

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

SE NE SEC. 22T6N R67W 6th P.M.

STROMBERGER 8

ORIGINAL WELLBORE

05 August, 2015

Plan: PROPOSAL #2

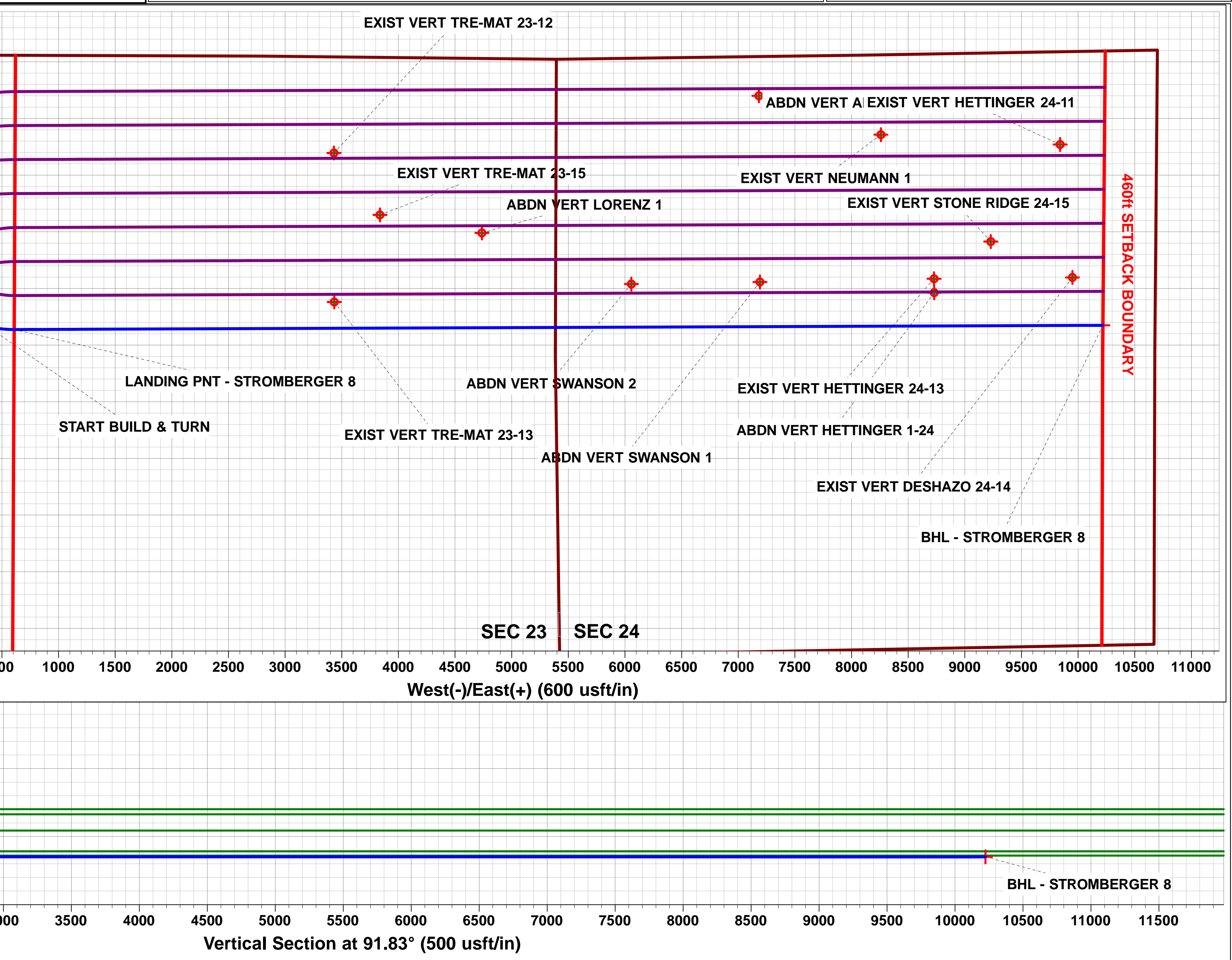
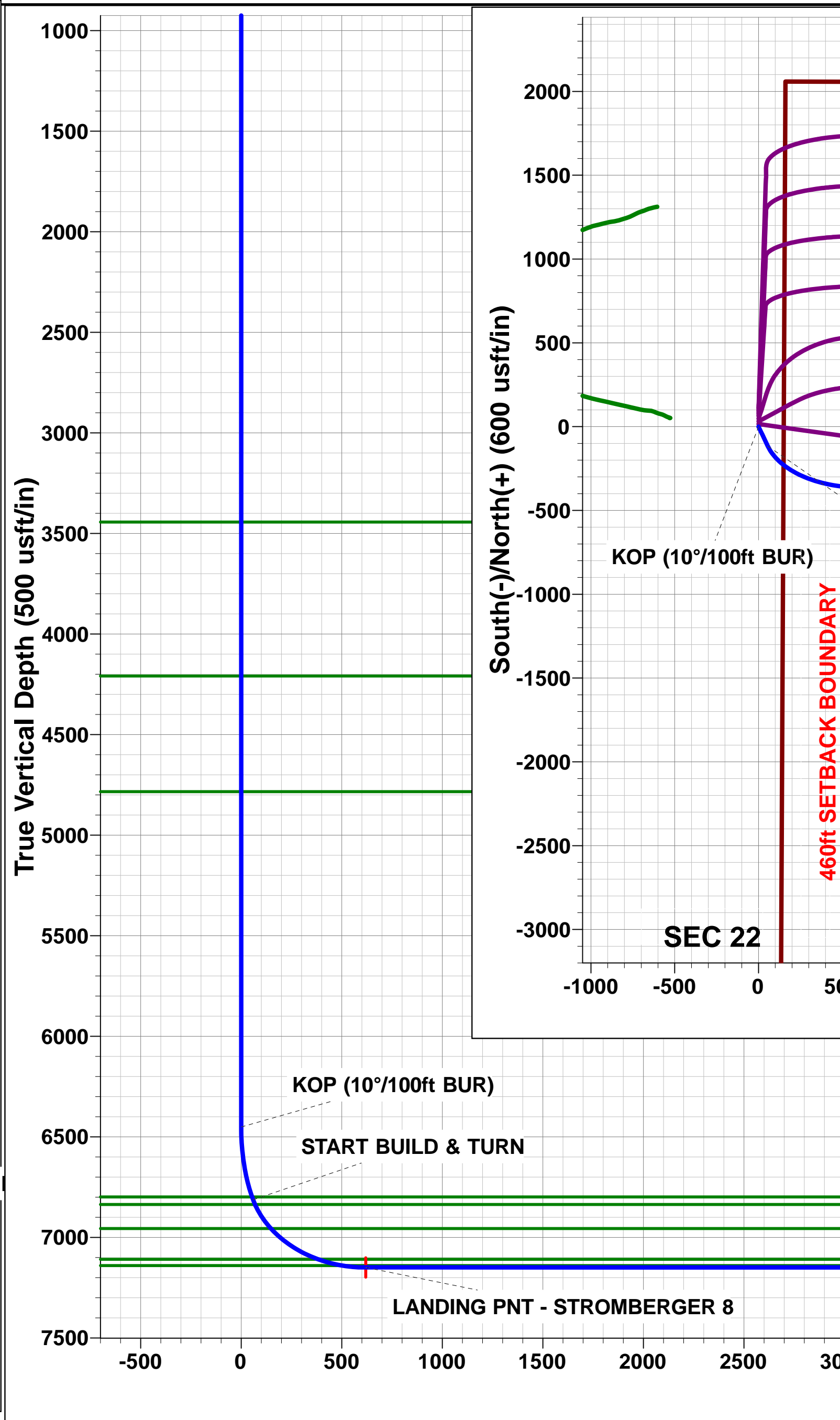
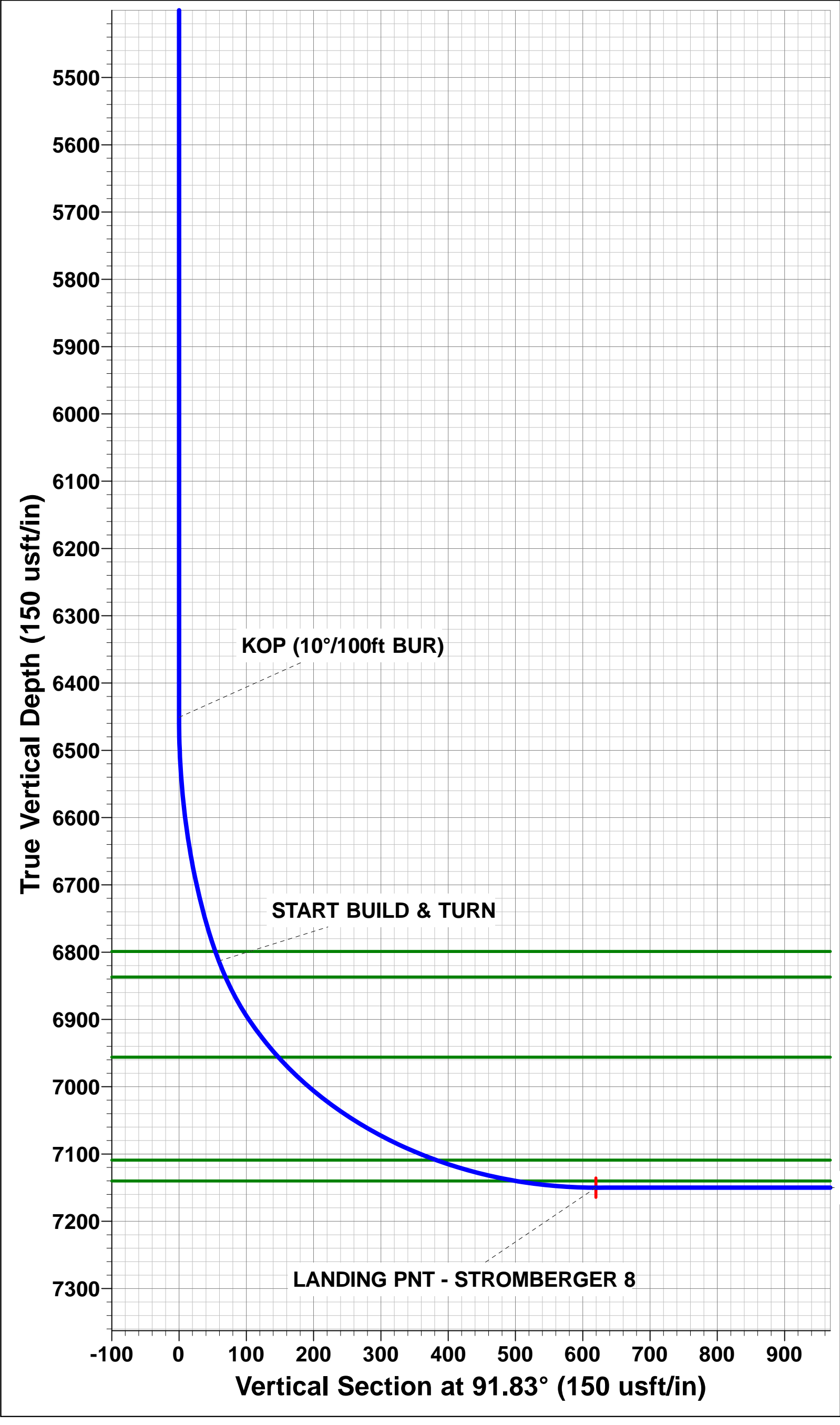
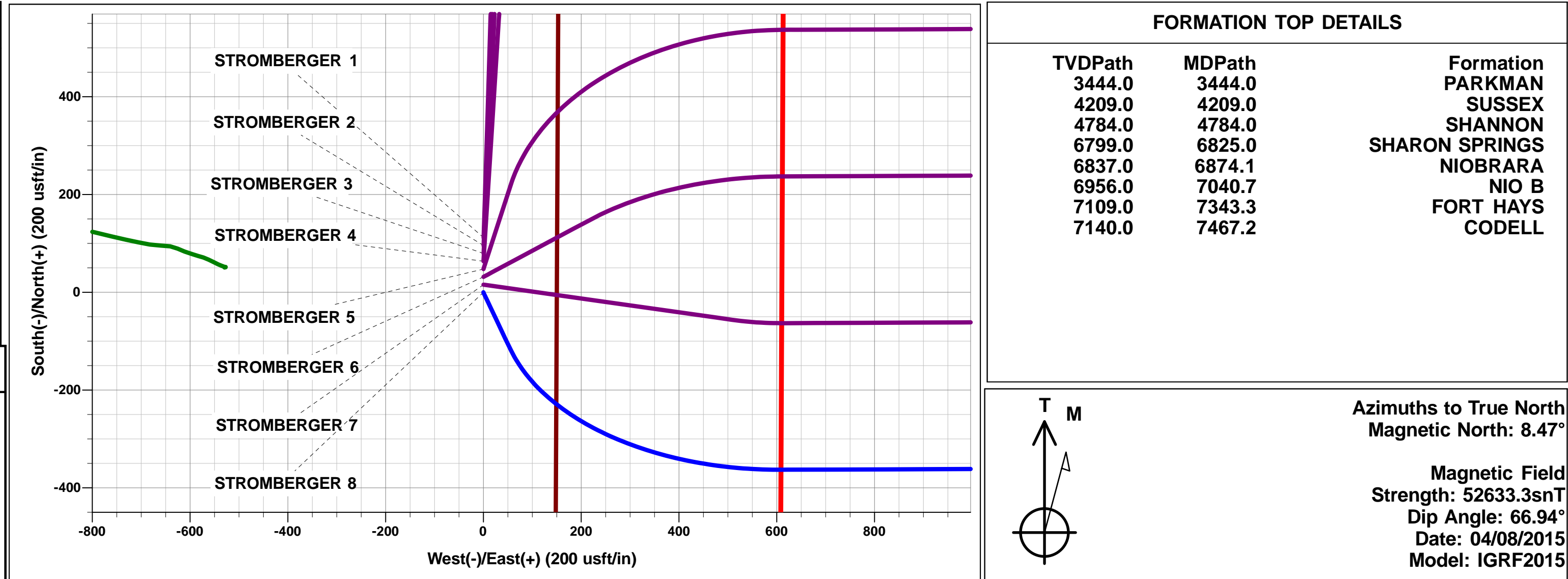




Project: WELD COUNTY, COLORADO (NAD 83)
Site: SE NE SEC. 22T6N R67W 6th P.M.
Well: STROMBERGER 8
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation	
6451.0	6451.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP (10°/100ft BUR)	
6813.2	6843.1	39.20	154.54	-116.5	55.4	59.1	129.0	START BUILD & TURN	
7150.0	7586.8	90.00	89.78	-362.8	608.2	619.4	779.0	LANDING PNT - STROMBERGER 8	
7150.0	17197.1	90.00	89.78	-325.8	10218.5	10223.6	10389.4	BHL - STROMBERGER 8	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LANDING PNT - STROMBERGER 8	7150.0	-362.8	608.2	40.473064	-104.868676
BHL - STROMBERGER 8	7150.0	-325.8	10218.5	40.473160	-104.834134



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well STROMBERGER 8
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4794.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4794.0usft
Site:	SE NE SEC. 22T6N R67W 6th P.M.	North Reference:	True
Well:	STROMBERGER 8	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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	SE NE SEC. 22T6N R67W 6th P.M.		
Site Position:		Northing:	1,417,027.43usft
From:	Lat/Long	Easting:	3,175,712.36usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.476424
		Longitude:	-104.868382
		Grid Convergence:	0.41 °

Well	STROMBERGER 8		
Well Position	+N-S	-861.2 usft	Northing:
	+E-W	-690.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	40.474060
		Longitude:	-104.870862
		Ground Level:	4,778.0 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	04/08/2015	8.47	66.94	52,633

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 (°)
	-11.0	0.0	0.0	91.83

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	-4,794.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,451.0	0.00	0.00	6,451.0	1,657.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,843.1	39.20	154.54	6,813.2	2,019.2	-116.5	55.4	10.00	10.00	0.00	154.54	
7,586.8	90.00	89.78	7,150.0	2,356.0	-362.8	608.2	10.00	6.83	-8.71	-69.94	LANDING PNT - S1
17,197.1	90.00	89.78	7,150.0	2,356.0	-325.8	10,218.5	0.00	0.00	0.00	0.00	BHL - STROMBERG

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Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4794.0usft
Site:	SE NE SEC. 22T6N R67W 6th P.M.	North Reference:	True
Well:	STROMBERGER 8	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)
0.0	0.00	0.00	0.0	4,794.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,694.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,594.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,494.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,394.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,294.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,194.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,094.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,994.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,894.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,794.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,694.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,594.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	3,494.00	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	3,394.00	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	3,294.00	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	3,194.00	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	3,094.00	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	2,994.00	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	2,894.00	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	2,794.00	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	2,694.00	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	2,594.00	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	2,494.00	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	2,394.00	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	2,294.00	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	2,194.00	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	2,094.00	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	1,994.00	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	1,894.00	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	1,794.00	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	1,694.00	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	1,594.00	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	1,494.00	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	1,394.00	0.0	0.0	0.0	0.00	0.00	0.00
PARKMAN										
3,444.0	0.00	0.00	3,444.0	1,350.00	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	1,294.00	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	1,194.00	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	1,094.00	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	994.00	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	894.00	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	794.00	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	694.00	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	594.00	0.0	0.0	0.0	0.00	0.00	0.00
SUSSEX										
4,209.0	0.00	0.00	4,209.0	585.00	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	494.00	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	394.00	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	294.00	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	194.00	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	94.00	0.0	0.0	0.0	0.00	0.00	0.00
SHANNON										

Planning Report



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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)
4,784.0	0.00	0.00	4,784.0	10.00	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	-6.00	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	-106.00	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	-206.00	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	-306.00	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	-406.00	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	-506.00	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	-606.00	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	-706.00	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	-806.00	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	-906.00	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	-1,006.00	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	-1,106.00	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	-1,206.00	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	-1,306.00	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	-1,406.00	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	-1,506.00	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	-1,606.00	0.0	0.0	0.0	0.00	0.00	0.00
KOP (10°/100ft BUR)										
6,451.0	0.00	0.00	6,451.0	-1,657.00	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	4.90	154.54	6,499.9	-1,705.94	-1.9	0.9	1.0	10.00	10.00	0.00
6,600.0	14.90	154.54	6,598.3	-1,804.33	-17.4	8.3	8.8	10.00	10.00	0.00
6,700.0	24.90	154.54	6,692.2	-1,898.24	-48.1	22.9	24.4	10.00	10.00	0.00
6,800.0	34.90	154.54	6,778.8	-1,984.82	-93.0	44.3	47.2	10.00	10.00	0.00
SHARON SPRINGS										
6,825.0	37.40	154.54	6,799.0	-2,005.00	-106.3	50.6	54.0	10.00	10.00	0.00
START BUILD & TURN										
6,843.1	39.20	154.54	6,813.2	-2,019.17	-116.5	55.4	59.1	10.00	10.00	0.00
NIOBRARA										
6,874.1	40.35	150.04	6,837.0	-2,043.00	-134.0	64.7	68.9	10.00	3.71	-14.51
6,900.0	41.45	146.45	6,856.6	-2,062.61	-148.4	73.6	78.3	10.00	4.21	-13.86
7,000.0	46.58	134.07	6,928.6	-2,134.64	-201.4	118.1	124.5	10.00	5.13	-12.38
NIO B										
7,040.7	49.01	129.66	6,956.0	-2,162.00	-221.5	140.6	147.5	10.00	5.97	-10.83
7,100.0	52.82	123.81	6,993.4	-2,199.39	-249.0	177.4	185.3	10.00	6.43	-9.87
7,200.0	59.81	115.20	7,048.9	-2,254.89	-289.6	249.8	258.9	10.00	6.99	-8.61
7,300.0	67.29	107.77	7,093.4	-2,299.45	-322.2	333.1	343.2	10.00	7.47	-7.43
FORT HAYS										
7,343.3	70.63	104.82	7,109.0	-2,315.00	-333.5	371.9	382.3	10.00	7.71	-6.82
7,400.0	75.07	101.13	7,125.7	-2,331.72	-345.6	424.6	435.4	10.00	7.83	-6.51
CODELL										
7,467.2	80.41	96.94	7,140.0	-2,346.00	-355.9	489.5	500.6	10.00	7.94	-6.22
7,500.0	83.03	94.96	7,144.7	-2,350.72	-359.3	521.7	532.9	10.00	8.00	-6.06
LANDING PNT - STROMBERGER 8										
7,586.8	90.00	89.78	7,150.0	-2,356.00	-362.8	608.2	619.4	10.00	8.04	-5.97
7,600.0	90.00	89.78	7,150.0	-2,356.00	-362.8	621.4	632.7	0.00	0.00	0.00
7,700.0	90.00	89.78	7,150.0	-2,356.00	-362.4	721.4	732.6	0.00	0.00	0.00
7,800.0	90.00	89.78	7,150.0	-2,356.00	-362.0	821.4	832.5	0.00	0.00	0.00
7,900.0	90.00	89.78	7,150.0	-2,356.00	-361.6	921.4	932.5	0.00	0.00	0.00
8,000.0	90.00	89.78	7,150.0	-2,356.00	-361.2	1,021.4	1,032.4	0.00	0.00	0.00
8,100.0	90.00	89.78	7,150.0	-2,356.00	-360.9	1,121.4	1,132.3	0.00	0.00	0.00
8,200.0	90.00	89.78	7,150.0	-2,356.00	-360.5	1,221.4	1,232.3	0.00	0.00	0.00
8,300.0	90.00	89.78	7,150.0	-2,356.00	-360.1	1,321.4	1,332.2	0.00	0.00	0.00

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Wellbore:	ORIGINAL WELLBORE		
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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)
8,400.0	90.00	89.78	7,150.0	-2,356.00	-359.7	1,421.4	1,432.1	0.00	0.00	0.00
8,500.0	90.00	89.78	7,150.0	-2,356.00	-359.3	1,521.4	1,532.1	0.00	0.00	0.00
8,600.0	90.00	89.78	7,150.0	-2,356.00	-358.9	1,621.4	1,632.0	0.00	0.00	0.00
8,700.0	90.00	89.78	7,150.0	-2,356.00	-358.5	1,721.4	1,732.0	0.00	0.00	0.00
8,800.0	90.00	89.78	7,150.0	-2,356.00	-358.2	1,821.4	1,831.9	0.00	0.00	0.00
8,900.0	90.00	89.78	7,150.0	-2,356.00	-357.8	1,921.4	1,931.8	0.00	0.00	0.00
9,000.0	90.00	89.78	7,150.0	-2,356.00	-357.4	2,021.4	2,031.8	0.00	0.00	0.00
9,100.0	90.00	89.78	7,150.0	-2,356.00	-357.0	2,121.4	2,131.7	0.00	0.00	0.00
9,200.0	90.00	89.78	7,150.0	-2,356.00	-356.6	2,221.4	2,231.6	0.00	0.00	0.00
9,300.0	90.00	89.78	7,150.0	-2,356.00	-356.2	2,321.4	2,331.6	0.00	0.00	0.00
9,400.0	90.00	89.78	7,150.0	-2,356.00	-355.8	2,421.4	2,431.5	0.00	0.00	0.00
9,500.0	90.00	89.78	7,150.0	-2,356.00	-355.5	2,521.4	2,531.4	0.00	0.00	0.00
9,600.0	90.00	89.78	7,150.0	-2,356.00	-355.1	2,621.4	2,631.4	0.00	0.00	0.00
9,700.0	90.00	89.78	7,150.0	-2,356.00	-354.7	2,721.4	2,731.3	0.00	0.00	0.00
9,800.0	90.00	89.78	7,150.0	-2,356.00	-354.3	2,821.4	2,831.3	0.00	0.00	0.00
9,900.0	90.00	89.78	7,150.0	-2,356.00	-353.9	2,921.4	2,931.2	0.00	0.00	0.00
10,000.0	90.00	89.78	7,150.0	-2,356.00	-353.5	3,021.4	3,031.1	0.00	0.00	0.00
10,100.0	90.00	89.78	7,150.0	-2,356.00	-353.1	3,121.4	3,131.1	0.00	0.00	0.00
10,200.0	90.00	89.78	7,150.0	-2,356.00	-352.8	3,221.4	3,231.0	0.00	0.00	0.00
10,300.0	90.00	89.78	7,150.0	-2,356.00	-352.4	3,321.4	3,330.9	0.00	0.00	0.00
10,400.0	90.00	89.78	7,150.0	-2,356.00	-352.0	3,421.4	3,430.9	0.00	0.00	0.00
10,500.0	90.00	89.78	7,150.0	-2,356.00	-351.6	3,521.4	3,530.8	0.00	0.00	0.00
10,600.0	90.00	89.78	7,150.0	-2,356.00	-351.2	3,621.4	3,630.7	0.00	0.00	0.00
10,700.0	90.00	89.78	7,150.0	-2,356.00	-350.8	3,721.4	3,730.7	0.00	0.00	0.00
10,800.0	90.00	89.78	7,150.0	-2,356.00	-350.4	3,821.4	3,830.6	0.00	0.00	0.00
10,900.0	90.00	89.78	7,150.0	-2,356.00	-350.1	3,921.4	3,930.6	0.00	0.00	0.00
11,000.0	90.00	89.78	7,150.0	-2,356.00	-349.7	4,021.4	4,030.5	0.00	0.00	0.00
11,100.0	90.00	89.78	7,150.0	-2,356.00	-349.3	4,121.4	4,130.4	0.00	0.00	0.00
11,200.0	90.00	89.78	7,150.0	-2,356.00	-348.9	4,221.4	4,230.4	0.00	0.00	0.00
11,300.0	90.00	89.78	7,150.0	-2,356.00	-348.5	4,321.4	4,330.3	0.00	0.00	0.00
11,400.0	90.00	89.78	7,150.0	-2,356.00	-348.1	4,421.4	4,430.2	0.00	0.00	0.00
11,500.0	90.00	89.78	7,150.0	-2,356.00	-347.7	4,521.4	4,530.2	0.00	0.00	0.00
11,600.0	90.00	89.78	7,150.0	-2,356.00	-347.4	4,621.4	4,630.1	0.00	0.00	0.00
11,700.0	90.00	89.78	7,150.0	-2,356.00	-347.0	4,721.4	4,730.0	0.00	0.00	0.00
11,800.0	90.00	89.78	7,150.0	-2,356.00	-346.6	4,821.4	4,830.0	0.00	0.00	0.00
11,900.0	90.00	89.78	7,150.0	-2,356.00	-346.2	4,921.4	4,929.9	0.00	0.00	0.00
12,000.0	90.00	89.78	7,150.0	-2,356.00	-345.8	5,021.4	5,029.9	0.00	0.00	0.00
12,100.0	90.00	89.78	7,150.0	-2,356.00	-345.4	5,121.4	5,129.8	0.00	0.00	0.00
12,200.0	90.00	89.78	7,150.0	-2,356.00	-345.0	5,221.4	5,229.7	0.00	0.00	0.00
12,300.0	90.00	89.78	7,150.0	-2,356.00	-344.7	5,321.4	5,329.7	0.00	0.00	0.00
12,400.0	90.00	89.78	7,150.0	-2,356.00	-344.3	5,421.4	5,429.6	0.00	0.00	0.00
12,500.0	90.00	89.78	7,150.0	-2,356.00	-343.9	5,521.4	5,529.5	0.00	0.00	0.00
12,600.0	90.00	89.78	7,150.0	-2,356.00	-343.5	5,621.4	5,629.5	0.00	0.00	0.00
12,700.0	90.00	89.78	7,150.0	-2,356.00	-343.1	5,721.4	5,729.4	0.00	0.00	0.00
12,800.0	90.00	89.78	7,150.0	-2,356.00	-342.7	5,821.4	5,829.3	0.00	0.00	0.00
12,900.0	90.00	89.78	7,150.0	-2,356.00	-342.3	5,921.4	5,929.3	0.00	0.00	0.00
13,000.0	90.00	89.78	7,150.0	-2,356.00	-342.0	6,021.4	6,029.2	0.00	0.00	0.00
13,100.0	90.00	89.78	7,150.0	-2,356.00	-341.6	6,121.4	6,129.2	0.00	0.00	0.00
13,200.0	90.00	89.78	7,150.0	-2,356.00	-341.2	6,221.4	6,229.1	0.00	0.00	0.00
13,300.0	90.00	89.78	7,150.0	-2,356.00	-340.8	6,321.4	6,329.0	0.00	0.00	0.00
13,400.0	90.00	89.78	7,150.0	-2,356.00	-340.4	6,421.4	6,429.0	0.00	0.00	0.00
13,500.0	90.00	89.78	7,150.0	-2,356.00	-340.0	6,521.4	6,528.9	0.00	0.00	0.00
13,600.0	90.00	89.78	7,150.0	-2,356.00	-339.6	6,621.4	6,628.8	0.00	0.00	0.00
13,700.0	90.00	89.78	7,150.0	-2,356.00	-339.3	6,721.4	6,728.8	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well STROMBERGER 8
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4794.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4794.0usft
Site:	SE NE SEC. 22T6N R67W 6th P.M.	North Reference:	True
Well:	STROMBERGER 8	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)
13,800.0	90.00	89.78	7,150.0	-2,356.00	-338.9	6,821.4	6,828.7	0.00	0.00	0.00
13,900.0	90.00	89.78	7,150.0	-2,356.00	-338.5	6,921.4	6,928.6	0.00	0.00	0.00
14,000.0	90.00	89.78	7,150.0	-2,356.00	-338.1	7,021.4	7,028.6	0.00	0.00	0.00
14,100.0	90.00	89.78	7,150.0	-2,356.00	-337.7	7,121.4	7,128.5	0.00	0.00	0.00
14,200.0	90.00	89.78	7,150.0	-2,356.00	-337.3	7,221.4	7,228.4	0.00	0.00	0.00
14,300.0	90.00	89.78	7,150.0	-2,356.00	-336.9	7,321.4	7,328.4	0.00	0.00	0.00
14,400.0	90.00	89.78	7,150.0	-2,356.00	-336.6	7,421.4	7,428.3	0.00	0.00	0.00
14,500.0	90.00	89.78	7,150.0	-2,356.00	-336.2	7,521.4	7,528.3	0.00	0.00	0.00
14,600.0	90.00	89.78	7,150.0	-2,356.00	-335.8	7,621.4	7,628.2	0.00	0.00	0.00
14,700.0	90.00	89.78	7,150.0	-2,356.00	-335.4	7,721.4	7,728.1	0.00	0.00	0.00
14,800.0	90.00	89.78	7,150.0	-2,356.00	-335.0	7,821.4	7,828.1	0.00	0.00	0.00
14,900.0	90.00	89.78	7,150.0	-2,356.00	-334.6	7,921.4	7,928.0	0.00	0.00	0.00
15,000.0	90.00	89.78	7,150.0	-2,356.00	-334.2	8,021.4	8,027.9	0.00	0.00	0.00
15,100.0	90.00	89.78	7,150.0	-2,356.00	-333.9	8,121.4	8,127.9	0.00	0.00	0.00
15,200.0	90.00	89.78	7,150.0	-2,356.00	-333.5	8,221.4	8,227.8	0.00	0.00	0.00
15,300.0	90.00	89.78	7,150.0	-2,356.00	-333.1	8,321.4	8,327.7	0.00	0.00	0.00
15,400.0	90.00	89.78	7,150.0	-2,356.00	-332.7	8,421.4	8,427.7	0.00	0.00	0.00
15,500.0	90.00	89.78	7,150.0	-2,356.00	-332.3	8,521.4	8,527.6	0.00	0.00	0.00
15,600.0	90.00	89.78	7,150.0	-2,356.00	-331.9	8,621.4	8,627.6	0.00	0.00	0.00
15,700.0	90.00	89.78	7,150.0	-2,356.00	-331.5	8,721.4	8,727.5	0.00	0.00	0.00
15,800.0	90.00	89.78	7,150.0	-2,356.00	-331.2	8,821.4	8,827.4	0.00	0.00	0.00
15,900.0	90.00	89.78	7,150.0	-2,356.00	-330.8	8,921.4	8,927.4	0.00	0.00	0.00
16,000.0	90.00	89.78	7,150.0	-2,356.00	-330.4	9,021.4	9,027.3	0.00	0.00	0.00
16,100.0	90.00	89.78	7,150.0	-2,356.00	-330.0	9,121.4	9,127.2	0.00	0.00	0.00
16,200.0	90.00	89.78	7,150.0	-2,356.00	-329.6	9,221.4	9,227.2	0.00	0.00	0.00
16,300.0	90.00	89.78	7,150.0	-2,356.00	-329.2	9,321.4	9,327.1	0.00	0.00	0.00
16,400.0	90.00	89.78	7,150.0	-2,356.00	-328.8	9,421.4	9,427.0	0.00	0.00	0.00
16,500.0	90.00	89.78	7,150.0	-2,356.00	-328.5	9,521.3	9,527.0	0.00	0.00	0.00
16,600.0	90.00	89.78	7,150.0	-2,356.00	-328.1	9,621.3	9,626.9	0.00	0.00	0.00
16,700.0	90.00	89.78	7,150.0	-2,356.00	-327.7	9,721.3	9,726.9	0.00	0.00	0.00
16,800.0	90.00	89.78	7,150.0	-2,356.00	-327.3	9,821.3	9,826.8	0.00	0.00	0.00
16,900.0	90.00	89.78	7,150.0	-2,356.00	-326.9	9,921.3	9,926.7	0.00	0.00	0.00
17,000.0	90.00	89.78	7,150.0	-2,356.00	-326.5	10,021.3	10,026.7	0.00	0.00	0.00
17,100.0	90.00	89.78	7,150.0	-2,356.00	-326.1	10,121.3	10,126.6	0.00	0.00	0.00
BHL - STROMBERGER 8										
17,197.1	90.00	89.78	7,150.0	-2,356.00	-325.8	10,218.5	10,223.6	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,444.0	3,444.0	PARKMAN				
4,209.0	4,209.0	SUSSEX				
4,784.0	4,784.0	SHANNON				
6,825.0	6,799.0	SHARON SPRINGS				
6,874.1	6,837.0	NIOBRARA				
7,040.7	6,956.0	NIO B				
7,343.3	7,109.0	FORT HAYS				
7,467.2	7,140.0	CODELL				

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well STROMBERGER 8
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4794.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4794.0usft
Site:	SE NE SEC. 22T6N R67W 6th P.M.	North Reference:	True
Well:	STROMBERGER 8	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,451.0	6,451.0	0.0	0.0	KOP (10°/100ft BUR)
6,843.1	6,813.2	-116.5	55.4	START BUILD & TURN
7,586.8	7,150.0	-362.8	608.2	LANDING PNT - STROMBERGER 8
17,197.1	7,150.0	-325.8	10,218.5	BHL - STROMBERGER 8