

EXTRACTION OIL & GAS

WELD COUNTY

Sec 17-T7N-R67W

WALT 17W-20-4C

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

16 August, 2018



Project: WELD COUNTY
Site: Sec 17-T7N-R67W
Well: WALT 17W-20-4C
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL 1



Azimuths to True North
Magnetic North: 8.18°
Magnetic Field
Strength: 52333.3snT
Dip Angle: 66.94°
Date: 8/15/2018
Model: IGRF2015

WELL DETAILS: WALT 17W-20-4C

+N/-S	+E/-W	Northing	Easting	5103.00	Latitude	Longitude	Slot
0.00	0.00	1453254.12	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	
3	1109.46	8.19	37.41	1108.06	23.20	17.75	2.00	37.41	-16.66	
4	6339.36	8.19	37.41	6284.64	614.90	470.35	0.00	0.00	-441.62	
5	7290.71	90.00	268.49	6905.00	669.25	-101.95	10.00	-128.64	132.56	WALT 17W-4C - LP
6	16473.50	90.00	268.49	6905.00	426.54	-9281.54	0.00	0.00	9291.33	WALT 17W-4C - PBHL

ANNOTATIONS

+N/-S	+E/-W	VSec	Departure	Annotation
0.00	0.00	0.00	0.00	Start Build 2.00
23.20	17.75	-16.66	29.21	Start 5229.90 hold at 1109.46 MD
614.90	470.35	-441.62	774.17	Start DLS 10.00 TFO -128.64
669.25	-101.95	132.56	1364.92	Start 9182.80 hold at 7290.71 MD
426.54	-9281.54	9291.33	10547.72	TD at 16473.50

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
WALT 17W-4C - LP	6905.00	669.25	-101.95	1453922.67	3164051.14	40° 34' 40.501 N	104° 54' 33.894 W	Point
- plan hits target center								
WALT 17W-4C - PBHL	6905.00	426.54	-9281.54	1453618.79	3154873.38	40° 34' 38.086 N	104° 56' 32.860 W	Point
- plan hits target center								

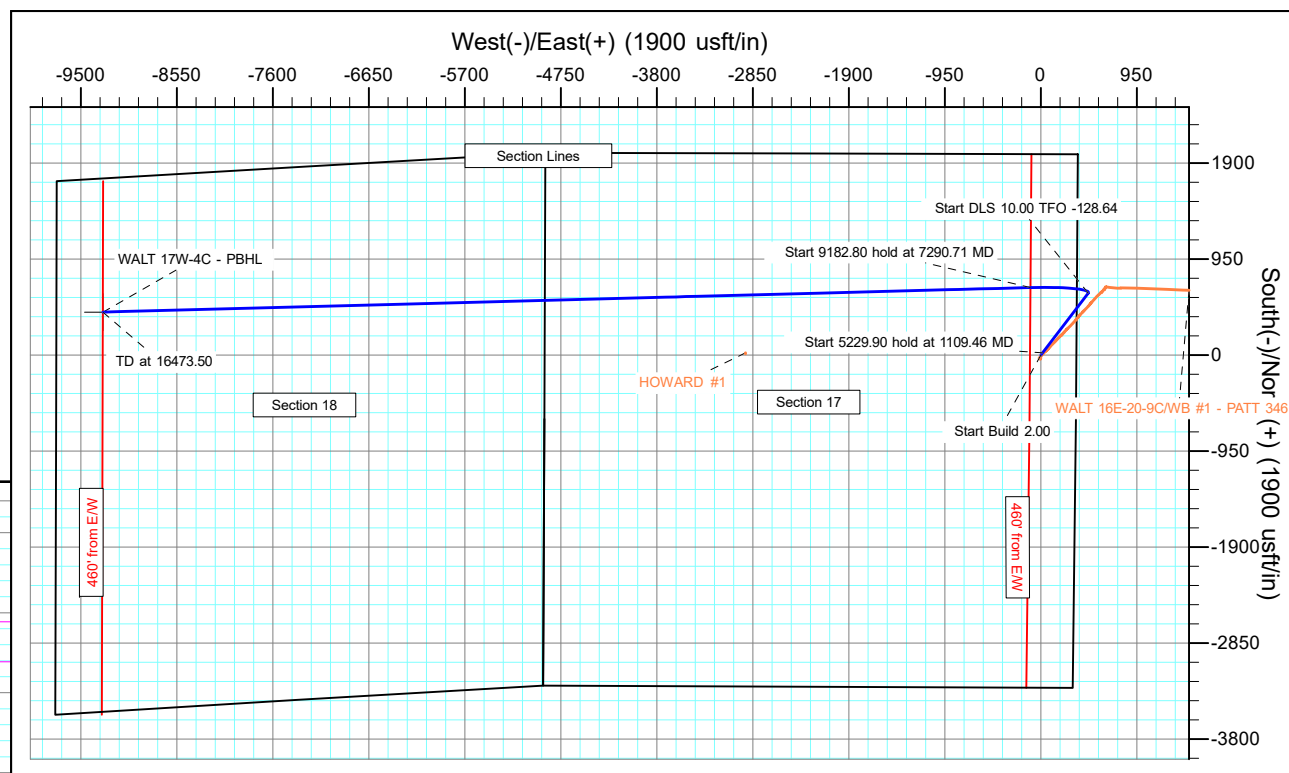
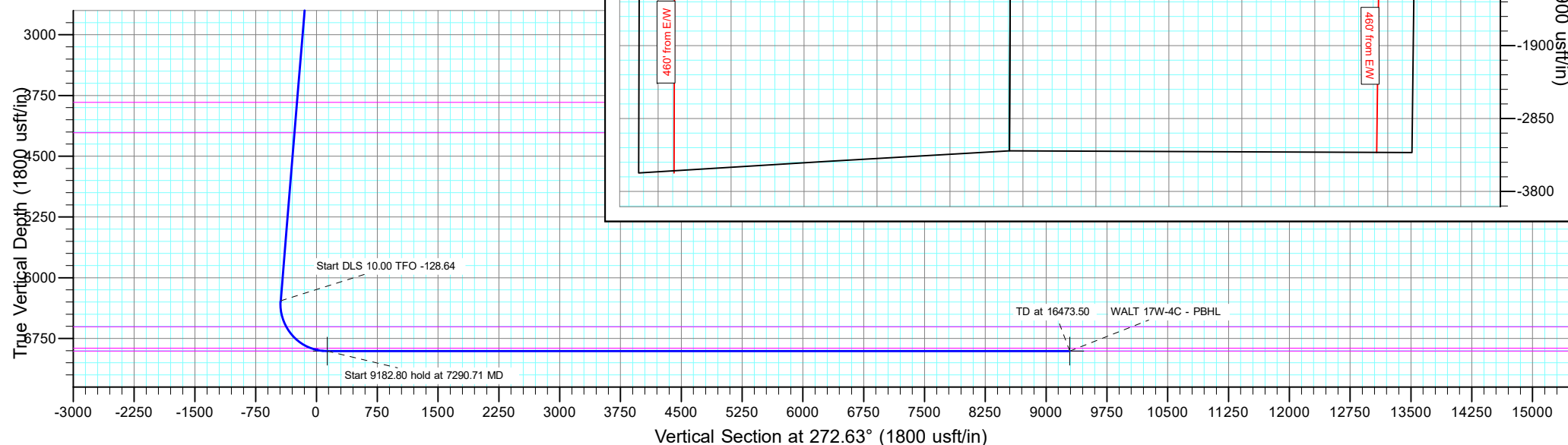
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3835.00	3864.49	SUSSEX
4210.00	4243.35	SHANNON
6605.00	6673.08	NIOBRARA
6870.00	7088.77	FORT HAYS
6905.00	7290.71	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:
1989' FNL, 353' FEL
Sec 17-T7N-R67W
LP:
1320' FNL, 460' FEL
Sec 17-T7N-R67W
BHL:
1320' FNL, 460' FWL
Sec 18-T7N-R67W



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-4C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5132.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5132.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 17W-20-4C	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-20-4C					
Well Position	+N/-S	-1,987.69 usft	Northing:	1,453,254.12 usft	Latitude:	40° 34' 33.888 N
	+E/-W	-367.23 usft	Easting:	3,164,157.55 usft	Longitude:	104° 54' 32.573 W
Position Uncertainty	0.00 usft		Wellhead Elevation:		Ground Level:	5,103.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	8/15/2018	8.18	66.94	52,333.28743938

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	272.63

Plan Survey Tool Program	Date	8/16/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,473.51	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	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,109.46	8.19	37.41	1,108.06	23.20	17.75	2.00	2.00	0.00	37.41	
6,339.36	8.19	37.41	6,284.64	614.90	470.35	0.00	0.00	0.00	0.00	
7,290.71	90.00	268.49	6,905.00	669.25	-101.95	10.00	8.60	-13.55	-128.64	WALT 17W-4C - LP
16,473.51	90.00	268.49	6,905.00	426.54	-9,281.54	0.00	0.00	0.00	0.00	WALT 17W-4C - PBH

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-4C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5132.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5132.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 17W-20-4C	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
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
Start Build 2.00									
800.00	2.00	37.41	799.98	1.39	1.06	-1.00	2.00	2.00	0.00
900.00	4.00	37.41	899.84	5.54	4.24	-3.98	2.00	2.00	0.00
1,000.00	6.00	37.41	999.45	12.47	9.53	-8.95	2.00	2.00	0.00
1,109.46	8.19	37.41	1,108.06	23.20	17.75	-16.66	2.00	2.00	0.00
Start 5229.90 hold at 1109.46 MD									
1,200.00	8.19	37.41	1,197.68	33.45	25.58	-24.02	0.00	0.00	0.00
1,300.00	8.19	37.41	1,296.66	44.76	34.24	-32.15	0.00	0.00	0.00
1,400.00	8.19	37.41	1,395.64	56.07	42.89	-40.27	0.00	0.00	0.00
1,500.00	8.19	37.41	1,494.63	67.39	51.55	-48.40	0.00	0.00	0.00
1,600.00	8.19	37.41	1,593.61	78.70	60.20	-56.52	0.00	0.00	0.00
1,700.00	8.19	37.41	1,692.59	90.01	68.85	-64.65	0.00	0.00	0.00
1,800.00	8.19	37.41	1,791.57	101.33	77.51	-72.77	0.00	0.00	0.00
1,900.00	8.19	37.41	1,890.55	112.64	86.16	-80.90	0.00	0.00	0.00
2,000.00	8.19	37.41	1,989.53	123.96	94.82	-89.03	0.00	0.00	0.00
2,100.00	8.19	37.41	2,088.51	135.27	103.47	-97.15	0.00	0.00	0.00
2,200.00	8.19	37.41	2,187.49	146.58	112.12	-105.28	0.00	0.00	0.00
2,300.00	8.19	37.41	2,286.47	157.90	120.78	-113.40	0.00	0.00	0.00
2,400.00	8.19	37.41	2,385.45	169.21	129.43	-121.53	0.00	0.00	0.00
2,500.00	8.19	37.41	2,484.43	180.53	138.09	-129.65	0.00	0.00	0.00
2,600.00	8.19	37.41	2,583.41	191.84	146.74	-137.78	0.00	0.00	0.00
2,700.00	8.19	37.41	2,682.39	203.15	155.39	-145.90	0.00	0.00	0.00
2,800.00	8.19	37.41	2,781.37	214.47	164.05	-154.03	0.00	0.00	0.00
2,900.00	8.19	37.41	2,880.35	225.78	172.70	-162.16	0.00	0.00	0.00
3,000.00	8.19	37.41	2,979.33	237.09	181.36	-170.28	0.00	0.00	0.00
3,100.00	8.19	37.41	3,078.31	248.41	190.01	-178.41	0.00	0.00	0.00
3,200.00	8.19	37.41	3,177.29	259.72	198.67	-186.53	0.00	0.00	0.00
3,300.00	8.19	37.41	3,276.27	271.04	207.32	-194.66	0.00	0.00	0.00
3,400.00	8.19	37.41	3,375.25	282.35	215.97	-202.78	0.00	0.00	0.00
3,500.00	8.19	37.41	3,474.23	293.66	224.63	-210.91	0.00	0.00	0.00
3,600.00	8.19	37.41	3,573.21	304.98	233.28	-219.03	0.00	0.00	0.00
3,700.00	8.19	37.41	3,672.19	316.29	241.94	-227.16	0.00	0.00	0.00
3,800.00	8.19	37.41	3,771.17	327.60	250.59	-235.29	0.00	0.00	0.00
3,864.49	8.19	37.41	3,835.00	334.90	256.17	-240.53	0.00	0.00	0.00
SUSSEX									
3,900.00	8.19	37.41	3,870.15	338.92	259.24	-243.41	0.00	0.00	0.00
4,000.00	8.19	37.41	3,969.13	350.23	267.90	-251.54	0.00	0.00	0.00
4,100.00	8.19	37.41	4,068.11	361.55	276.55	-259.66	0.00	0.00	0.00
4,200.00	8.19	37.41	4,167.09	372.86	285.21	-267.79	0.00	0.00	0.00
4,243.35	8.19	37.41	4,210.00	377.76	288.96	-271.31	0.00	0.00	0.00
SHANNON									
4,300.00	8.19	37.41	4,266.07	384.17	293.86	-275.91	0.00	0.00	0.00
4,400.00	8.19	37.41	4,365.05	395.49	302.51	-284.04	0.00	0.00	0.00
4,500.00	8.19	37.41	4,464.03	406.80	311.17	-292.17	0.00	0.00	0.00
4,600.00	8.19	37.41	4,563.02	418.12	319.82	-300.29	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-4C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5132.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5132.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 17W-20-4C	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)
4,700.00	8.19	37.41	4,662.00	429.43	328.48	-308.42	0.00	0.00	0.00
4,800.00	8.19	37.41	4,760.98	440.74	337.13	-316.54	0.00	0.00	0.00
4,900.00	8.19	37.41	4,859.96	452.06	345.78	-324.67	0.00	0.00	0.00
5,000.00	8.19	37.41	4,958.94	463.37	354.44	-332.79	0.00	0.00	0.00
5,100.00	8.19	37.41	5,057.92	474.68	363.09	-340.92	0.00	0.00	0.00
5,200.00	8.19	37.41	5,156.90	486.00	371.75	-349.04	0.00	0.00	0.00
5,300.00	8.19	37.41	5,255.88	497.31	380.40	-357.17	0.00	0.00	0.00
5,400.00	8.19	37.41	5,354.86	508.63	389.06	-365.30	0.00	0.00	0.00
5,500.00	8.19	37.41	5,453.84	519.94	397.71	-373.42	0.00	0.00	0.00
5,600.00	8.19	37.41	5,552.82	531.25	406.36	-381.55	0.00	0.00	0.00
5,700.00	8.19	37.41	5,651.80	542.57	415.02	-389.67	0.00	0.00	0.00
5,800.00	8.19	37.41	5,750.78	553.88	423.67	-397.80	0.00	0.00	0.00
5,900.00	8.19	37.41	5,849.76	565.19	432.33	-405.92	0.00	0.00	0.00
6,000.00	8.19	37.41	5,948.74	576.51	440.98	-414.05	0.00	0.00	0.00
6,100.00	8.19	37.41	6,047.72	587.82	449.63	-422.17	0.00	0.00	0.00
6,200.00	8.19	37.41	6,146.70	599.14	458.29	-430.30	0.00	0.00	0.00
6,300.00	8.19	37.41	6,245.68	610.45	466.94	-438.43	0.00	0.00	0.00
6,339.36	8.19	37.41	6,284.64	614.90	470.35	-441.62	0.00	0.00	0.00
Start DLS 10.00 TFO -128.64									
6,350.00	7.57	31.09	6,295.18	616.10	471.17	-442.39	10.00	-5.82	-59.41
6,400.00	6.45	350.19	6,344.83	621.70	472.39	-443.36	10.00	-2.23	-81.80
6,450.00	8.71	315.46	6,394.42	627.17	469.26	-439.97	10.00	4.50	-69.47
6,500.00	12.64	298.43	6,443.56	632.47	461.79	-432.27	10.00	7.86	-34.04
6,550.00	17.13	289.78	6,491.87	637.57	450.04	-420.30	10.00	8.98	-17.31
6,600.00	21.84	284.71	6,539.00	642.43	434.11	-404.16	10.00	9.42	-10.15
6,650.00	26.65	281.37	6,584.58	647.01	414.10	-383.96	10.00	9.62	-6.66
6,673.08	28.89	280.19	6,605.00	649.01	403.54	-373.32	10.00	9.71	-5.13
NIOBRARA									
6,700.00	31.52	279.00	6,628.26	651.27	390.19	-359.88	10.00	9.75	-4.40
6,750.00	36.42	277.21	6,669.72	655.18	362.54	-332.08	10.00	9.80	-3.58
6,800.00	41.34	275.80	6,708.63	658.71	331.36	-300.78	10.00	9.84	-2.83
6,850.00	46.27	274.63	6,744.70	661.84	296.91	-266.21	10.00	9.87	-2.33
6,900.00	51.22	273.65	6,777.66	664.54	259.43	-228.65	10.00	9.89	-1.97
6,950.00	56.17	272.79	6,807.26	666.79	219.21	-188.37	10.00	9.90	-1.72
7,000.00	61.13	272.02	6,833.27	668.58	176.56	-145.68	10.00	9.91	-1.53
7,050.00	66.09	271.33	6,855.49	669.88	131.81	-100.92	10.00	9.92	-1.39
7,088.77	69.94	270.83	6,870.00	670.56	95.87	-64.99	10.00	9.93	-1.29
FORT HAYS									
7,100.00	71.05	270.69	6,873.75	670.70	85.29	-54.41	10.00	9.93	-1.25
7,150.00	76.02	270.08	6,887.92	671.02	37.35	-6.51	10.00	9.93	-1.21
7,200.00	80.99	269.50	6,897.88	670.84	-11.63	42.41	10.00	9.94	-1.16
7,250.00	85.95	268.94	6,903.56	670.16	-61.28	91.98	10.00	9.94	-1.13
7,290.71	90.00	268.49	6,905.00	669.25	-101.95	132.56	10.00	9.94	-1.11
Start 9182.80 hold at 7290.71 MD - CODELL									
7,300.00	90.00	268.49	6,905.00	669.00	-111.24	141.83	0.00	0.00	0.00
7,400.00	90.00	268.49	6,905.00	666.36	-211.20	241.57	0.00	0.00	0.00
7,500.00	90.00	268.49	6,905.00	663.72	-311.17	341.31	0.00	0.00	0.00
7,600.00	90.00	268.49	6,905.00	661.07	-411.13	441.05	0.00	0.00	0.00
7,700.00	90.00	268.49	6,905.00	658.43	-511.10	540.78	0.00	0.00	0.00
7,800.00	90.00	268.49	6,905.00	655.79	-611.06	640.52	0.00	0.00	0.00
7,900.00	90.00	268.49	6,905.00	653.14	-711.03	740.26	0.00	0.00	0.00
8,000.00	90.00	268.49	6,905.00	650.50	-810.99	840.00	0.00	0.00	0.00
8,100.00	90.00	268.49	6,905.00	647.86	-910.96	939.74	0.00	0.00	0.00

Planning Report

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5132.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5132.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 17W-20-4C	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)	
8,200.00	90.00	268.49	6,905.00	645.21	-1,010.92	1,039.48	0.00	0.00	0.00	
8,300.00	90.00	268.49	6,905.00	642.57	-1,110.89	1,139.21	0.00	0.00	0.00	
8,400.00	90.00	268.49	6,905.00	639.93	-1,210.85	1,238.95	0.00	0.00	0.00	
8,500.00	90.00	268.49	6,905.00	637.28	-1,310.82	1,338.69	0.00	0.00	0.00	
8,600.00	90.00	268.49	6,905.00	634.64	-1,410.78	1,438.43	0.00	0.00	0.00	
8,700.00	90.00	268.49	6,905.00	632.00	-1,510.75	1,538.17	0.00	0.00	0.00	
8,800.00	90.00	268.49	6,905.00	629.36	-1,610.71	1,637.91	0.00	0.00	0.00	
8,900.00	90.00	268.49	6,905.00	626.71	-1,710.68	1,737.64	0.00	0.00	0.00	
9,000.00	90.00	268.49	6,905.00	624.07	-1,810.64	1,837.38	0.00	0.00	0.00	
9,100.00	90.00	268.49	6,905.00	621.43	-1,910.61	1,937.12	0.00	0.00	0.00	
9,200.00	90.00	268.49	6,905.00	618.78	-2,010.57	2,036.86	0.00	0.00	0.00	
9,300.00	90.00	268.49	6,905.00	616.14	-2,110.54	2,136.60	0.00	0.00	0.00	
9,400.00	90.00	268.49	6,905.00	613.50	-2,210.50	2,236.34	0.00	0.00	0.00	
9,500.00	90.00	268.49	6,905.00	610.85	-2,310.47	2,336.07	0.00	0.00	0.00	
9,600.00	90.00	268.49	6,905.00	608.21	-2,410.43	2,435.81	0.00	0.00	0.00	
9,700.00	90.00	268.49	6,905.00	605.57	-2,510.40	2,535.55	0.00	0.00	0.00	
9,800.00	90.00	268.49	6,905.00	602.93	-2,610.36	2,635.29	0.00	0.00	0.00	
9,900.00	90.00	268.49	6,905.00	600.28	-2,710.33	2,735.03	0.00	0.00	0.00	
10,000.00	90.00	268.49	6,905.00	597.64	-2,810.29	2,834.77	0.00	0.00	0.00	
10,100.00	90.00	268.49	6,905.00	595.00	-2,910.26	2,934.50	0.00	0.00	0.00	
10,200.00	90.00	268.49	6,905.00	592.35	-3,010.22	3,034.24	0.00	0.00	0.00	
10,300.00	90.00	268.49	6,905.00	589.71	-3,110.19	3,133.98	0.00	0.00	0.00	
10,400.00	90.00	268.49	6,905.00	587.07	-3,210.15	3,233.72	0.00	0.00	0.00	
10,500.00	90.00	268.49	6,905.00	584.42	-3,310.12	3,333.46	0.00	0.00	0.00	
10,600.00	90.00	268.49	6,905.00	581.78	-3,410.08	3,433.20	0.00	0.00	0.00	
10,700.00	90.00	268.49	6,905.00	579.14	-3,510.05	3,532.93	0.00	0.00	0.00	
10,800.00	90.00	268.49	6,905.00	576.49	-3,610.01	3,632.67	0.00	0.00	0.00	
10,900.00	90.00	268.49	6,905.00	573.85	-3,709.98	3,732.41	0.00	0.00	0.00	
11,000.00	90.00	268.49	6,905.00	571.21	-3,809.94	3,832.15	0.00	0.00	0.00	
11,100.00	90.00	268.49	6,905.00	568.57	-3,909.91	3,931.89	0.00	0.00	0.00	
11,200.00	90.00	268.49	6,905.00	565.92	-4,009.87	4,031.63	0.00	0.00	0.00	
11,300.00	90.00	268.49	6,905.00	563.28	-4,109.84	4,131.36	0.00	0.00	0.00	
11,400.00	90.00	268.49	6,905.00	560.64	-4,209.80	4,231.10	0.00	0.00	0.00	
11,500.00	90.00	268.49	6,905.00	557.99	-4,309.77	4,330.84	0.00	0.00	0.00	
11,600.00	90.00	268.49	6,905.00	555.35	-4,409.73	4,430.58	0.00	0.00	0.00	
11,700.00	90.00	268.49	6,905.00	552.71	-4,509.70	4,530.32	0.00	0.00	0.00	
11,800.00	90.00	268.49	6,905.00	550.06	-4,609.66	4,630.06	0.00	0.00	0.00	
11,900.00	90.00	268.49	6,905.00	547.42	-4,709.63	4,729.79	0.00	0.00	0.00	
12,000.00	90.00	268.49	6,905.00	544.78	-4,809.59	4,829.53	0.00	0.00	0.00	
12,100.00	90.00	268.49	6,905.00	542.13	-4,909.56	4,929.27	0.00	0.00	0.00	
12,200.00	90.00	268.49	6,905.00	539.49	-5,009.52	5,029.01	0.00	0.00	0.00	
12,300.00	90.00	268.49	6,905.00	536.85	-5,109.49	5,128.75	0.00	0.00	0.00	
12,400.00	90.00	268.49	6,905.00	534.21	-5,209.45	5,228.49	0.00	0.00	0.00	
12,500.00	90.00	268.49	6,905.00	531.56	-5,309.42	5,328.22	0.00	0.00	0.00	
12,600.00	90.00	268.49	6,905.00	528.92	-5,409.38	5,427.96	0.00	0.00	0.00	
12,700.00	90.00	268.49	6,905.00	526.28	-5,509.35	5,527.70	0.00	0.00	0.00	
12,800.00	90.00	268.49	6,905.00	523.63	-5,609.31	5,627.44	0.00	0.00	0.00	
12,900.00	90.00	268.49	6,905.00	520.99	-5,709.28	5,727.18	0.00	0.00	0.00	
13,000.00	90.00	268.49	6,905.00	518.35	-5,809.24	5,826.92	0.00	0.00	0.00	
13,100.00	90.00	268.49	6,905.00	515.70	-5,909.21	5,926.65	0.00	0.00	0.00	
13,200.00	90.00	268.49	6,905.00	513.06	-6,009.17	6,026.39	0.00	0.00	0.00	
13,300.00	90.00	268.49	6,905.00	510.42	-6,109.14	6,126.13	0.00	0.00	0.00	
13,400.00	90.00	268.49	6,905.00	507.78	-6,209.10	6,225.87	0.00	0.00	0.00	
13,500.00	90.00	268.49	6,905.00	505.13	-6,309.07	6,325.61	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-4C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5132.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5132.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 17W-20-4C	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)	
13,600.00	90.00	268.49	6,905.00	502.49	-6,409.03	6,425.35	0.00	0.00	0.00	
13,700.00	90.00	268.49	6,905.00	499.85	-6,509.00	6,525.08	0.00	0.00	0.00	
13,800.00	90.00	268.49	6,905.00	497.20	-6,608.96	6,624.82	0.00	0.00	0.00	
13,900.00	90.00	268.49	6,905.00	494.56	-6,708.93	6,724.56	0.00	0.00	0.00	
14,000.00	90.00	268.49	6,905.00	491.92	-6,808.89	6,824.30	0.00	0.00	0.00	
14,100.00	90.00	268.49	6,905.00	489.27	-6,908.86	6,924.04	0.00	0.00	0.00	
14,200.00	90.00	268.49	6,905.00	486.63	-7,008.82	7,023.78	0.00	0.00	0.00	
14,300.00	90.00	268.49	6,905.00	483.99	-7,108.79	7,123.51	0.00	0.00	0.00	
14,400.00	90.00	268.49	6,905.00	481.34	-7,208.76	7,223.25	0.00	0.00	0.00	
14,500.00	90.00	268.49	6,905.00	478.70	-7,308.72	7,322.99	0.00	0.00	0.00	
14,600.00	90.00	268.49	6,905.00	476.06	-7,408.69	7,422.73	0.00	0.00	0.00	
14,700.00	90.00	268.49	6,905.00	473.42	-7,508.65	7,522.47	0.00	0.00	0.00	
14,800.00	90.00	268.49	6,905.00	470.77	-7,608.62	7,622.21	0.00	0.00	0.00	
14,900.00	90.00	268.49	6,905.00	468.13	-7,708.58	7,721.94	0.00	0.00	0.00	
15,000.00	90.00	268.49	6,905.00	465.49	-7,808.55	7,821.68	0.00	0.00	0.00	
15,100.00	90.00	268.49	6,905.00	462.84	-7,908.51	7,921.42	0.00	0.00	0.00	
15,200.00	90.00	268.49	6,905.00	460.20	-8,008.48	8,021.16	0.00	0.00	0.00	
15,300.00	90.00	268.49	6,905.00	457.56	-8,108.44	8,120.90	0.00	0.00	0.00	
15,400.00	90.00	268.49	6,905.00	454.91	-8,208.41	8,220.64	0.00	0.00	0.00	
15,500.00	90.00	268.49	6,905.00	452.27	-8,308.37	8,320.37	0.00	0.00	0.00	
15,600.00	90.00	268.49	6,905.00	449.63	-8,408.34	8,420.11	0.00	0.00	0.00	
15,700.00	90.00	268.49	6,905.00	446.99	-8,508.30	8,519.85	0.00	0.00	0.00	
15,800.00	90.00	268.49	6,905.00	444.34	-8,608.27	8,619.59	0.00	0.00	0.00	
15,900.00	90.00	268.49	6,905.00	441.70	-8,708.23	8,719.33	0.00	0.00	0.00	
16,000.00	90.00	268.49	6,905.00	439.06	-8,808.20	8,819.07	0.00	0.00	0.00	
16,100.00	90.00	268.49	6,905.00	436.41	-8,908.16	8,918.80	0.00	0.00	0.00	
16,200.00	90.00	268.49	6,905.00	433.77	-9,008.13	9,018.54	0.00	0.00	0.00	
16,300.00	90.00	268.49	6,905.00	431.13	-9,108.09	9,118.28	0.00	0.00	0.00	
16,400.00	90.00	268.49	6,905.00	428.48	-9,208.06	9,218.02	0.00	0.00	0.00	
16,473.51	90.00	268.49	6,905.00	426.54	-9,281.54	9,291.33	0.00	0.00	0.00	
TD at 16473.50										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
WALT 17W-4C - LP	0.00	0.00	6,905.00	669.25	-101.95	1,453,922.67	3,164,051.14	40° 34' 40.501 N	104° 54' 33.894 W
- plan hits target center									
- Point									
WALT 17W-4C - PBHL	0.00	0.00	6,905.00	426.54	-9,281.54	1,453,618.80	3,154,873.38	40° 34' 38.086 N	104° 56' 32.860 W
- plan hits target center									
- Point									

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-4C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5132.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5132.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 17W-20-4C	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,864.49	3,835.00	SUSSEX				
4,243.35	4,210.00	SHANNON				
6,673.08	6,605.00	NIOBRARA				
7,088.77	6,870.00	FORT HAYS				
7,290.71	6,905.00	CODELL				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
700.00	700.00	0.00	0.00	Start Build 2.00	
1,109.46	1,108.06	23.20	17.75	Start 5229.90 hold at 1109.46 MD	
6,339.36	6,284.64	614.90	470.35	Start DLS 10.00 TFO -128.64	
7,290.71	6,905.00	669.25	-101.95	Start 9182.80 hold at 7290.71 MD	
16,473.51	6,905.00	426.54	-9,281.54	TD at 16473.50	