

EXTRACTION OIL & GAS

**Weld County
Sec 17-T7N-R67W
WALT 16E-20-3C**

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

30 May, 2017



WELL DETAILS: WALT 16E-20-3C

+N/-S	+E/-W	Northing	Easting	5080.0	Latitude	Longitude	Slot
0.0	0.0	1453226.06	3164157.46	40° 34'	33.611° N	104° 54'	32.576° W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1250.0	0.00	0.00	1250.0	0.0	0.0	0.00	0.00	0.0	
3	1600.9	7.02	20.00	1600.0	20.2	7.3	2.00	10.1	15.9	
4	1700.9	7.02	20.00	1699.3	31.6	11.5	0.00	15.9	54.6	
5	2193.1	16.75	12.03	2180.4	129.5	36.6	2.00	-13.51	495.5	
6	6636.1	16.75	12.03	6434.9	1381.7	303.5	0.00	0.00	1030.0	
7	7423.4	90.00	90.18	6905.0	1518.5	823.9	11.00	78.64	4097.6	
8	10523.4	90.00	90.18	6905.0	1508.7	3923.9	0.00	0.00	4405.1	
9	10832.4	90.00	84.00	6905.0	1524.4	4232.3	2.00	-90.00	4505.1	
10	10932.4	90.00	84.00	6905.0	1534.9	4331.8	0.00	0.00	4834.2	
11	11263.3	90.00	90.62	6905.0	1550.4	4662.0	2.00	90.00	10541.4	
12	17037.4	90.00	90.62	6905.0	1488.3	10435.8	0.00	0.00		

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3835.0	3921.0	SUSSEX
4210.0	4312.6	SHANNON
6605.0	6819.4	NIORARA
6870.0	7227.3	FORT HAYS
6905.0	7423.4	CODELL

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

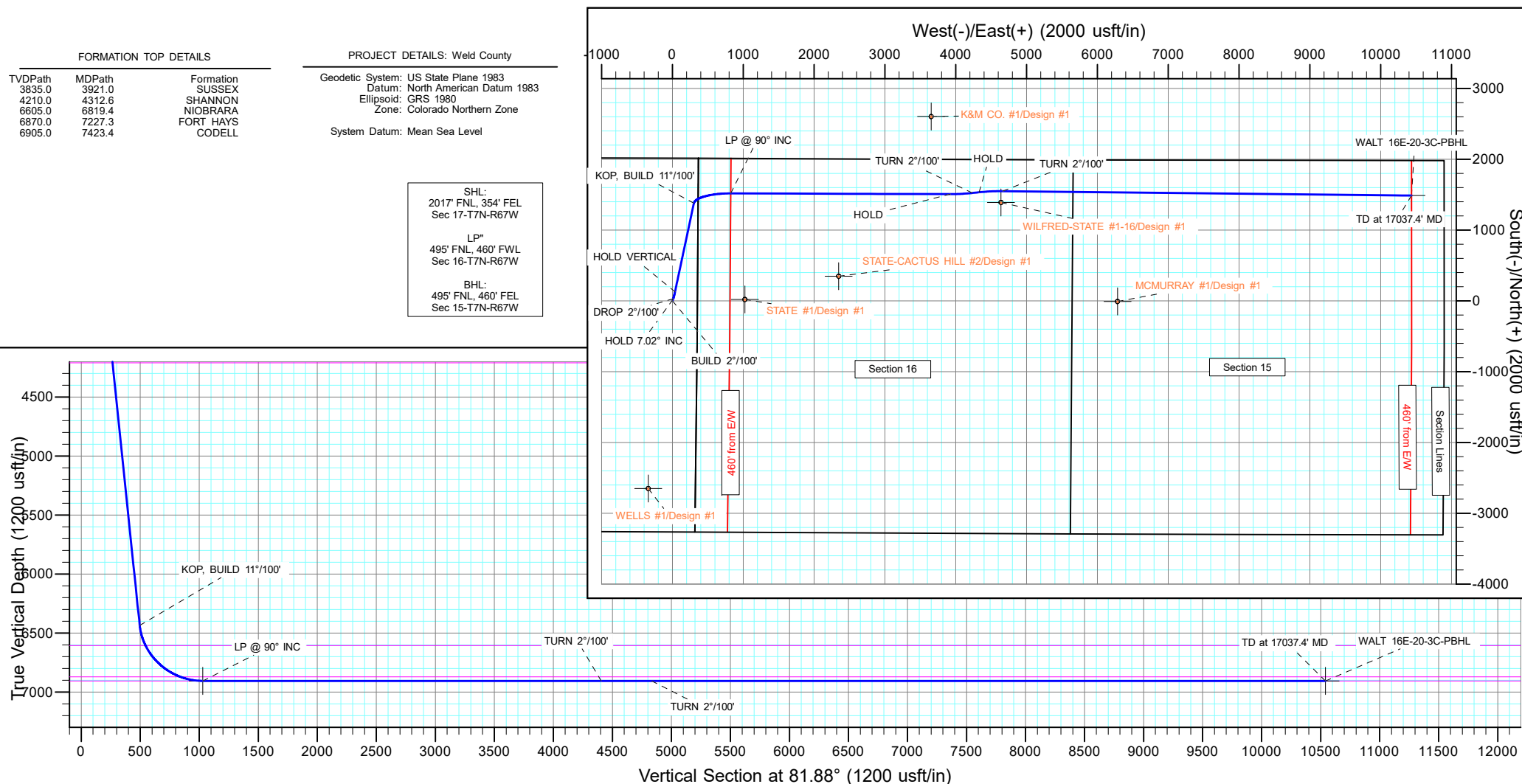
SHL:
2017' FNL, 354' FEL
Sec 17-T7N-R67W
LP:
495' FNL, 460' FWL
Sec 16-T7N-R67W
BHL:
495' FNL, 460' FEL
Sec 15-T7N-R67W

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1250.0	0.00	0.00	1250.0	0.0	0.0	0.0	0.0	BUILD 2°/100'
1600.9	7.02	20.00	1600.0	20.2	7.3	10.1	21.5	HOLD 7.02° INC
1700.9	7.02	20.00	1699.3	31.6	11.5	15.9	33.7	DROP 2°/100'
2193.1	16.75	12.03	2180.4	129.5	36.6	54.6	134.8	HOLD VERTICAL
6636.1	16.75	12.03	6434.9	1381.7	303.5	495.5	1415.1	KOP, BUILD 11°/100'
7423.4	90.00	90.18	6905.0	1518.5	823.9	1030.0	1973.1	LP @ 90° INC
10523.4	90.00	90.18	6905.0	1508.7	3923.9	4097.6	5073.1	HOLD
10832.4	90.00	84.00	6905.0	1524.4	4232.3	4405.1	5382.1	TURN 2°/100'
10932.4	90.00	84.00	6905.0	1534.9	4331.8	4505.1	5482.1	HOLD
11263.3	90.00	90.62	6905.0	1550.4	4662.0	4834.2	5813.0	TURN 2°/100'

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
WALT 16E-20-3C-LP	6905.0	1518.5	823.9	1454749.99	3164971.18	40° 34' 48.616° N	104° 54' 21.899° W	Point
- plan hits target center								
WALT 16E-20-3C-PBHL	6905.0	1488.3	10435.8	1454783.82	3174583.14	40° 34' 48.295° N	104° 52' 17.324° W	Point
- plan hits target center								
WALT 16E-20-3C-PBHL								



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 16E-20-3C
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 16E-20-3C	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 16E-20-3C					
Well Position	+N/-S	-2,015.8 usft	Northing:	1,453,226.06 usft	Latitude:	40° 34' 33.611 N
	+E/-W	-367.5 usft	Easting:	3,164,157.46 usft	Longitude:	104° 54' 32.576 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	52,476.47712272

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	81.88	

Plan Survey Tool Program	Date	5/30/2017			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	17,037.4	PROPOSAL 1 (ORIGINAL WELL	MWD OWSG	
			OWSG MWD - Standard		

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Project:	Weld County	MD Reference:	KB 25' @ 5105.0usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 16E-20-3C	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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,250.0	0.00	0.00	1,250.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,600.9	7.02	20.00	1,600.0	20.2	7.3	2.00	2.00	0.00	20.00	
1,700.9	7.02	20.00	1,699.3	31.6	11.5	0.00	0.00	0.00	0.00	
2,193.1	16.75	12.03	2,180.4	129.5	36.6	2.00	1.98	-1.62	-13.51	
6,636.1	16.75	12.03	6,434.9	1,381.7	303.5	0.00	0.00	0.00	0.00	
7,423.4	90.00	90.18	6,905.0	1,518.5	823.9	11.00	9.30	9.93	78.64	WALT 16E-20-3C-LP
10,523.4	90.00	90.18	6,905.0	1,508.7	3,923.9	0.00	0.00	0.00	0.00	
10,832.4	90.00	84.00	6,905.0	1,524.4	4,232.3	2.00	0.00	-2.00	-90.00	
10,932.4	90.00	84.00	6,905.0	1,534.9	4,331.8	0.00	0.00	0.00	0.00	
11,263.3	90.00	90.62	6,905.0	1,550.4	4,662.0	2.00	0.00	2.00	90.00	WALT 16E-20-3C-PBI
17,037.4	90.00	90.62	6,905.0	1,488.3	10,435.8	0.00	0.00	0.00	0.00	WALT 16E-20-3C-PBI

Planning Report

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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 16E-20-3C	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
1,250.0	0.00	0.00	1,250.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,300.0	1.00	20.00	1,300.0	0.4	0.1	0.2	2.00	2.00	0.00
1,400.0	3.00	20.00	1,399.9	3.7	1.3	1.9	2.00	2.00	0.00
1,500.0	5.00	20.00	1,499.7	10.2	3.7	5.1	2.00	2.00	0.00
1,600.9	7.02	20.00	1,600.0	20.2	7.3	10.1	2.00	2.00	0.00
Start 100.0 hold at 1600.9 MD									
1,700.9	7.02	20.00	1,699.3	31.6	11.5	15.9	0.00	0.00	0.00
Start DLS 2.00 TFO -13.51									
1,800.0	8.96	17.02	1,797.4	44.7	15.8	22.0	2.00	1.96	-3.00
1,900.0	10.93	15.09	1,895.9	61.3	20.6	29.0	2.00	1.97	-1.93
2,000.0	12.91	13.74	1,993.7	81.3	25.7	36.9	2.00	1.98	-1.35
2,100.0	14.90	12.75	2,090.8	104.7	31.2	45.7	2.00	1.99	-0.99
2,193.1	16.75	12.03	2,180.4	129.5	36.6	54.6	2.00	1.99	-0.77
Start 4443.0 hold at 2193.1 MD									
2,200.0	16.75	12.03	2,187.0	131.4	37.1	55.2	0.00	0.00	0.00
2,300.0	16.75	12.03	2,282.7	159.6	43.1	65.2	0.00	0.00	0.00
2,400.0	16.75	12.03	2,378.5	187.8	49.1	75.1	0.00	0.00	0.00
2,500.0	16.75	12.03	2,474.3	216.0	55.1	85.0	0.00	0.00	0.00
2,600.0	16.75	12.03	2,570.0	244.2	61.1	94.9	0.00	0.00	0.00
2,700.0	16.75	12.03	2,665.8	272.4	67.1	104.9	0.00	0.00	0.00
2,800.0	16.75	12.03	2,761.5	300.5	73.1	114.8	0.00	0.00	0.00
2,900.0	16.75	12.03	2,857.3	328.7	79.1	124.7	0.00	0.00	0.00
3,000.0	16.75	12.03	2,953.0	356.9	85.1	134.6	0.00	0.00	0.00
3,100.0	16.75	12.03	3,048.8	385.1	91.1	144.6	0.00	0.00	0.00
3,200.0	16.75	12.03	3,144.6	413.3	97.1	154.5	0.00	0.00	0.00
3,300.0	16.75	12.03	3,240.3	441.5	103.1	164.4	0.00	0.00	0.00
3,400.0	16.75	12.03	3,336.1	469.6	109.1	174.3	0.00	0.00	0.00
3,500.0	16.75	12.03	3,431.8	497.8	115.1	184.3	0.00	0.00	0.00
3,600.0	16.75	12.03	3,527.6	526.0	121.1	194.2	0.00	0.00	0.00
3,700.0	16.75	12.03	3,623.4	554.2	127.1	204.1	0.00	0.00	0.00
3,800.0	16.75	12.03	3,719.1	582.4	133.1	214.0	0.00	0.00	0.00
3,900.0	16.75	12.03	3,814.9	610.6	139.2	224.0	0.00	0.00	0.00
3,921.0	16.75	12.03	3,835.0	616.5	140.4	226.0	0.00	0.00	0.00
SUSSEX									
4,000.0	16.75	12.03	3,910.6	638.7	145.2	233.9	0.00	0.00	0.00
4,100.0	16.75	12.03	4,006.4	666.9	151.2	243.8	0.00	0.00	0.00
4,200.0	16.75	12.03	4,102.1	695.1	157.2	253.7	0.00	0.00	0.00
4,300.0	16.75	12.03	4,197.9	723.3	163.2	263.7	0.00	0.00	0.00
4,312.6	16.75	12.03	4,210.0	726.8	163.9	264.9	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 16E-20-3C
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 16E-20-3C	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)
SHANNON									
4,400.0	16.75	12.03	4,293.7	751.5	169.2	273.6	0.00	0.00	0.00
4,500.0	16.75	12.03	4,389.4	779.7	175.2	283.5	0.00	0.00	0.00
4,600.0	16.75	12.03	4,485.2	807.8	181.2	293.4	0.00	0.00	0.00
4,700.0	16.75	12.03	4,580.9	836.0	187.2	303.4	0.00	0.00	0.00
4,800.0	16.75	12.03	4,676.7	864.2	193.2	313.3	0.00	0.00	0.00
4,900.0	16.75	12.03	4,772.5	892.4	199.2	323.2	0.00	0.00	0.00
5,000.0	16.75	12.03	4,868.2	920.6	205.2	333.1	0.00	0.00	0.00
5,100.0	16.75	12.03	4,964.0	948.8	211.2	343.1	0.00	0.00	0.00
5,200.0	16.75	12.03	5,059.7	976.9	217.2	353.0	0.00	0.00	0.00
5,300.0	16.75	12.03	5,155.5	1,005.1	223.2	362.9	0.00	0.00	0.00
5,400.0	16.75	12.03	5,251.2	1,033.3	229.2	372.8	0.00	0.00	0.00
5,500.0	16.75	12.03	5,347.0	1,061.5	235.2	382.8	0.00	0.00	0.00
5,600.0	16.75	12.03	5,442.8	1,089.7	241.3	392.7	0.00	0.00	0.00
5,700.0	16.75	12.03	5,538.5	1,117.9	247.3	402.6	0.00	0.00	0.00
5,800.0	16.75	12.03	5,634.3	1,146.0	253.3	412.5	0.00	0.00	0.00
5,900.0	16.75	12.03	5,730.0	1,174.2	259.3	422.5	0.00	0.00	0.00
6,000.0	16.75	12.03	5,825.8	1,202.4	265.3	432.4	0.00	0.00	0.00
6,100.0	16.75	12.03	5,921.6	1,230.6	271.3	442.3	0.00	0.00	0.00
6,200.0	16.75	12.03	6,017.3	1,258.8	277.3	452.2	0.00	0.00	0.00
6,300.0	16.75	12.03	6,113.1	1,287.0	283.3	462.1	0.00	0.00	0.00
6,400.0	16.75	12.03	6,208.8	1,315.1	289.3	472.1	0.00	0.00	0.00
6,500.0	16.75	12.03	6,304.6	1,343.3	295.3	482.0	0.00	0.00	0.00
6,600.0	16.75	12.03	6,400.3	1,371.5	301.3	491.9	0.00	0.00	0.00
6,636.1	16.75	12.03	6,434.9	1,381.7	303.5	495.5	0.00	0.00	0.00
Start DLS 11.00 TFO 78.64									
6,650.0	17.11	17.13	6,448.2	1,385.6	304.5	497.1	11.00	2.63	36.69
6,700.0	19.36	33.25	6,495.7	1,399.6	311.2	505.7	11.00	4.50	32.23
6,750.0	22.71	45.46	6,542.4	1,413.3	322.6	518.9	11.00	6.70	24.42
6,800.0	26.75	54.42	6,587.8	1,426.6	338.7	536.7	11.00	8.07	17.93
6,819.4	28.44	57.23	6,605.0	1,431.6	346.1	544.8	11.00	8.71	14.50
NIOBRARA									
6,850.0	31.21	61.09	6,631.6	1,439.4	359.2	558.8	11.00	9.05	12.60
6,900.0	35.93	66.20	6,673.2	1,451.6	384.0	585.1	11.00	9.45	10.22
6,950.0	40.82	70.25	6,712.4	1,463.1	412.8	615.2	11.00	9.79	8.10
7,000.0	45.83	73.56	6,748.8	1,473.7	445.4	649.0	11.00	10.02	6.62
7,050.0	50.93	76.35	6,782.0	1,483.3	481.5	686.1	11.00	10.18	5.57
7,100.0	56.07	78.75	6,811.7	1,492.0	520.7	726.2	11.00	10.30	4.82
7,150.0	61.26	80.89	6,837.7	1,499.5	562.8	768.8	11.00	10.38	4.27
7,200.0	66.48	82.82	6,859.7	1,505.8	607.2	813.7	11.00	10.44	3.86
7,227.3	69.35	83.81	6,870.0	1,508.8	632.3	839.0	11.00	10.48	3.62
FORT HAYS									
7,250.0	71.73	84.60	6,877.6	1,510.9	653.6	860.4	11.00	10.49	3.50
7,300.0	76.98	86.28	6,891.0	1,514.8	701.6	908.4	11.00	10.52	3.35
7,350.0	82.25	87.88	6,900.0	1,517.3	750.7	957.4	11.00	10.54	3.21
7,400.0	87.53	89.45	6,904.5	1,518.4	800.4	1,006.8	11.00	10.55	3.13
7,423.4	90.00	90.18	6,905.0	1,518.5	823.9	1,030.0	11.00	10.55	3.11
Start 3100.0 hold at 7423.4 MD - CODELL									
7,500.0	90.00	90.18	6,905.0	1,518.2	900.4	1,105.8	0.00	0.00	0.00
7,600.0	90.00	90.18	6,905.0	1,517.9	1,000.4	1,204.7	0.00	0.00	0.00
7,700.0	90.00	90.18	6,905.0	1,517.6	1,100.4	1,303.7	0.00	0.00	0.00
7,800.0	90.00	90.18	6,905.0	1,517.3	1,200.4	1,402.6	0.00	0.00	0.00
7,900.0	90.00	90.18	6,905.0	1,517.0	1,300.4	1,501.6	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 16E-20-3C
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 16E-20-3C	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)	
8,000.0	90.00	90.18	6,905.0	1,516.7	1,400.4	1,600.5	0.00	0.00	0.00	
8,100.0	90.00	90.18	6,905.0	1,516.4	1,500.4	1,699.5	0.00	0.00	0.00	
8,200.0	90.00	90.18	6,905.0	1,516.0	1,600.4	1,798.4	0.00	0.00	0.00	
8,300.0	90.00	90.18	6,905.0	1,515.7	1,700.4	1,897.4	0.00	0.00	0.00	
8,400.0	90.00	90.18	6,905.0	1,515.4	1,800.4	1,996.3	0.00	0.00	0.00	
8,500.0	90.00	90.18	6,905.0	1,515.1	1,900.4	2,095.3	0.00	0.00	0.00	
8,600.0	90.00	90.18	6,905.0	1,514.8	2,000.4	2,194.2	0.00	0.00	0.00	
8,700.0	90.00	90.18	6,905.0	1,514.5	2,100.4	2,293.2	0.00	0.00	0.00	
8,800.0	90.00	90.18	6,905.0	1,514.2	2,200.4	2,392.2	0.00	0.00	0.00	
8,900.0	90.00	90.18	6,905.0	1,513.8	2,300.4	2,491.1	0.00	0.00	0.00	
9,000.0	90.00	90.18	6,905.0	1,513.5	2,400.4	2,590.1	0.00	0.00	0.00	
9,100.0	90.00	90.18	6,905.0	1,513.2	2,500.4	2,689.0	0.00	0.00	0.00	
9,200.0	90.00	90.18	6,905.0	1,512.9	2,600.4	2,788.0	0.00	0.00	0.00	
9,300.0	90.00	90.18	6,905.0	1,512.6	2,700.4	2,886.9	0.00	0.00	0.00	
9,400.0	90.00	90.18	6,905.0	1,512.3	2,800.4	2,985.9	0.00	0.00	0.00	
9,500.0	90.00	90.18	6,905.0	1,512.0	2,900.4	3,084.8	0.00	0.00	0.00	
9,600.0	90.00	90.18	6,905.0	1,511.6	3,000.4	3,183.8	0.00	0.00	0.00	
9,700.0	90.00	90.18	6,905.0	1,511.3	3,100.4	3,282.7	0.00	0.00	0.00	
9,800.0	90.00	90.18	6,905.0	1,511.0	3,200.4	3,381.7	0.00	0.00	0.00	
9,900.0	90.00	90.18	6,905.0	1,510.7	3,300.4	3,480.6	0.00	0.00	0.00	
10,000.0	90.00	90.18	6,905.0	1,510.4	3,400.4	3,579.6	0.00	0.00	0.00	
10,100.0	90.00	90.18	6,905.0	1,510.1	3,500.4	3,678.5	0.00	0.00	0.00	
10,200.0	90.00	90.18	6,905.0	1,509.8	3,600.4	3,777.5	0.00	0.00	0.00	
10,300.0	90.00	90.18	6,905.0	1,509.4	3,700.4	3,876.5	0.00	0.00	0.00	
10,400.0	90.00	90.18	6,905.0	1,509.1	3,800.4	3,975.4	0.00	0.00	0.00	
10,500.0	90.00	90.18	6,905.0	1,508.8	3,900.4	4,074.4	0.00	0.00	0.00	
10,523.4	90.00	90.18	6,905.0	1,508.7	3,923.9	4,097.6	0.00	0.00	0.00	
Start DLS 2.00 TFO -90.00										
10,600.0	90.00	88.65	6,905.0	1,509.5	4,000.4	4,173.5	2.00	0.00	-2.00	
10,700.0	90.00	86.65	6,905.0	1,513.6	4,100.3	4,272.9	2.00	0.00	-2.00	
10,800.0	90.00	84.65	6,905.0	1,521.2	4,200.0	4,372.7	2.00	0.00	-2.00	
10,832.4	90.00	84.00	6,905.0	1,524.4	4,232.3	4,405.1	2.00	0.00	-2.00	
Start 100.0 hold at 10832.4 MD										
10,900.0	90.00	84.00	6,905.0	1,531.5	4,299.5	4,472.6	0.00	0.00	0.00	
10,932.4	90.00	84.00	6,905.0	1,534.9	4,331.8	4,505.1	0.00	0.00	0.00	
Start Turn 2.00										
11,000.0	90.00	85.35	6,905.0	1,541.1	4,399.0	4,572.5	2.00	0.00	2.00	
11,100.0	90.00	87.35	6,905.0	1,547.5	4,498.8	4,672.2	2.00	0.00	2.00	
11,200.0	90.00	89.35	6,905.0	1,550.4	4,598.8	4,771.6	2.00	0.00	2.00	
11,263.3	90.00	90.62	6,905.0	1,550.4	4,662.0	4,834.2	2.00	0.00	2.00	
Start 5774.1 hold at 11263.3 MD										
11,300.0	90.00	90.62	6,905.0	1,550.0	4,698.8	4,870.5	0.00	0.00	0.00	
11,400.0	90.00	90.62	6,905.0	1,548.9	4,798.8	4,969.4	0.00	0.00	0.00	
11,500.0	90.00	90.62	6,905.0	1,547.8	4,898.8	5,068.2	0.00	0.00	0.00	
11,600.0	90.00	90.62	6,905.0	1,546.8	4,998.7	5,167.1	0.00	0.00	0.00	
11,700.0	90.00	90.62	6,905.0	1,545.7	5,098.7	5,265.9	0.00	0.00	0.00	
11,800.0	90.00	90.62	6,905.0	1,544.6	5,198.7	5,364.7	0.00	0.00	0.00	
11,900.0	90.00	90.62	6,905.0	1,543.5	5,298.7	5,463.6	0.00	0.00	0.00	
12,000.0	90.00	90.62	6,905.0	1,542.5	5,398.7	5,562.4	0.00	0.00	0.00	
12,100.0	90.00	90.62	6,905.0	1,541.4	5,498.7	5,661.3	0.00	0.00	0.00	
12,200.0	90.00	90.62	6,905.0	1,540.3	5,598.7	5,760.1	0.00	0.00	0.00	
12,300.0	90.00	90.62	6,905.0	1,539.2	5,698.7	5,858.9	0.00	0.00	0.00	
12,400.0	90.00	90.62	6,905.0	1,538.2	5,798.7	5,957.8	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 16E-20-3C
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 16E-20-3C	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)	
12,500.0	90.00	90.62	6,905.0	1,537.1	5,898.7	6,056.6	0.00	0.00	0.00	
12,600.0	90.00	90.62	6,905.0	1,536.0	5,998.7	6,155.5	0.00	0.00	0.00	
12,700.0	90.00	90.62	6,905.0	1,534.9	6,098.7	6,254.3	0.00	0.00	0.00	
12,800.0	90.00	90.62	6,905.0	1,533.9	6,198.7	6,353.1	0.00	0.00	0.00	
12,900.0	90.00	90.62	6,905.0	1,532.8	6,298.7	6,452.0	0.00	0.00	0.00	
13,000.0	90.00	90.62	6,905.0	1,531.7	6,398.7	6,550.8	0.00	0.00	0.00	
13,100.0	90.00	90.62	6,905.0	1,530.6	6,498.7	6,649.7	0.00	0.00	0.00	
13,200.0	90.00	90.62	6,905.0	1,529.6	6,598.7	6,748.5	0.00	0.00	0.00	
13,300.0	90.00	90.62	6,905.0	1,528.5	6,698.7	6,847.3	0.00	0.00	0.00	
13,400.0	90.00	90.62	6,905.0	1,527.4	6,798.6	6,946.2	0.00	0.00	0.00	
13,500.0	90.00	90.62	6,905.0	1,526.3	6,898.6	7,045.0	0.00	0.00	0.00	
13,600.0	90.00	90.62	6,905.0	1,525.2	6,998.6	7,143.9	0.00	0.00	0.00	
13,700.0	90.00	90.62	6,905.0	1,524.2	7,098.6	7,242.7	0.00	0.00	0.00	
13,800.0	90.00	90.62	6,905.0	1,523.1	7,198.6	7,341.6	0.00	0.00	0.00	
13,900.0	90.00	90.62	6,905.0	1,522.0	7,298.6	7,440.4	0.00	0.00	0.00	
14,000.0	90.00	90.62	6,905.0	1,520.9	7,398.6	7,539.2	0.00	0.00	0.00	
14,100.0	90.00	90.62	6,905.0	1,519.9	7,498.6	7,638.1	0.00	0.00	0.00	
14,200.0	90.00	90.62	6,905.0	1,518.8	7,598.6	7,736.9	0.00	0.00	0.00	
14,300.0	90.00	90.62	6,905.0	1,517.7	7,698.6	7,835.8	0.00	0.00	0.00	
14,400.0	90.00	90.62	6,905.0	1,516.6	7,798.6	7,934.6	0.00	0.00	0.00	
14,500.0	90.00	90.62	6,905.0	1,515.6	7,898.6	8,033.4	0.00	0.00	0.00	
14,600.0	90.00	90.62	6,905.0	1,514.5	7,998.6	8,132.3	0.00	0.00	0.00	
14,700.0	90.00	90.62	6,905.0	1,513.4	8,098.6	8,231.1	0.00	0.00	0.00	
14,800.0	90.00	90.62	6,905.0	1,512.3	8,198.6	8,330.0	0.00	0.00	0.00	
14,900.0	90.00	90.62	6,905.0	1,511.3	8,298.6	8,428.8	0.00	0.00	0.00	
15,000.0	90.00	90.62	6,905.0	1,510.2	8,398.6	8,527.6	0.00	0.00	0.00	
15,100.0	90.00	90.62	6,905.0	1,509.1	8,498.5	8,626.5	0.00	0.00	0.00	
15,200.0	90.00	90.62	6,905.0	1,508.0	8,598.5	8,725.3	0.00	0.00	0.00	
15,300.0	90.00	90.62	6,905.0	1,507.0	8,698.5	8,824.2	0.00	0.00	0.00	
15,400.0	90.00	90.62	6,905.0	1,505.9	8,798.5	8,923.0	0.00	0.00	0.00	
15,500.0	90.00	90.62	6,905.0	1,504.8	8,898.5	9,021.8	0.00	0.00	0.00	
15,600.0	90.00	90.62	6,905.0	1,503.7	8,998.5	9,120.7	0.00	0.00	0.00	
15,700.0	90.00	90.62	6,905.0	1,502.6	9,098.5	9,219.5	0.00	0.00	0.00	
15,800.0	90.00	90.62	6,905.0	1,501.6	9,198.5	9,318.4	0.00	0.00	0.00	
15,900.0	90.00	90.62	6,905.0	1,500.5	9,298.5	9,417.2	0.00	0.00	0.00	
16,000.0	90.00	90.62	6,905.0	1,499.4	9,398.5	9,516.0	0.00	0.00	0.00	
16,100.0	90.00	90.62	6,905.0	1,498.3	9,498.5	9,614.9	0.00	0.00	0.00	
16,200.0	90.00	90.62	6,905.0	1,497.3	9,598.5	9,713.7	0.00	0.00	0.00	
16,300.0	90.00	90.62	6,905.0	1,496.2	9,698.5	9,812.6	0.00	0.00	0.00	
16,400.0	90.00	90.62	6,905.0	1,495.1	9,798.5	9,911.4	0.00	0.00	0.00	
16,500.0	90.00	90.62	6,905.0	1,494.0	9,898.5	10,010.2	0.00	0.00	0.00	
16,600.0	90.00	90.62	6,905.0	1,493.0	9,998.5	10,109.1	0.00	0.00	0.00	
16,700.0	90.00	90.62	6,905.0	1,491.9	10,098.5	10,207.9	0.00	0.00	0.00	
16,800.0	90.00	90.62	6,905.0	1,490.8	10,198.4	10,306.8	0.00	0.00	0.00	
16,900.0	90.00	90.62	6,905.0	1,489.7	10,298.4	10,405.6	0.00	0.00	0.00	
17,000.0	90.00	90.62	6,905.0	1,488.7	10,398.4	10,504.5	0.00	0.00	0.00	
17,037.4	90.00	90.62	6,905.0	1,488.3	10,435.8	10,541.4	0.00	0.00	0.00	
TD at 17037.4										

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 16E-20-3C
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 16E-20-3C	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)		
WALT 16E-20-3C-LP	0.00	0.00	6,905.0	1,518.5	823.9	1,454,750.00	3,164,971.19	40° 34' 48.616 N	104° 54' 21.899 W
- plan hits target center									
- Point									
WALT 16E-20-3C-PBHL	0.00	0.00	6,905.0	1,488.3	10,435.8	1,454,783.83	3,174,583.15	40° 34' 48.295 N	104° 52' 17.324 W
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
3,921.0	3,835.0	SUSSEX				
4,312.6	4,210.0	SHANNON				
6,819.4	6,605.0	NIOBRARA				
7,227.3	6,870.0	FORT HAYS				
7,423.4	6,905.0	CODELL				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
1,250.0	1,250.0	0.0	0.0	Start Build 2.00	
1,600.9	1,600.0	20.2	7.3	Start 100.0 hold at 1600.9 MD	
1,700.9	1,699.3	31.6	11.5	Start DLS 2.00 TFO -13.51	
2,193.1	2,180.4	129.5	36.6	Start 4443.0 hold at 2193.1 MD	
6,636.1	6,434.9	1,381.7	303.5	Start DLS 11.00 TFO 78.64	
7,423.4	6,905.0	1,518.5	823.9	Start 3100.0 hold at 7423.4 MD	
10,523.4	6,905.0	1,508.7	3,923.9	Start DLS 2.00 TFO -90.00	
10,832.4	6,905.0	1,524.4	4,232.3	Start 100.0 hold at 10832.4 MD	
10,932.4	6,905.0	1,534.9	4,331.8	Start Turn 2.00	
11,263.3	6,905.0	1,550.4	4,662.0	Start 5774.1 hold at 11263.3 MD	
17,037.4	6,905.0	1,488.3	10,435.8	TD at 17037.4	