

# **PDC ENERGY**

**WELD COUNTY, COLORADO  
SE SE SEC. 18 T5N R64W 6th P.M.  
GILLHAM 18X-102**

## **ORIGINAL WELLBORE**

**17 September, 2015**

**Plan: PROPOSAL #2**





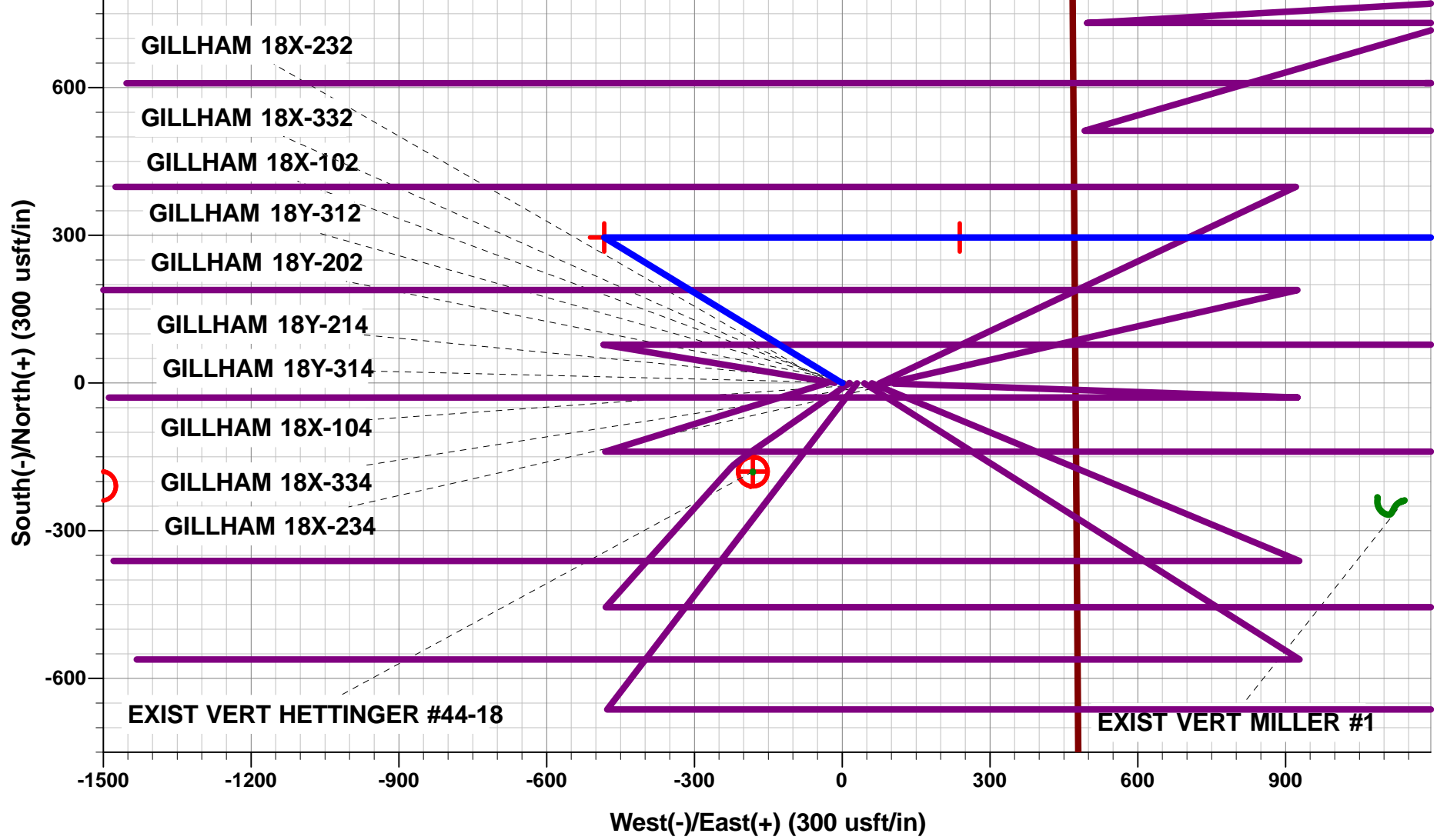
Project: WELD COUNTY, COLORADO  
Site: SE SE SEC. 18 T5N R64W 6th P.M.  
Well: GILLHAM 18X-102  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #2

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Dep	Annotation
1250.0	1250.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1845.6	1850.0	12.00	301.46	32.7	-53.4	-51.5	62.6	EOB TO 12° INC
3922.2	3973.0	12.00	301.46	263.0	-429.9	-414.5	504.0	END OF TANGENT
4517.8	4572.9	0.00	301.46	295.7	-483.3	-466.0	566.6	EOD TO VERTICAL
5881.8	5936.9	0.00	0.00	295.7	-483.3	-466.0	566.6	KOP (8°/100ft BUR)
6598.0	7067.6	90.45	90.00	295.7	238.5	254.7	1288.4	7" ICP *NEW* - GILLHAM 18X-102 (P2)
6558.0	12093.1	90.47	90.00	295.7	5263.9	5272.2	6313.8	BHL - GILLHAM 18X-102 (P2)

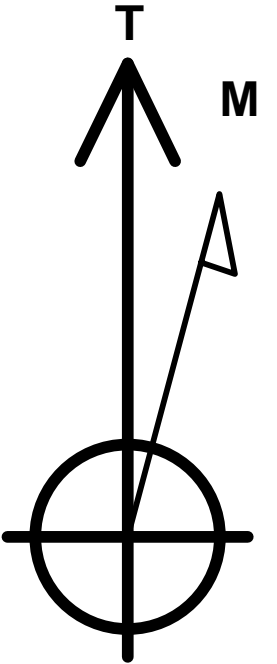
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - GILLHAM 18X-102 (P2)	5881.8	295.7	-483.3	40.395136	-104.586834
7" ICP *NEW* - GILLHAM 18X-102 (P2)	6598.0	295.7	238.5	40.395136	-104.584243
BHL - GILLHAM 18X-102 (P2)	6558.0	295.7	5263.9	40.395134	-104.566201



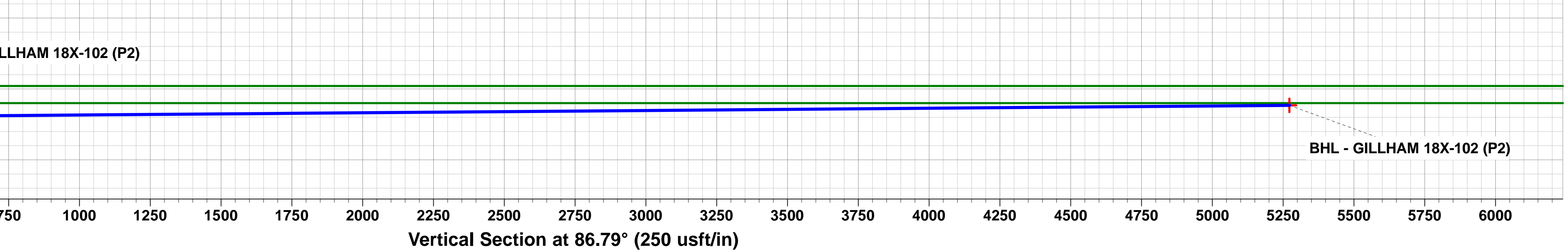
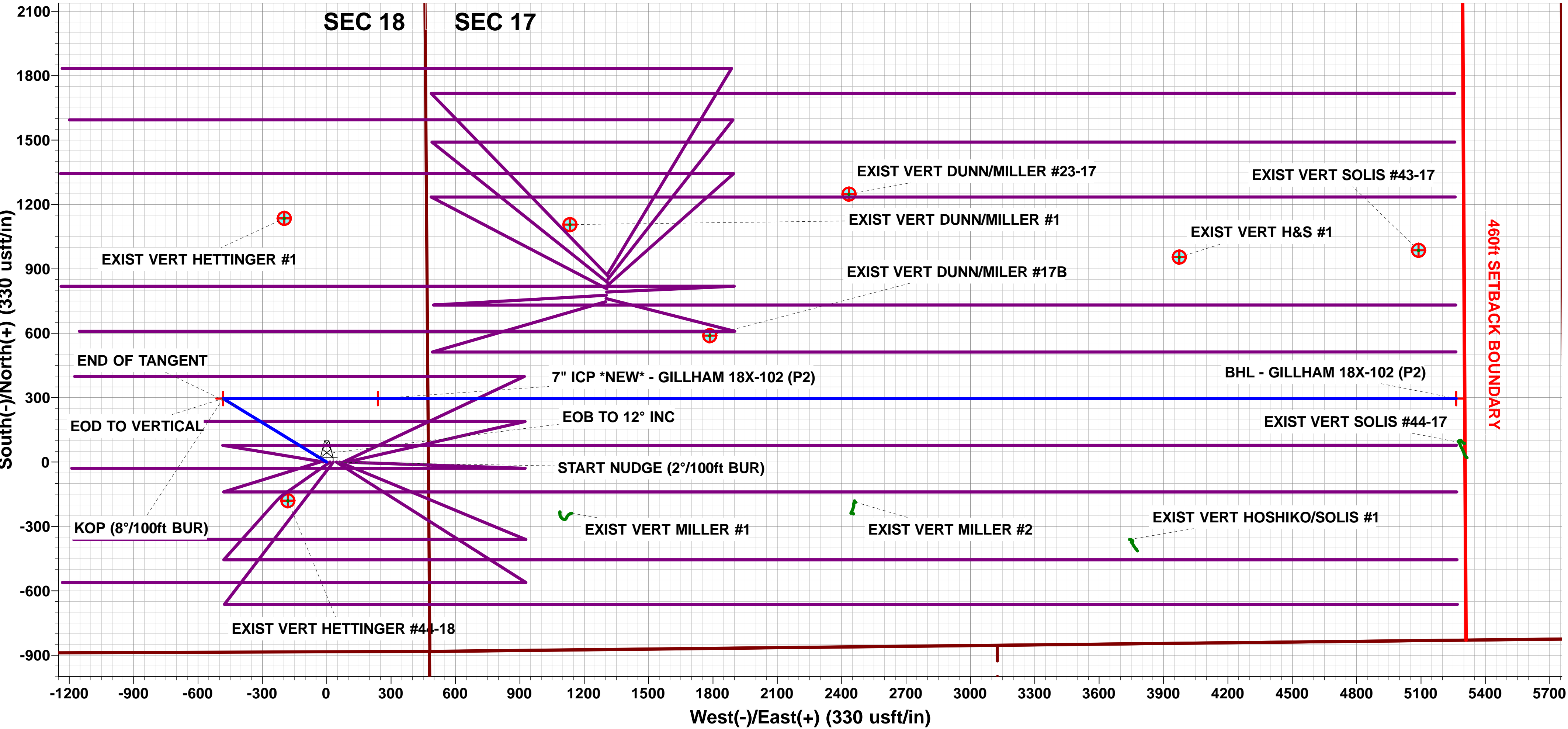
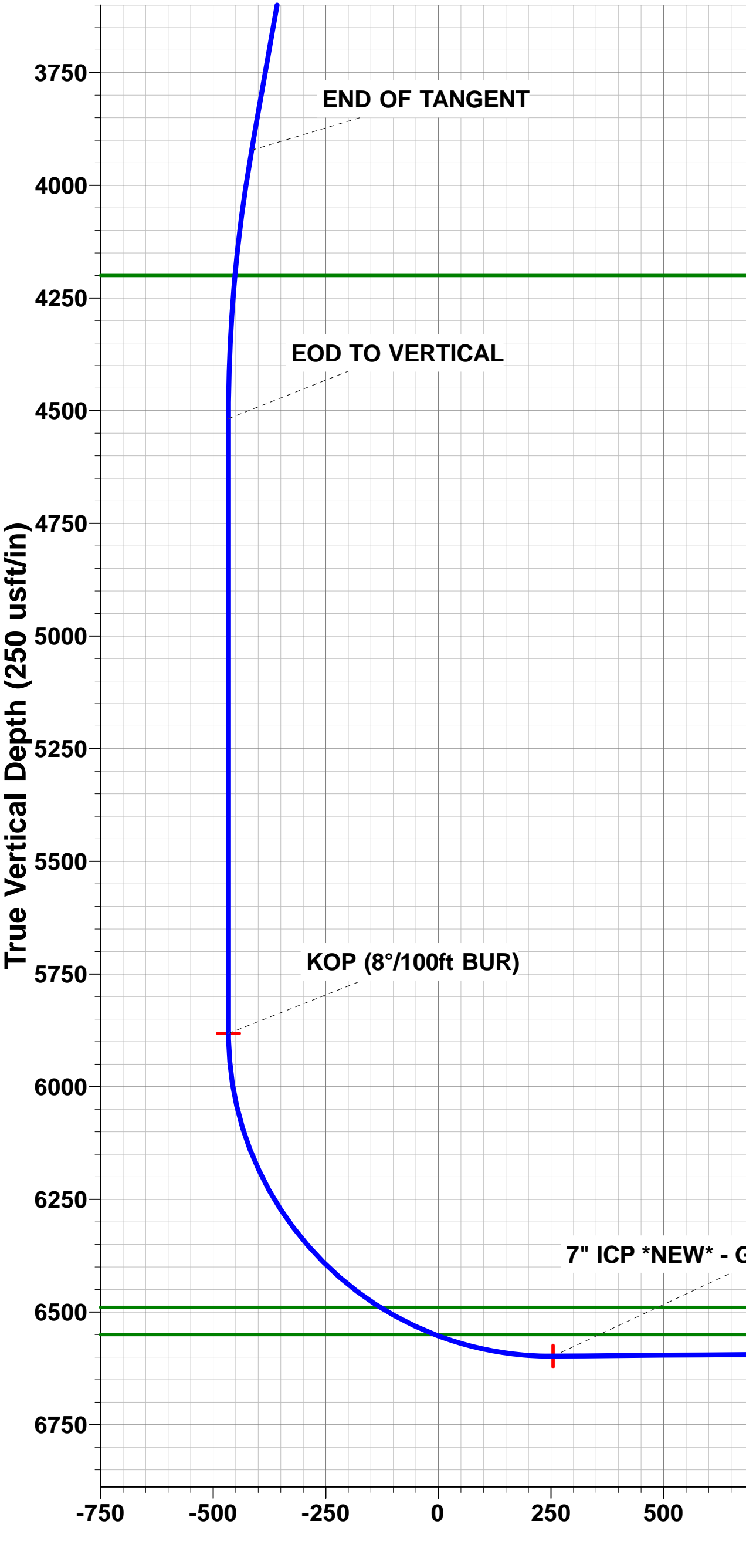
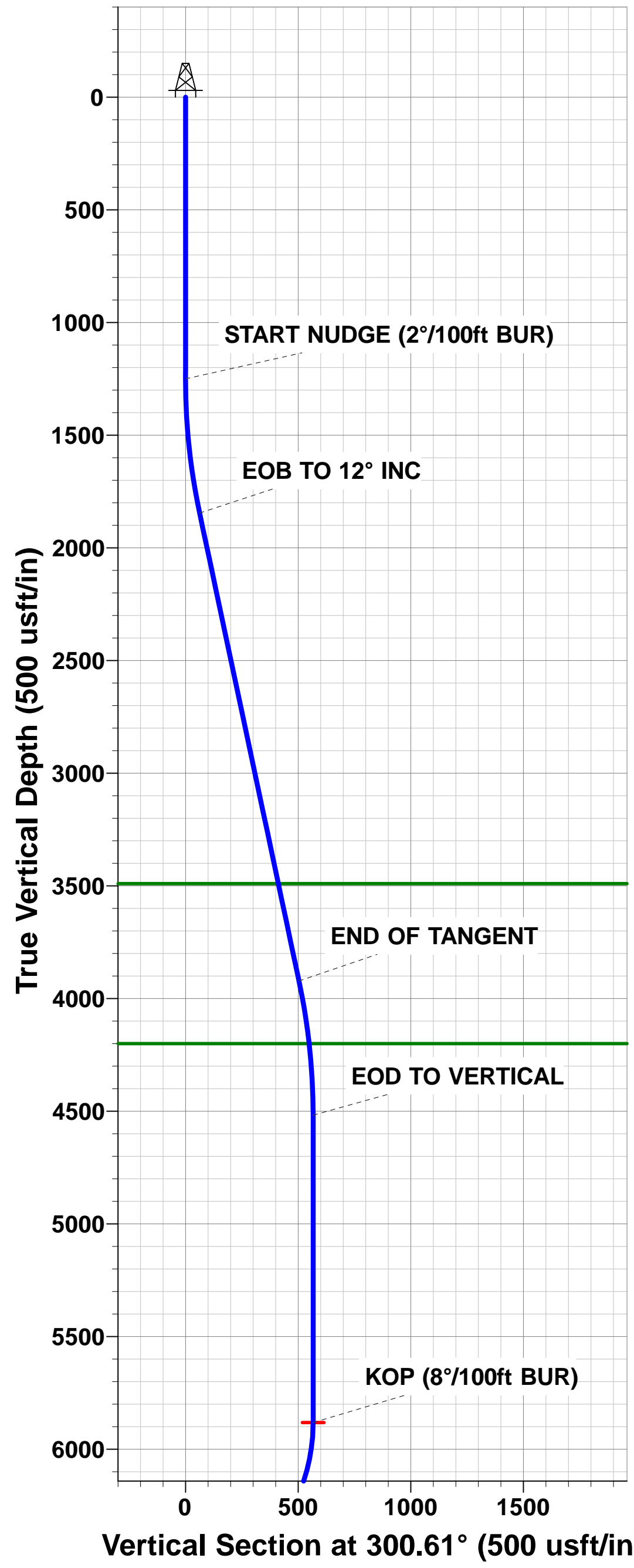
PROPOSED LOCAL COORDINATES:

SHL: 884ft FSL & 474ft FEL of Sec 18  
7" ICP \*NEW\*: 1179.7ft FSL & 233.5ft FEL of Sec 18  
BHL: 1126ft FSL & 500ft FEL of Sec 17



Azimuths to True North  
Magnetic North: 8.30°

Magnetic Field  
Strength: 52612.6snT  
Dip Angle: 66.92°  
Date: 07/09/2015  
Model: IGRF2015



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GILLHAM 18X-102
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4638.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4638.0usft (Original Well Elev)
<b>Site:</b>	SE SE SEC. 18 T5N R64W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	GILLHAM 18X-102	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

<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>	SE SE SEC. 18 T5N R64W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,387,807.29 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,254,796.41 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.394325
		<b>Longitude:</b>	-104.585206
		<b>Grid Convergence:</b>	0.59 °

<b>Well</b>	GILLHAM 18X-102		
<b>Well Position</b>	<b>+N/-S</b>	-0.4 usft	<b>Northing:</b>
	<b>+E/-W</b>	29.8 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	07/09/2015	8.30	66.92	52,613

<b>Design</b>	PROPOSAL #2			
<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	86.79

<b>Plan Sections</b>											
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	-4,638.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,250.0	0.00	0.00	1,250.0	-3,388.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,850.0	12.00	301.46	1,845.6	-2,792.4	32.7	-53.4	2.00	2.00	0.00	301.46	
3,973.0	12.00	301.46	3,922.2	-715.8	263.0	-429.9	0.00	0.00	0.00	0.00	
4,572.9	0.00	0.00	4,517.8	-120.2	295.7	-483.3	2.00	-2.00	0.00	180.00	
5,936.9	0.00	0.00	5,881.8	1,243.8	295.7	-483.3	0.00	0.00	0.00	0.00	KOP - GILLHAM 18
7,067.6	90.45	90.00	6,598.0	1,960.0	295.7	238.5	8.00	8.00	7.96	90.00	7" ICP *NEW* - GIL
12,093.1	90.47	90.00	6,558.0	1,920.0	295.7	5,263.9	0.00	0.00	0.00	2.60	BHL - GILLHAM 18

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GILLHAM 18X-102
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4638.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4638.0usft (Original Well Elev)
<b>Site:</b>	SE SE SEC. 18 T5N R64W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	GILLHAM 18X-102	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

## 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	4,638.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,538.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,438.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,338.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,238.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,138.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,038.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,938.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,838.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,738.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,638.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,538.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,438.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
1,250.0	0.00	0.00	1,250.0	3,388.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	1.00	301.46	1,300.0	3,338.00	0.2	-0.4	-0.4	2.00	2.00	0.00
1,400.0	3.00	301.46	1,399.9	3,238.07	2.0	-3.3	-3.2	2.00	2.00	0.00
1,500.0	5.00	301.46	1,499.7	3,138.32	5.7	-9.3	-9.0	2.00	2.00	0.00
1,600.0	7.00	301.46	1,599.1	3,038.87	11.1	-18.2	-17.6	2.00	2.00	0.00
1,700.0	9.00	301.46	1,698.2	2,939.85	18.4	-30.1	-29.0	2.00	2.00	0.00
1,800.0	11.00	301.46	1,796.6	2,841.37	27.5	-44.9	-43.3	2.00	2.00	0.00
<b>EOB TO 12° INC</b>										
1,850.0	12.00	301.46	1,845.6	2,792.38	32.7	-53.4	-51.5	2.00	2.00	0.00
1,900.0	12.00	301.46	1,894.5	2,743.47	38.1	-62.3	-60.0	0.00	0.00	0.00
2,000.0	12.00	301.46	1,992.3	2,645.65	48.9	-80.0	-77.1	0.00	0.00	0.00
2,100.0	12.00	301.46	2,090.2	2,547.84	59.8	-97.7	-94.2	0.00	0.00	0.00
2,200.0	12.00	301.46	2,188.0	2,450.03	70.6	-115.5	-111.3	0.00	0.00	0.00
2,300.0	12.00	301.46	2,285.8	2,352.21	81.5	-133.2	-128.4	0.00	0.00	0.00
2,400.0	12.00	301.46	2,383.6	2,254.40	92.4	-150.9	-145.5	0.00	0.00	0.00
2,500.0	12.00	301.46	2,481.4	2,156.58	103.2	-168.7	-162.6	0.00	0.00	0.00
2,600.0	12.00	301.46	2,579.2	2,058.77	114.1	-186.4	-179.7	0.00	0.00	0.00
2,700.0	12.00	301.46	2,677.0	1,960.95	124.9	-204.1	-196.8	0.00	0.00	0.00
2,800.0	12.00	301.46	2,774.9	1,863.14	135.8	-221.9	-213.9	0.00	0.00	0.00
2,900.0	12.00	301.46	2,872.7	1,765.32	146.6	-239.6	-231.0	0.00	0.00	0.00
3,000.0	12.00	301.46	2,970.5	1,667.51	157.5	-257.4	-248.1	0.00	0.00	0.00
3,100.0	12.00	301.46	3,068.3	1,569.69	168.3	-275.1	-265.2	0.00	0.00	0.00
3,200.0	12.00	301.46	3,166.1	1,471.88	179.2	-292.8	-282.3	0.00	0.00	0.00
3,300.0	12.00	301.46	3,263.9	1,374.06	190.0	-310.6	-299.4	0.00	0.00	0.00
3,400.0	12.00	301.46	3,361.8	1,276.25	200.9	-328.3	-316.5	0.00	0.00	0.00
3,500.0	12.00	301.46	3,459.6	1,178.43	211.7	-346.0	-333.6	0.00	0.00	0.00
<b>PARKMAN SANDSTONE</b>										
3,531.1	12.00	301.46	3,490.0	1,148.00	215.1	-351.5	-338.9	0.00	0.00	0.00
3,600.0	12.00	301.46	3,557.4	1,080.62	222.6	-363.8	-350.7	0.00	0.00	0.00
3,700.0	12.00	301.46	3,655.2	982.80	233.4	-381.5	-367.8	0.00	0.00	0.00
3,800.0	12.00	301.46	3,753.0	884.99	244.3	-399.2	-384.9	0.00	0.00	0.00
3,900.0	12.00	301.46	3,850.8	787.17	255.1	-417.0	-402.0	0.00	0.00	0.00
<b>END OF TANGENT</b>										
3,973.0	12.00	301.46	3,922.2	715.77	263.0	-429.9	-414.5	0.00	0.00	0.00
4,000.0	11.46	301.46	3,948.7	689.33	265.9	-434.6	-419.0	2.00	-2.00	0.00
4,100.0	9.46	301.46	4,047.0	591.00	275.4	-450.1	-433.9	2.00	-2.00	0.00
4,200.0	7.46	301.46	4,145.9	492.09	283.0	-462.6	-446.0	2.00	-2.00	0.00
<b>SUSSEX SANDSTONE</b>										
4,254.5	6.37	301.46	4,200.0	438.00	286.5	-468.2	-451.4	2.00	-2.00	0.00
4,300.0	5.46	301.46	4,245.3	392.73	288.9	-472.2	-455.3	2.00	-2.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GILLHAM 18X-102
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4638.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4638.0usft (Original Well Elev)
<b>Site:</b>	SE SE SEC. 18 T5N R64W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	GILLHAM 18X-102	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

## 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)
4,400.0	3.46	301.46	4,345.0	293.04	293.0	-478.8	-461.7	2.00	-2.00	0.00
4,500.0	1.46	301.46	4,444.9	193.14	295.2	-482.5	-465.2	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>4,572.9</b>	<b>0.00</b>	<b>301.46</b>	<b>4,517.8</b>	<b>120.24</b>	<b>295.7</b>	<b>-483.3</b>	<b>-466.0</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
4,600.0	0.00	0.00	4,544.9	93.14	295.7	-483.3	-466.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,644.9	-6.86	295.7	-483.3	-466.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,744.9	-106.86	295.7	-483.3	-466.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,844.9	-206.86	295.7	-483.3	-466.0	0.00	0.00	0.00
5,000.0	0.00	0.00	4,944.9	-306.86	295.7	-483.3	-466.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,044.9	-406.86	295.7	-483.3	-466.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,144.9	-506.86	295.7	-483.3	-466.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,244.9	-606.86	295.7	-483.3	-466.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,344.9	-706.86	295.7	-483.3	-466.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,444.9	-806.86	295.7	-483.3	-466.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,544.9	-906.86	295.7	-483.3	-466.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,644.9	-1,006.86	295.7	-483.3	-466.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,744.9	-1,106.86	295.7	-483.3	-466.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,844.9	-1,206.86	295.7	-483.3	-466.0	0.00	0.00	0.00
<b>KOP (8°/100ft BUR)</b>										
<b>5,936.9</b>	<b>0.00</b>	<b>0.00</b>	<b>5,881.8</b>	<b>-1,243.76</b>	<b>295.7</b>	<b>-483.3</b>	<b>-466.0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,000.0	5.04	90.00	5,944.8	-1,306.77	295.7	-480.5	-463.2	7.99	7.99	0.00
6,100.0	13.04	90.00	6,043.5	-1,405.45	295.7	-464.8	-447.5	8.00	8.00	0.00
6,200.0	21.04	90.00	6,139.0	-1,500.98	295.7	-435.5	-418.3	8.00	8.00	0.00
6,300.0	29.04	90.00	6,229.5	-1,591.51	295.7	-393.2	-376.0	8.00	8.00	0.00
6,400.0	37.04	90.00	6,313.3	-1,675.26	295.7	-338.8	-321.6	8.00	8.00	0.00
6,500.0	45.04	90.00	6,388.6	-1,750.62	295.7	-273.1	-256.1	8.00	8.00	0.00
6,600.0	53.04	90.00	6,454.1	-1,816.12	295.7	-197.7	-180.8	8.00	8.00	0.00
<b>SHARON SPRINGS</b>										
<b>6,663.5</b>	<b>58.12</b>	<b>90.00</b>	<b>6,490.0</b>	<b>-1,852.00</b>	<b>295.7</b>	<b>-145.3</b>	<b>-128.5</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
6,700.0	61.04	90.00	6,508.5	-1,870.48	295.7	-113.8	-97.1	8.00	8.00	0.00
<b>NIOBRARA A</b>										
<b>6,798.2</b>	<b>68.90</b>	<b>90.00</b>	<b>6,550.0</b>	<b>-1,912.00</b>	<b>295.7</b>	<b>-24.9</b>	<b>-8.3</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
6,800.0	69.04	90.00	6,550.6	-1,912.64	295.7	-23.3	-6.6	8.00	8.00	0.00
6,900.0	77.04	90.00	6,579.8	-1,941.78	295.7	72.3	88.8	8.00	8.00	0.00
7,000.0	85.04	90.00	6,595.3	-1,957.34	295.7	171.0	187.3	8.00	8.00	0.00
<b>7" ICP *NEW* - GILLHAM 18X-102 (P2)</b>										
<b>7,067.6</b>	<b>90.45</b>	<b>90.00</b>	<b>6,598.0</b>	<b>-1,960.00</b>	<b>295.7</b>	<b>238.5</b>	<b>254.7</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,100.0	90.45	90.00	6,597.7	-1,959.75	295.7	270.9	287.1	0.00	0.00	0.00
7,200.0	90.45	90.00	6,597.0	-1,958.97	295.7	370.9	386.9	0.00	0.00	0.00
7,300.0	90.45	90.00	6,596.2	-1,958.19	295.7	470.9	486.8	0.00	0.00	0.00
7,400.0	90.45	90.00	6,595.4	-1,957.41	295.7	570.9	586.6	0.00	0.00	0.00
7,500.0	90.45	90.00	6,594.6	-1,956.63	295.7	670.9	686.5	0.00	0.00	0.00
7,600.0	90.45	90.00	6,593.8	-1,955.84	295.7	770.9	786.3	0.00	0.00	0.00
7,700.0	90.45	90.00	6,593.1	-1,955.06	295.7	870.9	886.1	0.00	0.00	0.00
7,800.0	90.45	90.00	6,592.3	-1,954.28	295.7	970.9	986.0	0.00	0.00	0.00
7,900.0	90.45	90.00	6,591.5	-1,953.49	295.7	1,070.9	1,085.8	0.00	0.00	0.00
8,000.0	90.45	90.00	6,590.7	-1,952.71	295.7	1,170.9	1,185.7	0.00	0.00	0.00
8,100.0	90.45	90.00	6,589.9	-1,951.92	295.7	1,270.9	1,285.5	0.00	0.00	0.00
8,200.0	90.45	90.00	6,589.1	-1,951.14	295.7	1,370.9	1,385.3	0.00	0.00	0.00
8,300.0	90.45	90.00	6,588.3	-1,950.35	295.7	1,470.9	1,485.2	0.00	0.00	0.00
8,400.0	90.45	90.00	6,587.6	-1,949.56	295.7	1,570.9	1,585.0	0.00	0.00	0.00
8,500.0	90.45	90.00	6,586.8	-1,948.77	295.7	1,670.9	1,684.8	0.00	0.00	0.00
8,600.0	90.45	90.00	6,586.0	-1,947.98	295.7	1,770.9	1,784.7	0.00	0.00	0.00



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GILLHAM 18X-102
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4638.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4638.0usft (Original Well Elev)
<b>Site:</b>	SE SE SEC. 18 T5N R64W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	GILLHAM 18X-102	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

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)
8,700.0	90.45	90.00	6,585.2	-1,947.20	295.7	1,870.9	1,884.5	0.00	0.00	0.00
8,800.0	90.45	90.00	6,584.4	-1,946.40	295.7	1,970.9	1,984.4	0.00	0.00	0.00
8,900.0	90.45	90.00	6,583.6	-1,945.61	295.7	2,070.9	2,084.2	0.00	0.00	0.00
9,000.0	90.45	90.00	6,582.8	-1,944.82	295.7	2,170.9	2,184.0	0.00	0.00	0.00
9,100.0	90.45	90.00	6,582.0	-1,944.03	295.7	2,270.9	2,283.9	0.00	0.00	0.00
9,200.0	90.45	90.00	6,581.2	-1,943.24	295.7	2,370.9	2,383.7	0.00	0.00	0.00
9,300.0	90.45	90.00	6,580.4	-1,942.44	295.7	2,470.9	2,483.6	0.00	0.00	0.00
9,400.0	90.46	90.00	6,579.6	-1,941.65	295.7	2,570.9	2,583.4	0.00	0.00	0.00
9,500.0	90.46	90.00	6,578.9	-1,940.85	295.7	2,670.9	2,683.2	0.00	0.00	0.00
9,600.0	90.46	90.00	6,578.1	-1,940.06	295.7	2,770.9	2,783.1	0.00	0.00	0.00
9,700.0	90.46	90.00	6,577.3	-1,939.26	295.7	2,870.9	2,882.9	0.00	0.00	0.00
9,800.0	90.46	90.00	6,576.5	-1,938.46	295.7	2,970.9	2,982.8	0.00	0.00	0.00
9,900.0	90.46	90.00	6,575.7	-1,937.67	295.7	3,070.9	3,082.6	0.00	0.00	0.00
10,000.0	90.46	90.00	6,574.9	-1,936.87	295.7	3,170.8	3,182.4	0.00	0.00	0.00
10,100.0	90.46	90.00	6,574.1	-1,936.07	295.7	3,270.8	3,282.3	0.00	0.00	0.00
10,200.0	90.46	90.00	6,573.3	-1,935.27	295.7	3,370.8	3,382.1	0.00	0.00	0.00
10,300.0	90.46	90.00	6,572.5	-1,934.47	295.7	3,470.8	3,482.0	0.00	0.00	0.00
10,400.0	90.46	90.00	6,571.7	-1,933.67	295.7	3,570.8	3,581.8	0.00	0.00	0.00
10,500.0	90.46	90.00	6,570.9	-1,932.87	295.7	3,670.8	3,681.6	0.00	0.00	0.00
10,600.0	90.46	90.00	6,570.1	-1,932.06	295.7	3,770.8	3,781.5	0.00	0.00	0.00
10,700.0	90.46	90.00	6,569.3	-1,931.26	295.7	3,870.8	3,881.3	0.00	0.00	0.00
10,800.0	90.46	90.00	6,568.5	-1,930.46	295.7	3,970.8	3,981.2	0.00	0.00	0.00
10,900.0	90.46	90.00	6,567.7	-1,929.65	295.7	4,070.8	4,081.0	0.00	0.00	0.00
11,000.0	90.46	90.00	6,566.8	-1,928.85	295.7	4,170.8	4,180.8	0.00	0.00	0.00
11,100.0	90.46	90.00	6,566.0	-1,928.04	295.7	4,270.8	4,280.7	0.00	0.00	0.00
11,200.0	90.46	90.00	6,565.2	-1,927.23	295.7	4,370.8	4,380.5	0.00	0.00	0.00
11,300.0	90.46	90.00	6,564.4	-1,926.43	295.7	4,470.8	4,480.4	0.00	0.00	0.00
11,400.0	90.46	90.00	6,563.6	-1,925.62	295.7	4,570.8	4,580.2	0.00	0.00	0.00
11,500.0	90.46	90.00	6,562.8	-1,924.81	295.7	4,670.8	4,680.0	0.00	0.00	0.00
11,600.0	90.46	90.00	6,562.0	-1,924.00	295.7	4,770.8	4,779.9	0.00	0.00	0.00
11,700.0	90.46	90.00	6,561.2	-1,923.19	295.7	4,870.8	4,879.7	0.00	0.00	0.00
11,800.0	90.46	90.00	6,560.4	-1,922.38	295.7	4,970.8	4,979.5	0.00	0.00	0.00
11,900.0	90.47	90.00	6,559.6	-1,921.57	295.7	5,070.8	5,079.4	0.00	0.00	0.00
12,000.0	90.47	90.00	6,558.8	-1,920.76	295.7	5,170.8	5,179.2	0.00	0.00	0.00
<b>BHL - GILLHAM 18X-102 (P2)</b>										
<b>12,093.1</b>	<b>90.47</b>	<b>90.00</b>	<b>6,558.0</b>	<b>-1,920.00</b>	<b>295.7</b>	<b>5,263.9</b>	<b>5,272.2</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,531.1	3,490.0	PARKMAN SANDSTONE				
4,254.5	4,200.0	SUSSEX SANDSTONE				
6,663.5	6,490.0	SHARON SPRINGS				
6,798.2	6,550.0	NIOBRARA A				

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GILLHAM 18X-102
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4638.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4638.0usft (Original Well Elev)
<b>Site:</b>	SE SE SEC. 18 T5N R64W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	GILLHAM 18X-102	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

## Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,250.0	1,250.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,850.0	1,845.6	32.7	-53.4	EOB TO 12° INC
3,973.0	3,922.2	263.0	-429.9	END OF TANGENT
4,572.9	4,517.8	295.7	-483.3	EOD TO VERTICAL
5,936.9	5,881.8	295.7	-483.3	KOP (8°/100ft BUR)
7,067.6	6,598.0	295.7	238.5	7" ICP *NEW* - GILLHAM 18X-102 (P2)
12,093.1	6,558.0	295.7	5,263.9	BHL - GILLHAM 18X-102 (P2)