

EXTRACTION OIL & GAS

WELD COUNTY

Sec 28-T1N-R68W

COYOTE TRAILS 33W-15-1N

ORIGINAL WELLBORE

Plan: PROPOSAL 1

Standard Planning Report

11 February, 2019



Project: WELD COUNTY
Site: Sec 28-T1N-R68W
Well: COYOTE TRAILS 33W-15-1N
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL 1



Azimuths to True North
Magnetic North: 8.30°

Magnetic Field
Strength: 52159.8nT
Dip Angle: 66.51°
Date: 6/29/2017
Model: IGRF2015

WELL DETAILS: COYOTE TRAILS 33W-15-1N

	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
	0.00	0.00	1249858.53	3137865.02	40.018198°N	105.007761°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	1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00	
3	2421.03	16.42	173.30	2409.84	-116.05	13.64	2.00	173.30	7.68	
4	6608.14	16.42	173.30	6426.16	-1291.60	151.82	0.00	85.48	0.00	
5	7429.17	0.00	0.00	7236.00	-1407.65	165.46	2.00	180.00	93.16	
6	7459.17	0.00	0.00	7266.00	-1407.65	165.46	0.00	93.16	93.16	
7	8359.24	90.00	269.90	7839.00	-1408.64	-407.54	10.00	269.90	656.79	CT 33W-1N LP
8	15635.55	90.00	269.90	7839.00	-1421.29	-7683.84	0.00	7814.19	7814.19	CT 33W-1N PBHL

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	Start Build 2.00
2421.03	16.42	173.30	2409.84	-116.05	13.64	7.68	116.85	Start 1487.11 hold at 2421.03 MD
6608.14	16.42	173.30	6426.16	-1291.60	151.82	85.48	1300.49	Start Drop -2.00
7429.17	0.00	0.00	7236.00	-1407.65	165.46	93.16	1417.34	Start 30.00 hold at 7429.17 MD
7459.17	0.00	0.00	7266.00	-1407.65	165.46	93.16	1417.34	Start DLS 10.00 TFO 269.90
8359.24	90.00	269.90	7839.00	-1408.64	-407.54	656.79	1990.34	Start 7276.32 hold at 8359.24 MD
15635.55	90.00	269.90	7839.02	-1421.18	-7683.84	7814.17	9266.66	TD at 15635.55

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
CT 33W-1N LP	7839.00	-1408.64	-407.54	1248447.66	3137465.31	40.014331°N	105.009216°W	Point
- plan hits target center								
CT 33W-1N PBHL	7839.00	-1421.29	-7683.84	1248394.61	3130189.18	40.014293°N	105.035194°W	Point
- plan hits target center								

FORMATION TOP DETAILS

TVDPATH	MDPath	Formation
4440.00	4537.52	PARKMAN
4910.00	5027.51	SUSSEX
7610.00	7828.15	SHARON SPRINGS
7650.00	7879.99	NIOBRARA
7797.00	8138.48	NIO B

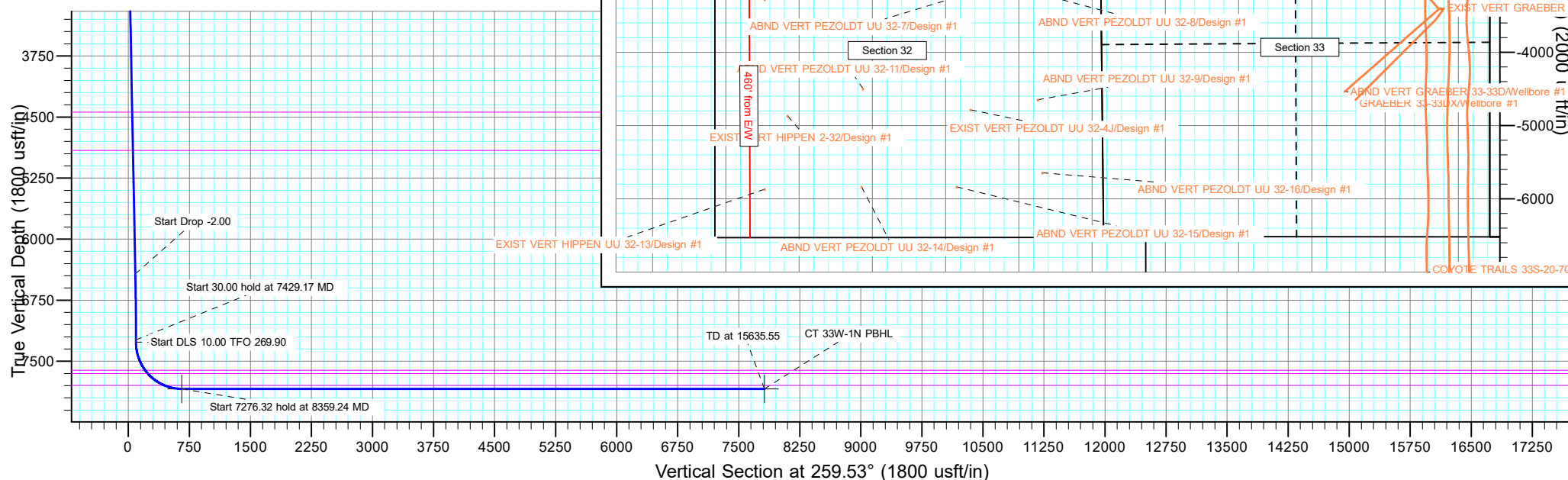
PROJECT DETAILS: WELD COUNTY

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

SHL:
1231' FSL, 2435' FEL
Sec 28-T1N-R68W

LP:
174' FNL, 2492' FWL
Sec 33-T1N-R68W

BHL:
172' FNL, 460' FWL
Sec 31-T1N-R68W



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well COYOTE TRAILS 33W-15-1N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 28' @ 5301.00usft
Project:	WELD COUNTY	MD Reference:	KB 28' @ 5301.00usft
Site:	Sec 28-T1N-R68W	North Reference:	True
Well:	COYOTE TRAILS 33W-15-1N	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 28-T1N-R68W			
Site Position:		Northing:	1,248,660.21 usft	Latitude:	40.014871°N
From:	Lat/Long	Easting:	3,140,299.83 usft	Longitude:	104.999092°W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.32 °

Well	COYOTE TRAILS 33W-15-1N					
Well Position	+N/-S	1,212.05 usft	Northing:	1,249,858.53 usft	Latitude:	40.018198°N
	+E/-W	-2,428.00 usft	Easting:	3,137,865.02 usft	Longitude:	105.007761°W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,273.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/29/2017	8.30	66.51	52,159.78068120

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	259.53

Plan Survey Tool Program	Date	2/11/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,635.55	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	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,421.03	16.42	173.30	2,409.84	-116.05	13.64	2.00	2.00	0.00	173.30	
6,608.14	16.42	173.30	6,426.16	-1,291.60	151.82	0.00	0.00	0.00	0.00	
7,429.17	0.00	0.00	7,236.00	-1,407.65	165.46	2.00	-2.00	0.00	180.00	
7,459.17	0.00	0.00	7,266.00	-1,407.65	165.46	0.00	0.00	0.00	0.00	
8,359.24	90.00	269.90	7,839.00	-1,408.64	-407.54	10.00	10.00	-10.01	269.90	CT 33W-1N LP
15,635.55	90.00	269.90	7,839.00	-1,421.29	-7,683.84	0.00	0.00	0.00	0.00	CT 33W-1N PBHL

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 28' @ 5301.00usft
Project:	WELD COUNTY	MD Reference:	KB 28' @ 5301.00usft
Site:	Sec 28-T1N-R68W	North Reference:	True
Well:	COYOTE TRAILS 33W-15-1N	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
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,700.00	2.00	173.30	1,699.98	-1.73	0.20	0.11	2.00	2.00	0.00
1,800.00	4.00	173.30	1,799.84	-6.93	0.81	0.46	2.00	2.00	0.00
1,900.00	6.00	173.30	1,899.45	-15.59	1.83	1.03	2.00	2.00	0.00
2,000.00	8.00	173.30	1,998.70	-27.69	3.25	1.83	2.00	2.00	0.00
2,100.00	10.00	173.30	2,097.47	-43.23	5.08	2.86	2.00	2.00	0.00
2,200.00	12.00	173.30	2,195.62	-62.17	7.31	4.11	2.00	2.00	0.00
2,300.00	14.00	173.30	2,293.06	-84.51	9.93	5.59	2.00	2.00	0.00
2,400.00	16.00	173.30	2,389.64	-110.22	12.96	7.29	2.00	2.00	0.00
2,421.03	16.42	173.30	2,409.84	-116.05	13.64	7.68	2.00	2.00	0.00
Start 4187.11 hold at 2421.03 MD									
2,500.00	16.42	173.30	2,485.59	-138.22	16.25	9.15	0.00	0.00	0.00
2,600.00	16.42	173.30	2,581.51	-166.30	19.55	11.01	0.00	0.00	0.00
2,700.00	16.42	173.30	2,677.43	-194.37	22.85	12.86	0.00	0.00	0.00
2,800.00	16.42	173.30	2,773.35	-222.45	26.15	14.72	0.00	0.00	0.00
2,900.00	16.42	173.30	2,869.27	-250.52	29.45	16.58	0.00	0.00	0.00
3,000.00	16.42	173.30	2,965.19	-278.60	32.75	18.44	0.00	0.00	0.00
3,100.00	16.42	173.30	3,061.11	-306.67	36.05	20.30	0.00	0.00	0.00
3,200.00	16.42	173.30	3,157.03	-334.75	39.35	22.15	0.00	0.00	0.00
3,300.00	16.42	173.30	3,252.96	-362.82	42.65	24.01	0.00	0.00	0.00
3,400.00	16.42	173.30	3,348.88	-390.90	45.95	25.87	0.00	0.00	0.00
3,500.00	16.42	173.30	3,444.80	-418.98	49.25	27.73	0.00	0.00	0.00
3,600.00	16.42	173.30	3,540.72	-447.05	52.55	29.59	0.00	0.00	0.00
3,700.00	16.42	173.30	3,636.64	-475.13	55.85	31.44	0.00	0.00	0.00
3,800.00	16.42	173.30	3,732.56	-503.20	59.15	33.30	0.00	0.00	0.00
3,900.00	16.42	173.30	3,828.48	-531.28	62.45	35.16	0.00	0.00	0.00
4,000.00	16.42	173.30	3,924.40	-559.35	65.75	37.02	0.00	0.00	0.00
4,100.00	16.42	173.30	4,020.32	-587.43	69.05	38.88	0.00	0.00	0.00
4,200.00	16.42	173.30	4,116.25	-615.50	72.35	40.73	0.00	0.00	0.00
4,300.00	16.42	173.30	4,212.17	-643.58	75.65	42.59	0.00	0.00	0.00
4,400.00	16.42	173.30	4,308.09	-671.65	78.95	44.45	0.00	0.00	0.00
4,500.00	16.42	173.30	4,404.01	-699.73	82.25	46.31	0.00	0.00	0.00
4,537.52	16.42	173.30	4,440.00	-710.26	83.49	47.00	0.00	0.00	0.00
PARKMAN									
4,600.00	16.42	173.30	4,499.93	-727.81	85.55	48.17	0.00	0.00	0.00
4,700.00	16.42	173.30	4,595.85	-755.88	88.85	50.02	0.00	0.00	0.00

Planning Report

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Project:	WELD COUNTY	MD Reference:	KB 28' @ 5301.00usft
Site:	Sec 28-T1N-R68W	North Reference:	True
Well:	COYOTE TRAILS 33W-15-1N	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)
4,800.00	16.42	173.30	4,691.77	-783.96	92.15	51.88	0.00	0.00	0.00
4,900.00	16.42	173.30	4,787.69	-812.03	95.45	53.74	0.00	0.00	0.00
5,000.00	16.42	173.30	4,883.62	-840.11	98.75	55.60	0.00	0.00	0.00
5,027.51	16.42	173.30	4,910.00	-847.83	99.66	56.11	0.00	0.00	0.00
SUSSEX									
5,100.00	16.42	173.30	4,979.54	-868.18	102.05	57.46	0.00	0.00	0.00
5,200.00	16.42	173.30	5,075.46	-896.26	105.35	59.31	0.00	0.00	0.00
5,300.00	16.42	173.30	5,171.38	-924.33	108.65	61.17	0.00	0.00	0.00
5,400.00	16.42	173.30	5,267.30	-952.41	111.95	63.03	0.00	0.00	0.00
5,500.00	16.42	173.30	5,363.22	-980.49	115.25	64.89	0.00	0.00	0.00
5,600.00	16.42	173.30	5,459.14	-1,008.56	118.55	66.75	0.00	0.00	0.00
5,700.00	16.42	173.30	5,555.06	-1,036.64	121.85	68.60	0.00	0.00	0.00
5,800.00	16.42	173.30	5,650.99	-1,064.71	125.15	70.46	0.00	0.00	0.00
5,900.00	16.42	173.30	5,746.91	-1,092.79	128.45	72.32	0.00	0.00	0.00
6,000.00	16.42	173.30	5,842.83	-1,120.86	131.75	74.18	0.00	0.00	0.00
6,100.00	16.42	173.30	5,938.75	-1,148.94	135.05	76.04	0.00	0.00	0.00
6,200.00	16.42	173.30	6,034.67	-1,177.01	138.35	77.89	0.00	0.00	0.00
6,300.00	16.42	173.30	6,130.59	-1,205.09	141.65	79.75	0.00	0.00	0.00
6,400.00	16.42	173.30	6,226.51	-1,233.16	144.95	81.61	0.00	0.00	0.00
6,500.00	16.42	173.30	6,322.43	-1,261.24	148.25	83.47	0.00	0.00	0.00
6,608.14	16.42	173.30	6,426.16	-1,291.60	151.82	85.48	0.00	0.00	0.00
Start Drop -2.00									
6,700.00	14.58	173.30	6,514.68	-1,315.98	154.69	87.09	2.00	-2.00	0.00
6,800.00	12.58	173.30	6,611.88	-1,339.31	157.43	88.63	2.00	-2.00	0.00
6,900.00	10.58	173.30	6,709.83	-1,359.25	159.77	89.95	2.00	-2.00	0.00
7,000.00	8.58	173.30	6,808.43	-1,375.78	161.71	91.05	2.00	-2.00	0.00
7,100.00	6.58	173.30	6,907.55	-1,388.89	163.25	91.92	2.00	-2.00	0.00
7,200.00	4.58	173.30	7,007.07	-1,398.55	164.39	92.55	2.00	-2.00	0.00
7,300.00	2.58	173.30	7,106.87	-1,404.76	165.12	92.97	2.00	-2.00	0.00
7,400.00	0.58	173.30	7,206.83	-1,407.50	165.44	93.15	2.00	-2.00	0.00
7,429.17	0.00	0.00	7,236.00	-1,407.65	165.46	93.16	2.00	-2.00	-594.08
Start 30.00 hold at 7429.17 MD									
7,459.17	0.00	0.00	7,266.00	-1,407.65	165.46	93.16	0.00	0.00	0.00
Start DLS 10.00 TFO 269.90									
7,500.00	4.08	269.90	7,306.80	-1,407.65	164.01	94.59	10.00	10.00	0.00
7,550.00	9.08	269.90	7,356.45	-1,407.66	158.28	100.22	10.00	10.00	0.00
7,600.00	14.08	269.90	7,405.42	-1,407.68	148.24	110.09	10.00	10.00	0.00
7,650.00	19.08	269.90	7,453.32	-1,407.70	133.98	124.13	10.00	10.00	0.00
7,700.00	24.08	269.90	7,499.80	-1,407.74	115.59	142.21	10.00	10.00	0.00
7,750.00	29.08	269.90	7,544.50	-1,407.77	93.22	164.21	10.00	10.00	0.00
7,800.00	34.08	269.90	7,587.08	-1,407.82	67.05	189.96	10.00	10.00	0.00
7,828.15	36.89	269.90	7,610.00	-1,407.85	50.71	206.03	10.00	10.00	0.00
SHARON SPRINGS									
7,850.00	39.08	269.90	7,627.22	-1,407.87	37.26	219.26	10.00	10.00	0.00
7,879.99	42.08	269.90	7,650.00	-1,407.90	17.75	238.45	10.00	10.00	0.00
NIOBRARA									
7,900.00	44.08	269.90	7,664.61	-1,407.93	4.09	251.89	10.00	10.00	0.00
7,950.00	49.08	269.90	7,698.97	-1,407.99	-32.22	287.60	10.00	10.00	0.00
8,000.00	54.08	269.90	7,730.03	-1,408.06	-71.38	326.12	10.00	10.00	0.00
8,050.00	59.08	269.90	7,757.56	-1,408.13	-113.10	367.16	10.00	10.00	0.00
8,100.00	64.08	269.90	7,781.35	-1,408.21	-157.06	410.40	10.00	10.00	0.00
8,138.48	67.93	269.90	7,797.00	-1,408.27	-192.21	444.98	10.00	10.00	0.00
NIO B									

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well COYOTE TRAILS 33W-15-1N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 28' @ 5301.00usft
Project:	WELD COUNTY	MD Reference:	KB 28' @ 5301.00usft
Site:	Sec 28-T1N-R68W	North Reference:	True
Well:	COYOTE TRAILS 33W-15-1N	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)	
8,150.00	69.08	269.90	7,801.22	-1,408.28	-202.92	455.52	10.00	10.00	0.00	
8,200.00	74.08	269.90	7,817.02	-1,408.37	-250.34	502.17	10.00	10.00	0.00	
8,250.00	79.08	269.90	7,828.62	-1,408.45	-298.96	549.99	10.00	10.00	0.00	
8,300.00	84.08	269.90	7,835.94	-1,408.54	-348.41	598.63	10.00	10.00	0.00	
8,350.00	89.08	269.90	7,838.93	-1,408.62	-398.30	647.71	10.00	10.00	0.00	
8,359.24	90.00	269.90	7,839.00	-1,408.64	-407.54	656.79	10.00	10.00	0.00	
Start 7276.32 hold at 8359.24 MD										
8,400.00	90.00	269.90	7,839.00	-1,408.71	-448.30	696.89	0.00	0.00	0.00	
8,500.00	90.00	269.90	7,839.00	-1,408.88	-548.30	795.25	0.00	0.00	0.00	
8,600.00	90.00	269.90	7,839.00	-1,409.05	-648.30	893.62	0.00	0.00	0.00	
8,700.00	90.00	269.90	7,839.00	-1,409.22	-748.30	991.98	0.00	0.00	0.00	
8,800.00	90.00	269.90	7,839.00	-1,409.40	-848.30	1,090.35	0.00	0.00	0.00	
8,900.00	90.00	269.90	7,839.00	-1,409.57	-948.30	1,188.71	0.00	0.00	0.00	
9,000.00	90.00	269.90	7,839.00	-1,409.74	-1,048.30	1,287.08	0.00	0.00	0.00	
9,100.00	90.00	269.90	7,839.00	-1,409.91	-1,148.30	1,385.45	0.00	0.00	0.00	
9,200.00	90.00	269.90	7,839.00	-1,410.09	-1,248.30	1,483.81	0.00	0.00	0.00	
9,300.00	90.00	269.90	7,839.00	-1,410.26	-1,348.30	1,582.18	0.00	0.00	0.00	
9,400.00	90.00	269.90	7,839.00	-1,410.43	-1,448.30	1,680.54	0.00	0.00	0.00	
9,500.00	90.00	269.90	7,839.00	-1,410.60	-1,548.30	1,778.91	0.00	0.00	0.00	
9,600.00	90.00	269.90	7,839.00	-1,410.78	-1,648.30	1,877.27	0.00	0.00	0.00	
9,700.00	90.00	269.90	7,839.00	-1,410.95	-1,748.30	1,975.64	0.00	0.00	0.00	
9,800.00	90.00	269.90	7,839.00	-1,411.12	-1,848.30	2,074.00	0.00	0.00	0.00	
9,900.00	90.00	269.90	7,839.00	-1,411.29	-1,948.30	2,172.37	0.00	0.00	0.00	
10,000.00	90.00	269.90	7,839.00	-1,411.47	-2,048.30	2,270.73	0.00	0.00	0.00	
10,100.00	90.00	269.90	7,839.00	-1,411.64	-2,148.30	2,369.10	0.00	0.00	0.00	
10,200.00	90.00	269.90	7,839.00	-1,411.81	-2,248.30	2,467.46	0.00	0.00	0.00	
10,300.00	90.00	269.90	7,839.00	-1,411.98	-2,348.30	2,565.83	0.00	0.00	0.00	
10,400.00	90.00	269.90	7,839.00	-1,412.15	-2,448.30	2,664.20	0.00	0.00	0.00	
10,500.00	90.00	269.90	7,839.01	-1,412.33	-2,548.30	2,762.56	0.00	0.00	0.00	
10,600.00	90.00	269.90	7,839.01	-1,412.50	-2,648.30	2,860.93	0.00	0.00	0.00	
10,700.00	90.00	269.90	7,839.01	-1,412.67	-2,748.30	2,959.29	0.00	0.00	0.00	
10,800.00	90.00	269.90	7,839.01	-1,412.84	-2,848.30	3,057.66	0.00	0.00	0.00	
10,900.00	90.00	269.90	7,839.01	-1,413.02	-2,948.30	3,156.02	0.00	0.00	0.00	
11,000.00	90.00	269.90	7,839.01	-1,413.19	-3,048.30	3,254.39	0.00	0.00	0.00	
11,100.00	90.00	269.90	7,839.01	-1,413.36	-3,148.30	3,352.75	0.00	0.00	0.00	
11,200.00	90.00	269.90	7,839.01	-1,413.53	-3,248.30	3,451.12	0.00	0.00	0.00	
11,300.00	90.00	269.90	7,839.01	-1,413.71	-3,348.30	3,549.48	0.00	0.00	0.00	
11,400.00	90.00	269.90	7,839.01	-1,413.88	-3,448.30	3,647.85	0.00	0.00	0.00	
11,500.00	90.00	269.90	7,839.01	-1,414.05	-3,548.30	3,746.21	0.00	0.00	0.00	
11,600.00	90.00	269.90	7,839.01	-1,414.22	-3,648.30	3,844.58	0.00	0.00	0.00	
11,700.00	90.00	269.90	7,839.01	-1,414.40	-3,748.30	3,942.95	0.00	0.00	0.00	
11,800.00	90.00	269.90	7,839.01	-1,414.57	-3,848.30	4,041.31	0.00	0.00	0.00	
11,900.00	90.00	269.90	7,839.01	-1,414.74	-3,948.30	4,139.68	0.00	0.00	0.00	
12,000.00	90.00	269.90	7,839.01	-1,414.91	-4,048.30	4,238.04	0.00	0.00	0.00	
12,100.00	90.00	269.90	7,839.01	-1,415.08	-4,148.30	4,336.41	0.00	0.00	0.00	
12,200.00	90.00	269.90	7,839.01	-1,415.26	-4,248.30	4,434.77	0.00	0.00	0.00	
12,300.00	90.00	269.90	7,839.01	-1,415.43	-4,348.30	4,533.14	0.00	0.00	0.00	
12,400.00	90.00	269.90	7,839.01	-1,415.60	-4,448.30	4,631.50	0.00	0.00	0.00	
12,500.00	90.00	269.90	7,839.01	-1,415.77	-4,548.30	4,729.87	0.00	0.00	0.00	
12,600.00	90.00	269.90	7,839.01	-1,415.95	-4,648.30	4,828.23	0.00	0.00	0.00	
12,700.00	90.00	269.90	7,839.01	-1,416.12	-4,748.30	4,926.60	0.00	0.00	0.00	
12,800.00	90.00	269.90	7,839.01	-1,416.29	-4,848.30	5,024.96	0.00	0.00	0.00	
12,900.00	90.00	269.90	7,839.01	-1,416.46	-4,948.30	5,123.33	0.00	0.00	0.00	
13,000.00	90.00	269.90	7,839.01	-1,416.64	-5,048.30	5,221.70	0.00	0.00	0.00	

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well COYOTE TRAILS 33W-15-1N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 28' @ 5301.00usft
Project:	WELD COUNTY	MD Reference:	KB 28' @ 5301.00usft
Site:	Sec 28-T1N-R68W	North Reference:	True
Well:	COYOTE TRAILS 33W-15-1N	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	90.00	269.90	7,839.01	-1,416.81	-5,148.30	5,320.06	0.00	0.00	0.00
13,200.00	90.00	269.90	7,839.01	-1,416.98	-5,248.30	5,418.43	0.00	0.00	0.00
13,300.00	90.00	269.90	7,839.01	-1,417.15	-5,348.30	5,516.79	0.00	0.00	0.00
13,400.00	90.00	269.90	7,839.01	-1,417.33	-5,448.29	5,615.16	0.00	0.00	0.00
13,500.00	90.00	269.90	7,839.01	-1,417.50	-5,548.29	5,713.52	0.00	0.00	0.00
13,600.00	90.00	269.90	7,839.01	-1,417.67	-5,648.29	5,811.89	0.00	0.00	0.00
13,700.00	90.00	269.90	7,839.01	-1,417.84	-5,748.29	5,910.25	0.00	0.00	0.00
13,800.00	90.00	269.90	7,839.01	-1,418.01	-5,848.29	6,008.62	0.00	0.00	0.00
13,900.00	90.00	269.90	7,839.01	-1,418.19	-5,948.29	6,106.98	0.00	0.00	0.00
14,000.00	90.00	269.90	7,839.01	-1,418.36	-6,048.29	6,205.35	0.00	0.00	0.00
14,100.00	90.00	269.90	7,839.01	-1,418.53	-6,148.29	6,303.71	0.00	0.00	0.00
14,200.00	90.00	269.90	7,839.01	-1,418.70	-6,248.29	6,402.08	0.00	0.00	0.00
14,300.00	90.00	269.90	7,839.01	-1,418.88	-6,348.29	6,500.45	0.00	0.00	0.00
14,400.00	90.00	269.90	7,839.01	-1,419.05	-6,448.29	6,598.81	0.00	0.00	0.00
14,500.00	90.00	269.90	7,839.01	-1,419.22	-6,548.29	6,697.18	0.00	0.00	0.00
14,600.00	90.00	269.90	7,839.01	-1,419.39	-6,648.29	6,795.54	0.00	0.00	0.00
14,700.00	90.00	269.90	7,839.01	-1,419.57	-6,748.29	6,893.91	0.00	0.00	0.00
14,800.00	90.00	269.90	7,839.02	-1,419.74	-6,848.29	6,992.27	0.00	0.00	0.00
14,900.00	90.00	269.90	7,839.02	-1,419.91	-6,948.29	7,090.64	0.00	0.00	0.00
15,000.00	90.00	269.90	7,839.02	-1,420.08	-7,048.29	7,189.00	0.00	0.00	0.00
15,100.00	90.00	269.90	7,839.02	-1,420.26	-7,148.29	7,287.37	0.00	0.00	0.00
15,200.00	90.00	269.90	7,839.02	-1,420.43	-7,248.29	7,385.73	0.00	0.00	0.00
15,300.00	90.00	269.90	7,839.02	-1,420.60	-7,348.29	7,484.10	0.00	0.00	0.00
15,400.00	90.00	269.90	7,839.02	-1,420.77	-7,448.29	7,582.47	0.00	0.00	0.00
15,500.00	90.00	269.90	7,839.02	-1,420.94	-7,548.29	7,680.83	0.00	0.00	0.00
15,600.00	90.00	269.90	7,839.02	-1,421.12	-7,648.29	7,779.20	0.00	0.00	0.00
15,635.55	90.00	269.90	7,839.02	-1,421.18	-7,683.84	7,814.17	0.00	0.00	0.00
TD at 15635.55									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
CT 33W-1N LP - hit/miss target - Shape - Point	0.00	0.00	7,839.00	-1,408.64	-407.54	1,248,447.65	3,137,465.31	40.014331°N	105.009216°W
CT 33W-1N PBHL - plan misses target center by 0.12usft at 15635.55usft MD (7839.02 TVD, -1421.18 N, -7683.84 E) - Point	0.00	0.00	7,839.00	-1,421.29	-7,683.84	1,248,394.61	3,130,189.18	40.014293°N	105.035194°W

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well COYOTE TRAILS 33W-15-1N
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB 28' @ 5301.00usft
Project:	WELD COUNTY	MD Reference:	KB 28' @ 5301.00usft
Site:	Sec 28-T1N-R68W	North Reference:	True
Well:	COYOTE TRAILS 33W-15-1N	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL 1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,537.52	4,440.00	PARKMAN				
5,027.51	4,910.00	SUSSEX				
7,828.15	7,610.00	SHARON SPRINGS				
7,879.99	7,650.00	NIOBRARA				
8,138.48	7,797.00	NIO B				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,600.00	1,600.00	0.00	0.00	Start Build 2.00	
2,421.03	2,409.84	-116.05	13.64	Start 4187.11 hold at 2421.03 MD	
6,608.14	6,426.16	-1,291.60	151.82	Start Drop -2.00	
7,429.17	7,236.00	-1,407.65	165.46	Start 30.00 hold at 7429.17 MD	
7,459.17	7,266.00	-1,407.65	165.46	Start DLS 10.00 TFO 269.90	
8,359.24	7,839.00	-1,408.64	-407.54	Start 7276.32 hold at 8359.24 MD	
15,635.55	7,839.02	-1,421.18	-7,683.84	TD at 15635.55	