

# **EXTRACTION OIL & GAS**

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

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

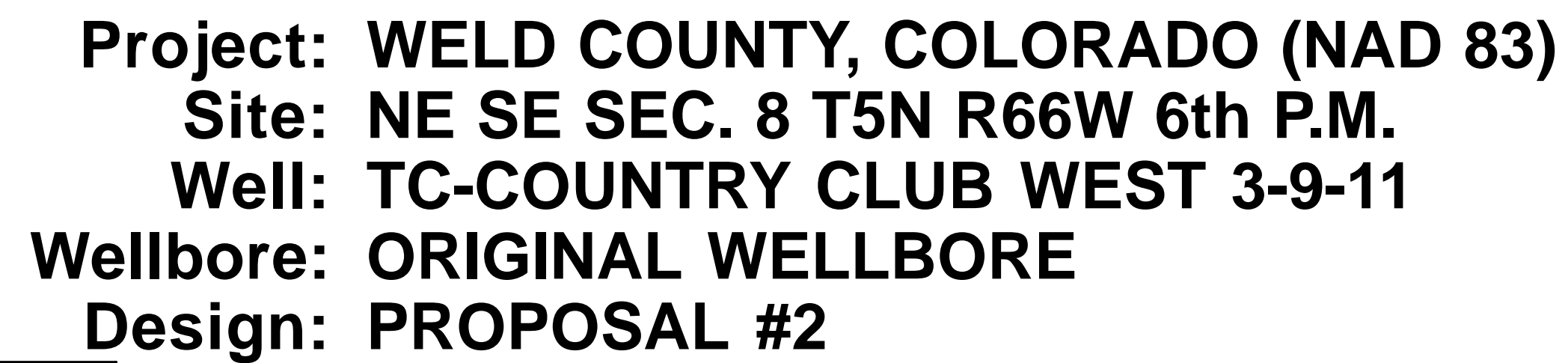
**TC-COUNTRY CLUB WEST 3-9-11**

**ORIGINAL WELLBORE**

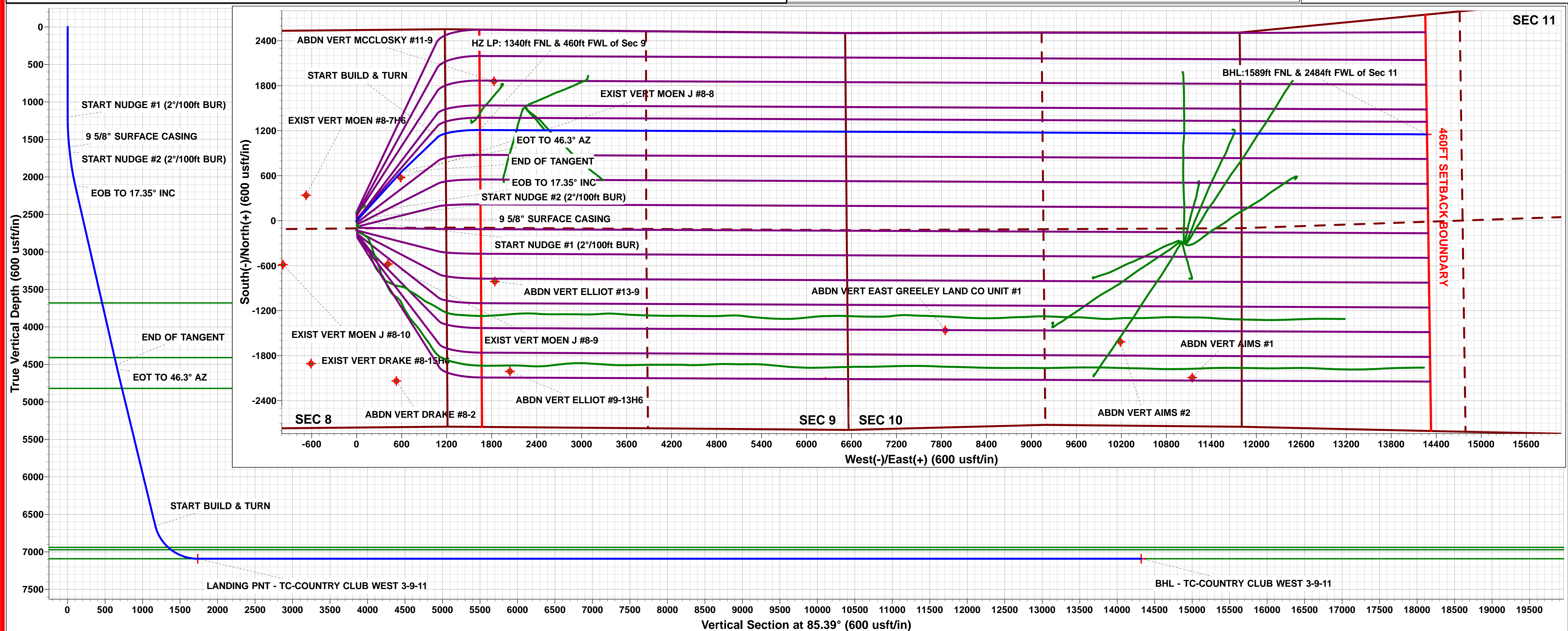
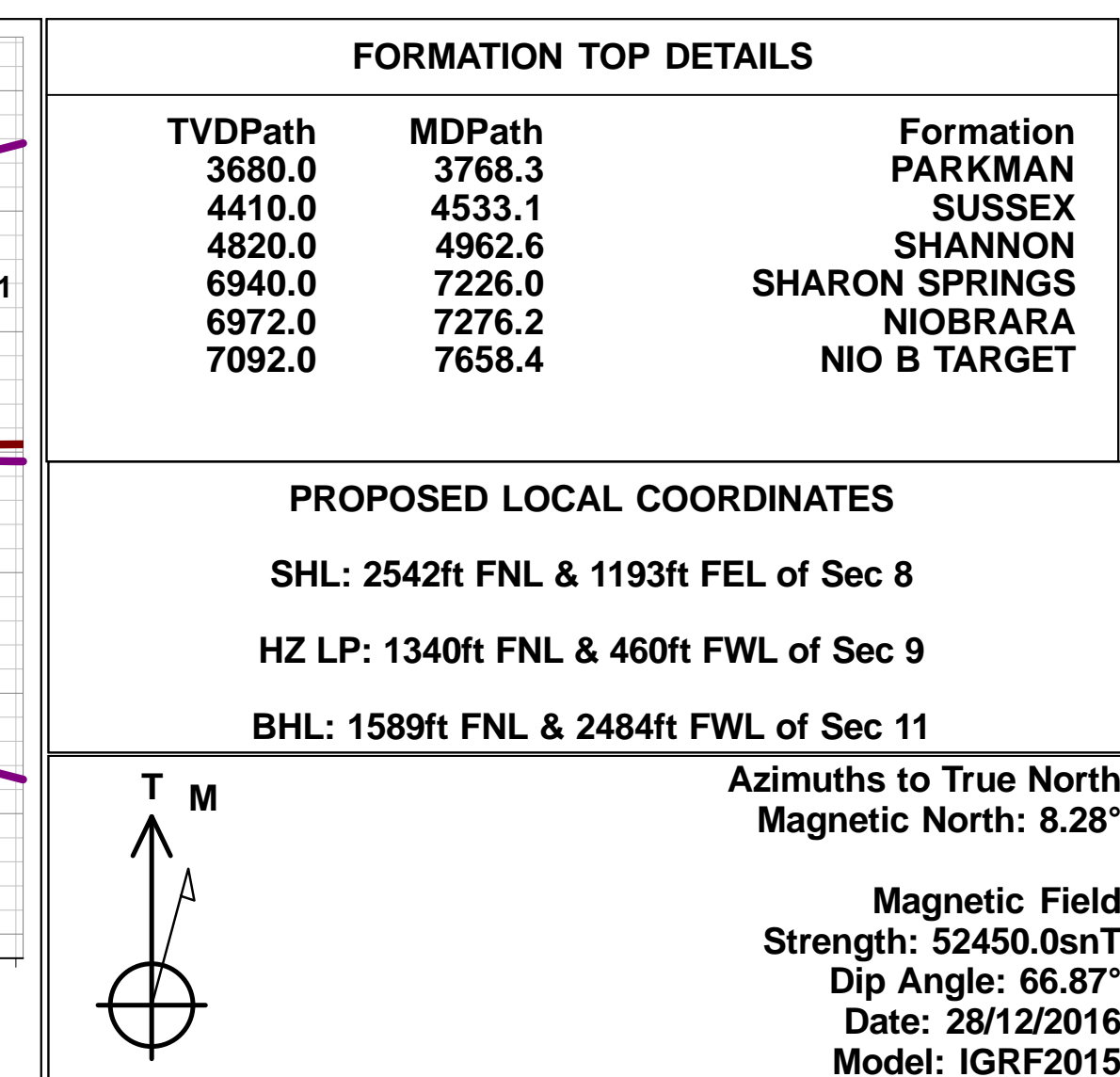
**09 January, 2017**

**Plan: PROPOSAL #2**





WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LANDING PNT - TC-COUNTRY CLUB WEST 3-9-11	7092.0	1209.6	1642.8	40.417740	-104.792780
BHL - TC-COUNTRY CLUB WEST 3-9-11	7092.0	1151.7	14273.3	40.417570	-104.747420



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-COUNTRY CLUB WEST 3-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4805.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4805.0usft
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-COUNTRY CLUB WEST 3-9-11	<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-COUNTRY CLUB WEST 3-9-11					
Well Position	+N/-S	222.2 usft	Northing:	1,394,585.79 usfi	Latitude:	40.414420
	+E/-W	-5.6 usft	Easting:	3,195,281.30 usfi	Longitude:	-104.798680
Position Uncertainty		0.0 usft	Wellhead Elevation:	usfi	Ground Level:	4,789.0 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	85.39

<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	-4,805.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	-3,605.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,601.3	8.03	42.50	1,600.0	-3,205.0	20.7	19.0	2.00	2.00	0.00	42.50	
1,666.3	8.03	42.50	1,664.4	-3,140.6	27.4	25.1	0.00	0.00	0.00	0.00	
2,132.5	17.35	42.50	2,118.7	-2,686.3	102.8	94.2	2.00	2.00	0.00	0.00	
4,632.5	17.35	42.50	4,504.9	-300.1	652.4	597.9	0.00	0.00	0.00	0.00	
4,689.1	17.36	46.30	4,559.0	-246.0	664.5	609.7	2.00	0.02	6.71	91.20	
6,882.4	17.36	46.30	6,652.3	1,847.3	1,116.7	1,082.8	0.00	0.00	0.00	0.00	
7,658.4	90.00	90.26	7,092.0	2,287.0	1,209.6	1,642.8	10.00	9.36	5.67	45.30	LANDING PNT - TC
20,289.0	90.00	90.26	7,092.0	2,287.0	1,151.7	14,273.3	0.00	0.00	0.00	0.00	BHL - TC-COUNTR

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well TC-COUNTRY CLUB WEST 3-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4805.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4805.0usft
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-COUNTRY CLUB WEST 3-9-11	<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: 2542ft FNL &amp; 1193ft FEL of Sec 8</b>										
0.0	0.00	0.00	0.0	4,805.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,705.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,605.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,505.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,405.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,305.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,205.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,105.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	4,005.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,905.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,805.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,705.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE #1 (2°/100ft BUR)</b>										
1,200.0	0.00	0.00	1,200.0	3,605.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	2.00	42.50	1,300.0	3,505.02	1.3	1.2	1.3	2.00	2.00	0.00
1,400.0	4.00	42.50	1,399.8	3,405.16	5.1	4.7	5.1	2.00	2.00	0.00
1,500.0	6.00	42.50	1,499.5	3,305.55	11.6	10.6	11.5	2.00	2.00	0.00
1,600.0	8.00	42.50	1,598.7	3,206.30	20.6	18.8	20.4	2.00	2.00	0.00
<b>9 5/8" SURFACE CASING</b>										
1,601.3	8.03	42.50	1,600.0	3,205.01	20.7	19.0	20.6	2.00	2.00	0.00
<b>START NUDGE #2 (2°/100ft BUR)</b>										
1,666.3	8.03	42.50	1,664.4	3,140.65	27.4	25.1	27.2	0.00	0.00	0.00
1,700.0	8.70	42.50	1,697.7	3,107.31	31.0	28.4	30.8	2.00	2.00	0.00
1,800.0	10.70	42.50	1,796.3	3,008.74	43.4	39.8	43.1	2.00	2.00	0.00
1,900.0	12.70	42.50	1,894.2	2,910.82	58.4	53.5	58.0	2.00	2.00	0.00
2,000.0	14.70	42.50	1,991.3	2,813.67	75.8	69.5	75.4	2.00	2.00	0.00
2,100.0	16.70	42.50	2,087.6	2,717.41	95.8	87.8	95.2	2.00	2.00	0.00
<b>EOB TO 17.35° INC</b>										
2,132.5	17.35	42.50	2,118.7	2,686.33	102.8	94.2	102.2	2.00	2.00	0.00
2,200.0	17.35	42.50	2,183.1	2,621.91	117.6	107.8	116.9	0.00	0.00	0.00
2,300.0	17.35	42.50	2,278.5	2,526.45	139.6	127.9	138.8	0.00	0.00	0.00
2,400.0	17.35	42.50	2,374.0	2,431.00	161.6	148.1	160.6	0.00	0.00	0.00
2,500.0	17.35	42.50	2,469.4	2,335.55	183.6	168.2	182.5	0.00	0.00	0.00
2,600.0	17.35	42.50	2,564.9	2,240.10	205.6	188.4	204.3	0.00	0.00	0.00
2,700.0	17.35	42.50	2,660.3	2,144.65	227.6	208.5	226.2	0.00	0.00	0.00
2,800.0	17.35	42.50	2,755.8	2,049.20	249.5	228.7	248.0	0.00	0.00	0.00
2,900.0	17.35	42.50	2,851.2	1,953.75	271.5	248.8	269.9	0.00	0.00	0.00
3,000.0	17.35	42.50	2,946.7	1,858.30	293.5	269.0	291.7	0.00	0.00	0.00
3,100.0	17.35	42.50	3,042.1	1,762.85	315.5	289.1	313.5	0.00	0.00	0.00
3,200.0	17.35	42.50	3,137.6	1,667.40	337.5	309.3	335.4	0.00	0.00	0.00
3,300.0	17.35	42.50	3,233.0	1,571.95	359.5	329.4	357.2	0.00	0.00	0.00
3,400.0	17.35	42.50	3,328.5	1,476.50	381.5	349.6	379.1	0.00	0.00	0.00
3,500.0	17.35	42.50	3,423.9	1,381.05	403.5	369.7	400.9	0.00	0.00	0.00
3,600.0	17.35	42.50	3,519.4	1,285.60	425.4	389.8	422.8	0.00	0.00	0.00
3,700.0	17.35	42.50	3,614.8	1,190.15	447.4	410.0	444.6	0.00	0.00	0.00
<b>PARKMAN</b>										
3,768.3	17.35	42.50	3,680.0	1,125.00	462.4	423.7	459.6	0.00	0.00	0.00
3,800.0	17.35	42.50	3,710.3	1,094.70	469.4	430.1	466.5	0.00	0.00	0.00
3,900.0	17.35	42.50	3,805.7	999.25	491.4	450.3	488.3	0.00	0.00	0.00
4,000.0	17.35	42.50	3,901.2	903.80	513.4	470.4	510.2	0.00	0.00	0.00
4,100.0	17.35	42.50	3,996.6	808.35	535.4	490.6	532.0	0.00	0.00	0.00
4,200.0	17.35	42.50	4,092.1	712.90	557.4	510.7	553.9	0.00	0.00	0.00



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<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4805.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4805.0usft
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-COUNTRY CLUB WEST 3-9-11	<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)
4,300.0	17.35	42.50	4,187.5	617.45	579.3	530.9	575.7	0.00	0.00	0.00
4,400.0	17.35	42.50	4,283.0	522.00	601.3	551.0	597.6	0.00	0.00	0.00
4,500.0	17.35	42.50	4,378.4	426.55	623.3	571.2	619.4	0.00	0.00	0.00
<b>SUSSEX</b>										
<b>4,533.1</b>	<b>17.35</b>	<b>42.50</b>	<b>4,410.0</b>	<b>395.00</b>	<b>630.6</b>	<b>577.8</b>	<b>626.7</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,600.0	17.35	42.50	4,473.9	331.10	645.3	591.3	641.3	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>4,632.5</b>	<b>17.35</b>	<b>42.50</b>	<b>4,504.9</b>	<b>300.08</b>	<b>652.4</b>	<b>597.9</b>	<b>648.4</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>EOT TO 46.3° AZ</b>										
<b>4,689.1</b>	<b>17.36</b>	<b>46.30</b>	<b>4,558.9</b>	<b>246.06</b>	<b>664.5</b>	<b>609.7</b>	<b>661.1</b>	<b>2.00</b>	<b>0.02</b>	<b>6.71</b>
4,700.0	17.36	46.30	4,569.3	235.65	666.8	612.0	663.7	0.01	0.00	0.02
4,800.0	17.36	46.30	4,664.8	140.21	687.4	633.6	686.8	0.00	0.00	0.00
4,900.0	17.36	46.30	4,760.2	44.77	708.0	655.2	710.0	0.00	0.00	0.00
<b>SHANNON</b>										
<b>4,962.6</b>	<b>17.36</b>	<b>46.30</b>	<b>4,820.0</b>	<b>-15.00</b>	<b>720.9</b>	<b>668.7</b>	<b>724.5</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,000.0	17.36	46.30	4,855.7	-50.68	728.6	676.7	733.1	0.00	0.00	0.00
5,100.0	17.36	46.30	4,951.1	-146.12	749.2	698.3	756.3	0.00	0.00	0.00
5,200.0	17.36	46.30	5,046.6	-241.57	769.8	719.9	779.5	0.00	0.00	0.00
5,300.0	17.36	46.30	5,142.0	-337.01	790.5	741.5	802.6	0.00	0.00	0.00
5,400.0	17.36	46.30	5,237.5	-432.45	811.1	763.0	825.8	0.00	0.00	0.00
5,500.0	17.36	46.30	5,332.9	-527.90	831.7	784.6	848.9	0.00	0.00	0.00
5,600.0	17.36	46.30	5,428.3	-623.34	852.3	806.2	872.1	0.00	0.00	0.00
5,700.0	17.36	46.30	5,523.8	-718.78	872.9	827.7	895.3	0.00	0.00	0.00
5,800.0	17.36	46.30	5,619.2	-814.23	893.5	849.3	918.4	0.00	0.00	0.00
5,900.0	17.36	46.30	5,714.7	-909.67	914.2	870.9	941.6	0.00	0.00	0.00
6,000.0	17.36	46.30	5,810.1	-1,005.12	934.8	892.5	964.8	0.00	0.00	0.00
6,100.0	17.36	46.30	5,905.6	-1,100.56	955.4	914.0	987.9	0.00	0.00	0.00
6,200.0	17.36	46.30	6,001.0	-1,196.00	976.0	935.6	1,011.1	0.00	0.00	0.00
6,300.0	17.36	46.30	6,096.4	-1,291.45	996.6	957.2	1,034.2	0.00	0.00	0.00
6,400.0	17.36	46.30	6,191.9	-1,386.89	1,017.3	978.8	1,057.4	0.00	0.00	0.00
6,500.0	17.36	46.30	6,287.3	-1,482.34	1,037.9	1,000.3	1,080.6	0.00	0.00	0.00
6,600.0	17.36	46.30	6,382.8	-1,577.78	1,058.5	1,021.9	1,103.7	0.00	0.00	0.00
6,700.0	17.36	46.30	6,478.2	-1,673.22	1,079.1	1,043.5	1,126.9	0.00	0.00	0.00
6,800.0	17.36	46.30	6,573.7	-1,768.67	1,099.7	1,065.0	1,150.0	0.00	0.00	0.00
<b>START BUILD &amp; TURN</b>										
<b>6,882.4</b>	<b>17.36</b>	<b>46.30</b>	<b>6,652.3</b>	<b>-1,847.31</b>	<b>1,116.7</b>	<b>1,082.8</b>	<b>1,169.1</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,900.0	18.64	50.21	6,669.1	-1,864.05	1,120.3	1,086.9	1,173.5	9.98	7.25	22.22
7,000.0	26.92	64.96	6,761.2	-1,956.25	1,140.2	1,119.8	1,207.8	10.00	8.28	14.75
7,100.0	36.04	72.90	6,846.5	-2,041.48	1,158.5	1,168.5	1,257.9	10.00	9.12	7.95
7,200.0	45.49	77.94	6,922.2	-2,117.16	1,174.6	1,231.6	1,322.1	10.00	9.45	5.04
<b>SHARON SPRINGS</b>										
<b>7,226.0</b>	<b>47.98</b>	<b>78.98</b>	<b>6,940.0</b>	<b>-2,135.00</b>	<b>1,178.4</b>	<b>1,250.2</b>	<b>1,340.9</b>	<b>10.00</b>	<b>9.57</b>	<b>4.00</b>
<b>NIOBRARA</b>										
<b>7,276.2</b>	<b>52.80</b>	<b>80.78</b>	<b>6,972.0</b>	<b>-2,167.00</b>	<b>1,185.2</b>	<b>1,288.3</b>	<b>1,379.4</b>	<b>10.00</b>	<b>9.61</b>	<b>3.58</b>
7,300.0	55.10	81.55	6,986.0	-2,180.98	1,188.1	1,307.3	1,398.6	10.00	9.65	3.25
7,400.0	64.79	84.40	7,036.0	-2,231.02	1,198.6	1,393.1	1,484.9	10.00	9.69	2.85
7,500.0	74.53	86.82	7,070.7	-2,265.74	1,205.7	1,486.4	1,578.6	10.00	9.74	2.42
7,600.0	84.29	89.02	7,089.1	-2,284.09	1,209.2	1,584.5	1,676.7	10.00	9.76	2.20
<b>HZ LP: 1340ft FNL &amp; 460ft FWL of Sec 9 - NIO B TARGET</b>										
<b>7,658.4</b>	<b>90.00</b>	<b>90.26</b>	<b>7,092.0</b>	<b>-2,287.00</b>	<b>1,209.6</b>	<b>1,642.8</b>	<b>1,734.8</b>	<b>10.00</b>	<b>9.77</b>	<b>2.13</b>
7,700.0	90.00	90.26	7,092.0	-2,287.00	1,209.4	1,684.4	1,776.3	0.00	0.00	0.00
7,800.0	90.00	90.26	7,092.0	-2,287.00	1,208.9	1,784.4	1,875.9	0.00	0.00	0.00
7,900.0	90.00	90.26	7,092.0	-2,287.00	1,208.5	1,884.4	1,975.5	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-COUNTRY CLUB WEST 3-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4805.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4805.0usft
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-COUNTRY CLUB WEST 3-9-11	<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)
8,000.0	90.00	90.26	7,092.0	-2,287.00	1,208.0	1,984.4	2,075.2	0.00	0.00	0.00
8,100.0	90.00	90.26	7,092.0	-2,287.00	1,207.6	2,084.4	2,174.8	0.00	0.00	0.00
8,200.0	90.00	90.26	7,092.0	-2,287.00	1,207.1	2,184.4	2,274.4	0.00	0.00	0.00
8,300.0	90.00	90.26	7,092.0	-2,287.00	1,206.6	2,284.4	2,374.1	0.00	0.00	0.00
8,400.0	90.00	90.26	7,092.0	-2,287.00	1,206.2	2,384.4	2,473.7	0.00	0.00	0.00
8,500.0	90.00	90.26	7,092.0	-2,287.00	1,205.7	2,484.4	2,573.4	0.00	0.00	0.00
8,600.0	90.00	90.26	7,092.0	-2,287.00	1,205.3	2,584.4	2,673.0	0.00	0.00	0.00
8,700.0	90.00	90.26	7,092.0	-2,287.00	1,204.8	2,684.4	2,772.6	0.00	0.00	0.00
8,800.0	90.00	90.26	7,092.0	-2,287.00	1,204.4	2,784.4	2,872.3	0.00	0.00	0.00
8,900.0	90.00	90.26	7,092.0	-2,287.00	1,203.9	2,884.4	2,971.9	0.00	0.00	0.00
9,000.0	90.00	90.26	7,092.0	-2,287.00	1,203.4	2,984.4	3,071.6	0.00	0.00	0.00
9,100.0	90.00	90.26	7,092.0	-2,287.00	1,203.0	3,084.4	3,171.2	0.00	0.00	0.00
9,200.0	90.00	90.26	7,092.0	-2,287.00	1,202.5	3,184.4	3,270.8	0.00	0.00	0.00
9,300.0	90.00	90.26	7,092.0	-2,287.00	1,202.1	3,284.4	3,370.5	0.00	0.00	0.00
9,400.0	90.00	90.26	7,092.0	-2,287.00	1,201.6	3,384.4	3,470.1	0.00	0.00	0.00
9,500.0	90.00	90.26	7,092.0	-2,287.00	1,201.1	3,484.4	3,569.7	0.00	0.00	0.00
9,600.0	90.00	90.26	7,092.0	-2,287.00	1,200.7	3,584.4	3,669.4	0.00	0.00	0.00
9,700.0	90.00	90.26	7,092.0	-2,287.00	1,200.2	3,684.4	3,769.0	0.00	0.00	0.00
9,800.0	90.00	90.26	7,092.0	-2,287.00	1,199.8	3,784.4	3,868.7	0.00	0.00	0.00
9,900.0	90.00	90.26	7,092.0	-2,287.00	1,199.3	3,884.4	3,968.3	0.00	0.00	0.00
10,000.0	90.00	90.26	7,092.0	-2,287.00	1,198.9	3,984.4	4,067.9	0.00	0.00	0.00
10,100.0	90.00	90.26	7,092.0	-2,287.00	1,198.4	4,084.4	4,167.6	0.00	0.00	0.00
10,200.0	90.00	90.26	7,092.0	-2,287.00	1,197.9	4,184.4	4,267.2	0.00	0.00	0.00
10,300.0	90.00	90.26	7,092.0	-2,287.00	1,197.5	4,284.4	4,366.8	0.00	0.00	0.00
10,400.0	90.00	90.26	7,092.0	-2,287.00	1,197.0	4,384.4	4,466.5	0.00	0.00	0.00
10,500.0	90.00	90.26	7,092.0	-2,287.00	1,196.6	4,484.4	4,566.1	0.00	0.00	0.00
10,600.0	90.00	90.26	7,092.0	-2,287.00	1,196.1	4,584.4	4,665.8	0.00	0.00	0.00
10,700.0	90.00	90.26	7,092.0	-2,287.00	1,195.6	4,684.4	4,765.4	0.00	0.00	0.00
10,800.0	90.00	90.26	7,092.0	-2,287.00	1,195.2	4,784.4	4,865.0	0.00	0.00	0.00
10,900.0	90.00	90.26	7,092.0	-2,287.00	1,194.7	4,884.4	4,964.7	0.00	0.00	0.00
11,000.0	90.00	90.26	7,092.0	-2,287.00	1,194.3	4,984.4	5,064.3	0.00	0.00	0.00
11,100.0	90.00	90.26	7,092.0	-2,287.00	1,193.8	5,084.4	5,164.0	0.00	0.00	0.00
11,200.0	90.00	90.26	7,092.0	-2,287.00	1,193.4	5,184.4	5,263.6	0.00	0.00	0.00
11,300.0	90.00	90.26	7,092.0	-2,287.00	1,192.9	5,284.4	5,363.2	0.00	0.00	0.00
11,400.0	90.00	90.26	7,092.0	-2,287.00	1,192.4	5,384.4	5,462.9	0.00	0.00	0.00
11,500.0	90.00	90.26	7,092.0	-2,287.00	1,192.0	5,484.4	5,562.5	0.00	0.00	0.00
11,600.0	90.00	90.26	7,092.0	-2,287.00	1,191.5	5,584.4	5,662.1	0.00	0.00	0.00
11,700.0	90.00	90.26	7,092.0	-2,287.00	1,191.1	5,684.4	5,761.8	0.00	0.00	0.00
11,800.0	90.00	90.26	7,092.0	-2,287.00	1,190.6	5,784.4	5,861.4	0.00	0.00	0.00
11,900.0	90.00	90.26	7,092.0	-2,287.00	1,190.1	5,884.4	5,961.1	0.00	0.00	0.00
12,000.0	90.00	90.26	7,092.0	-2,287.00	1,189.7	5,984.4	6,060.7	0.00	0.00	0.00
12,100.0	90.00	90.26	7,092.0	-2,287.00	1,189.2	6,084.4	6,160.3	0.00	0.00	0.00
12,200.0	90.00	90.26	7,092.0	-2,287.00	1,188.8	6,184.4	6,260.0	0.00	0.00	0.00
12,300.0	90.00	90.26	7,092.0	-2,287.00	1,188.3	6,284.4	6,359.6	0.00	0.00	0.00
12,400.0	90.00	90.26	7,092.0	-2,287.00	1,187.9	6,384.4	6,459.2	0.00	0.00	0.00
12,500.0	90.00	90.26	7,092.0	-2,287.00	1,187.4	6,484.4	6,558.9	0.00	0.00	0.00
12,600.0	90.00	90.26	7,092.0	-2,287.00	1,186.9	6,584.4	6,658.5	0.00	0.00	0.00
12,700.0	90.00	90.26	7,092.0	-2,287.00	1,186.5	6,684.4	6,758.2	0.00	0.00	0.00
12,800.0	90.00	90.26	7,092.0	-2,287.00	1,186.0	6,784.4	6,857.8	0.00	0.00	0.00
12,900.0	90.00	90.26	7,092.0	-2,287.00	1,185.6	6,884.4	6,957.4	0.00	0.00	0.00
13,000.0	90.00	90.26	7,092.0	-2,287.00	1,185.1	6,984.4	7,057.1	0.00	0.00	0.00
13,100.0	90.00	90.26	7,092.0	-2,287.00	1,184.7	7,084.4	7,156.7	0.00	0.00	0.00
13,200.0	90.00	90.26	7,092.0	-2,287.00	1,184.2	7,184.4	7,256.4	0.00	0.00	0.00
13,300.0	90.00	90.26	7,092.0	-2,287.00	1,183.7	7,284.4	7,356.0	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-COUNTRY CLUB WEST 3-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4805.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4805.0usft
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-COUNTRY CLUB WEST 3-9-11	<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)
13,400.0	90.00	90.26	7,092.0	-2,287.00	1,183.3	7,384.4	7,455.6	0.00	0.00	0.00
13,500.0	90.00	90.26	7,092.0	-2,287.00	1,182.8	7,484.4	7,555.3	0.00	0.00	0.00
13,600.0	90.00	90.26	7,092.0	-2,287.00	1,182.4	7,584.4	7,654.9	0.00	0.00	0.00
13,700.0	90.00	90.26	7,092.0	-2,287.00	1,181.9	7,684.4	7,754.5	0.00	0.00	0.00
13,800.0	90.00	90.26	7,092.0	-2,287.00	1,181.4	7,784.4	7,854.2	0.00	0.00	0.00
13,900.0	90.00	90.26	7,092.0	-2,287.00	1,181.0	7,884.4	7,953.8	0.00	0.00	0.00
14,000.0	90.00	90.26	7,092.0	-2,287.00	1,180.5	7,984.4	8,053.5	0.00	0.00	0.00
14,100.0	90.00	90.26	7,092.0	-2,287.00	1,180.1	8,084.4	8,153.1	0.00	0.00	0.00
14,200.0	90.00	90.26	7,092.0	-2,287.00	1,179.6	8,184.4	8,252.7	0.00	0.00	0.00
14,300.0	90.00	90.26	7,092.0	-2,287.00	1,179.2	8,284.4	8,352.4	0.00	0.00	0.00
14,400.0	90.00	90.26	7,092.0	-2,287.00	1,178.7	8,384.4	8,452.0	0.00	0.00	0.00
14,500.0	90.00	90.26	7,092.0	-2,287.00	1,178.2	8,484.4	8,551.7	0.00	0.00	0.00
14,600.0	90.00	90.26	7,092.0	-2,287.00	1,177.8	8,584.4	8,651.3	0.00	0.00	0.00
14,700.0	90.00	90.26	7,092.0	-2,287.00	1,177.3	8,684.4	8,750.9	0.00	0.00	0.00
14,800.0	90.00	90.26	7,092.0	-2,287.00	1,176.9	8,784.4	8,850.6	0.00	0.00	0.00
14,900.0	90.00	90.26	7,092.0	-2,287.00	1,176.4	8,884.4	8,950.2	0.00	0.00	0.00
15,000.0	90.00	90.26	7,092.0	-2,287.00	1,175.9	8,984.4	9,049.8	0.00	0.00	0.00
15,100.0	90.00	90.26	7,092.0	-2,287.00	1,175.5	9,084.4	9,149.5	0.00	0.00	0.00
15,200.0	90.00	90.26	7,092.0	-2,287.00	1,175.0	9,184.4	9,249.1	0.00	0.00	0.00
15,300.0	90.00	90.26	7,092.0	-2,287.00	1,174.6	9,284.4	9,348.8	0.00	0.00	0.00
15,400.0	90.00	90.26	7,092.0	-2,287.00	1,174.1	9,384.4	9,448.4	0.00	0.00	0.00
15,500.0	90.00	90.26	7,092.0	-2,287.00	1,173.7	9,484.4	9,548.0	0.00	0.00	0.00
15,600.0	90.00	90.26	7,092.0	-2,287.00	1,173.2	9,584.4	9,647.7	0.00	0.00	0.00
15,700.0	90.00	90.26	7,092.0	-2,287.00	1,172.7	9,684.4	9,747.3	0.00	0.00	0.00
15,800.0	90.00	90.26	7,092.0	-2,287.00	1,172.3	9,784.4	9,846.9	0.00	0.00	0.00
15,900.0	90.00	90.26	7,092.0	-2,287.00	1,171.8	9,884.4	9,946.6	0.00	0.00	0.00
16,000.0	90.00	90.26	7,092.0	-2,287.00	1,171.4	9,984.4	10,046.2	0.00	0.00	0.00
16,100.0	90.00	90.26	7,092.0	-2,287.00	1,170.9	10,084.4	10,145.9	0.00	0.00	0.00
16,200.0	90.00	90.26	7,092.0	-2,287.00	1,170.4	10,184.4	10,245.5	0.00	0.00	0.00
16,300.0	90.00	90.26	7,092.0	-2,287.00	1,170.0	10,284.4	10,345.1	0.00	0.00	0.00
16,400.0	90.00	90.26	7,092.0	-2,287.00	1,169.5	10,384.4	10,444.8	0.00	0.00	0.00
16,500.0	90.00	90.26	7,092.0	-2,287.00	1,169.1	10,484.4	10,544.4	0.00	0.00	0.00
16,600.0	90.00	90.26	7,092.0	-2,287.00	1,168.6	10,584.3	10,644.1	0.00	0.00	0.00
16,700.0	90.00	90.26	7,092.0	-2,287.00	1,168.2	10,684.3	10,743.7	0.00	0.00	0.00
16,800.0	90.00	90.26	7,092.0	-2,287.00	1,167.7	10,784.3	10,843.3	0.00	0.00	0.00
16,900.0	90.00	90.26	7,092.0	-2,287.00	1,167.2	10,884.3	10,943.0	0.00	0.00	0.00
17,000.0	90.00	90.26	7,092.0	-2,287.00	1,166.8	10,984.3	11,042.6	0.00	0.00	0.00
17,100.0	90.00	90.26	7,092.0	-2,287.00	1,166.3	11,084.3	11,142.2	0.00	0.00	0.00
17,200.0	90.00	90.26	7,092.0	-2,287.00	1,165.9	11,184.3	11,241.9	0.00	0.00	0.00
17,300.0	90.00	90.26	7,092.0	-2,287.00	1,165.4	11,284.3	11,341.5	0.00	0.00	0.00
17,400.0	90.00	90.26	7,092.0	-2,287.00	1,165.0	11,384.3	11,441.2	0.00	0.00	0.00
17,500.0	90.00	90.26	7,092.0	-2,287.00	1,164.5	11,484.3	11,540.8	0.00	0.00	0.00
17,600.0	90.00	90.26	7,092.0	-2,287.00	1,164.0	11,584.3	11,640.4	0.00	0.00	0.00
17,700.0	90.00	90.26	7,092.0	-2,287.00	1,163.6	11,684.3	11,740.1	0.00	0.00	0.00
17,800.0	90.00	90.26	7,092.0	-2,287.00	1,163.1	11,784.3	11,839.7	0.00	0.00	0.00
17,900.0	90.00	90.26	7,092.0	-2,287.00	1,162.7	11,884.3	11,939.3	0.00	0.00	0.00
18,000.0	90.00	90.26	7,092.0	-2,287.00	1,162.2	11,984.3	12,039.0	0.00	0.00	0.00
18,100.0	90.00	90.26	7,092.0	-2,287.00	1,161.7	12,084.3	12,138.6	0.00	0.00	0.00
18,200.0	90.00	90.26	7,092.0	-2,287.00	1,161.3	12,184.3	12,238.3	0.00	0.00	0.00
18,300.0	90.00	90.26	7,092.0	-2,287.00	1,160.8	12,284.3	12,337.9	0.00	0.00	0.00
18,400.0	90.00	90.26	7,092.0	-2,287.00	1,160.4	12,384.3	12,437.5	0.00	0.00	0.00
18,500.0	90.00	90.26	7,092.0	-2,287.00	1,159.9	12,484.3	12,537.2	0.00	0.00	0.00
18,600.0	90.00	90.26	7,092.0	-2,287.00	1,159.5	12,584.3	12,636.8	0.00	0.00	0.00
18,700.0	90.00	90.26	7,092.0	-2,287.00	1,159.0	12,684.3	12,736.5	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-COUNTRY CLUB WEST 3-9-11
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4805.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4805.0usft
<b>Site:</b>	NE SE SEC. 8 T5N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	TC-COUNTRY CLUB WEST 3-9-11	<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)
18,800.0	90.00	90.26	7,092.0	-2,287.00	1,158.5	12,784.3	12,836.1	0.00	0.00	0.00
18,900.0	90.00	90.26	7,092.0	-2,287.00	1,158.1	12,884.3	12,935.7	0.00	0.00	0.00
19,000.0	90.00	90.26	7,092.0	-2,287.00	1,157.6	12,984.3	13,035.4	0.00	0.00	0.00
19,100.0	90.00	90.26	7,092.0	-2,287.00	1,157.2	13,084.3	13,135.0	0.00	0.00	0.00
19,200.0	90.00	90.26	7,092.0	-2,287.00	1,156.7	13,184.3	13,234.6	0.00	0.00	0.00
19,300.0	90.00	90.26	7,092.0	-2,287.00	1,156.2	13,284.3	13,334.3	0.00	0.00	0.00
19,400.0	90.00	90.26	7,092.0	-2,287.00	1,155.8	13,384.3	13,433.9	0.00	0.00	0.00
19,500.0	90.00	90.26	7,092.0	-2,287.00	1,155.3	13,484.3	13,533.6	0.00	0.00	0.00
19,600.0	90.00	90.26	7,092.0	-2,287.00	1,154.9	13,584.3	13,633.2	0.00	0.00	0.00
19,700.0	90.00	90.26	7,092.0	-2,287.00	1,154.4	13,684.3	13,732.8	0.00	0.00	0.00
19,800.0	90.00	90.26	7,092.0	-2,287.00	1,154.0	13,784.3	13,832.5	0.00	0.00	0.00
19,900.0	90.00	90.26	7,092.0	-2,287.00	1,153.5	13,884.3	13,932.1	0.00	0.00	0.00
20,000.0	90.00	90.26	7,092.0	-2,287.00	1,153.0	13,984.3	14,031.7	0.00	0.00	0.00
20,100.0	90.00	90.26	7,092.0	-2,287.00	1,152.6	14,084.3	14,131.4	0.00	0.00	0.00
20,200.0	90.00	90.26	7,092.0	-2,287.00	1,152.1	14,184.3	14,231.0	0.00	0.00	0.00
<b>BHL:1589ft FNL &amp; 2484ft FWL of Sec 11</b>										
<b>20,289.0</b>	<b>90.00</b>	<b>90.26</b>	<b>7,092.0</b>	<b>-2,287.00</b>	<b>1,151.7</b>	<b>14,273.3</b>	<b>14,319.7</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,768.3	3,680.0	PARKMAN			
4,533.1	4,410.0	SUSSEX			
4,962.6	4,820.0	SHANNON			
7,226.0	6,940.0	SHARON SPRINGS			
7,276.2	6,972.0	NIOBRARA			
7,658.4	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: 2542ft FNL & 1193ft FEL of Sec 8
1,200.0	1,200.0	0.0	0.0	START NUDGE #1 (2°/100ft BUR)
1,601.3	1,600.0	20.7	19.0	9 5/8" SURFACE CASING
1,666.3	1,664.4	27.4	25.1	START NUDGE #2 (2°/100ft BUR)
2,132.5	2,118.7	102.8	94.2	EOB TO 17.35° INC
4,632.5	4,504.9	652.4	597.9	END OF TANGENT
4,689.1	4,558.9	664.5	609.7	EOT TO 46.3° AZ
6,882.4	6,652.3	1,116.7	1,082.8	START BUILD & TURN
7,658.4	7,092.0	1,209.6	1,642.8	HZ LP: 1340ft FNL & 460ft FWL of Sec 9
20,289.0	7,092.0	1,151.7	14,273.3	BHL:1589ft FNL & 2484ft FWL of Sec 11