

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

NW NE SEC. 5 T5N R65W 6th P.M.

DT-FORBES 3-5-6

ORIGINAL WELLBORE

17 November, 2014

Plan: PROPOSAL #2

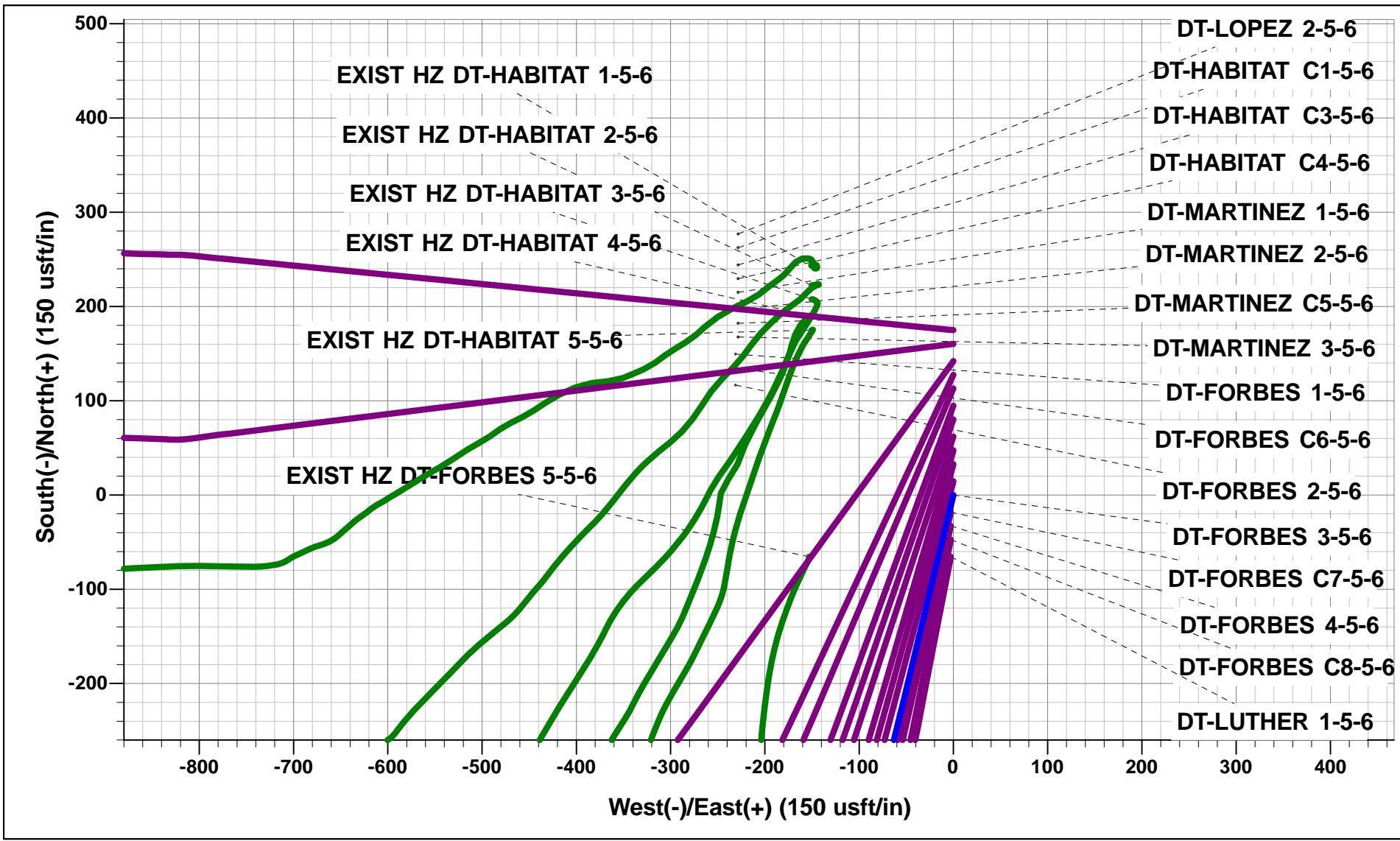




Project: WELD COUNTY, COLORADO (NAD 83)
Site: NW NE SEC. 5 T5N R65W 6th P.M.
Well: DT-FORBES 3-5-6
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

ANNOTATIONS										
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation		
1150.0	1150.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (6"/100ft BUR)		
1764.8	1818.0	40.08	193.64	-217.9	-52.9	124.7	224.3	EOB TO 40.08° INC		
5662.3	6911.6	40.08	193.64	-3404.9	-826.0	1948.4	3503.7	END OF TANGENT		
6277.1	7579.5	0.00	193.64	-3622.8	-878.9	2073.1	3727.9	EOD TO VERTICAL		
6307.1	7609.5	0.00	0.00	-3622.8	-878.9	2073.1	3727.9	KOP (10"/100ft BUR)		
6880.0	8509.5	90.00	273.80	-3584.8	-1450.6	2596.7	4300.8	7" ICP - DT-FORBES 3-5-6		
6880.0	15568.8	90.00	273.80	-3117.1	-8494.4	9048.2	11360.1	BHL - DT-FORBES 3-5-6		

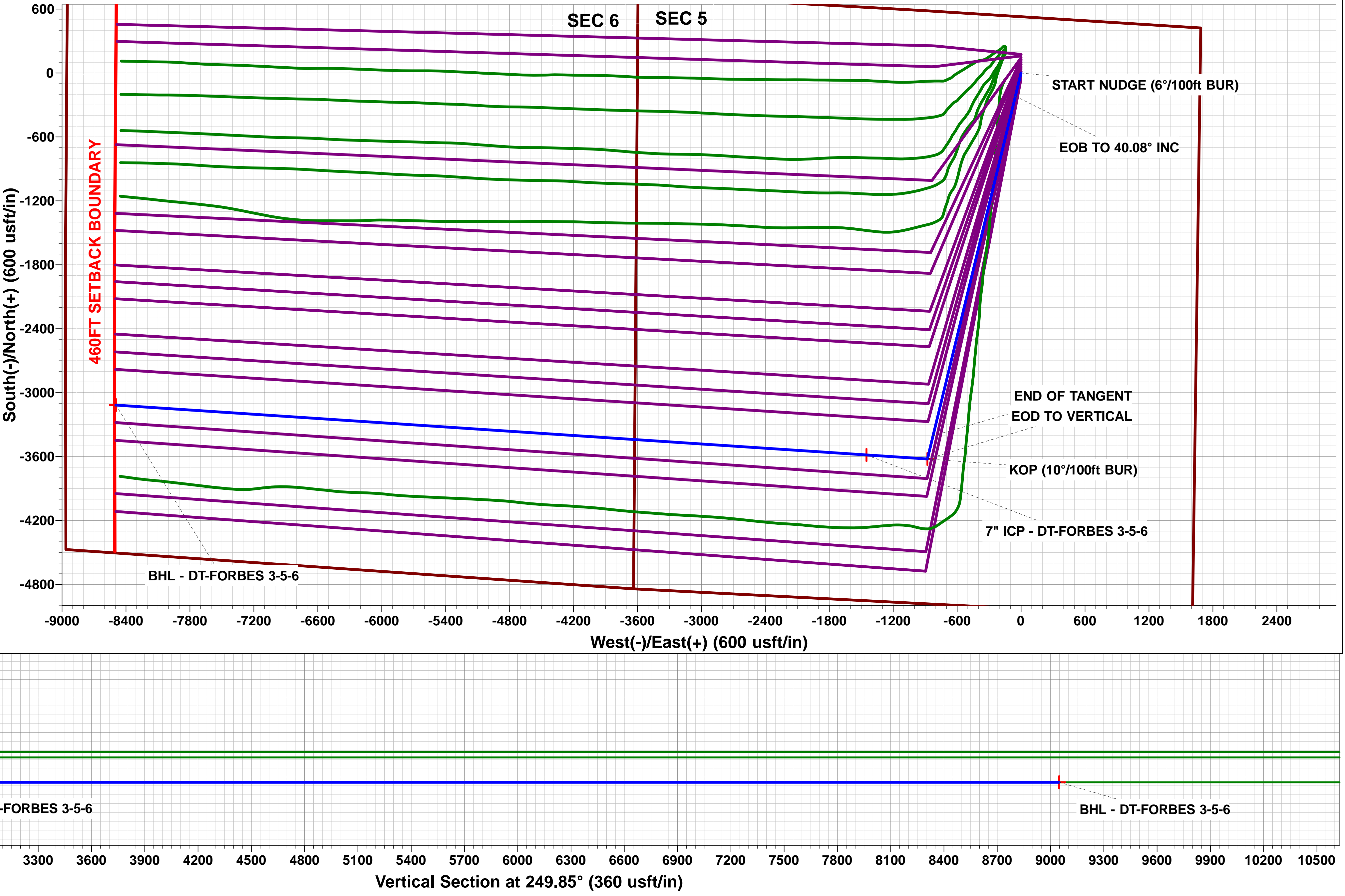
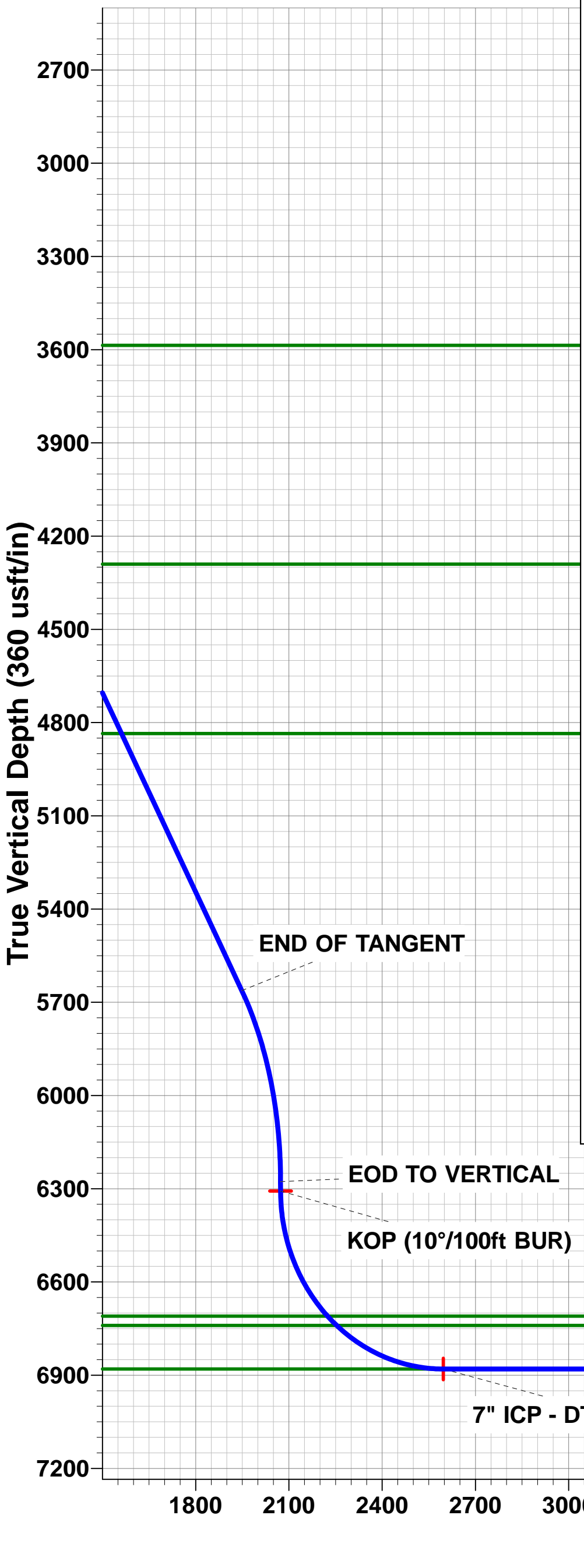
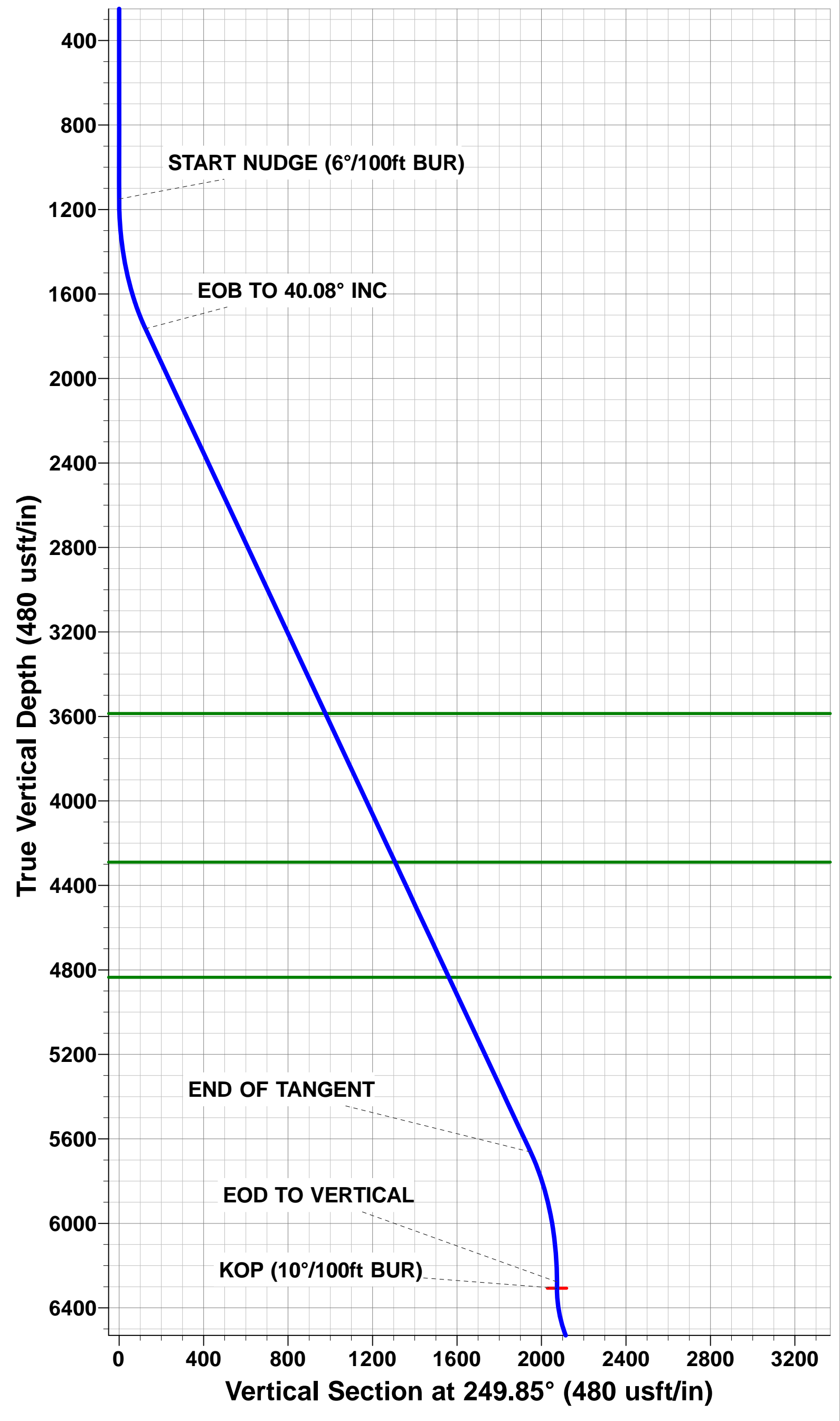
WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - DT-FORBES 3-5-6	6307.1	-3622.8	-878.9	40.425106	-104.686887
7" ICP - DT-FORBES 3-5-6	6880.0	-3584.8	-1450.6	40.425210	-104.688940
BHL - DT-FORBES 3-5-6	6880.0	-3117.1	-8494.4	40.426490	-104.714240



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3586.0	4198.1	PARKMAN
4290.0	5118.1	SUSSEX
4835.0	5830.4	SHANNON
6710.0	8056.4	SHARON SPRINGS
6740.0	8100.3	NIOBRARA
6880.0	8509.5	NIO B TARGET

Azimuths to True North
Magnetic North: 8.37°

Magnetic Field
Strength: 52801.3snT
Dip Angle: 66.97°
Date: 08/11/2014
Model: IGRF2010



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well DT-FORBES 3-5-6
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4657.0usft (SAV 802)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4657.0usft (SAV 802)
Site:	NW NE SEC. 5 T5N R65W 6th P.M.	North Reference:	True
Well:	DT-FORBES 3-5-6	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	NW NE SEC. 5 T5N R65W 6th P.M.		
Site Position:		Northing:	1,402,409.16usft
From:	Lat/Long	Easting:	3,226,987.53usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.435150
		Longitude:	-104.684560
		Grid Convergence:	0.53 °

Well	DT-FORBES 3-5-6		
Well Position	+N/-S	-36.4 usft	Northing:
	+E/-W	231.1 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)
	IGRF2010	08/11/2014	8.37	66.97	52,801

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	249.85

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	-4,657.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,150.0	0.00	0.00	1,150.0	-3,507.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,818.0	40.08	193.64	1,764.8	-2,892.2	-217.9	-52.9	6.00	6.00	0.00	193.64	
6,911.6	40.08	193.64	5,662.3	1,005.3	-3,404.9	-826.0	0.00	0.00	0.00	0.00	
7,579.5	0.00	0.00	6,277.1	1,620.1	-3,622.8	-878.9	6.00	-6.00	0.00	180.00	
7,609.5	0.00	0.00	6,307.1	1,650.1	-3,622.8	-878.9	0.00	0.00	0.00	0.00	KOP - DT-FORBES
8,509.5	90.00	273.80	6,880.0	2,223.0	-3,584.8	-1,450.6	10.00	10.00	-9.58	273.80	7" ICP - DT-FORBE
15,568.8	90.00	273.80	6,880.0	2,223.0	-3,117.1	-8,494.4	0.00	0.00	0.00	-131.32	BHL - DT-FORBES

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well DT-FORBES 3-5-6
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4657.0usft (SAV 802)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4657.0usft (SAV 802)
Site:	NW NE SEC. 5 T5N R65W 6th P.M.	North Reference:	True
Well:	DT-FORBES 3-5-6	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	4,657.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,557.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,457.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,357.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,257.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,157.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,057.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,957.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,857.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,757.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,657.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,557.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (6°/100ft BUR)										
1,150.0	0.00	0.00	1,150.0	3,507.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	3.00	193.64	1,200.0	3,457.02	-1.3	-0.3	0.7	6.00	6.00	0.00
1,300.0	9.00	193.64	1,299.4	3,357.62	-11.4	-2.8	6.5	6.00	6.00	0.00
1,400.0	15.00	193.64	1,397.2	3,259.85	-31.6	-7.7	18.1	6.00	6.00	0.00
1,500.0	21.00	193.64	1,492.2	3,164.78	-61.6	-15.0	35.3	6.00	6.00	0.00
1,600.0	27.00	193.64	1,583.5	3,073.47	-101.1	-24.5	57.9	6.00	6.00	0.00
1,700.0	33.00	193.64	1,670.1	2,986.91	-149.7	-36.3	85.7	6.00	6.00	0.00
1,800.0	39.00	193.64	1,751.0	2,906.04	-206.8	-50.2	118.3	6.00	6.00	0.00
EOB TO 40.08° INC										
1,818.0	40.08	193.64	1,764.8	2,892.16	-217.9	-52.9	124.7	5.99	5.99	0.00
1,900.0	40.08	193.64	1,827.6	2,829.42	-269.3	-65.3	154.1	0.00	0.00	0.00
2,000.0	40.08	193.64	1,904.1	2,752.90	-331.8	-80.5	189.9	0.00	0.00	0.00
2,100.0	40.08	193.64	1,980.6	2,676.38	-394.4	-95.7	225.7	0.00	0.00	0.00
2,200.0	40.08	193.64	2,057.1	2,599.87	-457.0	-110.9	261.5	0.00	0.00	0.00
2,300.0	40.08	193.64	2,133.7	2,523.35	-519.5	-126.0	297.3	0.00	0.00	0.00
2,400.0	40.08	193.64	2,210.2	2,446.83	-582.1	-141.2	333.1	0.00	0.00	0.00
2,500.0	40.08	193.64	2,286.7	2,370.31	-644.7	-156.4	368.9	0.00	0.00	0.00
2,600.0	40.08	193.64	2,363.2	2,293.80	-707.2	-171.6	404.7	0.00	0.00	0.00
2,700.0	40.08	193.64	2,439.7	2,217.28	-769.8	-186.8	440.5	0.00	0.00	0.00
2,800.0	40.08	193.64	2,516.2	2,140.76	-832.4	-201.9	476.3	0.00	0.00	0.00
2,900.0	40.08	193.64	2,592.8	2,064.24	-894.9	-217.1	512.1	0.00	0.00	0.00
3,000.0	40.08	193.64	2,669.3	1,987.73	-957.5	-232.3	547.9	0.00	0.00	0.00
3,100.0	40.08	193.64	2,745.8	1,911.21	-1,020.1	-247.5	583.7	0.00	0.00	0.00
3,200.0	40.08	193.64	2,822.3	1,834.69	-1,082.6	-262.6	619.5	0.00	0.00	0.00
3,300.0	40.08	193.64	2,898.8	1,758.18	-1,145.2	-277.8	655.3	0.00	0.00	0.00
3,400.0	40.08	193.64	2,975.3	1,681.66	-1,207.8	-293.0	691.1	0.00	0.00	0.00
3,500.0	40.08	193.64	3,051.9	1,605.14	-1,270.3	-308.2	726.9	0.00	0.00	0.00
3,600.0	40.08	193.64	3,128.4	1,528.62	-1,332.9	-323.4	762.7	0.00	0.00	0.00
3,700.0	40.08	193.64	3,204.9	1,452.11	-1,395.5	-338.5	798.5	0.00	0.00	0.00
3,800.0	40.08	193.64	3,281.4	1,375.59	-1,458.0	-353.7	834.4	0.00	0.00	0.00
3,900.0	40.08	193.64	3,357.9	1,299.07	-1,520.6	-368.9	870.2	0.00	0.00	0.00
4,000.0	40.08	193.64	3,434.4	1,222.55	-1,583.2	-384.1	906.0	0.00	0.00	0.00
4,100.0	40.08	193.64	3,511.0	1,146.04	-1,645.7	-399.3	941.8	0.00	0.00	0.00
PARKMAN										
4,198.1	40.08	193.64	3,586.0	1,071.00	-1,707.1	-414.1	976.9	0.00	0.00	0.00
4,200.0	40.08	193.64	3,587.5	1,069.52	-1,708.3	-414.4	977.6	0.00	0.00	0.00
4,300.0	40.08	193.64	3,664.0	993.00	-1,770.9	-429.6	1,013.4	0.00	0.00	0.00
4,400.0	40.08	193.64	3,740.5	916.48	-1,833.4	-444.8	1,049.2	0.00	0.00	0.00
4,500.0	40.08	193.64	3,817.0	839.97	-1,896.0	-460.0	1,085.0	0.00	0.00	0.00
4,600.0	40.08	193.64	3,893.5	763.45	-1,958.6	-475.2	1,120.8	0.00	0.00	0.00

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Well:	DT-FORBES 3-5-6	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)
4,700.0	40.08	193.64	3,970.1	686.93	-2,021.1	-490.3	1,156.6	0.00	0.00	0.00
4,800.0	40.08	193.64	4,046.6	610.42	-2,083.7	-505.5	1,192.4	0.00	0.00	0.00
4,900.0	40.08	193.64	4,123.1	533.90	-2,146.3	-520.7	1,228.2	0.00	0.00	0.00
5,000.0	40.08	193.64	4,199.6	457.38	-2,208.8	-535.9	1,264.0	0.00	0.00	0.00
5,100.0	40.08	193.64	4,276.1	380.86	-2,271.4	-551.0	1,299.8	0.00	0.00	0.00
SUSSEX										
5,118.1	40.08	193.64	4,290.0	367.00	-2,282.8	-553.8	1,306.3	0.00	0.00	0.00
5,200.0	40.08	193.64	4,352.7	304.35	-2,334.0	-566.2	1,335.6	0.00	0.00	0.00
5,300.0	40.08	193.64	4,429.2	227.83	-2,396.5	-581.4	1,371.4	0.00	0.00	0.00
5,400.0	40.08	193.64	4,505.7	151.31	-2,459.1	-596.6	1,407.2	0.00	0.00	0.00
5,500.0	40.08	193.64	4,582.2	74.79	-2,521.7	-611.8	1,443.0	0.00	0.00	0.00
5,600.0	40.08	193.64	4,658.7	-1.72	-2,584.3	-626.9	1,478.8	0.00	0.00	0.00
5,700.0	40.08	193.64	4,735.2	-78.24	-2,646.8	-642.1	1,514.6	0.00	0.00	0.00
5,800.0	40.08	193.64	4,811.8	-154.76	-2,709.4	-657.3	1,550.4	0.00	0.00	0.00
SHANNON										
5,830.4	40.08	193.64	4,835.0	-178.00	-2,728.4	-661.9	1,561.3	0.00	0.00	0.00
5,900.0	40.08	193.64	4,888.3	-231.27	-2,772.0	-672.5	1,586.2	0.00	0.00	0.00
6,000.0	40.08	193.64	4,964.8	-307.79	-2,834.5	-687.7	1,622.0	0.00	0.00	0.00
6,100.0	40.08	193.64	5,041.3	-384.31	-2,897.1	-702.8	1,657.8	0.00	0.00	0.00
6,200.0	40.08	193.64	5,117.8	-460.83	-2,959.7	-718.0	1,693.6	0.00	0.00	0.00
6,300.0	40.08	193.64	5,194.3	-537.34	-3,022.2	-733.2	1,729.4	0.00	0.00	0.00
6,400.0	40.08	193.64	5,270.9	-613.86	-3,084.8	-748.4	1,765.3	0.00	0.00	0.00
6,500.0	40.08	193.64	5,347.4	-690.38	-3,147.4	-763.5	1,801.1	0.00	0.00	0.00
6,600.0	40.08	193.64	5,423.9	-766.90	-3,209.9	-778.7	1,836.9	0.00	0.00	0.00
6,700.0	40.08	193.64	5,500.4	-843.41	-3,272.5	-793.9	1,872.7	0.00	0.00	0.00
6,800.0	40.08	193.64	5,576.9	-919.93	-3,335.1	-809.1	1,908.5	0.00	0.00	0.00
6,900.0	40.08	193.64	5,653.4	-996.45	-3,397.6	-824.3	1,944.3	0.00	0.00	0.00
END OF TANGENT										
6,911.6	40.08	193.64	5,662.3	-1,005.32	-3,404.9	-826.0	1,948.4	0.00	0.00	0.00
7,000.0	34.77	193.64	5,732.5	-1,075.50	-3,457.1	-838.7	1,978.3	6.00	-6.00	0.00
7,100.0	28.77	193.64	5,817.5	-1,160.48	-3,508.2	-851.1	2,007.6	6.00	-6.00	0.00
7,200.0	22.77	193.64	5,907.5	-1,250.49	-3,550.5	-861.3	2,031.7	6.00	-6.00	0.00
7,300.0	16.77	193.64	6,001.6	-1,344.56	-3,583.3	-869.3	2,050.5	6.00	-6.00	0.00
7,400.0	10.77	193.64	6,098.6	-1,441.64	-3,606.4	-874.9	2,063.8	6.00	-6.00	0.00
7,500.0	4.77	193.64	6,197.7	-1,540.67	-3,619.6	-878.1	2,071.3	6.00	-6.00	0.00
EOD TO VERTICAL										
7,579.5	0.00	193.64	6,277.1	-1,620.08	-3,622.8	-878.9	2,073.1	6.00	-6.00	0.00
7,600.0	0.00	0.00	6,297.6	-1,640.58	-3,622.8	-878.9	2,073.1	0.01	-0.01	0.00
KOP (10°/100ft BUR)										
7,609.5	0.00	0.00	6,307.1	-1,650.08	-3,622.8	-878.9	2,073.1	0.00	0.00	0.00
7,700.0	9.05	273.80	6,397.2	-1,740.21	-3,622.3	-886.0	2,079.6	10.00	10.00	0.00
7,800.0	19.05	273.80	6,494.1	-1,837.09	-3,620.7	-910.2	2,101.8	10.00	10.00	0.00
7,900.0	29.05	273.80	6,585.3	-1,928.29	-3,618.0	-950.8	2,139.0	10.00	10.00	0.00
8,000.0	39.05	273.80	6,668.0	-2,011.04	-3,614.3	-1,006.6	2,190.1	10.00	10.00	0.00
SHARON SPRINGS										
8,056.4	44.69	273.80	6,710.0	-2,053.00	-3,611.8	-1,044.1	2,224.5	10.00	10.00	0.00
8,100.0	49.05	273.80	6,739.8	-2,082.82	-3,609.7	-1,075.9	2,253.6	10.00	10.00	0.00
NIORARA										
8,100.3	49.08	273.80	6,740.0	-2,083.00	-3,609.7	-1,076.1	2,253.7	10.00	10.00	0.00
8,200.0	59.05	273.80	6,798.4	-2,141.45	-3,604.3	-1,156.6	2,327.4	10.00	10.00	0.00
8,300.0	69.06	273.80	6,842.1	-2,185.15	-3,598.4	-1,246.2	2,409.5	10.00	10.00	0.00
8,400.0	79.06	273.80	6,869.6	-2,212.58	-3,592.0	-1,342.0	2,497.3	10.00	10.00	0.00
8,500.0	89.06	273.80	6,879.9	-2,222.92	-3,585.4	-1,441.1	2,588.1	10.00	10.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well DT-FORBES 3-5-6
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4657.0usft (SAV 802)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4657.0usft (SAV 802)
Site:	NW NE SEC. 5 T5N R65W 6th P.M.	North Reference:	True
Well:	DT-FORBES 3-5-6	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)
7" ICP - DT-FORBES 3-5-6 - NIO B TARGET										
8,509.5	90.00	273.80	6,880.0	-2,223.00	-3,584.8	-1,450.6	2,596.7	10.00	10.00	0.00
8,600.0	90.00	273.80	6,880.0	-2,223.00	-3,578.8	-1,540.9	2,679.4	0.00	0.00	0.00
8,700.0	90.00	273.80	6,880.0	-2,222.99	-3,572.2	-1,640.7	2,770.8	0.00	0.00	0.00
8,800.0	90.00	273.80	6,880.0	-2,222.99	-3,565.5	-1,740.5	2,862.2	0.00	0.00	0.00
8,900.0	90.00	273.80	6,880.0	-2,222.98	-3,558.9	-1,840.2	2,953.6	0.00	0.00	0.00
9,000.0	90.00	273.80	6,880.0	-2,222.98	-3,552.3	-1,940.0	3,045.0	0.00	0.00	0.00
9,100.0	90.00	273.80	6,880.0	-2,222.97	-3,545.6	-2,039.8	3,136.4	0.00	0.00	0.00
9,200.0	90.00	273.80	6,880.0	-2,222.97	-3,539.0	-2,139.6	3,227.8	0.00	0.00	0.00
9,300.0	90.00	273.80	6,880.0	-2,222.96	-3,532.4	-2,239.4	3,319.2	0.00	0.00	0.00
9,400.0	90.00	273.80	6,880.0	-2,222.96	-3,525.7	-2,339.1	3,410.6	0.00	0.00	0.00
9,500.0	90.00	273.80	6,880.0	-2,222.96	-3,519.1	-2,438.9	3,501.9	0.00	0.00	0.00
9,600.0	90.00	273.80	6,880.0	-2,222.95	-3,512.5	-2,538.7	3,593.3	0.00	0.00	0.00
9,700.0	90.00	273.80	6,880.0	-2,222.95	-3,505.9	-2,638.5	3,684.7	0.00	0.00	0.00
9,800.0	90.00	273.80	6,879.9	-2,222.95	-3,499.2	-2,738.3	3,776.1	0.00	0.00	0.00
9,900.0	90.00	273.80	6,879.9	-2,222.94	-3,492.6	-2,838.0	3,867.5	0.00	0.00	0.00
10,000.0	90.00	273.80	6,879.9	-2,222.94	-3,486.0	-2,937.8	3,958.9	0.00	0.00	0.00
10,100.0	90.00	273.80	6,879.9	-2,222.94	-3,479.3	-3,037.6	4,050.3	0.00	0.00	0.00
10,200.0	90.00	273.80	6,879.9	-2,222.94	-3,472.7	-3,137.4	4,141.7	0.00	0.00	0.00
10,300.0	90.00	273.80	6,879.9	-2,222.93	-3,466.1	-3,237.2	4,233.0	0.00	0.00	0.00
10,400.0	90.00	273.80	6,879.9	-2,222.93	-3,459.4	-3,336.9	4,324.4	0.00	0.00	0.00
10,500.0	90.00	273.80	6,879.9	-2,222.93	-3,452.8	-3,436.7	4,415.8	0.00	0.00	0.00
10,600.0	90.00	273.80	6,879.9	-2,222.93	-3,446.2	-3,536.5	4,507.2	0.00	0.00	0.00
10,700.0	90.00	273.80	6,879.9	-2,222.92	-3,439.6	-3,636.3	4,598.6	0.00	0.00	0.00
10,800.0	90.00	273.80	6,879.9	-2,222.92	-3,432.9	-3,736.1	4,690.0	0.00	0.00	0.00
10,900.0	90.00	273.80	6,879.9	-2,222.92	-3,426.3	-3,835.8	4,781.4	0.00	0.00	0.00
11,000.0	90.00	273.80	6,879.9	-2,222.92	-3,419.7	-3,935.6	4,872.8	0.00	0.00	0.00
11,100.0	90.00	273.80	6,879.9	-2,222.92	-3,413.1	-4,035.4	4,964.2	0.00	0.00	0.00
11,200.0	90.00	273.80	6,879.9	-2,222.92	-3,406.4	-4,135.2	5,055.6	0.00	0.00	0.00
11,300.0	90.00	273.80	6,879.9	-2,222.91	-3,399.8	-4,235.0	5,146.9	0.00	0.00	0.00
11,400.0	90.00	273.80	6,879.9	-2,222.91	-3,393.2	-4,334.7	5,238.3	0.00	0.00	0.00
11,500.0	90.00	273.80	6,879.9	-2,222.91	-3,386.5	-4,434.5	5,329.7	0.00	0.00	0.00
11,600.0	90.00	273.80	6,879.9	-2,222.91	-3,379.9	-4,534.3	5,421.1	0.00	0.00	0.00
11,700.0	90.00	273.80	6,879.9	-2,222.91	-3,373.3	-4,634.1	5,512.5	0.00	0.00	0.00
11,800.0	90.00	273.80	6,879.9	-2,222.91	-3,366.7	-4,733.9	5,603.9	0.00	0.00	0.00
11,900.0	90.00	273.80	6,879.9	-2,222.91	-3,360.0	-4,833.6	5,695.3	0.00	0.00	0.00
12,000.0	90.00	273.80	6,879.9	-2,222.91	-3,353.4	-4,933.4	5,786.7	0.00	0.00	0.00
12,100.0	90.00	273.80	6,879.9	-2,222.91	-3,346.8	-5,033.2	5,878.1	0.00	0.00	0.00
12,200.0	90.00	273.80	6,879.9	-2,222.91	-3,340.2	-5,133.0	5,969.4	0.00	0.00	0.00
12,300.0	90.00	273.80	6,879.9	-2,222.91	-3,333.5	-5,232.8	6,060.8	0.00	0.00	0.00
12,400.0	90.00	273.80	6,879.9	-2,222.91	-3,326.9	-5,332.5	6,152.2	0.00	0.00	0.00
12,500.0	90.00	273.80	6,879.9	-2,222.91	-3,320.3	-5,432.3	6,243.6	0.00	0.00	0.00
12,600.0	90.00	273.80	6,879.9	-2,222.91	-3,313.7	-5,532.1	6,335.0	0.00	0.00	0.00
12,700.0	90.00	273.80	6,879.9	-2,222.91	-3,307.0	-5,631.9	6,426.4	0.00	0.00	0.00
12,800.0	90.00	273.80	6,879.9	-2,222.92	-3,300.4	-5,731.7	6,517.8	0.00	0.00	0.00
12,900.0	90.00	273.80	6,879.9	-2,222.92	-3,293.8	-5,831.4	6,609.2	0.00	0.00	0.00
13,000.0	90.00	273.80	6,879.9	-2,222.92	-3,287.2	-5,931.2	6,700.6	0.00	0.00	0.00
13,100.0	90.00	273.80	6,879.9	-2,222.92	-3,280.5	-6,031.0	6,792.0	0.00	0.00	0.00
13,200.0	90.00	273.80	6,879.9	-2,222.92	-3,273.9	-6,130.8	6,883.4	0.00	0.00	0.00
13,300.0	90.00	273.80	6,879.9	-2,222.92	-3,267.3	-6,230.6	6,974.7	0.00	0.00	0.00
13,400.0	90.00	273.80	6,879.9	-2,222.92	-3,260.7	-6,330.3	7,066.1	0.00	0.00	0.00
13,500.0	90.00	273.80	6,879.9	-2,222.93	-3,254.0	-6,430.1	7,157.5	0.00	0.00	0.00
13,600.0	90.00	273.80	6,879.9	-2,222.93	-3,247.4	-6,529.9	7,248.9	0.00	0.00	0.00
13,700.0	90.00	273.80	6,879.9	-2,222.93	-3,240.8	-6,629.7	7,340.3	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well DT-FORBES 3-5-6
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4657.0usft (SAV 802)
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4657.0usft (SAV 802)
Site:	NW NE SEC. 5 T5N R65W 6th P.M.	North Reference:	True
Well:	DT-FORBES 3-5-6	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	273.80	6,879.9	-2,222.93	-3,234.2	-6,729.5	7,431.7	0.00	0.00	0.00
13,900.0	90.00	273.80	6,879.9	-2,222.94	-3,227.5	-6,829.2	7,523.1	0.00	0.00	0.00
14,000.0	90.00	273.80	6,879.9	-2,222.94	-3,220.9	-6,929.0	7,614.5	0.00	0.00	0.00
14,100.0	90.00	273.80	6,879.9	-2,222.94	-3,214.3	-7,028.8	7,705.9	0.00	0.00	0.00
14,200.0	90.00	273.80	6,879.9	-2,222.94	-3,207.7	-7,128.6	7,797.3	0.00	0.00	0.00
14,300.0	90.00	273.80	6,879.9	-2,222.95	-3,201.1	-7,228.4	7,888.7	0.00	0.00	0.00
14,400.0	90.00	273.80	6,880.0	-2,222.95	-3,194.4	-7,328.1	7,980.0	0.00	0.00	0.00
14,500.0	90.00	273.80	6,880.0	-2,222.95	-3,187.8	-7,427.9	8,071.4	0.00	0.00	0.00
14,600.0	90.00	273.80	6,880.0	-2,222.96	-3,181.2	-7,527.7	8,162.8	0.00	0.00	0.00
14,700.0	90.00	273.80	6,880.0	-2,222.96	-3,174.6	-7,627.5	8,254.2	0.00	0.00	0.00
14,800.0	90.00	273.80	6,880.0	-2,222.97	-3,168.0	-7,727.3	8,345.6	0.00	0.00	0.00
14,900.0	90.00	273.80	6,880.0	-2,222.97	-3,161.3	-7,827.1	8,437.0	0.00	0.00	0.00
15,000.0	90.00	273.80	6,880.0	-2,222.97	-3,154.7	-7,926.8	8,528.4	0.00	0.00	0.00
15,100.0	90.00	273.80	6,880.0	-2,222.98	-3,148.1	-8,026.6	8,619.8	0.00	0.00	0.00
15,200.0	90.00	273.80	6,880.0	-2,222.98	-3,141.5	-8,126.4	8,711.2	0.00	0.00	0.00
15,300.0	90.00	273.80	6,880.0	-2,222.99	-3,134.8	-8,226.2	8,802.6	0.00	0.00	0.00
15,400.0	90.00	273.80	6,880.0	-2,222.99	-3,128.2	-8,326.0	8,894.0	0.00	0.00	0.00
15,500.0	90.00	273.80	6,880.0	-2,223.00	-3,121.6	-8,425.7	8,985.4	0.00	0.00	0.00
BHL - DT-FORBES 3-5-6										
15,568.8	90.00	273.80	6,880.0	-2,223.00	-3,117.1	-8,494.4	9,048.2	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,198.1	3,586.0	PARKMAN			
5,118.1	4,290.0	SUSSEX			
5,830.4	4,835.0	SHANNON			
8,056.4	6,710.0	SHARON SPRINGS			
8,100.3	6,740.0	NIOBRARA			
8,509.5	6,880.0	NIO B TARGET			

Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,150.0	1,150.0	0.0	0.0	START NUDGE (6°/100ft BUR)
1,818.0	1,764.8	-217.9	-52.9	EOB TO 40.08° INC
6,911.6	5,662.3	-3,404.9	-826.0	END OF TANGENT
7,579.5	6,277.1	-3,622.8	-878.9	EOD TO VERTICAL
7,609.5	6,307.1	-3,622.8	-878.9	KOP (10°/100ft BUR)
8,509.5	6,880.0	-3,584.8	-1,450.6	7" ICP - DT-FORBES 3-5-6
15,568.8	6,880.0	-3,117.1	-8,494.4	BHL - DT-FORBES 3-5-6