

PDC ENERGY

WELD COUNTY, COLORADO

SW SW SEC. 28 T5N R67W 6th P.M.

KINZER 28G-332

ORIGINAL WELLBORE

25 March, 2016

Plan: PROPOSAL #2



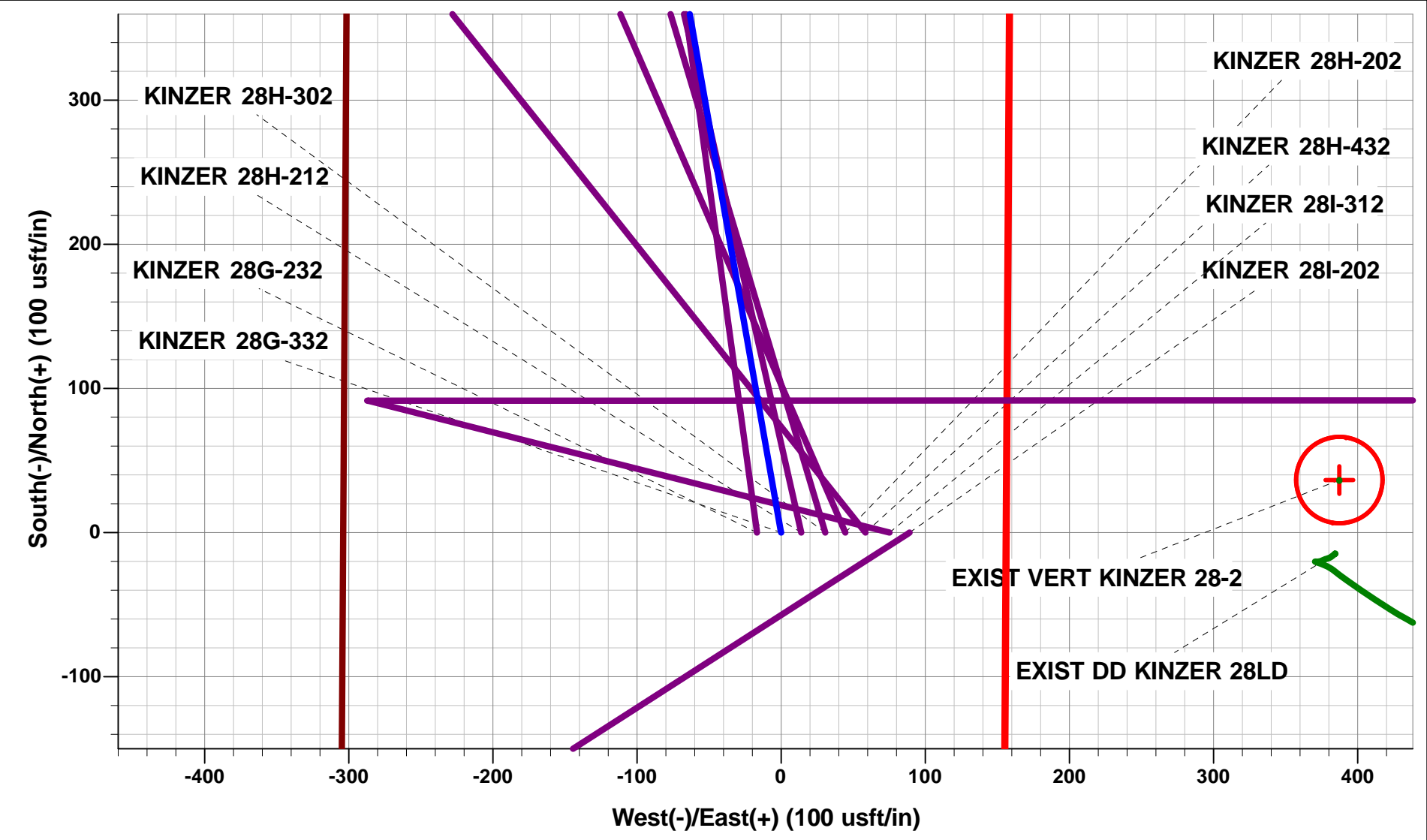


Project: WELD COUNTY, COLORADO
Site: SW SW SEC. 28 T5N R67W 6th P.M.
Well: KINZER 28G-332
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation	
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 431ft FSL & 303ft FWL of Sec 28	
400.0	400.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
1310.3	1326.4	18.53	350.02	146.2	-25.7	19.3	148.5	EOB TO 18.53° INC	
5224.5	5454.5	18.53	350.02	1438.2	-253.1	190.3	1460.3	END OF TANGENT	
6134.8	6380.9	0.00	0.00	1584.4	-278.8	209.6	1608.7	EOD TO VERTICAL	
6164.8	6410.9	0.00	0.00	1584.4	-278.8	209.6	1608.7	KOP (8°/100ft BUR)	
6881.0	7542.1	90.50	90.00	1584.4	443.6	898.7	2331.2	HZ LP *NEW*: 2013.2ft FSL & 737.4ft FWL of Sec 28	
6841.0	12133.9	90.50	90.00	1584.4	5035.2	5278.6	6922.7	BHL *NEW*: 2020ft FSL & 75ft FEL of Sec 28	

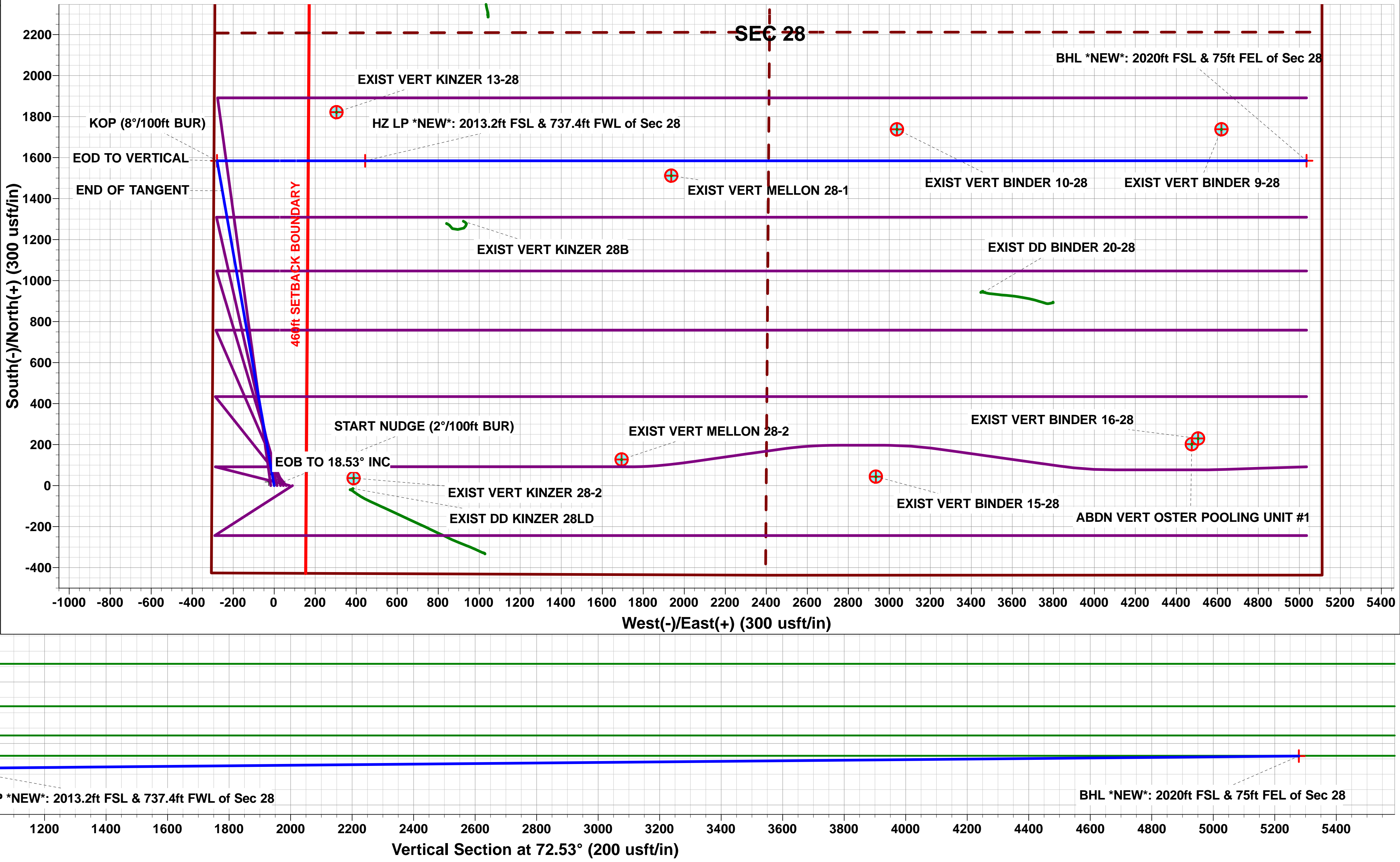
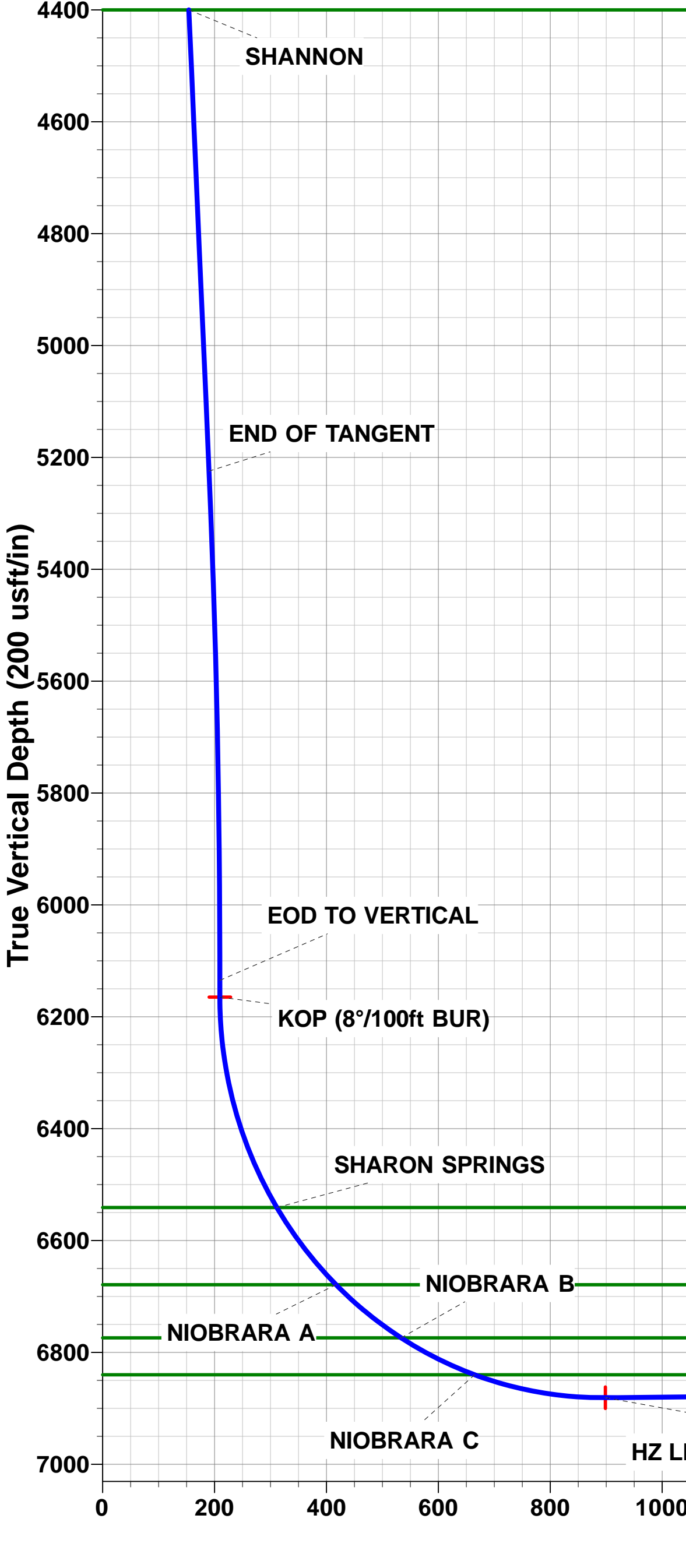
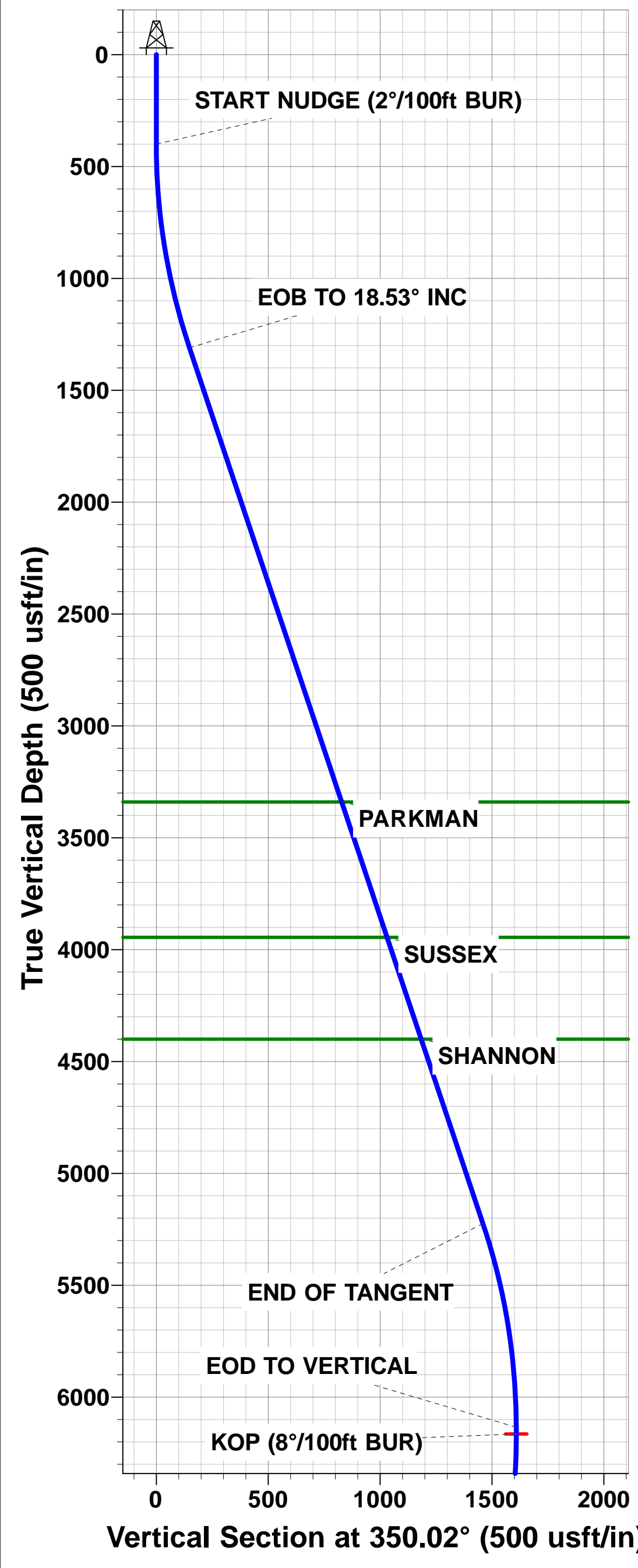
WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - KINZER 28G-332 (P2)	6164.8	1584.4	-278.8	40.368959	-104.907511
BHL *NEW* - KINZER 28G-332 (P2)	6841.0	1584.4	5035.2	40.368958	-104.888440
HZ LP *NEW* - KINZER 28G-332 (P2)	6881.0	1584.4	443.6	40.368959	-104.904918



PROPOSED LOCAL COORDINATES:
SHL: 431ft FSL & 303ft FWL of Sec 28
HZ LP *NEW*: 2013.2ft FSL & 737.4ft FWL of Sec 28
BHL: 2020ft FSL & 75ft FEL of Sec 28

Azimuths to True North
Magnetic North: 8.41°

Magnetic Field
Strength: 52499.7snT
Dip Angle: 66.83°
Date: 24/03/2016
Model: IGRF2015



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well KINZER 28G-332
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site:	SW SW SEC. 28 T5N R67W 6th P.M.	North Reference:	True
Well:	KINZER 28G-332	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	SW SW SEC. 28 T5N R67W 6th P.M.		
Site Position:		Northing:	1,376,222.00 usft
From:	Lat/Long	Easting:	3,165,467.33 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000 ft
		Latitude:	40.364610
		Longitude:	-104.906190
		Grid Convergence:	0.38 °

Well	KINZER 28G-332		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	-89.2 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	24/03/2016	8.41	66.83	52,500

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 (°)
	6,841.0	0.0	0.0	72.53

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	-4,797.5	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	-4,397.5	0.0	0.0	0.00	0.00	0.00	0.00	
1,326.4	18.53	350.02	1,310.3	-3,487.2	146.2	-25.7	2.00	2.00	0.00	350.02	
5,454.5	18.53	350.02	5,224.5	427.0	1,438.2	-253.1	0.00	0.00	0.00	0.00	
6,380.9	0.00	0.00	6,134.8	1,337.3	1,584.4	-278.8	2.00	-2.00	0.00	180.00	
6,410.9	0.00	0.00	6,164.8	1,367.3	1,584.4	-278.8	0.00	0.00	0.00	0.00	KOP - KINZER 28G
7,542.1	90.50	90.00	6,881.0	2,083.5	1,584.4	443.6	8.00	8.00	0.00	90.00	
12,133.9	90.50	90.00	6,841.0	2,043.5	1,584.4	5,035.2	0.00	0.00	0.00	-180.00	BHL *NEW* - KINZI

Planning Report



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Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site:	SW SW SEC. 28 T5N R67W 6th P.M.	North Reference:	True
Well:	KINZER 28G-332	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: 431ft FSL & 303ft FWL of Sec 28										
0.0	0.00	0.00	0.0	4,797.50	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,697.50	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,597.50	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,497.50	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
400.0	0.00	0.00	400.0	4,397.50	0.0	0.0	0.0	0.00	0.00	0.00
500.0	2.00	350.02	500.0	4,297.52	1.7	-0.3	0.2	2.00	2.00	0.00
600.0	4.00	350.02	599.8	4,197.66	6.9	-1.2	0.9	2.00	2.00	0.00
700.0	6.00	350.02	699.5	4,098.05	15.5	-2.7	2.0	2.00	2.00	0.00
800.0	8.00	350.02	798.7	3,998.80	27.5	-4.8	3.6	2.00	2.00	0.00
900.0	10.00	350.02	897.5	3,900.03	42.9	-7.5	5.7	2.00	2.00	0.00
1,000.0	12.00	350.02	995.6	3,801.88	61.7	-10.8	8.2	2.00	2.00	0.00
1,100.0	14.00	350.02	1,093.1	3,704.44	83.8	-14.7	11.1	2.00	2.00	0.00
1,200.0	16.00	350.02	1,189.6	3,607.86	109.3	-19.2	14.5	2.00	2.00	0.00
1,300.0	18.00	350.02	1,285.3	3,512.23	138.1	-24.3	18.3	2.00	2.00	0.00
EOB TO 18.53° INC										
1,326.4	18.53	350.02	1,310.3	3,487.16	146.2	-25.7	19.3	2.00	2.00	0.00
1,400.0	18.53	350.02	1,380.1	3,417.38	169.3	-29.8	22.4	0.00	0.00	0.00
1,500.0	18.53	350.02	1,474.9	3,322.56	200.6	-35.3	26.5	0.00	0.00	0.00
1,600.0	18.53	350.02	1,569.8	3,227.74	231.9	-40.8	30.7	0.00	0.00	0.00
1,700.0	18.53	350.02	1,664.6	3,132.93	263.2	-46.3	34.8	0.00	0.00	0.00
1,800.0	18.53	350.02	1,759.4	3,038.11	294.5	-51.8	39.0	0.00	0.00	0.00
1,900.0	18.53	350.02	1,854.2	2,943.29	325.8	-57.3	43.1	0.00	0.00	0.00
2,000.0	18.53	350.02	1,949.0	2,848.48	357.0	-62.8	47.2	0.00	0.00	0.00
2,100.0	18.53	350.02	2,043.8	2,753.66	388.3	-68.3	51.4	0.00	0.00	0.00
2,200.0	18.53	350.02	2,138.7	2,658.84	419.6	-73.8	55.5	0.00	0.00	0.00
2,300.0	18.53	350.02	2,233.5	2,564.02	450.9	-79.3	59.7	0.00	0.00	0.00
2,400.0	18.53	350.02	2,328.3	2,469.21	482.2	-84.9	63.8	0.00	0.00	0.00
2,500.0	18.53	350.02	2,423.1	2,374.39	513.5	-90.4	67.9	0.00	0.00	0.00
2,600.0	18.53	350.02	2,517.9	2,279.57	544.8	-95.9	72.1	0.00	0.00	0.00
2,700.0	18.53	350.02	2,612.7	2,184.76	576.1	-101.4	76.2	0.00	0.00	0.00
2,800.0	18.53	350.02	2,707.6	2,089.94	607.4	-106.9	80.4	0.00	0.00	0.00
2,900.0	18.53	350.02	2,802.4	1,995.12	638.7	-112.4	84.5	0.00	0.00	0.00
3,000.0	18.53	350.02	2,897.2	1,900.31	670.0	-117.9	88.6	0.00	0.00	0.00
3,100.0	18.53	350.02	2,992.0	1,805.49	701.3	-123.4	92.8	0.00	0.00	0.00
3,200.0	18.53	350.02	3,086.8	1,710.67	732.6	-128.9	96.9	0.00	0.00	0.00
3,300.0	18.53	350.02	3,181.6	1,615.86	763.9	-134.4	101.1	0.00	0.00	0.00
3,400.0	18.53	350.02	3,276.5	1,521.04	795.2	-139.9	105.2	0.00	0.00	0.00
PARKMAN										
3,467.0	18.53	350.02	3,340.0	1,457.50	816.2	-143.6	108.0	0.00	0.00	0.00
3,500.0	18.53	350.02	3,371.3	1,426.22	826.5	-145.4	109.3	0.00	0.00	0.00
3,600.0	18.53	350.02	3,466.1	1,331.40	857.8	-150.9	113.5	0.00	0.00	0.00
3,700.0	18.53	350.02	3,560.9	1,236.59	889.1	-156.4	117.6	0.00	0.00	0.00
3,800.0	18.53	350.02	3,655.7	1,141.77	920.4	-162.0	121.8	0.00	0.00	0.00
3,900.0	18.53	350.02	3,750.5	1,046.95	951.7	-167.5	125.9	0.00	0.00	0.00
4,000.0	18.53	350.02	3,845.4	952.14	983.0	-173.0	130.1	0.00	0.00	0.00
4,100.0	18.53	350.02	3,940.2	857.32	1,014.3	-178.5	134.2	0.00	0.00	0.00
SUSSEX										
4,105.1	18.53	350.02	3,945.0	852.50	1,015.9	-178.8	134.4	0.00	0.00	0.00
4,200.0	18.53	350.02	4,035.0	762.50	1,045.6	-184.0	138.3	0.00	0.00	0.00
4,300.0	18.53	350.02	4,129.8	667.69	1,076.9	-189.5	142.5	0.00	0.00	0.00
4,400.0	18.53	350.02	4,224.6	572.87	1,108.1	-195.0	146.6	0.00	0.00	0.00
4,500.0	18.53	350.02	4,319.4	478.05	1,139.4	-200.5	150.8	0.00	0.00	0.00

Planning Report



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Well:	KINZER 28G-332	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)
SHANNON										
4,585.0	18.53	350.02	4,400.0	397.50	1,166.0	-205.2	154.3	0.00	0.00	0.00
4,600.0	18.53	350.02	4,414.3	383.24	1,170.7	-206.0	154.9	0.00	0.00	0.00
4,700.0	18.53	350.02	4,509.1	288.42	1,202.0	-211.5	159.0	0.00	0.00	0.00
4,800.0	18.53	350.02	4,603.9	193.60	1,233.3	-217.0	163.2	0.00	0.00	0.00
4,900.0	18.53	350.02	4,698.7	98.79	1,264.6	-222.5	167.3	0.00	0.00	0.00
5,000.0	18.53	350.02	4,793.5	3.97	1,295.9	-228.0	171.5	0.00	0.00	0.00
5,100.0	18.53	350.02	4,888.3	-90.85	1,327.2	-233.5	175.6	0.00	0.00	0.00
5,200.0	18.53	350.02	4,983.2	-185.67	1,358.5	-239.1	179.7	0.00	0.00	0.00
5,300.0	18.53	350.02	5,078.0	-280.48	1,389.8	-244.6	183.9	0.00	0.00	0.00
5,400.0	18.53	350.02	5,172.8	-375.30	1,421.1	-250.1	188.0	0.00	0.00	0.00
END OF TANGENT										
5,454.5	18.53	350.02	5,224.5	-426.97	1,438.2	-253.1	190.3	0.00	0.00	0.00
5,500.0	17.62	350.02	5,267.7	-470.23	1,452.1	-255.5	192.1	2.00	-2.00	0.00
5,600.0	15.62	350.02	5,363.5	-566.05	1,480.2	-260.5	195.8	2.00	-2.00	0.00
5,700.0	13.62	350.02	5,460.3	-662.81	1,505.1	-264.8	199.1	2.00	-2.00	0.00
5,800.0	11.62	350.02	5,557.9	-760.39	1,526.6	-268.6	202.0	2.00	-2.00	0.00
5,900.0	9.62	350.02	5,656.2	-858.67	1,544.7	-271.8	204.4	2.00	-2.00	0.00
6,000.0	7.62	350.02	5,755.0	-957.53	1,559.5	-274.4	206.3	2.00	-2.00	0.00
6,100.0	5.62	350.02	5,854.4	-1,056.86	1,570.8	-276.4	207.8	2.00	-2.00	0.00
6,200.0	3.62	350.02	5,954.0	-1,156.53	1,578.8	-277.8	208.9	2.00	-2.00	0.00
6,300.0	1.62	350.02	6,053.9	-1,256.42	1,583.3	-278.6	209.5	2.00	-2.00	0.00
EOD TO VERTICAL										
6,380.9	0.00	0.00	6,134.8	-1,337.31	1,584.4	-278.8	209.6	2.00	-2.00	0.00
6,400.0	0.00	0.00	6,153.9	-1,356.41	1,584.4	-278.8	209.6	0.00	0.00	0.00
KOP (8°/100ft BUR)										
6,410.9	0.00	0.00	6,164.8	-1,367.31	1,584.4	-278.8	209.6	0.00	0.00	0.00
6,500.0	7.13	90.00	6,253.7	-1,456.18	1,584.4	-273.3	214.9	8.00	8.00	0.00
6,600.0	15.13	90.00	6,351.7	-1,554.22	1,584.4	-254.0	233.3	8.00	8.00	0.00
6,700.0	23.13	90.00	6,446.1	-1,648.62	1,584.4	-221.2	264.5	8.00	8.00	0.00
6,800.0	31.13	90.00	6,535.1	-1,737.55	1,584.4	-175.7	308.0	8.00	8.00	0.00
SHARON SPRINGS										
6,807.0	31.69	90.00	6,541.0	-1,743.50	1,584.4	-172.0	311.5	8.00	8.00	0.00
6,900.0	39.13	90.00	6,616.8	-1,819.27	1,584.4	-118.2	362.8	8.00	8.00	0.00
NIORARA A										
6,984.5	45.89	90.00	6,679.0	-1,881.50	1,584.4	-61.1	417.2	8.00	8.00	0.00
7,000.0	47.13	90.00	6,689.7	-1,892.19	1,584.4	-49.9	428.0	8.00	8.00	0.00
7,100.0	55.13	90.00	6,752.4	-1,954.90	1,584.4	27.9	502.2	8.00	8.00	0.00
NIORARA B										
7,139.4	58.28	90.00	6,774.0	-1,976.50	1,584.4	60.8	533.6	8.00	8.00	0.00
7,200.0	63.13	90.00	6,803.7	-2,006.17	1,584.4	113.7	584.0	8.00	8.00	0.00
NIORARA C										
7,292.4	70.52	90.00	6,840.0	-2,042.50	1,584.4	198.6	665.0	8.00	8.00	0.00
7,300.0	71.13	90.00	6,842.5	-2,045.00	1,584.4	205.8	671.8	8.00	8.00	0.00
7,400.0	79.13	90.00	6,868.1	-2,070.64	1,584.4	302.3	764.0	8.00	8.00	0.00
7,500.0	87.13	90.00	6,880.1	-2,082.60	1,584.4	401.5	858.6	8.00	8.00	0.00
HZ LP *NEW*: 2013.2ft FSL & 737.4ft FWL of Sec 28										
7,542.1	90.50	90.00	6,881.0	-2,083.47	1,584.4	443.6	898.7	8.00	8.00	0.00
7,600.0	90.50	90.00	6,880.5	-2,082.97	1,584.4	501.5	954.0	0.01	0.01	0.00
7,700.0	90.50	90.00	6,879.6	-2,082.09	1,584.4	601.5	1,049.3	0.00	0.00	0.00
7,800.0	90.50	90.00	6,878.7	-2,081.22	1,584.4	701.5	1,144.7	0.00	0.00	0.00
7,900.0	90.50	90.00	6,877.8	-2,080.35	1,584.4	801.5	1,240.1	0.00	0.00	0.00
8,000.0	90.50	90.00	6,877.0	-2,079.48	1,584.4	901.5	1,335.5	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well KINZER 28G-332
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site:	SW SW SEC. 28 T5N R67W 6th P.M.	North Reference:	True
Well:	KINZER 28G-332	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)
8,100.0	90.50	90.00	6,876.1	-2,078.60	1,584.4	1,001.5	1,430.9	0.00	0.00	0.00
8,200.0	90.50	90.00	6,875.2	-2,077.73	1,584.4	1,101.5	1,526.3	0.00	0.00	0.00
8,300.0	90.50	90.00	6,874.4	-2,076.86	1,584.4	1,201.5	1,621.6	0.00	0.00	0.00
8,400.0	90.50	90.00	6,873.5	-2,075.99	1,584.4	1,301.5	1,717.0	0.00	0.00	0.00
8,500.0	90.50	90.00	6,872.6	-2,075.12	1,584.4	1,401.5	1,812.4	0.00	0.00	0.00
8,600.0	90.50	90.00	6,871.7	-2,074.24	1,584.4	1,501.5	1,907.8	0.00	0.00	0.00
8,700.0	90.50	90.00	6,870.9	-2,073.37	1,584.4	1,601.5	2,003.2	0.00	0.00	0.00
8,800.0	90.50	90.00	6,870.0	-2,072.50	1,584.4	1,701.5	2,098.6	0.00	0.00	0.00
8,900.0	90.50	90.00	6,869.1	-2,071.63	1,584.4	1,801.5	2,194.0	0.00	0.00	0.00
9,000.0	90.50	90.00	6,868.3	-2,070.76	1,584.4	1,901.5	2,289.3	0.00	0.00	0.00
9,100.0	90.50	90.00	6,867.4	-2,069.89	1,584.4	2,001.5	2,384.7	0.00	0.00	0.00
9,200.0	90.50	90.00	6,866.5	-2,069.02	1,584.4	2,101.4	2,480.1	0.00	0.00	0.00
9,300.0	90.50	90.00	6,865.6	-2,068.14	1,584.4	2,201.4	2,575.5	0.00	0.00	0.00
9,400.0	90.50	90.00	6,864.8	-2,067.27	1,584.4	2,301.4	2,670.9	0.00	0.00	0.00
9,500.0	90.50	90.00	6,863.9	-2,066.40	1,584.4	2,401.4	2,766.3	0.00	0.00	0.00
9,600.0	90.50	90.00	6,863.0	-2,065.53	1,584.4	2,501.4	2,861.7	0.00	0.00	0.00
9,700.0	90.50	90.00	6,862.2	-2,064.66	1,584.4	2,601.4	2,957.0	0.00	0.00	0.00
9,800.0	90.50	90.00	6,861.3	-2,063.79	1,584.4	2,701.4	3,052.4	0.00	0.00	0.00
9,900.0	90.50	90.00	6,860.4	-2,062.92	1,584.4	2,801.4	3,147.8	0.00	0.00	0.00
10,000.0	90.50	90.00	6,859.5	-2,062.05	1,584.4	2,901.4	3,243.2	0.00	0.00	0.00
10,100.0	90.50	90.00	6,858.7	-2,061.18	1,584.4	3,001.4	3,338.6	0.00	0.00	0.00
10,200.0	90.50	90.00	6,857.8	-2,060.31	1,584.4	3,101.4	3,434.0	0.00	0.00	0.00
10,300.0	90.50	90.00	6,856.9	-2,059.44	1,584.4	3,201.4	3,529.4	0.00	0.00	0.00
10,400.0	90.50	90.00	6,856.1	-2,058.57	1,584.4	3,301.4	3,624.7	0.00	0.00	0.00
10,500.0	90.50	90.00	6,855.2	-2,057.70	1,584.4	3,401.4	3,720.1	0.00	0.00	0.00
10,600.0	90.50	90.00	6,854.3	-2,056.83	1,584.4	3,501.4	3,815.5	0.00	0.00	0.00
10,700.0	90.50	90.00	6,853.5	-2,055.96	1,584.4	3,601.4	3,910.9	0.00	0.00	0.00
10,800.0	90.50	90.00	6,852.6	-2,055.09	1,584.4	3,701.4	4,006.3	0.00	0.00	0.00
10,900.0	90.50	90.00	6,851.7	-2,054.22	1,584.4	3,801.4	4,101.7	0.00	0.00	0.00
11,000.0	90.50	90.00	6,850.9	-2,053.35	1,584.4	3,901.4	4,197.1	0.00	0.00	0.00
11,100.0	90.50	90.00	6,850.0	-2,052.48	1,584.4	4,001.4	4,292.4	0.00	0.00	0.00
11,200.0	90.50	90.00	6,849.1	-2,051.61	1,584.4	4,101.4	4,387.8	0.00	0.00	0.00
11,300.0	90.50	90.00	6,848.2	-2,050.74	1,584.4	4,201.4	4,483.2	0.00	0.00	0.00
11,400.0	90.50	90.00	6,847.4	-2,049.87	1,584.4	4,301.4	4,578.6	0.00	0.00	0.00
11,500.0	90.50	90.00	6,846.5	-2,049.01	1,584.4	4,401.4	4,674.0	0.00	0.00	0.00
11,600.0	90.50	90.00	6,845.6	-2,048.14	1,584.4	4,501.4	4,769.4	0.00	0.00	0.00
11,700.0	90.50	90.00	6,844.8	-2,047.27	1,584.4	4,601.4	4,864.8	0.00	0.00	0.00
11,800.0	90.50	90.00	6,843.9	-2,046.40	1,584.4	4,701.3	4,960.1	0.00	0.00	0.00
11,900.0	90.50	90.00	6,843.0	-2,045.53	1,584.4	4,801.3	5,055.5	0.00	0.00	0.00
12,000.0	90.50	90.00	6,842.2	-2,044.66	1,584.4	4,901.3	5,150.9	0.00	0.00	0.00
12,100.0	90.50	90.00	6,841.3	-2,043.79	1,584.4	5,001.3	5,246.3	0.00	0.00	0.00
BHL *NEW*: 2020ft FSL & 75ft FEL of Sec 28										
12,133.9	90.50	90.00	6,841.0	-2,043.50	1,584.4	5,035.2	5,278.6	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well KINZER 28G-332
Company:	PDC ENERGY	TVD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB-EST @ 4797.5usft (Original Well Elev)
Site:	SW SW SEC. 28 T5N R67W 6th P.M.	North Reference:	True
Well:	KINZER 28G-332	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,467.0	3,340.0	PARKMAN			
4,105.1	3,945.0	SUSSEX			
4,585.0	4,400.0	SHANNON			
6,807.0	6,541.0	SHARON SPRINGS			
6,984.5	6,679.0	NIOBRARA A			
7,139.4	6,774.0	NIOBRARA B			
7,292.4	6,840.0	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: 431ft FSL & 303ft FWL of Sec 28
400.0	400.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,326.4	1,310.3	146.2	-25.7	EOB TO 18.53° INC
5,454.5	5,224.5	1,438.2	-253.1	END OF TANGENT
6,380.9	6,134.8	1,584.4	-278.8	EOD TO VERTICAL
6,410.9	6,164.8	1,584.4	-278.8	KOP (8°/100ft BUR)
7,542.1	6,881.0	1,584.4	443.6	HZ LP *NEW*: 2013.2ft FSL & 737.4ft FWL of Sec 28
12,133.9	6,841.0	1,584.4	5,035.2	BHL *NEW*: 2020ft FSL & 75ft FEL of Sec 28