

EXTRACTION OIL & GAS

WELD COUNTY

Sec 32-T6N-R65W

WAKE EAST 33E-20-9

ORIGINAL WELLBORE

Plan: PROPOSAL #1

Standard Planning Report

30 July, 2018

WELL DETAILS: WAKE EAST 33E-20-9

+N/-S	+E/-W	Northing	Ground Level: Easting	4650.00 Latitude	Longitude	Slot
0.00	0.00	1405360.88	3226676.48	40° 26' 35.736 N	104° 41' 8.088 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	
3	2065.42	23.31	78.22	2033.54	47.75	228.87	2.00	78.22	230.08	
4	6885.08	23.31	78.22	6459.85	437.21	2095.72	0.00	0.00	2106.74	
5	7557.89	90.00	90.78	6810.00	462.82	2624.63	10.00	13.64	2636.14	WAI
6	8857.89	90.00	90.78	6810.00	445.08	3924.51	0.00	0.00	3935.07	
7	8996.98	90.00	88.00	6810.00	446.56	4063.58	2.00	-90.00	4074.13	
8	9056.59	90.00	89.79	6810.00	447.71	4123.17	3.00	90.00	4133.73	
9	12856.59	90.00	89.79	6810.00	461.74	7923.15	0.00	0.00	7932.71	
10	13067.18	90.00	94.00	6810.00	454.78	8133.57	2.00	90.00	8142.86	
11	13167.18	90.00	94.00	6810.00	447.81	8233.32	0.00	0.00	8242.40	
12	13286.39	90.00	91.62	6810.00	441.97	8352.38	2.00	-90.00	8361.25	WAI
13	17223.79	90.00	91.62	6810.00	330.95	12288.22	0.00	0.00	12292.68	WAI

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3600.00	3771.08	PARKMAN
4140.00	4359.07	SUSSEX
4680.00	4947.06	SHANNON
6800.00	7450.45	NIOBRARA

PROJECT DETAILS: WELD COUNTY

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level

SHL:
2416' FSL, 2171' FEL
Sec 32-T6N-R65W

LP:
2160' FNL, 460' FWL
Sec 33-T6N-R65W

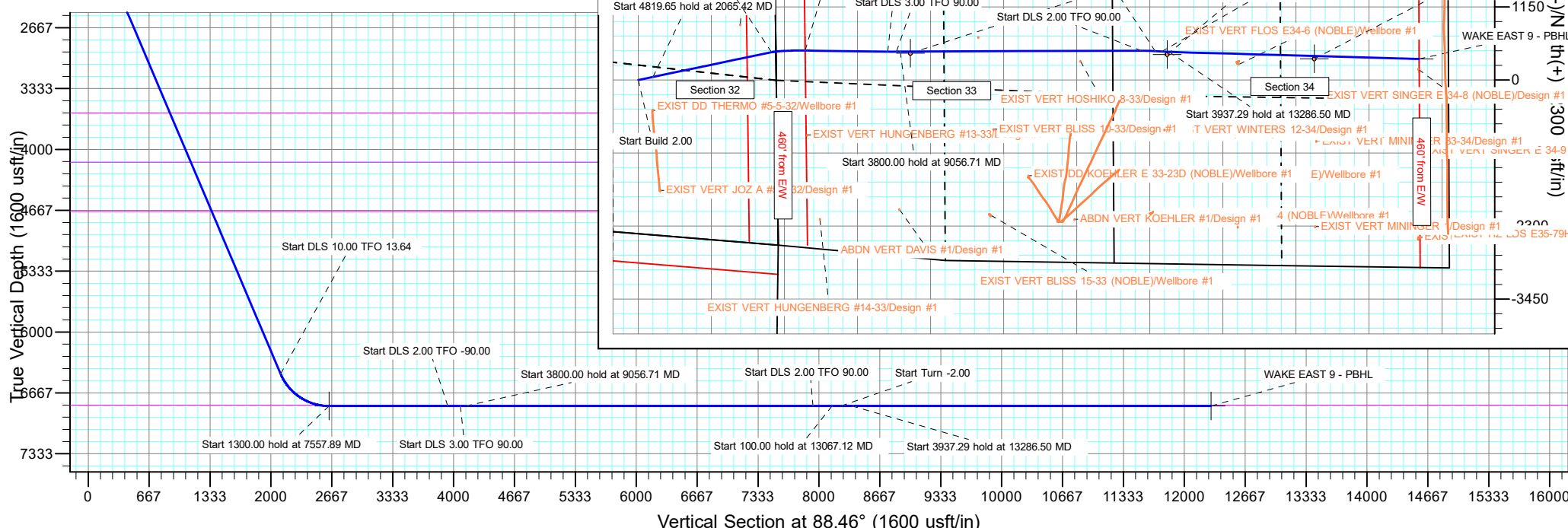
BHL:
2008' FNL, 460' FEL
Sec 34-T6N-R65W

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	Start Build 2.00
2065.42	23.31	78.22	2033.54	47.75	228.87	230.08	233.80	Start 4819.65 hold at 2065.42 MD
6885.08	23.31	78.22	6459.85	437.21	2095.72	2106.74	2140.84	Start DLS 10.00 TFO 13.64
7557.89	90.00	90.78	6810.00	462.82	2624.63	2636.14	2671.05	Start 1300.00 hold at 7557.89 MD
8857.89	90.00	90.78	6810.00	445.08	3924.51	3935.07	3971.05	Start DLS 2.00 TFO -90.00
8996.98	90.00	88.00	6810.00	446.56	4063.58	4074.13	4110.14	Start DLS 3.00 TFO 90.00
9056.71	90.00	89.79	6810.00	447.71	4123.29	4133.85	4169.87	Start 3800.00 hold at 9056.71 MD
12856.71	90.00	89.79	6810.00	461.74	7923.26	7932.82	7969.87	Start DLS 2.00 TFO 90.00
13067.12	90.00	94.00	6810.00	454.78	8133.51	8142.81	8180.28	Start 100.00 hold at 13067.12 MD
13167.12	90.00	94.00	6810.00	447.81	8233.27	8242.34	8280.28	Start Turn -2.00
13286.50	90.00	91.62	6810.00	441.96	8352.49	8361.36	8399.65	Start 3937.29 hold at 13286.50 MD
17223.78	90.00	91.62	6810.00	330.95	12288.21	12292.67	12336.94	TD at 17223.78

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
WAKE EAST 9 - LP	6810.00	462.82	2624.63	1405847.78	3229296.74	40° 26' 40.308 N	104° 40' 34.140 W	Point
- plan hits target center								
WAKE EAST 9 - PBHL	6810.00	330.95	12288.22	1405804.67	3238961.14	40° 26' 38.976 N	104° 38' 29.148 W	Point
- plan hits target center								



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WAKE EAST 33E-20-9
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4675.00usft
Project:	WELD COUNTY	MD Reference:	KB 25' @ 4675.00usft
Site:	Sec 32-T6N-R65W	North Reference:	True
Well:	WAKE EAST 33E-20-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Project	WELD COUNTY		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Sec 32-T6N-R65W			
Site Position:		Northing:	1,405,488.40 usft	Latitude:	40° 26' 36.996 N
From:	Lat/Long	Easting:	3,226,675.31 usft	Longitude:	104° 41' 8.088 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.53 °

Well	WAKE EAST 33E-20-9					
Well Position	+N/-S	-127.52 usft	Northing:	1,405,360.88 usft	Latitude:	40° 26' 35.736 N
	+E/-W	0.00 usft	Easting:	3,226,676.48 usft	Longitude:	104° 41' 8.088 W
Position Uncertainty	0.00 usft		Wellhead Elevation:		Ground Level:	4,650.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/4/2017	8.20	66.91	52,457.24182957

Design	PROPOSAL #1				
Audit Notes:					
Version:		Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	88.46	

Plan Survey Tool Program	Date	7/30/2018			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	17,222.84	PROPOSAL #1 (ORIGINAL WEL	MWD OWSG	
			OWSG MWD - Standard		

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WAKE EAST 33E-20-9
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4675.00usft
Project:	WELD COUNTY	MD Reference:	KB 25' @ 4675.00usft
Site:	Sec 32-T6N-R65W	North Reference:	True
Well:	WAKE EAST 33E-20-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,065.42	23.31	78.22	2,033.54	47.75	228.87	2.00	2.00	0.00	78.22	
6,885.08	23.31	78.22	6,459.86	437.21	2,095.72	0.00	0.00	0.00	0.00	
7,557.89	90.00	90.78	6,810.00	462.82	2,624.63	10.00	9.91	1.87	13.64	WAKE EAST 9 - LP
8,857.89	90.00	90.78	6,810.00	445.08	3,924.51	0.00	0.00	0.00	0.00	
8,996.98	90.00	88.00	6,810.00	446.56	4,063.58	2.00	0.00	-2.00	-90.00	
9,056.71	90.00	89.79	6,810.00	447.71	4,123.29	3.00	0.00	3.00	90.00	
12,856.71	90.00	89.79	6,810.00	461.51	7,923.27	0.00	0.00	0.00	0.00	
13,067.12	90.00	94.00	6,810.00	454.55	8,133.51	2.00	0.00	2.00	90.00	
13,167.12	90.00	94.00	6,810.00	447.58	8,233.27	0.00	0.00	0.00	0.00	
13,286.50	90.00	91.61	6,810.00	441.74	8,352.49	2.00	0.00	-2.00	-90.00	WAKE EAST 9 - PBH
17,223.78	90.00	91.61	6,810.00	330.95	12,288.22	0.00	0.00	0.00	0.00	WAKE EAST 9 - PBH

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WAKE EAST 33E-20-9
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4675.00usft
Project:	WELD COUNTY	MD Reference:	KB 25' @ 4675.00usft
Site:	Sec 32-T6N-R65W	North Reference:	True
Well:	WAKE EAST 33E-20-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,000.00	2.00	78.22	999.98	0.36	1.71	1.72	2.00	2.00	0.00
1,100.00	4.00	78.22	1,099.84	1.43	6.83	6.87	2.00	2.00	0.00
1,200.00	6.00	78.22	1,199.45	3.21	15.36	15.44	2.00	2.00	0.00
1,300.00	8.00	78.22	1,298.70	5.69	27.29	27.44	2.00	2.00	0.00
1,400.00	10.00	78.22	1,397.47	8.89	42.61	42.83	2.00	2.00	0.00
1,500.00	12.00	78.22	1,495.62	12.78	61.28	61.61	2.00	2.00	0.00
1,600.00	14.00	78.22	1,593.06	17.38	83.30	83.74	2.00	2.00	0.00
1,700.00	16.00	78.22	1,689.64	22.66	108.64	109.21	2.00	2.00	0.00
1,800.00	18.00	78.22	1,785.27	28.63	137.26	137.98	2.00	2.00	0.00
1,900.00	20.00	78.22	1,879.82	35.28	169.13	170.02	2.00	2.00	0.00
2,000.00	22.00	78.22	1,973.17	42.60	204.21	205.28	2.00	2.00	0.00
2,065.42	23.31	78.22	2,033.54	47.75	228.87	230.08	2.00	2.00	0.00
Start 4819.65 hold at 2065.42 MD									
2,100.00	23.31	78.22	2,065.30	50.54	242.27	243.54	0.00	0.00	0.00
2,200.00	23.31	78.22	2,157.14	58.62	281.00	282.48	0.00	0.00	0.00
2,300.00	23.31	78.22	2,248.98	66.70	319.74	321.41	0.00	0.00	0.00
2,400.00	23.31	78.22	2,340.81	74.78	358.47	360.35	0.00	0.00	0.00
2,500.00	23.31	78.22	2,432.65	82.86	397.20	399.29	0.00	0.00	0.00
2,600.00	23.31	78.22	2,524.49	90.95	435.94	438.23	0.00	0.00	0.00
2,700.00	23.31	78.22	2,616.33	99.03	474.67	477.17	0.00	0.00	0.00
2,800.00	23.31	78.22	2,708.17	107.11	513.41	516.10	0.00	0.00	0.00
2,900.00	23.31	78.22	2,800.01	115.19	552.14	555.04	0.00	0.00	0.00
3,000.00	23.31	78.22	2,891.85	123.27	590.87	593.98	0.00	0.00	0.00
3,100.00	23.31	78.22	2,983.69	131.35	629.61	632.92	0.00	0.00	0.00
3,200.00	23.31	78.22	3,075.53	139.43	668.34	671.85	0.00	0.00	0.00
3,300.00	23.31	78.22	3,167.36	147.51	707.08	710.79	0.00	0.00	0.00
3,400.00	23.31	78.22	3,259.20	155.59	745.81	749.73	0.00	0.00	0.00
3,500.00	23.31	78.22	3,351.04	163.67	784.54	788.67	0.00	0.00	0.00
3,600.00	23.31	78.22	3,442.88	171.75	823.28	827.60	0.00	0.00	0.00
3,700.00	23.31	78.22	3,534.72	179.83	862.01	866.54	0.00	0.00	0.00
3,771.08	23.31	78.22	3,600.00	185.58	889.55	894.22	0.00	0.00	0.00
PARKMAN									
3,800.00	23.31	78.22	3,626.56	187.91	900.75	905.48	0.00	0.00	0.00
3,900.00	23.31	78.22	3,718.40	196.00	939.48	944.42	0.00	0.00	0.00
4,000.00	23.31	78.22	3,810.24	204.08	978.22	983.36	0.00	0.00	0.00
4,100.00	23.31	78.22	3,902.07	212.16	1,016.95	1,022.29	0.00	0.00	0.00
4,200.00	23.31	78.22	3,993.91	220.24	1,055.68	1,061.23	0.00	0.00	0.00
4,300.00	23.31	78.22	4,085.75	228.32	1,094.42	1,100.17	0.00	0.00	0.00
4,359.07	23.31	78.22	4,140.00	233.09	1,117.30	1,123.17	0.00	0.00	0.00
SUSSEX									
4,400.00	23.31	78.22	4,177.59	236.40	1,133.15	1,139.11	0.00	0.00	0.00
4,500.00	23.31	78.22	4,269.43	244.48	1,171.89	1,178.04	0.00	0.00	0.00
4,600.00	23.31	78.22	4,361.27	252.56	1,210.62	1,216.98	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WAKE EAST 33E-20-9
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4675.00usft
Project:	WELD COUNTY	MD Reference:	KB 25' @ 4675.00usft
Site:	Sec 32-T6N-R65W	North Reference:	True
Well:	WAKE EAST 33E-20-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,700.00	23.31	78.22	4,453.11	260.64	1,249.35	1,255.92	0.00	0.00	0.00
4,800.00	23.31	78.22	4,544.95	268.72	1,288.09	1,294.86	0.00	0.00	0.00
4,900.00	23.31	78.22	4,636.78	276.80	1,326.82	1,333.79	0.00	0.00	0.00
4,947.06	23.31	78.22	4,680.00	280.60	1,345.05	1,352.12	0.00	0.00	0.00
SHANNON									
5,000.00	23.31	78.22	4,728.62	284.88	1,365.56	1,372.73	0.00	0.00	0.00
5,100.00	23.31	78.22	4,820.46	292.96	1,404.29	1,411.67	0.00	0.00	0.00
5,200.00	23.31	78.22	4,912.30	301.04	1,443.03	1,450.61	0.00	0.00	0.00
5,300.00	23.31	78.22	5,004.14	309.13	1,481.76	1,489.54	0.00	0.00	0.00
5,400.00	23.31	78.22	5,095.98	317.21	1,520.49	1,528.48	0.00	0.00	0.00
5,500.00	23.31	78.22	5,187.82	325.29	1,559.23	1,567.42	0.00	0.00	0.00
5,600.00	23.31	78.22	5,279.66	333.37	1,597.96	1,606.36	0.00	0.00	0.00
5,700.00	23.31	78.22	5,371.50	341.45	1,636.70	1,645.30	0.00	0.00	0.00
5,800.00	23.31	78.22	5,463.33	349.53	1,675.43	1,684.23	0.00	0.00	0.00
5,900.00	23.31	78.22	5,555.17	357.61	1,714.16	1,723.17	0.00	0.00	0.00
6,000.00	23.31	78.22	5,647.01	365.69	1,752.90	1,762.11	0.00	0.00	0.00
6,100.00	23.31	78.22	5,738.85	373.77	1,791.63	1,801.05	0.00	0.00	0.00
6,200.00	23.31	78.22	5,830.69	381.85	1,830.37	1,839.98	0.00	0.00	0.00
6,300.00	23.31	78.22	5,922.53	389.93	1,869.10	1,878.92	0.00	0.00	0.00
6,400.00	23.31	78.22	6,014.37	398.01	1,907.83	1,917.86	0.00	0.00	0.00
6,500.00	23.31	78.22	6,106.21	406.09	1,946.57	1,956.80	0.00	0.00	0.00
6,600.00	23.31	78.22	6,198.04	414.17	1,985.30	1,995.73	0.00	0.00	0.00
6,700.00	23.31	78.22	6,289.88	422.26	2,024.04	2,034.67	0.00	0.00	0.00
6,800.00	23.31	78.22	6,381.72	430.34	2,062.77	2,073.61	0.00	0.00	0.00
6,885.08	23.31	78.22	6,459.86	437.21	2,095.72	2,106.74	0.00	0.00	0.00
Start DLS 10.00 TFO 13.64									
6,900.00	24.76	79.06	6,473.49	438.41	2,101.68	2,112.73	10.00	9.73	5.63
6,950.00	29.66	81.31	6,517.94	442.27	2,124.21	2,135.34	10.00	9.79	4.50
7,000.00	34.58	82.97	6,560.28	445.88	2,150.53	2,161.76	10.00	9.84	3.32
7,050.00	39.52	84.26	6,600.17	449.21	2,180.46	2,191.76	10.00	9.88	2.58
7,100.00	44.47	85.30	6,637.32	452.24	2,213.76	2,225.13	10.00	9.90	2.09
7,150.00	49.43	86.18	6,671.45	454.94	2,250.19	2,261.62	10.00	9.92	1.75
7,200.00	54.39	86.93	6,702.28	457.29	2,289.45	2,300.93	10.00	9.93	1.51
7,250.00	59.36	87.60	6,729.60	459.28	2,331.27	2,342.79	10.00	9.94	1.33
7,300.00	64.33	88.20	6,753.18	460.89	2,375.31	2,386.85	10.00	9.94	1.20
7,350.00	69.31	88.75	6,772.86	462.11	2,421.24	2,432.80	10.00	9.95	1.11
7,400.00	74.28	89.27	6,788.48	462.93	2,468.71	2,480.28	10.00	9.95	1.04
7,450.00	79.26	89.76	6,799.92	463.34	2,517.37	2,528.93	10.00	9.95	0.99
7,450.45	79.30	89.77	6,800.00	463.34	2,517.81	2,529.38	10.00	9.95	0.97
NIOBRARA									
7,500.00	84.24	90.24	6,807.09	463.33	2,566.84	2,578.38	10.00	9.96	0.95
7,550.00	89.21	90.71	6,809.95	462.92	2,616.74	2,628.25	10.00	9.96	0.94
7,557.89	90.00	90.78	6,810.00	462.82	2,624.63	2,636.14	10.00	9.96	0.93
Start 1300.00 hold at 7557.89 MD									
7,600.00	90.00	90.78	6,810.00	462.24	2,666.73	2,678.21	0.00	0.00	0.00
7,700.00	90.00	90.78	6,810.00	460.88	2,766.72	2,778.13	0.00	0.00	0.00
7,800.00	90.00	90.78	6,810.00	459.51	2,866.71	2,878.05	0.00	0.00	0.00
7,900.00	90.00	90.78	6,810.00	458.15	2,966.70	2,977.96	0.00	0.00	0.00
8,000.00	90.00	90.78	6,810.00	456.78	3,066.70	3,077.88	0.00	0.00	0.00
8,100.00	90.00	90.78	6,810.00	455.42	3,166.69	3,177.80	0.00	0.00	0.00
8,200.00	90.00	90.78	6,810.00	454.06	3,266.68	3,277.72	0.00	0.00	0.00
8,300.00	90.00	90.78	6,810.00	452.69	3,366.67	3,377.63	0.00	0.00	0.00
8,400.00	90.00	90.78	6,810.00	451.33	3,466.66	3,477.55	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WAKE EAST 33E-20-9
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4675.00usft
Project:	WELD COUNTY	MD Reference:	KB 25' @ 4675.00usft
Site:	Sec 32-T6N-R65W	North Reference:	True
Well:	WAKE EAST 33E-20-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,500.00	90.00	90.78	6,810.00	449.96	3,566.65	3,577.47	0.00	0.00	0.00	
8,600.00	90.00	90.78	6,810.00	448.60	3,666.64	3,677.39	0.00	0.00	0.00	
8,700.00	90.00	90.78	6,810.00	447.23	3,766.63	3,777.31	0.00	0.00	0.00	
8,800.00	90.00	90.78	6,810.00	445.87	3,866.62	3,877.22	0.00	0.00	0.00	
8,857.89	90.00	90.78	6,810.00	445.08	3,924.51	3,935.07	0.00	0.00	0.00	
Start DLS 2.00 TFO -90.00										
8,900.00	90.00	89.94	6,810.00	444.81	3,966.61	3,977.15	2.00	0.00	-2.00	
8,996.98	90.00	88.00	6,810.00	446.56	4,063.58	4,074.13	2.00	0.00	-2.00	
Start DLS 3.00 TFO 90.00										
9,000.00	90.00	88.09	6,810.00	446.66	4,066.59	4,077.14	3.00	0.00	3.00	
9,056.71	90.00	89.79	6,810.00	447.71	4,123.29	4,133.85	3.00	0.00	3.00	
Start 3800.00 hold at 9056.71 MD										
9,100.00	90.00	89.79	6,810.00	447.87	4,166.58	4,177.13	0.00	0.00	0.00	
9,200.00	90.00	89.79	6,810.00	448.23	4,266.58	4,277.10	0.00	0.00	0.00	
9,300.00	90.00	89.79	6,810.00	448.59	4,366.58	4,377.07	0.00	0.00	0.00	
9,400.00	90.00	89.79	6,810.00	448.96	4,466.58	4,477.05	0.00	0.00	0.00	
9,500.00	90.00	89.79	6,810.00	449.32	4,566.58	4,577.02	0.00	0.00	0.00	
9,600.00	90.00	89.79	6,810.00	449.68	4,666.58	4,676.99	0.00	0.00	0.00	
9,700.00	90.00	89.79	6,810.00	450.05	4,766.58	4,776.96	0.00	0.00	0.00	
9,800.00	90.00	89.79	6,810.00	450.41	4,866.58	4,876.94	0.00	0.00	0.00	
9,900.00	90.00	89.79	6,810.00	450.77	4,966.57	4,976.91	0.00	0.00	0.00	
10,000.00	90.00	89.79	6,810.00	451.14	5,066.57	5,076.88	0.00	0.00	0.00	
10,100.00	90.00	89.79	6,810.00	451.50	5,166.57	5,176.86	0.00	0.00	0.00	
10,200.00	90.00	89.79	6,810.00	451.86	5,266.57	5,276.83	0.00	0.00	0.00	
10,300.00	90.00	89.79	6,810.00	452.23	5,366.57	5,376.80	0.00	0.00	0.00	
10,400.00	90.00	89.79	6,810.00	452.59	5,466.57	5,476.77	0.00	0.00	0.00	
10,500.00	90.00	89.79	6,810.00	452.95	5,566.57	5,576.75	0.00	0.00	0.00	
10,600.00	90.00	89.79	6,810.00	453.32	5,666.57	5,676.72	0.00	0.00	0.00	
10,700.00	90.00	89.79	6,810.00	453.68	5,766.57	5,776.69	0.00	0.00	0.00	
10,800.00	90.00	89.79	6,810.00	454.04	5,866.57	5,876.67	0.00	0.00	0.00	
10,900.00	90.00	89.79	6,810.00	454.41	5,966.57	5,976.64	0.00	0.00	0.00	
11,000.00	90.00	89.79	6,810.00	454.77	6,066.57	6,076.61	0.00	0.00	0.00	
11,100.00	90.00	89.79	6,810.00	455.13	6,166.57	6,176.58	0.00	0.00	0.00	
11,200.00	90.00	89.79	6,810.00	455.50	6,266.57	6,276.56	0.00	0.00	0.00	
11,300.00	90.00	89.79	6,810.00	455.86	6,366.57	6,376.53	0.00	0.00	0.00	
11,400.00	90.00	89.79	6,810.00	456.22	6,466.56	6,476.50	0.00	0.00	0.00	
11,500.00	90.00	89.79	6,810.00	456.59	6,566.56	6,576.48	0.00	0.00	0.00	
11,600.00	90.00	89.79	6,810.00	456.95	6,666.56	6,676.45	0.00	0.00	0.00	
11,700.00	90.00	89.79	6,810.00	457.31	6,766.56	6,776.42	0.00	0.00	0.00	
11,800.00	90.00	89.79	6,810.00	457.68	6,866.56	6,876.39	0.00	0.00	0.00	
11,900.00	90.00	89.79	6,810.00	458.04	6,966.56	6,976.37	0.00	0.00	0.00	
12,000.00	90.00	89.79	6,810.00	458.40	7,066.56	7,076.34	0.00	0.00	0.00	
12,100.00	90.00	89.79	6,810.00	458.77	7,166.56	7,176.31	0.00	0.00	0.00	
12,200.00	90.00	89.79	6,810.00	459.13	7,266.56	7,276.29	0.00	0.00	0.00	
12,300.00	90.00	89.79	6,810.00	459.49	7,366.56	7,376.26	0.00	0.00	0.00	
12,400.00	90.00	89.79	6,810.00	459.86	7,466.56	7,476.23	0.00	0.00	0.00	
12,500.00	90.00	89.79	6,810.00	460.22	7,566.56	7,576.20	0.00	0.00	0.00	
12,600.00	90.00	89.79	6,810.00	460.58	7,666.56	7,676.18	0.00	0.00	0.00	
12,700.00	90.00	89.79	6,810.00	460.95	7,766.56	7,776.15	0.00	0.00	0.00	
12,800.00	90.00	89.79	6,810.00	461.31	7,866.56	7,876.12	0.00	0.00	0.00	
12,856.71	90.00	89.79	6,810.00	461.51	7,923.27	7,932.82	0.00	0.00	0.00	
Start DLS 2.00 TFO 90.00										
12,900.00	90.00	90.66	6,810.00	461.34	7,966.55	7,976.09	2.00	0.00	2.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WAKE EAST 33E-20-9
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4675.00usft
Project:	WELD COUNTY	MD Reference:	KB 25' @ 4675.00usft
Site:	Sec 32-T6N-R65W	North Reference:	True
Well:	WAKE EAST 33E-20-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,000.00	90.00	92.66	6,810.00	458.45	8,066.51	8,075.93	2.00	0.00	2.00
13,067.12	90.00	94.00	6,810.00	454.55	8,133.51	8,142.80	2.00	0.00	2.00
Start 100.00 hold at 13067.12 MD									
13,100.00	90.00	94.00	6,810.00	452.26	8,166.31	8,175.53	0.00	0.00	0.00
13,167.12	90.00	94.00	6,810.00	447.58	8,233.27	8,242.33	0.00	0.00	0.00
Start Turn -2.00									
13,200.00	90.00	93.34	6,810.00	445.47	8,266.08	8,275.08	2.00	0.00	-2.00
13,286.50	90.00	91.61	6,810.00	441.74	8,352.49	8,361.36	2.00	0.00	-2.00
Start 3937.29 hold at 13286.50 MD									
13,300.00	90.00	91.61	6,810.00	441.36	8,365.99	8,374.84	0.00	0.00	0.00
13,400.00	90.00	91.61	6,810.00	438.54	8,465.95	8,474.69	0.00	0.00	0.00
13,500.00	90.00	91.61	6,810.00	435.73	8,565.91	8,574.54	0.00	0.00	0.00
13,600.00	90.00	91.61	6,810.00	432.91	8,665.87	8,674.39	0.00	0.00	0.00
13,700.00	90.00	91.61	6,810.00	430.10	8,765.83	8,774.24	0.00	0.00	0.00
13,800.00	90.00	91.61	6,810.00	427.29	8,865.79	8,874.08	0.00	0.00	0.00
13,900.00	90.00	91.61	6,810.00	424.47	8,965.75	8,973.93	0.00	0.00	0.00
14,000.00	90.00	91.61	6,810.00	421.66	9,065.71	9,073.78	0.00	0.00	0.00
14,100.00	90.00	91.61	6,810.00	418.84	9,165.68	9,173.63	0.00	0.00	0.00
14,200.00	90.00	91.61	6,810.00	416.03	9,265.64	9,273.48	0.00	0.00	0.00
14,300.00	90.00	91.61	6,810.00	413.22	9,365.60	9,373.33	0.00	0.00	0.00
14,400.00	90.00	91.61	6,810.00	410.40	9,465.56	9,473.17	0.00	0.00	0.00
14,500.00	90.00	91.61	6,810.00	407.59	9,565.52	9,573.02	0.00	0.00	0.00
14,600.00	90.00	91.61	6,810.00	404.78	9,665.48	9,672.87	0.00	0.00	0.00
14,700.00	90.00	91.61	6,810.00	401.96	9,765.44	9,772.72	0.00	0.00	0.00
14,800.00	90.00	91.61	6,810.00	399.15	9,865.40	9,872.57	0.00	0.00	0.00
14,900.00	90.00	91.61	6,810.00	396.33	9,965.36	9,972.42	0.00	0.00	0.00
15,000.00	90.00	91.61	6,810.00	393.52	10,065.32	10,072.26	0.00	0.00	0.00
15,100.00	90.00	91.61	6,810.00	390.71	10,165.28	10,172.11	0.00	0.00	0.00
15,200.00	90.00	91.61	6,810.00	387.89	10,265.24	10,271.96	0.00	0.00	0.00
15,300.00	90.00	91.61	6,810.00	385.08	10,365.20	10,371.81	0.00	0.00	0.00
15,400.00	90.00	91.61	6,810.00	382.26	10,465.16	10,471.66	0.00	0.00	0.00
15,500.00	90.00	91.61	6,810.00	379.45	10,565.12	10,571.51	0.00	0.00	0.00
15,600.00	90.00	91.61	6,810.00	376.64	10,665.08	10,671.36	0.00	0.00	0.00
15,700.00	90.00	91.61	6,810.00	373.82	10,765.04	10,771.20	0.00	0.00	0.00
15,800.00	90.00	91.61	6,810.00	371.01	10,865.00	10,871.05	0.00	0.00	0.00
15,900.00	90.00	91.61	6,810.00	368.20	10,964.96	10,970.90	0.00	0.00	0.00
16,000.00	90.00	91.61	6,810.00	365.38	11,064.92	11,070.75	0.00	0.00	0.00
16,100.00	90.00	91.61	6,810.00	362.57	11,164.88	11,170.60	0.00	0.00	0.00
16,200.00	90.00	91.61	6,810.00	359.75	11,264.84	11,270.45	0.00	0.00	0.00
16,300.00	90.00	91.61	6,810.00	356.94	11,364.80	11,370.29	0.00	0.00	0.00
16,400.00	90.00	91.61	6,810.00	354.13	11,464.76	11,470.14	0.00	0.00	0.00
16,500.00	90.00	91.61	6,810.00	351.31	11,564.72	11,569.99	0.00	0.00	0.00
16,600.00	90.00	91.61	6,810.00	348.50	11,664.69	11,669.84	0.00	0.00	0.00
16,700.00	90.00	91.61	6,810.00	345.68	11,764.65	11,769.69	0.00	0.00	0.00
16,800.00	90.00	91.61	6,810.00	342.87	11,864.61	11,869.54	0.00	0.00	0.00
16,900.00	90.00	91.61	6,810.00	340.06	11,964.57	11,969.38	0.00	0.00	0.00
17,000.00	90.00	91.61	6,810.00	337.24	12,064.53	12,069.23	0.00	0.00	0.00
17,100.00	90.00	91.61	6,810.00	334.43	12,164.49	12,169.08	0.00	0.00	0.00
17,200.00	90.00	91.61	6,810.00	331.62	12,264.45	12,268.93	0.00	0.00	0.00
17,223.78	90.00	91.61	6,810.00	330.95	12,288.22	12,292.68	0.00	0.00	0.00
TD at 17223.78									

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WAKE EAST 33E-20-9
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 4675.00usft
Project:	WELD COUNTY	MD Reference:	KB 25' @ 4675.00usft
Site:	Sec 32-T6N-R65W	North Reference:	True
Well:	WAKE EAST 33E-20-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
WAKE EAST 9 - PBHL - plan hits target center - Point	0.00	0.00	6,810.00	330.95	12,288.22	1,405,804.67	3,238,961.14	40° 26' 38.976 N	104° 38' 29.148 W
WAKE EAST 9 - LP - plan hits target center - Point	0.00	0.00	6,810.00	462.82	2,624.63	1,405,847.78	3,229,296.75	40° 26' 40.308 N	104° 40' 34.140 W

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
3,771.08	3,600.00	PARKMAN			
4,359.07	4,140.00	SUSSEX			
4,947.06	4,680.00	SHANNON			
7,450.45	6,800.00	NIOBRARA			

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
900.00	900.00	0.00	0.00	Start Build 2.00
2,065.42	2,033.54	47.75	228.87	Start 4819.65 hold at 2065.42 MD
6,885.08	6,459.86	437.21	2,095.72	Start DLS 10.00 TFO 13.64
7,557.89	6,810.00	462.82	2,624.63	Start 1300.00 hold at 7557.89 MD
8,857.89	6,810.00	445.08	3,924.51	Start DLS 2.00 TFO -90.00
8,996.98	6,810.00	446.56	4,063.58	Start DLS 3.00 TFO 90.00
9,056.71	6,810.00	447.71	4,123.29	Start 3800.00 hold at 9056.71 MD
12,856.71	6,810.00	461.51	7,923.27	Start DLS 2.00 TFO 90.00
13,067.12	6,810.00	454.55	8,133.51	Start 100.00 hold at 13067.12 MD
13,167.12	6,810.00	447.58	8,233.27	Start Turn -2.00
13,286.50	6,810.00	441.74	8,352.49	Start 3937.29 hold at 13286.50 MD
17,223.78	6,810.00	330.95	12,288.22	TD at 17223.78