



Weld County, Colorado
Section 34-T01N-R65W
Buford 33-03-3L
plan1

Azimuth Corrections:

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

Buford 33-03-3L			
Surf loc: 770 FSL 869 FWL Section 34-T01N-R65W			
NAD83 Colorado - HARN			
Universal Transverse Mercator (US Survey Feet)			
Zone 13N (108 W to 102 W)			
RKB=5138+25 @ 5163.00ft			
Northing	Easting	Latitude	Longitude
14527893.20	1736625.30	40.00267564	-104.65644720

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	5512.49	51.25	244.83	5446.84	-91.15	-193.98	10.00	-39.21	Begin 51.25° tangent section
4	7807.07	51.25	244.83	6883.09	-852.20	-1813.57	0.00	-366.57	Begin 10°/100' build/turn
5	8897.65	89.89	359.68	7388.00	-314.80	-2385.59	10.00	297.87	LP Begin 89.89° lateral section
6	18557.84	89.89	359.68	7407.00	9345.22	-2439.13	0.00	9658.29	PBHL/TD 18557.84 MD 7407.00 TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP Buford 33-03-3L 470 FSL 1520 FEL	7388.00	-314.80	-2385.59	14527578.40	1734239.71	40.00183609	-104.66497002
BHL Buford 33-03-3L 470 FNL 1520 FEL	7407.00	9345.22	-2439.13	14537238.40	1734186.17	40.02836435	-104.66503154

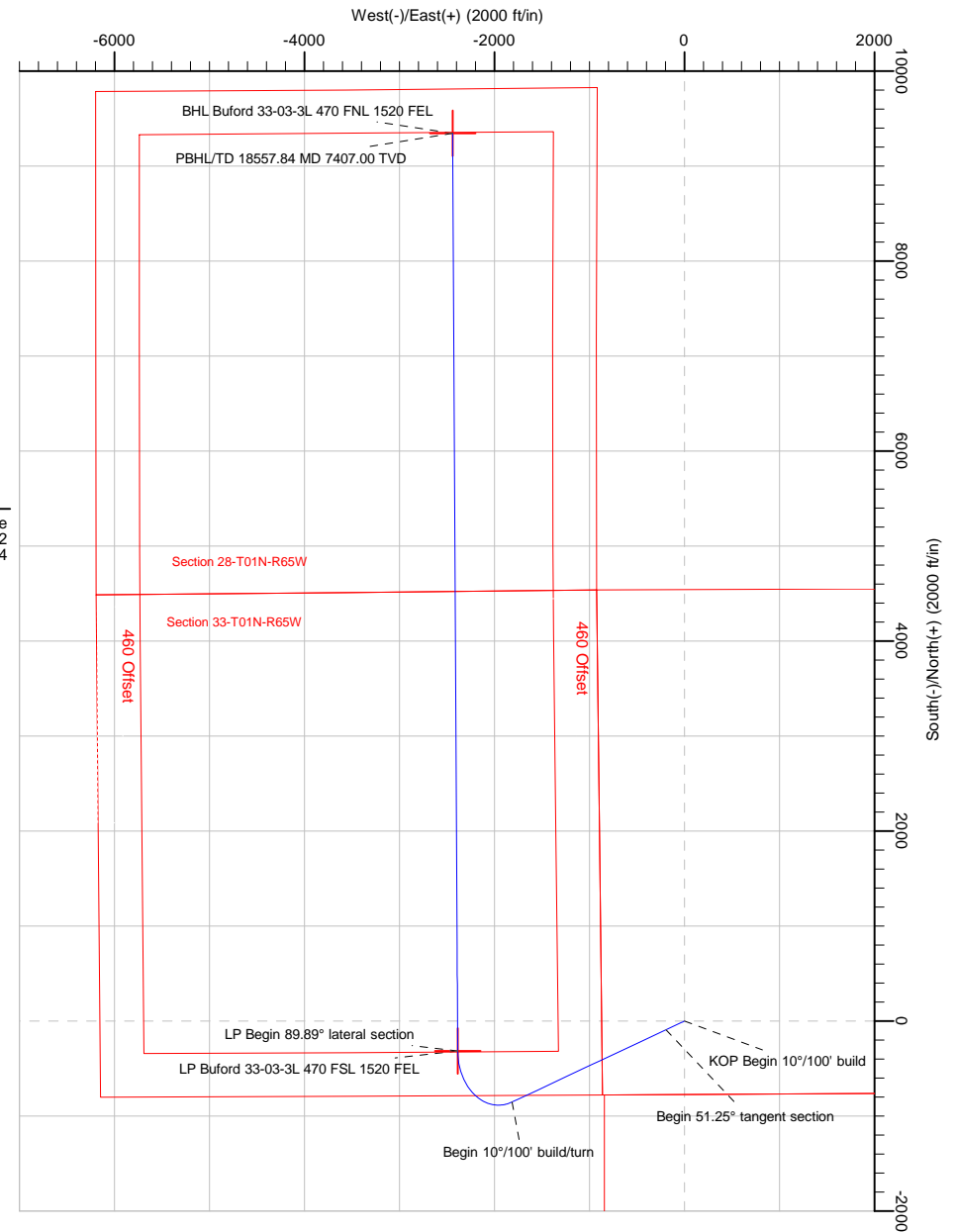
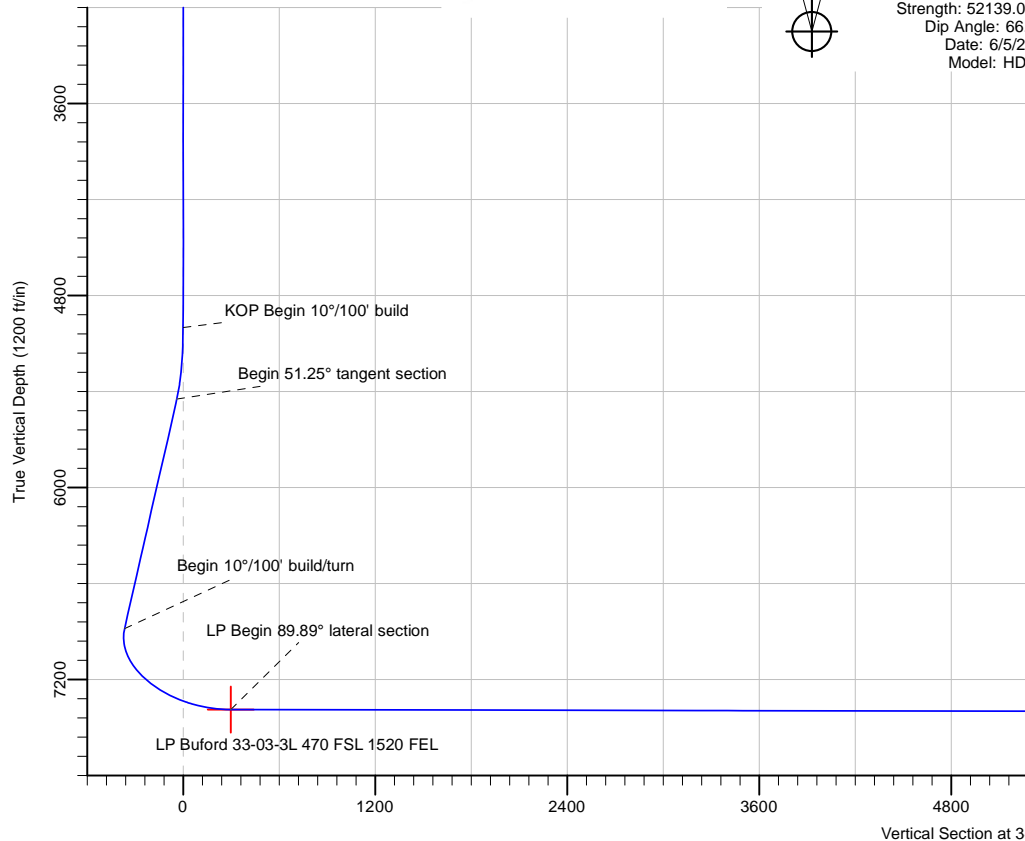


PRODIRECTIONAL



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

Magnetic Field
Strength: 52139.0snT
Dip Angle: 66.45°
Date: 6/5/2017
Model: HDGM



PBHL/TD 18557.84 MD 7407.00 TVD

BHL Buford 33-03-3L 470 FNL 1520 FEL

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 33-03-3L
Company:	Confluence Resources	TVD Reference:	RKB=5138+25 @ 5163.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5138+25 @ 5163.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-03-3L	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 33-03-3L, Surf loc: 770 FSL 869 FWL Section 34-T01N-R65W					
Well Position	+N/-S	0.40 ft	Northing:	14,527,893.20 usft	Latitude:	40.00267564
	+E/-W	100.00 ft	Easting:	1,736,625.30 usft	Longitude:	-104.65644720
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,138.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/5/2017	8.28	66.45	52,139.00000000

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	345.37

Plan Survey Tool Program	Date	6/5/2017		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,557.84	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	
5,512.49	51.25	244.83	5,446.84	-91.15	-193.98	10.00	10.00	0.00	244.83	
7,807.08	51.25	244.83	6,883.09	-852.20	-1,813.57	0.00	0.00	0.00	0.00	
8,897.65	89.89	359.68	7,388.00	-314.80	-2,385.59	10.00	3.54	10.53	106.26	LP Buford 33-03-3L 4'
18,557.84	89.89	359.68	7,407.00	9,345.22	-2,439.13	0.00	0.00	0.00	0.00	BHL Buford 33-03-3L

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-03-3L
Company:	Confluence Resources	TVD Reference:	RKB=5138+25 @ 5163.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5138+25 @ 5163.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-03-3L	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	244.83	5,000.01	0.00	0.00	0.00	0.00	0.00	0.00
5,100.01	10.00	244.83	5,099.50	-3.70	-7.88	-1.59	10.00	10.00	0.00

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Project:	Weld County, Colorado	MD Reference:	RKB=5138+25 @ 5163.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-03-3L	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	244.83	5,195.97	-14.70	-31.28	-6.32	10.00	10.00	0.00
5,300.01	30.00	244.83	5,286.49	-32.65	-69.48	-14.04	10.00	10.00	0.00
5,400.01	40.00	244.83	5,368.30	-57.01	-121.33	-24.52	10.00	10.00	0.00
5,500.01	50.00	244.83	5,438.92	-87.05	-185.24	-37.44	10.00	10.00	0.00
5,512.49	51.25	244.83	5,446.84	-91.15	-193.98	-39.21	10.01	10.01	0.00
Begin 51.25° tangent section									
5,600.01	51.25	244.83	5,501.62	-120.18	-255.75	-51.69	0.00	0.00	0.00
5,700.01	51.25	244.83	5,564.21	-153.34	-326.33	-65.96	0.00	0.00	0.00
5,800.01	51.25	244.83	5,626.80	-186.51	-396.92	-80.23	0.00	0.00	0.00
5,900.01	51.25	244.83	5,689.40	-219.68	-467.50	-94.49	0.00	0.00	0.00
6,000.01	51.25	244.83	5,751.99	-252.85	-538.08	-108.76	0.00	0.00	0.00
6,100.01	51.25	244.83	5,814.59	-286.01	-608.67	-123.03	0.00	0.00	0.00
6,200.01	51.25	244.83	5,877.18	-319.18	-679.25	-137.30	0.00	0.00	0.00
6,300.01	51.25	244.83	5,939.77	-352.35	-749.83	-151.56	0.00	0.00	0.00
6,400.01	51.25	244.83	6,002.37	-385.52	-820.42	-165.83	0.00	0.00	0.00
6,500.01	51.25	244.83	6,064.96	-418.68	-891.00	-180.10	0.00	0.00	0.00
6,600.01	51.25	244.83	6,127.55	-451.85	-961.58	-194.36	0.00	0.00	0.00
6,700.01	51.25	244.83	6,190.15	-485.02	-1,032.17	-208.63	0.00	0.00	0.00
6,800.01	51.25	244.83	6,252.74	-518.19	-1,102.75	-222.90	0.00	0.00	0.00
6,900.01	51.25	244.83	6,315.33	-551.35	-1,173.33	-237.16	0.00	0.00	0.00
7,000.01	51.25	244.83	6,377.93	-584.52	-1,243.92	-251.43	0.00	0.00	0.00
7,100.01	51.25	244.83	6,440.52	-617.69	-1,314.50	-265.70	0.00	0.00	0.00
7,200.01	51.25	244.83	6,503.11	-650.85	-1,385.08	-279.96	0.00	0.00	0.00
7,300.01	51.25	244.83	6,565.71	-684.02	-1,455.67	-294.23	0.00	0.00	0.00
7,400.01	51.25	244.83	6,628.30	-717.19	-1,526.25	-308.50	0.00	0.00	0.00
7,500.02	51.25	244.83	6,690.90	-750.36	-1,596.83	-322.76	0.00	0.00	0.00
7,600.02	51.25	244.83	6,753.49	-783.52	-1,667.42	-337.03	0.00	0.00	0.00
7,700.02	51.25	244.83	6,816.08	-816.69	-1,738.00	-351.30	0.00	0.00	0.00
7,800.02	51.25	244.83	6,878.68	-849.86	-1,808.58	-365.57	0.00	0.00	0.00
7,807.08	51.25	244.83	6,883.09	-852.20	-1,813.57	-366.57	0.00	0.00	0.00
Begin 10°/100' build/turn									
7,900.02	49.23	256.64	6,942.66	-875.80	-1,880.76	-372.43	10.00	-2.17	12.71
8,000.02	48.48	269.90	7,008.62	-884.63	-1,955.23	-362.18	10.00	-0.76	13.25
8,100.02	49.25	283.15	7,074.57	-876.06	-2,029.74	-335.07	10.00	0.78	13.25
8,200.02	51.49	295.81	7,138.50	-850.34	-2,102.03	-291.92	10.00	2.23	12.67
8,300.02	54.99	307.52	7,198.47	-808.25	-2,169.90	-234.06	10.00	3.50	11.70
8,400.02	59.51	318.13	7,252.66	-751.08	-2,231.29	-163.23	10.00	4.52	10.61
8,500.02	64.82	327.73	7,299.42	-680.55	-2,284.34	-81.59	10.00	5.30	9.60
8,600.02	70.68	336.49	7,337.33	-598.81	-2,327.43	8.37	10.00	5.87	8.76
8,700.02	76.94	344.62	7,365.25	-508.35	-2,359.25	103.94	10.00	6.25	8.13
8,800.02	83.43	352.34	7,382.31	-411.92	-2,378.84	202.19	10.00	6.50	7.72
8,897.65	89.89	359.68	7,388.00	-314.80	-2,385.59	297.87	10.00	6.61	7.52
LP Begin 89.89° lateral section									
8,900.02	89.89	359.68	7,388.00	-312.44	-2,385.61	300.16	0.00	0.00	0.00
9,000.02	89.89	359.68	7,388.20	-212.44	-2,386.16	397.06	0.00	0.00	0.00
9,100.02	89.89	359.68	7,388.40	-112.44	-2,386.72	493.95	0.00	0.00	0.00
9,200.02	89.89	359.68	7,388.59	-12.44	-2,387.27	590.85	0.00	0.00	0.00
9,300.02	89.89	359.68	7,388.79	87.56	-2,387.82	687.75	0.00	0.00	0.00
9,400.02	89.89	359.68	7,388.99	187.56	-2,388.38	784.64	0.00	0.00	0.00
9,500.02	89.89	359.68	7,389.18	287.55	-2,388.93	881.54	0.00	0.00	0.00
9,600.02	89.89	359.68	7,389.38	387.55	-2,389.49	978.44	0.00	0.00	0.00
9,700.02	89.89	359.68	7,389.58	487.55	-2,390.04	1,075.34	0.00	0.00	0.00
9,800.02	89.89	359.68	7,389.77	587.55	-2,390.60	1,172.23	0.00	0.00	0.00

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Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-03-3L	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	89.89	359.68	7,389.97	687.55	-2,391.15	1,269.13	0.00	0.00	0.00
10,000.02	89.89	359.68	7,390.17	787.55	-2,391.70	1,366.03	0.00	0.00	0.00
10,100.02	89.89	359.68	7,390.37	887.54	-2,392.26	1,462.92	0.00	0.00	0.00
10,200.02	89.89	359.68	7,390.56	987.54	-2,392.81	1,559.82	0.00	0.00	0.00
10,300.02	89.89	359.68	7,390.76	1,087.54	-2,393.37	1,656.72	0.00	0.00	0.00
10,400.02	89.89	359.68	7,390.96	1,187.54	-2,393.92	1,753.62	0.00	0.00	0.00
10,500.02	89.89	359.68	7,391.15	1,287.54	-2,394.48	1,850.51	0.00	0.00	0.00
10,600.02	89.89	359.68	7,391.35	1,387.54	-2,395.03	1,947.41	0.00	0.00	0.00
10,700.02	89.89	359.68	7,391.55	1,487.54	-2,395.58	2,044.31	0.00	0.00	0.00
10,800.02	89.89	359.68	7,391.74	1,587.53	-2,396.14	2,141.20	0.00	0.00	0.00
10,900.02	89.89	359.68	7,391.94	1,687.53	-2,396.69	2,238.10	0.00	0.00	0.00
11,000.02	89.89	359.68	7,392.14	1,787.53	-2,397.25	2,335.00	0.00	0.00	0.00
11,100.02	89.89	359.68	7,392.33	1,887.53	-2,397.80	2,431.89	0.00	0.00	0.00
11,200.02	89.89	359.68	7,392.53	1,987.53	-2,398.36	2,528.79	0.00	0.00	0.00
11,300.02	89.89	359.68	7,392.73	2,087.53	-2,398.91	2,625.69	0.00	0.00	0.00
11,400.02	89.89	359.68	7,392.92	2,187.52	-2,399.46	2,722.59	0.00	0.00	0.00
11,500.02	89.89	359.68	7,393.12	2,287.52	-2,400.02	2,819.48	0.00	0.00	0.00
11,600.02	89.89	359.68	7,393.32	2,387.52	-2,400.57	2,916.38	0.00	0.00	0.00
11,700.02	89.89	359.68	7,393.51	2,487.52	-2,401.13	3,013.28	0.00	0.00	0.00
11,800.02	89.89	359.68	7,393.71	2,587.52	-2,401.68	3,110.17	0.00	0.00	0.00
11,900.02	89.89	359.68	7,393.91	2,687.52	-2,402.24	3,207.07	0.00	0.00	0.00
12,000.02	89.89	359.68	7,394.10	2,787.52	-2,402.79	3,303.97	0.00	0.00	0.00
12,100.02	89.89	359.68	7,394.30	2,887.51	-2,403.34	3,400.87	0.00	0.00	0.00
12,200.02	89.89	359.68	7,394.50	2,987.51	-2,403.90	3,497.76	0.00	0.00	0.00
12,300.02	89.89	359.68	7,394.69	3,087.51	-2,404.45	3,594.66	0.00	0.00	0.00
12,400.03	89.89	359.68	7,394.89	3,187.51	-2,405.01	3,691.56	0.00	0.00	0.00
12,500.03	89.89	359.68	7,395.09	3,287.51	-2,405.56	3,788.45	0.00	0.00	0.00
12,600.03	89.89	359.68	7,395.28	3,387.51	-2,406.11	3,885.35	0.00	0.00	0.00
12,700.03	89.89	359.68	7,395.48	3,487.50	-2,406.67	3,982.25	0.00	0.00	0.00
12,800.03	89.89	359.68	7,395.68	3,587.50	-2,407.22	4,079.14	0.00	0.00	0.00
12,900.03	89.89	359.68	7,395.87	3,687.50	-2,407.78	4,176.04	0.00	0.00	0.00
13,000.03	89.89	359.68	7,396.07	3,787.50	-2,408.33	4,272.94	0.00	0.00	0.00
13,100.03	89.89	359.68	7,396.27	3,887.50	-2,408.89	4,369.84	0.00	0.00	0.00
13,200.03	89.89	359.68	7,396.46	3,987.50	-2,409.44	4,466.73	0.00	0.00	0.00
13,300.03	89.89	359.68	7,396.66	4,087.50	-2,409.99	4,563.63	0.00	0.00	0.00
13,400.03	89.89	359.68	7,396.86	4,187.49	-2,410.55	4,660.53	0.00	0.00	0.00
13,500.03	89.89	359.68	7,397.05	4,287.49	-2,411.10	4,757.42	0.00	0.00	0.00
13,600.03	89.89	359.68	7,397.25	4,387.49	-2,411.66	4,854.32	0.00	0.00	0.00
13,700.03	89.89	359.68	7,397.45	4,487.49	-2,412.21	4,951.22	0.00	0.00	0.00
13,800.03	89.89	359.68	7,397.64	4,587.49	-2,412.77	5,048.12	0.00	0.00	0.00
13,900.03	89.89	359.68	7,397.84	4,687.49	-2,413.32	5,145.01	0.00	0.00	0.00
14,000.03	89.89	359.68	7,398.04	4,787.49	-2,413.87	5,241.91	0.00	0.00	0.00
14,100.03	89.89	359.68	7,398.23	4,887.48	-2,414.43	5,338.81	0.00	0.00	0.00
14,200.03	89.89	359.68	7,398.43	4,987.48	-2,414.98	5,435.70	0.00	0.00	0.00
14,300.03	89.89	359.68	7,398.63	5,087.48	-2,415.54	5,532.60	0.00	0.00	0.00
14,400.03	89.89	359.68	7,398.82	5,187.48	-2,416.09	5,629.50	0.00	0.00	0.00
14,500.03	89.89	359.68	7,399.02	5,287.48	-2,416.65	5,726.39	0.00	0.00	0.00
14,600.03	89.89	359.68	7,399.22	5,387.48	-2,417.20	5,823.29	0.00	0.00	0.00
14,700.03	89.89	359.68	7,399.41	5,487.47	-2,417.75	5,920.19	0.00	0.00	0.00
14,800.03	89.89	359.68	7,399.61	5,587.47	-2,418.31	6,017.09	0.00	0.00	0.00
14,900.03	89.89	359.68	7,399.81	5,687.47	-2,418.86	6,113.98	0.00	0.00	0.00
15,000.03	89.89	359.68	7,400.00	5,787.47	-2,419.42	6,210.88	0.00	0.00	0.00
15,100.03	89.89	359.68	7,400.20	5,887.47	-2,419.97	6,307.78	0.00	0.00	0.00
15,200.03	89.89	359.68	7,400.40	5,987.47	-2,420.52	6,404.67	0.00	0.00	0.00

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-03-3L
Company:	Confluence Resources	TVD Reference:	RKB=5138+25 @ 5163.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5138+25 @ 5163.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-03-3L	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	89.89	359.68	7,400.59	6,087.47	-2,421.08	6,501.57	0.00	0.00	0.00	
15,400.03	89.89	359.68	7,400.79	6,187.46	-2,421.63	6,598.47	0.00	0.00	0.00	
15,500.03	89.89	359.68	7,400.99	6,287.46	-2,422.19	6,695.37	0.00	0.00	0.00	
15,600.03	89.89	359.68	7,401.18	6,387.46	-2,422.74	6,792.26	0.00	0.00	0.00	
15,700.03	89.89	359.68	7,401.38	6,487.46	-2,423.30	6,889.16	0.00	0.00	0.00	
15,800.03	89.89	359.68	7,401.58	6,587.46	-2,423.85	6,986.06	0.00	0.00	0.00	
15,900.03	89.89	359.68	7,401.77	6,687.46	-2,424.40	7,082.95	0.00	0.00	0.00	
16,000.03	89.89	359.68	7,401.97	6,787.45	-2,424.96	7,179.85	0.00	0.00	0.00	
16,100.03	89.89	359.68	7,402.17	6,887.45	-2,425.51	7,276.75	0.00	0.00	0.00	
16,200.03	89.89	359.68	7,402.36	6,987.45	-2,426.07	7,373.64	0.00	0.00	0.00	
16,300.03	89.89	359.68	7,402.56	7,087.45	-2,426.62	7,470.54	0.00	0.00	0.00	
16,400.03	89.89	359.68	7,402.76	7,187.45	-2,427.18	7,567.44	0.00	0.00	0.00	
16,500.03	89.89	359.68	7,402.95	7,287.45	-2,427.73	7,664.34	0.00	0.00	0.00	
16,600.03	89.89	359.68	7,403.15	7,387.45	-2,428.28	7,761.23	0.00	0.00	0.00	
16,700.03	89.89	359.68	7,403.35	7,487.44	-2,428.84	7,858.13	0.00	0.00	0.00	
16,800.03	89.89	359.68	7,403.54	7,587.44	-2,429.39	7,955.03	0.00	0.00	0.00	
16,900.03	89.89	359.68	7,403.74	7,687.44	-2,429.95	8,051.92	0.00	0.00	0.00	
17,000.03	89.89	359.68	7,403.94	7,787.44	-2,430.50	8,148.82	0.00	0.00	0.00	
17,100.03	89.89	359.68	7,404.13	7,887.44	-2,431.06	8,245.72	0.00	0.00	0.00	
17,200.03	89.89	359.68	7,404.33	7,987.44	-2,431.61	8,342.61	0.00	0.00	0.00	
17,300.03	89.89	359.68	7,404.53	8,087.43	-2,432.16	8,439.51	0.00	0.00	0.00	
17,400.04	89.89	359.68	7,404.72	8,187.43	-2,432.72	8,536.41	0.00	0.00	0.00	
17,500.04	89.89	359.68	7,404.92	8,287.43	-2,433.27	8,633.31	0.00	0.00	0.00	
17,600.04	89.89	359.68	7,405.12	8,387.43	-2,433.83	8,730.20	0.00	0.00	0.00	
17,700.04	89.89	359.68	7,405.31	8,487.43	-2,434.38	8,827.10	0.00	0.00	0.00	
17,800.04	89.89	359.68	7,405.51	8,587.43	-2,434.93	8,924.00	0.00	0.00	0.00	
17,900.04	89.89	359.68	7,405.71	8,687.43	-2,435.49	9,020.89	0.00	0.00	0.00	
18,000.04	89.89	359.68	7,405.90	8,787.42	-2,436.04	9,117.79	0.00	0.00	0.00	
18,100.04	89.89	359.68	7,406.10	8,887.42	-2,436.60	9,214.69	0.00	0.00	0.00	
18,200.04	89.89	359.68	7,406.30	8,987.42	-2,437.15	9,311.59	0.00	0.00	0.00	
18,300.04	89.89	359.68	7,406.49	9,087.42	-2,437.71	9,408.48	0.00	0.00	0.00	
18,400.04	89.89	359.68	7,406.69	9,187.42	-2,438.26	9,505.38	0.00	0.00	0.00	
18,500.04	89.89	359.68	7,406.89	9,287.42	-2,438.81	9,602.28	0.00	0.00	0.00	
18,557.84	89.89	359.68	7,407.00	9,345.22	-2,439.13	9,658.29	0.00	0.00	0.00	
PBHL/TD 18557.84 MD 7407.00 TVD										

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 33-03-3L 470	0.00	0.00	7,388.00	-314.80	-2,385.59	14,527,578.40	1,734,239.71	40.00183609		-104.66497002
- plan hits target center										
- Point										
BHL Buford 33-03-3L 47	0.00	0.00	7,407.00	9,345.22	-2,439.13	14,537,238.40	1,734,186.17	40.02836435		-104.66503153
- plan hits target center										
- Point										

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-03-3L
Company:	Confluence Resources	TVD Reference:	RKB=5138+25 @ 5163.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5138+25 @ 5163.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-03-3L	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	
5,512.49	5,446.84	-91.15	-193.98	Begin 51.25° tangent section	
7,807.08	6,883.09	-852.20	-1,813.57	Begin 10°/100' build/turn	
8,897.65	7,388.00	-314.80	-2,385.59	LP Begin 89.89° lateral section	
18,557.84	7,407.00	9,345.22	-2,439.13	PBHL/TD 18557.84 MD 7407.00 TVD	

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-03-3L
Company:	Confluence Resources	TVD Reference:	RKB=5138+25 @ 5163.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5138+25 @ 5163.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-03-3L	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 33-03-3L, Surf loc: 770 FSL 869 FWL Section 34-T01N-R65W					
Well Position	+N/-S	0.00 ft	Northing:	14,527,893.20 usft	Latitude:	40.00267564
	+E/-W	0.00 ft	Easting:	1,736,625.30 usft	Longitude:	-104.65644720
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,138.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/5/2017	8.28	66.45	52,139.00000000

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	345.37

Plan Survey Tool Program	Date	6/5/2017		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,557.84 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	
5,512.49	51.25	244.83	5,446.84	-91.15	-193.98	10.00	10.00	0.00	244.83	
7,807.08	51.25	244.83	6,883.09	-852.20	-1,813.57	0.00	0.00	0.00	0.00	
8,897.65	89.89	359.68	7,388.00	-314.80	-2,385.59	10.00	3.54	10.53	106.26	LP Buford 33-03-3L 4'
18,557.84	89.89	359.68	7,407.00	9,345.22	-2,439.13	0.00	0.00	0.00	0.00	BHL Buford 33-03-3L

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-03-3L
Company:	Confluence Resources	TVD Reference:	RKB=5138+25 @ 5163.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5138+25 @ 5163.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-03-3L	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	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
100.00	0.00	0.00	100.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
200.00	0.00	0.00	200.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
300.00	0.00	0.00	300.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
400.00	0.00	0.00	400.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
500.00	0.00	0.00	500.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
600.00	0.00	0.00	600.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
700.00	0.00	0.00	700.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
800.00	0.00	0.00	800.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
900.00	0.00	0.00	900.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
2,100.00	0.00	0.00	2,100.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
2,200.00	0.00	0.00	2,200.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
2,300.00	0.00	0.00	2,300.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
2,400.00	0.00	0.00	2,400.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
2,500.01	0.00	0.00	2,500.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
2,600.01	0.00	0.00	2,600.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
2,700.01	0.00	0.00	2,700.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
2,800.01	0.00	0.00	2,800.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
2,900.01	0.00	0.00	2,900.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
3,000.01	0.00	0.00	3,000.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
3,100.01	0.00	0.00	3,100.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
3,200.01	0.00	0.00	3,200.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
3,300.01	0.00	0.00	3,300.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
3,400.01	0.00	0.00	3,400.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
3,500.01	0.00	0.00	3,500.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
3,600.01	0.00	0.00	3,600.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
3,700.01	0.00	0.00	3,700.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
3,800.01	0.00	0.00	3,800.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
3,900.01	0.00	0.00	3,900.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
4,000.01	0.00	0.00	4,000.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
4,100.01	0.00	0.00	4,100.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
4,200.01	0.00	0.00	4,200.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
4,300.01	0.00	0.00	4,300.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
4,400.01	0.00	0.00	4,400.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
4,500.01	0.00	0.00	4,500.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
4,600.01	0.00	0.00	4,600.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
4,700.01	0.00	0.00	4,700.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
4,800.01	0.00	0.00	4,800.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
4,900.01	0.00	0.00	4,900.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
5,000.00	0.00	0.00	5,000.00	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
KOP Begin 10°/100' build									
5,000.01	0.00	244.83	5,000.01	0.00	0.00	14,527,893.20	1,736,625.30	40.00267564	-104.65644720
5,100.01	10.00	244.83	5,099.50	-3.70	-7.88	14,527,889.50	1,736,617.42	40.00266556	-104.65647538

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-03-3L
Company:	Confluence Resources	TVD Reference:	RKB=5138+25 @ 5163.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5138+25 @ 5163.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-03-3L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Planned Survey										
Measured			Vertical			Map	Map			
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)			
5,200.01	20.00	244.83	5,195.97	-14.70	-31.28	14,527,878.51	1,736,594.02	40.00263561	-104.65655908	
5,300.01	30.00	244.83	5,286.49	-32.65	-69.48	14,527,860.56	1,736,555.82	40.00258672	-104.65669574	
5,400.01	40.00	244.83	5,368.30	-57.01	-121.33	14,527,836.19	1,736,503.97	40.00252036	-104.65688122	
5,500.01	50.00	244.83	5,438.92	-87.05	-185.24	14,527,806.16	1,736,440.06	40.00243856	-104.65710987	
5,512.49	51.25	244.83	5,446.84	-91.15	-193.98	14,527,802.06	1,736,431.32	40.00242738	-104.65714110	
Begin 51.25° tangent section										
5,600.01	51.25	244.83	5,501.62	-120.18	-255.75	14,527,773.03	1,736,369.55	40.00234832	-104.65736209	
5,700.01	51.25	244.83	5,564.21	-153.34	-326.33	14,527,739.86	1,736,298.97	40.00225798	-104.65761458	
5,800.01	51.25	244.83	5,626.80	-186.51	-396.92	14,527,706.69	1,736,228.38	40.00216765	-104.65786708	
5,900.01	51.25	244.83	5,689.40	-219.68	-467.50	14,527,673.53	1,736,157.80	40.00207731	-104.65811957	
6,000.01	51.25	244.83	5,751.99	-252.85	-538.08	14,527,640.36	1,736,087.22	40.00198697	-104.65837207	
6,100.01	51.25	244.83	5,814.59	-286.01	-608.67	14,527,607.19	1,736,016.63	40.00189663	-104.65862456	
6,200.01	51.25	244.83	5,877.18	-319.18	-679.25	14,527,574.02	1,735,946.05	40.00180629	-104.65887705	
6,300.01	51.25	244.83	5,939.77	-352.35	-749.83	14,527,540.86	1,735,875.47	40.00171595	-104.65912955	
6,400.01	51.25	244.83	6,002.37	-385.52	-820.42	14,527,507.69	1,735,804.88	40.00162561	-104.65938204	
6,500.01	51.25	244.83	6,064.96	-418.68	-891.00	14,527,474.52	1,735,734.30	40.00153527	-104.65963453	
6,600.01	51.25	244.83	6,127.55	-451.85	-961.58	14,527,441.36	1,735,663.72	40.00144492	-104.65988702	
6,700.01	51.25	244.83	6,190.15	-485.02	-1,032.17	14,527,408.19	1,735,593.13	40.00135458	-104.66013951	
6,800.01	51.25	244.83	6,252.74	-518.19	-1,102.75	14,527,375.02	1,735,522.55	40.00126424	-104.66039200	
6,900.01	51.25	244.83	6,315.33	-551.35	-1,173.33	14,527,341.85	1,735,451.97	40.00117389	-104.66064449	
7,000.01	51.25	244.83	6,377.93	-584.52	-1,243.92	14,527,308.69	1,735,381.38	40.00108355	-104.66089697	
7,100.01	51.25	244.83	6,440.52	-617.69	-1,314.50	14,527,275.52	1,735,310.80	40.00099321	-104.66114946	
7,200.01	51.25	244.83	6,503.11	-650.85	-1,385.08	14,527,242.35	1,735,240.22	40.00090286	-104.66140195	
7,300.01	51.25	244.83	6,565.71	-684.02	-1,455.67	14,527,209.18	1,735,169.63	40.00081251	-104.66165443	
7,400.01	51.25	244.83	6,628.30	-717.19	-1,526.25	14,527,176.02	1,735,099.05	40.00072217	-104.66190692	
7,500.02	51.25	244.83	6,690.90	-750.36	-1,596.83	14,527,142.85	1,735,028.47	40.00063182	-104.66215940	
7,600.02	51.25	244.83	6,753.49	-783.52	-1,667.42	14,527,109.68	1,734,957.89	40.00054147	-104.66241189	
7,700.02	51.25	244.83	6,816.08	-816.69	-1,738.00	14,527,076.52	1,734,887.30	40.00045112	-104.66266437	
7,800.02	51.25	244.83	6,878.68	-849.86	-1,808.58	14,527,043.35	1,734,816.72	40.00036078	-104.66291685	
7,807.08	51.25	244.83	6,883.09	-852.20	-1,813.57	14,527,041.01	1,734,811.74	40.00035440	-104.66293467	
Begin 10°/100' build/turn										
7,900.02	49.23	256.64	6,942.66	-875.80	-1,880.76	14,527,017.41	1,734,744.54	40.00029030	-104.66317491	
8,000.02	48.48	269.90	7,008.62	-884.63	-1,955.23	14,527,008.57	1,734,670.08	40.00026680	-104.66344094	
8,100.02	49.25	283.15	7,074.57	-876.06	-2,029.74	14,527,017.15	1,734,595.56	40.00029112	-104.66370689	
8,200.02	51.49	295.81	7,138.50	-850.34	-2,102.03	14,527,042.87	1,734,523.27	40.00036250	-104.66396467	
8,300.02	54.99	307.52	7,198.47	-808.25	-2,169.90	14,527,084.95	1,734,455.40	40.00047878	-104.66420646	
8,400.02	59.51	318.13	7,252.66	-751.08	-2,231.29	14,527,142.13	1,734,394.01	40.00063643	-104.66442490	
8,500.02	64.82	327.73	7,299.42	-680.55	-2,284.34	14,527,212.66	1,734,340.96	40.00083065	-104.66461337	
8,600.02	70.68	336.49	7,337.33	-598.81	-2,327.43	14,527,294.39	1,734,297.87	40.00105555	-104.66476614	
8,700.02	76.94	344.62	7,365.25	-508.35	-2,359.25	14,527,384.85	1,734,266.05	40.00130430	-104.66487856	
8,800.02	83.43	352.34	7,382.31	-411.92	-2,378.84	14,527,481.29	1,734,246.46	40.00156932	-104.66494721	
8,897.65	89.89	359.68	7,388.00	-314.80	-2,385.59	14,527,578.40	1,734,239.71	40.00183609	-104.66497002	
LP Begin 89.89° lateral section										
8,900.02	89.89	359.68	7,388.00	-312.44	-2,385.61	14,527,580.77	1,734,239.70	40.00184258	-104.66497003	
9,000.02	89.89	359.68	7,388.20	-212.44	-2,386.16	14,527,680.77	1,734,239.14	40.00211720	-104.66497067	
9,100.02	89.89	359.68	7,388.40	-112.44	-2,386.72	14,527,780.76	1,734,238.59	40.00239182	-104.66497131	
9,200.02	89.89	359.68	7,388.59	-12.44	-2,387.27	14,527,880.76	1,734,238.03	40.00266643	-104.66497194	
9,300.02	89.89	359.68	7,388.79	87.56	-2,387.82	14,527,980.76	1,734,237.48	40.00294105	-104.66497258	
9,400.02	89.89	359.68	7,388.99	187.56	-2,388.38	14,528,080.76	1,734,236.92	40.00321566	-104.66497322	
9,500.02	89.89	359.68	7,389.18	287.55	-2,388.93	14,528,180.76	1,734,236.37	40.00349028	-104.66497386	
9,600.02	89.89	359.68	7,389.38	387.55	-2,389.49	14,528,280.76	1,734,235.82	40.00376489	-104.66497449	
9,700.02	89.89	359.68	7,389.58	487.55	-2,390.04	14,528,380.75	1,734,235.26	40.00403951	-104.66497513	
9,800.02	89.89	359.68	7,389.77	587.55	-2,390.60	14,528,480.75	1,734,234.71	40.00431412	-104.66497577	
9,900.02	89.89	359.68	7,389.97	687.55	-2,391.15	14,528,580.75	1,734,234.15	40.00458874	-104.66497640	

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-03-3L
Company:	Confluence Resources	TVD Reference:	RKB=5138+25 @ 5163.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5138+25 @ 5163.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-03-3L	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	89.89	359.68	7,390.17	787.55	-2,391.70	14,528,680.75	1,734,233.60	40.00486335	-104.66497704
10,100.02	89.89	359.68	7,390.37	887.54	-2,392.26	14,528,780.75	1,734,233.04	40.00513797	-104.66497768
10,200.02	89.89	359.68	7,390.56	987.54	-2,392.81	14,528,880.75	1,734,232.49	40.00541259	-104.66497831
10,300.02	89.89	359.68	7,390.76	1,087.54	-2,393.37	14,528,980.74	1,734,231.94	40.00568720	-104.66497895
10,400.02	89.89	359.68	7,390.96	1,187.54	-2,393.92	14,529,080.74	1,734,231.38	40.00596182	-104.66497959
10,500.02	89.89	359.68	7,391.15	1,287.54	-2,394.48	14,529,180.74	1,734,230.83	40.00623643	-104.66498022
10,600.02	89.89	359.68	7,391.35	1,387.54	-2,395.03	14,529,280.74	1,734,230.27	40.00651105	-104.66498086
10,700.02	89.89	359.68	7,391.55	1,487.54	-2,395.58	14,529,380.74	1,734,229.72	40.00678566	-104.66498150
10,800.02	89.89	359.68	7,391.74	1,587.53	-2,396.14	14,529,480.74	1,734,229.17	40.00706028	-104.66498213
10,900.02	89.89	359.68	7,391.94	1,687.53	-2,396.69	14,529,580.73	1,734,228.61	40.00733489	-104.66498277
11,000.02	89.89	359.68	7,392.14	1,787.53	-2,397.25	14,529,680.73	1,734,228.06	40.00760951	-104.66498341
11,100.02	89.89	359.68	7,392.33	1,887.53	-2,397.80	14,529,780.73	1,734,227.50	40.00788412	-104.66498405
11,200.02	89.89	359.68	7,392.53	1,987.53	-2,398.36	14,529,880.73	1,734,226.95	40.00815874	-104.66498468
11,300.02	89.89	359.68	7,392.73	2,087.53	-2,398.91	14,529,980.73	1,734,226.39	40.00843335	-104.66498532
11,400.02	89.89	359.68	7,392.92	2,187.52	-2,399.46	14,530,080.73	1,734,225.84	40.00870797	-104.66498596
11,500.02	89.89	359.68	7,393.12	2,287.52	-2,400.02	14,530,180.72	1,734,225.29	40.00898258	-104.66498659
11,600.02	89.89	359.68	7,393.32	2,387.52	-2,400.57	14,530,280.72	1,734,224.73	40.00925720	-104.66498723
11,700.02	89.89	359.68	7,393.51	2,487.52	-2,401.13	14,530,380.72	1,734,224.18	40.00953181	-104.66498787
11,800.02	89.89	359.68	7,393.71	2,587.52	-2,401.68	14,530,480.72	1,734,223.62	40.00980643	-104.66498850
11,900.02	89.89	359.68	7,393.91	2,687.52	-2,402.24	14,530,580.72	1,734,223.07	40.01008104	-104.66498914
12,000.02	89.89	359.68	7,394.10	2,787.52	-2,402.79	14,530,680.71	1,734,222.51	40.01035566	-104.66498978
12,100.02	89.89	359.68	7,394.30	2,887.51	-2,403.34	14,530,780.71	1,734,221.96	40.01063027	-104.66499041
12,200.02	89.89	359.68	7,394.50	2,987.51	-2,403.90	14,530,880.71	1,734,221.41	40.01090489	-104.66499105
12,300.02	89.89	359.68	7,394.69	3,087.51	-2,404.45	14,530,980.71	1,734,220.85	40.01117950	-104.66499169
12,400.03	89.89	359.68	7,394.89	3,187.51	-2,405.01	14,531,080.71	1,734,220.30	40.01145412	-104.66499232
12,500.03	89.89	359.68	7,395.09	3,287.51	-2,405.56	14,531,180.71	1,734,219.74	40.01172873	-104.66499296
12,600.03	89.89	359.68	7,395.28	3,387.51	-2,406.11	14,531,280.70	1,734,219.19	40.01200335	-104.66499360
12,700.03	89.89	359.68	7,395.48	3,487.50	-2,406.67	14,531,380.70	1,734,218.63	40.01227796	-104.66499423
12,800.03	89.89	359.68	7,395.68	3,587.50	-2,407.22	14,531,480.70	1,734,218.08	40.01255258	-104.66499487
12,900.03	89.89	359.68	7,395.87	3,687.50	-2,407.78	14,531,580.70	1,734,217.53	40.01282719	-104.66499551
13,000.03	89.89	359.68	7,396.07	3,787.50	-2,408.33	14,531,680.70	1,734,216.97	40.01310181	-104.66499614
13,100.03	89.89	359.68	7,396.27	3,887.50	-2,408.89	14,531,780.70	1,734,216.42	40.01337642	-104.66499678
13,200.03	89.89	359.68	7,396.46	3,987.50	-2,409.44	14,531,880.69	1,734,215.86	40.01365104	-104.66499742
13,300.03	89.89	359.68	7,396.66	4,087.50	-2,409.99	14,531,980.69	1,734,215.31	40.01392565	-104.66499805
13,400.03	89.89	359.68	7,396.86	4,187.49	-2,410.55	14,532,080.69	1,734,214.76	40.01420027	-104.66499869
13,500.03	89.89	359.68	7,397.05	4,287.49	-2,411.10	14,532,180.69	1,734,214.20	40.01447488	-104.66499933
13,600.03	89.89	359.68	7,397.25	4,387.49	-2,411.66	14,532,280.69	1,734,213.65	40.01474950	-104.66499997
13,700.03	89.89	359.68	7,397.45	4,487.49	-2,412.21	14,532,380.69	1,734,213.09	40.01502411	-104.66500060
13,800.03	89.89	359.68	7,397.64	4,587.49	-2,412.77	14,532,480.68	1,734,212.54	40.01529873	-104.66500124
13,900.03	89.89	359.68	7,397.84	4,687.49	-2,413.32	14,532,580.68	1,734,211.98	40.01557334	-104.66500188
14,000.03	89.89	359.68	7,398.04	4,787.49	-2,413.87	14,532,680.68	1,734,211.43	40.01584796	-104.66500251
14,100.03	89.89	359.68	7,398.23	4,887.48	-2,414.43	14,532,780.68	1,734,210.88	40.01612257	-104.66500315
14,200.03	89.89	359.68	7,398.43	4,987.48	-2,414.98	14,532,880.68	1,734,210.32	40.01639719	-104.66500379
14,300.03	89.89	359.68	7,398.63	5,087.48	-2,415.54	14,532,980.68	1,734,209.77	40.01667180	-104.66500442
14,400.03	89.89	359.68	7,398.82	5,187.48	-2,416.09	14,533,080.67	1,734,209.21	40.01694642	-104.66500506
14,500.03	89.89	359.68	7,399.02	5,287.48	-2,416.65	14,533,180.67	1,734,208.66	40.01722103	-104.66500570
14,600.03	89.89	359.68	7,399.22	5,387.48	-2,417.20	14,533,280.67	1,734,208.10	40.01749565	-104.66500633
14,700.03	89.89	359.68	7,399.41	5,487.47	-2,417.75	14,533,380.67	1,734,207.55	40.01777026	-104.66500697
14,800.03	89.89	359.68	7,399.61	5,587.47	-2,418.31	14,533,480.67	1,734,207.00	40.01804488	-104.66500761
14,900.03	89.89	359.68	7,399.81	5,687.47	-2,418.86	14,533,580.66	1,734,206.44	40.01831949	-104.66500824
15,000.03	89.89	359.68	7,400.00	5,787.47	-2,419.42	14,533,680.66	1,734,205.89	40.01859411	-104.66500888
15,100.03	89.89	359.68	7,400.20	5,887.47	-2,419.97	14,533,780.66	1,734,205.33	40.01886872	-104.66500952
15,200.03	89.89	359.68	7,400.40	5,987.47	-2,420.52	14,533,880.66	1,734,204.78	40.01914334	-104.66501015
15,300.03	89.89	359.68	7,400.59	6,087.47	-2,421.08	14,533,980.66	1,734,204.22	40.01941795	-104.66501079
15,400.03	89.89	359.68	7,400.79	6,187.46	-2,421.63	14,534,080.66	1,734,203.67	40.01969257	-104.66501143

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-03-3L
Company:	Confluence Resources	TVD Reference:	RKB=5138+25 @ 5163.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5138+25 @ 5163.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-03-3L	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	89.89	359.68	7,400.99	6,287.46	-2,422.19	14,534,180.65	1,734,203.12	40.01996718	-104.66501206
15,600.03	89.89	359.68	7,401.18	6,387.46	-2,422.74	14,534,280.65	1,734,202.56	40.02024180	-104.66501270
15,700.03	89.89	359.68	7,401.38	6,487.46	-2,423.30	14,534,380.65	1,734,202.01	40.02051641	-104.66501334
15,800.03	89.89	359.68	7,401.58	6,587.46	-2,423.85	14,534,480.65	1,734,201.45	40.02079102	-104.66501397
15,900.03	89.89	359.68	7,401.77	6,687.46	-2,424.40	14,534,580.65	1,734,200.90	40.02106564	-104.66501461
16,000.03	89.89	359.68	7,401.97	6,787.45	-2,424.96	14,534,680.65	1,734,200.34	40.02134025	-104.66501525
16,100.03	89.89	359.68	7,402.17	6,887.45	-2,425.51	14,534,780.64	1,734,199.79	40.02161487	-104.66501588
16,200.03	89.89	359.68	7,402.36	6,987.45	-2,426.07	14,534,880.64	1,734,199.24	40.02188948	-104.66501652
16,300.03	89.89	359.68	7,402.56	7,087.45	-2,426.62	14,534,980.64	1,734,198.68	40.02216410	-104.66501716
16,400.03	89.89	359.68	7,402.76	7,187.45	-2,427.18	14,535,080.64	1,734,198.13	40.02243871	-104.66501779
16,500.03	89.89	359.68	7,402.95	7,287.45	-2,427.73	14,535,180.64	1,734,197.57	40.02271333	-104.66501843
16,600.03	89.89	359.68	7,403.15	7,387.45	-2,428.28	14,535,280.64	1,734,197.02	40.02298794	-104.66501907
16,700.03	89.89	359.68	7,403.35	7,487.44	-2,428.84	14,535,380.63	1,734,196.47	40.02326256	-104.66501970
16,800.03	89.89	359.68	7,403.54	7,587.44	-2,429.39	14,535,480.63	1,734,195.91	40.02353717	-104.66502034
16,900.03	89.89	359.68	7,403.74	7,687.44	-2,429.95	14,535,580.63	1,734,195.36	40.02381178	-104.66502098
17,000.03	89.89	359.68	7,403.94	7,787.44	-2,430.50	14,535,680.63	1,734,194.80	40.02408640	-104.66502161
17,100.03	89.89	359.68	7,404.13	7,887.44	-2,431.06	14,535,780.63	1,734,194.25	40.02436101	-104.66502225
17,200.03	89.89	359.68	7,404.33	7,987.44	-2,431.61	14,535,880.63	1,734,193.69	40.02463563	-104.66502289
17,300.03	89.89	359.68	7,404.53	8,087.43	-2,432.16	14,535,980.62	1,734,193.14	40.02491024	-104.66502352
17,400.04	89.89	359.68	7,404.72	8,187.43	-2,432.72	14,536,080.62	1,734,192.59	40.02518486	-104.66502416
17,500.04	89.89	359.68	7,404.92	8,287.43	-2,433.27	14,536,180.62	1,734,192.03	40.02545947	-104.66502480
17,600.04	89.89	359.68	7,405.12	8,387.43	-2,433.83	14,536,280.62	1,734,191.48	40.02573409	-104.66502543
17,700.04	89.89	359.68	7,405.31	8,487.43	-2,434.38	14,536,380.62	1,734,190.92	40.02600870	-104.66502607
17,800.04	89.89	359.68	7,405.51	8,587.43	-2,434.93	14,536,480.61	1,734,190.37	40.02628331	-104.66502671
17,900.04	89.89	359.68	7,405.71	8,687.43	-2,435.49	14,536,580.61	1,734,189.81	40.02655793	-104.66502734
18,000.04	89.89	359.68	7,405.90	8,787.42	-2,436.04	14,536,680.61	1,734,189.26	40.02683254	-104.66502798
18,100.04	89.89	359.68	7,406.10	8,887.42	-2,436.60	14,536,780.61	1,734,188.71	40.02710716	-104.66502862
18,200.04	89.89	359.68	7,406.30	8,987.42	-2,437.15	14,536,880.61	1,734,188.15	40.02738177	-104.66502925
18,300.04	89.89	359.68	7,406.49	9,087.42	-2,437.71	14,536,980.61	1,734,187.60	40.02765639	-104.66502989
18,400.04	89.89	359.68	7,406.69	9,187.42	-2,438.26	14,537,080.60	1,734,187.04	40.02793100	-104.66503053
18,500.04	89.89	359.68	7,406.89	9,287.42	-2,438.81	14,537,180.60	1,734,186.49	40.02820561	-104.66503116
18,557.84	89.89	359.68	7,407.00	9,345.22	-2,439.13	14,537,238.40	1,734,186.17	40.02836435	-104.66503153
PBHL/TD 18557.84 MD 7407.00 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LP Buford 33-03-3L 470 - hit/miss target - Shape	0.00	0.00	7,388.00	-314.80	-2,385.59	14,527,578.40	1,734,239.71	40.00183609	-104.66497002
BHL Buford 33-03-3L 47 - plan hits target center - Point	0.00	0.00	7,407.00	9,345.22	-2,439.13	14,537,238.40	1,734,186.17	40.02836435	-104.66503153

Database:	DB_Aug0116_LT_v14	Local Co-ordinate Reference:	Well Buford 33-03-3L
Company:	Confluence Resources	TVD Reference:	RKB=5138+25 @ 5163.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5138+25 @ 5163.00ft
Site:	Section 34-T01N-R65W	North Reference:	Grid
Well:	Buford 33-03-3L	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
5,512.49	5,446.84	-91.15	-193.98	Begin 51.25° tangent section
7,807.08	6,883.09	-852.20	-1,813.57	Begin 10°/100' build/turn
8,897.65	7,388.00	-314.80	-2,385.59	LP Begin 89.89° lateral section
18,557.84	7,407.00	9,345.22	-2,439.13	PBHL/TD 18557.84 MD 7407.00 TVD