

Well: Middlepark 18-09-3L
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	3292.80	25.86	111.24	3249.37	-103.91	267.30	2.00	-69.37	Begin 25.86° tangent
4	6031.64	25.86	111.24	5714.03	-536.68	1380.58	0.00	-358.30	Begin 10°/100' build
5	7032.10	90.00	357.66	6329.00	38.15	1630.52	10.00	243.46	LP Begin 90° lateral
6	16722.41	90.00	357.66	6329.00	9720.41	1235.64	0.00	9798.63	PBHL/TD 16722.41 MD/6329.00 TVD

DESIGN TARGET DETAILS

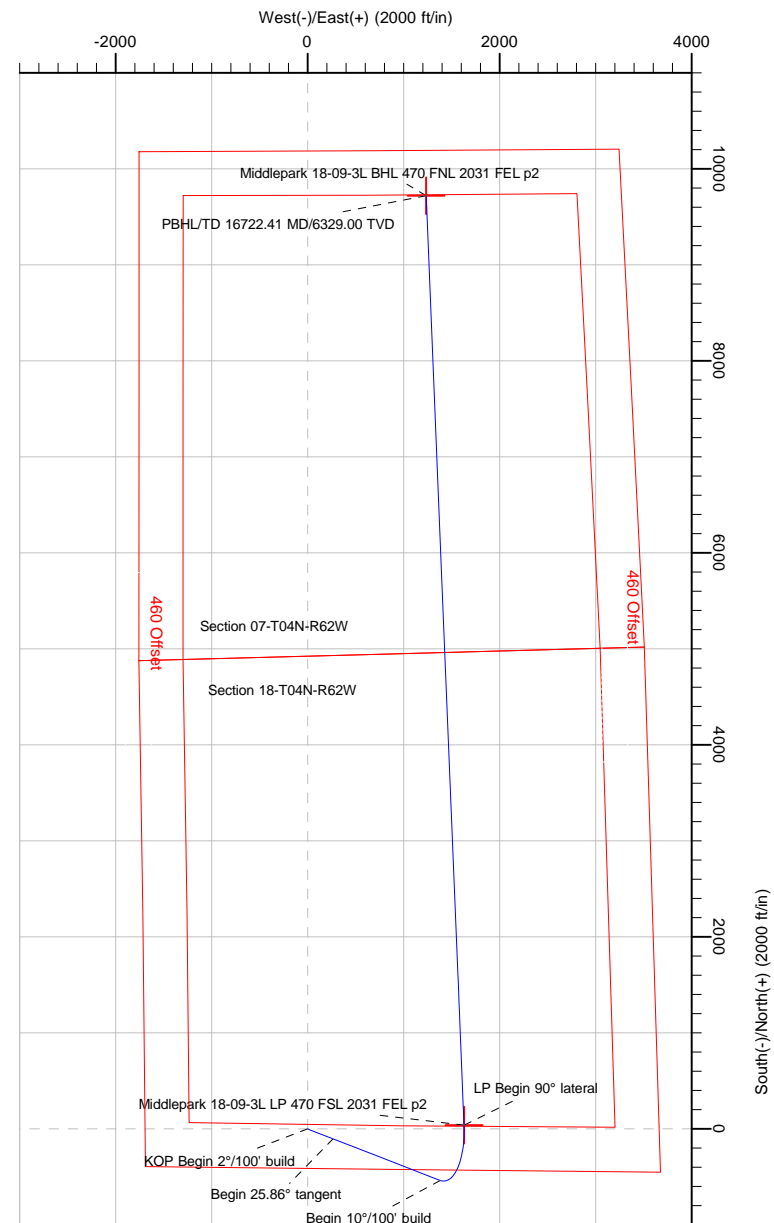
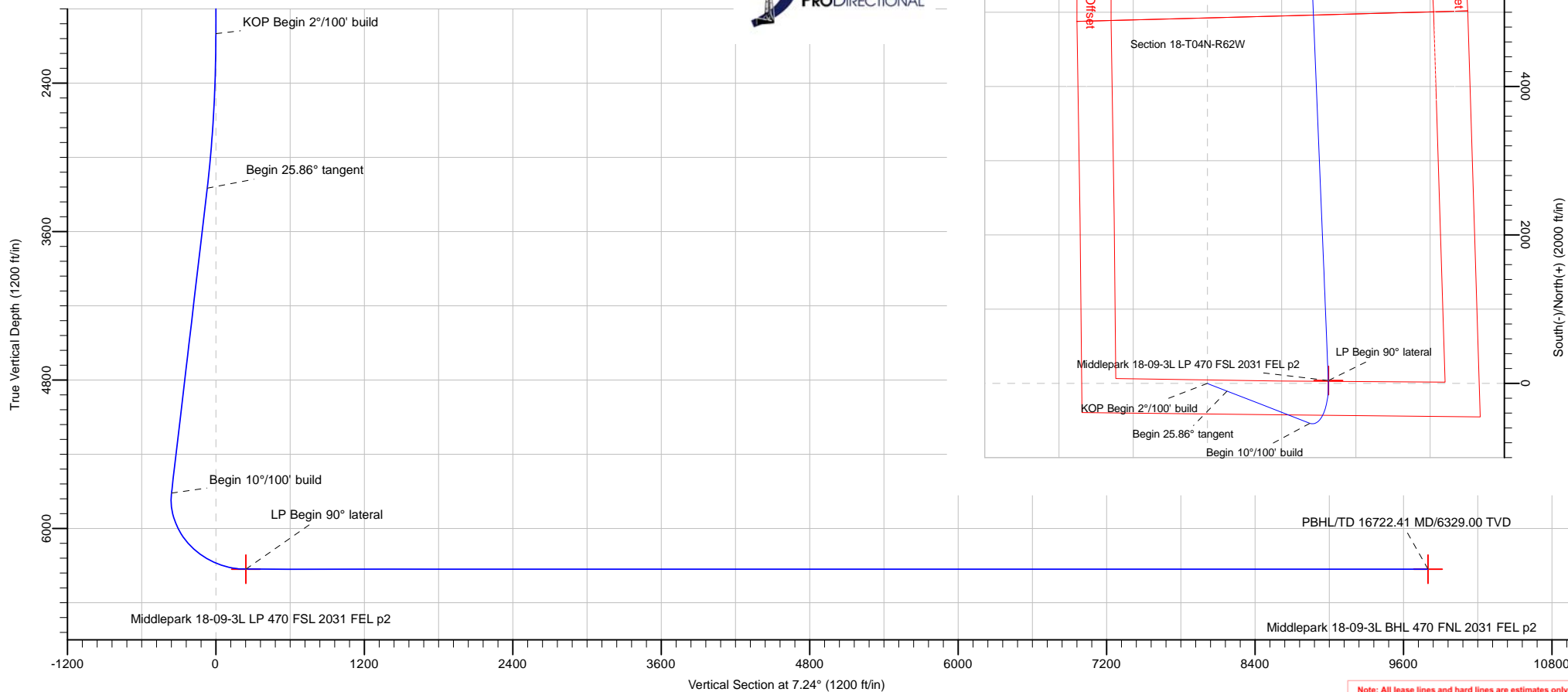
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Middlepark 18-09-3L BHL 470 FNL 2031 FEL p2	6329.00	9720.41	1235.64	14648629.19	1817091.04	40.33300230	-104.36604676
Middlepark 18-09-3L LP 470 FSL 2031 FEL p2	6329.00	38.15	1630.52	14638950.00	1817554.72	40.30641535	-104.36463226



Azimuths to True North
Magnetic North: 8.18°

Magnetic Field
Strength: 52247.5nT
Dip Angle: 66.90°
Date: 4/22/2018
Model: HDGM

Middlepark 18-09-3L Surf loc: 413 FSL 1693 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
14638900.26	1815924.52	40.30631074	-104.37048047



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 18-09-3L
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 18-09-3L	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 18-09-3L, Surf loc: 413 FSL 1693 FWL Section 18-T04N-R62W					
Well Position	+N/-S	-2,261.22 ft	Northing:	14,638,900.26 usft	Latitude:	40.30631074
	+E/-W	1,134.61 ft	Easting:	1,815,924.52 usft	Longitude:	-104.37048048
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 (°)
	0.00	0.00	0.00	7.24

Plan Survey Tool Program	Date	4/27/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,722.41	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	
3,292.80	25.86	111.24	3,249.37	-103.91	267.30	2.00	2.00	0.00	111.24	
6,031.64	25.86	111.24	5,714.03	-536.68	1,380.58	0.00	0.00	0.00	0.00	
7,032.10	90.00	357.66	6,329.00	38.15	1,630.52	10.00	6.41	-11.35	-111.44	Middlepark 18-09-3L I
16,722.41	90.00	357.66	6,329.00	9,720.41	1,235.64	0.00	0.00	0.00	0.00	Middlepark 18-09-3L I

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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 18-09-3L	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	111.24	2,099.98	-0.63	1.63	-0.42	2.00	2.00	0.00
2,200.00	4.00	111.24	2,199.84	-2.53	6.50	-1.69	2.00	2.00	0.00
2,300.00	6.00	111.24	2,299.45	-5.69	14.63	-3.80	2.00	2.00	0.00
2,400.00	8.00	111.24	2,398.70	-10.10	25.99	-6.74	2.00	2.00	0.00
2,500.00	10.00	111.24	2,497.47	-15.77	40.57	-10.53	2.00	2.00	0.00
2,600.00	12.00	111.24	2,595.62	-22.68	58.35	-15.14	2.00	2.00	0.00
2,700.00	14.00	111.24	2,693.06	-30.83	79.31	-20.58	2.00	2.00	0.00
2,800.00	16.00	111.24	2,789.64	-40.21	103.44	-26.84	2.00	2.00	0.00
2,900.00	18.00	111.24	2,885.27	-50.80	130.69	-33.92	2.00	2.00	0.00
3,000.00	20.00	111.24	2,979.82	-62.60	161.03	-41.79	2.00	2.00	0.00
3,100.00	22.00	111.24	3,073.17	-75.58	194.43	-50.46	2.00	2.00	0.00
3,200.00	24.00	111.24	3,165.21	-89.74	230.85	-59.91	2.00	2.00	0.00
3,292.80	25.86	111.24	3,249.37	-103.91	267.30	-69.37	2.00	2.00	0.00
Begin 25.86° tangent									
3,300.00	25.86	111.24	3,255.84	-105.05	270.23	-70.13	0.00	0.00	0.00
3,400.00	25.86	111.24	3,345.83	-120.85	310.87	-80.68	0.00	0.00	0.00
3,500.00	25.86	111.24	3,435.82	-136.65	351.52	-91.23	0.00	0.00	0.00
3,600.00	25.86	111.24	3,525.81	-152.45	392.17	-101.78	0.00	0.00	0.00
3,700.00	25.86	111.24	3,615.80	-168.25	432.82	-112.33	0.00	0.00	0.00
3,800.00	25.86	111.24	3,705.79	-184.05	473.47	-122.88	0.00	0.00	0.00
3,900.00	25.86	111.24	3,795.78	-199.86	514.11	-133.43	0.00	0.00	0.00
4,000.00	25.86	111.24	3,885.77	-215.66	554.76	-143.98	0.00	0.00	0.00
4,100.00	25.86	111.24	3,975.76	-231.46	595.41	-154.53	0.00	0.00	0.00
4,200.00	25.86	111.24	4,065.75	-247.26	636.06	-165.08	0.00	0.00	0.00
4,300.00	25.86	111.24	4,155.74	-263.06	676.71	-175.63	0.00	0.00	0.00
4,400.00	25.86	111.24	4,245.73	-278.86	717.35	-186.17	0.00	0.00	0.00
4,500.00	25.86	111.24	4,335.72	-294.66	758.00	-196.72	0.00	0.00	0.00
4,600.00	25.86	111.24	4,425.70	-310.46	798.65	-207.27	0.00	0.00	0.00
4,700.00	25.86	111.24	4,515.69	-326.27	839.30	-217.82	0.00	0.00	0.00
4,800.00	25.86	111.24	4,605.68	-342.07	879.94	-228.37	0.00	0.00	0.00
4,900.00	25.86	111.24	4,695.67	-357.87	920.59	-238.92	0.00	0.00	0.00

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Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-09-3L	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	25.86	111.24	4,785.66	-373.67	961.24	-249.47	0.00	0.00	0.00
5,100.00	25.86	111.24	4,875.65	-389.47	1,001.89	-260.02	0.00	0.00	0.00
5,200.00	25.86	111.24	4,965.64	-405.27	1,042.54	-270.57	0.00	0.00	0.00
5,300.00	25.86	111.24	5,055.63	-421.07	1,083.18	-281.12	0.00	0.00	0.00
5,400.00	25.86	111.24	5,145.62	-436.88	1,123.83	-291.67	0.00	0.00	0.00
5,500.00	25.86	111.24	5,235.61	-452.68	1,164.48	-302.22	0.00	0.00	0.00
5,600.00	25.86	111.24	5,325.60	-468.48	1,205.13	-312.77	0.00	0.00	0.00
5,700.00	25.86	111.24	5,415.59	-484.28	1,245.78	-323.32	0.00	0.00	0.00
5,800.00	25.86	111.24	5,505.58	-500.08	1,286.42	-333.87	0.00	0.00	0.00
5,900.00	25.86	111.24	5,595.57	-515.88	1,327.07	-344.42	0.00	0.00	0.00
6,000.00	25.86	111.24	5,685.55	-531.68	1,367.72	-354.96	0.00	0.00	0.00
6,031.64	25.86	111.24	5,714.03	-536.68	1,380.58	-358.30	0.00	0.00	0.00
Begin 10°/100' build									
6,100.00	24.15	95.53	5,776.05	-543.44	1,408.43	-361.49	10.00	-2.49	-22.98
6,200.00	24.84	71.32	5,867.28	-538.67	1,448.79	-351.67	10.00	0.69	-24.21
6,300.00	28.96	51.04	5,956.63	-516.67	1,487.61	-324.95	10.00	4.12	-20.28
6,400.00	35.33	36.46	6,041.38	-478.09	1,523.71	-282.13	10.00	6.37	-14.58
6,500.00	42.95	26.16	6,118.96	-424.12	1,556.00	-224.51	10.00	7.62	-10.30
6,600.00	51.26	18.54	6,187.02	-356.38	1,583.49	-153.86	10.00	8.31	-7.62
6,700.00	59.96	12.55	6,243.47	-276.95	1,605.35	-72.30	10.00	8.70	-5.99
6,800.00	68.89	7.54	6,286.62	-188.23	1,620.91	17.67	10.00	8.93	-5.01
6,900.00	77.94	3.11	6,315.14	-92.93	1,629.70	113.33	10.00	9.06	-4.43
7,000.00	87.07	358.97	6,328.18	6.08	1,631.46	211.76	10.00	9.12	-4.14
7,032.10	90.00	357.66	6,329.00	38.15	1,630.52	243.46	10.00	9.14	-4.06
LP Begin 90° lateral									
7,100.00	90.00	357.66	6,329.00	105.99	1,627.75	310.41	0.00	0.00	0.00
7,200.00	90.00	357.66	6,329.00	205.91	1,623.67	409.02	0.00	0.00	0.00
7,300.00	90.00	357.66	6,329.00	305.83	1,619.60	507.62	0.00	0.00	0.00
7,400.00	90.00	357.66	6,329.00	405.74	1,615.52	606.23	0.00	0.00	0.00
7,500.00	90.00	357.66	6,329.00	505.66	1,611.45	704.83	0.00	0.00	0.00
7,600.00	90.00	357.66	6,329.00	605.58	1,607.37	803.44	0.00	0.00	0.00
7,700.00	90.00	357.66	6,329.00	705.49	1,603.30	902.04	0.00	0.00	0.00
7,800.00	90.00	357.66	6,329.00	805.41	1,599.22	1,000.65	0.00	0.00	0.00
7,900.00	90.00	357.66	6,329.00	905.33	1,595.15	1,099.25	0.00	0.00	0.00
8,000.00	90.00	357.66	6,329.00	1,005.24	1,591.07	1,197.86	0.00	0.00	0.00
8,100.00	90.00	357.66	6,329.00	1,105.16	1,587.00	1,296.47	0.00	0.00	0.00
8,200.00	90.00	357.66	6,329.00	1,205.08	1,582.92	1,395.07	0.00	0.00	0.00
8,300.00	90.00	357.66	6,329.00	1,305.00	1,578.85	1,493.68	0.00	0.00	0.00
8,400.00	90.00	357.66	6,329.00	1,404.91	1,574.78	1,592.28	0.00	0.00	0.00
8,500.00	90.00	357.66	6,329.00	1,504.83	1,570.70	1,690.89	0.00	0.00	0.00
8,600.00	90.00	357.66	6,329.00	1,604.75	1,566.63	1,789.49	0.00	0.00	0.00
8,700.00	90.00	357.66	6,329.00	1,704.66	1,562.55	1,888.10	0.00	0.00	0.00
8,800.00	90.00	357.66	6,329.00	1,804.58	1,558.48	1,986.70	0.00	0.00	0.00
8,900.00	90.00	357.66	6,329.00	1,904.50	1,554.40	2,085.31	0.00	0.00	0.00
9,000.00	90.00	357.66	6,329.00	2,004.41	1,550.33	2,183.91	0.00	0.00	0.00
9,100.00	90.00	357.66	6,329.00	2,104.33	1,546.25	2,282.52	0.00	0.00	0.00
9,200.00	90.00	357.66	6,329.00	2,204.25	1,542.18	2,381.13	0.00	0.00	0.00
9,300.00	90.00	357.66	6,329.00	2,304.16	1,538.10	2,479.73	0.00	0.00	0.00
9,400.00	90.00	357.66	6,329.00	2,404.08	1,534.03	2,578.34	0.00	0.00	0.00
9,500.00	90.00	357.66	6,329.00	2,504.00	1,529.95	2,676.94	0.00	0.00	0.00
9,600.00	90.00	357.66	6,329.00	2,603.92	1,525.88	2,775.55	0.00	0.00	0.00
9,700.00	90.00	357.66	6,329.00	2,703.83	1,521.80	2,874.15	0.00	0.00	0.00
9,800.00	90.00	357.66	6,329.00	2,803.75	1,517.73	2,972.76	0.00	0.00	0.00
9,900.00	90.00	357.66	6,329.00	2,903.67	1,513.65	3,071.36	0.00	0.00	0.00

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Well:	Middlepark 18-09-3L	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	357.66	6,329.00	3,003.58	1,509.58	3,169.97	0.00	0.00	0.00
10,100.00	90.00	357.66	6,329.00	3,103.50	1,505.50	3,268.57	0.00	0.00	0.00
10,200.00	90.00	357.66	6,329.00	3,203.42	1,501.43	3,367.18	0.00	0.00	0.00
10,300.00	90.00	357.66	6,329.00	3,303.33	1,497.35	3,465.79	0.00	0.00	0.00
10,400.00	90.00	357.66	6,329.00	3,403.25	1,493.28	3,564.39	0.00	0.00	0.00
10,500.00	90.00	357.66	6,329.00	3,503.17	1,489.20	3,663.00	0.00	0.00	0.00
10,600.00	90.00	357.66	6,329.00	3,603.09	1,485.13	3,761.60	0.00	0.00	0.00
10,700.00	90.00	357.66	6,329.00	3,703.00	1,481.05	3,860.21	0.00	0.00	0.00
10,800.00	90.00	357.66	6,329.00	3,802.92	1,476.98	3,958.81	0.00	0.00	0.00
10,900.00	90.00	357.66	6,329.00	3,902.84	1,472.90	4,057.42	0.00	0.00	0.00
11,000.00	90.00	357.66	6,329.00	4,002.75	1,468.83	4,156.02	0.00	0.00	0.00
11,100.00	90.00	357.66	6,329.00	4,102.67	1,464.75	4,254.63	0.00	0.00	0.00
11,200.00	90.00	357.66	6,329.00	4,202.59	1,460.68	4,353.23	0.00	0.00	0.00
11,300.00	90.00	357.66	6,329.00	4,302.50	1,456.60	4,451.84	0.00	0.00	0.00
11,400.00	90.00	357.66	6,329.00	4,402.42	1,452.53	4,550.45	0.00	0.00	0.00
11,500.00	90.00	357.66	6,329.00	4,502.34	1,448.45	4,649.05	0.00	0.00	0.00
11,600.00	90.00	357.66	6,329.00	4,602.25	1,444.38	4,747.66	0.00	0.00	0.00
11,700.00	90.00	357.66	6,329.00	4,702.17	1,440.30	4,846.26	0.00	0.00	0.00
11,800.00	90.00	357.66	6,329.00	4,802.09	1,436.23	4,944.87	0.00	0.00	0.00
11,900.00	90.00	357.66	6,329.00	4,902.01	1,432.15	5,043.47	0.00	0.00	0.00
12,000.00	90.00	357.66	6,329.00	5,001.92	1,428.08	5,142.08	0.00	0.00	0.00
12,100.00	90.00	357.66	6,329.00	5,101.84	1,424.00	5,240.68	0.00	0.00	0.00
12,200.00	90.00	357.66	6,329.00	5,201.76	1,419.93	5,339.29	0.00	0.00	0.00
12,300.00	90.00	357.66	6,329.00	5,301.67	1,415.85	5,437.89	0.00	0.00	0.00
12,400.00	90.00	357.66	6,329.00	5,401.59	1,411.78	5,536.50	0.00	0.00	0.00
12,500.00	90.00	357.66	6,329.00	5,501.51	1,407.70	5,635.11	0.00	0.00	0.00
12,600.00	90.00	357.66	6,329.00	5,601.42	1,403.63	5,733.71	0.00	0.00	0.00
12,700.00	90.00	357.66	6,329.00	5,701.34	1,399.55	5,832.32	0.00	0.00	0.00
12,800.00	90.00	357.66	6,329.00	5,801.26	1,395.48	5,930.92	0.00	0.00	0.00
12,900.00	90.00	357.66	6,329.00	5,901.17	1,391.40	6,029.53	0.00	0.00	0.00
13,000.00	90.00	357.66	6,329.00	6,001.09	1,387.33	6,128.13	0.00	0.00	0.00
13,100.00	90.00	357.66	6,329.00	6,101.01	1,383.25	6,226.74	0.00	0.00	0.00
13,200.00	90.00	357.66	6,329.00	6,200.93	1,379.18	6,325.34	0.00	0.00	0.00
13,300.00	90.00	357.66	6,329.00	6,300.84	1,375.10	6,423.95	0.00	0.00	0.00
13,400.00	90.00	357.66	6,329.00	6,400.76	1,371.03	6,522.55	0.00	0.00	0.00
13,500.00	90.00	357.66	6,329.00	6,500.68	1,366.96	6,621.16	0.00	0.00	0.00
13,600.00	90.00	357.66	6,329.00	6,600.59	1,362.88	6,719.77	0.00	0.00	0.00
13,700.00	90.00	357.66	6,329.00	6,700.51	1,358.81	6,818.37	0.00	0.00	0.00
13,800.00	90.00	357.66	6,329.00	6,800.43	1,354.73	6,916.98	0.00	0.00	0.00
13,900.00	90.00	357.66	6,329.00	6,900.34	1,350.66	7,015.58	0.00	0.00	0.00
14,000.00	90.00	357.66	6,329.00	7,000.26	1,346.58	7,114.19	0.00	0.00	0.00
14,100.00	90.00	357.66	6,329.00	7,100.18	1,342.51	7,212.79	0.00	0.00	0.00
14,200.00	90.00	357.66	6,329.00	7,200.10	1,338.43	7,311.40	0.00	0.00	0.00
14,300.00	90.00	357.66	6,329.00	7,300.01	1,334.36	7,410.00	0.00	0.00	0.00
14,400.00	90.00	357.66	6,329.00	7,399.93	1,330.28	7,508.61	0.00	0.00	0.00
14,500.00	90.00	357.66	6,329.00	7,499.85	1,326.21	7,607.21	0.00	0.00	0.00
14,600.00	90.00	357.66	6,329.00	7,599.76	1,322.13	7,705.82	0.00	0.00	0.00
14,700.00	90.00	357.66	6,329.00	7,699.68	1,318.06	7,804.43	0.00	0.00	0.00
14,800.00	90.00	357.66	6,329.00	7,799.60	1,313.98	7,903.03	0.00	0.00	0.00
14,900.00	90.00	357.66	6,329.00	7,899.51	1,309.91	8,001.64	0.00	0.00	0.00
15,000.00	90.00	357.66	6,329.00	7,999.43	1,305.83	8,100.24	0.00	0.00	0.00
15,100.00	90.00	357.66	6,329.00	8,099.35	1,301.76	8,198.85	0.00	0.00	0.00
15,200.00	90.00	357.66	6,329.00	8,199.26	1,297.68	8,297.45	0.00	0.00	0.00
15,300.00	90.00	357.66	6,329.00	8,299.18	1,293.61	8,396.06	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-09-3L
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 18-09-3L	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	357.66	6,329.00	8,399.10	1,289.53	8,494.66	0.00	0.00	0.00
15,500.00	90.00	357.66	6,329.00	8,499.02	1,285.46	8,593.27	0.00	0.00	0.00
15,600.00	90.00	357.66	6,329.00	8,598.93	1,281.38	8,691.87	0.00	0.00	0.00
15,700.00	90.00	357.66	6,329.00	8,698.85	1,277.31	8,790.48	0.00	0.00	0.00
15,800.00	90.00	357.66	6,329.00	8,798.77	1,273.23	8,889.09	0.00	0.00	0.00
15,900.00	90.00	357.66	6,329.00	8,898.68	1,269.16	8,987.69	0.00	0.00	0.00
16,000.00	90.00	357.66	6,329.00	8,998.60	1,265.08	9,086.30	0.00	0.00	0.00
16,100.00	90.00	357.66	6,329.00	9,098.52	1,261.01	9,184.90	0.00	0.00	0.00
16,200.00	90.00	357.66	6,329.00	9,198.43	1,256.93	9,283.51	0.00	0.00	0.00
16,300.00	90.00	357.66	6,329.00	9,298.35	1,252.86	9,382.11	0.00	0.00	0.00
16,400.00	90.00	357.66	6,329.00	9,398.27	1,248.78	9,480.72	0.00	0.00	0.00
16,500.00	90.00	357.66	6,329.00	9,498.18	1,244.71	9,579.32	0.00	0.00	0.00
16,600.00	90.00	357.66	6,329.00	9,598.10	1,240.63	9,677.93	0.00	0.00	0.00
16,700.00	90.00	357.66	6,329.00	9,698.02	1,236.56	9,776.53	0.00	0.00	0.00
16,722.41	90.00	357.66	6,329.00	9,720.41	1,235.64	9,798.63	0.00	0.00	0.00
PBHL/TD 16722.41 MD/6329.00 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 18-09-3L BH	0.00	0.00	6,329.00	9,720.41	1,235.64	14,648,629.19	1,817,091.04	40.33300230	-104.36604676
- plan hits target center									
- Point									
Middlepark 18-09-3L LP	0.00	0.00	6,329.00	38.15	1,630.52	14,638,950.00	1,817,554.72	40.30641536	-104.36463226
- 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
3,292.80	3,249.37	-103.91	267.30	Begin 25.86° tangent
6,031.64	5,714.03	-536.68	1,380.58	Begin 10°/100' build
7,032.10	6,329.00	38.15	1,630.52	LP Begin 90° lateral
16,722.41	6,329.00	9,720.41	1,235.64	PBHL/TD 16722.41 MD/6329.00 TVD

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-09-3L
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 18-09-3L	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 18-09-3L, Surf loc: 413 FSL 1693 FWL Section 18-T04N-R62W					
Well Position	+N/-S	0.00 ft	Northing:	14,638,900.26 usft	Latitude:	40.30631074
	+E/-W	0.00 ft	Easting:	1,815,924.52 usft	Longitude:	-104.37048048
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 (°)
	0.00	0.00	0.00	7.24

Plan Survey Tool Program	Date	4/27/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,722.41 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	
3,292.80	25.86	111.24	3,249.37	-103.91	267.30	2.00	2.00	0.00	111.24	
6,031.64	25.86	111.24	5,714.03	-536.68	1,380.58	0.00	0.00	0.00	0.00	
7,032.10	90.00	357.66	6,329.00	38.15	1,630.52	10.00	6.41	-11.35	-111.44	Middlepark 18-09-3L I
16,722.41	90.00	357.66	6,329.00	9,720.41	1,235.64	0.00	0.00	0.00	0.00	Middlepark 18-09-3L I

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-09-3L
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 18-09-3L	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	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
100.00	0.00	0.00	100.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
200.00	0.00	0.00	200.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
300.00	0.00	0.00	300.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
400.00	0.00	0.00	400.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
500.00	0.00	0.00	500.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
600.00	0.00	0.00	600.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
700.00	0.00	0.00	700.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
800.00	0.00	0.00	800.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
900.00	0.00	0.00	900.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,638,900.26	1,815,924.52	40.30631074	-104.37048048
KOP Begin 2°/100' build									
2,100.00	2.00	111.24	2,099.98	-0.63	1.63	14,638,899.64	1,815,926.15	40.30630901	-104.37047464
2,200.00	4.00	111.24	2,199.84	-2.53	6.50	14,638,897.78	1,815,931.04	40.30630380	-104.37045715
2,300.00	6.00	111.24	2,299.45	-5.69	14.63	14,638,894.68	1,815,939.19	40.30629513	-104.37042801
2,400.00	8.00	111.24	2,398.70	-10.10	25.99	14,638,890.34	1,815,950.58	40.30628300	-104.37038727
2,500.00	10.00	111.24	2,497.47	-15.77	40.57	14,638,884.78	1,815,965.20	40.30626744	-104.37033498
2,600.00	12.00	111.24	2,595.62	-22.68	58.35	14,638,877.99	1,815,983.03	40.30624846	-104.37027119
2,700.00	14.00	111.24	2,693.06	-30.83	79.31	14,638,869.99	1,816,004.05	40.30622608	-104.37019600
2,800.00	16.00	111.24	2,789.64	-40.21	103.44	14,638,860.78	1,816,028.24	40.30620033	-104.37010948
2,900.00	18.00	111.24	2,885.27	-50.80	130.69	14,638,850.39	1,816,055.56	40.30617124	-104.37001174
3,000.00	20.00	111.24	2,979.82	-62.60	161.03	14,638,838.81	1,816,085.99	40.30613885	-104.36990291
3,100.00	22.00	111.24	3,073.17	-75.58	194.43	14,638,826.06	1,816,119.48	40.30610320	-104.36978312
3,200.00	24.00	111.24	3,165.21	-89.74	230.85	14,638,812.16	1,816,156.00	40.30606432	-104.36965250
3,292.80	25.86	111.24	3,249.37	-103.91	267.30	14,638,798.25	1,816,192.55	40.30602541	-104.36952175
Begin 25.86° tangent									
3,300.00	25.86	111.24	3,255.84	-105.05	270.23	14,638,797.13	1,816,195.49	40.30602229	-104.36951125
3,400.00	25.86	111.24	3,345.83	-120.85	310.87	14,638,781.62	1,816,236.24	40.30597890	-104.36936546
3,500.00	25.86	111.24	3,435.82	-136.65	351.52	14,638,766.11	1,816,277.00	40.30593550	-104.36921967
3,600.00	25.86	111.24	3,525.81	-152.45	392.17	14,638,750.60	1,816,317.76	40.30589211	-104.36907388
3,700.00	25.86	111.24	3,615.80	-168.25	432.82	14,638,735.09	1,816,358.52	40.30584872	-104.36892809
3,800.00	25.86	111.24	3,705.79	-184.05	473.47	14,638,719.57	1,816,399.28	40.30580533	-104.36878230
3,900.00	25.86	111.24	3,795.78	-199.86	514.11	14,638,704.06	1,816,440.04	40.30576194	-104.36863651
4,000.00	25.86	111.24	3,885.77	-215.66	554.76	14,638,688.55	1,816,480.80	40.30571855	-104.36849072
4,100.00	25.86	111.24	3,975.76	-231.46	595.41	14,638,673.04	1,816,521.56	40.30567515	-104.36834493
4,200.00	25.86	111.24	4,065.75	-247.26	636.06	14,638,657.53	1,816,562.32	40.30563176	-104.36819914
4,300.00	25.86	111.24	4,155.74	-263.06	676.71	14,638,642.01	1,816,603.08	40.30558837	-104.36805335
4,400.00	25.86	111.24	4,245.73	-278.86	717.35	14,638,626.50	1,816,643.84	40.30554498	-104.36790756
4,500.00	25.86	111.24	4,335.72	-294.66	758.00	14,638,610.99	1,816,684.60	40.30550158	-104.36776177
4,600.00	25.86	111.24	4,425.70	-310.46	798.65	14,638,595.48	1,816,725.35	40.30545819	-104.36761598
4,700.00	25.86	111.24	4,515.69	-326.27	839.30	14,638,579.97	1,816,766.11	40.30541480	-104.36747019
4,800.00	25.86	111.24	4,605.68	-342.07	879.94	14,638,564.45	1,816,806.87	40.30537140	-104.36732440
4,900.00	25.86	111.24	4,695.67	-357.87	920.59	14,638,548.94	1,816,847.63	40.30532801	-104.36717861
5,000.00	25.86	111.24	4,785.66	-373.67	961.24	14,638,533.43	1,816,888.39	40.30528462	-104.36703282

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-09-3L
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 18-09-3L	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	25.86	111.24	4,875.65	-389.47	1,001.89	14,638,517.92	1,816,929.15	40.30524122	-104.36688703
5,200.00	25.86	111.24	4,965.64	-405.27	1,042.54	14,638,502.41	1,816,969.91	40.30519783	-104.36674125
5,300.00	25.86	111.24	5,055.63	-421.07	1,083.18	14,638,486.89	1,817,010.67	40.30515443	-104.36659546
5,400.00	25.86	111.24	5,145.62	-436.88	1,123.83	14,638,471.38	1,817,051.43	40.30511104	-104.36644967
5,500.00	25.86	111.24	5,235.61	-452.68	1,164.48	14,638,455.87	1,817,092.19	40.30506764	-104.36630388
5,600.00	25.86	111.24	5,325.60	-468.48	1,205.13	14,638,440.36	1,817,132.95	40.30502425	-104.36615810
5,700.00	25.86	111.24	5,415.59	-484.28	1,245.78	14,638,424.85	1,817,173.71	40.30498085	-104.36601231
5,800.00	25.86	111.24	5,505.58	-500.08	1,286.42	14,638,409.33	1,817,214.46	40.30493746	-104.36586652
5,900.00	25.86	111.24	5,595.57	-515.88	1,327.07	14,638,393.82	1,817,255.22	40.30489406	-104.36572073
6,000.00	25.86	111.24	5,685.55	-531.68	1,367.72	14,638,378.31	1,817,295.98	40.30485067	-104.36557495
6,031.64	25.86	111.24	5,714.03	-536.68	1,380.58	14,638,373.40	1,817,308.88	40.30483694	-104.36552882
Begin 10°/100' build									
6,100.00	24.15	95.53	5,776.05	-543.44	1,408.43	14,638,366.84	1,817,336.77	40.30481838	-104.36542895
6,200.00	24.84	71.32	5,867.28	-538.67	1,448.79	14,638,371.90	1,817,377.10	40.30483146	-104.36528419
6,300.00	28.96	51.04	5,956.63	-516.67	1,487.61	14,638,394.18	1,817,415.76	40.30489189	-104.36514495
6,400.00	35.33	36.46	6,041.38	-478.09	1,523.71	14,638,433.01	1,817,451.59	40.30499781	-104.36501545
6,500.00	42.95	26.16	6,118.96	-424.12	1,556.00	14,638,487.21	1,817,483.49	40.30514601	-104.36489964
6,600.00	51.26	18.54	6,187.02	-356.38	1,583.49	14,638,555.14	1,817,510.50	40.30533199	-104.36480102
6,700.00	59.96	12.55	6,243.47	-276.95	1,605.35	14,638,634.72	1,817,531.79	40.30555011	-104.36472261
6,800.00	68.89	7.54	6,286.62	-188.23	1,620.91	14,638,723.55	1,817,546.72	40.30579372	-104.36466677
6,900.00	77.94	3.11	6,315.14	-92.93	1,629.70	14,638,818.92	1,817,554.84	40.30605543	-104.36463521
7,000.00	87.07	358.97	6,328.18	6.08	1,631.46	14,638,917.93	1,817,555.89	40.30632728	-104.36462889
7,032.10	90.00	357.66	6,329.00	38.15	1,630.52	14,638,949.99	1,817,554.72	40.30641535	-104.36463226
LP Begin 90° lateral									
7,100.00	90.00	357.66	6,329.00	105.99	1,627.75	14,639,017.82	1,817,551.47	40.30660165	-104.36464217
7,200.00	90.00	357.66	6,329.00	205.91	1,623.67	14,639,117.70	1,817,546.69	40.30687601	-104.36465676
7,300.00	90.00	357.66	6,329.00	305.83	1,619.60	14,639,217.59	1,817,541.90	40.30715038	-104.36467135
7,400.00	90.00	357.66	6,329.00	405.74	1,615.52	14,639,317.47	1,817,537.12	40.30742475	-104.36468594
7,500.00	90.00	357.66	6,329.00	505.66	1,611.45	14,639,417.36	1,817,532.33	40.30769911	-104.36470054
7,600.00	90.00	357.66	6,329.00	605.58	1,607.37	14,639,517.24	1,817,527.55	40.30797348	-104.36471513
7,700.00	90.00	357.66	6,329.00	705.49	1,603.30	14,639,617.13	1,817,522.76	40.30824785	-104.36472972
7,800.00	90.00	357.66	6,329.00	805.41	1,599.22	14,639,717.01	1,817,517.98	40.30852221	-104.36474431
7,900.00	90.00	357.66	6,329.00	905.33	1,595.15	14,639,816.90	1,817,513.19	40.30879658	-104.36475891
8,000.00	90.00	357.66	6,329.00	1,005.24	1,591.07	14,639,916.78	1,817,508.41	40.30907095	-104.36477350
8,100.00	90.00	357.66	6,329.00	1,105.16	1,587.00	14,640,016.67	1,817,503.62	40.30934532	-104.36478809
8,200.00	90.00	357.66	6,329.00	1,205.08	1,582.92	14,640,116.55	1,817,498.84	40.30961968	-104.36480269
8,300.00	90.00	357.66	6,329.00	1,305.00	1,578.85	14,640,216.44	1,817,494.05	40.30989405	-104.36481728
8,400.00	90.00	357.66	6,329.00	1,404.91	1,574.78	14,640,316.32	1,817,489.27	40.31016842	-104.36483187
8,500.00	90.00	357.66	6,329.00	1,504.83	1,570.70	14,640,416.21	1,817,484.48	40.31044278	-104.36484647
8,600.00	90.00	357.66	6,329.00	1,604.75	1,566.63	14,640,516.10	1,817,479.70	40.31071715	-104.36486106
8,700.00	90.00	357.66	6,329.00	1,704.66	1,562.55	14,640,615.98	1,817,474.91	40.31099152	-104.36487565
8,800.00	90.00	357.66	6,329.00	1,804.58	1,558.48	14,640,715.87	1,817,470.13	40.31126588	-104.36489025
8,900.00	90.00	357.66	6,329.00	1,904.50	1,554.40	14,640,815.75	1,817,465.34	40.31154025	-104.36490484
9,000.00	90.00	357.66	6,329.00	2,004.41	1,550.33	14,640,915.64	1,817,460.56	40.31181462	-104.36491944
9,100.00	90.00	357.66	6,329.00	2,104.33	1,546.25	14,641,015.52	1,817,455.77	40.31208898	-104.36493403
9,200.00	90.00	357.66	6,329.00	2,204.25	1,542.18	14,641,115.41	1,817,450.99	40.31236335	-104.36494862
9,300.00	90.00	357.66	6,329.00	2,304.16	1,538.10	14,641,215.29	1,817,446.20	40.31263772	-104.36496322
9,400.00	90.00	357.66	6,329.00	2,404.08	1,534.03	14,641,315.18	1,817,441.42	40.31291207	-104.36497781
9,500.00	90.00	357.66	6,329.00	2,504.00	1,529.95	14,641,415.06	1,817,436.63	40.31318644	-104.36499241
9,600.00	90.00	357.66	6,329.00	2,603.92	1,525.88	14,641,514.95	1,817,431.85	40.31346081	-104.36500700
9,700.00	90.00	357.66	6,329.00	2,703.83	1,521.80	14,641,614.83	1,817,427.06	40.31373517	-104.36502160
9,800.00	90.00	357.66	6,329.00	2,803.75	1,517.73	14,641,714.72	1,817,422.28	40.31400954	-104.36503619
9,900.00	90.00	357.66	6,329.00	2,903.67	1,513.65	14,641,814.60	1,817,417.49	40.31428391	-104.36505079
10,000.00	90.00	357.66	6,329.00	3,003.58	1,509.58	14,641,914.49	1,817,412.71	40.31455827	-104.36506538

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-09-3L
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 18-09-3L	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	357.66	6,329.00	3,103.50	1,505.50	14,642,014.37	1,817,407.92	40.31483264	-104.36507998
10,200.00	90.00	357.66	6,329.00	3,203.42	1,501.43	14,642,114.26	1,817,403.14	40.31510701	-104.36509457
10,300.00	90.00	357.66	6,329.00	3,303.33	1,497.35	14,642,214.14	1,817,398.35	40.31538137	-104.36510917
10,400.00	90.00	357.66	6,329.00	3,403.25	1,493.28	14,642,314.03	1,817,393.57	40.31565574	-104.36512376
10,500.00	90.00	357.66	6,329.00	3,503.17	1,489.20	14,642,413.91	1,817,388.78	40.31593011	-104.36513836
10,600.00	90.00	357.66	6,329.00	3,603.09	1,485.13	14,642,513.80	1,817,384.00	40.31620447	-104.36515295
10,700.00	90.00	357.66	6,329.00	3,703.00	1,481.05	14,642,613.69	1,817,379.21	40.31647884	-104.36516755
10,800.00	90.00	357.66	6,329.00	3,802.92	1,476.98	14,642,713.57	1,817,374.43	40.31675321	-104.36518215
10,900.00	90.00	357.66	6,329.00	3,902.84	1,472.90	14,642,813.46	1,817,369.64	40.31702757	-104.36519674
11,000.00	90.00	357.66	6,329.00	4,002.75	1,468.83	14,642,913.34	1,817,364.86	40.31730194	-104.36521134
11,100.00	90.00	357.66	6,329.00	4,102.67	1,464.75	14,643,013.23	1,817,360.07	40.31757631	-104.36522593
11,200.00	90.00	357.66	6,329.00	4,202.59	1,460.68	14,643,113.11	1,817,355.29	40.31785067	-104.36524053
11,300.00	90.00	357.66	6,329.00	4,302.50	1,456.60	14,643,213.00	1,817,350.50	40.31812504	-104.36525513
11,400.00	90.00	357.66	6,329.00	4,402.42	1,452.53	14,643,312.88	1,817,345.72	40.31839940	-104.36526972
11,500.00	90.00	357.66	6,329.00	4,502.34	1,448.45	14,643,412.77	1,817,340.93	40.31867377	-104.36528432
11,600.00	90.00	357.66	6,329.00	4,602.25	1,444.38	14,643,512.65	1,817,336.15	40.31894814	-104.36529892
11,700.00	90.00	357.66	6,329.00	4,702.17	1,440.30	14,643,612.54	1,817,331.36	40.31922250	-104.36531351
11,800.00	90.00	357.66	6,329.00	4,802.09	1,436.23	14,643,712.42	1,817,326.58	40.31949687	-104.36532811
11,900.00	90.00	357.66	6,329.00	4,902.01	1,432.15	14,643,812.31	1,817,321.79	40.31977124	-104.36534271
12,000.00	90.00	357.66	6,329.00	5,001.92	1,428.08	14,643,912.19	1,817,317.01	40.32004560	-104.36535731
12,100.00	90.00	357.66	6,329.00	5,101.84	1,424.00	14,644,012.08	1,817,312.22	40.32031997	-104.36537190
12,200.00	90.00	357.66	6,329.00	5,201.76	1,419.93	14,644,111.96	1,817,307.44	40.32059434	-104.36538650
12,300.00	90.00	357.66	6,329.00	5,301.67	1,415.85	14,644,211.85	1,817,302.65	40.32086870	-104.36540110
12,400.00	90.00	357.66	6,329.00	5,401.59	1,411.78	14,644,311.73	1,817,297.87	40.32114307	-104.36541570
12,500.00	90.00	357.66	6,329.00	5,501.51	1,407.70	14,644,411.62	1,817,293.08	40.32141743	-104.36543029
12,600.00	90.00	357.66	6,329.00	5,601.42	1,403.63	14,644,511.51	1,817,288.30	40.32169180	-104.36544489
12,700.00	90.00	357.66	6,329.00	5,701.34	1,399.55	14,644,611.39	1,817,283.51	40.32196617	-104.36545949
12,800.00	90.00	357.66	6,329.00	5,801.26	1,395.48	14,644,711.28	1,817,278.73	40.32224053	-104.36547409
12,900.00	90.00	357.66	6,329.00	5,901.17	1,391.40	14,644,811.16	1,817,273.94	40.32251490	-104.36548868
13,000.00	90.00	357.66	6,329.00	6,001.09	1,387.33	14,644,911.05	1,817,269.16	40.32278927	-104.36550328
13,100.00	90.00	357.66	6,329.00	6,101.01	1,383.25	14,645,010.93	1,817,264.37	40.32306363	-104.36551788
13,200.00	90.00	357.66	6,329.00	6,200.93	1,379.18	14,645,110.82	1,817,259.59	40.32333800	-104.36553248
13,300.00	90.00	357.66	6,329.00	6,300.84	1,375.10	14,645,210.70	1,817,254.80	40.32361236	-104.36554708
13,400.00	90.00	357.66	6,329.00	6,400.76	1,371.03	14,645,310.59	1,817,250.02	40.32388673	-104.36556168
13,500.00	90.00	357.66	6,329.00	6,500.68	1,366.96	14,645,410.47	1,817,245.23	40.32416110	-104.36557628
13,600.00	90.00	357.66	6,329.00	6,600.59	1,362.88	14,645,510.36	1,817,240.45	40.32443546	-104.36559087
13,700.00	90.00	357.66	6,329.00	6,700.51	1,358.81	14,645,610.24	1,817,235.66	40.32470983	-104.36560547
13,800.00	90.00	357.66	6,329.00	6,800.43	1,354.73	14,645,710.13	1,817,230.88	40.32498419	-104.36562007
13,900.00	90.00	357.66	6,329.00	6,900.34	1,350.66	14,645,810.01	1,817,226.09	40.32525856	-104.36563467
14,000.00	90.00	357.66	6,329.00	7,000.26	1,346.58	14,645,909.90	1,817,221.31	40.32553293	-104.36564927
14,100.00	90.00	357.66	6,329.00	7,100.18	1,342.51	14,646,009.78	1,817,216.52	40.32580729	-104.36566387
14,200.00	90.00	357.66	6,329.00	7,200.10	1,338.43	14,646,109.67	1,817,211.74	40.32608166	-104.36567847
14,300.00	90.00	357.66	6,329.00	7,300.01	1,334.36	14,646,209.55	1,817,206.95	40.32635602	-104.36569307
14,400.00	90.00	357.66	6,329.00	7,399.93	1,330.28	14,646,309.44	1,817,202.17	40.32663039	-104.36570767
14,500.00	90.00	357.66	6,329.00	7,499.85	1,326.21	14,646,409.33	1,817,197.38	40.32690476	-104.36572227
14,600.00	90.00	357.66	6,329.00	7,599.76	1,322.13	14,646,509.21	1,817,192.60	40.32717912	-104.36573687
14,700.00	90.00	357.66	6,329.00	7,699.68	1,318.06	14,646,609.10	1,817,187.81	40.32745349	-104.36575147
14,800.00	90.00	357.66	6,329.00	7,799.60	1,313.98	14,646,708.98	1,817,183.03	40.32772785	-104.36576607
14,900.00	90.00	357.66	6,329.00	7,899.51	1,309.91	14,646,808.87	1,817,178.24	40.32800222	-104.36578067
15,000.00	90.00	357.66	6,329.00	7,999.43	1,305.83	14,646,908.75	1,817,173.46	40.32827659	-104.36579527
15,100.00	90.00	357.66	6,329.00	8,099.35	1,301.76	14,647,008.64	1,817,168.67	40.32855095	-104.36580987
15,200.00	90.00	357.66	6,329.00	8,199.26	1,297.68	14,647,108.52	1,817,163.89	40.32882532	-104.36582447
15,300.00	90.00	357.66	6,329.00	8,299.18	1,293.61	14,647,208.41	1,817,159.10	40.32909968	-104.36583907
15,400.00	90.00	357.66	6,329.00	8,399.10	1,289.53	14,647,308.29	1,817,154.32	40.32937405	-104.36585367
15,500.00	90.00	357.66	6,329.00	8,499.02	1,285.46	14,647,408.18	1,817,149.53	40.32964842	-104.36586827

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-09-3L
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 18-09-3L	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	357.66	6,329.00	8,598.93	1,281.38	14,647,508.06	1,817,144.75	40.32992278	-104.36588287
15,700.00	90.00	357.66	6,329.00	8,698.85	1,277.31	14,647,607.95	1,817,139.96	40.33019715	-104.36589747
15,800.00	90.00	357.66	6,329.00	8,798.77	1,273.23	14,647,707.83	1,817,135.18	40.33047151	-104.36591207
15,900.00	90.00	357.66	6,329.00	8,898.68	1,269.16	14,647,807.72	1,817,130.39	40.33074588	-104.36592668
16,000.00	90.00	357.66	6,329.00	8,998.60	1,265.08	14,647,907.60	1,817,125.61	40.33102024	-104.36594128
16,100.00	90.00	357.66	6,329.00	9,098.52	1,261.01	14,648,007.49	1,817,120.82	40.33129461	-104.36595588
16,200.00	90.00	357.66	6,329.00	9,198.43	1,256.93	14,648,107.37	1,817,116.04	40.33156898	-104.36597048
16,300.00	90.00	357.66	6,329.00	9,298.35	1,252.86	14,648,207.26	1,817,111.25	40.33184334	-104.36598508
16,400.00	90.00	357.66	6,329.00	9,398.27	1,248.78	14,648,307.15	1,817,106.47	40.33211771	-104.36599968
16,500.00	90.00	357.66	6,329.00	9,498.18	1,244.71	14,648,407.03	1,817,101.68	40.33239207	-104.36601428
16,600.00	90.00	357.66	6,329.00	9,598.10	1,240.63	14,648,506.92	1,817,096.90	40.33266644	-104.36602889
16,700.00	90.00	357.66	6,329.00	9,698.02	1,236.56	14,648,606.80	1,817,092.11	40.33294080	-104.36604349
16,722.41	90.00	357.66	6,329.00	9,720.41	1,235.64	14,648,629.19	1,817,091.04	40.33300229	-104.36604676
PBHL/TD 16722.41 MD/6329.00 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 18-09-3L BH	0.00	0.00	6,329.00	9,720.41	1,235.64	14,648,629.19	1,817,091.04	40.33300230	-104.36604676
- plan hits target center									
- Point									
Middlepark 18-09-3L LP	0.00	0.00	6,329.00	38.15	1,630.52	14,638,950.00	1,817,554.72	40.30641536	-104.36463226
- 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
3,292.80	3,249.37	-103.91	267.30	Begin 25.86° tangent
6,031.64	5,714.03	-536.68	1,380.58	Begin 10°/100' build
7,032.10	6,329.00	38.15	1,630.52	LP Begin 90° lateral
16,722.41	6,329.00	9,720.41	1,235.64	PBHL/TD 16722.41 MD/6329.00 TVD