELD COUNTY, COLORADO
NE SE SEC. 7 T6N R64W 6th P.M.
CARLSON 7S-314**

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-314
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

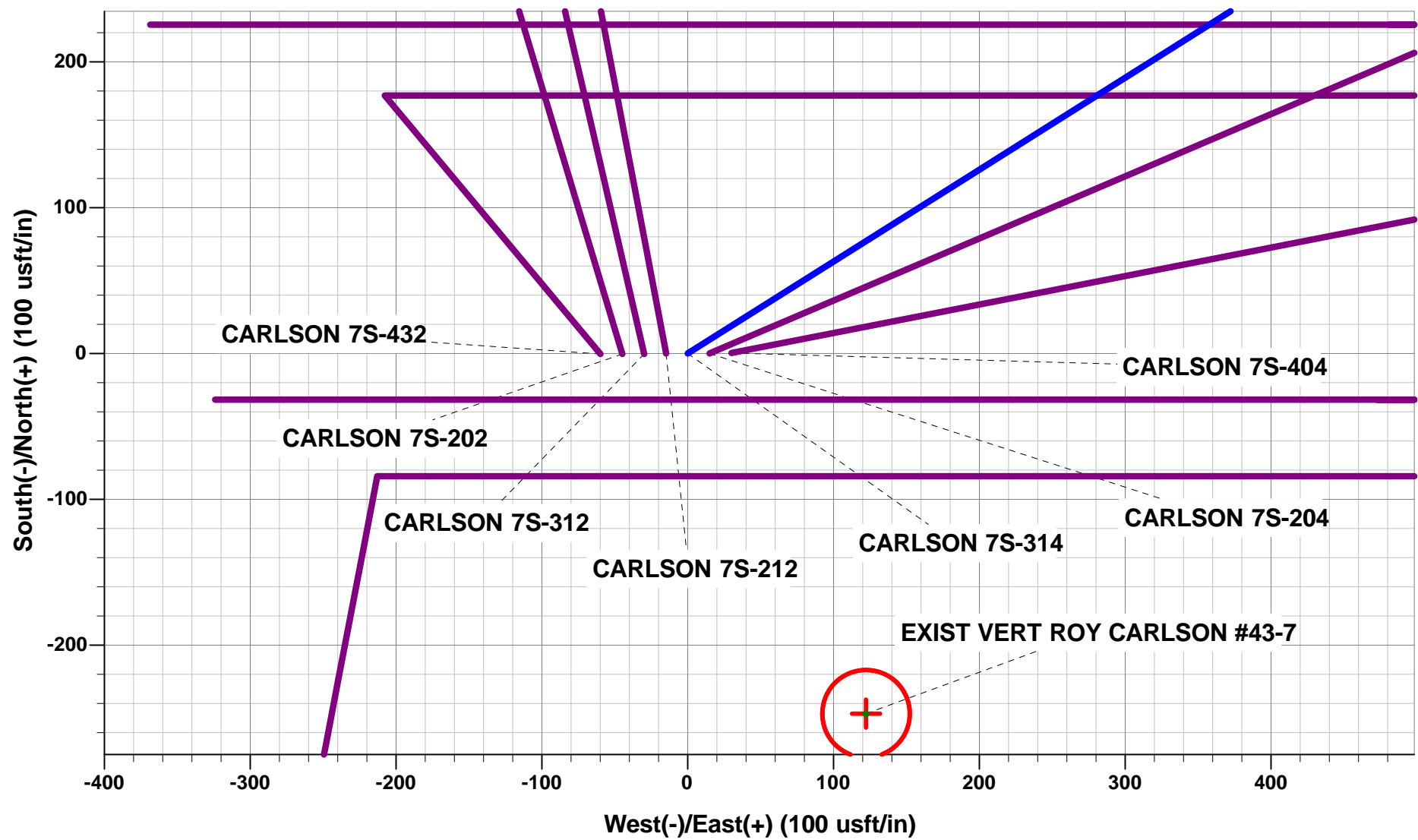


ANNOTATIONS

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 & 743ft FEL of Sec 7
1260.0	1260.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2222.5	2241.6	19.63	57.78	88.8	140.9	-123.3	166.5	EOB TO 19.63° INC
5233.3	5438.2	19.63	57.78	661.4	1049.5	-918.8	1240.5	END OF TANGENT
6195.8	6419.8	0.00	0.00	750.2	1190.4	-1042.1	1407.1	EOD TO VERTICAL
6225.8	6449.8	0.00	0.00	750.2	1190.4	-1042.1	1407.1	KOP (8°/100ft BUR)
6942.0	7574.8	90.00	270.00	750.2	474.2	-336.8	2123.3	7" ICP *NEW*: 2303.7ft FNL & 270ft FEL of Sec 7
6942.0	12305.7	90.00	270.00	750.2	-4256.6	4322.2	6854.1	BHL: 2256ft FNL & 0ft FWL of Sec 7

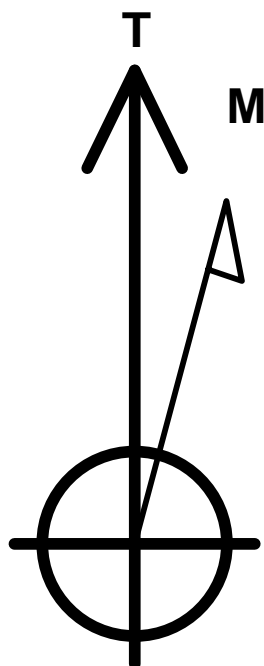
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - CARLSON 7S-314	6225.8	750.2	1190.4	40.501427	-104.582080
7" ICP *NEW* - CARLSON 7S-314	6942.0	750.2	474.2	40.501427	-104.584655
BHL - CARLSON 7S-314	6942.0	750.2	-4256.6	40.501426	-104.601666



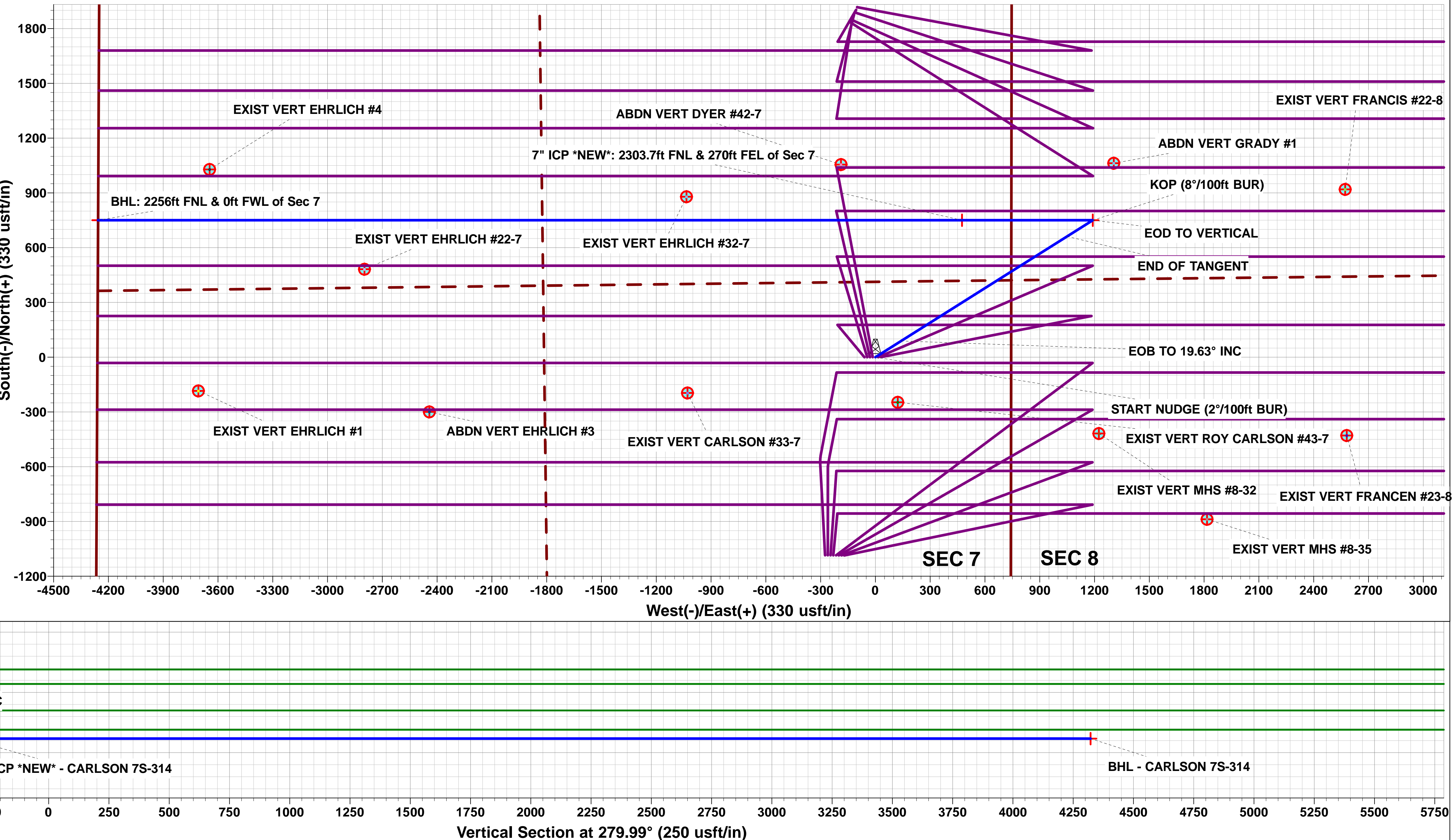
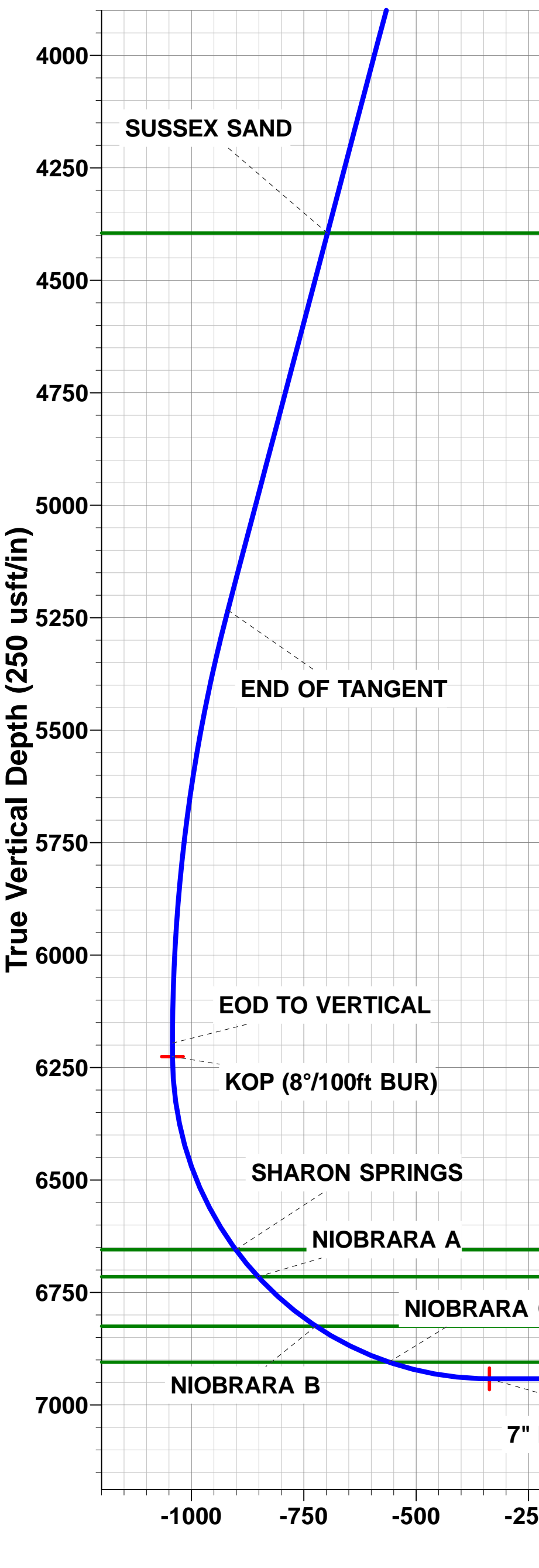
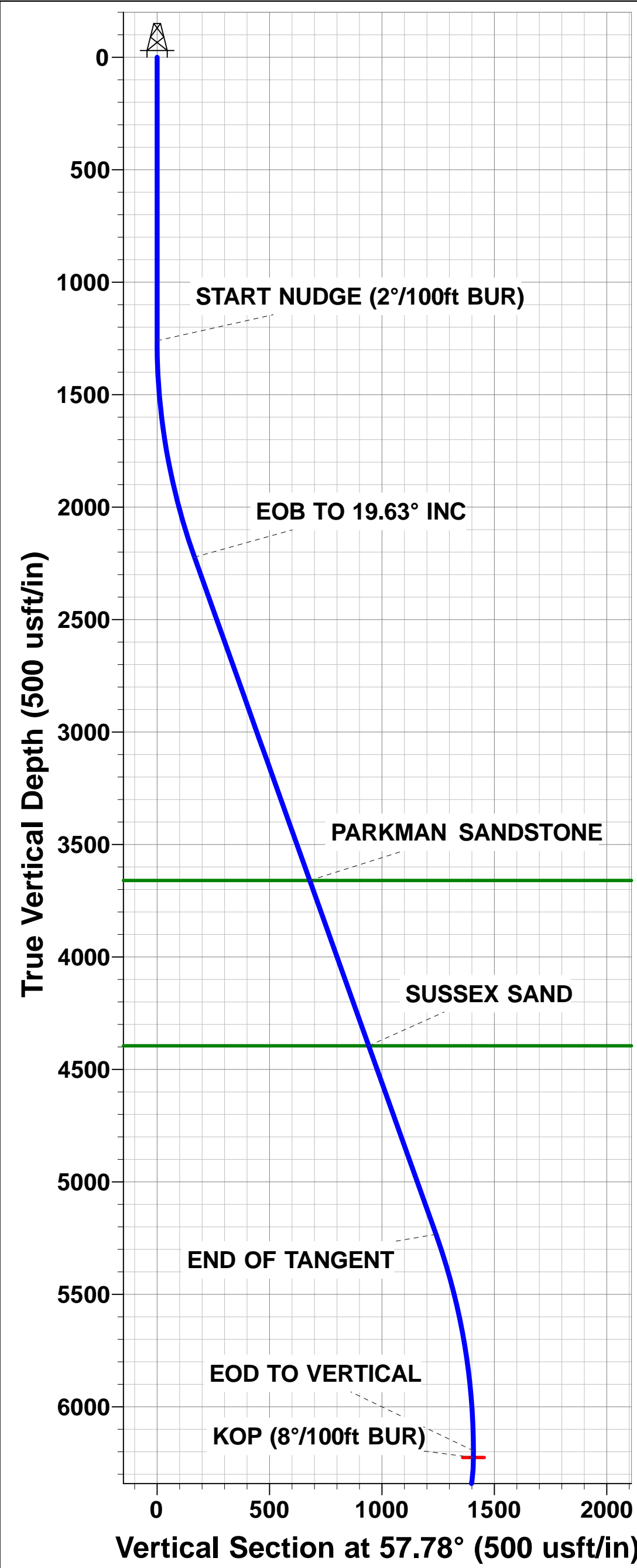
PROPOSED LOCAL COORDINATES:

SHL: 2220ft FSL & 743ft FEL of Sec 7
7" ICP *NEW*: 2303.7ft FNL & 270ft FEL of Sec 7
BHL: 2256ft 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



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well CARLSON 7S-314
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4761.0usft
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4761.0usft
Site:	NE SE SEC. 7 T6N R64W 6th P.M.	North Reference:	True
Well:	CARLSON 7S-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 SE SEC. 7 T6N R64W 6th P.M.		
Site Position:		Northing:	1,426,069.05 usft
From:	Lat/Long	Easting:	3,254,065.99 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000 ft
		Latitude:	40.499368
		Longitude:	-104.586413
		Grid Convergence:	0.59 °

Well	CARLSON 7S-314		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	14.7 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	01/03/2016	8.26	66.99	52,611

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 (°)
	0.0	0.0	0.0	279.99

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	-4,761.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,260.0	0.00	0.00	1,260.0	-3,501.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,241.6	19.63	57.78	2,222.5	-2,538.5	88.8	140.9	2.00	2.00	0.00	57.78	
5,438.2	19.63	57.78	5,233.3	472.3	661.4	1,049.5	0.00	0.00	0.00	0.00	
6,419.8	0.00	0.00	6,195.8	1,434.8	750.2	1,190.4	2.00	-2.00	0.00	180.00	
6,449.8	0.00	0.00	6,225.8	1,464.8	750.2	1,190.4	0.00	0.00	0.00	0.00	KOP - CARLSON 7
7,574.8	90.00	270.00	6,942.0	2,181.0	750.2	474.2	8.00	8.00	-8.00	270.00	7" ICP *NEW* - CA
12,305.7	90.00	270.00	6,942.0	2,181.0	750.2	-4,256.6	0.00	0.00	0.00	0.00	BHL - CARLSON 7

Planning Report



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Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4761.0usft
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4761.0usft
Site:	NE SE SEC. 7 T6N R64W 6th P.M.	North Reference:	True
Well:	CARLSON 7S-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: 2220ft FSL & 743ft FEL of Sec 7										
0.0	0.00	0.00	0.0	4,761.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,661.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,561.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,461.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,361.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,261.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,161.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,061.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,961.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,861.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,761.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,661.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,561.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
1,260.0	0.00	0.00	1,260.0	3,501.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.80	57.78	1,300.0	3,461.00	0.1	0.2	-0.2	2.00	2.00	0.00
1,400.0	2.80	57.78	1,399.9	3,361.06	1.8	2.9	-2.5	2.00	2.00	0.00
1,500.0	4.80	57.78	1,499.7	3,261.28	5.4	8.5	-7.4	2.00	2.00	0.00
1,600.0	6.80	57.78	1,599.2	3,161.80	10.7	17.0	-14.9	2.00	2.00	0.00
1,700.0	8.80	57.78	1,698.3	3,062.73	18.0	28.5	-25.0	2.00	2.00	0.00
1,800.0	10.80	57.78	1,796.8	2,964.19	27.1	42.9	-37.6	2.00	2.00	0.00
1,900.0	12.80	57.78	1,894.7	2,866.31	38.0	60.2	-52.7	2.00	2.00	0.00
2,000.0	14.80	57.78	1,991.8	2,769.20	50.7	80.4	-70.4	2.00	2.00	0.00
2,100.0	16.80	57.78	2,088.0	2,672.98	65.2	103.4	-90.6	2.00	2.00	0.00
2,200.0	18.80	57.78	2,183.2	2,577.78	81.5	129.3	-113.2	2.00	2.00	0.00
EOB TO 19.63° INC										
2,241.6	19.63	57.78	2,222.5	2,538.48	88.8	140.9	-123.3	2.00	2.00	0.00
2,300.0	19.63	57.78	2,277.5	2,483.49	99.2	157.5	-137.9	0.00	0.00	0.00
2,400.0	19.63	57.78	2,371.7	2,389.30	117.2	185.9	-162.8	0.00	0.00	0.00
2,500.0	19.63	57.78	2,465.9	2,295.12	135.1	214.3	-187.6	0.00	0.00	0.00
2,600.0	19.63	57.78	2,560.1	2,200.93	153.0	242.8	-212.5	0.00	0.00	0.00
2,700.0	19.63	57.78	2,654.3	2,106.74	170.9	271.2	-237.4	0.00	0.00	0.00
2,800.0	19.63	57.78	2,748.4	2,012.56	188.8	299.6	-262.3	0.00	0.00	0.00
2,900.0	19.63	57.78	2,842.6	1,918.37	206.7	328.0	-287.2	0.00	0.00	0.00
3,000.0	19.63	57.78	2,936.8	1,824.18	224.6	356.5	-312.1	0.00	0.00	0.00
3,100.0	19.63	57.78	3,031.0	1,730.00	242.6	384.9	-336.9	0.00	0.00	0.00
3,200.0	19.63	57.78	3,125.2	1,635.81	260.5	413.3	-361.8	0.00	0.00	0.00
3,300.0	19.63	57.78	3,219.4	1,541.62	278.4	441.7	-386.7	0.00	0.00	0.00
3,400.0	19.63	57.78	3,313.6	1,447.44	296.3	470.2	-411.6	0.00	0.00	0.00
3,500.0	19.63	57.78	3,407.8	1,353.25	314.2	498.6	-436.5	0.00	0.00	0.00
3,600.0	19.63	57.78	3,501.9	1,259.06	332.1	527.0	-461.4	0.00	0.00	0.00
3,700.0	19.63	57.78	3,596.1	1,164.88	350.0	555.4	-486.3	0.00	0.00	0.00
PARKMAN SANDSTONE										
3,767.8	19.63	57.78	3,660.0	1,101.00	362.2	574.7	-503.1	0.00	0.00	0.00
3,800.0	19.63	57.78	3,690.3	1,070.69	368.0	583.9	-511.1	0.00	0.00	0.00
3,900.0	19.63	57.78	3,784.5	976.50	385.9	612.3	-536.0	0.00	0.00	0.00
4,000.0	19.63	57.78	3,878.7	882.32	403.8	640.7	-560.9	0.00	0.00	0.00
4,100.0	19.63	57.78	3,972.9	788.13	421.7	669.1	-585.8	0.00	0.00	0.00
4,200.0	19.63	57.78	4,067.1	693.94	439.6	697.6	-610.7	0.00	0.00	0.00
4,300.0	19.63	57.78	4,161.2	599.75	457.5	726.0	-635.6	0.00	0.00	0.00
4,400.0	19.63	57.78	4,255.4	505.57	475.4	754.4	-660.4	0.00	0.00	0.00
4,500.0	19.63	57.78	4,349.6	411.38	493.3	782.8	-685.3	0.00	0.00	0.00
SUSSEX SANDSTONE										

Planning Report



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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)
4,548.2	19.63	57.78	4,395.0	366.00	502.0	796.5	-697.3	0.00	0.00	0.00
4,600.0	19.63	57.78	4,443.8	317.19	511.3	811.3	-710.2	0.00	0.00	0.00
4,700.0	19.63	57.78	4,538.0	223.01	529.2	839.7	-735.1	0.00	0.00	0.00
4,800.0	19.63	57.78	4,632.2	128.82	547.1	868.1	-760.0	0.00	0.00	0.00
4,900.0	19.63	57.78	4,726.4	34.63	565.0	896.5	-784.9	0.00	0.00	0.00
5,000.0	19.63	57.78	4,820.6	-59.55	582.9	925.0	-809.7	0.00	0.00	0.00
5,100.0	19.63	57.78	4,914.7	-153.74	600.8	953.4	-834.6	0.00	0.00	0.00
5,200.0	19.63	57.78	5,008.9	-247.93	618.7	981.8	-859.5	0.00	0.00	0.00
5,300.0	19.63	57.78	5,103.1	-342.11	636.7	1,010.2	-884.4	0.00	0.00	0.00
5,400.0	19.63	57.78	5,197.3	-436.30	654.6	1,038.7	-909.3	0.00	0.00	0.00
END OF TANGENT										
5,438.2	19.63	57.78	5,233.3	-472.28	661.4	1,049.5	-918.8	0.00	0.00	0.00
5,500.0	18.40	57.78	5,291.7	-530.71	672.1	1,066.5	-933.7	2.00	-2.00	0.00
5,600.0	16.40	57.78	5,387.1	-626.13	688.1	1,091.8	-955.8	2.00	-2.00	0.00
5,700.0	14.40	57.78	5,483.5	-722.53	702.2	1,114.3	-975.5	2.00	-2.00	0.00
5,800.0	12.40	57.78	5,580.8	-819.81	714.6	1,133.9	-992.7	2.00	-2.00	0.00
5,900.0	10.40	57.78	5,678.8	-917.83	725.1	1,150.6	-1,007.3	2.00	-2.00	0.00
6,000.0	8.40	57.78	5,777.5	-1,016.48	733.8	1,164.4	-1,019.4	2.00	-2.00	0.00
6,100.0	6.40	57.78	5,876.6	-1,115.65	740.7	1,175.3	-1,028.9	2.00	-2.00	0.00
6,200.0	4.40	57.78	5,976.2	-1,215.20	745.7	1,183.3	-1,035.9	2.00	-2.00	0.00
6,300.0	2.40	57.78	6,076.0	-1,315.02	748.9	1,188.3	-1,040.3	2.00	-2.00	0.00
6,400.0	0.40	57.78	6,176.0	-1,414.98	750.2	1,190.3	-1,042.1	2.00	-2.00	0.00
EOD TO VERTICAL										
6,419.8	0.00	0.00	6,195.8	-1,434.80	750.2	1,190.4	-1,042.1	2.00	-2.00	0.00
KOP (8°/100ft BUR)										
6,449.8	0.00	0.00	6,225.8	-1,464.80	750.2	1,190.4	-1,042.1	0.00	0.00	0.00
6,500.0	4.01	270.00	6,275.9	-1,514.94	750.2	1,188.6	-1,040.4	8.00	8.00	0.00
6,600.0	12.01	270.00	6,374.9	-1,613.88	750.2	1,174.7	-1,026.7	8.00	8.00	0.00
6,700.0	20.01	270.00	6,470.9	-1,709.93	750.2	1,147.1	-999.5	8.00	8.00	0.00
6,800.0	28.01	270.00	6,562.2	-1,801.20	750.2	1,106.5	-959.5	8.00	8.00	0.00
6,900.0	36.01	270.00	6,646.9	-1,885.92	750.2	1,053.5	-907.3	8.00	8.00	0.00
SHARON SPRINGS										
6,910.0	36.82	270.00	6,655.0	-1,894.00	750.2	1,047.5	-901.4	8.00	8.00	0.00
NIOBRARA A										
6,988.3	43.08	270.00	6,715.0	-1,954.00	750.2	997.3	-852.0	8.00	8.00	0.00
7,000.0	44.01	270.00	6,723.4	-1,962.44	750.2	989.3	-844.0	8.00	8.00	0.00
7,100.0	52.01	270.00	6,790.3	-2,029.28	750.2	915.0	-770.9	8.00	8.00	0.00
NIOBRARA B										
7,159.7	56.79	270.00	6,825.0	-2,064.00	750.2	866.5	-723.1	8.00	8.00	0.00
7,200.0	60.01	270.00	6,846.1	-2,085.14	750.2	832.1	-689.3	8.00	8.00	0.00
7,300.0	68.01	270.00	6,889.9	-2,128.92	750.2	742.3	-600.9	8.00	8.00	0.00
NIOBRARA C										
7,343.6	71.50	270.00	6,905.0	-2,144.00	750.2	701.4	-560.6	8.00	8.00	0.00
7,400.0	76.01	270.00	6,920.8	-2,159.77	750.2	647.3	-507.3	8.00	8.00	0.00
7,500.0	84.01	270.00	6,938.1	-2,177.10	750.2	548.9	-410.4	8.00	8.00	0.00
7" ICP *NEW*: 2303.7ft FNL & 270ft FEL of Sec 7										
7,574.8	90.00	270.00	6,942.0	-2,181.00	750.2	474.2	-336.8	8.00	8.00	0.00
7,600.0	90.00	270.00	6,942.0	-2,181.00	750.2	449.0	-312.0	0.00	0.00	0.00
7,700.0	90.00	270.00	6,942.0	-2,181.00	750.2	349.0	-213.5	0.00	0.00	0.00
7,800.0	90.00	270.00	6,942.0	-2,181.00	750.2	249.0	-115.0	0.00	0.00	0.00
7,900.0	90.00	270.00	6,942.0	-2,181.00	750.2	149.0	-16.6	0.00	0.00	0.00
8,000.0	90.00	270.00	6,942.0	-2,181.00	750.2	49.0	81.9	0.00	0.00	0.00
8,100.0	90.00	270.00	6,942.0	-2,181.00	750.2	-51.0	180.4	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well CARLSON 7S-314
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4761.0usft
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4761.0usft
Site:	NE SE SEC. 7 T6N R64W 6th P.M.	North Reference:	True
Well:	CARLSON 7S-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)
8,200.0	90.00	270.00	6,942.0	-2,181.00	750.2	-151.0	278.9	0.00	0.00	0.00
8,300.0	90.00	270.00	6,942.0	-2,181.00	750.2	-251.0	377.4	0.00	0.00	0.00
8,400.0	90.00	270.00	6,942.0	-2,181.00	750.2	-351.0	475.9	0.00	0.00	0.00
8,500.0	90.00	270.00	6,942.0	-2,181.00	750.2	-451.0	574.3	0.00	0.00	0.00
8,600.0	90.00	270.00	6,942.0	-2,181.00	750.2	-551.0	672.8	0.00	0.00	0.00
8,700.0	90.00	270.00	6,942.0	-2,181.00	750.2	-651.0	771.3	0.00	0.00	0.00
8,800.0	90.00	270.00	6,942.0	-2,181.00	750.2	-751.0	869.8	0.00	0.00	0.00
8,900.0	90.00	270.00	6,942.0	-2,181.00	750.2	-851.0	968.3	0.00	0.00	0.00
9,000.0	90.00	270.00	6,942.0	-2,181.00	750.2	-951.0	1,066.7	0.00	0.00	0.00
9,100.0	90.00	270.00	6,942.0	-2,181.00	750.2	-1,051.0	1,165.2	0.00	0.00	0.00
9,200.0	90.00	270.00	6,942.0	-2,181.00	750.2	-1,151.0	1,263.7	0.00	0.00	0.00
9,300.0	90.00	270.00	6,942.0	-2,181.00	750.2	-1,251.0	1,362.2	0.00	0.00	0.00
9,400.0	90.00	270.00	6,942.0	-2,181.00	750.2	-1,351.0	1,460.7	0.00	0.00	0.00
9,500.0	90.00	270.00	6,942.0	-2,181.00	750.2	-1,451.0	1,559.2	0.00	0.00	0.00
9,600.0	90.00	270.00	6,942.0	-2,181.00	750.2	-1,551.0	1,657.6	0.00	0.00	0.00
9,700.0	90.00	270.00	6,942.0	-2,181.00	750.2	-1,651.0	1,756.1	0.00	0.00	0.00
9,800.0	90.00	270.00	6,942.0	-2,181.00	750.2	-1,751.0	1,854.6	0.00	0.00	0.00
9,900.0	90.00	270.00	6,942.0	-2,181.00	750.2	-1,851.0	1,953.1	0.00	0.00	0.00
10,000.0	90.00	270.00	6,942.0	-2,181.00	750.2	-1,951.0	2,051.6	0.00	0.00	0.00
10,100.0	90.00	270.00	6,942.0	-2,181.00	750.2	-2,051.0	2,150.1	0.00	0.00	0.00
10,200.0	90.00	270.00	6,942.0	-2,181.00	750.2	-2,151.0	2,248.5	0.00	0.00	0.00
10,300.0	90.00	270.00	6,942.0	-2,181.00	750.2	-2,251.0	2,347.0	0.00	0.00	0.00
10,400.0	90.00	270.00	6,942.0	-2,181.00	750.2	-2,351.0	2,445.5	0.00	0.00	0.00
10,500.0	90.00	270.00	6,942.0	-2,181.00	750.2	-2,451.0	2,544.0	0.00	0.00	0.00
10,600.0	90.00	270.00	6,942.0	-2,181.00	750.2	-2,551.0	2,642.5	0.00	0.00	0.00
10,700.0	90.00	270.00	6,942.0	-2,181.00	750.2	-2,651.0	2,741.0	0.00	0.00	0.00
10,800.0	90.00	270.00	6,942.0	-2,181.00	750.2	-2,751.0	2,839.4	0.00	0.00	0.00
10,900.0	90.00	270.00	6,942.0	-2,181.00	750.2	-2,851.0	2,937.9	0.00	0.00	0.00
11,000.0	90.00	270.00	6,942.0	-2,181.00	750.2	-2,951.0	3,036.4	0.00	0.00	0.00
11,100.0	90.00	270.00	6,942.0	-2,181.00	750.2	-3,051.0	3,134.9	0.00	0.00	0.00
11,200.0	90.00	270.00	6,942.0	-2,181.00	750.2	-3,151.0	3,233.4	0.00	0.00	0.00
11,300.0	90.00	270.00	6,942.0	-2,181.00	750.2	-3,251.0	3,331.8	0.00	0.00	0.00
11,400.0	90.00	270.00	6,942.0	-2,181.00	750.2	-3,351.0	3,430.3	0.00	0.00	0.00
11,500.0	90.00	270.00	6,942.0	-2,181.00	750.2	-3,451.0	3,528.8	0.00	0.00	0.00
11,600.0	90.00	270.00	6,942.0	-2,181.00	750.2	-3,551.0	3,627.3	0.00	0.00	0.00
11,700.0	90.00	270.00	6,942.0	-2,181.00	750.2	-3,651.0	3,725.8	0.00	0.00	0.00
11,800.0	90.00	270.00	6,942.0	-2,181.00	750.2	-3,751.0	3,824.3	0.00	0.00	0.00
11,900.0	90.00	270.00	6,942.0	-2,181.00	750.2	-3,851.0	3,922.7	0.00	0.00	0.00
12,000.0	90.00	270.00	6,942.0	-2,181.00	750.2	-3,951.0	4,021.2	0.00	0.00	0.00
12,100.0	90.00	270.00	6,942.0	-2,181.00	750.2	-4,051.0	4,119.7	0.00	0.00	0.00
12,200.0	90.00	270.00	6,942.0	-2,181.00	750.2	-4,151.0	4,218.2	0.00	0.00	0.00
12,300.0	90.00	270.00	6,942.0	-2,181.00	750.2	-4,251.0	4,316.7	0.00	0.00	0.00
BHL: 2256ft FNL & 0ft FWL of Sec 7										
12,305.7	90.00	270.00	6,942.0	-2,181.00	750.2	-4,256.6	4,322.2	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well CARLSON 7S-314
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4761.0usft
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4761.0usft
Site:	NE SE SEC. 7 T6N R64W 6th P.M.	North Reference:	True
Well:	CARLSON 7S-314	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,767.8	3,660.0	PARKMAN SANDSTONE			
4,548.2	4,395.0	SUSSEX SANDSTONE			
6,910.0	6,655.0	SHARON SPRINGS			
6,988.3	6,715.0	NIOBRARA A			
7,159.7	6,825.0	NIOBRARA B			
7,343.6	6,905.0	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: 2220ft FSL & 743ft FEL of Sec 7
1,260.0	1,260.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,241.6	2,222.5	88.8	140.9	EOB TO 19.63° INC
5,438.2	5,233.3	661.4	1,049.5	END OF TANGENT
6,419.8	6,195.8	750.2	1,190.4	EOD TO VERTICAL
6,449.8	6,225.8	750.2	1,190.4	KOP (8°/100ft BUR)
7,574.8	6,942.0	750.2	474.2	7" ICP *NEW*: 2303.7ft FNL & 270ft FEL of Sec 7
12,305.7	6,942.0	750.2	-4,256.6	BHL: 2256ft FNL & 0ft FWL of Sec 7