

# **EXTRACTION OIL & GAS**

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

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

**TC-AIMS C5-9-11**

**ORIGINAL WELLBORE**

**23 July, 2015**

**Plan: PROPOSAL #1**





Project: WELD COUNTY, COLORADO (NAD 83)  
Site: NE SE SEC. 8 T5N R66W 6th P.M.  
Well: TC-AIMS C5-9-11  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

ANNOTATIONS											FORMATION TOP DETAILS		
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation			TVDPth	MDPth	Formation
1100.0	1100.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2"/100ft BUR)			3680.0	3732.1	PARKMAN
1600.0	1602.6	10.05	114.52	-18.3	40.0	40.7	44.0	9 5/8" SURFACE CASING			4410.0	4479.9	SUSSEX
1664.0	1667.6	10.05	114.52	-23.0	50.3	51.3	55.3	START NUDGE (2"/100ft BUR)			4820.0	4899.8	SHANNON
1785.0	1791.0	12.52	114.52	-33.0	72.3	73.6	79.5	EOB TO 12.52° INC			6940.0	7074.1	SHARON SPRINGS
6837.2	6966.1	12.52	114.52	-498.4	1092.6	1112.6	1201.0	START BUILD & TURN			6972.0	7109.3	NIOBRARA
7295.0	7752.1	90.00	90.26	-542.8	1654.1	1675.4	1765.7	LANDING PNT - TC-AIMS C5-9-11			7092.0	7253.2	NIO B TARGET
7295.0	20397.6	90.00	90.26	-600.6	14299.4	14312.0	14411.2	BHL - TC-AIMS C5-9-11			7260.0	7550.4	FORT HAYS
											7285.0	7644.7	CODELL

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LANDING PNT - TC-AIMS C5-9-11	7295.0	-542.8	1654.1	40.412760	-104.792730
BHL - TC-AIMS C5-9-11	7295.0	-600.6	14299.4	40.412590	-104.747320

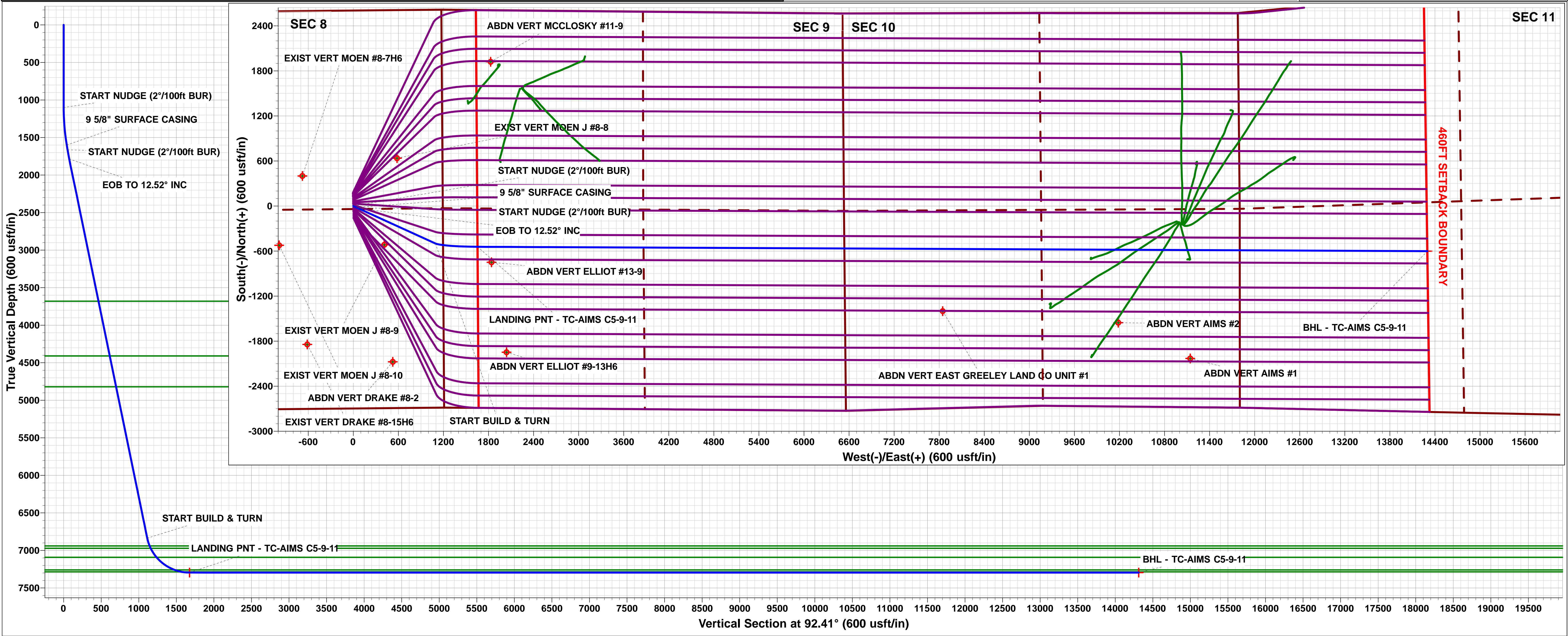
TC-MOISER HILL 2-9-7  
TC-MOISER HILL 3-9-11  
TC-COUNTRY CLUB WEST C1-9-11  
TC-COUNTRY CLUB WEST 1-9-11  
TC-COUNTRY CLUB WEST 2-9-11  
TC-COUNTRY CLUB WEST C2-9-11  
TC-COUNTRY CLUB WEST 3-9-11  
TC-COUNTRY CLUB WEST 4-9-11  
TC-COUNTRY CLUB WEST C3-9-11  
TC-COUNTRY CLUB WEST 5-9-11  
TC-AIMS 1-9-11  
TC-AIMS C4-9-11  
TC-AIMS 2-9-11  
TC-AIMS 3-9-11  
TC-AIMS C5-9-11  
TC-AIMS 4-9-11  
TC-HILAND KNOLLS 1-9-11  
TC-HILAND KNOLLS C6-9-11

TC-HILAND KNOLLS 2-9-11  
TC-HILAND KNOLLS 3-9-11  
TC-HILAND KNOLLS C7-9-11  
TC-HILAND KNOLLS 4-9-11  
TC-PINNACLE PARK 1-9-11  
TC-PINNACLE PARK C8-9-11  
TC-PINNACLE PARK 2-9-11

T  
M

Azimuths to True North  
Magnetic North: 8.43°

Magnetic Field  
Strength: 52613.5snT  
Dip Angle: 66.91°  
Date: 23/07/2015  
Model: IGRF2015



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-AIMS C5-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4806.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4806.0usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-AIMS C5-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

<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 °

<b>Well</b>	TC-AIMS C5-9-11		
<b>Well Position</b>	<b>+N/-S</b>	160.3 usft	<b>Northing:</b>
	<b>+E/-W</b>	-2.8 usft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<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	23/07/2015	8.43	66.91	52,613

<b>Design</b>	PROPOSAL #1			
<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>
	7,295.0	0.0	0.0	92.41

<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	
1,100.0	0.00	0.00	1,100.0	-3,706.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,602.6	10.05	114.52	1,600.0	-3,206.0	-18.2	40.0	2.00	2.00	0.00	114.52	
1,667.6	10.05	114.52	1,664.0	-3,142.0	-23.0	50.3	0.00	0.00	0.00	0.00	
1,791.0	12.52	114.52	1,785.0	-3,021.0	-33.0	72.3	2.00	2.00	0.00	0.00	
1,791.0	12.52	114.52	1,785.1	-3,020.9	-33.0	72.3	10.00	-9.98	3.21	176.01	
6,966.1	12.52	114.52	6,837.1	2,031.1	-498.4	1,092.6	0.00	0.00	0.00	0.00	
7,752.1	90.00	90.26	7,295.0	2,489.0	-542.8	1,654.1	10.00	9.86	-3.09	-24.78	LANDING PNT - TC
20,397.6	90.00	90.26	7,295.0	2,489.0	-600.6	14,299.4	0.00	0.00	0.00	0.00	BHL - TC-AIMS C5-

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-AIMS C5-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4806.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4806.0usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-AIMS C5-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## 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	4,806.00	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
<b>START NUDGE (2°/100ft BUR)</b>										
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	2.00	114.52	1,200.0	3,606.02	-0.7	1.6	1.6	2.00	2.00	0.00
1,300.0	4.00	114.52	1,299.8	3,506.16	-2.9	6.3	6.5	2.00	2.00	0.00
1,400.0	6.00	114.52	1,399.5	3,406.55	-6.5	14.3	14.5	2.00	2.00	0.00
1,500.0	8.00	114.52	1,498.7	3,307.30	-11.6	25.4	25.8	2.00	2.00	0.00
1,600.0	10.00	114.52	1,597.5	3,208.53	-18.1	39.6	40.3	2.00	2.00	0.00
<b>9 5/8" SURFACE CASING</b>										
1,602.6	10.05	114.52	1,600.0	3,205.97	-18.3	40.0	40.7	1.98	1.98	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
1,667.6	10.05	114.52	1,664.0	3,141.97	-23.0	50.3	51.3	0.00	0.00	0.00
1,700.0	10.70	114.52	1,695.9	3,110.10	-25.4	55.6	56.7	2.00	2.00	0.00
<b>EOB TO 12.52° INC</b>										
1,791.0	12.52	114.52	1,785.0	3,020.97	-33.0	72.3	73.6	2.00	2.00	0.00
1,800.0	12.52	114.52	1,793.8	3,012.18	-33.8	74.1	75.4	0.05	-0.05	0.02
1,900.0	12.52	114.52	1,891.4	2,914.56	-42.8	93.8	95.5	0.00	0.00	0.00
2,000.0	12.52	114.52	1,989.1	2,816.93	-51.8	113.5	115.6	0.00	0.00	0.00
2,100.0	12.52	114.52	2,086.7	2,719.31	-60.8	133.2	135.7	0.00	0.00	0.00
2,200.0	12.52	114.52	2,184.3	2,621.69	-69.8	152.9	155.7	0.00	0.00	0.00
2,300.0	12.52	114.52	2,281.9	2,524.06	-78.8	172.7	175.8	0.00	0.00	0.00
2,400.0	12.52	114.52	2,379.6	2,426.44	-87.8	192.4	195.9	0.00	0.00	0.00
2,500.0	12.52	114.52	2,477.2	2,328.82	-96.7	212.1	216.0	0.00	0.00	0.00
2,600.0	12.52	114.52	2,574.8	2,231.19	-105.7	231.8	236.0	0.00	0.00	0.00
2,700.0	12.52	114.52	2,672.4	2,133.57	-114.7	251.5	256.1	0.00	0.00	0.00
2,800.0	12.52	114.52	2,770.1	2,035.95	-123.7	271.2	276.2	0.00	0.00	0.00
2,900.0	12.52	114.52	2,867.7	1,938.32	-132.7	291.0	296.3	0.00	0.00	0.00
3,000.0	12.52	114.52	2,965.3	1,840.70	-141.7	310.7	316.3	0.00	0.00	0.00
3,100.0	12.52	114.52	3,062.9	1,743.07	-150.7	330.4	336.4	0.00	0.00	0.00
3,200.0	12.52	114.52	3,160.5	1,645.45	-159.7	350.1	356.5	0.00	0.00	0.00
3,300.0	12.52	114.52	3,258.2	1,547.83	-168.7	369.8	376.6	0.00	0.00	0.00
3,400.0	12.52	114.52	3,355.8	1,450.20	-177.7	389.5	396.7	0.00	0.00	0.00
3,500.0	12.52	114.52	3,453.4	1,352.58	-186.7	409.3	416.7	0.00	0.00	0.00
3,600.0	12.52	114.52	3,551.0	1,254.96	-195.7	429.0	436.8	0.00	0.00	0.00
3,700.0	12.52	114.52	3,648.7	1,157.33	-204.7	448.7	456.9	0.00	0.00	0.00
<b>PARKMAN</b>										
3,732.1	12.52	114.52	3,680.0	1,126.00	-207.6	455.0	463.3	0.00	0.00	0.00
3,800.0	12.52	114.52	3,746.3	1,059.71	-213.7	468.4	477.0	0.00	0.00	0.00
3,900.0	12.52	114.52	3,843.9	962.09	-222.7	488.1	497.0	0.00	0.00	0.00
4,000.0	12.52	114.52	3,941.5	864.46	-231.7	507.8	517.1	0.00	0.00	0.00
4,100.0	12.52	114.52	4,039.2	766.84	-240.7	527.6	537.2	0.00	0.00	0.00
4,200.0	12.52	114.52	4,136.8	669.21	-249.6	547.3	557.3	0.00	0.00	0.00
4,300.0	12.52	114.52	4,234.4	571.59	-258.6	567.0	577.3	0.00	0.00	0.00
4,400.0	12.52	114.52	4,332.0	473.97	-267.6	586.7	597.4	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 C5-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4806.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4806.0usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-AIMS C5-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

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>SUSSEX</b>										
4,479.9	12.52	114.52	4,410.0	396.00	-274.8	602.4	613.4	0.00	0.00	0.00
4,500.0	12.52	114.52	4,429.7	376.34	-276.6	606.4	617.5	0.00	0.00	0.00
4,600.0	12.52	114.52	4,527.3	278.72	-285.6	626.1	637.6	0.00	0.00	0.00
4,700.0	12.52	114.52	4,624.9	181.10	-294.6	645.8	657.6	0.00	0.00	0.00
4,800.0	12.52	114.52	4,722.5	83.47	-303.6	665.6	677.7	0.00	0.00	0.00
<b>SHANNON</b>										
4,899.8	12.52	114.52	4,820.0	-14.00	-312.6	685.3	697.8	0.00	0.00	0.00
4,900.0	12.52	114.52	4,820.2	-14.15	-312.6	685.3	697.8	0.00	0.00	0.00
5,000.0	12.52	114.52	4,917.8	-111.77	-321.6	705.0	717.9	0.00	0.00	0.00
5,100.0	12.52	114.52	5,015.4	-209.40	-330.6	724.7	737.9	0.00	0.00	0.00
5,200.0	12.52	114.52	5,113.0	-307.02	-339.6	744.4	758.0	0.00	0.00	0.00
5,300.0	12.52	114.52	5,210.6	-404.65	-348.6	764.1	778.1	0.00	0.00	0.00
5,400.0	12.52	114.52	5,308.3	-502.27	-357.6	783.9	798.2	0.00	0.00	0.00
5,500.0	12.52	114.52	5,405.9	-599.89	-366.6	803.6	818.3	0.00	0.00	0.00
5,600.0	12.52	114.52	5,503.5	-697.52	-375.6	823.3	838.3	0.00	0.00	0.00
5,700.0	12.52	114.52	5,601.1	-795.14	-384.6	843.0	858.4	0.00	0.00	0.00
5,800.0	12.52	114.52	5,698.8	-892.76	-393.6	862.7	878.5	0.00	0.00	0.00
5,900.0	12.52	114.52	5,796.4	-990.39	-402.5	882.4	898.6	0.00	0.00	0.00
6,000.0	12.52	114.52	5,894.0	-1,088.01	-411.5	902.2	918.6	0.00	0.00	0.00
6,100.0	12.52	114.52	5,991.6	-1,185.63	-420.5	921.9	938.7	0.00	0.00	0.00
6,200.0	12.52	114.52	6,089.3	-1,283.26	-429.5	941.6	958.8	0.00	0.00	0.00
6,300.0	12.52	114.52	6,186.9	-1,380.88	-438.5	961.3	978.9	0.00	0.00	0.00
6,400.0	12.52	114.52	6,284.5	-1,478.51	-447.5	981.0	998.9	0.00	0.00	0.00
6,500.0	12.52	114.52	6,382.1	-1,576.13	-456.5	1,000.7	1,019.0	0.00	0.00	0.00
6,600.0	12.52	114.52	6,479.8	-1,673.75	-465.5	1,020.5	1,039.1	0.00	0.00	0.00
6,700.0	12.52	114.52	6,577.4	-1,771.38	-474.5	1,040.2	1,059.2	0.00	0.00	0.00
6,800.0	12.52	114.52	6,675.0	-1,869.00	-483.5	1,059.9	1,079.2	0.00	0.00	0.00
6,900.0	12.52	114.52	6,772.6	-1,966.62	-492.5	1,079.6	1,099.3	0.00	0.00	0.00
<b>START BUILD &amp; TURN</b>										
6,966.1	12.52	114.52	6,837.2	-2,031.15	-498.4	1,092.6	1,112.6	0.00	0.00	0.00
7,000.0	15.66	109.25	6,870.0	-2,064.03	-501.5	1,100.3	1,120.4	10.00	9.27	-15.55
<b>SHARON SPRINGS</b>										
7,074.1	22.77	102.81	6,940.0	-2,134.00	-508.0	1,123.8	1,144.1	10.00	9.60	-8.69
7,100.0	25.29	101.39	6,963.6	-2,157.62	-510.2	1,134.1	1,154.5	10.00	9.75	-5.49
<b>NIOBRARA</b>										
7,109.3	26.20	100.94	6,972.0	-2,166.00	-510.9	1,138.0	1,158.5	10.00	9.78	-4.81
7,200.0	35.13	97.71	7,049.9	-2,243.94	-518.3	1,183.6	1,204.4	10.00	9.84	-3.56
<b>NIO B TARGET</b>										
7,253.2	40.39	96.42	7,092.0	-2,286.00	-522.2	1,216.0	1,236.8	10.00	9.89	-2.43
7,300.0	45.02	95.49	7,126.4	-2,320.37	-525.5	1,247.5	1,268.5	10.00	9.91	-1.98
7,400.0	54.95	93.93	7,190.6	-2,384.58	-531.7	1,323.8	1,344.9	10.00	9.93	-1.56
7,500.0	64.90	92.71	7,240.6	-2,434.64	-536.7	1,410.1	1,431.3	10.00	9.94	-1.22
<b>FORT HAYS</b>										
7,550.4	69.91	92.17	7,260.0	-2,454.00	-538.7	1,456.5	1,477.9	10.00	9.95	-1.07
7,600.0	74.85	91.68	7,275.0	-2,469.00	-540.2	1,503.8	1,525.1	10.00	9.95	-1.00
<b>CODELL</b>										
7,644.7	79.30	91.25	7,285.0	-2,479.00	-541.4	1,547.3	1,568.7	10.00	9.96	-0.96
7,700.0	84.81	90.74	7,292.6	-2,486.64	-542.3	1,602.0	1,623.4	10.00	9.96	-0.93
<b>LANDING PNT - TC-AIMS C5-9-11</b>										
7,752.1	90.00	90.26	7,295.0	-2,489.00	-542.8	1,654.1	1,675.4	10.00	9.96	-0.91
7,800.0	90.00	90.26	7,295.0	-2,489.00	-543.0	1,702.0	1,723.3	0.01	0.01	0.00
7,900.0	90.00	90.26	7,295.0	-2,489.00	-543.4	1,802.0	1,823.2	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 C5-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4806.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4806.0usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-AIMS C5-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

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)
8,000.0	90.00	90.26	7,295.0	-2,489.00	-543.9	1,902.0	1,923.1	0.00	0.00	0.00
8,100.0	90.00	90.26	7,295.0	-2,489.00	-544.4	2,002.0	2,023.0	0.00	0.00	0.00
8,200.0	90.00	90.26	7,295.0	-2,489.00	-544.8	2,102.0	2,123.0	0.00	0.00	0.00
8,300.0	90.00	90.26	7,295.0	-2,489.00	-545.3	2,202.0	2,222.9	0.00	0.00	0.00
8,400.0	90.00	90.26	7,295.0	-2,489.00	-545.7	2,302.0	2,322.8	0.00	0.00	0.00
8,500.0	90.00	90.26	7,295.0	-2,489.00	-546.2	2,402.0	2,422.8	0.00	0.00	0.00
8,600.0	90.00	90.26	7,295.0	-2,489.00	-546.6	2,502.0	2,522.7	0.00	0.00	0.00
8,700.0	90.00	90.26	7,295.0	-2,489.00	-547.1	2,602.0	2,622.6	0.00	0.00	0.00
8,800.0	90.00	90.26	7,295.0	-2,489.00	-547.6	2,702.0	2,722.6	0.00	0.00	0.00
8,900.0	90.00	90.26	7,295.0	-2,489.00	-548.0	2,802.0	2,822.5	0.00	0.00	0.00
9,000.0	90.00	90.26	7,295.0	-2,489.00	-548.5	2,902.0	2,922.4	0.00	0.00	0.00
9,100.0	90.00	90.26	7,295.0	-2,489.00	-548.9	3,002.0	3,022.3	0.00	0.00	0.00
9,200.0	90.00	90.26	7,295.0	-2,489.00	-549.4	3,101.9	3,122.3	0.00	0.00	0.00
9,300.0	90.00	90.26	7,295.0	-2,489.00	-549.8	3,201.9	3,222.2	0.00	0.00	0.00
9,400.0	90.00	90.26	7,295.0	-2,489.00	-550.3	3,301.9	3,322.1	0.00	0.00	0.00
9,500.0	90.00	90.26	7,295.0	-2,489.00	-550.8	3,401.9	3,422.1	0.00	0.00	0.00
9,600.0	90.00	90.26	7,295.0	-2,489.00	-551.2	3,501.9	3,522.0	0.00	0.00	0.00
9,700.0	90.00	90.26	7,295.0	-2,489.00	-551.7	3,601.9	3,621.9	0.00	0.00	0.00
9,800.0	90.00	90.26	7,295.0	-2,489.00	-552.1	3,701.9	3,721.9	0.00	0.00	0.00
9,900.0	90.00	90.26	7,295.0	-2,489.00	-552.6	3,801.9	3,821.8	0.00	0.00	0.00
10,000.0	90.00	90.26	7,295.0	-2,489.00	-553.0	3,901.9	3,921.7	0.00	0.00	0.00
10,100.0	90.00	90.26	7,295.0	-2,489.00	-553.5	4,001.9	4,021.6	0.00	0.00	0.00
10,200.0	90.00	90.26	7,295.0	-2,489.00	-554.0	4,101.9	4,121.6	0.00	0.00	0.00
10,300.0	90.00	90.26	7,295.0	-2,489.00	-554.4	4,201.9	4,221.5	0.00	0.00	0.00
10,400.0	90.00	90.26	7,295.0	-2,489.00	-554.9	4,301.9	4,321.4	0.00	0.00	0.00
10,500.0	90.00	90.26	7,295.0	-2,489.00	-555.3	4,401.9	4,421.4	0.00	0.00	0.00
10,600.0	90.00	90.26	7,295.0	-2,489.00	-555.8	4,501.9	4,521.3	0.00	0.00	0.00
10,700.0	90.00	90.26	7,295.0	-2,489.00	-556.2	4,601.9	4,621.2	0.00	0.00	0.00
10,800.0	90.00	90.26	7,295.0	-2,489.00	-556.7	4,701.9	4,721.2	0.00	0.00	0.00
10,900.0	90.00	90.26	7,295.0	-2,489.00	-557.2	4,801.9	4,821.1	0.00	0.00	0.00
11,000.0	90.00	90.26	7,295.0	-2,489.00	-557.6	4,901.9	4,921.0	0.00	0.00	0.00
11,100.0	90.00	90.26	7,295.0	-2,489.00	-558.1	5,001.9	5,020.9	0.00	0.00	0.00
11,200.0	90.00	90.26	7,295.0	-2,489.00	-558.5	5,101.9	5,120.9	0.00	0.00	0.00
11,300.0	90.00	90.26	7,295.0	-2,489.00	-559.0	5,201.9	5,220.8	0.00	0.00	0.00
11,400.0	90.00	90.26	7,295.0	-2,489.00	-559.4	5,301.9	5,320.7	0.00	0.00	0.00
11,500.0	90.00	90.26	7,295.0	-2,489.00	-559.9	5,401.9	5,420.7	0.00	0.00	0.00
11,600.0	90.00	90.26	7,295.0	-2,489.00	-560.4	5,501.9	5,520.6	0.00	0.00	0.00
11,700.0	90.00	90.26	7,295.0	-2,489.00	-560.8	5,601.9	5,620.5	0.00	0.00	0.00
11,800.0	90.00	90.26	7,295.0	-2,489.00	-561.3	5,701.9	5,720.5	0.00	0.00	0.00
11,900.0	90.00	90.26	7,295.0	-2,489.00	-561.7	5,801.9	5,820.4	0.00	0.00	0.00
12,000.0	90.00	90.26	7,295.0	-2,489.00	-562.2	5,901.9	5,920.3	0.00	0.00	0.00
12,100.0	90.00	90.26	7,295.0	-2,489.00	-562.7	6,001.9	6,020.2	0.00	0.00	0.00
12,200.0	90.00	90.26	7,295.0	-2,489.00	-563.1	6,101.9	6,120.2	0.00	0.00	0.00
12,300.0	90.00	90.26	7,295.0	-2,489.00	-563.6	6,201.9	6,220.1	0.00	0.00	0.00
12,400.0	90.00	90.26	7,295.0	-2,489.00	-564.0	6,301.9	6,320.0	0.00	0.00	0.00
12,500.0	90.00	90.26	7,295.0	-2,489.00	-564.5	6,401.9	6,420.0	0.00	0.00	0.00
12,600.0	90.00	90.26	7,295.0	-2,489.00	-564.9	6,501.9	6,519.9	0.00	0.00	0.00
12,700.0	90.00	90.26	7,295.0	-2,489.00	-565.4	6,601.9	6,619.8	0.00	0.00	0.00
12,800.0	90.00	90.26	7,295.0	-2,489.00	-565.9	6,701.9	6,719.8	0.00	0.00	0.00
12,900.0	90.00	90.26	7,295.0	-2,489.00	-566.3	6,801.9	6,819.7	0.00	0.00	0.00
13,000.0	90.00	90.26	7,295.0	-2,489.00	-566.8	6,901.9	6,919.6	0.00	0.00	0.00
13,100.0	90.00	90.26	7,295.0	-2,489.00	-567.2	7,001.9	7,019.5	0.00	0.00	0.00
13,200.0	90.00	90.26	7,295.0	-2,489.00	-567.7	7,101.9	7,119.5	0.00	0.00	0.00
13,300.0	90.00	90.26	7,295.0	-2,489.00	-568.1	7,201.9	7,219.4	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 C5-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4806.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4806.0usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-AIMS C5-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

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)
13,400.0	90.00	90.26	7,295.0	-2,489.00	-568.6	7,301.9	7,319.3	0.00	0.00	0.00
13,500.0	90.00	90.26	7,295.0	-2,489.00	-569.1	7,401.9	7,419.3	0.00	0.00	0.00
13,600.0	90.00	90.26	7,295.0	-2,489.00	-569.5	7,501.9	7,519.2	0.00	0.00	0.00
13,700.0	90.00	90.26	7,295.0	-2,489.00	-570.0	7,601.9	7,619.1	0.00	0.00	0.00
13,800.0	90.00	90.26	7,295.0	-2,489.00	-570.4	7,701.9	7,719.1	0.00	0.00	0.00
13,900.0	90.00	90.26	7,295.0	-2,489.00	-570.9	7,801.9	7,819.0	0.00	0.00	0.00
14,000.0	90.00	90.26	7,295.0	-2,489.00	-571.3	7,901.9	7,918.9	0.00	0.00	0.00
14,100.0	90.00	90.26	7,295.0	-2,489.00	-571.8	8,001.9	8,018.8	0.00	0.00	0.00
14,200.0	90.00	90.26	7,295.0	-2,489.00	-572.3	8,101.9	8,118.8	0.00	0.00	0.00
14,300.0	90.00	90.26	7,295.0	-2,489.00	-572.7	8,201.9	8,218.7	0.00	0.00	0.00
14,400.0	90.00	90.26	7,295.0	-2,489.00	-573.2	8,301.9	8,318.6	0.00	0.00	0.00
14,500.0	90.00	90.26	7,295.0	-2,489.00	-573.6	8,401.9	8,418.6	0.00	0.00	0.00
14,600.0	90.00	90.26	7,295.0	-2,489.00	-574.1	8,501.9	8,518.5	0.00	0.00	0.00
14,700.0	90.00	90.26	7,295.0	-2,489.00	-574.5	8,601.9	8,618.4	0.00	0.00	0.00
14,800.0	90.00	90.26	7,295.0	-2,489.00	-575.0	8,701.9	8,718.4	0.00	0.00	0.00
14,900.0	90.00	90.26	7,295.0	-2,489.00	-575.5	8,801.9	8,818.3	0.00	0.00	0.00
15,000.0	90.00	90.26	7,295.0	-2,489.00	-575.9	8,901.9	8,918.2	0.00	0.00	0.00
15,100.0	90.00	90.26	7,295.0	-2,489.00	-576.4	9,001.9	9,018.1	0.00	0.00	0.00
15,200.0	90.00	90.26	7,295.0	-2,489.00	-576.8	9,101.9	9,118.1	0.00	0.00	0.00
15,300.0	90.00	90.26	7,295.0	-2,489.00	-577.3	9,201.9	9,218.0	0.00	0.00	0.00
15,400.0	90.00	90.26	7,295.0	-2,489.00	-577.7	9,301.9	9,317.9	0.00	0.00	0.00
15,500.0	90.00	90.26	7,295.0	-2,489.00	-578.2	9,401.9	9,417.9	0.00	0.00	0.00
15,600.0	90.00	90.26	7,295.0	-2,489.00	-578.7	9,501.9	9,517.8	0.00	0.00	0.00
15,700.0	90.00	90.26	7,295.0	-2,489.00	-579.1	9,601.9	9,617.7	0.00	0.00	0.00
15,800.0	90.00	90.26	7,295.0	-2,489.00	-579.6	9,701.9	9,717.7	0.00	0.00	0.00
15,900.0	90.00	90.26	7,295.0	-2,489.00	-580.0	9,801.9	9,817.6	0.00	0.00	0.00
16,000.0	90.00	90.26	7,295.0	-2,489.00	-580.5	9,901.9	9,917.5	0.00	0.00	0.00
16,100.0	90.00	90.26	7,295.0	-2,489.00	-581.0	10,001.9	10,017.4	0.00	0.00	0.00
16,200.0	90.00	90.26	7,295.0	-2,489.00	-581.4	10,101.9	10,117.4	0.00	0.00	0.00
16,300.0	90.00	90.26	7,295.0	-2,489.00	-581.9	10,201.9	10,217.3	0.00	0.00	0.00
16,400.0	90.00	90.26	7,295.0	-2,489.00	-582.3	10,301.9	10,317.2	0.00	0.00	0.00
16,500.0	90.00	90.26	7,295.0	-2,489.00	-582.8	10,401.9	10,417.2	0.00	0.00	0.00
16,600.0	90.00	90.26	7,295.0	-2,489.00	-583.2	10,501.9	10,517.1	0.00	0.00	0.00
16,700.0	90.00	90.26	7,295.0	-2,489.00	-583.7	10,601.9	10,617.0	0.00	0.00	0.00
16,800.0	90.00	90.26	7,295.0	-2,489.00	-584.2	10,701.9	10,717.0	0.00	0.00	0.00
16,900.0	90.00	90.26	7,295.0	-2,489.00	-584.6	10,801.9	10,816.9	0.00	0.00	0.00
17,000.0	90.00	90.26	7,295.0	-2,489.00	-585.1	10,901.9	10,916.8	0.00	0.00	0.00
17,100.0	90.00	90.26	7,295.0	-2,489.00	-585.5	11,001.9	11,016.7	0.00	0.00	0.00
17,200.0	90.00	90.26	7,295.0	-2,489.00	-586.0	11,101.9	11,116.7	0.00	0.00	0.00
17,300.0	90.00	90.26	7,295.0	-2,489.00	-586.4	11,201.9	11,216.6	0.00	0.00	0.00
17,400.0	90.00	90.26	7,295.0	-2,489.00	-586.9	11,301.9	11,316.5	0.00	0.00	0.00
17,500.0	90.00	90.26	7,295.0	-2,489.00	-587.4	11,401.9	11,416.5	0.00	0.00	0.00
17,600.0	90.00	90.26	7,295.0	-2,489.00	-587.8	11,501.9	11,516.4	0.00	0.00	0.00
17,700.0	90.00	90.26	7,295.0	-2,489.00	-588.3	11,601.9	11,616.3	0.00	0.00	0.00
17,800.0	90.00	90.26	7,295.0	-2,489.00	-588.7	11,701.9	11,716.3	0.00	0.00	0.00
17,900.0	90.00	90.26	7,295.0	-2,489.00	-589.2	11,801.9	11,816.2	0.00	0.00	0.00
18,000.0	90.00	90.26	7,295.0	-2,489.00	-589.6	11,901.9	11,916.1	0.00	0.00	0.00
18,100.0	90.00	90.26	7,295.0	-2,489.00	-590.1	12,001.9	12,016.0	0.00	0.00	0.00
18,200.0	90.00	90.26	7,295.0	-2,489.00	-590.6	12,101.9	12,116.0	0.00	0.00	0.00
18,300.0	90.00	90.26	7,295.0	-2,489.00	-591.0	12,201.9	12,215.9	0.00	0.00	0.00
18,400.0	90.00	90.26	7,295.0	-2,489.00	-591.5	12,301.9	12,315.8	0.00	0.00	0.00
18,500.0	90.00	90.26	7,295.0	-2,489.00	-591.9	12,401.9	12,415.8	0.00	0.00	0.00
18,600.0	90.00	90.26	7,295.0	-2,489.00	-592.4	12,501.9	12,515.7	0.00	0.00	0.00
18,700.0	90.00	90.26	7,295.0	-2,489.00	-592.8	12,601.9	12,615.6	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-AIMS C5-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4806.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4806.0usft (Original Well Elev)
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-AIMS C5-9-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## 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)
18,800.0	90.00	90.26	7,295.0	-2,489.00	-593.3	12,701.8	12,715.6	0.00	0.00	0.00
18,900.0	90.00	90.26	7,295.0	-2,489.00	-593.8	12,801.8	12,815.5	0.00	0.00	0.00
19,000.0	90.00	90.26	7,295.0	-2,489.00	-594.2	12,901.8	12,915.4	0.00	0.00	0.00
19,100.0	90.00	90.26	7,295.0	-2,489.00	-594.7	13,001.8	13,015.3	0.00	0.00	0.00
19,200.0	90.00	90.26	7,295.0	-2,489.00	-595.1	13,101.8	13,115.3	0.00	0.00	0.00
19,300.0	90.00	90.26	7,295.0	-2,489.00	-595.6	13,201.8	13,215.2	0.00	0.00	0.00
19,400.0	90.00	90.26	7,295.0	-2,489.00	-596.0	13,301.8	13,315.1	0.00	0.00	0.00
19,500.0	90.00	90.26	7,295.0	-2,489.00	-596.5	13,401.8	13,415.1	0.00	0.00	0.00
19,600.0	90.00	90.26	7,295.0	-2,489.00	-597.0	13,501.8	13,515.0	0.00	0.00	0.00
19,700.0	90.00	90.26	7,295.0	-2,489.00	-597.4	13,601.8	13,614.9	0.00	0.00	0.00
19,800.0	90.00	90.26	7,295.0	-2,489.00	-597.9	13,701.8	13,714.9	0.00	0.00	0.00
19,900.0	90.00	90.26	7,295.0	-2,489.00	-598.3	13,801.8	13,814.8	0.00	0.00	0.00
20,000.0	90.00	90.26	7,295.0	-2,489.00	-598.8	13,901.8	13,914.7	0.00	0.00	0.00
20,100.0	90.00	90.26	7,295.0	-2,489.00	-599.2	14,001.8	14,014.6	0.00	0.00	0.00
20,200.0	90.00	90.26	7,295.0	-2,489.00	-599.7	14,101.8	14,114.6	0.00	0.00	0.00
20,300.0	90.00	90.26	7,295.0	-2,489.00	-600.2	14,201.8	14,214.5	0.00	0.00	0.00
<b>BHL - TC-AIMS C5-9-11</b>										
<b>20,397.6</b>	<b>90.00</b>	<b>90.26</b>	<b>7,295.0</b>	<b>-2,489.00</b>	<b>-600.6</b>	<b>14,299.4</b>	<b>14,312.0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,732.1	3,680.0	PARKMAN			
4,479.9	4,410.0	SUSSEX			
4,899.8	4,820.0	SHANNON			
7,074.1	6,940.0	SHARON SPRINGS			
7,109.3	6,972.0	NIOBRARA			
7,253.2	7,092.0	NIO B TARGET			
7,550.4	7,260.0	FORT HAYS			
7,644.7	7,285.0	CODELL			

## Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,100.0	1,100.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,602.6	1,600.0	-18.3	40.0	9 5/8" SURFACE CASING
1,667.6	1,664.0	-23.0	50.3	START NUDGE (2°/100ft BUR)
1,791.0	1,785.0	-33.0	72.3	EOB TO 12.52° INC
6,966.1	6,837.2	-498.4	1,092.6	START BUILD & TURN
7,752.1	7,295.0	-542.8	1,654.1	LANDING PNT - TC-AIMS C5-9-11
20,397.6	7,295.0	-600.6	14,299.4	BHL - TC-AIMS C5-9-11