

# **EXTRACTION OIL & GAS**

**WELD COUNTY, COLORADO (NAD 83)**

**NW SE SEC. 32 T6N R65W 6th P.M.**

**WAKE NORTH 13**

**ORIGINAL WELLBORE**

**29 June, 2016**

**Plan: PROPOSAL #1**

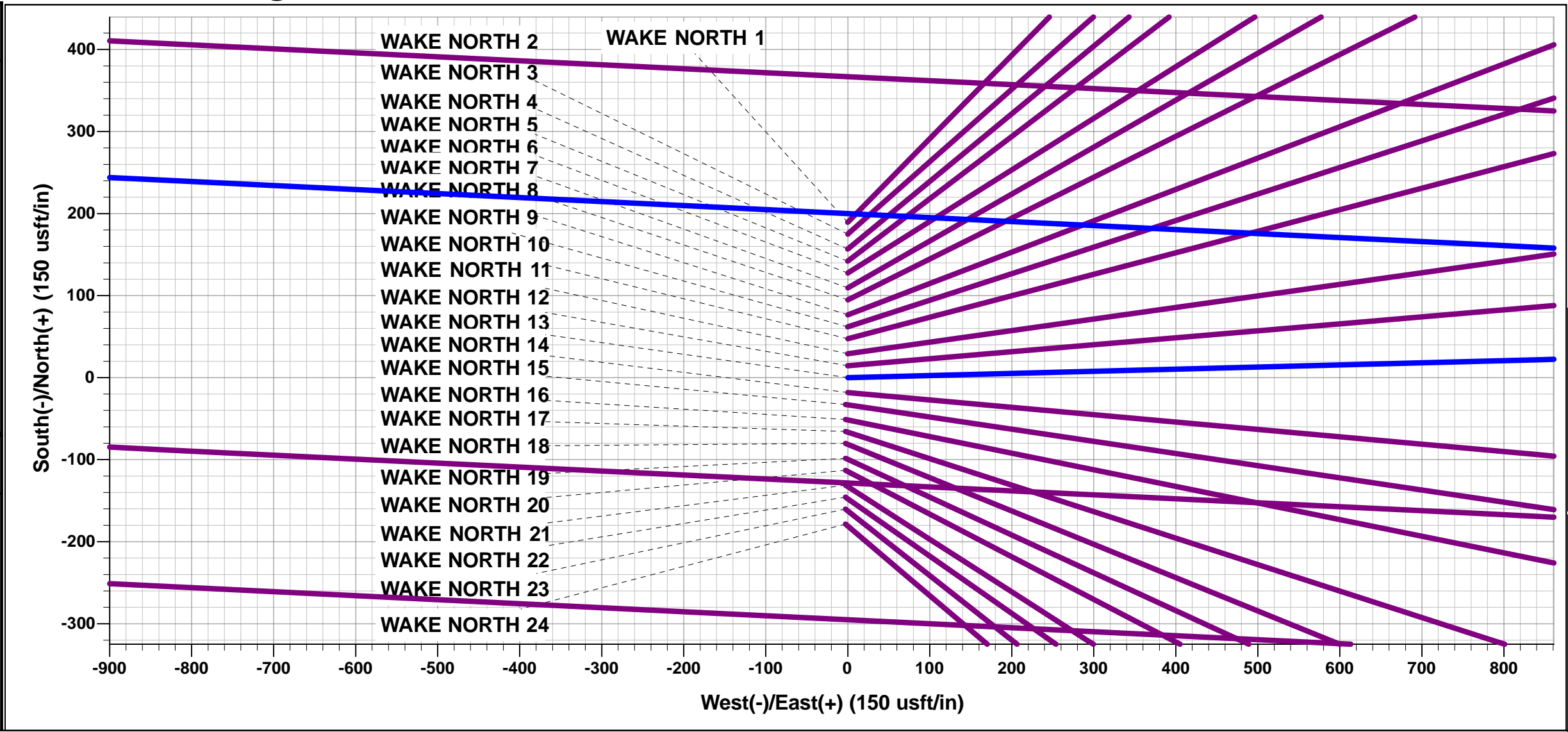




Project: WELD COUNTY, COLORADO (NAD 83)  
Site: NW SE SEC. 32 T6N R65W 6th P.M.  
Well: WAKE NORTH 13  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation	
1300.0	1300.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE #1 (2°/100ft BUR)	
1600.0	1600.0	6.01	88.52	0.4	15.7	-15.7	15.8	9 5/8" SURFACE CASING	
1664.6	1665.6	6.01	88.52	0.6	22.6	-22.4	22.6	START NUDGE #2 (2°/100ft BUR)	
2762.4	2825.2	29.20	88.52	9.6	370.8	-369.1	370.9	EOB TO 29.2° INC	
6049.0	6590.3	29.20	88.52	56.9	2207.3	-2197.1	2208.0	KOP (10°/100ft DGLG)	
6900.0	7781.5	90.00	272.79	116.6	1709.0	-1695.8	2857.9	HZ LANDING POINT - WAKE NORTH 13	
6900.0	17529.3	90.00	272.79	591.5	-8027.2	8049.0	12605.7	BHL - WAKE NORTH 13	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HZ LP - WAKE NORTH 13	6900.0	116.6	1709.0	40.443410	-104.679440
BHL - WAKE NORTH 13	6900.0	591.5	-8027.2	40.444710	-104.714420



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3626.0	3814.5	PARKMAN
4330.0	4621.0	SUSSEX
4875.0	5245.4	SHANNON
6730.0	7328.2	SHARON SPRINGS
6760.0	7372.1	NIOBRARA
6900.0	7781.5	NIO B TARGET

PROPOSED LOCAL COORDINATES		
SHL: 2352ft FSL & 2172ft FEL of Sec 32		
LP: 2624ft FNL & 460ft FEL of Sec 32		
BHL: 2646ft FNL & 460ft FWL of Sec 31		

T M

Azimuths to True North

Magnetic North: 8.28°

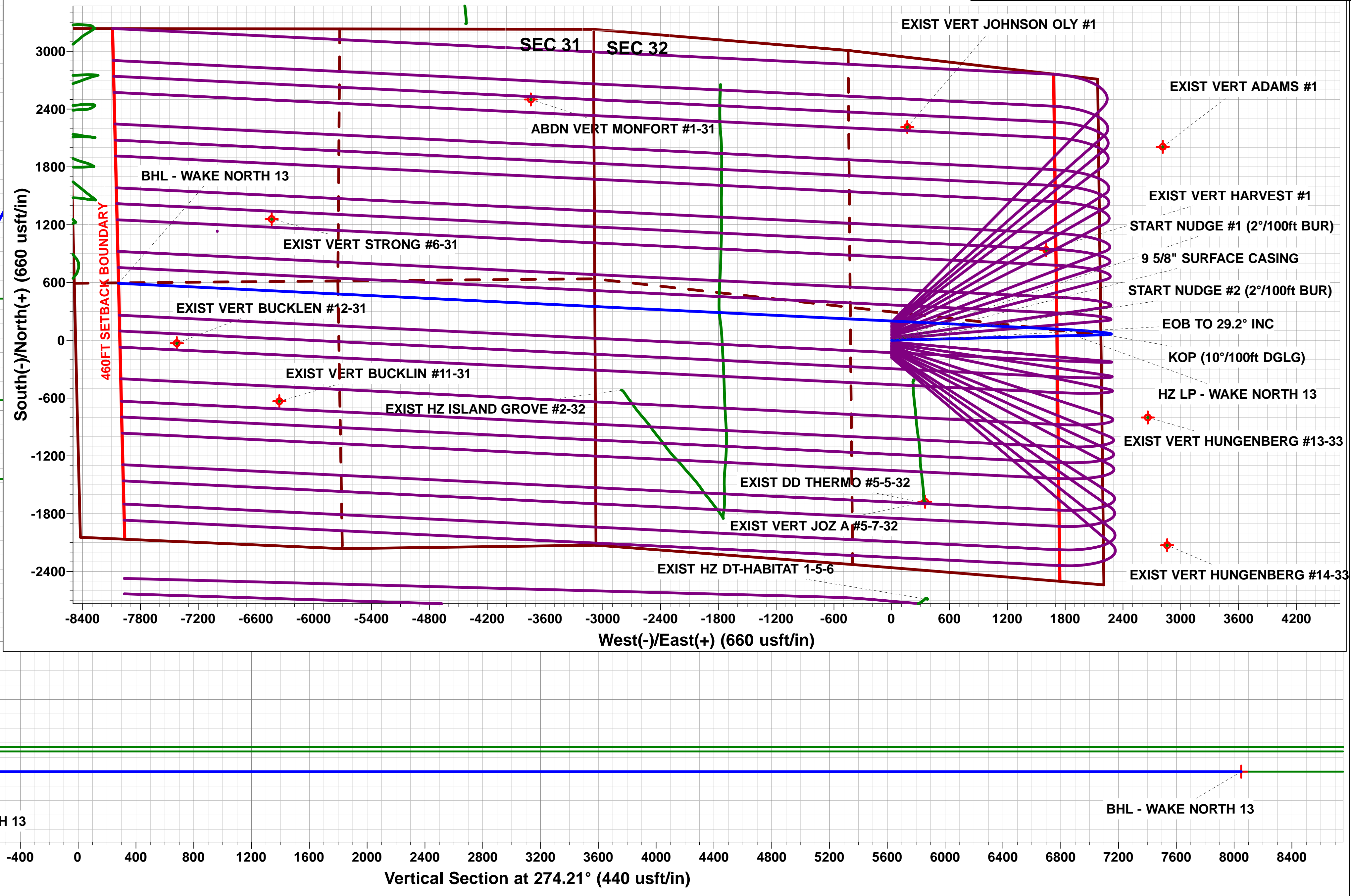
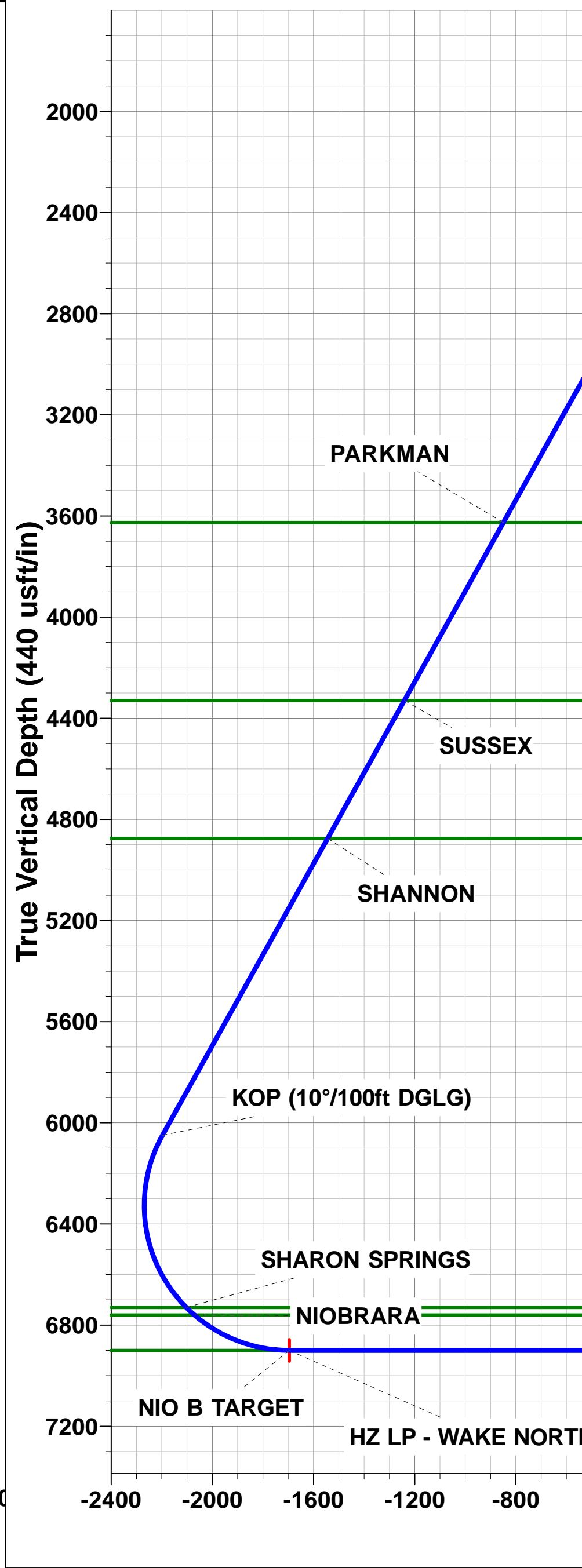
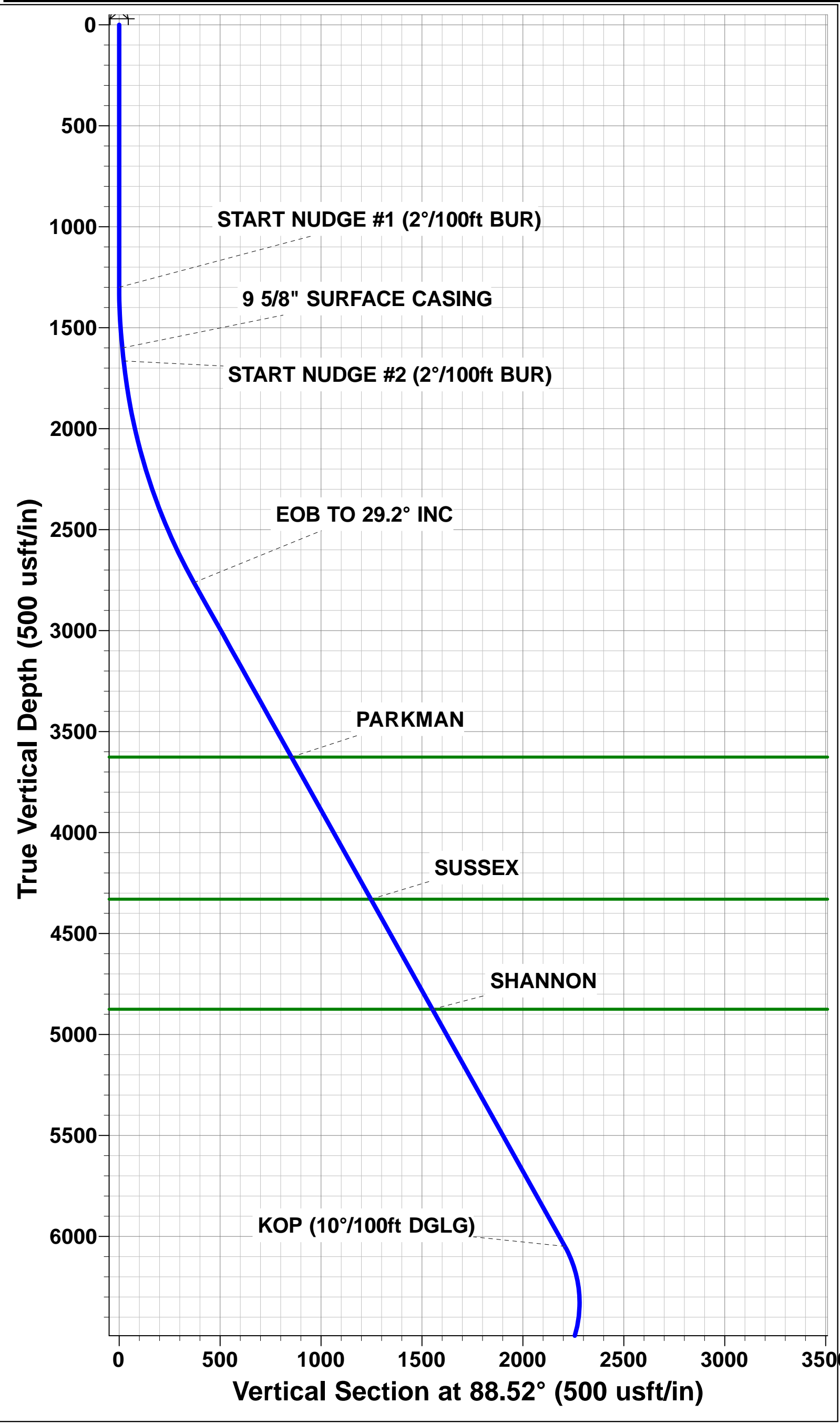
Magnetic Field

Strength: 52534.7snT

Dip Angle: 66.93°

Date: 29/06/2016

Model: IGRF2015



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WAKE NORTH 13
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4666.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4666.0usft (Original Well Elev)
<b>Site:</b>	NW SE SEC. 32 T6N R65W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WAKE NORTH 13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

<b>Project</b>	WELD COUNTY, COLORADO (NAD 83)		
<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		Using geodetic scale factor

<b>Site</b>	NW SE SEC. 32 T6N R65W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,405,488.40 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,226,675.31 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.443610
		<b>Longitude:</b>	-104.685580
		<b>Grid Convergence:</b>	0.53 °

<b>Well</b>	WAKE NORTH 13		
<b>Well Position</b>	<b>+N-S</b>	-189.5 usft	<b>Northing:</b>
	<b>+E-W</b>	0.0 usft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<b>Wellbore</b>	ORIGINAL WELLBORE				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	29/06/2016	8.28	66.93	52,535

<b>Design</b>	PROPOSAL #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N-S (usft)</b>	<b>+E-W (usft)</b>	<b>Direction (°)</b>
	6,900.0	0.0	0.0	274.21

<b>Plan Sections</b>											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N-S (usft)	+E-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,666.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	-3,366.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,600.6	6.01	88.52	1,600.0	-3,066.0	0.4	15.7	2.00	2.00	0.00	88.52	
1,665.6	6.01	88.52	1,664.6	-3,001.4	0.6	22.6	0.00	0.00	0.00	0.00	
2,825.2	29.20	88.52	2,762.4	-1,903.6	9.6	370.8	2.00	2.00	0.00	0.00	
6,590.3	29.20	88.52	6,049.0	1,383.0	56.9	2,207.3	0.00	0.00	0.00	0.00	
7,781.5	90.00	272.79	6,900.0	2,234.0	116.6	1,709.0	10.00	5.10	-14.75	-175.11	HZ LP - WAKE NOI
17,529.3	90.00	272.79	6,900.0	2,234.0	591.5	-8,027.2	0.00	0.00	0.00	0.00	BHL - WAKE NORT



# Planning Report



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<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4666.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4666.0usft (Original Well Elev)
<b>Site:</b>	NW SE SEC. 32 T6N R65W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WAKE NORTH 13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	4,666.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,566.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,466.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,366.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,266.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,166.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,066.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,966.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,866.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,766.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,666.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,566.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,466.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE #1 (2°/100ft BUR)</b>										
1,300.0	0.00	0.00	1,300.0	3,366.00	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	2.00	88.52	1,400.0	3,266.02	0.0	1.7	-1.7	2.00	2.00	0.00
1,500.0	4.00	88.52	1,499.8	3,166.16	0.2	7.0	-6.9	2.00	2.00	0.00
1,600.0	6.00	88.52	1,599.5	3,066.55	0.4	15.7	-15.6	2.00	2.00	0.00
<b>9 5/8" SURFACE CASING</b>										
1,600.6	6.01	88.52	1,600.0	3,066.00	0.4	15.7	-15.7	2.00	2.00	0.00
<b>START NUDGE #2 (2°/100ft BUR)</b>										
1,665.6	6.01	88.52	1,664.6	3,001.36	0.6	22.6	-22.4	0.00	0.00	0.00
1,700.0	6.70	88.52	1,698.9	2,967.12	0.7	26.4	-26.2	2.00	2.00	0.00
1,800.0	8.70	88.52	1,798.0	2,868.03	1.0	39.8	-39.6	2.00	2.00	0.00
1,900.0	10.70	88.52	1,896.5	2,769.46	1.5	56.6	-56.3	2.00	2.00	0.00
2,000.0	12.70	88.52	1,994.5	2,671.54	2.0	76.9	-76.5	2.00	2.00	0.00
2,100.0	14.70	88.52	2,091.6	2,574.39	2.6	100.5	-100.1	2.00	2.00	0.00
2,200.0	16.70	88.52	2,187.9	2,478.13	3.3	127.6	-127.0	2.00	2.00	0.00
2,300.0	18.70	88.52	2,283.1	2,382.87	4.1	158.0	-157.3	2.00	2.00	0.00
2,400.0	20.70	88.52	2,377.3	2,288.73	4.9	191.7	-190.8	2.00	2.00	0.00
2,500.0	22.70	88.52	2,470.2	2,195.82	5.9	228.6	-227.6	2.00	2.00	0.00
2,600.0	24.70	88.52	2,561.7	2,104.26	6.9	268.8	-267.6	2.00	2.00	0.00
2,700.0	26.70	88.52	2,651.8	2,014.15	8.1	312.2	-310.7	2.00	2.00	0.00
2,800.0	28.70	88.52	2,740.4	1,925.62	9.2	358.6	-357.0	2.00	2.00	0.00
<b>EOB TO 29.2° INC</b>										
2,825.2	29.20	88.52	2,762.4	1,903.60	9.6	370.8	-369.1	2.00	2.00	0.00
2,900.0	29.20	88.52	2,827.7	1,838.28	10.5	407.3	-405.4	0.00	0.00	0.00
3,000.0	29.20	88.52	2,915.0	1,750.99	11.8	456.1	-454.0	0.00	0.00	0.00
3,100.0	29.20	88.52	3,002.3	1,663.70	13.0	504.9	-502.5	0.00	0.00	0.00
3,200.0	29.20	88.52	3,089.6	1,576.41	14.3	553.6	-551.1	0.00	0.00	0.00
3,300.0	29.20	88.52	3,176.9	1,489.12	15.5	602.4	-599.6	0.00	0.00	0.00
3,400.0	29.20	88.52	3,264.2	1,401.83	16.8	651.2	-648.2	0.00	0.00	0.00
3,500.0	29.20	88.52	3,351.5	1,314.54	18.0	700.0	-696.7	0.00	0.00	0.00
3,600.0	29.20	88.52	3,438.8	1,227.25	19.3	748.7	-745.3	0.00	0.00	0.00
3,700.0	29.20	88.52	3,526.0	1,139.96	20.6	797.5	-793.8	0.00	0.00	0.00
3,800.0	29.20	88.52	3,613.3	1,052.67	21.8	846.3	-842.4	0.00	0.00	0.00
<b>PARKMAN</b>										
3,814.5	29.20	88.52	3,626.0	1,040.00	22.0	853.4	-849.4	0.00	0.00	0.00
3,900.0	29.20	88.52	3,700.6	965.38	23.1	895.1	-890.9	0.00	0.00	0.00
4,000.0	29.20	88.52	3,787.9	878.09	24.3	943.8	-939.5	0.00	0.00	0.00
4,100.0	29.20	88.52	3,875.2	790.80	25.6	992.6	-988.0	0.00	0.00	0.00
4,200.0	29.20	88.52	3,962.5	703.51	26.8	1,041.4	-1,036.6	0.00	0.00	0.00
4,300.0	29.20	88.52	4,049.8	616.22	28.1	1,090.2	-1,085.1	0.00	0.00	0.00
4,400.0	29.20	88.52	4,137.1	528.93	29.4	1,138.9	-1,133.7	0.00	0.00	0.00

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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4666.0usft (Original Well Elev)
<b>Site:</b>	NW SE SEC. 32 T6N R65W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WAKE NORTH 13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,500.0	29.20	88.52	4,224.4	441.64	30.6	1,187.7	-1,182.2	0.00	0.00	0.00
4,600.0	29.20	88.52	4,311.6	354.35	31.9	1,236.5	-1,230.8	0.00	0.00	0.00
<b>SUSSEX</b>										
<b>4,621.0</b>	<b>29.20</b>	<b>88.52</b>	<b>4,330.0</b>	<b>336.00</b>	<b>32.1</b>	<b>1,246.7</b>	<b>-1,241.0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,700.0	29.20	88.52	4,398.9	267.07	33.1	1,285.3	-1,279.4	0.00	0.00	0.00
4,800.0	29.20	88.52	4,486.2	179.78	34.4	1,334.0	-1,327.9	0.00	0.00	0.00
4,900.0	29.20	88.52	4,573.5	92.49	35.6	1,382.8	-1,376.5	0.00	0.00	0.00
5,000.0	29.20	88.52	4,660.8	5.20	36.9	1,431.6	-1,425.0	0.00	0.00	0.00
5,100.0	29.20	88.52	4,748.1	-82.09	38.2	1,480.4	-1,473.6	0.00	0.00	0.00
5,200.0	29.20	88.52	4,835.4	-169.38	39.4	1,529.1	-1,522.1	0.00	0.00	0.00
<b>SHANNON</b>										
<b>5,245.4</b>	<b>29.20</b>	<b>88.52</b>	<b>4,875.0</b>	<b>-209.00</b>	<b>40.0</b>	<b>1,551.3</b>	<b>-1,544.1</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,300.0	29.20	88.52	4,922.7	-256.67	40.7	1,577.9	-1,570.7	0.00	0.00	0.00
5,400.0	29.20	88.52	5,010.0	-343.96	41.9	1,626.7	-1,619.2	0.00	0.00	0.00
5,500.0	29.20	88.52	5,097.3	-431.25	43.2	1,675.5	-1,667.8	0.00	0.00	0.00
5,600.0	29.20	88.52	5,184.5	-518.54	44.4	1,724.2	-1,716.3	0.00	0.00	0.00
5,700.0	29.20	88.52	5,271.8	-605.83	45.7	1,773.0	-1,764.9	0.00	0.00	0.00
5,800.0	29.20	88.52	5,359.1	-693.12	47.0	1,821.8	-1,813.4	0.00	0.00	0.00
5,900.0	29.20	88.52	5,446.4	-780.41	48.2	1,870.6	-1,862.0	0.00	0.00	0.00
6,000.0	29.20	88.52	5,533.7	-867.70	49.5	1,919.3	-1,910.5	0.00	0.00	0.00
6,100.0	29.20	88.52	5,621.0	-954.99	50.7	1,968.1	-1,959.1	0.00	0.00	0.00
6,200.0	29.20	88.52	5,708.3	-1,042.28	52.0	2,016.9	-2,007.6	0.00	0.00	0.00
6,300.0	29.20	88.52	5,795.6	-1,129.57	53.2	2,065.7	-2,056.2	0.00	0.00	0.00
6,400.0	29.20	88.52	5,882.9	-1,216.86	54.5	2,114.4	-2,104.7	0.00	0.00	0.00
6,500.0	29.20	88.52	5,970.1	-1,304.15	55.8	2,163.2	-2,153.3	0.00	0.00	0.00
<b>KOP (10°/100ft DGLG)</b>										
<b>6,590.3</b>	<b>29.20</b>	<b>88.52</b>	<b>6,049.0</b>	<b>-1,383.00</b>	<b>56.9</b>	<b>2,207.3</b>	<b>-2,197.1</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,600.0	28.24	88.35	6,057.5	-1,391.47	57.0	2,211.9	-2,201.7	10.00	-9.96	-1.80
6,700.0	18.30	85.56	6,149.2	-1,483.23	58.9	2,251.3	-2,240.9	10.00	-9.94	-2.78
6,800.0	8.49	76.60	6,246.4	-1,580.40	61.9	2,274.2	-2,263.5	10.00	-9.81	-8.96
6,900.0	3.02	324.92	6,346.0	-1,680.03	65.7	2,279.9	-2,268.9	10.00	-5.47	-111.68
7,000.0	12.09	284.00	6,445.1	-1,779.11	70.4	2,268.2	-2,256.9	10.00	9.07	-40.92
7,100.0	21.97	278.71	6,540.6	-1,874.61	75.8	2,239.5	-2,227.8	10.00	9.89	-5.29
7,200.0	31.93	276.62	6,629.6	-1,963.64	81.7	2,194.6	-2,182.6	10.00	9.96	-2.09
7,300.0	41.91	275.45	6,709.5	-2,043.49	87.9	2,134.9	-2,122.7	10.00	9.98	-1.17
<b>SHARON SPRINGS</b>										
<b>7,328.2</b>	<b>44.72</b>	<b>275.20</b>	<b>6,730.0</b>	<b>-2,064.00</b>	<b>89.7</b>	<b>2,115.7</b>	<b>-2,103.3</b>	<b>10.00</b>	<b>9.98</b>	<b>-0.88</b>
<b>NIOBRARA</b>										
<b>7,372.1</b>	<b>49.11</b>	<b>274.86</b>	<b>6,760.0</b>	<b>-2,094.00</b>	<b>92.5</b>	<b>2,083.7</b>	<b>-2,071.3</b>	<b>10.00</b>	<b>9.98</b>	<b>-0.78</b>
7,400.0	51.89	274.66	6,777.7	-2,111.73	94.3	2,062.3	-2,049.8	10.00	9.99	-0.70
7,500.0	61.88	274.07	6,832.3	-2,166.29	100.7	1,978.9	-1,966.1	10.00	9.99	-0.60
7,600.0	71.87	273.57	6,871.5	-2,205.52	106.8	1,887.2	-1,874.3	10.00	9.99	-0.49
7,700.0	81.86	273.13	6,894.2	-2,228.22	112.5	1,790.1	-1,777.0	10.00	9.99	-0.44
<b>HZ LANDING POINT - WAKE NORTH 13 - NIO B TARGET</b>										
<b>7,781.5</b>	<b>90.00</b>	<b>272.79</b>	<b>6,900.0</b>	<b>-2,234.00</b>	<b>116.6</b>	<b>1,709.0</b>	<b>-1,695.8</b>	<b>10.00</b>	<b>9.99</b>	<b>-0.42</b>
7,800.0	90.00	272.79	6,900.0	-2,234.00	117.5	1,690.5	-1,677.3	0.00	0.00	0.00
7,900.0	90.00	272.79	6,900.0	-2,234.00	122.4	1,590.6	-1,577.4	0.00	0.00	0.00
8,000.0	90.00	272.79	6,900.0	-2,234.00	127.3	1,490.8	-1,477.4	0.00	0.00	0.00
8,100.0	90.00	272.79	6,900.0	-2,234.00	132.2	1,390.9	-1,377.4	0.00	0.00	0.00
8,200.0	90.00	272.79	6,900.0	-2,234.00	137.0	1,291.0	-1,277.4	0.00	0.00	0.00
8,300.0	90.00	272.79	6,900.0	-2,234.00	141.9	1,191.1	-1,177.5	0.00	0.00	0.00
8,400.0	90.00	272.79	6,900.0	-2,234.00	146.8	1,091.2	-1,077.5	0.00	0.00	0.00
8,500.0	90.00	272.79	6,900.0	-2,234.00	151.6	991.4	-977.5	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WAKE NORTH 13
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4666.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4666.0usft (Original Well Elev)
<b>Site:</b>	NW SE SEC. 32 T6N R65W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WAKE NORTH 13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,600.0	90.00	272.79	6,900.0	-2,234.00	156.5	891.5	-877.6	0.00	0.00	0.00
8,700.0	90.00	272.79	6,900.0	-2,234.00	161.4	791.6	-777.6	0.00	0.00	0.00
8,800.0	90.00	272.79	6,900.0	-2,234.00	166.3	691.7	-677.6	0.00	0.00	0.00
8,900.0	90.00	272.79	6,900.0	-2,234.00	171.1	591.8	-577.7	0.00	0.00	0.00
9,000.0	90.00	272.79	6,900.0	-2,234.00	176.0	492.0	-477.7	0.00	0.00	0.00
9,100.0	90.00	272.79	6,900.0	-2,234.00	180.9	392.1	-377.7	0.00	0.00	0.00
9,200.0	90.00	272.79	6,900.0	-2,234.00	185.7	292.2	-277.8	0.00	0.00	0.00
9,300.0	90.00	272.79	6,900.0	-2,234.00	190.6	192.3	-177.8	0.00	0.00	0.00
9,400.0	90.00	272.79	6,900.0	-2,234.00	195.5	92.4	-77.8	0.00	0.00	0.00
9,500.0	90.00	272.79	6,900.0	-2,234.00	200.4	-7.5	22.2	0.00	0.00	0.00
9,600.0	90.00	272.79	6,900.0	-2,234.00	205.2	-107.3	122.1	0.00	0.00	0.00
9,700.0	90.00	272.79	6,900.0	-2,234.00	210.1	-207.2	222.1	0.00	0.00	0.00
9,800.0	90.00	272.79	6,900.0	-2,234.00	215.0	-307.1	322.1	0.00	0.00	0.00
9,900.0	90.00	272.79	6,900.0	-2,234.00	219.8	-407.0	422.0	0.00	0.00	0.00
10,000.0	90.00	272.79	6,900.0	-2,234.00	224.7	-506.9	522.0	0.00	0.00	0.00
10,100.0	90.00	272.79	6,900.0	-2,234.00	229.6	-606.7	622.0	0.00	0.00	0.00
10,200.0	90.00	272.79	6,900.0	-2,234.00	234.5	-706.6	721.9	0.00	0.00	0.00
10,300.0	90.00	272.79	6,900.0	-2,234.00	239.3	-806.5	821.9	0.00	0.00	0.00
10,400.0	90.00	272.79	6,900.0	-2,234.00	244.2	-906.4	921.9	0.00	0.00	0.00
10,500.0	90.00	272.79	6,900.0	-2,234.00	249.1	-1,006.3	1,021.8	0.00	0.00	0.00
10,600.0	90.00	272.79	6,900.0	-2,234.00	253.9	-1,106.1	1,121.8	0.00	0.00	0.00
10,700.0	90.00	272.79	6,900.0	-2,234.00	258.8	-1,206.0	1,221.8	0.00	0.00	0.00
10,800.0	90.00	272.79	6,900.0	-2,234.00	263.7	-1,305.9	1,321.8	0.00	0.00	0.00
10,900.0	90.00	272.79	6,900.0	-2,234.00	268.6	-1,405.8	1,421.7	0.00	0.00	0.00
11,000.0	90.00	272.79	6,900.0	-2,234.00	273.4	-1,505.7	1,521.7	0.00	0.00	0.00
11,100.0	90.00	272.79	6,900.0	-2,234.00	278.3	-1,605.6	1,621.7	0.00	0.00	0.00
11,200.0	90.00	272.79	6,900.0	-2,234.00	283.2	-1,705.4	1,721.6	0.00	0.00	0.00
11,300.0	90.00	272.79	6,900.0	-2,234.00	288.0	-1,805.3	1,821.6	0.00	0.00	0.00
11,400.0	90.00	272.79	6,900.0	-2,234.00	292.9	-1,905.2	1,921.6	0.00	0.00	0.00
11,500.0	90.00	272.79	6,900.0	-2,234.00	297.8	-2,005.1	2,021.5	0.00	0.00	0.00
11,600.0	90.00	272.79	6,900.0	-2,234.00	302.7	-2,105.0	2,121.5	0.00	0.00	0.00
11,700.0	90.00	272.79	6,900.0	-2,234.00	307.5	-2,204.8	2,221.5	0.00	0.00	0.00
11,800.0	90.00	272.79	6,900.0	-2,234.00	312.4	-2,304.7	2,321.4	0.00	0.00	0.00
11,900.0	90.00	272.79	6,900.0	-2,234.00	317.3	-2,404.6	2,421.4	0.00	0.00	0.00
12,000.0	90.00	272.79	6,900.0	-2,234.00	322.1	-2,504.5	2,521.4	0.00	0.00	0.00
12,100.0	90.00	272.79	6,900.0	-2,234.00	327.0	-2,604.4	2,621.4	0.00	0.00	0.00
12,200.0	90.00	272.79	6,900.0	-2,234.00	331.9	-2,704.2	2,721.3	0.00	0.00	0.00
12,300.0	90.00	272.79	6,900.0	-2,234.00	336.8	-2,804.1	2,821.3	0.00	0.00	0.00
12,400.0	90.00	272.79	6,900.0	-2,234.00	341.6	-2,904.0	2,921.3	0.00	0.00	0.00
12,500.0	90.00	272.79	6,900.0	-2,234.00	346.5	-3,003.9	3,021.2	0.00	0.00	0.00
12,600.0	90.00	272.79	6,900.0	-2,234.00	351.4	-3,103.8	3,121.2	0.00	0.00	0.00
12,700.0	90.00	272.79	6,900.0	-2,234.00	356.2	-3,203.7	3,221.2	0.00	0.00	0.00
12,800.0	90.00	272.79	6,900.0	-2,234.00	361.1	-3,303.5	3,321.1	0.00	0.00	0.00
12,900.0	90.00	272.79	6,900.0	-2,234.00	366.0	-3,403.4	3,421.1	0.00	0.00	0.00
13,000.0	90.00	272.79	6,900.0	-2,234.00	370.9	-3,503.3	3,521.1	0.00	0.00	0.00
13,100.0	90.00	272.79	6,900.0	-2,234.00	375.7	-3,603.2	3,621.0	0.00	0.00	0.00
13,200.0	90.00	272.79	6,900.0	-2,234.00	380.6	-3,703.1	3,721.0	0.00	0.00	0.00
13,300.0	90.00	272.79	6,900.0	-2,234.00	385.5	-3,802.9	3,821.0	0.00	0.00	0.00
13,400.0	90.00	272.79	6,900.0	-2,234.00	390.3	-3,902.8	3,921.0	0.00	0.00	0.00
13,500.0	90.00	272.79	6,900.0	-2,234.00	395.2	-4,002.7	4,020.9	0.00	0.00	0.00
13,600.0	90.00	272.79	6,900.0	-2,234.00	400.1	-4,102.6	4,120.9	0.00	0.00	0.00
13,700.0	90.00	272.79	6,900.0	-2,234.00	405.0	-4,202.5	4,220.9	0.00	0.00	0.00
13,800.0	90.00	272.79	6,900.0	-2,234.00	409.8	-4,302.3	4,320.8	0.00	0.00	0.00
13,900.0	90.00	272.79	6,900.0	-2,234.00	414.7	-4,402.2	4,420.8	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WAKE NORTH 13
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4666.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4666.0usft (Original Well Elev)
<b>Site:</b>	NW SE SEC. 32 T6N R65W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WAKE NORTH 13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,000.0	90.00	272.79	6,900.0	-2,234.00	419.6	-4,502.1	4,520.8	0.00	0.00	0.00
14,100.0	90.00	272.79	6,900.0	-2,234.00	424.4	-4,602.0	4,620.7	0.00	0.00	0.00
14,200.0	90.00	272.79	6,900.0	-2,234.00	429.3	-4,701.9	4,720.7	0.00	0.00	0.00
14,300.0	90.00	272.79	6,900.0	-2,234.00	434.2	-4,801.8	4,820.7	0.00	0.00	0.00
14,400.0	90.00	272.79	6,900.0	-2,234.00	439.1	-4,901.6	4,920.6	0.00	0.00	0.00
14,500.0	90.00	272.79	6,900.0	-2,234.00	443.9	-5,001.5	5,020.6	0.00	0.00	0.00
14,600.0	90.00	272.79	6,900.0	-2,234.00	448.8	-5,101.4	5,120.6	0.00	0.00	0.00
14,700.0	90.00	272.79	6,900.0	-2,234.00	453.7	-5,201.3	5,220.6	0.00	0.00	0.00
14,800.0	90.00	272.79	6,900.0	-2,234.00	458.5	-5,301.2	5,320.5	0.00	0.00	0.00
14,900.0	90.00	272.79	6,900.0	-2,234.00	463.4	-5,401.0	5,420.5	0.00	0.00	0.00
15,000.0	90.00	272.79	6,900.0	-2,234.00	468.3	-5,500.9	5,520.5	0.00	0.00	0.00
15,100.0	90.00	272.79	6,900.0	-2,234.00	473.2	-5,600.8	5,620.4	0.00	0.00	0.00
15,200.0	90.00	272.79	6,900.0	-2,234.00	478.0	-5,700.7	5,720.4	0.00	0.00	0.00
15,300.0	90.00	272.79	6,900.0	-2,234.00	482.9	-5,800.6	5,820.4	0.00	0.00	0.00
15,400.0	90.00	272.79	6,900.0	-2,234.00	487.8	-5,900.4	5,920.3	0.00	0.00	0.00
15,500.0	90.00	272.79	6,900.0	-2,234.00	492.6	-6,000.3	6,020.3	0.00	0.00	0.00
15,600.0	90.00	272.79	6,900.0	-2,234.00	497.5	-6,100.2	6,120.3	0.00	0.00	0.00
15,700.0	90.00	272.79	6,900.0	-2,234.00	502.4	-6,200.1	6,220.2	0.00	0.00	0.00
15,800.0	90.00	272.79	6,900.0	-2,234.00	507.3	-6,300.0	6,320.2	0.00	0.00	0.00
15,900.0	90.00	272.79	6,900.0	-2,234.00	512.1	-6,399.9	6,420.2	0.00	0.00	0.00
16,000.0	90.00	272.79	6,900.0	-2,234.00	517.0	-6,499.7	6,520.2	0.00	0.00	0.00
16,100.0	90.00	272.79	6,900.0	-2,234.00	521.9	-6,599.6	6,620.1	0.00	0.00	0.00
16,200.0	90.00	272.79	6,900.0	-2,234.00	526.7	-6,699.5	6,720.1	0.00	0.00	0.00
16,300.0	90.00	272.79	6,900.0	-2,234.00	531.6	-6,799.4	6,820.1	0.00	0.00	0.00
16,400.0	90.00	272.79	6,900.0	-2,234.00	536.5	-6,899.3	6,920.0	0.00	0.00	0.00
16,500.0	90.00	272.79	6,900.0	-2,234.00	541.4	-6,999.1	7,020.0	0.00	0.00	0.00
16,600.0	90.00	272.79	6,900.0	-2,234.00	546.2	-7,099.0	7,120.0	0.00	0.00	0.00
16,700.0	90.00	272.79	6,900.0	-2,234.00	551.1	-7,198.9	7,219.9	0.00	0.00	0.00
16,800.0	90.00	272.79	6,900.0	-2,234.00	556.0	-7,298.8	7,319.9	0.00	0.00	0.00
16,900.0	90.00	272.79	6,900.0	-2,234.00	560.8	-7,398.7	7,419.9	0.00	0.00	0.00
17,000.0	90.00	272.79	6,900.0	-2,234.00	565.7	-7,498.5	7,519.8	0.00	0.00	0.00
17,100.0	90.00	272.79	6,900.0	-2,234.00	570.6	-7,598.4	7,619.8	0.00	0.00	0.00
17,200.0	90.00	272.79	6,900.0	-2,234.00	575.5	-7,698.3	7,719.8	0.00	0.00	0.00
17,300.0	90.00	272.79	6,900.0	-2,234.00	580.3	-7,798.2	7,819.8	0.00	0.00	0.00
17,400.0	90.00	272.79	6,900.0	-2,234.00	585.2	-7,898.1	7,919.7	0.00	0.00	0.00
17,500.0	90.00	272.79	6,900.0	-2,234.00	590.1	-7,998.0	8,019.7	0.00	0.00	0.00
<b>BHL - WAKE NORTH 13</b>										
<b>17,529.3</b>	<b>90.00</b>	<b>272.79</b>	<b>6,900.0</b>	<b>-2,234.00</b>	<b>591.5</b>	<b>-8,027.2</b>	<b>8,049.0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,814.5	3,626.0	PARKMAN				
4,621.0	4,330.0	SUSSEX				
5,245.4	4,875.0	SHANNON				
7,328.2	6,730.0	SHARON SPRINGS				
7,372.1	6,760.0	NIOBRARA				
7,781.5	6,900.0	NIO B TARGET				

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WAKE NORTH 13
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4666.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4666.0usft (Original Well Elev)
<b>Site:</b>	NW SE SEC. 32 T6N R65W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WAKE NORTH 13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,300.0	1,300.0	0.0	0.0	START NUDGE #1 (2°/100ft BUR)
1,600.6	1,600.0	0.4	15.7	9 5/8" SURFACE CASING
1,665.6	1,664.6	0.6	22.6	START NUDGE #2 (2°/100ft BUR)
2,825.2	2,762.4	9.6	370.8	EOB TO 29.2° INC
6,590.3	6,049.0	56.9	2,207.3	KOP (10°/100ft DGLG)
7,781.5	6,900.0	116.6	1,709.0	HZ LANDING POINT - WAKE NORTH 13
17,529.3	6,900.0	591.5	-8,027.2	BHL - WAKE NORTH 13