

# **PDC ENERGY**

**WELD COUNTY, COLORADO  
NW NE SEC 30 T4N R67W 6th P.M.  
OLSON 30R-203**

## **ORIGINAL WELLBORE**

**26 February, 2016**

**Plan: PROPOSAL #2**





Project: WELD COUNTY, COLORADO  
Site: NW NE SEC 30 T4N R67W 6th P.M.  
Well: OLSON 30R-203  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #2

#### 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: 983ft FNL & 2314ft FEL of Sec 30
1750.0	1750.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2729.8	2750.0	20.00	42.00	128.4	115.6	-97.4	172.8	EOB TO 20° INC
3668.6	3749.0	20.00	42.00	382.3	344.2	-290.1	514.4	END OF TANGENT
3796.6	3885.2	20.00	49.97	414.6	377.7	-313.6	561.0	EOT TO 49.97° AZ
5318.0	5504.2	20.00	49.97	770.7	801.6	-559.4	1114.6	END OF TANGENT
6297.7	6504.1	0.00	0.00	881.8	933.9	-636.1	1287.4	EOD TO VERTICAL
6411.8	6618.2	0.00	0.00	881.8	933.9	-636.1	1287.4	KOP (8°/100ft BUR)
7128.0	7746.5	90.26	180.00	162.3	933.9	63.0	2006.8	7" ICP *NEW*: 784.3ft FNL & 1381ft FEL of Sec 30
7110.0	11747.9	90.26	180.00	-3839.0	933.9	3951.0	6008.2	BHL: 500ft FSL & 1375ft FEL of Sec 30

#### PROPOSED LOCAL COORDINATES:

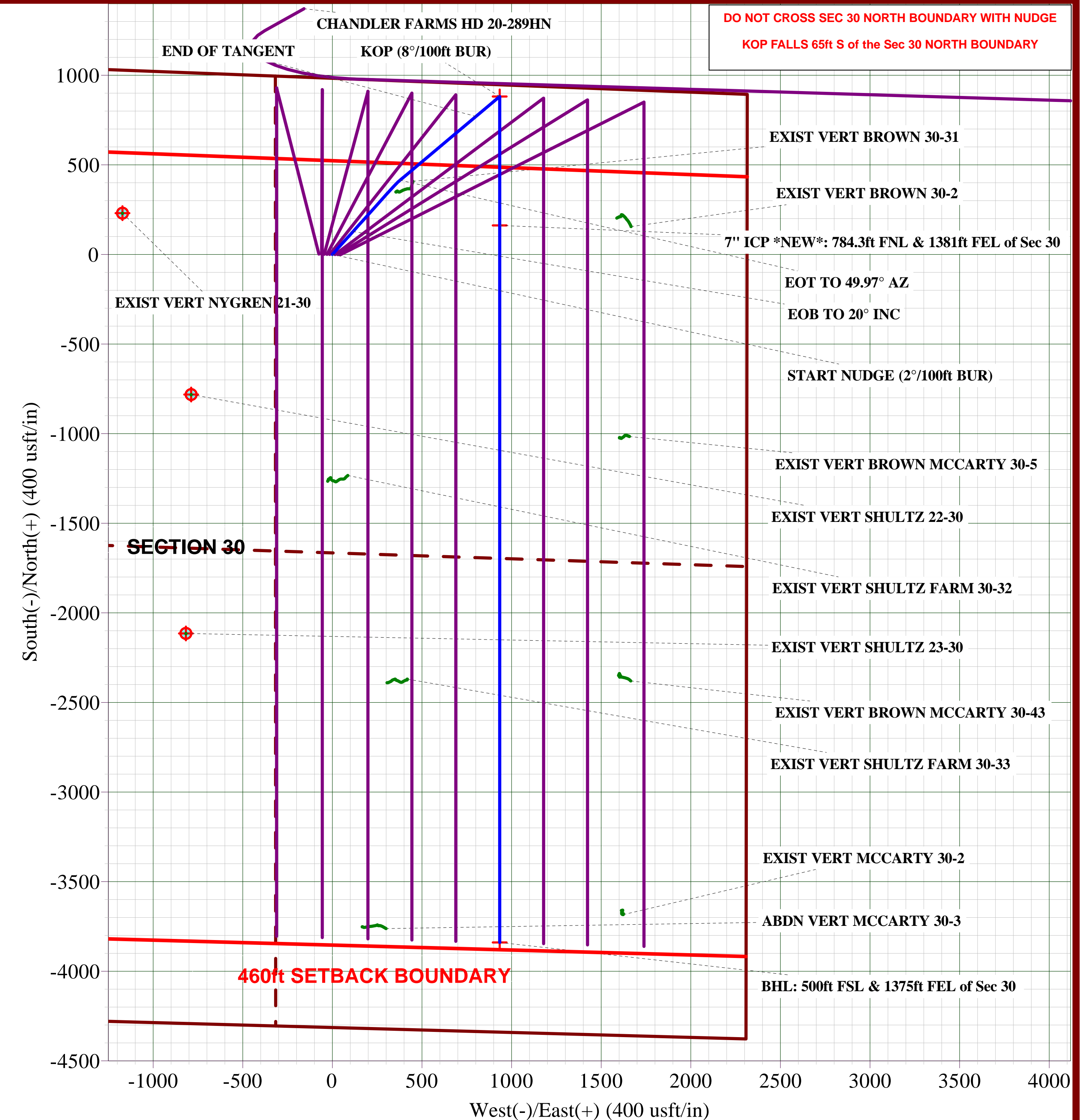
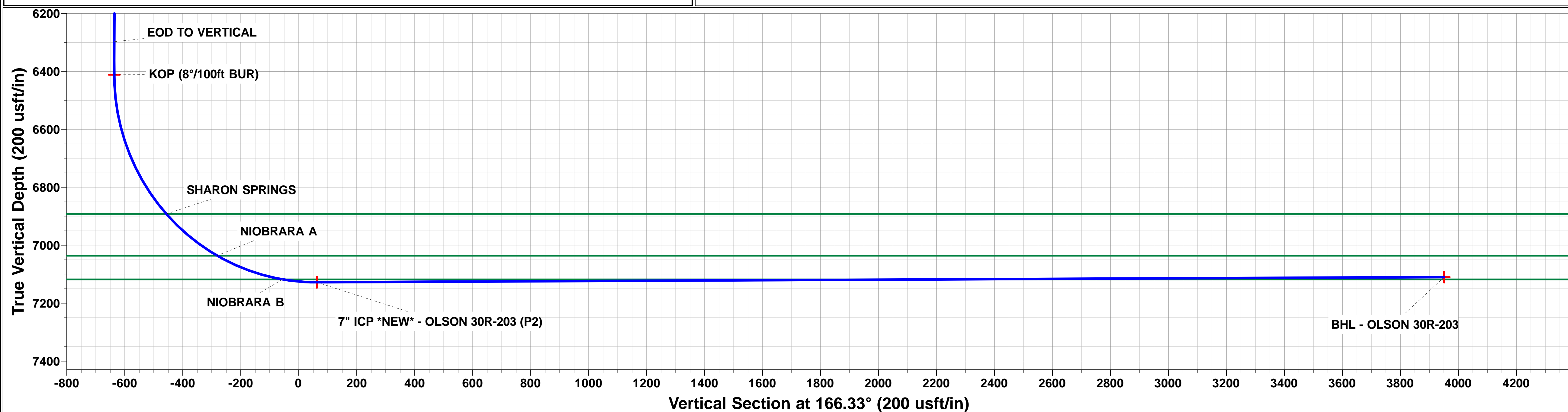
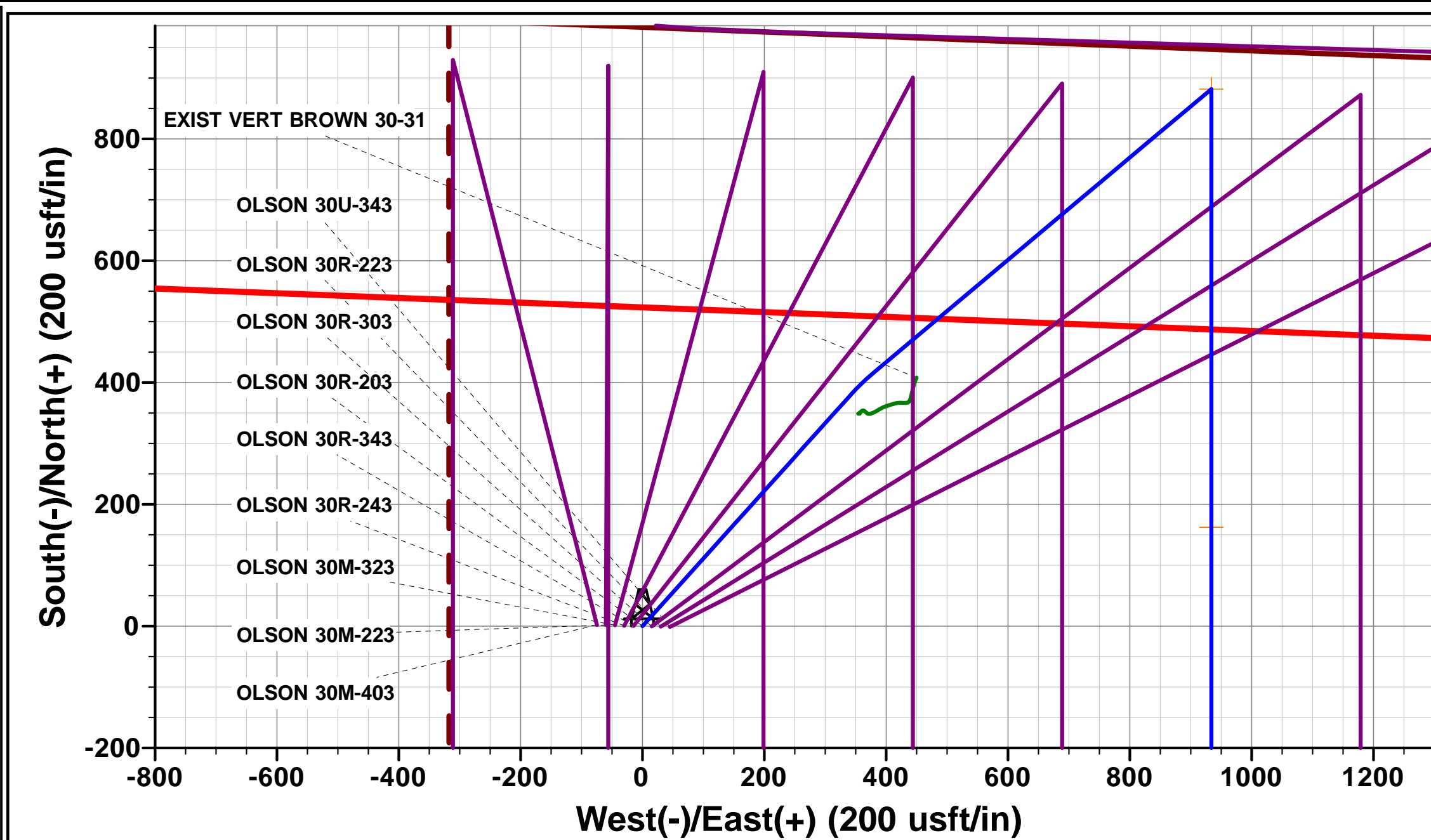
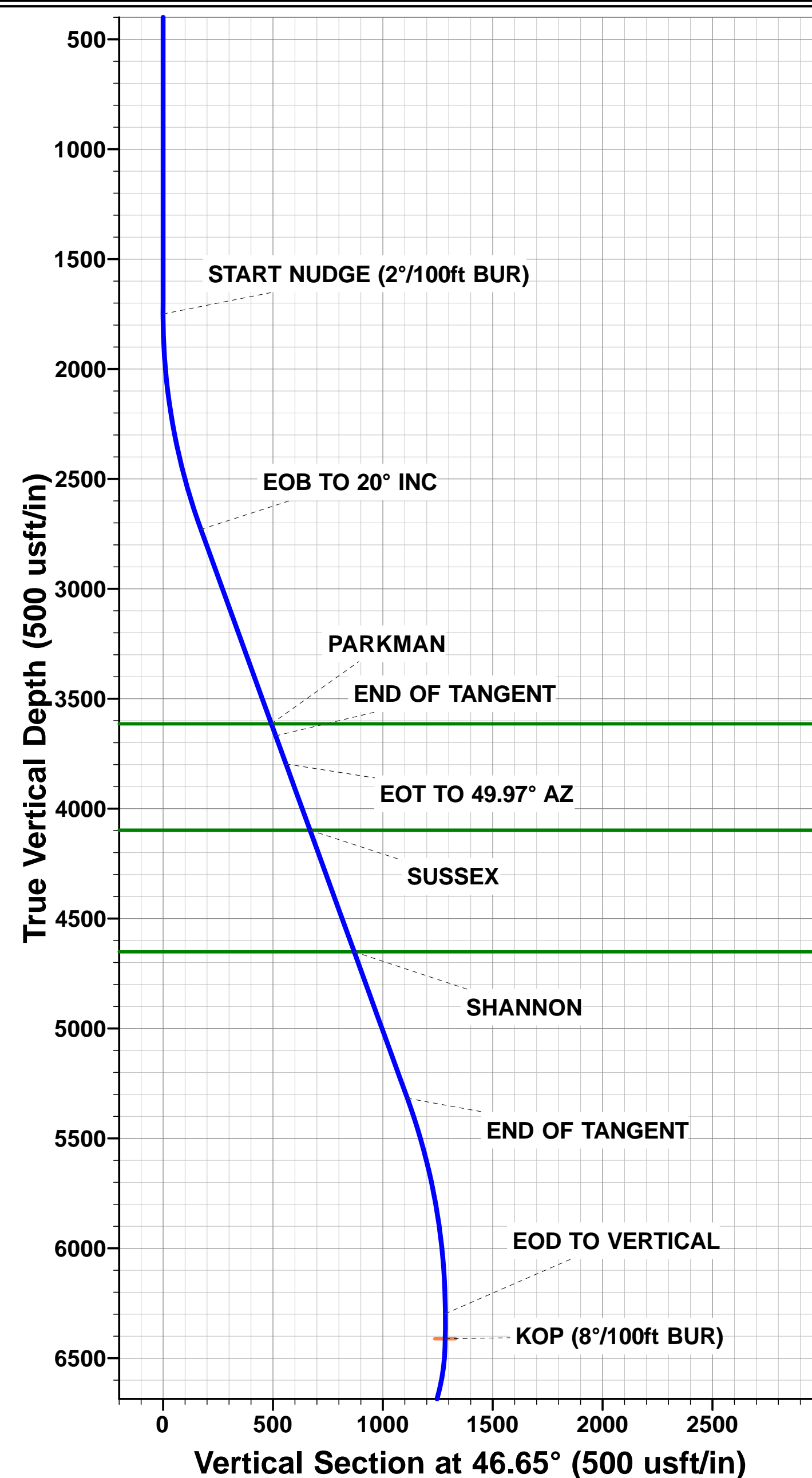
SHL: 983ft FNL & 2314t FEL Sec 30

7" ICP \*NEW\*: 784.3ft FNL & 1381ft FEL Sec 30

BHL: 500ft FSL & 1375ft FEL Sec 30

#### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
BHL - OLSON 30R-203	7110.0	-3839.0	933.9	40.278478	-104.928008
7" ICP *NEW* - OLSON 30R-203 (P2)	7128.0	162.4	933.9	40.289462	-104.928007
KOP - OLSON 30R-203 (P2)	6411.8	881.7	933.9	40.291436	-104.928007



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well OLSON 30R-203
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4989.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4989.0usft (Original Well Elev)
<b>Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	OLSON 30R-203	<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>	NW NE SEC 30 T4N R67W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,348,637.56 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,158,676.90 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.289013
		<b>Longitude:</b>	-104.931193
		<b>Grid Convergence:</b>	0.37 °

<b>Well</b>	OLSON 30R-203		
<b>Well Position</b>	<b>+N-S</b>	1.1 usft	<b>Northing:</b>
	<b>+E-W</b>	-45.2 usft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>
			usft
			<b>Latitude:</b>
			40.289016
			<b>Longitude:</b>
			-104.931355
			<b>Ground Level:</b>
			4,966.0 usft

<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	25/02/2016	8.43	66.77	52,465

<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	166.33

<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	-4,989.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,750.0	0.00	0.00	1,750.0	-3,239.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,750.0	20.00	42.00	2,729.8	-2,259.2	128.4	115.6	2.00	2.00	0.00	42.00	
3,749.0	20.00	42.00	3,668.6	-1,320.4	382.3	344.2	0.00	0.00	0.00	0.00	
3,885.2	20.00	49.97	3,796.6	-1,192.4	414.6	377.7	2.00	0.00	5.85	93.80	
5,504.2	20.00	49.97	5,318.0	329.0	770.7	801.6	0.00	0.00	0.00	0.00	
6,504.1	0.00	0.00	6,297.7	1,308.7	881.8	933.9	2.00	-2.00	0.00	180.00	
6,618.2	0.00	0.00	6,411.8	1,422.8	881.8	933.9	0.00	0.00	0.00	0.00	
7,746.5	90.26	180.00	7,128.0	2,139.0	162.4	933.9	8.00	8.00	0.00	180.00	
11,747.9	90.26	180.00	7,110.0	2,121.0	-3,839.0	933.9	0.00	0.00	0.00	-168.61	BHL - OLSON 30R-

# Planning Report



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<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4989.0usft (Original Well Elev)
<b>Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	OLSON 30R-203	<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)
<b>SHL: 983ft FNL &amp; 2314ft FEL of Sec 30</b>										
0.0	0.00	0.00	0.0	4,989.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,889.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,789.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,689.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,589.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,489.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,389.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,289.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	4,189.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	4,089.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,989.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,889.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,789.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	3,689.00	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	3,589.00	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	3,489.00	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	3,389.00	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	3,289.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
1,750.0	0.00	0.00	1,750.0	3,239.00	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	1.00	42.00	1,800.0	3,189.00	0.3	0.3	-0.2	2.00	2.00	0.00
1,900.0	3.00	42.00	1,899.9	3,089.07	2.9	2.6	-2.2	2.00	2.00	0.00
2,000.0	5.00	42.00	1,999.7	2,989.32	8.1	7.3	-6.1	2.00	2.00	0.00
2,100.0	7.00	42.00	2,099.1	2,889.87	15.9	14.3	-12.0	2.00	2.00	0.00
2,200.0	9.00	42.00	2,198.2	2,790.85	26.2	23.6	-19.9	2.00	2.00	0.00
2,300.0	11.00	42.00	2,296.6	2,692.37	39.1	35.2	-29.7	2.00	2.00	0.00
2,400.0	13.00	42.00	2,394.4	2,594.56	54.6	49.1	-41.4	2.00	2.00	0.00
2,500.0	15.00	42.00	2,491.5	2,497.54	72.5	65.3	-55.0	2.00	2.00	0.00
2,600.0	17.00	42.00	2,587.6	2,401.42	93.0	83.8	-70.6	2.00	2.00	0.00
2,700.0	19.00	42.00	2,682.7	2,306.32	116.0	104.4	-88.0	2.00	2.00	0.00
<b>EOB TO 20° INC</b>										
2,750.0	20.00	42.00	2,729.8	2,259.18	128.4	115.6	-97.4	2.00	2.00	0.00
2,800.0	20.00	42.00	2,776.8	2,212.20	141.1	127.0	-107.1	0.00	0.00	0.00
2,900.0	20.00	42.00	2,870.8	2,118.23	166.5	149.9	-126.4	0.00	0.00	0.00
3,000.0	20.00	42.00	2,964.7	2,024.26	191.9	172.8	-145.6	0.00	0.00	0.00
3,100.0	20.00	42.00	3,058.7	1,930.29	217.4	195.7	-164.9	0.00	0.00	0.00
3,200.0	20.00	42.00	3,152.7	1,836.32	242.8	218.6	-184.2	0.00	0.00	0.00
3,300.0	20.00	42.00	3,246.6	1,742.35	268.2	241.5	-203.5	0.00	0.00	0.00
3,400.0	20.00	42.00	3,340.6	1,648.38	293.6	264.4	-222.8	0.00	0.00	0.00
3,500.0	20.00	42.00	3,434.6	1,554.41	319.0	287.2	-242.1	0.00	0.00	0.00
3,600.0	20.00	42.00	3,528.6	1,460.45	344.4	310.1	-261.4	0.00	0.00	0.00
<b>PARKMAN</b>										
3,690.9	20.00	42.00	3,614.0	1,375.00	367.5	330.9	-278.9	0.00	0.00	0.00
3,700.0	20.00	42.00	3,622.5	1,366.48	369.9	333.0	-280.7	0.00	0.00	0.00
<b>END OF TANGENT</b>										
3,749.0	20.00	42.00	3,668.6	1,320.43	382.3	344.2	-290.1	0.00	0.00	0.00
3,800.0	19.96	44.98	3,716.5	1,272.50	394.9	356.2	-299.6	2.00	-0.08	5.85
<b>EOT TO 49.97° AZ</b>										
3,885.2	20.00	49.97	3,796.6	1,192.42	414.6	377.7	-313.6	2.00	0.05	5.85
3,900.0	20.00	49.97	3,810.5	1,178.51	417.9	381.5	-315.8	0.00	0.00	0.00
4,000.0	20.00	49.97	3,904.5	1,084.54	439.9	407.7	-331.0	0.00	0.00	0.00
4,100.0	20.00	49.97	3,998.4	990.57	461.8	433.9	-346.2	0.00	0.00	0.00

# Planning Report



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<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4989.0usft (Original Well Elev)
<b>Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	OLSON 30R-203	<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)
4,200.0	20.00	49.97	4,092.4	896.60	483.8	460.1	-361.4	0.00	0.00	0.00
<b>SUSSEX</b>										
<b>4,206.0</b>	<b>20.00</b>	<b>49.97</b>	<b>4,098.0</b>	<b>891.00</b>	<b>485.2</b>	<b>461.6</b>	<b>-362.3</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,300.0	20.00	49.97	4,186.4	802.63	505.8	486.3	-376.6	0.00	0.00	0.00
4,400.0	20.00	49.97	4,280.3	708.66	527.8	512.5	-391.7	0.00	0.00	0.00
4,500.0	20.00	49.97	4,374.3	614.69	549.8	538.6	-406.9	0.00	0.00	0.00
4,600.0	20.00	49.97	4,468.3	520.72	571.8	564.8	-422.1	0.00	0.00	0.00
4,700.0	20.00	49.97	4,562.3	426.75	593.8	591.0	-437.3	0.00	0.00	0.00
<b>SHANNON</b>										
<b>4,794.4</b>	<b>20.00</b>	<b>49.97</b>	<b>4,651.0</b>	<b>338.00</b>	<b>614.6</b>	<b>615.7</b>	<b>-451.6</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,800.0	20.00	49.97	4,656.2	332.78	615.8	617.2	-452.5	0.00	0.00	0.00
4,900.0	20.00	49.97	4,750.2	238.80	637.8	643.4	-467.7	0.00	0.00	0.00
5,000.0	20.00	49.97	4,844.2	144.83	659.8	669.6	-482.8	0.00	0.00	0.00
5,100.0	20.00	49.97	4,938.1	50.86	681.8	695.8	-498.0	0.00	0.00	0.00
5,200.0	20.00	49.97	5,032.1	-43.11	703.8	721.9	-513.2	0.00	0.00	0.00
5,300.0	20.00	49.97	5,126.1	-137.08	725.8	748.1	-528.4	0.00	0.00	0.00
5,400.0	20.00	49.97	5,220.0	-231.05	747.8	774.3	-543.6	0.00	0.00	0.00
5,500.0	20.00	49.97	5,314.0	-325.02	769.8	800.5	-558.8	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>5,504.2</b>	<b>20.00</b>	<b>49.97</b>	<b>5,318.0</b>	<b>-328.97</b>	<b>770.7</b>	<b>801.6</b>	<b>-559.4</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,600.0	18.08	49.97	5,408.5	-419.52	790.8	825.5	-573.3	2.00	-2.00	0.00
5,700.0	16.08	49.97	5,504.1	-515.11	809.7	848.0	-586.3	2.00	-2.00	0.00
5,800.0	14.08	49.97	5,600.7	-611.66	826.4	867.9	-597.9	2.00	-2.00	0.00
5,900.0	12.08	49.97	5,698.1	-709.06	841.0	885.3	-607.9	2.00	-2.00	0.00
6,000.0	10.08	49.97	5,796.2	-807.19	853.4	900.0	-616.4	2.00	-2.00	0.00
6,100.0	8.08	49.97	5,894.9	-905.93	863.5	912.1	-623.5	2.00	-2.00	0.00
6,200.0	6.08	49.97	5,994.2	-1,005.16	871.4	921.5	-628.9	2.00	-2.00	0.00
6,300.0	4.08	49.97	6,093.8	-1,104.76	877.1	928.3	-632.9	2.00	-2.00	0.00
6,400.0	2.08	49.97	6,193.6	-1,204.61	880.6	932.4	-635.2	2.00	-2.00	0.00
6,500.0	0.08	49.97	6,293.6	-1,304.59	881.8	933.8	-636.1	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>6,504.1</b>	<b>0.00</b>	<b>0.00</b>	<b>6,297.7</b>	<b>-1,308.69</b>	<b>881.8</b>	<b>933.9</b>	<b>-636.1</b>	<b>1.98</b>	<b>-1.98</b>	<b>0.00</b>
6,600.0	0.00	0.00	6,393.6	-1,404.59	881.8	933.9	-636.1	0.00	0.00	0.00
<b>KOP (8°/100ft BUR)</b>										
<b>6,618.2</b>	<b>0.00</b>	<b>0.00</b>	<b>6,411.8</b>	<b>-1,422.79</b>	<b>881.8</b>	<b>933.9</b>	<b>-636.1</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,700.0	6.54	180.00	6,493.4	-1,504.41	877.1	933.9	-631.5	8.00	8.00	0.00
6,800.0	14.54	180.00	6,591.6	-1,602.65	858.9	933.9	-613.8	8.00	8.00	0.00
6,900.0	22.54	180.00	6,686.4	-1,697.38	827.1	933.9	-582.9	8.00	8.00	0.00
7,000.0	30.54	180.00	6,775.8	-1,786.76	782.4	933.9	-539.5	8.00	8.00	0.00
7,100.0	38.54	180.00	6,858.1	-1,869.07	725.8	933.9	-484.5	8.00	8.00	0.00
<b>SHARON SPRINGS</b>										
<b>7,144.5</b>	<b>42.10</b>	<b>180.00</b>	<b>6,892.0</b>	<b>-1,903.00</b>	<b>697.0</b>	<b>933.9</b>	<b>-456.5</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,200.0	46.54	180.00	6,931.7	-1,942.68	658.2	933.9	-418.8	8.00	8.00	0.00
7,300.0	54.54	180.00	6,995.2	-2,006.18	581.1	933.9	-343.9	8.00	8.00	0.00
<b>NIORARA A</b>										
<b>7,376.2</b>	<b>60.64</b>	<b>180.00</b>	<b>7,036.0</b>	<b>-2,047.00</b>	<b>516.8</b>	<b>933.9</b>	<b>-281.4</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,400.0	62.54	180.00	7,047.3	-2,058.32	495.8	933.9	-261.0	8.00	8.00	0.00
7,500.0	70.54	180.00	7,087.1	-2,098.10	404.2	933.9	-172.0	8.00	8.00	0.00
7,600.0	78.54	180.00	7,113.7	-2,124.73	307.9	933.9	-78.4	8.00	8.00	0.00
<b>NIORARA B</b>										
<b>7,623.4</b>	<b>80.42</b>	<b>180.00</b>	<b>7,118.0</b>	<b>-2,129.00</b>	<b>284.9</b>	<b>933.9</b>	<b>-56.0</b>	<b>8.00</b>	<b>8.00</b>	<b>0.00</b>
7,700.0	86.54	180.00	7,126.7	-2,137.69	208.8	933.9	17.9	8.00	8.00	0.00
<b>7" ICP *NEW*: 784.3ft FNL &amp; 1381ft FEL of Sec 30</b>										



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well OLSON 30R-203
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4989.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4989.0usft (Original Well Elev)
<b>Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	OLSON 30R-203	<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)
7,746.5	90.26	180.00	7,128.0	-2,138.99	162.3	933.9	63.0	7.99	7.99	0.00
7,800.0	90.26	180.00	7,127.7	-2,138.75	108.8	933.9	115.0	0.00	0.00	0.00
7,900.0	90.26	180.00	7,127.3	-2,138.29	8.8	933.9	212.2	0.00	0.00	0.00
8,000.0	90.26	180.00	7,126.8	-2,137.84	-91.2	933.9	309.3	0.00	0.00	0.00
8,100.0	90.26	180.00	7,126.4	-2,137.39	-191.2	933.9	406.5	0.00	0.00	0.00
8,200.0	90.26	180.00	7,125.9	-2,136.93	-291.2	933.9	503.7	0.00	0.00	0.00
8,300.0	90.26	180.00	7,125.5	-2,136.48	-391.2	933.9	600.8	0.00	0.00	0.00
8,400.0	90.26	180.00	7,125.0	-2,136.03	-491.2	933.9	698.0	0.00	0.00	0.00
8,500.0	90.26	180.00	7,124.6	-2,135.58	-591.2	933.9	795.2	0.00	0.00	0.00
8,600.0	90.26	180.00	7,124.1	-2,135.12	-691.2	933.9	892.3	0.00	0.00	0.00
8,700.0	90.26	180.00	7,123.7	-2,134.67	-791.2	933.9	989.5	0.00	0.00	0.00
8,800.0	90.26	180.00	7,123.2	-2,134.22	-891.2	933.9	1,086.7	0.00	0.00	0.00
8,900.0	90.26	180.00	7,122.8	-2,133.77	-991.2	933.9	1,183.8	0.00	0.00	0.00
9,000.0	90.26	180.00	7,122.3	-2,133.32	-1,091.2	933.9	1,281.0	0.00	0.00	0.00
9,100.0	90.26	180.00	7,121.9	-2,132.87	-1,191.2	933.9	1,378.2	0.00	0.00	0.00
9,200.0	90.26	180.00	7,121.4	-2,132.42	-1,291.2	933.9	1,475.3	0.00	0.00	0.00
9,300.0	90.26	180.00	7,121.0	-2,131.97	-1,391.2	933.9	1,572.5	0.00	0.00	0.00
9,400.0	90.26	180.00	7,120.5	-2,131.52	-1,491.2	933.9	1,669.6	0.00	0.00	0.00
9,500.0	90.26	180.00	7,120.1	-2,131.06	-1,591.2	933.9	1,766.8	0.00	0.00	0.00
9,600.0	90.26	180.00	7,119.6	-2,130.61	-1,691.2	933.9	1,864.0	0.00	0.00	0.00
9,700.0	90.26	180.00	7,119.2	-2,130.17	-1,791.2	933.9	1,961.1	0.00	0.00	0.00
9,800.0	90.26	180.00	7,118.7	-2,129.72	-1,891.2	933.9	2,058.3	0.00	0.00	0.00
9,900.0	90.26	180.00	7,118.3	-2,129.27	-1,991.2	933.9	2,155.5	0.00	0.00	0.00
10,000.0	90.26	180.00	7,117.8	-2,128.82	-2,091.2	933.9	2,252.6	0.00	0.00	0.00
10,100.0	90.26	180.00	7,117.4	-2,128.37	-2,191.2	933.9	2,349.8	0.00	0.00	0.00
10,200.0	90.26	180.00	7,116.9	-2,127.92	-2,291.2	933.9	2,447.0	0.00	0.00	0.00
10,300.0	90.26	180.00	7,116.5	-2,127.47	-2,391.2	933.9	2,544.1	0.00	0.00	0.00
10,400.0	90.26	180.00	7,116.0	-2,127.02	-2,491.2	933.9	2,641.3	0.00	0.00	0.00
10,500.0	90.26	180.00	7,115.6	-2,126.57	-2,591.2	933.9	2,738.5	0.00	0.00	0.00
10,600.0	90.26	180.00	7,115.1	-2,126.13	-2,691.2	933.9	2,835.6	0.00	0.00	0.00
10,700.0	90.26	180.00	7,114.7	-2,125.68	-2,791.2	933.9	2,932.8	0.00	0.00	0.00
10,800.0	90.26	180.00	7,114.2	-2,125.23	-2,891.2	933.9	3,030.0	0.00	0.00	0.00
10,900.0	90.26	180.00	7,113.8	-2,124.78	-2,991.2	933.9	3,127.1	0.00	0.00	0.00
11,000.0	90.26	180.00	7,113.3	-2,124.34	-3,091.2	933.9	3,224.3	0.00	0.00	0.00
11,100.0	90.26	180.00	7,112.9	-2,123.89	-3,191.2	933.9	3,321.5	0.00	0.00	0.00
11,200.0	90.26	180.00	7,112.4	-2,123.44	-3,291.2	933.9	3,418.6	0.00	0.00	0.00
11,300.0	90.26	180.00	7,112.0	-2,123.00	-3,391.2	933.9	3,515.8	0.00	0.00	0.00
11,400.0	90.26	180.00	7,111.6	-2,122.55	-3,491.1	933.9	3,613.0	0.00	0.00	0.00
11,500.0	90.26	180.00	7,111.1	-2,122.10	-3,591.1	933.9	3,710.1	0.00	0.00	0.00
11,600.0	90.26	180.00	7,110.7	-2,121.66	-3,691.1	933.9	3,807.3	0.00	0.00	0.00
11,700.0	90.26	180.00	7,110.2	-2,121.21	-3,791.1	933.9	3,904.5	0.00	0.00	0.00
<b>BHL: 500ft FSL &amp; 1375ft FEL of Sec 30</b>										
11,747.9	90.26	180.00	7,110.0	-2,121.00	-3,839.0	933.9	3,951.0	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well OLSON 30R-203
<b>Company:</b>	PDC ENERGY	<b>TVD Reference:</b>	KB-EST @ 4989.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB-EST @ 4989.0usft (Original Well Elev)
<b>Site:</b>	NW NE SEC 30 T4N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	OLSON 30R-203	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,690.9	3,614.0	PARKMAN		0.00	
4,206.0	4,098.0	SUSSEX		0.00	
4,794.4	4,651.0	SHANNON		0.00	
7,144.5	6,892.0	SHARON SPRINGS		0.00	
7,376.2	7,036.0	NIOBRARA A		0.00	
7,623.4	7,118.0	NIOBRARA B		0.00	

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL: 983ft FNL & 2314ft FEL of Sec 30
1,750.0	1,750.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,750.0	2,729.8	128.4	115.6	EOB TO 20° INC
3,749.0	3,668.6	382.3	344.2	END OF TANGENT
3,885.2	3,796.6	414.6	377.7	EOT TO 49.97° AZ
5,504.2	5,318.0	770.7	801.6	END OF TANGENT
6,504.1	6,297.7	881.8	933.9	EOD TO VERTICAL
6,618.2	6,411.8	881.8	933.9	KOP (8°/100ft BUR)
7,746.5	7,128.0	162.3	933.9	7" ICP *NEW*: 784.3ft FNL & 1381ft FEL of Sec 30
11,747.9	7,110.0	-3,839.0	933.9	BHL: 500ft FSL & 1375ft FEL of Sec 30