

# **EXTRACTION OIL & GAS**

**Weld County  
Sec 32-T6N-R65W  
WAKE EAST 10**

**ORIGINAL WELLBORE**

**Plan: PROPOSAL #1**

## **Standard Planning Report**

**15 November, 2017**



Project: Weld County  
Site: Sec 32-T6N-R65W  
Well: WAKE EAST 10  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1



Azimuths to True North  
Magnetic North: 8.20°

Magnetic Field  
Strength: 52457.2nT  
Dip Angle: 66.91°  
Date: 3/4/2017  
Model: IGRF2015

#### WELL DETAILS: WAKE EAST 10

+N/-S	+E/-W	Northing	Ground Level: Easting	4650.00 Latitude	Longitude	Slot
0.00	0.00	1405346.31	3226676.61	40° 26' 35.592 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	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	
3	2180.83	23.62	80.38	2147.68	40.10	236.56	2.00	80.38	236.70	
4	6890.89	23.62	80.38	6463.26	355.47	2096.94	0.00	0.00	2098.17	
5	7559.79	90.00	91.93	6810.00	368.10	2624.64	10.00	12.57	2625.92	WAI
6	17228.98	90.00	91.93	6810.00	43.14	12288.37	0.00	0.00	12288.45	WAI

#### ANNOTATIONS

+N/-S	+E/-W	VSect	Departure	Annotation
0.00	0.00	0.00	0.00	BUILD 2°/100'
40.10	236.56	40.10	239.94	HOLD 23.62° INC
355.47	2096.94	355.47	2126.86	KOP, BUILD 10°/100'
368.10	2624.64	368.10	2655.29	LP @ 90° INC, 91.93° AZM HOLD
43.14	12288.37	43.14	12324.48	TD at 17228.99' MD

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
WAKE EAST 10N - LP	6810.00	368.10	2624.64	1405738.50	3229297.76	40° 26' 39.228 N	104° 40' 34.140 W	Point
- plan hits target center								
WAKE EAST 10N - PBHL	6810.00	43.14	12288.37	1405502.31	3238964.07	40° 26' 35.988 N	104° 38' 29.148 W	Point
- plan hits target center								

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3600.00	3765.91	PARKMAN
4140.00	4355.27	SUSSEX
4680.00	4944.63	SHANNON
6800.00	7452.38	NIOBRARA

#### PROJECT DETAILS: Weld County

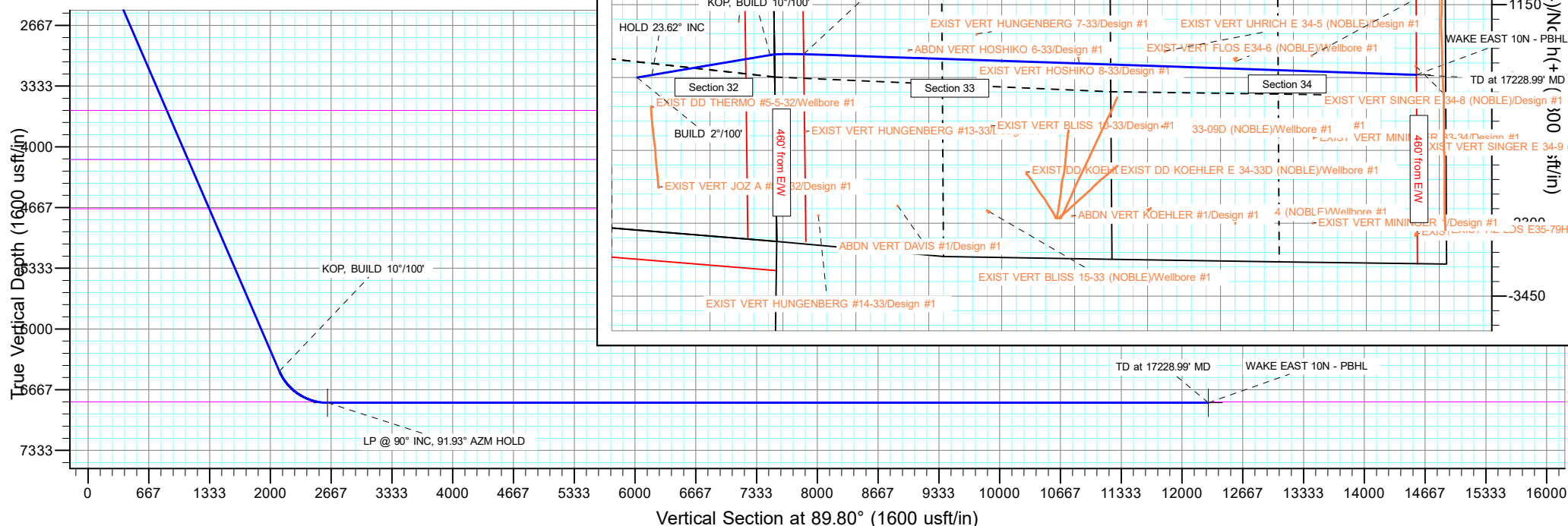
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone

System Datum: Mean Sea Level

SHL:  
2400' FSL, 2171' FEL  
Sec 32-T6N-R65W

LP:  
2268' FNL, 460' FWL  
Sec 33-T6N-R65W

BHL:  
2311' FNL, 460' FEL  
Sec 34-T6N-R65W



## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well WAKE EAST 10
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4675.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4675.00usft
<b>Site:</b>	Sec 32-T6N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	WAKE EAST 10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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 10					
Well Position	+N/-S	-142.09 usft	Northing:	1,405,346.31 usft	Latitude:	40° 26' 35.592 N
	+E/-W	0.00 usft	Easting:	3,226,676.61 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	52,457.22108680

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	89.80

Plan Survey Tool Program			Date	11/15/2017	
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	17,228.98	PROPOSAL #1 (ORIGINAL WEL	MWD OWSG	
			OWSG MWD - Standard		

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	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,180.83	23.62	80.38	2,147.68	40.10	236.56	2.00	2.00	0.00	80.38	
6,890.89	23.62	80.38	6,463.26	355.47	2,096.94	0.00	0.00	0.00	0.00	
7,559.79	90.00	91.93	6,810.00	368.10	2,624.64	10.00	9.92	1.73	12.57	WAKE EAST 10N - LI
17,228.98	90.00	91.93	6,810.00	43.14	12,288.37	0.00	0.00	0.00	0.00	WAKE EAST 10N - PI

# Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well WAKE EAST 10
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4675.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4675.00usft
<b>Site:</b>	Sec 32-T6N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	WAKE EAST 10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>BUILD 2°/100'</b>									
1,100.00	2.00	80.38	1,099.98	0.29	1.72	1.72	2.00	2.00	0.00
1,200.00	4.00	80.38	1,199.84	1.17	6.88	6.88	2.00	2.00	0.00
1,300.00	6.00	80.38	1,299.45	2.62	15.47	15.48	2.00	2.00	0.00
1,400.00	8.00	80.38	1,398.70	4.66	27.49	27.50	2.00	2.00	0.00
1,500.00	10.00	80.38	1,497.47	7.27	42.91	42.94	2.00	2.00	0.00
1,600.00	12.00	80.38	1,595.62	10.46	61.72	61.76	2.00	2.00	0.00
1,700.00	14.00	80.38	1,693.06	14.22	83.90	83.95	2.00	2.00	0.00
1,800.00	16.00	80.38	1,789.64	18.55	109.42	109.48	2.00	2.00	0.00
1,900.00	18.00	80.38	1,885.27	23.43	138.24	138.32	2.00	2.00	0.00
2,000.00	20.00	80.38	1,979.82	28.88	170.34	170.44	2.00	2.00	0.00
2,100.00	22.00	80.38	2,073.17	34.87	205.67	205.79	2.00	2.00	0.00
2,180.83	23.62	80.38	2,147.68	40.10	236.56	236.70	2.00	2.00	0.00
<b>HOLD 23.62° INC</b>									
2,200.00	23.62	80.38	2,165.24	41.39	244.13	244.28	0.00	0.00	0.00
2,300.00	23.62	80.38	2,256.87	48.08	283.63	283.80	0.00	0.00	0.00
2,400.00	23.62	80.38	2,348.49	54.78	323.13	323.32	0.00	0.00	0.00
2,500.00	23.62	80.38	2,440.11	61.47	362.63	362.84	0.00	0.00	0.00
2,600.00	23.62	80.38	2,531.74	68.17	402.12	402.36	0.00	0.00	0.00
2,700.00	23.62	80.38	2,623.36	74.86	441.62	441.88	0.00	0.00	0.00
2,800.00	23.62	80.38	2,714.99	81.56	481.12	481.40	0.00	0.00	0.00
2,900.00	23.62	80.38	2,806.61	88.26	520.62	520.92	0.00	0.00	0.00
3,000.00	23.62	80.38	2,898.24	94.95	560.12	560.45	0.00	0.00	0.00
3,100.00	23.62	80.38	2,989.86	101.65	599.61	599.97	0.00	0.00	0.00
3,200.00	23.62	80.38	3,081.49	108.34	639.11	639.49	0.00	0.00	0.00
3,300.00	23.62	80.38	3,173.11	115.04	678.61	679.01	0.00	0.00	0.00
3,400.00	23.62	80.38	3,264.74	121.73	718.11	718.53	0.00	0.00	0.00
3,500.00	23.62	80.38	3,356.36	128.43	757.61	758.05	0.00	0.00	0.00
3,600.00	23.62	80.38	3,447.99	135.13	797.10	797.57	0.00	0.00	0.00
3,700.00	23.62	80.38	3,539.61	141.82	836.60	837.09	0.00	0.00	0.00
3,765.91	23.62	80.38	3,600.00	146.23	862.63	863.14	0.00	0.00	0.00
<b>PARKMAN</b>									
3,800.00	23.62	80.38	3,631.24	148.52	876.10	876.62	0.00	0.00	0.00
3,900.00	23.62	80.38	3,722.86	155.21	915.60	916.14	0.00	0.00	0.00
4,000.00	23.62	80.38	3,814.48	161.91	955.10	955.66	0.00	0.00	0.00
4,100.00	23.62	80.38	3,906.11	168.60	994.59	995.18	0.00	0.00	0.00
4,200.00	23.62	80.38	3,997.73	175.30	1,034.09	1,034.70	0.00	0.00	0.00
4,300.00	23.62	80.38	4,089.36	182.00	1,073.59	1,074.22	0.00	0.00	0.00
4,355.27	23.62	80.38	4,140.00	185.70	1,095.42	1,096.07	0.00	0.00	0.00
<b>SUSSEX</b>									
4,400.00	23.62	80.38	4,180.98	188.69	1,113.09	1,113.74	0.00	0.00	0.00
4,500.00	23.62	80.38	4,272.61	195.39	1,152.59	1,153.26	0.00	0.00	0.00

# Planning Report

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<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4675.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4675.00usft
<b>Site:</b>	Sec 32-T6N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	WAKE EAST 10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)
4,600.00	23.62	80.38	4,364.23	202.08	1,192.08	1,192.79	0.00	0.00	0.00
4,700.00	23.62	80.38	4,455.86	208.78	1,231.58	1,232.31	0.00	0.00	0.00
4,800.00	23.62	80.38	4,547.48	215.47	1,271.08	1,271.83	0.00	0.00	0.00
4,900.00	23.62	80.38	4,639.11	222.17	1,310.58	1,311.35	0.00	0.00	0.00
4,944.63	23.62	80.38	4,680.00	225.16	1,328.21	1,328.99	0.00	0.00	0.00
<b>SHANNON</b>									
5,000.00	23.62	80.38	4,730.73	228.87	1,350.07	1,350.87	0.00	0.00	0.00
5,100.00	23.62	80.38	4,822.36	235.56	1,389.57	1,390.39	0.00	0.00	0.00
5,200.00	23.62	80.38	4,913.98	242.26	1,429.07	1,429.91	0.00	0.00	0.00
5,300.00	23.62	80.38	5,005.61	248.95	1,468.57	1,469.43	0.00	0.00	0.00
5,400.00	23.62	80.38	5,097.23	255.65	1,508.07	1,508.95	0.00	0.00	0.00
5,500.00	23.62	80.38	5,188.85	262.34	1,547.56	1,548.48	0.00	0.00	0.00
5,600.00	23.62	80.38	5,280.48	269.04	1,587.06	1,588.00	0.00	0.00	0.00
5,700.00	23.62	80.38	5,372.10	275.74	1,626.56	1,627.52	0.00	0.00	0.00
5,800.00	23.62	80.38	5,463.73	282.43	1,666.06	1,667.04	0.00	0.00	0.00
5,900.00	23.62	80.38	5,555.35	289.13	1,705.56	1,706.56	0.00	0.00	0.00
6,000.00	23.62	80.38	5,646.98	295.82	1,745.05	1,746.08	0.00	0.00	0.00
6,100.00	23.62	80.38	5,738.60	302.52	1,784.55	1,785.60	0.00	0.00	0.00
6,200.00	23.62	80.38	5,830.23	309.21	1,824.05	1,825.12	0.00	0.00	0.00
6,300.00	23.62	80.38	5,921.85	315.91	1,863.55	1,864.65	0.00	0.00	0.00
6,400.00	23.62	80.38	6,013.48	322.61	1,903.05	1,904.17	0.00	0.00	0.00
6,500.00	23.62	80.38	6,105.10	329.30	1,942.54	1,943.69	0.00	0.00	0.00
6,600.00	23.62	80.38	6,196.73	336.00	1,982.04	1,983.21	0.00	0.00	0.00
6,700.00	23.62	80.38	6,288.35	342.69	2,021.54	2,022.73	0.00	0.00	0.00
6,800.00	23.62	80.38	6,379.98	349.39	2,061.04	2,062.25	0.00	0.00	0.00
6,890.89	23.62	80.38	6,463.26	355.47	2,096.94	2,098.17	0.00	0.00	0.00
<b>KOP, BUILD 10°/100'</b>									
6,900.00	24.51	80.86	6,471.57	356.08	2,100.60	2,101.84	10.00	9.77	5.25
6,950.00	29.41	82.99	6,516.13	359.23	2,123.04	2,124.29	10.00	9.81	4.28
7,000.00	34.34	84.57	6,558.57	362.06	2,149.28	2,150.54	10.00	9.86	3.14
7,050.00	39.29	85.79	6,598.59	364.56	2,179.13	2,180.40	10.00	9.89	2.44
7,100.00	44.25	86.77	6,635.87	366.71	2,212.35	2,213.63	10.00	9.91	1.97
7,150.00	49.21	87.59	6,670.13	368.49	2,248.70	2,249.98	10.00	9.93	1.65
7,200.00	54.18	88.30	6,701.11	369.88	2,287.90	2,289.19	10.00	9.94	1.42
7,250.00	59.15	88.93	6,728.58	370.88	2,329.65	2,330.94	10.00	9.95	1.25
7,300.00	64.13	89.49	6,752.33	371.48	2,373.63	2,374.92	10.00	9.95	1.13
7,350.00	69.10	90.01	6,772.16	371.68	2,419.51	2,420.80	10.00	9.95	1.04
7,400.00	74.08	90.50	6,787.95	371.47	2,466.94	2,468.23	10.00	9.96	0.97
7,450.00	79.06	90.96	6,799.55	370.85	2,515.55	2,516.84	10.00	9.96	0.92
7,452.38	79.30	90.98	6,800.00	370.81	2,517.89	2,519.18	10.00	9.96	0.90
<b>NIOBRARA</b>									
7,500.00	84.04	91.40	6,806.90	369.83	2,564.98	2,566.27	10.00	9.96	0.89
7,550.00	89.02	91.84	6,809.92	368.42	2,614.86	2,616.13	10.00	9.96	0.88
7,559.79	90.00	91.93	6,810.00	368.10	2,624.64	2,625.92	10.00	9.96	0.87
<b>LP @ 90° INC, 91.93° AZM HOLD</b>									
7,600.00	90.00	91.93	6,810.00	366.74	2,664.83	2,666.10	0.00	0.00	0.00
7,700.00	90.00	91.93	6,810.00	363.38	2,764.77	2,766.03	0.00	0.00	0.00
7,800.00	90.00	91.93	6,810.00	360.02	2,864.71	2,865.96	0.00	0.00	0.00
7,900.00	90.00	91.93	6,810.00	356.66	2,964.66	2,965.89	0.00	0.00	0.00
8,000.00	90.00	91.93	6,810.00	353.30	3,064.60	3,065.82	0.00	0.00	0.00
8,100.00	90.00	91.93	6,810.00	349.94	3,164.54	3,165.75	0.00	0.00	0.00
8,200.00	90.00	91.93	6,810.00	346.58	3,264.49	3,265.68	0.00	0.00	0.00
8,300.00	90.00	91.93	6,810.00	343.22	3,364.43	3,365.62	0.00	0.00	0.00

# Planning Report

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<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4675.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4675.00usft
<b>Site:</b>	Sec 32-T6N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	WAKE EAST 10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)	
8,400.00	90.00	91.93	6,810.00	339.86	3,464.38	3,465.55	0.00	0.00	0.00	
8,500.00	90.00	91.93	6,810.00	336.50	3,564.32	3,565.48	0.00	0.00	0.00	
8,600.00	90.00	91.93	6,810.00	333.14	3,664.26	3,665.41	0.00	0.00	0.00	
8,700.00	90.00	91.93	6,810.00	329.78	3,764.21	3,765.34	0.00	0.00	0.00	
8,800.00	90.00	91.93	6,810.00	326.42	3,864.15	3,865.27	0.00	0.00	0.00	
8,900.00	90.00	91.93	6,810.00	323.06	3,964.09	3,965.20	0.00	0.00	0.00	
9,000.00	90.00	91.93	6,810.00	319.69	4,064.04	4,065.13	0.00	0.00	0.00	
9,100.00	90.00	91.93	6,810.00	316.33	4,163.98	4,165.06	0.00	0.00	0.00	
9,200.00	90.00	91.93	6,810.00	312.97	4,263.92	4,265.00	0.00	0.00	0.00	
9,300.00	90.00	91.93	6,810.00	309.61	4,363.87	4,364.93	0.00	0.00	0.00	
9,400.00	90.00	91.93	6,810.00	306.25	4,463.81	4,464.86	0.00	0.00	0.00	
9,500.00	90.00	91.93	6,810.00	302.89	4,563.75	4,564.79	0.00	0.00	0.00	
9,600.00	90.00	91.93	6,810.00	299.53	4,663.70	4,664.72	0.00	0.00	0.00	
9,700.00	90.00	91.93	6,810.00	296.17	4,763.64	4,764.65	0.00	0.00	0.00	
9,800.00	90.00	91.93	6,810.00	292.81	4,863.58	4,864.58	0.00	0.00	0.00	
9,900.00	90.00	91.93	6,810.00	289.45	4,963.53	4,964.51	0.00	0.00	0.00	
10,000.00	90.00	91.93	6,810.00	286.09	5,063.47	5,064.44	0.00	0.00	0.00	
10,100.00	90.00	91.93	6,810.00	282.73	5,163.41	5,164.38	0.00	0.00	0.00	
10,200.00	90.00	91.93	6,810.00	279.37	5,263.36	5,264.31	0.00	0.00	0.00	
10,300.00	90.00	91.93	6,810.00	276.01	5,363.30	5,364.24	0.00	0.00	0.00	
10,400.00	90.00	91.93	6,810.00	272.64	5,463.25	5,464.17	0.00	0.00	0.00	
10,500.00	90.00	91.93	6,810.00	269.28	5,563.19	5,564.10	0.00	0.00	0.00	
10,600.00	90.00	91.93	6,810.00	265.92	5,663.13	5,664.03	0.00	0.00	0.00	
10,700.00	90.00	91.93	6,810.00	262.56	5,763.08	5,763.96	0.00	0.00	0.00	
10,800.00	90.00	91.93	6,810.00	259.20	5,863.02	5,863.89	0.00	0.00	0.00	
10,900.00	90.00	91.93	6,810.00	255.84	5,962.96	5,963.82	0.00	0.00	0.00	
11,000.00	90.00	91.93	6,810.00	252.48	6,062.91	6,063.76	0.00	0.00	0.00	
11,100.00	90.00	91.93	6,810.00	249.12	6,162.85	6,163.69	0.00	0.00	0.00	
11,200.00	90.00	91.93	6,810.00	245.76	6,262.79	6,263.62	0.00	0.00	0.00	
11,300.00	90.00	91.93	6,810.00	242.40	6,362.74	6,363.55	0.00	0.00	0.00	
11,400.00	90.00	91.93	6,810.00	239.04	6,462.68	6,463.48	0.00	0.00	0.00	
11,500.00	90.00	91.93	6,810.00	235.68	6,562.62	6,563.41	0.00	0.00	0.00	
11,600.00	90.00	91.93	6,810.00	232.32	6,662.57	6,663.34	0.00	0.00	0.00	
11,700.00	90.00	91.93	6,810.00	228.96	6,762.51	6,763.27	0.00	0.00	0.00	
11,800.00	90.00	91.93	6,810.00	225.60	6,862.45	6,863.20	0.00	0.00	0.00	
11,900.00	90.00	91.93	6,810.00	222.23	6,962.40	6,963.14	0.00	0.00	0.00	
12,000.00	90.00	91.93	6,810.00	218.87	7,062.34	7,063.07	0.00	0.00	0.00	
12,100.00	90.00	91.93	6,810.00	215.51	7,162.29	7,163.00	0.00	0.00	0.00	
12,200.00	90.00	91.93	6,810.00	212.15	7,262.23	7,262.93	0.00	0.00	0.00	
12,300.00	90.00	91.93	6,810.00	208.79	7,362.17	7,362.86	0.00	0.00	0.00	
12,400.00	90.00	91.93	6,810.00	205.43	7,462.12	7,462.79	0.00	0.00	0.00	
12,500.00	90.00	91.93	6,810.00	202.07	7,562.06	7,562.72	0.00	0.00	0.00	
12,600.00	90.00	91.93	6,810.00	198.71	7,662.00	7,662.65	0.00	0.00	0.00	
12,700.00	90.00	91.93	6,810.00	195.35	7,761.95	7,762.58	0.00	0.00	0.00	
12,800.00	90.00	91.93	6,810.00	191.99	7,861.89	7,862.52	0.00	0.00	0.00	
12,900.00	90.00	91.93	6,810.00	188.63	7,961.83	7,962.45	0.00	0.00	0.00	
13,000.00	90.00	91.93	6,810.00	185.27	8,061.78	8,062.38	0.00	0.00	0.00	
13,100.00	90.00	91.93	6,810.00	181.91	8,161.72	8,162.31	0.00	0.00	0.00	
13,200.00	90.00	91.93	6,810.00	178.55	8,261.66	8,262.24	0.00	0.00	0.00	
13,300.00	90.00	91.93	6,810.00	175.19	8,361.61	8,362.17	0.00	0.00	0.00	
13,400.00	90.00	91.93	6,810.00	171.82	8,461.55	8,462.10	0.00	0.00	0.00	
13,500.00	90.00	91.93	6,810.00	168.46	8,561.49	8,562.03	0.00	0.00	0.00	
13,600.00	90.00	91.93	6,810.00	165.10	8,661.44	8,661.96	0.00	0.00	0.00	
13,700.00	90.00	91.93	6,810.00	161.74	8,761.38	8,761.90	0.00	0.00	0.00	

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well WAKE EAST 10
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4675.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4675.00usft
<b>Site:</b>	Sec 32-T6N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	WAKE EAST 10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	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)	
13,800.00	90.00	91.93	6,810.00	158.38	8,861.33	8,861.83	0.00	0.00	0.00	
13,900.00	90.00	91.93	6,810.00	155.02	8,961.27	8,961.76	0.00	0.00	0.00	
14,000.00	90.00	91.93	6,810.00	151.66	9,061.21	9,061.69	0.00	0.00	0.00	
14,100.00	90.00	91.93	6,810.00	148.30	9,161.16	9,161.62	0.00	0.00	0.00	
14,200.00	90.00	91.93	6,810.00	144.94	9,261.10	9,261.55	0.00	0.00	0.00	
14,300.00	90.00	91.93	6,810.00	141.58	9,361.04	9,361.48	0.00	0.00	0.00	
14,400.00	90.00	91.93	6,810.00	138.22	9,460.99	9,461.41	0.00	0.00	0.00	
14,500.00	90.00	91.93	6,810.00	134.86	9,560.93	9,561.34	0.00	0.00	0.00	
14,600.00	90.00	91.93	6,810.00	131.50	9,660.87	9,661.28	0.00	0.00	0.00	
14,700.00	90.00	91.93	6,810.00	128.14	9,760.82	9,761.21	0.00	0.00	0.00	
14,800.00	90.00	91.93	6,810.00	124.77	9,860.76	9,861.14	0.00	0.00	0.00	
14,900.00	90.00	91.93	6,810.00	121.41	9,960.70	9,961.07	0.00	0.00	0.00	
15,000.00	90.00	91.93	6,810.00	118.05	10,060.65	10,061.00	0.00	0.00	0.00	
15,100.00	90.00	91.93	6,810.00	114.69	10,160.59	10,160.93	0.00	0.00	0.00	
15,200.00	90.00	91.93	6,810.00	111.33	10,260.53	10,260.86	0.00	0.00	0.00	
15,300.00	90.00	91.93	6,810.00	107.97	10,360.48	10,360.79	0.00	0.00	0.00	
15,400.00	90.00	91.93	6,810.00	104.61	10,460.42	10,460.72	0.00	0.00	0.00	
15,500.00	90.00	91.93	6,810.00	101.25	10,560.36	10,560.66	0.00	0.00	0.00	
15,600.00	90.00	91.93	6,810.00	97.89	10,660.31	10,660.59	0.00	0.00	0.00	
15,700.00	90.00	91.93	6,810.00	94.53	10,760.25	10,760.52	0.00	0.00	0.00	
15,800.00	90.00	91.93	6,810.00	91.17	10,860.20	10,860.45	0.00	0.00	0.00	
15,900.00	90.00	91.93	6,810.00	87.81	10,960.14	10,960.38	0.00	0.00	0.00	
16,000.00	90.00	91.93	6,810.00	84.45	11,060.08	11,060.31	0.00	0.00	0.00	
16,100.00	90.00	91.93	6,810.00	81.09	11,160.03	11,160.24	0.00	0.00	0.00	
16,200.00	90.00	91.93	6,810.00	77.73	11,259.97	11,260.17	0.00	0.00	0.00	
16,300.00	90.00	91.93	6,810.00	74.36	11,359.91	11,360.10	0.00	0.00	0.00	
16,400.00	90.00	91.93	6,810.00	71.00	11,459.86	11,460.04	0.00	0.00	0.00	
16,500.00	90.00	91.93	6,810.00	67.64	11,559.80	11,559.97	0.00	0.00	0.00	
16,600.00	90.00	91.93	6,810.00	64.28	11,659.74	11,659.90	0.00	0.00	0.00	
16,700.00	90.00	91.93	6,810.00	60.92	11,759.69	11,759.83	0.00	0.00	0.00	
16,800.00	90.00	91.93	6,810.00	57.56	11,859.63	11,859.76	0.00	0.00	0.00	
16,900.00	90.00	91.93	6,810.00	54.20	11,959.57	11,959.69	0.00	0.00	0.00	
17,000.00	90.00	91.93	6,810.00	50.84	12,059.52	12,059.62	0.00	0.00	0.00	
17,100.00	90.00	91.93	6,810.00	47.48	12,159.46	12,159.55	0.00	0.00	0.00	
17,200.00	90.00	91.93	6,810.00	44.12	12,259.40	12,259.48	0.00	0.00	0.00	
17,228.98	90.00	91.93	6,810.00	43.14	12,288.37	12,288.45	0.00	0.00	0.00	
TD at 17228.99' MD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
WAKE EAST 10N - LP - hit/miss target - Shape - Point	0.00	0.00	6,810.00	368.10	2,624.64	1,405,738.50	3,229,297.76	40° 26' 39.228 N	104° 40' 34.140 W	
WAKE EAST 10N - PBH - plan hits target center - Point	0.00	0.00	6,810.00	43.14	12,288.37	1,405,502.31	3,238,964.07	40° 26' 35.988 N	104° 38' 29.148 W	

## Planning Report

<b>Database:</b>	EDT_32Bit_ODBC	<b>Local Co-ordinate Reference:</b>	Well WAKE EAST 10
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB 25' @ 4675.00usft
<b>Project:</b>	Weld County	<b>MD Reference:</b>	KB 25' @ 4675.00usft
<b>Site:</b>	Sec 32-T6N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	WAKE EAST 10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,765.91	3,600.00	PARKMAN				
4,355.27	4,140.00	SUSSEX				
4,944.63	4,680.00	SHANNON				
7,452.38	6,800.00	NIOBRARA				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,000.00	1,000.00	0.00	0.00	BUILD 2°/100'	
2,180.83	2,147.68	40.10	236.56	HOLD 23.62° INC	
6,890.89	6,463.26	355.47	2,096.94	KOP, BUILD 10°/100'	
7,559.79	6,810.00	368.10	2,624.64	LP @ 90° INC, 91.93° AZM HOLD	
17,228.98	6,810.00	43.14	12,288.37	TD at 17228.99' MD	