

EXTRACTION OIL & GAS

WELD COUNTY

Sec 17-T7N-R67W

WALT 17W-20-12N

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

16 August, 2018



Project: WELD COUNTY
Site: Sec 17-T7N-R67W
Well: WALT 17W-20-12N
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL 1



Azimuths to True North
Magnetic North: 8.18°

Magnetic Field
Strength: 52332.9nT
Dip Angle: 66.94°
Date: 8/15/2018
Model: IGRF2015

WELL DETAILS: WALT 17W-20-12N

+N/-S	+E/-W	Northing	Easting	5107.00	Latitude	Longitude	Slot
0.00	0.00	1453002.00	3164157.28	40° 34' 31.397 N	104° 54' 32.598 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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	1417.78	24.36	169.59	1381.43	-250.76	46.07	2.00	169.59	29.43	
4	6552.07	24.36	169.59	6058.79	-2333.28	428.69	0.00	0.00	273.80	
5	7488.45	90.00	268.44	6615.00	-2597.54	-136.13	10.00	98.07	891.26	WALT 17W-12N - LP
6	16644.97	90.00	268.44	6615.00	-2846.80	-9289.25	0.00	0.00	9715.68	WALT 17W-12N - P

ANNOTATIONS

+N/-S	+E/-W	VSect	Departure	Annotation
0.00	0.00	0.00	0.00	Start Build 2.00
-250.76	46.07	29.43	254.96	Start 5134.30 hold at 1417.78 MD
-2333.28	428.69	273.80	2372.33	Start DLS 10.00 TFO 98.07
-2597.54	-136.13	891.26	3049.58	Start 9156.52 hold at 7488.45 MD
-2846.80	-9289.25	9715.68	12206.10	TD at 16644.97

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
WALT 17W-12N - LP	6615.00	-2597.54	-136.13	1450403.61	3164038.46	40° 34' 5.729 N	104° 54' 34.362 W	Point
- plan hits target center								
WALT 17W-12N - PBHL	6615.00	-2846.80	-9289.25	1450093.36	3154887.21	40° 34' 3.248 N	104° 56' 32.968 W	Point
- plan hits target center								

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3835.00	4111.04	SUSSEX
4210.00	4522.67	SHANNON
6605.00	7376.23	NIOBRARA

PROJECT DETAILS: WELD COUNTY

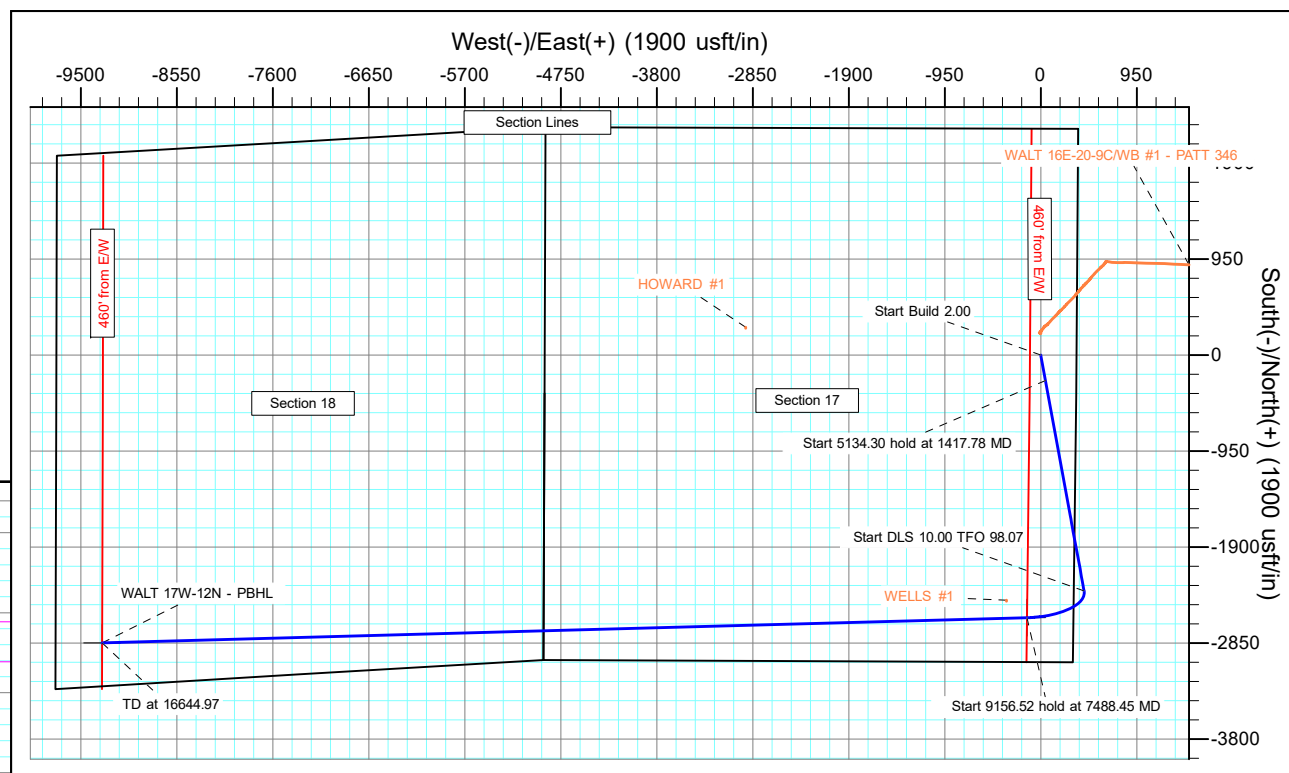
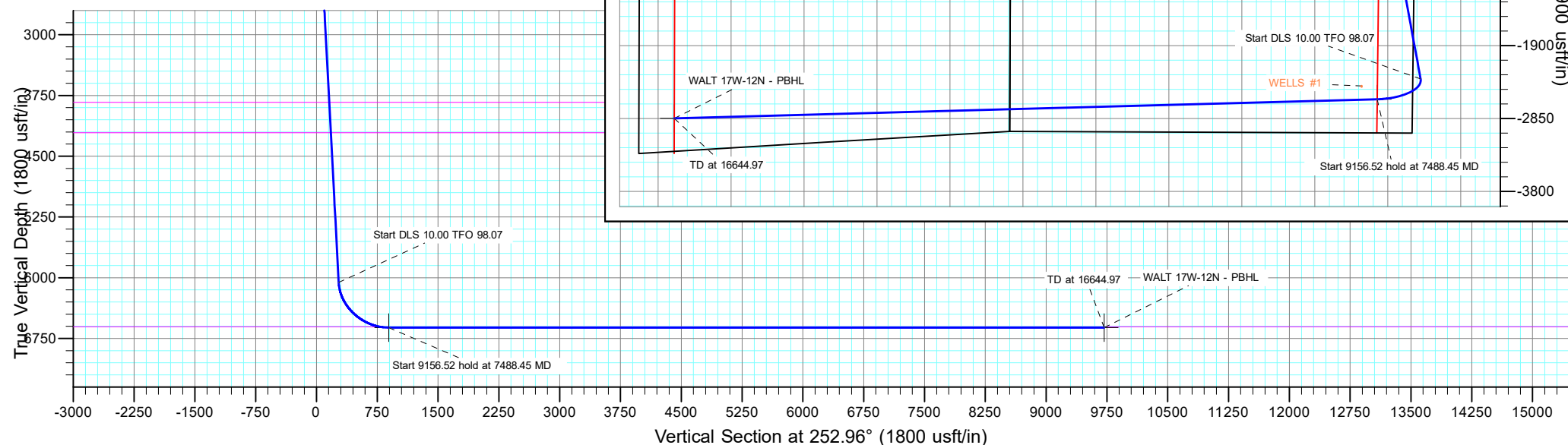
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level

SHL:
2241' FNL, 354' FEL
Sec 17-T7N-R67W

LP:
441' FSL, 460' FEL
Sec 17-T7N-R67W

BHL:
430' FSL, 460' FWL
Sec 18-T7N-R67W



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-12N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5136.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5136.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 17W-20-12N	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:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.38 °

Well	WALT 17W-20-12N					
Well Position	+N/-S	-2,239.80 usft	Northing:	1,453,002.00 usft	Latitude:	40° 34' 31.397 N
	+E/-W	-369.18 usft	Easting:	3,164,157.28 usft	Longitude:	104° 54' 32.598 W
Position Uncertainty	0.00 usft		Wellhead Elevation:		Ground Level:	5,107.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/15/2018	8.18	66.94	52,332.89758847

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	252.96

Plan Survey Tool Program	Date	8/16/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,644.97	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
0.00	0.00	0.00	0.00	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	
1,417.78	24.36	169.59	1,381.43	-250.76	46.07	2.00	2.00	0.00	169.59	
6,552.07	24.36	169.59	6,058.79	-2,333.28	428.69	0.00	0.00	0.00	0.00	
7,488.45	90.00	268.44	6,615.00	-2,597.54	-136.13	10.00	7.01	10.56	98.07	WALT 17W-12N - LP
16,644.97	90.00	268.44	6,615.00	-2,846.80	-9,289.25	0.00	0.00	0.00	0.00	WALT 17W-12N - PBI

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-12N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5136.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5136.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 17W-20-12N	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
Start Build 2.00									
300.00	2.00	169.59	299.98	-1.72	0.32	0.20	2.00	2.00	0.00
400.00	4.00	169.59	399.84	-6.86	1.26	0.81	2.00	2.00	0.00
500.00	6.00	169.59	499.45	-15.44	2.84	1.81	2.00	2.00	0.00
600.00	8.00	169.59	598.70	-27.42	5.04	3.22	2.00	2.00	0.00
700.00	10.00	169.59	697.47	-42.81	7.86	5.02	2.00	2.00	0.00
800.00	12.00	169.59	795.62	-61.57	11.31	7.23	2.00	2.00	0.00
900.00	14.00	169.59	893.06	-83.70	15.38	9.82	2.00	2.00	0.00
1,000.00	16.00	169.59	989.64	-109.15	20.05	12.81	2.00	2.00	0.00
1,100.00	18.00	169.59	1,085.27	-137.90	25.34	16.18	2.00	2.00	0.00
1,200.00	20.00	169.59	1,179.82	-169.92	31.22	19.94	2.00	2.00	0.00
1,300.00	22.00	169.59	1,273.17	-205.17	37.70	24.08	2.00	2.00	0.00
1,400.00	24.00	169.59	1,365.21	-243.60	44.76	28.59	2.00	2.00	0.00
1,417.78	24.36	169.59	1,381.43	-250.76	46.07	29.43	2.00	2.00	0.00
Start 5134.30 hold at 1417.78 MD									
1,500.00	24.36	169.59	1,456.34	-284.11	52.20	33.34	0.00	0.00	0.00
1,600.00	24.36	169.59	1,547.44	-324.67	59.65	38.10	0.00	0.00	0.00
1,700.00	24.36	169.59	1,638.54	-365.23	67.10	42.86	0.00	0.00	0.00
1,800.00	24.36	169.59	1,729.64	-405.79	74.55	47.62	0.00	0.00	0.00
1,900.00	24.36	169.59	1,820.74	-446.35	82.01	52.38	0.00	0.00	0.00
2,000.00	24.36	169.59	1,911.84	-486.91	89.46	57.14	0.00	0.00	0.00
2,100.00	24.36	169.59	2,002.94	-527.47	96.91	61.90	0.00	0.00	0.00
2,200.00	24.36	169.59	2,094.04	-568.04	104.36	66.66	0.00	0.00	0.00
2,300.00	24.36	169.59	2,185.14	-608.60	111.82	71.42	0.00	0.00	0.00
2,400.00	24.36	169.59	2,276.24	-649.16	119.27	76.18	0.00	0.00	0.00
2,500.00	24.36	169.59	2,367.34	-689.72	126.72	80.94	0.00	0.00	0.00
2,600.00	24.36	169.59	2,458.44	-730.28	134.17	85.70	0.00	0.00	0.00
2,700.00	24.36	169.59	2,549.54	-770.84	141.62	90.46	0.00	0.00	0.00
2,800.00	24.36	169.59	2,640.64	-811.40	149.08	95.22	0.00	0.00	0.00
2,900.00	24.36	169.59	2,731.74	-851.96	156.53	99.98	0.00	0.00	0.00
3,000.00	24.36	169.59	2,822.84	-892.52	163.98	104.74	0.00	0.00	0.00
3,100.00	24.36	169.59	2,913.94	-933.08	171.43	109.49	0.00	0.00	0.00
3,200.00	24.36	169.59	3,005.04	-973.64	178.88	114.25	0.00	0.00	0.00
3,300.00	24.36	169.59	3,096.14	-1,014.21	186.34	119.01	0.00	0.00	0.00
3,400.00	24.36	169.59	3,187.24	-1,054.77	193.79	123.77	0.00	0.00	0.00
3,500.00	24.36	169.59	3,278.34	-1,095.33	201.24	128.53	0.00	0.00	0.00
3,600.00	24.36	169.59	3,369.45	-1,135.89	208.69	133.29	0.00	0.00	0.00
3,700.00	24.36	169.59	3,460.55	-1,176.45	216.15	138.05	0.00	0.00	0.00
3,800.00	24.36	169.59	3,551.65	-1,217.01	223.60	142.81	0.00	0.00	0.00
3,900.00	24.36	169.59	3,642.75	-1,257.57	231.05	147.57	0.00	0.00	0.00
4,000.00	24.36	169.59	3,733.85	-1,298.13	238.50	152.33	0.00	0.00	0.00
4,100.00	24.36	169.59	3,824.95	-1,338.69	245.95	157.09	0.00	0.00	0.00
4,111.04	24.36	169.59	3,835.00	-1,343.17	246.78	157.62	0.00	0.00	0.00
SUSSEX									
4,200.00	24.36	169.59	3,916.05	-1,379.25	253.41	161.85	0.00	0.00	0.00
4,300.00	24.36	169.59	4,007.15	-1,419.81	260.86	166.61	0.00	0.00	0.00
4,400.00	24.36	169.59	4,098.25	-1,460.38	268.31	171.37	0.00	0.00	0.00
4,500.00	24.36	169.59	4,189.35	-1,500.94	275.76	176.13	0.00	0.00	0.00
4,522.67	24.36	169.59	4,210.00	-1,510.13	277.45	177.21	0.00	0.00	0.00
SHANNON									

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-12N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5136.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5136.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 17W-20-12N	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)
4,600.00	24.36	169.59	4,280.45	-1,541.50	283.22	180.89	0.00	0.00	0.00
4,700.00	24.36	169.59	4,371.55	-1,582.06	290.67	185.65	0.00	0.00	0.00
4,800.00	24.36	169.59	4,462.65	-1,622.62	298.12	190.41	0.00	0.00	0.00
4,900.00	24.36	169.59	4,553.75	-1,663.18	305.57	195.17	0.00	0.00	0.00
5,000.00	24.36	169.59	4,644.85	-1,703.74	313.02	199.93	0.00	0.00	0.00
5,100.00	24.36	169.59	4,735.95	-1,744.30	320.48	204.69	0.00	0.00	0.00
5,200.00	24.36	169.59	4,827.05	-1,784.86	327.93	209.45	0.00	0.00	0.00
5,300.00	24.36	169.59	4,918.15	-1,825.42	335.38	214.21	0.00	0.00	0.00
5,400.00	24.36	169.59	5,009.25	-1,865.98	342.83	218.97	0.00	0.00	0.00
5,500.00	24.36	169.59	5,100.35	-1,906.55	350.28	223.73	0.00	0.00	0.00
5,600.00	24.36	169.59	5,191.45	-1,947.11	357.74	228.49	0.00	0.00	0.00
5,700.00	24.36	169.59	5,282.55	-1,987.67	365.19	233.25	0.00	0.00	0.00
5,800.00	24.36	169.59	5,373.65	-2,028.23	372.64	238.01	0.00	0.00	0.00
5,900.00	24.36	169.59	5,464.75	-2,068.79	380.09	242.77	0.00	0.00	0.00
6,000.00	24.36	169.59	5,555.85	-2,109.35	387.55	247.53	0.00	0.00	0.00
6,100.00	24.36	169.59	5,646.95	-2,149.91	395.00	252.29	0.00	0.00	0.00
6,200.00	24.36	169.59	5,738.05	-2,190.47	402.45	257.05	0.00	0.00	0.00
6,300.00	24.36	169.59	5,829.16	-2,231.03	409.90	261.81	0.00	0.00	0.00
6,400.00	24.36	169.59	5,920.26	-2,271.59	417.35	266.57	0.00	0.00	0.00
6,500.00	24.36	169.59	6,011.36	-2,312.16	424.81	271.33	0.00	0.00	0.00
6,552.07	24.36	169.59	6,058.79	-2,333.28	428.69	273.80	0.00	0.00	0.00
Start DLS 10.00 TFO 98.07									
6,600.00	24.12	181.27	6,102.52	-2,352.80	430.26	278.02	10.00	-0.48	24.36
6,650.00	24.83	193.23	6,148.06	-2,373.25	427.63	286.53	10.00	1.40	23.94
6,700.00	26.41	204.22	6,193.16	-2,393.62	420.66	299.16	10.00	3.18	21.97
6,750.00	28.74	213.79	6,237.50	-2,413.77	409.40	315.83	10.00	4.65	19.15
6,800.00	31.64	221.90	6,280.73	-2,433.53	393.94	336.40	10.00	5.80	16.22
6,850.00	34.98	228.70	6,322.53	-2,452.76	374.41	360.71	10.00	6.67	13.59
6,900.00	38.63	234.40	6,362.57	-2,471.32	350.93	388.59	10.00	7.31	11.41
6,950.00	42.52	239.24	6,400.55	-2,489.06	323.71	419.82	10.00	7.78	9.68
7,000.00	46.58	243.40	6,436.18	-2,505.84	292.93	454.16	10.00	8.13	8.31
7,050.00	50.78	247.03	6,469.19	-2,521.54	258.84	491.36	10.00	8.39	7.25
7,100.00	55.07	250.24	6,499.33	-2,536.04	221.70	531.12	10.00	8.59	6.42
7,150.00	59.44	253.13	6,526.37	-2,549.22	181.78	573.15	10.00	8.74	5.78
7,200.00	63.87	255.77	6,550.11	-2,561.00	139.39	617.12	10.00	8.86	5.28
7,250.00	68.34	258.21	6,570.36	-2,571.27	94.87	662.71	10.00	8.95	4.89
7,300.00	72.85	260.51	6,586.96	-2,579.96	48.53	709.56	10.00	9.01	4.59
7,350.00	77.38	262.69	6,599.80	-2,587.01	0.74	757.31	10.00	9.06	4.37
7,376.23	79.77	263.81	6,605.00	-2,590.03	-24.79	782.61	10.00	9.09	4.25
NIOBRARA									
7,400.00	81.93	264.80	6,608.78	-2,592.36	-48.14	805.62	10.00	9.10	4.19
7,450.00	86.49	266.87	6,613.82	-2,595.97	-97.74	854.09	10.00	9.12	4.13
7,488.45	90.00	268.44	6,615.00	-2,597.54	-136.13	891.26	10.00	9.13	4.09
Start 9156.52 hold at 7488.45 MD									
7,500.00	90.00	268.44	6,615.00	-2,597.85	-147.68	902.39	0.00	0.00	0.00
7,600.00	90.00	268.44	6,615.00	-2,600.57	-247.64	998.77	0.00	0.00	0.00
7,700.00	90.00	268.44	6,615.00	-2,603.30	-347.60	1,095.14	0.00	0.00	0.00
7,800.00	90.00	268.44	6,615.00	-2,606.02	-447.57	1,191.51	0.00	0.00	0.00
7,900.00	90.00	268.44	6,615.00	-2,608.74	-547.53	1,287.89	0.00	0.00	0.00
8,000.00	90.00	268.44	6,615.00	-2,611.46	-647.49	1,384.26	0.00	0.00	0.00
8,100.00	90.00	268.44	6,615.00	-2,614.19	-747.45	1,480.63	0.00	0.00	0.00
8,200.00	90.00	268.44	6,615.00	-2,616.91	-847.42	1,577.01	0.00	0.00	0.00
8,300.00	90.00	268.44	6,615.00	-2,619.63	-947.38	1,673.38	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-12N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5136.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5136.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 17W-20-12N	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)	
8,400.00	90.00	268.44	6,615.00	-2,622.35	-1,047.34	1,769.75	0.00	0.00	0.00	
8,500.00	90.00	268.44	6,615.00	-2,625.07	-1,147.31	1,866.12	0.00	0.00	0.00	
8,600.00	90.00	268.44	6,615.00	-2,627.80	-1,247.27	1,962.50	0.00	0.00	0.00	
8,700.00	90.00	268.44	6,615.00	-2,630.52	-1,347.23	2,058.87	0.00	0.00	0.00	
8,800.00	90.00	268.44	6,615.00	-2,633.24	-1,447.20	2,155.24	0.00	0.00	0.00	
8,900.00	90.00	268.44	6,615.00	-2,635.96	-1,547.16	2,251.62	0.00	0.00	0.00	
9,000.00	90.00	268.44	6,615.00	-2,638.69	-1,647.12	2,347.99	0.00	0.00	0.00	
9,100.00	90.00	268.44	6,615.00	-2,641.41	-1,747.08	2,444.36	0.00	0.00	0.00	
9,200.00	90.00	268.44	6,615.00	-2,644.13	-1,847.05	2,540.74	0.00	0.00	0.00	
9,300.00	90.00	268.44	6,615.00	-2,646.85	-1,947.01	2,637.11	0.00	0.00	0.00	
9,400.00	90.00	268.44	6,615.00	-2,649.57	-2,046.97	2,733.48	0.00	0.00	0.00	
9,500.00	90.00	268.44	6,615.00	-2,652.30	-2,146.94	2,829.86	0.00	0.00	0.00	
9,600.00	90.00	268.44	6,615.00	-2,655.02	-2,246.90	2,926.23	0.00	0.00	0.00	
9,700.00	90.00	268.44	6,615.00	-2,657.74	-2,346.86	3,022.60	0.00	0.00	0.00	
9,800.00	90.00	268.44	6,615.00	-2,660.46	-2,446.82	3,118.98	0.00	0.00	0.00	
9,900.00	90.00	268.44	6,615.00	-2,663.19	-2,546.79	3,215.35	0.00	0.00	0.00	
10,000.00	90.00	268.44	6,615.00	-2,665.91	-2,646.75	3,311.72	0.00	0.00	0.00	
10,100.00	90.00	268.44	6,615.00	-2,668.63	-2,746.71	3,408.09	0.00	0.00	0.00	
10,200.00	90.00	268.44	6,615.00	-2,671.35	-2,846.68	3,504.47	0.00	0.00	0.00	
10,300.00	90.00	268.44	6,615.00	-2,674.07	-2,946.64	3,600.84	0.00	0.00	0.00	
10,400.00	90.00	268.44	6,615.00	-2,676.80	-3,046.60	3,697.21	0.00	0.00	0.00	
10,500.00	90.00	268.44	6,615.00	-2,679.52	-3,146.57	3,793.59	0.00	0.00	0.00	
10,600.00	90.00	268.44	6,615.00	-2,682.24	-3,246.53	3,889.96	0.00	0.00	0.00	
10,700.00	90.00	268.44	6,615.00	-2,684.96	-3,346.49	3,986.33	0.00	0.00	0.00	
10,800.00	90.00	268.44	6,615.00	-2,687.69	-3,446.45	4,082.71	0.00	0.00	0.00	
10,900.00	90.00	268.44	6,615.00	-2,690.41	-3,546.42	4,179.08	0.00	0.00	0.00	
11,000.00	90.00	268.44	6,615.00	-2,693.13	-3,646.38	4,275.45	0.00	0.00	0.00	
11,100.00	90.00	268.44	6,615.00	-2,695.85	-3,746.34	4,371.83	0.00	0.00	0.00	
11,200.00	90.00	268.44	6,615.00	-2,698.57	-3,846.31	4,468.20	0.00	0.00	0.00	
11,300.00	90.00	268.44	6,615.00	-2,701.30	-3,946.27	4,564.57	0.00	0.00	0.00	
11,400.00	90.00	268.44	6,615.00	-2,704.02	-4,046.23	4,660.95	0.00	0.00	0.00	
11,500.00	90.00	268.44	6,615.00	-2,706.74	-4,146.19	4,757.32	0.00	0.00	0.00	
11,600.00	90.00	268.44	6,615.00	-2,709.46	-4,246.16	4,853.69	0.00	0.00	0.00	
11,700.00	90.00	268.44	6,615.00	-2,712.19	-4,346.12	4,950.06	0.00	0.00	0.00	
11,800.00	90.00	268.44	6,615.00	-2,714.91	-4,446.08	5,046.44	0.00	0.00	0.00	
11,900.00	90.00	268.44	6,615.00	-2,717.63	-4,546.05	5,142.81	0.00	0.00	0.00	
12,000.00	90.00	268.44	6,615.00	-2,720.35	-4,646.01	5,239.18	0.00	0.00	0.00	
12,100.00	90.00	268.44	6,615.00	-2,723.07	-4,745.97	5,335.56	0.00	0.00	0.00	
12,200.00	90.00	268.44	6,615.00	-2,725.80	-4,845.94	5,431.93	0.00	0.00	0.00	
12,300.00	90.00	268.44	6,615.00	-2,728.52	-4,945.90	5,528.30	0.00	0.00	0.00	
12,400.00	90.00	268.44	6,615.00	-2,731.24	-5,045.86	5,624.68	0.00	0.00	0.00	
12,500.00	90.00	268.44	6,615.00	-2,733.96	-5,145.82	5,721.05	0.00	0.00	0.00	
12,600.00	90.00	268.44	6,615.00	-2,736.69	-5,245.79	5,817.42	0.00	0.00	0.00	
12,700.00	90.00	268.44	6,615.00	-2,739.41	-5,345.75	5,913.80	0.00	0.00	0.00	
12,800.00	90.00	268.44	6,615.00	-2,742.13	-5,445.71	6,010.17	0.00	0.00	0.00	
12,900.00	90.00	268.44	6,615.00	-2,744.85	-5,545.68	6,106.54	0.00	0.00	0.00	
13,000.00	90.00	268.44	6,615.00	-2,747.57	-5,645.64	6,202.92	0.00	0.00	0.00	
13,100.00	90.00	268.44	6,615.00	-2,750.30	-5,745.60	6,299.29	0.00	0.00	0.00	
13,200.00	90.00	268.44	6,615.00	-2,753.02	-5,845.56	6,395.66	0.00	0.00	0.00	
13,300.00	90.00	268.44	6,615.00	-2,755.74	-5,945.53	6,492.03	0.00	0.00	0.00	
13,400.00	90.00	268.44	6,615.00	-2,758.46	-6,045.49	6,588.41	0.00	0.00	0.00	
13,500.00	90.00	268.44	6,615.00	-2,761.19	-6,145.45	6,684.78	0.00	0.00	0.00	
13,600.00	90.00	268.44	6,615.00	-2,763.91	-6,245.42	6,781.15	0.00	0.00	0.00	
13,700.00	90.00	268.44	6,615.00	-2,766.63	-6,345.38	6,877.53	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-12N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5136.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5136.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 17W-20-12N	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)	
13,800.00	90.00	268.44	6,615.00	-2,769.35	-6,445.34	6,973.90	0.00	0.00	0.00	
13,900.00	90.00	268.44	6,615.00	-2,772.07	-6,545.31	7,070.27	0.00	0.00	0.00	
14,000.00	90.00	268.44	6,615.00	-2,774.80	-6,645.27	7,166.65	0.00	0.00	0.00	
14,100.00	90.00	268.44	6,615.00	-2,777.52	-6,745.23	7,263.02	0.00	0.00	0.00	
14,200.00	90.00	268.44	6,615.00	-2,780.24	-6,845.19	7,359.39	0.00	0.00	0.00	
14,300.00	90.00	268.44	6,615.00	-2,782.96	-6,945.16	7,455.77	0.00	0.00	0.00	
14,400.00	90.00	268.44	6,615.00	-2,785.68	-7,045.12	7,552.14	0.00	0.00	0.00	
14,500.00	90.00	268.44	6,615.00	-2,788.41	-7,145.08	7,648.51	0.00	0.00	0.00	
14,600.00	90.00	268.44	6,615.00	-2,791.13	-7,245.05	7,744.89	0.00	0.00	0.00	
14,700.00	90.00	268.44	6,615.00	-2,793.85	-7,345.01	7,841.26	0.00	0.00	0.00	
14,800.00	90.00	268.44	6,615.00	-2,796.57	-7,444.97	7,937.63	0.00	0.00	0.00	
14,900.00	90.00	268.44	6,615.00	-2,799.30	-7,544.93	8,034.00	0.00	0.00	0.00	
15,000.00	90.00	268.44	6,615.00	-2,802.02	-7,644.90	8,130.38	0.00	0.00	0.00	
15,100.00	90.00	268.44	6,615.00	-2,804.74	-7,744.86	8,226.75	0.00	0.00	0.00	
15,200.00	90.00	268.44	6,615.00	-2,807.46	-7,844.82	8,323.12	0.00	0.00	0.00	
15,300.00	90.00	268.44	6,615.00	-2,810.18	-7,944.79	8,419.50	0.00	0.00	0.00	
15,400.00	90.00	268.44	6,615.00	-2,812.91	-8,044.75	8,515.87	0.00	0.00	0.00	
15,500.00	90.00	268.44	6,615.00	-2,815.63	-8,144.71	8,612.24	0.00	0.00	0.00	
15,600.00	90.00	268.44	6,615.00	-2,818.35	-8,244.68	8,708.62	0.00	0.00	0.00	
15,700.00	90.00	268.44	6,615.00	-2,821.07	-8,344.64	8,804.99	0.00	0.00	0.00	
15,800.00	90.00	268.44	6,615.00	-2,823.80	-8,444.60	8,901.36	0.00	0.00	0.00	
15,900.00	90.00	268.44	6,615.00	-2,826.52	-8,544.56	8,997.74	0.00	0.00	0.00	
16,000.00	90.00	268.44	6,615.00	-2,829.24	-8,644.53	9,094.11	0.00	0.00	0.00	
16,100.00	90.00	268.44	6,615.00	-2,831.96	-8,744.49	9,190.48	0.00	0.00	0.00	
16,200.00	90.00	268.44	6,615.00	-2,834.68	-8,844.45	9,286.86	0.00	0.00	0.00	
16,300.00	90.00	268.44	6,615.00	-2,837.41	-8,944.42	9,383.23	0.00	0.00	0.00	
16,400.00	90.00	268.44	6,615.00	-2,840.13	-9,044.38	9,479.60	0.00	0.00	0.00	
16,500.00	90.00	268.44	6,615.00	-2,842.85	-9,144.34	9,575.97	0.00	0.00	0.00	
16,600.00	90.00	268.44	6,615.00	-2,845.57	-9,244.30	9,672.35	0.00	0.00	0.00	
16,644.97	90.00	268.44	6,615.00	-2,846.80	-9,289.25	9,715.68	0.00	0.00	0.00	
TD at 16644.97										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
WALT 17W-12N - LP	0.00	0.00	6,615.00	-2,597.54	-136.13	1,450,403.62	3,164,038.47	40° 34' 5.729 N	104° 54' 34.362 W	
- plan hits target center										
- Point										
WALT 17W-12N - PBHL	0.00	0.00	6,615.00	-2,846.80	-9,289.25	1,450,093.36	3,154,887.21	40° 34' 3.248 N	104° 56' 32.968 W	
- plan hits target center										
- Point										

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-12N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5136.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5136.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 17W-20-12N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,111.04	3,835.00	SUSSEX			
4,522.67	4,210.00	SHANNON			
7,376.23	6,605.00	NIOBRARA			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
200.00	200.00	0.00	0.00	Start Build 2.00
1,417.78	1,381.43	-250.76	46.07	Start 5134.30 hold at 1417.78 MD
6,552.07	6,058.79	-2,333.28	428.69	Start DLS 10.00 TFO 98.07
7,488.45	6,615.00	-2,597.54	-136.13	Start 9156.52 hold at 7488.45 MD
16,644.97	6,615.00	-2,846.80	-9,289.25	TD at 16644.97