



Well: Middlepark 18-02-04L
 Site: Section 18-T04N-R62W
 Project: Weld County, Colorado
 Wellbore: Original Hole
 Design: plan2

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 2°/100' build
3	3832.87	36.66	101.78	3710.36	-115.64	554.67	2.00	4.34	Begin 36.66° tangent
4	6582.06	36.66	101.78	5915.82	-450.61	2161.47	0.00	16.89	Begin 10°/100' build
5	7565.73	90.00	357.67	6448.00	131.40	2522.22	10.00	662.05	LP Begin 90° lateral
6	17270.87	90.00	357.67	6448.00	9828.52	2127.60	0.00	10056.17	PBHL/TD 17270.87 MD/6448.00 TVD

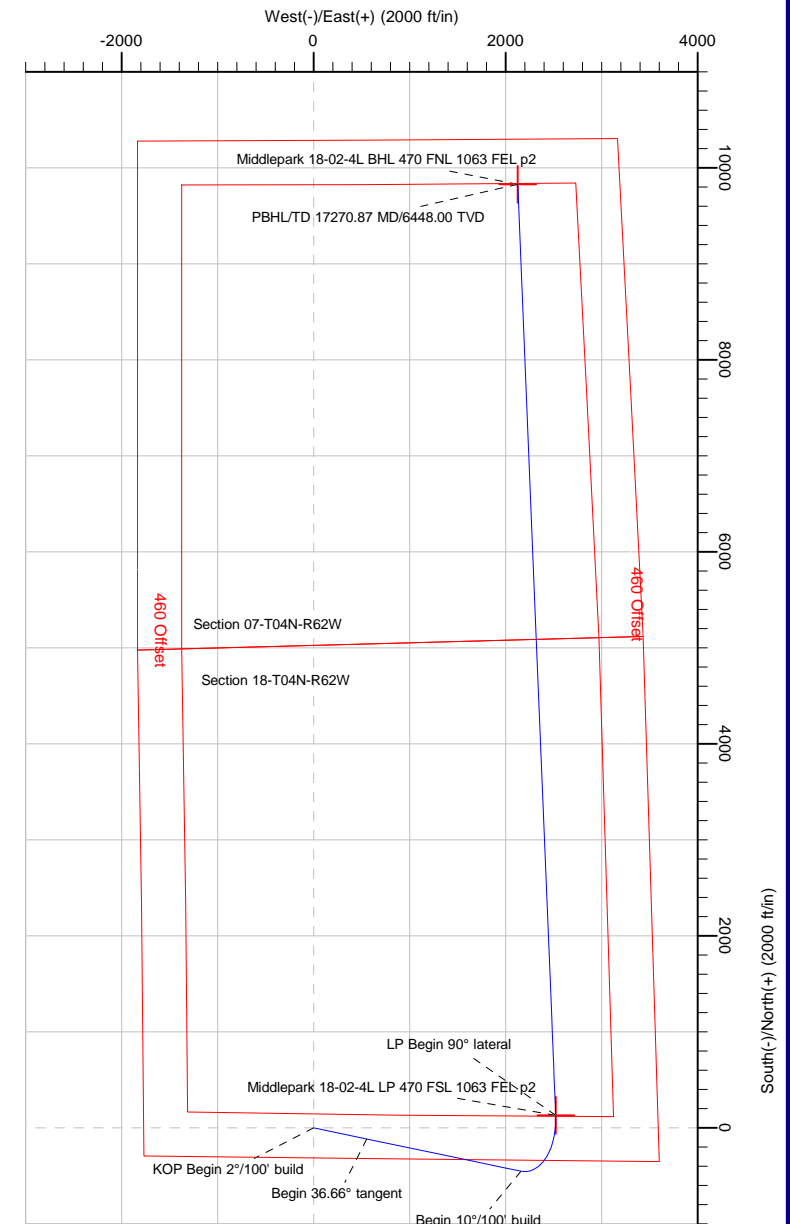
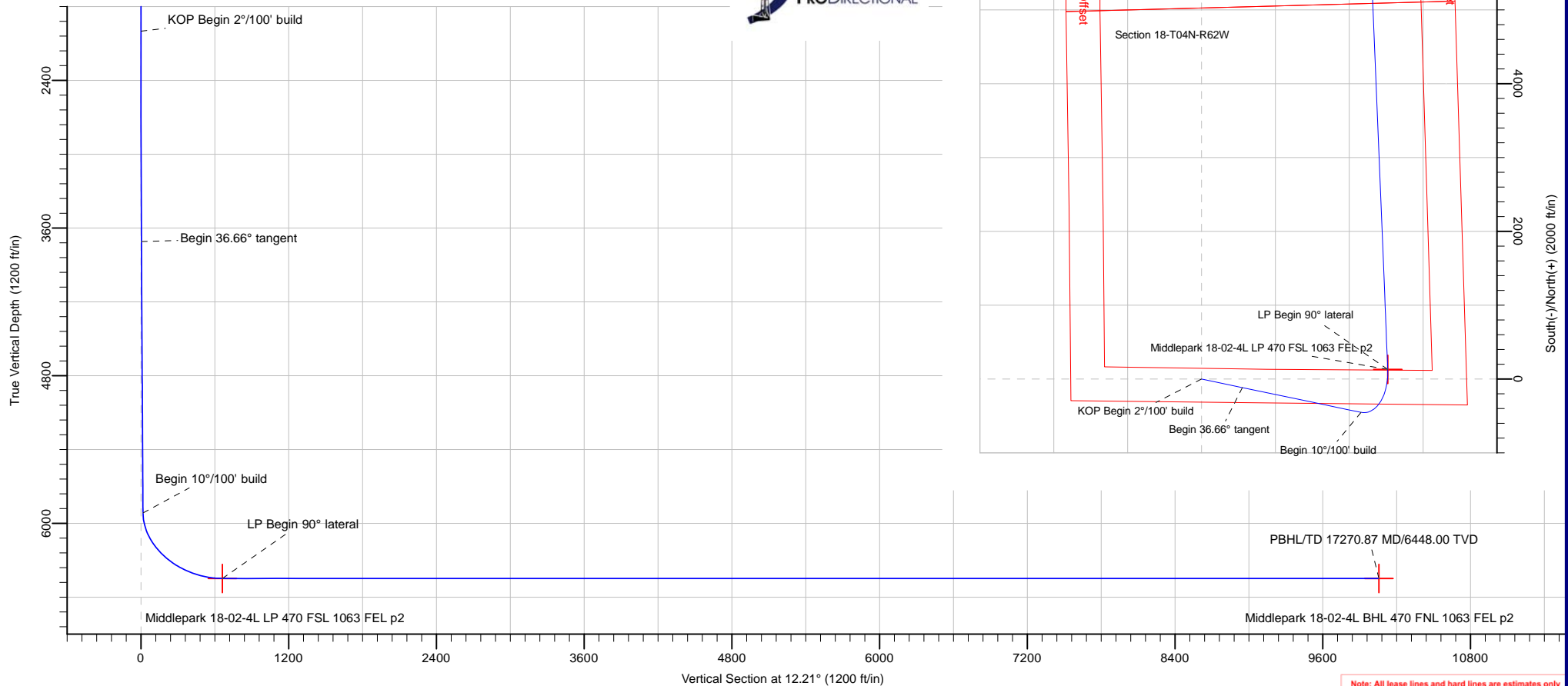
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Middlepark 18-02-4L BHL 470 FNL 1063 FEL p2	6448.00	9828.52	2127.60	14648644.05	1818059.85	40.33302400	-104.36257024
Middlepark 18-02-4L LP 470 FSL 1063 FEL p2	6448.00	131.40	2522.22	14638950.00	1818523.42	40.30639622	-104.36115788



Azimuths to True North
 Magnetic North: 8.18°
 Magnetic Field
 Strength: 52247.5snT
 Dip Angle: 66.90°
 Date: 4/22/2018
 Model: HDGM

Middlepark 18-02-04L Surf loc: 314 FSL 1769 FWL Section 18-T04N-R62W			
NAD83 Colorado - HARN Universal Transverse Mercator (US Survey Feet) Zone 13N (108 W to 102 W) RKB=4557+24 @ 4581.00ft			
Northing	Easting	Latitude	Longitude
14638800.67	1816002.20	40.30603576	-104.37020440



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 18-02-04L
Company:	Confluence Resources	TVD Reference:	RKB=4557+24 @ 4581.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4557+24 @ 4581.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-02-04L	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 18-02-04L, Surf loc: 314 FSL 1769 FWL Section 18-T04N-R62W					
Well Position	+N/-S	-2,361.36 ft	Northing:	14,638,800.67 usft	Latitude:	40.30603576
	+E/-W	1,211.58 ft	Easting:	1,816,002.20 usft	Longitude:	-104.37020441
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,557.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/22/2018	8.18	66.90	52,247.50000000

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 (°)
	-0.14	0.00	0.00	12.21

Plan Survey Tool Program	Date	4/26/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,270.85	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	
3,832.87	36.66	101.78	3,710.36	-115.64	554.67	2.00	2.00	0.00	101.78	
6,582.06	36.66	101.78	5,915.82	-450.61	2,161.47	0.00	0.00	0.00	0.00	
7,565.73	90.00	357.67	6,448.00	131.40	2,522.22	10.00	5.42	-10.58	-101.40	Middlepark 18-02-4L I
17,270.87	90.00	357.67	6,448.00	9,828.52	2,127.60	0.00	0.00	0.00	0.00	Middlepark 18-02-4L I

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-02-04L
Company:	Confluence Resources	TVD Reference:	RKB=4557+24 @ 4581.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4557+24 @ 4581.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-02-04L	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 2°/100' build									
2,100.00	2.00	101.78	2,099.98	-0.36	1.71	0.01	2.00	2.00	0.00
2,200.00	4.00	101.78	2,199.84	-1.42	6.83	0.05	2.00	2.00	0.00
2,300.00	6.00	101.78	2,299.45	-3.20	15.36	0.12	2.00	2.00	0.00
2,400.00	8.00	101.78	2,398.70	-5.69	27.29	0.21	2.00	2.00	0.00
2,500.00	10.00	101.78	2,497.47	-8.88	42.61	0.33	2.00	2.00	0.00
2,600.00	12.00	101.78	2,595.62	-12.78	61.28	0.48	2.00	2.00	0.00
2,700.00	14.00	101.78	2,693.06	-17.37	83.31	0.65	2.00	2.00	0.00
2,800.00	16.00	101.78	2,789.64	-22.65	108.64	0.85	2.00	2.00	0.00
2,900.00	18.00	101.78	2,885.27	-28.62	137.26	1.07	2.00	2.00	0.00
3,000.00	20.00	101.78	2,979.82	-35.26	169.13	1.32	2.00	2.00	0.00
3,100.00	22.00	101.78	3,073.17	-42.57	204.21	1.60	2.00	2.00	0.00
3,200.00	24.00	101.78	3,165.21	-50.55	242.46	1.90	2.00	2.00	0.00
3,300.00	26.00	101.78	3,255.84	-59.17	283.83	2.22	2.00	2.00	0.00
3,400.00	28.00	101.78	3,344.94	-68.44	328.27	2.57	2.00	2.00	0.00
3,500.00	30.00	101.78	3,432.39	-78.33	375.73	2.94	2.00	2.00	0.00
3,600.00	32.00	101.78	3,518.11	-88.84	426.15	3.33	2.00	2.00	0.00
3,700.00	34.00	101.78	3,601.97	-99.96	479.46	3.75	2.00	2.00	0.00
3,800.00	36.00	101.78	3,683.88	-111.66	535.61	4.19	2.00	2.00	0.00
3,832.87	36.66	101.78	3,710.36	-115.64	554.67	4.34	2.00	2.00	0.00
Begin 36.66° tangent									
3,900.00	36.66	101.78	3,764.21	-123.81	593.91	4.64	0.00	0.00	0.00
4,000.00	36.66	101.78	3,844.44	-136.00	652.35	5.10	0.00	0.00	0.00
4,100.00	36.66	101.78	3,924.66	-148.18	710.80	5.56	0.00	0.00	0.00
4,200.00	36.66	101.78	4,004.88	-160.37	769.25	6.01	0.00	0.00	0.00
4,300.00	36.66	101.78	4,085.10	-172.55	827.69	6.47	0.00	0.00	0.00
4,400.00	36.66	101.78	4,165.32	-184.74	886.14	6.93	0.00	0.00	0.00
4,500.00	36.66	101.78	4,245.55	-196.92	944.59	7.38	0.00	0.00	0.00
4,600.00	36.66	101.78	4,325.77	-209.11	1,003.03	7.84	0.00	0.00	0.00
4,700.00	36.66	101.78	4,405.99	-221.29	1,061.48	8.30	0.00	0.00	0.00
4,800.00	36.66	101.78	4,486.21	-233.48	1,119.92	8.75	0.00	0.00	0.00
4,900.00	36.66	101.78	4,566.43	-245.66	1,178.37	9.21	0.00	0.00	0.00

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Project:	Weld County, Colorado	MD Reference:	RKB=4557+24 @ 4581.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-02-04L	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	36.66	101.78	4,646.66	-257.84	1,236.82	9.67	0.00	0.00	0.00
5,100.00	36.66	101.78	4,726.88	-270.03	1,295.26	10.12	0.00	0.00	0.00
5,200.00	36.66	101.78	4,807.10	-282.21	1,353.71	10.58	0.00	0.00	0.00
5,300.00	36.66	101.78	4,887.32	-294.40	1,412.16	11.04	0.00	0.00	0.00
5,400.00	36.66	101.78	4,967.54	-306.58	1,470.60	11.49	0.00	0.00	0.00
5,500.00	36.66	101.78	5,047.77	-318.77	1,529.05	11.95	0.00	0.00	0.00
5,600.00	36.66	101.78	5,127.99	-330.95	1,587.49	12.41	0.00	0.00	0.00
5,700.00	36.66	101.78	5,208.21	-343.14	1,645.94	12.87	0.00	0.00	0.00
5,800.00	36.66	101.78	5,288.43	-355.32	1,704.39	13.32	0.00	0.00	0.00
5,900.00	36.66	101.78	5,368.66	-367.51	1,762.83	13.78	0.00	0.00	0.00
6,000.00	36.66	101.78	5,448.88	-379.69	1,821.28	14.24	0.00	0.00	0.00
6,100.00	36.66	101.78	5,529.10	-391.87	1,879.73	14.69	0.00	0.00	0.00
6,200.00	36.66	101.78	5,609.32	-404.06	1,938.17	15.15	0.00	0.00	0.00
6,300.00	36.66	101.78	5,689.54	-416.24	1,996.62	15.61	0.00	0.00	0.00
6,400.00	36.66	101.78	5,769.77	-428.43	2,055.07	16.06	0.00	0.00	0.00
6,500.00	36.66	101.78	5,849.99	-440.61	2,113.51	16.52	0.00	0.00	0.00
6,582.06	36.66	101.78	5,915.82	-450.61	2,161.47	16.89	0.00	0.00	0.00
Begin 10°/100' build									
6,600.00	36.34	98.81	5,930.24	-452.52	2,171.97	17.25	10.00	-1.77	-16.55
6,700.00	35.96	81.83	6,011.19	-452.88	2,230.46	29.27	10.00	-0.38	-16.98
6,800.00	37.94	65.48	6,091.30	-435.91	2,287.64	57.96	10.00	1.97	-16.35
6,900.00	41.93	51.15	6,168.13	-402.11	2,341.76	102.45	10.00	3.99	-14.32
7,000.00	47.41	39.23	6,239.35	-352.51	2,391.19	161.38	10.00	5.49	-11.92
7,100.00	53.92	29.40	6,302.79	-288.63	2,434.42	232.96	10.00	6.51	-9.83
7,200.00	61.11	21.14	6,356.52	-212.40	2,470.13	315.02	10.00	7.19	-8.26
7,300.00	68.73	13.99	6,398.93	-126.13	2,497.25	405.07	10.00	7.62	-7.16
7,400.00	76.63	7.55	6,428.70	-32.46	2,514.95	500.37	10.00	7.89	-6.44
7,500.00	84.67	1.53	6,444.95	65.78	2,522.69	598.02	10.00	8.05	-6.02
7,565.73	90.00	357.67	6,448.00	131.40	2,522.22	662.06	10.00	8.10	-5.87
LP Begin 90° lateral									
7,600.00	90.00	357.67	6,448.00	165.64	2,520.83	695.23	0.00	0.00	0.00
7,700.00	90.00	357.67	6,448.00	265.56	2,516.76	792.02	0.00	0.00	0.00
7,800.00	90.00	357.67	6,448.00	365.48	2,512.70	888.82	0.00	0.00	0.00
7,900.00	90.00	357.67	6,448.00	465.40	2,508.63	985.61	0.00	0.00	0.00
8,000.00	90.00	357.67	6,448.00	565.31	2,504.57	1,082.41	0.00	0.00	0.00
8,100.00	90.00	357.67	6,448.00	665.23	2,500.50	1,179.21	0.00	0.00	0.00
8,200.00	90.00	357.67	6,448.00	765.15	2,496.43	1,276.00	0.00	0.00	0.00
8,300.00	90.00	357.67	6,448.00	865.06	2,492.37	1,372.80	0.00	0.00	0.00
8,400.00	90.00	357.67	6,448.00	964.98	2,488.30	1,469.59	0.00	0.00	0.00
8,500.00	90.00	357.67	6,448.00	1,064.90	2,484.23	1,566.39	0.00	0.00	0.00
8,600.00	90.00	357.67	6,448.00	1,164.82	2,480.17	1,663.18	0.00	0.00	0.00
8,700.00	90.00	357.67	6,448.00	1,264.73	2,476.10	1,759.98	0.00	0.00	0.00
8,800.00	90.00	357.67	6,448.00	1,364.65	2,472.04	1,856.77	0.00	0.00	0.00
8,900.00	90.00	357.67	6,448.00	1,464.57	2,467.97	1,953.57	0.00	0.00	0.00
9,000.00	90.00	357.67	6,448.00	1,564.49	2,463.90	2,050.36	0.00	0.00	0.00
9,100.00	90.00	357.67	6,448.00	1,664.40	2,459.84	2,147.16	0.00	0.00	0.00
9,200.00	90.00	357.67	6,448.00	1,764.32	2,455.77	2,243.95	0.00	0.00	0.00
9,300.00	90.00	357.67	6,448.00	1,864.24	2,451.71	2,340.75	0.00	0.00	0.00
9,400.00	90.00	357.67	6,448.00	1,964.15	2,447.64	2,437.54	0.00	0.00	0.00
9,500.00	90.00	357.67	6,448.00	2,064.07	2,443.57	2,534.34	0.00	0.00	0.00
9,600.00	90.00	357.67	6,448.00	2,163.99	2,439.51	2,631.13	0.00	0.00	0.00
9,700.00	90.00	357.67	6,448.00	2,263.91	2,435.44	2,727.93	0.00	0.00	0.00
9,800.00	90.00	357.67	6,448.00	2,363.82	2,431.37	2,824.72	0.00	0.00	0.00
9,900.00	90.00	357.67	6,448.00	2,463.74	2,427.31	2,921.52	0.00	0.00	0.00

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Project:	Weld County, Colorado	MD Reference:	RKB=4557+24 @ 4581.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-02-04L	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	357.67	6,448.00	2,563.66	2,423.24	3,018.31	0.00	0.00	0.00
10,100.00	90.00	357.67	6,448.00	2,663.58	2,419.18	3,115.11	0.00	0.00	0.00
10,200.00	90.00	357.67	6,448.00	2,763.49	2,415.11	3,211.90	0.00	0.00	0.00
10,300.00	90.00	357.67	6,448.00	2,863.41	2,411.04	3,308.70	0.00	0.00	0.00
10,400.00	90.00	357.67	6,448.00	2,963.33	2,406.98	3,405.49	0.00	0.00	0.00
10,500.00	90.00	357.67	6,448.00	3,063.25	2,402.91	3,502.29	0.00	0.00	0.00
10,600.00	90.00	357.67	6,448.00	3,163.16	2,398.85	3,599.08	0.00	0.00	0.00
10,700.00	90.00	357.67	6,448.00	3,263.08	2,394.78	3,695.88	0.00	0.00	0.00
10,800.00	90.00	357.67	6,448.00	3,363.00	2,390.71	3,792.67	0.00	0.00	0.00
10,900.00	90.00	357.67	6,448.00	3,462.91	2,386.65	3,889.47	0.00	0.00	0.00
11,000.00	90.00	357.67	6,448.00	3,562.83	2,382.58	3,986.26	0.00	0.00	0.00
11,100.00	90.00	357.67	6,448.00	3,662.75	2,378.51	4,083.06	0.00	0.00	0.00
11,200.00	90.00	357.67	6,448.00	3,762.67	2,374.45	4,179.85	0.00	0.00	0.00
11,300.00	90.00	357.67	6,448.00	3,862.58	2,370.38	4,276.65	0.00	0.00	0.00
11,400.00	90.00	357.67	6,448.00	3,962.50	2,366.32	4,373.44	0.00	0.00	0.00
11,500.00	90.00	357.67	6,448.00	4,062.42	2,362.25	4,470.24	0.00	0.00	0.00
11,600.00	90.00	357.67	6,448.00	4,162.34	2,358.18	4,567.04	0.00	0.00	0.00
11,700.00	90.00	357.67	6,448.00	4,262.25	2,354.12	4,663.83	0.00	0.00	0.00
11,800.00	90.00	357.67	6,448.00	4,362.17	2,350.05	4,760.63	0.00	0.00	0.00
11,900.00	90.00	357.67	6,448.00	4,462.09	2,345.99	4,857.42	0.00	0.00	0.00
12,000.00	90.00	357.67	6,448.00	4,562.00	2,341.92	4,954.22	0.00	0.00	0.00
12,100.00	90.00	357.67	6,448.00	4,661.92	2,337.85	5,051.01	0.00	0.00	0.00
12,200.00	90.00	357.67	6,448.00	4,761.84	2,333.79	5,147.81	0.00	0.00	0.00
12,300.00	90.00	357.67	6,448.00	4,861.76	2,329.72	5,244.60	0.00	0.00	0.00
12,400.00	90.00	357.67	6,448.00	4,961.67	2,325.65	5,341.40	0.00	0.00	0.00
12,500.00	90.00	357.67	6,448.00	5,061.59	2,321.59	5,438.19	0.00	0.00	0.00
12,600.00	90.00	357.67	6,448.00	5,161.51	2,317.52	5,534.99	0.00	0.00	0.00
12,700.00	90.00	357.67	6,448.00	5,261.43	2,313.46	5,631.78	0.00	0.00	0.00
12,800.00	90.00	357.67	6,448.00	5,361.34	2,309.39	5,728.58	0.00	0.00	0.00
12,900.00	90.00	357.67	6,448.00	5,461.26	2,305.32	5,825.37	0.00	0.00	0.00
13,000.00	90.00	357.67	6,448.00	5,561.18	2,301.26	5,922.17	0.00	0.00	0.00
13,100.00	90.00	357.67	6,448.00	5,661.10	2,297.19	6,018.96	0.00	0.00	0.00
13,200.00	90.00	357.67	6,448.00	5,761.01	2,293.13	6,115.76	0.00	0.00	0.00
13,300.00	90.00	357.67	6,448.00	5,860.93	2,289.06	6,212.55	0.00	0.00	0.00
13,400.00	90.00	357.67	6,448.00	5,960.85	2,284.99	6,309.35	0.00	0.00	0.00
13,500.00	90.00	357.67	6,448.00	6,060.76	2,280.93	6,406.14	0.00	0.00	0.00
13,600.00	90.00	357.67	6,448.00	6,160.68	2,276.86	6,502.94	0.00	0.00	0.00
13,700.00	90.00	357.67	6,448.00	6,260.60	2,272.79	6,599.73	0.00	0.00	0.00
13,800.00	90.00	357.67	6,448.00	6,360.52	2,268.73	6,696.53	0.00	0.00	0.00
13,900.00	90.00	357.67	6,448.00	6,460.43	2,264.66	6,793.32	0.00	0.00	0.00
14,000.00	90.00	357.67	6,448.00	6,560.35	2,260.60	6,890.12	0.00	0.00	0.00
14,100.00	90.00	357.67	6,448.00	6,660.27	2,256.53	6,986.91	0.00	0.00	0.00
14,200.00	90.00	357.67	6,448.00	6,760.19	2,252.46	7,083.71	0.00	0.00	0.00
14,300.00	90.00	357.67	6,448.00	6,860.10	2,248.40	7,180.50	0.00	0.00	0.00
14,400.00	90.00	357.67	6,448.00	6,960.02	2,244.33	7,277.30	0.00	0.00	0.00
14,500.00	90.00	357.67	6,448.00	7,059.94	2,240.27	7,374.09	0.00	0.00	0.00
14,600.00	90.00	357.67	6,448.00	7,159.85	2,236.20	7,470.89	0.00	0.00	0.00
14,700.00	90.00	357.67	6,448.00	7,259.77	2,232.13	7,567.68	0.00	0.00	0.00
14,800.00	90.00	357.67	6,448.00	7,359.69	2,228.07	7,664.48	0.00	0.00	0.00
14,900.00	90.00	357.67	6,448.00	7,459.61	2,224.00	7,761.28	0.00	0.00	0.00
15,000.00	90.00	357.67	6,448.00	7,559.52	2,219.93	7,858.07	0.00	0.00	0.00
15,100.00	90.00	357.67	6,448.00	7,659.44	2,215.87	7,954.87	0.00	0.00	0.00
15,200.00	90.00	357.67	6,448.00	7,759.36	2,211.80	8,051.66	0.00	0.00	0.00
15,300.00	90.00	357.67	6,448.00	7,859.28	2,207.74	8,148.46	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-02-04L
Company:	Confluence Resources	TVD Reference:	RKB=4557+24 @ 4581.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4557+24 @ 4581.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-02-04L	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	357.67	6,448.00	7,959.19	2,203.67	8,245.25	0.00	0.00	0.00
15,500.00	90.00	357.67	6,448.00	8,059.11	2,199.60	8,342.05	0.00	0.00	0.00
15,600.00	90.00	357.67	6,448.00	8,159.03	2,195.54	8,438.84	0.00	0.00	0.00
15,700.00	90.00	357.67	6,448.00	8,258.94	2,191.47	8,535.64	0.00	0.00	0.00
15,800.00	90.00	357.67	6,448.00	8,358.86	2,187.41	8,632.43	0.00	0.00	0.00
15,900.00	90.00	357.67	6,448.00	8,458.78	2,183.34	8,729.23	0.00	0.00	0.00
16,000.00	90.00	357.67	6,448.00	8,558.70	2,179.27	8,826.02	0.00	0.00	0.00
16,100.00	90.00	357.67	6,448.00	8,658.61	2,175.21	8,922.82	0.00	0.00	0.00
16,200.00	90.00	357.67	6,448.00	8,758.53	2,171.14	9,019.61	0.00	0.00	0.00
16,300.00	90.00	357.67	6,448.00	8,858.45	2,167.07	9,116.41	0.00	0.00	0.00
16,400.00	90.00	357.67	6,448.00	8,958.37	2,163.01	9,213.20	0.00	0.00	0.00
16,500.00	90.00	357.67	6,448.00	9,058.28	2,158.94	9,310.00	0.00	0.00	0.00
16,600.00	90.00	357.67	6,448.00	9,158.20	2,154.88	9,406.79	0.00	0.00	0.00
16,700.00	90.00	357.67	6,448.00	9,258.12	2,150.81	9,503.59	0.00	0.00	0.00
16,800.00	90.00	357.67	6,448.00	9,358.04	2,146.74	9,600.38	0.00	0.00	0.00
16,900.00	90.00	357.67	6,448.00	9,457.95	2,142.68	9,697.18	0.00	0.00	0.00
17,000.00	90.00	357.67	6,448.00	9,557.87	2,138.61	9,793.97	0.00	0.00	0.00
17,100.00	90.00	357.67	6,448.00	9,657.79	2,134.55	9,890.77	0.00	0.00	0.00
17,200.00	90.00	357.67	6,448.00	9,757.70	2,130.48	9,987.56	0.00	0.00	0.00
17,270.87	90.00	357.67	6,448.00	9,828.52	2,127.60	10,056.16	0.00	0.00	0.00
PBHL/TD 17270.87 MD/6448.00 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									
Middlepark 18-02-4L LP	0.00	0.00	6,448.00	131.40	2,522.22	14,638,950.00	1,818,523.42	40.30639623	-104.36115788
- plan hits target center									
- Point									
Middlepark 18-02-4L BH	0.00	0.00	6,448.00	9,828.52	2,127.60	14,648,644.05	1,818,059.85	40.33302400	-104.36257024
- plan hits target center									
- Point									

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,000.00	2,000.00	0.00	0.00	KOP Begin 2°/100' build	
3,832.87	3,710.36	-115.64	554.67	Begin 36.66° tangent	
6,582.06	5,915.82	-450.61	2,161.47	Begin 10°/100' build	
7,565.73	6,448.00	131.40	2,522.22	LP Begin 90° lateral	
17,270.87	6,448.00	9,828.52	2,127.60	PBHL/TD 17270.87 MD/6448.00 TVD	

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-02-04L
Company:	Confluence Resources	TVD Reference:	RKB=4557+24 @ 4581.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4557+24 @ 4581.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-02-04L	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 18-02-04L, Surf loc: 314 FSL 1769 FWL Section 18-T04N-R62W					
Well Position	+N/-S	0.00 ft	Northing:	14,638,800.67 usft	Latitude:	40.30603576
	+E/-W	0.00 ft	Easting:	1,816,002.20 usft	Longitude:	-104.37020441
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,557.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/22/2018	8.18	66.90	52,247.50000000

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 (°)
	-0.14	0.00	0.00	12.21

Plan Survey Tool Program	Date	4/26/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,270.85 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	
3,832.87	36.66	101.78	3,710.36	-115.64	554.67	2.00	2.00	0.00	101.78	
6,582.06	36.66	101.78	5,915.82	-450.61	2,161.47	0.00	0.00	0.00	0.00	
7,565.73	90.00	357.67	6,448.00	131.40	2,522.22	10.00	5.42	-10.58	-101.40	Middlepark 18-02-4L I
17,270.87	90.00	357.67	6,448.00	9,828.52	2,127.60	0.00	0.00	0.00	0.00	Middlepark 18-02-4L I

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-02-04L
Company:	Confluence Resources	TVD Reference:	RKB=4557+24 @ 4581.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4557+24 @ 4581.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-02-04L	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	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
100.00	0.00	0.00	100.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
200.00	0.00	0.00	200.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
300.00	0.00	0.00	300.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
400.00	0.00	0.00	400.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
500.00	0.00	0.00	500.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
600.00	0.00	0.00	600.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
700.00	0.00	0.00	700.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
800.00	0.00	0.00	800.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
900.00	0.00	0.00	900.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,638,800.67	1,816,002.20	40.30603576	-104.37020441
KOP Begin 2°/100' build									
2,100.00	2.00	101.78	2,099.98	-0.36	1.71	14,638,800.32	1,816,003.91	40.30603479	-104.37019828
2,200.00	4.00	101.78	2,199.84	-1.42	6.83	14,638,799.29	1,816,009.04	40.30603185	-104.37017990
2,300.00	6.00	101.78	2,299.45	-3.20	15.36	14,638,797.57	1,816,017.59	40.30602697	-104.37014930
2,400.00	8.00	101.78	2,398.70	-5.69	27.29	14,638,795.17	1,816,029.53	40.30602014	-104.37010651
2,500.00	10.00	101.78	2,497.47	-8.88	42.61	14,638,792.09	1,816,044.87	40.30601137	-104.37005159
2,600.00	12.00	101.78	2,595.62	-12.78	61.28	14,638,788.33	1,816,063.57	40.30600068	-104.36998459
2,700.00	14.00	101.78	2,693.06	-17.37	83.31	14,638,783.89	1,816,085.63	40.30598807	-104.36990561
2,800.00	16.00	101.78	2,789.64	-22.65	108.64	14,638,778.79	1,816,111.00	40.30597357	-104.36981474
2,900.00	18.00	101.78	2,885.27	-28.62	137.26	14,638,773.03	1,816,139.66	40.3059719	-104.36971209
3,000.00	20.00	101.78	2,979.82	-35.26	169.13	14,638,766.61	1,816,171.58	40.30593894	-104.36959778
3,100.00	22.00	101.78	3,073.17	-42.57	204.21	14,638,759.55	1,816,206.71	40.30591886	-104.36947196
3,200.00	24.00	101.78	3,165.21	-50.55	242.46	14,638,751.85	1,816,245.01	40.30589696	-104.36933477
3,300.00	26.00	101.78	3,255.84	-59.17	283.83	14,638,743.52	1,816,286.45	40.30587328	-104.36918639
3,400.00	28.00	101.78	3,344.94	-68.44	328.27	14,638,734.57	1,816,330.95	40.30584784	-104.36902699
3,500.00	30.00	101.78	3,432.39	-78.33	375.73	14,638,725.01	1,816,378.48	40.30582067	-104.36885677
3,600.00	32.00	101.78	3,518.11	-88.84	426.15	14,638,714.86	1,816,428.97	40.30579180	-104.36867594
3,700.00	34.00	101.78	3,601.97	-99.96	479.46	14,638,704.12	1,816,482.36	40.30576128	-104.36848472
3,800.00	36.00	101.78	3,683.88	-111.66	535.61	14,638,692.82	1,816,538.59	40.30572913	-104.36828333
3,832.87	36.66	101.78	3,710.36	-115.64	554.67	14,638,688.98	1,816,557.68	40.30571822	-104.36821496
Begin 36.66° tangent									
3,900.00	36.66	101.78	3,764.21	-123.81	593.91	14,638,681.08	1,816,596.97	40.30569576	-104.36807424
4,000.00	36.66	101.78	3,844.44	-136.00	652.35	14,638,669.31	1,816,655.50	40.30566229	-104.36786461
4,100.00	36.66	101.78	3,924.66	-148.18	710.80	14,638,657.54	1,816,714.04	40.30562883	-104.36765498
4,200.00	36.66	101.78	4,004.88	-160.37	769.25	14,638,645.77	1,816,772.57	40.30559537	-104.36744536
4,300.00	36.66	101.78	4,085.10	-172.55	827.69	14,638,634.00	1,816,831.10	40.30556191	-104.36723573
4,400.00	36.66	101.78	4,165.32	-184.74	886.14	14,638,622.24	1,816,889.63	40.30552844	-104.36702610
4,500.00	36.66	101.78	4,245.55	-196.92	944.59	14,638,610.47	1,816,948.16	40.30549498	-104.36681648
4,600.00	36.66	101.78	4,325.77	-209.11	1,003.03	14,638,598.70	1,817,006.69	40.30546151	-104.36660685
4,700.00	36.66	101.78	4,405.99	-221.29	1,061.48	14,638,586.93	1,817,065.22	40.30542805	-104.36639723
4,800.00	36.66	101.78	4,486.21	-233.48	1,119.92	14,638,575.16	1,817,123.76	40.30539458	-104.36618760
4,900.00	36.66	101.78	4,566.43	-245.66	1,178.37	14,638,563.39	1,817,182.29	40.30536112	-104.36597797
5,000.00	36.66	101.78	4,646.66	-257.84	1,236.82	14,638,551.62	1,817,240.82	40.30532765	-104.36576835

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-02-04L
Company:	Confluence Resources	TVD Reference:	RKB=4557+24 @ 4581.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4557+24 @ 4581.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-02-04L	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	36.66	101.78	4,726.88	-270.03	1,295.26	14,638,539.86	1,817,299.35	40.30529419	-104.36555872
5,200.00	36.66	101.78	4,807.10	-282.21	1,353.71	14,638,528.09	1,817,357.88	40.30526072	-104.36534910
5,300.00	36.66	101.78	4,887.32	-294.40	1,412.16	14,638,516.32	1,817,416.41	40.30522725	-104.36513947
5,400.00	36.66	101.78	4,967.54	-306.58	1,470.60	14,638,504.55	1,817,474.94	40.30519379	-104.36492985
5,500.00	36.66	101.78	5,047.77	-318.77	1,529.05	14,638,492.78	1,817,533.47	40.30516032	-104.36472022
5,600.00	36.66	101.78	5,127.99	-330.95	1,587.49	14,638,481.01	1,817,592.01	40.30512685	-104.36451060
5,700.00	36.66	101.78	5,208.21	-343.14	1,645.94	14,638,469.24	1,817,650.54	40.30509338	-104.36430098
5,800.00	36.66	101.78	5,288.43	-355.32	1,704.39	14,638,457.48	1,817,709.07	40.30505991	-104.36409135
5,900.00	36.66	101.78	5,368.66	-367.51	1,762.83	14,638,445.71	1,817,767.60	40.30502644	-104.36388173
6,000.00	36.66	101.78	5,448.88	-379.69	1,821.28	14,638,433.94	1,817,826.13	40.30499297	-104.36367211
6,100.00	36.66	101.78	5,529.10	-391.87	1,879.73	14,638,422.17	1,817,884.66	40.30495950	-104.36346248
6,200.00	36.66	101.78	5,609.32	-404.06	1,938.17	14,638,410.40	1,817,943.19	40.30492603	-104.36325286
6,300.00	36.66	101.78	5,689.54	-416.24	1,996.62	14,638,398.63	1,818,001.72	40.30489256	-104.36304324
6,400.00	36.66	101.78	5,769.77	-428.43	2,055.07	14,638,386.86	1,818,060.26	40.30485909	-104.36283362
6,500.00	36.66	101.78	5,849.99	-440.61	2,113.51	14,638,375.10	1,818,118.79	40.30482562	-104.36262399
6,582.06	36.66	101.78	5,915.82	-450.61	2,161.47	14,638,365.44	1,818,166.82	40.30479815	-104.36245198
Begin 10°/100' build									
6,600.00	36.34	98.81	5,930.24	-452.52	2,171.97	14,638,363.61	1,818,177.33	40.30479291	-104.36241433
6,700.00	35.96	81.83	6,011.19	-452.88	2,230.46	14,638,363.66	1,818,235.82	40.30479190	-104.36220454
6,800.00	37.94	65.48	6,091.30	-435.91	2,287.64	14,638,381.04	1,818,292.88	40.30483850	-104.36199946
6,900.00	41.93	51.15	6,168.13	-402.11	2,341.76	14,638,415.22	1,818,346.76	40.30493130	-104.36180533
7,000.00	47.41	39.23	6,239.35	-352.51	2,391.19	14,638,465.17	1,818,395.83	40.30506747	-104.36162803
7,100.00	53.92	29.40	6,302.79	-288.63	2,434.42	14,638,529.36	1,818,438.60	40.30524288	-104.36147296
7,200.00	61.11	21.14	6,356.52	-212.40	2,470.13	14,638,605.84	1,818,473.78	40.30545220	-104.36134483
7,300.00	68.73	13.99	6,398.93	-126.13	2,497.25	14,638,692.30	1,818,500.28	40.30568907	-104.36124754
7,400.00	76.63	7.55	6,428.70	-32.46	2,514.95	14,638,786.09	1,818,517.31	40.30594629	-104.36118403
7,500.00	84.67	1.53	6,444.95	65.78	2,522.69	14,638,884.38	1,818,524.35	40.30621604	-104.36115624
7,565.73	90.00	357.67	6,448.00	131.40	2,522.22	14,638,950.00	1,818,523.42	40.30639624	-104.36115788
LP Begin 90° lateral									
7,600.00	90.00	357.67	6,448.00	165.64	2,520.83	14,638,984.23	1,818,521.78	40.30649026	-104.36116287
7,700.00	90.00	357.67	6,448.00	265.56	2,516.76	14,639,084.12	1,818,517.01	40.30676463	-104.36117742
7,800.00	90.00	357.67	6,448.00	365.48	2,512.70	14,639,184.00	1,818,512.23	40.30703900	-104.36119196
7,900.00	90.00	357.67	6,448.00	465.40	2,508.63	14,639,283.89	1,818,507.45	40.30731337	-104.36120651
8,000.00	90.00	357.67	6,448.00	565.31	2,504.57	14,639,383.77	1,818,502.68	40.30758773	-104.36122106
8,100.00	90.00	357.67	6,448.00	665.23	2,500.50	14,639,483.66	1,818,497.90	40.30786210	-104.36123561
8,200.00	90.00	357.67	6,448.00	765.15	2,496.43	14,639,583.55	1,818,493.12	40.30813647	-104.36125016
8,300.00	90.00	357.67	6,448.00	865.06	2,492.37	14,639,683.43	1,818,488.35	40.30841084	-104.36126470
8,400.00	90.00	357.67	6,448.00	964.98	2,488.30	14,639,783.32	1,818,483.57	40.30868521	-104.36127925
8,500.00	90.00	357.67	6,448.00	1,064.90	2,484.23	14,639,883.20	1,818,478.79	40.30895958	-104.36129380
8,600.00	90.00	357.67	6,448.00	1,164.82	2,480.17	14,639,983.09	1,818,474.02	40.30923394	-104.36130835
8,700.00	90.00	357.67	6,448.00	1,264.73	2,476.10	14,640,082.97	1,818,469.24	40.30950831	-104.36132290
8,800.00	90.00	357.67	6,448.00	1,364.65	2,472.04	14,640,182.86	1,818,464.47	40.30978268	-104.36133745
8,900.00	90.00	357.67	6,448.00	1,464.57	2,467.97	14,640,282.75	1,818,459.69	40.31005705	-104.36135200
9,000.00	90.00	357.67	6,448.00	1,564.49	2,463.90	14,640,382.63	1,818,454.91	40.31033142	-104.36136655
9,100.00	90.00	357.67	6,448.00	1,664.40	2,459.84	14,640,482.52	1,818,450.14	40.31060578	-104.36138109
9,200.00	90.00	357.67	6,448.00	1,764.32	2,455.77	14,640,582.40	1,818,445.36	40.31088015	-104.36139564
9,300.00	90.00	357.67	6,448.00	1,864.24	2,451.71	14,640,682.29	1,818,440.58	40.31115452	-104.36141019
9,400.00	90.00	357.67	6,448.00	1,964.15	2,447.64	14,640,782.17	1,818,435.81	40.31142889	-104.36142474
9,500.00	90.00	357.67	6,448.00	2,064.07	2,443.57	14,640,882.06	1,818,431.03	40.31170326	-104.36143929
9,600.00	90.00	357.67	6,448.00	2,163.99	2,439.51	14,640,981.94	1,818,426.25	40.31197762	-104.36145384
9,700.00	90.00	357.67	6,448.00	2,263.91	2,435.44	14,641,081.83	1,818,421.48	40.31225199	-104.36146839
9,800.00	90.00	357.67	6,448.00	2,363.82	2,431.37	14,641,181.72	1,818,416.70	40.31252636	-104.36148294
9,900.00	90.00	357.67	6,448.00	2,463.74	2,427.31	14,641,281.60	1,818,411.92	40.31280073	-104.36149749
10,000.00	90.00	357.67	6,448.00	2,563.66	2,423.24	14,641,381.49	1,818,407.15	40.31307509	-104.36151204



Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-02-04L
Company:	Confluence Resources	TVD Reference:	RKB=4557+24 @ 4581.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4557+24 @ 4581.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-02-04L	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	357.67	6,448.00	2,663.58	2,419.18	14,641,481.37	1,818,402.37	40.31334945	-104.36152659
10,200.00	90.00	357.67	6,448.00	2,763.49	2,415.11	14,641,581.26	1,818,397.59	40.31362382	-104.36154114
10,300.00	90.00	357.67	6,448.00	2,863.41	2,411.04	14,641,681.14	1,818,392.82	40.31389819	-104.36155569
10,400.00	90.00	357.67	6,448.00	2,963.33	2,406.98	14,641,781.03	1,818,388.04	40.31417256	-104.36157024
10,500.00	90.00	357.67	6,448.00	3,063.25	2,402.91	14,641,880.92	1,818,383.26	40.31444693	-104.36158479
10,600.00	90.00	357.67	6,448.00	3,163.16	2,398.85	14,641,980.80	1,818,378.49	40.31472129	-104.36159934
10,700.00	90.00	357.67	6,448.00	3,263.08	2,394.78	14,642,080.69	1,818,373.71	40.31499566	-104.36161390
10,800.00	90.00	357.67	6,448.00	3,363.00	2,390.71	14,642,180.57	1,818,368.93	40.31527003	-104.36162845
10,900.00	90.00	357.67	6,448.00	3,462.91	2,386.65	14,642,280.46	1,818,364.16	40.31554440	-104.36164300
11,000.00	90.00	357.67	6,448.00	3,562.83	2,382.58	14,642,380.34	1,818,359.38	40.31581877	-104.36165755
11,100.00	90.00	357.67	6,448.00	3,662.75	2,378.51	14,642,480.23	1,818,354.60	40.31609313	-104.36167210
11,200.00	90.00	357.67	6,448.00	3,762.67	2,374.45	14,642,580.12	1,818,349.83	40.31636750	-104.36168665
11,300.00	90.00	357.67	6,448.00	3,862.58	2,370.38	14,642,680.00	1,818,345.05	40.31664187	-104.36170120
11,400.00	90.00	357.67	6,448.00	3,962.50	2,366.32	14,642,779.89	1,818,340.28	40.31691624	-104.36171575
11,500.00	90.00	357.67	6,448.00	4,062.42	2,362.25	14,642,879.77	1,818,335.50	40.31719060	-104.36173031
11,600.00	90.00	357.67	6,448.00	4,162.34	2,358.18	14,642,979.66	1,818,330.72	40.31746497	-104.36174486
11,700.00	90.00	357.67	6,448.00	4,262.25	2,354.12	14,643,079.54	1,818,325.95	40.31773934	-104.36175941
11,800.00	90.00	357.67	6,448.00	4,362.17	2,350.05	14,643,179.43	1,818,321.17	40.31801371	-104.36177396
11,900.00	90.00	357.67	6,448.00	4,462.09	2,345.99	14,643,279.32	1,818,316.39	40.31828807	-104.36178851
12,000.00	90.00	357.67	6,448.00	4,562.00	2,341.92	14,643,379.20	1,818,311.62	40.31856244	-104.36180307
12,100.00	90.00	357.67	6,448.00	4,661.92	2,337.85	14,643,479.09	1,818,306.84	40.31883681	-104.36181762
12,200.00	90.00	357.67	6,448.00	4,761.84	2,333.79	14,643,578.97	1,818,302.06	40.31911118	-104.36183217
12,300.00	90.00	357.67	6,448.00	4,861.76	2,329.72	14,643,678.86	1,818,297.29	40.31938555	-104.36184672
12,400.00	90.00	357.67	6,448.00	4,961.67	2,325.65	14,643,778.74	1,818,292.51	40.31965991	-104.36186128
12,500.00	90.00	357.67	6,448.00	5,061.59	2,321.59	14,643,878.63	1,818,287.73	40.31993428	-104.36187583
12,600.00	90.00	357.67	6,448.00	5,161.51	2,317.52	14,643,978.51	1,818,282.96	40.32020865	-104.36189038
12,700.00	90.00	357.67	6,448.00	5,261.43	2,313.46	14,644,078.40	1,818,278.18	40.32048302	-104.36190493
12,800.00	90.00	357.67	6,448.00	5,361.34	2,309.39	14,644,178.29	1,818,273.40	40.32075738	-104.36191949
12,900.00	90.00	357.67	6,448.00	5,461.26	2,305.32	14,644,278.17	1,818,268.63	40.32103175	-104.36193404
13,000.00	90.00	357.67	6,448.00	5,561.18	2,301.26	14,644,378.06	1,818,263.85	40.32130612	-104.36194859
13,100.00	90.00	357.67	6,448.00	5,661.10	2,297.19	14,644,477.94	1,818,259.07	40.32158049	-104.36196315
13,200.00	90.00	357.67	6,448.00	5,761.01	2,293.13	14,644,577.83	1,818,254.30	40.32185485	-104.36197770
13,300.00	90.00	357.67	6,448.00	5,860.93	2,289.06	14,644,677.71	1,818,249.52	40.32212922	-104.36199225
13,400.00	90.00	357.67	6,448.00	5,960.85	2,284.99	14,644,777.60	1,818,244.74	40.32240359	-104.36200681
13,500.00	90.00	357.67	6,448.00	6,060.76	2,280.93	14,644,877.49	1,818,239.97	40.32267796	-104.36202136
13,600.00	90.00	357.67	6,448.00	6,160.68	2,276.86	14,644,977.37	1,818,235.19	40.32295232	-104.36203592
13,700.00	90.00	357.67	6,448.00	6,260.60	2,272.79	14,645,077.26	1,818,230.41	40.32322669	-104.36205047
13,800.00	90.00	357.67	6,448.00	6,360.52	2,268.73	14,645,177.14	1,818,225.64	40.32350106	-104.36206502
13,900.00	90.00	357.67	6,448.00	6,460.43	2,264.66	14,645,277.03	1,818,220.86	40.32377543	-104.36207958
14,000.00	90.00	357.67	6,448.00	6,560.35	2,260.60	14,645,376.91	1,818,216.09	40.32404979	-104.36209413
14,100.00	90.00	357.67	6,448.00	6,660.27	2,256.53	14,645,476.80	1,818,211.31	40.32432416	-104.36210869
14,200.00	90.00	357.67	6,448.00	6,760.19	2,252.46	14,645,576.69	1,818,206.53	40.32459853	-104.36212324
14,300.00	90.00	357.67	6,448.00	6,860.10	2,248.40	14,645,676.57	1,818,201.76	40.32487290	-104.36213780
14,400.00	90.00	357.67	6,448.00	6,960.02	2,244.33	14,645,776.46	1,818,196.98	40.32514726	-104.36215235
14,500.00	90.00	357.67	6,448.00	7,059.94	2,240.27	14,645,876.34	1,818,192.20	40.32542163	-104.36216690
14,600.00	90.00	357.67	6,448.00	7,159.85	2,236.20	14,645,976.23	1,818,187.43	40.32569600	-104.36218146
14,700.00	90.00	357.67	6,448.00	7,259.77	2,232.13	14,646,076.11	1,818,182.65	40.32597036	-104.36219601
14,800.00	90.00	357.67	6,448.00	7,359.69	2,228.07	14,646,176.00	1,818,177.87	40.32624473	-104.36221057
14,900.00	90.00	357.67	6,448.00	7,459.61	2,224.00	14,646,275.88	1,818,173.10	40.32651910	-104.36222512
15,000.00	90.00	357.67	6,448.00	7,559.52	2,219.93	14,646,375.77	1,818,168.32	40.32679347	-104.36223968
15,100.00	90.00	357.67	6,448.00	7,659.44	2,215.87	14,646,475.66	1,818,163.54	40.32706783	-104.36225424
15,200.00	90.00	357.67	6,448.00	7,759.36	2,211.80	14,646,575.54	1,818,158.77	40.32734220	-104.36226879
15,300.00	90.00	357.67	6,448.00	7,859.28	2,207.74	14,646,675.43	1,818,153.99	40.32761657	-104.36228335
15,400.00	90.00	357.67	6,448.00	7,959.19	2,203.67	14,646,775.31	1,818,149.21	40.32789094	-104.36229790
15,500.00	90.00	357.67	6,448.00	8,059.11	2,199.60	14,646,875.20	1,818,144.44	40.32816530	-104.36231246

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-02-04L
Company:	Confluence Resources	TVD Reference:	RKB=4557+24 @ 4581.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4557+24 @ 4581.00ft
Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-02-04L	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	357.67	6,448.00	8,159.03	2,195.54	14,646,975.08	1,818,139.66	40.32843967	-104.36232701
15,700.00	90.00	357.67	6,448.00	8,258.94	2,191.47	14,647,074.97	1,818,134.88	40.32871404	-104.36234157
15,800.00	90.00	357.67	6,448.00	8,358.86	2,187.41	14,647,174.86	1,818,130.11	40.32898840	-104.36235613
15,900.00	90.00	357.67	6,448.00	8,458.78	2,183.34	14,647,274.74	1,818,125.33	40.32926277	-104.36237068
16,000.00	90.00	357.67	6,448.00	8,558.70	2,179.27	14,647,374.63	1,818,120.55	40.32953714	-104.36238524
16,100.00	90.00	357.67	6,448.00	8,658.61	2,175.21	14,647,474.51	1,818,115.78	40.32981151	-104.36239980
16,200.00	90.00	357.67	6,448.00	8,758.53	2,171.14	14,647,574.40	1,818,111.00	40.33008587	-104.36241435
16,300.00	90.00	357.67	6,448.00	8,858.45	2,167.07	14,647,674.28	1,818,106.22	40.33036024	-104.36242891
16,400.00	90.00	357.67	6,448.00	8,958.37	2,163.01	14,647,774.17	1,818,101.45	40.33063461	-104.36244346
16,500.00	90.00	357.67	6,448.00	9,058.28	2,158.94	14,647,874.06	1,818,096.67	40.33090897	-104.36245802
16,600.00	90.00	357.67	6,448.00	9,158.20	2,154.88	14,647,973.94	1,818,091.90	40.33118334	-104.36247258
16,700.00	90.00	357.67	6,448.00	9,258.12	2,150.81	14,648,073.83	1,818,087.12	40.33145771	-104.36248714
16,800.00	90.00	357.67	6,448.00	9,358.04	2,146.74	14,648,173.71	1,818,082.34	40.33173208	-104.36250169
16,900.00	90.00	357.67	6,448.00	9,457.95	2,142.68	14,648,273.60	1,818,077.57	40.33200644	-104.36251625
17,000.00	90.00	357.67	6,448.00	9,557.87	2,138.61	14,648,373.48	1,818,072.79	40.33228081	-104.36253081
17,100.00	90.00	357.67	6,448.00	9,657.79	2,134.55	14,648,473.37	1,818,068.01	40.33255518	-104.36254536
17,200.00	90.00	357.67	6,448.00	9,757.70	2,130.48	14,648,573.26	1,818,063.24	40.33282954	-104.36255992
17,270.87	90.00	357.67	6,448.00	9,828.52	2,127.60	14,648,644.04	1,818,059.85	40.33302399	-104.36257024
PBHL/TD 17270.87 MD/6448.00 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									
Middlepark 18-02-4L LP	0.00	0.00	6,448.00	131.40	2,522.22	14,638,950.00	1,818,523.42	40.30639623	-104.36115788
- plan hits target center									
- Point									
Middlepark 18-02-4L BH	0.00	0.00	6,448.00	9,828.52	2,127.60	14,648,644.05	1,818,059.85	40.33302400	-104.36257024
- plan hits target center									
- Point									

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 2°/100' build
3,832.87	3,710.36	-115.64	554.67	Begin 36.66° tangent
6,582.06	5,915.82	-450.61	2,161.47	Begin 10°/100' build
7,565.73	6,448.00	131.40	2,522.22	LP Begin 90° lateral
17,270.87	6,448.00	9,828.52	2,127.60	PBHL/TD 17270.87 MD/6448.00 TVD