

PDC ENERGY

WELD COUNTY, COLORADO

NW NE SEC 30 T4N R67W 6th P.M.

OLSON 30U-343 - Slot OLSON 30U-343

ORIGINAL WELLBORE

26 February, 2016

Plan: PROPOSAL #2





Project: WELD COUNTY, COLORADO
Site: NW NE SEC 30 T4N R67W 6th P.M.
Well: OLSON 30U-343
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

ANNOTATIONS

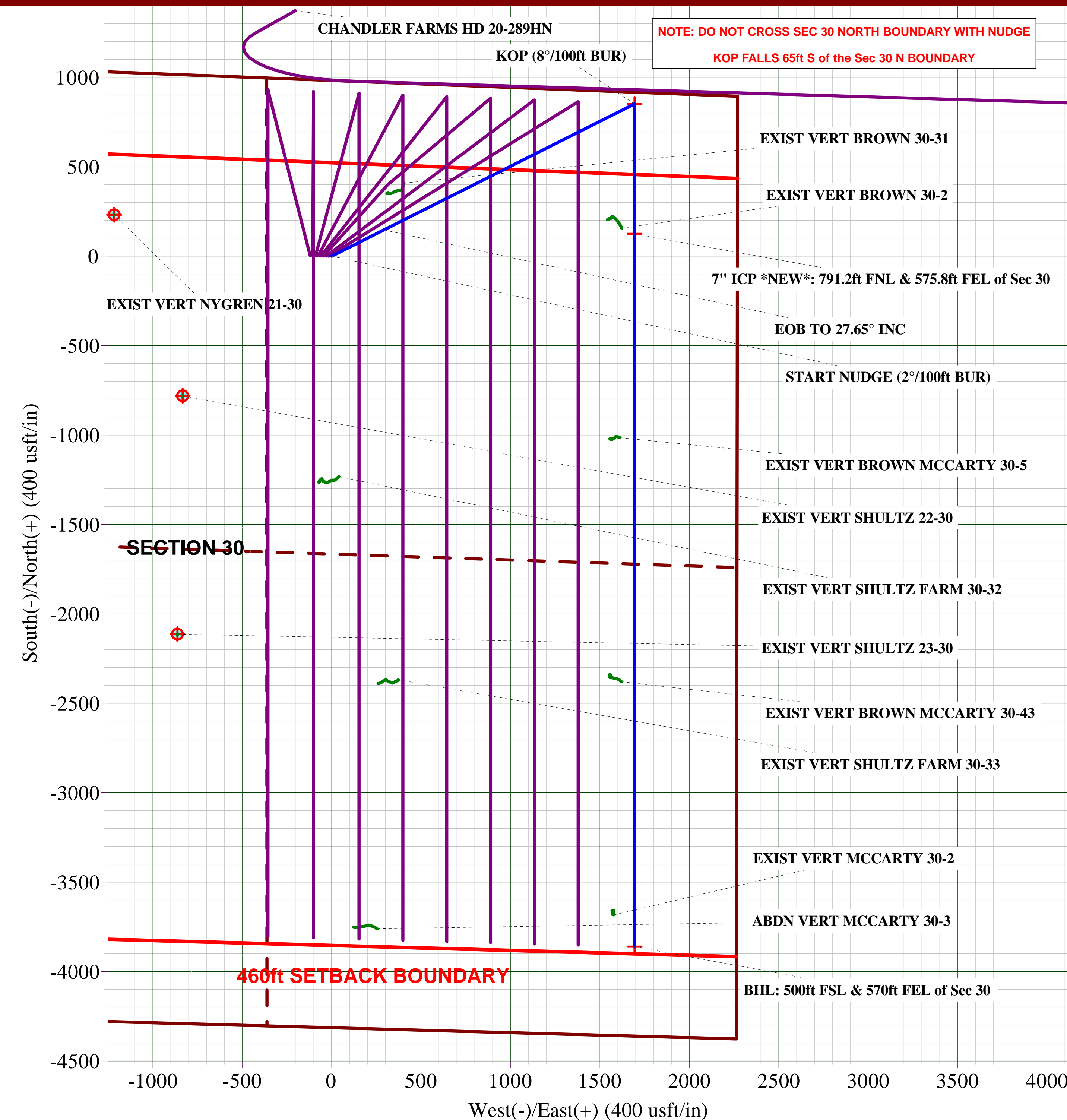
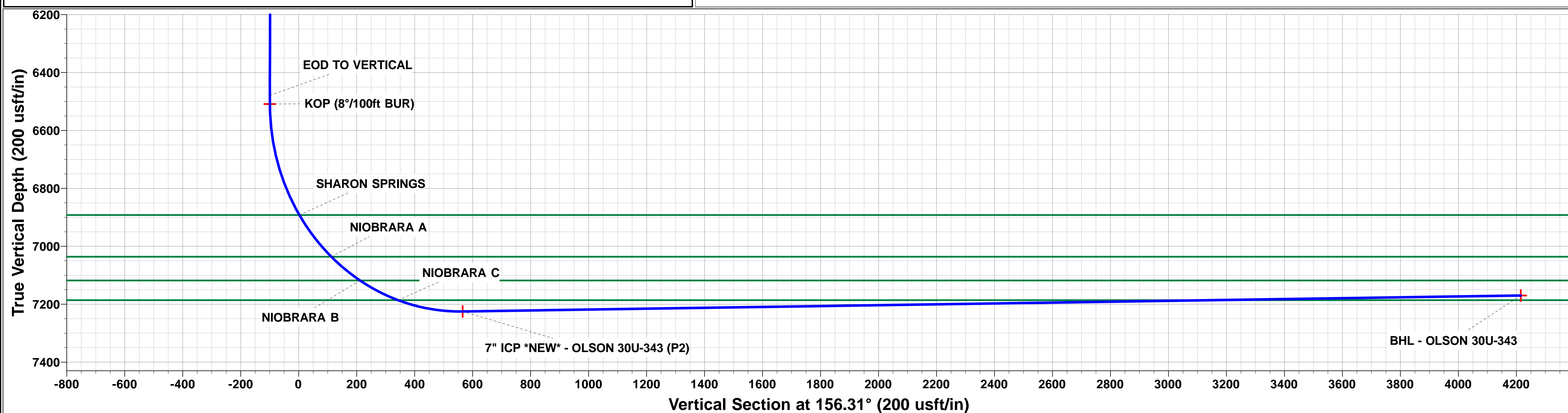
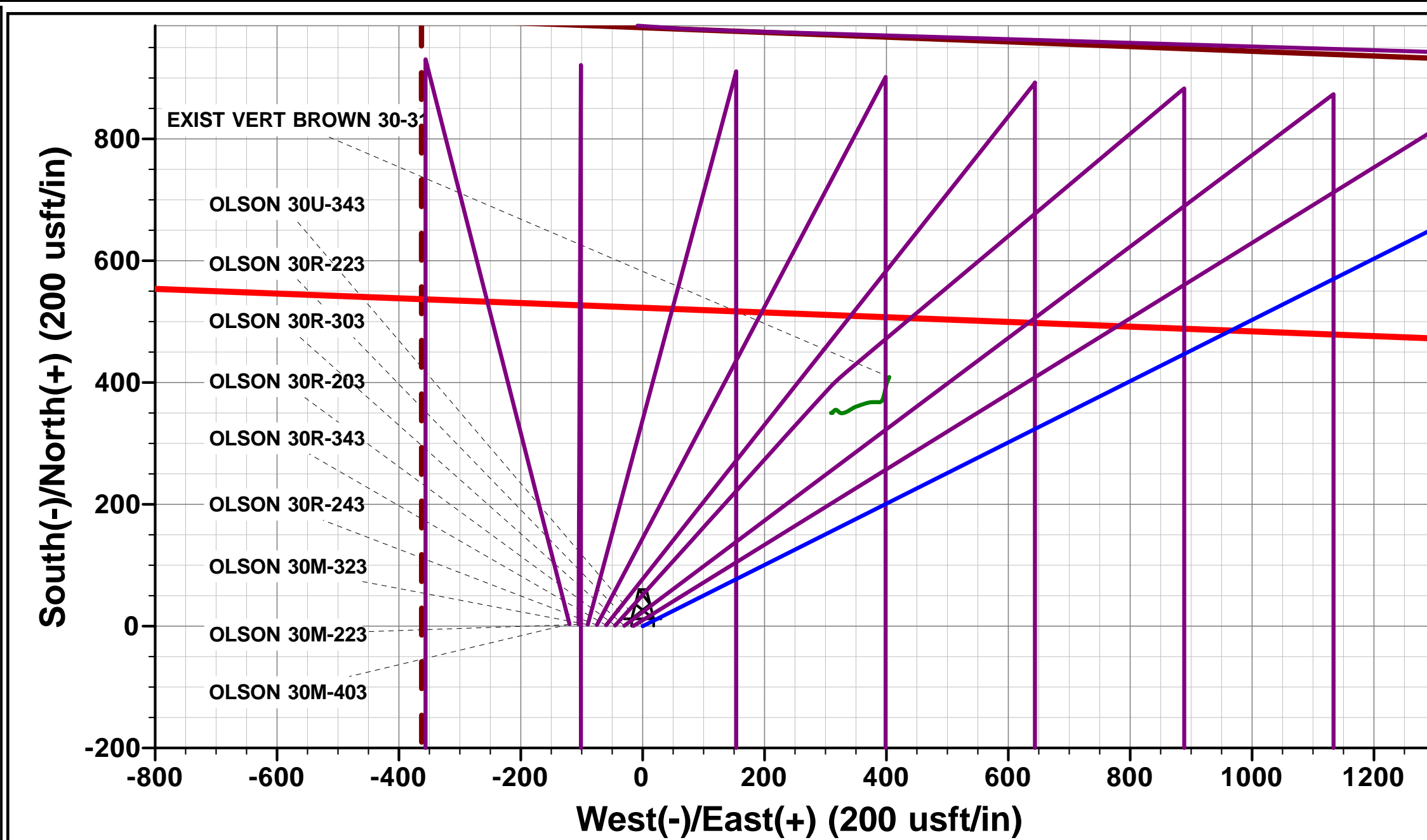
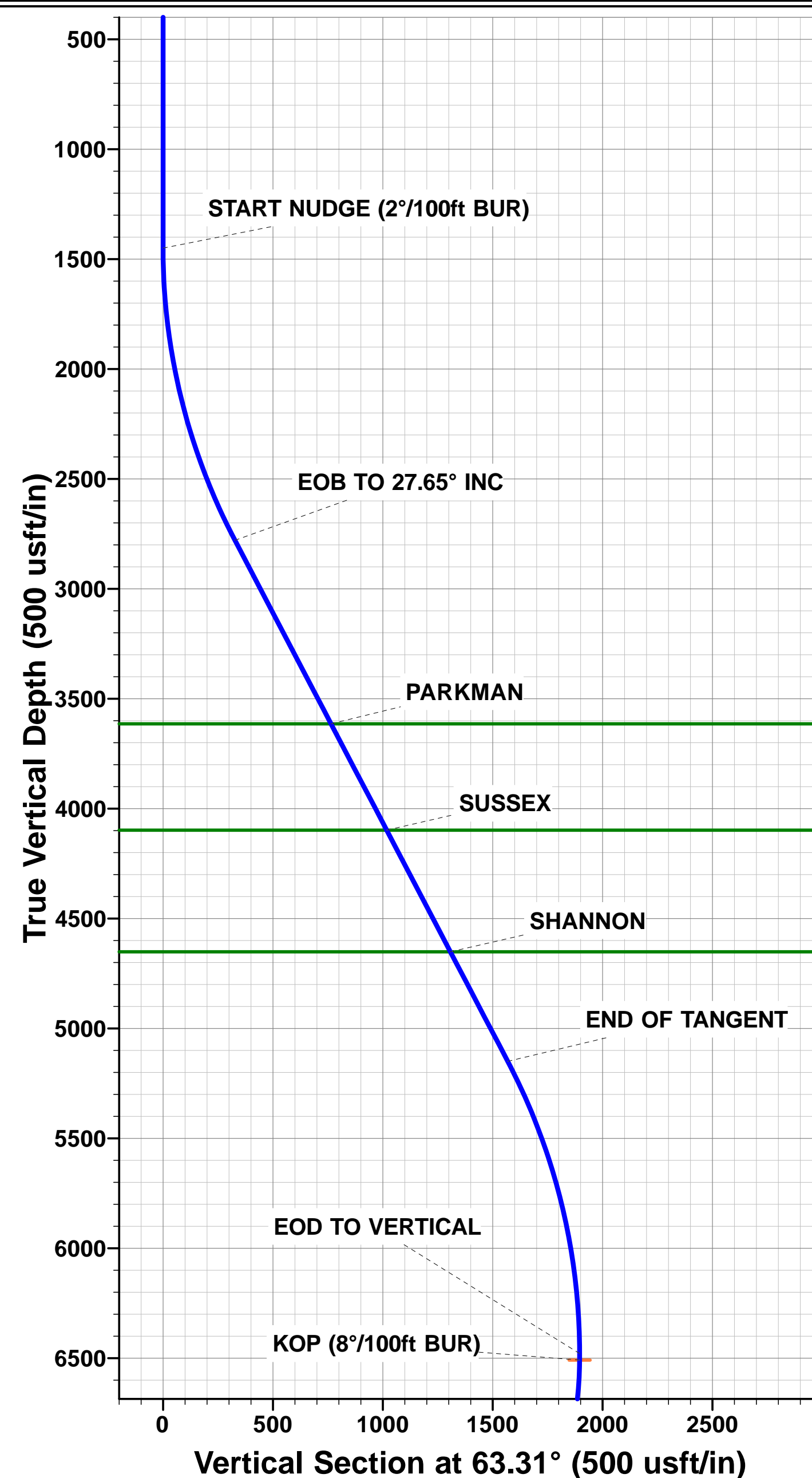
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Dep	Annotation
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 982ft FNL & 2269ft FEL of Sec 30
1450.0	1450.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2779.3	2832.3	27.65	63.31	146.9	292.2	-17.1	327.1	EOB TO 27.65° INC
5149.7	5508.2	27.65	63.31	704.6	1401.5	-82.1	1568.7	END OF TANGENT
6478.9	6890.4	0.00	63.31	851.5	1693.7	-99.2	1895.7	EOD TO VERTICAL
6508.9	6920.4	0.00	0.00	851.5	1693.7	-99.2	1895.7	KOP (8°/100ft BUR)
7225.0	8055.3	90.79	180.00	125.4	1693.7	565.7	2621.8	7" ICP *NEW*: 791.2ft FNL & 575.8ft FEL of Sec 30
7170.0	12041.2	90.79	180.00	-3860.1	1693.7	4215.3	6607.3	BHL: 500ft FSL & 570ft FEL of Sec 30

PROPOSED LOCAL COORDINATES:

SHL: 982ft FNL & 2269ft FEL Sec 30
7" ICP *NEW*: 791.2ft FNL & 575.8ft FEL Sec 30
BHL: 500ft FSL & 570ft FEL Sec 30

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - OLSON 30U-343 (P2)	6508.9	851.5	1693.7	40.291350	-104.925122
BHL - OLSON 30U-343	7170.0	-3860.1	1693.7	40.278417	-104.925123
7" ICP *NEW* - OLSON 30U-343 (P2)	7225.0	125.4	1693.7	40.289357	-104.925122



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well OLSON 30U-343 - Slot OLSON 30U-343
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4989.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4989.0usft (Original Well Elev)
Site:	NW NE SEC 30 T4N R67W 6th P.M.	North Reference:	True
Well:	OLSON 30U-343	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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 NE SEC 30 T4N R67W 6th P.M.		
Site Position:		Northing:	1,348,637.56 usft
From:	Lat/Long	Easting:	3,158,676.90 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.289013
		Longitude:	-104.931193
		Grid Convergence:	0.37 °

Well	OLSON 30U-343 - Slot OLSON 30U-343		
Well Position	+N-S	0.0 usft	Northing: 1,348,637.56 usft
	+E-W	0.0 usft	Easting: 3,158,676.90 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	40.289013
		Longitude:	-104.931193
		Ground Level:	4,966.0 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	24/02/2016	8.43	66.77	52,465

Design	PROPOSAL #2			
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	156.31

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	-4,989.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,450.0	0.00	0.00	1,450.0	-3,539.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,832.3	27.65	63.31	2,779.2	-2,209.8	146.9	292.2	2.00	2.00	0.00	63.31	
5,508.2	27.65	63.31	5,149.7	160.7	704.6	1,401.5	0.00	0.00	0.00	0.00	
6,890.4	0.00	0.00	6,478.9	1,489.9	851.5	1,693.7	2.00	-2.00	0.00	180.00	
6,920.4	0.00	0.00	6,508.9	1,519.9	851.5	1,693.7	0.00	0.00	0.00	0.00	KOP - OLSON 30U
8,055.3	90.79	180.00	7,225.0	2,236.0	125.4	1,693.7	8.00	8.00	0.00	180.00	
12,041.2	90.79	180.00	7,170.0	2,181.0	-3,860.1	1,693.7	0.00	0.00	0.00	27.31	BHL - OLSON 30U-

Planning Report



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Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4989.0usft (Original Well Elev)
Site:	NW NE SEC 30 T4N R67W 6th P.M.	North Reference:	True
Well:	OLSON 30U-343	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
SHL: 982ft FNL & 2269ft FEL of Sec 30										
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
START NUDGE (2°/100ft BUR)										
1,450.0	0.00	0.00	1,450.0	3,539.00	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	1.00	63.31	1,500.0	3,489.00	0.2	0.4	0.0	2.00	2.00	0.00
1,600.0	3.00	63.31	1,599.9	3,389.07	1.8	3.5	-0.2	2.00	2.00	0.00
1,700.0	5.00	63.31	1,699.7	3,289.32	4.9	9.7	-0.6	2.00	2.00	0.00
1,800.0	7.00	63.31	1,799.1	3,189.87	9.6	19.1	-1.1	2.00	2.00	0.00
1,900.0	9.00	63.31	1,898.2	3,090.85	15.8	31.5	-1.8	2.00	2.00	0.00
2,000.0	11.00	63.31	1,996.6	2,992.37	23.6	47.0	-2.8	2.00	2.00	0.00
2,100.0	13.00	63.31	2,094.4	2,894.56	33.0	65.6	-3.8	2.00	2.00	0.00
2,200.0	15.00	63.31	2,191.5	2,797.54	43.8	87.2	-5.1	2.00	2.00	0.00
2,300.0	17.00	63.31	2,287.6	2,701.42	56.2	111.8	-6.6	2.00	2.00	0.00
2,400.0	19.00	63.31	2,382.7	2,606.32	70.1	139.4	-8.2	2.00	2.00	0.00
2,500.0	21.00	63.31	2,476.6	2,512.35	85.5	170.0	-10.0	2.00	2.00	0.00
2,600.0	23.00	63.31	2,569.4	2,419.64	102.3	203.5	-11.9	2.00	2.00	0.00
2,700.0	25.00	63.31	2,660.7	2,328.29	120.6	239.8	-14.1	2.00	2.00	0.00
2,800.0	27.00	63.31	2,750.6	2,238.41	140.3	279.0	-16.3	2.00	2.00	0.00
EOB TO 27.65° INC										
2,832.3	27.65	63.31	2,779.3	2,209.72	146.9	292.2	-17.1	2.00	2.00	0.00
2,900.0	27.65	63.31	2,839.3	2,149.75	161.0	320.3	-18.8	0.00	0.00	0.00
3,000.0	27.65	63.31	2,927.8	2,061.16	181.9	361.7	-21.2	0.00	0.00	0.00
3,100.0	27.65	63.31	3,016.4	1,972.58	202.7	403.2	-23.6	0.00	0.00	0.00
3,200.0	27.65	63.31	3,105.0	1,883.99	223.5	444.6	-26.1	0.00	0.00	0.00
3,300.0	27.65	63.31	3,193.6	1,795.41	244.4	486.1	-28.5	0.00	0.00	0.00
3,400.0	27.65	63.31	3,282.2	1,706.83	265.2	527.6	-30.9	0.00	0.00	0.00
3,500.0	27.65	63.31	3,370.8	1,618.24	286.1	569.0	-33.3	0.00	0.00	0.00
3,600.0	27.65	63.31	3,459.3	1,529.66	306.9	610.5	-35.8	0.00	0.00	0.00
3,700.0	27.65	63.31	3,547.9	1,441.07	327.8	651.9	-38.2	0.00	0.00	0.00
PARKMAN										
3,774.6	27.65	63.31	3,614.0	1,375.00	343.3	682.8	-40.0	0.00	0.00	0.00
3,800.0	27.65	63.31	3,636.5	1,352.49	348.6	693.4	-40.6	0.00	0.00	0.00
3,900.0	27.65	63.31	3,725.1	1,263.91	369.4	734.8	-43.1	0.00	0.00	0.00
4,000.0	27.65	63.31	3,813.7	1,175.32	390.3	776.3	-45.5	0.00	0.00	0.00
4,100.0	27.65	63.31	3,902.3	1,086.74	411.1	817.7	-47.9	0.00	0.00	0.00
4,200.0	27.65	63.31	3,990.8	998.16	432.0	859.2	-50.3	0.00	0.00	0.00
4,300.0	27.65	63.31	4,079.4	909.57	452.8	900.7	-52.8	0.00	0.00	0.00
SUSSEX										
4,321.0	27.65	63.31	4,098.0	891.00	457.2	909.3	-53.3	0.00	0.00	0.00
4,400.0	27.65	63.31	4,168.0	820.99	473.6	942.1	-55.2	0.00	0.00	0.00

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Wellbore:	ORIGINAL WELLBORE		
Design:	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)
4,500.0	27.65	63.31	4,256.6	732.40	494.5	983.6	-57.6	0.00	0.00	0.00
4,600.0	27.65	63.31	4,345.2	643.82	515.3	1,025.0	-60.1	0.00	0.00	0.00
4,700.0	27.65	63.31	4,433.8	555.24	536.2	1,066.5	-62.5	0.00	0.00	0.00
4,800.0	27.65	63.31	4,522.3	466.65	557.0	1,107.9	-64.9	0.00	0.00	0.00
4,900.0	27.65	63.31	4,610.9	378.07	577.9	1,149.4	-67.3	0.00	0.00	0.00
SHANNON										
4,945.2	27.65	63.31	4,651.0	338.00	587.3	1,168.1	-68.4	0.00	0.00	0.00
5,000.0	27.65	63.31	4,699.5	289.49	598.7	1,190.8	-69.8	0.00	0.00	0.00
5,100.0	27.65	63.31	4,788.1	200.90	619.5	1,232.3	-72.2	0.00	0.00	0.00
5,200.0	27.65	63.31	4,876.7	112.32	640.4	1,273.8	-74.6	0.00	0.00	0.00
5,300.0	27.65	63.31	4,965.3	23.73	661.2	1,315.2	-77.1	0.00	0.00	0.00
5,400.0	27.65	63.31	5,053.8	-64.85	682.1	1,356.7	-79.5	0.00	0.00	0.00
5,500.0	27.65	63.31	5,142.4	-153.43	702.9	1,398.1	-81.9	0.00	0.00	0.00
END OF TANGENT										
5,508.2	27.65	63.31	5,149.7	-160.70	704.6	1,401.5	-82.1	0.00	0.00	0.00
5,600.0	25.81	63.31	5,231.7	-242.69	723.2	1,438.4	-84.3	2.00	-2.00	0.00
5,700.0	23.81	63.31	5,322.5	-333.45	742.0	1,475.9	-86.5	2.00	-2.00	0.00
5,800.0	21.81	63.31	5,414.6	-425.63	759.4	1,510.5	-88.5	2.00	-2.00	0.00
5,900.0	19.81	63.31	5,508.1	-519.10	775.4	1,542.3	-90.4	2.00	-2.00	0.00
6,000.0	17.81	63.31	5,602.8	-613.76	789.8	1,571.1	-92.1	2.00	-2.00	0.00
6,100.0	15.81	63.31	5,698.5	-709.48	802.8	1,596.9	-93.6	2.00	-2.00	0.00
6,200.0	13.81	63.31	5,795.2	-806.16	814.3	1,619.7	-94.9	2.00	-2.00	0.00
6,300.0	11.81	63.31	5,892.7	-903.66	824.3	1,639.5	-96.1	2.00	-2.00	0.00
6,400.0	9.81	63.31	5,990.9	-1,001.88	832.7	1,656.3	-97.0	2.00	-2.00	0.00
6,500.0	7.81	63.31	6,089.7	-1,100.70	839.6	1,670.0	-97.8	2.00	-2.00	0.00
6,600.0	5.81	63.31	6,189.0	-1,199.99	844.9	1,680.6	-98.5	2.00	-2.00	0.00
6,700.0	3.81	63.31	6,288.6	-1,299.63	848.7	1,688.0	-98.9	2.00	-2.00	0.00
6,800.0	1.81	63.31	6,388.5	-1,399.51	850.9	1,692.4	-99.2	2.00	-2.00	0.00
EOD TO VERTICAL										
6,890.4	0.00	63.31	6,478.9	-1,489.89	851.5	1,693.7	-99.2	2.00	-2.00	0.00
6,900.0	0.00	0.00	6,488.5	-1,499.49	851.5	1,693.7	-99.2	0.00	0.00	0.00
KOP (8°/100ft BUR)										
6,920.4	0.00	0.00	6,508.9	-1,519.89	851.5	1,693.7	-99.2	0.00	0.00	0.00
7,000.0	6.37	180.00	6,588.3	-1,599.33	847.1	1,693.7	-95.2	8.00	8.00	0.00
7,100.0	14.37	180.00	6,686.6	-1,697.62	829.1	1,693.7	-78.7	8.00	8.00	0.00
7,200.0	22.37	180.00	6,781.4	-1,792.44	797.6	1,693.7	-49.9	8.00	8.00	0.00
7,300.0	30.37	180.00	6,871.0	-1,881.97	753.2	1,693.7	-9.3	8.00	8.00	0.00
SHARON SPRINGS										
7,324.6	32.34	180.00	6,892.0	-1,903.00	740.4	1,693.7	2.5	8.00	8.00	0.00
7,400.0	38.37	180.00	6,953.4	-1,964.44	696.8	1,693.7	42.4	8.00	8.00	0.00
7,500.0	46.37	180.00	7,027.3	-2,038.27	629.5	1,693.7	104.1	8.00	8.00	0.00
NIOBRARA A										
7,512.8	47.39	180.00	7,036.0	-2,047.00	620.2	1,693.7	112.6	8.00	8.00	0.00
7,600.0	54.37	180.00	7,091.0	-2,102.00	552.5	1,693.7	174.5	8.00	8.00	0.00
NIOBRARA B										
7,648.7	58.26	180.00	7,118.0	-2,129.00	512.0	1,693.7	211.6	8.00	8.00	0.00
7,700.0	62.37	180.00	7,143.4	-2,154.41	467.5	1,693.7	252.4	8.00	8.00	0.00
7,800.0	70.37	180.00	7,183.5	-2,194.46	375.9	1,693.7	336.2	8.00	8.00	0.00
NIOBRARA C										
7,807.7	70.98	180.00	7,186.0	-2,197.00	368.7	1,693.7	342.9	8.00	8.00	0.00
7,900.0	78.37	180.00	7,210.4	-2,221.39	279.7	1,693.7	424.4	8.00	8.00	0.00
8,000.0	86.37	180.00	7,223.7	-2,234.66	180.7	1,693.7	515.1	8.00	8.00	0.00
7" ICP *NEW*: 791.2ft FNL & 575.8ft FEL of Sec 30										

Planning Report



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Site:	NW NE SEC 30 T4N R67W 6th P.M.	North Reference:	True
Well:	OLSON 30U-343	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
8,055.3	90.79	180.00	7,225.0	-2,236.03	125.4	1,693.7	565.7	8.00	8.00	0.00
8,100.0	90.79	180.00	7,224.4	-2,235.41	80.7	1,693.7	606.6	0.00	0.00	0.00
8,200.0	90.79	180.00	7,223.0	-2,234.03	-19.3	1,693.7	698.2	0.00	0.00	0.00
8,300.0	90.79	180.00	7,221.7	-2,232.65	-119.3	1,693.7	789.7	0.00	0.00	0.00
8,400.0	90.79	180.00	7,220.3	-2,231.28	-219.3	1,693.7	881.3	0.00	0.00	0.00
8,500.0	90.79	180.00	7,218.9	-2,229.90	-319.2	1,693.7	972.9	0.00	0.00	0.00
8,600.0	90.79	180.00	7,217.5	-2,228.52	-419.2	1,693.7	1,064.4	0.00	0.00	0.00
8,700.0	90.79	180.00	7,216.1	-2,227.14	-519.2	1,693.7	1,156.0	0.00	0.00	0.00
8,800.0	90.79	180.00	7,214.8	-2,225.76	-619.2	1,693.7	1,247.5	0.00	0.00	0.00
8,900.0	90.79	180.00	7,213.4	-2,224.38	-719.2	1,693.7	1,339.1	0.00	0.00	0.00
9,000.0	90.79	180.00	7,212.0	-2,223.00	-819.2	1,693.7	1,430.7	0.00	0.00	0.00
9,100.0	90.79	180.00	7,210.6	-2,221.62	-919.2	1,693.7	1,522.2	0.00	0.00	0.00
9,200.0	90.79	180.00	7,209.2	-2,220.24	-1,019.2	1,693.7	1,613.8	0.00	0.00	0.00
9,300.0	90.79	180.00	7,207.9	-2,218.86	-1,119.2	1,693.7	1,705.4	0.00	0.00	0.00
9,400.0	90.79	180.00	7,206.5	-2,217.48	-1,219.2	1,693.7	1,796.9	0.00	0.00	0.00
9,500.0	90.79	180.00	7,205.1	-2,216.10	-1,319.2	1,693.7	1,888.5	0.00	0.00	0.00
9,600.0	90.79	180.00	7,203.7	-2,214.72	-1,419.1	1,693.7	1,980.1	0.00	0.00	0.00
9,700.0	90.79	180.00	7,202.3	-2,213.34	-1,519.1	1,693.7	2,071.6	0.00	0.00	0.00
9,800.0	90.79	180.00	7,201.0	-2,211.96	-1,619.1	1,693.7	2,163.2	0.00	0.00	0.00
9,900.0	90.79	180.00	7,199.6	-2,210.58	-1,719.1	1,693.7	2,254.8	0.00	0.00	0.00
10,000.0	90.79	180.00	7,198.2	-2,209.20	-1,819.1	1,693.7	2,346.3	0.00	0.00	0.00
10,100.0	90.79	180.00	7,196.8	-2,207.82	-1,919.1	1,693.7	2,437.9	0.00	0.00	0.00
10,200.0	90.79	180.00	7,195.4	-2,206.44	-2,019.1	1,693.7	2,529.4	0.00	0.00	0.00
10,300.0	90.79	180.00	7,194.1	-2,205.06	-2,119.1	1,693.7	2,621.0	0.00	0.00	0.00
10,400.0	90.79	180.00	7,192.7	-2,203.68	-2,219.1	1,693.7	2,712.6	0.00	0.00	0.00
10,500.0	90.79	180.00	7,191.3	-2,202.29	-2,319.1	1,693.7	2,804.1	0.00	0.00	0.00
10,600.0	90.79	180.00	7,189.9	-2,200.91	-2,419.0	1,693.7	2,895.7	0.00	0.00	0.00
10,700.0	90.79	180.00	7,188.5	-2,199.53	-2,519.0	1,693.7	2,987.3	0.00	0.00	0.00
10,800.0	90.79	180.00	7,187.2	-2,198.15	-2,619.0	1,693.7	3,078.8	0.00	0.00	0.00
10,900.0	90.79	180.00	7,185.8	-2,196.77	-2,719.0	1,693.7	3,170.4	0.00	0.00	0.00
11,000.0	90.79	180.00	7,184.4	-2,195.39	-2,819.0	1,693.7	3,262.0	0.00	0.00	0.00
11,100.0	90.79	180.00	7,183.0	-2,194.01	-2,919.0	1,693.7	3,353.5	0.00	0.00	0.00
11,200.0	90.79	180.00	7,181.6	-2,192.63	-3,019.0	1,693.7	3,445.1	0.00	0.00	0.00
11,300.0	90.79	180.00	7,180.2	-2,191.24	-3,119.0	1,693.7	3,536.6	0.00	0.00	0.00
11,400.0	90.79	180.00	7,178.9	-2,189.86	-3,219.0	1,693.7	3,628.2	0.00	0.00	0.00
11,500.0	90.79	180.00	7,177.5	-2,188.48	-3,319.0	1,693.7	3,719.8	0.00	0.00	0.00
11,600.0	90.79	180.00	7,176.1	-2,187.10	-3,419.0	1,693.7	3,811.3	0.00	0.00	0.00
11,700.0	90.79	180.00	7,174.7	-2,185.72	-3,518.9	1,693.7	3,902.9	0.00	0.00	0.00
11,800.0	90.79	180.00	7,173.3	-2,184.33	-3,618.9	1,693.7	3,994.5	0.00	0.00	0.00
11,900.0	90.79	180.00	7,172.0	-2,182.95	-3,718.9	1,693.7	4,086.0	0.00	0.00	0.00
12,000.0	90.79	180.00	7,170.6	-2,181.57	-3,818.9	1,693.7	4,177.6	0.00	0.00	0.00
BHL: 500ft FSL & 570ft FEL of Sec 30										
12,041.2	90.79	180.00	7,170.0	-2,181.00	-3,860.1	1,693.7	4,215.3	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well OLSON 30U-343 - Slot OLSON 30U-343
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4989.0usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4989.0usft (Original Well Elev)
Site:	NW NE SEC 30 T4N R67W 6th P.M.	North Reference:	True
Well:	OLSON 30U-343	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,774.6	3,614.0	PARKMAN		0.00	
4,321.0	4,098.0	SUSSEX		0.00	
4,945.2	4,651.0	SHANNON		0.00	
7,324.6	6,892.0	SHARON SPRINGS		0.00	
7,512.8	7,036.0	NIOBRARA A		0.00	
7,648.7	7,118.0	NIOBRARA B		0.00	
7,807.7	7,186.0	NIOBRARA C		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: 982ft FNL & 2269ft FEL of Sec 30
1,450.0	1,450.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,832.3	2,779.3	146.9	292.2	EOB TO 27.65° INC
5,508.2	5,149.7	704.6	1,401.5	END OF TANGENT
6,890.4	6,478.9	851.5	1,693.7	EOD TO VERTICAL
6,920.4	6,508.9	851.5	1,693.7	KOP (8°/100ft BUR)
8,055.3	7,225.0	125.4	1,693.7	7" ICP *NEW*: 791.2ft FNL & 575.8ft FEL of Sec 30
12,041.2	7,170.0	-3,860.1	1,693.7	BHL: 500ft FSL & 570ft FEL of Sec 30