

BONANZA CREEK ENERGY INC.

WELD COUNTY, COLORADO (NAD 83)

NW NE SEC. 22 T5N R63W 6th P.M.

NORTH PLATTE FEDERAL 21-24-22HC

ORIGINAL WELLBORE

06 October, 2016

Plan: PROPOSAL #4





Project: WELD COUNTY, COLORADO (NAD 83)
Site: NW NE SEC. 22 T5N R63W 6th P.M.
Well: NORTH PLATTE FEDERAL 21-24-22HC
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #4

ANNOTATIONS

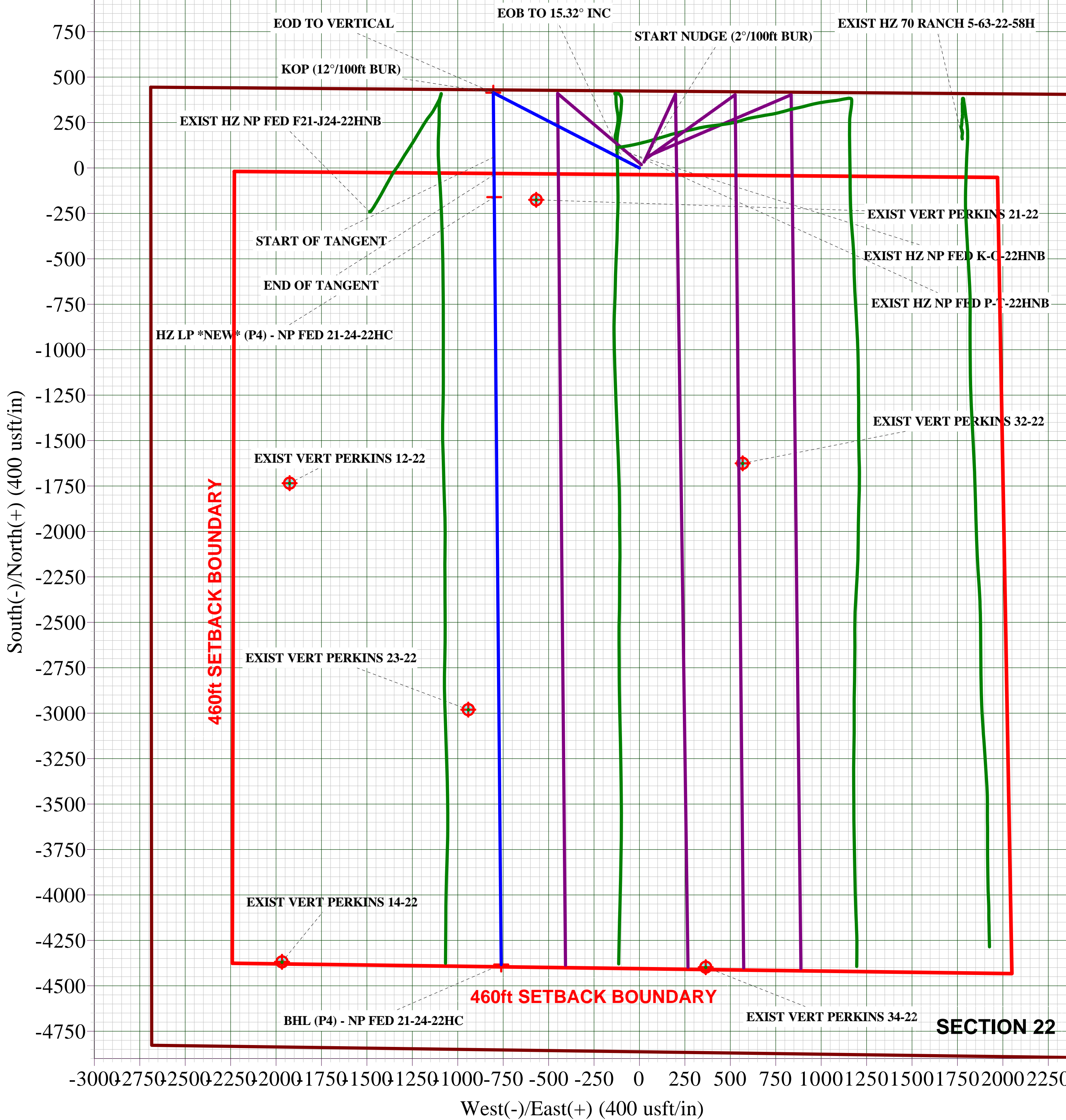
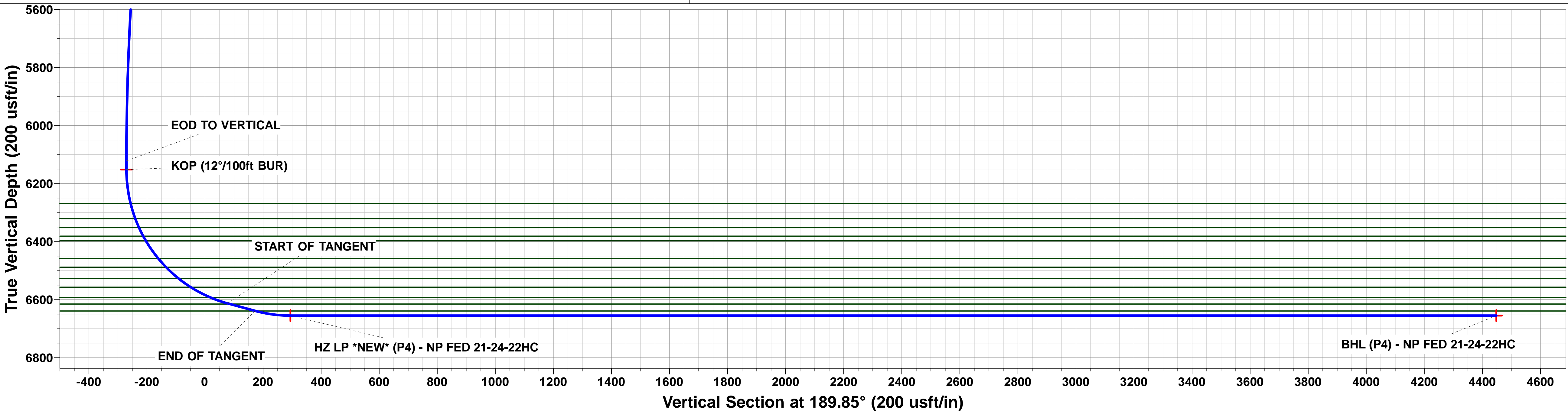
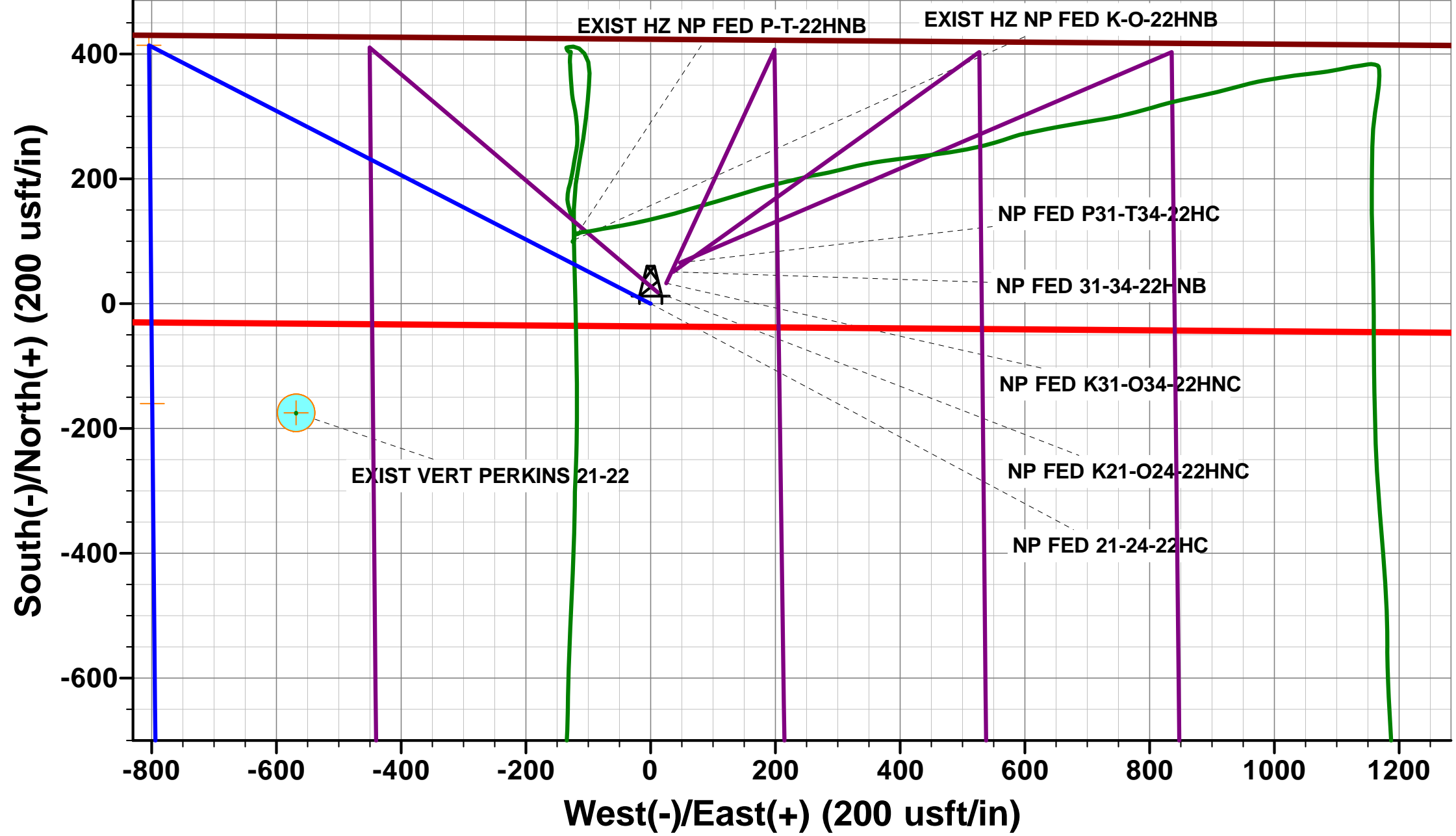
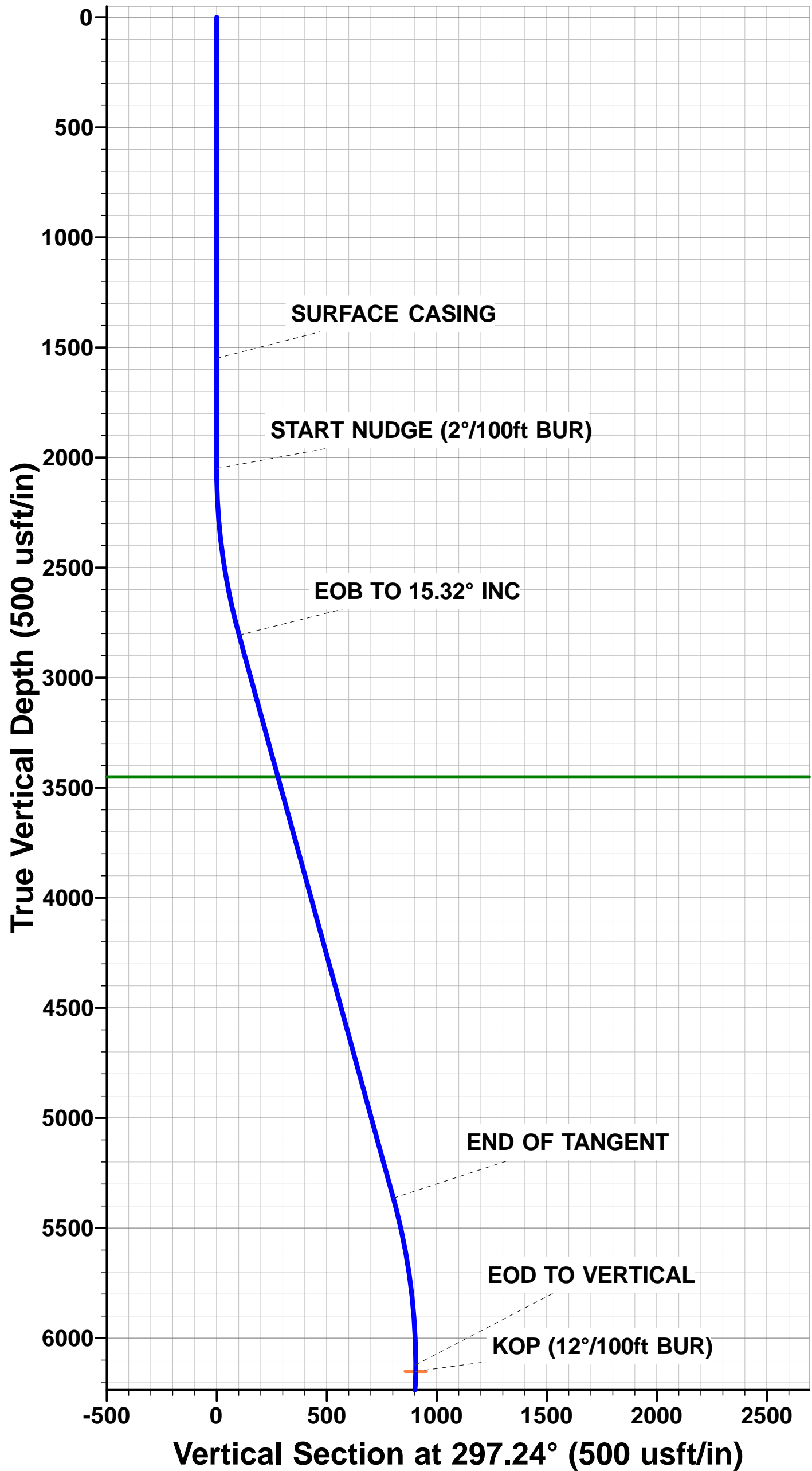
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation
1550.0	1550.0	0.00	0.00	0.0	0.0	0.0	0.0	SURFACE CASING
2050.0	2050.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2807.1	2816.2	15.32	297.24	46.6	-90.6	-30.4	101.9	EOB TO 15.32° INC
5364.6	5468.0	15.32	297.24	367.4	-713.6	-239.9	802.7	END OF TANGENT
6121.7	6234.2	0.00	0.00	414.0	-804.2	-270.4	904.5	EOD TO VERTICAL
6151.7	6264.2	0.00	0.00	414.0	-804.2	-270.4	904.5	KOP (12°/100ft BUR)
6612.9	6889.2	75.00	179.48	60.1	-801.0	77.7	1258.4	START OF TANGENT
6638.8	6989.2	75.00	179.48	-36.5	-800.1	172.8	1355.0	END OF TANGENT
6655.0	7114.2	90.00	179.48	-160.1	-799.0	294.3	1478.6	HZ LP *NEW* (P4) - NP FED 21-24-22HC
6655.0	11337.0	90.00	179.48	-4382.6	-760.6	4448.1	5701.3	BHL (P4) - NP FED 21-24-22HC

PROPOSED LOCAL COORDINATES:

SHL: 423ft FNL & 2439ft FEL Sec 22
HZ LP *NEW: 589ft FNL & 1890ft FWL Sec 22
BHL: 470ft FSL & 1925ft FWL Sec 22

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP (P4) - NP FED 21-24-22HC	6151.7	414.0	-804.2	40.392086	-104.424377
BHL (P4) - NP FED 21-24-22HC	6655.0	-4382.6	-760.6	40.378920	-104.424220
HZ LP *NEW* (P4) - NP FED 21-24-22HC	6655.0	-160.0	-799.0	40.390511	-104.424358



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NORTH PLATTE FEDERAL 21-24-22HC
Company:	BONANZA CREEK ENERGY INC.	TVD Reference:	KB-EST @ 4665.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4665.0usft
Site:	NW NE SEC. 22 T5N R63W 6th P.M.	North Reference:	True
Well:	NORTH PLATTE FEDERAL 21-24-22HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

Project	WELD COUNTY, COLORADO (NAD 83)		
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. 22 T5N R63W 6th P.M.		
Site Position:		Northing:	1,386,960.17 usft
From:	Lat/Long	Easting:	3,300,476.11 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.390590
		Longitude:	-104.421254
		Grid Convergence:	0.70 °

Well	NORTH PLATTE FEDERAL 21-24-22HC		
Well Position	+N/-S	131.0 usft	Northing:
	+E/-W	-65.6 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	07/09/2016	8.11	66.92	52,513

Design	PROPOSAL #4			
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	189.85

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	-4,665.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,050.0	0.00	0.00	2,050.0	-2,615.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,816.2	15.32	297.24	2,807.1	-1,857.9	46.6	-90.6	2.00	2.00	0.00	297.24	
5,468.0	15.32	297.24	5,364.6	699.6	367.4	-713.6	0.00	0.00	0.00	0.00	
6,234.2	0.00	0.00	6,121.7	1,456.7	414.0	-804.2	2.00	-2.00	0.00	180.00	
6,264.2	0.00	0.00	6,151.7	1,486.7	414.0	-804.2	0.00	0.00	0.00	0.00	KOP (P4) - NP FEC
6,889.2	75.00	179.48	6,612.9	1,947.9	60.1	-801.0	12.00	12.00	0.00	179.48	
6,989.2	75.00	179.48	6,638.8	1,973.8	-36.5	-800.1	0.00	0.00	0.00	0.00	
7,114.2	90.00	179.48	6,655.0	1,990.0	-160.0	-799.0	12.00	12.00	0.00	0.00	
11,337.0	90.00	179.48	6,655.0	1,990.0	-4,382.6	-760.6	0.00	0.00	0.00	-54.44	BHL (P4) - NP FED

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Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4665.0usft
Site:	NW NE SEC. 22 T5N R63W 6th P.M.	North Reference:	True
Well:	NORTH PLATTE FEDERAL 21-24-22HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

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	4,665.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,565.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,465.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,365.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,265.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,165.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,065.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,965.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,865.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,765.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,665.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,565.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,465.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	3,365.00	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	3,265.00	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	3,165.00	0.0	0.0	0.0	0.00	0.00	0.00
SURFACE CASING										
1,550.0	0.00	0.00	1,550.0	3,115.00	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	3,065.00	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	2,965.00	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	2,865.00	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	2,765.00	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	2,665.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
2,050.0	0.00	0.00	2,050.0	2,615.00	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	1.00	297.24	2,100.0	2,565.00	0.2	-0.4	-0.1	2.00	2.00	0.00
2,200.0	3.00	297.24	2,199.9	2,465.07	1.8	-3.5	-1.2	2.00	2.00	0.00
2,300.0	5.00	297.24	2,299.7	2,365.32	5.0	-9.7	-3.3	2.00	2.00	0.00
2,400.0	7.00	297.24	2,399.1	2,265.87	9.8	-19.0	-6.4	2.00	2.00	0.00
2,500.0	9.00	297.24	2,498.2	2,166.85	16.1	-31.4	-10.5	2.00	2.00	0.00
2,600.0	11.00	297.24	2,596.6	2,068.37	24.1	-46.8	-15.7	2.00	2.00	0.00
2,700.0	13.00	297.24	2,694.4	1,970.56	33.6	-65.3	-21.9	2.00	2.00	0.00
2,800.0	15.00	297.24	2,791.5	1,873.54	44.7	-86.8	-29.2	2.00	2.00	0.00
EOB TO 15.32° INC										
2,816.2	15.32	297.24	2,807.1	1,857.90	46.6	-90.6	-30.4	2.00	2.00	0.00
2,900.0	15.32	297.24	2,887.9	1,777.08	56.8	-110.2	-37.1	0.00	0.00	0.00
3,000.0	15.32	297.24	2,984.4	1,680.64	68.9	-133.7	-45.0	0.00	0.00	0.00
3,100.0	15.32	297.24	3,080.8	1,584.19	80.9	-157.2	-52.9	0.00	0.00	0.00
3,200.0	15.32	297.24	3,177.3	1,487.75	93.0	-180.7	-60.8	0.00	0.00	0.00
3,300.0	15.32	297.24	3,273.7	1,391.30	105.1	-204.2	-68.7	0.00	0.00	0.00
3,400.0	15.32	297.24	3,370.1	1,294.86	117.2	-227.7	-76.6	0.00	0.00	0.00
PARKMAN										
3,484.9	15.32	297.24	3,452.0	1,213.00	127.5	-247.7	-83.3	0.00	0.00	0.00
3,500.0	15.32	297.24	3,466.6	1,198.41	129.3	-251.2	-84.5	0.00	0.00	0.00
3,600.0	15.32	297.24	3,563.0	1,101.97	141.4	-274.7	-92.4	0.00	0.00	0.00
3,700.0	15.32	297.24	3,659.5	1,005.52	153.5	-298.2	-100.3	0.00	0.00	0.00
3,800.0	15.32	297.24	3,755.9	909.08	165.6	-321.7	-108.2	0.00	0.00	0.00
3,900.0	15.32	297.24	3,852.4	812.63	177.7	-345.2	-116.1	0.00	0.00	0.00
4,000.0	15.32	297.24	3,948.8	716.19	189.8	-368.7	-124.0	0.00	0.00	0.00
4,100.0	15.32	297.24	4,045.3	619.74	201.9	-392.2	-131.9	0.00	0.00	0.00
4,200.0	15.32	297.24	4,141.7	523.30	214.0	-415.7	-139.8	0.00	0.00	0.00
4,300.0	15.32	297.24	4,238.1	426.86	226.1	-439.2	-147.7	0.00	0.00	0.00
4,400.0	15.32	297.24	4,334.6	330.41	238.2	-462.7	-155.6	0.00	0.00	0.00
4,500.0	15.32	297.24	4,431.0	233.97	250.3	-486.2	-163.5	0.00	0.00	0.00

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Well:	NORTH PLATTE FEDERAL 21-24-22HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

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)
4,600.0	15.32	297.24	4,527.5	137.52	262.4	-509.7	-171.4	0.00	0.00	0.00
4,700.0	15.32	297.24	4,623.9	41.08	274.5	-533.2	-179.3	0.00	0.00	0.00
4,800.0	15.32	297.24	4,720.4	-55.37	286.6	-556.7	-187.2	0.00	0.00	0.00
4,900.0	15.32	297.24	4,816.8	-151.81	298.7	-580.2	-195.1	0.00	0.00	0.00
5,000.0	15.32	297.24	4,913.3	-248.26	310.8	-603.7	-203.0	0.00	0.00	0.00
5,100.0	15.32	297.24	5,009.7	-344.70	322.9	-627.2	-210.9	0.00	0.00	0.00
5,200.0	15.32	297.24	5,106.1	-441.15	335.0	-650.7	-218.8	0.00	0.00	0.00
5,300.0	15.32	297.24	5,202.6	-537.59	347.1	-674.2	-226.7	0.00	0.00	0.00
5,400.0	15.32	297.24	5,299.0	-634.04	359.2	-697.7	-234.6	0.00	0.00	0.00
END OF TANGENT										
5,468.0	15.32	297.24	5,364.6	-699.62	367.4	-713.6	-239.9	0.00	0.00	0.00
5,500.0	14.68	297.24	5,395.5	-730.53	371.2	-721.0	-242.4	2.00	-2.00	0.00
5,600.0	12.68	297.24	5,492.7	-827.68	382.0	-742.0	-249.5	2.00	-2.00	0.00
5,700.0	10.68	297.24	5,590.6	-925.61	391.3	-760.0	-255.5	2.00	-2.00	0.00
5,800.0	8.68	297.24	5,689.2	-1,024.18	399.0	-775.0	-260.6	2.00	-2.00	0.00
5,900.0	6.68	297.24	5,788.3	-1,123.27	405.1	-786.9	-264.6	2.00	-2.00	0.00
6,000.0	4.68	297.24	5,887.8	-1,222.78	409.6	-795.7	-267.5	2.00	-2.00	0.00
6,100.0	2.68	297.24	5,987.6	-1,322.57	412.6	-801.4	-269.5	2.00	-2.00	0.00
6,200.0	0.68	297.24	6,087.5	-1,422.52	413.9	-804.0	-270.3	2.00	-2.00	0.00
EOD TO VERTICAL										
6,234.2	0.00	0.00	6,121.7	-1,456.72	414.0	-804.2	-270.4	2.00	-2.00	0.00
KOP (12°/100ft BUR)										
6,264.2	0.00	0.00	6,151.7	-1,486.72	414.0	-804.2	-270.4	0.00	0.00	0.00
6,300.0	4.30	179.48	6,187.5	-1,522.48	412.7	-804.2	-269.1	12.01	12.01	0.00
SHARON SPRINGS										
6,381.7	14.10	179.48	6,268.0	-1,603.00	399.6	-804.1	-256.2	12.00	12.00	0.00
6,400.0	16.30	179.48	6,285.7	-1,620.69	394.8	-804.0	-251.5	12.00	12.00	0.00
SHARON SPRINGS "A"										
6,437.2	20.77	179.48	6,321.0	-1,656.00	383.0	-803.9	-239.9	12.00	12.00	0.00
SHARON SPRINGS "B"										
6,470.9	24.80	179.48	6,352.0	-1,687.00	370.0	-803.8	-227.1	12.00	12.00	0.00
6,500.0	28.30	179.48	6,378.0	-1,713.05	356.9	-803.7	-214.3	12.00	12.00	0.00
NIOBRARA "A" CHALK										
6,503.4	28.70	179.48	6,381.0	-1,716.00	355.3	-803.7	-212.7	12.00	12.00	0.00
NIOBRARA "A" MARL										
6,521.8	30.91	179.48	6,397.0	-1,732.00	346.2	-803.6	-203.7	12.00	12.00	0.00
NIOBRARA "B" CHALK										
6,596.7	39.90	179.48	6,458.0	-1,793.00	302.8	-803.2	-161.0	12.00	12.00	0.00
6,600.0	40.30	179.48	6,460.5	-1,795.51	300.7	-803.2	-158.9	12.00	12.00	0.00
NIOBRARA "B" MARL										
6,637.3	44.78	179.48	6,488.0	-1,823.00	275.5	-802.9	-134.1	12.00	12.00	0.00
NIOBRARA "C" CHALK										
6,697.6	52.01	179.48	6,528.0	-1,863.00	230.4	-802.5	-89.8	12.00	12.00	0.00
6,700.0	52.30	179.48	6,529.5	-1,864.47	228.5	-802.5	-87.9	12.00	12.00	0.00
NIOBRARA "C" MARL										
6,748.2	58.09	179.48	6,557.0	-1,892.00	188.9	-802.2	-49.0	12.00	12.00	0.00
6,800.0	64.30	179.48	6,581.9	-1,916.93	143.6	-801.7	-4.4	12.00	12.00	0.00
BASE "C" MARL										
6,824.6	67.24	179.48	6,592.0	-1,927.00	121.2	-801.5	17.6	12.00	12.00	0.00
START OF TANGENT										
6,889.2	75.00	179.48	6,612.9	-1,947.90	60.1	-801.0	77.7	12.00	12.00	0.00
FT HAYS										

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Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4665.0usft
Site:	NW NE SEC. 22 T5N R63W 6th P.M.	North Reference:	True
Well:	NORTH PLATTE FEDERAL 21-24-22HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

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)
6,897.3	75.00	179.48	6,615.0	-1,950.00	52.3	-800.9	85.4	0.00	0.00	0.00
6,900.0	75.00	179.48	6,615.7	-1,950.70	49.7	-800.9	88.0	0.00	0.00	0.00
END OF TANGENT										
6,989.2	75.00	179.48	6,638.8	-1,973.78	-36.5	-800.1	172.8	0.00	0.00	0.00
CODELL										
6,990.0	75.10	179.48	6,639.0	-1,974.00	-37.3	-800.1	173.6	12.25	12.25	0.00
7,000.0	76.30	179.48	6,641.5	-1,976.46	-46.9	-800.0	183.0	12.00	12.00	0.00
7,100.0	88.30	179.48	6,654.8	-1,989.84	-145.9	-799.1	280.3	12.00	12.00	0.00
HZ LP *NEW* (P4) - NP FED 21-24-22HC										
7,114.2	90.00	179.48	6,655.0	-1,990.05	-160.1	-799.0	294.3	11.99	11.99	0.00
7,200.0	90.00	179.48	6,655.0	-1,990.05	-245.8	-798.2	378.7	0.00	0.00	0.00
7,300.0	90.00	179.48	6,655.0	-1,990.05	-345.8	-797.3	477.1	0.00	0.00	0.00
7,400.0	90.00	179.48	6,655.0	-1,990.05	-445.8	-796.4	575.5	0.00	0.00	0.00
7,500.0	90.00	179.48	6,655.0	-1,990.05	-545.8	-795.5	673.8	0.00	0.00	0.00
7,600.0	90.00	179.48	6,655.0	-1,990.05	-645.8	-794.6	772.2	0.00	0.00	0.00
7,700.0	90.00	179.48	6,655.0	-1,990.05	-745.8	-793.7	870.6	0.00	0.00	0.00
7,800.0	90.00	179.48	6,655.0	-1,990.05	-845.8	-792.8	968.9	0.00	0.00	0.00
7,900.0	90.00	179.48	6,655.0	-1,990.05	-945.8	-791.9	1,067.3	0.00	0.00	0.00
8,000.0	90.00	179.48	6,655.0	-1,990.04	-1,045.8	-790.9	1,165.7	0.00	0.00	0.00
8,100.0	90.00	179.48	6,655.0	-1,990.04	-1,145.8	-790.0	1,264.0	0.00	0.00	0.00
8,200.0	90.00	179.48	6,655.0	-1,990.04	-1,245.8	-789.1	1,362.4	0.00	0.00	0.00
8,300.0	90.00	179.48	6,655.0	-1,990.04	-1,345.8	-788.2	1,460.8	0.00	0.00	0.00
8,400.0	90.00	179.48	6,655.0	-1,990.04	-1,445.8	-787.3	1,559.1	0.00	0.00	0.00
8,500.0	90.00	179.48	6,655.0	-1,990.04	-1,545.8	-786.4	1,657.5	0.00	0.00	0.00
8,600.0	90.00	179.48	6,655.0	-1,990.04	-1,645.8	-785.5	1,755.9	0.00	0.00	0.00
8,700.0	90.00	179.48	6,655.0	-1,990.04	-1,745.8	-784.6	1,854.2	0.00	0.00	0.00
8,800.0	90.00	179.48	6,655.0	-1,990.04	-1,845.8	-783.7	1,952.6	0.00	0.00	0.00
8,900.0	90.00	179.48	6,655.0	-1,990.04	-1,945.8	-782.8	2,051.0	0.00	0.00	0.00
9,000.0	90.00	179.48	6,655.0	-1,990.04	-2,045.8	-781.9	2,149.3	0.00	0.00	0.00
9,100.0	90.00	179.48	6,655.0	-1,990.04	-2,145.8	-781.0	2,247.7	0.00	0.00	0.00
9,200.0	90.00	179.48	6,655.0	-1,990.04	-2,245.8	-780.0	2,346.1	0.00	0.00	0.00
9,300.0	90.00	179.48	6,655.0	-1,990.03	-2,345.8	-779.1	2,444.4	0.00	0.00	0.00
9,400.0	90.00	179.48	6,655.0	-1,990.03	-2,445.8	-778.2	2,542.8	0.00	0.00	0.00
9,500.0	90.00	179.48	6,655.0	-1,990.03	-2,545.8	-777.3	2,641.2	0.00	0.00	0.00
9,600.0	90.00	179.48	6,655.0	-1,990.03	-2,645.7	-776.4	2,739.5	0.00	0.00	0.00
9,700.0	90.00	179.48	6,655.0	-1,990.03	-2,745.7	-775.5	2,837.9	0.00	0.00	0.00
9,800.0	90.00	179.48	6,655.0	-1,990.03	-2,845.7	-774.6	2,936.3	0.00	0.00	0.00
9,900.0	90.00	179.48	6,655.0	-1,990.03	-2,945.7	-773.7	3,034.6	0.00	0.00	0.00
10,000.0	90.00	179.48	6,655.0	-1,990.02	-3,045.7	-772.8	3,133.0	0.00	0.00	0.00
10,100.0	90.00	179.48	6,655.0	-1,990.02	-3,145.7	-771.9	3,231.4	0.00	0.00	0.00
10,200.0	90.00	179.48	6,655.0	-1,990.02	-3,245.7	-770.9	3,329.7	0.00	0.00	0.00
10,300.0	90.00	179.48	6,655.0	-1,990.02	-3,345.7	-770.0	3,428.1	0.00	0.00	0.00
10,400.0	90.00	179.48	6,655.0	-1,990.02	-3,445.7	-769.1	3,526.5	0.00	0.00	0.00
10,500.0	90.00	179.48	6,655.0	-1,990.02	-3,545.7	-768.2	3,624.9	0.00	0.00	0.00
10,600.0	90.00	179.48	6,655.0	-1,990.01	-3,645.7	-767.3	3,723.2	0.00	0.00	0.00
10,700.0	90.00	179.48	6,655.0	-1,990.01	-3,745.7	-766.4	3,821.6	0.00	0.00	0.00
10,800.0	90.00	179.48	6,655.0	-1,990.01	-3,845.7	-765.5	3,920.0	0.00	0.00	0.00
10,900.0	90.00	179.48	6,655.0	-1,990.01	-3,945.7	-764.6	4,018.3	0.00	0.00	0.00
11,000.0	90.00	179.48	6,655.0	-1,990.01	-4,045.7	-763.7	4,116.7	0.00	0.00	0.00
11,100.0	90.00	179.48	6,655.0	-1,990.01	-4,145.7	-762.8	4,215.1	0.00	0.00	0.00
11,200.0	90.00	179.48	6,655.0	-1,990.00	-4,245.7	-761.8	4,313.4	0.00	0.00	0.00
11,300.0	90.00	179.48	6,655.0	-1,990.00	-4,345.7	-760.9	4,411.8	0.00	0.00	0.00
BHL (P4) - NP FED 21-24-22HC										

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well NORTH PLATTE FEDERAL 21-24-22HC
Company:	BONANZA CREEK ENERGY INC.	TVD Reference:	KB-EST @ 4665.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4665.0usft
Site:	NW NE SEC. 22 T5N R63W 6th P.M.	North Reference:	True
Well:	NORTH PLATTE FEDERAL 21-24-22HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #4		

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)
11,337.0	90.00	179.48	6,655.0	-1,990.00	-4,382.6	-760.6	4,448.1	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,484.9	3,452.0	PARKMAN			
6,381.7	6,268.0	SHARON SPRINGS			
6,437.2	6,321.0	SHARON SPRINGS "A"			
6,470.9	6,352.0	SHARON SPRINGS "B"			
6,503.4	6,381.0	NIOBRARA "A" CHALK			
6,521.8	6,397.0	NIOBRARA "A" MARL			
6,596.7	6,458.0	NIOBRARA "B" CHALK			
6,637.3	6,488.0	NIOBRARA "B" MARL			
6,697.6	6,528.0	NIOBRARA "C" CHALK			
6,748.2	6,557.0	NIOBRARA "C" MARL			
6,824.6	6,592.0	BASE "C" MARL			
6,897.3	6,615.0	FT HAYS			
6,990.0	6,639.0	CODELL			

Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,550.0	1,550.0	0.0	0.0	SURFACE CASING
2,050.0	2,050.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,816.2	2,807.1	46.6	-90.6	EOB TO 15.32° INC
5,468.0	5,364.6	367.4	-713.6	END OF TANGENT
6,234.2	6,121.7	414.0	-804.2	EOD TO VERTICAL
6,264.2	6,151.7	414.0	-804.2	KOP (12°/100ft BUR)
6,889.2	6,612.9	60.1	-801.0	START OF TANGENT
6,989.2	6,638.8	-36.5	-800.1	END OF TANGENT
7,114.2	6,655.0	-160.1	-799.0	HZ LP *NEW* (P4) - NP FED 21-24-22HC
11,337.0	6,655.0	-4,382.6	-760.6	BHL (P4) - NP FED 21-24-22HC