

# **EXTRACTION OIL & GAS**

**SEC 19 T7N R65W**

**WAAG NORTH**

**WAAG 2 - Slot WAAG 2**

**Wellbore #1**

**Plan: Plan #1 01Aug14 jps**

## **Standard Planning Report - Geographic**

**13 August, 2014**

# New Tech

## Planning Report - Geographic

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WAAG 2 - Slot WAAG 2
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	WELL @ 4918.0ft (Xtreme 7 Rig)
<b>Project:</b>	SEC 19 T7N R65W	<b>MD Reference:</b>	WELL @ 4918.0ft (Xtreme 7 Rig)
<b>Site:</b>	WAAG NORTH	<b>North Reference:</b>	True
<b>Well:</b>	WAAG 2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 01Aug14 jps		

<b>Project</b>	SEC 19 T7N R65W, Weld County, CO		
<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		

<b>Site</b>	WAAG NORTH			
<b>Site Position:</b>		<b>Northing:</b>	1,450,756.94 ft	<b>Latitude:</b> 40° 34' 4.944 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,219,613.80 ft	<b>Longitude:</b> 104° 42' 34.200 W
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"	<b>Grid Convergence:</b> 0.51 °

<b>Well</b>	WAAG 2 - Slot WAAG 2			
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,450,742.60 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	3,219,638.93 ft
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft
			<b>Ground Level:</b>	4,902.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	8/1/2014	8.43	67.09	52,894

<b>Design</b>	Plan #1 01Aug14 jps			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	268.71

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,480.7	11.61	98.92	1,476.7	-9.1	57.9	2.00	2.00	0.00	98.92	
6,055.9	11.61	98.92	5,958.3	-151.9	967.9	0.00	0.00	0.00	0.00	
6,636.6	0.00	0.00	6,535.0	-161.0	1,025.8	2.00	-2.00	0.00	180.00	
6,666.6	0.00	0.00	6,565.0	-161.0	1,025.8	0.00	0.00	0.00	0.00	
7,566.6	90.00	270.79	7,138.0	-153.0	452.9	10.00	10.00	0.00	270.79	
12,056.7	90.00	270.80	7,138.0	-90.7	-4,036.7	0.00	0.00	0.00	0.00	TD / PBHL WAAG NC

# New Tech

## Planning Report - Geographic

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WAAG 2 - Slot WAAG 2
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	WELL @ 4918.0ft (Xtreme 7 Rig)
<b>Project:</b>	SEC 19 T7N R65W	<b>MD Reference:</b>	WELL @ 4918.0ft (Xtreme 7 Rig)
<b>Site:</b>	WAAG NORTH	<b>North Reference:</b>	True
<b>Well:</b>	WAAG 2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 01Aug14 jps		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,450,742.60	3,219,638.93	40° 34' 4.800 N	104° 42' 33.876 W
100.0	0.00	0.00	100.0	0.0	0.0	1,450,742.60	3,219,638.93	40° 34' 4.800 N	104° 42' 33.876 W
200.0	0.00	0.00	200.0	0.0	0.0	1,450,742.60	3,219,638.93	40° 34' 4.800 N	104° 42' 33.876 W
300.0	0.00	0.00	300.0	0.0	0.0	1,450,742.60	3,219,638.93	40° 34' 4.800 N	104° 42' 33.876 W
400.0	0.00	0.00	400.0	0.0	0.0	1,450,742.60	3,219,638.93	40° 34' 4.800 N	104° 42' 33.876 W
500.0	0.00	0.00	500.0	0.0	0.0	1,450,742.60	3,219,638.93	40° 34' 4.800 N	104° 42' 33.876 W
600.0	0.00	0.00	600.0	0.0	0.0	1,450,742.60	3,219,638.93	40° 34' 4.800 N	104° 42' 33.876 W
700.0	0.00	0.00	700.0	0.0	0.0	1,450,742.60	3,219,638.93	40° 34' 4.800 N	104° 42' 33.876 W
800.0	0.00	0.00	800.0	0.0	0.0	1,450,742.60	3,219,638.93	40° 34' 4.800 N	104° 42' 33.876 W
850.0	0.00	0.00	850.0	0.0	0.0	1,450,742.60	3,219,638.93	40° 34' 4.800 N	104° 42' 33.876 W
<b>9 5/8"</b>									
900.0	0.00	0.00	900.0	0.0	0.0	1,450,742.60	3,219,638.93	40° 34' 4.800 N	104° 42' 33.876 W
<b>Start Build 2.00</b>									
1,000.0	2.00	98.92	1,000.0	-0.3	1.7	1,450,742.34	3,219,640.66	40° 34' 4.797 N	104° 42' 33.854 W
1,100.0	4.00	98.92	1,099.8	-1.1	6.9	1,450,741.57	3,219,645.83	40° 34' 4.789 N	104° 42' 33.787 W
1,200.0	6.00	98.92	1,199.5	-2.4	15.5	1,450,740.30	3,219,654.46	40° 34' 4.776 N	104° 42' 33.675 W
1,300.0	8.00	98.92	1,298.7	-4.3	27.5	1,450,738.52	3,219,666.51	40° 34' 4.757 N	104° 42' 33.519 W
1,400.0	10.00	98.92	1,397.5	-6.7	43.0	1,450,736.23	3,219,681.99	40° 34' 4.733 N	104° 42' 33.319 W
1,480.7	11.61	98.92	1,476.7	-9.1	57.9	1,450,734.02	3,219,696.95	40° 34' 4.710 N	104° 42' 33.125 W
<b>Hold 11.61° Inc, 98.92° Az</b>									
1,500.0	11.61	98.92	1,495.6	-9.7	61.8	1,450,733.45	3,219,700.80	40° 34' 4.704 N	104° 42' 33.075 W
1,600.0	11.61	98.92	1,593.6	-12.8	81.7	1,450,730.51	3,219,720.71	40° 34' 4.673 N	104° 42' 32.818 W
1,700.0	11.61	98.92	1,691.5	-15.9	101.6	1,450,727.57	3,219,740.63	40° 34' 4.642 N	104° 42' 32.560 W
1,800.0	11.61	98.92	1,789.5	-19.1	121.4	1,450,724.62	3,219,760.54	40° 34' 4.612 N	104° 42' 32.302 W
1,900.0	11.61	98.92	1,887.4	-22.2	141.3	1,450,721.68	3,219,780.46	40° 34' 4.581 N	104° 42' 32.045 W
2,000.0	11.61	98.92	1,985.4	-25.3	161.2	1,450,718.74	3,219,800.37	40° 34' 4.550 N	104° 42' 31.787 W
2,100.0	11.61	98.92	2,083.4	-28.4	181.1	1,450,715.79	3,219,820.29	40° 34' 4.519 N	104° 42' 31.529 W
2,200.0	11.61	98.92	2,181.3	-31.5	201.0	1,450,712.85	3,219,840.20	40° 34' 4.488 N	104° 42' 31.271 W
2,300.0	11.61	98.92	2,279.3	-34.7	220.9	1,450,709.91	3,219,860.12	40° 34' 4.457 N	104° 42' 31.014 W
2,400.0	11.61	98.92	2,377.2	-37.8	240.8	1,450,706.96	3,219,880.03	40° 34' 4.427 N	104° 42' 30.756 W
2,500.0	11.61	98.92	2,475.2	-40.9	260.7	1,450,704.02	3,219,899.95	40° 34' 4.396 N	104° 42' 30.498 W
2,600.0	11.61	98.92	2,573.1	-44.0	280.6	1,450,701.08	3,219,919.86	40° 34' 4.365 N	104° 42' 30.241 W
2,700.0	11.61	98.92	2,671.1	-47.1	300.4	1,450,698.14	3,219,939.78	40° 34' 4.334 N	104° 42' 29.983 W
2,800.0	11.61	98.92	2,769.0	-50.3	320.3	1,450,695.19	3,219,959.69	40° 34' 4.303 N	104° 42' 29.725 W
2,900.0	11.61	98.92	2,867.0	-53.4	340.2	1,450,692.25	3,219,979.61	40° 34' 4.272 N	104° 42' 29.467 W
3,000.0	11.61	98.92	2,964.9	-56.5	360.1	1,450,689.31	3,219,999.52	40° 34' 4.242 N	104° 42' 29.210 W
3,100.0	11.61	98.92	3,062.9	-59.6	380.0	1,450,686.36	3,220,019.44	40° 34' 4.211 N	104° 42' 28.952 W
3,200.0	11.61	98.92	3,160.8	-62.7	399.9	1,450,683.42	3,220,039.35	40° 34' 4.180 N	104° 42' 28.694 W
3,300.0	11.61	98.92	3,258.8	-65.9	419.8	1,450,680.48	3,220,059.27	40° 34' 4.149 N	104° 42' 28.437 W
3,400.0	11.61	98.92	3,356.7	-69.0	439.7	1,450,677.53	3,220,079.18	40° 34' 4.118 N	104° 42' 28.179 W
3,500.0	11.61	98.92	3,454.7	-72.1	459.5	1,450,674.59	3,220,099.10	40° 34' 4.087 N	104° 42' 27.921 W
3,600.0	11.61	98.92	3,552.6	-75.2	479.4	1,450,671.65	3,220,119.01	40° 34' 4.057 N	104° 42' 27.664 W
3,658.6	11.61	98.92	3,610.0	-77.1	491.1	1,450,669.92	3,220,130.67	40° 34' 4.039 N	104° 42' 27.513 W
<b>PARKMAN</b>									
3,700.0	11.61	98.92	3,650.6	-78.3	499.3	1,450,668.71	3,220,138.93	40° 34' 4.026 N	104° 42' 27.406 W
3,800.0	11.61	98.92	3,748.5	-81.5	519.2	1,450,665.76	3,220,158.84	40° 34' 3.995 N	104° 42' 27.148 W
3,900.0	11.61	98.92	3,846.5	-84.6	539.1	1,450,662.82	3,220,178.76	40° 34' 3.964 N	104° 42' 26.890 W
4,000.0	11.61	98.92	3,944.5	-87.7	559.0	1,450,659.88	3,220,198.67	40° 34' 3.933 N	104° 42' 26.633 W
4,100.0	11.61	98.92	4,042.4	-90.8	578.9	1,450,656.93	3,220,218.59	40° 34' 3.902 N	104° 42' 26.375 W
4,200.0	11.61	98.92	4,140.4	-93.9	598.8	1,450,653.99	3,220,238.50	40° 34' 3.872 N	104° 42' 26.117 W
4,300.0	11.61	98.92	4,238.3	-97.1	618.6	1,450,651.05	3,220,258.42	40° 34' 3.841 N	104° 42' 25.860 W
4,400.0	11.61	98.92	4,336.3	-100.2	638.5	1,450,648.10	3,220,278.33	40° 34' 3.810 N	104° 42' 25.602 W

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Planning Report - Geographic

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<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	WELL @ 4918.0ft (Xtreme 7 Rig)
<b>Project:</b>	SEC 19 T7N R65W	<b>MD Reference:</b>	WELL @ 4918.0ft (Xtreme 7 Rig)
<b>Site:</b>	WAAG NORTH	<b>North Reference:</b>	True
<b>Well:</b>	WAAG 2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 01Aug14 jps		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,400.8	11.61	98.92	4,337.0	-100.2	638.7	1,450,648.08	3,220,278.48	40° 34' 3.810 N	104° 42' 25.600 W
<b>SUSSEX</b>									
4,500.0	11.61	98.92	4,434.2	-103.3	658.4	1,450,645.16	3,220,298.25	40° 34' 3.779 N	104° 42' 25.344 W
4,600.0	11.61	98.92	4,532.2	-106.4	678.3	1,450,642.22	3,220,318.16	40° 34' 3.748 N	104° 42' 25.086 W
4,700.0	11.61	98.92	4,630.1	-109.5	698.2	1,450,639.27	3,220,338.08	40° 34' 3.717 N	104° 42' 24.829 W
4,800.0	11.61	98.92	4,728.1	-112.7	718.1	1,450,636.33	3,220,357.99	40° 34' 3.686 N	104° 42' 24.571 W
4,802.0	11.61	98.92	4,730.0	-112.7	718.5	1,450,636.27	3,220,358.38	40° 34' 3.686 N	104° 42' 24.566 W
<b>SHANNON</b>									
4,900.0	11.61	98.92	4,826.0	-115.8	738.0	1,450,633.39	3,220,377.91	40° 34' 3.656 N	104° 42' 24.313 W
5,000.0	11.61	98.92	4,924.0	-118.9	757.9	1,450,630.45	3,220,397.82	40° 34' 3.625 N	104° 42' 24.056 W
5,100.0	11.61	98.92	5,021.9	-122.0	777.8	1,450,627.50	3,220,417.74	40° 34' 3.594 N	104° 42' 23.798 W
5,200.0	11.61	98.92	5,119.9	-125.2	797.6	1,450,624.56	3,220,437.65	40° 34' 3.563 N	104° 42' 23.540 W
5,300.0	11.61	98.92	5,217.8	-128.3	817.5	1,450,621.62	3,220,457.57	40° 34' 3.532 N	104° 42' 23.283 W
5,400.0	11.61	98.92	5,315.8	-131.4	837.4	1,450,618.67	3,220,477.48	40° 34' 3.501 N	104° 42' 23.025 W
5,500.0	11.61	98.92	5,413.7	-134.5	857.3	1,450,615.73	3,220,497.40	40° 34' 3.471 N	104° 42' 22.767 W
5,600.0	11.61	98.92	5,511.7	-137.6	877.2	1,450,612.79	3,220,517.31	40° 34' 3.440 N	104° 42' 22.509 W
5,700.0	11.61	98.92	5,609.6	-140.8	897.1	1,450,609.84	3,220,537.23	40° 34' 3.409 N	104° 42' 22.252 W
5,800.0	11.61	98.92	5,707.6	-143.9	917.0	1,450,606.90	3,220,557.14	40° 34' 3.378 N	104° 42' 21.994 W
5,900.0	11.61	98.92	5,805.6	-147.0	936.9	1,450,603.96	3,220,577.06	40° 34' 3.347 N	104° 42' 21.736 W
6,000.0	11.61	98.92	5,903.5	-150.1	956.7	1,450,601.02	3,220,596.97	40° 34' 3.316 N	104° 42' 21.479 W
6,055.9	11.61	98.92	5,958.3	-151.9	967.9	1,450,599.37	3,220,608.11	40° 34' 3.299 N	104° 42' 21.334 W
<b>Start Drop -2.00</b>									
6,100.0	10.73	98.92	6,001.5	-153.2	976.3	1,450,598.12	3,220,616.56	40° 34' 3.286 N	104° 42' 21.225 W
6,200.0	8.73	98.92	6,100.1	-155.8	993.0	1,450,595.65	3,220,633.28	40° 34' 3.260 N	104° 42' 21.009 W
6,300.0	6.73	98.92	6,199.2	-157.9	1,006.3	1,450,593.68	3,220,646.59	40° 34' 3.240 N	104° 42' 20.837 W
6,400.0	4.73	98.92	6,298.7	-159.4	1,016.2	1,450,592.22	3,220,656.47	40° 34' 3.224 N	104° 42' 20.709 W
6,500.0	2.73	98.92	6,398.4	-160.4	1,022.6	1,450,591.27	3,220,662.91	40° 34' 3.214 N	104° 42' 20.625 W
6,600.0	0.73	98.92	6,498.4	-160.9	1,025.6	1,450,590.83	3,220,665.90	40° 34' 3.210 N	104° 42' 20.587 W
6,636.6	0.00	0.00	6,535.0	-161.0	1,025.8	1,450,590.80	3,220,666.13	40° 34' 3.209 N	104° 42' 20.584 W
<b>Vertical</b>									
6,666.6	0.00	0.00	6,565.0	-161.0	1,025.8	1,450,590.80	3,220,666.13	40° 34' 3.209 N	104° 42' 20.584 W
<b>KOP 10°/100</b>									
6,700.0	3.34	270.79	6,598.4	-160.9	1,024.8	1,450,590.80	3,220,665.16	40° 34' 3.209 N	104° 42' 20.596 W
6,800.0	13.34	270.79	6,697.2	-160.7	1,010.3	1,450,590.87	3,220,650.67	40° 34' 3.211 N	104° 42' 20.784 W
6,900.0	23.34	270.79	6,792.0	-160.3	978.9	1,450,591.02	3,220,619.25	40° 34' 3.216 N	104° 42' 21.191 W
7,000.0	33.34	270.79	6,879.9	-159.7	931.5	1,450,591.26	3,220,571.84	40° 34' 3.222 N	104° 42' 21.805 W
7,100.0	43.34	270.79	6,958.2	-158.8	869.6	1,450,591.56	3,220,509.89	40° 34' 3.231 N	104° 42' 22.608 W
7,173.0	50.64	270.79	7,008.0	-158.1	816.2	1,450,591.82	3,220,456.54	40° 34' 3.238 N	104° 42' 23.299 W
<b>NIORARA</b>									
7,200.0	53.34	270.79	7,024.6	-157.8	795.0	1,450,591.92	3,220,435.27	40° 34' 3.241 N	104° 42' 23.575 W
7,300.0	63.34	270.79	7,077.0	-156.6	710.0	1,450,592.34	3,220,350.26	40° 34' 3.252 N	104° 42' 24.676 W
7,400.0	73.34	270.79	7,113.9	-155.3	617.2	1,450,592.79	3,220,257.45	40° 34' 3.265 N	104° 42' 25.879 W
7,500.0	83.34	270.79	7,134.1	-154.0	519.4	1,450,593.27	3,220,159.63	40° 34' 3.279 N	104° 42' 27.146 W
7,566.6	90.00	270.79	7,138.0	-153.0	452.9	1,450,593.60	3,220,093.18	40° 34' 3.288 N	104° 42' 28.007 W
<b>Landing Pt 90° Inc, 270.79° Az - 7"</b>									
7,600.0	90.00	270.79	7,138.0	-152.6	419.5	1,450,593.76	3,220,059.79	40° 34' 3.292 N	104° 42' 28.440 W
7,700.0	90.00	270.79	7,138.0	-151.2	319.5	1,450,594.25	3,219,959.79	40° 34' 3.306 N	104° 42' 29.736 W
7,800.0	90.00	270.79	7,138.0	-149.8	219.5	1,450,594.74	3,219,859.79	40° 34' 3.319 N	104° 42' 31.031 W
7,900.0	90.00	270.79	7,138.0	-148.4	119.5	1,450,595.22	3,219,759.79	40° 34' 3.333 N	104° 42' 32.327 W
8,000.0	90.00	270.79	7,138.0	-147.1	19.5	1,450,595.71	3,219,659.79	40° 34' 3.347 N	104° 42' 33.623 W
8,100.0	90.00	270.79	7,138.0	-145.7	-80.4	1,450,596.20	3,219,559.79	40° 34' 3.360 N	104° 42' 34.918 W
8,200.0	90.00	270.79	7,138.0	-144.3	-180.4	1,450,596.69	3,219,459.79	40° 34' 3.374 N	104° 42' 36.214 W
8,300.0	90.00	270.79	7,137.9	-142.9	-280.4	1,450,597.18	3,219,359.79	40° 34' 3.388 N	104° 42' 37.510 W

# New Tech

## Planning Report - Geographic

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WAAG 2 - Slot WAAG 2
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	WELL @ 4918.0ft (Xtreme 7 Rig)
<b>Project:</b>	SEC 19 T7N R65W	<b>MD Reference:</b>	WELL @ 4918.0ft (Xtreme 7 Rig)
<b>Site:</b>	WAAG NORTH	<b>North Reference:</b>	True
<b>Well:</b>	WAAG 2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 01Aug14 jps		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
8,400.0	90.00	270.79	7,137.9	-141.5	-380.4	1,450,597.67	3,219,259.79	40° 34' 3.401 N	104° 42' 38.805 W	
8,500.0	90.00	270.79	7,137.9	-140.2	-480.4	1,450,598.16	3,219,159.80	40° 34' 3.415 N	104° 42' 40.101 W	
8,600.0	90.00	270.79	7,137.9	-138.8	-580.4	1,450,598.65	3,219,059.80	40° 34' 3.429 N	104° 42' 41.397 W	
8,700.0	90.00	270.79	7,137.9	-137.4	-680.4	1,450,599.13	3,218,959.80	40° 34' 3.442 N	104° 42' 42.692 W	
8,800.0	90.00	270.79	7,137.9	-136.0	-780.4	1,450,599.62	3,218,859.80	40° 34' 3.456 N	104° 42' 43.988 W	
8,900.0	90.00	270.79	7,137.9	-134.6	-880.4	1,450,600.11	3,218,759.80	40° 34' 3.469 N	104° 42' 45.284 W	
9,000.0	90.00	270.79	7,137.9	-133.3	-980.4	1,450,600.60	3,218,659.80	40° 34' 3.483 N	104° 42' 46.579 W	
9,100.0	90.00	270.79	7,137.9	-131.9	-1,080.3	1,450,601.09	3,218,559.80	40° 34' 3.497 N	104° 42' 47.875 W	
9,200.0	90.00	270.79	7,137.9	-130.5	-1,180.3	1,450,601.58	3,218,459.80	40° 34' 3.510 N	104° 42' 49.171 W	
9,300.0	90.00	270.79	7,137.9	-129.1	-1,280.3	1,450,602.07	3,218,359.81	40° 34' 3.524 N	104° 42' 50.466 W	
9,400.0	90.00	270.79	7,137.9	-127.7	-1,380.3	1,450,602.55	3,218,259.81	40° 34' 3.537 N	104° 42' 51.762 W	
9,500.0	90.00	270.79	7,137.9	-126.4	-1,480.3	1,450,603.04	3,218,159.81	40° 34' 3.551 N	104° 42' 53.058 W	
9,600.0	90.00	270.79	7,137.9	-125.0	-1,580.3	1,450,603.53	3,218,059.81	40° 34' 3.564 N	104° 42' 54.353 W	
9,700.0	90.00	270.79	7,137.9	-123.6	-1,680.3	1,450,604.02	3,217,959.81	40° 34' 3.578 N	104° 42' 55.649 W	
9,800.0	90.00	270.79	7,137.9	-122.2	-1,780.3	1,450,604.51	3,217,859.81	40° 34' 3.592 N	104° 42' 56.945 W	
9,900.0	90.00	270.79	7,137.9	-120.8	-1,880.3	1,450,605.00	3,217,759.81	40° 34' 3.605 N	104° 42' 58.240 W	
10,000.0	90.00	270.79	7,137.9	-119.5	-1,980.3	1,450,605.49	3,217,659.81	40° 34' 3.619 N	104° 42' 59.536 W	
10,100.0	90.00	270.79	7,137.9	-118.1	-2,080.3	1,450,605.98	3,217,559.82	40° 34' 3.632 N	104° 43' 0.832 W	
10,200.0	90.00	270.79	7,137.8	-116.7	-2,180.2	1,450,606.46	3,217,459.82	40° 34' 3.646 N	104° 43' 2.127 W	
10,300.0	90.01	270.79	7,137.8	-115.3	-2,280.2	1,450,606.95	3,217,359.82	40° 34' 3.659 N	104° 43' 3.423 W	
10,400.0	90.01	270.79	7,137.8	-113.9	-2,380.2	1,450,607.44	3,217,259.82	40° 34' 3.673 N	104° 43' 4.719 W	
10,500.0	90.01	270.79	7,137.8	-112.6	-2,480.2	1,450,607.93	3,217,159.82	40° 34' 3.686 N	104° 43' 6.015 W	
10,600.0	90.01	270.79	7,137.8	-111.2	-2,580.2	1,450,608.42	3,217,059.82	40° 34' 3.700 N	104° 43' 7.310 W	
10,700.0	90.01	270.79	7,137.8	-109.8	-2,680.2	1,450,608.91	3,216,959.82	40° 34' 3.714 N	104° 43' 8.606 W	
10,800.0	90.01	270.79	7,137.8	-108.4	-2,780.2	1,450,609.40	3,216,859.82	40° 34' 3.727 N	104° 43' 9.902 W	
10,900.0	90.01	270.79	7,137.8	-107.0	-2,880.2	1,450,609.89	3,216,759.82	40° 34' 3.741 N	104° 43' 11.197 W	
11,000.0	90.01	270.79	7,137.8	-105.7	-2,980.2	1,450,610.37	3,216,659.83	40° 34' 3.754 N	104° 43' 12.493 W	
11,100.0	90.01	270.79	7,137.8	-104.3	-3,080.2	1,450,610.86	3,216,559.83	40° 34' 3.768 N	104° 43' 13.789 W	
11,200.0	90.01	270.79	7,137.7	-102.9	-3,180.1	1,450,611.35	3,216,459.83	40° 34' 3.781 N	104° 43' 15.084 W	
11,300.0	90.01	270.79	7,137.7	-101.5	-3,280.1	1,450,611.84	3,216,359.83	40° 34' 3.795 N	104° 43' 16.380 W	
11,400.0	90.01	270.79	7,137.7	-100.1	-3,380.1	1,450,612.33	3,216,259.83	40° 34' 3.808 N	104° 43' 17.676 W	
11,500.0	90.01	270.79	7,137.7	-98.8	-3,480.1	1,450,612.82	3,216,159.83	40° 34' 3.822 N	104° 43' 18.971 W	
11,600.0	90.01	270.79	7,137.7	-97.4	-3,580.1	1,450,613.31	3,216,059.83	40° 34' 3.835 N	104° 43' 20.267 W	
11,700.0	90.01	270.79	7,137.7	-96.0	-3,680.1	1,450,613.79	3,215,959.83	40° 34' 3.849 N	104° 43' 21.563 W	
11,800.0	90.01	270.79	7,137.7	-94.6	-3,780.1	1,450,614.28	3,215,859.84	40° 34' 3.862 N	104° 43' 22.858 W	
11,900.0	90.01	270.79	7,137.7	-93.2	-3,880.1	1,450,614.77	3,215,759.84	40° 34' 3.876 N	104° 43' 24.154 W	
12,000.0	90.01	270.79	7,137.6	-91.9	-3,980.1	1,450,615.26	3,215,659.84	40° 34' 3.889 N	104° 43' 25.450 W	
12,056.7	90.00	270.80	7,137.6	-91.1	-4,036.7	1,450,615.54	3,215,603.16	40° 34' 3.897 N	104° 43' 26.184 W	
TD at 12056.7 - TD / PBHL WAAG NORTH 2										

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
TD / PBHL WAAG NOR - hit/miss target - Shape - Point	0.00	0.50	7,138.0	-90.7	-4,036.7	1,450,615.86	3,215,603.16	40° 34' 3.900 N	104° 43' 26.184 W	
LP WAAG NORTH 2 - plan hits target - Point	0.00	0.51	7,138.0	-153.0	452.8	1,450,593.63	3,220,093.13	40° 34' 3.288 N	104° 42' 28.008 W	

**New Tech**  
Planning Report - Geographic

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WAAG 2 - Slot WAAG 2
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	WELL @ 4918.0ft (Xtreme 7 Rig)
<b>Project:</b>	SEC 19 T7N R65W	<b>MD Reference:</b>	WELL @ 4918.0ft (Xtreme 7 Rig)
<b>Site:</b>	WAAG NORTH	<b>North Reference:</b>	True
<b>Well:</b>	WAAG 2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 01Aug14 jps		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
850.0	850.0	9 5/8"	0	0	
7,566.6	7,138.0	7"	0	0	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3658.60	3610.00	PARKMAN			
4400.80	4337.00	SUSSEX			
4802.00	4730.00	SHANNON			
7173.00	7008.00	NIOBRARA			
	7148.00	NIO B TARGET			
	7292.00	FORT HAYS			
	7325.00	CODELL			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
900.0	900.0	0.0	0.0	Start Build 2.00	
1,480.7	1,476.7	-9.1	57.9	Hold 11.61° Inc, 98.92° Az	
6,055.9	5,958.3	-151.9	967.9	Start Drop -2.00	
6,636.6	6,535.0	-161.0	1,025.8	Vertical	
6,666.6	6,565.0	-161.0	1,025.8	KOP 10°/100	
7,566.6	7,138.0	-153.0	452.9	Landing Pt 90° Inc, 270.79° Az	
12,056.7	7,137.6	-91.1	-4,036.7	TD at 12056.7	