

# **PDC ENERGY**

**WELD COUNTY, COLORADO  
NW SW SEC. 27 T5N R65W 6th P.M.  
BOULTER FARMS 27H-302**

## **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 27H-302  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

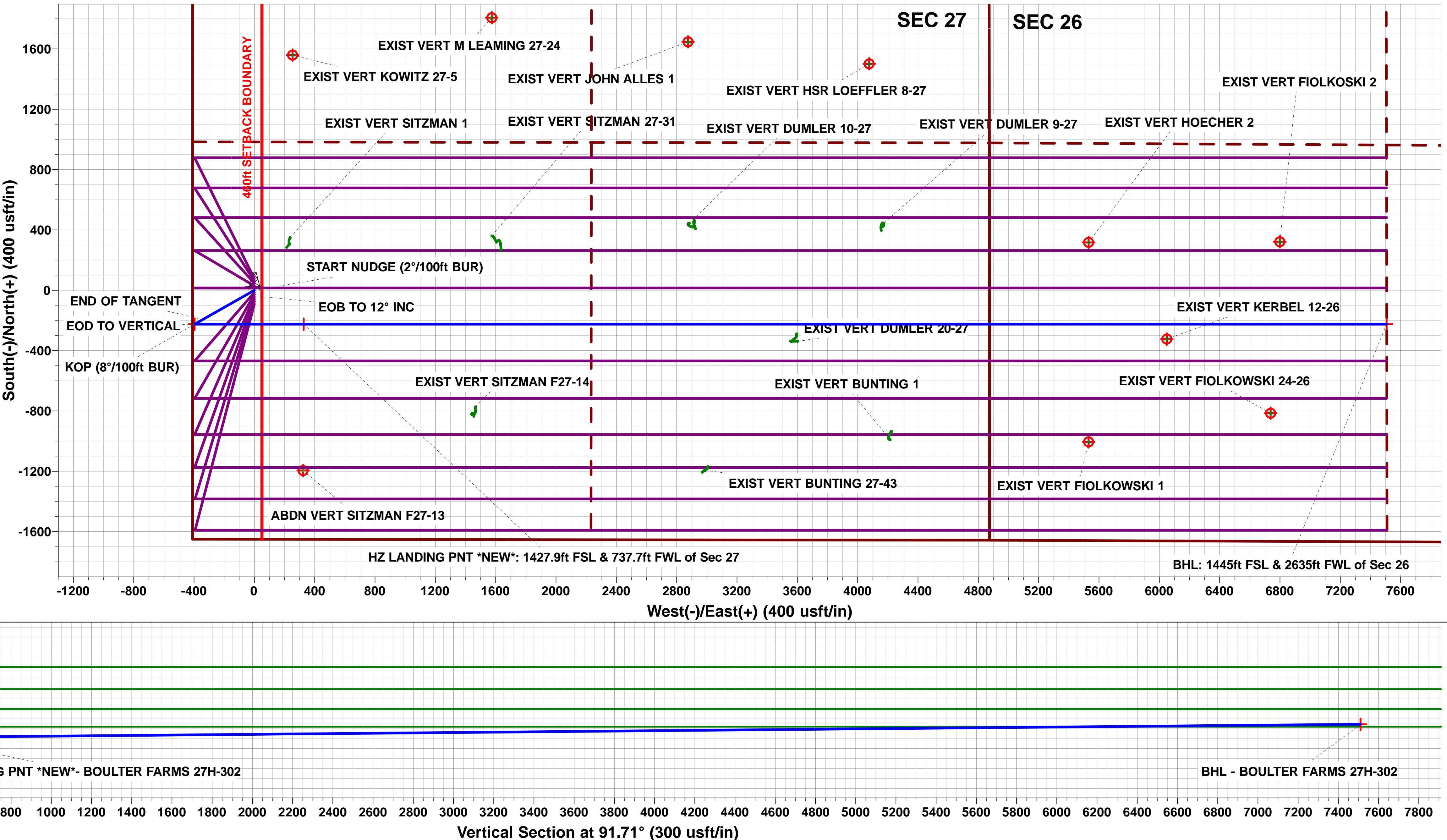
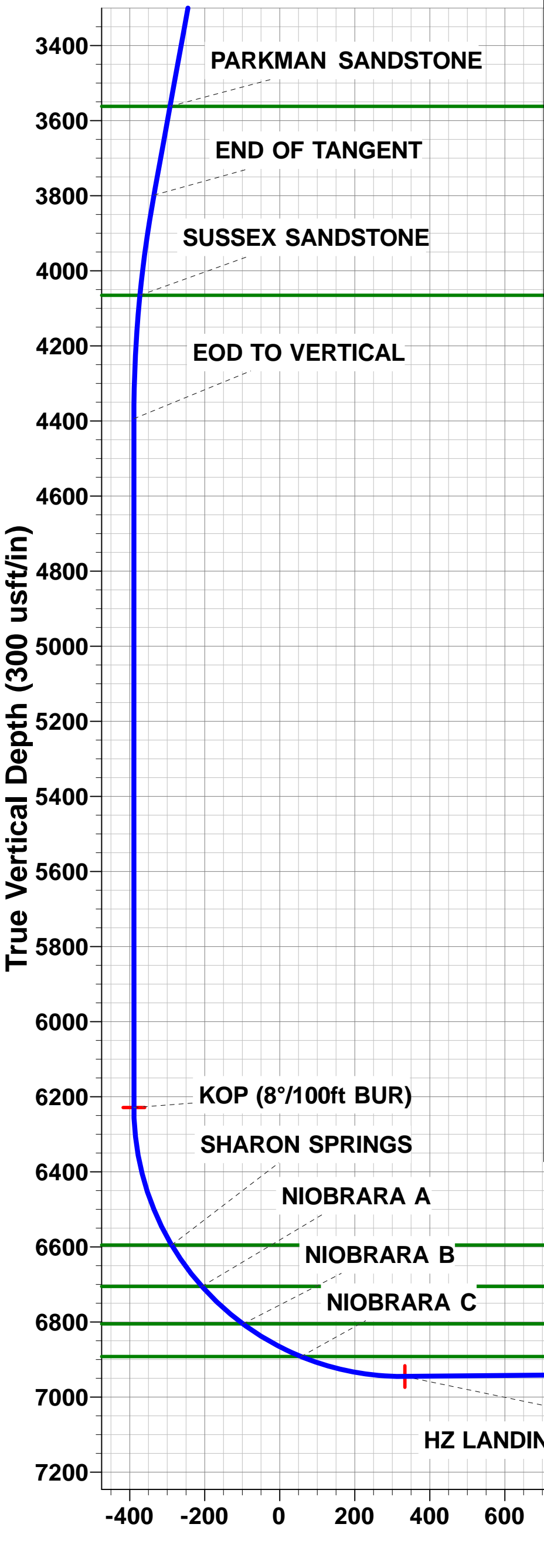
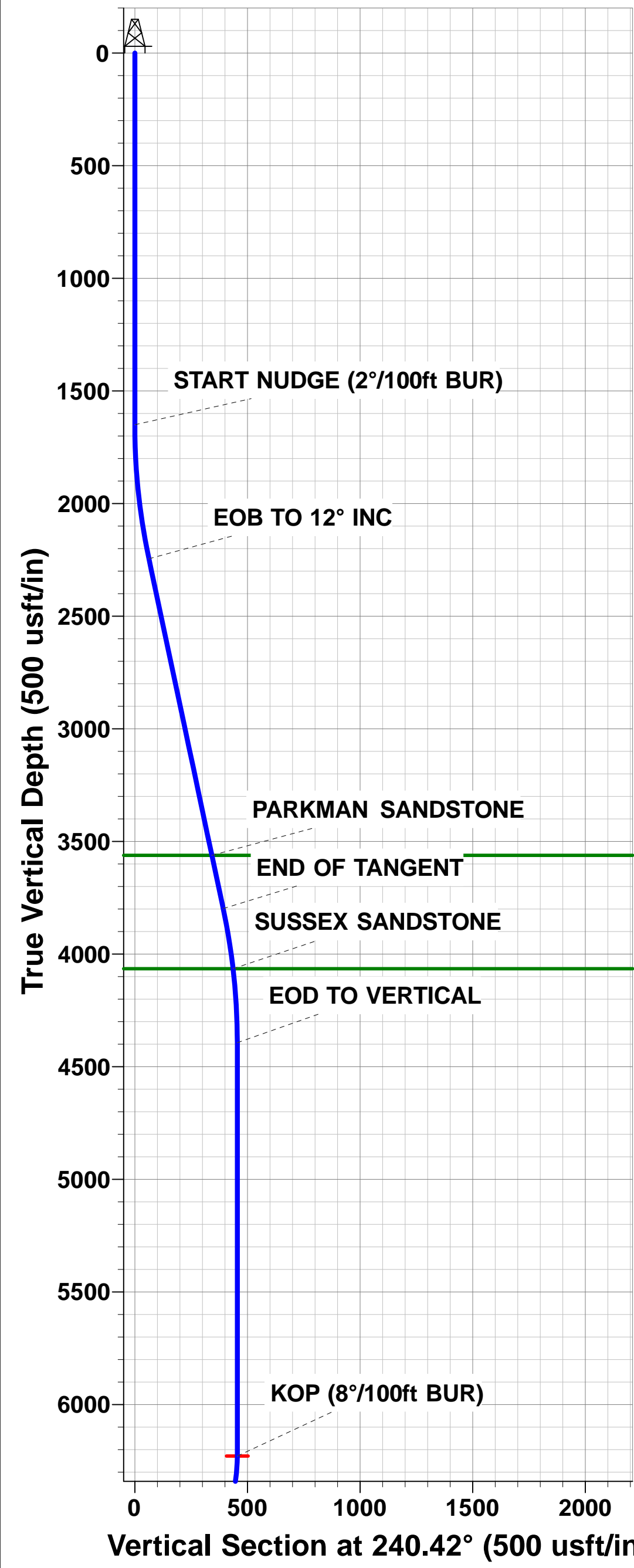
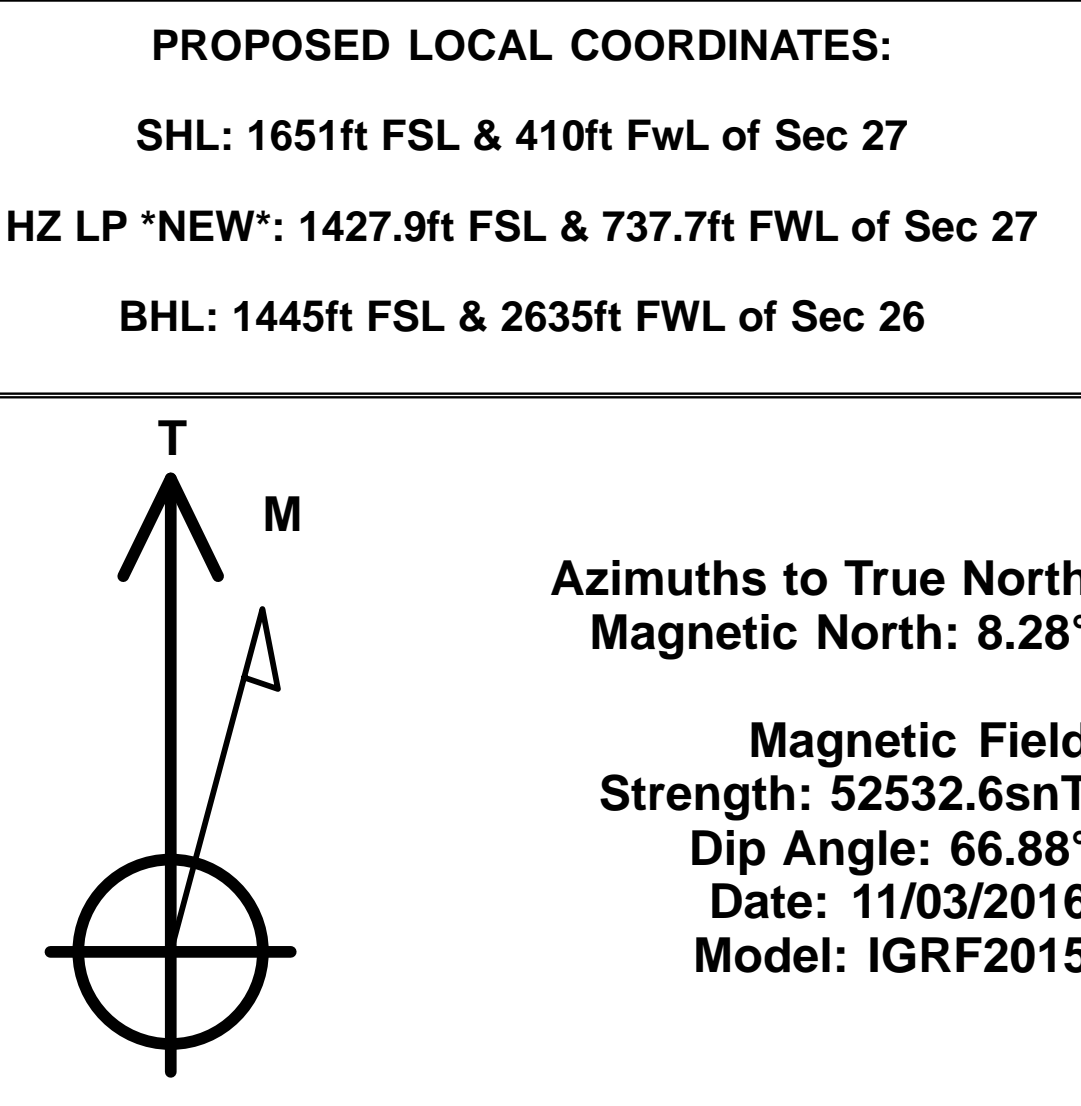
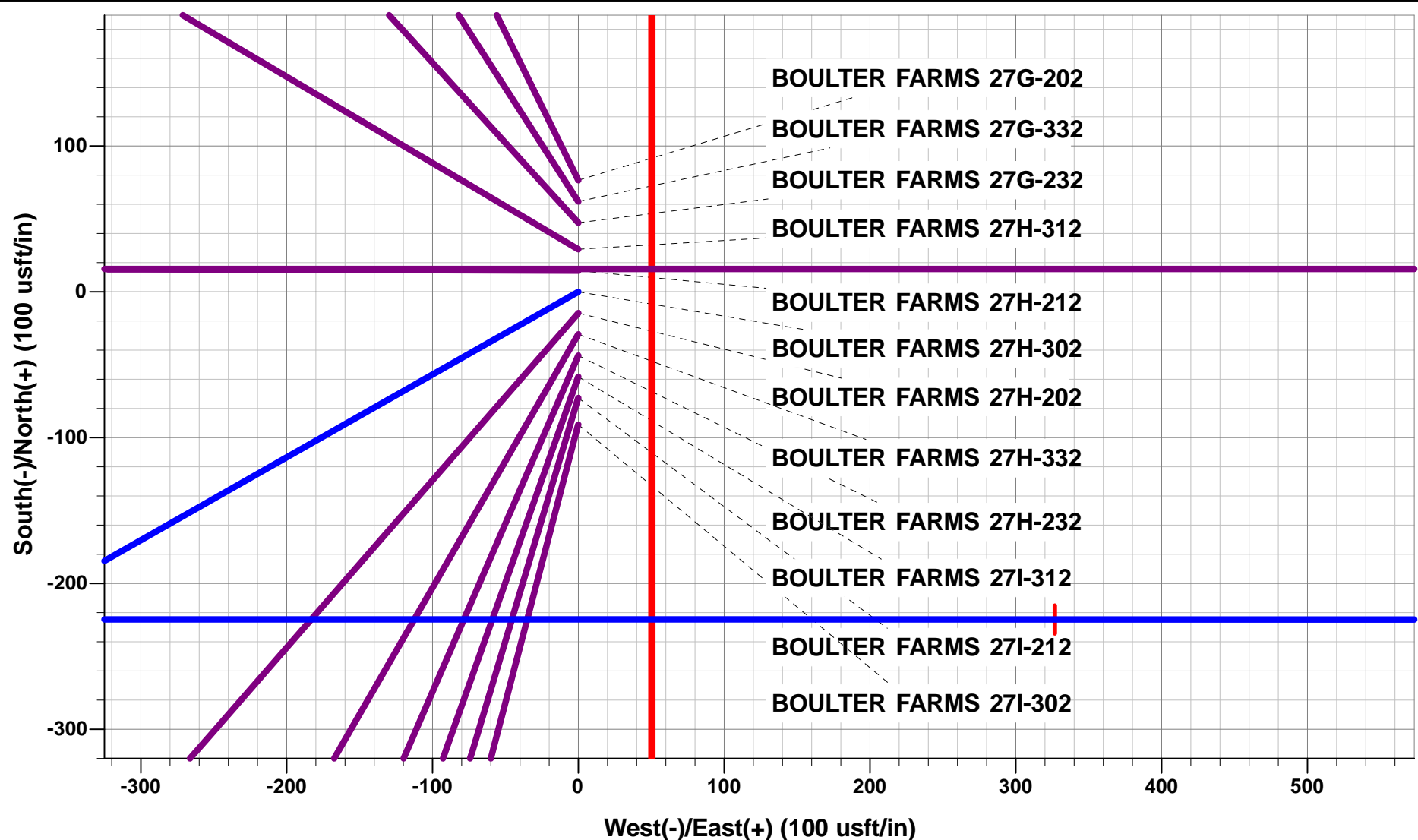


ANNOTATIONS

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: 1651ft FSL & 410ft FWL of Sec 27
1650.0	1650.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2245.5	2249.9	12.00	240.42	-30.9	-54.4	-53.5	62.6	EOB TO 12° INC
3798.3	3837.4	12.00	240.42	-193.8	-341.4	-335.4	392.6	END OF TANGENT
4393.8	4437.2	0.00	0.00	-224.7	-395.8	-388.9	455.1	EOD TO VERTICAL
6228.8	6272.2	0.00	0.00	-224.7	-395.8	-388.9	455.1	KOP (8°/100ft BUR)
6945.0	7403.7	90.52	90.00	-224.7	326.9	333.5	1177.8	HZ LANDING PNT *NEW*: 1427.9ft FSL & 737.7ft FWL of Sec 27
6880.0	14584.2	90.52	90.00	-224.7	7507.0	7510.4	8358.0	BHL: 1445ft FSL & 2635ft FWL of Sec 26

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - BOULTER FARMS 27H-302	6228.8	-224.7	-395.8	40.366983	-104.658810
BHL - BOULTER FARMS 27H-302	6880.0	-224.7	7507.0	40.366980	-104.630450
HZ LP *NEW*- BOULTER FARMS 27H-302	6945.0	-224.7	326.9	40.366983	-104.656217



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BOULTER FARMS 27H-302
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Site:</b>	NW SW SEC. 27 T5N R65W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	BOULTER FARMS 27H-302	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

<b>Project</b>	WELD COUNTY, COLORADO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	NW SW SEC. 27 T5N R65W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,377,949.21 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,234,783.51 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.367810
		<b>Longitude:</b>	-104.657390
		<b>Grid Convergence:</b>	0.54 °

<b>Well</b>	BOULTER FARMS 27H-302		
<b>Well Position</b>	<b>+N/-S</b>	-76.5 usft	<b>Northing:</b>
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<b>Wellbore</b>	ORIGINAL WELLBORE				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	11/03/2016	8.29	66.88	52,533

<b>Design</b>	PROPOSAL #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	91.71

<b>Plan Sections</b>											
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	-4,681.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,650.0	0.00	0.00	1,650.0	-3,031.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,249.9	12.00	240.42	2,245.5	-2,435.5	-30.9	-54.4	2.00	2.00	0.00	240.42	
3,837.4	12.00	240.42	3,798.3	-882.7	-193.8	-341.4	0.00	0.00	0.00	0.00	
4,437.2	0.00	0.00	4,393.8	-287.2	-224.7	-395.8	2.00	-2.00	0.00	180.00	
6,272.2	0.00	0.00	6,228.8	1,547.8	-224.7	-395.8	0.00	0.00	0.00	0.00	KOP - BOULTER F
7,403.7	90.52	90.00	6,945.0	2,264.0	-224.7	326.9	8.00	8.00	0.00	90.00	
14,584.2	90.52	90.00	6,880.0	2,199.0	-224.7	7,507.0	0.00	0.00	0.00	173.34	BHL - BOULTER F

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BOULTER FARMS 27H-302
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Site:</b>	NW SW SEC. 27 T5N R65W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	BOULTER FARMS 27H-302	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
<b>SHL: 1651ft FSL &amp; 410ft FWL of Sec 27</b>										
0.0	0.00	0.00	0.0	4,681.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,581.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,481.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,381.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,281.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,181.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,081.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,981.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,881.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,781.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,681.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,581.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,481.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	3,381.00	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	3,281.00	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	3,181.00	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	3,081.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
1,650.0	0.00	0.00	1,650.0	3,031.00	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	1.00	240.42	1,700.0	2,981.00	-0.2	-0.4	-0.4	2.00	2.00	0.00
1,800.0	3.00	240.42	1,799.9	2,881.07	-1.9	-3.4	-3.4	2.00	2.00	0.00
1,900.0	5.00	240.42	1,899.7	2,781.32	-5.4	-9.5	-9.3	2.00	2.00	0.00
2,000.0	7.00	240.42	1,999.1	2,681.87	-10.5	-18.6	-18.2	2.00	2.00	0.00
2,100.0	9.00	240.42	2,098.2	2,582.85	-17.4	-30.7	-30.1	2.00	2.00	0.00
2,200.0	11.00	240.42	2,196.6	2,484.37	-26.0	-45.8	-45.0	2.00	2.00	0.00
<b>EOB TO 12° INC</b>										
2,249.9	12.00	240.42	2,245.5	2,435.51	-30.9	-54.4	-53.5	2.00	2.00	0.00
2,300.0	12.00	240.42	2,294.5	2,386.47	-36.0	-63.5	-62.4	0.00	0.00	0.00
2,400.0	12.00	240.42	2,392.3	2,288.65	-46.3	-81.6	-80.1	0.00	0.00	0.00
2,500.0	12.00	240.42	2,490.2	2,190.84	-56.6	-99.6	-97.9	0.00	0.00	0.00
2,600.0	12.00	240.42	2,588.0	2,093.02	-66.8	-117.7	-115.7	0.00	0.00	0.00
2,700.0	12.00	240.42	2,685.8	1,995.21	-77.1	-135.8	-133.4	0.00	0.00	0.00
2,800.0	12.00	240.42	2,783.6	1,897.39	-87.3	-153.9	-151.2	0.00	0.00	0.00
2,900.0	12.00	240.42	2,881.4	1,799.57	-97.6	-171.9	-168.9	0.00	0.00	0.00
3,000.0	12.00	240.42	2,979.2	1,701.76	-107.9	-190.0	-186.7	0.00	0.00	0.00
3,100.0	12.00	240.42	3,077.1	1,603.94	-118.1	-208.1	-204.5	0.00	0.00	0.00
3,200.0	12.00	240.42	3,174.9	1,506.13	-128.4	-226.2	-222.2	0.00	0.00	0.00
3,300.0	12.00	240.42	3,272.7	1,408.31	-138.7	-244.2	-240.0	0.00	0.00	0.00
3,400.0	12.00	240.42	3,370.5	1,310.50	-148.9	-262.3	-257.7	0.00	0.00	0.00
3,500.0	12.00	240.42	3,468.3	1,212.68	-159.2	-280.4	-275.5	0.00	0.00	0.00
<b>PARKMAN SANDSTONE</b>										
3,595.8	12.00	240.42	3,562.0	1,119.00	-169.0	-297.7	-292.5	0.00	0.00	0.00
3,600.0	12.00	240.42	3,566.1	1,114.86	-169.4	-298.5	-293.3	0.00	0.00	0.00
3,700.0	12.00	240.42	3,664.0	1,017.05	-179.7	-316.6	-311.0	0.00	0.00	0.00
3,800.0	12.00	240.42	3,761.8	919.23	-190.0	-334.6	-328.8	0.00	0.00	0.00
<b>END OF TANGENT</b>										
3,837.4	12.00	240.42	3,798.3	882.69	-193.8	-341.4	-335.4	0.00	0.00	0.00
3,900.0	10.74	240.42	3,859.7	821.28	-199.9	-352.1	-346.0	2.00	-2.00	0.00
4,000.0	8.74	240.42	3,958.3	722.73	-208.3	-366.8	-360.4	2.00	-2.00	0.00
4,100.0	6.74	240.42	4,057.4	623.64	-214.9	-378.6	-372.0	2.00	-2.00	0.00
<b>SUSSEX SANDSTONE</b>										
4,107.7	6.59	240.42	4,065.0	616.00	-215.4	-379.3	-372.7	2.00	-2.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BOULTER FARMS 27H-302
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Site:</b>	NW SW SEC. 27 T5N R65W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	BOULTER FARMS 27H-302	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
4,200.0	4.74	240.42	4,156.8	524.15	-219.9	-387.3	-380.5	2.00	-2.00	0.00
4,300.0	2.74	240.42	4,256.6	424.37	-223.1	-392.9	-386.1	2.00	-2.00	0.00
4,400.0	0.74	240.42	4,356.6	324.42	-224.6	-395.6	-388.7	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>4,437.2</b>	<b>0.00</b>	<b>0.00</b>	<b>4,393.8</b>	<b>287.20</b>	<b>-224.7</b>	<b>-395.8</b>	<b>-388.9</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
4,500.0	0.00	0.00	4,456.6	224.42	-224.7	-395.8	-388.9	0.00	0.00	0.00
4,600.0	0.00	0.00	4,556.6	124.42	-224.7	-395.8	-388.9	0.00	0.00	0.00
4,700.0	0.00	0.00	4,656.6	24.42	-224.7	-395.8	-388.9	0.00	0.00	0.00
4,800.0	0.00	0.00	4,756.6	-75.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
4,900.0	0.00	0.00	4,856.6	-175.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
5,000.0	0.00	0.00	4,956.6	-275.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
5,100.0	0.00	0.00	5,056.6	-375.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
5,200.0	0.00	0.00	5,156.6	-475.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
5,300.0	0.00	0.00	5,256.6	-575.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
5,400.0	0.00	0.00	5,356.6	-675.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
5,500.0	0.00	0.00	5,456.6	-775.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
5,600.0	0.00	0.00	5,556.6	-875.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
5,700.0	0.00	0.00	5,656.6	-975.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,756.6	-1,075.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
5,900.0	0.00	0.00	5,856.6	-1,175.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
6,000.0	0.00	0.00	5,956.6	-1,275.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
6,100.0	0.00	0.00	6,056.6	-1,375.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
6,200.0	0.00	0.00	6,156.6	-1,475.58	-224.7	-395.8	-388.9	0.00	0.00	0.00
<b>KOP (8°/100ft BUR)</b>										
<b>6,272.2</b>	<b>0.00</b>	<b>0.00</b>	<b>6,228.8</b>	<b>-1,547.80</b>	<b>-224.7</b>	<b>-395.8</b>	<b>-388.9</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,300.0	2.22	90.00	6,256.6	-1,575.57	-224.7	-395.3	-388.4	8.00	8.00	0.00
6,400.0	10.22	90.00	6,355.9	-1,674.90	-224.7	-384.4	-377.5	8.00	8.00	0.00
6,500.0	18.22	90.00	6,452.8	-1,771.76	-224.7	-359.9	-353.0	8.00	8.00	0.00
6,600.0	26.22	90.00	6,545.3	-1,864.25	-224.7	-322.1	-315.2	8.00	8.00	0.00
<b>SHARON SPRINGS</b>										
<b>6,656.6</b>	<b>30.75</b>	<b>90.00</b>	<b>6,595.0</b>	<b>-1,914.00</b>	<b>-224.7</b>	<b>-295.1</b>	<b>-288.2</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
6,700.0	34.22	90.00	6,631.6	-1,950.59	-224.7	-271.8	-265.0	8.00	8.00	0.00
<b>NIOBRARA A</b>										
<b>6,793.2</b>	<b>41.67</b>	<b>90.00</b>	<b>6,705.0</b>	<b>-2,024.00</b>	<b>-224.7</b>	<b>-214.6</b>	<b>-207.7</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
6,800.0	42.22	90.00	6,710.1	-2,029.09	-224.7	-210.0	-203.2	8.00	8.00	0.00
6,900.0	50.22	90.00	6,779.2	-2,098.22	-224.7	-137.8	-131.0	8.00	8.00	0.00
<b>NIOBRARA B</b>										
<b>6,941.8</b>	<b>53.56</b>	<b>90.00</b>	<b>6,805.0</b>	<b>-2,124.00</b>	<b>-224.7</b>	<b>-105.0</b>	<b>-98.2</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,000.0	58.22	90.00	6,837.6	-2,156.64	-224.7	-56.8	-50.0	8.00	8.00	0.00
7,100.0	66.22	90.00	6,884.2	-2,203.20	-224.7	31.6	38.3	8.00	8.00	0.00
<b>NIOBRARA C</b>										
<b>7,120.0</b>	<b>67.82</b>	<b>90.00</b>	<b>6,892.0</b>	<b>-2,211.00</b>	<b>-224.7</b>	<b>50.0</b>	<b>56.7</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,200.0	74.22	90.00	6,918.0	-2,237.01	-224.7	125.7	132.3	8.00	8.00	0.00
7,300.0	82.22	90.00	6,938.4	-2,257.41	-224.7	223.5	230.1	8.00	8.00	0.00
7,400.0	90.22	90.00	6,945.0	-2,263.99	-224.7	323.2	329.8	8.00	8.00	0.00
<b>HZ LANDING PNT *NEW*: 1427.9ft FSL &amp; 737.7ft FWL of Sec 27</b>										
<b>7,403.7</b>	<b>90.52</b>	<b>90.00</b>	<b>6,945.0</b>	<b>-2,263.97</b>	<b>-224.7</b>	<b>326.9</b>	<b>333.5</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,500.0	90.52	90.00	6,944.1	-2,263.09	-224.7	423.2	429.7	0.00	0.00	0.00
7,600.0	90.52	90.00	6,943.2	-2,262.19	-224.7	523.2	529.7	0.00	0.00	0.00
7,700.0	90.52	90.00	6,942.3	-2,261.28	-224.7	623.2	629.6	0.00	0.00	0.00
7,800.0	90.52	90.00	6,941.4	-2,260.37	-224.7	723.2	729.6	0.00	0.00	0.00
7,900.0	90.52	90.00	6,940.5	-2,259.46	-224.7	823.2	829.5	0.00	0.00	0.00
8,000.0	90.52	90.00	6,939.6	-2,258.56	-224.7	923.1	929.5	0.00	0.00	0.00



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BOULTER FARMS 27H-302
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Site:</b>	NW SW SEC. 27 T5N R65W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	BOULTER FARMS 27H-302	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
8,100.0	90.52	90.00	6,938.7	-2,257.65	-224.7	1,023.1	1,029.4	0.00	0.00	0.00
8,200.0	90.52	90.00	6,937.7	-2,256.74	-224.7	1,123.1	1,129.4	0.00	0.00	0.00
8,300.0	90.52	90.00	6,936.8	-2,255.84	-224.7	1,223.1	1,229.3	0.00	0.00	0.00
8,400.0	90.52	90.00	6,935.9	-2,254.93	-224.7	1,323.1	1,329.3	0.00	0.00	0.00
8,500.0	90.52	90.00	6,935.0	-2,254.02	-224.7	1,423.1	1,429.2	0.00	0.00	0.00
8,600.0	90.52	90.00	6,934.1	-2,253.12	-224.7	1,523.1	1,529.2	0.00	0.00	0.00
8,700.0	90.52	90.00	6,933.2	-2,252.21	-224.7	1,623.1	1,629.1	0.00	0.00	0.00
8,800.0	90.52	90.00	6,932.3	-2,251.30	-224.7	1,723.1	1,729.1	0.00	0.00	0.00
8,900.0	90.52	90.00	6,931.4	-2,250.40	-224.7	1,823.1	1,829.0	0.00	0.00	0.00
9,000.0	90.52	90.00	6,930.5	-2,249.49	-224.7	1,923.1	1,929.0	0.00	0.00	0.00
9,100.0	90.52	90.00	6,929.6	-2,248.58	-224.7	2,023.1	2,028.9	0.00	0.00	0.00
9,200.0	90.52	90.00	6,928.7	-2,247.68	-224.7	2,123.1	2,128.9	0.00	0.00	0.00
9,300.0	90.52	90.00	6,927.8	-2,246.77	-224.7	2,223.1	2,228.8	0.00	0.00	0.00
9,400.0	90.52	90.00	6,926.9	-2,245.87	-224.7	2,323.1	2,328.8	0.00	0.00	0.00
9,500.0	90.52	90.00	6,926.0	-2,244.96	-224.7	2,423.1	2,428.7	0.00	0.00	0.00
9,600.0	90.52	90.00	6,925.1	-2,244.05	-224.7	2,523.1	2,528.7	0.00	0.00	0.00
9,700.0	90.52	90.00	6,924.1	-2,243.15	-224.7	2,623.1	2,628.6	0.00	0.00	0.00
9,800.0	90.52	90.00	6,923.2	-2,242.24	-224.7	2,723.1	2,728.6	0.00	0.00	0.00
9,900.0	90.52	90.00	6,922.3	-2,241.34	-224.7	2,823.1	2,828.5	0.00	0.00	0.00
10,000.0	90.52	90.00	6,921.4	-2,240.43	-224.7	2,923.1	2,928.5	0.00	0.00	0.00
10,100.0	90.52	90.00	6,920.5	-2,239.53	-224.7	3,023.1	3,028.4	0.00	0.00	0.00
10,200.0	90.52	90.00	6,919.6	-2,238.62	-224.7	3,123.1	3,128.4	0.00	0.00	0.00
10,300.0	90.52	90.00	6,918.7	-2,237.71	-224.7	3,223.1	3,228.3	0.00	0.00	0.00
10,400.0	90.52	90.00	6,917.8	-2,236.81	-224.7	3,323.1	3,328.3	0.00	0.00	0.00
10,500.0	90.52	90.00	6,916.9	-2,235.90	-224.7	3,423.0	3,428.2	0.00	0.00	0.00
10,600.0	90.52	90.00	6,916.0	-2,235.00	-224.7	3,523.0	3,528.2	0.00	0.00	0.00
10,700.0	90.52	90.00	6,915.1	-2,234.09	-224.7	3,623.0	3,628.1	0.00	0.00	0.00
10,800.0	90.52	90.00	6,914.2	-2,233.19	-224.7	3,723.0	3,728.1	0.00	0.00	0.00
10,900.0	90.52	90.00	6,913.3	-2,232.28	-224.7	3,823.0	3,828.0	0.00	0.00	0.00
11,000.0	90.52	90.00	6,912.4	-2,231.38	-224.7	3,923.0	3,928.0	0.00	0.00	0.00
11,100.0	90.52	90.00	6,911.5	-2,230.47	-224.7	4,023.0	4,027.9	0.00	0.00	0.00
11,200.0	90.52	90.00	6,910.6	-2,229.57	-224.7	4,123.0	4,127.9	0.00	0.00	0.00
11,300.0	90.52	90.00	6,909.7	-2,228.67	-224.7	4,223.0	4,227.8	0.00	0.00	0.00
11,400.0	90.52	90.00	6,908.8	-2,227.76	-224.7	4,323.0	4,327.8	0.00	0.00	0.00
11,500.0	90.52	90.00	6,907.9	-2,226.86	-224.7	4,423.0	4,427.7	0.00	0.00	0.00
11,600.0	90.52	90.00	6,907.0	-2,225.95	-224.7	4,523.0	4,527.7	0.00	0.00	0.00
11,700.0	90.52	90.00	6,906.0	-2,225.05	-224.7	4,623.0	4,627.7	0.00	0.00	0.00
11,800.0	90.52	90.00	6,905.1	-2,224.14	-224.7	4,723.0	4,727.6	0.00	0.00	0.00
11,900.0	90.52	90.00	6,904.2	-2,223.24	-224.7	4,823.0	4,827.6	0.00	0.00	0.00
12,000.0	90.52	90.00	6,903.3	-2,222.34	-224.7	4,923.0	4,927.5	0.00	0.00	0.00
12,100.0	90.52	90.00	6,902.4	-2,221.43	-224.7	5,023.0	5,027.5	0.00	0.00	0.00
12,200.0	90.52	90.00	6,901.5	-2,220.53	-224.7	5,123.0	5,127.4	0.00	0.00	0.00
12,300.0	90.52	90.00	6,900.6	-2,219.62	-224.7	5,223.0	5,227.4	0.00	0.00	0.00
12,400.0	90.52	90.00	6,899.7	-2,218.72	-224.7	5,323.0	5,327.3	0.00	0.00	0.00
12,500.0	90.52	90.00	6,898.8	-2,217.82	-224.7	5,423.0	5,427.3	0.00	0.00	0.00
12,600.0	90.52	90.00	6,897.9	-2,216.91	-224.7	5,523.0	5,527.2	0.00	0.00	0.00
12,700.0	90.52	90.00	6,897.0	-2,216.01	-224.7	5,623.0	5,627.2	0.00	0.00	0.00
12,800.0	90.52	90.00	6,896.1	-2,215.11	-224.7	5,723.0	5,727.1	0.00	0.00	0.00
12,900.0	90.52	90.00	6,895.2	-2,214.20	-224.7	5,822.9	5,827.1	0.00	0.00	0.00
13,000.0	90.52	90.00	6,894.3	-2,213.30	-224.7	5,922.9	5,927.0	0.00	0.00	0.00
13,100.0	90.52	90.00	6,893.4	-2,212.40	-224.7	6,022.9	6,027.0	0.00	0.00	0.00
13,200.0	90.52	90.00	6,892.5	-2,211.49	-224.7	6,122.9	6,126.9	0.00	0.00	0.00
13,300.0	90.52	90.00	6,891.6	-2,210.59	-224.7	6,222.9	6,226.9	0.00	0.00	0.00
13,400.0	90.52	90.00	6,890.7	-2,209.69	-224.7	6,322.9	6,326.8	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BOULTER FARMS 27H-302
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Site:</b>	NW SW SEC. 27 T5N R65W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	BOULTER FARMS 27H-302	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
13,500.0	90.52	90.00	6,889.8	-2,208.78	-224.7	6,422.9	6,426.8	0.00	0.00	0.00
13,600.0	90.52	90.00	6,888.9	-2,207.88	-224.7	6,522.9	6,526.7	0.00	0.00	0.00
13,700.0	90.52	90.00	6,888.0	-2,206.98	-224.7	6,622.9	6,626.7	0.00	0.00	0.00
13,800.0	90.52	90.00	6,887.1	-2,206.08	-224.7	6,722.9	6,726.6	0.00	0.00	0.00
13,900.0	90.52	90.00	6,886.2	-2,205.17	-224.7	6,822.9	6,826.6	0.00	0.00	0.00
14,000.0	90.52	90.00	6,885.3	-2,204.27	-224.7	6,922.9	6,926.5	0.00	0.00	0.00
14,100.0	90.52	90.00	6,884.4	-2,203.37	-224.7	7,022.9	7,026.5	0.00	0.00	0.00
14,200.0	90.52	90.00	6,883.5	-2,202.47	-224.7	7,122.9	7,126.4	0.00	0.00	0.00
14,300.0	90.52	90.00	6,882.6	-2,201.56	-224.7	7,222.9	7,226.4	0.00	0.00	0.00
14,400.0	90.52	90.00	6,881.7	-2,200.66	-224.7	7,322.9	7,326.3	0.00	0.00	0.00
14,500.0	90.52	90.00	6,880.8	-2,199.76	-224.7	7,422.9	7,426.3	0.00	0.00	0.00
<b>BHL: 1445ft FSL &amp; 2635ft FWL of Sec 26</b>										
<b>14,584.2</b>	<b>90.52</b>	<b>90.00</b>	<b>6,880.0</b>	<b>-2,199.00</b>	<b>-224.7</b>	<b>7,507.0</b>	<b>7,510.4</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,595.8	3,562.0	PARKMAN SANDSTONE				
4,107.7	4,065.0	SUSSEX SANDSTONE				
6,656.6	6,595.0	SHARON SPRINGS				
6,793.2	6,705.0	NIOBRARA A				
6,941.8	6,805.0	NIOBRARA B				
7,120.0	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: 1651ft FSL & 410ft FWL of Sec 27
1,650.0	1,650.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,249.9	2,245.5	-30.9	-54.4	EOB TO 12° INC
3,837.4	3,798.3	-193.8	-341.4	END OF TANGENT
4,437.2	4,393.8	-224.7	-395.8	EOD TO VERTICAL
6,272.2	6,228.8	-224.7	-395.8	KOP (8°/100ft BUR)
7,403.7	6,945.0	-224.7	326.9	HZ LANDING PNT *NEW*: 1427.9ft FSL & 737.7ft FWL of Sec 27
14,584.2	6,880.0	-224.7	7,507.0	BHL: 1445ft FSL & 2635ft FWL of Sec 26