

Edge Energy LLC

Weld County, Co (NAD 83)

Sec. 10 Twn 4N Rng 63W

70 Ranch-10-11-12 - Slot A12

Hz

UWI:

WL:

Plan: #1

Standard Planning Report

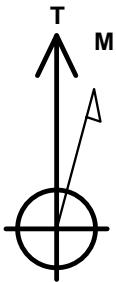
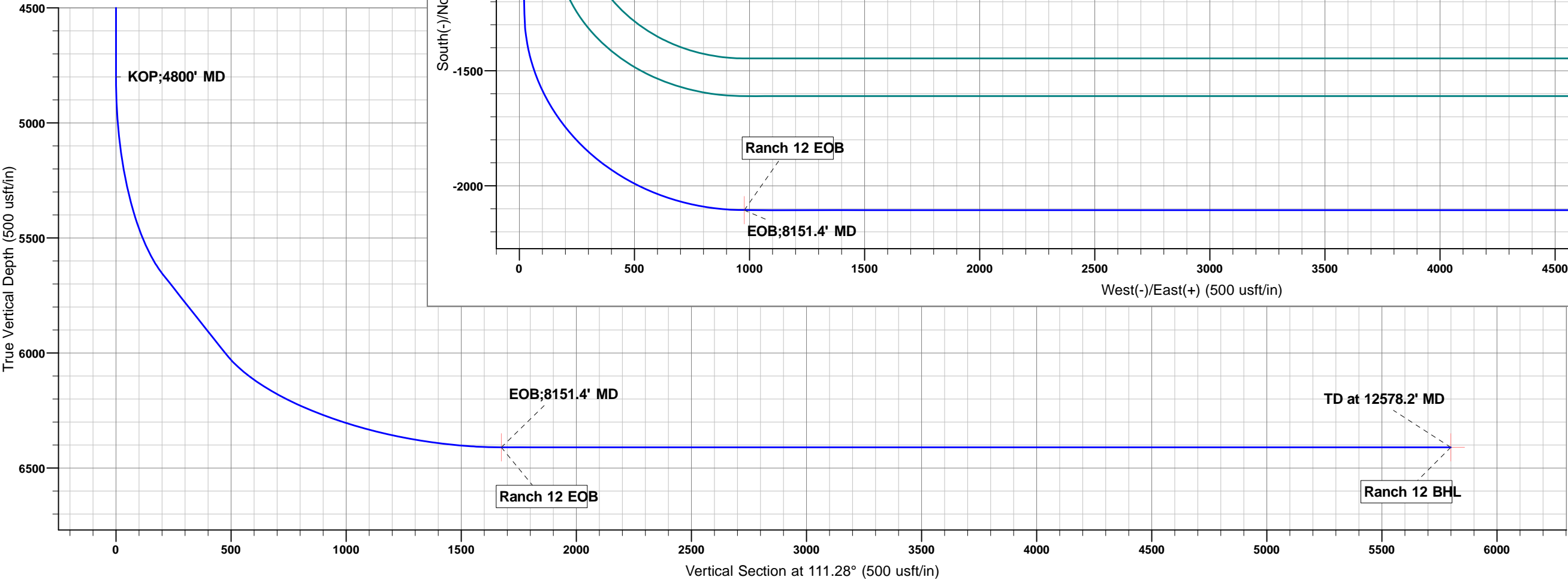
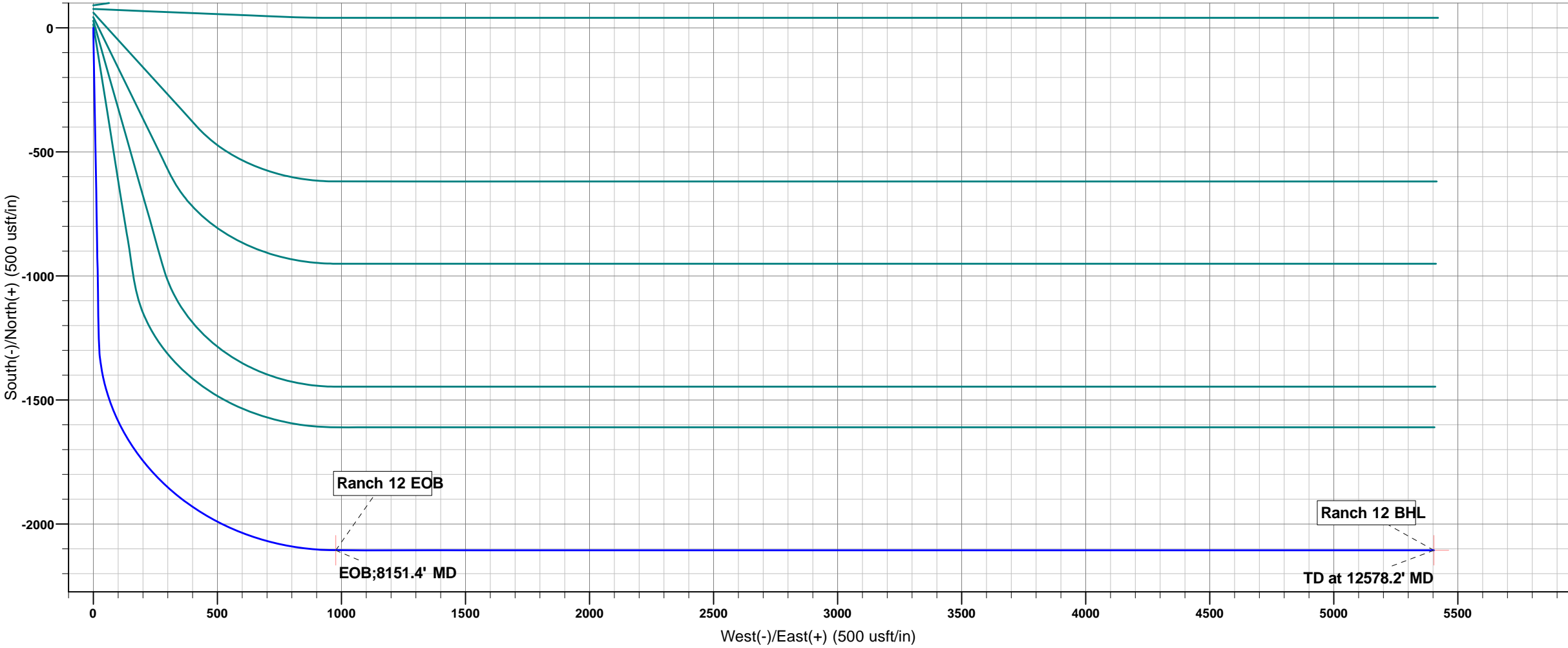
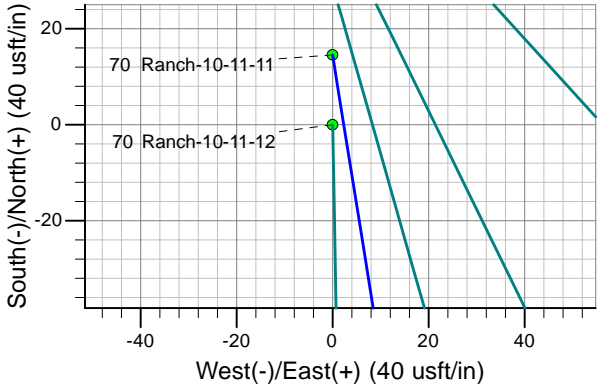
28 December, 2016

Project: Weld County, Co (NAD 83)
Site: Sec. 10 Twn 4N Rng 63W
Well: 70 Ranch-10-11-12
Wellbore: Hz
Plan: #1

Reference Details - WELL CENTRE
Geodetic System: US State Plane 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
Northing: 1363858.38
Easting: 3301962.94
Latitude: 40° 19' 37.66788 N
Longitude: 104° 25' 0.94800 W
Grid Convergence: 0.70° West
Ground Elevation: 4605.0
KB Elevation: RKB @ 4625.0usft (kb;20')

PLAN DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4800.0	0.00	0.00	4800.0	0.0	0.0	0.00	0.00	0.0	
3	5873.4	64.40	178.99	5661.2	-542.3	9.6	6.00	178.99	205.7	
4	6666.6	64.40	178.99	6003.9	-1257.5	22.2	0.00	0.00	477.1	
5	8151.4	90.00	90.00	6410.0	-2105.0	977.0	6.00	-89.56	1674.4	Ranch 12 EOB
6	12578.2	90.00	90.00	6410.0	-2105.0	5403.8	0.00	0.00	5799.3	Ranch 12 BHL



Azimuths to True North
Magnetic North: 7.92°
Magnetic Field
Strength: 52549.0snT
Dip Angle: 66.85°
Date: 21/12/2016
Model: IGRF201015

Planning Report

Database:	WellPlan Services	Local Co-ordinate Reference:	Well 70 Ranch-10-11-12 - Slot A12
Company:	Edge Energy LLC	TVD Reference:	RKB @ 4625.0usft (kb;20')
Project:	Weld County, Co (NAD 83)	MD Reference:	RKB @ 4625.0usft (kb;20')
Site:	Sec. 10 TwN 4N Rng 63W	North Reference:	True
Well:	70 Ranch-10-11-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	#1		

Project	Weld County, Co (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Sec. 10 TwN 4N Rng 63W			
Site Position:		Northing:	1,364,022.34 usft	Latitude:	40° 19' 39.28800 N
From:	Lat/Long	Easting:	3,301,963.73 usft	Longitude:	104° 25' 0.91200 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.70 °

Well	70 Ranch-10-11-12 - Slot A12					
Well Position	+N/-S	-163.9 usft	Northing:	1,363,858.38 usft	Latitude:	40° 19' 37.66788 N
	+E/-W	-2.8 usft	Easting:	3,301,962.94 usft	Longitude:	104° 25' 0.94800 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	4,605.0 usft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF201015	21/12/2016	7.92	66.85	52,549

Design	#1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	111.28

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,873.4	64.40	178.99	5,661.2	-542.3	9.6	6.00	6.00	0.00	178.99	
6,666.6	64.40	178.99	6,003.9	-1,257.5	22.2	0.00	0.00	0.00	0.00	
8,151.4	90.00	90.00	6,410.0	-2,105.0	977.0	6.00	1.72	-5.99	-89.56	Ranch 12 EOB
12,578.2	90.00	90.00	6,410.0	-2,105.0	5,403.8	0.00	0.00	0.00	0.00	Ranch 12 BHL

Planning Report

Database:	WellPlan Services	Local Co-ordinate Reference:	Well 70 Ranch-10-11-12 - Slot A12
Company:	Edge Energy LLC	TVD Reference:	RKB @ 4625.0usft (kb;20')
Project:	Weld County, Co (NAD 83)	MD Reference:	RKB @ 4625.0usft (kb;20')
Site:	Sec. 10 Twn 4N Rng 63W	North Reference:	True
Well:	70 Ranch-10-11-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	#1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	-4,625.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP;4800' MD										
4,800.0	0.00	0.00	4,800.0	175.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	6.00	178.99	4,899.8	274.8	-5.2	0.1	2.0	6.00	6.00	0.00
5,000.0	12.00	178.99	4,998.5	373.5	-20.9	0.4	7.9	6.00	6.00	0.00
5,100.0	18.00	178.99	5,095.1	470.1	-46.7	0.8	17.7	6.00	6.00	0.00
5,200.0	24.00	178.99	5,188.4	563.4	-82.5	1.5	31.3	6.00	6.00	0.00
5,300.0	30.00	178.99	5,277.5	652.5	-127.9	2.3	48.5	6.00	6.00	0.00
5,400.0	36.00	178.99	5,361.3	736.3	-182.3	3.2	69.2	6.00	6.00	0.00
5,500.0	42.00	178.99	5,439.0	814.0	-245.2	4.3	93.0	6.00	6.00	0.00
5,600.0	48.00	178.99	5,509.7	884.7	-315.9	5.6	119.9	6.00	6.00	0.00
5,700.0	54.00	178.99	5,572.6	947.6	-393.6	6.9	149.3	6.00	6.00	0.00
5,800.0	60.00	178.99	5,627.0	1,002.0	-477.4	8.4	181.1	6.00	6.00	0.00
5,873.4	64.40	178.99	5,661.2	1,036.2	-542.3	9.6	205.7	6.00	6.00	0.00
5,900.0	64.40	178.99	5,672.7	1,047.7	-566.3	10.0	214.9	0.00	0.00	0.00
6,000.0	64.40	178.99	5,715.9	1,090.9	-656.4	11.6	249.1	0.00	0.00	0.00
6,100.0	64.40	178.99	5,759.1	1,134.1	-746.6	13.2	283.3	0.00	0.00	0.00
6,200.0	64.40	178.99	5,802.3	1,177.3	-836.8	14.8	317.5	0.00	0.00	0.00
6,300.0	64.40	178.99	5,845.5	1,220.5	-927.0	16.4	351.7	0.00	0.00	0.00
6,400.0	64.40	178.99	5,888.7	1,263.7	-1,017.1	18.0	385.9	0.00	0.00	0.00
6,500.0	64.40	178.99	5,931.9	1,306.9	-1,107.3	19.5	420.1	0.00	0.00	0.00
6,600.0	64.40	178.99	5,975.1	1,350.1	-1,197.5	21.1	454.3	0.00	0.00	0.00
6,666.6	64.40	178.99	6,003.9	1,378.9	-1,257.5	22.2	477.1	0.00	0.00	0.00
6,700.0	64.43	176.77	6,018.3	1,393.3	-1,287.6	23.3	489.1	6.00	0.10	-6.65
6,800.0	64.73	170.13	6,061.3	1,436.3	-1,377.3	33.6	531.2	6.00	0.30	-6.64
6,900.0	65.32	163.54	6,103.6	1,478.6	-1,465.5	54.2	582.5	6.00	0.59	-6.59
7,000.0	66.19	157.03	6,144.7	1,519.7	-1,551.3	85.0	642.3	6.00	0.87	-6.51
7,100.0	67.34	150.62	6,184.2	1,559.2	-1,633.7	125.5	709.9	6.00	1.14	-6.41
7,200.0	68.73	144.33	6,221.6	1,596.6	-1,711.8	175.4	784.7	6.00	1.39	-6.29
7,300.0	70.35	138.16	6,256.6	1,631.6	-1,784.8	234.0	865.9	6.00	1.62	-6.17
7,400.0	72.18	132.13	6,288.7	1,663.7	-1,851.9	300.8	952.4	6.00	1.83	-6.04
7,500.0	74.19	126.22	6,317.7	1,692.7	-1,912.3	374.9	1,043.5	6.00	2.01	-5.91
7,600.0	76.36	120.44	6,343.1	1,718.1	-1,965.4	455.7	1,138.0	6.00	2.17	-5.79
7,700.0	78.65	114.76	6,364.7	1,739.7	-2,010.6	542.2	1,235.0	6.00	2.30	-5.68
7,800.0	81.06	109.17	6,382.4	1,757.4	-2,047.3	633.5	1,333.4	6.00	2.40	-5.59
7,900.0	83.54	103.66	6,395.8	1,770.8	-2,075.3	728.5	1,432.1	6.00	2.49	-5.51
8,000.0	86.09	98.21	6,404.8	1,779.8	-2,094.2	826.2	1,530.0	6.00	2.54	-5.46
8,100.0	88.67	92.78	6,409.4	1,784.4	-2,103.8	925.6	1,626.1	6.00	2.58	-5.42
EOB;8151.4' MD										
8,151.4	90.00	90.00	6,410.0	1,785.0	-2,105.0	977.0	1,674.4	6.00	2.59	-5.41
8,200.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	1,025.6	1,719.7	0.00	0.00	0.00
8,300.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	1,125.6	1,812.9	0.00	0.00	0.00
8,400.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	1,225.6	1,906.1	0.00	0.00	0.00
8,500.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	1,325.6	1,999.2	0.00	0.00	0.00
8,600.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	1,425.6	2,092.4	0.00	0.00	0.00
8,700.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	1,525.6	2,185.6	0.00	0.00	0.00

Planning Report

Database:	WellPlan Services	Local Co-ordinate Reference:	Well 70 Ranch-10-11-12 - Slot A12
Company:	Edge Energy LLC	TVD Reference:	RKB @ 4625.0usft (kb;20')
Project:	Weld County, Co (NAD 83)	MD Reference:	RKB @ 4625.0usft (kb;20')
Site:	Sec. 10 Twn 4N Rng 63W	North Reference:	True
Well:	70 Ranch-10-11-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	#1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,800.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	1,625.6	2,278.8	0.00	0.00	0.00
8,900.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	1,725.6	2,372.0	0.00	0.00	0.00
9,000.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	1,825.6	2,465.1	0.00	0.00	0.00
9,100.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	1,925.6	2,558.3	0.00	0.00	0.00
9,200.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	2,025.6	2,651.5	0.00	0.00	0.00
9,300.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	2,125.6	2,744.7	0.00	0.00	0.00
9,400.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	2,225.6	2,837.9	0.00	0.00	0.00
9,500.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	2,325.6	2,931.0	0.00	0.00	0.00
9,600.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	2,425.6	3,024.2	0.00	0.00	0.00
9,700.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	2,525.6	3,117.4	0.00	0.00	0.00
9,800.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	2,625.6	3,210.6	0.00	0.00	0.00
9,900.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	2,725.6	3,303.8	0.00	0.00	0.00
10,000.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	2,825.6	3,396.9	0.00	0.00	0.00
10,100.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	2,925.6	3,490.1	0.00	0.00	0.00
10,200.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	3,025.6	3,583.3	0.00	0.00	0.00
10,300.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	3,125.6	3,676.5	0.00	0.00	0.00
10,400.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	3,225.6	3,769.7	0.00	0.00	0.00
10,500.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	3,325.6	3,862.8	0.00	0.00	0.00
10,600.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	3,425.6	3,956.0	0.00	0.00	0.00
10,700.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	3,525.6	4,049.2	0.00	0.00	0.00
10,800.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	3,625.6	4,142.4	0.00	0.00	0.00
10,900.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	3,725.6	4,235.6	0.00	0.00	0.00
11,000.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	3,825.6	4,328.7	0.00	0.00	0.00
11,100.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	3,925.6	4,421.9	0.00	0.00	0.00
11,200.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	4,025.6	4,515.1	0.00	0.00	0.00
11,300.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	4,125.6	4,608.3	0.00	0.00	0.00
11,400.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	4,225.6	4,701.5	0.00	0.00	0.00
11,500.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	4,325.6	4,794.6	0.00	0.00	0.00
11,600.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	4,425.6	4,887.8	0.00	0.00	0.00
11,700.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	4,525.6	4,981.0	0.00	0.00	0.00
11,800.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	4,625.6	5,074.2	0.00	0.00	0.00
11,900.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	4,725.6	5,167.4	0.00	0.00	0.00
12,000.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	4,825.6	5,260.5	0.00	0.00	0.00
12,100.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	4,925.6	5,353.7	0.00	0.00	0.00
12,200.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	5,025.6	5,446.9	0.00	0.00	0.00
12,300.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	5,125.6	5,540.1	0.00	0.00	0.00
12,400.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	5,225.6	5,633.3	0.00	0.00	0.00
12,500.0	90.00	90.00	6,410.0	1,785.0	-2,105.0	5,325.6	5,726.4	0.00	0.00	0.00
TD at 12578.2' MD										
12,578.2	90.00	90.00	6,410.0	1,785.0	-2,105.0	5,403.8	5,799.3	0.00	0.00	0.00

Planning Report

Database:	WellPlan Services	Local Co-ordinate Reference:	Well 70 Ranch-10-11-12 - Slot A12
Company:	Edge Energy LLC	TVD Reference:	RKB @ 4625.0usft (kb;20')
Project:	Weld County, Co (NAD 83)	MD Reference:	RKB @ 4625.0usft (kb;20')
Site:	Sec. 10 Twn 4N Rng 63W	North Reference:	True
Well:	70 Ranch-10-11-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	#1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Ranch 12 EOB	0.00	0.00	6,410.0	-2,105.0	977.0	1,361,765.46	3,302,965.58	40° 19' 16.86560 N	104° 24' 48.33402 W
- plan hits target center									
- Point									
Ranch 12 BHL	0.00	0.00	6,410.0	-2,105.0	5,403.8	1,361,819.53	3,307,392.04	40° 19' 16.85996 N	104° 23' 51.18000 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
4,800.0	4,800.0	0.0	0.0	KOP;4800' MD
8,151.4	6,410.0	-2,105.0	977.0	EOB;8151.4' MD
12,578.2	6,410.0	-2,105.0	5,403.8	TD at 12578.2' MD

Anticollision Report

Company:	Edge Energy LLC	Local Co-ordinate Reference:	Well 70 Ranch-10-11-12 - Slot A12
Project:	Weld County, Co (NAD 83)	TVD Reference:	RKB @ 4625.0usft (kb;20')
Reference Site:	Sec. 10 Twn 4N Rng 63W	MD Reference:	RKB @ 4625.0usft (kb;20')
Site Error:	0.0 usft	North Reference:	True
Reference Well:	70 Ranch-10-11-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	WellPlan Services
Reference Design:	#1	Offset TVD Reference:	Offset Datum

Reference	#1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 50.0usft	Error Model:	ISCWSA
Depth Range:	5,000.0 to 99,999.0usft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 50.0 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	28/12/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	12,578.2	#1 (Hz)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
Offset Well - Wellbore - Design	Depth (usft)	Depth (usft)	Between Centres (usft)	Between Ellipses (usft)		
Sec. 10 Twn 4N Rng 63W						
70 Ranch-10-11-1 - Hz - #1						Out of range
70 Ranch-10-11-10 - Hz - #1						Out of range
70 Ranch-10-11-11 - Hz - #1	5,087.4	5,091.2	10.2	-11.7	0.467	Level 1, CC
70 Ranch-10-11-11 - Hz - #1	5,100.0	5,103.9	10.3	-11.7	0.467	Level 1, ES, SF
70 Ranch-10-11-2 - Hz - #1						Out of range
70 Ranch-10-11-3 - Hz - #1						Out of range
70 Ranch-10-11-4 - Hz - #1						Out of range
70 Ranch-10-11-5 - Hz - #1						Out of range
70 Ranch-10-11-6 - Hz - #1						Out of range
70 Ranch-10-11-7 - Hz - #1						Out of range
70 Ranch-10-11-8 - Hz - #1						Out of range
70 Ranch-10-11-9 - Hz - #1						Out of range

Offset Design	Sec. 10 Twn 4N Rng 63W - 70 Ranch-10-11-11 - Hz - #1											Offset Site Error:	0.0 usft
Survey Program:	0-MWD											Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance				Minimum Separation		Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
5,000.0	4,998.5	5,003.1	5,001.1	11.0	11.0	-160.92	-10.2	4.0	11.5	-10.1	21.65	0.533	Level 1
5,050.0	5,047.2	5,053.6	5,049.6	11.1	11.1	-147.14	-23.9	6.1	10.5	-11.2	21.74	0.485	Level 1
5,087.4	5,083.0	5,091.2	5,085.1	11.2	11.2	-133.40	-36.1	8.1	10.2	-11.7	21.93	0.467	Level 1, CC
5,100.0	5,095.1	5,103.9	5,097.0	11.2	11.2	-128.27	-40.5	8.8	10.3	-11.7	22.02	0.467	Level 1, ES, SF
5,150.0	5,142.2	5,154.0	5,143.1	11.3	11.3	-107.72	-59.9	11.9	11.4	-11.1	22.46	0.506	Level 1
5,200.0	5,188.4	5,203.8	5,187.6	11.4	11.4	-90.52	-81.8	15.4	14.0	-8.8	22.81	0.612	Level 1
5,250.0	5,233.5	5,253.3	5,230.5	11.5	11.6	-78.30	-106.3	19.3	17.8	-5.2	22.98	0.776	Level 1
5,300.0	5,277.5	5,302.5	5,271.5	11.7	11.8	-69.98	-133.0	23.5	22.7	-0.4	23.06	0.983	Level 1
5,350.0	5,320.1	5,351.4	5,310.6	11.8	12.0	-64.23	-162.0	28.2	28.3	5.2	23.11	1.224	Level 2
5,400.0	5,361.3	5,400.0	5,347.7	12.0	12.2	-60.11	-193.0	33.1	34.5	11.4	23.15	1.492	Level 3
5,450.0	5,401.0	5,448.0	5,382.4	12.3	12.5	-57.06	-225.8	38.3	41.3	18.1	23.22	1.781	
5,500.0	5,439.0	5,495.8	5,415.0	12.5	12.8	-54.71	-260.3	43.8	48.6	25.3	23.31	2.086	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	Edge Energy LLC	Local Co-ordinate Reference:	Well 70 Ranch-10-11-12 - Slot A12
Project:	Weld County, Co (NAD 83)	TVD Reference:	RKB @ 4625.0usft (kb;20')
Reference Site:	Sec. 10 Twn 4N Rng 63W	MD Reference:	RKB @ 4625.0usft (kb;20')
Site Error:	0.0 usft	North Reference:	True
Reference Well:	70 Ranch-10-11-12	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	WellPlan Services
Reference Design:	#1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 4625.0usft (kb;20')

Offset Depths are relative to Offset Datum

Central Meridian is 105° 30' 0.00000 W

Coordinates are relative to: 70 Ranch-10-11-12 - Slot A12

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.70°

