

EXTRACTION OIL & GAS

WELD COUNTY

Sec 29-T7N-R67W

FRYE NORTH 29W-15-7C

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

06 August, 2018



Project: WELD COUNTY
Site: Sec 29-T7N-R67W
Well: FRYE NORTH 29W-15-7C
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL 1



Azimuths to True North
Magnetic North: 8.19°
Magnetic Field
Strength: 52322.6nT
Dip Angle: 66.92°
Date: 7/24/2018
Model: IGRF2015

WELL DETAILS: FRYE NORTH 29W-15-7C

4960.00							
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot	
0.00	0.00	1440746.37	3161630.55	40° 32' 30.458 N	104° 55' 6.384 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	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	
3	1340.49	14.81	16.12	1332.27	91.43	26.43	2.00	16.12	-12.38	
4	5935.35	14.81	16.12	5774.49	1219.72	352.59	0.00	0.00	-165.23	
5	6675.84	0.00	0.00	6506.76	1311.15	379.02	2.00	180.00	-177.61	
6	6705.84	0.00	0.00	6536.76	1311.15	379.02	0.00	0.00	-177.61	
7	7606.53	90.03	267.63	7110.00	1287.48	-193.98	10.00	267.63	385.32	
8	14115.90	89.97	267.63	7110.00	1018.43	-6697.78	0.00	-172.76	6774.77	

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	Start Build 2.00
1340.49	14.81	16.12	1332.27	91.43	26.43	-12.38	95.17	Start 4594.86 hold at 1340.49 MD
5935.35	14.81	16.12	5774.49	1219.72	352.59	-165.23	1269.66	Start Drop -2.00
6675.84	0.00	0.00	6506.76	1311.15	379.02	-177.61	1364.83	Start 30.00 hold at 6675.84 MD
6705.84	0.00	0.00	6536.76	1311.15	379.02	-177.61	1364.83	Start DLS 10.00 TFO 267.63
7606.53	90.03	267.63	7110.00	1287.48	-193.98	385.32	1938.33	Start DLS 0.00 TFO -172.76
14115.90	89.97	267.63	7110.00	1018.43	-6697.78	6774.77	8447.69	TD at 14115.90

DESIGN TARGET DETAILS

FN	Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
FN	FN 29W-7C - LP	7110.00	1287.48	-193.98	1442032.55	3161428.12	40° 32' 43.181 N	104° 55' 8.897 W	Point
	- plan hits target center								
FN	FN 29W-7C - PBHL	7110.00	1018.43	-6697.78	1441720.85	3154926.23	40° 32' 40.513 N	104° 56' 33.144 W	Point
	- plan hits target center								

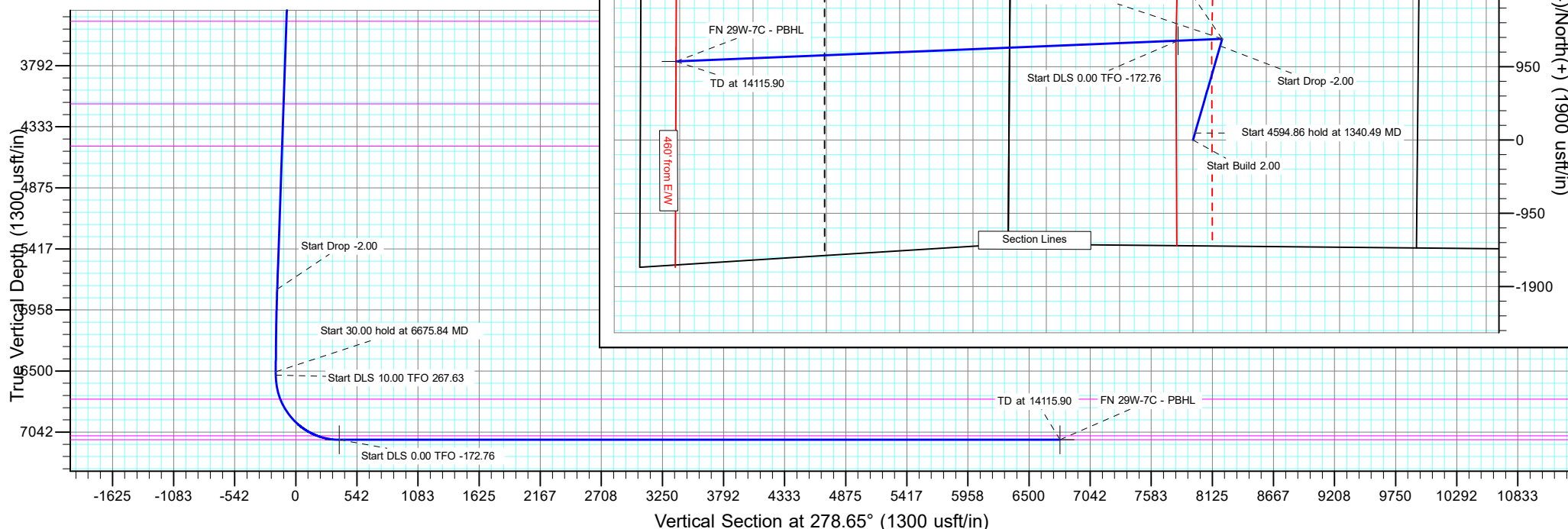
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3398.00	3477.20	PARKMAN
4130.00	4234.35	SUSSEX
4504.00	4621.20	SHANNON
6750.00	6924.33	NIOBRARA
7075.00	7404.93	FORT HAYS
7110.00	7606.53	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:
2385' FWL, 1371' FSL
Sec 29-T7N-R67W
LP:
2641' FNL, 2181' FWL
Sec 29-T7N-R67W
BHL:
2641' FNL, 460' FWL
Sec 30-T7N-R67W



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well FRYE NORTH 29W-15-7C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 4989.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 4989.00usft
Site:	Sec 29-T7N-R67W	North Reference:	True
Well:	FRYE NORTH 29W-15-7C	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 29-T7N-R67W			
Site Position:		Northing:	1,444,683.95 usft	Latitude:	40° 33' 9.176 N
From:	Lat/Long	Easting:	3,164,551.74 usft	Longitude:	104° 54' 28.206 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.38 °

Well	FRYE NORTH 29W-15-7C					
Well Position	+N/-S	-3,917.98 usft	Northing:	1,440,746.37 usft	Latitude:	40° 32' 30.458 N
	+E/-W	-2,947.42 usft	Easting:	3,161,630.55 usft	Longitude:	104° 55' 6.384 W
Position Uncertainty	0.00 usft		Wellhead Elevation:		Ground Level:	4,960.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/24/2018	8.19	66.92	52,322.64450471

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	278.65

Plan Survey Tool Program	Date	8/6/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	14,115.85	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	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,340.49	14.81	16.12	1,332.27	91.43	26.43	2.00	2.00	0.00	16.12	
5,935.35	14.81	16.12	5,774.49	1,219.72	352.59	0.00	0.00	0.00	0.00	
6,675.84	0.00	0.00	6,506.76	1,311.15	379.02	2.00	-2.00	0.00	180.00	
6,705.84	0.00	0.00	6,536.76	1,311.15	379.02	0.00	0.00	0.00	0.00	
7,606.53	90.03	267.63	7,110.00	1,287.48	-193.98	10.00	10.00	-10.25	267.63	FN 29W-7C - LP
14,115.90	89.97	267.63	7,110.00	1,018.43	-6,697.78	0.00	0.00	0.00	-172.76	FN 29W-7C - PBHL

Planning Report

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 4989.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 4989.00usft
Site:	Sec 29-T7N-R67W	North Reference:	True
Well:	FRYE NORTH 29W-15-7C	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
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
700.00	2.00	16.12	699.98	1.68	0.48	-0.23	2.00	2.00	0.00
800.00	4.00	16.12	799.84	6.70	1.94	-0.91	2.00	2.00	0.00
900.00	6.00	16.12	899.45	15.08	4.36	-2.04	2.00	2.00	0.00
1,000.00	8.00	16.12	998.70	26.78	7.74	-3.63	2.00	2.00	0.00
1,100.00	10.00	16.12	1,097.47	41.81	12.09	-5.66	2.00	2.00	0.00
1,200.00	12.00	16.12	1,195.62	60.14	17.39	-8.15	2.00	2.00	0.00
1,300.00	14.00	16.12	1,293.06	81.75	23.63	-11.07	2.00	2.00	0.00
1,340.49	14.81	16.12	1,332.27	91.43	26.43	-12.38	2.00	2.00	0.00
Start 4594.86 hold at 1340.49 MD									
1,400.00	14.81	16.12	1,389.80	106.04	30.65	-14.36	0.00	0.00	0.00
1,500.00	14.81	16.12	1,486.48	130.59	37.75	-17.69	0.00	0.00	0.00
1,600.00	14.81	16.12	1,583.16	155.15	44.85	-21.02	0.00	0.00	0.00
1,700.00	14.81	16.12	1,679.84	179.71	51.95	-24.34	0.00	0.00	0.00
1,800.00	14.81	16.12	1,776.52	204.26	59.05	-27.67	0.00	0.00	0.00
1,900.00	14.81	16.12	1,873.19	228.82	66.15	-31.00	0.00	0.00	0.00
2,000.00	14.81	16.12	1,969.87	253.37	73.24	-34.32	0.00	0.00	0.00
2,100.00	14.81	16.12	2,066.55	277.93	80.34	-37.65	0.00	0.00	0.00
2,200.00	14.81	16.12	2,163.23	302.48	87.44	-40.98	0.00	0.00	0.00
2,300.00	14.81	16.12	2,259.91	327.04	94.54	-44.30	0.00	0.00	0.00
2,400.00	14.81	16.12	2,356.58	351.60	101.64	-47.63	0.00	0.00	0.00
2,500.00	14.81	16.12	2,453.26	376.15	108.74	-50.95	0.00	0.00	0.00
2,600.00	14.81	16.12	2,549.94	400.71	115.83	-54.28	0.00	0.00	0.00
2,700.00	14.81	16.12	2,646.62	425.26	122.93	-57.61	0.00	0.00	0.00
2,800.00	14.81	16.12	2,743.30	449.82	130.03	-60.93	0.00	0.00	0.00
2,900.00	14.81	16.12	2,839.97	474.37	137.13	-64.26	0.00	0.00	0.00
3,000.00	14.81	16.12	2,936.65	498.93	144.23	-67.59	0.00	0.00	0.00
3,100.00	14.81	16.12	3,033.33	523.49	151.33	-70.91	0.00	0.00	0.00
3,200.00	14.81	16.12	3,130.01	548.04	158.42	-74.24	0.00	0.00	0.00
3,300.00	14.81	16.12	3,226.69	572.60	165.52	-77.57	0.00	0.00	0.00
3,400.00	14.81	16.12	3,323.36	597.15	172.62	-80.89	0.00	0.00	0.00
3,477.20	14.81	16.12	3,398.00	616.11	178.10	-83.46	0.00	0.00	0.00
PARKMAN									
3,500.00	14.81	16.12	3,420.04	621.71	179.72	-84.22	0.00	0.00	0.00
3,600.00	14.81	16.12	3,516.72	646.26	186.82	-87.54	0.00	0.00	0.00
3,700.00	14.81	16.12	3,613.40	670.82	193.92	-90.87	0.00	0.00	0.00
3,800.00	14.81	16.12	3,710.08	695.38	201.02	-94.20	0.00	0.00	0.00
3,900.00	14.81	16.12	3,806.75	719.93	208.11	-97.52	0.00	0.00	0.00
4,000.00	14.81	16.12	3,903.43	744.49	215.21	-100.85	0.00	0.00	0.00
4,100.00	14.81	16.12	4,000.11	769.04	222.31	-104.18	0.00	0.00	0.00
4,200.00	14.81	16.12	4,096.79	793.60	229.41	-107.50	0.00	0.00	0.00
4,234.35	14.81	16.12	4,130.00	802.03	231.85	-108.65	0.00	0.00	0.00
SUSSEX									
4,300.00	14.81	16.12	4,193.47	818.15	236.51	-110.83	0.00	0.00	0.00
4,400.00	14.81	16.12	4,290.14	842.71	243.61	-114.16	0.00	0.00	0.00
4,500.00	14.81	16.12	4,386.82	867.26	250.70	-117.48	0.00	0.00	0.00

Planning Report

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Project:	WELD COUNTY	MD Reference:	KB 29' @ 4989.00usft
Site:	Sec 29-T7N-R67W	North Reference:	True
Well:	FRYE NORTH 29W-15-7C	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	14.81	16.12	4,483.50	891.82	257.80	-120.81	0.00	0.00	0.00
4,621.20	14.81	16.12	4,504.00	897.03	259.31	-121.51	0.00	0.00	0.00
SHANNON									
4,700.00	14.81	16.12	4,580.18	916.38	264.90	-124.13	0.00	0.00	0.00
4,800.00	14.81	16.12	4,676.86	940.93	272.00	-127.46	0.00	0.00	0.00
4,900.00	14.81	16.12	4,773.53	965.49	279.10	-130.79	0.00	0.00	0.00
5,000.00	14.81	16.12	4,870.21	990.04	286.20	-134.11	0.00	0.00	0.00
5,100.00	14.81	16.12	4,966.89	1,014.60	293.29	-137.44	0.00	0.00	0.00
5,200.00	14.81	16.12	5,063.57	1,039.15	300.39	-140.77	0.00	0.00	0.00
5,300.00	14.81	16.12	5,160.25	1,063.71	307.49	-144.09	0.00	0.00	0.00
5,400.00	14.81	16.12	5,256.92	1,088.27	314.59	-147.42	0.00	0.00	0.00
5,500.00	14.81	16.12	5,353.60	1,112.82	321.69	-150.74	0.00	0.00	0.00
5,600.00	14.81	16.12	5,450.28	1,137.38	328.79	-154.07	0.00	0.00	0.00
5,700.00	14.81	16.12	5,546.96	1,161.93	335.89	-157.40	0.00	0.00	0.00
5,800.00	14.81	16.12	5,643.64	1,186.49	342.98	-160.72	0.00	0.00	0.00
5,900.00	14.81	16.12	5,740.31	1,211.04	350.08	-164.05	0.00	0.00	0.00
5,935.35	14.81	16.12	5,774.49	1,219.72	352.59	-165.23	0.00	0.00	0.00
Start Drop -2.00									
6,000.00	13.52	16.12	5,837.17	1,234.92	356.98	-167.28	2.00	-2.00	0.00
6,100.00	11.52	16.12	5,934.79	1,255.74	363.00	-170.11	2.00	-2.00	0.00
6,200.00	9.52	16.12	6,033.11	1,273.27	368.07	-172.48	2.00	-2.00	0.00
6,300.00	7.52	16.12	6,132.00	1,287.50	372.18	-174.41	2.00	-2.00	0.00
6,400.00	5.52	16.12	6,231.35	1,298.40	375.34	-175.88	2.00	-2.00	0.00
6,500.00	3.52	16.12	6,331.03	1,305.97	377.52	-176.91	2.00	-2.00	0.00
6,600.00	1.52	16.12	6,430.93	1,310.19	378.74	-177.48	2.00	-2.00	0.00
6,675.84	0.00	0.00	6,506.76	1,311.15	379.02	-177.61	2.00	-2.00	-21.26
Start 30.00 hold at 6675.84 MD									
6,705.84	0.00	0.00	6,536.76	1,311.15	379.02	-177.61	0.00	0.00	0.00
Start DLS 10.00 TFO 267.63									
6,750.00	4.41	267.63	6,580.88	1,311.08	377.32	-175.94	10.00	10.00	0.00
6,800.00	9.41	267.63	6,630.50	1,310.83	371.31	-170.04	10.00	10.00	0.00
6,850.00	14.41	267.63	6,679.41	1,310.41	361.00	-159.91	10.00	10.00	0.00
6,900.00	19.41	267.63	6,727.23	1,309.81	346.48	-145.64	10.00	10.00	0.00
6,924.33	21.84	267.63	6,750.00	1,309.45	337.92	-137.23	10.00	10.00	0.00
NIOBRARA									
6,950.00	24.40	267.63	6,773.61	1,309.04	327.85	-127.34	10.00	10.00	0.00
7,000.00	29.40	267.63	6,818.18	1,308.10	305.25	-105.14	10.00	10.00	0.00
7,050.00	34.40	267.63	6,860.62	1,307.01	278.86	-79.21	10.00	10.00	0.00
7,100.00	39.40	267.63	6,900.59	1,305.77	248.87	-49.75	10.00	10.00	0.00
7,150.00	44.39	267.63	6,937.79	1,304.40	215.52	-16.99	10.00	10.00	0.00
7,200.00	49.39	267.63	6,971.95	1,302.89	179.06	18.83	10.00	10.00	0.00
7,250.00	54.39	267.63	7,002.80	1,301.27	139.77	57.44	10.00	10.00	0.00
7,300.00	59.39	267.63	7,030.11	1,299.54	97.94	98.53	10.00	10.00	0.00
7,350.00	64.38	267.63	7,053.66	1,297.72	53.89	141.81	10.00	10.00	0.00
7,400.00	69.38	267.63	7,073.28	1,295.82	7.95	186.93	10.00	10.00	0.00
7,404.93	69.87	267.63	7,075.00	1,295.63	3.34	191.47	10.00	10.00	0.00
FORT HAYS									
7,450.00	74.38	267.63	7,088.83	1,293.86	-39.51	233.56	10.00	10.00	0.00
7,500.00	79.38	267.63	7,100.18	1,291.85	-88.15	281.35	10.00	10.00	0.00
7,550.00	84.37	267.63	7,107.24	1,289.81	-137.59	329.92	10.00	10.00	0.00
7,600.00	89.37	267.63	7,109.97	1,287.75	-187.46	378.91	10.00	10.00	0.00
7,606.53	90.03	267.63	7,110.00	1,287.48	-193.98	385.32	10.00	10.00	0.00
Start DLS 0.00 TFO -172.76 - CODELL									

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well FRYE NORTH 29W-15-7C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 4989.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 4989.00usft
Site:	Sec 29-T7N-R67W	North Reference:	True
Well:	FRYE NORTH 29W-15-7C	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)	
7,700.00	90.02	267.63	7,109.96	1,283.62	-287.37	477.07	0.00	0.00	0.00	
7,800.00	90.02	267.63	7,109.92	1,279.49	-387.28	575.23	0.00	0.00	0.00	
7,900.00	90.02	267.63	7,109.88	1,275.36	-487.20	673.39	0.00	0.00	0.00	
8,000.00	90.02	267.63	7,109.84	1,271.24	-587.11	771.54	0.00	0.00	0.00	
8,100.00	90.02	267.63	7,109.80	1,267.11	-687.03	869.70	0.00	0.00	0.00	
8,200.00	90.02	267.63	7,109.76	1,262.98	-786.94	967.86	0.00	0.00	0.00	
8,300.00	90.02	267.63	7,109.73	1,258.85	-886.86	1,066.02	0.00	0.00	0.00	
8,400.00	90.02	267.63	7,109.69	1,254.72	-986.77	1,164.18	0.00	0.00	0.00	
8,500.00	90.02	267.63	7,109.66	1,250.59	-1,086.69	1,262.34	0.00	0.00	0.00	
8,600.00	90.02	267.63	7,109.63	1,246.46	-1,186.60	1,360.50	0.00	0.00	0.00	
8,700.00	90.02	267.63	7,109.60	1,242.33	-1,286.52	1,458.65	0.00	0.00	0.00	
8,800.00	90.02	267.63	7,109.57	1,238.20	-1,386.43	1,556.81	0.00	0.00	0.00	
8,900.00	90.02	267.63	7,109.54	1,234.08	-1,486.35	1,654.97	0.00	0.00	0.00	
9,000.00	90.01	267.63	7,109.52	1,229.95	-1,586.26	1,753.13	0.00	0.00	0.00	
9,100.00	90.01	267.63	7,109.49	1,225.82	-1,686.18	1,851.29	0.00	0.00	0.00	
9,200.00	90.01	267.63	7,109.47	1,221.68	-1,786.09	1,949.45	0.00	0.00	0.00	
9,300.00	90.01	267.63	7,109.45	1,217.55	-1,886.01	2,047.61	0.00	0.00	0.00	
9,400.00	90.01	267.63	7,109.43	1,213.42	-1,985.92	2,145.76	0.00	0.00	0.00	
9,500.00	90.01	267.63	7,109.41	1,209.29	-2,085.83	2,243.92	0.00	0.00	0.00	
9,600.00	90.01	267.63	7,109.39	1,205.16	-2,185.75	2,342.08	0.00	0.00	0.00	
9,700.00	90.01	267.63	7,109.38	1,201.03	-2,285.66	2,440.24	0.00	0.00	0.00	
9,800.00	90.01	267.63	7,109.36	1,196.90	-2,385.58	2,538.40	0.00	0.00	0.00	
9,900.00	90.01	267.63	7,109.35	1,192.77	-2,485.49	2,636.55	0.00	0.00	0.00	
10,000.00	90.01	267.63	7,109.33	1,188.64	-2,585.41	2,734.71	0.00	0.00	0.00	
10,100.00	90.01	267.63	7,109.32	1,184.50	-2,685.32	2,832.87	0.00	0.00	0.00	
10,200.00	90.01	267.63	7,109.31	1,180.37	-2,785.24	2,931.03	0.00	0.00	0.00	
10,300.00	90.00	267.63	7,109.31	1,176.24	-2,885.15	3,029.19	0.00	0.00	0.00	
10,400.00	90.00	267.63	7,109.30	1,172.11	-2,985.07	3,127.34	0.00	0.00	0.00	
10,500.00	90.00	267.63	7,109.29	1,167.98	-3,084.98	3,225.50	0.00	0.00	0.00	
10,600.00	90.00	267.63	7,109.29	1,163.84	-3,184.90	3,323.66	0.00	0.00	0.00	
10,700.00	90.00	267.63	7,109.29	1,159.71	-3,284.81	3,421.82	0.00	0.00	0.00	
10,800.00	90.00	267.63	7,109.28	1,155.58	-3,384.72	3,519.98	0.00	0.00	0.00	
10,900.00	90.00	267.63	7,109.28	1,151.44	-3,484.64	3,618.13	0.00	0.00	0.00	
11,000.00	90.00	267.63	7,109.29	1,147.31	-3,584.55	3,716.29	0.00	0.00	0.00	
11,100.00	90.00	267.63	7,109.29	1,143.18	-3,684.47	3,814.45	0.00	0.00	0.00	
11,200.00	90.00	267.63	7,109.29	1,139.04	-3,784.38	3,912.61	0.00	0.00	0.00	
11,300.00	90.00	267.63	7,109.30	1,134.91	-3,884.30	4,010.77	0.00	0.00	0.00	
11,400.00	90.00	267.63	7,109.30	1,130.78	-3,984.21	4,108.92	0.00	0.00	0.00	
11,500.00	90.00	267.63	7,109.31	1,126.64	-4,084.13	4,207.08	0.00	0.00	0.00	
11,600.00	89.99	267.63	7,109.32	1,122.51	-4,184.04	4,305.24	0.00	0.00	0.00	
11,700.00	89.99	267.63	7,109.33	1,118.37	-4,283.96	4,403.40	0.00	0.00	0.00	
11,800.00	89.99	267.63	7,109.34	1,114.24	-4,383.87	4,501.55	0.00	0.00	0.00	
11,900.00	89.99	267.63	7,109.36	1,110.10	-4,483.78	4,599.71	0.00	0.00	0.00	
12,000.00	89.99	267.63	7,109.37	1,105.97	-4,583.70	4,697.87	0.00	0.00	0.00	
12,100.00	89.99	267.63	7,109.39	1,101.83	-4,683.61	4,796.03	0.00	0.00	0.00	
12,200.00	89.99	267.63	7,109.41	1,097.70	-4,783.53	4,894.18	0.00	0.00	0.00	
12,300.00	89.99	267.63	7,109.42	1,093.56	-4,883.44	4,992.34	0.00	0.00	0.00	
12,400.00	89.99	267.63	7,109.44	1,089.43	-4,983.36	5,090.50	0.00	0.00	0.00	
12,500.00	89.99	267.63	7,109.47	1,085.29	-5,083.27	5,188.65	0.00	0.00	0.00	
12,600.00	89.99	267.63	7,109.49	1,081.15	-5,183.19	5,286.81	0.00	0.00	0.00	
12,700.00	89.99	267.63	7,109.51	1,077.02	-5,283.10	5,384.97	0.00	0.00	0.00	
12,800.00	89.98	267.63	7,109.54	1,072.88	-5,383.01	5,483.13	0.00	0.00	0.00	
12,900.00	89.98	267.63	7,109.57	1,068.75	-5,482.93	5,581.28	0.00	0.00	0.00	
13,000.00	89.98	267.63	7,109.59	1,064.61	-5,582.84	5,679.44	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well FRYE NORTH 29W-15-7C
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 29' @ 4989.00usft
Project:	WELD COUNTY	MD Reference:	KB 29' @ 4989.00usft
Site:	Sec 29-T7N-R67W	North Reference:	True
Well:	FRYE NORTH 29W-15-7C	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)	
13,100.00	89.98	267.63	7,109.62	1,060.47	-5,682.76	5,777.60	0.00	0.00	0.00	
13,200.00	89.98	267.63	7,109.65	1,056.33	-5,782.67	5,875.75	0.00	0.00	0.00	
13,300.00	89.98	267.63	7,109.69	1,052.20	-5,882.59	5,973.91	0.00	0.00	0.00	
13,400.00	89.98	267.63	7,109.72	1,048.06	-5,982.50	6,072.07	0.00	0.00	0.00	
13,500.00	89.98	267.63	7,109.75	1,043.92	-6,082.41	6,170.23	0.00	0.00	0.00	
13,600.00	89.98	267.63	7,109.79	1,039.78	-6,182.33	6,268.38	0.00	0.00	0.00	
13,700.00	89.98	267.63	7,109.83	1,035.65	-6,282.24	6,366.54	0.00	0.00	0.00	
13,800.00	89.98	267.63	7,109.87	1,031.51	-6,382.16	6,464.70	0.00	0.00	0.00	
13,900.00	89.98	267.63	7,109.91	1,027.37	-6,482.07	6,562.85	0.00	0.00	0.00	
14,000.00	89.98	267.63	7,109.95	1,023.23	-6,581.99	6,661.01	0.00	0.00	0.00	
14,100.00	89.97	267.63	7,109.99	1,019.09	-6,681.90	6,759.17	0.00	0.00	0.00	
14,115.90	89.97	267.63	7,110.00	1,018.43	-6,697.78	6,774.77	0.00	0.00	0.00	
TD at 14115.90										

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										
FN 29W-7C - PBHL	0.00	0.00	7,110.00	1,018.43	-6,697.78	1,441,720.86	3,154,926.23	40° 32' 40.513 N	104° 56' 33.144 W	
- plan hits target center										
- Point										
FN 29W-7C - LP	0.00	0.00	7,110.00	1,287.48	-193.98	1,442,032.55	3,161,428.12	40° 32' 43.181 N	104° 55' 8.897 W	
- plan hits target center										
- Point										

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,477.20	3,398.00	PARKMAN				
4,234.35	4,130.00	SUSSEX				
4,621.20	4,504.00	SHANNON				
6,924.33	6,750.00	NIOBRARA				
7,404.93	7,075.00	FORT HAYS				
7,606.53	7,110.00	CODELL				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
600.00	600.00	0.00	0.00	Start Build 2.00	
1,340.49	1,332.27	91.43	26.43	Start 4594.86 hold at 1340.49 MD	
5,935.35	5,774.49	1,219.72	352.59	Start Drop -2.00	
6,675.84	6,506.76	1,311.15	379.02	Start 30.00 hold at 6675.84 MD	
6,705.84	6,536.76	1,311.15	379.02	Start DLS 10.00 TFO 267.63	
7,606.53	7,110.00	1,287.48	-193.98	Start DLS 0.00 TFO -172.76	
14,115.90	7,110.00	1,018.43	-6,697.78	TD at 14115.90	