

EXTRACTION OIL & GAS

WELD COUNTY

SEC 17-T7N-R67W

WALT WEST 17W-20-05N

OWB

Plan: PROPOSAL 1

Standard Planning Report

20 August, 2021



Project: WELD COUNTY
Site: SEC 17-T7N-R67W
Well: WALT WEST 17W-20-05N
Wellbore: OWB
Design: PROPOSAL 1



Azimuths to True North
Magnetic North: 8.22°

Magnetic Field
Strength: 52337.2nT
Dip Angle: 66.89°
Date: 8/15/2018
Model: IGRF2020

WELL DETAILS: WALT WEST 17W-20-05N

+N/-S	+E/-W	Northing	Easting	5103.00	Latitude	Longitude	Slot
0.00	0.00	1453114.21	3164157.65		40.575696°N	104.909051°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	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	680.13	7.60	37.27	679.02	20.04	15.25	2.00	37.27	-14.32	
4	6362.96	7.60	37.27	6311.89	618.36	470.54	0.00	0.00	-441.80	
5	7310.50	90.00	268.48	6929.00	667.43	-101.95	10.00	-128.54	132.32	WALT WEST 17W-05N-LP
616492.80	90.00	268.48	6929.00	424.36	-9281.03	0.00	0.00	9290.73		WALT WEST 17W-05N-PBHL

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	Start Build 2.00
680.13	7.60	37.27	679.02	20.04	15.25	-14.32	25.18	Start 5682.83 hold at 680.13 MD
6362.96	7.60	37.27	6311.89	618.36	470.54	-441.80	777.03	Start DLS 10.00 TFO -128.54
7310.50	90.00	268.48	6929.00	667.43	-101.95	132.32	1365.61	Start 9182.31 hold at 7310.50 MD
16492.80	90.00	268.48	6929.00	424.36	-9281.03	9290.73	10547.91	TD at 16492.80

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
WALT WEST 17W-05N-LP	6929.00	667.43	-101.95	1453780.95	3164051.25	40.577528°N	104.909418°W	Point
- plan hits target center								
WALT WEST 17W-05N-PBHL	6929.00	424.36	-9281.03	1453476.71	3154873.99	40.576856°N	104.942462°W	Point
- plan hits target center								

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
794.00	796.13	Fox Hills Base:
3454.00	3479.72	Parkman:
3974.00	4004.34	Sussex:
4554.00	4589.48	Shannon:
6897.00	7117.58	Sharon Springs (Confining Zone):
6919.00	7203.00	Niobrara:

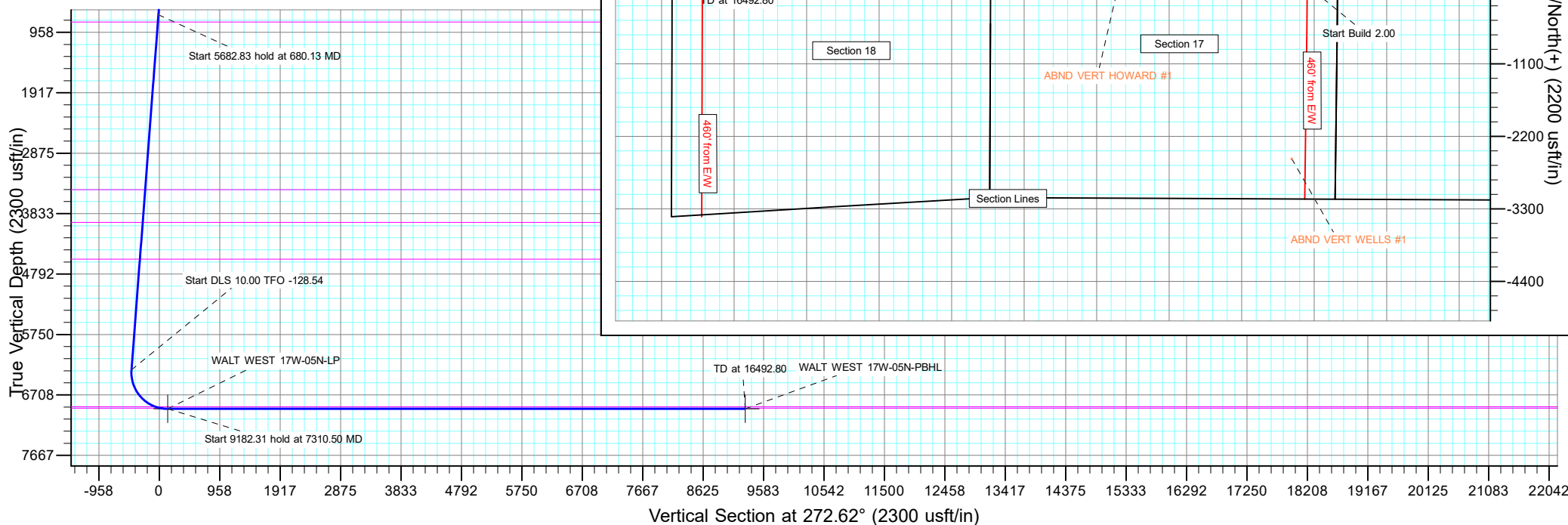
PROJECT DETAILS: WELD COUNTY

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

SHL:
2129' FNL, 353' FEL
Sec 17-T7N-R67W

LP:
1462' FNL, 460' FEL
Sec 17-T7N-R67W

BHL:
1462' FNL, 460' FWL
Sec 18-T7N-R67W



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well WALT WEST 17W-20-05N
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 WEST 17W-20-05N	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	

Well		WALT WEST 17W-20-05N				
Well Position	+N/-S	0.00 usft	Northing:	1,453,114.22 usft	Latitude:	40.575696°N
	+E/-W	0.00 usft	Easting:	3,164,157.65 usft	Longitude:	104.909051°W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,103.00 usft
Grid Convergence:		0.38 °				

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/15/2018	8.22	66.89	52,337.19824902

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	272.62	

Plan Survey Tool Program	Date	8/20/2021			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	16,492.80 PROPOSAL 1 (OWB)	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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
680.13	7.60	37.27	679.02	20.04	15.25	2.00	2.00	0.00	37.27	
6,362.96	7.60	37.27	6,311.89	618.36	470.54	0.00	0.00	0.00	0.00	
7,310.50	90.00	268.48	6,929.00	667.43	-101.95	10.00	8.70	-13.59	-128.54	WALT WEST 17W-05
16,492.80	90.00	268.48	6,929.00	424.36	-9,281.03	0.00	0.00	0.00	0.00	WALT WEST 17W-05

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Project:	WELD COUNTY	MD Reference:	KB 29' @ 5132.00usft
Site:	SEC 17-T7N-R67W	North Reference:	True
Well:	WALT WEST 17W-20-05N	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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	37.27	399.98	1.39	1.06	-0.99	2.00	2.00	0.00
500.00	4.00	37.27	499.84	5.55	4.23	-3.97	2.00	2.00	0.00
600.00	6.00	37.27	599.45	12.49	9.50	-8.92	2.00	2.00	0.00
680.13	7.60	37.27	679.02	20.04	15.25	-14.32	2.00	2.00	0.00
Start 5682.83 hold at 680.13 MD									
700.00	7.60	37.27	698.71	22.13	16.84	-15.81	0.00	0.00	0.00
796.13	7.60	37.27	794.00	32.25	24.54	-23.04	0.00	0.00	0.00
Fox Hills Base:									
800.00	7.60	37.27	797.83	32.66	24.85	-23.34	0.00	0.00	0.00
900.00	7.60	37.27	896.95	43.19	32.87	-30.86	0.00	0.00	0.00
1,000.00	7.60	37.27	996.07	53.72	40.88	-38.38	0.00	0.00	0.00
1,100.00	7.60	37.27	1,095.19	64.25	48.89	-45.90	0.00	0.00	0.00
1,200.00	7.60	37.27	1,194.32	74.78	56.90	-53.43	0.00	0.00	0.00
1,300.00	7.60	37.27	1,293.44	85.30	64.91	-60.95	0.00	0.00	0.00
1,400.00	7.60	37.27	1,392.56	95.83	72.92	-68.47	0.00	0.00	0.00
1,500.00	7.60	37.27	1,491.68	106.36	80.94	-75.99	0.00	0.00	0.00
1,600.00	7.60	37.27	1,590.80	116.89	88.95	-83.51	0.00	0.00	0.00
1,700.00	7.60	37.27	1,689.92	127.42	96.96	-91.04	0.00	0.00	0.00
1,800.00	7.60	37.27	1,789.04	137.95	104.97	-98.56	0.00	0.00	0.00
1,900.00	7.60	37.27	1,888.16	148.48	112.98	-106.08	0.00	0.00	0.00
2,000.00	7.60	37.27	1,987.28	159.00	120.99	-113.60	0.00	0.00	0.00
2,100.00	7.60	37.27	2,086.40	169.53	129.01	-121.13	0.00	0.00	0.00
2,200.00	7.60	37.27	2,185.53	180.06	137.02	-128.65	0.00	0.00	0.00
2,300.00	7.60	37.27	2,284.65	190.59	145.03	-136.17	0.00	0.00	0.00
2,400.00	7.60	37.27	2,383.77	201.12	153.04	-143.69	0.00	0.00	0.00
2,500.00	7.60	37.27	2,482.89	211.65	161.05	-151.22	0.00	0.00	0.00
2,600.00	7.60	37.27	2,582.01	222.18	169.06	-158.74	0.00	0.00	0.00
2,700.00	7.60	37.27	2,681.13	232.70	177.08	-166.26	0.00	0.00	0.00
2,800.00	7.60	37.27	2,780.25	243.23	185.09	-173.78	0.00	0.00	0.00
2,900.00	7.60	37.27	2,879.37	253.76	193.10	-181.31	0.00	0.00	0.00
3,000.00	7.60	37.27	2,978.49	264.29	201.11	-188.83	0.00	0.00	0.00
3,100.00	7.60	37.27	3,077.61	274.82	209.12	-196.35	0.00	0.00	0.00
3,200.00	7.60	37.27	3,176.73	285.35	217.13	-203.87	0.00	0.00	0.00
3,300.00	7.60	37.27	3,275.86	295.88	225.15	-211.40	0.00	0.00	0.00
3,400.00	7.60	37.27	3,374.98	306.40	233.16	-218.92	0.00	0.00	0.00
3,479.72	7.60	37.27	3,454.00	314.80	239.54	-224.92	0.00	0.00	0.00
Parkman:									
3,500.00	7.60	37.27	3,474.10	316.93	241.17	-226.44	0.00	0.00	0.00
3,600.00	7.60	37.27	3,573.22	327.46	249.18	-233.96	0.00	0.00	0.00
3,700.00	7.60	37.27	3,672.34	337.99	257.19	-241.49	0.00	0.00	0.00
3,800.00	7.60	37.27	3,771.46	348.52	265.20	-249.01	0.00	0.00	0.00
3,900.00	7.60	37.27	3,870.58	359.05	273.22	-256.53	0.00	0.00	0.00
4,000.00	7.60	37.27	3,969.70	369.58	281.23	-264.05	0.00	0.00	0.00
4,004.34	7.60	37.27	3,974.00	370.03	281.57	-264.38	0.00	0.00	0.00
Sussex:									
4,100.00	7.60	37.27	4,068.82	380.10	289.24	-271.58	0.00	0.00	0.00
4,200.00	7.60	37.27	4,167.94	390.63	297.25	-279.10	0.00	0.00	0.00
4,300.00	7.60	37.27	4,267.07	401.16	305.26	-286.62	0.00	0.00	0.00
4,400.00	7.60	37.27	4,366.19	411.69	313.27	-294.14	0.00	0.00	0.00
4,500.00	7.60	37.27	4,465.31	422.22	321.29	-301.66	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 WEST 17W-20-05N	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)
4,589.48	7.60	37.27	4,554.00	431.64	328.45	-308.40	0.00	0.00	0.00
Shannon:									
4,600.00	7.60	37.27	4,564.43	432.75	329.30	-309.19	0.00	0.00	0.00
4,700.00	7.60	37.27	4,663.55	443.28	337.31	-316.71	0.00	0.00	0.00
4,800.00	7.60	37.27	4,762.67	453.80	345.32	-324.23	0.00	0.00	0.00
4,900.00	7.60	37.27	4,861.79	464.33	353.33	-331.75	0.00	0.00	0.00
5,000.00	7.60	37.27	4,960.91	474.86	361.34	-339.28	0.00	0.00	0.00
5,100.00	7.60	37.27	5,060.03	485.39	369.36	-346.80	0.00	0.00	0.00
5,200.00	7.60	37.27	5,159.15	495.92	377.37	-354.32	0.00	0.00	0.00
5,300.00	7.60	37.27	5,258.27	506.45	385.38	-361.84	0.00	0.00	0.00
5,400.00	7.60	37.27	5,357.40	516.98	393.39	-369.37	0.00	0.00	0.00
5,500.00	7.60	37.27	5,456.52	527.50	401.40	-376.89	0.00	0.00	0.00
5,600.00	7.60	37.27	5,555.64	538.03	409.41	-384.41	0.00	0.00	0.00
5,700.00	7.60	37.27	5,654.76	548.56	417.43	-391.93	0.00	0.00	0.00
5,800.00	7.60	37.27	5,753.88	559.09	425.44	-399.46	0.00	0.00	0.00
5,900.00	7.60	37.27	5,853.00	569.62	433.45	-406.98	0.00	0.00	0.00
6,000.00	7.60	37.27	5,952.12	580.15	441.46	-414.50	0.00	0.00	0.00
6,100.00	7.60	37.27	6,051.24	590.67	449.47	-422.02	0.00	0.00	0.00
6,200.00	7.60	37.27	6,150.36	601.20	457.48	-429.55	0.00	0.00	0.00
6,300.00	7.60	37.27	6,249.48	611.73	465.50	-437.07	0.00	0.00	0.00
6,362.96	7.60	37.27	6,311.89	618.36	470.54	-441.80	0.00	0.00	0.00
Start DLS 10.00 TFO -128.54									
6,400.00	6.03	8.53	6,348.68	622.24	472.31	-443.40	10.00	-4.24	-77.60
6,450.00	7.13	324.77	6,398.38	627.37	470.91	-441.76	10.00	2.20	-87.51
6,500.00	10.73	301.79	6,447.78	632.36	465.16	-435.79	10.00	7.20	-45.96
6,550.00	15.14	291.10	6,496.51	637.17	455.11	-425.53	10.00	8.82	-21.38
6,600.00	19.83	285.26	6,544.19	641.75	440.83	-411.06	10.00	9.38	-11.69
6,650.00	24.63	281.60	6,590.46	646.08	422.43	-392.48	10.00	9.61	-7.32
6,700.00	29.50	279.08	6,634.97	650.12	400.05	-369.94	10.00	9.74	-5.04
6,750.00	34.40	277.22	6,677.38	653.84	373.86	-343.61	10.00	9.81	-3.72
6,800.00	39.33	275.78	6,717.37	657.21	344.07	-313.69	10.00	9.85	-2.89
6,850.00	44.27	274.61	6,754.64	660.21	310.89	-280.41	10.00	9.88	-2.34
6,900.00	49.22	273.63	6,788.89	662.82	274.58	-244.02	10.00	9.90	-1.96
6,950.00	54.17	272.79	6,819.87	665.00	235.41	-204.79	10.00	9.91	-1.68
7,000.00	59.14	272.05	6,847.35	666.76	193.70	-163.04	10.00	9.92	-1.49
7,050.00	64.10	271.38	6,871.11	668.07	149.74	-119.07	10.00	9.93	-1.34
7,100.00	69.07	270.76	6,890.97	668.92	103.88	-73.22	10.00	9.94	-1.23
7,117.58	70.82	270.56	6,897.00	669.11	87.37	-56.72	10.00	9.94	-1.17
Sharon Springs (Confining Zone):									
7,150.00	74.04	270.19	6,906.79	669.31	56.47	-25.84	10.00	9.94	-1.14
7,200.00	79.01	269.64	6,918.44	669.24	7.86	22.72	10.00	9.94	-1.10
7,203.00	79.31	269.61	6,919.00	669.22	4.91	25.66	10.00	9.94	-1.07
Niobrara:									
7,250.00	83.98	269.11	6,925.83	668.70	-41.57	72.07	10.00	9.95	-1.06
7,300.00	88.96	268.59	6,928.90	667.70	-91.45	121.85	10.00	9.95	-1.04
7,310.50	90.00	268.48	6,929.00	667.43	-101.95	132.32	10.00	9.95	-1.03
Start 9182.31 hold at 7310.50 MD									
7,400.00	90.00	268.48	6,929.00	665.06	-191.42	221.59	0.00	0.00	0.00
7,500.00	90.00	268.48	6,929.00	662.41	-291.38	321.33	0.00	0.00	0.00
7,600.00	90.00	268.48	6,929.00	659.77	-391.35	421.07	0.00	0.00	0.00
7,700.00	90.00	268.48	6,929.00	657.12	-491.31	520.81	0.00	0.00	0.00
7,800.00	90.00	268.48	6,929.00	654.47	-591.28	620.55	0.00	0.00	0.00
7,900.00	90.00	268.48	6,929.00	651.82	-691.24	720.29	0.00	0.00	0.00

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Project:	WELD COUNTY	MD Reference:	KB 29' @ 5132.00usft
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Well:	WALT WEST 17W-20-05N	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)	
8,000.00	90.00	268.48	6,929.00	649.18	-791.21	820.03	0.00	0.00	0.00	
8,100.00	90.00	268.48	6,929.00	646.53	-891.17	919.77	0.00	0.00	0.00	
8,200.00	90.00	268.48	6,929.00	643.88	-991.14	1,019.51	0.00	0.00	0.00	
8,300.00	90.00	268.48	6,929.00	641.24	-1,091.10	1,119.25	0.00	0.00	0.00	
8,400.00	90.00	268.48	6,929.00	638.59	-1,191.07	1,218.99	0.00	0.00	0.00	
8,500.00	90.00	268.48	6,929.00	635.94	-1,291.03	1,318.73	0.00	0.00	0.00	
8,600.00	90.00	268.48	6,929.00	633.29	-1,391.00	1,418.47	0.00	0.00	0.00	
8,700.00	90.00	268.48	6,929.00	630.65	-1,490.96	1,518.21	0.00	0.00	0.00	
8,800.00	90.00	268.48	6,929.00	628.00	-1,590.93	1,617.95	0.00	0.00	0.00	
8,900.00	90.00	268.48	6,929.00	625.35	-1,690.89	1,717.69	0.00	0.00	0.00	
9,000.00	90.00	268.48	6,929.00	622.71	-1,790.86	1,817.43	0.00	0.00	0.00	
9,100.00	90.00	268.48	6,929.00	620.06	-1,890.82	1,917.17	0.00	0.00	0.00	
9,200.00	90.00	268.48	6,929.00	617.41	-1,990.79	2,016.91	0.00	0.00	0.00	
9,300.00	90.00	268.48	6,929.00	614.76	-2,090.75	2,116.65	0.00	0.00	0.00	
9,400.00	90.00	268.48	6,929.00	612.12	-2,190.72	2,216.39	0.00	0.00	0.00	
9,500.00	90.00	268.48	6,929.00	609.47	-2,290.68	2,316.13	0.00	0.00	0.00	
9,600.00	90.00	268.48	6,929.00	606.82	-2,390.65	2,415.87	0.00	0.00	0.00	
9,700.00	90.00	268.48	6,929.00	604.18	-2,490.61	2,515.61	0.00	0.00	0.00	
9,800.00	90.00	268.48	6,929.00	601.53	-2,590.58	2,615.35	0.00	0.00	0.00	
9,900.00	90.00	268.48	6,929.00	598.88	-2,690.54	2,715.09	0.00	0.00	0.00	
10,000.00	90.00	268.48	6,929.00	596.23	-2,790.51	2,814.83	0.00	0.00	0.00	
10,100.00	90.00	268.48	6,929.00	593.59	-2,890.47	2,914.57	0.00	0.00	0.00	
10,200.00	90.00	268.48	6,929.00	590.94	-2,990.44	3,014.31	0.00	0.00	0.00	
10,300.00	90.00	268.48	6,929.00	588.29	-3,090.40	3,114.05	0.00	0.00	0.00	
10,400.00	90.00	268.48	6,929.00	585.65	-3,190.37	3,213.79	0.00	0.00	0.00	
10,500.00	90.00	268.48	6,929.00	583.00	-3,290.33	3,313.53	0.00	0.00	0.00	
10,600.00	90.00	268.48	6,929.00	580.35	-3,390.30	3,413.27	0.00	0.00	0.00	
10,700.00	90.00	268.48	6,929.00	577.70	-3,490.26	3,513.01	0.00	0.00	0.00	
10,800.00	90.00	268.48	6,929.00	575.06	-3,590.23	3,612.75	0.00	0.00	0.00	
10,900.00	90.00	268.48	6,929.00	572.41	-3,690.19	3,712.48	0.00	0.00	0.00	
11,000.00	90.00	268.48	6,929.00	569.76	-3,790.16	3,812.22	0.00	0.00	0.00	
11,100.00	90.00	268.48	6,929.00	567.12	-3,890.12	3,911.96	0.00	0.00	0.00	
11,200.00	90.00	268.48	6,929.00	564.47	-3,990.09	4,011.70	0.00	0.00	0.00	
11,300.00	90.00	268.48	6,929.00	561.82	-4,090.05	4,111.44	0.00	0.00	0.00	
11,400.00	90.00	268.48	6,929.00	559.17	-4,190.02	4,211.18	0.00	0.00	0.00	
11,500.00	90.00	268.48	6,929.00	556.53	-4,289.98	4,310.92	0.00	0.00	0.00	
11,600.00	90.00	268.48	6,929.00	553.88	-4,389.95	4,410.66	0.00	0.00	0.00	
11,700.00	90.00	268.48	6,929.00	551.23	-4,489.91	4,510.40	0.00	0.00	0.00	
11,800.00	90.00	268.48	6,929.00	548.59	-4,589.88	4,610.14	0.00	0.00	0.00	
11,900.00	90.00	268.48	6,929.00	545.94	-4,689.84	4,709.88	0.00	0.00	0.00	
12,000.00	90.00	268.48	6,929.00	543.29	-4,789.81	4,809.62	0.00	0.00	0.00	
12,100.00	90.00	268.48	6,929.00	540.64	-4,889.77	4,909.36	0.00	0.00	0.00	
12,200.00	90.00	268.48	6,929.00	538.00	-4,989.74	5,009.10	0.00	0.00	0.00	
12,300.00	90.00	268.48	6,929.00	535.35	-5,089.70	5,108.84	0.00	0.00	0.00	
12,400.00	90.00	268.48	6,929.00	532.70	-5,189.67	5,208.58	0.00	0.00	0.00	
12,500.00	90.00	268.48	6,929.00	530.05	-5,289.63	5,308.32	0.00	0.00	0.00	
12,600.00	90.00	268.48	6,929.00	527.41	-5,389.60	5,408.06	0.00	0.00	0.00	
12,700.00	90.00	268.48	6,929.00	524.76	-5,489.56	5,507.80	0.00	0.00	0.00	
12,800.00	90.00	268.48	6,929.00	522.11	-5,589.53	5,607.54	0.00	0.00	0.00	
12,900.00	90.00	268.48	6,929.00	519.47	-5,689.49	5,707.28	0.00	0.00	0.00	
13,000.00	90.00	268.48	6,929.00	516.82	-5,789.46	5,807.02	0.00	0.00	0.00	
13,100.00	90.00	268.48	6,929.00	514.17	-5,889.42	5,906.76	0.00	0.00	0.00	
13,200.00	90.00	268.48	6,929.00	511.52	-5,989.39	6,006.50	0.00	0.00	0.00	
13,300.00	90.00	268.48	6,929.00	508.88	-6,089.35	6,106.24	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well WALT WEST 17W-20-05N
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 WEST 17W-20-05N	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)	
13,400.00	90.00	268.48	6,929.00	506.23	-6,189.32	6,205.98	0.00	0.00	0.00	
13,500.00	90.00	268.48	6,929.00	503.58	-6,289.28	6,305.72	0.00	0.00	0.00	
13,600.00	90.00	268.48	6,929.00	500.94	-6,389.25	6,405.46	0.00	0.00	0.00	
13,700.00	90.00	268.48	6,929.00	498.29	-6,489.21	6,505.20	0.00	0.00	0.00	
13,800.00	90.00	268.48	6,929.00	495.64	-6,589.17	6,604.94	0.00	0.00	0.00	
13,900.00	90.00	268.48	6,929.00	492.99	-6,689.14	6,704.68	0.00	0.00	0.00	
14,000.00	90.00	268.48	6,929.00	490.35	-6,789.10	6,804.42	0.00	0.00	0.00	
14,100.00	90.00	268.48	6,929.00	487.70	-6,889.07	6,904.16	0.00	0.00	0.00	
14,200.00	90.00	268.48	6,929.00	485.05	-6,989.03	7,003.90	0.00	0.00	0.00	
14,300.00	90.00	268.48	6,929.00	482.41	-7,089.00	7,103.64	0.00	0.00	0.00	
14,400.00	90.00	268.48	6,929.00	479.76	-7,188.96	7,203.38	0.00	0.00	0.00	
14,500.00	90.00	268.48	6,929.00	477.11	-7,288.93	7,303.11	0.00	0.00	0.00	
14,600.00	90.00	268.48	6,929.00	474.46	-7,388.89	7,402.85	0.00	0.00	0.00	
14,700.00	90.00	268.48	6,929.00	471.82	-7,488.86	7,502.59	0.00	0.00	0.00	
14,800.00	90.00	268.48	6,929.00	469.17	-7,588.82	7,602.33	0.00	0.00	0.00	
14,900.00	90.00	268.48	6,929.00	466.52	-7,688.79	7,702.07	0.00	0.00	0.00	
15,000.00	90.00	268.48	6,929.00	463.88	-7,788.75	7,801.81	0.00	0.00	0.00	
15,100.00	90.00	268.48	6,929.00	461.23	-7,888.72	7,901.55	0.00	0.00	0.00	
15,200.00	90.00	268.48	6,929.00	458.58	-7,988.68	8,001.29	0.00	0.00	0.00	
15,300.00	90.00	268.48	6,929.00	455.93	-8,088.65	8,101.03	0.00	0.00	0.00	
15,400.00	90.00	268.48	6,929.00	453.29	-8,188.61	8,200.77	0.00	0.00	0.00	
15,500.00	90.00	268.48	6,929.00	450.64	-8,288.58	8,300.51	0.00	0.00	0.00	
15,600.00	90.00	268.48	6,929.00	447.99	-8,388.54	8,400.25	0.00	0.00	0.00	
15,700.00	90.00	268.48	6,929.00	445.35	-8,488.51	8,499.99	0.00	0.00	0.00	
15,800.00	90.00	268.48	6,929.00	442.70	-8,588.47	8,599.73	0.00	0.00	0.00	
15,900.00	90.00	268.48	6,929.00	440.05	-8,688.44	8,699.47	0.00	0.00	0.00	
16,000.00	90.00	268.48	6,929.00	437.40	-8,788.40	8,799.21	0.00	0.00	0.00	
16,100.00	90.00	268.48	6,929.00	434.76	-8,888.37	8,898.95	0.00	0.00	0.00	
16,200.00	90.00	268.48	6,929.00	432.11	-8,988.33	8,998.69	0.00	0.00	0.00	
16,300.00	90.00	268.48	6,929.00	429.46	-9,088.30	9,098.43	0.00	0.00	0.00	
16,400.00	90.00	268.48	6,929.00	426.82	-9,188.26	9,198.17	0.00	0.00	0.00	
16,492.80	90.00	268.48	6,929.00	424.36	-9,281.03	9,290.73	0.00	0.00	0.00	
TD at 16492.80										

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 WEST 17W-05N-I	0.00	0.00	6,929.00	667.43	-101.95	1,453,780.95	3,164,051.26	40.577528°N	104.909418°W	
- plan hits target center										
- Point										
WALT WEST 17W-05N-I	0.00	0.00	6,929.00	424.36	-9,281.03	1,453,476.72	3,154,873.99	40.576856°N	104.942462°W	
- plan hits target center										
- Point										

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well WALT WEST 17W-20-05N
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 WEST 17W-20-05N	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
796.13	794.00	Fox Hills Base:				
3,479.72	3,454.00	Parkman:				
4,004.34	3,974.00	Sussex:				
4,589.48	4,554.00	Shannon:				
7,117.58	6,897.00	Sharon Springs (Confining Zone):				
7,203.00	6,919.00	Niobrara:				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
680.13	679.02	20.04	15.25	Start 5682.83 hold at 680.13 MD	
6,362.96	6,311.89	618.36	470.54	Start DLS 10.00 TFO -128.54	
7,310.50	6,929.00	667.43	-101.95	Start 9182.31 hold at 7310.50 MD	
16,492.80	6,929.00	424.36	-9,281.03	TD at 16492.80	