

PDC ENERGY

**WELD COUNTY, COLORADO
SW NW SEC. 17 T5N R64W 6th P.M.
SCHAUMBERG 17F-334**

ORIGINAL WELLBORE

16 December, 2015

Plan: PROPOSAL #1





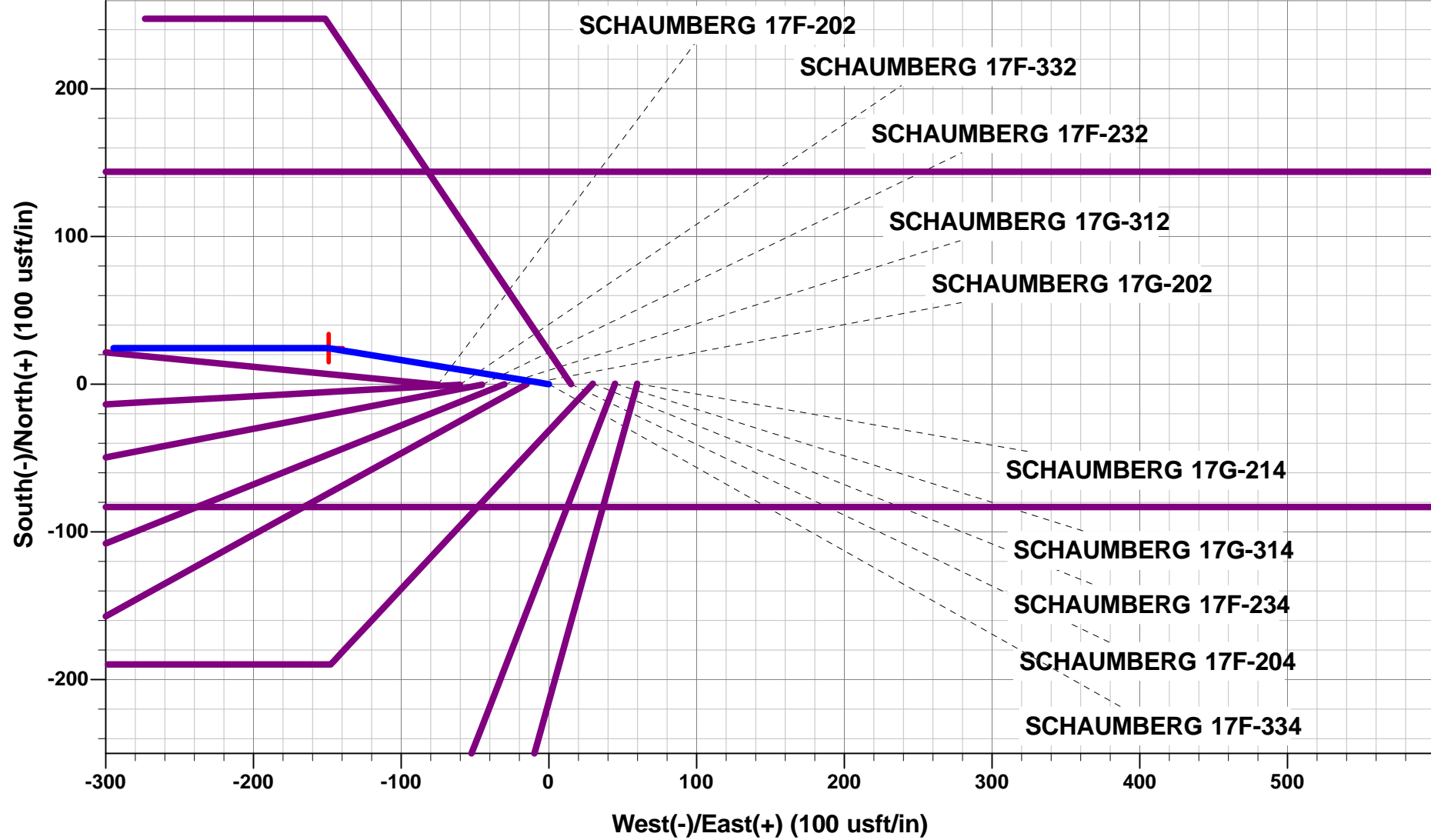
Project: WELD COUNTY, COLORADO
Site: SW NW SEC. 17 T5N R64W 6th P.M.
Well: SCHAUMBERG 17F-334
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation
1500.0	1500.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2095.7	2100.1	12.00	279.30	10.1	-61.8	61.8	62.6	EOB TO 12° INC
2217.1	2224.2	12.00	279.30	14.3	-87.3	87.3	88.4	END OF TANGENT
2812.8	2824.3	0.00	0.00	24.4	-149.1	149.2	151.0	EOD TO VERTICAL
6073.8	6085.3	0.00	0.00	24.4	-149.1	149.2	151.0	KOP (8°/100ft BUR)
6790.0	7213.0	90.22	270.00	24.4	-868.0	868.1	869.9	7" ICP *NEW* - SCHAUMBERG 17F-334
6770.0	12316.4	90.23	270.00	24.4	-5971.3	5971.4	5973.3	BHL - SCHAUMBERG 17F-334

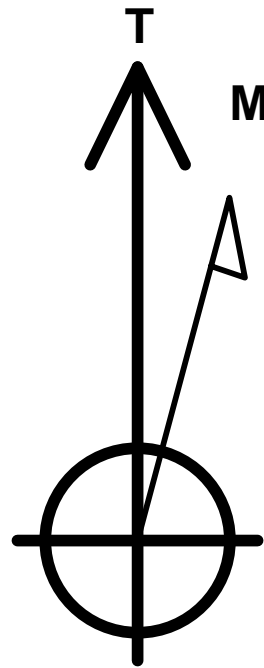
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - SCHAUMBERG 17F-334	6073.8	24.4	-149.1	40.402068	-104.580383
7" ICP *NEW* - SCHAUMBERG 17F-334	6790.0	24.4	-868.0	40.402068	-104.582964
BHL - SCHAUMBERG 17F-334	6770.0	24.4	-5971.3	40.402066	-104.601288



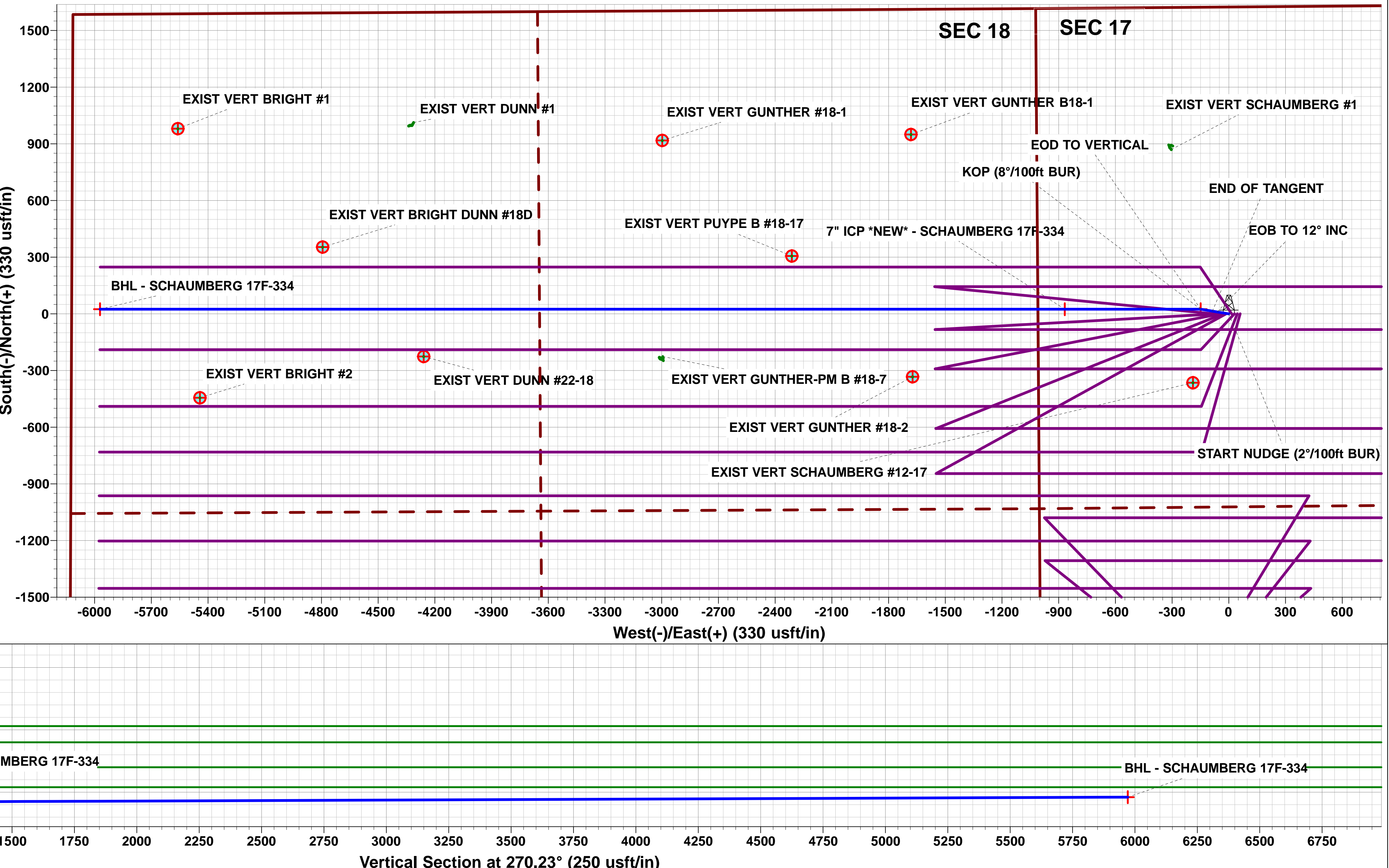
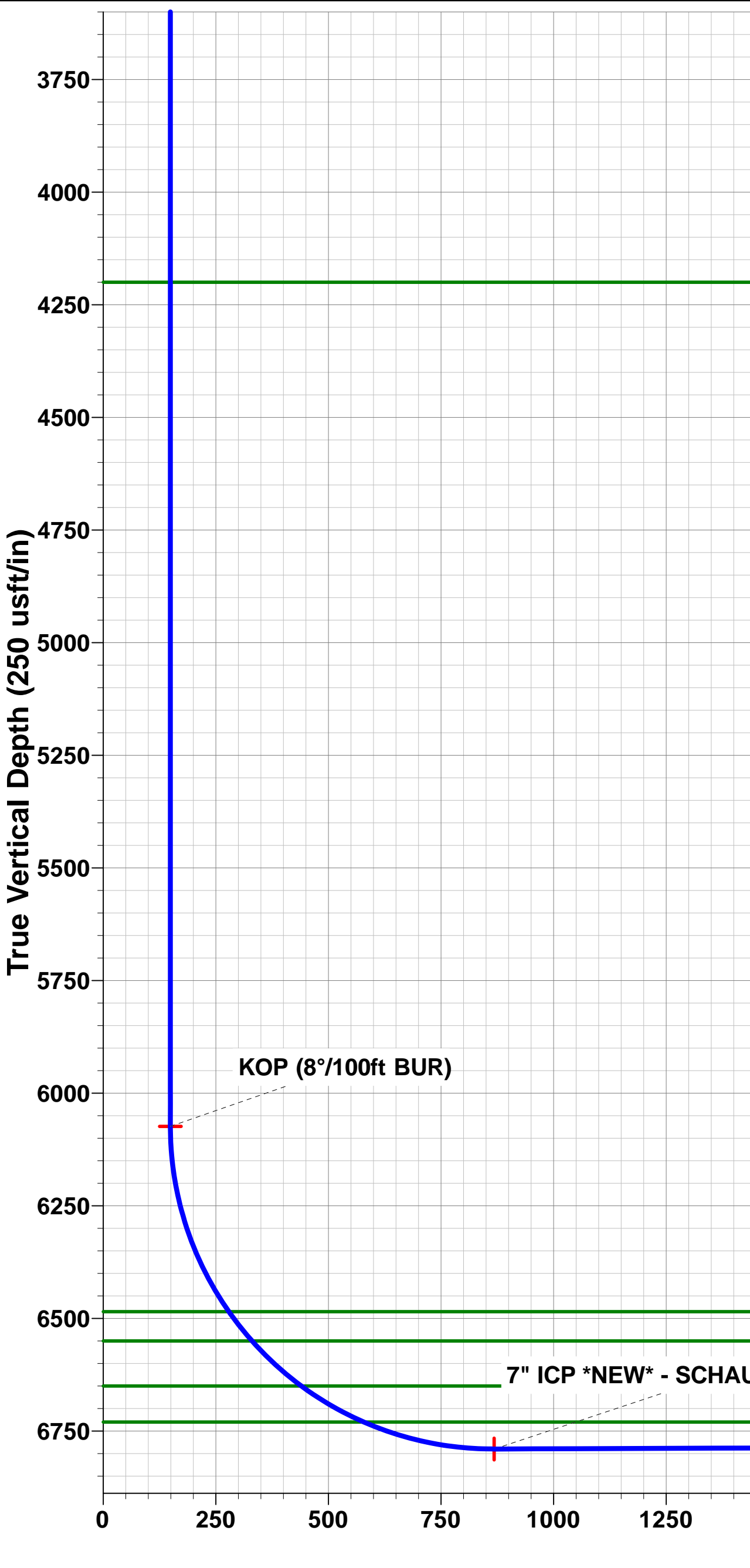
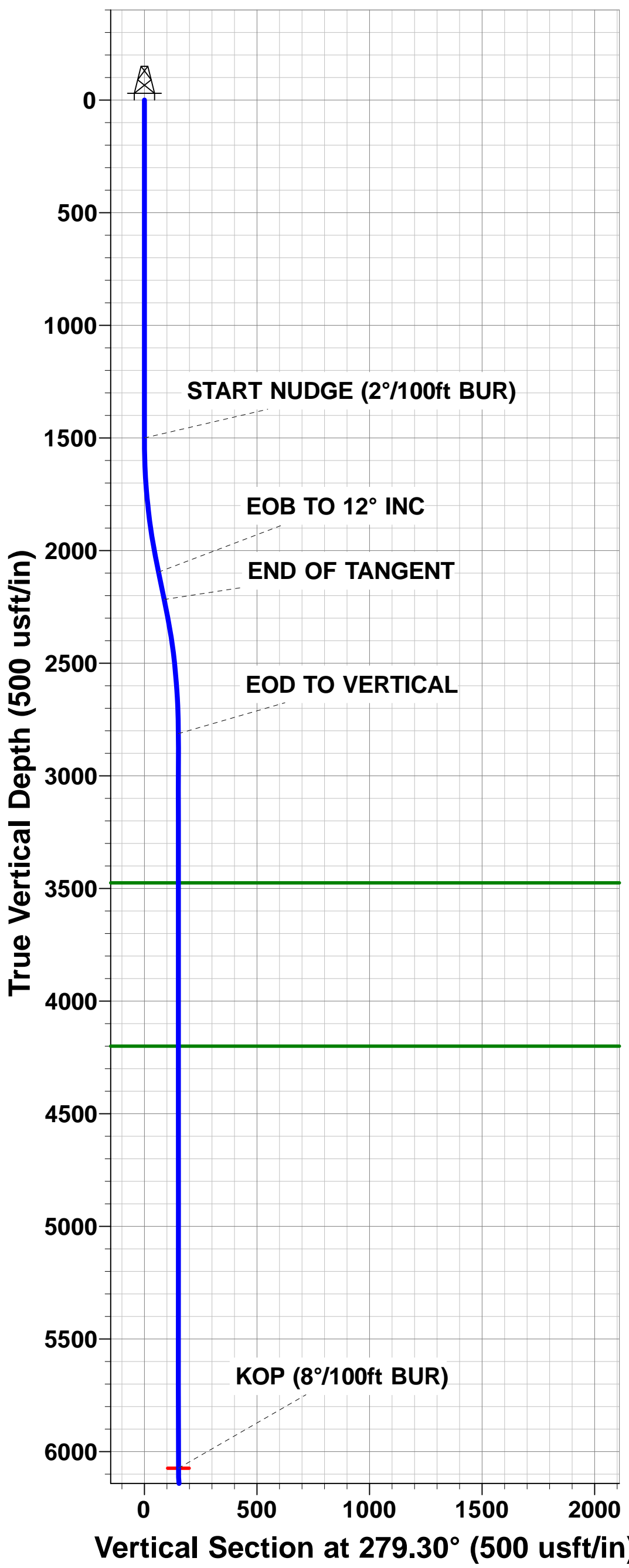
PROPOSED LOCAL COORDINATES:

SHL: 1624ft FNL & 1010ft FWL of Sec 17
7" ICP *NEW*: 1592.7ft FNL & 142ft FWL of Sec 17
BHL: 1561ft FNL & 150ft FWL of Sec 18



Azimuths to True North
Magnetic North: 8.27°

Magnetic Field
Strength: 52585.9snT
Dip Angle: 66.92°
Date: 16/12/2015
Model: IGRF2015



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SCHAUMBERG 17F-334
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4633.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4633.0usft (Original Well Elev)
Site:	SW NW SEC. 17 T5N R64W 6th P.M.	North Reference:	True
Well:	SCHAUMBERG 17F-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	SW NW SEC. 17 T5N R64W 6th P.M.		
Site Position:		Northing:	1,390,619.91 usft
From:	Lat/Long	Easting:	3,256,319.57 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.402002
		Longitude:	-104.579633
		Grid Convergence:	0.59 °

Well	SCHAUMBERG 17F-334		
Well Position	+N/-S	-0.4 usft	Northing:
	+E/-W	-59.9 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	16/12/2015	8.27	66.92	52,586

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	270.23

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	-4,633.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	-3,133.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,100.1	12.00	279.30	2,095.7	-2,537.3	10.1	-61.8	2.00	2.00	0.00	279.30	
2,224.2	12.00	279.30	2,217.1	-2,415.9	14.3	-87.3	0.00	0.00	0.00	0.00	
2,824.3	0.00	0.00	2,812.8	-1,820.2	24.4	-149.1	2.00	-2.00	0.00	180.00	
6,085.3	0.00	0.00	6,073.8	1,440.8	24.4	-149.1	0.00	0.00	0.00	0.00	KOP - SCHAUMBE
7,213.0	90.22	270.00	6,790.0	2,157.0	24.4	-868.0	8.00	8.00	-7.98	270.00	7" ICP *NEW* - SC
12,316.4	90.23	270.00	6,770.0	2,137.0	24.4	-5,971.3	0.00	0.00	0.00	1.00	BHL - SCHAUMBE

Planning Report



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Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4633.0usft (Original Well Elev)
Site:	SW NW SEC. 17 T5N R64W 6th P.M.	North Reference:	True
Well:	SCHAUMBERG 17F-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)
0.0	0.00	0.00	0.0	4,633.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,533.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,433.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,333.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,233.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,133.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,033.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,933.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,833.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,733.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,633.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,533.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,433.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	3,333.00	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	3,233.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
1,500.0	0.00	0.00	1,500.0	3,133.00	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	2.00	279.30	1,600.0	3,033.02	0.3	-1.7	1.7	2.00	2.00	0.00
1,700.0	4.00	279.30	1,699.8	2,933.16	1.1	-6.9	6.9	2.00	2.00	0.00
1,800.0	6.00	279.30	1,799.5	2,833.55	2.5	-15.5	15.5	2.00	2.00	0.00
1,900.0	8.00	279.30	1,898.7	2,734.30	4.5	-27.5	27.5	2.00	2.00	0.00
2,000.0	10.00	279.30	1,997.5	2,635.53	7.0	-43.0	43.0	2.00	2.00	0.00
2,100.0	12.00	279.30	2,095.6	2,537.38	10.1	-61.8	61.8	2.00	2.00	0.00
EOB TO 12° INC										
2,100.1	12.00	279.30	2,095.7	2,537.29	10.1	-61.8	61.8	2.00	2.00	0.00
2,200.0	12.00	279.30	2,193.4	2,439.56	13.5	-82.3	82.4	0.00	0.00	0.00
END OF TANGENT										
2,224.2	12.00	279.30	2,217.1	2,415.91	14.3	-87.3	87.3	0.00	0.00	0.00
2,300.0	10.49	279.30	2,291.5	2,341.55	16.7	-101.9	101.9	2.00	-2.00	0.00
2,400.0	8.49	279.30	2,390.1	2,242.92	19.3	-118.1	118.2	2.00	-2.00	0.00
2,500.0	6.49	279.30	2,489.2	2,143.78	21.4	-131.0	131.1	2.00	-2.00	0.00
2,600.0	4.49	279.30	2,588.8	2,044.24	23.0	-140.4	140.5	2.00	-2.00	0.00
2,700.0	2.49	279.30	2,688.6	1,944.43	24.0	-146.4	146.5	2.00	-2.00	0.00
2,800.0	0.49	279.30	2,788.5	1,844.47	24.4	-149.0	149.1	2.00	-2.00	0.00
EOD TO VERTICAL										
2,824.3	0.00	0.00	2,812.8	1,820.20	24.4	-149.1	149.2	2.00	-2.00	0.00
2,900.0	0.00	0.00	2,888.5	1,744.47	24.4	-149.1	149.2	0.00	0.00	0.00
3,000.0	0.00	0.00	2,988.5	1,644.47	24.4	-149.1	149.2	0.00	0.00	0.00
3,100.0	0.00	0.00	3,088.5	1,544.47	24.4	-149.1	149.2	0.00	0.00	0.00
3,200.0	0.00	0.00	3,188.5	1,444.47	24.4	-149.1	149.2	0.00	0.00	0.00
3,300.0	0.00	0.00	3,288.5	1,344.47	24.4	-149.1	149.2	0.00	0.00	0.00
3,400.0	0.00	0.00	3,388.5	1,244.47	24.4	-149.1	149.2	0.00	0.00	0.00
PARKMAN SANDSTONE										
3,486.5	0.00	0.00	3,475.0	1,158.00	24.4	-149.1	149.2	0.00	0.00	0.00
3,500.0	0.00	0.00	3,488.5	1,144.47	24.4	-149.1	149.2	0.00	0.00	0.00
3,600.0	0.00	0.00	3,588.5	1,044.47	24.4	-149.1	149.2	0.00	0.00	0.00
3,700.0	0.00	0.00	3,688.5	944.47	24.4	-149.1	149.2	0.00	0.00	0.00
3,800.0	0.00	0.00	3,788.5	844.47	24.4	-149.1	149.2	0.00	0.00	0.00
3,900.0	0.00	0.00	3,888.5	744.47	24.4	-149.1	149.2	0.00	0.00	0.00
4,000.0	0.00	0.00	3,988.5	644.47	24.4	-149.1	149.2	0.00	0.00	0.00
4,100.0	0.00	0.00	4,088.5	544.47	24.4	-149.1	149.2	0.00	0.00	0.00
4,200.0	0.00	0.00	4,188.5	444.47	24.4	-149.1	149.2	0.00	0.00	0.00
SUSSEX SANDSTONE										

Planning Report



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Well:	SCHAUMBERG 17F-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)
4,211.5	0.00	0.00	4,200.0	433.00	24.4	-149.1	149.2	0.00	0.00	0.00
4,300.0	0.00	0.00	4,288.5	344.47	24.4	-149.1	149.2	0.00	0.00	0.00
4,400.0	0.00	0.00	4,388.5	244.47	24.4	-149.1	149.2	0.00	0.00	0.00
4,500.0	0.00	0.00	4,488.5	144.47	24.4	-149.1	149.2	0.00	0.00	0.00
4,600.0	0.00	0.00	4,588.5	44.47	24.4	-149.1	149.2	0.00	0.00	0.00
4,700.0	0.00	0.00	4,688.5	-55.53	24.4	-149.1	149.2	0.00	0.00	0.00
4,800.0	0.00	0.00	4,788.5	-155.53	24.4	-149.1	149.2	0.00	0.00	0.00
4,900.0	0.00	0.00	4,888.5	-255.53	24.4	-149.1	149.2	0.00	0.00	0.00
5,000.0	0.00	0.00	4,988.5	-355.53	24.4	-149.1	149.2	0.00	0.00	0.00
5,100.0	0.00	0.00	5,088.5	-455.53	24.4	-149.1	149.2	0.00	0.00	0.00
5,200.0	0.00	0.00	5,188.5	-555.53	24.4	-149.1	149.2	0.00	0.00	0.00
5,300.0	0.00	0.00	5,288.5	-655.53	24.4	-149.1	149.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,388.5	-755.53	24.4	-149.1	149.2	0.00	0.00	0.00
5,500.0	0.00	0.00	5,488.5	-855.53	24.4	-149.1	149.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,588.5	-955.53	24.4	-149.1	149.2	0.00	0.00	0.00
5,700.0	0.00	0.00	5,688.5	-1,055.53	24.4	-149.1	149.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,788.5	-1,155.53	24.4	-149.1	149.2	0.00	0.00	0.00
5,900.0	0.00	0.00	5,888.5	-1,255.53	24.4	-149.1	149.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,988.5	-1,355.53	24.4	-149.1	149.2	0.00	0.00	0.00
KOP (8°/100ft BUR)										
6,085.3	0.00	0.00	6,073.8	-1,440.80	24.4	-149.1	149.2	0.00	0.00	0.00
6,100.0	1.18	270.00	6,088.5	-1,455.53	24.4	-149.2	149.3	8.00	8.00	0.00
6,200.0	9.18	270.00	6,188.0	-1,555.04	24.4	-158.2	158.3	8.00	8.00	0.00
6,300.0	17.18	270.00	6,285.3	-1,652.33	24.4	-181.0	181.1	8.00	8.00	0.00
6,400.0	25.18	270.00	6,378.5	-1,745.50	24.4	-217.1	217.2	8.00	8.00	0.00
6,500.0	33.18	270.00	6,465.7	-1,832.74	24.4	-265.8	265.9	8.00	8.00	0.00
SHARON SPRINGS										
6,523.3	35.04	270.00	6,485.0	-1,852.00	24.4	-278.9	279.0	8.00	8.00	0.00
6,600.0	41.18	270.00	6,545.3	-1,912.35	24.4	-326.2	326.3	8.00	8.00	0.00
NIOBRARA A										
6,606.2	41.67	270.00	6,550.0	-1,917.00	24.4	-330.3	330.4	8.00	8.00	0.00
6,700.0	49.18	270.00	6,615.8	-1,982.78	24.4	-397.1	397.2	8.00	8.00	0.00
NIOBRARA B										
6,754.8	53.56	270.00	6,650.0	-2,017.00	24.4	-439.9	440.0	8.00	8.00	0.00
6,800.0	57.18	270.00	6,675.7	-2,042.67	24.4	-477.1	477.2	8.00	8.00	0.00
6,900.0	65.18	270.00	6,723.8	-2,090.84	24.4	-564.6	564.7	8.00	8.00	0.00
NIOBRARA C										
6,915.0	66.38	270.00	6,730.0	-2,097.00	24.4	-578.3	578.4	8.00	8.00	0.00
7,000.0	73.18	270.00	6,759.4	-2,126.36	24.4	-658.0	658.1	8.00	8.00	0.00
7,100.0	81.18	270.00	6,781.5	-2,148.53	24.4	-755.4	755.5	8.00	8.00	0.00
7,200.0	89.18	270.00	6,789.9	-2,156.93	24.4	-855.0	855.1	8.00	8.00	0.00
7" ICP *NEW* - SCHAUMBERG 17F-334										
7,213.0	90.22	270.00	6,790.0	-2,157.00	24.4	-868.0	868.1	8.00	8.00	0.00
7,300.0	90.22	270.00	6,789.7	-2,156.67	24.4	-955.0	955.1	0.00	0.00	0.00
7,400.0	90.22	270.00	6,789.3	-2,156.30	24.4	-1,055.0	1,055.1	0.00	0.00	0.00
7,500.0	90.22	270.00	6,788.9	-2,155.92	24.4	-1,155.0	1,155.1	0.00	0.00	0.00
7,600.0	90.22	270.00	6,788.5	-2,155.54	24.4	-1,255.0	1,255.1	0.00	0.00	0.00
7,700.0	90.22	270.00	6,788.2	-2,155.16	24.4	-1,355.0	1,355.1	0.00	0.00	0.00
7,800.0	90.22	270.00	6,787.8	-2,154.78	24.4	-1,455.0	1,455.1	0.00	0.00	0.00
7,900.0	90.22	270.00	6,787.4	-2,154.40	24.4	-1,555.0	1,555.1	0.00	0.00	0.00
8,000.0	90.22	270.00	6,787.0	-2,154.02	24.4	-1,655.0	1,655.1	0.00	0.00	0.00
8,100.0	90.22	270.00	6,786.6	-2,153.64	24.4	-1,755.0	1,755.1	0.00	0.00	0.00
8,200.0	90.22	270.00	6,786.3	-2,153.26	24.4	-1,855.0	1,855.1	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SCHAUMBERG 17F-334
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4633.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4633.0usft (Original Well Elev)
Site:	SW NW SEC. 17 T5N R64W 6th P.M.	North Reference:	True
Well:	SCHAUMBERG 17F-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)
8,300.0	90.22	270.00	6,785.9	-2,152.87	24.4	-1,955.0	1,955.1	0.00	0.00	0.00
8,400.0	90.22	270.00	6,785.5	-2,152.49	24.4	-2,055.0	2,055.1	0.00	0.00	0.00
8,500.0	90.22	270.00	6,785.1	-2,152.11	24.4	-2,155.0	2,155.1	0.00	0.00	0.00
8,600.0	90.22	270.00	6,784.7	-2,151.72	24.4	-2,255.0	2,255.1	0.00	0.00	0.00
8,700.0	90.22	270.00	6,784.3	-2,151.34	24.4	-2,355.0	2,355.1	0.00	0.00	0.00
8,800.0	90.22	270.00	6,784.0	-2,150.95	24.4	-2,455.0	2,455.1	0.00	0.00	0.00
8,900.0	90.22	270.00	6,783.6	-2,150.56	24.4	-2,555.0	2,555.0	0.00	0.00	0.00
9,000.0	90.22	270.00	6,783.2	-2,150.18	24.4	-2,655.0	2,655.0	0.00	0.00	0.00
9,100.0	90.22	270.00	6,782.8	-2,149.79	24.4	-2,755.0	2,755.0	0.00	0.00	0.00
9,200.0	90.22	270.00	6,782.4	-2,149.40	24.4	-2,855.0	2,855.0	0.00	0.00	0.00
9,300.0	90.22	270.00	6,782.0	-2,149.01	24.4	-2,955.0	2,955.0	0.00	0.00	0.00
9,400.0	90.22	270.00	6,781.6	-2,148.62	24.4	-3,055.0	3,055.0	0.00	0.00	0.00
9,500.0	90.22	270.00	6,781.2	-2,148.23	24.4	-3,155.0	3,155.0	0.00	0.00	0.00
9,600.0	90.22	270.00	6,780.8	-2,147.84	24.4	-3,255.0	3,255.0	0.00	0.00	0.00
9,700.0	90.22	270.00	6,780.5	-2,147.45	24.4	-3,355.0	3,355.0	0.00	0.00	0.00
9,800.0	90.22	270.00	6,780.1	-2,147.06	24.4	-3,455.0	3,455.0	0.00	0.00	0.00
9,900.0	90.23	270.00	6,779.7	-2,146.67	24.4	-3,555.0	3,555.0	0.00	0.00	0.00
10,000.0	90.23	270.00	6,779.3	-2,146.28	24.4	-3,655.0	3,655.0	0.00	0.00	0.00
10,100.0	90.23	270.00	6,778.9	-2,145.88	24.4	-3,755.0	3,755.0	0.00	0.00	0.00
10,200.0	90.23	270.00	6,778.5	-2,145.49	24.4	-3,855.0	3,855.0	0.00	0.00	0.00
10,300.0	90.23	270.00	6,778.1	-2,145.09	24.4	-3,955.0	3,955.0	0.00	0.00	0.00
10,400.0	90.23	270.00	6,777.7	-2,144.70	24.4	-4,055.0	4,055.0	0.00	0.00	0.00
10,500.0	90.23	270.00	6,777.3	-2,144.30	24.4	-4,155.0	4,155.0	0.00	0.00	0.00
10,600.0	90.23	270.00	6,776.9	-2,143.90	24.4	-4,255.0	4,255.0	0.00	0.00	0.00
10,700.0	90.23	270.00	6,776.5	-2,143.51	24.4	-4,355.0	4,355.0	0.00	0.00	0.00
10,800.0	90.23	270.00	6,776.1	-2,143.11	24.4	-4,455.0	4,455.0	0.00	0.00	0.00
10,900.0	90.23	270.00	6,775.7	-2,142.71	24.4	-4,555.0	4,555.0	0.00	0.00	0.00
11,000.0	90.23	270.00	6,775.3	-2,142.31	24.4	-4,655.0	4,655.0	0.00	0.00	0.00
11,100.0	90.23	270.00	6,774.9	-2,141.91	24.4	-4,755.0	4,755.0	0.00	0.00	0.00
11,200.0	90.23	270.00	6,774.5	-2,141.51	24.4	-4,855.0	4,855.0	0.00	0.00	0.00
11,300.0	90.23	270.00	6,774.1	-2,141.11	24.4	-4,955.0	4,955.0	0.00	0.00	0.00
11,400.0	90.23	270.00	6,773.7	-2,140.71	24.4	-5,055.0	5,055.0	0.00	0.00	0.00
11,500.0	90.23	270.00	6,773.3	-2,140.31	24.4	-5,155.0	5,155.0	0.00	0.00	0.00
11,600.0	90.23	270.00	6,772.9	-2,139.90	24.4	-5,254.9	5,255.0	0.00	0.00	0.00
11,700.0	90.23	270.00	6,772.5	-2,139.50	24.4	-5,354.9	5,355.0	0.00	0.00	0.00
11,800.0	90.23	270.00	6,772.1	-2,139.10	24.4	-5,454.9	5,455.0	0.00	0.00	0.00
11,900.0	90.23	270.00	6,771.7	-2,138.69	24.4	-5,554.9	5,555.0	0.00	0.00	0.00
12,000.0	90.23	270.00	6,771.3	-2,138.29	24.4	-5,654.9	5,655.0	0.00	0.00	0.00
12,100.0	90.23	270.00	6,770.9	-2,137.88	24.4	-5,754.9	5,755.0	0.00	0.00	0.00
12,200.0	90.23	270.00	6,770.5	-2,137.47	24.4	-5,854.9	5,855.0	0.00	0.00	0.00
12,300.0	90.23	270.00	6,770.1	-2,137.07	24.4	-5,954.9	5,955.0	0.00	0.00	0.00
BHL - SCHAUMBERG 17F-334										
12,316.4	90.23	270.00	6,770.0	-2,137.00	24.4	-5,971.3	5,971.4	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SCHAUMBERG 17F-334
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4633.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4633.0usft (Original Well Elev)
Site:	SW NW SEC. 17 T5N R64W 6th P.M.	North Reference:	True
Well:	SCHAUMBERG 17F-334	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,486.5	3,475.0	PARKMAN SANDSTONE			
4,211.5	4,200.0	SUSSEX SANDSTONE			
6,523.3	6,485.0	SHARON SPRINGS			
6,606.2	6,550.0	NIOBRARA A			
6,754.8	6,650.0	NIOBRARA B			
6,915.0	6,730.0	NIOBRARA C			

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,500.0	1,500.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,100.1	2,095.7	10.1	-61.8	EOB TO 12° INC
2,224.2	2,217.1	14.3	-87.3	END OF TANGENT
2,824.3	2,812.8	24.4	-149.1	EOD TO VERTICAL
6,085.3	6,073.8	24.4	-149.1	KOP (8°/100ft BUR)
7,213.0	6,790.0	24.4	-868.0	7" ICP *NEW* - SCHAUMBERG 17F-334
12,316.4	6,770.0	24.4	-5,971.3	BHL - SCHAUMBERG 17F-334