

EXTRACTION OIL & GAS

WELD COUNTY

SEC 17-T7N-R67W

WALT WEST 17W-20-06N

OWB

Plan: PROPOSAL 1

Standard Planning Report

20 August, 2021



Project: WELD COUNTY
Site: SEC 17-T7N-R67W
Well: WALT WEST 17W-20-06N
Wellbore: OWB
Design: PROPOSAL 1



Azimuths to True North
Magnetic North: 8.22°

Magnetic Field
Strength: 52337.1nT
Dip Angle: 66.89°
Date: 8/15/2018
Model: IGRF2020

WELL DETAILS: WALT WEST 17W-20-06N

+N/-S	+E/-W	Northing	Easting	5104.00	Latitude	Longitude	Slot
0.00	0.00	1453085.80	3164157.84		40.575618°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	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	
3	740.55	4.81	76.21	740.27	2.41	9.80	2.00	76.21	-9.84	
4	6329.16	4.81	76.21	6309.19	114.14	465.01	0.00	0.00	-466.61	
5	7276.17	90.00	268.48	6929.00	110.03	-106.11	10.00	-167.69	104.51	WALT WEST 17W-06N-LP
6	16455.39	90.00	268.48	6929.00	-134.13	-9282.09	0.00	0.00	9283.06	WALT WEST 17W-06N-PBHL

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	Start Build 2.00
740.55	4.81	76.21	740.27	2.41	9.80	-9.84	10.09	Start 5588.61 hold at 740.55 MD
6329.16	4.81	76.21	6309.19	114.14	465.01	-466.61	478.81	Start DLS 10.00 TFO -167.69
7276.17	90.00	268.48	6929.00	110.03	-106.11	104.51	1055.30	Start 9179.22 hold at 7276.17 MD
16455.39	90.00	268.48	6929.00	-134.13	-9282.09	9283.06	10234.52	TD at 16455.39

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
WALT WEST 17W-06N-LP	6929.00	110.03	-106.11	1453195.12	3164050.99	40.575920°N	104.909433°W	Point
- plan hits target center								
WALT WEST 17W-06N-PBHL	6929.00	-134.13	-9282.09	1452889.81	3154876.85	40.575245°N	104.942465°W	Point
- plan hits target center								

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
794.00	794.47	Fox Hills Base:
3454.00	3463.88	Parkman:
3974.00	3985.72	Sussex:
4554.00	4567.77	Shannon:
6897.00	7083.76	Sharon Springs (Confining Zone):
6919.00	7168.95	Niobrara:

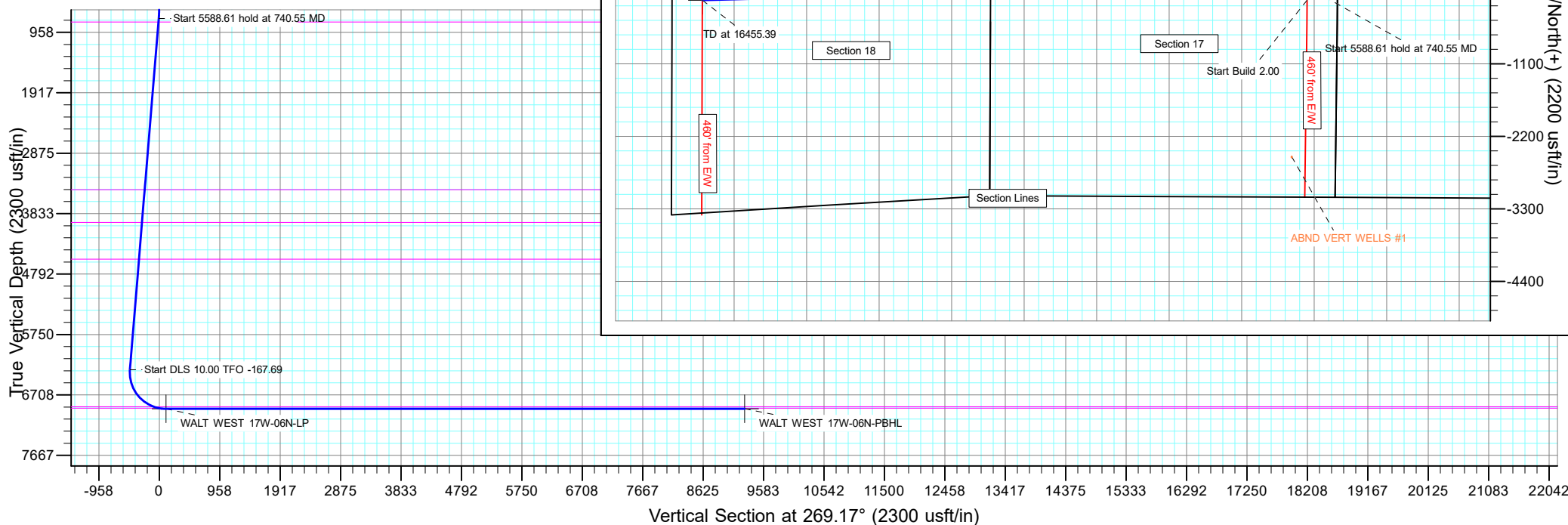
PROJECT DETAILS: WELD COUNTY

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

SHL:
2157' FNL, 353' FEL
Sec 17-T7N-R67W

LP:
2048' FNL, 460' FEL
Sec 17-T7N-R67W

BHL:
2048' FNL, 460' FWL
Sec 18-T7N-R67W



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well WALT WEST 17W-20-06N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5133.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5133.00usft
Site:	SEC 17-T7N-R67W	North Reference:	True
Well:	WALT WEST 17W-20-06N	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-20-06N				
Well Position	+N/-S	0.00 usft	Northing:	1,453,085.80 usft	Latitude:	40.575618°N
	+E/-W	0.00 usft	Easting:	3,164,157.84 usft	Longitude:	104.909051°W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,104.00 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	52,337.14965369

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	269.17

Plan Survey Tool Program	Date	8/20/2021		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,455.39 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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
740.55	4.81	76.21	740.27	2.41	9.80	2.00	2.00	0.00	76.21	
6,329.16	4.81	76.21	6,309.19	114.14	465.01	0.00	0.00	0.00	0.00	
7,276.17	90.00	268.48	6,929.00	110.03	-106.11	10.00	9.00	-17.71	-167.69	WALT WEST 17W-06
16,455.39	90.00	268.48	6,929.00	-134.13	-9,282.09	0.00	0.00	0.00	0.00	WALT WEST 17W-06

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well WALT WEST 17W-20-06N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5133.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5133.00usft
Site:	SEC 17-T7N-R67W	North Reference:	True
Well:	WALT WEST 17W-20-06N	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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
600.00	2.00	76.21	599.98	0.42	1.69	-1.70	2.00	2.00	0.00
700.00	4.00	76.21	699.84	1.66	6.78	-6.80	2.00	2.00	0.00
740.55	4.81	76.21	740.27	2.41	9.80	-9.84	2.00	2.00	0.00
Start 5588.61 hold at 740.55 MD									
794.47	4.81	76.21	794.00	3.48	14.19	-14.24	0.00	0.00	0.00
Fox Hills Base:									
800.00	4.81	76.21	799.51	3.59	14.64	-14.70	0.00	0.00	0.00
900.00	4.81	76.21	899.16	5.59	22.79	-22.87	0.00	0.00	0.00
1,000.00	4.81	76.21	998.80	7.59	30.94	-31.04	0.00	0.00	0.00
1,100.00	4.81	76.21	1,098.45	9.59	39.08	-39.21	0.00	0.00	0.00
1,200.00	4.81	76.21	1,198.10	11.59	47.23	-47.39	0.00	0.00	0.00
1,300.00	4.81	76.21	1,297.75	13.59	55.37	-55.56	0.00	0.00	0.00
1,400.00	4.81	76.21	1,397.39	15.59	63.52	-63.73	0.00	0.00	0.00
1,500.00	4.81	76.21	1,497.04	17.59	71.66	-71.91	0.00	0.00	0.00
1,600.00	4.81	76.21	1,596.69	19.59	79.81	-80.08	0.00	0.00	0.00
1,700.00	4.81	76.21	1,696.34	21.59	87.95	-88.25	0.00	0.00	0.00
1,800.00	4.81	76.21	1,795.98	23.59	96.10	-96.43	0.00	0.00	0.00
1,900.00	4.81	76.21	1,895.63	25.59	104.24	-104.60	0.00	0.00	0.00
2,000.00	4.81	76.21	1,995.28	27.59	112.39	-112.77	0.00	0.00	0.00
2,100.00	4.81	76.21	2,094.93	29.59	120.53	-120.95	0.00	0.00	0.00
2,200.00	4.81	76.21	2,194.58	31.59	128.68	-129.12	0.00	0.00	0.00
2,300.00	4.81	76.21	2,294.22	33.58	136.82	-137.29	0.00	0.00	0.00
2,400.00	4.81	76.21	2,393.87	35.58	144.97	-145.47	0.00	0.00	0.00
2,500.00	4.81	76.21	2,493.52	37.58	153.11	-153.64	0.00	0.00	0.00
2,600.00	4.81	76.21	2,593.17	39.58	161.26	-161.81	0.00	0.00	0.00
2,700.00	4.81	76.21	2,692.81	41.58	169.40	-169.99	0.00	0.00	0.00
2,800.00	4.81	76.21	2,792.46	43.58	177.55	-178.16	0.00	0.00	0.00
2,900.00	4.81	76.21	2,892.11	45.58	185.69	-186.33	0.00	0.00	0.00
3,000.00	4.81	76.21	2,991.76	47.58	193.84	-194.51	0.00	0.00	0.00
3,100.00	4.81	76.21	3,091.40	49.58	201.98	-202.68	0.00	0.00	0.00
3,200.00	4.81	76.21	3,191.05	51.58	210.13	-210.85	0.00	0.00	0.00
3,300.00	4.81	76.21	3,290.70	53.58	218.28	-219.03	0.00	0.00	0.00
3,400.00	4.81	76.21	3,390.35	55.58	226.42	-227.20	0.00	0.00	0.00
3,463.88	4.81	76.21	3,454.00	56.85	231.62	-232.42	0.00	0.00	0.00
Parkman:									
3,500.00	4.81	76.21	3,490.00	57.58	234.57	-235.37	0.00	0.00	0.00
3,600.00	4.81	76.21	3,589.64	59.58	242.71	-243.55	0.00	0.00	0.00
3,700.00	4.81	76.21	3,689.29	61.57	250.86	-251.72	0.00	0.00	0.00
3,800.00	4.81	76.21	3,788.94	63.57	259.00	-259.89	0.00	0.00	0.00
3,900.00	4.81	76.21	3,888.59	65.57	267.15	-268.07	0.00	0.00	0.00
3,985.72	4.81	76.21	3,974.00	67.29	274.13	-275.07	0.00	0.00	0.00
Sussex:									
4,000.00	4.81	76.21	3,988.23	67.57	275.29	-276.24	0.00	0.00	0.00
4,100.00	4.81	76.21	4,087.88	69.57	283.44	-284.41	0.00	0.00	0.00
4,200.00	4.81	76.21	4,187.53	71.57	291.58	-292.59	0.00	0.00	0.00
4,300.00	4.81	76.21	4,287.18	73.57	299.73	-300.76	0.00	0.00	0.00
4,400.00	4.81	76.21	4,386.82	75.57	307.87	-308.93	0.00	0.00	0.00
4,500.00	4.81	76.21	4,486.47	77.57	316.02	-317.11	0.00	0.00	0.00
4,567.77	4.81	76.21	4,554.00	78.92	321.54	-322.64	0.00	0.00	0.00
Shannon:									

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well WALT WEST 17W-20-06N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5133.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5133.00usft
Site:	SEC 17-T7N-R67W	North Reference:	True
Well:	WALT WEST 17W-20-06N	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)
4,600.00	4.81	76.21	4,586.12	79.57	324.16	-325.28	0.00	0.00	0.00
4,700.00	4.81	76.21	4,685.77	81.57	332.31	-333.45	0.00	0.00	0.00
4,800.00	4.81	76.21	4,785.41	83.57	340.45	-341.63	0.00	0.00	0.00
4,900.00	4.81	76.21	4,885.06	85.57	348.60	-349.80	0.00	0.00	0.00
5,000.00	4.81	76.21	4,984.71	87.57	356.74	-357.97	0.00	0.00	0.00
5,100.00	4.81	76.21	5,084.36	89.57	364.89	-366.15	0.00	0.00	0.00
5,200.00	4.81	76.21	5,184.01	91.56	373.03	-374.32	0.00	0.00	0.00
5,300.00	4.81	76.21	5,283.65	93.56	381.18	-382.49	0.00	0.00	0.00
5,400.00	4.81	76.21	5,383.30	95.56	389.33	-390.67	0.00	0.00	0.00
5,500.00	4.81	76.21	5,482.95	97.56	397.47	-398.84	0.00	0.00	0.00
5,600.00	4.81	76.21	5,582.60	99.56	405.62	-407.01	0.00	0.00	0.00
5,700.00	4.81	76.21	5,682.24	101.56	413.76	-415.19	0.00	0.00	0.00
5,800.00	4.81	76.21	5,781.89	103.56	421.91	-423.36	0.00	0.00	0.00
5,900.00	4.81	76.21	5,881.54	105.56	430.05	-431.53	0.00	0.00	0.00
6,000.00	4.81	76.21	5,981.19	107.56	438.20	-439.70	0.00	0.00	0.00
6,100.00	4.81	76.21	6,080.83	109.56	446.34	-447.88	0.00	0.00	0.00
6,200.00	4.81	76.21	6,180.48	111.56	454.49	-456.05	0.00	0.00	0.00
6,300.00	4.81	76.21	6,280.13	113.56	462.63	-464.22	0.00	0.00	0.00
6,329.16	4.81	76.21	6,309.19	114.14	465.01	-466.61	0.00	0.00	0.00
Start DLS 10.00 TFO -167.69									
6,350.00	2.81	67.11	6,329.98	114.55	466.33	-467.93	10.00	-9.60	-43.66
6,400.00	2.59	291.72	6,379.96	115.44	466.40	-468.02	10.00	-0.43	-270.77
6,450.00	7.45	276.33	6,429.75	116.22	462.13	-463.76	10.00	9.72	-30.78
6,500.00	12.42	273.13	6,478.99	116.87	453.53	-455.17	10.00	9.94	-6.40
6,550.00	17.41	271.74	6,527.29	117.39	440.67	-442.32	10.00	9.98	-2.77
6,600.00	22.41	270.96	6,574.28	117.78	423.66	-425.31	10.00	9.99	-1.57
6,650.00	27.40	270.45	6,619.62	118.03	402.61	-404.27	10.00	9.99	-1.02
6,700.00	32.40	270.09	6,662.95	118.14	377.69	-379.36	10.00	9.99	-0.72
6,750.00	37.40	269.82	6,703.95	118.12	349.10	-350.77	10.00	10.00	-0.55
6,800.00	42.39	269.60	6,742.30	117.95	317.04	-318.71	10.00	10.00	-0.44
6,850.00	47.39	269.42	6,777.71	117.65	281.76	-283.43	10.00	10.00	-0.36
6,900.00	52.39	269.27	6,809.91	117.20	243.54	-245.21	10.00	10.00	-0.31
6,950.00	57.39	269.13	6,838.66	116.63	202.65	-204.32	10.00	10.00	-0.27
7,000.00	62.39	269.01	6,863.73	115.93	159.42	-161.08	10.00	10.00	-0.24
7,050.00	67.39	268.90	6,884.95	115.10	114.17	-115.82	10.00	10.00	-0.22
7,083.76	70.76	268.83	6,897.00	114.48	82.65	-84.29	10.00	10.00	-0.21
Sharon Springs (Confining Zone):									
7,100.00	72.39	268.80	6,902.13	114.16	67.24	-68.88	10.00	10.00	-0.20
7,150.00	77.39	268.71	6,915.17	113.11	19.00	-20.63	10.00	10.00	-0.19
7,168.95	79.28	268.67	6,919.00	112.69	0.44	-2.07	10.00	10.00	-0.19
Niobrara:									
7,200.00	82.38	268.61	6,923.95	111.96	-30.20	28.58	10.00	10.00	-0.18
7,250.00	87.38	268.52	6,928.40	110.72	-79.97	78.36	10.00	10.00	-0.18
7,276.17	90.00	268.48	6,929.00	110.03	-106.11	104.51	10.00	10.00	-0.18
Start 9179.22 hold at 7276.17 MD									
7,300.00	90.00	268.48	6,929.00	109.40	-129.94	128.35	0.00	0.00	0.00
7,400.00	90.00	268.48	6,929.00	106.74	-229.90	228.34	0.00	0.00	0.00
7,500.00	90.00	268.48	6,929.00	104.08	-329.87	328.33	0.00	0.00	0.00
7,600.00	90.00	268.48	6,929.00	101.42	-429.83	428.32	0.00	0.00	0.00
7,700.00	90.00	268.48	6,929.00	98.76	-529.80	528.32	0.00	0.00	0.00
7,800.00	90.00	268.48	6,929.00	96.10	-629.76	628.31	0.00	0.00	0.00
7,900.00	90.00	268.48	6,929.00	93.44	-729.73	728.30	0.00	0.00	0.00
8,000.00	90.00	268.48	6,929.00	90.78	-829.69	828.29	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well WALT WEST 17W-20-06N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5133.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5133.00usft
Site:	SEC 17-T7N-R67W	North Reference:	True
Well:	WALT WEST 17W-20-06N	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)	
8,100.00	90.00	268.48	6,929.00	88.12	-929.66	928.29	0.00	0.00	0.00	
8,200.00	90.00	268.48	6,929.00	85.46	-1,029.62	1,028.28	0.00	0.00	0.00	
8,300.00	90.00	268.48	6,929.00	82.80	-1,129.59	1,128.27	0.00	0.00	0.00	
8,400.00	90.00	268.48	6,929.00	80.14	-1,229.55	1,228.26	0.00	0.00	0.00	
8,500.00	90.00	268.48	6,929.00	77.48	-1,329.52	1,328.26	0.00	0.00	0.00	
8,600.00	90.00	268.48	6,929.00	74.82	-1,429.48	1,428.25	0.00	0.00	0.00	
8,700.00	90.00	268.48	6,929.00	72.16	-1,529.44	1,528.24	0.00	0.00	0.00	
8,800.00	90.00	268.48	6,929.00	69.50	-1,629.41	1,628.24	0.00	0.00	0.00	
8,900.00	90.00	268.48	6,929.00	66.84	-1,729.37	1,728.23	0.00	0.00	0.00	
9,000.00	90.00	268.48	6,929.00	64.18	-1,829.34	1,828.22	0.00	0.00	0.00	
9,100.00	90.00	268.48	6,929.00	61.52	-1,929.30	1,928.21	0.00	0.00	0.00	
9,200.00	90.00	268.48	6,929.00	58.86	-2,029.27	2,028.21	0.00	0.00	0.00	
9,300.00	90.00	268.48	6,929.00	56.20	-2,129.23	2,128.20	0.00	0.00	0.00	
9,400.00	90.00	268.48	6,929.00	53.54	-2,229.20	2,228.19	0.00	0.00	0.00	
9,500.00	90.00	268.48	6,929.00	50.88	-2,329.16	2,328.18	0.00	0.00	0.00	
9,600.00	90.00	268.48	6,929.00	48.22	-2,429.13	2,428.18	0.00	0.00	0.00	
9,700.00	90.00	268.48	6,929.00	45.56	-2,529.09	2,528.17	0.00	0.00	0.00	
9,800.00	90.00	268.48	6,929.00	42.90	-2,629.06	2,628.16	0.00	0.00	0.00	
9,900.00	90.00	268.48	6,929.00	40.24	-2,729.02	2,728.15	0.00	0.00	0.00	
10,000.00	90.00	268.48	6,929.00	37.58	-2,828.98	2,828.15	0.00	0.00	0.00	
10,100.00	90.00	268.48	6,929.00	34.92	-2,928.95	2,928.14	0.00	0.00	0.00	
10,200.00	90.00	268.48	6,929.00	32.26	-3,028.91	3,028.13	0.00	0.00	0.00	
10,300.00	90.00	268.48	6,929.00	29.60	-3,128.88	3,128.12	0.00	0.00	0.00	
10,400.00	90.00	268.48	6,929.00	26.94	-3,228.84	3,228.12	0.00	0.00	0.00	
10,500.00	90.00	268.48	6,929.00	24.28	-3,328.81	3,328.11	0.00	0.00	0.00	
10,600.00	90.00	268.48	6,929.00	21.62	-3,428.77	3,428.10	0.00	0.00	0.00	
10,700.00	90.00	268.48	6,929.00	18.96	-3,528.74	3,528.09	0.00	0.00	0.00	
10,800.00	90.00	268.48	6,929.00	16.30	-3,628.70	3,628.09	0.00	0.00	0.00	
10,900.00	90.00	268.48	6,929.00	13.64	-3,728.67	3,728.08	0.00	0.00	0.00	
11,000.00	90.00	268.48	6,929.00	10.98	-3,828.63	3,828.07	0.00	0.00	0.00	
11,100.00	90.00	268.48	6,929.00	8.32	-3,928.60	3,928.07	0.00	0.00	0.00	
11,200.00	90.00	268.48	6,929.00	5.66	-4,028.56	4,028.06	0.00	0.00	0.00	
11,300.00	90.00	268.48	6,929.00	3.00	-4,128.52	4,128.05	0.00	0.00	0.00	
11,400.00	90.00	268.48	6,929.00	0.34	-4,228.49	4,228.04	0.00	0.00	0.00	
11,500.00	90.00	268.48	6,929.00	-2.32	-4,328.45	4,328.04	0.00	0.00	0.00	
11,600.00	90.00	268.48	6,929.00	-4.98	-4,428.42	4,428.03	0.00	0.00	0.00	
11,700.00	90.00	268.48	6,929.00	-7.64	-4,528.38	4,528.02	0.00	0.00	0.00	
11,800.00	90.00	268.48	6,929.00	-10.30	-4,628.35	4,628.01	0.00	0.00	0.00	
11,900.00	90.00	268.48	6,929.00	-12.96	-4,728.31	4,728.01	0.00	0.00	0.00	
12,000.00	90.00	268.48	6,929.00	-15.62	-4,828.28	4,828.00	0.00	0.00	0.00	
12,100.00	90.00	268.48	6,929.00	-18.28	-4,928.24	4,927.99	0.00	0.00	0.00	
12,200.00	90.00	268.48	6,929.00	-20.94	-5,028.21	5,027.98	0.00	0.00	0.00	
12,300.00	90.00	268.48	6,929.00	-23.60	-5,128.17	5,127.98	0.00	0.00	0.00	
12,400.00	90.00	268.48	6,929.00	-26.26	-5,228.14	5,227.97	0.00	0.00	0.00	
12,500.00	90.00	268.48	6,929.00	-28.92	-5,328.10	5,327.96	0.00	0.00	0.00	
12,600.00	90.00	268.48	6,929.00	-31.58	-5,428.06	5,427.95	0.00	0.00	0.00	
12,700.00	90.00	268.48	6,929.00	-34.24	-5,528.03	5,527.95	0.00	0.00	0.00	
12,800.00	90.00	268.48	6,929.00	-36.90	-5,627.99	5,627.94	0.00	0.00	0.00	
12,900.00	90.00	268.48	6,929.00	-39.56	-5,727.96	5,727.93	0.00	0.00	0.00	
13,000.00	90.00	268.48	6,929.00	-42.22	-5,827.92	5,827.93	0.00	0.00	0.00	
13,100.00	90.00	268.48	6,929.00	-44.88	-5,927.89	5,927.92	0.00	0.00	0.00	
13,200.00	90.00	268.48	6,929.00	-47.54	-6,027.85	6,027.91	0.00	0.00	0.00	
13,300.00	90.00	268.48	6,929.00	-50.20	-6,127.82	6,127.90	0.00	0.00	0.00	
13,400.00	90.00	268.48	6,929.00	-52.86	-6,227.78	6,227.90	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well WALT WEST 17W-20-06N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5133.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5133.00usft
Site:	SEC 17-T7N-R67W	North Reference:	True
Well:	WALT WEST 17W-20-06N	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)	
13,500.00	90.00	268.48	6,929.00	-55.52	-6,327.75	6,327.89	0.00	0.00	0.00	
13,600.00	90.00	268.48	6,929.00	-58.18	-6,427.71	6,427.88	0.00	0.00	0.00	
13,700.00	90.00	268.48	6,929.00	-60.84	-6,527.68	6,527.87	0.00	0.00	0.00	
13,800.00	90.00	268.48	6,929.00	-63.50	-6,627.64	6,627.87	0.00	0.00	0.00	
13,900.00	90.00	268.48	6,929.00	-66.16	-6,727.60	6,727.86	0.00	0.00	0.00	
14,000.00	90.00	268.48	6,929.00	-68.82	-6,827.57	6,827.85	0.00	0.00	0.00	
14,100.00	90.00	268.48	6,929.00	-71.48	-6,927.53	6,927.84	0.00	0.00	0.00	
14,200.00	90.00	268.48	6,929.00	-74.14	-7,027.50	7,027.84	0.00	0.00	0.00	
14,300.00	90.00	268.48	6,929.00	-76.80	-7,127.46	7,127.83	0.00	0.00	0.00	
14,400.00	90.00	268.48	6,929.00	-79.46	-7,227.43	7,227.82	0.00	0.00	0.00	
14,500.00	90.00	268.48	6,929.00	-82.12	-7,327.39	7,327.81	0.00	0.00	0.00	
14,600.00	90.00	268.48	6,929.00	-84.78	-7,427.36	7,427.81	0.00	0.00	0.00	
14,700.00	90.00	268.48	6,929.00	-87.44	-7,527.32	7,527.80	0.00	0.00	0.00	
14,800.00	90.00	268.48	6,929.00	-90.10	-7,627.29	7,627.79	0.00	0.00	0.00	
14,900.00	90.00	268.48	6,929.00	-92.76	-7,727.25	7,727.78	0.00	0.00	0.00	
15,000.00	90.00	268.48	6,929.00	-95.42	-7,827.22	7,827.78	0.00	0.00	0.00	
15,100.00	90.00	268.48	6,929.00	-98.08	-7,927.18	7,927.77	0.00	0.00	0.00	
15,200.00	90.00	268.48	6,929.00	-100.74	-8,027.15	8,027.76	0.00	0.00	0.00	
15,300.00	90.00	268.48	6,929.00	-103.40	-8,127.11	8,127.76	0.00	0.00	0.00	
15,400.00	90.00	268.48	6,929.00	-106.06	-8,227.07	8,227.75	0.00	0.00	0.00	
15,500.00	90.00	268.48	6,929.00	-108.72	-8,327.04	8,327.74	0.00	0.00	0.00	
15,600.00	90.00	268.48	6,929.00	-111.38	-8,427.00	8,427.73	0.00	0.00	0.00	
15,700.00	90.00	268.48	6,929.00	-114.04	-8,526.97	8,527.73	0.00	0.00	0.00	
15,800.00	90.00	268.48	6,929.00	-116.70	-8,626.93	8,627.72	0.00	0.00	0.00	
15,900.00	90.00	268.48	6,929.00	-119.36	-8,726.90	8,727.71	0.00	0.00	0.00	
16,000.00	90.00	268.48	6,929.00	-122.02	-8,826.86	8,827.70	0.00	0.00	0.00	
16,100.00	90.00	268.48	6,929.00	-124.68	-8,926.83	8,927.70	0.00	0.00	0.00	
16,200.00	90.00	268.48	6,929.00	-127.34	-9,026.79	9,027.69	0.00	0.00	0.00	
16,300.00	90.00	268.48	6,929.00	-130.00	-9,126.76	9,127.68	0.00	0.00	0.00	
16,400.00	90.00	268.48	6,929.00	-132.66	-9,226.72	9,227.67	0.00	0.00	0.00	
16,455.39	90.00	268.48	6,929.00	-134.13	-9,282.09	9,283.06	0.00	0.00	0.00	
TD at 16455.39										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
WALT WEST 17W-06N-I - hit/miss target - Shape - Point	0.00	0.00	6,929.00	110.03	-106.11	1,453,195.12	3,164,050.99	40.575920°N	104.909433°W
WALT WEST 17W-06N-I - plan hits target center - Point	0.00	0.00	6,929.00	-134.13	-9,282.09	1,452,889.81	3,154,876.85	40.575245°N	104.942465°W

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well WALT WEST 17W-20-06N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 5133.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 5133.00usft
Site:	SEC 17-T7N-R67W	North Reference:	True
Well:	WALT WEST 17W-20-06N	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
794.47	794.00	Fox Hills Base:				
3,463.88	3,454.00	Parkman:				
3,985.72	3,974.00	Sussex:				
4,567.77	4,554.00	Shannon:				
7,083.76	6,897.00	Sharon Springs (Confining Zone):				
7,168.95	6,919.00	Niobrara:				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
500.00	500.00	0.00	0.00	Start Build 2.00	
740.55	740.27	2.41	9.80	Start 5588.61 hold at 740.55 MD	
6,329.16	6,309.19	114.14	465.01	Start DLS 10.00 TFO -167.69	
7,276.17	6,929.00	110.03	-106.11	Start 9179.22 hold at 7276.17 MD	
16,455.39	6,929.00	-134.13	-9,282.09	TD at 16455.39	