

EXTRACTION OIL & GAS

WELD COUNTY

Sec 17-T7N-R67W

WALT EAST 16E-20-01

OWB

Plan: PROPOSAL 1

Standard Planning Report

08 March, 2021



WELL DETAILS: WALT EAST 16E-20-01

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1453169.95	3164157.55	40.575849°N	104.909050°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	1585.81	11.72	168.22	1581.74	-58.43	12.19	2.00	168.22	19.04	
4	6825.44	11.72	168.22	6712.20	-1100.00	229.44	0.00	0.00	358.54	
5	7701.23	90.00	90.22	7250.00	-1211.32	801.46	10.00	-78.24	939.73	
6	12501.23	90.00	90.22	7250.00	-1230.01	5601.42	0.00	0.00	5707.90	
7	12862.38	90.00	83.00	7250.00	-1208.68	5961.71	2.00	-90.00	6063.10	
8	12962.38	90.00	83.00	7250.00	-1196.49	6060.96	0.00	0.00	6160.20	
9	13365.19	90.00	91.06	7250.00	-1175.63	6462.89	2.00	90.00	6556.81	
10	17336.94	90.00	91.06	7250.00	-1248.83	10433.97	0.00	0.00	10508.44	

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	Start Build 2.00
1585.81	11.72	168.22	1581.74	-58.43	12.19	19.05	59.69	Start 5239.62 hold at 1585.81 MD
6825.44	11.72	168.22	6712.20	-1100.00	229.44	358.54	1123.67	Start DLS 10.00 TFO -78.24
7701.23	90.00	90.22	7250.00	-1211.32	801.46	939.73	1720.65	Start 4800.00 hold at 7701.23 MD
12501.23	90.00	90.22	7250.00	-1230.01	5601.42	5707.90	6520.65	Start DLS 2.00 TFO -90.00
12862.38	90.00	83.00	7250.00	-1208.68	5961.71	6063.10	6881.81	Start 100.00 hold at 12862.39 MD
12962.38	90.00	83.00	7250.00	-1196.49	6060.96	6160.20	6981.81	Start Turn 2.00
13365.19	90.00	91.06	7250.00	-1175.63	6463.00	6556.91	7384.72	Start 3971.65 hold at 13365.29 MD
17336.94	90.00	91.06	7250.00	-1248.83	10433.97	10508.44	11356.36	TD at 17336.94

DESIGN TARGET DETAILS

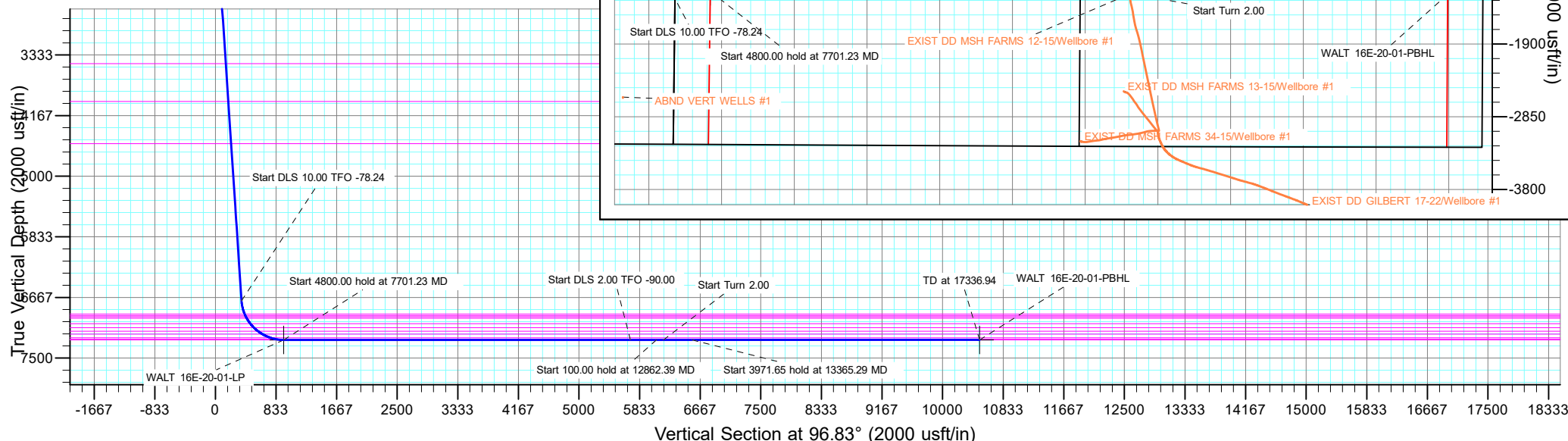
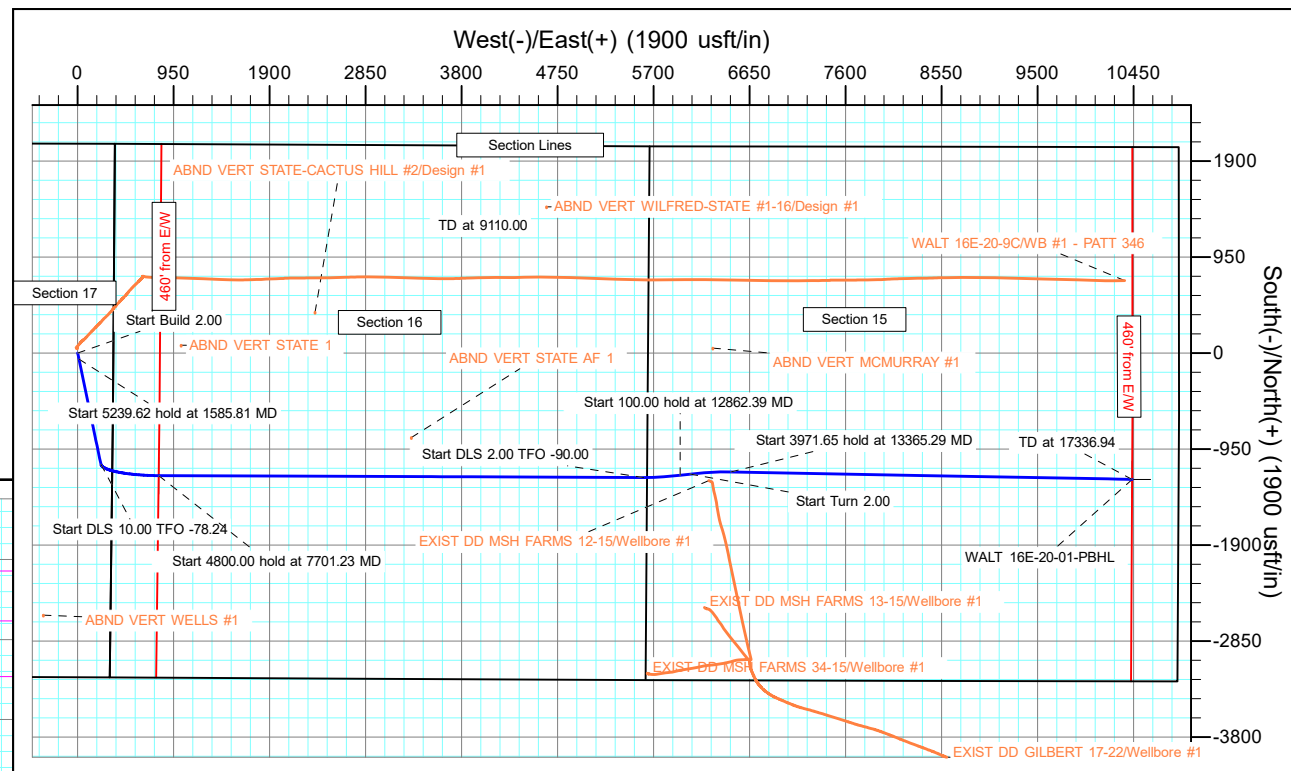
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
WALT 16E-20-01-LP	7250.00	-1211.32	801.46	1451964.00	3164967.06	40.572524°N	104.906165°W	Point
WALT 16E-20-01-PI	7250.00	-1248.83	10433.97	1451990.68	3174599.61	40.572415°N	104.871491°W	Point

FORMATION TOP DETAILS

PROJECT DETAILS: WELD COUNTY

TVDPath	MDPath	Formation	Geodetic System: US State Plane 1983
792.00	792.00	Fox Hills Base:	Datum: North American Datum 1983
3452.00	3495.87	Parkman:	Ellipsoid: GRS 1980
3972.00	4026.93	Sussex:	Zone: Colorado Northern Zone
4552.00	4619.28	Shannon:	
6895.00	7017.02	Sharon Springs (Confining Zone):	System Datum: Mean Sea Level
6917.00	7041.37	Niobrara:	
6932.00	7058.24	A Chalk:	
6952.00	7081.12	A Marl:	
7027.00	7171.98	B2 Chalk:	
7082.00	7246.15	B Marl:	
7130.00	7319.63	C Chalk:	
7170.00	7391.63	C Marl:	
7220.00	7513.09	Ft Hays (Confining Zone):	
7240.00	7592.93	Codell:	
7250.00	7701.23	Landing Point:	

SHL:
2073' FNL, 353' FEL
Sec 17-T7N-R67W
LP*
2000' FSL, 460' FWL
Sec 16-T7N-R67W
BHL:
2000' FSL, 460' FEL
Sec 15-T7N-R67W



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference	Well WALT EAST 16E-20-01
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5135.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5135.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT EAST 16E-20-01	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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:	40.581536°N
From:	Lat/Long	Easting:	3,164,511.50 usft	Longitude:	104.907726°W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.38 °

Well	WALT EAST 16E-20-01					
Well Position	+N/-S	-2,071.85 usft	Northing:	1,453,169.96 usft	Latitude:	40.575849°N
	+E/-W	-367.79 usft	Easting:	3,164,157.55 usft	Longitude:	104.909050°W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,106.00 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	3/1/2021	7.97	66.78	52,058.67984102

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	96.83	

Plan Survey Tool Program	Date	3/2/2021			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	17,336.94	PROPOSAL 1 (OWB)	MWD OWSG	
				OWSG MWD - Standard	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference	Well WALT EAST 16E-20-01
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5135.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5135.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT EAST 16E-20-01	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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
0.00	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	
1,585.81	11.72	168.22	1,581.74	-58.43	12.19	2.00	2.00	0.00	168.22	
6,825.44	11.72	168.22	6,712.20	-1,100.00	229.44	0.00	0.00	0.00	0.00	
7,701.23	90.00	90.22	7,250.00	-1,211.32	801.46	10.00	8.94	-8.91	-78.24	WALT 16E-20-01-LP
12,501.23	90.00	90.22	7,250.00	-1,230.01	5,601.42	0.00	0.00	0.00	0.00	
12,862.38	90.00	83.00	7,250.00	-1,208.68	5,961.71	2.00	0.00	-2.00	-90.00	
12,962.38	90.00	83.00	7,250.00	-1,196.49	6,060.96	0.00	0.00	0.00	0.00	
13,365.19	90.00	91.06	7,250.00	-1,175.63	6,462.89	2.00	0.00	2.00	90.00	WALT 16E-20-01-PB
17,336.94	90.00	91.06	7,250.00	-1,248.83	10,433.97	0.00	0.00	0.00	0.00	WALT 16E-20-01-PB

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference	Well WALT EAST 16E-20-01
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5135.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5135.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT EAST 16E-20-01	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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	
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	
792.00	0.00	0.00	792.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fox Hills Base:										
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	
Start Build 2.00										
1,100.00	2.00	168.22	1,099.98	-1.71	0.36	0.56	2.00	2.00	0.00	
1,200.00	4.00	168.22	1,199.84	-6.83	1.42	2.23	2.00	2.00	0.00	
1,300.00	6.00	168.22	1,299.45	-15.36	3.20	5.01	2.00	2.00	0.00	
1,400.00	8.00	168.22	1,398.70	-27.29	5.69	8.90	2.00	2.00	0.00	
1,500.00	10.00	168.22	1,497.47	-42.61	8.89	13.89	2.00	2.00	0.00	
1,585.81	11.72	168.22	1,581.74	-58.43	12.19	19.05	2.00	2.00	0.00	
Start 5239.62 hold at 1585.81 MD										
1,600.00	11.72	168.22	1,595.63	-61.25	12.78	19.96	0.00	0.00	0.00	
1,700.00	11.72	168.22	1,693.55	-81.13	16.92	26.44	0.00	0.00	0.00	
1,800.00	11.72	168.22	1,791.46	-101.01	21.07	32.92	0.00	0.00	0.00	
1,900.00	11.72	168.22	1,889.38	-120.89	25.21	39.40	0.00	0.00	0.00	
2,000.00	11.72	168.22	1,987.30	-140.76	29.36	45.88	0.00	0.00	0.00	
2,100.00	11.72	168.22	2,085.21	-160.64	33.51	52.36	0.00	0.00	0.00	
2,200.00	11.72	168.22	2,183.13	-180.52	37.65	58.84	0.00	0.00	0.00	
2,300.00	11.72	168.22	2,281.05	-200.40	41.80	65.32	0.00	0.00	0.00	
2,400.00	11.72	168.22	2,378.96	-220.28	45.95	71.80	0.00	0.00	0.00	
2,500.00	11.72	168.22	2,476.88	-240.16	50.09	78.28	0.00	0.00	0.00	
2,600.00	11.72	168.22	2,574.80	-260.04	54.24	84.76	0.00	0.00	0.00	
2,700.00	11.72	168.22	2,672.71	-279.92	58.39	91.24	0.00	0.00	0.00	
2,800.00	11.72	168.22	2,770.63	-299.79	62.53	97.72	0.00	0.00	0.00	
2,900.00	11.72	168.22	2,868.55	-319.67	66.68	104.20	0.00	0.00	0.00	
3,000.00	11.72	168.22	2,966.46	-339.55	70.82	110.68	0.00	0.00	0.00	
3,100.00	11.72	168.22	3,064.38	-359.43	74.97	117.15	0.00	0.00	0.00	
3,200.00	11.72	168.22	3,162.29	-379.31	79.12	123.63	0.00	0.00	0.00	
3,300.00	11.72	168.22	3,260.21	-399.19	83.26	130.11	0.00	0.00	0.00	
3,400.00	11.72	168.22	3,358.13	-419.07	87.41	136.59	0.00	0.00	0.00	
3,495.87	11.72	168.22	3,452.00	-438.12	91.39	142.80	0.00	0.00	0.00	
Parkman:										
3,500.00	11.72	168.22	3,456.04	-438.94	91.56	143.07	0.00	0.00	0.00	
3,600.00	11.72	168.22	3,553.96	-458.82	95.70	149.55	0.00	0.00	0.00	
3,700.00	11.72	168.22	3,651.88	-478.70	99.85	156.03	0.00	0.00	0.00	
3,800.00	11.72	168.22	3,749.79	-498.58	104.00	162.51	0.00	0.00	0.00	
3,900.00	11.72	168.22	3,847.71	-518.46	108.14	168.99	0.00	0.00	0.00	
4,000.00	11.72	168.22	3,945.63	-538.34	112.29	175.47	0.00	0.00	0.00	
4,026.93	11.72	168.22	3,972.00	-543.69	113.41	177.21	0.00	0.00	0.00	
Sussex:										
4,100.00	11.72	168.22	4,043.54	-558.22	116.43	181.95	0.00	0.00	0.00	
4,200.00	11.72	168.22	4,141.46	-578.09	120.58	188.43	0.00	0.00	0.00	
4,300.00	11.72	168.22	4,239.38	-597.97	124.73	194.91	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference	Well WALT EAST 16E-20-01
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5135.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5135.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT EAST 16E-20-01	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)	
4,400.00	11.72	168.22	4,337.29	-617.85	128.87	201.39	0.00	0.00	0.00	
4,500.00	11.72	168.22	4,435.21	-637.73	133.02	207.87	0.00	0.00	0.00	
4,600.00	11.72	168.22	4,533.13	-657.61	137.17	214.35	0.00	0.00	0.00	
4,619.28	11.72	168.22	4,552.00	-661.44	137.97	215.59	0.00	0.00	0.00	
Shannon:										
4,700.00	11.72	168.22	4,631.04	-677.49	141.31	220.82	0.00	0.00	0.00	
4,800.00	11.72	168.22	4,728.96	-697.37	145.46	227.30	0.00	0.00	0.00	
4,900.00	11.72	168.22	4,826.88	-717.25	149.61	233.78	0.00	0.00	0.00	
5,000.00	11.72	168.22	4,924.79	-737.12	153.75	240.26	0.00	0.00	0.00	
5,100.00	11.72	168.22	5,022.71	-757.00	157.90	246.74	0.00	0.00	0.00	
5,200.00	11.72	168.22	5,120.63	-776.88	162.04	253.22	0.00	0.00	0.00	
5,300.00	11.72	168.22	5,218.54	-796.76	166.19	259.70	0.00	0.00	0.00	
5,400.00	11.72	168.22	5,316.46	-816.64	170.34	266.18	0.00	0.00	0.00	
5,500.00	11.72	168.22	5,414.38	-836.52	174.48	272.66	0.00	0.00	0.00	
5,600.00	11.72	168.22	5,512.29	-856.40	178.63	279.14	0.00	0.00	0.00	
5,700.00	11.72	168.22	5,610.21	-876.27	182.78	285.62	0.00	0.00	0.00	
5,800.00	11.72	168.22	5,708.12	-896.15	186.92	292.10	0.00	0.00	0.00	
5,900.00	11.72	168.22	5,806.04	-916.03	191.07	298.58	0.00	0.00	0.00	
6,000.00	11.72	168.22	5,903.96	-935.91	195.22	305.06	0.00	0.00	0.00	
6,100.00	11.72	168.22	6,001.87	-955.79	199.36	311.54	0.00	0.00	0.00	
6,200.00	11.72	168.22	6,099.79	-975.67	203.51	318.02	0.00	0.00	0.00	
6,300.00	11.72	168.22	6,197.71	-995.55	207.65	324.49	0.00	0.00	0.00	
6,400.00	11.72	168.22	6,295.62	-1,015.43	211.80	330.97	0.00	0.00	0.00	
6,500.00	11.72	168.22	6,393.54	-1,035.30	215.95	337.45	0.00	0.00	0.00	
6,600.00	11.72	168.22	6,491.46	-1,055.18	220.09	343.93	0.00	0.00	0.00	
6,700.00	11.72	168.22	6,589.37	-1,075.06	224.24	350.41	0.00	0.00	0.00	
6,800.00	11.72	168.22	6,687.29	-1,094.94	228.39	356.89	0.00	0.00	0.00	
6,825.44	11.72	168.22	6,712.20	-1,100.00	229.44	358.54	0.00	0.00	0.00	
Start DLS 10.00 TFO -78.24										
6,850.00	12.45	156.99	6,736.22	-1,104.88	230.99	360.65	10.00	2.98	-45.69	
6,900.00	15.09	139.01	6,784.80	-1,114.75	237.37	368.16	10.00	5.29	-35.97	
6,950.00	18.70	127.03	6,832.65	-1,124.50	248.04	379.92	10.00	7.23	-23.96	
7,000.00	22.83	119.03	6,879.40	-1,134.04	262.93	395.84	10.00	8.25	-16.01	
7,017.02	24.31	116.91	6,895.00	-1,137.23	268.94	402.19	10.00	8.67	-12.45	
Sharon Springs (Confining Zone):										
7,041.37	26.46	114.27	6,917.00	-1,141.73	278.36	412.07	10.00	8.86	-10.84	
Niobrara:										
7,050.00	27.24	113.43	6,924.70	-1,143.31	281.93	415.80	10.00	8.98	-9.75	
7,058.24	27.98	112.67	6,932.00	-1,144.80	285.44	419.47	10.00	9.03	-9.26	
A Chalk:										
7,081.12	30.07	110.73	6,952.00	-1,148.90	295.75	430.19	10.00	9.12	-8.46	
A Marl:										
7,100.00	31.81	109.31	6,968.20	-1,152.22	304.88	439.65	10.00	9.22	-7.53	
7,150.00	36.49	106.14	7,009.57	-1,160.72	331.61	467.20	10.00	9.35	-6.34	
7,171.98	38.56	104.96	7,027.00	-1,164.30	344.51	480.43	10.00	9.45	-5.36	
B2 Chalk:										
7,200.00	41.23	103.61	7,048.49	-1,168.73	361.92	498.25	10.00	9.51	-4.84	
7,246.15	45.64	101.66	7,082.00	-1,175.65	392.88	529.81	10.00	9.57	-4.22	
B Marl:										
7,250.00	46.01	101.51	7,084.68	-1,176.20	395.58	532.56	10.00	9.61	-3.86	
7,300.00	50.83	99.73	7,117.85	-1,183.07	432.34	569.87	10.00	9.64	-3.56	
7,319.63	52.73	99.10	7,130.00	-1,185.60	447.55	585.28	10.00	9.67	-3.22	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference	Well WALT EAST 16E-20-01
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5135.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5135.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT EAST 16E-20-01	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)
C Chalk:									
7,350.00	55.68	98.18	7,147.76	-1,189.29	471.90	609.89	10.00	9.69	-3.02
7,391.63	59.72	97.02	7,170.00	-1,193.94	506.77	645.07	10.00	9.72	-2.79
C Marl:									
7,400.00	60.54	96.80	7,174.17	-1,194.82	513.98	652.33	10.00	9.73	-2.64
7,450.00	65.41	95.55	7,196.88	-1,199.60	558.25	696.85	10.00	9.75	-2.51
7,500.00	70.30	94.39	7,215.72	-1,203.60	604.37	743.12	10.00	9.77	-2.32
7,513.09	71.58	94.10	7,220.00	-1,204.51	616.71	755.49	10.00	9.78	-2.23
Ft Hays (Confining Zone):									
7,550.00	75.19	93.30	7,230.55	-1,206.79	652.00	790.79	10.00	9.78	-2.17
7,592.93	79.39	92.40	7,240.00	-1,208.87	693.82	832.56	10.00	9.79	-2.09
Codell:									
7,600.00	80.08	92.26	7,241.26	-1,209.15	700.76	839.49	10.00	9.79	-2.05
7,650.00	84.98	91.24	7,247.76	-1,210.66	750.30	888.86	10.00	9.80	-2.02
7,701.23	90.00	90.22	7,250.00	-1,211.32	801.46	939.73	10.00	9.80	-1.99
Start 4800.00 hold at 7701.23 MD - Landing Point:									
7,800.00	90.00	90.22	7,250.00	-1,211.70	900.23	1,037.85	0.00	0.00	0.00
7,900.00	90.00	90.22	7,250.00	-1,212.09	1,000.23	1,137.19	0.00	0.00	0.00
8,000.00	90.00	90.22	7,250.00	-1,212.48	1,100.23	1,236.52	0.00	0.00	0.00
8,100.00	90.00	90.22	7,250.00	-1,212.87	1,200.23	1,335.86	0.00	0.00	0.00
8,200.00	90.00	90.22	7,250.00	-1,213.26	1,300.23	1,435.20	0.00	0.00	0.00
8,300.00	90.00	90.22	7,250.00	-1,213.65	1,400.23	1,534.53	0.00	0.00	0.00
8,400.00	90.00	90.22	7,250.00	-1,214.04	1,500.22	1,633.87	0.00	0.00	0.00
8,500.00	90.00	90.22	7,250.00	-1,214.43	1,600.22	1,733.21	0.00	0.00	0.00
8,600.00	90.00	90.22	7,250.00	-1,214.82	1,700.22	1,832.54	0.00	0.00	0.00
8,700.00	90.00	90.22	7,250.00	-1,215.21	1,800.22	1,931.88	0.00	0.00	0.00
8,800.00	90.00	90.22	7,250.00	-1,215.60	1,900.22	2,031.22	0.00	0.00	0.00
8,900.00	90.00	90.22	7,250.00	-1,215.99	2,000.22	2,130.55	0.00	0.00	0.00
9,000.00	90.00	90.22	7,250.00	-1,216.38	2,100.22	2,229.89	0.00	0.00	0.00
9,100.00	90.00	90.22	7,250.00	-1,216.77	2,200.22	2,329.23	0.00	0.00	0.00
9,200.00	90.00	90.22	7,250.00	-1,217.15	2,300.22	2,428.57	0.00	0.00	0.00
9,300.00	90.00	90.22	7,250.00	-1,217.54	2,400.22	2,527.90	0.00	0.00	0.00
9,400.00	90.00	90.22	7,250.00	-1,217.93	2,500.22	2,627.24	0.00	0.00	0.00
9,500.00	90.00	90.22	7,250.00	-1,218.32	2,600.22	2,726.58	0.00	0.00	0.00
9,600.00	90.00	90.22	7,250.00	-1,218.71	2,700.22	2,825.91	0.00	0.00	0.00
9,700.00	90.00	90.22	7,250.00	-1,219.10	2,800.21	2,925.25	0.00	0.00	0.00
9,800.00	90.00	90.22	7,250.00	-1,219.49	2,900.21	3,024.59	0.00	0.00	0.00
9,900.00	90.00	90.22	7,250.00	-1,219.88	3,000.21	3,123.92	0.00	0.00	0.00
10,000.00	90.00	90.22	7,250.00	-1,220.27	3,100.21	3,223.26	0.00	0.00	0.00
10,100.00	90.00	90.22	7,250.00	-1,220.66	3,200.21	3,322.60	0.00	0.00	0.00
10,200.00	90.00	90.22	7,250.00	-1,221.05	3,300.21	3,421.93	0.00	0.00	0.00
10,300.00	90.00	90.22	7,250.00	-1,221.44	3,400.21	3,521.27	0.00	0.00	0.00
10,400.00	90.00	90.22	7,250.00	-1,221.83	3,500.21	3,620.61	0.00	0.00	0.00
10,500.00	90.00	90.22	7,250.00	-1,222.22	3,600.21	3,719.94	0.00	0.00	0.00
10,600.00	90.00	90.22	7,250.00	-1,222.61	3,700.21	3,819.28	0.00	0.00	0.00
10,700.00	90.00	90.22	7,250.00	-1,223.00	3,800.21	3,918.62	0.00	0.00	0.00
10,800.00	90.00	90.22	7,250.00	-1,223.39	3,900.21	4,017.96	0.00	0.00	0.00
10,900.00	90.00	90.22	7,250.00	-1,223.78	4,000.21	4,117.29	0.00	0.00	0.00
11,000.00	90.00	90.22	7,250.00	-1,224.16	4,100.21	4,216.63	0.00	0.00	0.00
11,100.00	90.00	90.22	7,250.00	-1,224.55	4,200.20	4,315.97	0.00	0.00	0.00
11,200.00	90.00	90.22	7,250.00	-1,224.94	4,300.20	4,415.30	0.00	0.00	0.00
11,300.00	90.00	90.22	7,250.00	-1,225.33	4,400.20	4,514.64	0.00	0.00	0.00
11,400.00	90.00	90.22	7,250.00	-1,225.72	4,500.20	4,613.98	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference	Well WALT EAST 16E-20-01
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5135.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5135.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT EAST 16E-20-01	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)
11,500.00	90.00	90.22	7,250.00	-1,226.11	4,600.20	4,713.31	0.00	0.00	0.00
11,600.00	90.00	90.22	7,250.00	-1,226.50	4,700.20	4,812.65	0.00	0.00	0.00
11,700.00	90.00	90.22	7,250.00	-1,226.89	4,800.20	4,911.99	0.00	0.00	0.00
11,800.00	90.00	90.22	7,250.00	-1,227.28	4,900.20	5,011.32	0.00	0.00	0.00
11,900.00	90.00	90.22	7,250.00	-1,227.67	5,000.20	5,110.66	0.00	0.00	0.00
12,000.00	90.00	90.22	7,250.00	-1,228.06	5,100.20	5,210.00	0.00	0.00	0.00
12,100.00	90.00	90.22	7,250.00	-1,228.45	5,200.20	5,309.33	0.00	0.00	0.00
12,200.00	90.00	90.22	7,250.00	-1,228.84	5,300.20	5,408.67	0.00	0.00	0.00
12,300.00	90.00	90.22	7,250.00	-1,229.23	5,400.20	5,508.01	0.00	0.00	0.00
12,400.00	90.00	90.22	7,250.00	-1,229.62	5,500.19	5,607.34	0.00	0.00	0.00
12,501.23	90.00	90.22	7,250.00	-1,230.01	5,601.42	5,707.90	0.00	0.00	0.00
Start DLS 2.00 TFO -90.00									
12,600.00	90.00	88.25	7,250.00	-1,228.69	5,700.18	5,805.80	2.00	0.00	-2.00
12,700.00	90.00	86.25	7,250.00	-1,223.89	5,800.06	5,904.40	2.00	0.00	-2.00
12,800.00	90.00	84.25	7,250.00	-1,215.61	5,899.71	6,002.37	2.00	0.00	-2.00
12,862.39	90.00	83.00	7,250.00	-1,208.68	5,961.71	6,063.10	2.00	0.00	-2.00
Start 100.00 hold at 12862.39 MD									
12,900.00	90.00	83.00	7,250.00	-1,204.09	5,999.04	6,099.63	0.00	0.00	0.00
12,962.39	90.00	83.00	7,250.00	-1,196.49	6,060.96	6,160.20	0.00	0.00	0.00
Start Turn 2.00									
13,000.00	90.00	83.75	7,250.00	-1,192.15	6,098.33	6,196.79	2.00	0.00	2.00
13,100.00	90.00	85.75	7,250.00	-1,183.01	6,197.90	6,294.57	2.00	0.00	2.00
13,200.00	90.00	87.75	7,250.00	-1,177.34	6,297.74	6,393.02	2.00	0.00	2.00
13,300.00	90.00	89.75	7,250.00	-1,175.17	6,397.71	6,492.03	2.00	0.00	2.00
13,365.19	90.00	91.06	7,250.00	-1,175.63	6,462.89	6,556.81	2.00	0.00	2.00
13,365.29	90.00	91.06	7,250.00	-1,175.63	6,463.00	6,556.91	0.00	0.00	0.00
Start 3971.65 hold at 13365.29 MD									
13,400.00	90.00	91.06	7,250.00	-1,176.27	6,497.70	6,591.44	0.00	0.00	0.00
13,500.00	90.00	91.06	7,250.00	-1,178.11	6,597.68	6,690.93	0.00	0.00	0.00
13,600.00	90.00	91.06	7,250.00	-1,179.95	6,697.67	6,790.43	0.00	0.00	0.00
13,700.00	90.00	91.06	7,250.00	-1,181.80	6,797.65	6,889.92	0.00	0.00	0.00
13,800.00	90.00	91.06	7,250.00	-1,183.64	6,897.63	6,989.41	0.00	0.00	0.00
13,900.00	90.00	91.06	7,250.00	-1,185.48	6,997.61	7,088.91	0.00	0.00	0.00
14,000.00	90.00	91.06	7,250.00	-1,187.33	7,097.60	7,188.40	0.00	0.00	0.00
14,100.00	90.00	91.06	7,250.00	-1,189.17	7,197.58	7,287.90	0.00	0.00	0.00
14,200.00	90.00	91.06	7,250.00	-1,191.01	7,297.56	7,387.39	0.00	0.00	0.00
14,300.00	90.00	91.06	7,250.00	-1,192.86	7,397.55	7,486.88	0.00	0.00	0.00
14,400.00	90.00	91.06	7,250.00	-1,194.70	7,497.53	7,586.38	0.00	0.00	0.00
14,500.00	90.00	91.06	7,250.00	-1,196.54	7,597.51	7,685.87	0.00	0.00	0.00
14,600.00	90.00	91.06	7,250.00	-1,198.38	7,697.50	7,785.36	0.00	0.00	0.00
14,700.00	90.00	91.06	7,250.00	-1,200.23	7,797.48	7,884.86	0.00	0.00	0.00
14,800.00	90.00	91.06	7,250.00	-1,202.07	7,897.46	7,984.35	0.00	0.00	0.00
14,900.00	90.00	91.06	7,250.00	-1,203.91	7,997.44	8,083.84	0.00	0.00	0.00
15,000.00	90.00	91.06	7,250.00	-1,205.76	8,097.43	8,183.34	0.00	0.00	0.00
15,100.00	90.00	91.06	7,250.00	-1,207.60	8,197.41	8,282.83	0.00	0.00	0.00
15,200.00	90.00	91.06	7,250.00	-1,209.44	8,297.39	8,382.32	0.00	0.00	0.00
15,300.00	90.00	91.06	7,250.00	-1,211.29	8,397.38	8,481.82	0.00	0.00	0.00
15,400.00	90.00	91.06	7,250.00	-1,213.13	8,497.36	8,581.31	0.00	0.00	0.00
15,500.00	90.00	91.06	7,250.00	-1,214.97	8,597.34	8,680.80	0.00	0.00	0.00
15,600.00	90.00	91.06	7,250.00	-1,216.82	8,697.33	8,780.30	0.00	0.00	0.00
15,700.00	90.00	91.06	7,250.00	-1,218.66	8,797.31	8,879.79	0.00	0.00	0.00
15,800.00	90.00	91.06	7,250.00	-1,220.50	8,897.29	8,979.28	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference	Well WALT EAST 16E-20-01
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5135.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5135.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT EAST 16E-20-01	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
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)	
15,900.00	90.00	91.06	7,250.00	-1,222.35	8,997.27	9,078.78	0.00	0.00	0.00	
16,000.00	90.00	91.06	7,250.00	-1,224.19	9,097.26	9,178.27	0.00	0.00	0.00	
16,100.00	90.00	91.06	7,250.00	-1,226.03	9,197.24	9,277.77	0.00	0.00	0.00	
16,200.00	90.00	91.06	7,250.00	-1,227.88	9,297.22	9,377.26	0.00	0.00	0.00	
16,300.00	90.00	91.06	7,250.00	-1,229.72	9,397.21	9,476.75	0.00	0.00	0.00	
16,400.00	90.00	91.06	7,250.00	-1,231.56	9,497.19	9,576.25	0.00	0.00	0.00	
16,500.00	90.00	91.06	7,250.00	-1,233.41	9,597.17	9,675.74	0.00	0.00	0.00	
16,600.00	90.00	91.06	7,250.00	-1,235.25	9,697.16	9,775.23	0.00	0.00	0.00	
16,700.00	90.00	91.06	7,250.00	-1,237.09	9,797.14	9,874.73	0.00	0.00	0.00	
16,800.00	90.00	91.06	7,250.00	-1,238.93	9,897.12	9,974.22	0.00	0.00	0.00	
16,900.00	90.00	91.06	7,250.00	-1,240.78	9,997.10	10,073.71	0.00	0.00	0.00	
17,000.00	90.00	91.06	7,250.00	-1,242.62	10,097.09	10,173.21	0.00	0.00	0.00	
17,100.00	90.00	91.06	7,250.00	-1,244.46	10,197.07	10,272.70	0.00	0.00	0.00	
17,200.00	90.00	91.06	7,250.00	-1,246.31	10,297.05	10,372.19	0.00	0.00	0.00	
17,300.00	90.00	91.06	7,250.00	-1,248.15	10,397.04	10,471.69	0.00	0.00	0.00	
17,336.94	90.00	91.06	7,250.00	-1,248.83	10,433.97	10,508.44	0.00	0.00	0.00	
TD at 17336.94										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
WALT 16E-20-01-PBHL - hit/miss target - plan hits target center - Point	0.00	0.00	7,250.00	-1,248.83	10,433.97	1,451,990.69	3,174,599.61	40.572415°N	104.871491°W
WALT 16E-20-01-LP - plan hits target center - Point	0.00	0.00	7,250.00	-1,211.32	801.46	1,451,964.01	3,164,967.07	40.572524°N	104.906165°W

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference	Well WALT EAST 16E-20-01
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5135.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5135.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT EAST 16E-20-01	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
792.00	792.00	Fox Hills Base:				
3,495.87	3,452.00	Parkman:				
4,026.93	3,972.00	Sussex:				
4,619.28	4,552.00	Shannon:				
7,017.02	6,895.00	Sharon Springs (Confining Zone):				
7,041.37	6,917.00	Niobrara:				
7,058.24	6,932.00	A Chalk:				
7,081.12	6,952.00	A Marl:				
7,171.98	7,027.00	B2 Chalk:				
7,246.15	7,082.00	B Marl:				
7,319.63	7,130.00	C Chalk:				
7,391.63	7,170.00	C Marl:				
7,513.09	7,220.00	Ft Hays (Confining Zone):				
7,592.93	7,240.00	Codell:				
7,701.23	7,250.00	Landing Point:				

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	Start Build 2.00	
1,585.81	1,581.74	-58.43	12.19	Start 5239.62 hold at 1585.81 MD	
6,825.44	6,712.20	-1,100.00	229.44	Start DLS 10.00 TFO -78.24	
7,701.23	7,250.00	-1,211.32	801.46	Start 4800.00 hold at 7701.23 MD	
12,501.23	7,250.00	-1,230.01	5,601.42	Start DLS 2.00 TFO -90.00	
12,862.39	7,250.00	-1,208.68	5,961.71	Start 100.00 hold at 12862.39 MD	
12,962.39	7,250.00	-1,196.49	6,060.96	Start Turn 2.00	
13,365.29	7,250.00	-1,175.63	6,463.00	Start 3971.65 hold at 13365.29 MD	
17,336.94	7,250.00	-1,248.83	10,433.97	TD at 17336.94	