

EXTRACTION OIL & GAS

SEC 19 T7N R65W

WAAG NORTH

WAAG 4 - Slot WAAG 4

Wellbore #1

Plan: Plan #1 01Aug14 jps

Standard Planning Report - Geographic

13 August, 2014

New Tech

Planning Report - Geographic

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well WAAG 4 - Slot WAAG 4
Company:	EXTRACTION OIL & GAS	TVD Reference:	WELL @ 4918.0ft (Xtreme 7 Rig)
Project:	SEC 19 T7N R65W	MD Reference:	WELL @ 4918.0ft (Xtreme 7 Rig)
Site:	WAAG NORTH	North Reference:	True
Well:	WAAG 4	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 01Aug14 jps		

Project	SEC 19 T7N R65W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

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

Well	WAAG 4 - Slot WAAG 4			
Well Position	+N/-S	0.0 ft	Northing:	1,450,717.52 ft
	+E/-W	0.0 ft	Easting:	3,219,686.39 ft
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft
			Ground Level:	4,902.0 ft

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

Design	Plan #1 01Aug14 jps			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	262.18

Plan Sections										
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	
1,528.6	12.57	122.71	1,523.5	-37.1	57.8	2.00	2.00	0.00	122.71	
6,226.1	12.57	122.71	6,108.5	-589.7	918.1	0.00	0.00	0.00	0.00	
6,854.7	0.00	0.00	6,732.0	-626.8	975.8	2.00	-2.00	0.00	180.00	
6,884.7	0.00	0.00	6,762.0	-626.8	975.8	0.00	0.00	0.00	0.00	
7,784.7	90.00	270.75	7,335.0	-619.3	402.9	10.00	10.00	0.00	270.75	
12,269.3	90.00	270.75	7,335.0	-560.7	-4,081.3	0.00	0.00	0.00	0.00	TD / PBHL WAAG NC

New Tech

Planning Report - Geographic

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well WAAG 4 - Slot WAAG 4
Company:	EXTRACTION OIL & GAS	TVD Reference:	WELL @ 4918.0ft (Xtreme 7 Rig)
Project:	SEC 19 T7N R65W	MD Reference:	WELL @ 4918.0ft (Xtreme 7 Rig)
Site:	WAAG NORTH	North Reference:	True
Well:	WAAG 4	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	1,450,717.52	3,219,686.39	40° 34' 4.548 N	104° 42' 33.264 W
100.0	0.00	0.00	100.0	0.0	0.0	1,450,717.52	3,219,686.39	40° 34' 4.548 N	104° 42' 33.264 W
200.0	0.00	0.00	200.0	0.0	0.0	1,450,717.52	3,219,686.39	40° 34' 4.548 N	104° 42' 33.264 W
300.0	0.00	0.00	300.0	0.0	0.0	1,450,717.52	3,219,686.39	40° 34' 4.548 N	104° 42' 33.264 W
400.0	0.00	0.00	400.0	0.0	0.0	1,450,717.52	3,219,686.39	40° 34' 4.548 N	104° 42' 33.264 W
500.0	0.00	0.00	500.0	0.0	0.0	1,450,717.52	3,219,686.39	40° 34' 4.548 N	104° 42' 33.264 W
600.0	0.00	0.00	600.0	0.0	0.0	1,450,717.52	3,219,686.39	40° 34' 4.548 N	104° 42' 33.264 W
700.0	0.00	0.00	700.0	0.0	0.0	1,450,717.52	3,219,686.39	40° 34' 4.548 N	104° 42' 33.264 W
800.0	0.00	0.00	800.0	0.0	0.0	1,450,717.52	3,219,686.39	40° 34' 4.548 N	104° 42' 33.264 W
850.0	0.00	0.00	850.0	0.0	0.0	1,450,717.52	3,219,686.39	40° 34' 4.548 N	104° 42' 33.264 W
9 5/8"									
900.0	0.00	0.00	900.0	0.0	0.0	1,450,717.52	3,219,686.39	40° 34' 4.548 N	104° 42' 33.264 W
Start Build 2.00									
1,000.0	2.00	122.71	1,000.0	-0.9	1.5	1,450,716.59	3,219,687.86	40° 34' 4.539 N	104° 42' 33.245 W
1,100.0	4.00	122.71	1,099.8	-3.8	5.9	1,450,713.80	3,219,692.29	40° 34' 4.511 N	104° 42' 33.188 W
1,200.0	6.00	122.71	1,199.5	-8.5	13.2	1,450,709.15	3,219,699.66	40° 34' 4.464 N	104° 42' 33.093 W
1,300.0	8.00	122.71	1,298.7	-15.1	23.5	1,450,702.66	3,219,709.98	40° 34' 4.399 N	104° 42' 32.960 W
1,400.0	10.00	122.71	1,397.5	-23.5	36.6	1,450,694.32	3,219,723.21	40° 34' 4.316 N	104° 42' 32.789 W
1,500.0	12.00	122.71	1,495.6	-33.8	52.7	1,450,684.15	3,219,739.36	40° 34' 4.214 N	104° 42' 32.581 W
1,528.6	12.57	122.71	1,523.5	-37.1	57.8	1,450,680.91	3,219,744.50	40° 34' 4.181 N	104° 42' 32.515 W
Hold 12.57° Inc, 122.71° Az									
1,600.0	12.57	122.71	1,593.3	-45.5	70.9	1,450,672.63	3,219,757.66	40° 34' 4.098 N	104° 42' 32.346 W
1,700.0	12.57	122.71	1,690.9	-57.3	89.2	1,450,661.03	3,219,776.07	40° 34' 3.982 N	104° 42' 32.108 W
1,800.0	12.57	122.71	1,788.5	-69.0	107.5	1,450,649.43	3,219,794.49	40° 34' 3.866 N	104° 42' 31.871 W
1,900.0	12.57	122.71	1,886.1	-80.8	125.8	1,450,637.83	3,219,812.91	40° 34' 3.749 N	104° 42' 31.634 W
2,000.0	12.57	122.71	1,983.7	-92.6	144.1	1,450,626.23	3,219,831.33	40° 34' 3.633 N	104° 42' 31.396 W
2,100.0	12.57	122.71	2,081.3	-104.3	162.4	1,450,614.63	3,219,849.74	40° 34' 3.517 N	104° 42' 31.159 W
2,200.0	12.57	122.71	2,178.9	-116.1	180.7	1,450,603.03	3,219,868.16	40° 34' 3.401 N	104° 42' 30.922 W
2,300.0	12.57	122.71	2,276.5	-127.9	199.1	1,450,591.43	3,219,886.58	40° 34' 3.284 N	104° 42' 30.685 W
2,400.0	12.57	122.71	2,374.1	-139.6	217.4	1,450,579.83	3,219,905.00	40° 34' 3.168 N	104° 42' 30.447 W
2,500.0	12.57	122.71	2,471.7	-151.4	235.7	1,450,568.23	3,219,923.41	40° 34' 3.052 N	104° 42' 30.210 W
2,600.0	12.57	122.71	2,569.3	-163.2	254.0	1,450,556.63	3,219,941.83	40° 34' 2.936 N	104° 42' 29.973 W
2,700.0	12.57	122.71	2,666.9	-174.9	272.3	1,450,545.03	3,219,960.25	40° 34' 2.819 N	104° 42' 29.735 W
2,800.0	12.57	122.71	2,764.5	-186.7	290.6	1,450,533.43	3,219,978.67	40° 34' 2.703 N	104° 42' 29.498 W
2,900.0	12.57	122.71	2,862.1	-198.4	308.9	1,450,521.83	3,219,997.08	40° 34' 2.587 N	104° 42' 29.261 W
3,000.0	12.57	122.71	2,959.7	-210.2	327.3	1,450,510.23	3,220,015.50	40° 34' 2.471 N	104° 42' 29.023 W
3,100.0	12.57	122.71	3,057.3	-222.0	345.6	1,450,498.63	3,220,033.92	40° 34' 2.354 N	104° 42' 28.786 W
3,200.0	12.57	122.71	3,154.9	-233.7	363.9	1,450,487.03	3,220,052.34	40° 34' 2.238 N	104° 42' 28.549 W
3,300.0	12.57	122.71	3,252.5	-245.5	382.2	1,450,475.43	3,220,070.75	40° 34' 2.122 N	104° 42' 28.312 W
3,400.0	12.57	122.71	3,350.1	-257.3	400.5	1,450,463.84	3,220,089.17	40° 34' 2.006 N	104° 42' 28.074 W
3,500.0	12.57	122.71	3,447.7	-269.0	418.8	1,450,452.24	3,220,107.59	40° 34' 1.890 N	104° 42' 27.837 W
3,600.0	12.57	122.71	3,545.3	-280.8	437.1	1,450,440.64	3,220,126.01	40° 34' 1.773 N	104° 42' 27.600 W
3,666.3	12.57	122.71	3,610.0	-288.6	449.3	1,450,432.95	3,220,138.21	40° 34' 1.696 N	104° 42' 27.442 W
PARKMAN									
3,700.0	12.57	122.71	3,642.9	-292.6	455.4	1,450,429.04	3,220,144.42	40° 34' 1.657 N	104° 42' 27.362 W
3,800.0	12.57	122.71	3,740.5	-304.3	473.8	1,450,417.44	3,220,162.84	40° 34' 1.541 N	104° 42' 27.125 W
3,900.0	12.57	122.71	3,838.1	-316.1	492.1	1,450,405.84	3,220,181.26	40° 34' 1.425 N	104° 42' 26.888 W
4,000.0	12.57	122.71	3,935.7	-327.8	510.4	1,450,394.24	3,220,199.68	40° 34' 1.308 N	104° 42' 26.650 W
4,100.0	12.57	122.71	4,033.3	-339.6	528.7	1,450,382.64	3,220,218.09	40° 34' 1.192 N	104° 42' 26.413 W
4,200.0	12.57	122.71	4,130.9	-351.4	547.0	1,450,371.04	3,220,236.51	40° 34' 1.076 N	104° 42' 26.176 W
4,300.0	12.57	122.71	4,228.5	-363.1	565.3	1,450,359.44	3,220,254.93	40° 34' 0.960 N	104° 42' 25.939 W
4,400.0	12.57	122.71	4,326.1	-374.9	583.6	1,450,347.84	3,220,273.35	40° 34' 0.843 N	104° 42' 25.701 W

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Project:	SEC 19 T7N R65W	MD Reference:	WELL @ 4918.0ft (Xtreme 7 Rig)
Site:	WAAG NORTH	North Reference:	True
Well:	WAAG 4	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
4,411.1	12.57	122.71	4,337.0	-376.2	585.7	1,450,346.55	3,220,275.40	40° 34' 0.830 N	104° 42' 25.675 W
SUSSEX									
4,500.0	12.57	122.71	4,423.7	-386.7	602.0	1,450,336.24	3,220,291.76	40° 34' 0.727 N	104° 42' 25.464 W
4,600.0	12.57	122.71	4,521.3	-398.4	620.3	1,450,324.64	3,220,310.18	40° 34' 0.611 N	104° 42' 25.227 W
4,700.0	12.57	122.71	4,618.9	-410.2	638.6	1,450,313.04	3,220,328.60	40° 34' 0.495 N	104° 42' 24.989 W
4,800.0	12.57	122.71	4,716.5	-421.9	656.9	1,450,301.44	3,220,347.02	40° 34' 0.378 N	104° 42' 24.752 W
4,813.8	12.57	122.71	4,730.0	-423.6	659.4	1,450,299.84	3,220,349.56	40° 34' 0.362 N	104° 42' 24.719 W
SHANNON									
4,900.0	12.57	122.71	4,814.1	-433.7	675.2	1,450,289.84	3,220,365.43	40° 34' 0.262 N	104° 42' 24.515 W
5,000.0	12.57	122.71	4,911.7	-445.5	693.5	1,450,278.24	3,220,383.85	40° 34' 0.146 N	104° 42' 24.278 W
5,100.0	12.57	122.71	5,009.3	-457.2	711.8	1,450,266.64	3,220,402.27	40° 34' 0.030 N	104° 42' 24.040 W
5,200.0	12.57	122.71	5,106.9	-469.0	730.1	1,450,255.04	3,220,420.69	40° 33' 59.913 N	104° 42' 23.803 W
5,300.0	12.57	122.71	5,204.5	-480.8	748.5	1,450,243.44	3,220,439.10	40° 33' 59.797 N	104° 42' 23.566 W
5,400.0	12.57	122.71	5,302.2	-492.5	766.8	1,450,231.84	3,220,457.52	40° 33' 59.681 N	104° 42' 23.328 W
5,500.0	12.57	122.71	5,399.8	-504.3	785.1	1,450,220.24	3,220,475.94	40° 33' 59.565 N	104° 42' 23.091 W
5,600.0	12.57	122.71	5,497.4	-516.1	803.4	1,450,208.64	3,220,494.35	40° 33' 59.448 N	104° 42' 22.854 W
5,700.0	12.57	122.71	5,595.0	-527.8	821.7	1,450,197.05	3,220,512.77	40° 33' 59.332 N	104° 42' 22.616 W
5,800.0	12.57	122.71	5,692.6	-539.6	840.0	1,450,185.45	3,220,531.19	40° 33' 59.216 N	104° 42' 22.379 W
5,900.0	12.57	122.71	5,790.2	-551.3	858.3	1,450,173.85	3,220,549.61	40° 33' 59.100 N	104° 42' 22.142 W
6,000.0	12.57	122.71	5,887.8	-563.1	876.7	1,450,162.25	3,220,568.02	40° 33' 58.983 N	104° 42' 21.905 W
6,100.0	12.57	122.71	5,985.4	-574.9	895.0	1,450,150.65	3,220,586.44	40° 33' 58.867 N	104° 42' 21.667 W
6,200.0	12.57	122.71	6,083.0	-586.6	913.3	1,450,139.05	3,220,604.86	40° 33' 58.751 N	104° 42' 21.430 W
6,226.1	12.57	122.71	6,108.5	-589.7	918.1	1,450,136.02	3,220,609.67	40° 33' 58.721 N	104° 42' 21.368 W
Start Drop -2.00									
6,300.0	11.09	122.71	6,180.8	-597.9	930.8	1,450,127.94	3,220,622.49	40° 33' 58.640 N	104° 42' 21.203 W
6,400.0	9.09	122.71	6,279.2	-607.4	945.6	1,450,118.60	3,220,637.32	40° 33' 58.546 N	104° 42' 21.012 W
6,500.0	7.09	122.71	6,378.2	-615.0	957.4	1,450,111.10	3,220,649.23	40° 33' 58.471 N	104° 42' 20.858 W
6,600.0	5.09	122.71	6,477.6	-620.7	966.3	1,450,105.44	3,220,658.21	40° 33' 58.414 N	104° 42' 20.743 W
6,700.0	3.09	122.71	6,577.4	-624.6	972.3	1,450,101.64	3,220,664.25	40° 33' 58.376 N	104° 42' 20.665 W
6,800.0	1.09	122.71	6,677.3	-626.5	975.4	1,450,099.69	3,220,667.34	40° 33' 58.356 N	104° 42' 20.625 W
6,854.7	0.00	0.00	6,732.0	-626.8	975.8	1,450,099.42	3,220,667.79	40° 33' 58.354 N	104° 42' 20.619 W
Vertical									
6,884.7	0.00	0.00	6,762.0	-626.8	975.8	1,450,099.42	3,220,667.79	40° 33' 58.354 N	104° 42' 20.619 W
KOP 10°/100									
6,900.0	1.53	270.75	6,777.3	-626.8	975.6	1,450,099.42	3,220,667.58	40° 33' 58.354 N	104° 42' 20.622 W
7,000.0	11.53	270.75	6,876.5	-626.7	964.3	1,450,099.46	3,220,656.22	40° 33' 58.355 N	104° 42' 20.769 W
7,100.0	21.53	270.75	6,972.3	-626.3	935.9	1,450,099.58	3,220,627.80	40° 33' 58.359 N	104° 42' 21.137 W
7,139.0	25.43	270.75	7,008.0	-626.1	920.4	1,450,099.65	3,220,612.29	40° 33' 58.361 N	104° 42' 21.338 W
NIORARA									
7,200.0	31.53	270.75	7,061.6	-625.7	891.3	1,450,099.77	3,220,583.19	40° 33' 58.365 N	104° 42' 21.715 W
7,300.0	41.53	270.75	7,141.9	-624.9	831.8	1,450,100.02	3,220,523.74	40° 33' 58.372 N	104° 42' 22.486 W
7,308.2	42.35	270.75	7,148.0	-624.9	826.3	1,450,100.04	3,220,518.25	40° 33' 58.373 N	104° 42' 22.557 W
NIO B TARGET									
7,400.0	51.53	270.75	7,210.6	-624.0	759.3	1,450,100.32	3,220,451.26	40° 33' 58.382 N	104° 42' 23.425 W
7,500.0	61.53	270.75	7,265.7	-622.9	676.0	1,450,100.67	3,220,367.95	40° 33' 58.393 N	104° 42' 24.504 W
7,561.4	67.67	270.75	7,292.0	-622.2	620.6	1,450,100.90	3,220,312.50	40° 33' 58.400 N	104° 42' 25.223 W
FORT HAYS									
7,600.0	71.53	270.75	7,305.4	-621.7	584.4	1,450,101.06	3,220,276.34	40° 33' 58.405 N	104° 42' 25.691 W
7,677.7	79.30	270.75	7,325.0	-620.7	509.3	1,450,101.37	3,220,201.19	40° 33' 58.414 N	104° 42' 26.665 W
CODELL									
7,700.0	81.53	270.75	7,328.7	-620.4	487.3	1,450,101.46	3,220,179.21	40° 33' 58.417 N	104° 42' 26.950 W
7,784.7	90.00	270.75	7,335.0	-619.3	402.9	1,450,101.82	3,220,094.83	40° 33' 58.428 N	104° 42' 28.043 W
Landing Pt 90° Inc, 270.75° Az - 7"									

New Tech

Planning Report - Geographic

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Company:	EXTRACTION OIL & GAS	TVD Reference:	WELL @ 4918.0ft (Xtreme 7 Rig)
Project:	SEC 19 T7N R65W	MD Reference:	WELL @ 4918.0ft (Xtreme 7 Rig)
Site:	WAAG NORTH	North Reference:	True
Well:	WAAG 4	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
7,800.0	90.00	270.75	7,335.0	-619.1	387.6	1,450,101.88	3,220,079.52	40° 33' 58.430 N	104° 42' 28.241 W
7,900.0	90.00	270.75	7,335.0	-617.8	287.6	1,450,102.30	3,219,979.52	40° 33' 58.443 N	104° 42' 29.537 W
8,000.0	90.00	270.75	7,335.0	-616.5	187.6	1,450,102.72	3,219,879.52	40° 33' 58.456 N	104° 42' 30.833 W
8,100.0	90.00	270.75	7,335.0	-615.2	87.7	1,450,103.14	3,219,779.52	40° 33' 58.469 N	104° 42' 32.128 W
8,200.0	90.00	270.75	7,335.0	-613.9	-12.3	1,450,103.56	3,219,679.52	40° 33' 58.482 N	104° 42' 33.424 W
8,300.0	90.00	270.75	7,335.0	-612.6	-112.3	1,450,103.97	3,219,579.52	40° 33' 58.495 N	104° 42' 34.720 W
8,400.0	90.00	270.75	7,335.0	-611.3	-212.3	1,450,104.39	3,219,479.52	40° 33' 58.508 N	104° 42' 36.015 W
8,500.0	90.00	270.75	7,335.0	-609.9	-312.3	1,450,104.81	3,219,379.53	40° 33' 58.521 N	104° 42' 37.311 W
8,600.0	90.00	270.75	7,335.0	-608.6	-412.3	1,450,105.23	3,219,279.53	40° 33' 58.534 N	104° 42' 38.606 W
8,700.0	90.00	270.75	7,335.0	-607.3	-512.3	1,450,105.65	3,219,179.53	40° 33' 58.547 N	104° 42' 39.902 W
8,800.0	90.00	270.75	7,334.9	-606.0	-612.3	1,450,106.07	3,219,079.53	40° 33' 58.559 N	104° 42' 41.198 W
8,900.0	90.00	270.75	7,334.9	-604.7	-712.3	1,450,106.49	3,218,979.53	40° 33' 58.572 N	104° 42' 42.493 W
9,000.0	90.00	270.75	7,334.9	-603.4	-812.3	1,450,106.91	3,218,879.53	40° 33' 58.585 N	104° 42' 43.789 W
9,100.0	90.00	270.75	7,334.9	-602.1	-912.3	1,450,107.33	3,218,779.53	40° 33' 58.598 N	104° 42' 45.085 W
9,200.0	90.00	270.75	7,334.9	-600.8	-1,012.3	1,450,107.74	3,218,679.53	40° 33' 58.611 N	104° 42' 46.380 W
9,300.0	90.00	270.75	7,334.9	-599.5	-1,112.2	1,450,108.16	3,218,579.53	40° 33' 58.624 N	104° 42' 47.676 W
9,400.0	90.00	270.75	7,334.9	-598.1	-1,212.2	1,450,108.58	3,218,479.53	40° 33' 58.637 N	104° 42' 48.972 W
9,500.0	90.00	270.75	7,334.9	-596.8	-1,312.2	1,450,109.00	3,218,379.53	40° 33' 58.650 N	104° 42' 50.267 W
9,600.0	90.00	270.75	7,334.9	-595.5	-1,412.2	1,450,109.42	3,218,279.54	40° 33' 58.663 N	104° 42' 51.563 W
9,700.0	90.00	270.75	7,334.9	-594.2	-1,512.2	1,450,109.84	3,218,179.54	40° 33' 58.676 N	104° 42' 52.859 W
9,800.0	90.00	270.75	7,334.9	-592.9	-1,612.2	1,450,110.26	3,218,079.54	40° 33' 58.689 N	104° 42' 54.154 W
9,900.0	90.00	270.75	7,334.9	-591.6	-1,712.2	1,450,110.68	3,217,979.54	40° 33' 58.701 N	104° 42' 55.450 W
10,000.0	90.00	270.75	7,334.9	-590.3	-1,812.2	1,450,111.10	3,217,879.54	40° 33' 58.714 N	104° 42' 56.746 W
10,100.0	90.00	270.75	7,334.9	-589.0	-1,912.2	1,450,111.51	3,217,779.54	40° 33' 58.727 N	104° 42' 58.041 W
10,200.0	90.00	270.75	7,334.9	-587.7	-2,012.2	1,450,111.93	3,217,679.54	40° 33' 58.740 N	104° 42' 59.337 W
10,300.0	90.00	270.75	7,334.9	-586.4	-2,112.2	1,450,112.35	3,217,579.54	40° 33' 58.753 N	104° 43' 0.633 W
10,400.0	90.00	270.75	7,334.9	-585.0	-2,212.1	1,450,112.77	3,217,479.54	40° 33' 58.766 N	104° 43' 1.928 W
10,500.0	90.00	270.75	7,334.9	-583.7	-2,312.1	1,450,113.19	3,217,379.54	40° 33' 58.779 N	104° 43' 3.224 W
10,600.0	90.00	270.75	7,334.9	-582.4	-2,412.1	1,450,113.61	3,217,279.54	40° 33' 58.792 N	104° 43' 4.520 W
10,700.0	90.00	270.75	7,334.9	-581.1	-2,512.1	1,450,114.03	3,217,179.54	40° 33' 58.804 N	104° 43' 5.815 W
10,800.0	90.00	270.75	7,334.9	-579.8	-2,612.1	1,450,114.45	3,217,079.55	40° 33' 58.817 N	104° 43' 7.111 W
10,900.0	90.00	270.75	7,334.9	-578.5	-2,712.1	1,450,114.86	3,216,979.55	40° 33' 58.830 N	104° 43' 8.407 W
11,000.0	90.00	270.75	7,334.9	-577.2	-2,812.1	1,450,115.28	3,216,879.55	40° 33' 58.843 N	104° 43' 9.702 W
11,100.0	90.00	270.75	7,334.9	-575.9	-2,912.1	1,450,115.70	3,216,779.55	40° 33' 58.856 N	104° 43' 10.998 W
11,200.0	90.00	270.75	7,334.9	-574.6	-3,012.1	1,450,116.12	3,216,679.55	40° 33' 58.869 N	104° 43' 12.294 W
11,300.0	90.00	270.75	7,334.9	-573.2	-3,112.1	1,450,116.54	3,216,579.55	40° 33' 58.881 N	104° 43' 13.589 W
11,400.0	90.00	270.75	7,334.9	-571.9	-3,212.1	1,450,116.96	3,216,479.55	40° 33' 58.894 N	104° 43' 14.885 W
11,500.0	90.00	270.75	7,334.8	-570.6	-3,312.1	1,450,117.38	3,216,379.55	40° 33' 58.907 N	104° 43' 16.181 W
11,600.0	90.00	270.75	7,334.8	-569.3	-3,412.0	1,450,117.80	3,216,279.55	40° 33' 58.920 N	104° 43' 17.476 W
11,700.0	90.00	270.75	7,334.8	-568.0	-3,512.0	1,450,118.22	3,216,179.55	40° 33' 58.933 N	104° 43' 18.772 W
11,800.0	90.00	270.75	7,334.8	-566.7	-3,612.0	1,450,118.63	3,216,079.55	40° 33' 58.945 N	104° 43' 20.068 W
11,900.0	90.00	270.75	7,334.8	-565.4	-3,712.0	1,450,119.05	3,215,979.56	40° 33' 58.958 N	104° 43' 21.363 W
12,000.0	90.00	270.75	7,334.8	-564.1	-3,812.0	1,450,119.47	3,215,879.56	40° 33' 58.971 N	104° 43' 22.659 W
12,100.0	90.00	270.75	7,334.8	-562.8	-3,912.0	1,450,119.89	3,215,779.56	40° 33' 58.984 N	104° 43' 23.955 W
12,200.0	90.00	270.75	7,334.8	-561.5	-4,012.0	1,450,120.31	3,215,679.56	40° 33' 58.997 N	104° 43' 25.250 W
12,269.3	90.00	270.75	7,334.8	-560.5	-4,081.3	1,450,120.60	3,215,610.27	40° 33' 59.006 N	104° 43' 26.148 W
TD at 12269.3 - TD / PBHL WAAG NORTH 4									

New Tech
Planning Report - Geographic

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well WAAG 4 - Slot WAAG 4
Company:	EXTRACTION OIL & GAS	TVD Reference:	WELL @ 4918.0ft (Xtreme 7 Rig)
Project:	SEC 19 T7N R65W	MD Reference:	WELL @ 4918.0ft (Xtreme 7 Rig)
Site:	WAAG NORTH	North Reference:	True
Well:	WAAG 4	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 01Aug14 jps		

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
LP WAAG NORTH 4 - plan hits target - Point	0.00	0.51	7,335.0	-619.3	402.8	1,450,101.81	3,220,094.74	40° 33' 58.428 N	104° 42' 28.044 W
TD / PBHL WAAG NOR' - plan hits target - Point	0.00	0.50	7,335.0	-560.7	-4,081.3	1,450,120.44	3,215,610.27	40° 33' 59.004 N	104° 43' 26.148 W

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
850.0	850.0	9 5/8"	0	0
7,784.7	7,335.0	7"	0	0

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3666.30	3610.00	PARKMAN			
4411.10	4337.00	SUSSEX			
4813.80	4730.00	SHANNON			
7139.00	7008.00	NIOBRARA			
7308.20	7148.00	NIO B TARGET			
7561.40	7292.00	FORT HAYS			
7677.70	7325.00	CODELL			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
900.0	900.0	0.0	0.0	Start Build 2.00
1,528.6	1,523.5	-37.1	57.8	Hold 12.57° Inc, 122.71° Az
6,226.1	6,108.5	-589.7	918.1	Start Drop -2.00
6,854.7	6,732.0	-626.8	975.8	Vertical
6,884.7	6,762.0	-626.8	975.8	KOP 10°/100
7,784.7	7,335.0	-619.3	402.9	Landing Pt 90° Inc, 270.75° Az
12,269.3	7,334.8	-560.5	-4,081.3	TD at 12269.3