

EXTRACTION OIL & GAS

WELD COUNTY

Sec 17-T7N-R67W

WALT 17W-20-13C

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

16 August, 2018



Project: WELD COUNTY
Site: Sec 17-T7N-R67W
Well: WALT 17W-20-13C
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-20-13C

+N/-S	+E/-W	Northing	Easting	5107.00	Latitude	Longitude	Slot
0.00	0.00	1452974.31	3164157.19	40° 34' 31.123 N	104° 54' 32.602 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	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
3	1413.78	26.28	171.17	1368.21	-292.50	45.42	2.00	171.17	53.71	
4	6982.34	26.28	171.17	6361.40	-2728.44	423.72	0.00	0.00	501.02	
5	7914.67	90.00	268.49	6905.00	-3009.57	-141.13	10.00	96.57	1127.02	WALT 17W-13C - LP
6	17066.95	90.00	268.49	6905.00	-3250.09	-9290.25	0.00	0.00	9842.35	WALT 17W-13C - P

ANNOTATIONS

+N/-S	+E/-W	VSect	Departure	Annotation
0.00	0.00	0.00	0.00	Start Build 2.00
-292.50	45.42	53.71	296.00	Start 5568.56 hold at 1413.78 MD
-2728.44	423.72	501.02	2761.15	Start DLS 10.00 TFO 96.57
-3009.57	-141.13	1127.02	3448.35	Start 9152.28 hold at 7914.67 MD
-3250.09	-9290.25	9842.35	12600.63	TD at 17066.95

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
WALT 17W-13C - LP	6905.00	-3009.57	-141.13	1449963.86	3164036.11	40° 34' 1.384 N	104° 54' 34.430 W	Point
WALT 17W-13C - PBHL	6905.00	-3250.09	-9290.25	1449662.38	3154888.80	40° 33' 58.990 N	104° 56' 32.982 W	Point

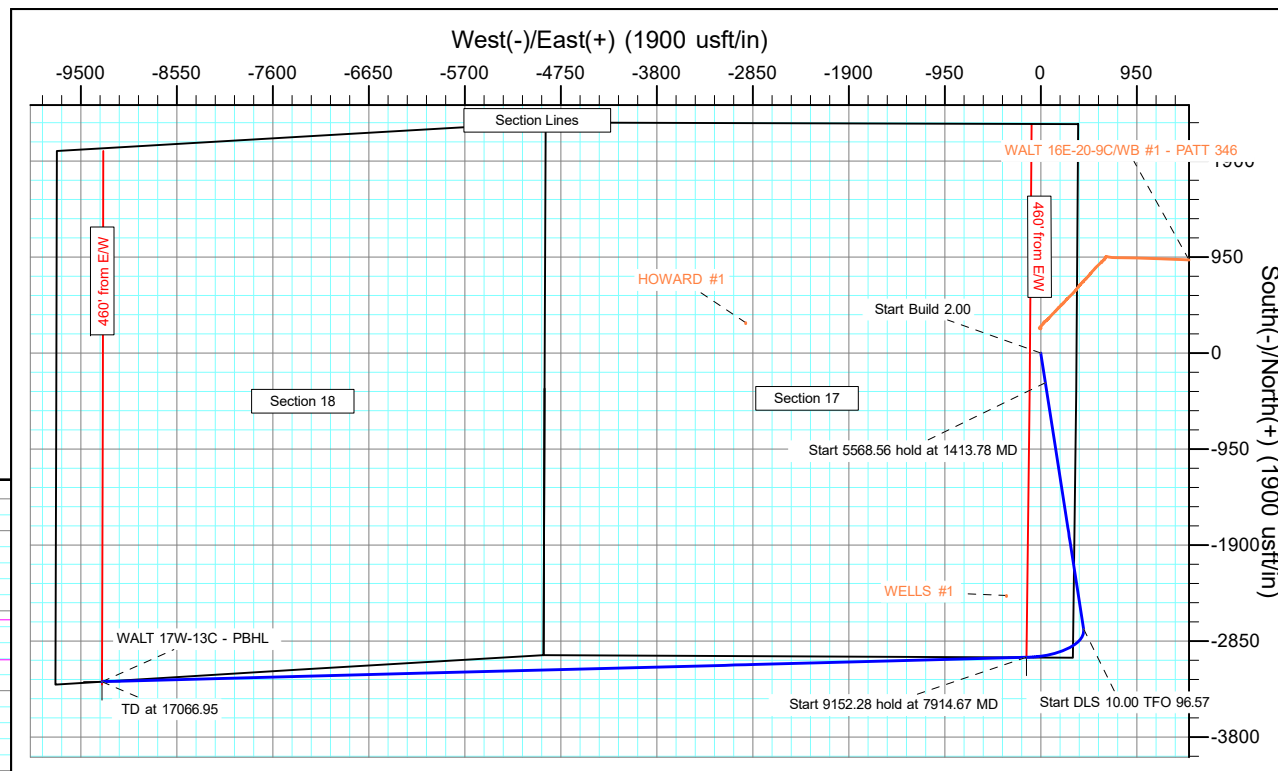
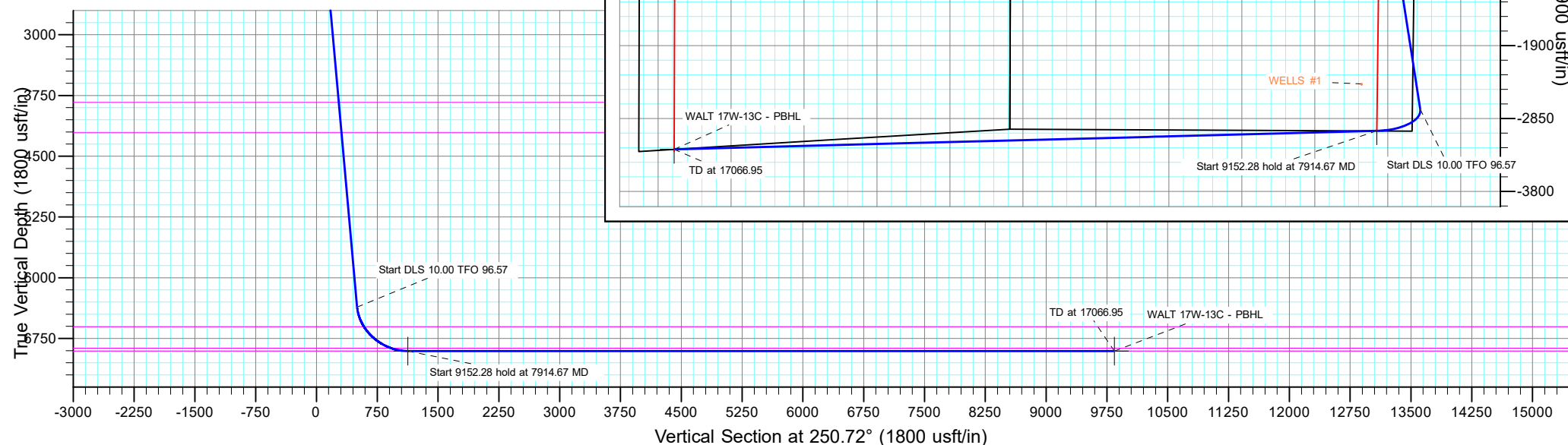
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3835.00	4164.82	SUSSEX
4210.00	4583.03	SHANNON
6605.00	7261.13	NIOBRARA
6870.00	7702.13	FORT HAYS
6905.00	7914.67	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:
2269' FNL, 354' FEL
Sec 17-T7N-R67W
LP:
1' FSL, 460' FEL
Sec 17-T7N-R67W
BHL:
0' FSL, 460' FWL
Sec 18-T7N-R67W



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-13C
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-20-13C	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-20-13C					
Well Position	+N/-S	-2,267.49 usft	Northing:	1,452,974.31 usft	Latitude:	40° 34' 31.123 N
	+E/-W	-369.46 usft	Easting:	3,164,157.19 usft	Longitude:	104° 54' 32.602 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	52,332.85828989

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	250.72

Plan Survey Tool Program	Date	8/16/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,066.95	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	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,413.78	26.28	171.17	1,368.21	-292.50	45.42	2.00	2.00	0.00	171.17	
6,982.34	26.28	171.17	6,361.40	-2,728.44	423.72	0.00	0.00	0.00	0.00	
7,914.67	90.00	268.49	6,905.00	-3,009.57	-141.13	10.00	6.83	10.44	96.57	WALT 17W-13C - LP
17,066.95	90.00	268.49	6,905.00	-3,250.09	-9,290.25	0.00	0.00	0.00	0.00	WALT 17W-13C - PBI

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-13C
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-20-13C	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
Start Build 2.00									
200.00	2.00	171.17	199.98	-1.72	0.27	0.32	2.00	2.00	0.00
300.00	4.00	171.17	299.84	-6.90	1.07	1.27	2.00	2.00	0.00
400.00	6.00	171.17	399.45	-15.51	2.41	2.85	2.00	2.00	0.00
500.00	8.00	171.17	498.70	-27.55	4.28	5.06	2.00	2.00	0.00
600.00	10.00	171.17	597.47	-43.01	6.68	7.90	2.00	2.00	0.00
700.00	12.00	171.17	695.62	-61.86	9.61	11.36	2.00	2.00	0.00
800.00	14.00	171.17	793.06	-84.09	13.06	15.44	2.00	2.00	0.00
900.00	16.00	171.17	889.64	-109.66	17.03	20.14	2.00	2.00	0.00
1,000.00	18.00	171.17	985.27	-138.55	21.52	25.44	2.00	2.00	0.00
1,100.00	20.00	171.17	1,079.82	-170.72	26.51	31.35	2.00	2.00	0.00
1,200.00	22.00	171.17	1,173.17	-206.13	32.01	37.85	2.00	2.00	0.00
1,300.00	24.00	171.17	1,265.21	-244.74	38.01	44.94	2.00	2.00	0.00
1,400.00	26.00	171.17	1,355.84	-286.50	44.49	52.61	2.00	2.00	0.00
1,413.78	26.28	171.17	1,368.21	-292.50	45.42	53.71	2.00	2.00	0.00
Start 5568.56 hold at 1413.78 MD									
1,500.00	26.28	171.17	1,445.52	-330.22	51.28	60.64	0.00	0.00	0.00
1,600.00	26.28	171.17	1,535.19	-373.96	58.07	68.67	0.00	0.00	0.00
1,700.00	26.28	171.17	1,624.86	-417.70	64.87	76.70	0.00	0.00	0.00
1,800.00	26.28	171.17	1,714.53	-461.45	71.66	84.74	0.00	0.00	0.00
1,900.00	26.28	171.17	1,804.19	-505.19	78.45	92.77	0.00	0.00	0.00
2,000.00	26.28	171.17	1,893.86	-548.94	85.25	100.80	0.00	0.00	0.00
2,100.00	26.28	171.17	1,983.53	-592.68	92.04	108.83	0.00	0.00	0.00
2,200.00	26.28	171.17	2,073.20	-636.43	98.83	116.87	0.00	0.00	0.00
2,300.00	26.28	171.17	2,162.86	-680.17	105.63	124.90	0.00	0.00	0.00
2,400.00	26.28	171.17	2,252.53	-723.92	112.42	132.93	0.00	0.00	0.00
2,500.00	26.28	171.17	2,342.20	-767.66	119.21	140.97	0.00	0.00	0.00
2,600.00	26.28	171.17	2,431.87	-811.41	126.01	149.00	0.00	0.00	0.00
2,700.00	26.28	171.17	2,521.53	-855.15	132.80	157.03	0.00	0.00	0.00
2,800.00	26.28	171.17	2,611.20	-898.90	139.60	165.06	0.00	0.00	0.00
2,900.00	26.28	171.17	2,700.87	-942.64	146.39	173.10	0.00	0.00	0.00
3,000.00	26.28	171.17	2,790.54	-986.38	153.18	181.13	0.00	0.00	0.00
3,100.00	26.28	171.17	2,880.20	-1,030.13	159.98	189.16	0.00	0.00	0.00
3,200.00	26.28	171.17	2,969.87	-1,073.87	166.77	197.20	0.00	0.00	0.00
3,300.00	26.28	171.17	3,059.54	-1,117.62	173.56	205.23	0.00	0.00	0.00
3,400.00	26.28	171.17	3,149.20	-1,161.36	180.36	213.26	0.00	0.00	0.00
3,500.00	26.28	171.17	3,238.87	-1,205.11	187.15	221.29	0.00	0.00	0.00
3,600.00	26.28	171.17	3,328.54	-1,248.85	193.94	229.33	0.00	0.00	0.00
3,700.00	26.28	171.17	3,418.21	-1,292.60	200.74	237.36	0.00	0.00	0.00
3,800.00	26.28	171.17	3,507.87	-1,336.34	207.53	245.39	0.00	0.00	0.00
3,900.00	26.28	171.17	3,597.54	-1,380.09	214.32	253.43	0.00	0.00	0.00
4,000.00	26.28	171.17	3,687.21	-1,423.83	221.12	261.46	0.00	0.00	0.00
4,100.00	26.28	171.17	3,776.88	-1,467.58	227.91	269.49	0.00	0.00	0.00
4,164.82	26.28	171.17	3,835.00	-1,495.93	232.31	274.70	0.00	0.00	0.00
SUSSEX									
4,200.00	26.28	171.17	3,866.54	-1,511.32	234.70	277.52	0.00	0.00	0.00
4,300.00	26.28	171.17	3,956.21	-1,555.07	241.50	285.56	0.00	0.00	0.00
4,400.00	26.28	171.17	4,045.88	-1,598.81	248.29	293.59	0.00	0.00	0.00
4,500.00	26.28	171.17	4,135.55	-1,642.55	255.08	301.62	0.00	0.00	0.00
4,583.03	26.28	171.17	4,210.00	-1,678.88	260.72	308.29	0.00	0.00	0.00
SHANNON									

Planning Report

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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-20-13C	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	26.28	171.17	4,225.21	-1,686.30	261.88	309.66	0.00	0.00	0.00
4,700.00	26.28	171.17	4,314.88	-1,730.04	268.67	317.69	0.00	0.00	0.00
4,800.00	26.28	171.17	4,404.55	-1,773.79	275.46	325.72	0.00	0.00	0.00
4,900.00	26.28	171.17	4,494.22	-1,817.53	282.26	333.75	0.00	0.00	0.00
5,000.00	26.28	171.17	4,583.88	-1,861.28	289.05	341.79	0.00	0.00	0.00
5,100.00	26.28	171.17	4,673.55	-1,905.02	295.84	349.82	0.00	0.00	0.00
5,200.00	26.28	171.17	4,763.22	-1,948.77	302.64	357.85	0.00	0.00	0.00
5,300.00	26.28	171.17	4,852.89	-1,992.51	309.43	365.88	0.00	0.00	0.00
5,400.00	26.28	171.17	4,942.55	-2,036.26	316.22	373.92	0.00	0.00	0.00
5,500.00	26.28	171.17	5,032.22	-2,080.00	323.02	381.95	0.00	0.00	0.00
5,600.00	26.28	171.17	5,121.89	-2,123.75	329.81	389.98	0.00	0.00	0.00
5,700.00	26.28	171.17	5,211.56	-2,167.49	336.60	398.02	0.00	0.00	0.00
5,800.00	26.28	171.17	5,301.22	-2,211.23	343.40	406.05	0.00	0.00	0.00
5,900.00	26.28	171.17	5,390.89	-2,254.98	350.19	414.08	0.00	0.00	0.00
6,000.00	26.28	171.17	5,480.56	-2,298.72	356.98	422.11	0.00	0.00	0.00
6,100.00	26.28	171.17	5,570.23	-2,342.47	363.78	430.15	0.00	0.00	0.00
6,200.00	26.28	171.17	5,659.89	-2,386.21	370.57	438.18	0.00	0.00	0.00
6,300.00	26.28	171.17	5,749.56	-2,429.96	377.36	446.21	0.00	0.00	0.00
6,400.00	26.28	171.17	5,839.23	-2,473.70	384.16	454.25	0.00	0.00	0.00
6,500.00	26.28	171.17	5,928.90	-2,517.45	390.95	462.28	0.00	0.00	0.00
6,600.00	26.28	171.17	6,018.56	-2,561.19	397.74	470.31	0.00	0.00	0.00
6,700.00	26.28	171.17	6,108.23	-2,604.94	404.54	478.34	0.00	0.00	0.00
6,800.00	26.28	171.17	6,197.90	-2,648.68	411.33	486.38	0.00	0.00	0.00
6,900.00	26.28	171.17	6,287.57	-2,692.43	418.12	494.41	0.00	0.00	0.00
6,982.34	26.28	171.17	6,361.40	-2,728.44	423.72	501.02	0.00	0.00	0.00
Start DLS 10.00 TFO 96.57									
7,000.00	26.13	175.16	6,377.25	-2,736.18	424.64	502.70	10.00	-0.83	22.57
7,050.00	26.31	186.48	6,422.13	-2,758.18	424.32	510.27	10.00	0.37	22.65
7,100.00	27.36	197.33	6,466.77	-2,780.17	419.65	521.95	10.00	2.09	21.69
7,150.00	29.17	207.18	6,510.83	-2,801.99	410.65	537.64	10.00	3.63	19.71
7,200.00	31.62	215.81	6,553.98	-2,823.47	397.41	557.24	10.00	4.90	17.25
7,250.00	34.57	223.21	6,595.88	-2,844.45	380.01	580.58	10.00	5.90	14.80
7,261.13	35.28	224.71	6,605.00	-2,849.04	375.59	586.27	10.00	6.40	13.42
NIORARA									
7,300.00	37.91	229.53	6,636.22	-2,864.77	358.60	607.50	10.00	6.74	12.40
7,350.00	41.53	234.93	6,674.68	-2,884.28	333.34	637.79	10.00	7.24	10.80
7,400.00	45.37	239.59	6,710.98	-2,902.82	304.41	671.22	10.00	7.68	9.32
7,450.00	49.37	243.65	6,744.85	-2,920.26	272.05	707.53	10.00	8.01	8.14
7,500.00	53.51	247.26	6,776.01	-2,936.46	236.48	746.45	10.00	8.27	7.20
7,550.00	57.74	250.49	6,804.24	-2,951.30	198.00	787.67	10.00	8.46	6.46
7,600.00	62.04	253.43	6,829.32	-2,964.67	156.88	830.90	10.00	8.61	5.88
7,650.00	66.40	256.14	6,851.07	-2,976.46	113.44	875.79	10.00	8.73	5.43
7,700.00	70.81	258.68	6,869.30	-2,986.59	68.02	922.01	10.00	8.81	5.08
7,702.14	71.00	258.79	6,870.00	-2,986.98	66.04	924.01	10.00	8.85	4.92
FORT HAYS									
7,750.00	75.25	261.09	6,883.89	-2,994.97	20.95	969.21	10.00	8.88	4.81
7,800.00	79.71	263.40	6,894.73	-3,001.55	-27.40	1,017.02	10.00	8.93	4.62
7,850.00	84.19	265.64	6,901.73	-3,006.28	-76.66	1,065.08	10.00	8.96	4.49
7,900.00	88.68	267.85	6,904.83	-3,009.11	-126.47	1,113.03	10.00	8.98	4.42
7,914.67	90.00	268.49	6,905.00	-3,009.57	-141.13	1,127.02	10.00	8.98	4.40
Start 9152.28 hold at 7914.67 MD - CODELL									
8,000.00	90.00	268.49	6,905.00	-3,011.82	-226.43	1,208.28	0.00	0.00	0.00
8,100.00	90.00	268.49	6,905.00	-3,014.44	-326.40	1,303.50	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-13C
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-20-13C	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	-3,017.07	-426.36	1,398.73	0.00	0.00	0.00	
8,300.00	90.00	268.49	6,905.00	-3,019.70	-526.33	1,493.95	0.00	0.00	0.00	
8,400.00	90.00	268.49	6,905.00	-3,022.33	-626.29	1,589.18	0.00	0.00	0.00	
8,500.00	90.00	268.49	6,905.00	-3,024.96	-726.26	1,684.41	0.00	0.00	0.00	
8,600.00	90.00	268.49	6,905.00	-3,027.58	-826.22	1,779.63	0.00	0.00	0.00	
8,700.00	90.00	268.49	6,905.00	-3,030.21	-926.19	1,874.86	0.00	0.00	0.00	
8,800.00	90.00	268.49	6,905.00	-3,032.84	-1,026.15	1,970.08	0.00	0.00	0.00	
8,900.00	90.00	268.49	6,905.00	-3,035.47	-1,126.12	2,065.31	0.00	0.00	0.00	
9,000.00	90.00	268.49	6,905.00	-3,038.10	-1,226.09	2,160.53	0.00	0.00	0.00	
9,100.00	90.00	268.49	6,905.00	-3,040.72	-1,326.05	2,255.76	0.00	0.00	0.00	
9,200.00	90.00	268.49	6,905.00	-3,043.35	-1,426.02	2,350.99	0.00	0.00	0.00	
9,300.00	90.00	268.49	6,905.00	-3,045.98	-1,525.98	2,446.21	0.00	0.00	0.00	
9,400.00	90.00	268.49	6,905.00	-3,048.61	-1,625.95	2,541.44	0.00	0.00	0.00	
9,500.00	90.00	268.49	6,905.00	-3,051.24	-1,725.91	2,636.66	0.00	0.00	0.00	
9,600.00	90.00	268.49	6,905.00	-3,053.86	-1,825.88	2,731.89	0.00	0.00	0.00	
9,700.00	90.00	268.49	6,905.00	-3,056.49	-1,925.84	2,827.11	0.00	0.00	0.00	
9,800.00	90.00	268.49	6,905.00	-3,059.12	-2,025.81	2,922.34	0.00	0.00	0.00	
9,900.00	90.00	268.49	6,905.00	-3,061.75	-2,125.77	3,017.57	0.00	0.00	0.00	
10,000.00	90.00	268.49	6,905.00	-3,064.38	-2,225.74	3,112.79	0.00	0.00	0.00	
10,100.00	90.00	268.49	6,905.00	-3,067.00	-2,325.71	3,208.02	0.00	0.00	0.00	
10,200.00	90.00	268.49	6,905.00	-3,069.63	-2,425.67	3,303.24	0.00	0.00	0.00	
10,300.00	90.00	268.49	6,905.00	-3,072.26	-2,525.64	3,398.47	0.00	0.00	0.00	
10,400.00	90.00	268.49	6,905.00	-3,074.89	-2,625.60	3,493.69	0.00	0.00	0.00	
10,500.00	90.00	268.49	6,905.00	-3,077.52	-2,725.57	3,588.92	0.00	0.00	0.00	
10,600.00	90.00	268.49	6,905.00	-3,080.14	-2,825.53	3,684.15	0.00	0.00	0.00	
10,700.00	90.00	268.49	6,905.00	-3,082.77	-2,925.50	3,779.37	0.00	0.00	0.00	
10,800.00	90.00	268.49	6,905.00	-3,085.40	-3,025.46	3,874.60	0.00	0.00	0.00	
10,900.00	90.00	268.49	6,905.00	-3,088.03	-3,125.43	3,969.82	0.00	0.00	0.00	
11,000.00	90.00	268.49	6,905.00	-3,090.65	-3,225.39	4,065.05	0.00	0.00	0.00	
11,100.00	90.00	268.49	6,905.00	-3,093.28	-3,325.36	4,160.27	0.00	0.00	0.00	
11,200.00	90.00	268.49	6,905.00	-3,095.91	-3,425.33	4,255.50	0.00	0.00	0.00	
11,300.00	90.00	268.49	6,905.00	-3,098.54	-3,525.29	4,350.73	0.00	0.00	0.00	
11,400.00	90.00	268.49	6,905.00	-3,101.17	-3,625.26	4,445.95	0.00	0.00	0.00	
11,500.00	90.00	268.49	6,905.00	-3,103.79	-3,725.22	4,541.18	0.00	0.00	0.00	
11,600.00	90.00	268.49	6,905.00	-3,106.42	-3,825.19	4,636.40	0.00	0.00	0.00	
11,700.00	90.00	268.49	6,905.00	-3,109.05	-3,925.15	4,731.63	0.00	0.00	0.00	
11,800.00	90.00	268.49	6,905.00	-3,111.68	-4,025.12	4,826.86	0.00	0.00	0.00	
11,900.00	90.00	268.49	6,905.00	-3,114.31	-4,125.08	4,922.08	0.00	0.00	0.00	
12,000.00	90.00	268.49	6,905.00	-3,116.93	-4,225.05	5,017.31	0.00	0.00	0.00	
12,100.00	90.00	268.49	6,905.00	-3,119.56	-4,325.01	5,112.53	0.00	0.00	0.00	
12,200.00	90.00	268.49	6,905.00	-3,122.19	-4,424.98	5,207.76	0.00	0.00	0.00	
12,300.00	90.00	268.49	6,905.00	-3,124.82	-4,524.95	5,302.98	0.00	0.00	0.00	
12,400.00	90.00	268.49	6,905.00	-3,127.45	-4,624.91	5,398.21	0.00	0.00	0.00	
12,500.00	90.00	268.49	6,905.00	-3,130.07	-4,724.88	5,493.44	0.00	0.00	0.00	
12,600.00	90.00	268.49	6,905.00	-3,132.70	-4,824.84	5,588.66	0.00	0.00	0.00	
12,700.00	90.00	268.49	6,905.00	-3,135.33	-4,924.81	5,683.89	0.00	0.00	0.00	
12,800.00	90.00	268.49	6,905.00	-3,137.96	-5,024.77	5,779.11	0.00	0.00	0.00	
12,900.00	90.00	268.49	6,905.00	-3,140.59	-5,124.74	5,874.34	0.00	0.00	0.00	
13,000.00	90.00	268.49	6,905.00	-3,143.21	-5,224.70	5,969.56	0.00	0.00	0.00	
13,100.00	90.00	268.49	6,905.00	-3,145.84	-5,324.67	6,064.79	0.00	0.00	0.00	
13,200.00	90.00	268.49	6,905.00	-3,148.47	-5,424.64	6,160.02	0.00	0.00	0.00	
13,300.00	90.00	268.49	6,905.00	-3,151.10	-5,524.60	6,255.24	0.00	0.00	0.00	
13,400.00	90.00	268.49	6,905.00	-3,153.73	-5,624.57	6,350.47	0.00	0.00	0.00	
13,500.00	90.00	268.49	6,905.00	-3,156.35	-5,724.53	6,445.69	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-13C
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-20-13C	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	-3,158.98	-5,824.50	6,540.92	0.00	0.00	0.00	
13,700.00	90.00	268.49	6,905.00	-3,161.61	-5,924.46	6,636.14	0.00	0.00	0.00	
13,800.00	90.00	268.49	6,905.00	-3,164.24	-6,024.43	6,731.37	0.00	0.00	0.00	
13,900.00	90.00	268.49	6,905.00	-3,166.86	-6,124.39	6,826.60	0.00	0.00	0.00	
14,000.00	90.00	268.49	6,905.00	-3,169.49	-6,224.36	6,921.82	0.00	0.00	0.00	
14,100.00	90.00	268.49	6,905.00	-3,172.12	-6,324.32	7,017.05	0.00	0.00	0.00	
14,200.00	90.00	268.49	6,905.00	-3,174.75	-6,424.29	7,112.27	0.00	0.00	0.00	
14,300.00	90.00	268.49	6,905.00	-3,177.38	-6,524.26	7,207.50	0.00	0.00	0.00	
14,400.00	90.00	268.49	6,905.00	-3,180.00	-6,624.22	7,302.73	0.00	0.00	0.00	
14,500.00	90.00	268.49	6,905.00	-3,182.63	-6,724.19	7,397.95	0.00	0.00	0.00	
14,600.00	90.00	268.49	6,905.00	-3,185.26	-6,824.15	7,493.18	0.00	0.00	0.00	
14,700.00	90.00	268.49	6,905.00	-3,187.89	-6,924.12	7,588.40	0.00	0.00	0.00	
14,800.00	90.00	268.49	6,905.00	-3,190.52	-7,024.08	7,683.63	0.00	0.00	0.00	
14,900.00	90.00	268.49	6,905.00	-3,193.14	-7,124.05	7,778.85	0.00	0.00	0.00	
15,000.00	90.00	268.49	6,905.00	-3,195.77	-7,224.01	7,874.08	0.00	0.00	0.00	
15,100.00	90.00	268.49	6,905.00	-3,198.40	-7,323.98	7,969.31	0.00	0.00	0.00	
15,200.00	90.00	268.49	6,905.00	-3,201.03	-7,423.94	8,064.53	0.00	0.00	0.00	
15,300.00	90.00	268.49	6,905.00	-3,203.66	-7,523.91	8,159.76	0.00	0.00	0.00	
15,400.00	90.00	268.49	6,905.00	-3,206.28	-7,623.88	8,254.98	0.00	0.00	0.00	
15,500.00	90.00	268.49	6,905.00	-3,208.91	-7,723.84	8,350.21	0.00	0.00	0.00	
15,600.00	90.00	268.49	6,905.00	-3,211.54	-7,823.81	8,445.43	0.00	0.00	0.00	
15,700.00	90.00	268.49	6,905.00	-3,214.17	-7,923.77	8,540.66	0.00	0.00	0.00	
15,800.00	90.00	268.49	6,905.00	-3,216.80	-8,023.74	8,635.89	0.00	0.00	0.00	
15,900.00	90.00	268.49	6,905.00	-3,219.42	-8,123.70	8,731.11	0.00	0.00	0.00	
16,000.00	90.00	268.49	6,905.00	-3,222.05	-8,223.67	8,826.34	0.00	0.00	0.00	
16,100.00	90.00	268.49	6,905.00	-3,224.68	-8,323.63	8,921.56	0.00	0.00	0.00	
16,200.00	90.00	268.49	6,905.00	-3,227.31	-8,423.60	9,016.79	0.00	0.00	0.00	
16,300.00	90.00	268.49	6,905.00	-3,229.94	-8,523.56	9,112.01	0.00	0.00	0.00	
16,400.00	90.00	268.49	6,905.00	-3,232.56	-8,623.53	9,207.24	0.00	0.00	0.00	
16,500.00	90.00	268.49	6,905.00	-3,235.19	-8,723.50	9,302.47	0.00	0.00	0.00	
16,600.00	90.00	268.49	6,905.00	-3,237.82	-8,823.46	9,397.69	0.00	0.00	0.00	
16,700.00	90.00	268.49	6,905.00	-3,240.45	-8,923.43	9,492.92	0.00	0.00	0.00	
16,800.00	90.00	268.49	6,905.00	-3,243.08	-9,023.39	9,588.14	0.00	0.00	0.00	
16,900.00	90.00	268.49	6,905.00	-3,245.70	-9,123.36	9,683.37	0.00	0.00	0.00	
17,000.00	90.00	268.49	6,905.00	-3,248.33	-9,223.32	9,778.60	0.00	0.00	0.00	
17,066.95	90.00	268.49	6,905.00	-3,250.09	-9,290.25	9,842.35	0.00	0.00	0.00	
TD at 17066.95										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
WALT 17W-13C - LP	0.00	0.00	6,905.00	-3,009.57	-141.13	1,449,963.87	3,164,036.11	40° 34' 1.384 N	104° 54' 34.430 W	
- plan hits target center										
- Point										
WALT 17W-13C - PBHL	0.00	0.00	6,905.00	-3,250.09	-9,290.25	1,449,662.38	3,154,888.81	40° 33' 58.990 N	104° 56' 32.982 W	
- plan hits target center										
- Point										

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 17W-20-13C
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-20-13C	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,164.82	3,835.00	SUSSEX				
4,583.03	4,210.00	SHANNON				
7,261.13	6,605.00	NIOBRARA				
7,702.14	6,870.00	FORT HAYS				
7,914.67	6,905.00	CODELL				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
100.00	100.00	0.00	0.00	Start Build 2.00	
1,413.78	1,368.21	-292.50	45.42	Start 5568.56 hold at 1413.78 MD	
6,982.34	6,361.40	-2,728.44	423.72	Start DLS 10.00 TFO 96.57	
7,914.67	6,905.00	-3,009.57	-141.13	Start 9152.28 hold at 7914.67 MD	
17,066.95	6,905.00	-3,250.09	-9,290.25	TD at 17066.95	