

# **EXTRACTION OIL & GAS**

**SEC 19 T7N R65W**

**WAAG NORTH**

**WAAG 5 - Slot WAAG 5**

**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 5 - Slot WAAG 5
<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 5	<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 5 - Slot WAAG 5			
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,450,703.17 ft
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	3,219,711.52 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	260.19

<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	
1,598.9	13.98	129.46	1,592.0	-53.9	65.5	2.00	2.00	0.00	129.46	
5,979.7	13.98	129.46	5,843.0	-726.5	882.4	0.00	0.00	0.00	0.00	
6,678.5	0.00	0.00	6,535.0	-780.4	947.9	2.00	-2.00	0.00	180.00	
6,708.5	0.00	0.00	6,565.0	-780.4	947.9	0.00	0.00	0.00	0.00	
7,608.5	90.00	270.80	7,138.0	-772.4	375.0	10.00	10.00	0.00	270.80	
12,090.3	90.00	270.79	7,138.0	-710.1	-4,106.3	0.00	0.00	0.00	0.00	TD / PBHL WAAG NC

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## Planning Report - Geographic

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WAAG 5 - Slot WAAG 5
<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 5	<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	1,450,703.17	3,219,711.52	40° 34' 4.404 N	104° 42' 32.940 W
100.0	0.00	0.00	100.0	0.0	0.0	1,450,703.17	3,219,711.52	40° 34' 4.404 N	104° 42' 32.940 W
200.0	0.00	0.00	200.0	0.0	0.0	1,450,703.17	3,219,711.52	40° 34' 4.404 N	104° 42' 32.940 W
300.0	0.00	0.00	300.0	0.0	0.0	1,450,703.17	3,219,711.52	40° 34' 4.404 N	104° 42' 32.940 W
400.0	0.00	0.00	400.0	0.0	0.0	1,450,703.17	3,219,711.52	40° 34' 4.404 N	104° 42' 32.940 W
500.0	0.00	0.00	500.0	0.0	0.0	1,450,703.17	3,219,711.52	40° 34' 4.404 N	104° 42' 32.940 W
600.0	0.00	0.00	600.0	0.0	0.0	1,450,703.17	3,219,711.52	40° 34' 4.404 N	104° 42' 32.940 W
700.0	0.00	0.00	700.0	0.0	0.0	1,450,703.17	3,219,711.52	40° 34' 4.404 N	104° 42' 32.940 W
800.0	0.00	0.00	800.0	0.0	0.0	1,450,703.17	3,219,711.52	40° 34' 4.404 N	104° 42' 32.940 W
850.0	0.00	0.00	850.0	0.0	0.0	1,450,703.17	3,219,711.52	40° 34' 4.404 N	104° 42' 32.940 W
<b>9 5/8"</b>									
900.0	0.00	0.00	900.0	0.0	0.0	1,450,703.17	3,219,711.52	40° 34' 4.404 N	104° 42' 32.940 W
<b>Start Build 2.00</b>									
1,000.0	2.00	129.46	1,000.0	-1.1	1.3	1,450,702.07	3,219,712.88	40° 34' 4.393 N	104° 42' 32.923 W
1,100.0	4.00	129.46	1,099.8	-4.4	5.4	1,450,698.78	3,219,716.95	40° 34' 4.360 N	104° 42' 32.870 W
1,200.0	6.00	129.46	1,199.5	-10.0	12.1	1,450,693.30	3,219,723.72	40° 34' 4.305 N	104° 42' 32.783 W
1,300.0	8.00	129.46	1,298.7	-17.7	21.5	1,450,685.64	3,219,733.20	40° 34' 4.229 N	104° 42' 32.661 W
1,400.0	10.00	129.46	1,397.5	-27.7	33.6	1,450,675.80	3,219,745.36	40° 34' 4.131 N	104° 42' 32.505 W
1,500.0	12.00	129.46	1,495.6	-39.8	48.3	1,450,663.81	3,219,760.20	40° 34' 4.011 N	104° 42' 32.314 W
1,598.9	13.98	129.46	1,592.0	-53.9	65.5	1,450,649.84	3,219,777.48	40° 34' 3.871 N	104° 42' 32.091 W
<b>Hold 13.98° Inc, 129.46° Az</b>									
1,600.0	13.98	129.46	1,593.1	-54.1	65.7	1,450,649.67	3,219,777.69	40° 34' 3.869 N	104° 42' 32.089 W
1,700.0	13.98	129.46	1,690.1	-69.4	84.3	1,450,634.48	3,219,796.48	40° 34' 3.718 N	104° 42' 31.847 W
1,800.0	13.98	129.46	1,787.1	-84.8	103.0	1,450,619.30	3,219,815.26	40° 34' 3.566 N	104° 42' 31.605 W
1,900.0	13.98	129.46	1,884.2	-100.1	121.6	1,450,604.11	3,219,834.04	40° 34' 3.414 N	104° 42' 31.364 W
2,000.0	13.98	129.46	1,981.2	-115.5	140.3	1,450,588.93	3,219,852.83	40° 34' 3.263 N	104° 42' 31.122 W
2,100.0	13.98	129.46	2,078.3	-130.8	158.9	1,450,573.74	3,219,871.61	40° 34' 3.111 N	104° 42' 30.881 W
2,200.0	13.98	129.46	2,175.3	-146.2	177.6	1,450,558.55	3,219,890.40	40° 34' 2.959 N	104° 42' 30.639 W
2,300.0	13.98	129.46	2,272.3	-161.6	196.2	1,450,543.37	3,219,909.18	40° 34' 2.808 N	104° 42' 30.397 W
2,400.0	13.98	129.46	2,369.4	-176.9	214.9	1,450,528.18	3,219,927.96	40° 34' 2.656 N	104° 42' 30.156 W
2,500.0	13.98	129.46	2,466.4	-192.3	233.5	1,450,513.00	3,219,946.75	40° 34' 2.504 N	104° 42' 29.914 W
2,600.0	13.98	129.46	2,563.4	-207.6	252.2	1,450,497.81	3,219,965.53	40° 34' 2.352 N	104° 42' 29.672 W
2,700.0	13.98	129.46	2,660.5	-223.0	270.8	1,450,482.63	3,219,984.31	40° 34' 2.201 N	104° 42' 29.431 W
2,800.0	13.98	129.46	2,757.5	-238.3	289.5	1,450,467.44	3,220,003.10	40° 34' 2.049 N	104° 42' 29.189 W
2,900.0	13.98	129.46	2,854.6	-253.7	308.1	1,450,452.26	3,220,021.88	40° 34' 1.897 N	104° 42' 28.948 W
3,000.0	13.98	129.46	2,951.6	-269.0	326.8	1,450,437.07	3,220,040.67	40° 34' 1.746 N	104° 42' 28.706 W
3,100.0	13.98	129.46	3,048.6	-284.4	345.4	1,450,421.89	3,220,059.45	40° 34' 1.594 N	104° 42' 28.464 W
3,200.0	13.98	129.46	3,145.7	-299.7	364.1	1,450,406.70	3,220,078.23	40° 34' 1.442 N	104° 42' 28.223 W
3,300.0	13.98	129.46	3,242.7	-315.1	382.7	1,450,391.51	3,220,097.02	40° 34' 1.290 N	104° 42' 27.981 W
3,400.0	13.98	129.46	3,339.8	-330.4	401.4	1,450,376.33	3,220,115.80	40° 34' 1.139 N	104° 42' 27.739 W
3,500.0	13.98	129.46	3,436.8	-345.8	420.0	1,450,361.14	3,220,134.58	40° 34' 0.987 N	104° 42' 27.498 W
3,600.0	13.98	129.46	3,533.8	-361.1	438.6	1,450,345.96	3,220,153.37	40° 34' 0.835 N	104° 42' 27.256 W
3,678.5	13.98	129.46	3,610.0	-373.2	453.3	1,450,334.04	3,220,168.11	40° 34' 0.716 N	104° 42' 27.066 W
<b>PARKMAN</b>									
3,700.0	13.98	129.46	3,630.9	-376.5	457.3	1,450,330.77	3,220,172.15	40° 34' 0.684 N	104° 42' 27.014 W
3,800.0	13.98	129.46	3,727.9	-391.8	475.9	1,450,315.59	3,220,190.93	40° 34' 0.532 N	104° 42' 26.773 W
3,900.0	13.98	129.46	3,825.0	-407.2	494.6	1,450,300.40	3,220,209.72	40° 34' 0.380 N	104° 42' 26.531 W
4,000.0	13.98	129.46	3,922.0	-422.5	513.2	1,450,285.22	3,220,228.50	40° 34' 0.228 N	104° 42' 26.290 W
4,100.0	13.98	129.46	4,019.0	-437.9	531.9	1,450,270.03	3,220,247.29	40° 34' 0.077 N	104° 42' 26.048 W
4,200.0	13.98	129.46	4,116.1	-453.2	550.5	1,450,254.85	3,220,266.07	40° 33' 59.925 N	104° 42' 25.806 W
4,300.0	13.98	129.46	4,213.1	-468.6	569.2	1,450,239.66	3,220,284.85	40° 33' 59.773 N	104° 42' 25.565 W
4,400.0	13.98	129.46	4,310.1	-484.0	587.8	1,450,224.47	3,220,303.64	40° 33' 59.622 N	104° 42' 25.323 W

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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 5	<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
4,427.7	13.98	129.46	4,337.0	-488.2	593.0	1,450,220.27	3,220,308.83	40° 33' 59.580 N	104° 42' 25.256 W
<b>SUSSEX</b>									
4,500.0	13.98	129.46	4,407.2	-499.3	606.5	1,450,209.29	3,220,322.42	40° 33' 59.470 N	104° 42' 25.081 W
4,600.0	13.98	129.46	4,504.2	-514.7	625.1	1,450,194.10	3,220,341.20	40° 33' 59.318 N	104° 42' 24.840 W
4,700.0	13.98	129.46	4,601.3	-530.0	643.8	1,450,178.92	3,220,359.99	40° 33' 59.166 N	104° 42' 24.598 W
4,800.0	13.98	129.46	4,698.3	-545.4	662.4	1,450,163.73	3,220,378.77	40° 33' 59.015 N	104° 42' 24.357 W
4,832.7	13.98	129.46	4,730.0	-550.4	668.5	1,450,158.77	3,220,384.91	40° 33' 58.965 N	104° 42' 24.278 W
<b>SHANNON</b>									
4,900.0	13.98	129.46	4,795.3	-560.7	681.1	1,450,148.55	3,220,397.55	40° 33' 58.863 N	104° 42' 24.115 W
5,000.0	13.98	129.46	4,892.4	-576.1	699.7	1,450,133.36	3,220,416.34	40° 33' 58.711 N	104° 42' 23.873 W
5,100.0	13.98	129.46	4,989.4	-591.4	718.4	1,450,118.18	3,220,435.12	40° 33' 58.560 N	104° 42' 23.632 W
5,200.0	13.98	129.46	5,086.5	-606.8	737.0	1,450,102.99	3,220,453.91	40° 33' 58.408 N	104° 42' 23.390 W
5,300.0	13.98	129.46	5,183.5	-622.1	755.7	1,450,087.80	3,220,472.69	40° 33' 58.256 N	104° 42' 23.149 W
5,400.0	13.98	129.46	5,280.5	-637.5	774.3	1,450,072.62	3,220,491.47	40° 33' 58.105 N	104° 42' 22.907 W
5,500.0	13.98	129.46	5,377.6	-652.8	792.9	1,450,057.43	3,220,510.26	40° 33' 57.953 N	104° 42' 22.665 W
5,600.0	13.98	129.46	5,474.6	-668.2	811.6	1,450,042.25	3,220,529.04	40° 33' 57.801 N	104° 42' 22.424 W
5,700.0	13.98	129.46	5,571.7	-683.5	830.2	1,450,027.06	3,220,547.82	40° 33' 57.649 N	104° 42' 22.182 W
5,800.0	13.98	129.46	5,668.7	-698.9	848.9	1,450,011.88	3,220,566.61	40° 33' 57.498 N	104° 42' 21.940 W
5,900.0	13.98	129.46	5,765.7	-714.2	867.5	1,449,996.69	3,220,585.39	40° 33' 57.346 N	104° 42' 21.699 W
5,979.7	13.98	129.46	5,843.0	-726.5	882.4	1,449,984.60	3,220,600.35	40° 33' 57.225 N	104° 42' 21.506 W
<b>Start Drop -2.00</b>									
6,000.0	13.57	129.46	5,862.8	-729.5	886.1	1,449,981.55	3,220,604.12	40° 33' 57.195 N	104° 42' 21.458 W
6,100.0	11.57	129.46	5,960.4	-743.4	902.9	1,449,967.87	3,220,621.04	40° 33' 57.058 N	104° 42' 21.240 W
6,200.0	9.57	129.46	6,058.7	-755.0	917.1	1,449,956.34	3,220,635.31	40° 33' 56.943 N	104° 42' 21.057 W
6,300.0	7.57	129.46	6,157.6	-764.5	928.6	1,449,946.97	3,220,646.90	40° 33' 56.849 N	104° 42' 20.908 W
6,400.0	5.57	129.46	6,256.9	-771.8	937.4	1,449,939.77	3,220,655.80	40° 33' 56.777 N	104° 42' 20.793 W
6,500.0	3.57	129.46	6,356.6	-776.8	943.6	1,449,934.76	3,220,661.99	40° 33' 56.727 N	104° 42' 20.713 W
6,600.0	1.57	129.46	6,456.5	-779.7	947.0	1,449,931.94	3,220,665.48	40° 33' 56.699 N	104° 42' 20.669 W
6,678.5	0.00	0.00	6,535.0	-780.4	947.9	1,449,931.27	3,220,666.32	40° 33' 56.692 N	104° 42' 20.658 W
<b>Vertical</b>									
6,700.0	0.00	0.00	6,556.5	-780.4	947.9	1,449,931.27	3,220,666.32	40° 33' 56.692 N	104° 42' 20.658 W
6,708.5	0.00	0.00	6,565.0	-780.4	947.9	1,449,931.27	3,220,666.32	40° 33' 56.692 N	104° 42' 20.658 W
<b>KOP 10°/100</b>									
6,800.0	9.15	270.80	6,656.1	-780.3	940.6	1,449,931.30	3,220,659.03	40° 33' 56.693 N	104° 42' 20.752 W
6,900.0	19.15	270.80	6,752.9	-779.9	916.2	1,449,931.43	3,220,634.62	40° 33' 56.697 N	104° 42' 21.068 W
7,000.0	29.15	270.80	6,844.1	-779.4	875.3	1,449,931.63	3,220,593.77	40° 33' 56.702 N	104° 42' 21.598 W
7,100.0	39.15	270.80	6,926.7	-778.6	819.3	1,449,931.92	3,220,537.71	40° 33' 56.710 N	104° 42' 22.324 W
7,200.0	49.15	270.80	6,998.4	-777.6	749.7	1,449,932.27	3,220,468.15	40° 33' 56.720 N	104° 42' 23.225 W
7,214.9	50.64	270.80	7,008.0	-777.5	738.3	1,449,932.33	3,220,456.72	40° 33' 56.721 N	104° 42' 23.373 W
<b>NIOBRARA</b>									
7,300.0	59.15	270.80	7,056.9	-776.5	668.8	1,449,932.68	3,220,387.20	40° 33' 56.731 N	104° 42' 24.274 W
7,400.0	69.15	270.80	7,100.4	-775.2	578.9	1,449,933.13	3,220,297.33	40° 33' 56.743 N	104° 42' 25.439 W
7,500.0	79.15	270.80	7,127.7	-773.9	482.9	1,449,933.62	3,220,201.25	40° 33' 56.757 N	104° 42' 26.683 W
7,600.0	89.15	270.80	7,137.9	-772.5	383.5	1,449,934.12	3,220,101.90	40° 33' 56.770 N	104° 42' 27.971 W
7,608.5	90.00	270.80	7,138.0	-772.4	375.0	1,449,934.17	3,220,093.37	40° 33' 56.772 N	104° 42' 28.081 W
<b>Landing Pt 90° Inc, 270.80° Az - 7"</b>									
7,700.0	90.00	270.80	7,138.0	-771.1	283.5	1,449,934.63	3,220,001.91	40° 33' 56.784 N	104° 42' 29.266 W
7,800.0	90.00	270.80	7,138.0	-769.7	183.5	1,449,935.14	3,219,901.91	40° 33' 56.798 N	104° 42' 30.562 W
7,900.0	90.00	270.80	7,138.0	-768.3	83.5	1,449,935.64	3,219,801.91	40° 33' 56.812 N	104° 42' 31.858 W
8,000.0	90.00	270.80	7,138.0	-766.9	-16.4	1,449,936.15	3,219,701.91	40° 33' 56.826 N	104° 42' 33.153 W
8,100.0	90.00	270.80	7,138.0	-765.5	-116.4	1,449,936.65	3,219,601.91	40° 33' 56.840 N	104° 42' 34.449 W
8,200.0	90.00	270.80	7,138.0	-764.1	-216.4	1,449,937.16	3,219,501.91	40° 33' 56.853 N	104° 42' 35.744 W
8,300.0	90.00	270.80	7,137.9	-762.7	-316.4	1,449,937.67	3,219,401.91	40° 33' 56.867 N	104° 42' 37.040 W

# New Tech

## Planning Report - Geographic

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WAAG 5 - Slot WAAG 5
<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 5	<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	270.80	7,137.9	-761.3	-416.4	1,449,938.17	3,219,301.91	40° 33' 56.881 N	104° 42' 38.336 W	
8,500.0	90.00	270.80	7,137.9	-759.9	-516.4	1,449,938.68	3,219,201.92	40° 33' 56.895 N	104° 42' 39.631 W	
8,600.0	90.00	270.80	7,137.9	-758.5	-616.4	1,449,939.19	3,219,101.92	40° 33' 56.909 N	104° 42' 40.927 W	
8,700.0	90.00	270.80	7,137.9	-757.1	-716.4	1,449,939.69	3,219,001.92	40° 33' 56.922 N	104° 42' 42.223 W	
8,800.0	90.00	270.80	7,137.9	-755.7	-816.4	1,449,940.20	3,218,901.92	40° 33' 56.936 N	104° 42' 43.518 W	
8,900.0	90.00	270.80	7,137.9	-754.3	-916.4	1,449,940.70	3,218,801.92	40° 33' 56.950 N	104° 42' 44.814 W	
9,000.0	90.00	270.80	7,137.9	-752.9	-1,016.4	1,449,941.21	3,218,701.92	40° 33' 56.964 N	104° 42' 46.109 W	
9,100.0	90.00	270.80	7,137.9	-751.5	-1,116.3	1,449,941.72	3,218,601.92	40° 33' 56.977 N	104° 42' 47.405 W	
9,200.0	90.00	270.80	7,137.9	-750.1	-1,216.3	1,449,942.22	3,218,501.92	40° 33' 56.991 N	104° 42' 48.701 W	
9,300.0	90.00	270.80	7,137.9	-748.7	-1,316.3	1,449,942.73	3,218,401.93	40° 33' 57.005 N	104° 42' 49.996 W	
9,400.0	90.00	270.80	7,137.9	-747.3	-1,416.3	1,449,943.23	3,218,301.93	40° 33' 57.019 N	104° 42' 51.292 W	
9,500.0	90.00	270.80	7,137.9	-745.9	-1,516.3	1,449,943.74	3,218,201.93	40° 33' 57.032 N	104° 42' 52.588 W	
9,600.0	90.00	270.80	7,137.9	-744.5	-1,616.3	1,449,944.25	3,218,101.93	40° 33' 57.046 N	104° 42' 53.883 W	
9,700.0	90.00	270.80	7,137.9	-743.1	-1,716.3	1,449,944.75	3,218,001.93	40° 33' 57.060 N	104° 42' 55.179 W	
9,800.0	90.00	270.80	7,137.9	-741.7	-1,816.3	1,449,945.26	3,217,901.93	40° 33' 57.074 N	104° 42' 56.475 W	
9,900.0	90.00	270.80	7,137.9	-740.3	-1,916.3	1,449,945.76	3,217,801.93	40° 33' 57.087 N	104° 42' 57.770 W	
10,000.0	90.00	270.80	7,137.9	-738.9	-2,016.3	1,449,946.27	3,217,701.93	40° 33' 57.101 N	104° 42' 59.066 W	
10,100.0	90.00	270.80	7,137.9	-737.5	-2,116.2	1,449,946.78	3,217,601.94	40° 33' 57.115 N	104° 43' 0.361 W	
10,200.0	90.01	270.80	7,137.8	-736.1	-2,216.2	1,449,947.28	3,217,501.94	40° 33' 57.129 N	104° 43' 1.657 W	
10,300.0	90.01	270.80	7,137.8	-734.7	-2,316.2	1,449,947.79	3,217,401.94	40° 33' 57.142 N	104° 43' 2.953 W	
10,400.0	90.01	270.80	7,137.8	-733.4	-2,416.2	1,449,948.30	3,217,301.94	40° 33' 57.156 N	104° 43' 4.248 W	
10,500.0	90.01	270.80	7,137.8	-732.0	-2,516.2	1,449,948.80	3,217,201.94	40° 33' 57.170 N	104° 43' 5.544 W	
10,600.0	90.01	270.80	7,137.8	-730.6	-2,616.2	1,449,949.31	3,217,101.94	40° 33' 57.183 N	104° 43' 6.840 W	
10,700.0	90.01	270.80	7,137.8	-729.2	-2,716.2	1,449,949.81	3,217,001.94	40° 33' 57.197 N	104° 43' 8.135 W	
10,800.0	90.01	270.80	7,137.8	-727.8	-2,816.2	1,449,950.32	3,216,901.94	40° 33' 57.211 N	104° 43' 9.431 W	
10,900.0	90.01	270.80	7,137.8	-726.4	-2,916.2	1,449,950.83	3,216,801.95	40° 33' 57.225 N	104° 43' 10.727 W	
11,000.0	90.01	270.80	7,137.8	-725.0	-3,016.2	1,449,951.33	3,216,701.95	40° 33' 57.238 N	104° 43' 12.022 W	
11,100.0	90.01	270.80	7,137.7	-723.6	-3,116.1	1,449,951.84	3,216,601.95	40° 33' 57.252 N	104° 43' 13.318 W	
11,200.0	90.01	270.80	7,137.7	-722.2	-3,216.1	1,449,952.34	3,216,501.95	40° 33' 57.266 N	104° 43' 14.613 W	
11,300.0	90.01	270.80	7,137.7	-720.8	-3,316.1	1,449,952.85	3,216,401.95	40° 33' 57.279 N	104° 43' 15.909 W	
11,400.0	90.01	270.80	7,137.7	-719.4	-3,416.1	1,449,953.36	3,216,301.95	40° 33' 57.293 N	104° 43' 17.205 W	
11,500.0	90.01	270.80	7,137.7	-718.0	-3,516.1	1,449,953.86	3,216,201.95	40° 33' 57.307 N	104° 43' 18.500 W	
11,600.0	90.01	270.80	7,137.7	-716.6	-3,616.1	1,449,954.37	3,216,101.96	40° 33' 57.320 N	104° 43' 19.796 W	
11,700.0	90.01	270.80	7,137.7	-715.2	-3,716.1	1,449,954.88	3,216,001.96	40° 33' 57.334 N	104° 43' 21.092 W	
11,800.0	90.01	270.80	7,137.7	-713.8	-3,816.1	1,449,955.38	3,215,901.96	40° 33' 57.348 N	104° 43' 22.387 W	
11,900.0	90.01	270.80	7,137.6	-712.4	-3,916.1	1,449,955.89	3,215,801.96	40° 33' 57.361 N	104° 43' 23.683 W	
12,000.0	90.01	270.80	7,137.6	-711.0	-4,016.1	1,449,956.39	3,215,701.96	40° 33' 57.375 N	104° 43' 24.979 W	
12,090.3	90.00	270.79	7,137.6	-709.7	-4,106.3	1,449,956.84	3,215,611.71	40° 33' 57.387 N	104° 43' 26.148 W	
TD at 12090.3 - TD / PBHL WAAG NORTH 5										

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	-710.1	-4,106.3	1,449,956.51	3,215,611.71	40° 33' 57.384 N	104° 43' 26.148 W	
LP WAAG NORTH 5 - plan hits target - Point	0.00	0.51	7,138.0	-772.3	375.1	1,449,934.20	3,220,093.46	40° 33' 56.772 N	104° 42' 28.080 W	

# New Tech

## Planning Report - Geographic

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WAAG 5 - Slot WAAG 5
<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 5	<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	
7,608.5	7,138.0	7"	0	0	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3678.50	3610.00	PARKMAN			
4427.70	4337.00	SUSSEX			
4832.70	4730.00	SHANNON			
7214.90	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	
1,598.9	1,592.0	-53.9	65.5	Hold 13.98° Inc, 129.46° Az	
5,979.7	5,843.0	-726.5	882.4	Start Drop -2.00	
6,678.5	6,535.0	-780.4	947.9	Vertical	
6,708.5	6,565.0	-780.4	947.9	KOP 10°/100	
7,608.5	7,138.0	-772.4	375.0	Landing Pt 90° Inc, 270.80° Az	
12,090.3	7,137.6	-709.7	-4,106.3	TD at 12090.3	