

EXTRACTION OIL & GAS

WELD COUNTY

Sec 29-T7N-R67W

FRYE NORTH 29E-20-10C

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

03 August, 2018



WELL DETAILS: FRYE NORTH 29E-20-10C

+N/-S	+E/-W	Northing	Easting	4960.00	Latitude	Longitude	Slot
0.00	0.00	1440661.68	3161715.87	40° 32' 29.616 N	104° 55' 5.286 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	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	607.52	4.15	285.44	607.34	2.00	-7.24	2.00	285.44	-7.23	
4	6314.81	4.15	285.44	6299.66	112.00	-405.40	0.00	0.00	-404.70	
5	6522.33	0.00	0.00	6507.00	114.00	-412.64	2.00	180.00	-411.93	
6	6552.33	0.00	0.00	6537.00	114.00	-412.64	0.00	0.00	-411.93	
7	7452.41	90.00	90.25	7110.00	111.49	160.36	10.00	90.25	161.04	
8	17967.08	90.00	90.25	7110.00	65.35	10674.94	0.00	0.00	10675.14	

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	Start Build 2.00
607.52	4.15	285.44	607.34	2.00	-7.24	-7.23	7.51	Start 5707.28 hold at 607.52 MD
6314.81	4.15	285.44	6299.66	112.00	-405.40	-404.70	420.58	Start Drop -2.00
6522.33	0.00	0.00	6507.00	114.00	-412.64	-411.93	428.10	Start 30.00 hold at 6522.33 MD
6552.33	0.00	0.00	6537.00	114.00	-412.64	-411.93	428.10	Start DLS 10.00 TFO 90.25
7452.41	90.00	90.25	7110.00	111.49	160.36	161.04	1001.11	Start 10514.68 hold at 7452.41 MD
17967.08	90.00	90.25	7109.82	65.38	10674.94	10675.14	11515.78	TD at 17967.08

DESIGN TARGET DETAILS

FN	Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
FN	29E-10C - LP	7110.00	111.49	160.36	1440774.21	3161875.50	40° 32' 30.718 N	104° 55' 3.209 W	Point
	- plan hits target center								
FN	29E-10C - PBHL	7110.00	65.35	10674.94	1440797.07	3172390.15	40° 32' 30.239 N	104° 52' 47.014 W	Point
	- plan hits target center								

FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
3398.00	3405.52	PARKMAN
4130.00	4139.44	SUSSEX
4504.00	4514.43	SHANNON
6750.00	6770.57	NIOBRARA
7075.00	7251.09	FORT HAYS
7110.00	7452.41	CODELL

PROJECT DETAILS: WELD COUNTY

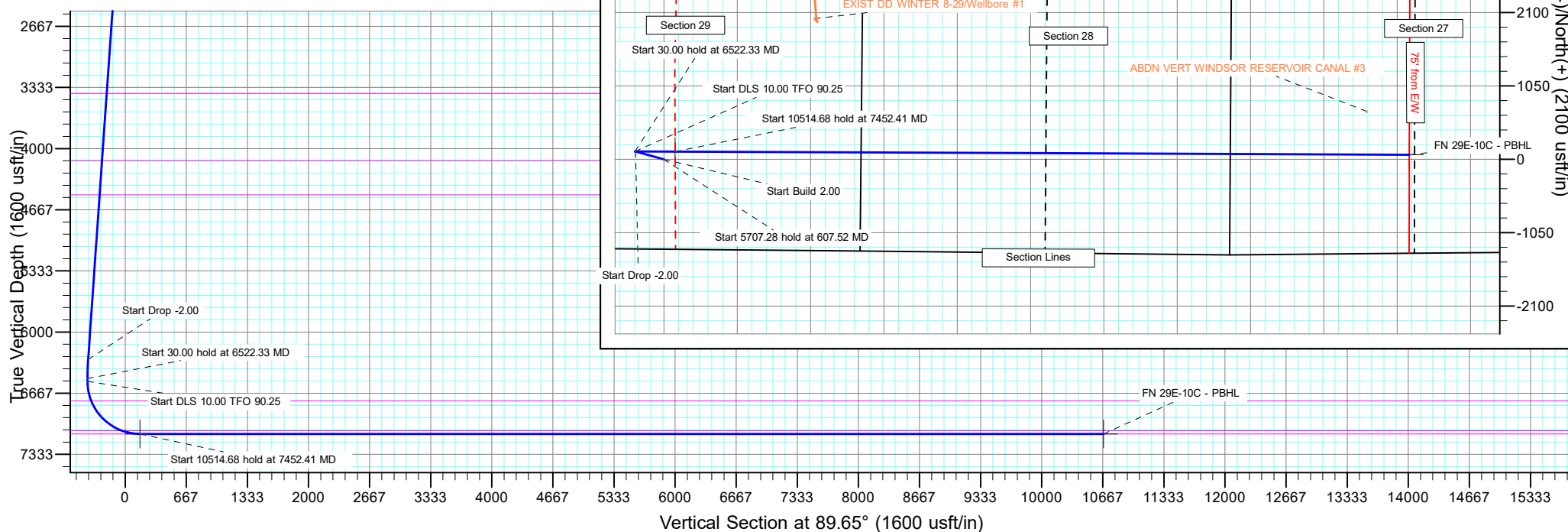
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level

SHL:
2470' FWL, 1287' FSL
Sec 29-T7N-R67W

LP:
1400' FSL, 2630' FWL
Sec 29-T7N-R67W

BHL:
1409' FSL, 2564' FWL
Sec 27-T7N-R67W



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well FRYE NORTH 29E-20-10C
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 29E-20-10C	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 29E-20-10C				
Well Position	+N/-S	-4,003.24 usft	Northing:	1,440,661.68 usft	Latitude:	40° 32' 29.616 N
	+E/-W	-2,862.67 usft	Easting:	3,161,715.87 usft	Longitude:	104° 55' 5.286 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	7/23/2018	8.19	66.92	52,322.86763653

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	89.65

Plan Survey Tool Program	Date	8/3/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,966.34	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	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
607.52	4.15	285.44	607.34	2.00	-7.24	2.00	2.00	0.00	285.44	
6,314.81	4.15	285.44	6,299.66	112.00	-405.40	0.00	0.00	0.00	0.00	
6,522.33	0.00	0.00	6,507.00	114.00	-412.64	2.00	-2.00	0.00	180.00	
6,552.33	0.00	0.00	6,537.00	114.00	-412.64	0.00	0.00	0.00	0.00	
7,452.41	90.00	90.25	7,110.00	111.49	160.36	10.00	10.00	10.03	90.25	FN 29E-10C - LP
17,967.08	90.00	90.25	7,110.00	65.35	10,674.94	0.00	0.00	0.00	0.00	FN 29E-10C - 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 29E-20-10C	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
Start Build 2.00									
500.00	2.00	285.44	499.98	0.46	-1.68	-1.68	2.00	2.00	0.00
607.52	4.15	285.44	607.34	2.00	-7.24	-7.23	2.00	2.00	0.00
Start 5707.28 hold at 607.52 MD									
700.00	4.15	285.44	699.58	3.78	-13.69	-13.67	0.00	0.00	0.00
800.00	4.15	285.44	799.31	5.71	-20.67	-20.63	0.00	0.00	0.00
900.00	4.15	285.44	899.05	7.64	-27.65	-27.60	0.00	0.00	0.00
1,000.00	4.15	285.44	998.79	9.57	-34.62	-34.56	0.00	0.00	0.00
1,100.00	4.15	285.44	1,098.53	11.49	-41.60	-41.53	0.00	0.00	0.00
1,200.00	4.15	285.44	1,198.26	13.42	-48.57	-48.49	0.00	0.00	0.00
1,300.00	4.15	285.44	1,298.00	15.35	-55.55	-55.46	0.00	0.00	0.00
1,400.00	4.15	285.44	1,397.74	17.27	-62.53	-62.42	0.00	0.00	0.00
1,500.00	4.15	285.44	1,497.48	19.20	-69.50	-69.38	0.00	0.00	0.00
1,600.00	4.15	285.44	1,597.22	21.13	-76.48	-76.35	0.00	0.00	0.00
1,700.00	4.15	285.44	1,696.95	23.06	-83.46	-83.31	0.00	0.00	0.00
1,800.00	4.15	285.44	1,796.69	24.98	-90.43	-90.28	0.00	0.00	0.00
1,900.00	4.15	285.44	1,896.43	26.91	-97.41	-97.24	0.00	0.00	0.00
2,000.00	4.15	285.44	1,996.17	28.84	-104.38	-104.21	0.00	0.00	0.00
2,100.00	4.15	285.44	2,095.90	30.77	-111.36	-111.17	0.00	0.00	0.00
2,200.00	4.15	285.44	2,195.64	32.69	-118.34	-118.14	0.00	0.00	0.00
2,300.00	4.15	285.44	2,295.38	34.62	-125.31	-125.10	0.00	0.00	0.00
2,400.00	4.15	285.44	2,395.12	36.55	-132.29	-132.06	0.00	0.00	0.00
2,500.00	4.15	285.44	2,494.86	38.48	-139.27	-139.03	0.00	0.00	0.00
2,600.00	4.15	285.44	2,594.59	40.40	-146.24	-145.99	0.00	0.00	0.00
2,700.00	4.15	285.44	2,694.33	42.33	-153.22	-152.96	0.00	0.00	0.00
2,800.00	4.15	285.44	2,794.07	44.26	-160.20	-159.92	0.00	0.00	0.00
2,900.00	4.15	285.44	2,893.81	46.18	-167.17	-166.89	0.00	0.00	0.00
3,000.00	4.15	285.44	2,993.54	48.11	-174.15	-173.85	0.00	0.00	0.00
3,100.00	4.15	285.44	3,093.28	50.04	-181.12	-180.81	0.00	0.00	0.00
3,200.00	4.15	285.44	3,193.02	51.97	-188.10	-187.78	0.00	0.00	0.00
3,300.00	4.15	285.44	3,292.76	53.89	-195.08	-194.74	0.00	0.00	0.00
3,400.00	4.15	285.44	3,392.50	55.82	-202.05	-201.71	0.00	0.00	0.00
3,405.52	4.15	285.44	3,398.00	55.93	-202.44	-202.09	0.00	0.00	0.00
PARKMAN									
3,500.00	4.15	285.44	3,492.23	57.75	-209.03	-208.67	0.00	0.00	0.00
3,600.00	4.15	285.44	3,591.97	59.68	-216.01	-215.64	0.00	0.00	0.00
3,700.00	4.15	285.44	3,691.71	61.60	-222.98	-222.60	0.00	0.00	0.00
3,800.00	4.15	285.44	3,791.45	63.53	-229.96	-229.56	0.00	0.00	0.00
3,900.00	4.15	285.44	3,891.18	65.46	-236.93	-236.53	0.00	0.00	0.00
4,000.00	4.15	285.44	3,990.92	67.39	-243.91	-243.49	0.00	0.00	0.00
4,100.00	4.15	285.44	4,090.66	69.31	-250.89	-250.46	0.00	0.00	0.00
4,139.44	4.15	285.44	4,130.00	70.07	-253.64	-253.20	0.00	0.00	0.00
SUSSEX									
4,200.00	4.15	285.44	4,190.40	71.24	-257.86	-257.42	0.00	0.00	0.00
4,300.00	4.15	285.44	4,290.13	73.17	-264.84	-264.39	0.00	0.00	0.00
4,400.00	4.15	285.44	4,389.87	75.09	-271.82	-271.35	0.00	0.00	0.00
4,500.00	4.15	285.44	4,489.61	77.02	-278.79	-278.32	0.00	0.00	0.00
4,514.43	4.15	285.44	4,504.00	77.30	-279.80	-279.32	0.00	0.00	0.00

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Project:	WELD COUNTY	MD Reference:	KB 29' @ 4989.00usft
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Well:	FRYE NORTH 29E-20-10C	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)
SHANNON									
4,600.00	4.15	285.44	4,589.35	78.95	-285.77	-285.28	0.00	0.00	0.00
4,700.00	4.15	285.44	4,689.09	80.88	-292.74	-292.24	0.00	0.00	0.00
4,800.00	4.15	285.44	4,788.82	82.80	-299.72	-299.21	0.00	0.00	0.00
4,900.00	4.15	285.44	4,888.56	84.73	-306.70	-306.17	0.00	0.00	0.00
5,000.00	4.15	285.44	4,988.30	86.66	-313.67	-313.14	0.00	0.00	0.00
5,100.00	4.15	285.44	5,088.04	88.59	-320.65	-320.10	0.00	0.00	0.00
5,200.00	4.15	285.44	5,187.77	90.51	-327.63	-327.07	0.00	0.00	0.00
5,300.00	4.15	285.44	5,287.51	92.44	-334.60	-334.03	0.00	0.00	0.00
5,400.00	4.15	285.44	5,387.25	94.37	-341.58	-340.99	0.00	0.00	0.00
5,500.00	4.15	285.44	5,486.99	96.30	-348.55	-347.96	0.00	0.00	0.00
5,600.00	4.15	285.44	5,586.73	98.22	-355.53	-354.92	0.00	0.00	0.00
5,700.00	4.15	285.44	5,686.46	100.15	-362.51	-361.89	0.00	0.00	0.00
5,800.00	4.15	285.44	5,786.20	102.08	-369.48	-368.85	0.00	0.00	0.00
5,900.00	4.15	285.44	5,885.94	104.00	-376.46	-375.82	0.00	0.00	0.00
6,000.00	4.15	285.44	5,985.68	105.93	-383.44	-382.78	0.00	0.00	0.00
6,100.00	4.15	285.44	6,085.41	107.86	-390.41	-389.75	0.00	0.00	0.00
6,200.00	4.15	285.44	6,185.15	109.79	-397.39	-396.71	0.00	0.00	0.00
6,300.00	4.15	285.44	6,284.89	111.71	-404.37	-403.67	0.00	0.00	0.00
6,314.81	4.15	285.44	6,299.66	112.00	-405.40	-404.70	0.00	0.00	0.00
Start Drop -2.00									
6,400.00	2.45	285.44	6,384.71	113.30	-410.12	-409.42	2.00	-2.00	0.00
6,500.00	0.45	285.44	6,484.67	113.98	-412.56	-411.85	2.00	-2.00	0.00
6,522.33	0.00	0.00	6,507.00	114.00	-412.64	-411.93	2.00	-2.00	0.00
Start 30.00 hold at 6522.33 MD									
6,552.33	0.00	0.00	6,537.00	114.00	-412.64	-411.93	0.00	0.00	0.00
Start DLS 10.00 TFO 90.25									
6,600.00	4.77	90.25	6,584.61	113.99	-410.66	-409.95	10.00	10.00	0.00
6,650.00	9.77	90.25	6,634.20	113.96	-404.34	-403.63	10.00	10.00	0.00
6,700.00	14.77	90.25	6,683.04	113.92	-393.72	-393.01	10.00	10.00	0.00
6,750.00	19.77	90.25	6,730.77	113.85	-378.88	-378.18	10.00	10.00	0.00
6,770.57	21.82	90.25	6,750.00	113.82	-371.58	-370.88	10.00	10.00	0.00
NIOBRARA									
6,800.00	24.77	90.25	6,777.03	113.77	-359.94	-359.24	10.00	10.00	0.00
6,850.00	29.76	90.25	6,821.46	113.67	-337.05	-336.34	10.00	10.00	0.00
6,900.00	34.76	90.25	6,863.73	113.55	-310.36	-309.66	10.00	10.00	0.00
6,950.00	39.76	90.25	6,903.51	113.42	-280.10	-279.40	10.00	10.00	0.00
7,000.00	44.76	90.25	6,940.50	113.27	-246.48	-245.78	10.00	10.00	0.00
7,050.00	49.76	90.25	6,974.42	113.11	-209.77	-209.07	10.00	10.00	0.00
7,100.00	54.76	90.25	7,005.01	112.94	-170.24	-169.55	10.00	10.00	0.00
7,150.00	59.76	90.25	7,032.04	112.75	-128.20	-127.50	10.00	10.00	0.00
7,200.00	64.76	90.25	7,055.30	112.56	-83.96	-83.27	10.00	10.00	0.00
7,250.00	69.76	90.25	7,074.62	112.36	-37.86	-37.17	10.00	10.00	0.00
7,251.09	69.87	90.25	7,075.00	112.35	-36.84	-36.15	10.00	10.00	0.00
FORT HAYS									
7,300.00	74.76	90.25	7,089.85	112.15	9.75	10.44	10.00	10.00	0.00
7,350.00	79.76	90.25	7,100.88	111.93	58.50	59.19	10.00	10.00	0.00
7,400.00	84.76	90.25	7,107.61	111.72	108.03	108.71	10.00	10.00	0.00
7,452.41	90.00	90.25	7,110.00	111.49	160.36	161.04	10.00	10.00	0.00
Start 10514.68 hold at 7452.41 MD - CODELL									
7,500.00	90.00	90.25	7,110.00	111.28	207.96	208.63	0.00	0.00	0.00
7,600.00	90.00	90.25	7,110.00	110.84	307.96	308.63	0.00	0.00	0.00
7,700.00	90.00	90.25	7,110.00	110.40	407.96	408.62	0.00	0.00	0.00

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 29E-20-10C	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)	
7,800.00	90.00	90.25	7,109.99	109.96	507.95	508.62	0.00	0.00	0.00	
7,900.00	90.00	90.25	7,109.99	109.52	607.95	608.61	0.00	0.00	0.00	
8,000.00	90.00	90.25	7,109.99	109.09	707.95	708.61	0.00	0.00	0.00	
8,100.00	90.00	90.25	7,109.99	108.65	807.95	808.60	0.00	0.00	0.00	
8,200.00	90.00	90.25	7,109.99	108.21	907.95	908.60	0.00	0.00	0.00	
8,300.00	90.00	90.25	7,109.99	107.77	1,007.95	1,008.59	0.00	0.00	0.00	
8,400.00	90.00	90.25	7,109.98	107.33	1,107.95	1,108.58	0.00	0.00	0.00	
8,500.00	90.00	90.25	7,109.98	106.89	1,207.95	1,208.58	0.00	0.00	0.00	
8,600.00	90.00	90.25	7,109.98	106.45	1,307.95	1,308.57	0.00	0.00	0.00	
8,700.00	90.00	90.25	7,109.98	106.02	1,407.95	1,408.57	0.00	0.00	0.00	
8,800.00	90.00	90.25	7,109.98	105.58	1,507.94	1,508.56	0.00	0.00	0.00	
8,900.00	90.00	90.25	7,109.98	105.14	1,607.94	1,608.56	0.00	0.00	0.00	
9,000.00	90.00	90.25	7,109.97	104.70	1,707.94	1,708.55	0.00	0.00	0.00	
9,100.00	90.00	90.25	7,109.97	104.26	1,807.94	1,808.55	0.00	0.00	0.00	
9,200.00	90.00	90.25	7,109.97	103.82	1,907.94	1,908.54	0.00	0.00	0.00	
9,300.00	90.00	90.25	7,109.97	103.39	2,007.94	2,008.53	0.00	0.00	0.00	
9,400.00	90.00	90.25	7,109.97	102.95	2,107.94	2,108.53	0.00	0.00	0.00	
9,500.00	90.00	90.25	7,109.97	102.51	2,207.94	2,208.52	0.00	0.00	0.00	
9,600.00	90.00	90.25	7,109.96	102.07	2,307.94	2,308.52	0.00	0.00	0.00	
9,700.00	90.00	90.25	7,109.96	101.63	2,407.94	2,408.51	0.00	0.00	0.00	
9,800.00	90.00	90.25	7,109.96	101.19	2,507.93	2,508.51	0.00	0.00	0.00	
9,900.00	90.00	90.25	7,109.96	100.75	2,607.93	2,608.50	0.00	0.00	0.00	
10,000.00	90.00	90.25	7,109.96	100.32	2,707.93	2,708.50	0.00	0.00	0.00	
10,100.00	90.00	90.25	7,109.96	99.88	2,807.93	2,808.49	0.00	0.00	0.00	
10,200.00	90.00	90.25	7,109.95	99.44	2,907.93	2,908.49	0.00	0.00	0.00	
10,300.00	90.00	90.25	7,109.95	99.00	3,007.93	3,008.48	0.00	0.00	0.00	
10,400.00	90.00	90.25	7,109.95	98.56	3,107.93	3,108.47	0.00	0.00	0.00	
10,500.00	90.00	90.25	7,109.95	98.12	3,207.93	3,208.47	0.00	0.00	0.00	
10,600.00	90.00	90.25	7,109.95	97.68	3,307.93	3,308.46	0.00	0.00	0.00	
10,700.00	90.00	90.25	7,109.95	97.25	3,407.93	3,408.46	0.00	0.00	0.00	
10,800.00	90.00	90.25	7,109.94	96.81	3,507.93	3,508.45	0.00	0.00	0.00	
10,900.00	90.00	90.25	7,109.94	96.37	3,607.92	3,608.45	0.00	0.00	0.00	
11,000.00	90.00	90.25	7,109.94	95.93	3,707.92	3,708.44	0.00	0.00	0.00	
11,100.00	90.00	90.25	7,109.94	95.49	3,807.92	3,808.44	0.00	0.00	0.00	
11,200.00	90.00	90.25	7,109.94	95.05	3,907.92	3,908.43	0.00	0.00	0.00	
11,300.00	90.00	90.25	7,109.94	94.61	4,007.92	4,008.42	0.00	0.00	0.00	
11,400.00	90.00	90.25	7,109.93	94.18	4,107.92	4,108.42	0.00	0.00	0.00	
11,500.00	90.00	90.25	7,109.93	93.74	4,207.92	4,208.41	0.00	0.00	0.00	
11,600.00	90.00	90.25	7,109.93	93.30	4,307.92	4,308.41	0.00	0.00	0.00	
11,700.00	90.00	90.25	7,109.93	92.86	4,407.92	4,408.40	0.00	0.00	0.00	
11,800.00	90.00	90.25	7,109.93	92.42	4,507.92	4,508.40	0.00	0.00	0.00	
11,900.00	90.00	90.25	7,109.92	91.98	4,607.91	4,608.39	0.00	0.00	0.00	
12,000.00	90.00	90.25	7,109.92	91.55	4,707.91	4,708.39	0.00	0.00	0.00	
12,100.00	90.00	90.25	7,109.92	91.11	4,807.91	4,808.38	0.00	0.00	0.00	
12,200.00	90.00	90.25	7,109.92	90.67	4,907.91	4,908.37	0.00	0.00	0.00	
12,300.00	90.00	90.25	7,109.92	90.23	5,007.91	5,008.37	0.00	0.00	0.00	
12,400.00	90.00	90.25	7,109.92	89.79	5,107.91	5,108.36	0.00	0.00	0.00	
12,500.00	90.00	90.25	7,109.91	89.35	5,207.91	5,208.36	0.00	0.00	0.00	
12,600.00	90.00	90.25	7,109.91	88.91	5,307.91	5,308.35	0.00	0.00	0.00	
12,700.00	90.00	90.25	7,109.91	88.48	5,407.91	5,408.35	0.00	0.00	0.00	
12,800.00	90.00	90.25	7,109.91	88.04	5,507.91	5,508.34	0.00	0.00	0.00	
12,900.00	90.00	90.25	7,109.91	87.60	5,607.91	5,608.34	0.00	0.00	0.00	
13,000.00	90.00	90.25	7,109.91	87.16	5,707.90	5,708.33	0.00	0.00	0.00	
13,100.00	90.00	90.25	7,109.90	86.72	5,807.90	5,808.33	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well FRYE NORTH 29E-20-10C
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 29E-20-10C	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)	
13,200.00	90.00	90.25	7,109.90	86.28	5,907.90	5,908.32	0.00	0.00	0.00	
13,300.00	90.00	90.25	7,109.90	85.84	6,007.90	6,008.31	0.00	0.00	0.00	
13,400.00	90.00	90.25	7,109.90	85.41	6,107.90	6,108.31	0.00	0.00	0.00	
13,500.00	90.00	90.25	7,109.90	84.97	6,207.90	6,208.30	0.00	0.00	0.00	
13,600.00	90.00	90.25	7,109.90	84.53	6,307.90	6,308.30	0.00	0.00	0.00	
13,700.00	90.00	90.25	7,109.89	84.09	6,407.90	6,408.29	0.00	0.00	0.00	
13,800.00	90.00	90.25	7,109.89	83.65	6,507.90	6,508.29	0.00	0.00	0.00	
13,900.00	90.00	90.25	7,109.89	83.21	6,607.90	6,608.28	0.00	0.00	0.00	
14,000.00	90.00	90.25	7,109.89	82.77	6,707.89	6,708.28	0.00	0.00	0.00	
14,100.00	90.00	90.25	7,109.89	82.34	6,807.89	6,808.27	0.00	0.00	0.00	
14,200.00	90.00	90.25	7,109.89	81.90	6,907.89	6,908.26	0.00	0.00	0.00	
14,300.00	90.00	90.25	7,109.88	81.46	7,007.89	7,008.26	0.00	0.00	0.00	
14,400.00	90.00	90.25	7,109.88	81.02	7,107.89	7,108.25	0.00	0.00	0.00	
14,500.00	90.00	90.25	7,109.88	80.58	7,207.89	7,208.25	0.00	0.00	0.00	
14,600.00	90.00	90.25	7,109.88	80.14	7,307.89	7,308.24	0.00	0.00	0.00	
14,700.00	90.00	90.25	7,109.88	79.71	7,407.89	7,408.24	0.00	0.00	0.00	
14,800.00	90.00	90.25	7,109.88	79.27	7,507.89	7,508.23	0.00	0.00	0.00	
14,900.00	90.00	90.25	7,109.87	78.83	7,607.89	7,608.23	0.00	0.00	0.00	
15,000.00	90.00	90.25	7,109.87	78.39	7,707.88	7,708.22	0.00	0.00	0.00	
15,100.00	90.00	90.25	7,109.87	77.95	7,807.88	7,808.21	0.00	0.00	0.00	
15,200.00	90.00	90.25	7,109.87	77.51	7,907.88	7,908.21	0.00	0.00	0.00	
15,300.00	90.00	90.25	7,109.87	77.07	8,007.88	8,008.20	0.00	0.00	0.00	
15,400.00	90.00	90.25	7,109.87	76.64	8,107.88	8,108.20	0.00	0.00	0.00	
15,500.00	90.00	90.25	7,109.86	76.20	8,207.88	8,208.19	0.00	0.00	0.00	
15,600.00	90.00	90.25	7,109.86	75.76	8,307.88	8,308.19	0.00	0.00	0.00	
15,700.00	90.00	90.25	7,109.86	75.32	8,407.88	8,408.18	0.00	0.00	0.00	
15,800.00	90.00	90.25	7,109.86	74.88	8,507.88	8,508.18	0.00	0.00	0.00	
15,900.00	90.00	90.25	7,109.86	74.44	8,607.88	8,608.17	0.00	0.00	0.00	
16,000.00	90.00	90.25	7,109.86	74.00	8,707.88	8,708.17	0.00	0.00	0.00	
16,100.00	90.00	90.25	7,109.85	73.57	8,807.87	8,808.16	0.00	0.00	0.00	
16,200.00	90.00	90.25	7,109.85	73.13	8,907.87	8,908.15	0.00	0.00	0.00	
16,300.00	90.00	90.25	7,109.85	72.69	9,007.87	9,008.15	0.00	0.00	0.00	
16,400.00	90.00	90.25	7,109.85	72.25	9,107.87	9,108.14	0.00	0.00	0.00	
16,500.00	90.00	90.25	7,109.85	71.81	9,207.87	9,208.14	0.00	0.00	0.00	
16,600.00	90.00	90.25	7,109.85	71.37	9,307.87	9,308.13	0.00	0.00	0.00	
16,700.00	90.00	90.25	7,109.84	70.93	9,407.87	9,408.13	0.00	0.00	0.00	
16,800.00	90.00	90.25	7,109.84	70.50	9,507.87	9,508.12	0.00	0.00	0.00	
16,900.00	90.00	90.25	7,109.84	70.06	9,607.87	9,608.12	0.00	0.00	0.00	
17,000.00	90.00	90.25	7,109.84	69.62	9,707.87	9,708.11	0.00	0.00	0.00	
17,100.00	90.00	90.25	7,109.84	69.18	9,807.86	9,808.10	0.00	0.00	0.00	
17,200.00	90.00	90.25	7,109.84	68.74	9,907.86	9,908.10	0.00	0.00	0.00	
17,300.00	90.00	90.25	7,109.83	68.30	10,007.86	10,008.09	0.00	0.00	0.00	
17,400.00	90.00	90.25	7,109.83	67.87	10,107.86	10,108.09	0.00	0.00	0.00	
17,500.00	90.00	90.25	7,109.83	67.43	10,207.86	10,208.08	0.00	0.00	0.00	
17,600.00	90.00	90.25	7,109.83	66.99	10,307.86	10,308.08	0.00	0.00	0.00	
17,700.00	90.00	90.25	7,109.83	66.55	10,407.86	10,408.07	0.00	0.00	0.00	
17,800.00	90.00	90.25	7,109.83	66.11	10,507.86	10,508.07	0.00	0.00	0.00	
17,900.00	90.00	90.25	7,109.82	65.67	10,607.86	10,608.06	0.00	0.00	0.00	
17,967.08	90.00	90.25	7,110.00	65.35	10,674.94	10,675.14	0.00	0.00	0.00	
TD at 17967.08										

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well FRYE NORTH 29E-20-10C
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 29E-20-10C	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
FN 29E-10C - LP	0.00	0.00	7,110.00	111.49	160.36	1,440,774.22	3,161,875.50	40° 32' 30.718 N	104° 55' 3.209 W
- plan hits target center									
- Point									
FN 29E-10C - PBHL	0.00	0.00	7,110.00	65.35	10,674.94	1,440,797.07	3,172,390.15	40° 32' 30.239 N	104° 52' 47.014 W
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
3,405.52	3,398.00	PARKMAN				
4,139.44	4,130.00	SUSSEX				
4,514.43	4,504.00	SHANNON				
6,770.57	6,750.00	NIOBRARA				
7,251.09	7,075.00	FORT HAYS				
7,452.41	7,110.00	CODELL				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		
(usft)	(usft)	+N/-S	+E/-W	Comment
(usft)	(usft)	(usft)	(usft)	
400.00	400.00	0.00	0.00	Start Build 2.00
607.52	607.34	2.00	-7.24	Start 5707.28 hold at 607.52 MD
6,314.81	6,299.66	112.00	-405.40	Start Drop -2.00
6,522.33	6,507.00	114.00	-412.64	Start 30.00 hold at 6522.33 MD
6,552.33	6,537.00	114.00	-412.64	Start DLS 10.00 TFO 90.25
7,452.41	7,110.00	111.49	160.36	Start 10514.68 hold at 7452.41 MD
17,967.08	7,110.00	65.35	10,674.94	TD at 17967.08