



Weld County, Colorado
Section 34-T01N-R65W
Buford 33-04-2L
plan1

Azimuth Corrections:

To convert a Magnetic Direction to a True Direction, Add 8.28° East

Buford 33-04-2L Surf loc: 770 FSL 844 FWL Section 34-T01N-R65W			
NAD83 Colorado - HARN Universal Transverse Mercator (US Survey Feet) Zone 13N (108 W to 102 W) RKB=5137+25 @ 5162.00ft			
Northing	Easting	Latitude	Longitude
14527892.50	1736600.42	40.00267398	-104.65653605

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	KOP Begin 10°/100' build
3	5534.88	53.49	245.90	5460.50	-94.75	-211.83	10.00	-35.54	Begin 53.49° tangent section
4	7847.19	53.49	245.90	6836.31	-853.55	-1908.34	0.00	-320.19	Begin 10°/100' build/turn
5	8935.88	89.93	359.68	7314.00	-315.20	-2500.71	10.00	355.29	LP Begin 89.93° lateral section
6	18596.16	89.93	359.68	7325.00	9344.92	-2554.27	0.00	9687.71	PBHL/TD 18596.15 MD 7325.00 TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP Buford 33-04-2L 470 FSL 1660 FEL	7314.00	-315.20	-2500.71	14527577.30	1734099.72	40.00183451	-104.66546992
BHL Buford 33-04-2L 470 FNL 1660 FEL	7325.00	9344.92	-2554.27	14537237.40	1734046.16	40.02836305	-104.66553169

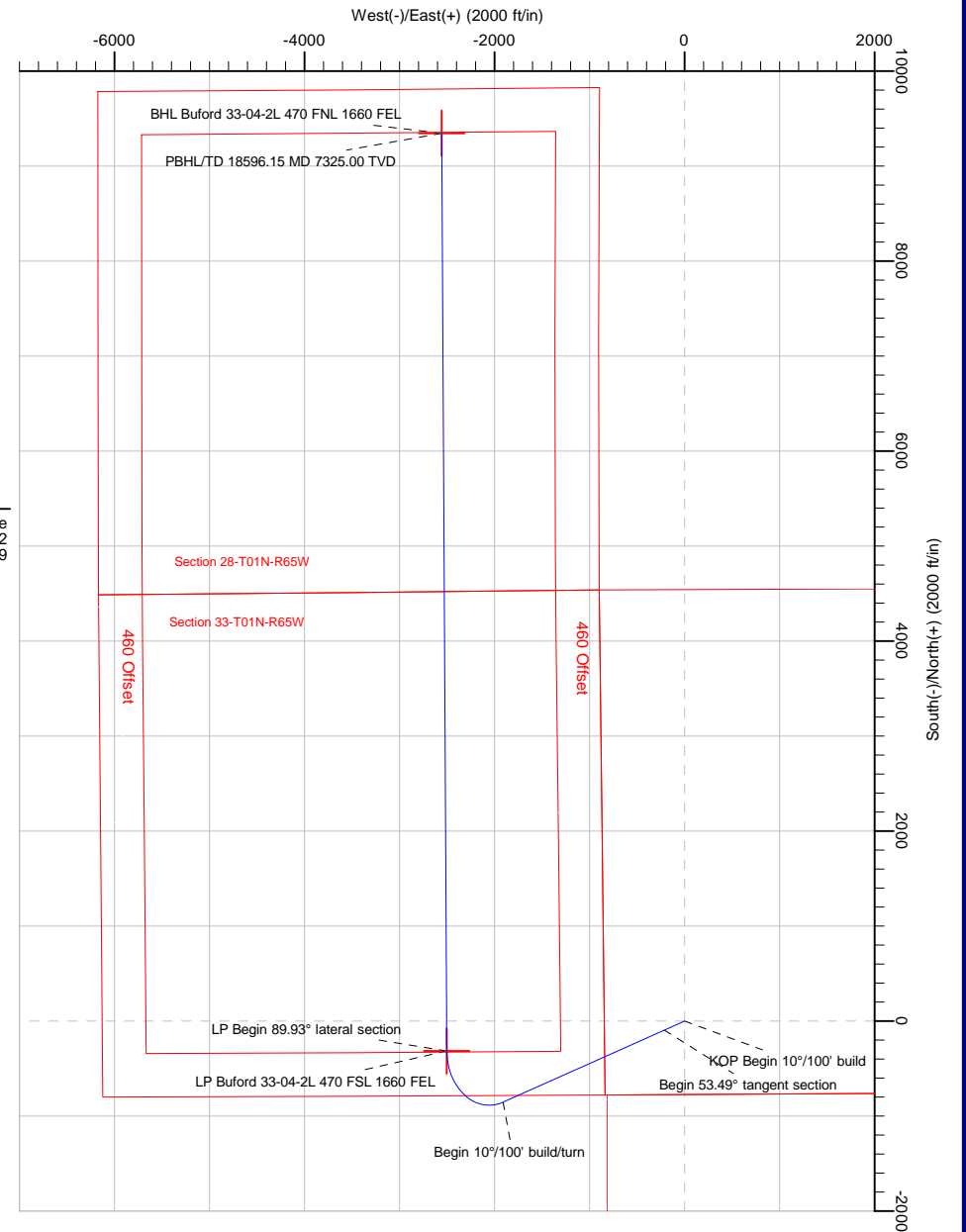
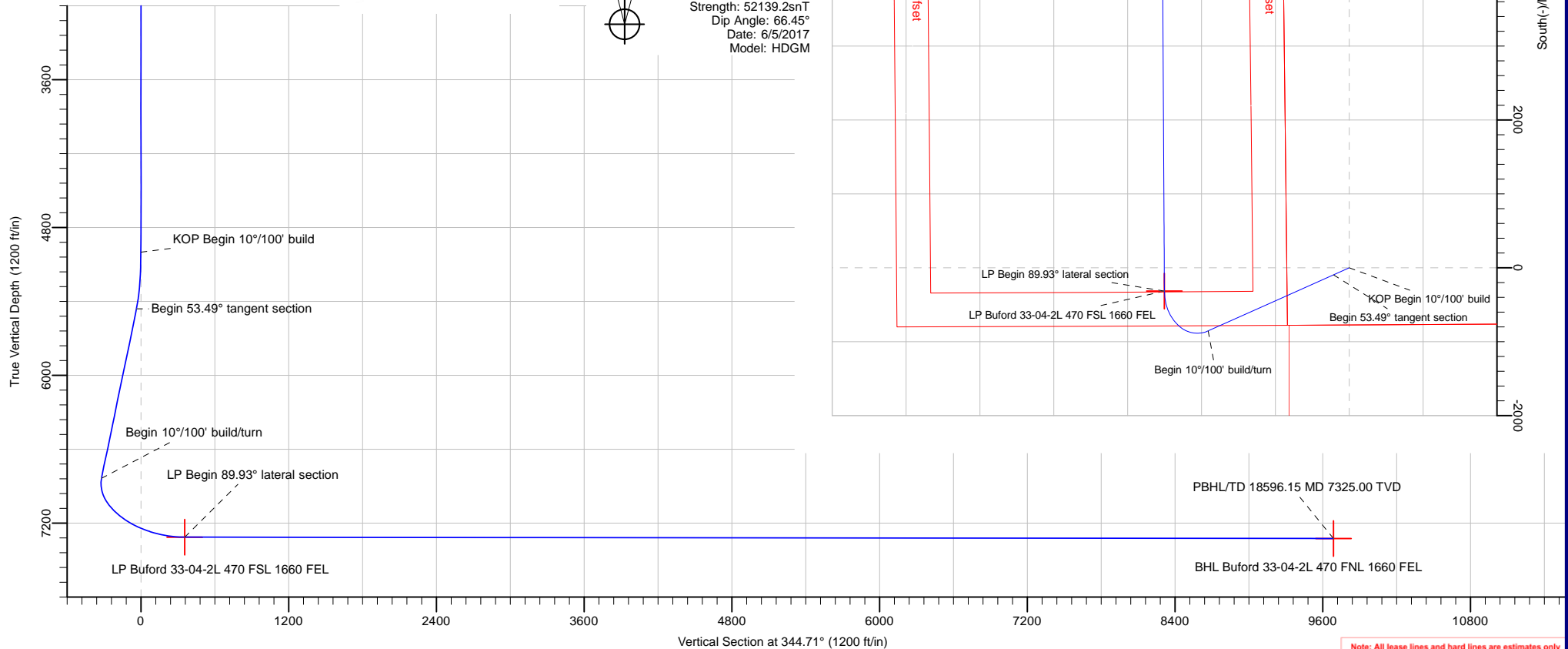


PRODIRECTIONAL



Azimuths to Grid North
True North: -0.22°
Magnetic North: 8.06°

Magnetic Field
Strength: 52139.2snT
Dip Angle: 66.45°
Date: 6/5/2017
Model: HDGM



Note: All lease lines and hard lines are estimates only and are subject to customers approval.

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-04-2L
Company:	Confluence Resources	TVD Reference:	RKB=5137+25 @ 5162.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5137+25 @ 5162.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-04-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original hole		
Design:	plan1		

Project	Weld County, Colorado		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD83 Colorado - HARN		
Map Zone:	Zone 13N (108 W to 102 W)		

Site		Section 34-T01N-R65W			
Site Position:		Northing:	14,527,892.80 usft	Latitude:	40.00267560
From:	Map	Easting:	1,736,525.30 usft	Longitude:	-104.65680429
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.22 °

Well	Buford 33-04-2L, Surf loc: 770 FSL 844 FWL Section 34-T01N-R65W					
Well Position	+N/-S	-0.30 ft	Northing:	14,527,892.50 usft	Latitude:	40.00267398
	+E/-W	75.12 ft	Easting:	1,736,600.42 usft	Longitude:	-104.65653605
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,137.00 ft

Wellbore	Original hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/5/2017	8.28	66.45	52,139.20000000

Design	plan1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	344.71

Plan Survey Tool Program	Date	6/5/2017		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,596.16	plan1 (Original hole)	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	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	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,534.88	53.49	245.90	5,460.50	-94.75	-211.83	10.00	10.00	0.00	245.90	
7,847.19	53.49	245.90	6,836.31	-853.55	-1,908.34	0.00	0.00	0.00	0.00	
8,935.88	89.93	359.68	7,314.00	-315.20	-2,500.71	10.00	3.35	10.45	104.74	LP Buford 33-04-2L 4'
18,596.16	89.93	359.68	7,325.00	9,344.92	-2,554.27	0.00	0.00	0.00	0.00	BHL Buford 33-04-2L

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-04-2L
Company:	Confluence Resources	TVD Reference:	RKB=5137+25 @ 5162.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5137+25 @ 5162.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-04-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.01	0.00	0.00	2,500.01	0.00	0.00	0.00	0.00	0.00	0.00
2,600.01	0.00	0.00	2,600.01	0.00	0.00	0.00	0.00	0.00	0.00
2,700.01	0.00	0.00	2,700.01	0.00	0.00	0.00	0.00	0.00	0.00
2,800.01	0.00	0.00	2,800.01	0.00	0.00	0.00	0.00	0.00	0.00
2,900.01	0.00	0.00	2,900.01	0.00	0.00	0.00	0.00	0.00	0.00
3,000.01	0.00	0.00	3,000.01	0.00	0.00	0.00	0.00	0.00	0.00
3,100.01	0.00	0.00	3,100.01	0.00	0.00	0.00	0.00	0.00	0.00
3,200.01	0.00	0.00	3,200.01	0.00	0.00	0.00	0.00	0.00	0.00
3,300.01	0.00	0.00	3,300.01	0.00	0.00	0.00	0.00	0.00	0.00
3,400.01	0.00	0.00	3,400.01	0.00	0.00	0.00	0.00	0.00	0.00
3,500.01	0.00	0.00	3,500.01	0.00	0.00	0.00	0.00	0.00	0.00
3,600.01	0.00	0.00	3,600.01	0.00	0.00	0.00	0.00	0.00	0.00
3,700.01	0.00	0.00	3,700.01	0.00	0.00	0.00	0.00	0.00	0.00
3,800.01	0.00	0.00	3,800.01	0.00	0.00	0.00	0.00	0.00	0.00
3,900.01	0.00	0.00	3,900.01	0.00	0.00	0.00	0.00	0.00	0.00
4,000.01	0.00	0.00	4,000.01	0.00	0.00	0.00	0.00	0.00	0.00
4,100.01	0.00	0.00	4,100.01	0.00	0.00	0.00	0.00	0.00	0.00
4,200.01	0.00	0.00	4,200.01	0.00	0.00	0.00	0.00	0.00	0.00
4,300.01	0.00	0.00	4,300.01	0.00	0.00	0.00	0.00	0.00	0.00
4,400.01	0.00	0.00	4,400.01	0.00	0.00	0.00	0.00	0.00	0.00
4,500.01	0.00	0.00	4,500.01	0.00	0.00	0.00	0.00	0.00	0.00
4,600.01	0.00	0.00	4,600.01	0.00	0.00	0.00	0.00	0.00	0.00
4,700.01	0.00	0.00	4,700.01	0.00	0.00	0.00	0.00	0.00	0.00
4,800.01	0.00	0.00	4,800.01	0.00	0.00	0.00	0.00	0.00	0.00
4,900.01	0.00	0.00	4,900.01	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 10°/100' build									
5,000.01	0.00	245.90	5,000.01	0.00	0.00	0.00	0.00	0.00	0.00
5,100.01	10.00	245.90	5,099.50	-3.55	-7.95	-1.33	10.00	10.00	0.00

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Project:	Weld County, Colorado	MD Reference:	RKB=5137+25 @ 5162.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-04-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200.01	20.00	245.90	5,195.97	-14.11	-31.55	-5.29	10.00	10.00	0.00
5,300.01	30.00	245.90	5,286.49	-31.34	-70.08	-11.76	10.00	10.00	0.00
5,400.01	40.00	245.90	5,368.30	-54.73	-122.37	-20.53	10.00	10.00	0.00
5,500.01	50.00	245.90	5,438.92	-83.57	-186.84	-31.35	10.00	10.00	0.00
5,534.88	53.49	245.90	5,460.50	-94.75	-211.83	-35.54	10.00	10.00	0.00
Begin 53.49° tangent section									
5,600.01	53.49	245.90	5,499.26	-116.12	-259.62	-43.56	0.00	0.00	0.00
5,700.01	53.49	245.90	5,558.76	-148.93	-332.98	-55.87	0.00	0.00	0.00
5,800.01	53.49	245.90	5,618.26	-181.75	-406.35	-68.18	0.00	0.00	0.00
5,900.01	53.49	245.90	5,677.76	-214.57	-479.72	-80.49	0.00	0.00	0.00
6,000.01	53.49	245.90	5,737.25	-247.38	-553.09	-92.80	0.00	0.00	0.00
6,100.01	53.49	245.90	5,796.75	-280.20	-626.46	-105.11	0.00	0.00	0.00
6,200.01	53.49	245.90	5,856.25	-313.01	-699.83	-117.42	0.00	0.00	0.00
6,300.01	53.49	245.90	5,915.75	-345.83	-773.20	-129.73	0.00	0.00	0.00
6,400.01	53.49	245.90	5,975.25	-378.65	-846.57	-142.04	0.00	0.00	0.00
6,500.01	53.49	245.90	6,034.75	-411.46	-919.94	-154.35	0.00	0.00	0.00
6,600.01	53.49	245.90	6,094.25	-444.28	-993.31	-166.66	0.00	0.00	0.00
6,700.01	53.49	245.90	6,153.75	-477.09	-1,066.67	-178.97	0.00	0.00	0.00
6,800.01	53.49	245.90	6,213.25	-509.91	-1,140.04	-191.28	0.00	0.00	0.00
6,900.01	53.49	245.90	6,272.75	-542.72	-1,213.41	-203.59	0.00	0.00	0.00
7,000.01	53.49	245.90	6,332.25	-575.54	-1,286.78	-215.90	0.00	0.00	0.00
7,100.01	53.49	245.90	6,391.75	-608.36	-1,360.15	-228.21	0.00	0.00	0.00
7,200.01	53.49	245.90	6,451.25	-641.17	-1,433.52	-240.52	0.00	0.00	0.00
7,300.01	53.49	245.90	6,510.74	-673.99	-1,506.89	-252.83	0.00	0.00	0.00
7,400.01	53.49	245.90	6,570.24	-706.80	-1,580.26	-265.14	0.00	0.00	0.00
7,500.02	53.49	245.90	6,629.74	-739.62	-1,653.63	-277.45	0.00	0.00	0.00
7,600.02	53.49	245.90	6,689.24	-772.44	-1,726.99	-289.76	0.00	0.00	0.00
7,700.02	53.49	245.90	6,748.74	-805.25	-1,800.36	-302.07	0.00	0.00	0.00
7,800.02	53.49	245.90	6,808.24	-838.07	-1,873.73	-314.38	0.00	0.00	0.00
7,847.19	53.49	245.90	6,836.31	-853.55	-1,908.34	-320.19	0.00	0.00	0.00
Begin 10°/100' build/turn									
7,900.02	52.32	252.36	6,868.19	-868.56	-1,947.67	-324.30	10.00	-2.22	12.22
8,000.02	51.11	265.02	6,930.31	-883.97	-2,024.34	-318.95	10.00	-1.21	12.66
8,100.02	51.29	277.86	6,993.13	-882.01	-2,101.96	-296.59	10.00	0.18	12.84
8,200.02	52.85	290.39	7,054.75	-862.73	-2,178.16	-257.91	10.00	1.56	12.53
8,300.02	55.67	302.22	7,113.29	-826.74	-2,250.63	-204.08	10.00	2.81	11.83
8,400.02	59.53	313.15	7,166.98	-775.11	-2,317.17	-136.74	10.00	3.87	10.93
8,500.02	64.24	323.17	7,214.18	-709.43	-2,375.75	-57.93	10.00	4.70	10.01
8,600.02	69.57	332.37	7,253.46	-631.67	-2,424.60	29.95	10.00	5.33	9.20
8,700.02	75.36	340.93	7,283.62	-544.21	-2,462.23	124.23	10.00	5.78	8.56
8,800.02	81.44	349.04	7,303.76	-449.71	-2,487.50	222.05	10.00	6.08	8.11
8,900.02	87.68	356.89	7,313.25	-351.03	-2,499.63	320.44	10.00	6.24	7.85
8,935.88	89.93	359.68	7,314.00	-315.20	-2,500.71	355.29	10.00	6.29	7.78
LP Begin 89.93° lateral section									
9,000.02	89.93	359.68	7,314.07	-251.07	-2,501.06	417.25	0.00	0.00	0.00
9,100.02	89.93	359.68	7,314.19	-151.07	-2,501.62	513.86	0.00	0.00	0.00
9,200.02	89.93	359.68	7,314.30	-51.07	-2,502.17	610.46	0.00	0.00	0.00
9,300.02	89.93	359.68	7,314.41	48.93	-2,502.72	707.07	0.00	0.00	0.00
9,400.02	89.93	359.68	7,314.53	148.93	-2,503.28	803.67	0.00	0.00	0.00
9,500.02	89.93	359.68	7,314.64	248.93	-2,503.83	900.28	0.00	0.00	0.00
9,600.02	89.93	359.68	7,314.76	348.93	-2,504.39	996.89	0.00	0.00	0.00
9,700.02	89.93	359.68	7,314.87	448.93	-2,504.94	1,093.49	0.00	0.00	0.00
9,800.02	89.93	359.68	7,314.98	548.92	-2,505.50	1,190.10	0.00	0.00	0.00

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Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-04-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,900.02	89.93	359.68	7,315.10	648.92	-2,506.05	1,286.71	0.00	0.00	0.00
10,000.02	89.93	359.68	7,315.21	748.92	-2,506.61	1,383.31	0.00	0.00	0.00
10,100.02	89.93	359.68	7,315.33	848.92	-2,507.16	1,479.92	0.00	0.00	0.00
10,200.02	89.93	359.68	7,315.44	948.92	-2,507.71	1,576.53	0.00	0.00	0.00
10,300.02	89.93	359.68	7,315.55	1,048.92	-2,508.27	1,673.13	0.00	0.00	0.00
10,400.02	89.93	359.68	7,315.67	1,148.92	-2,508.82	1,769.74	0.00	0.00	0.00
10,500.02	89.93	359.68	7,315.78	1,248.91	-2,509.38	1,866.34	0.00	0.00	0.00
10,600.02	89.93	359.68	7,315.90	1,348.91	-2,509.93	1,962.95	0.00	0.00	0.00
10,700.02	89.93	359.68	7,316.01	1,448.91	-2,510.49	2,059.56	0.00	0.00	0.00
10,800.02	89.93	359.68	7,316.12	1,548.91	-2,511.04	2,156.16	0.00	0.00	0.00
10,900.02	89.93	359.68	7,316.24	1,648.91	-2,511.59	2,252.77	0.00	0.00	0.00
11,000.02	89.93	359.68	7,316.35	1,748.91	-2,512.15	2,349.38	0.00	0.00	0.00
11,100.02	89.93	359.68	7,316.46	1,848.91	-2,512.70	2,445.98	0.00	0.00	0.00
11,200.02	89.93	359.68	7,316.58	1,948.90	-2,513.26	2,542.59	0.00	0.00	0.00
11,300.02	89.93	359.68	7,316.69	2,048.90	-2,513.81	2,639.20	0.00	0.00	0.00
11,400.02	89.93	359.68	7,316.81	2,148.90	-2,514.37	2,735.80	0.00	0.00	0.00
11,500.02	89.93	359.68	7,316.92	2,248.90	-2,514.92	2,832.41	0.00	0.00	0.00
11,600.02	89.93	359.68	7,317.03	2,348.90	-2,515.48	2,929.02	0.00	0.00	0.00
11,700.02	89.93	359.68	7,317.15	2,448.90	-2,516.03	3,025.62	0.00	0.00	0.00
11,800.02	89.93	359.68	7,317.26	2,548.90	-2,516.58	3,122.23	0.00	0.00	0.00
11,900.02	89.93	359.68	7,317.38	2,648.89	-2,517.14	3,218.83	0.00	0.00	0.00
12,000.02	89.93	359.68	7,317.49	2,748.89	-2,517.69	3,315.44	0.00	0.00	0.00
12,100.02	89.93	359.68	7,317.60	2,848.89	-2,518.25	3,412.05	0.00	0.00	0.00
12,200.02	89.93	359.68	7,317.72	2,948.89	-2,518.80	3,508.65	0.00	0.00	0.00
12,300.02	89.93	359.68	7,317.83	3,048.89	-2,519.36	3,605.26	0.00	0.00	0.00
12,400.03	89.93	359.68	7,317.94	3,148.89	-2,519.91	3,701.87	0.00	0.00	0.00
12,500.03	89.93	359.68	7,318.06	3,248.89	-2,520.47	3,798.47	0.00	0.00	0.00
12,600.03	89.93	359.68	7,318.17	3,348.88	-2,521.02	3,895.08	0.00	0.00	0.00
12,700.03	89.93	359.68	7,318.29	3,448.88	-2,521.57	3,991.69	0.00	0.00	0.00
12,800.03	89.93	359.68	7,318.40	3,548.88	-2,522.13	4,088.29	0.00	0.00	0.00
12,900.03	89.93	359.68	7,318.51	3,648.88	-2,522.68	4,184.90	0.00	0.00	0.00
13,000.03	89.93	359.68	7,318.63	3,748.88	-2,523.24	4,281.50	0.00	0.00	0.00
13,100.03	89.93	359.68	7,318.74	3,848.88	-2,523.79	4,378.11	0.00	0.00	0.00
13,200.03	89.93	359.68	7,318.86	3,948.88	-2,524.35	4,474.72	0.00	0.00	0.00
13,300.03	89.93	359.68	7,318.97	4,048.87	-2,524.90	4,571.32	0.00	0.00	0.00
13,400.03	89.93	359.68	7,319.08	4,148.87	-2,525.46	4,667.93	0.00	0.00	0.00
13,500.03	89.93	359.68	7,319.20	4,248.87	-2,526.01	4,764.54	0.00	0.00	0.00
13,600.03	89.93	359.68	7,319.31	4,348.87	-2,526.56	4,861.14	0.00	0.00	0.00
13,700.03	89.93	359.68	7,319.43	4,448.87	-2,527.12	4,957.75	0.00	0.00	0.00
13,800.03	89.93	359.68	7,319.54	4,548.87	-2,527.67	5,054.36	0.00	0.00	0.00
13,900.03	89.93	359.68	7,319.65	4,648.87	-2,528.23	5,150.96	0.00	0.00	0.00
14,000.03	89.93	359.68	7,319.77	4,748.86	-2,528.78	5,247.57	0.00	0.00	0.00
14,100.03	89.93	359.68	7,319.88	4,848.86	-2,529.34	5,344.18	0.00	0.00	0.00
14,200.03	89.93	359.68	7,319.99	4,948.86	-2,529.89	5,440.78	0.00	0.00	0.00
14,300.03	89.93	359.68	7,320.11	5,048.86	-2,530.45	5,537.39	0.00	0.00	0.00
14,400.03	89.93	359.68	7,320.22	5,148.86	-2,531.00	5,633.99	0.00	0.00	0.00
14,500.03	89.93	359.68	7,320.34	5,248.86	-2,531.55	5,730.60	0.00	0.00	0.00
14,600.03	89.93	359.68	7,320.45	5,348.86	-2,532.11	5,827.21	0.00	0.00	0.00
14,700.03	89.93	359.68	7,320.56	5,448.86	-2,532.66	5,923.81	0.00	0.00	0.00
14,800.03	89.93	359.68	7,320.68	5,548.85	-2,533.22	6,020.42	0.00	0.00	0.00
14,900.03	89.93	359.68	7,320.79	5,648.85	-2,533.77	6,117.03	0.00	0.00	0.00
15,000.03	89.93	359.68	7,320.91	5,748.85	-2,534.33	6,213.63	0.00	0.00	0.00
15,100.03	89.93	359.68	7,321.02	5,848.85	-2,534.88	6,310.24	0.00	0.00	0.00
15,200.03	89.93	359.68	7,321.13	5,948.85	-2,535.44	6,406.85	0.00	0.00	0.00

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-04-2L
Company:	Confluence Resources	TVD Reference:	RKB=5137+25 @ 5162.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5137+25 @ 5162.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-04-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,300.03	89.93	359.68	7,321.25	6,048.85	-2,535.99	6,503.45	0.00	0.00	0.00
15,400.03	89.93	359.68	7,321.36	6,148.85	-2,536.54	6,600.06	0.00	0.00	0.00
15,500.03	89.93	359.68	7,321.47	6,248.84	-2,537.10	6,696.66	0.00	0.00	0.00
15,600.03	89.93	359.68	7,321.59	6,348.84	-2,537.65	6,793.27	0.00	0.00	0.00
15,700.03	89.93	359.68	7,321.70	6,448.84	-2,538.21	6,889.88	0.00	0.00	0.00
15,800.03	89.93	359.68	7,321.82	6,548.84	-2,538.76	6,986.48	0.00	0.00	0.00
15,900.03	89.93	359.68	7,321.93	6,648.84	-2,539.32	7,083.09	0.00	0.00	0.00
16,000.03	89.93	359.68	7,322.04	6,748.84	-2,539.87	7,179.70	0.00	0.00	0.00
16,100.03	89.93	359.68	7,322.16	6,848.84	-2,540.43	7,276.30	0.00	0.00	0.00
16,200.03	89.93	359.68	7,322.27	6,948.83	-2,540.98	7,372.91	0.00	0.00	0.00
16,300.03	89.93	359.68	7,322.39	7,048.83	-2,541.53	7,469.52	0.00	0.00	0.00
16,400.03	89.93	359.68	7,322.50	7,148.83	-2,542.09	7,566.12	0.00	0.00	0.00
16,500.03	89.93	359.68	7,322.61	7,248.83	-2,542.64	7,662.73	0.00	0.00	0.00
16,600.03	89.93	359.68	7,322.73	7,348.83	-2,543.20	7,759.33	0.00	0.00	0.00
16,700.03	89.93	359.68	7,322.84	7,448.83	-2,543.75	7,855.94	0.00	0.00	0.00
16,800.03	89.93	359.68	7,322.95	7,548.83	-2,544.31	7,952.55	0.00	0.00	0.00
16,900.03	89.93	359.68	7,323.07	7,648.82	-2,544.86	8,049.15	0.00	0.00	0.00
17,000.03	89.93	359.68	7,323.18	7,748.82	-2,545.42	8,145.76	0.00	0.00	0.00
17,100.03	89.93	359.68	7,323.30	7,848.82	-2,545.97	8,242.37	0.00	0.00	0.00
17,200.03	89.93	359.68	7,323.41	7,948.82	-2,546.52	8,338.97	0.00	0.00	0.00
17,300.03	89.93	359.68	7,323.52	8,048.82	-2,547.08	8,435.58	0.00	0.00	0.00
17,400.04	89.93	359.68	7,323.64	8,148.82	-2,547.63	8,532.19	0.00	0.00	0.00
17,500.04	89.93	359.68	7,323.75	8,248.82	-2,548.19	8,628.79	0.00	0.00	0.00
17,600.04	89.93	359.68	7,323.87	8,348.81	-2,548.74	8,725.40	0.00	0.00	0.00
17,700.04	89.93	359.68	7,323.98	8,448.81	-2,549.30	8,822.01	0.00	0.00	0.00
17,800.04	89.93	359.68	7,324.09	8,548.81	-2,549.85	8,918.61	0.00	0.00	0.00
17,900.04	89.93	359.68	7,324.21	8,648.81	-2,550.41	9,015.22	0.00	0.00	0.00
18,000.04	89.93	359.68	7,324.32	8,748.81	-2,550.96	9,111.82	0.00	0.00	0.00
18,100.04	89.93	359.68	7,324.44	8,848.81	-2,551.51	9,208.43	0.00	0.00	0.00
18,200.04	89.93	359.68	7,324.55	8,948.81	-2,552.07	9,305.04	0.00	0.00	0.00
18,300.04	89.93	359.68	7,324.66	9,048.80	-2,552.62	9,401.64	0.00	0.00	0.00
18,400.04	89.93	359.68	7,324.78	9,148.80	-2,553.18	9,498.25	0.00	0.00	0.00
18,500.04	89.93	359.68	7,324.89	9,248.80	-2,553.73	9,594.86	0.00	0.00	0.00
18,596.15	89.93	359.68	7,325.00	9,344.91	-2,554.27	9,687.71	0.00	0.00	0.00
PBHL/TD 18596.15 MD 7325.00 TVD									
18,596.16	89.93	359.68	7,325.00	9,344.92	-2,554.27	9,687.71	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LP Buford 33-04-2L 470 - plan hits target center - Point	0.00	359.78	7,314.00	-315.20	-2,500.71	14,527,577.30	1,734,099.72	40.00183452	-104.66546991
BHL Buford 33-04-2L 47 - plan hits target center - Point	0.00	359.78	7,325.00	9,344.92	-2,554.27	14,537,237.40	1,734,046.16	40.02836305	-104.66553169

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-04-2L
Company:	Confluence Resources	TVD Reference:	RKB=5137+25 @ 5162.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5137+25 @ 5162.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-04-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original hole		
Design:	plan1		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
5,000.00	5,000.00	0.00	0.00	KOP Begin 10°/100' build	
5,534.88	5,460.50	-94.75	-211.83	Begin 53.49° tangent section	
7,847.19	6,836.31	-853.55	-1,908.34	Begin 10°/100' build/turn	
8,935.88	7,314.00	-315.20	-2,500.71	LP Begin 89.93° lateral section	
18,596.15	7,325.00	9,344.91	-2,554.27	PBHL/TD 18596.15 MD 7325.00 TVD	

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-04-2L
Company:	Confluence Resources	TVD Reference:	RKB=5137+25 @ 5162.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5137+25 @ 5162.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-04-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original hole		
Design:	plan1		

Project	Weld County, Colorado		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD83 Colorado - HARN		
Map Zone:	Zone 13N (108 W to 102 W)		

Site		Section 34-T01N-R65W			
Site Position:		Northing:	14,527,892.80 usft	Latitude:	40.00267560
From:	Map	Easting:	1,736,525.30 usft	Longitude:	-104.65680429
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.22 °

Well	Buford 33-04-2L, Surf loc: 770 FSL 844 FWL Section 34-T01N-R65W					
Well Position	+N/-S	0.00 ft	Northing:	14,527,892.50 usft	Latitude:	40.00267398
	+E/-W	0.00 ft	Easting:	1,736,600.42 usft	Longitude:	-104.65653605
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,137.00 ft

Wellbore	Original hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/5/2017	8.28	66.45	52,139.20000000

Design	plan1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	344.71

Plan Survey Tool Program	Date	6/5/2017		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,596.16 plan1 (Original hole)		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	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	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,534.88	53.49	245.90	5,460.50	-94.75	-211.83	10.00	10.00	0.00	245.90	
7,847.19	53.49	245.90	6,836.31	-853.55	-1,908.34	0.00	0.00	0.00	0.00	
8,935.88	89.93	359.68	7,314.00	-315.20	-2,500.71	10.00	3.35	10.45	104.74	LP Buford 33-04-2L 4'
18,596.16	89.93	359.68	7,325.00	9,344.92	-2,554.27	0.00	0.00	0.00	0.00	BHL Buford 33-04-2L

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-04-2L
Company:	Confluence Resources	TVD Reference:	RKB=5137+25 @ 5162.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5137+25 @ 5162.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-04-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
100.00	0.00	0.00	100.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
200.00	0.00	0.00	200.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
300.00	0.00	0.00	300.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
400.00	0.00	0.00	400.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
500.00	0.00	0.00	500.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
600.00	0.00	0.00	600.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
700.00	0.00	0.00	700.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
800.00	0.00	0.00	800.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
900.00	0.00	0.00	900.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
2,100.00	0.00	0.00	2,100.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
2,200.00	0.00	0.00	2,200.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
2,300.00	0.00	0.00	2,300.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
2,400.00	0.00	0.00	2,400.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
2,500.01	0.00	0.00	2,500.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
2,600.01	0.00	0.00	2,600.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
2,700.01	0.00	0.00	2,700.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
2,800.01	0.00	0.00	2,800.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
2,900.01	0.00	0.00	2,900.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
3,000.01	0.00	0.00	3,000.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
3,100.01	0.00	0.00	3,100.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
3,200.01	0.00	0.00	3,200.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
3,300.01	0.00	0.00	3,300.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
3,400.01	0.00	0.00	3,400.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
3,500.01	0.00	0.00	3,500.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
3,600.01	0.00	0.00	3,600.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
3,700.01	0.00	0.00	3,700.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
3,800.01	0.00	0.00	3,800.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
3,900.01	0.00	0.00	3,900.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
4,000.01	0.00	0.00	4,000.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
4,100.01	0.00	0.00	4,100.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
4,200.01	0.00	0.00	4,200.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
4,300.01	0.00	0.00	4,300.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
4,400.01	0.00	0.00	4,400.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
4,500.01	0.00	0.00	4,500.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
4,600.01	0.00	0.00	4,600.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
4,700.01	0.00	0.00	4,700.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
4,800.01	0.00	0.00	4,800.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
4,900.01	0.00	0.00	4,900.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
5,000.00	0.00	0.00	5,000.00	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
KOP Begin 10°/100' build									
5,000.01	0.00	245.90	5,000.01	0.00	0.00	14,527,892.50	1,736,600.42	40.00267398	-104.65653605
5,100.01	10.00	245.90	5,099.50	-3.55	-7.95	14,527,888.95	1,736,592.47	40.00266430	-104.65656448

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-04-2L
Company:	Confluence Resources	TVD Reference:	RKB=5137+25 @ 5162.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5137+25 @ 5162.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-04-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,200.01	20.00	245.90	5,195.97	-14.11	-31.55	14,527,878.40	1,736,568.87	40.00263557	-104.65664889
5,300.01	30.00	245.90	5,286.49	-31.34	-70.08	14,527,861.16	1,736,530.34	40.00258865	-104.65678671
5,400.01	40.00	245.90	5,368.30	-54.73	-122.37	14,527,837.77	1,736,478.05	40.00252497	-104.65697377
5,500.01	50.00	245.90	5,438.92	-83.57	-186.84	14,527,808.94	1,736,413.58	40.00244647	-104.65720437
5,534.88	53.49	245.90	5,460.50	-94.75	-211.83	14,527,797.76	1,736,388.59	40.00241604	-104.65729376
Begin 53.49° tangent section									
5,600.01	53.49	245.90	5,499.26	-116.12	-259.62	14,527,776.39	1,736,340.80	40.00235785	-104.65746469
5,700.01	53.49	245.90	5,558.76	-148.93	-332.98	14,527,743.57	1,736,267.43	40.00226851	-104.65772713
5,800.01	53.49	245.90	5,618.26	-181.75	-406.35	14,527,710.75	1,736,194.07	40.00217916	-104.65798956
5,900.01	53.49	245.90	5,677.76	-214.57	-479.72	14,527,677.94	1,736,120.70	40.00208982	-104.65825200
6,000.01	53.49	245.90	5,737.25	-247.38	-553.09	14,527,645.12	1,736,047.33	40.00200047	-104.65851444
6,100.01	53.49	245.90	5,796.75	-280.20	-626.46	14,527,612.31	1,735,973.96	40.00191113	-104.65877687
6,200.01	53.49	245.90	5,856.25	-313.01	-699.83	14,527,579.49	1,735,900.59	40.00182178	-104.65903931
6,300.01	53.49	245.90	5,915.75	-345.83	-773.20	14,527,546.68	1,735,827.22	40.00173244	-104.65930174
6,400.01	53.49	245.90	5,975.25	-378.65	-846.57	14,527,513.86	1,735,753.85	40.00164309	-104.65956417
6,500.01	53.49	245.90	6,034.75	-411.46	-919.94	14,527,481.04	1,735,680.48	40.00155374	-104.65982661
6,600.01	53.49	245.90	6,094.25	-444.28	-993.31	14,527,448.23	1,735,607.12	40.00146439	-104.66008904
6,700.01	53.49	245.90	6,153.75	-477.09	-1,066.67	14,527,415.41	1,735,533.75	40.00137504	-104.66035147
6,800.01	53.49	245.90	6,213.25	-509.91	-1,140.04	14,527,382.60	1,735,460.38	40.00128569	-104.66061390
6,900.01	53.49	245.90	6,272.75	-542.72	-1,213.41	14,527,349.78	1,735,387.01	40.00119634	-104.66087633
7,000.01	53.49	245.90	6,332.25	-575.54	-1,286.78	14,527,316.97	1,735,313.64	40.00110699	-104.66113876
7,100.01	53.49	245.90	6,391.75	-608.36	-1,360.15	14,527,284.15	1,735,240.27	40.00101764	-104.66140119
7,200.01	53.49	245.90	6,451.25	-641.17	-1,433.52	14,527,251.33	1,735,166.90	40.00092829	-104.66166362
7,300.01	53.49	245.90	6,510.74	-673.99	-1,506.89	14,527,218.52	1,735,093.53	40.00083894	-104.66192604
7,400.01	53.49	245.90	6,570.24	-706.80	-1,580.26	14,527,185.70	1,735,020.17	40.00074959	-104.66218847
7,500.02	53.49	245.90	6,629.74	-739.62	-1,653.63	14,527,152.89	1,734,946.80	40.00066023	-104.66245090
7,600.02	53.49	245.90	6,689.24	-772.44	-1,726.99	14,527,120.07	1,734,873.43	40.00057088	-104.66271332
7,700.02	53.49	245.90	6,748.74	-805.25	-1,800.36	14,527,087.26	1,734,800.06	40.00048152	-104.66297574
7,800.02	53.49	245.90	6,808.24	-838.07	-1,873.73	14,527,054.44	1,734,726.69	40.00039217	-104.66323817
7,847.19	53.49	245.90	6,836.31	-853.55	-1,908.34	14,527,038.96	1,734,692.08	40.00035001	-104.66336197
Begin 10°/100' build/turn									
7,900.02	52.32	252.36	6,868.19	-868.56	-1,947.67	14,527,023.95	1,734,652.75	40.00030920	-104.66350259
8,000.02	51.11	265.02	6,930.31	-883.97	-2,024.34	14,527,008.54	1,734,576.08	40.00026768	-104.66377658
8,100.02	51.29	277.86	6,993.13	-882.01	-2,101.96	14,527,010.50	1,734,498.46	40.00027387	-104.66405370
8,200.02	52.85	290.39	7,054.75	-862.73	-2,178.16	14,527,029.77	1,734,422.26	40.00032758	-104.66432554
8,300.02	55.67	302.22	7,113.29	-826.74	-2,250.63	14,527,065.77	1,734,349.79	40.00042718	-104.66458383
8,400.02	59.53	313.15	7,166.98	-775.11	-2,317.17	14,527,117.39	1,734,283.25	40.00056964	-104.66482072
8,500.02	64.24	323.17	7,214.18	-709.43	-2,375.75	14,527,183.08	1,734,224.67	40.00075063	-104.66502902
8,600.02	69.57	332.37	7,253.46	-631.67	-2,424.60	14,527,260.83	1,734,175.82	40.00096466	-104.66520240
8,700.02	75.36	340.93	7,283.62	-544.21	-2,462.23	14,527,348.29	1,734,138.19	40.00120521	-104.66533560
8,800.02	81.44	349.04	7,303.76	-449.71	-2,487.50	14,527,442.79	1,734,112.93	40.00146499	-104.66542455
8,900.02	87.68	356.89	7,313.25	-351.03	-2,499.63	14,527,541.47	1,734,100.79	40.00173610	-104.66546657
8,935.88	89.93	359.68	7,314.00	-315.20	-2,500.71	14,527,577.30	1,734,099.72	40.00183452	-104.66546991
LP Begin 89.93° lateral section									
9,000.02	89.93	359.68	7,314.07	-251.07	-2,501.06	14,527,641.44	1,734,099.36	40.00201065	-104.66547032
9,100.02	89.93	359.68	7,314.19	-151.07	-2,501.62	14,527,741.44	1,734,098.81	40.00228526	-104.66547096
9,200.02	89.93	359.68	7,314.30	-51.07	-2,502.17	14,527,841.44	1,734,098.25	40.00255988	-104.66547160
9,300.02	89.93	359.68	7,314.41	48.93	-2,502.72	14,527,941.44	1,734,097.70	40.00283449	-104.66547224
9,400.02	89.93	359.68	7,314.53	148.93	-2,503.28	14,528,041.43	1,734,097.15	40.00310911	-104.66547288
9,500.02	89.93	359.68	7,314.64	248.93	-2,503.83	14,528,141.43	1,734,096.59	40.00338372	-104.66547352
9,600.02	89.93	359.68	7,314.76	348.93	-2,504.39	14,528,241.43	1,734,096.04	40.00365834	-104.66547416
9,700.02	89.93	359.68	7,314.87	448.93	-2,504.94	14,528,341.43	1,734,095.48	40.00393296	-104.66547480
9,800.02	89.93	359.68	7,314.98	548.92	-2,505.50	14,528,441.43	1,734,094.93	40.00420757	-104.66547544
9,900.02	89.93	359.68	7,315.10	648.92	-2,506.05	14,528,541.43	1,734,094.37	40.00448219	-104.66547608

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-04-2L
Company:	Confluence Resources	TVD Reference:	RKB=5137+25 @ 5162.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5137+25 @ 5162.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-04-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,000.02	89.93	359.68	7,315.21	748.92	-2,506.61	14,528,641.42	1,734,093.82	40.00475680	-104.66547672
10,100.02	89.93	359.68	7,315.33	848.92	-2,507.16	14,528,741.42	1,734,093.26	40.00503142	-104.66547736
10,200.02	89.93	359.68	7,315.44	948.92	-2,507.71	14,528,841.42	1,734,092.71	40.00530603	-104.66547800
10,300.02	89.93	359.68	7,315.55	1,048.92	-2,508.27	14,528,941.42	1,734,092.16	40.00558065	-104.66547864
10,400.02	89.93	359.68	7,315.67	1,148.92	-2,508.82	14,529,041.42	1,734,091.60	40.00585527	-104.66547928
10,500.02	89.93	359.68	7,315.78	1,248.91	-2,509.38	14,529,141.42	1,734,091.05	40.00612988	-104.66547992
10,600.02	89.93	359.68	7,315.90	1,348.91	-2,509.93	14,529,241.41	1,734,090.49	40.00640450	-104.66548056
10,700.02	89.93	359.68	7,316.01	1,448.91	-2,510.49	14,529,341.41	1,734,089.94	40.00667911	-104.66548120
10,800.02	89.93	359.68	7,316.12	1,548.91	-2,511.04	14,529,441.41	1,734,089.38	40.00695373	-104.66548183
10,900.02	89.93	359.68	7,316.24	1,648.91	-2,511.59	14,529,541.41	1,734,088.83	40.00722834	-104.66548247
11,000.02	89.93	359.68	7,316.35	1,748.91	-2,512.15	14,529,641.41	1,734,088.27	40.00750296	-104.66548311
11,100.02	89.93	359.68	7,316.46	1,848.91	-2,512.70	14,529,741.41	1,734,087.72	40.00777758	-104.66548375
11,200.02	89.93	359.68	7,316.58	1,948.90	-2,513.26	14,529,841.40	1,734,087.17	40.00805219	-104.66548439
11,300.02	89.93	359.68	7,316.69	2,048.90	-2,513.81	14,529,941.40	1,734,086.61	40.00832681	-104.66548503
11,400.02	89.93	359.68	7,316.81	2,148.90	-2,514.37	14,530,041.40	1,734,086.06	40.00860142	-104.66548567
11,500.02	89.93	359.68	7,316.92	2,248.90	-2,514.92	14,530,141.40	1,734,085.50	40.00887604	-104.66548631
11,600.02	89.93	359.68	7,317.03	2,348.90	-2,515.48	14,530,241.40	1,734,084.95	40.00915065	-104.66548695
11,700.02	89.93	359.68	7,317.15	2,448.90	-2,516.03	14,530,341.40	1,734,084.39	40.00942527	-104.66548759
11,800.02	89.93	359.68	7,317.26	2,548.90	-2,516.58	14,530,441.40	1,734,083.84	40.00969988	-104.66548823
11,900.02	89.93	359.68	7,317.38	2,648.89	-2,517.14	14,530,541.39	1,734,083.28	40.00997450	-104.66548887
12,000.02	89.93	359.68	7,317.49	2,748.89	-2,517.69	14,530,641.39	1,734,082.73	40.01024912	-104.66548951
12,100.02	89.93	359.68	7,317.60	2,848.89	-2,518.25	14,530,741.39	1,734,082.18	40.01052373	-104.66549015
12,200.02	89.93	359.68	7,317.72	2,948.89	-2,518.80	14,530,841.39	1,734,081.62	40.01079835	-104.66549079
12,300.02	89.93	359.68	7,317.83	3,048.89	-2,519.36	14,530,941.39	1,734,081.07	40.01107296	-104.66549143
12,400.03	89.93	359.68	7,317.94	3,148.89	-2,519.91	14,531,041.39	1,734,080.51	40.01134758	-104.66549207
12,500.03	89.93	359.68	7,318.06	3,248.89	-2,520.47	14,531,141.38	1,734,079.96	40.01162219	-104.66549271
12,600.03	89.93	359.68	7,318.17	3,348.88	-2,521.02	14,531,241.38	1,734,079.40	40.01189681	-104.66549335
12,700.03	89.93	359.68	7,318.29	3,448.88	-2,521.57	14,531,341.38	1,734,078.85	40.01217142	-104.66549399
12,800.03	89.93	359.68	7,318.40	3,548.88	-2,522.13	14,531,441.38	1,734,078.29	40.01244604	-104.66549463
12,900.03	89.93	359.68	7,318.51	3,648.88	-2,522.68	14,531,541.38	1,734,077.74	40.01272065	-104.66549527
13,000.03	89.93	359.68	7,318.63	3,748.88	-2,523.24	14,531,641.38	1,734,077.19	40.01299527	-104.66549590
13,100.03	89.93	359.68	7,318.74	3,848.88	-2,523.79	14,531,741.37	1,734,076.63	40.01326989	-104.66549654
13,200.03	89.93	359.68	7,318.86	3,948.88	-2,524.35	14,531,841.37	1,734,076.08	40.01354450	-104.66549718
13,300.03	89.93	359.68	7,318.97	4,048.87	-2,524.90	14,531,941.37	1,734,075.52	40.01381912	-104.66549782
13,400.03	89.93	359.68	7,319.08	4,148.87	-2,525.46	14,532,041.37	1,734,074.97	40.01409373	-104.66549846
13,500.03	89.93	359.68	7,319.20	4,248.87	-2,526.01	14,532,141.37	1,734,074.41	40.01436835	-104.66549910
13,600.03	89.93	359.68	7,319.31	4,348.87	-2,526.56	14,532,241.37	1,734,073.86	40.01464296	-104.66549974
13,700.03	89.93	359.68	7,319.43	4,448.87	-2,527.12	14,532,341.36	1,734,073.30	40.01491758	-104.66550038
13,800.03	89.93	359.68	7,319.54	4,548.87	-2,527.67	14,532,441.36	1,734,072.75	40.01519219	-104.66550102
13,900.03	89.93	359.68	7,319.65	4,648.87	-2,528.23	14,532,541.36	1,734,072.20	40.01546681	-104.66550166
14,000.03	89.93	359.68	7,319.77	4,748.86	-2,528.78	14,532,641.36	1,734,071.64	40.01574142	-104.66550230
14,100.03	89.93	359.68	7,319.88	4,848.86	-2,529.34	14,532,741.36	1,734,071.09	40.01601604	-104.66550294
14,200.03	89.93	359.68	7,319.99	4,948.86	-2,529.89	14,532,841.36	1,734,070.53	40.01629065	-104.66550358
14,300.03	89.93	359.68	7,320.11	5,048.86	-2,530.45	14,532,941.36	1,734,069.98	40.01656527	-104.66550422
14,400.03	89.93	359.68	7,320.22	5,148.86	-2,531.00	14,533,041.35	1,734,069.42	40.01683988	-104.66550486
14,500.03	89.93	359.68	7,320.34	5,248.86	-2,531.55	14,533,141.35	1,734,068.87	40.01711450	-104.66550550
14,600.03	89.93	359.68	7,320.45	5,348.86	-2,532.11	14,533,241.35	1,734,068.31	40.01738911	-104.66550614
14,700.03	89.93	359.68	7,320.56	5,448.86	-2,532.66	14,533,341.35	1,734,067.76	40.01766373	-104.66550678
14,800.03	89.93	359.68	7,320.68	5,548.85	-2,533.22	14,533,441.35	1,734,067.21	40.01793834	-104.66550742
14,900.03	89.93	359.68	7,320.79	5,648.85	-2,533.77	14,533,541.35	1,734,066.65	40.01821296	-104.66550805
15,000.03	89.93	359.68	7,320.91	5,748.85	-2,534.33	14,533,641.34	1,734,066.10	40.01848757	-104.66550869
15,100.03	89.93	359.68	7,321.02	5,848.85	-2,534.88	14,533,741.34	1,734,065.54	40.01876219	-104.66550933
15,200.03	89.93	359.68	7,321.13	5,948.85	-2,535.44	14,533,841.34	1,734,064.99	40.01903680	-104.66550997
15,300.03	89.93	359.68	7,321.25	6,048.85	-2,535.99	14,533,941.34	1,734,064.43	40.01931142	-104.66551061
15,400.03	89.93	359.68	7,321.36	6,148.85	-2,536.54	14,534,041.34	1,734,063.88	40.01958603	-104.66551125

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-04-2L
Company:	Confluence Resources	TVD Reference:	RKB=5137+25 @ 5162.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5137+25 @ 5162.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-04-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,500.03	89.93	359.68	7,321.47	6,248.84	-2,537.10	14,534,141.34	1,734,063.32	40.01986065	-104.66551189
15,600.03	89.93	359.68	7,321.59	6,348.84	-2,537.65	14,534,241.33	1,734,062.77	40.02013526	-104.66551253
15,700.03	89.93	359.68	7,321.70	6,448.84	-2,538.21	14,534,341.33	1,734,062.22	40.02040988	-104.66551317
15,800.03	89.93	359.68	7,321.82	6,548.84	-2,538.76	14,534,441.33	1,734,061.66	40.02068449	-104.66551381
15,900.03	89.93	359.68	7,321.93	6,648.84	-2,539.32	14,534,541.33	1,734,061.11	40.02095911	-104.66551445
16,000.03	89.93	359.68	7,322.04	6,748.84	-2,539.87	14,534,641.33	1,734,060.55	40.02123372	-104.66551509
16,100.03	89.93	359.68	7,322.16	6,848.84	-2,540.43	14,534,741.33	1,734,060.00	40.02150834	-104.66551573
16,200.03	89.93	359.68	7,322.27	6,948.83	-2,540.98	14,534,841.32	1,734,059.44	40.02178295	-104.66551637
16,300.03	89.93	359.68	7,322.39	7,048.83	-2,541.53	14,534,941.32	1,734,058.89	40.02205757	-104.66551701
16,400.03	89.93	359.68	7,322.50	7,148.83	-2,542.09	14,535,041.32	1,734,058.33	40.02233218	-104.66551765
16,500.03	89.93	359.68	7,322.61	7,248.83	-2,542.64	14,535,141.32	1,734,057.78	40.02260680	-104.66551829
16,600.03	89.93	359.68	7,322.73	7,348.83	-2,543.20	14,535,241.32	1,734,057.23	40.02288141	-104.66551893
16,700.03	89.93	359.68	7,322.84	7,448.83	-2,543.75	14,535,341.32	1,734,056.67	40.02315603	-104.66551956
16,800.03	89.93	359.68	7,322.95	7,548.83	-2,544.31	14,535,441.32	1,734,056.12	40.02343064	-104.66552020
16,900.03	89.93	359.68	7,323.07	7,648.82	-2,544.86	14,535,541.31	1,734,055.56	40.02370526	-104.66552084
17,000.03	89.93	359.68	7,323.18	7,748.82	-2,545.42	14,535,641.31	1,734,055.01	40.02397987	-104.66552148
17,100.03	89.93	359.68	7,323.30	7,848.82	-2,545.97	14,535,741.31	1,734,054.45	40.02425449	-104.66552212
17,200.03	89.93	359.68	7,323.41	7,948.82	-2,546.52	14,535,841.31	1,734,053.90	40.02452910	-104.66552276
17,300.03	89.93	359.68	7,323.52	8,048.82	-2,547.08	14,535,941.31	1,734,053.34	40.02480372	-104.66552340
17,400.04	89.93	359.68	7,323.64	8,148.82	-2,547.63	14,536,041.31	1,734,052.79	40.02507833	-104.66552404
17,500.04	89.93	359.68	7,323.75	8,248.82	-2,548.19	14,536,141.30	1,734,052.24	40.02535295	-104.66552468
17,600.04	89.93	359.68	7,323.87	8,348.81	-2,548.74	14,536,241.30	1,734,051.68	40.02562756	-104.66552532
17,700.04	89.93	359.68	7,323.98	8,448.81	-2,549.30	14,536,341.30	1,734,051.13	40.02590218	-104.66552596
17,800.04	89.93	359.68	7,324.09	8,548.81	-2,549.85	14,536,441.30	1,734,050.57	40.02617679	-104.66552660
17,900.04	89.93	359.68	7,324.21	8,648.81	-2,550.41	14,536,541.30	1,734,050.02	40.02645141	-104.66552724
18,000.04	89.93	359.68	7,324.32	8,748.81	-2,550.96	14,536,641.30	1,734,049.46	40.02672602	-104.66552788
18,100.04	89.93	359.68	7,324.44	8,848.81	-2,551.51	14,536,741.29	1,734,048.91	40.02700064	-104.66552852
18,200.04	89.93	359.68	7,324.55	8,948.81	-2,552.07	14,536,841.29	1,734,048.35	40.02727525	-104.66552916
18,300.04	89.93	359.68	7,324.66	9,048.80	-2,552.62	14,536,941.29	1,734,047.80	40.02754987	-104.66552980
18,400.04	89.93	359.68	7,324.78	9,148.80	-2,553.18	14,537,041.29	1,734,047.25	40.02782448	-104.66553043
18,500.04	89.93	359.68	7,324.89	9,248.80	-2,553.73	14,537,141.29	1,734,046.69	40.02809909	-104.66553107
18,596.15	89.93	359.68	7,325.00	9,344.91	-2,554.27	14,537,237.40	1,734,046.16	40.02836303	-104.66553169
PBHL/TD 18596.15 MD 7325.00 TVD									
18,596.16	89.93	359.68	7,325.00	9,344.92	-2,554.27	14,537,237.40	1,734,046.16	40.02836305	-104.66553169

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
LP Buford 33-04-2L 470	0.00	359.78	7,314.00	-315.20	-2,500.71	14,527,577.30	1,734,099.72	40.00183452	-104.66546991
- plan hits target center									
- Point									
BHL Buford 33-04-2L 47	0.00	359.78	7,325.00	9,344.92	-2,554.27	14,537,237.40	1,734,046.16	40.02836305	-104.66553169
- plan hits target center									
- Point									

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-04-2L
Company:	Confluence Resources	TVD Reference:	RKB=5137+25 @ 5162.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5137+25 @ 5162.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-04-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original hole		
Design:	plan1		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
5,000.00	5,000.00	0.00	0.00	KOP Begin 10°/100' build
5,534.88	5,460.50	-94.75	-211.83	Begin 53.49° tangent section
7,847.19	6,836.31	-853.55	-1,908.34	Begin 10°/100' build/turn
8,935.88	7,314.00	-315.20	-2,500.71	LP Begin 89.93° lateral section
18,596.15	7,325.00	9,344.91	-2,554.27	PBHL/TD 18596.15 MD 7325.00 TVD