

EXTRACTION OIL & GAS

**Weld County
Sec 17-T7N-R67W
WALT 8N-20-20N**

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

14 July, 2017



Project: Weld County
Site: Sec 17-T7N-R67W
Well: WALT 8N-20-20N
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL 1

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



Azimuths to True North
Magnetic North: 8.31°

Magnetic Field
Strength: 52476.5nT
Dip Angle: 66.97°
Date: 5/15/2017
Model: IGRF2015

WELL DETAILS: WALT 8N-20-20N

+N/-S	+E/-W	Northing	Easting	5080.0	Latitude	Longitude	Slot
0.0	0.0	1453254.11	3164157.55		40° 34' 33.888 N	104° 54' 32.573 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1350.0	0.00	0.00	1350.0	0.0	0.0	0.00	0.00	0.0	
3	1600.3	5.01	330.00	1600.0	9.5	-5.5	2.00	330.00	9.5	
4	1700.3	5.01	330.00	1699.6	17.0	-9.8	0.00	0.00	17.1	
5	2760.4	25.52	357.49	2717.6	288.4	-43.4	2.00	33.36	288.5	
6	6778.0	25.52	357.49	6343.1	2017.9	-119.3	0.00	0.00	2018.3	
7	7315.6	90.00	0.48	6615.0	2448.9	-122.5	12.00	3.31	2449.3	WALT 8N-20-20N-LP
8	16972.8	90.00	0.48	6615.0	12105.8	-42.2	0.00	0.00	12105.9	WALT 8N-20-20N-PBHL

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3835.0	3998.7	SUSSEX
4210.0	4414.2	SHANNON
6605.0	7217.7	NIOBRARA

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
1350.0	0.00	0.00	1350.0	0.0	0.0	0.0	0.0	BUILD 2°/100'
1600.3	5.01	330.00	1600.0	9.5	-5.5	10.9	10.9	HOLD 5.01° INC
1700.3	5.01	330.00	1699.6	17.0	-9.8	17.1	17.1	DROP 2°/100'
2760.4	25.52	357.49	2717.6	288.4	-43.4	288.5	294.2	HOLD VERTICAL
6778.0	25.52	357.49	6343.1	2017.9	-119.3	2018.3	2025.4	KOP, BUILD 12°/100'
7315.6	90.00	0.48	6615.0	2448.9	-122.5	2449.3	2456.5	LP @ 90° INC, 0.48° AZM HOLD
16972.8	90.00	0.48	6615.0	12105.8	-42.2	12105.9	12113.7	TD at 16972.8' MD

DESIGN TARGET DETAILS

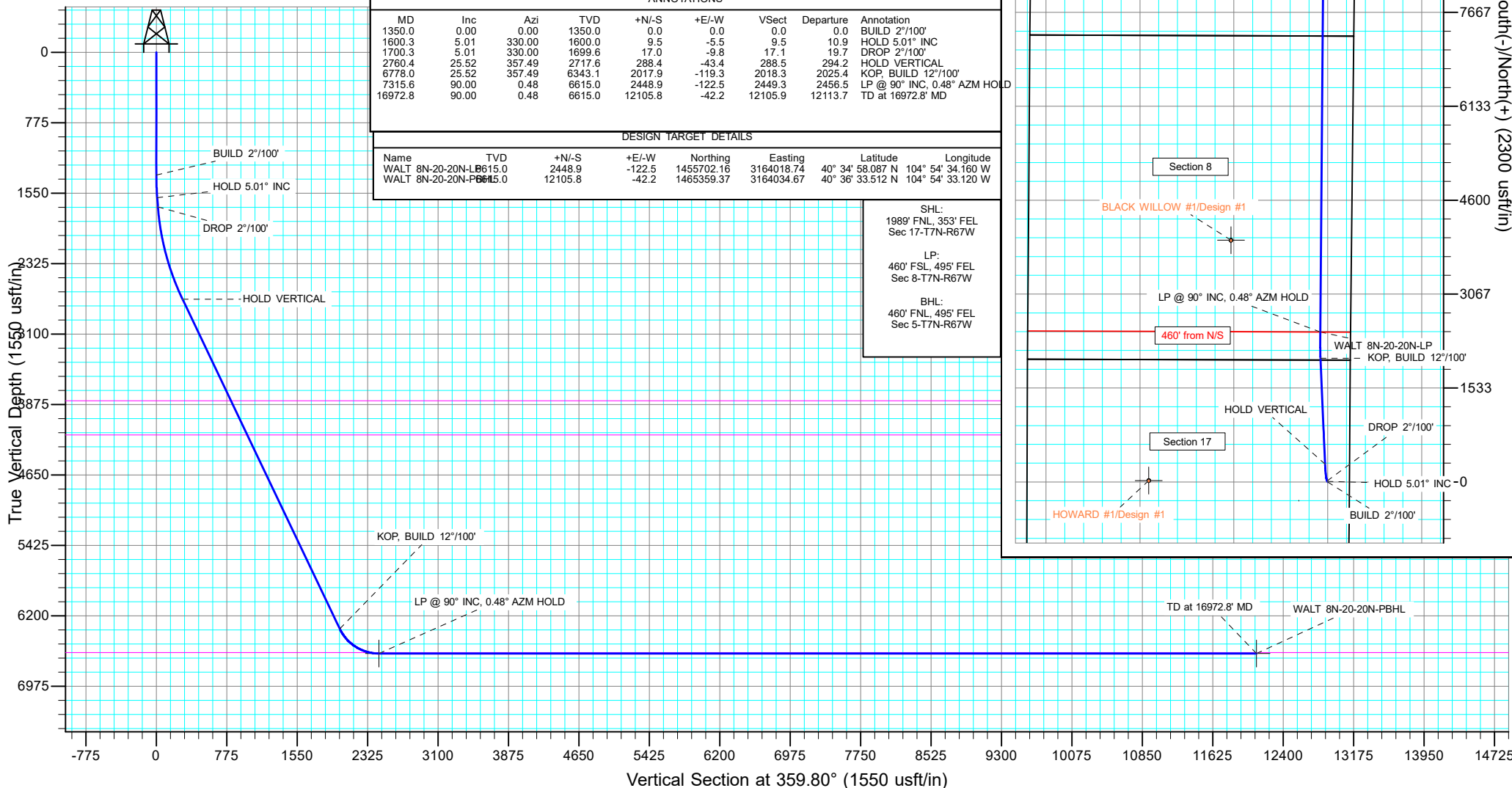
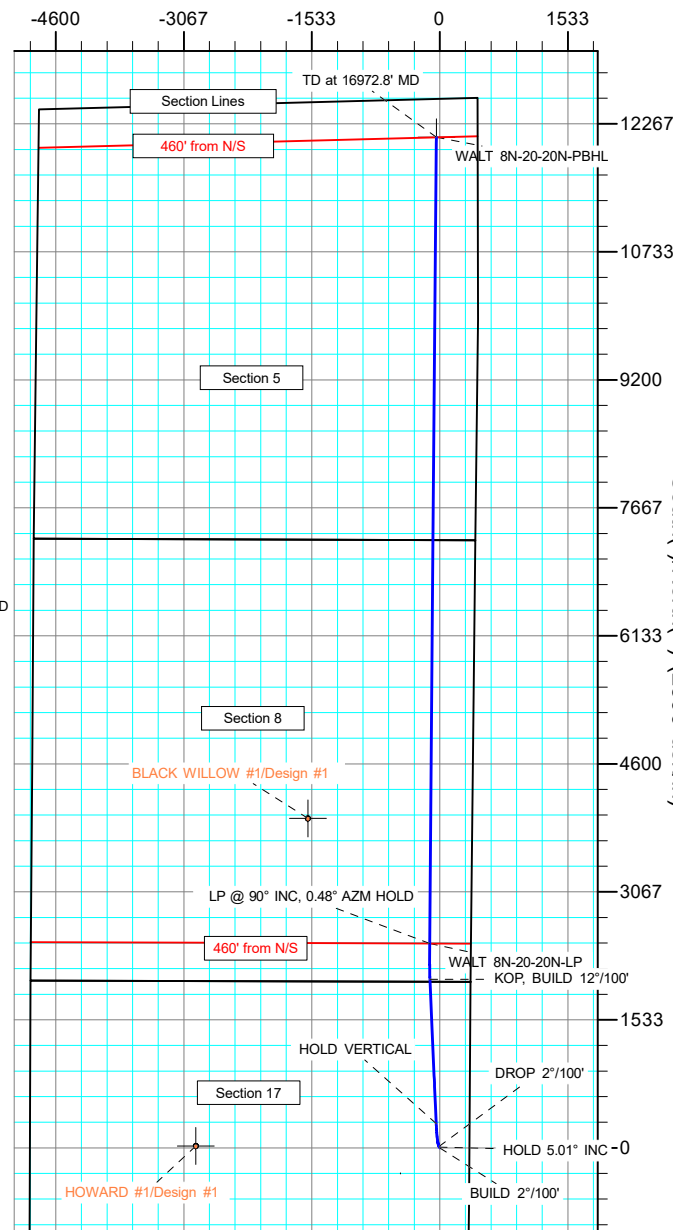
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
WALT 8N-20-20N-LP	6615.0	2448.9	-122.5	1455702.16	3164018.74	40° 34' 58.087 N	104° 54' 34.160 W
WALT 8N-20-20N-PBHL	6615.0	12105.8	-42.2	1465359.37	3164034.67	40° 36' 33.512 N	104° 54' 33.120 W

SHL:
1989' FNL, 353' FEL
Sec 17-T7N-R67W

LP:
460' FSL, 495' FEL
Sec 8-T7N-R67W

BHL:
460' FNL, 495' FEL
Sec 5-T7N-R67W

West(-)/East(+) (2300 usft/in)



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 8N-20-20N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5105.0usft
Project:	Weld County	MD Reference:	KB 25' @ 5105.0usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 8N-20-20N	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 17-T7N-R67W				
Site Position:		Northing:	1,455,244.22 usft	Latitude:	40° 34' 53.530 N
From:	Lat/Long	Easting:	3,164,511.50 usft	Longitude:	104° 54' 27.814 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	0.38

Well	WALT 8N-20-20N					
Well Position	+N/-S	-1,987.7 usft	Northing:	1,453,254.11 usft	Latitude:	40° 34' 33.888 N
	+E/-W	-367.2 usft	Easting:	3,164,157.55 usft	Longitude:	104° 54' 32.573 W
Position Uncertainty	0.0 usft		Wellhead Elevation:		Ground Level:	5,080.0 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/15/2017	8.31	66.97	52,476.51704346

Design	PROPOSAL 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	359.80

Plan Survey Tool Program			Date	6/27/2017	
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	16,972.8	PROPOSAL 1 (ORIGINAL WELL	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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,350.0	0.00	0.00	1,350.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,600.3	5.01	330.00	1,600.0	9.5	-5.5	2.00	2.00	0.00	330.00	
1,700.3	5.01	330.00	1,699.6	17.0	-9.8	0.00	0.00	0.00	0.00	
2,760.4	25.52	357.49	2,717.6	288.4	-43.4	2.00	1.94	2.59	33.36	
6,778.0	25.52	357.49	6,343.1	2,017.9	-119.3	0.00	0.00	0.00	0.00	
7,315.6	90.00	0.48	6,615.0	2,448.9	-122.5	12.00	11.99	0.56	3.31	WALT 8N-20-20N-LP
16,972.8	90.00	0.48	6,615.0	12,105.8	-42.2	0.00	0.00	0.00	0.00	WALT 8N-20-20N-PB

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 8N-20-20N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5105.0usft
Project:	Weld County	MD Reference:	KB 25' @ 5105.0usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 8N-20-20N	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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,350.0	0.00	0.00	1,350.0	0.0	0.0	0.0	0.00	0.00	0.00
BUILD 2°/100'									
1,400.0	1.00	330.00	1,400.0	0.4	-0.2	0.4	2.00	2.00	0.00
1,500.0	3.00	330.00	1,499.9	3.4	-2.0	3.4	2.00	2.00	0.00
1,600.3	5.01	330.00	1,600.0	9.5	-5.5	9.5	2.00	2.00	0.00
HOLD 5.01° INC									
1,700.3	5.01	330.00	1,699.6	17.0	-9.8	17.1	0.00	0.00	0.00
DROP 2°/100'									
1,800.0	6.76	339.35	1,798.8	26.3	-14.1	26.3	2.00	1.76	9.38
1,900.0	8.63	344.80	1,897.9	39.0	-18.1	39.1	2.00	1.86	5.44
2,000.0	10.54	348.30	1,996.5	55.2	-21.9	55.3	2.00	1.91	3.50
2,100.0	12.48	350.72	2,094.5	74.8	-25.5	74.9	2.00	1.94	2.43
2,200.0	14.44	352.51	2,191.7	97.9	-28.9	98.0	2.00	1.96	1.78
2,300.0	16.40	353.87	2,288.1	124.3	-32.0	124.4	2.00	1.97	1.36
2,400.0	18.38	354.95	2,383.5	154.0	-34.9	154.1	2.00	1.97	1.08
2,500.0	20.36	355.82	2,477.9	187.1	-37.6	187.2	2.00	1.98	0.87
2,600.0	22.34	356.55	2,571.0	223.4	-40.0	223.5	2.00	1.98	0.73
2,700.0	24.32	357.16	2,662.8	262.9	-42.2	263.1	2.00	1.99	0.61
2,760.4	25.52	357.49	2,717.6	288.4	-43.4	288.5	2.00	1.99	0.54
HOLD VERTICAL									
2,800.0	25.52	357.49	2,753.3	305.4	-44.1	305.6	0.00	0.00	0.00
2,900.0	25.52	357.49	2,843.6	348.5	-46.0	348.6	0.00	0.00	0.00
3,000.0	25.52	357.49	2,933.8	391.5	-47.9	391.7	0.00	0.00	0.00
3,100.0	25.52	357.49	3,024.0	434.6	-49.8	434.7	0.00	0.00	0.00
3,200.0	25.52	357.49	3,114.3	477.6	-51.7	477.8	0.00	0.00	0.00
3,300.0	25.52	357.49	3,204.5	520.7	-53.6	520.8	0.00	0.00	0.00
3,400.0	25.52	357.49	3,294.8	563.7	-55.4	563.9	0.00	0.00	0.00
3,500.0	25.52	357.49	3,385.0	606.7	-57.3	606.9	0.00	0.00	0.00
3,600.0	25.52	357.49	3,475.2	649.8	-59.2	650.0	0.00	0.00	0.00
3,700.0	25.52	357.49	3,565.5	692.8	-61.1	693.1	0.00	0.00	0.00
3,800.0	25.52	357.49	3,655.7	735.9	-63.0	736.1	0.00	0.00	0.00
3,900.0	25.52	357.49	3,746.0	778.9	-64.9	779.2	0.00	0.00	0.00
3,998.7	25.52	357.49	3,835.0	821.4	-66.8	821.6	0.00	0.00	0.00
SUSSEX									
4,000.0	25.52	357.49	3,836.2	822.0	-66.8	822.2	0.00	0.00	0.00
4,100.0	25.52	357.49	3,926.4	865.0	-68.7	865.3	0.00	0.00	0.00
4,200.0	25.52	357.49	4,016.7	908.1	-70.6	908.3	0.00	0.00	0.00
4,300.0	25.52	357.49	4,106.9	951.1	-72.5	951.4	0.00	0.00	0.00
4,400.0	25.52	357.49	4,197.2	994.2	-74.4	994.4	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 8N-20-20N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5105.0usft
Project:	Weld County	MD Reference:	KB 25' @ 5105.0usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 8N-20-20N	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)
4,414.2	25.52	357.49	4,210.0	1,000.3	-74.6	1,000.6	0.00	0.00	0.00
SHANNON									
4,500.0	25.52	357.49	4,287.4	1,037.2	-76.2	1,037.5	0.00	0.00	0.00
4,600.0	25.52	357.49	4,377.6	1,080.3	-78.1	1,080.5	0.00	0.00	0.00
4,700.0	25.52	357.49	4,467.9	1,123.3	-80.0	1,123.6	0.00	0.00	0.00
4,800.0	25.52	357.49	4,558.1	1,166.4	-81.9	1,166.7	0.00	0.00	0.00
4,900.0	25.52	357.49	4,648.4	1,209.4	-83.8	1,209.7	0.00	0.00	0.00
5,000.0	25.52	357.49	4,738.6	1,252.5	-85.7	1,252.8	0.00	0.00	0.00
5,100.0	25.52	357.49	4,828.8	1,295.5	-87.6	1,295.8	0.00	0.00	0.00
5,200.0	25.52	357.49	4,919.1	1,338.6	-89.5	1,338.9	0.00	0.00	0.00
5,300.0	25.52	357.49	5,009.3	1,381.6	-91.4	1,381.9	0.00	0.00	0.00
5,400.0	25.52	357.49	5,099.6	1,424.7	-93.3	1,425.0	0.00	0.00	0.00
5,500.0	25.52	357.49	5,189.8	1,467.7	-95.1	1,468.0	0.00	0.00	0.00
5,600.0	25.52	357.49	5,280.0	1,510.8	-97.0	1,511.1	0.00	0.00	0.00
5,700.0	25.52	357.49	5,370.3	1,553.8	-98.9	1,554.2	0.00	0.00	0.00
5,800.0	25.52	357.49	5,460.5	1,596.9	-100.8	1,597.2	0.00	0.00	0.00
5,900.0	25.52	357.49	5,550.8	1,639.9	-102.7	1,640.3	0.00	0.00	0.00
6,000.0	25.52	357.49	5,641.0	1,683.0	-104.6	1,683.3	0.00	0.00	0.00
6,100.0	25.52	357.49	5,731.2	1,726.0	-106.5	1,726.4	0.00	0.00	0.00
6,200.0	25.52	357.49	5,821.5	1,769.1	-108.4	1,769.4	0.00	0.00	0.00
6,300.0	25.52	357.49	5,911.7	1,812.1	-110.3	1,812.5	0.00	0.00	0.00
6,400.0	25.52	357.49	6,002.0	1,855.2	-112.2	1,855.5	0.00	0.00	0.00
6,500.0	25.52	357.49	6,092.2	1,898.2	-114.0	1,898.6	0.00	0.00	0.00
6,600.0	25.52	357.49	6,182.4	1,941.3	-115.9	1,941.6	0.00	0.00	0.00
6,700.0	25.52	357.49	6,272.7	1,984.3	-117.8	1,984.7	0.00	0.00	0.00
6,778.0	25.52	357.49	6,343.1	2,017.9	-119.3	2,018.3	0.00	0.00	0.00
KOP, BUILD 12°/100'									
6,800.0	28.16	357.81	6,362.7	2,027.8	-119.7	2,028.2	12.00	11.98	1.47
6,825.0	31.16	358.11	6,384.4	2,040.2	-120.1	2,040.6	12.00	11.98	1.22
6,850.0	34.15	358.37	6,405.5	2,053.6	-120.6	2,054.1	12.00	11.99	1.03
6,875.0	37.15	358.59	6,425.8	2,068.2	-120.9	2,068.6	12.00	11.99	0.88
6,900.0	40.15	358.78	6,445.3	2,083.8	-121.3	2,084.2	12.00	11.99	0.77
6,925.0	43.14	358.95	6,464.0	2,100.4	-121.6	2,100.8	12.00	11.99	0.68
6,950.0	46.14	359.10	6,481.8	2,118.0	-121.9	2,118.4	12.00	11.99	0.61
6,975.0	49.14	359.24	6,498.6	2,136.5	-122.2	2,136.9	12.00	11.99	0.55
7,000.0	52.14	359.37	6,514.5	2,155.8	-122.4	2,156.2	12.00	11.99	0.50
7,025.0	55.14	359.48	6,529.3	2,175.9	-122.6	2,176.3	12.00	11.99	0.46
7,050.0	58.14	359.59	6,543.0	2,196.8	-122.8	2,197.2	12.00	11.99	0.43
7,075.0	61.14	359.69	6,555.7	2,218.4	-122.9	2,218.8	12.00	11.99	0.40
7,100.0	64.13	359.78	6,567.2	2,240.6	-123.0	2,241.0	12.00	12.00	0.38
7,125.0	67.13	359.87	6,577.5	2,263.3	-123.1	2,263.7	12.00	12.00	0.36
7,150.0	70.13	359.96	6,586.6	2,286.6	-123.1	2,287.0	12.00	12.00	0.34
7,175.0	73.13	0.04	6,594.4	2,310.3	-123.1	2,310.7	12.00	12.00	0.33
7,200.0	76.13	0.12	6,601.1	2,334.4	-123.1	2,334.8	12.00	12.00	0.32
7,217.7	78.25	0.18	6,605.0	2,351.7	-123.1	2,352.1	12.00	12.00	0.31
NIOBRARA									
7,225.0	79.13	0.20	6,606.4	2,358.9	-123.0	2,359.3	12.00	12.00	0.31
7,250.0	82.13	0.28	6,610.5	2,383.5	-122.9	2,383.9	12.00	12.00	0.31
7,275.0	85.13	0.35	6,613.3	2,408.4	-122.8	2,408.8	12.00	12.00	0.30
7,300.0	88.13	0.43	6,614.7	2,433.3	-122.6	2,433.7	12.00	12.00	0.30
7,315.6	90.00	0.48	6,615.0	2,448.9	-122.5	2,449.3	12.00	12.00	0.30
LP @ 90° INC, 0.48° AZM HOLD									
7,400.0	90.00	0.48	6,615.0	2,533.3	-121.8	2,533.7	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 8N-20-20N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5105.0usft
Project:	Weld County	MD Reference:	KB 25' @ 5105.0usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 8N-20-20N	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)
7,500.0	90.00	0.48	6,615.0	2,633.3	-121.0	2,633.7	0.00	0.00	0.00
7,600.0	90.00	0.48	6,615.0	2,733.3	-120.1	2,733.7	0.00	0.00	0.00
7,700.0	90.00	0.48	6,615.0	2,833.3	-119.3	2,833.7	0.00	0.00	0.00
7,800.0	90.00	0.48	6,615.0	2,933.3	-118.5	2,933.7	0.00	0.00	0.00
7,900.0	90.00	0.48	6,615.0	3,033.3	-117.6	3,033.7	0.00	0.00	0.00
8,000.0	90.00	0.48	6,615.0	3,133.3	-116.8	3,133.7	0.00	0.00	0.00
8,100.0	90.00	0.48	6,615.0	3,233.3	-116.0	3,233.7	0.00	0.00	0.00
8,200.0	90.00	0.48	6,615.0	3,333.3	-115.1	3,333.7	0.00	0.00	0.00
8,300.0	90.00	0.48	6,615.0	3,433.3	-114.3	3,433.7	0.00	0.00	0.00
8,400.0	90.00	0.48	6,615.0	3,533.3	-113.5	3,533.6	0.00	0.00	0.00
8,500.0	90.00	0.48	6,615.0	3,633.3	-112.6	3,633.6	0.00	0.00	0.00
8,600.0	90.00	0.48	6,615.0	3,733.3	-111.8	3,733.6	0.00	0.00	0.00
8,700.0	90.00	0.48	6,615.0	3,833.3	-111.0	3,833.6	0.00	0.00	0.00
8,800.0	90.00	0.48	6,615.0	3,933.3	-110.2	3,933.6	0.00	0.00	0.00
8,900.0	90.00	0.48	6,615.0	4,033.3	-109.3	4,033.6	0.00	0.00	0.00
9,000.0	90.00	0.48	6,615.0	4,133.2	-108.5	4,133.6	0.00	0.00	0.00
9,100.0	90.00	0.48	6,615.0	4,233.2	-107.7	4,233.6	0.00	0.00	0.00
9,200.0	90.00	0.48	6,615.0	4,333.2	-106.8	4,333.6	0.00	0.00	0.00
9,300.0	90.00	0.48	6,615.0	4,433.2	-106.0	4,433.6	0.00	0.00	0.00
9,400.0	90.00	0.48	6,615.0	4,533.2	-105.2	4,533.6	0.00	0.00	0.00
9,500.0	90.00	0.48	6,615.0	4,633.2	-104.3	4,633.6	0.00	0.00	0.00
9,600.0	90.00	0.48	6,615.0	4,733.2	-103.5	4,733.6	0.00	0.00	0.00
9,700.0	90.00	0.48	6,615.0	4,833.2	-102.7	4,833.6	0.00	0.00	0.00
9,800.0	90.00	0.48	6,615.0	4,933.2	-101.8	4,933.5	0.00	0.00	0.00
9,900.0	90.00	0.48	6,615.0	5,033.2	-101.0	5,033.5	0.00	0.00	0.00
10,000.0	90.00	0.48	6,615.0	5,133.2	-100.2	5,133.5	0.00	0.00	0.00
10,100.0	90.00	0.48	6,615.0	5,233.2	-99.3	5,233.5	0.00	0.00	0.00
10,200.0	90.00	0.48	6,615.0	5,333.2	-98.5	5,333.5	0.00	0.00	0.00
10,300.0	90.00	0.48	6,615.0	5,433.2	-97.7	5,433.5	0.00	0.00	0.00
10,400.0	90.00	0.48	6,615.0	5,533.2	-96.8	5,533.5	0.00	0.00	0.00
10,500.0	90.00	0.48	6,615.0	5,633.2	-96.0	5,633.5	0.00	0.00	0.00
10,600.0	90.00	0.48	6,615.0	5,733.2	-95.2	5,733.5	0.00	0.00	0.00
10,700.0	90.00	0.48	6,615.0	5,833.2	-94.4	5,833.5	0.00	0.00	0.00
10,800.0	90.00	0.48	6,615.0	5,933.2	-93.5	5,933.5	0.00	0.00	0.00
10,900.0	90.00	0.48	6,615.0	6,033.2	-92.7	6,033.5	0.00	0.00	0.00
11,000.0	90.00	0.48	6,615.0	6,133.2	-91.9	6,133.5	0.00	0.00	0.00
11,100.0	90.00	0.48	6,615.0	6,233.2	-91.0	6,233.5	0.00	0.00	0.00
11,200.0	90.00	0.48	6,615.0	6,333.2	-90.2	6,333.4	0.00	0.00	0.00
11,300.0	90.00	0.48	6,615.0	6,433.2	-89.4	6,433.4	0.00	0.00	0.00
11,400.0	90.00	0.48	6,615.0	6,533.2	-88.5	6,533.4	0.00	0.00	0.00
11,500.0	90.00	0.48	6,615.0	6,633.2	-87.7	6,633.4	0.00	0.00	0.00
11,600.0	90.00	0.48	6,615.0	6,733.2	-86.9	6,733.4	0.00	0.00	0.00
11,700.0	90.00	0.48	6,615.0	6,833.2	-86.0	6,833.4	0.00	0.00	0.00
11,800.0	90.00	0.48	6,615.0	6,933.2	-85.2	6,933.4	0.00	0.00	0.00
11,900.0	90.00	0.48	6,615.0	7,033.1	-84.4	7,033.4	0.00	0.00	0.00
12,000.0	90.00	0.48	6,615.0	7,133.1	-83.5	7,133.4	0.00	0.00	0.00
12,100.0	90.00	0.48	6,615.0	7,233.1	-82.7	7,233.4	0.00	0.00	0.00
12,200.0	90.00	0.48	6,615.0	7,333.1	-81.9	7,333.4	0.00	0.00	0.00
12,300.0	90.00	0.48	6,615.0	7,433.1	-81.1	7,433.4	0.00	0.00	0.00
12,400.0	90.00	0.48	6,615.0	7,533.1	-80.2	7,533.4	0.00	0.00	0.00
12,500.0	90.00	0.48	6,615.0	7,633.1	-79.4	7,633.4	0.00	0.00	0.00
12,600.0	90.00	0.48	6,615.0	7,733.1	-78.6	7,733.4	0.00	0.00	0.00
12,700.0	90.00	0.48	6,615.0	7,833.1	-77.7	7,833.3	0.00	0.00	0.00
12,800.0	90.00	0.48	6,615.0	7,933.1	-76.9	7,933.3	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 8N-20-20N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5105.0usft
Project:	Weld County	MD Reference:	KB 25' @ 5105.0usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 8N-20-20N	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)
12,900.0	90.00	0.48	6,615.0	8,033.1	-76.1	8,033.3	0.00	0.00	0.00
13,000.0	90.00	0.48	6,615.0	8,133.1	-75.2	8,133.3	0.00	0.00	0.00
13,100.0	90.00	0.48	6,615.0	8,233.1	-74.4	8,233.3	0.00	0.00	0.00
13,200.0	90.00	0.48	6,615.0	8,333.1	-73.6	8,333.3	0.00	0.00	0.00
13,300.0	90.00	0.48	6,615.0	8,433.1	-72.7	8,433.3	0.00	0.00	0.00
13,400.0	90.00	0.48	6,615.0	8,533.1	-71.9	8,533.3	0.00	0.00	0.00
13,500.0	90.00	0.48	6,615.0	8,633.1	-71.1	8,633.3	0.00	0.00	0.00
13,600.0	90.00	0.48	6,615.0	8,733.1	-70.2	8,733.3	0.00	0.00	0.00
13,700.0	90.00	0.48	6,615.0	8,833.1	-69.4	8,833.3	0.00	0.00	0.00
13,800.0	90.00	0.48	6,615.0	8,933.1	-68.6	8,933.3	0.00	0.00	0.00
13,900.0	90.00	0.48	6,615.0	9,033.1	-67.8	9,033.3	0.00	0.00	0.00
14,000.0	90.00	0.48	6,615.0	9,133.1	-66.9	9,133.3	0.00	0.00	0.00
14,100.0	90.00	0.48	6,615.0	9,233.1	-66.1	9,233.2	0.00	0.00	0.00
14,200.0	90.00	0.48	6,615.0	9,333.1	-65.3	9,333.2	0.00	0.00	0.00
14,300.0	90.00	0.48	6,615.0	9,433.1	-64.4	9,433.2	0.00	0.00	0.00
14,400.0	90.00	0.48	6,615.0	9,533.1	-63.6	9,533.2	0.00	0.00	0.00
14,500.0	90.00	0.48	6,615.0	9,633.1	-62.8	9,633.2	0.00	0.00	0.00
14,600.0	90.00	0.48	6,615.0	9,733.1	-61.9	9,733.2	0.00	0.00	0.00
14,700.0	90.00	0.48	6,615.0	9,833.1	-61.1	9,833.2	0.00	0.00	0.00
14,800.0	90.00	0.48	6,615.0	9,933.0	-60.3	9,933.2	0.00	0.00	0.00
14,900.0	90.00	0.48	6,615.0	10,033.0	-59.4	10,033.2	0.00	0.00	0.00
15,000.0	90.00	0.48	6,615.0	10,133.0	-58.6	10,133.2	0.00	0.00	0.00
15,100.0	90.00	0.48	6,615.0	10,233.0	-57.8	10,233.2	0.00	0.00	0.00
15,200.0	90.00	0.48	6,615.0	10,333.0	-56.9	10,333.2	0.00	0.00	0.00
15,300.0	90.00	0.48	6,615.0	10,433.0	-56.1	10,433.2	0.00	0.00	0.00
15,400.0	90.00	0.48	6,615.0	10,533.0	-55.3	10,533.2	0.00	0.00	0.00
15,500.0	90.00	0.48	6,615.0	10,633.0	-54.4	10,633.1	0.00	0.00	0.00
15,600.0	90.00	0.48	6,615.0	10,733.0	-53.6	10,733.1	0.00	0.00	0.00
15,700.0	90.00	0.48	6,615.0	10,833.0	-52.8	10,833.1	0.00	0.00	0.00
15,800.0	90.00	0.48	6,615.0	10,933.0	-52.0	10,933.1	0.00	0.00	0.00
15,900.0	90.00	0.48	6,615.0	11,033.0	-51.1	11,033.1	0.00	0.00	0.00
16,000.0	90.00	0.48	6,615.0	11,133.0	-50.3	11,133.1	0.00	0.00	0.00
16,100.0	90.00	0.48	6,615.0	11,233.0	-49.5	11,233.1	0.00	0.00	0.00
16,200.0	90.00	0.48	6,615.0	11,333.0	-48.6	11,333.1	0.00	0.00	0.00
16,300.0	90.00	0.48	6,615.0	11,433.0	-47.8	11,433.1	0.00	0.00	0.00
16,400.0	90.00	0.48	6,615.0	11,533.0	-47.0	11,533.1	0.00	0.00	0.00
16,500.0	90.00	0.48	6,615.0	11,633.0	-46.1	11,633.1	0.00	0.00	0.00
16,600.0	90.00	0.48	6,615.0	11,733.0	-45.3	11,733.1	0.00	0.00	0.00
16,700.0	90.00	0.48	6,615.0	11,833.0	-44.5	11,833.1	0.00	0.00	0.00
16,800.0	90.00	0.48	6,615.0	11,933.0	-43.6	11,933.1	0.00	0.00	0.00
16,900.0	90.00	0.48	6,615.0	12,033.0	-42.8	12,033.1	0.00	0.00	0.00
16,972.8	90.00	0.48	6,615.0	12,105.8	-42.2	12,105.9	0.00	0.00	0.00
TD at 16972.8' MD									

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 8N-20-20N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5105.0usft
Project:	Weld County	MD Reference:	KB 25' @ 5105.0usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 8N-20-20N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
WALT 8N-20-20N-LP	0.00	0.00	6,615.0	2,448.9	-122.5	1,455,702.16	3,164,018.74	40° 34' 58.087 N	104° 54' 34.160 W
- plan hits target center									
- Point									
WALT 8N-20-20N-PBHL	0.00	0.00	6,615.0	12,105.8	-42.2	1,465,359.37	3,164,034.67	40° 36' 33.512 N	104° 54' 33.120 W
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
3,998.7	3,835.0	SUSSEX				
4,414.2	4,210.0	SHANNON				
7,217.7	6,605.0	NIOBRARA				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment	
1,350.0	1,350.0	0.0	0.0	BUILD 2°/100'	
1,600.3	1,600.0	9.5	-5.5	HOLD 5.01° INC	
1,700.3	1,699.6	17.0	-9.8	DROP 2°/100'	
2,760.4	2,717.6	288.4	-43.4	HOLD VERTICAL	
6,778.0	6,343.1	2,017.9	-119.3	KOP, BUILD 12°/100'	
7,315.6	6,615.0	2,448.9	-122.5	LP @ 90° INC, 0.48° AZM HOLD	
16,972.8	6,615.0	12,105.8	-42.2	TD at 16972.8' MD	