

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	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	KOP Begin 1°/100' build
3	2666.91	13.34	141.14	2660.91	-60.18	48.48	2.00	-57.53	Begin 13.34° tangent
4	5635.92	13.34	141.14	5549.82	-593.57	478.19	0.00	-567.40	Begin 10°/100' build
5	6639.96	90.00	359.63	6219.00	-29.41	573.32	10.00	1.01	LP Begin 90° lateral
6	16305.93	90.00	359.63	6219.00	9636.36	511.41	0.00	9649.92	PBHL/TD 16305.92 MD/6219.00 TVD

DESIGN TARGET DETAILS

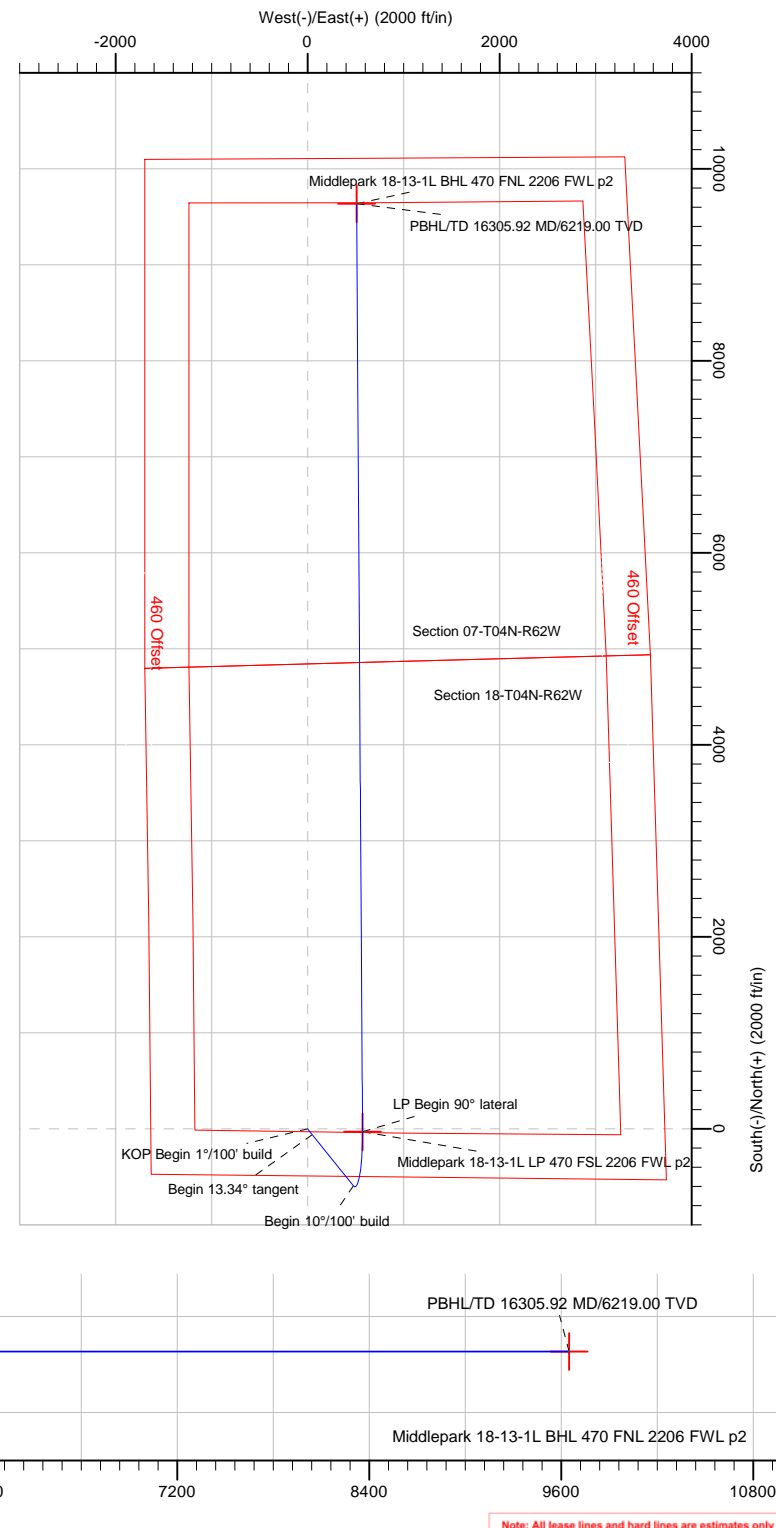
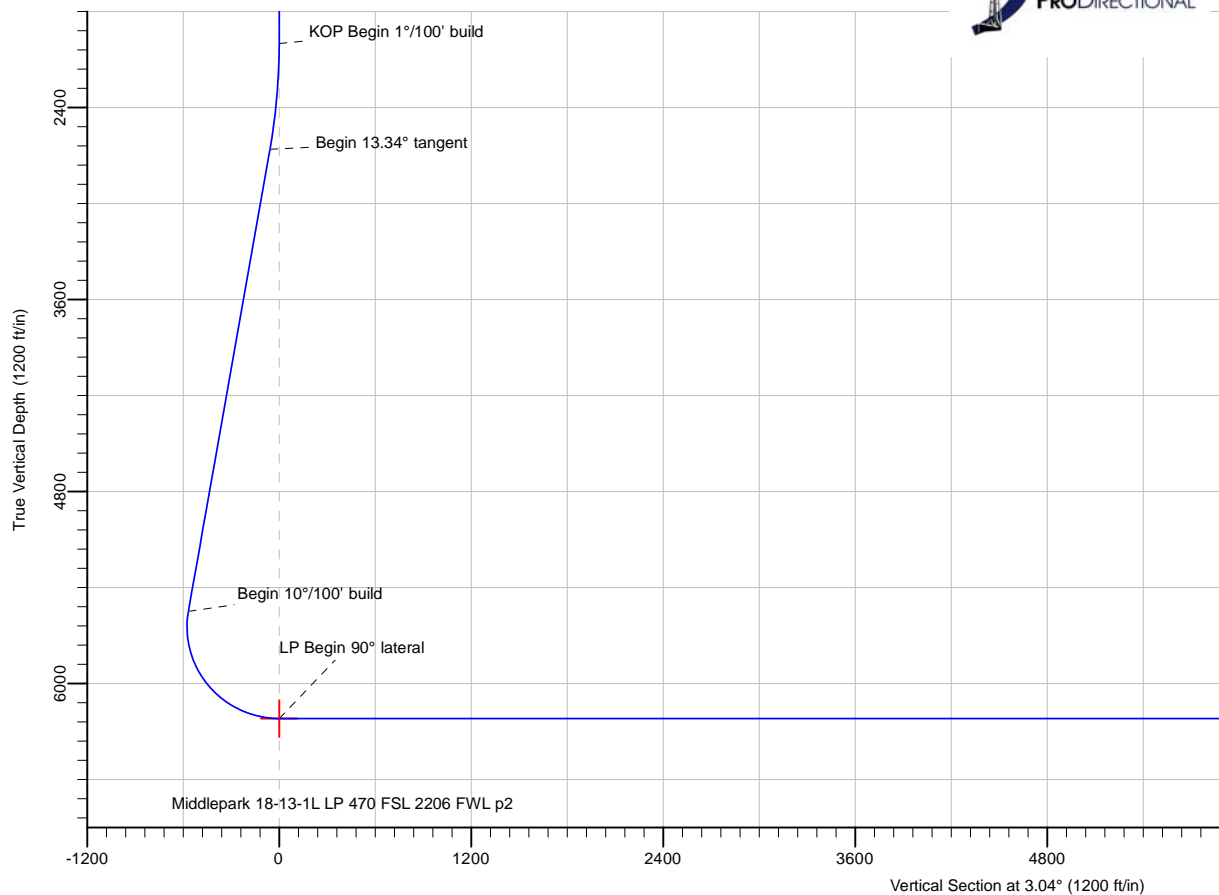
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Middlepark 18-13-1L BHL 470 FNL 2206 FWL p2	6219.00	9636.36	511.41	14648618.46	1816306.12	40.33298824	-104.36886336
Middlepark 18-13-1L LP 470 FSL 2206 FWL p2	6219.00	-29.41	573.32	14638953.39	1816436.70	40.30644662	-104.36864211



Azimuths to True North
Magnetic North: 8.18°

Magnetic Field
Strength: 52247.0snT
Dip Angle: 66.90°
Date: 4/22/2018
Model: HDGM

Middlepark 18-13-1L Surf loc: 491 FSL 1633 FWL Section 18-T04N-R62W			
NAD83 Colorado - HARN Universal Transverse Mercator (US Survey Feet) Zone 13N (108 W to 102 W) RKB=4558+24 @ 4582.00ft			
Northing	Easting	Latitude	Longitude
14638978.73	1815863.19	40.30652740	-104.37069844



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

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-13-1L
Company:	Confluence Resources	TVD Reference:	RKB=4558+24 @ 4582.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4558+24 @ 4582.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-13-1L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan2		

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 18-T04N-R62W			
Site Position:		Northing:	14,641,153.41 usft	Latitude:	40.31252000
From:	Lat/Long	Easting:	1,814,773.97 usft	Longitude:	-104.37455000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40 °

Well	Middlepark 18-13-1L, Surf loc: 491 FSL 1633 FWL Section 18-T04N-R62W					
Well Position	+N/-S	-2,182.32 ft	Northing:	14,638,978.73 usft	Latitude:	40.30652741
	+E/-W	1,073.83 ft	Easting:	1,815,863.19 usft	Longitude:	-104.37069844
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,558.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/22/2018	8.18	66.90	52,247.00000000

Design	plan2			
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	3.04

Plan Survey Tool Program	Date	4/27/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,305.93	plan2 (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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,666.91	13.34	141.14	2,660.91	-60.18	48.48	2.00	2.00	0.00	141.14	
5,635.92	13.34	141.14	5,549.82	-593.57	478.19	0.00	0.00	0.00	0.00	
6,639.96	90.00	359.63	6,219.00	-29.41	573.32	10.00	7.64	-14.09	-140.75	Middlepark 18-13-1L I
16,305.93	90.00	359.63	6,219.00	9,636.36	511.41	0.00	0.00	0.00	0.00	Middlepark 18-13-1L I

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-13-1L
Company:	Confluence Resources	TVD Reference:	RKB=4558+24 @ 4582.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4558+24 @ 4582.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-13-1L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan2		

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
KOP Begin 1°/100' build									
2,100.00	2.00	141.14	2,099.98	-1.36	1.09	-1.30	2.00	2.00	0.00
2,200.00	4.00	141.14	2,199.84	-5.43	4.38	-5.19	2.00	2.00	0.00
2,300.00	6.00	141.14	2,299.45	-12.22	9.85	-11.68	2.00	2.00	0.00
2,400.00	8.00	141.14	2,398.70	-21.71	17.49	-20.75	2.00	2.00	0.00
2,500.00	10.00	141.14	2,497.47	-33.89	27.30	-32.40	2.00	2.00	0.00
2,600.00	12.00	141.14	2,595.62	-48.75	39.27	-46.60	2.00	2.00	0.00
2,666.91	13.34	141.14	2,660.90	-60.18	48.48	-57.52	2.00	2.00	0.00
Begin 13.34° tangent									
2,700.00	13.34	141.14	2,693.10	-66.12	53.27	-63.21	0.00	0.00	0.00
2,800.00	13.34	141.14	2,790.40	-84.09	67.74	-80.38	0.00	0.00	0.00
2,900.00	13.34	141.14	2,887.71	-102.05	82.22	-97.55	0.00	0.00	0.00
3,000.00	13.34	141.14	2,985.01	-120.02	96.69	-114.73	0.00	0.00	0.00
3,100.00	13.34	141.14	3,082.31	-137.98	111.16	-131.90	0.00	0.00	0.00
3,200.00	13.34	141.14	3,179.61	-155.95	125.63	-149.07	0.00	0.00	0.00
3,300.00	13.34	141.14	3,276.91	-173.92	140.11	-166.25	0.00	0.00	0.00
3,400.00	13.34	141.14	3,374.22	-191.88	154.58	-183.42	0.00	0.00	0.00
3,500.00	13.34	141.14	3,471.52	-209.85	169.05	-200.59	0.00	0.00	0.00
3,600.00	13.34	141.14	3,568.82	-227.81	183.53	-217.77	0.00	0.00	0.00
3,700.00	13.34	141.14	3,666.12	-245.78	198.00	-234.94	0.00	0.00	0.00
3,800.00	13.34	141.14	3,763.43	-263.74	212.47	-252.11	0.00	0.00	0.00
3,900.00	13.34	141.14	3,860.73	-281.71	226.95	-269.28	0.00	0.00	0.00
4,000.00	13.34	141.14	3,958.03	-299.67	241.42	-286.46	0.00	0.00	0.00
4,100.00	13.34	141.14	4,055.33	-317.64	255.89	-303.63	0.00	0.00	0.00
4,200.00	13.34	141.14	4,152.64	-335.60	270.36	-320.80	0.00	0.00	0.00
4,300.00	13.34	141.14	4,249.94	-353.57	284.84	-337.98	0.00	0.00	0.00
4,400.00	13.34	141.14	4,347.24	-371.54	299.31	-355.15	0.00	0.00	0.00
4,500.00	13.34	141.14	4,444.54	-389.50	313.78	-372.32	0.00	0.00	0.00
4,600.00	13.34	141.14	4,541.85	-407.47	328.26	-389.50	0.00	0.00	0.00
4,700.00	13.34	141.14	4,639.15	-425.43	342.73	-406.67	0.00	0.00	0.00
4,800.00	13.34	141.14	4,736.45	-443.40	357.20	-423.84	0.00	0.00	0.00
4,900.00	13.34	141.14	4,833.75	-461.36	371.68	-441.02	0.00	0.00	0.00

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Company:	Confluence Resources	TVD Reference:	RKB=4558+24 @ 4582.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4558+24 @ 4582.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-13-1L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan2		

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)
5,000.00	13.34	141.14	4,931.06	-479.33	386.15	-458.19	0.00	0.00	0.00
5,100.00	13.34	141.14	5,028.36	-497.29	400.62	-475.36	0.00	0.00	0.00
5,200.00	13.34	141.14	5,125.66	-515.26	415.09	-492.54	0.00	0.00	0.00
5,300.00	13.34	141.14	5,222.96	-533.22	429.57	-509.71	0.00	0.00	0.00
5,400.00	13.34	141.14	5,320.27	-551.19	444.04	-526.88	0.00	0.00	0.00
5,500.00	13.34	141.14	5,417.57	-569.16	458.51	-544.06	0.00	0.00	0.00
5,600.00	13.34	141.14	5,514.87	-587.12	472.99	-561.23	0.00	0.00	0.00
5,635.92	13.34	141.14	5,549.82	-593.57	478.19	-567.40	0.00	0.00	0.00
Begin 10°/100' build									
5,700.00	9.29	115.20	5,612.68	-601.54	487.51	-574.86	10.00	-6.32	-40.48
5,800.00	10.31	53.86	5,711.47	-599.70	502.08	-572.25	10.00	1.02	-61.35
5,900.00	18.02	26.61	5,808.46	-580.54	516.27	-552.36	10.00	7.71	-27.25
6,000.00	27.24	16.29	5,900.70	-544.66	529.65	-515.82	10.00	9.21	-10.31
6,100.00	36.84	10.99	5,985.38	-493.13	541.81	-463.72	10.00	9.61	-5.30
6,200.00	46.59	7.66	6,059.95	-427.53	552.40	-397.66	10.00	9.75	-3.34
6,300.00	56.42	5.26	6,122.12	-349.86	561.07	-319.63	10.00	9.82	-2.40
6,400.00	66.28	3.35	6,170.01	-262.46	567.58	-232.01	10.00	9.86	-1.90
6,500.00	76.16	1.72	6,202.17	-168.00	571.72	-137.46	10.00	9.88	-1.63
6,600.00	86.05	0.22	6,217.62	-69.34	573.37	-38.85	10.00	9.89	-1.50
6,639.96	90.00	359.63	6,219.00	-29.41	573.32	1.02	10.00	9.89	-1.46
LP Begin 90° lateral									
6,700.00	90.00	359.63	6,219.00	30.63	572.93	60.95	0.00	0.00	0.00
6,800.00	90.00	359.63	6,219.00	130.63	572.29	160.77	0.00	0.00	0.00
6,900.00	90.00	359.63	6,219.00	230.62	571.65	260.60	0.00	0.00	0.00
7,000.00	90.00	359.63	6,219.00	330.62	571.01	360.42	0.00	0.00	0.00
7,100.00	90.00	359.63	6,219.00	430.62	570.37	460.24	0.00	0.00	0.00
7,200.00	90.00	359.63	6,219.00	530.62	569.73	560.07	0.00	0.00	0.00
7,300.00	90.00	359.63	6,219.00	630.62	569.09	659.89	0.00	0.00	0.00
7,400.00	90.00	359.63	6,219.00	730.61	568.45	759.71	0.00	0.00	0.00
7,500.00	90.00	359.63	6,219.00	830.61	567.81	859.54	0.00	0.00	0.00
7,600.00	90.00	359.63	6,219.00	930.61	567.17	959.36	0.00	0.00	0.00
7,700.00	90.00	359.63	6,219.00	1,030.61	566.53	1,059.18	0.00	0.00	0.00
7,800.00	90.00	359.63	6,219.00	1,130.61	565.89	1,159.01	0.00	0.00	0.00
7,900.00	90.00	359.63	6,219.00	1,230.60	565.25	1,258.83	0.00	0.00	0.00
8,000.00	90.00	359.63	6,219.00	1,330.60	564.61	1,358.65	0.00	0.00	0.00
8,100.00	90.00	359.63	6,219.00	1,430.60	563.97	1,458.48	0.00	0.00	0.00
8,200.00	90.00	359.63	6,219.00	1,530.60	563.33	1,558.30	0.00	0.00	0.00
8,300.00	90.00	359.63	6,219.00	1,630.60	562.69	1,658.12	0.00	0.00	0.00
8,400.00	90.00	359.63	6,219.00	1,730.59	562.05	1,757.95	0.00	0.00	0.00
8,500.00	90.00	359.63	6,219.00	1,830.59	561.40	1,857.77	0.00	0.00	0.00
8,600.00	90.00	359.63	6,219.00	1,930.59	560.76	1,957.60	0.00	0.00	0.00
8,700.00	90.00	359.63	6,219.00	2,030.59	560.12	2,057.42	0.00	0.00	0.00
8,800.00	90.00	359.63	6,219.00	2,130.59	559.48	2,157.24	0.00	0.00	0.00
8,900.00	90.00	359.63	6,219.00	2,230.58	558.84	2,257.07	0.00	0.00	0.00
9,000.00	90.00	359.63	6,219.00	2,330.58	558.20	2,356.89	0.00	0.00	0.00
9,100.00	90.00	359.63	6,219.00	2,430.58	557.56	2,456.71	0.00	0.00	0.00
9,200.00	90.00	359.63	6,219.00	2,530.58	556.92	2,556.54	0.00	0.00	0.00
9,300.00	90.00	359.63	6,219.00	2,630.58	556.28	2,656.36	0.00	0.00	0.00
9,400.00	90.00	359.63	6,219.00	2,730.57	555.64	2,756.18	0.00	0.00	0.00
9,500.00	90.00	359.63	6,219.00	2,830.57	555.00	2,856.01	0.00	0.00	0.00
9,600.00	90.00	359.63	6,219.00	2,930.57	554.36	2,955.83	0.00	0.00	0.00
9,700.00	90.00	359.63	6,219.00	3,030.57	553.72	3,055.65	0.00	0.00	0.00
9,800.00	90.00	359.63	6,219.00	3,130.57	553.08	3,155.48	0.00	0.00	0.00
9,900.00	90.00	359.63	6,219.00	3,230.56	552.44	3,255.30	0.00	0.00	0.00

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Project:	Weld County, Colorado	MD Reference:	RKB=4558+24 @ 4582.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-13-1L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan2		

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)
10,000.00	90.00	359.63	6,219.00	3,330.56	551.80	3,355.12	0.00	0.00	0.00
10,100.00	90.00	359.63	6,219.00	3,430.56	551.16	3,454.95	0.00	0.00	0.00
10,200.00	90.00	359.63	6,219.00	3,530.56	550.52	3,554.77	0.00	0.00	0.00
10,300.00	90.00	359.63	6,219.00	3,630.55	549.88	3,654.59	0.00	0.00	0.00
10,400.00	90.00	359.63	6,219.00	3,730.55	549.24	3,754.42	0.00	0.00	0.00
10,500.00	90.00	359.63	6,219.00	3,830.55	548.60	3,854.24	0.00	0.00	0.00
10,600.00	90.00	359.63	6,219.00	3,930.55	547.96	3,954.07	0.00	0.00	0.00
10,700.00	90.00	359.63	6,219.00	4,030.55	547.32	4,053.89	0.00	0.00	0.00
10,800.00	90.00	359.63	6,219.00	4,130.54	546.68	4,153.71	0.00	0.00	0.00
10,900.00	90.00	359.63	6,219.00	4,230.54	546.03	4,253.54	0.00	0.00	0.00
11,000.00	90.00	359.63	6,219.00	4,330.54	545.39	4,353.36	0.00	0.00	0.00
11,100.00	90.00	359.63	6,219.00	4,430.54	544.75	4,453.18	0.00	0.00	0.00
11,200.00	90.00	359.63	6,219.00	4,530.54	544.11	4,553.01	0.00	0.00	0.00
11,300.00	90.00	359.63	6,219.00	4,630.53	543.47	4,652.83	0.00	0.00	0.00
11,400.00	90.00	359.63	6,219.00	4,730.53	542.83	4,752.65	0.00	0.00	0.00
11,500.00	90.00	359.63	6,219.00	4,830.53	542.19	4,852.48	0.00	0.00	0.00
11,600.00	90.00	359.63	6,219.00	4,930.53	541.55	4,952.30	0.00	0.00	0.00
11,700.00	90.00	359.63	6,219.00	5,030.53	540.91	5,052.12	0.00	0.00	0.00
11,800.00	90.00	359.63	6,219.00	5,130.52	540.27	5,151.95	0.00	0.00	0.00
11,900.00	90.00	359.63	6,219.00	5,230.52	539.63	5,251.77	0.00	0.00	0.00
12,000.00	90.00	359.63	6,219.00	5,330.52	538.99	5,351.59	0.00	0.00	0.00
12,100.00	90.00	359.63	6,219.00	5,430.52	538.35	5,451.42	0.00	0.00	0.00
12,200.00	90.00	359.63	6,219.00	5,530.52	537.71	5,551.24	0.00	0.00	0.00
12,300.00	90.00	359.63	6,219.00	5,630.51	537.07	5,651.06	0.00	0.00	0.00
12,400.00	90.00	359.63	6,219.00	5,730.51	536.43	5,750.89	0.00	0.00	0.00
12,500.00	90.00	359.63	6,219.00	5,830.51	535.79	5,850.71	0.00	0.00	0.00
12,600.00	90.00	359.63	6,219.00	5,930.51	535.15	5,950.53	0.00	0.00	0.00
12,700.00	90.00	359.63	6,219.00	6,030.51	534.51	6,050.36	0.00	0.00	0.00
12,800.00	90.00	359.63	6,219.00	6,130.50	533.87	6,150.18	0.00	0.00	0.00
12,900.00	90.00	359.63	6,219.00	6,230.50	533.23	6,250.01	0.00	0.00	0.00
13,000.00	90.00	359.63	6,219.00	6,330.50	532.59	6,349.83	0.00	0.00	0.00
13,100.00	90.00	359.63	6,219.00	6,430.50	531.95	6,449.65	0.00	0.00	0.00
13,200.00	90.00	359.63	6,219.00	6,530.50	531.31	6,549.48	0.00	0.00	0.00
13,300.00	90.00	359.63	6,219.00	6,630.49	530.66	6,649.30	0.00	0.00	0.00
13,400.00	90.00	359.63	6,219.00	6,730.49	530.02	6,749.12	0.00	0.00	0.00
13,500.00	90.00	359.63	6,219.00	6,830.49	529.38	6,848.95	0.00	0.00	0.00
13,600.00	90.00	359.63	6,219.00	6,930.49	528.74	6,948.77	0.00	0.00	0.00
13,700.00	90.00	359.63	6,219.00	7,030.49	528.10	7,048.59	0.00	0.00	0.00
13,800.00	90.00	359.63	6,219.00	7,130.48	527.46	7,148.42	0.00	0.00	0.00
13,900.00	90.00	359.63	6,219.00	7,230.48	526.82	7,248.24	0.00	0.00	0.00
14,000.00	90.00	359.63	6,219.00	7,330.48	526.18	7,348.06	0.00	0.00	0.00
14,100.00	90.00	359.63	6,219.00	7,430.48	525.54	7,447.89	0.00	0.00	0.00
14,200.00	90.00	359.63	6,219.00	7,530.48	524.90	7,547.71	0.00	0.00	0.00
14,300.00	90.00	359.63	6,219.00	7,630.47	524.26	7,647.53	0.00	0.00	0.00
14,400.00	90.00	359.63	6,219.00	7,730.47	523.62	7,747.36	0.00	0.00	0.00
14,500.00	90.00	359.63	6,219.00	7,830.47	522.98	7,847.18	0.00	0.00	0.00
14,600.00	90.00	359.63	6,219.00	7,930.47	522.34	7,947.00	0.00	0.00	0.00
14,700.00	90.00	359.63	6,219.00	8,030.46	521.70	8,046.83	0.00	0.00	0.00
14,800.00	90.00	359.63	6,219.00	8,130.46	521.06	8,146.65	0.00	0.00	0.00
14,900.00	90.00	359.63	6,219.00	8,230.46	520.42	8,246.47	0.00	0.00	0.00
15,000.00	90.00	359.63	6,219.00	8,330.46	519.78	8,346.30	0.00	0.00	0.00
15,100.00	90.00	359.63	6,219.00	8,430.46	519.14	8,446.12	0.00	0.00	0.00
15,200.00	90.00	359.63	6,219.00	8,530.45	518.50	8,545.95	0.00	0.00	0.00
15,300.00	90.00	359.63	6,219.00	8,630.45	517.86	8,645.77	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-13-1L
Company:	Confluence Resources	TVD Reference:	RKB=4558+24 @ 4582.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4558+24 @ 4582.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-13-1L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan2		

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)
15,400.00	90.00	359.63	6,219.00	8,730.45	517.22	8,745.59	0.00	0.00	0.00
15,500.00	90.00	359.63	6,219.00	8,830.45	516.58	8,845.42	0.00	0.00	0.00
15,600.00	90.00	359.63	6,219.00	8,930.45	515.94	8,945.24	0.00	0.00	0.00
15,700.00	90.00	359.63	6,219.00	9,030.44	515.29	9,045.06	0.00	0.00	0.00
15,800.00	90.00	359.63	6,219.00	9,130.44	514.65	9,144.89	0.00	0.00	0.00
15,900.00	90.00	359.63	6,219.00	9,230.44	514.01	9,244.71	0.00	0.00	0.00
16,000.00	90.00	359.63	6,219.00	9,330.44	513.37	9,344.53	0.00	0.00	0.00
16,100.00	90.00	359.63	6,219.00	9,430.44	512.73	9,444.36	0.00	0.00	0.00
16,200.00	90.00	359.63	6,219.00	9,530.43	512.09	9,544.18	0.00	0.00	0.00
16,300.00	90.00	359.63	6,219.00	9,630.43	511.45	9,644.00	0.00	0.00	0.00
16,305.92	90.00	359.63	6,219.00	9,636.35	511.41	9,649.91	0.00	0.00	0.00
PBHL/TD 16305.92 MD/6219.00 TVD									
16,305.93	90.00	359.63	6,219.00	9,636.36	511.41	9,649.92	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
Middlepark 18-13-1L LP - plan hits target center - Point	0.00	0.00	6,219.00	-29.41	573.32	14,638,953.39	1,816,436.70	40.30644662	-104.36864211
Middlepark 18-13-1L BH - plan hits target center - Point	0.00	0.00	6,219.00	9,636.36	511.41	14,648,618.46	1,816,306.12	40.33298823	-104.36886337

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,000.00	2,000.00	0.00	0.00	KOP Begin 1°/100' build
2,666.91	2,660.90	-60.18	48.48	Begin 13.34° tangent
5,635.92	5,549.82	-593.57	478.19	Begin 10°/100' build
6,639.96	6,219.00	-29.41	573.32	LP Begin 90° lateral
16,305.92	6,219.00	9,636.35	511.41	PBHL/TD 16305.92 MD/6219.00 TVD

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-13-1L
Company:	Confluence Resources	TVD Reference:	RKB=4558+24 @ 4582.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4558+24 @ 4582.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-13-1L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan2		

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 18-T04N-R62W			
Site Position:		Northing:	14,641,153.41 usft	Latitude:	40.31252000
From:	Lat/Long	Easting:	1,814,773.97 usft	Longitude:	-104.37455000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40 °

Well	Middlepark 18-13-1L, Surf loc: 491 FSL 1633 FWL Section 18-T04N-R62W					
Well Position	+N/-S	0.00 ft	Northing:	14,638,978.73 usft	Latitude:	40.30652741
	+E/-W	0.00 ft	Easting:	1,815,863.19 usft	Longitude:	-104.37069844
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,558.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/22/2018	8.18	66.90	52,247.00000000

Design	plan2			
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	3.04

Plan Survey Tool Program	Date	4/27/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,305.93 plan2 (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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,666.91	13.34	141.14	2,660.91	-60.18	48.48	2.00	2.00	0.00	141.14	
5,635.92	13.34	141.14	5,549.82	-593.57	478.19	0.00	0.00	0.00	0.00	
6,639.96	90.00	359.63	6,219.00	-29.41	573.32	10.00	7.64	-14.09	-140.75	Middlepark 18-13-1L I
16,305.93	90.00	359.63	6,219.00	9,636.36	511.41	0.00	0.00	0.00	0.00	Middlepark 18-13-1L I

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-13-1L
Company:	Confluence Resources	TVD Reference:	RKB=4558+24 @ 4582.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4558+24 @ 4582.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-13-1L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan2		

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	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
100.00	0.00	0.00	100.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
200.00	0.00	0.00	200.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
300.00	0.00	0.00	300.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
400.00	0.00	0.00	400.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
500.00	0.00	0.00	500.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
600.00	0.00	0.00	600.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
700.00	0.00	0.00	700.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
800.00	0.00	0.00	800.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
900.00	0.00	0.00	900.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,638,978.73	1,815,863.19	40.30652741	-104.37069844
KOP Begin 1°/100' build									
2,100.00	2.00	141.14	2,099.98	-1.36	1.09	14,638,977.38	1,815,864.30	40.30652368	-104.37069452
2,200.00	4.00	141.14	2,199.84	-5.43	4.38	14,638,973.32	1,815,867.61	40.30651249	-104.37068274
2,300.00	6.00	141.14	2,299.45	-12.22	9.85	14,638,966.58	1,815,873.12	40.30649385	-104.37066313
2,400.00	8.00	141.14	2,398.70	-21.71	17.49	14,638,957.14	1,815,880.83	40.30646779	-104.37063571
2,500.00	10.00	141.14	2,497.47	-33.89	27.30	14,638,945.03	1,815,890.73	40.30643434	-104.37060051
2,600.00	12.00	141.14	2,595.62	-48.75	39.27	14,638,930.26	1,815,902.81	40.30639354	-104.37055758
2,666.91	13.34	141.14	2,660.90	-60.18	48.48	14,638,918.90	1,815,912.10	40.30636216	-104.37052456
Begin 13.34° tangent									
2,700.00	13.34	141.14	2,693.10	-66.12	53.27	14,638,912.98	1,815,916.93	40.30634584	-104.37050738
2,800.00	13.34	141.14	2,790.40	-84.09	67.74	14,638,895.12	1,815,931.53	40.30629651	-104.37045547
2,900.00	13.34	141.14	2,887.71	-102.05	82.22	14,638,877.26	1,815,946.13	40.30624717	-104.37040356
3,000.00	13.34	141.14	2,985.01	-120.02	96.69	14,638,859.40	1,815,960.73	40.30619784	-104.37035165
3,100.00	13.34	141.14	3,082.31	-137.98	111.16	14,638,841.54	1,815,975.33	40.30614851	-104.37029974
3,200.00	13.34	141.14	3,179.61	-155.95	125.63	14,638,823.67	1,815,989.93	40.30609918	-104.37024783
3,300.00	13.34	141.14	3,276.91	-173.92	140.11	14,638,805.81	1,816,004.53	40.30604985	-104.37019592
3,400.00	13.34	141.14	3,374.22	-191.88	154.58	14,638,787.95	1,816,019.13	40.30600051	-104.37014401
3,500.00	13.34	141.14	3,471.52	-209.85	169.05	14,638,770.09	1,816,033.73	40.30595118	-104.37009210
3,600.00	13.34	141.14	3,568.82	-227.81	183.53	14,638,752.23	1,816,048.33	40.30590185	-104.37004019
3,700.00	13.34	141.14	3,666.12	-245.78	198.00	14,638,734.36	1,816,062.93	40.30585252	-104.36998828
3,800.00	13.34	141.14	3,763.43	-263.74	212.47	14,638,716.50	1,816,077.53	40.30580318	-104.36993637
3,900.00	13.34	141.14	3,860.73	-281.71	226.95	14,638,698.64	1,816,092.13	40.30575385	-104.36988446
4,000.00	13.34	141.14	3,958.03	-299.67	241.42	14,638,680.78	1,816,106.73	40.30570452	-104.36983255
4,100.00	13.34	141.14	4,055.33	-317.64	255.89	14,638,662.91	1,816,121.33	40.30565519	-104.36978064
4,200.00	13.34	141.14	4,152.64	-335.60	270.36	14,638,645.05	1,816,135.93	40.30560585	-104.36972873
4,300.00	13.34	141.14	4,249.94	-353.57	284.84	14,638,627.19	1,816,150.53	40.30555652	-104.36967682
4,400.00	13.34	141.14	4,347.24	-371.54	299.31	14,638,609.33	1,816,165.13	40.30550719	-104.36962491
4,500.00	13.34	141.14	4,444.54	-389.50	313.78	14,638,591.47	1,816,179.73	40.30545786	-104.36957300
4,600.00	13.34	141.14	4,541.85	-407.47	328.26	14,638,573.60	1,816,194.33	40.30540852	-104.36952109
4,700.00	13.34	141.14	4,639.15	-425.43	342.73	14,638,555.74	1,816,208.93	40.30535919	-104.36946918
4,800.00	13.34	141.14	4,736.45	-443.40	357.20	14,638,537.88	1,816,223.53	40.30530986	-104.36941728
4,900.00	13.34	141.14	4,833.75	-461.36	371.68	14,638,520.02	1,816,238.13	40.30526053	-104.36936537
5,000.00	13.34	141.14	4,931.06	-479.33	386.15	14,638,502.16	1,816,252.73	40.30521119	-104.36931346

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-13-1L
Company:	Confluence Resources	TVD Reference:	RKB=4558+24 @ 4582.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4558+24 @ 4582.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-13-1L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,100.00	13.34	141.14	5,028.36	-497.29	400.62	14,638,484.29	1,816,267.34	40.30516186	-104.36926155
5,200.00	13.34	141.14	5,125.66	-515.26	415.09	14,638,466.43	1,816,281.94	40.30511253	-104.36920964
5,300.00	13.34	141.14	5,222.96	-533.22	429.57	14,638,448.57	1,816,296.54	40.30506319	-104.36915773
5,400.00	13.34	141.14	5,320.27	-551.19	444.04	14,638,430.71	1,816,311.14	40.30501386	-104.36910582
5,500.00	13.34	141.14	5,417.57	-569.16	458.51	14,638,412.85	1,816,325.74	40.30496453	-104.36905391
5,600.00	13.34	141.14	5,514.87	-587.12	472.99	14,638,394.98	1,816,340.34	40.30491520	-104.36900200
5,635.92	13.34	141.14	5,549.82	-593.57	478.19	14,638,388.57	1,816,345.58	40.30489748	-104.36898336
Begin 10°/100' build									
5,700.00	9.29	115.20	5,612.68	-601.54	487.51	14,638,380.67	1,816,354.96	40.30487560	-104.36894991
5,800.00	10.31	53.86	5,711.47	-599.70	502.08	14,638,382.61	1,816,369.52	40.30488066	-104.36889767
5,900.00	18.02	26.61	5,808.46	-580.54	516.27	14,638,401.87	1,816,383.57	40.30493326	-104.36884678
6,000.00	27.24	16.29	5,900.70	-544.66	529.65	14,638,437.85	1,816,396.69	40.30503180	-104.36879878
6,100.00	36.84	10.99	5,985.38	-493.13	541.81	14,638,489.46	1,816,408.49	40.30517328	-104.36875514
6,200.00	46.59	7.66	6,059.95	-427.53	552.40	14,638,555.13	1,816,418.61	40.30535341	-104.36871718
6,300.00	56.42	5.26	6,122.12	-349.86	561.07	14,638,632.87	1,816,426.73	40.30556671	-104.36868605
6,400.00	66.28	3.35	6,170.01	-262.46	567.58	14,638,720.31	1,816,432.62	40.30580670	-104.36866270
6,500.00	76.16	1.72	6,202.17	-168.00	571.72	14,638,814.80	1,816,436.09	40.30606609	-104.36864785
6,600.00	86.05	0.22	6,217.62	-69.34	573.37	14,638,913.46	1,816,437.04	40.30633699	-104.36864193
6,639.96	90.00	359.63	6,219.00	-29.41	573.32	14,638,953.39	1,816,436.70	40.30644663	-104.36864211
LP Begin 90° lateral									
6,700.00	90.00	359.63	6,219.00	30.63	572.93	14,639,013.43	1,816,435.89	40.30661150	-104.36864349
6,800.00	90.00	359.63	6,219.00	130.63	572.29	14,639,113.42	1,816,434.54	40.30688608	-104.36864578
6,900.00	90.00	359.63	6,219.00	230.62	571.65	14,639,213.41	1,816,433.19	40.30716067	-104.36864806
7,000.00	90.00	359.63	6,219.00	330.62	571.01	14,639,313.40	1,816,431.84	40.30743526	-104.36865035
7,100.00	90.00	359.63	6,219.00	430.62	570.37	14,639,413.39	1,816,430.49	40.30770985	-104.36865264
7,200.00	90.00	359.63	6,219.00	530.62	569.73	14,639,513.38	1,816,429.13	40.30798444	-104.36865493
7,300.00	90.00	359.63	6,219.00	630.62	569.09	14,639,613.37	1,816,427.78	40.30825903	-104.36865722
7,400.00	90.00	359.63	6,219.00	730.61	568.45	14,639,713.36	1,816,426.43	40.30853362	-104.36865951
7,500.00	90.00	359.63	6,219.00	830.61	567.81	14,639,813.35	1,816,425.08	40.30880821	-104.36866180
7,600.00	90.00	359.63	6,219.00	930.61	567.17	14,639,913.34	1,816,423.73	40.30908280	-104.36866409
7,700.00	90.00	359.63	6,219.00	1,030.61	566.53	14,640,013.33	1,816,422.38	40.30935738	-104.36866638
7,800.00	90.00	359.63	6,219.00	1,130.61	565.89	14,640,113.32	1,816,421.03	40.30963197	-104.36866866
7,900.00	90.00	359.63	6,219.00	1,230.60	565.25	14,640,213.31	1,816,419.68	40.30990656	-104.36867095
8,000.00	90.00	359.63	6,219.00	1,330.60	564.61	14,640,313.30	1,816,418.33	40.31018115	-104.36867324
8,100.00	90.00	359.63	6,219.00	1,430.60	563.97	14,640,413.30	1,816,416.98	40.31045574	-104.36867553
8,200.00	90.00	359.63	6,219.00	1,530.60	563.33	14,640,513.29	1,816,415.63	40.31073033	-104.36867782
8,300.00	90.00	359.63	6,219.00	1,630.60	562.69	14,640,613.28	1,816,414.27	40.31100492	-104.36868011
8,400.00	90.00	359.63	6,219.00	1,730.59	562.05	14,640,713.27	1,816,412.92	40.31127951	-104.36868240
8,500.00	90.00	359.63	6,219.00	1,830.59	561.40	14,640,813.26	1,816,411.57	40.31155409	-104.36868469
8,600.00	90.00	359.63	6,219.00	1,930.59	560.76	14,640,913.25	1,816,410.22	40.31182868	-104.36868698
8,700.00	90.00	359.63	6,219.00	2,030.59	560.12	14,641,013.24	1,816,408.87	40.31210327	-104.36868926
8,800.00	90.00	359.63	6,219.00	2,130.59	559.48	14,641,113.23	1,816,407.52	40.31237786	-104.36869155
8,900.00	90.00	359.63	6,219.00	2,230.58	558.84	14,641,213.22	1,816,406.17	40.31265245	-104.36869384
9,000.00	90.00	359.63	6,219.00	2,330.58	558.20	14,641,313.21	1,816,404.82	40.31292703	-104.36869613
9,100.00	90.00	359.63	6,219.00	2,430.58	557.56	14,641,413.20	1,816,403.47	40.31320162	-104.36869842
9,200.00	90.00	359.63	6,219.00	2,530.58	556.92	14,641,513.19	1,816,402.12	40.31347620	-104.36870071
9,300.00	90.00	359.63	6,219.00	2,630.58	556.28	14,641,613.18	1,816,400.77	40.31375079	-104.36870300
9,400.00	90.00	359.63	6,219.00	2,730.57	555.64	14,641,713.17	1,816,399.41	40.31402538	-104.36870529
9,500.00	90.00	359.63	6,219.00	2,830.57	555.00	14,641,813.16	1,816,398.06	40.31429997	-104.36870758
9,600.00	90.00	359.63	6,219.00	2,930.57	554.36	14,641,913.16	1,816,396.71	40.31457456	-104.36870986
9,700.00	90.00	359.63	6,219.00	3,030.57	553.72	14,642,013.15	1,816,395.36	40.31484915	-104.36871215
9,800.00	90.00	359.63	6,219.00	3,130.57	553.08	14,642,113.14	1,816,394.01	40.31512374	-104.36871444
9,900.00	90.00	359.63	6,219.00	3,230.56	552.44	14,642,213.13	1,816,392.66	40.31539832	-104.36871673
10,000.00	90.00	359.63	6,219.00	3,330.56	551.80	14,642,313.12	1,816,391.31	40.31567291	-104.36871902

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-13-1L
Company:	Confluence Resources	TVD Reference:	RKB=4558+24 @ 4582.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4558+24 @ 4582.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-13-1L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,100.00	90.00	359.63	6,219.00	3,430.56	551.16	14,642,413.11	1,816,389.96	40.31594750	-104.36872131
10,200.00	90.00	359.63	6,219.00	3,530.56	550.52	14,642,513.10	1,816,388.61	40.31622209	-104.36872360
10,300.00	90.00	359.63	6,219.00	3,630.55	549.88	14,642,613.09	1,816,387.26	40.31649668	-104.36872589
10,400.00	90.00	359.63	6,219.00	3,730.55	549.24	14,642,713.08	1,816,385.91	40.31677127	-104.36872818
10,500.00	90.00	359.63	6,219.00	3,830.55	548.60	14,642,813.07	1,816,384.55	40.31704585	-104.36873047
10,600.00	90.00	359.63	6,219.00	3,930.55	547.96	14,642,913.06	1,816,383.20	40.31732044	-104.36873275
10,700.00	90.00	359.63	6,219.00	4,030.55	547.32	14,643,013.05	1,816,381.85	40.31759503	-104.36873504
10,800.00	90.00	359.63	6,219.00	4,130.54	546.68	14,643,113.04	1,816,380.50	40.31786962	-104.36873733
10,900.00	90.00	359.63	6,219.00	4,230.54	546.03	14,643,213.03	1,816,379.15	40.31814421	-104.36873962
11,000.00	90.00	359.63	6,219.00	4,330.54	545.39	14,643,313.03	1,816,377.80	40.31841880	-104.36874191
11,100.00	90.00	359.63	6,219.00	4,430.54	544.75	14,643,413.02	1,816,376.45	40.31869338	-104.36874420
11,200.00	90.00	359.63	6,219.00	4,530.54	544.11	14,643,513.01	1,816,375.10	40.31896797	-104.36874649
11,300.00	90.00	359.63	6,219.00	4,630.53	543.47	14,643,613.00	1,816,373.75	40.31924256	-104.36874878
11,400.00	90.00	359.63	6,219.00	4,730.53	542.83	14,643,712.99	1,816,372.40	40.31951715	-104.36875107
11,500.00	90.00	359.63	6,219.00	4,830.53	542.19	14,643,812.98	1,816,371.05	40.31979174	-104.36875336
11,600.00	90.00	359.63	6,219.00	4,930.53	541.55	14,643,912.97	1,816,369.69	40.32006633	-104.36875564
11,700.00	90.00	359.63	6,219.00	5,030.53	540.91	14,644,012.96	1,816,368.34	40.32034091	-104.36875793
11,800.00	90.00	359.63	6,219.00	5,130.52	540.27	14,644,112.95	1,816,366.99	40.32061550	-104.36876022
11,900.00	90.00	359.63	6,219.00	5,230.52	539.63	14,644,212.94	1,816,365.64	40.32089009	-104.36876251
12,000.00	90.00	359.63	6,219.00	5,330.52	538.99	14,644,312.93	1,816,364.29	40.32116468	-104.36876480
12,100.00	90.00	359.63	6,219.00	5,430.52	538.35	14,644,412.92	1,816,362.94	40.32143927	-104.36876709
12,200.00	90.00	359.63	6,219.00	5,530.52	537.71	14,644,512.91	1,816,361.59	40.32171386	-104.36876938
12,300.00	90.00	359.63	6,219.00	5,630.51	537.07	14,644,612.90	1,816,360.24	40.32198844	-104.36877167
12,400.00	90.00	359.63	6,219.00	5,730.51	536.43	14,644,712.89	1,816,358.89	40.32226303	-104.36877396
12,500.00	90.00	359.63	6,219.00	5,830.51	535.79	14,644,812.88	1,816,357.54	40.32253762	-104.36877625
12,600.00	90.00	359.63	6,219.00	5,930.51	535.15	14,644,912.88	1,816,356.18	40.32281221	-104.36877853
12,700.00	90.00	359.63	6,219.00	6,030.51	534.51	14,645,012.87	1,816,354.83	40.32308680	-104.36878082
12,800.00	90.00	359.63	6,219.00	6,130.50	533.87	14,645,112.86	1,816,353.48	40.32336138	-104.36878311
12,900.00	90.00	359.63	6,219.00	6,230.50	533.23	14,645,212.85	1,816,352.13	40.32363597	-104.36878540
13,000.00	90.00	359.63	6,219.00	6,330.50	532.59	14,645,312.84	1,816,350.78	40.32391056	-104.36878769
13,100.00	90.00	359.63	6,219.00	6,430.50	531.95	14,645,412.83	1,816,349.43	40.32418515	-104.36878998
13,200.00	90.00	359.63	6,219.00	6,530.50	531.31	14,645,512.82	1,816,348.08	40.32445974	-104.36879227
13,300.00	90.00	359.63	6,219.00	6,630.49	530.66	14,645,612.81	1,816,346.73	40.32473432	-104.36879456
13,400.00	90.00	359.63	6,219.00	6,730.49	530.02	14,645,712.80	1,816,345.38	40.32500891	-104.36879685
13,500.00	90.00	359.63	6,219.00	6,830.49	529.38	14,645,812.79	1,816,344.03	40.32528350	-104.36879914
13,600.00	90.00	359.63	6,219.00	6,930.49	528.74	14,645,912.78	1,816,342.68	40.32555809	-104.36880143
13,700.00	90.00	359.63	6,219.00	7,030.49	528.10	14,646,012.77	1,816,341.32	40.32583268	-104.36880371
13,800.00	90.00	359.63	6,219.00	7,130.48	527.46	14,646,112.76	1,816,339.97	40.32610726	-104.36880600
13,900.00	90.00	359.63	6,219.00	7,230.48	526.82	14,646,212.75	1,816,338.62	40.32638185	-104.36880829
14,000.00	90.00	359.63	6,219.00	7,330.48	526.18	14,646,312.75	1,816,337.27	40.32665644	-104.36881058
14,100.00	90.00	359.63	6,219.00	7,430.48	525.54	14,646,412.74	1,816,335.92	40.32693103	-104.36881287
14,200.00	90.00	359.63	6,219.00	7,530.48	524.90	14,646,512.73	1,816,334.57	40.32720562	-104.36881516
14,300.00	90.00	359.63	6,219.00	7,630.47	524.26	14,646,612.72	1,816,333.22	40.32748020	-104.36881745
14,400.00	90.00	359.63	6,219.00	7,730.47	523.62	14,646,712.71	1,816,331.87	40.32775479	-104.36881974
14,500.00	90.00	359.63	6,219.00	7,830.47	522.98	14,646,812.70	1,816,330.52	40.32802938	-104.36882203
14,600.00	90.00	359.63	6,219.00	7,930.47	522.34	14,646,912.69	1,816,329.17	40.32830397	-104.36882432
14,700.00	90.00	359.63	6,219.00	8,030.46	521.70	14,647,012.68	1,816,327.82	40.32857856	-104.36882661
14,800.00	90.00	359.63	6,219.00	8,130.46	521.06	14,647,112.67	1,816,326.46	40.32885314	-104.36882890
14,900.00	90.00	359.63	6,219.00	8,230.46	520.42	14,647,212.66	1,816,325.11	40.32912773	-104.36883118
15,000.00	90.00	359.63	6,219.00	8,330.46	519.78	14,647,312.65	1,816,323.76	40.32940232	-104.36883347
15,100.00	90.00	359.63	6,219.00	8,430.46	519.14	14,647,412.64	1,816,322.41	40.32967691	-104.36883576
15,200.00	90.00	359.63	6,219.00	8,530.45	518.50	14,647,512.63	1,816,321.06	40.32995149	-104.36883805
15,300.00	90.00	359.63	6,219.00	8,630.45	517.86	14,647,612.62	1,816,319.71	40.33022608	-104.36884034
15,400.00	90.00	359.63	6,219.00	8,730.45	517.22	14,647,712.61	1,816,318.36	40.33050067	-104.36884263
15,500.00	90.00	359.63	6,219.00	8,830.45	516.58	14,647,812.61	1,816,317.01	40.33077526	-104.36884492

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-13-1L
Company:	Confluence Resources	TVD Reference:	RKB=4558+24 @ 4582.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4558+24 @ 4582.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-13-1L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,600.00	90.00	359.63	6,219.00	8,930.45	515.94	14,647,912.60	1,816,315.66	40.33104985	-104.36884721
15,700.00	90.00	359.63	6,219.00	9,030.44	515.29	14,648,012.59	1,816,314.31	40.33132443	-104.36884950
15,800.00	90.00	359.63	6,219.00	9,130.44	514.65	14,648,112.58	1,816,312.96	40.33159902	-104.36885179
15,900.00	90.00	359.63	6,219.00	9,230.44	514.01	14,648,212.57	1,816,311.60	40.33187361	-104.36885408
16,000.00	90.00	359.63	6,219.00	9,330.44	513.37	14,648,312.56	1,816,310.25	40.33214820	-104.36885637
16,100.00	90.00	359.63	6,219.00	9,430.44	512.73	14,648,412.55	1,816,308.90	40.33242278	-104.36885865
16,200.00	90.00	359.63	6,219.00	9,530.43	512.09	14,648,512.54	1,816,307.55	40.33269737	-104.36886094
16,300.00	90.00	359.63	6,219.00	9,630.43	511.45	14,648,612.53	1,816,306.20	40.33297196	-104.36886323
16,305.92	90.00	359.63	6,219.00	9,636.35	511.41	14,648,618.45	1,816,306.12	40.33298822	-104.36886337
PBHL/TD 16305.92 MD/6219.00 TVD									
16,305.93	90.00	359.63	6,219.00	9,636.36	511.41	14,648,618.46	1,816,306.12	40.33298823	-104.36886337

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
Middlepark 18-13-1L LP - plan hits target center - Point	0.00	0.00	6,219.00	-29.41	573.32	14,638,953.39	1,816,436.70	40.30644662	-104.36864211
Middlepark 18-13-1L BH - plan hits target center - Point	0.00	0.00	6,219.00	9,636.36	511.41	14,648,618.46	1,816,306.12	40.33298823	-104.36886337

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,000.00	2,000.00	0.00	0.00	KOP Begin 1°/100' build
2,666.91	2,660.90	-60.18	48.48	Begin 13.34° tangent
5,635.92	5,549.82	-593.57	478.19	Begin 10°/100' build
6,639.96	6,219.00	-29.41	573.32	LP Begin 90° lateral
16,305.92	6,219.00	9,636.35	511.41	PBHL/TD 16305.92 MD/6219.00 TVD