

EXTRACTION OIL & GAS

Weld County

Sec 7-T4N-R68W

TROTT 7W-20-8N

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

26 February, 2018



Project: Weld County
Site: Sec 7-T4N-R68W
Well: TROTT 7W-20-8N
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL 1



Azimuths to True North
Magnetic North: 8.37°

Magnetic Field
Strength: 52345.2nT
Dip Angle: 66.76°
Date: 4/4/2017
Model: IGRF2015

WELL DETAILS: TROTT 7W-20-8N

+N/-S	+E/-W	Northing	Easting	5031.00	Latitude	Longitude	Slot
0.00	0.00	1361363.40	3128335.91	40° 19' 27.944 N	105° 2' 22.981 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	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	
3	1413.60	18.27	84.43	1398.19	14.03	143.76	2.00	84.43	-143.71	
4	4605.14	18.27	84.43	4428.81	111.22	1139.67	0.00	0.00	-1139.26	
5	5518.73	0.00	0.00	5327.00	125.25	1283.43	2.00	180.00	-1282.97	
6	5548.73	0.00	0.00	5357.00	125.25	1283.43	0.00	0.00	-1282.97	
7	6448.82	90.00	269.50	5930.00	120.24	710.43	10.00	269.50	-709.99	TROTT 8 - LP REV 2
8	16350.39	90.00	269.50	5930.00	33.41	-9190.76	0.00	0.00	9190.82	TROTT 8 - PBHL REV 2

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	Start Build 2.00
1413.60	18.27	84.43	1398.19	14.03	143.76	-143.71	144.45	Start 3191.54 hold at 1413.60 MD
4605.14	18.27	84.43	4428.81	111.22	1139.67	-1139.26	1145.08	Start Drop -2.00
5518.73	0.00	0.00	5327.00	125.25	1283.43	-1282.97	1289.53	Start 30.00 hold at 5518.73 MD
5548.73	0.00	0.00	5357.00	125.25	1283.43	-1282.97	1289.53	Start DLS 10.00 TFO 269.50
6448.82	90.00	269.50	5930.00	120.24	710.43	-709.99	1862.55	Start 9901.57 hold at 6448.82 MD
16350.39	90.00	269.50	5930.00	33.41	-9190.76	9190.82	11764.12	TD at 16350.39

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	40° 19'	Latitude	105° 2'	Longitude	Shape
TROTT 8 - LP REV 2	5930.00	120.24	710.43	1361487.32	3129045.70	29.132 N		13.808 W		Point
TROTT 8 - PBHL REV 2	5930.00	33.41	-9190.76	1361349.10	3119145.10	28.258 N		15° 4' 21.648 W		Point
- plan hits target center										

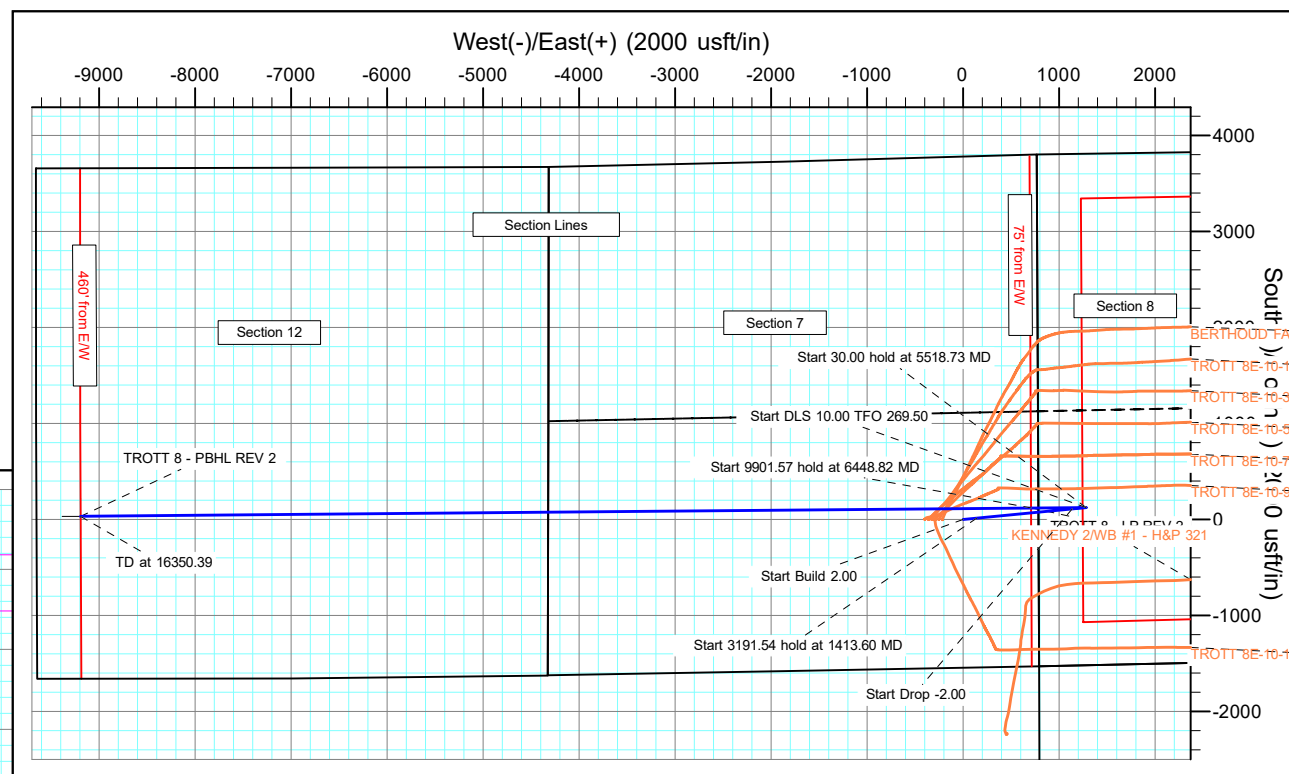
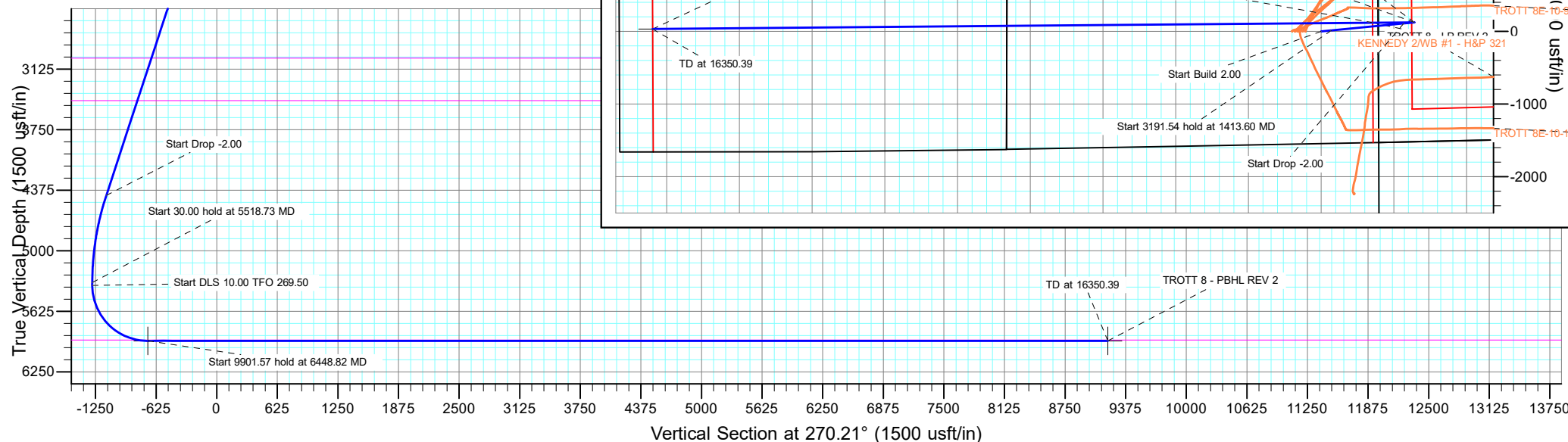
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2410.00	2479.13	PARKMAN
3010.00	3110.99	SUSSEX
3450.00	3574.35	SHANNON
5920.00	6341.59	NIOBARA

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:
1543' FSL, 786' FEL
Sec 7-T4N-R68W
LP*
1650' FSL, 75' FEL
Sec 7-T4N-R68W
BHL:
1693' FSL, 460' FWL
Sec 12-T4N-R69W



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well TROTT 7W-20-8N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5056.00usft
Project:	Weld County	MD Reference:	KB 25' @ 5056.00usft
Site:	Sec 7-T4N-R68W	North Reference:	True
Well:	TROTT 7W-20-8N	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 7-T4N-R68W			
Site Position:		Northing:	1,359,838.99 usft	Latitude:	40° 19' 12.839 N
From:	Lat/Long	Easting:	3,129,136.57 usft	Longitude:	105° 2' 12.746 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.30 °

Well	TROTT 7W-20-8N					
Well Position	+N/-S	1,528.57 usft	Northing:	1,361,363.40 usft	Latitude:	40° 19' 27.944 N
	+E/-W	-792.69 usft	Easting:	3,128,335.91 usft	Longitude:	105° 2' 22.981 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,031.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	4/4/2017	8.37	66.76	52,345.18499108

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	270.21

Plan Survey Tool Program	Date	2/22/2018			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	16,350.35	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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,413.60	18.27	84.43	1,398.19	14.03	143.76	2.00	2.00	0.00	84.43	
4,605.14	18.27	84.43	4,428.81	111.22	1,139.67	0.00	0.00	0.00	0.00	
5,518.73	0.00	0.00	5,327.00	125.25	1,283.43	2.00	-2.00	0.00	180.00	
5,548.73	0.00	0.00	5,357.00	125.25	1,283.43	0.00	0.00	0.00	0.00	
6,448.82	90.00	269.50	5,930.00	120.24	710.43	10.00	10.00	-10.05	269.50	TROTT 8 - LP REV 2
16,350.39	90.00	269.50	5,930.00	33.41	-9,190.76	0.00	0.00	0.00	0.00	TROTT 8 - PBHL REV 1

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5056.00usft
Project:	Weld County	MD Reference:	KB 25' @ 5056.00usft
Site:	Sec 7-T4N-R68W	North Reference:	True
Well:	TROTT 7W-20-8N	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
Start Build 2.00									
600.00	2.00	84.43	599.98	0.17	1.74	-1.74	2.00	2.00	0.00
700.00	4.00	84.43	699.84	0.68	6.95	-6.94	2.00	2.00	0.00
800.00	6.00	84.43	799.45	1.52	15.62	-15.61	2.00	2.00	0.00
900.00	8.00	84.43	898.70	2.71	27.75	-27.74	2.00	2.00	0.00
1,000.00	10.00	84.43	997.47	4.23	43.32	-43.30	2.00	2.00	0.00
1,100.00	12.00	84.43	1,095.62	6.08	62.31	-62.28	2.00	2.00	0.00
1,200.00	14.00	84.43	1,193.06	8.27	84.69	-84.66	2.00	2.00	0.00
1,300.00	16.00	84.43	1,289.64	10.78	110.45	-110.41	2.00	2.00	0.00
1,400.00	18.00	84.43	1,385.27	13.62	139.55	-139.50	2.00	2.00	0.00
1,413.60	18.27	84.43	1,398.19	14.03	143.76	-143.71	2.00	2.00	0.00
Start 3191.54 hold at 1413.60 MD									
1,500.00	18.27	84.43	1,480.24	16.66	170.72	-170.66	0.00	0.00	0.00
1,600.00	18.27	84.43	1,575.19	19.71	201.93	-201.86	0.00	0.00	0.00
1,700.00	18.27	84.43	1,670.15	22.75	233.13	-233.05	0.00	0.00	0.00
1,800.00	18.27	84.43	1,765.11	25.80	264.34	-264.24	0.00	0.00	0.00
1,900.00	18.27	84.43	1,860.07	28.84	295.54	-295.44	0.00	0.00	0.00
2,000.00	18.27	84.43	1,955.03	31.89	326.75	-326.63	0.00	0.00	0.00
2,100.00	18.27	84.43	2,049.98	34.93	357.95	-357.82	0.00	0.00	0.00
2,200.00	18.27	84.43	2,144.94	37.98	389.16	-389.02	0.00	0.00	0.00
2,300.00	18.27	84.43	2,239.90	41.02	420.36	-420.21	0.00	0.00	0.00
2,400.00	18.27	84.43	2,334.86	44.07	451.56	-451.40	0.00	0.00	0.00
2,479.13	18.27	84.43	2,410.00	46.48	476.26	-476.09	0.00	0.00	0.00
PARKMAN									
2,500.00	18.27	84.43	2,429.82	47.11	482.77	-482.59	0.00	0.00	0.00
2,600.00	18.27	84.43	2,524.77	50.16	513.97	-513.79	0.00	0.00	0.00
2,700.00	18.27	84.43	2,619.73	53.20	545.18	-544.98	0.00	0.00	0.00
2,800.00	18.27	84.43	2,714.69	56.25	576.38	-576.17	0.00	0.00	0.00
2,900.00	18.27	84.43	2,809.65	59.29	607.59	-607.37	0.00	0.00	0.00
3,000.00	18.27	84.43	2,904.61	62.34	638.79	-638.56	0.00	0.00	0.00
3,100.00	18.27	84.43	2,999.56	65.38	670.00	-669.75	0.00	0.00	0.00
3,110.99	18.27	84.43	3,010.00	65.72	673.43	-673.18	0.00	0.00	0.00
SUSSEX									
3,200.00	18.27	84.43	3,094.52	68.43	701.20	-700.95	0.00	0.00	0.00
3,300.00	18.27	84.43	3,189.48	71.48	732.41	-732.14	0.00	0.00	0.00
3,400.00	18.27	84.43	3,284.44	74.52	763.61	-763.33	0.00	0.00	0.00
3,500.00	18.27	84.43	3,379.39	77.57	794.81	-794.53	0.00	0.00	0.00
3,574.35	18.27	84.43	3,450.00	79.83	818.02	-817.72	0.00	0.00	0.00
SHANNON									
3,600.00	18.27	84.43	3,474.35	80.61	826.02	-825.72	0.00	0.00	0.00
3,700.00	18.27	84.43	3,569.31	83.66	857.22	-856.91	0.00	0.00	0.00
3,800.00	18.27	84.43	3,664.27	86.70	888.43	-888.11	0.00	0.00	0.00
3,900.00	18.27	84.43	3,759.23	89.75	919.63	-919.30	0.00	0.00	0.00
4,000.00	18.27	84.43	3,854.18	92.79	950.84	-950.49	0.00	0.00	0.00
4,100.00	18.27	84.43	3,949.14	95.84	982.04	-981.69	0.00	0.00	0.00
4,200.00	18.27	84.43	4,044.10	98.88	1,013.25	-1,012.88	0.00	0.00	0.00
4,300.00	18.27	84.43	4,139.06	101.93	1,044.45	-1,044.07	0.00	0.00	0.00

Planning Report

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5056.00usft
Project:	Weld County	MD Reference:	KB 25' @ 5056.00usft
Site:	Sec 7-T4N-R68W	North Reference:	True
Well:	TROTT 7W-20-8N	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)	
4,400.00	18.27	84.43	4,234.02	104.97	1,075.66	-1,075.27	0.00	0.00	0.00	
4,500.00	18.27	84.43	4,328.97	108.02	1,106.86	-1,106.46	0.00	0.00	0.00	
4,605.14	18.27	84.43	4,428.81	111.22	1,139.67	-1,139.26	0.00	0.00	0.00	
Start Drop -2.00										
4,700.00	16.37	84.43	4,519.37	113.96	1,167.78	-1,167.36	2.00	-2.00	0.00	
4,800.00	14.37	84.43	4,615.78	116.54	1,194.17	-1,193.73	2.00	-2.00	0.00	
4,900.00	12.37	84.43	4,713.06	118.79	1,217.19	-1,216.75	2.00	-2.00	0.00	
5,000.00	10.37	84.43	4,811.10	120.70	1,236.82	-1,236.37	2.00	-2.00	0.00	
5,100.00	8.37	84.43	4,909.75	122.28	1,253.03	-1,252.57	2.00	-2.00	0.00	
5,200.00	6.37	84.43	5,008.92	123.53	1,265.80	-1,265.34	2.00	-2.00	0.00	
5,300.00	4.37	84.43	5,108.48	124.44	1,275.12	-1,274.66	2.00	-2.00	0.00	
5,400.00	2.37	84.43	5,208.30	125.01	1,280.98	-1,280.52	2.00	-2.00	0.00	
5,500.00	0.37	84.43	5,308.27	125.24	1,283.37	-1,282.91	2.00	-2.00	0.00	
5,518.73	0.00	0.00	5,327.00	125.25	1,283.43	-1,282.97	2.00	-2.00	0.00	
Start 30.00 hold at 5518.73 MD										
5,548.73	0.00	0.00	5,357.00	125.25	1,283.43	-1,282.97	0.00	0.00	0.00	
Start DLS 10.00 TFO 269.50										
5,550.00	0.13	269.50	5,358.27	125.25	1,283.43	-1,282.96	10.00	10.00	0.00	
5,600.00	5.13	269.50	5,408.20	125.23	1,281.14	-1,280.67	10.00	10.00	0.00	
5,650.00	10.13	269.50	5,457.74	125.17	1,274.51	-1,274.04	10.00	10.00	0.00	
5,700.00	15.13	269.50	5,506.51	125.08	1,263.58	-1,263.12	10.00	10.00	0.00	
5,750.00	20.13	269.50	5,554.15	124.94	1,248.45	-1,247.98	10.00	10.00	0.00	
5,800.00	25.12	269.50	5,600.29	124.78	1,229.22	-1,228.76	10.00	10.00	0.00	
5,850.00	30.12	269.50	5,644.58	124.57	1,206.04	-1,205.58	10.00	10.00	0.00	
5,900.00	35.12	269.50	5,686.67	124.34	1,179.10	-1,178.64	10.00	10.00	0.00	
5,950.00	40.12	269.50	5,726.26	124.07	1,148.58	-1,148.12	10.00	10.00	0.00	
6,000.00	45.12	269.50	5,763.04	123.77	1,114.74	-1,114.28	10.00	10.00	0.00	
6,050.00	50.12	269.50	5,796.73	123.45	1,077.81	-1,077.36	10.00	10.00	0.00	
6,100.00	55.12	269.50	5,827.08	123.10	1,038.09	-1,037.64	10.00	10.00	0.00	
6,150.00	60.12	269.50	5,853.84	122.74	995.88	-995.43	10.00	10.00	0.00	
6,200.00	65.12	269.50	5,876.83	122.35	951.50	-951.05	10.00	10.00	0.00	
6,250.00	70.12	269.50	5,895.86	121.94	905.28	-904.83	10.00	10.00	0.00	
6,300.00	75.12	269.50	5,910.79	121.53	857.58	-857.13	10.00	10.00	0.00	
6,341.59	79.28	269.50	5,920.00	121.17	817.03	-816.59	10.00	10.00	0.00	
NIOBRARA										
6,350.00	80.12	269.50	5,921.50	121.10	808.76	-808.31	10.00	10.00	0.00	
6,400.00	85.12	269.50	5,927.92	120.67	759.19	-758.75	10.00	10.00	0.00	
6,448.82	90.00	269.50	5,930.00	120.24	710.43	-709.99	10.00	10.00	0.00	
Start 9901.57 hold at 6448.82 MD										
6,500.00	90.00	269.50	5,930.00	119.79	659.25	-658.81	0.00	0.00	0.00	
6,600.00	90.00	269.50	5,929.99	118.92	559.26	-558.82	0.00	0.00	0.00	
6,700.00	90.00	269.50	5,929.99	118.04	459.26	-458.83	0.00	0.00	0.00	
6,800.00	90.00	269.50	5,929.99	117.17	359.27	-358.84	0.00	0.00	0.00	
6,900.00	90.00	269.50	5,929.98	116.29	259.27	-258.85	0.00	0.00	0.00	
7,000.00	90.00	269.50	5,929.98	115.42	159.27	-158.85	0.00	0.00	0.00	
7,100.00	90.00	269.50	5,929.98	114.54	59.28	-58.86	0.00	0.00	0.00	
7,200.00	90.00	269.50	5,929.97	113.67	-40.72	41.13	0.00	0.00	0.00	
7,300.00	90.00	269.50	5,929.97	112.79	-140.71	141.12	0.00	0.00	0.00	
7,400.00	90.00	269.50	5,929.97	111.92	-240.71	241.12	0.00	0.00	0.00	
7,500.00	90.00	269.50	5,929.96	111.05	-340.71	341.11	0.00	0.00	0.00	
7,600.00	90.00	269.50	5,929.96	110.17	-440.70	441.10	0.00	0.00	0.00	
7,700.00	90.00	269.50	5,929.96	109.30	-540.70	541.09	0.00	0.00	0.00	
7,800.00	90.00	269.50	5,929.95	108.42	-640.70	641.09	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well TROTT 7W-20-8N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5056.00usft
Project:	Weld County	MD Reference:	KB 25' @ 5056.00usft
Site:	Sec 7-T4N-R68W	North Reference:	True
Well:	TROTT 7W-20-8N	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)
7,900.00	90.00	269.50	5,929.95	107.55	-740.69	741.08	0.00	0.00	0.00
8,000.00	90.00	269.50	5,929.95	106.67	-840.69	841.07	0.00	0.00	0.00
8,100.00	90.00	269.50	5,929.94	105.80	-940.68	941.06	0.00	0.00	0.00
8,200.00	90.00	269.50	5,929.94	104.92	-1,040.68	1,041.05	0.00	0.00	0.00
8,300.00	90.00	269.50	5,929.94	104.05	-1,140.68	1,141.05	0.00	0.00	0.00
8,400.00	90.00	269.50	5,929.93	103.17	-1,240.67	1,241.04	0.00	0.00	0.00
8,500.00	90.00	269.50	5,929.93	102.30	-1,340.67	1,341.03	0.00	0.00	0.00
8,600.00	90.00	269.50	5,929.93	101.43	-1,440.66	1,441.02	0.00	0.00	0.00
8,700.00	90.00	269.50	5,929.92	100.55	-1,540.66	1,541.02	0.00	0.00	0.00
8,800.00	90.00	269.50	5,929.92	99.68	-1,640.66	1,641.01	0.00	0.00	0.00
8,900.00	90.00	269.50	5,929.91	98.80	-1,740.65	1,741.00	0.00	0.00	0.00
9,000.00	90.00	269.50	5,929.91	97.93	-1,840.65	1,840.99	0.00	0.00	0.00
9,100.00	90.00	269.50	5,929.91	97.05	-1,940.65	1,940.99	0.00	0.00	0.00
9,200.00	90.00	269.50	5,929.90	96.18	-2,040.64	2,040.98	0.00	0.00	0.00
9,300.00	90.00	269.50	5,929.90	95.30	-2,140.64	2,140.97	0.00	0.00	0.00
9,400.00	90.00	269.50	5,929.90	94.43	-2,240.63	2,240.96	0.00	0.00	0.00
9,500.00	90.00	269.50	5,929.89	93.55	-2,340.63	2,340.96	0.00	0.00	0.00
9,600.00	90.00	269.50	5,929.89	92.68	-2,440.63	2,440.95	0.00	0.00	0.00
9,700.00	90.00	269.50	5,929.89	91.81	-2,540.62	2,540.94	0.00	0.00	0.00
9,800.00	90.00	269.50	5,929.88	90.93	-2,640.62	2,640.93	0.00	0.00	0.00
9,900.00	90.00	269.50	5,929.88	90.06	-2,740.62	2,740.92	0.00	0.00	0.00
10,000.00	90.00	269.50	5,929.88	89.18	-2,840.61	2,840.92	0.00	0.00	0.00
10,100.00	90.00	269.50	5,929.87	88.31	-2,940.61	2,940.91	0.00	0.00	0.00
10,200.00	90.00	269.50	5,929.87	87.43	-3,040.60	3,040.90	0.00	0.00	0.00
10,300.00	90.00	269.50	5,929.87	86.56	-3,140.60	3,140.89	0.00	0.00	0.00
10,400.00	90.00	269.50	5,929.86	85.68	-3,240.60	3,240.89	0.00	0.00	0.00
10,500.00	90.00	269.50	5,929.86	84.81	-3,340.59	3,340.88	0.00	0.00	0.00
10,600.00	90.00	269.50	5,929.86	83.93	-3,440.59	3,440.87	0.00	0.00	0.00
10,700.00	90.00	269.50	5,929.85	83.06	-3,540.58	3,540.86	0.00	0.00	0.00
10,800.00	90.00	269.50	5,929.85	82.19	-3,640.58	3,640.86	0.00	0.00	0.00
10,900.00	90.00	269.50	5,929.85	81.31	-3,740.58	3,740.85	0.00	0.00	0.00
11,000.00	90.00	269.50	5,929.84	80.44	-3,840.57	3,840.84	0.00	0.00	0.00
11,100.00	90.00	269.50	5,929.84	79.56	-3,940.57	3,940.83	0.00	0.00	0.00
11,200.00	90.00	269.50	5,929.83	78.69	-4,040.57	4,040.82	0.00	0.00	0.00
11,300.00	90.00	269.50	5,929.83	77.81	-4,140.56	4,140.82	0.00	0.00	0.00
11,400.00	90.00	269.50	5,929.83	76.94	-4,240.56	4,240.81	0.00	0.00	0.00
11,500.00	90.00	269.50	5,929.82	76.06	-4,340.55	4,340.80	0.00	0.00	0.00
11,600.00	90.00	269.50	5,929.82	75.19	-4,440.55	4,440.79	0.00	0.00	0.00
11,700.00	90.00	269.50	5,929.82	74.31	-4,540.55	4,540.79	0.00	0.00	0.00
11,800.00	90.00	269.50	5,929.81	73.44	-4,640.54	4,640.78	0.00	0.00	0.00
11,900.00	90.00	269.50	5,929.81	72.57	-4,740.54	4,740.77	0.00	0.00	0.00
12,000.00	90.00	269.50	5,929.81	71.69	-4,840.53	4,840.76	0.00	0.00	0.00
12,100.00	90.00	269.50	5,929.80	70.82	-4,940.53	4,940.76	0.00	0.00	0.00
12,200.00	90.00	269.50	5,929.80	69.94	-5,040.53	5,040.75	0.00	0.00	0.00
12,300.00	90.00	269.50	5,929.80	69.07	-5,140.52	5,140.74	0.00	0.00	0.00
12,400.00	90.00	269.50	5,929.79	68.19	-5,240.52	5,240.73	0.00	0.00	0.00
12,500.00	90.00	269.50	5,929.79	67.32	-5,340.52	5,340.73	0.00	0.00	0.00
12,600.00	90.00	269.50	5,929.79	66.44	-5,440.51	5,440.72	0.00	0.00	0.00
12,700.00	90.00	269.50	5,929.78	65.57	-5,540.51	5,540.71	0.00	0.00	0.00
12,800.00	90.00	269.50	5,929.78	64.69	-5,640.50	5,640.70	0.00	0.00	0.00
12,900.00	90.00	269.50	5,929.78	63.82	-5,740.50	5,740.69	0.00	0.00	0.00
13,000.00	90.00	269.50	5,929.77	62.95	-5,840.50	5,840.69	0.00	0.00	0.00
13,100.00	90.00	269.50	5,929.77	62.07	-5,940.49	5,940.68	0.00	0.00	0.00
13,200.00	90.00	269.50	5,929.77	61.20	-6,040.49	6,040.67	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well TROTT 7W-20-8N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5056.00usft
Project:	Weld County	MD Reference:	KB 25' @ 5056.00usft
Site:	Sec 7-T4N-R68W	North Reference:	True
Well:	TROTT 7W-20-8N	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)
13,300.00	90.00	269.50	5,929.76	60.32	-6,140.49	6,140.66	0.00	0.00	0.00
13,400.00	90.00	269.50	5,929.76	59.45	-6,240.48	6,240.66	0.00	0.00	0.00
13,500.00	90.00	269.50	5,929.75	58.57	-6,340.48	6,340.65	0.00	0.00	0.00
13,600.00	90.00	269.50	5,929.75	57.70	-6,440.47	6,440.64	0.00	0.00	0.00
13,700.00	90.00	269.50	5,929.75	56.82	-6,540.47	6,540.63	0.00	0.00	0.00
13,800.00	90.00	269.50	5,929.74	55.95	-6,640.47	6,640.63	0.00	0.00	0.00
13,900.00	90.00	269.50	5,929.74	55.07	-6,740.46	6,740.62	0.00	0.00	0.00
14,000.00	90.00	269.50	5,929.74	54.20	-6,840.46	6,840.61	0.00	0.00	0.00
14,100.00	90.00	269.50	5,929.73	53.32	-6,940.45	6,940.60	0.00	0.00	0.00
14,200.00	90.00	269.50	5,929.73	52.45	-7,040.45	7,040.60	0.00	0.00	0.00
14,300.00	90.00	269.50	5,929.73	51.58	-7,140.45	7,140.59	0.00	0.00	0.00
14,400.00	90.00	269.50	5,929.72	50.70	-7,240.44	7,240.58	0.00	0.00	0.00
14,500.00	90.00	269.50	5,929.72	49.83	-7,340.44	7,340.57	0.00	0.00	0.00
14,600.00	90.00	269.50	5,929.72	48.95	-7,440.44	7,440.56	0.00	0.00	0.00
14,700.00	90.00	269.50	5,929.71	48.08	-7,540.43	7,540.56	0.00	0.00	0.00
14,800.00	90.00	269.50	5,929.71	47.20	-7,640.43	7,640.55	0.00	0.00	0.00
14,900.00	90.00	269.50	5,929.71	46.33	-7,740.42	7,740.54	0.00	0.00	0.00
15,000.00	90.00	269.50	5,929.70	45.45	-7,840.42	7,840.53	0.00	0.00	0.00
15,100.00	90.00	269.50	5,929.70	44.58	-7,940.42	7,940.53	0.00	0.00	0.00
15,200.00	90.00	269.50	5,929.70	43.70	-8,040.41	8,040.52	0.00	0.00	0.00
15,300.00	90.00	269.50	5,929.69	42.83	-8,140.41	8,140.51	0.00	0.00	0.00
15,400.00	90.00	269.50	5,929.69	41.96	-8,240.41	8,240.50	0.00	0.00	0.00
15,500.00	90.00	269.50	5,929.69	41.08	-8,340.40	8,340.50	0.00	0.00	0.00
15,600.00	90.00	269.50	5,929.68	40.21	-8,440.40	8,440.49	0.00	0.00	0.00
15,700.00	90.00	269.50	5,929.68	39.33	-8,540.39	8,540.48	0.00	0.00	0.00
15,800.00	90.00	269.50	5,929.67	38.46	-8,640.39	8,640.47	0.00	0.00	0.00
15,900.00	90.00	269.50	5,929.67	37.58	-8,740.39	8,740.46	0.00	0.00	0.00
16,000.00	90.00	269.50	5,929.67	36.71	-8,840.38	8,840.46	0.00	0.00	0.00
16,100.00	90.00	269.50	5,929.66	35.83	-8,940.38	8,940.45	0.00	0.00	0.00
16,200.00	90.00	269.50	5,929.66	34.96	-9,040.37	9,040.44	0.00	0.00	0.00
16,300.00	90.00	269.50	5,929.66	34.08	-9,140.37	9,140.43	0.00	0.00	0.00
16,350.39	90.00	269.50	5,930.00	33.41	-9,190.76	9,190.82	0.00	0.00	0.00
TD at 16350.39									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TROTT 8 - PBHL REV 2	0.00	0.00	5,930.00	33.41	-9,190.76	1,361,349.10	3,119,145.10	40° 19' 28.258 N	105° 4' 21.648 W
- plan hits target center									
- Point									
TROTT 8 - LP REV 2	0.00	0.00	5,930.00	120.24	710.43	1,361,487.32	3,129,045.70	40° 19' 29.132 N	105° 2' 13.808 W
- plan hits target center									
- Point									

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well TROTT 7W-20-8N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 25' @ 5056.00usft
Project:	Weld County	MD Reference:	KB 25' @ 5056.00usft
Site:	Sec 7-T4N-R68W	North Reference:	True
Well:	TROTT 7W-20-8N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,479.13	2,410.00	PARKMAN			
3,110.99	3,010.00	SUSSEX			
3,574.35	3,450.00	SHANNON			
6,341.59	5,920.00	NIOBRARA			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
500.00	500.00	0.00	0.00	Start Build 2.00
1,413.60	1,398.19	14.03	143.76	Start 3191.54 hold at 1413.60 MD
4,605.14	4,428.81	111.22	1,139.67	Start Drop -2.00
5,518.73	5,327.00	125.25	1,283.43	Start 30.00 hold at 5518.73 MD
5,548.73	5,357.00	125.25	1,283.43	Start DLS 10.00 TFO 269.50
6,448.82	5,930.00	120.24	710.43	Start 9901.57 hold at 6448.82 MD
16,350.39	5,930.00	33.41	-9,190.76	TD at 16350.39