

PDC ENERGY

**WELD COUNTY, COLORADO
SW NW SEC. 17 T5N R64W 6th P.M.
SCHAUMBERG 17G-314**

ORIGINAL WELLBORE

16 December, 2015

Plan: PROPOSAL #1





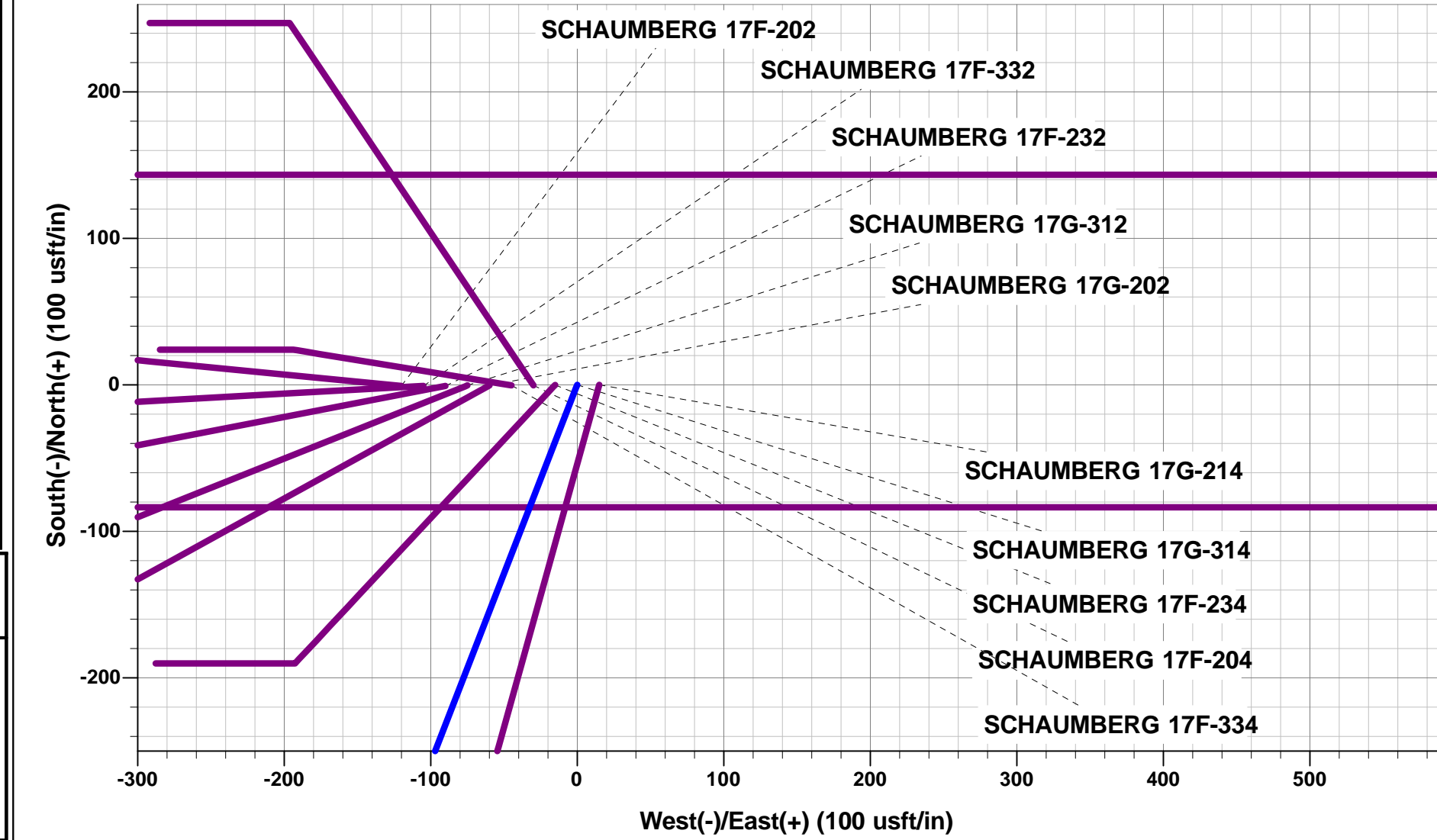
Project: WELD COUNTY, COLORADO
 Site: SW NW SEC. 17 T5N R64W 6th P.M.
 Well: SCHAUMBERG 17G-314
 Wellbore: ORIGINAL WELLBORE
 Design: PROPOSAL #1

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Dep	Annotation
1800.0	1800.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDDGE (2°/100ft BUR)
2395.6	2400.0	12.00	201.19	-58.4	-22.6	27.3	62.6	EOB TO 12° INC
4279.2	4325.7	12.00	201.19	-431.6	-167.4	201.8	463.0	END OF TANGENT
4874.8	4925.6	0.00	201.19	-490.0	-190.0	229.1	525.5	EOD TO VERTICAL
6073.8	6124.6	0.00	0.00	-490.0	-190.0	229.1	525.5	KOP (8°/100ft BUR)
6790.0	7252.3	90.22	270.00	-490.0	-908.9	945.7	1244.4	7" ICP *NEW* - SCHAUMBERG 17G-314
6770.0	12361.7	90.23	270.00	-490.0	-6018.2	6038.1	6353.8	BHL - SCHAUMBERG 17G-314

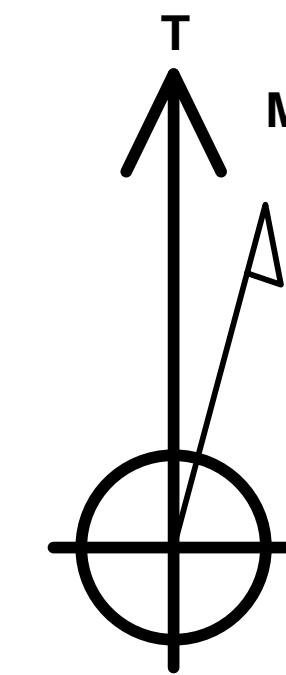
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - SCHAUMBERG 17G-314	6073.8	-490.0	-190.0	40.400657	-104.580369
7" ICP *NEW* - SCHAUMBERG 17G-314	6790.0	-490.0	-908.9	40.400657	-104.582950
BHL - SCHAUMBERG 17G-314	6770.0	-490.0	-6018.2	40.400655	-104.601295



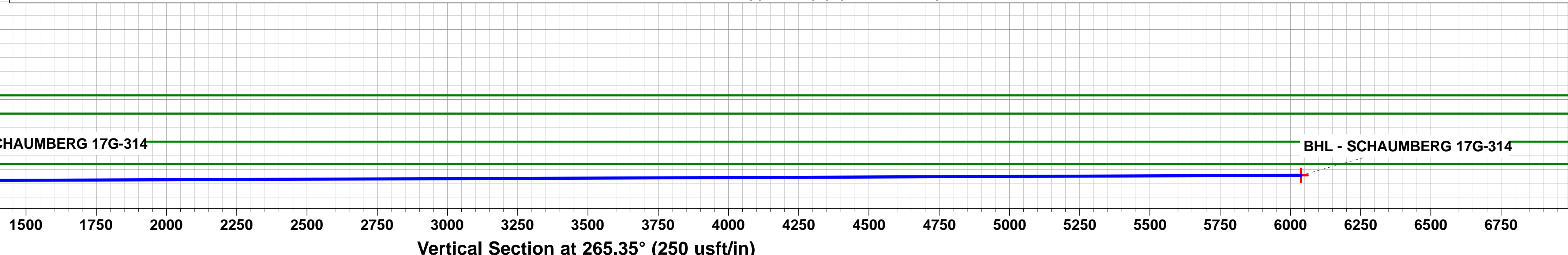
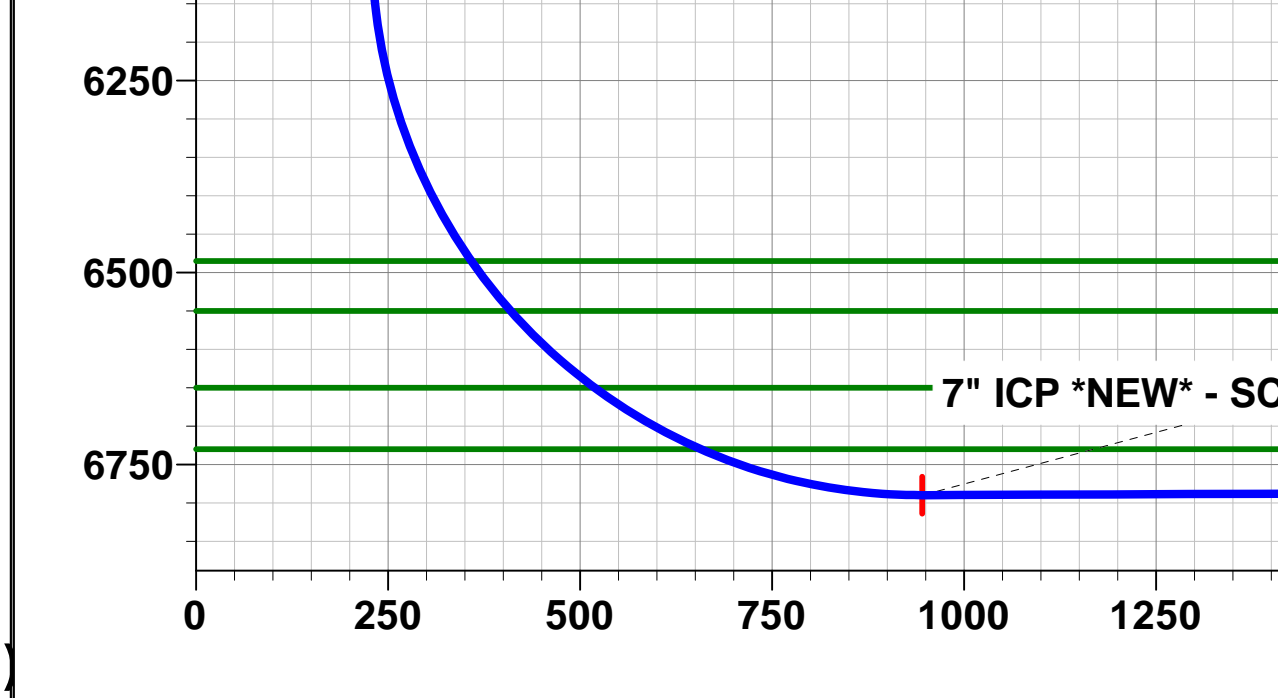
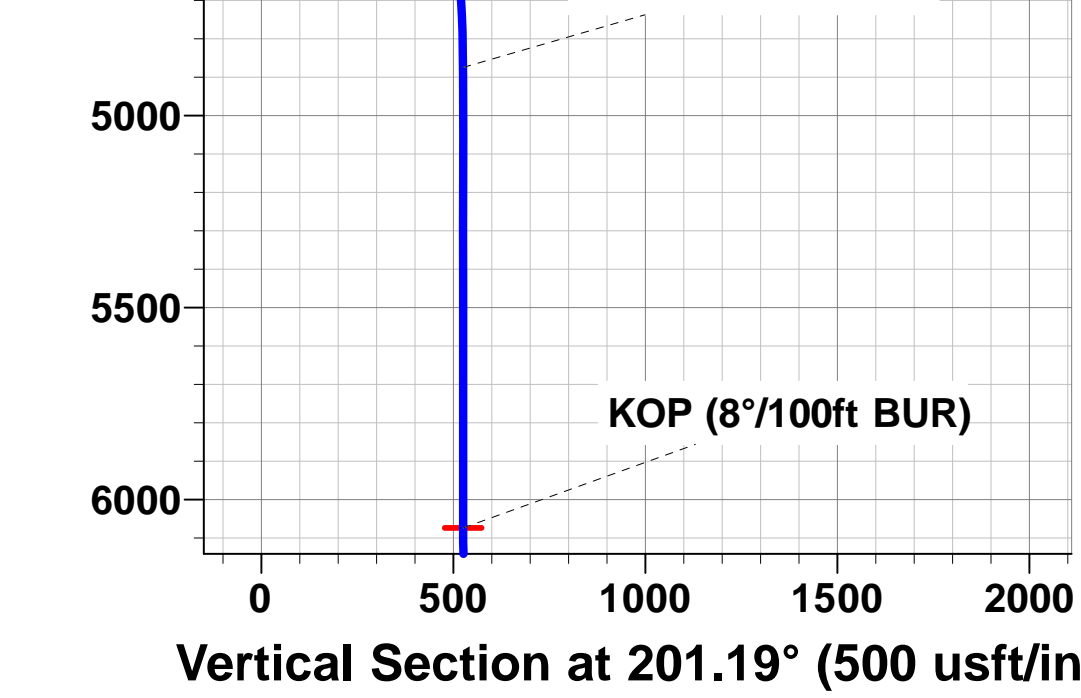
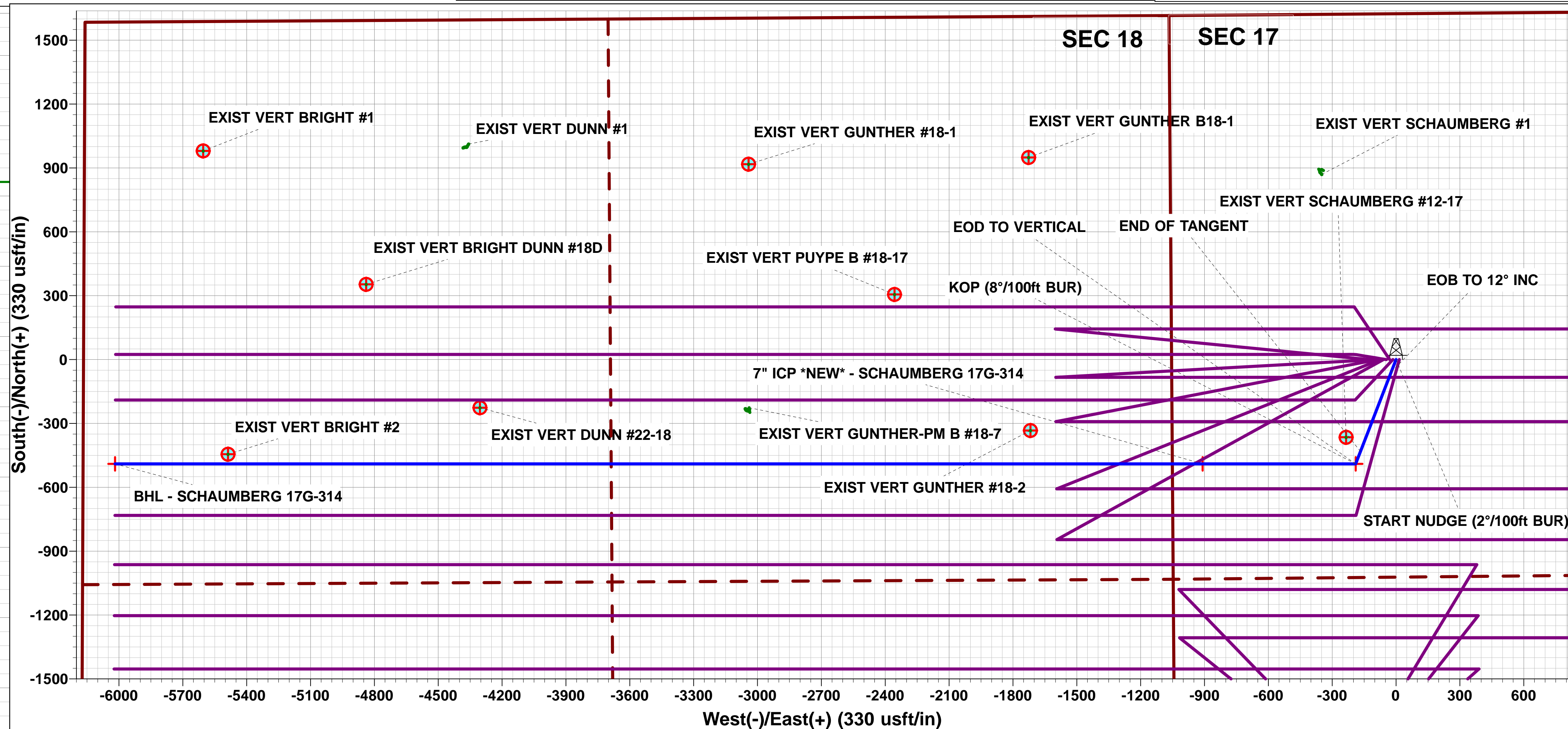
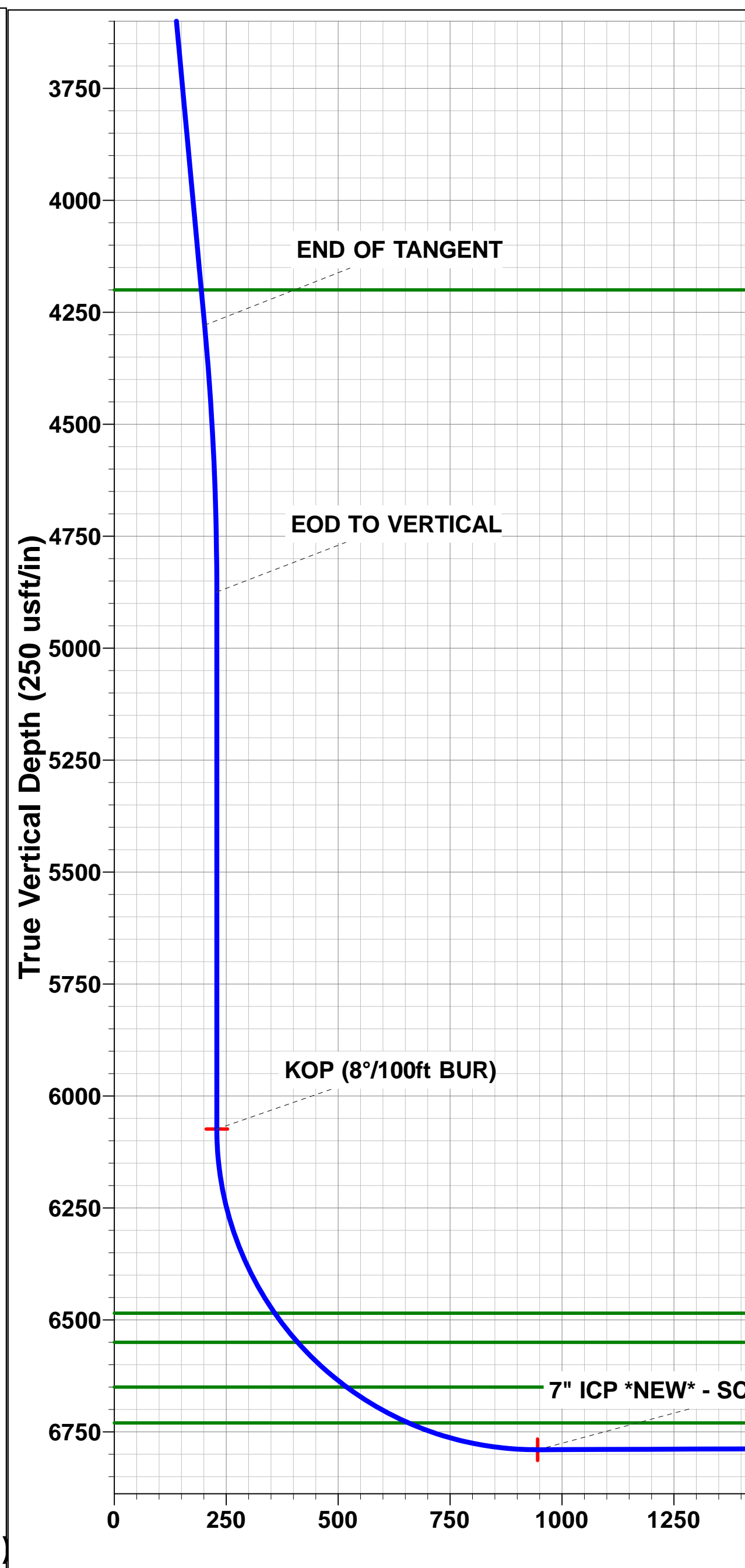
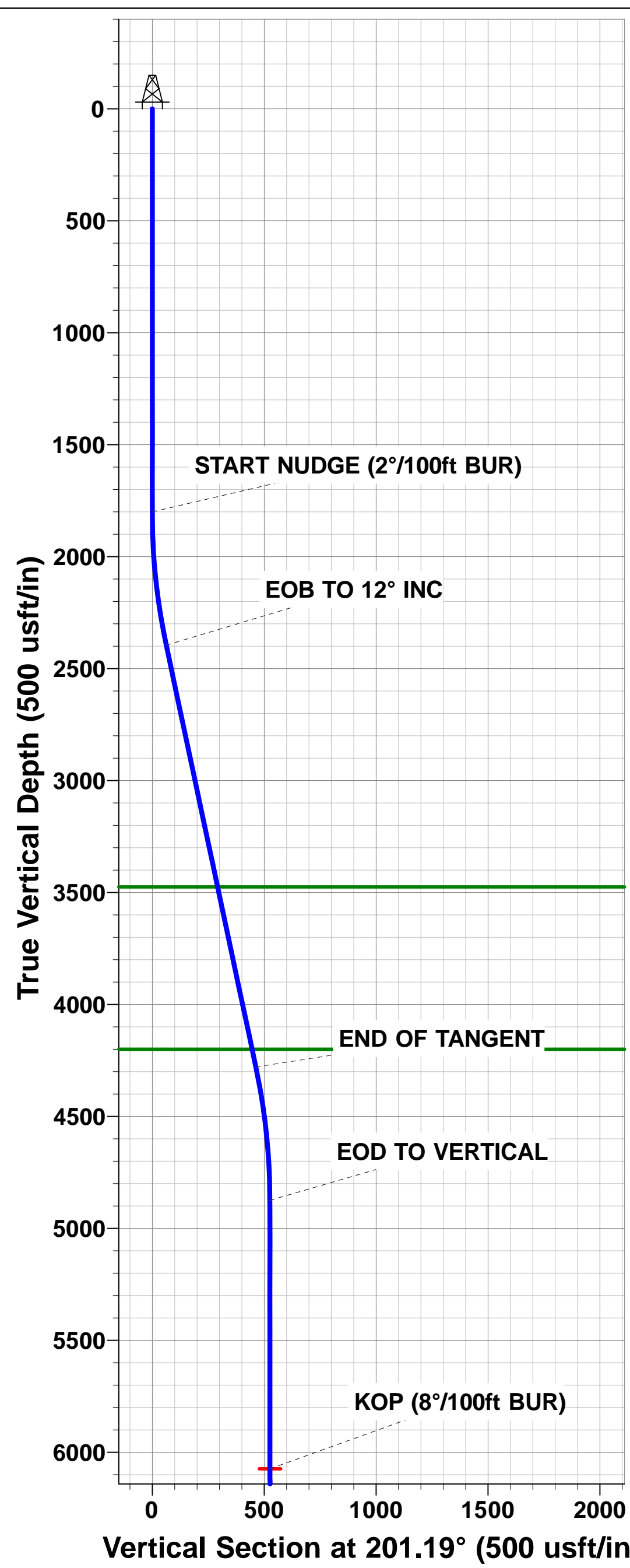
PROPOSED LOCAL COORDINATES:

SHL: 1624ft FNL & 1055ft FWL of Sec 17
 7" ICP *NEW*: 2106.7ft FNL & 142ft FWL of Sec 17
 BHL: 2075ft FNL & 150ft FWL of Sec 18



Azimuths to True North
 Magnetic North: 8.27°

Magnetic Field
 Strength: 52587.4snT
 Dip Angle: 66.92°
 Date: 11/12/2015
 Model: IGRF2015



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SCHAUMBERG 17G-314
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 17G-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 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 17G-314			
Well Position	+N/-S	0.0 usft	Northing: 1,390,619.74 usft
	+E/-W	-15.0 usft	Easting: 3,256,304.53 usft
Position Uncertainty		0.0 usft	Wellhead Elevation: usft
			Latitude: 40.402002
			Longitude: -104.579687
			Ground Level: 4,620.0 usft

Wellbore ORIGINAL WELLBORE					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/12/2015	8.27	66.92	52,587

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	265.35

Plan Sections											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	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	
1,800.0	0.00	0.00	1,800.0	-2,833.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,400.0	12.00	201.19	2,395.6	-2,237.4	-58.4	-22.6	2.00	2.00	0.00	201.19	
4,325.7	12.00	201.19	4,279.2	-353.8	-431.6	-167.4	0.00	0.00	0.00	0.00	
4,925.6	0.00	0.00	4,874.8	241.8	-490.0	-190.0	2.00	-2.00	0.00	180.00	
6,124.6	0.00	0.00	6,073.8	1,440.8	-490.0	-190.0	0.00	0.00	0.00	0.00	KOP - SCHAUMBE
7,252.3	90.22	270.00	6,790.0	2,157.0	-490.0	-908.9	8.00	8.00	-7.98	270.00	7" ICP *NEW* - SC
12,361.7	90.23	270.00	6,770.0	2,137.0	-490.0	-6,018.2	0.00	0.00	0.00	1.33	BHL - SCHAUMBEI

Planning Report



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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 17G-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)
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
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	0.00	0.00	1,600.0	3,033.00	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	2,933.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDDGE (2°/100ft BUR)										
1,800.0	0.00	0.00	1,800.0	2,833.00	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	2.00	201.19	1,900.0	2,733.02	-1.6	-0.6	0.8	2.00	2.00	0.00
2,000.0	4.00	201.19	1,999.8	2,633.16	-6.5	-2.5	3.0	2.00	2.00	0.00
2,100.0	6.00	201.19	2,099.5	2,533.55	-14.6	-5.7	6.8	2.00	2.00	0.00
2,200.0	8.00	201.19	2,198.7	2,434.30	-26.0	-10.1	12.2	2.00	2.00	0.00
2,300.0	10.00	201.19	2,297.5	2,335.53	-40.6	-15.7	19.0	2.00	2.00	0.00
EOB TO 12° INC										
2,400.0	12.00	201.19	2,395.6	2,237.38	-58.4	-22.6	27.3	2.00	2.00	0.00
2,500.0	12.00	201.19	2,493.4	2,139.56	-77.8	-30.1	36.4	0.00	0.00	0.00
2,600.0	12.00	201.19	2,591.3	2,041.75	-97.1	-37.7	45.4	0.00	0.00	0.00
2,700.0	12.00	201.19	2,689.1	1,943.93	-116.5	-45.2	54.5	0.00	0.00	0.00
2,800.0	12.00	201.19	2,786.9	1,846.12	-135.9	-52.7	63.6	0.00	0.00	0.00
2,900.0	12.00	201.19	2,884.7	1,748.30	-155.3	-60.2	72.6	0.00	0.00	0.00
3,000.0	12.00	201.19	2,982.5	1,650.49	-174.7	-67.7	81.7	0.00	0.00	0.00
3,100.0	12.00	201.19	3,080.3	1,552.67	-194.1	-75.2	90.7	0.00	0.00	0.00
3,200.0	12.00	201.19	3,178.1	1,454.86	-213.4	-82.8	99.8	0.00	0.00	0.00
3,300.0	12.00	201.19	3,276.0	1,357.04	-232.8	-90.3	108.9	0.00	0.00	0.00
3,400.0	12.00	201.19	3,373.8	1,259.23	-252.2	-97.8	117.9	0.00	0.00	0.00
3,500.0	12.00	201.19	3,471.6	1,161.41	-271.6	-105.3	127.0	0.00	0.00	0.00
PARKMAN SANDSTONE										
3,503.5	12.00	201.19	3,475.0	1,158.00	-272.3	-105.6	127.3	0.00	0.00	0.00
3,600.0	12.00	201.19	3,569.4	1,063.60	-291.0	-112.8	136.1	0.00	0.00	0.00
3,700.0	12.00	201.19	3,667.2	965.78	-310.4	-120.3	145.1	0.00	0.00	0.00
3,800.0	12.00	201.19	3,765.0	867.97	-329.7	-127.9	154.2	0.00	0.00	0.00
3,900.0	12.00	201.19	3,862.8	770.15	-349.1	-135.4	163.3	0.00	0.00	0.00
4,000.0	12.00	201.19	3,960.7	672.34	-368.5	-142.9	172.3	0.00	0.00	0.00
4,100.0	12.00	201.19	4,058.5	574.52	-387.9	-150.4	181.4	0.00	0.00	0.00
4,200.0	12.00	201.19	4,156.3	476.71	-407.3	-157.9	190.5	0.00	0.00	0.00
SUSSEX SANDSTONE										
4,244.7	12.00	201.19	4,200.0	433.00	-415.9	-161.3	194.5	0.00	0.00	0.00
4,300.0	12.00	201.19	4,254.1	378.89	-426.7	-165.4	199.5	0.00	0.00	0.00
END OF TANGENT										
4,325.7	12.00	201.19	4,279.2	353.75	-431.6	-167.4	201.8	0.00	0.00	0.00
4,400.0	10.51	201.19	4,352.1	280.88	-445.2	-172.6	208.2	2.00	-2.00	0.00
4,500.0	8.51	201.19	4,450.7	182.26	-460.6	-178.6	215.4	2.00	-2.00	0.00

Planning Report



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Well:	SCHAUMBERG 17G-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	6.51	201.19	4,549.9	83.13	-472.8	-183.3	221.1	2.00	-2.00	0.00
4,700.0	4.51	201.19	4,649.4	-16.40	-481.7	-186.8	225.3	2.00	-2.00	0.00
4,800.0	2.51	201.19	4,749.2	-116.21	-487.4	-189.0	227.9	2.00	-2.00	0.00
4,900.0	0.51	201.19	4,849.2	-216.17	-489.9	-190.0	229.1	2.00	-2.00	0.00
EOD TO VERTICAL										
4,925.6	0.00	201.19	4,874.8	-241.77	-490.0	-190.0	229.1	2.00	-2.00	0.00
5,000.0	0.00	0.00	4,949.2	-316.17	-490.0	-190.0	229.1	0.00	0.00	0.00
5,100.0	0.00	0.00	5,049.2	-416.17	-490.0	-190.0	229.1	0.00	0.00	0.00
5,200.0	0.00	0.00	5,149.2	-516.17	-490.0	-190.0	229.1	0.00	0.00	0.00
5,300.0	0.00	0.00	5,249.2	-616.17	-490.0	-190.0	229.1	0.00	0.00	0.00
5,400.0	0.00	0.00	5,349.2	-716.17	-490.0	-190.0	229.1	0.00	0.00	0.00
5,500.0	0.00	0.00	5,449.2	-816.17	-490.0	-190.0	229.1	0.00	0.00	0.00
5,600.0	0.00	0.00	5,549.2	-916.17	-490.0	-190.0	229.1	0.00	0.00	0.00
5,700.0	0.00	0.00	5,649.2	-1,016.17	-490.0	-190.0	229.1	0.00	0.00	0.00
5,800.0	0.00	0.00	5,749.2	-1,116.17	-490.0	-190.0	229.1	0.00	0.00	0.00
5,900.0	0.00	0.00	5,849.2	-1,216.17	-490.0	-190.0	229.1	0.00	0.00	0.00
6,000.0	0.00	0.00	5,949.2	-1,316.17	-490.0	-190.0	229.1	0.00	0.00	0.00
6,100.0	0.00	0.00	6,049.2	-1,416.17	-490.0	-190.0	229.1	0.00	0.00	0.00
KOP (8°/100ft BUR)										
6,124.6	0.00	0.00	6,073.8	-1,440.80	-490.0	-190.0	229.1	0.00	0.00	0.00
6,200.0	6.03	270.00	6,149.0	-1,516.03	-490.0	-194.0	233.1	8.00	8.00	0.00
6,300.0	14.03	270.00	6,247.4	-1,614.42	-490.0	-211.4	250.4	8.00	8.00	0.00
6,400.0	22.03	270.00	6,342.4	-1,709.44	-490.0	-242.3	281.3	8.00	8.00	0.00
6,500.0	30.03	270.00	6,432.2	-1,799.22	-490.0	-286.1	325.0	8.00	8.00	0.00
SHARON SPRINGS										
6,562.6	35.04	270.00	6,485.0	-1,852.00	-490.0	-319.8	358.5	8.00	8.00	0.00
6,600.0	38.03	270.00	6,515.0	-1,882.03	-490.0	-342.1	380.7	8.00	8.00	0.00
NIOBRARA A										
6,645.6	41.67	270.00	6,550.0	-1,917.00	-490.0	-371.2	409.8	8.00	8.00	0.00
6,700.0	46.03	270.00	6,589.2	-1,956.25	-490.0	-408.9	447.4	8.00	8.00	0.00
NIOBRARA B										
6,794.2	53.56	270.00	6,650.0	-2,017.00	-490.0	-480.8	519.0	8.00	8.00	0.00
6,800.0	54.03	270.00	6,653.4	-2,020.44	-490.0	-485.5	523.7	8.00	8.00	0.00
6,900.0	62.03	270.00	6,706.3	-2,073.34	-490.0	-570.3	608.2	8.00	8.00	0.00
NIOBRARA C										
6,954.4	66.38	270.00	6,730.0	-2,097.00	-490.0	-619.2	657.0	8.00	8.00	0.00
7,000.0	70.03	270.00	6,746.9	-2,113.94	-490.0	-661.6	699.2	8.00	8.00	0.00
7,100.0	78.03	270.00	6,774.4	-2,141.43	-490.0	-757.7	794.9	8.00	8.00	0.00
7,200.0	86.03	270.00	6,788.3	-2,155.29	-490.0	-856.6	893.5	8.00	8.00	0.00
7" ICP *NEW* - SCHAUMBERG 17G-314										
7,252.3	90.22	270.00	6,790.0	-2,157.00	-490.0	-908.9	945.7	8.00	8.00	0.00
7,300.0	90.22	270.00	6,789.8	-2,156.82	-490.0	-956.6	993.2	0.00	0.00	0.00
7,400.0	90.22	270.00	6,789.4	-2,156.44	-490.0	-1,056.6	1,092.8	0.00	0.00	0.00
7,500.0	90.22	270.00	6,789.1	-2,156.07	-490.0	-1,156.6	1,192.5	0.00	0.00	0.00
7,600.0	90.22	270.00	6,788.7	-2,155.69	-490.0	-1,256.6	1,292.2	0.00	0.00	0.00
7,700.0	90.22	270.00	6,788.3	-2,155.31	-490.0	-1,356.6	1,391.8	0.00	0.00	0.00
7,800.0	90.22	270.00	6,787.9	-2,154.93	-490.0	-1,456.6	1,491.5	0.00	0.00	0.00
7,900.0	90.22	270.00	6,787.6	-2,154.55	-490.0	-1,556.6	1,591.2	0.00	0.00	0.00
8,000.0	90.22	270.00	6,787.2	-2,154.17	-490.0	-1,656.6	1,690.9	0.00	0.00	0.00
8,100.0	90.22	270.00	6,786.8	-2,153.79	-490.0	-1,756.6	1,790.5	0.00	0.00	0.00
8,200.0	90.22	270.00	6,786.4	-2,153.41	-490.0	-1,856.6	1,890.2	0.00	0.00	0.00
8,300.0	90.22	270.00	6,786.0	-2,153.03	-490.0	-1,956.6	1,989.9	0.00	0.00	0.00
8,400.0	90.22	270.00	6,785.6	-2,152.64	-490.0	-2,056.6	2,089.5	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SCHAUMBERG 17G-314
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 17G-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)
8,500.0	90.22	270.00	6,785.3	-2,152.26	-490.0	-2,156.6	2,189.2	0.00	0.00	0.00
8,600.0	90.22	270.00	6,784.9	-2,151.88	-490.0	-2,256.6	2,288.9	0.00	0.00	0.00
8,700.0	90.22	270.00	6,784.5	-2,151.49	-490.0	-2,356.6	2,388.5	0.00	0.00	0.00
8,800.0	90.22	270.00	6,784.1	-2,151.11	-490.0	-2,456.6	2,488.2	0.00	0.00	0.00
8,900.0	90.22	270.00	6,783.7	-2,150.72	-490.0	-2,556.6	2,587.9	0.00	0.00	0.00
9,000.0	90.22	270.00	6,783.3	-2,150.33	-490.0	-2,656.6	2,687.6	0.00	0.00	0.00
9,100.0	90.22	270.00	6,782.9	-2,149.95	-490.0	-2,756.6	2,787.2	0.00	0.00	0.00
9,200.0	90.22	270.00	6,782.6	-2,149.56	-490.0	-2,856.5	2,886.9	0.00	0.00	0.00
9,300.0	90.22	270.00	6,782.2	-2,149.17	-490.0	-2,956.5	2,986.6	0.00	0.00	0.00
9,400.0	90.22	270.00	6,781.8	-2,148.78	-490.0	-3,056.5	3,086.2	0.00	0.00	0.00
9,500.0	90.22	270.00	6,781.4	-2,148.39	-490.0	-3,156.5	3,185.9	0.00	0.00	0.00
9,600.0	90.22	270.00	6,781.0	-2,148.00	-490.0	-3,256.5	3,285.6	0.00	0.00	0.00
9,700.0	90.22	270.00	6,780.6	-2,147.61	-490.0	-3,356.5	3,385.2	0.00	0.00	0.00
9,800.0	90.22	270.00	6,780.2	-2,147.22	-490.0	-3,456.5	3,484.9	0.00	0.00	0.00
9,900.0	90.22	270.00	6,779.8	-2,146.83	-490.0	-3,556.5	3,584.6	0.00	0.00	0.00
10,000.0	90.22	270.00	6,779.4	-2,146.44	-490.0	-3,656.5	3,684.2	0.00	0.00	0.00
10,100.0	90.23	270.00	6,779.0	-2,146.04	-490.0	-3,756.5	3,783.9	0.00	0.00	0.00
10,200.0	90.23	270.00	6,778.7	-2,145.65	-490.0	-3,856.5	3,883.6	0.00	0.00	0.00
10,300.0	90.23	270.00	6,778.3	-2,145.26	-490.0	-3,956.5	3,983.3	0.00	0.00	0.00
10,400.0	90.23	270.00	6,777.9	-2,144.86	-490.0	-4,056.5	4,082.9	0.00	0.00	0.00
10,500.0	90.23	270.00	6,777.5	-2,144.47	-490.0	-4,156.5	4,182.6	0.00	0.00	0.00
10,600.0	90.23	270.00	6,777.1	-2,144.07	-490.0	-4,256.5	4,282.3	0.00	0.00	0.00
10,700.0	90.23	270.00	6,776.7	-2,143.67	-490.0	-4,356.5	4,381.9	0.00	0.00	0.00
10,800.0	90.23	270.00	6,776.3	-2,143.28	-490.0	-4,456.5	4,481.6	0.00	0.00	0.00
10,900.0	90.23	270.00	6,775.9	-2,142.88	-490.0	-4,556.5	4,581.3	0.00	0.00	0.00
11,000.0	90.23	270.00	6,775.5	-2,142.48	-490.0	-4,656.5	4,680.9	0.00	0.00	0.00
11,100.0	90.23	270.00	6,775.1	-2,142.08	-490.0	-4,756.5	4,780.6	0.00	0.00	0.00
11,200.0	90.23	270.00	6,774.7	-2,141.68	-490.0	-4,856.5	4,880.3	0.00	0.00	0.00
11,300.0	90.23	270.00	6,774.3	-2,141.28	-490.0	-4,956.5	4,979.9	0.00	0.00	0.00
11,400.0	90.23	270.00	6,773.9	-2,140.88	-490.0	-5,056.5	5,079.6	0.00	0.00	0.00
11,500.0	90.23	270.00	6,773.5	-2,140.48	-490.0	-5,156.5	5,179.3	0.00	0.00	0.00
11,600.0	90.23	270.00	6,773.1	-2,140.08	-490.0	-5,256.5	5,279.0	0.00	0.00	0.00
11,700.0	90.23	270.00	6,772.7	-2,139.68	-490.0	-5,356.5	5,378.6	0.00	0.00	0.00
11,800.0	90.23	270.00	6,772.3	-2,139.27	-490.0	-5,456.5	5,478.3	0.00	0.00	0.00
11,900.0	90.23	270.00	6,771.9	-2,138.87	-490.0	-5,556.5	5,578.0	0.00	0.00	0.00
12,000.0	90.23	270.00	6,771.5	-2,138.47	-490.0	-5,656.5	5,677.6	0.00	0.00	0.00
12,100.0	90.23	270.00	6,771.1	-2,138.06	-490.0	-5,756.5	5,777.3	0.00	0.00	0.00
12,200.0	90.23	270.00	6,770.7	-2,137.66	-490.0	-5,856.5	5,877.0	0.00	0.00	0.00
12,300.0	90.23	270.00	6,770.3	-2,137.25	-490.0	-5,956.5	5,976.6	0.00	0.00	0.00
BHL - SCHAUMBERG 17G-314										
12,361.7	90.23	270.00	6,770.0	-2,137.00	-490.0	-6,018.2	6,038.1	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SCHAUMBERG 17G-314
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 17G-314	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,503.5	3,475.0	PARKMAN SANDSTONE			
4,244.7	4,200.0	SUSSEX SANDSTONE			
6,562.6	6,485.0	SHARON SPRINGS			
6,645.6	6,550.0	NIOBRARA A			
6,794.2	6,650.0	NIOBRARA B			
6,954.4	6,730.0	NIOBRARA C			

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,800.0	1,800.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,400.0	2,395.6	-58.4	-22.6	EOB TO 12° INC
4,325.7	4,279.2	-431.6	-167.4	END OF TANGENT
4,925.6	4,874.8	-490.0	-190.0	EOD TO VERTICAL
6,124.6	6,073.8	-490.0	-190.0	KOP (8°/100ft BUR)
7,252.3	6,790.0	-490.0	-908.9	7" ICP *NEW* - SCHAUMBERG 17G-314
12,361.7	6,770.0	-490.0	-6,018.2	BHL - SCHAUMBERG 17G-314