

PDC ENERGY

**WELD COUNTY, COLORADO
NW SW SEC. 27 T5N R65W 6th P.M.
BOULTER FARMS 27G-332**

ORIGINAL WELLBORE

11 March, 2016

Plan: PROPOSAL #1



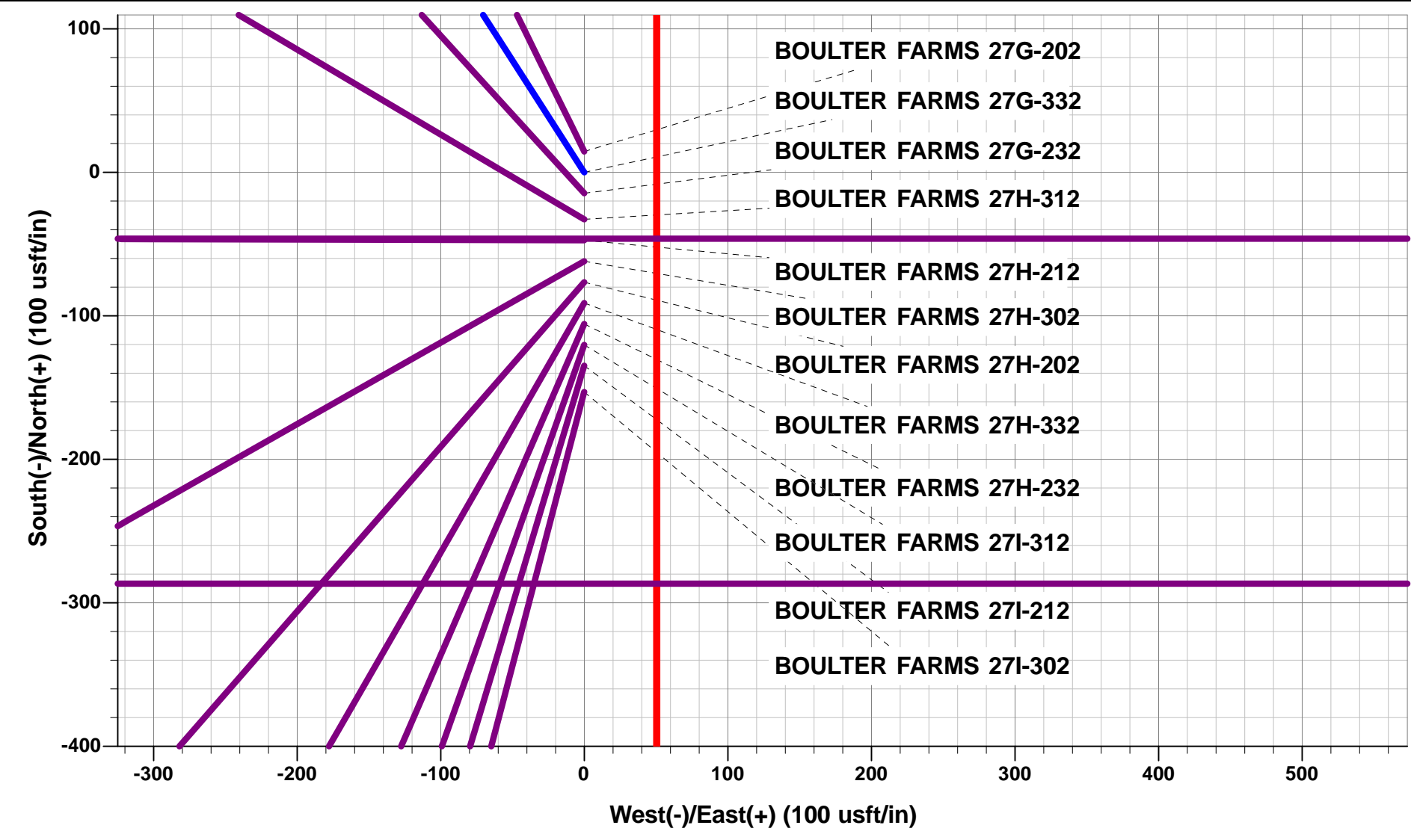


Project: WELD COUNTY, COLORADO
Site: NW SW SEC. 27 T5N R65W 6th P.M.
Well: BOULTER FARMS 27G-332
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1



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: 1711ft FSL & 410ft FWL of Sec 27	
1150.0	1150.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
1745.5	1749.9	12.00	327.31	52.7	-33.8	-29.4	62.6	EOB TO 12° INC	
4605.3	4673.6	12.00	327.31	564.1	-362.0	-314.6	670.3	END OF TANGENT	
5200.8	5273.4	0.00	0.00	616.8	-395.8	-344.0	732.9	EOD TO VERTICAL	
6228.8	6301.4	0.00	0.00	616.8	-395.8	-344.0	732.9	KOP (8°/100ft BUR)	
6945.0	7432.4	90.48	90.00	616.8	326.4	375.8	1455.1	HZ LANDING PNT *NEW*: 2321.3ft FSL & 737.2ft FWL of Sec 27	
6885.0	14613.0	90.48	90.00	616.8	7506.8	7532.1	8635.4	BHL: 2350ft FSL & 2635ft FWL of Sec 26	

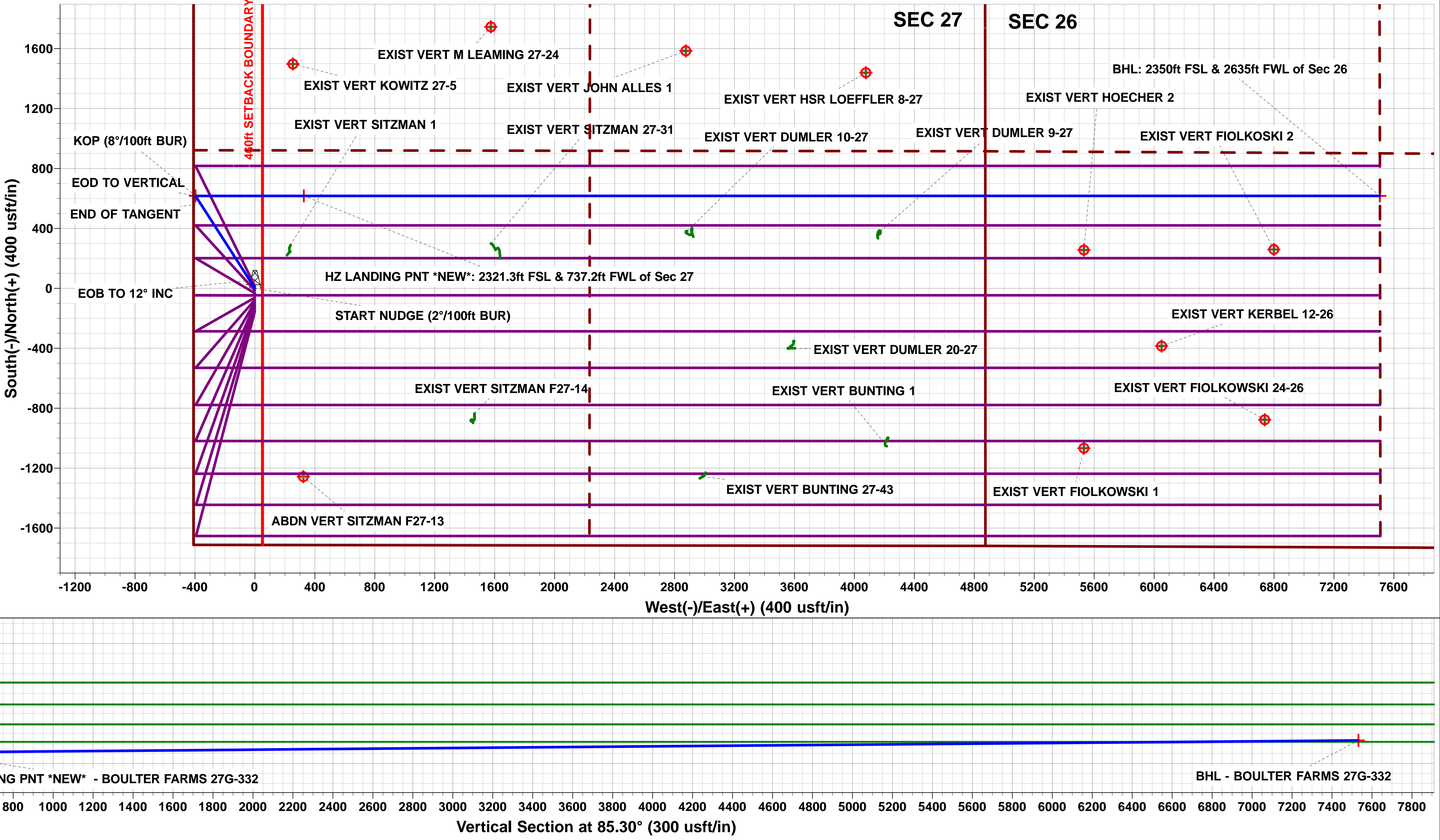
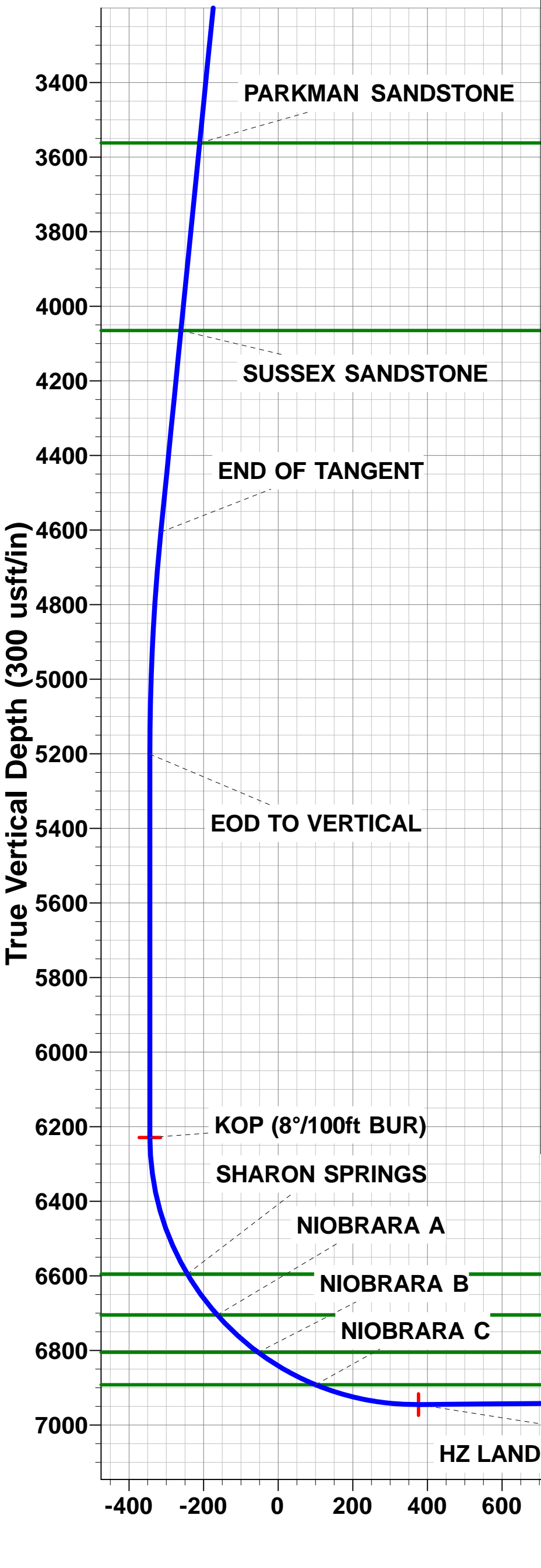
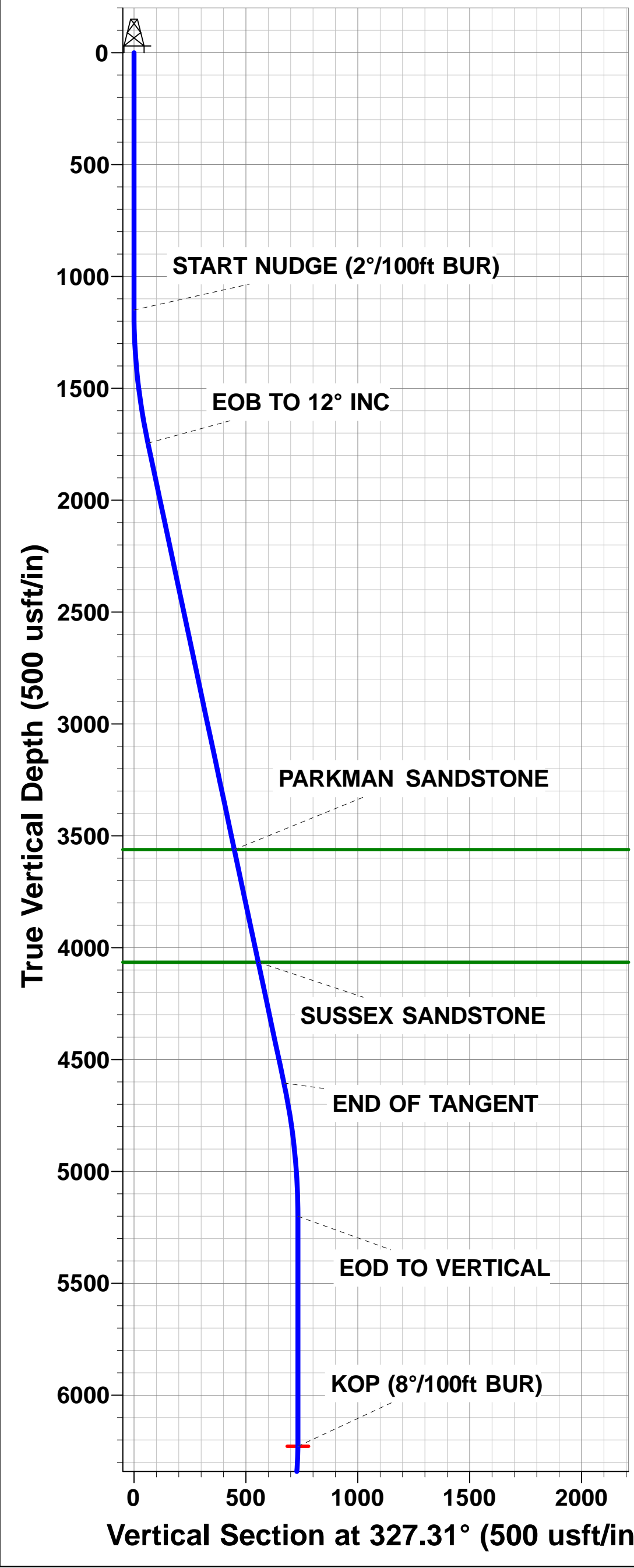
WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - BOULTER FARMS 27G-332	6228.8	616.8	-395.8	40.369463	-104.658810
BHL - BOULTER FARMS 27G-332	6885.0	616.8	7506.8	40.369460	-104.630450
HZ LP *NEW* - BOULTER FARMS 27G-332	6945.0	616.8	326.4	40.369463	-104.656219



PROPOSED LOCAL COORDINATES:
SHL: 1711ft FSL & 410ft FWL of Sec 27
HZ LP *NEW*: 2321.3ft FSL & 737.2ft FWL of Sec 27
BHL: 2350ft FSL & 2635ft FWL of Sec 26

Azimuths to True North
Magnetic North: 8.28°

Magnetic Field
Strength: 52532.7snT
Dip Angle: 66.88°
Date: 11/03/2016
Model: IGRF2015



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BOULTER FARMS 27G-332
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4680.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4680.0usft (Original Well Elev)
Site:	NW SW SEC. 27 T5N R65W 6th P.M.	North Reference:	True
Well:	BOULTER FARMS 27G-332	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	NW SW SEC. 27 T5N R65W 6th P.M.		
Site Position:		Northing:	1,377,949.21 usft
From:	Lat/Long	Easting:	3,234,783.51 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.367810
		Longitude:	-104.657390
		Grid Convergence:	0.54 °

Well	BOULTER FARMS 27G-332		
Well Position	+N/-S	-14.6 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	11/03/2016	8.29	66.88	52,533

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 (°)
	6,885.0	0.0	0.0	85.30

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	-4,680.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,150.0	0.00	0.00	1,150.0	-3,530.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,749.9	12.00	327.31	1,745.5	-2,934.5	52.7	-33.8	2.00	2.00	0.00	327.31	
4,673.6	12.00	327.31	4,605.3	-74.7	564.1	-362.0	0.00	0.00	0.00	0.00	
5,273.4	0.00	0.00	5,200.8	520.8	616.8	-395.8	2.00	-2.00	0.00	180.00	
6,301.4	0.00	0.00	6,228.8	1,548.8	616.8	-395.8	0.00	0.00	0.00	0.00	KOP - BOULTER F
7,432.4	90.48	90.00	6,945.0	2,265.0	616.8	326.4	8.00	8.00	0.00	90.00	
14,613.0	90.48	90.00	6,885.0	2,205.0	616.8	7,506.8	0.00	0.00	0.00	-170.29	BHL - BOULTER F

Planning Report



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Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4680.0usft (Original Well Elev)
Site:	NW SW SEC. 27 T5N R65W 6th P.M.	North Reference:	True
Well:	BOULTER FARMS 27G-332	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: 1711ft FSL & 410ft FWL of Sec 27										
0.0	0.00	0.00	0.0	4,680.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,580.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,480.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,380.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,280.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,180.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,080.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,980.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,880.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,780.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,680.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,580.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
1,150.0	0.00	0.00	1,150.0	3,530.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	1.00	327.31	1,200.0	3,480.00	0.4	-0.2	-0.2	2.00	2.00	0.00
1,300.0	3.00	327.31	1,299.9	3,380.07	3.3	-2.1	-1.8	2.00	2.00	0.00
1,400.0	5.00	327.31	1,399.7	3,280.32	9.2	-5.9	-5.1	2.00	2.00	0.00
1,500.0	7.00	327.31	1,499.1	3,180.87	18.0	-11.5	-10.0	2.00	2.00	0.00
1,600.0	9.00	327.31	1,598.2	3,081.85	29.7	-19.0	-16.6	2.00	2.00	0.00
1,700.0	11.00	327.31	1,696.6	2,983.37	44.3	-28.4	-24.7	2.00	2.00	0.00
EOB TO 12° INC										
1,749.9	12.00	327.31	1,745.5	2,934.52	52.7	-33.8	-29.4	2.00	2.00	0.00
1,800.0	12.00	327.31	1,794.5	2,885.47	61.4	-39.4	-34.3	0.00	0.00	0.00
1,900.0	12.00	327.31	1,892.3	2,787.65	78.9	-50.6	-44.0	0.00	0.00	0.00
2,000.0	12.00	327.31	1,990.2	2,689.84	96.4	-61.9	-53.8	0.00	0.00	0.00
2,100.0	12.00	327.31	2,088.0	2,592.02	113.9	-73.1	-63.5	0.00	0.00	0.00
2,200.0	12.00	327.31	2,185.8	2,494.21	131.4	-84.3	-73.3	0.00	0.00	0.00
2,300.0	12.00	327.31	2,283.6	2,396.39	148.9	-95.6	-83.0	0.00	0.00	0.00
2,400.0	12.00	327.31	2,381.4	2,298.57	166.4	-106.8	-92.8	0.00	0.00	0.00
2,500.0	12.00	327.31	2,479.2	2,200.76	183.9	-118.0	-102.5	0.00	0.00	0.00
2,600.0	12.00	327.31	2,577.1	2,102.94	201.4	-129.2	-112.3	0.00	0.00	0.00
2,700.0	12.00	327.31	2,674.9	2,005.13	218.9	-140.5	-122.1	0.00	0.00	0.00
2,800.0	12.00	327.31	2,772.7	1,907.31	236.4	-151.7	-131.8	0.00	0.00	0.00
2,900.0	12.00	327.31	2,870.5	1,809.50	253.9	-162.9	-141.6	0.00	0.00	0.00
3,000.0	12.00	327.31	2,968.3	1,711.68	271.4	-174.1	-151.3	0.00	0.00	0.00
3,100.0	12.00	327.31	3,066.1	1,613.86	288.9	-185.4	-161.1	0.00	0.00	0.00
3,200.0	12.00	327.31	3,164.0	1,516.05	306.4	-196.6	-170.8	0.00	0.00	0.00
3,300.0	12.00	327.31	3,261.8	1,418.23	323.8	-207.8	-180.6	0.00	0.00	0.00
3,400.0	12.00	327.31	3,359.6	1,320.42	341.3	-219.0	-190.3	0.00	0.00	0.00
3,500.0	12.00	327.31	3,457.4	1,222.60	358.8	-230.3	-200.1	0.00	0.00	0.00
3,600.0	12.00	327.31	3,555.2	1,124.78	376.3	-241.5	-209.9	0.00	0.00	0.00
PARKMAN SANDSTONE										
3,606.9	12.00	327.31	3,562.0	1,118.00	377.5	-242.3	-210.5	0.00	0.00	0.00
3,700.0	12.00	327.31	3,653.0	1,026.97	393.8	-252.7	-219.6	0.00	0.00	0.00
3,800.0	12.00	327.31	3,750.8	929.15	411.3	-263.9	-229.4	0.00	0.00	0.00
3,900.0	12.00	327.31	3,848.7	831.34	428.8	-275.2	-239.1	0.00	0.00	0.00
4,000.0	12.00	327.31	3,946.5	733.52	446.3	-286.4	-248.9	0.00	0.00	0.00
4,100.0	12.00	327.31	4,044.3	635.71	463.8	-297.6	-258.6	0.00	0.00	0.00
SUSSEX SANDSTONE										
4,121.2	12.00	327.31	4,065.0	615.00	467.5	-300.0	-260.7	0.00	0.00	0.00
4,200.0	12.00	327.31	4,142.1	537.89	481.3	-308.8	-268.4	0.00	0.00	0.00
4,300.0	12.00	327.31	4,239.9	440.07	498.8	-320.1	-278.1	0.00	0.00	0.00
4,400.0	12.00	327.31	4,337.7	342.26	516.3	-331.3	-287.9	0.00	0.00	0.00

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Well:	BOULTER FARMS 27G-332	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)
4,500.0	12.00	327.31	4,435.6	244.44	533.8	-342.5	-297.7	0.00	0.00	0.00
4,600.0	12.00	327.31	4,533.4	146.63	551.3	-353.7	-307.4	0.00	0.00	0.00
END OF TANGENT										
4,673.6	12.00	327.31	4,605.3	74.68	564.1	-362.0	-314.6	0.00	0.00	0.00
4,700.0	11.47	327.31	4,631.2	48.79	568.7	-364.9	-317.1	2.00	-2.00	0.00
4,800.0	9.47	327.31	4,729.5	-49.55	584.0	-374.7	-325.6	2.00	-2.00	0.00
4,900.0	7.47	327.31	4,828.4	-148.45	596.3	-382.7	-332.6	2.00	-2.00	0.00
5,000.0	5.47	327.31	4,927.8	-247.81	605.8	-388.8	-337.8	2.00	-2.00	0.00
5,100.0	3.47	327.31	5,027.5	-347.50	612.4	-393.0	-341.5	2.00	-2.00	0.00
5,200.0	1.47	327.31	5,127.4	-447.40	616.0	-395.3	-343.5	2.00	-2.00	0.00
EOD TO VERTICAL										
5,273.4	0.00	0.00	5,200.8	-520.80	616.8	-395.8	-344.0	2.00	-2.00	0.00
5,300.0	0.00	0.00	5,227.4	-547.39	616.8	-395.8	-344.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,327.4	-647.39	616.8	-395.8	-344.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,427.4	-747.39	616.8	-395.8	-344.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,527.4	-847.39	616.8	-395.8	-344.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,627.4	-947.39	616.8	-395.8	-344.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,727.4	-1,047.39	616.8	-395.8	-344.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,827.4	-1,147.39	616.8	-395.8	-344.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,927.4	-1,247.39	616.8	-395.8	-344.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,027.4	-1,347.39	616.8	-395.8	-344.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,127.4	-1,447.39	616.8	-395.8	-344.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,227.4	-1,547.39	616.8	-395.8	-344.0	0.00	0.00	0.00
KOP (8°/100ft BUR)										
6,301.4	0.00	0.00	6,228.8	-1,548.80	616.8	-395.8	-344.0	0.00	0.00	0.00
6,400.0	7.89	90.00	6,327.1	-1,647.08	616.8	-389.0	-337.2	8.00	8.00	0.00
6,500.0	15.89	90.00	6,424.9	-1,744.86	616.8	-368.4	-316.7	8.00	8.00	0.00
6,600.0	23.89	90.00	6,518.8	-1,838.82	616.8	-334.5	-282.8	8.00	8.00	0.00
SHARON SPRINGS										
6,685.8	30.75	90.00	6,595.0	-1,915.00	616.8	-295.1	-243.6	8.00	8.00	0.00
6,700.0	31.89	90.00	6,607.1	-1,927.13	616.8	-287.7	-236.2	8.00	8.00	0.00
6,800.0	39.89	90.00	6,688.1	-2,008.08	616.8	-229.1	-177.9	8.00	8.00	0.00
NIOBRARA A										
6,822.3	41.67	90.00	6,705.0	-2,025.00	616.8	-214.6	-163.3	8.00	8.00	0.00
6,900.0	47.89	90.00	6,760.1	-2,080.10	616.8	-159.9	-108.8	8.00	8.00	0.00
NIOBRARA B										
6,971.0	53.56	90.00	6,805.0	-2,125.00	616.8	-105.0	-54.1	8.00	8.00	0.00
7,000.0	55.89	90.00	6,821.8	-2,141.77	616.8	-81.3	-30.5	8.00	8.00	0.00
7,100.0	63.89	90.00	6,871.9	-2,191.90	616.8	5.2	55.7	8.00	8.00	0.00
NIOBRARA C										
7,149.2	67.82	90.00	6,892.0	-2,212.00	616.8	50.0	100.4	8.00	8.00	0.00
7,200.0	71.89	90.00	6,909.5	-2,229.51	616.8	97.7	147.9	8.00	8.00	0.00
7,300.0	79.89	90.00	6,933.9	-2,253.87	616.8	194.6	244.5	8.00	8.00	0.00
7,400.0	87.89	90.00	6,944.5	-2,264.51	616.8	294.0	343.5	8.00	8.00	0.00
HZ LANDING PNT *NEW*: 2321.3ft FSL & 737.2ft FWL of Sec 27										
7,432.4	90.48	90.00	6,945.0	-2,264.97	616.8	326.4	375.8	8.00	8.00	0.00
7,500.0	90.48	90.00	6,944.4	-2,264.41	616.8	394.0	443.2	0.00	0.00	0.00
7,600.0	90.48	90.00	6,943.6	-2,263.57	616.8	494.0	542.8	0.00	0.00	0.00
7,700.0	90.48	90.00	6,942.7	-2,262.73	616.8	594.0	642.5	0.00	0.00	0.00
7,800.0	90.48	90.00	6,941.9	-2,261.89	616.8	694.0	742.2	0.00	0.00	0.00
7,900.0	90.48	90.00	6,941.1	-2,261.06	616.8	794.0	841.8	0.00	0.00	0.00
8,000.0	90.48	90.00	6,940.2	-2,260.22	616.8	894.0	941.5	0.00	0.00	0.00
8,100.0	90.48	90.00	6,939.4	-2,259.38	616.8	994.0	1,041.1	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BOULTER FARMS 27G-332
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4680.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4680.0usft (Original Well Elev)
Site:	NW SW SEC. 27 T5N R65W 6th P.M.	North Reference:	True
Well:	BOULTER FARMS 27G-332	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	90.48	90.00	6,938.5	-2,258.54	616.8	1,094.0	1,140.8	0.00	0.00	0.00
8,300.0	90.48	90.00	6,937.7	-2,257.71	616.8	1,194.0	1,240.5	0.00	0.00	0.00
8,400.0	90.48	90.00	6,936.9	-2,256.87	616.8	1,294.0	1,340.1	0.00	0.00	0.00
8,500.0	90.48	90.00	6,936.0	-2,256.03	616.8	1,394.0	1,439.8	0.00	0.00	0.00
8,600.0	90.48	90.00	6,935.2	-2,255.20	616.8	1,493.9	1,539.4	0.00	0.00	0.00
8,700.0	90.48	90.00	6,934.4	-2,254.36	616.8	1,593.9	1,639.1	0.00	0.00	0.00
8,800.0	90.48	90.00	6,933.5	-2,253.52	616.8	1,693.9	1,738.8	0.00	0.00	0.00
8,900.0	90.48	90.00	6,932.7	-2,252.69	616.8	1,793.9	1,838.4	0.00	0.00	0.00
9,000.0	90.48	90.00	6,931.8	-2,251.85	616.8	1,893.9	1,938.1	0.00	0.00	0.00
9,100.0	90.48	90.00	6,931.0	-2,251.01	616.8	1,993.9	2,037.7	0.00	0.00	0.00
9,200.0	90.48	90.00	6,930.2	-2,250.18	616.8	2,093.9	2,137.4	0.00	0.00	0.00
9,300.0	90.48	90.00	6,929.3	-2,249.34	616.8	2,193.9	2,237.1	0.00	0.00	0.00
9,400.0	90.48	90.00	6,928.5	-2,248.50	616.8	2,293.9	2,336.7	0.00	0.00	0.00
9,500.0	90.48	90.00	6,927.7	-2,247.67	616.8	2,393.9	2,436.4	0.00	0.00	0.00
9,600.0	90.48	90.00	6,926.8	-2,246.83	616.8	2,493.9	2,536.1	0.00	0.00	0.00
9,700.0	90.48	90.00	6,926.0	-2,245.99	616.8	2,593.9	2,635.7	0.00	0.00	0.00
9,800.0	90.48	90.00	6,925.2	-2,245.16	616.8	2,693.9	2,735.4	0.00	0.00	0.00
9,900.0	90.48	90.00	6,924.3	-2,244.32	616.8	2,793.9	2,835.0	0.00	0.00	0.00
10,000.0	90.48	90.00	6,923.5	-2,243.49	616.8	2,893.9	2,934.7	0.00	0.00	0.00
10,100.0	90.48	90.00	6,922.6	-2,242.65	616.8	2,993.9	3,034.4	0.00	0.00	0.00
10,200.0	90.48	90.00	6,921.8	-2,241.81	616.8	3,093.9	3,134.0	0.00	0.00	0.00
10,300.0	90.48	90.00	6,921.0	-2,240.98	616.8	3,193.9	3,233.7	0.00	0.00	0.00
10,400.0	90.48	90.00	6,920.1	-2,240.14	616.8	3,293.9	3,333.3	0.00	0.00	0.00
10,500.0	90.48	90.00	6,919.3	-2,239.31	616.8	3,393.9	3,433.0	0.00	0.00	0.00
10,600.0	90.48	90.00	6,918.5	-2,238.47	616.8	3,493.9	3,532.7	0.00	0.00	0.00
10,700.0	90.48	90.00	6,917.6	-2,237.64	616.8	3,593.9	3,632.3	0.00	0.00	0.00
10,800.0	90.48	90.00	6,916.8	-2,236.80	616.8	3,693.9	3,732.0	0.00	0.00	0.00
10,900.0	90.48	90.00	6,916.0	-2,235.97	616.8	3,793.9	3,831.6	0.00	0.00	0.00
11,000.0	90.48	90.00	6,915.1	-2,235.13	616.8	3,893.9	3,931.3	0.00	0.00	0.00
11,100.0	90.48	90.00	6,914.3	-2,234.29	616.8	3,993.9	4,031.0	0.00	0.00	0.00
11,200.0	90.48	90.00	6,913.5	-2,233.46	616.8	4,093.9	4,130.6	0.00	0.00	0.00
11,300.0	90.48	90.00	6,912.6	-2,232.62	616.8	4,193.9	4,230.3	0.00	0.00	0.00
11,400.0	90.48	90.00	6,911.8	-2,231.79	616.8	4,293.9	4,329.9	0.00	0.00	0.00
11,500.0	90.48	90.00	6,911.0	-2,230.95	616.8	4,393.8	4,429.6	0.00	0.00	0.00
11,600.0	90.48	90.00	6,910.1	-2,230.12	616.8	4,493.8	4,529.3	0.00	0.00	0.00
11,700.0	90.48	90.00	6,909.3	-2,229.29	616.8	4,593.8	4,628.9	0.00	0.00	0.00
11,800.0	90.48	90.00	6,908.5	-2,228.45	616.8	4,693.8	4,728.6	0.00	0.00	0.00
11,900.0	90.48	90.00	6,907.6	-2,227.62	616.8	4,793.8	4,828.2	0.00	0.00	0.00
12,000.0	90.48	90.00	6,906.8	-2,226.78	616.8	4,893.8	4,927.9	0.00	0.00	0.00
12,100.0	90.48	90.00	6,905.9	-2,225.95	616.8	4,993.8	5,027.6	0.00	0.00	0.00
12,200.0	90.48	90.00	6,905.1	-2,225.11	616.8	5,093.8	5,127.2	0.00	0.00	0.00
12,300.0	90.48	90.00	6,904.3	-2,224.28	616.8	5,193.8	5,226.9	0.00	0.00	0.00
12,400.0	90.48	90.00	6,903.4	-2,223.44	616.8	5,293.8	5,326.5	0.00	0.00	0.00
12,500.0	90.48	90.00	6,902.6	-2,222.61	616.8	5,393.8	5,426.2	0.00	0.00	0.00
12,600.0	90.48	90.00	6,901.8	-2,221.78	616.8	5,493.8	5,525.9	0.00	0.00	0.00
12,700.0	90.48	90.00	6,900.9	-2,220.94	616.8	5,593.8	5,625.5	0.00	0.00	0.00
12,800.0	90.48	90.00	6,900.1	-2,220.11	616.8	5,693.8	5,725.2	0.00	0.00	0.00
12,900.0	90.48	90.00	6,899.3	-2,219.27	616.8	5,793.8	5,824.9	0.00	0.00	0.00
13,000.0	90.48	90.00	6,898.4	-2,218.44	616.8	5,893.8	5,924.5	0.00	0.00	0.00
13,100.0	90.48	90.00	6,897.6	-2,217.61	616.8	5,993.8	6,024.2	0.00	0.00	0.00
13,200.0	90.48	90.00	6,896.8	-2,216.77	616.8	6,093.8	6,123.8	0.00	0.00	0.00
13,300.0	90.48	90.00	6,895.9	-2,215.94	616.8	6,193.8	6,223.5	0.00	0.00	0.00
13,400.0	90.48	90.00	6,895.1	-2,215.11	616.8	6,293.8	6,323.2	0.00	0.00	0.00
13,500.0	90.48	90.00	6,894.3	-2,214.27	616.8	6,393.8	6,422.8	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well BOULTER FARMS 27G-332
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4680.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4680.0usft (Original Well Elev)
Site:	NW SW SEC. 27 T5N R65W 6th P.M.	North Reference:	True
Well:	BOULTER FARMS 27G-332	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)
13,600.0	90.48	90.00	6,893.4	-2,213.44	616.8	6,493.8	6,522.5	0.00	0.00	0.00
13,700.0	90.48	90.00	6,892.6	-2,212.61	616.8	6,593.8	6,622.1	0.00	0.00	0.00
13,800.0	90.48	90.00	6,891.8	-2,211.77	616.8	6,693.8	6,721.8	0.00	0.00	0.00
13,900.0	90.48	90.00	6,890.9	-2,210.94	616.8	6,793.8	6,821.5	0.00	0.00	0.00
14,000.0	90.48	90.00	6,890.1	-2,210.11	616.8	6,893.8	6,921.1	0.00	0.00	0.00
14,100.0	90.48	90.00	6,889.3	-2,209.27	616.8	6,993.8	7,020.8	0.00	0.00	0.00
14,200.0	90.48	90.00	6,888.4	-2,208.44	616.8	7,093.8	7,120.4	0.00	0.00	0.00
14,300.0	90.48	90.00	6,887.6	-2,207.61	616.8	7,193.8	7,220.1	0.00	0.00	0.00
14,400.0	90.48	90.00	6,886.8	-2,206.77	616.8	7,293.7	7,319.8	0.00	0.00	0.00
14,500.0	90.48	90.00	6,885.9	-2,205.94	616.8	7,393.7	7,419.4	0.00	0.00	0.00
14,600.0	90.48	90.00	6,885.1	-2,205.11	616.8	7,493.7	7,519.1	0.00	0.00	0.00
BHL: 2350ft FSL & 2635ft FWL of Sec 26										
14,613.0	90.48	90.00	6,885.0	-2,205.00	616.8	7,506.8	7,532.1	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,606.9	3,562.0	PARKMAN SANDSTONE				
4,121.2	4,065.0	SUSSEX SANDSTONE				
6,685.8	6,595.0	SHARON SPRINGS				
6,822.3	6,705.0	NIOBRARA A				
6,971.0	6,805.0	NIOBRARA B				
7,149.2	6,892.0	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: 1711ft FSL & 410ft FWL of Sec 27
1,150.0	1,150.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,749.9	1,745.5	52.7	-33.8	EOB TO 12° INC
4,673.6	4,605.3	564.1	-362.0	END OF TANGENT
5,273.4	5,200.8	616.8	-395.8	EOD TO VERTICAL
6,301.4	6,228.8	616.8	-395.8	KOP (8°/100ft BUR)
7,432.4	6,945.0	616.8	326.4	HZ LANDING PNT *NEW*: 2321.3ft FSL & 737.2ft FWL of Sec 27
14,613.0	6,885.0	616.8	7,506.8	BHL: 2350ft FSL & 2635ft FWL of Sec 26