

# **EXTRACTION OIL & GAS**

**WELD COUNTY, COLORADO (NAD 83)**

**NE SE SEC. 8 T5N R66W 6th P.M.**

**TC-AIMS 1-9-11**

**ORIGINAL WELLBORE**

**09 January, 2017**

**Plan: PROPOSAL #2**





Project: WELD COUNTY, COLORADO (NAD 83)  
Site: NE SE SEC. 8 T5N R66W 6th P.M.  
Well: TC-AIMS 1-9-11  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #2

ANNOTATIONS										FORMATION TOP DETAILS		
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation		TVDPath	MDPath	Formation
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 2622ft FNL & 1191ft FEL of Sec 8		3680.0	3722.0	PARKMAN
1900.0	1900.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)		4410.0	4475.6	SUSSEX
2610.7	2618.2	14.36	75.93	21.8	86.9	87.2	89.6	EOB TO 14.36° INC		4820.0	4898.8	SHANNON
6657.7	6795.8	14.36	75.93	273.7	1092.2	1096.7	1126.0	START BUILD & TURN		6940.0	7129.0	SHARON SPRINGS
7092.0	7556.7	90.00	90.25	298.8	1648.5	1653.4	1683.5	HZ LP: 2330ft FNL & 460ft FWL of Sec 9		6972.0	7178.6	NIOBRARA
7092.0	20193.3	90.00	90.25	244.6	14285.0	14287.1	14320.1	BHL: 2576ft FNL & 2488ft FWL of Sec 11		7092.0	7553.3	NIO B TARGET

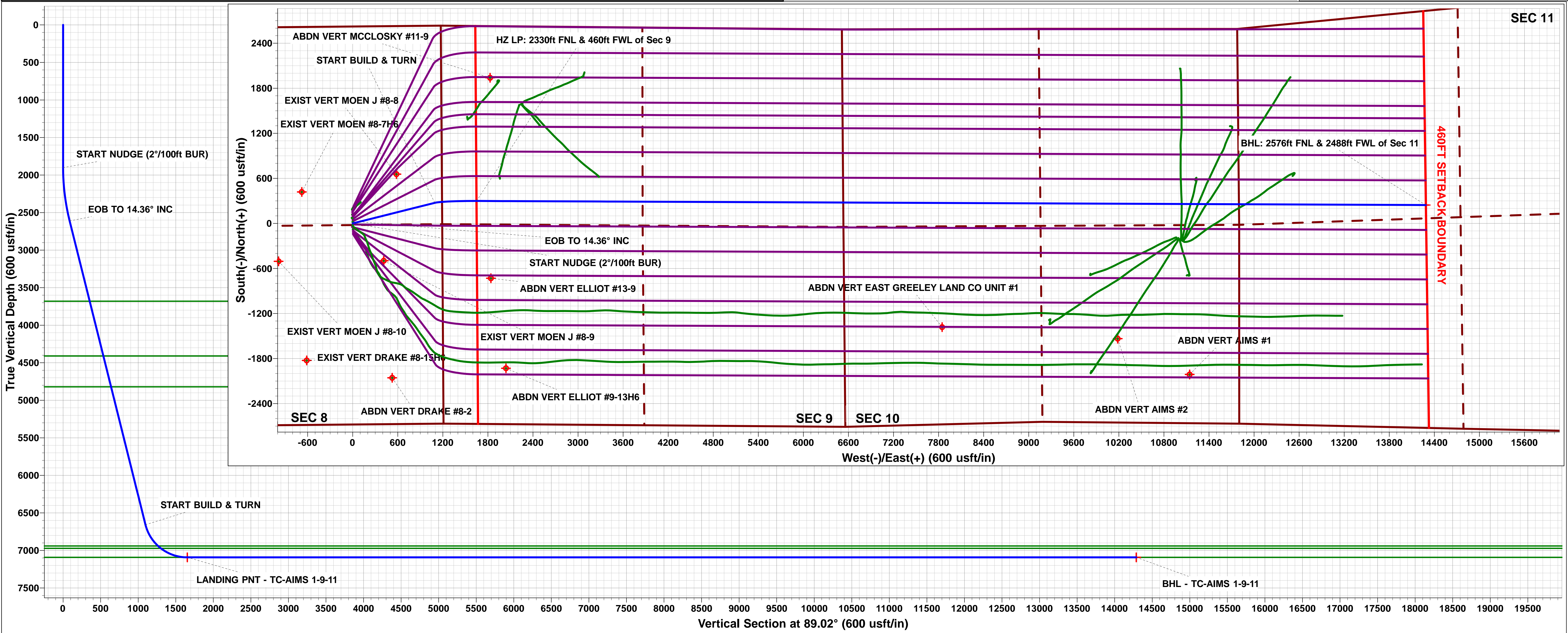
WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LANDING PNT - TC-AIMS 1-9-11	7092.0	298.8	1648.5	40.415020	-104.792750
BHL - TC-AIMS 1-9-11	7092.0	244.6	14285.0	40.414860	-104.747370

TC-MOISER HILL 2-9-7  
TC-COUNTRY CLUB WEST C1-9-11  
TC-MOISER HILL 3-9-11  
TC-COUNTRY CLUB WEST 1-9-11  
TC-COUNTRY CLUB WEST 2-9-11  
TC-COUNTRY CLUB WEST C3-9-11  
TC-COUNTRY CLUB WEST A2-9-11  
TC-COUNTRY CLUB WEST 3-9-11  
TC-AIMS C4-9-11  
TC-COUNTRY CLUB WEST 4-9-11  
TC-COUNTRY CLUB WEST 5-9-11  
TC-AIMS C5-9-11  
TC-AIMS 1-9-11  
TC-AIMS 2-9-11  
TC-HILAND KNOLLS C6-9-11  
TC-AIMS 3-9-11  
TC-AIMS 4-9-11

TC-HILAND KNOLLS C7-9-11  
TC-HILAND KNOLLS 1-9-11  
TC-HILAND KNOLLS 2-9-11  
TC-HILAND KNOLLS 3-9-11  
TC-HILAND KNOLLS 4-9-11

South(-)/North(+) (150 usft/in)  
West(-)/East(+) (150 usft/in)

T M  
Azimuths to True North  
Magnetic North: 8.28°  
Magnetic Field  
Strength: 52449.9snT  
Dip Angle: 66.87°  
Date: 28/12/2016  
Model: IGRF2015



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-AIMS 1-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4806.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4806.0usft
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-AIMS 1-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

<b>Project</b>	WELD COUNTY, COLORADO (NAD 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	NE SE SEC. 8 T5N R66W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,394,363.62 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,195,288.63 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.413810
		<b>Longitude:</b>	-104.798660
		<b>Grid Convergence:</b>	0.45 °

Well	TC-AIMS 1-9-11					
Well Position	+N/-S	142.1 usft	Northing:	1,394,505.67 usfi	Latitude:	40.414200
	+E/-W	-2.8 usft	Easting:	3,195,284.72 usfi	Longitude:	-104.798670
Position Uncertainty		0.0 usft	Wellhead Elevation:	usfi	Ground Level:	4,790.0 usft

<b>Wellbore</b>	ORIGINAL WELLBORE				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	28/12/2016	8.28	66.87	52,450

<b>Design</b>	PROPOSAL #2				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0	
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	89.02	

<b>Plan Sections</b>											
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	-4,806.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	-2,906.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,618.2	14.36	75.93	2,610.7	-2,195.3	21.8	86.9	2.00	2.00	0.00	75.93	
6,795.8	14.36	75.93	6,657.6	1,851.6	273.7	1,092.2	0.00	0.00	0.00	0.00	
7,556.7	90.00	90.25	7,092.0	2,286.0	298.8	1,648.5	10.00	9.94	1.88	14.76	LANDING PNT - TC
20,193.3	90.00	90.25	7,092.0	2,286.0	244.6	14,285.0	0.00	0.00	0.00	0.00	BHL - TC-AIMS 1-9

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-AIMS 1-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4806.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4806.0usft
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-AIMS 1-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
<b>SHL: 2622ft FNL &amp; 1191ft FEL of Sec 8</b>										
0.0	0.00	0.00	0.0	4,806.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,706.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,606.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,506.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,406.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,306.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,206.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,106.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	4,006.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,906.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,806.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,706.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,606.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	3,506.00	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	3,406.00	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	3,306.00	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	3,206.00	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	3,106.00	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	3,006.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
1,900.0	0.00	0.00	1,900.0	2,906.00	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	2.00	75.93	2,000.0	2,806.02	0.4	1.7	1.7	2.00	2.00	0.00
2,100.0	4.00	75.93	2,099.8	2,706.16	1.7	6.8	6.8	2.00	2.00	0.00
2,200.0	6.00	75.93	2,199.5	2,606.55	3.8	15.2	15.3	2.00	2.00	0.00
2,300.0	8.00	75.93	2,298.7	2,507.30	6.8	27.0	27.2	2.00	2.00	0.00
2,400.0	10.00	75.93	2,397.5	2,408.53	10.6	42.2	42.4	2.00	2.00	0.00
2,500.0	12.00	75.93	2,495.6	2,310.38	15.2	60.7	61.0	2.00	2.00	0.00
2,600.0	14.00	75.93	2,593.1	2,212.94	20.7	82.5	82.9	2.00	2.00	0.00
<b>EOB TO 14.36° INC</b>										
2,618.2	14.36	75.93	2,610.7	2,195.30	21.8	86.9	87.2	2.00	2.00	0.00
2,700.0	14.36	75.93	2,689.9	2,116.06	26.7	106.6	107.0	0.00	0.00	0.00
2,800.0	14.36	75.93	2,786.8	2,019.18	32.7	130.6	131.2	0.00	0.00	0.00
2,900.0	14.36	75.93	2,883.7	1,922.31	38.8	154.7	155.3	0.00	0.00	0.00
3,000.0	14.36	75.93	2,980.6	1,825.44	44.8	178.8	179.5	0.00	0.00	0.00
3,100.0	14.36	75.93	3,077.4	1,728.56	50.8	202.8	203.7	0.00	0.00	0.00
3,200.0	14.36	75.93	3,174.3	1,631.69	56.9	226.9	227.8	0.00	0.00	0.00
3,300.0	14.36	75.93	3,271.2	1,534.82	62.9	250.9	252.0	0.00	0.00	0.00
3,400.0	14.36	75.93	3,368.1	1,437.94	68.9	275.0	276.2	0.00	0.00	0.00
3,500.0	14.36	75.93	3,464.9	1,341.07	74.9	299.1	300.3	0.00	0.00	0.00
3,600.0	14.36	75.93	3,561.8	1,244.19	81.0	323.1	324.5	0.00	0.00	0.00
3,700.0	14.36	75.93	3,658.7	1,147.32	87.0	347.2	348.6	0.00	0.00	0.00
<b>PARKMAN</b>										
3,722.0	14.36	75.93	3,680.0	1,126.00	88.3	352.5	354.0	0.00	0.00	0.00
3,800.0	14.36	75.93	3,755.6	1,050.45	93.0	371.3	372.8	0.00	0.00	0.00
3,900.0	14.36	75.93	3,852.4	953.57	99.1	395.3	397.0	0.00	0.00	0.00
4,000.0	14.36	75.93	3,949.3	856.70	105.1	419.4	421.1	0.00	0.00	0.00
4,100.0	14.36	75.93	4,046.2	759.83	111.1	443.5	445.3	0.00	0.00	0.00
4,200.0	14.36	75.93	4,143.0	662.95	117.2	467.5	469.5	0.00	0.00	0.00
4,300.0	14.36	75.93	4,239.9	566.08	123.2	491.6	493.6	0.00	0.00	0.00
4,400.0	14.36	75.93	4,336.8	469.21	129.2	515.7	517.8	0.00	0.00	0.00
<b>SUSSEX</b>										
4,475.6	14.36	75.93	4,410.0	396.00	133.8	533.9	536.1	0.00	0.00	0.00
4,500.0	14.36	75.93	4,433.7	372.33	135.2	539.7	542.0	0.00	0.00	0.00



# Planning Report



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<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4806.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4806.0usft
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-AIMS 1-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
4,600.0	14.36	75.93	4,530.5	275.46	141.3	563.8	566.1	0.00	0.00	0.00
4,700.0	14.36	75.93	4,627.4	178.58	147.3	587.9	590.3	0.00	0.00	0.00
4,800.0	14.36	75.93	4,724.3	81.71	153.3	611.9	614.5	0.00	0.00	0.00
<b>SHANNON</b>										
<b>4,898.8</b>	<b>14.36</b>	<b>75.93</b>	<b>4,820.0</b>	<b>-14.00</b>	<b>159.3</b>	<b>635.7</b>	<b>638.3</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,900.0	14.36	75.93	4,821.2	-15.16	159.4	636.0	638.6	0.00	0.00	0.00
5,000.0	14.36	75.93	4,918.0	-112.04	165.4	660.1	662.8	0.00	0.00	0.00
5,100.0	14.36	75.93	5,014.9	-208.91	171.4	684.1	687.0	0.00	0.00	0.00
5,200.0	14.36	75.93	5,111.8	-305.78	177.5	708.2	711.1	0.00	0.00	0.00
5,300.0	14.36	75.93	5,208.7	-402.66	183.5	732.3	735.3	0.00	0.00	0.00
5,400.0	14.36	75.93	5,305.5	-499.53	189.5	756.3	759.5	0.00	0.00	0.00
5,500.0	14.36	75.93	5,402.4	-596.40	195.5	780.4	783.6	0.00	0.00	0.00
5,600.0	14.36	75.93	5,499.3	-693.28	201.6	804.4	807.8	0.00	0.00	0.00
5,700.0	14.36	75.93	5,596.2	-790.15	207.6	828.5	831.9	0.00	0.00	0.00
5,800.0	14.36	75.93	5,693.0	-887.02	213.6	852.6	856.1	0.00	0.00	0.00
5,900.0	14.36	75.93	5,789.9	-983.90	219.7	876.6	880.3	0.00	0.00	0.00
6,000.0	14.36	75.93	5,886.8	-1,080.77	225.7	900.7	904.4	0.00	0.00	0.00
6,100.0	14.36	75.93	5,983.6	-1,177.65	231.7	924.8	928.6	0.00	0.00	0.00
6,200.0	14.36	75.93	6,080.5	-1,274.52	237.8	948.8	952.8	0.00	0.00	0.00
6,300.0	14.36	75.93	6,177.4	-1,371.39	243.8	972.9	976.9	0.00	0.00	0.00
6,400.0	14.36	75.93	6,274.3	-1,468.27	249.8	997.0	1,001.1	0.00	0.00	0.00
6,500.0	14.36	75.93	6,371.1	-1,565.14	255.9	1,021.0	1,025.3	0.00	0.00	0.00
6,600.0	14.36	75.93	6,468.0	-1,662.01	261.9	1,045.1	1,049.4	0.00	0.00	0.00
6,700.0	14.36	75.93	6,564.9	-1,758.89	267.9	1,069.2	1,073.6	0.00	0.00	0.00
<b>START BUILD &amp; TURN</b>										
<b>6,795.8</b>	<b>14.36</b>	<b>75.93</b>	<b>6,657.7</b>	<b>-1,851.69</b>	<b>273.7</b>	<b>1,092.2</b>	<b>1,096.7</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,800.0	14.78	76.36	6,661.8	-1,855.76	273.9	1,093.2	1,097.8	10.11	9.79	10.10
6,900.0	24.59	82.29	6,755.8	-1,949.81	279.8	1,126.3	1,131.0	10.00	9.81	5.94
7,000.0	34.50	84.96	6,842.7	-2,036.70	285.0	1,175.3	1,180.0	10.00	9.92	2.67
7,100.0	44.45	86.55	6,919.8	-2,113.80	289.7	1,238.6	1,243.4	10.00	9.95	1.59
<b>SHARON SPRINGS</b>										
<b>7,129.0</b>	<b>47.34</b>	<b>86.90</b>	<b>6,940.0</b>	<b>-2,134.00</b>	<b>290.8</b>	<b>1,259.4</b>	<b>1,264.2</b>	<b>10.00</b>	<b>9.96</b>	<b>1.23</b>
<b>NIORARA</b>										
<b>7,178.6</b>	<b>52.29</b>	<b>87.44</b>	<b>6,972.0</b>	<b>-2,166.00</b>	<b>292.7</b>	<b>1,297.3</b>	<b>1,302.1</b>	<b>10.00</b>	<b>9.97</b>	<b>1.08</b>
7,200.0	54.42	87.65	6,984.7	-2,178.75	293.4	1,314.4	1,319.2	10.00	9.97	0.98
7,300.0	64.39	88.51	7,035.6	-2,229.58	296.3	1,400.3	1,405.2	10.00	9.97	0.86
7,400.0	74.37	89.23	7,070.8	-2,264.76	298.1	1,493.8	1,498.6	10.00	9.98	0.72
7,500.0	84.35	89.89	7,089.2	-2,283.21	298.9	1,591.9	1,596.8	10.00	9.98	0.66
<b>NIO B TARGET</b>										
<b>7,553.3</b>	<b>89.34</b>	<b>90.20</b>	<b>7,092.0</b>	<b>-2,286.00</b>	<b>298.8</b>	<b>1,645.2</b>	<b>1,650.0</b>	<b>9.38</b>	<b>9.36</b>	<b>0.59</b>
<b>HZ LP: 2330ft FNL &amp; 460ft FWL of Sec 9</b>										
<b>7,556.7</b>	<b>90.00</b>	<b>90.25</b>	<b>7,092.0</b>	<b>-2,286.00</b>	<b>298.8</b>	<b>1,648.5</b>	<b>1,653.4</b>	<b>19.74</b>	<b>19.70</b>	<b>1.25</b>
7,600.0	90.00	90.25	7,092.0	-2,286.00	298.6	1,691.8	1,696.7	0.00	0.00	0.00
7,700.0	90.00	90.25	7,092.0	-2,286.00	298.2	1,791.8	1,796.7	0.00	0.00	0.00
7,800.0	90.00	90.25	7,092.0	-2,286.00	297.8	1,891.8	1,896.6	0.00	0.00	0.00
7,900.0	90.00	90.25	7,092.0	-2,286.00	297.3	1,991.8	1,996.6	0.00	0.00	0.00
8,000.0	90.00	90.25	7,092.0	-2,286.00	296.9	2,091.8	2,096.6	0.00	0.00	0.00
8,100.0	90.00	90.25	7,092.0	-2,286.00	296.5	2,191.8	2,196.6	0.00	0.00	0.00
8,200.0	90.00	90.25	7,092.0	-2,286.00	296.0	2,291.8	2,296.6	0.00	0.00	0.00
8,300.0	90.00	90.25	7,092.0	-2,286.00	295.6	2,391.8	2,396.5	0.00	0.00	0.00
8,400.0	90.00	90.25	7,092.0	-2,286.00	295.2	2,491.8	2,496.5	0.00	0.00	0.00
8,500.0	90.00	90.25	7,092.0	-2,286.00	294.8	2,591.8	2,596.5	0.00	0.00	0.00
8,600.0	90.00	90.25	7,092.0	-2,286.00	294.3	2,691.8	2,696.5	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-AIMS 1-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4806.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4806.0usft
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-AIMS 1-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
8,700.0	90.00	90.25	7,092.0	-2,286.00	293.9	2,791.8	2,796.4	0.00	0.00	0.00
8,800.0	90.00	90.25	7,092.0	-2,286.00	293.5	2,891.8	2,896.4	0.00	0.00	0.00
8,900.0	90.00	90.25	7,092.0	-2,286.00	293.0	2,991.8	2,996.4	0.00	0.00	0.00
9,000.0	90.00	90.25	7,092.0	-2,286.00	292.6	3,091.8	3,096.4	0.00	0.00	0.00
9,100.0	90.00	90.25	7,092.0	-2,286.00	292.2	3,191.8	3,196.3	0.00	0.00	0.00
9,200.0	90.00	90.25	7,092.0	-2,286.00	291.7	3,291.8	3,296.3	0.00	0.00	0.00
9,300.0	90.00	90.25	7,092.0	-2,286.00	291.3	3,391.8	3,396.3	0.00	0.00	0.00
9,400.0	90.00	90.25	7,092.0	-2,286.00	290.9	3,491.8	3,496.3	0.00	0.00	0.00
9,500.0	90.00	90.25	7,092.0	-2,286.00	290.5	3,591.8	3,596.3	0.00	0.00	0.00
9,600.0	90.00	90.25	7,092.0	-2,286.00	290.0	3,691.8	3,696.2	0.00	0.00	0.00
9,700.0	90.00	90.25	7,092.0	-2,286.00	289.6	3,791.8	3,796.2	0.00	0.00	0.00
9,800.0	90.00	90.25	7,092.0	-2,286.00	289.2	3,891.8	3,896.2	0.00	0.00	0.00
9,900.0	90.00	90.25	7,092.0	-2,286.00	288.7	3,991.8	3,996.2	0.00	0.00	0.00
10,000.0	90.00	90.25	7,092.0	-2,286.00	288.3	4,091.8	4,096.1	0.00	0.00	0.00
10,100.0	90.00	90.25	7,092.0	-2,286.00	287.9	4,191.8	4,196.1	0.00	0.00	0.00
10,200.0	90.00	90.25	7,092.0	-2,286.00	287.5	4,291.8	4,296.1	0.00	0.00	0.00
10,300.0	90.00	90.25	7,092.0	-2,286.00	287.0	4,391.8	4,396.1	0.00	0.00	0.00
10,400.0	90.00	90.25	7,092.0	-2,286.00	286.6	4,491.8	4,496.0	0.00	0.00	0.00
10,500.0	90.00	90.25	7,092.0	-2,286.00	286.2	4,591.8	4,596.0	0.00	0.00	0.00
10,600.0	90.00	90.25	7,092.0	-2,286.00	285.7	4,691.8	4,696.0	0.00	0.00	0.00
10,700.0	90.00	90.25	7,092.0	-2,286.00	285.3	4,791.8	4,796.0	0.00	0.00	0.00
10,800.0	90.00	90.25	7,092.0	-2,286.00	284.9	4,891.8	4,896.0	0.00	0.00	0.00
10,900.0	90.00	90.25	7,092.0	-2,286.00	284.5	4,991.8	4,995.9	0.00	0.00	0.00
11,000.0	90.00	90.25	7,092.0	-2,286.00	284.0	5,091.8	5,095.9	0.00	0.00	0.00
11,100.0	90.00	90.25	7,092.0	-2,286.00	283.6	5,191.8	5,195.9	0.00	0.00	0.00
11,200.0	90.00	90.25	7,092.0	-2,286.00	283.2	5,291.8	5,295.9	0.00	0.00	0.00
11,300.0	90.00	90.25	7,092.0	-2,286.00	282.7	5,391.8	5,395.8	0.00	0.00	0.00
11,400.0	90.00	90.25	7,092.0	-2,286.00	282.3	5,491.8	5,495.8	0.00	0.00	0.00
11,500.0	90.00	90.25	7,092.0	-2,286.00	281.9	5,591.8	5,595.8	0.00	0.00	0.00
11,600.0	90.00	90.25	7,092.0	-2,286.00	281.5	5,691.8	5,695.8	0.00	0.00	0.00
11,700.0	90.00	90.25	7,092.0	-2,286.00	281.0	5,791.8	5,795.7	0.00	0.00	0.00
11,800.0	90.00	90.25	7,092.0	-2,286.00	280.6	5,891.8	5,895.7	0.00	0.00	0.00
11,900.0	90.00	90.25	7,092.0	-2,286.00	280.2	5,991.8	5,995.7	0.00	0.00	0.00
12,000.0	90.00	90.25	7,092.0	-2,286.00	279.7	6,091.8	6,095.7	0.00	0.00	0.00
12,100.0	90.00	90.25	7,092.0	-2,286.00	279.3	6,191.8	6,195.7	0.00	0.00	0.00
12,200.0	90.00	90.25	7,092.0	-2,286.00	278.9	6,291.8	6,295.6	0.00	0.00	0.00
12,300.0	90.00	90.25	7,092.0	-2,286.00	278.4	6,391.8	6,395.6	0.00	0.00	0.00
12,400.0	90.00	90.25	7,092.0	-2,286.00	278.0	6,491.8	6,495.6	0.00	0.00	0.00
12,500.0	90.00	90.25	7,092.0	-2,286.00	277.6	6,591.8	6,595.6	0.00	0.00	0.00
12,600.0	90.00	90.25	7,092.0	-2,286.00	277.2	6,691.8	6,695.5	0.00	0.00	0.00
12,700.0	90.00	90.25	7,092.0	-2,286.00	276.7	6,791.8	6,795.5	0.00	0.00	0.00
12,800.0	90.00	90.25	7,092.0	-2,286.00	276.3	6,891.8	6,895.5	0.00	0.00	0.00
12,900.0	90.00	90.25	7,092.0	-2,286.00	275.9	6,991.8	6,995.5	0.00	0.00	0.00
13,000.0	90.00	90.25	7,092.0	-2,286.00	275.4	7,091.8	7,095.5	0.00	0.00	0.00
13,100.0	90.00	90.25	7,092.0	-2,286.00	275.0	7,191.8	7,195.4	0.00	0.00	0.00
13,200.0	90.00	90.25	7,092.0	-2,286.00	274.6	7,291.8	7,295.4	0.00	0.00	0.00
13,300.0	90.00	90.25	7,092.0	-2,286.00	274.2	7,391.8	7,395.4	0.00	0.00	0.00
13,400.0	90.00	90.25	7,092.0	-2,286.00	273.7	7,491.8	7,495.4	0.00	0.00	0.00
13,500.0	90.00	90.25	7,092.0	-2,286.00	273.3	7,591.8	7,595.3	0.00	0.00	0.00
13,600.0	90.00	90.25	7,092.0	-2,286.00	272.9	7,691.8	7,695.3	0.00	0.00	0.00
13,700.0	90.00	90.25	7,092.0	-2,286.00	272.4	7,791.8	7,795.3	0.00	0.00	0.00
13,800.0	90.00	90.25	7,092.0	-2,286.00	272.0	7,891.8	7,895.3	0.00	0.00	0.00
13,900.0	90.00	90.25	7,092.0	-2,286.00	271.6	7,991.8	7,995.2	0.00	0.00	0.00
14,000.0	90.00	90.25	7,092.0	-2,286.00	271.2	8,091.8	8,095.2	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-AIMS 1-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4806.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4806.0usft
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-AIMS 1-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
14,100.0	90.00	90.25	7,092.0	-2,286.00	270.7	8,191.8	8,195.2	0.00	0.00	0.00
14,200.0	90.00	90.25	7,092.0	-2,286.00	270.3	8,291.8	8,295.2	0.00	0.00	0.00
14,300.0	90.00	90.25	7,092.0	-2,286.00	269.9	8,391.8	8,395.2	0.00	0.00	0.00
14,400.0	90.00	90.25	7,092.0	-2,286.00	269.4	8,491.8	8,495.1	0.00	0.00	0.00
14,500.0	90.00	90.25	7,092.0	-2,286.00	269.0	8,591.8	8,595.1	0.00	0.00	0.00
14,600.0	90.00	90.25	7,092.0	-2,286.00	268.6	8,691.8	8,695.1	0.00	0.00	0.00
14,700.0	90.00	90.25	7,092.0	-2,286.00	268.2	8,791.8	8,795.1	0.00	0.00	0.00
14,800.0	90.00	90.25	7,092.0	-2,286.00	267.7	8,891.8	8,895.0	0.00	0.00	0.00
14,900.0	90.00	90.25	7,092.0	-2,286.00	267.3	8,991.8	8,995.0	0.00	0.00	0.00
15,000.0	90.00	90.25	7,092.0	-2,286.00	266.9	9,091.8	9,095.0	0.00	0.00	0.00
15,100.0	90.00	90.25	7,092.0	-2,286.00	266.4	9,191.8	9,195.0	0.00	0.00	0.00
15,200.0	90.00	90.25	7,092.0	-2,286.00	266.0	9,291.8	9,294.9	0.00	0.00	0.00
15,300.0	90.00	90.25	7,092.0	-2,286.00	265.6	9,391.8	9,394.9	0.00	0.00	0.00
15,400.0	90.00	90.25	7,092.0	-2,286.00	265.2	9,491.8	9,494.9	0.00	0.00	0.00
15,500.0	90.00	90.25	7,092.0	-2,286.00	264.7	9,591.8	9,594.9	0.00	0.00	0.00
15,600.0	90.00	90.25	7,092.0	-2,286.00	264.3	9,691.8	9,694.9	0.00	0.00	0.00
15,700.0	90.00	90.25	7,092.0	-2,286.00	263.9	9,791.7	9,794.8	0.00	0.00	0.00
15,800.0	90.00	90.25	7,092.0	-2,286.00	263.4	9,891.7	9,894.8	0.00	0.00	0.00
15,900.0	90.00	90.25	7,092.0	-2,286.00	263.0	9,991.7	9,994.8	0.00	0.00	0.00
16,000.0	90.00	90.25	7,092.0	-2,286.00	262.6	10,091.7	10,094.8	0.00	0.00	0.00
16,100.0	90.00	90.25	7,092.0	-2,286.00	262.1	10,191.7	10,194.7	0.00	0.00	0.00
16,200.0	90.00	90.25	7,092.0	-2,286.00	261.7	10,291.7	10,294.7	0.00	0.00	0.00
16,300.0	90.00	90.25	7,092.0	-2,286.00	261.3	10,391.7	10,394.7	0.00	0.00	0.00
16,400.0	90.00	90.25	7,092.0	-2,286.00	260.9	10,491.7	10,494.7	0.00	0.00	0.00
16,500.0	90.00	90.25	7,092.0	-2,286.00	260.4	10,591.7	10,594.6	0.00	0.00	0.00
16,600.0	90.00	90.25	7,092.0	-2,286.00	260.0	10,691.7	10,694.6	0.00	0.00	0.00
16,700.0	90.00	90.25	7,092.0	-2,286.00	259.6	10,791.7	10,794.6	0.00	0.00	0.00
16,800.0	90.00	90.25	7,092.0	-2,286.00	259.1	10,891.7	10,894.6	0.00	0.00	0.00
16,900.0	90.00	90.25	7,092.0	-2,286.00	258.7	10,991.7	10,994.6	0.00	0.00	0.00
17,000.0	90.00	90.25	7,092.0	-2,286.00	258.3	11,091.7	11,094.5	0.00	0.00	0.00
17,100.0	90.00	90.25	7,092.0	-2,286.00	257.9	11,191.7	11,194.5	0.00	0.00	0.00
17,200.0	90.00	90.25	7,092.0	-2,286.00	257.4	11,291.7	11,294.5	0.00	0.00	0.00
17,300.0	90.00	90.25	7,092.0	-2,286.00	257.0	11,391.7	11,394.5	0.00	0.00	0.00
17,400.0	90.00	90.25	7,092.0	-2,286.00	256.6	11,491.7	11,494.4	0.00	0.00	0.00
17,500.0	90.00	90.25	7,092.0	-2,286.00	256.1	11,591.7	11,594.4	0.00	0.00	0.00
17,600.0	90.00	90.25	7,092.0	-2,286.00	255.7	11,691.7	11,694.4	0.00	0.00	0.00
17,700.0	90.00	90.25	7,092.0	-2,286.00	255.3	11,791.7	11,794.4	0.00	0.00	0.00
17,800.0	90.00	90.25	7,092.0	-2,286.00	254.9	11,891.7	11,894.4	0.00	0.00	0.00
17,900.0	90.00	90.25	7,092.0	-2,286.00	254.4	11,991.7	11,994.3	0.00	0.00	0.00
18,000.0	90.00	90.25	7,092.0	-2,286.00	254.0	12,091.7	12,094.3	0.00	0.00	0.00
18,100.0	90.00	90.25	7,092.0	-2,286.00	253.6	12,191.7	12,194.3	0.00	0.00	0.00
18,200.0	90.00	90.25	7,092.0	-2,286.00	253.1	12,291.7	12,294.3	0.00	0.00	0.00
18,300.0	90.00	90.25	7,092.0	-2,286.00	252.7	12,391.7	12,394.2	0.00	0.00	0.00
18,400.0	90.00	90.25	7,092.0	-2,286.00	252.3	12,491.7	12,494.2	0.00	0.00	0.00
18,500.0	90.00	90.25	7,092.0	-2,286.00	251.9	12,591.7	12,594.2	0.00	0.00	0.00
18,600.0	90.00	90.25	7,092.0	-2,286.00	251.4	12,691.7	12,694.2	0.00	0.00	0.00
18,700.0	90.00	90.25	7,092.0	-2,286.00	251.0	12,791.7	12,794.1	0.00	0.00	0.00
18,800.0	90.00	90.25	7,092.0	-2,286.00	250.6	12,891.7	12,894.1	0.00	0.00	0.00
18,900.0	90.00	90.25	7,092.0	-2,286.00	250.1	12,991.7	12,994.1	0.00	0.00	0.00
19,000.0	90.00	90.25	7,092.0	-2,286.00	249.7	13,091.7	13,094.1	0.00	0.00	0.00
19,100.0	90.00	90.25	7,092.0	-2,286.00	249.3	13,191.7	13,194.1	0.00	0.00	0.00
19,200.0	90.00	90.25	7,092.0	-2,286.00	248.8	13,291.7	13,294.0	0.00	0.00	0.00
19,300.0	90.00	90.25	7,092.0	-2,286.00	248.4	13,391.7	13,394.0	0.00	0.00	0.00
19,400.0	90.00	90.25	7,092.0	-2,286.00	248.0	13,491.7	13,494.0	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-AIMS 1-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4806.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4806.0usft
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-AIMS 1-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
19,500.0	90.00	90.25	7,092.0	-2,286.00	247.6	13,591.7	13,594.0	0.00	0.00	0.00
19,600.0	90.00	90.25	7,092.0	-2,286.00	247.1	13,691.7	13,693.9	0.00	0.00	0.00
19,700.0	90.00	90.25	7,092.0	-2,286.00	246.7	13,791.7	13,793.9	0.00	0.00	0.00
19,800.0	90.00	90.25	7,092.0	-2,286.00	246.3	13,891.7	13,893.9	0.00	0.00	0.00
19,900.0	90.00	90.25	7,092.0	-2,286.00	245.8	13,991.7	13,993.9	0.00	0.00	0.00
20,000.0	90.00	90.25	7,092.0	-2,286.00	245.4	14,091.7	14,093.8	0.00	0.00	0.00
20,100.0	90.00	90.25	7,092.0	-2,286.00	245.0	14,191.7	14,193.8	0.00	0.00	0.00
<b>BHL: 2576ft FNL &amp; 2488ft FWL of Sec 11</b>										
<b>20,193.3</b>	<b>90.00</b>	<b>90.25</b>	<b>7,092.0</b>	<b>-2,286.00</b>	<b>244.6</b>	<b>14,285.0</b>	<b>14,287.1</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,722.0	3,680.0	PARKMAN				
4,475.6	4,410.0	SUSSEX				
4,898.8	4,820.0	SHANNON				
7,129.0	6,940.0	SHARON SPRINGS				
7,178.6	6,972.0	NIOBRARA				
7,553.3	7,092.0	NIO B TARGET				

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL: 2622ft FNL & 1191ft FEL of Sec 8
1,900.0	1,900.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,618.2	2,610.7	21.8	86.9	EOB TO 14.36° INC
6,795.8	6,657.7	273.7	1,092.2	START BUILD & TURN
7,556.7	7,092.0	298.8	1,648.5	HZ LP: 2330ft FNL & 460ft FWL of Sec 9
20,193.3	7,092.0	244.6	14,285.0	BHL: 2576ft FNL & 2488ft FWL of Sec 11