

EXTRACTION OIL & GAS

**Weld County
Sec 17-T7N-R67W
WALT 16E-20-9C**

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

26 September, 2017



WELL DETAILS: WALT 16E-20-9C

+N/-S	+E/-W	Northing	Easting	5080.00	Latitude	Longitude	Slot
0.01	0.00	1453226.07	3164157.46	40° 34'	33.611° N	104° 54' 32.576° 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	0.01	0.00	0.00	0.00	0.00	
2	1250.00	0.00	0.00	1250.00	0.01	0.00	0.00	0.00	0.00	
3	1600.88	7.02	20.00	1600.00	20.17	7.34	2.00	20.00	8.60	
4	1700.88	7.02	20.00	1699.25	31.66	11.52	0.00	0.00	13.50	
5	1741.50	7.81	21.51	1739.53	36.55	13.38	2.00	14.61	15.67	
6	6409.96	7.81	21.51	6364.73	626.50	245.86	0.00	0.00	285.09	
7	7281.65	90.00	90.18	6905.00	693.67	818.34	10.00	68.85	860.67	WALT
8	16899.82	90.00	90.18	6905.00	663.08	10436.47	0.00	0.00	10457.51	WALT

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
1250.00	0.00	0.00	1250.00	0.01	0.00	0.00	0.00	BUILD 2°/100'
1600.88	7.02	20.00	1600.00	20.17	7.34	8.60	21.46	HOLD 7.02° INC
1700.88	7.02	20.00	1699.25	31.66	11.52	13.50	33.68	DROP 2°/100'
1741.50	7.81	21.51	1739.53	36.55	13.38	15.67	38.92	HOLD VERTICAL
6409.96	7.81	21.51	6364.73	626.50	245.86	285.09	673.02	KOP, BUILD 10°/100'
7281.65	90.00	90.18	6905.00	693.67	818.34	860.67	1275.02	LP @ 90° INC, 90.18° AZM HOLD
16899.82	90.00	90.18	6905.00	663.08	10436.47	10457.51	10893.20	TD at 16899.82' MD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
WALT 16E-20-9C-LP	6905.00	693.67	818.34	1453925.17	3164971.15	40° 34' 40.465° N	104° 54' 21.971° W	Point
- plan hits target center								
WALT 16E-20-9C-PBHL	6905.00	663.08	10436.47	1453958.68	3174589.27	40° 34' 40.141° N	104° 52' 17.321° W	Point
- plan hits target center								

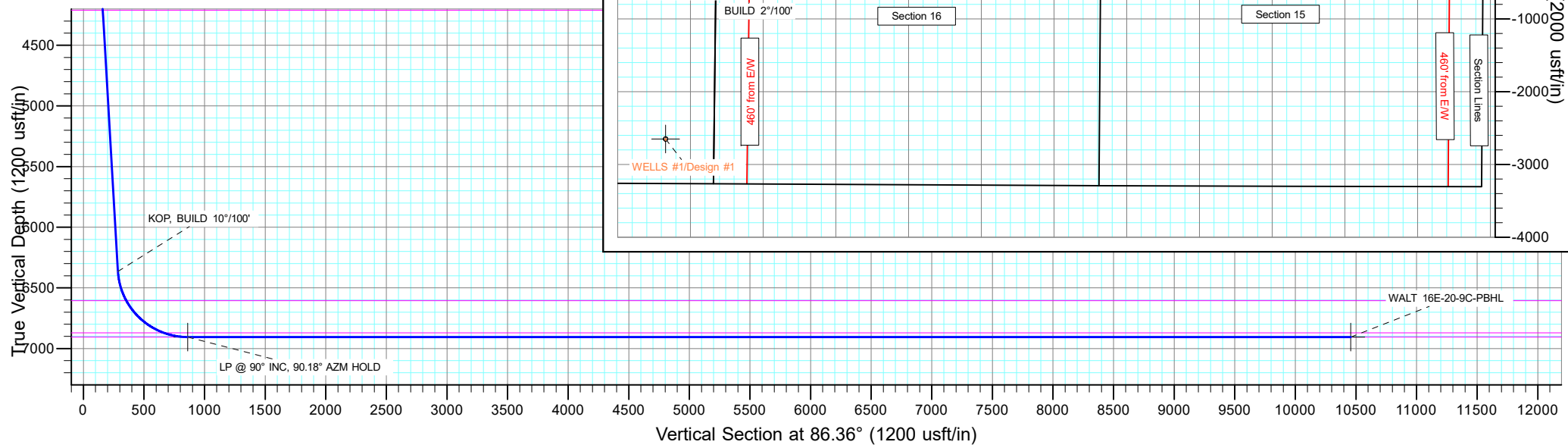
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3835.00	3856.57	SUSSEX
4210.00	4235.07	SHANNON
6605.00	6663.39	NIORARA
6870.00	7079.52	FORT HAYS
6905.00	7281.65	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:
2017' FNL, 354' FEL
Sec 17-T7N-R67W
LP:
1320' FNL, 460' FWL
Sec 16-T7N-R67W
BHL:
1320' FNL, 460' FEL
Sec 15-T7N-R67W



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 16E-20-9C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5105.00usft
Project:	Weld County	MD Reference:	KB 25' @ 5105.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 16E-20-9C	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 16E-20-9C					
Well Position	+N/-S	-2,015.74 usft	Northing:	1,453,226.07 usft	Latitude:	40° 34' 33.611 N
	+E/-W	-367.51 usft	Easting:	3,164,157.46 usft	Longitude:	104° 54' 32.576 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,080.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/15/2017	8.31	66.97	52,476.47712272

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	0.01	0.00	86.36

Plan Survey Tool Program			Date	9/26/2017	
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	16,899.20	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	0.01	0.00	0.00	0.00	0.00	0.00	
1,250.00	0.00	0.00	1,250.00	0.01	0.00	0.00	0.00	0.00	0.00	
1,600.88	7.02	20.00	1,600.00	20.17	7.34	2.00	2.00	0.00	20.00	
1,700.88	7.02	20.00	1,699.25	31.66	11.52	0.00	0.00	0.00	0.00	
1,741.50	7.81	21.51	1,739.53	36.55	13.38	2.00	1.94	3.71	14.61	
6,409.96	7.81	21.51	6,364.73	626.50	245.86	0.00	0.00	0.00	0.00	
7,281.65	90.00	90.18	6,905.00	693.67	818.34	10.00	9.43	7.88	68.85	WALT 16E-20-9C-LP
16,899.82	90.00	90.18	6,905.00	663.08	10,436.47	0.00	0.00	0.00	0.00	WALT 16E-20-9C-PBI

Planning Report

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5105.00usft
Project:	Weld County	MD Reference:	KB 25' @ 5105.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 16E-20-9C	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	0.01	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.01	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.01	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.01	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.01	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.01	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.01	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.01	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.01	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.01	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.01	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.01	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.01	0.00	0.00	0.00	0.00	0.00
1,250.00	0.00	0.00	1,250.00	0.01	0.00	0.00	0.00	0.00	0.00
BUILD 2°/100'									
1,300.00	1.00	20.00	1,300.00	0.42	0.15	0.17	2.00	2.00	0.00
1,400.00	3.00	20.00	1,399.93	3.70	1.34	1.57	2.00	2.00	0.00
1,500.00	5.00	20.00	1,499.68	10.25	3.73	4.37	2.00	2.00	0.00
1,600.88	7.02	20.00	1,600.00	20.17	7.34	8.60	2.00	2.00	0.00
HOLD 7.02° INC									
1,700.88	7.02	20.00	1,699.25	31.66	11.52	13.50	0.00	0.00	0.00
DROP 2°/100'									
1,741.50	7.81	21.51	1,739.53	36.55	13.38	15.67	2.00	1.94	3.71
HOLD VERTICAL									
1,800.00	7.81	21.51	1,797.49	43.95	16.29	19.05	0.00	0.00	0.00
1,900.00	7.81	21.51	1,896.57	56.58	21.27	24.82	0.00	0.00	0.00
2,000.00	7.81	21.51	1,995.64	69.22	26.25	30.59	0.00	0.00	0.00
2,100.00	7.81	21.51	2,094.71	81.86	31.23	36.36	0.00	0.00	0.00
2,200.00	7.81	21.51	2,193.79	94.49	36.21	42.13	0.00	0.00	0.00
2,300.00	7.81	21.51	2,292.86	107.13	41.19	47.90	0.00	0.00	0.00
2,400.00	7.81	21.51	2,391.93	119.77	46.17	53.67	0.00	0.00	0.00
2,500.00	7.81	21.51	2,491.01	132.40	51.15	59.44	0.00	0.00	0.00
2,600.00	7.81	21.51	2,590.08	145.04	56.13	65.21	0.00	0.00	0.00
2,700.00	7.81	21.51	2,689.15	157.68	61.11	70.99	0.00	0.00	0.00
2,800.00	7.81	21.51	2,788.23	170.31	66.09	76.76	0.00	0.00	0.00
2,900.00	7.81	21.51	2,887.30	182.95	71.07	82.53	0.00	0.00	0.00
3,000.00	7.81	21.51	2,986.37	195.59	76.05	88.30	0.00	0.00	0.00
3,100.00	7.81	21.51	3,085.44	208.22	81.03	94.07	0.00	0.00	0.00
3,200.00	7.81	21.51	3,184.52	220.86	86.01	99.84	0.00	0.00	0.00
3,300.00	7.81	21.51	3,283.59	233.50	90.99	105.61	0.00	0.00	0.00
3,400.00	7.81	21.51	3,382.66	246.13	95.97	111.38	0.00	0.00	0.00
3,500.00	7.81	21.51	3,481.74	258.77	100.95	117.15	0.00	0.00	0.00
3,600.00	7.81	21.51	3,580.81	271.41	105.93	122.93	0.00	0.00	0.00
3,700.00	7.81	21.51	3,679.88	284.04	110.91	128.70	0.00	0.00	0.00
3,800.00	7.81	21.51	3,778.96	296.68	115.89	134.47	0.00	0.00	0.00
3,856.57	7.81	21.51	3,835.00	303.83	118.71	137.73	0.00	0.00	0.00
SUSSEX									
3,900.00	7.81	21.51	3,878.03	309.32	120.87	140.24	0.00	0.00	0.00
4,000.00	7.81	21.51	3,977.10	321.96	125.85	146.01	0.00	0.00	0.00
4,100.00	7.81	21.51	4,076.18	334.59	130.83	151.78	0.00	0.00	0.00
4,200.00	7.81	21.51	4,175.25	347.23	135.81	157.55	0.00	0.00	0.00
4,235.07	7.81	21.51	4,210.00	351.66	137.56	159.58	0.00	0.00	0.00
SHANNON									

Planning Report

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5105.00usft
Project:	Weld County	MD Reference:	KB 25' @ 5105.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 16E-20-9C	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)	
4,300.00	7.81	21.51	4,274.32	359.87	140.79	163.32	0.00	0.00	0.00	
4,400.00	7.81	21.51	4,373.40	372.50	145.77	169.10	0.00	0.00	0.00	
4,500.00	7.81	21.51	4,472.47	385.14	150.75	174.87	0.00	0.00	0.00	
4,600.00	7.81	21.51	4,571.54	397.78	155.73	180.64	0.00	0.00	0.00	
4,700.00	7.81	21.51	4,670.62	410.41	160.71	186.41	0.00	0.00	0.00	
4,800.00	7.81	21.51	4,769.69	423.05	165.69	192.18	0.00	0.00	0.00	
4,900.00	7.81	21.51	4,868.76	435.69	170.67	197.95	0.00	0.00	0.00	
5,000.00	7.81	21.51	4,967.84	448.32	175.65	203.72	0.00	0.00	0.00	
5,100.00	7.81	21.51	5,066.91	460.96	180.63	209.49	0.00	0.00	0.00	
5,200.00	7.81	21.51	5,165.98	473.60	185.61	215.26	0.00	0.00	0.00	
5,300.00	7.81	21.51	5,265.06	486.23	190.59	221.04	0.00	0.00	0.00	
5,400.00	7.81	21.51	5,364.13	498.87	195.57	226.81	0.00	0.00	0.00	
5,500.00	7.81	21.51	5,463.20	511.51	200.55	232.58	0.00	0.00	0.00	
5,600.00	7.81	21.51	5,562.28	524.14	205.53	238.35	0.00	0.00	0.00	
5,700.00	7.81	21.51	5,661.35	536.78	210.51	244.12	0.00	0.00	0.00	
5,800.00	7.81	21.51	5,760.42	549.42	215.49	249.89	0.00	0.00	0.00	
5,900.00	7.81	21.51	5,859.50	562.05	220.47	255.66	0.00	0.00	0.00	
6,000.00	7.81	21.51	5,958.57	574.69	225.45	261.43	0.00	0.00	0.00	
6,100.00	7.81	21.51	6,057.64	587.33	230.43	267.20	0.00	0.00	0.00	
6,200.00	7.81	21.51	6,156.72	599.96	235.41	272.98	0.00	0.00	0.00	
6,300.00	7.81	21.51	6,255.79	612.60	240.39	278.75	0.00	0.00	0.00	
6,409.96	7.81	21.51	6,364.73	626.50	245.86	285.09	0.00	0.00	0.00	
KOP, BUILD 10°/100'										
6,450.00	9.97	43.60	6,404.30	631.54	249.25	288.79	10.00	5.41	55.17	
6,500.00	13.87	59.03	6,453.22	637.76	257.38	297.30	10.00	7.79	30.86	
6,550.00	18.30	67.47	6,501.26	643.86	269.78	310.06	10.00	8.86	16.87	
6,600.00	22.96	72.64	6,548.05	649.78	286.34	326.97	10.00	9.32	10.34	
6,650.00	27.73	76.12	6,593.22	655.48	306.96	347.90	10.00	9.55	6.97	
6,663.39	29.02	76.88	6,605.00	656.97	313.15	354.17	10.00	9.64	5.61	
NIOBRARA										
6,700.00	32.57	78.65	6,636.45	660.92	331.47	372.70	10.00	9.69	4.85	
6,750.00	37.45	80.58	6,677.39	666.06	359.67	401.18	10.00	9.75	3.87	
6,800.00	42.35	82.13	6,715.74	670.86	391.37	433.12	10.00	9.80	3.09	
6,850.00	47.27	83.41	6,751.20	675.28	426.32	468.28	10.00	9.84	2.56	
6,900.00	52.20	84.50	6,783.51	679.28	464.25	506.38	10.00	9.86	2.18	
6,950.00	57.14	85.45	6,812.42	682.85	504.87	547.15	10.00	9.88	1.91	
7,000.00	62.08	86.30	6,837.70	685.94	547.87	590.26	10.00	9.89	1.70	
7,050.00	67.03	87.08	6,859.18	688.54	592.93	635.40	10.00	9.90	1.56	
7,079.52	69.96	87.51	6,870.00	689.83	620.37	662.86	10.00	9.91	1.46	
FORT HAYS										
7,100.00	71.99	87.80	6,876.68	690.62	639.71	682.21	10.00	9.91	1.42	
7,150.00	76.94	88.49	6,890.06	692.18	687.84	730.34	10.00	9.91	1.37	
7,200.00	81.90	89.14	6,899.24	693.20	736.96	779.43	10.00	9.92	1.31	
7,250.00	86.86	89.78	6,904.13	693.66	786.71	829.11	10.00	9.92	1.28	
7,281.65	90.00	90.18	6,905.00	693.67	818.34	860.67	10.00	9.92	1.27	
LP @ 90° INC, 90.18° AZM HOLD - CODELL										
7,300.00	90.00	90.18	6,905.00	693.61	836.69	878.99	0.00	0.00	0.00	
7,400.00	90.00	90.18	6,905.00	693.30	936.69	978.76	0.00	0.00	0.00	
7,500.00	90.00	90.18	6,905.00	692.98	1,036.69	1,078.54	0.00	0.00	0.00	
7,600.00	90.00	90.18	6,905.00	692.66	1,136.69	1,178.32	0.00	0.00	0.00	
7,700.00	90.00	90.18	6,905.00	692.34	1,236.69	1,278.10	0.00	0.00	0.00	
7,800.00	90.00	90.18	6,905.00	692.02	1,336.69	1,377.88	0.00	0.00	0.00	
7,900.00	90.00	90.18	6,905.00	691.71	1,436.69	1,477.66	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 16E-20-9C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5105.00usft
Project:	Weld County	MD Reference:	KB 25' @ 5105.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 16E-20-9C	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)	
8,000.00	90.00	90.18	6,905.00	691.39	1,536.69	1,577.43	0.00	0.00	0.00	
8,100.00	90.00	90.18	6,905.00	691.07	1,636.69	1,677.21	0.00	0.00	0.00	
8,200.00	90.00	90.18	6,905.00	690.75	1,736.69	1,776.99	0.00	0.00	0.00	
8,300.00	90.00	90.18	6,905.00	690.43	1,836.69	1,876.77	0.00	0.00	0.00	
8,400.00	90.00	90.18	6,905.00	690.12	1,936.69	1,976.55	0.00	0.00	0.00	
8,500.00	90.00	90.18	6,905.00	689.80	2,036.68	2,076.32	0.00	0.00	0.00	
8,600.00	90.00	90.18	6,905.00	689.48	2,136.68	2,176.10	0.00	0.00	0.00	
8,700.00	90.00	90.18	6,905.00	689.16	2,236.68	2,275.88	0.00	0.00	0.00	
8,800.00	90.00	90.18	6,905.00	688.84	2,336.68	2,375.66	0.00	0.00	0.00	
8,900.00	90.00	90.18	6,905.00	688.53	2,436.68	2,475.44	0.00	0.00	0.00	
9,000.00	90.00	90.18	6,905.00	688.21	2,536.68	2,575.21	0.00	0.00	0.00	
9,100.00	90.00	90.18	6,905.00	687.89	2,636.68	2,674.99	0.00	0.00	0.00	
9,200.00	90.00	90.18	6,905.00	687.57	2,736.68	2,774.77	0.00	0.00	0.00	
9,300.00	90.00	90.18	6,905.00	687.25	2,836.68	2,874.55	0.00	0.00	0.00	
9,400.00	90.00	90.18	6,905.00	686.94	2,936.68	2,974.33	0.00	0.00	0.00	
9,500.00	90.00	90.18	6,905.00	686.62	3,036.68	3,074.10	0.00	0.00	0.00	
9,600.00	90.00	90.18	6,905.00	686.30	3,136.68	3,173.88	0.00	0.00	0.00	
9,700.00	90.00	90.18	6,905.00	685.98	3,236.68	3,273.66	0.00	0.00	0.00	
9,800.00	90.00	90.18	6,905.00	685.66	3,336.68	3,373.44	0.00	0.00	0.00	
9,900.00	90.00	90.18	6,905.00	685.35	3,436.68	3,473.22	0.00	0.00	0.00	
10,000.00	90.00	90.18	6,905.00	685.03	3,536.68	3,573.00	0.00	0.00	0.00	
10,100.00	90.00	90.18	6,905.00	684.71	3,636.68	3,672.77	0.00	0.00	0.00	
10,200.00	90.00	90.18	6,905.00	684.39	3,736.68	3,772.55	0.00	0.00	0.00	
10,300.00	90.00	90.18	6,905.00	684.07	3,836.68	3,872.33	0.00	0.00	0.00	
10,400.00	90.00	90.18	6,905.00	683.76	3,936.68	3,972.11	0.00	0.00	0.00	
10,500.00	90.00	90.18	6,905.00	683.44	4,036.67	4,071.89	0.00	0.00	0.00	
10,600.00	90.00	90.18	6,905.00	683.12	4,136.67	4,171.66	0.00	0.00	0.00	
10,700.00	90.00	90.18	6,905.00	682.80	4,236.67	4,271.44	0.00	0.00	0.00	
10,800.00	90.00	90.18	6,905.00	682.48	4,336.67	4,371.22	0.00	0.00	0.00	
10,900.00	90.00	90.18	6,905.00	682.16	4,436.67	4,471.00	0.00	0.00	0.00	
11,000.00	90.00	90.18	6,905.00	681.85	4,536.67	4,570.78	0.00	0.00	0.00	
11,100.00	90.00	90.18	6,905.00	681.53	4,636.67	4,670.55	0.00	0.00	0.00	
11,200.00	90.00	90.18	6,905.00	681.21	4,736.67	4,770.33	0.00	0.00	0.00	
11,300.00	90.00	90.18	6,905.00	680.89	4,836.67	4,870.11	0.00	0.00	0.00	
11,400.00	90.00	90.18	6,905.00	680.57	4,936.67	4,969.89	0.00	0.00	0.00	
11,500.00	90.00	90.18	6,905.00	680.26	5,036.67	5,069.67	0.00	0.00	0.00	
11,600.00	90.00	90.18	6,905.00	679.94	5,136.67	5,169.45	0.00	0.00	0.00	
11,700.00	90.00	90.18	6,905.00	679.62	5,236.67	5,269.22	0.00	0.00	0.00	
11,800.00	90.00	90.18	6,905.00	679.30	5,336.67	5,369.00	0.00	0.00	0.00	
11,900.00	90.00	90.18	6,905.00	678.98	5,436.67	5,468.78	0.00	0.00	0.00	
12,000.00	90.00	90.18	6,905.00	678.67	5,536.67	5,568.56	0.00	0.00	0.00	
12,100.00	90.00	90.18	6,905.00	678.35	5,636.67	5,668.34	0.00	0.00	0.00	
12,200.00	90.00	90.18	6,905.00	678.03	5,736.67	5,768.11	0.00	0.00	0.00	
12,300.00	90.00	90.18	6,905.00	677.71	5,836.67	5,867.89	0.00	0.00	0.00	
12,400.00	90.00	90.18	6,905.00	677.39	5,936.67	5,967.67	0.00	0.00	0.00	
12,500.00	90.00	90.18	6,905.00	677.08	6,036.66	6,067.45	0.00	0.00	0.00	
12,600.00	90.00	90.18	6,905.00	676.76	6,136.66	6,167.23	0.00	0.00	0.00	
12,700.00	90.00	90.18	6,905.00	676.44	6,236.66	6,267.00	0.00	0.00	0.00	
12,800.00	90.00	90.18	6,905.00	676.12	6,336.66	6,366.78	0.00	0.00	0.00	
12,900.00	90.00	90.18	6,905.00	675.80	6,436.66	6,466.56	0.00	0.00	0.00	
13,000.00	90.00	90.18	6,905.00	675.49	6,536.66	6,566.34	0.00	0.00	0.00	
13,100.00	90.00	90.18	6,905.00	675.17	6,636.66	6,666.12	0.00	0.00	0.00	
13,200.00	90.00	90.18	6,905.00	674.85	6,736.66	6,765.89	0.00	0.00	0.00	
13,300.00	90.00	90.18	6,905.00	674.53	6,836.66	6,865.67	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 16E-20-9C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5105.00usft
Project:	Weld County	MD Reference:	KB 25' @ 5105.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 16E-20-9C	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)	
13,400.00	90.00	90.18	6,905.00	674.21	6,936.66	6,965.45	0.00	0.00	0.00	
13,500.00	90.00	90.18	6,905.00	673.90	7,036.66	7,065.23	0.00	0.00	0.00	
13,600.00	90.00	90.18	6,905.00	673.58	7,136.66	7,165.01	0.00	0.00	0.00	
13,700.00	90.00	90.18	6,905.00	673.26	7,236.66	7,264.79	0.00	0.00	0.00	
13,800.00	90.00	90.18	6,905.00	672.94	7,336.66	7,364.56	0.00	0.00	0.00	
13,900.00	90.00	90.18	6,905.00	672.62	7,436.66	7,464.34	0.00	0.00	0.00	
14,000.00	90.00	90.18	6,905.00	672.31	7,536.66	7,564.12	0.00	0.00	0.00	
14,100.00	90.00	90.18	6,905.00	671.99	7,636.66	7,663.90	0.00	0.00	0.00	
14,200.00	90.00	90.18	6,905.00	671.67	7,736.66	7,763.68	0.00	0.00	0.00	
14,300.00	90.00	90.18	6,905.00	671.35	7,836.66	7,863.45	0.00	0.00	0.00	
14,400.00	90.00	90.18	6,905.00	671.03	7,936.66	7,963.23	0.00	0.00	0.00	
14,500.00	90.00	90.18	6,905.00	670.71	8,036.65	8,063.01	0.00	0.00	0.00	
14,600.00	90.00	90.18	6,905.00	670.40	8,136.65	8,162.79	0.00	0.00	0.00	
14,700.00	90.00	90.18	6,905.00	670.08	8,236.65	8,262.57	0.00	0.00	0.00	
14,800.00	90.00	90.18	6,905.00	669.76	8,336.65	8,362.34	0.00	0.00	0.00	
14,900.00	90.00	90.18	6,905.00	669.44	8,436.65	8,462.12	0.00	0.00	0.00	
15,000.00	90.00	90.18	6,905.00	669.12	8,536.65	8,561.90	0.00	0.00	0.00	
15,100.00	90.00	90.18	6,905.00	668.81	8,636.65	8,661.68	0.00	0.00	0.00	
15,200.00	90.00	90.18	6,905.00	668.49	8,736.65	8,761.46	0.00	0.00	0.00	
15,300.00	90.00	90.18	6,905.00	668.17	8,836.65	8,861.24	0.00	0.00	0.00	
15,400.00	90.00	90.18	6,905.00	667.85	8,936.65	8,961.01	0.00	0.00	0.00	
15,500.00	90.00	90.18	6,905.00	667.53	9,036.65	9,060.79	0.00	0.00	0.00	
15,600.00	90.00	90.18	6,905.00	667.22	9,136.65	9,160.57	0.00	0.00	0.00	
15,700.00	90.00	90.18	6,905.00	666.90	9,236.65	9,260.35	0.00	0.00	0.00	
15,800.00	90.00	90.18	6,905.00	666.58	9,336.65	9,360.13	0.00	0.00	0.00	
15,900.00	90.00	90.18	6,905.00	666.26	9,436.65	9,459.90	0.00	0.00	0.00	
16,000.00	90.00	90.18	6,905.00	665.94	9,536.65	9,559.68	0.00	0.00	0.00	
16,100.00	90.00	90.18	6,905.00	665.63	9,636.65	9,659.46	0.00	0.00	0.00	
16,200.00	90.00	90.18	6,905.00	665.31	9,736.65	9,759.24	0.00	0.00	0.00	
16,300.00	90.00	90.18	6,905.00	664.99	9,836.65	9,859.02	0.00	0.00	0.00	
16,400.00	90.00	90.18	6,905.00	664.67	9,936.64	9,958.79	0.00	0.00	0.00	
16,500.00	90.00	90.18	6,905.00	664.35	10,036.64	10,058.57	0.00	0.00	0.00	
16,600.00	90.00	90.18	6,905.00	664.04	10,136.64	10,158.35	0.00	0.00	0.00	
16,700.00	90.00	90.18	6,905.00	663.72	10,236.64	10,258.13	0.00	0.00	0.00	
16,800.00	90.00	90.18	6,905.00	663.40	10,336.64	10,357.91	0.00	0.00	0.00	
16,899.82	90.00	90.18	6,905.00	663.08	10,436.47	10,457.51	0.00	0.00	0.00	
TD at 16899.82' MD										

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 16E-20-9C-LP	0.00	0.00	6,905.00	693.67	818.34	1,453,925.17	3,164,971.15	40° 34' 40.465 N	104° 54' 21.971 W	
- plan hits target center										
- Point										
WALT 16E-20-9C-PBHL	0.00	0.00	6,905.00	663.08	10,436.47	1,453,958.68	3,174,589.27	40° 34' 40.141 N	104° 52' 17.321 W	
- plan hits target center										
- Point										

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well WALT 16E-20-9C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5105.00usft
Project:	Weld County	MD Reference:	KB 25' @ 5105.00usft
Site:	Sec 17-T7N-R67W	North Reference:	True
Well:	WALT 16E-20-9C	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,856.57	3,835.00	SUSSEX				
4,235.07	4,210.00	SHANNON				
6,663.39	6,605.00	NIOBRARA				
7,079.52	6,870.00	FORT HAYS				
7,281.65	6,905.00	CODELL				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,250.00	1,250.00	0.01	0.00	BUILD 2°/100'	
1,600.88	1,600.00	20.17	7.34	HOLD 7.02° INC	
1,700.88	1,699.25	31.66	11.52	DROP 2°/100'	
1,741.50	1,739.53	36.55	13.38	HOLD VERTICAL	
6,409.96	6,364.73	626.50	245.86	KOP, BUILD 10°/100'	
7,281.65	6,905.00	693.67	818.34	LP @ 90° INC, 90.18° AZM HOLD	
16,899.82	6,905.00	663.08	10,436.47	TD at 16899.82' MD	