



Well: Middlepark 18-03-3L
 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	4115.12	42.30	99.04	3928.13	-117.17	736.72	2.00	68.10	Begin 42.30° tangent
4	6771.45	42.30	99.04	5892.76	-398.00	2502.35	0.00	231.29	Begin 10°/100' build
5	7747.66	90.00	357.67	6377.00	186.98	2910.95	10.00	898.96	LP Begin 90° lateral
6	17459.46	90.00	357.67	6377.00	9890.76	2516.45	0.00	10205.86	PBHL/TD 17459.46 MD/6377.00 TVD

DESIGN TARGET DETAILS

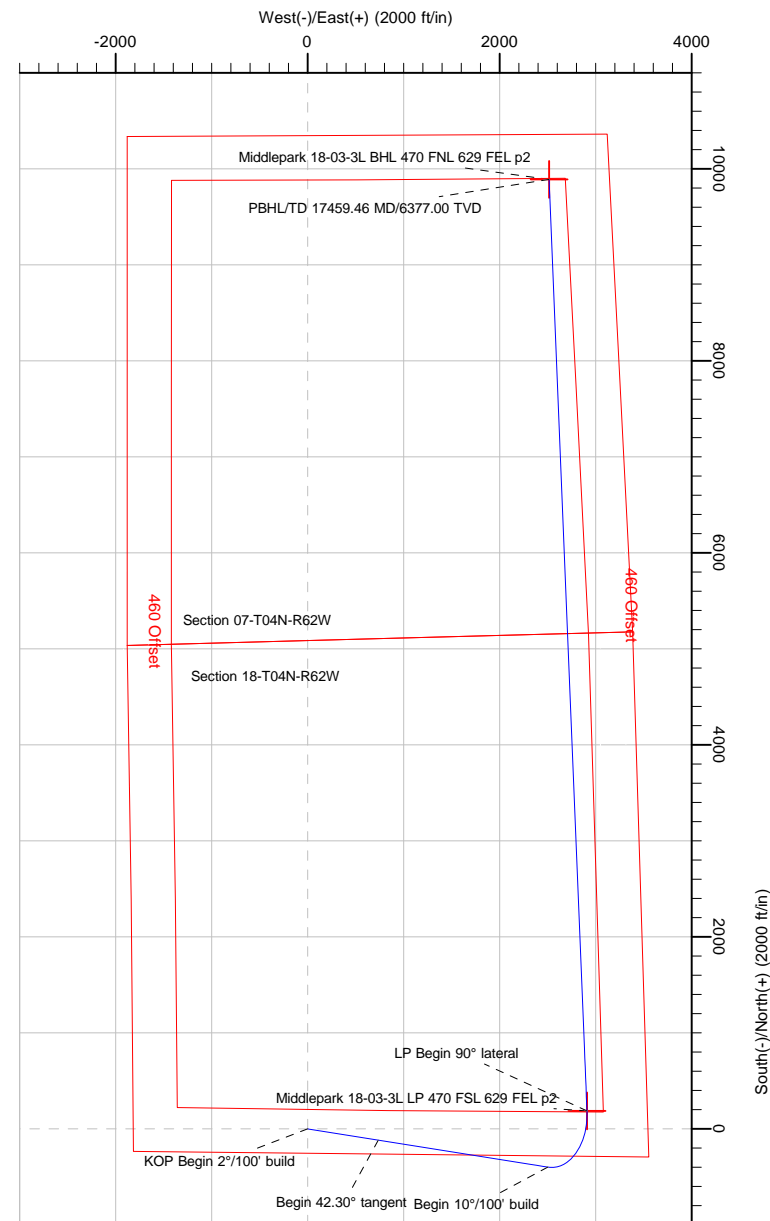
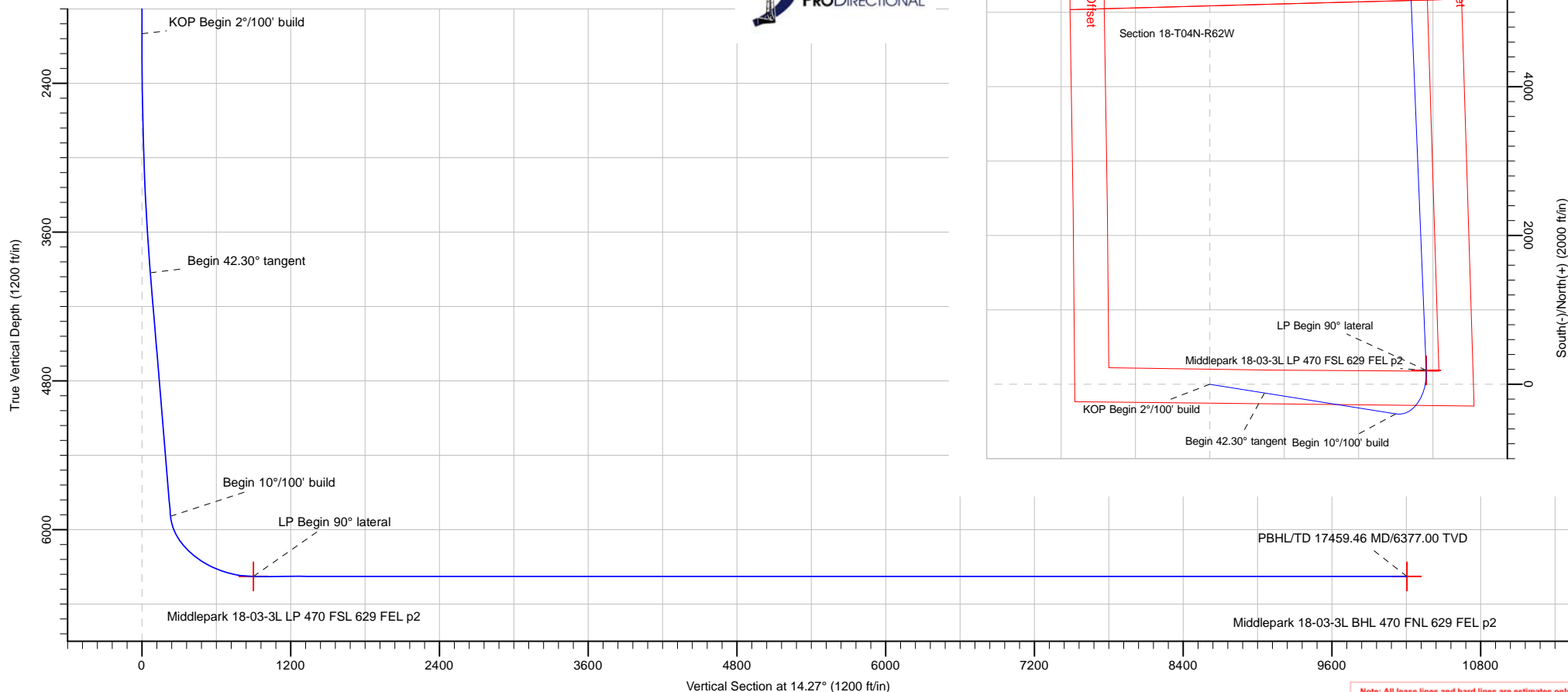
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Middlepark 18-03-3L BHL 470 FNL 629 FEL p2	6377.00	9890.76	2516.45	14648650.71	1818494.22	40.33303369	-104.36101152
Middlepark 18-03-3L LP 470 FSL 629 FEL p2	6377.00	186.98	2910.95	14638950.00	1818957.73	40.30638761	-104.35960016



Azimuths to True North
 Magnetic North: 8.18°

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

Middlepark 18-03-3L Surf loc: 256 FSL 1814 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
14638742.32	1816048.19	40.30587464	-104.37004094



Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-03-3L
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 18-03-3L	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 18-03-3L, Surf loc: 256 FSL 1814 FWL Section 18-T04N-R62W					
Well Position	+N/-S	-2,420.03 ft	Northing:	14,638,742.32 usft	Latitude:	40.30587464
	+E/-W	1,257.16 ft	Easting:	1,816,048.19 usft	Longitude:	-104.37004094
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	14.27

Plan Survey Tool Program	Date	4/26/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,459.46	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	
4,115.12	42.30	99.04	3,928.13	-117.17	736.72	2.00	2.00	0.00	99.04	
6,771.45	42.30	99.04	5,892.76	-398.00	2,502.35	0.00	0.00	0.00	0.00	
7,747.66	90.00	357.67	6,377.00	186.98	2,910.95	10.00	4.89	-10.38	-98.46	Middlepark 18-03-3L I
17,459.46	90.00	357.67	6,377.00	9,890.76	2,516.45	0.00	0.00	0.00	0.00	Middlepark 18-03-3L I

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-03-3L
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 18-03-3L	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	99.04	2,099.98	-0.27	1.72	0.16	2.00	2.00	0.00
2,200.00	4.00	99.04	2,199.84	-1.10	6.89	0.64	2.00	2.00	0.00
2,300.00	6.00	99.04	2,299.45	-2.47	15.50	1.43	2.00	2.00	0.00
2,400.00	8.00	99.04	2,398.70	-4.38	27.53	2.54	2.00	2.00	0.00
2,500.00	10.00	99.04	2,497.47	-6.84	42.98	3.97	2.00	2.00	0.00
2,600.00	12.00	99.04	2,595.62	-9.83	61.83	5.71	2.00	2.00	0.00
2,700.00	14.00	99.04	2,693.06	-13.37	84.04	7.77	2.00	2.00	0.00
2,800.00	16.00	99.04	2,789.64	-17.43	109.60	10.13	2.00	2.00	0.00
2,900.00	18.00	99.04	2,885.27	-22.02	138.47	12.80	2.00	2.00	0.00
3,000.00	20.00	99.04	2,979.82	-27.14	170.62	15.77	2.00	2.00	0.00
3,100.00	22.00	99.04	3,073.17	-32.77	206.01	19.04	2.00	2.00	0.00
3,200.00	24.00	99.04	3,165.21	-38.90	244.60	22.61	2.00	2.00	0.00
3,300.00	26.00	99.04	3,255.84	-45.54	286.33	26.47	2.00	2.00	0.00
3,400.00	28.00	99.04	3,344.94	-52.67	331.17	30.61	2.00	2.00	0.00
3,500.00	30.00	99.04	3,432.39	-60.29	379.04	35.04	2.00	2.00	0.00
3,600.00	32.00	99.04	3,518.11	-68.38	429.91	39.74	2.00	2.00	0.00
3,700.00	34.00	99.04	3,601.97	-76.93	483.69	44.71	2.00	2.00	0.00
3,800.00	36.00	99.04	3,683.88	-85.94	540.33	49.94	2.00	2.00	0.00
3,900.00	38.00	99.04	3,763.74	-95.39	599.77	55.44	2.00	2.00	0.00
4,000.00	40.00	99.04	3,841.45	-105.28	661.91	61.18	2.00	2.00	0.00
4,100.00	42.00	99.04	3,916.92	-115.58	726.70	67.17	2.00	2.00	0.00
4,115.12	42.30	99.04	3,928.13	-117.17	736.72	68.10	2.00	2.00	0.00
Begin 42.30° tangent									
4,200.00	42.30	99.04	3,990.91	-126.15	793.14	73.31	0.00	0.00	0.00
4,300.00	42.30	99.04	4,064.87	-136.72	859.61	79.45	0.00	0.00	0.00
4,400.00	42.30	99.04	4,138.83	-147.29	926.08	85.60	0.00	0.00	0.00
4,500.00	42.30	99.04	4,212.79	-157.86	992.55	91.74	0.00	0.00	0.00
4,600.00	42.30	99.04	4,286.75	-168.44	1,059.02	97.89	0.00	0.00	0.00
4,700.00	42.30	99.04	4,360.71	-179.01	1,125.49	104.03	0.00	0.00	0.00
4,800.00	42.30	99.04	4,434.67	-189.58	1,191.95	110.17	0.00	0.00	0.00
4,900.00	42.30	99.04	4,508.63	-200.15	1,258.42	116.32	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-03-3L
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 18-03-3L	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	42.30	99.04	4,582.59	-210.72	1,324.89	122.46	0.00	0.00	0.00
5,100.00	42.30	99.04	4,656.55	-221.29	1,391.36	128.60	0.00	0.00	0.00
5,200.00	42.30	99.04	4,730.51	-231.87	1,457.83	134.75	0.00	0.00	0.00
5,300.00	42.30	99.04	4,804.47	-242.44	1,524.30	140.89	0.00	0.00	0.00
5,400.00	42.30	99.04	4,878.43	-253.01	1,590.77	147.04	0.00	0.00	0.00
5,500.00	42.30	99.04	4,952.39	-263.58	1,657.24	153.18	0.00	0.00	0.00
5,600.00	42.30	99.04	5,026.35	-274.15	1,723.70	159.32	0.00	0.00	0.00
5,700.00	42.30	99.04	5,100.31	-284.73	1,790.17	165.47	0.00	0.00	0.00
5,800.00	42.30	99.04	5,174.27	-295.30	1,856.64	171.61	0.00	0.00	0.00
5,900.00	42.30	99.04	5,248.23	-305.87	1,923.11	177.75	0.00	0.00	0.00
6,000.00	42.30	99.04	5,322.19	-316.44	1,989.58	183.90	0.00	0.00	0.00
6,100.00	42.30	99.04	5,396.15	-327.01	2,056.05	190.04	0.00	0.00	0.00
6,200.00	42.30	99.04	5,470.11	-337.58	2,122.52	196.19	0.00	0.00	0.00
6,300.00	42.30	99.04	5,544.07	-348.16	2,188.99	202.33	0.00	0.00	0.00
6,400.00	42.30	99.04	5,618.03	-358.73	2,255.46	208.47	0.00	0.00	0.00
6,500.00	42.30	99.04	5,691.99	-369.30	2,321.92	214.62	0.00	0.00	0.00
6,600.00	42.30	99.04	5,765.95	-379.87	2,388.39	220.76	0.00	0.00	0.00
6,700.00	42.30	99.04	5,839.91	-390.44	2,454.86	226.90	0.00	0.00	0.00
6,771.45	42.30	99.04	5,892.76	-398.00	2,502.35	231.29	0.00	0.00	0.00
Begin 10°/100' build									
6,800.00	41.96	94.81	5,913.94	-400.31	2,521.36	233.74	10.00	-1.20	-14.80
6,900.00	42.01	79.84	5,988.46	-397.20	2,587.77	253.13	10.00	0.05	-14.97
7,000.00	43.95	65.42	6,061.80	-376.81	2,652.43	288.83	10.00	1.94	-14.41
7,100.00	47.55	52.38	6,131.73	-339.76	2,713.36	339.76	10.00	3.60	-13.05
7,200.00	52.45	40.98	6,196.11	-287.18	2,768.71	404.36	10.00	4.90	-11.40
7,300.00	58.30	31.11	6,253.01	-220.67	2,816.81	480.68	10.00	5.85	-9.87
7,400.00	64.82	22.47	6,300.68	-142.23	2,856.19	566.40	10.00	6.52	-8.64
7,500.00	71.78	14.75	6,337.68	-54.27	2,885.65	658.92	10.00	6.97	-7.73
7,600.00	79.04	7.62	6,362.88	40.56	2,904.29	755.41	10.00	7.25	-7.12
7,700.00	86.45	0.85	6,375.52	139.36	2,911.57	852.96	10.00	7.41	-6.78
7,747.66	90.00	357.67	6,377.00	186.98	2,910.95	898.95	10.00	7.46	-6.67
LP Begin 90° lateral									
7,800.00	90.00	357.67	6,377.00	239.27	2,908.82	949.11	0.00	0.00	0.00
7,900.00	90.00	357.67	6,377.00	339.19	2,904.76	1,044.94	0.00	0.00	0.00
8,000.00	90.00	357.67	6,377.00	439.11	2,900.70	1,140.77	0.00	0.00	0.00
8,100.00	90.00	357.67	6,377.00	539.03	2,896.64	1,236.60	0.00	0.00	0.00
8,200.00	90.00	357.67	6,377.00	638.94	2,892.58	1,332.44	0.00	0.00	0.00
8,300.00	90.00	357.67	6,377.00	738.86	2,888.51	1,428.27	0.00	0.00	0.00
8,400.00	90.00	357.67	6,377.00	838.78	2,884.45	1,524.10	0.00	0.00	0.00
8,500.00	90.00	357.67	6,377.00	938.70	2,880.39	1,619.93	0.00	0.00	0.00
8,600.00	90.00	357.67	6,377.00	1,038.61	2,876.33	1,715.76	0.00	0.00	0.00
8,700.00	90.00	357.67	6,377.00	1,138.53	2,872.26	1,811.59	0.00	0.00	0.00
8,800.00	90.00	357.67	6,377.00	1,238.45	2,868.20	1,907.42	0.00	0.00	0.00
8,900.00	90.00	357.67	6,377.00	1,338.37	2,864.14	2,003.25	0.00	0.00	0.00
9,000.00	90.00	357.67	6,377.00	1,438.28	2,860.08	2,099.08	0.00	0.00	0.00
9,100.00	90.00	357.67	6,377.00	1,538.20	2,856.02	2,194.91	0.00	0.00	0.00
9,200.00	90.00	357.67	6,377.00	1,638.12	2,851.95	2,290.75	0.00	0.00	0.00
9,300.00	90.00	357.67	6,377.00	1,738.04	2,847.89	2,386.58	0.00	0.00	0.00
9,400.00	90.00	357.67	6,377.00	1,837.95	2,843.83	2,482.41	0.00	0.00	0.00
9,500.00	90.00	357.67	6,377.00	1,937.87	2,839.77	2,578.24	0.00	0.00	0.00
9,600.00	90.00	357.67	6,377.00	2,037.79	2,835.71	2,674.07	0.00	0.00	0.00
9,700.00	90.00	357.67	6,377.00	2,137.71	2,831.64	2,769.90	0.00	0.00	0.00
9,800.00	90.00	357.67	6,377.00	2,237.62	2,827.58	2,865.73	0.00	0.00	0.00
9,900.00	90.00	357.67	6,377.00	2,337.54	2,823.52	2,961.56	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-03-3L
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 18-03-3L	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	357.67	6,377.00	2,437.46	2,819.46	3,057.39	0.00	0.00	0.00
10,100.00	90.00	357.67	6,377.00	2,537.38	2,815.40	3,153.22	0.00	0.00	0.00
10,200.00	90.00	357.67	6,377.00	2,637.29	2,811.33	3,249.05	0.00	0.00	0.00
10,300.00	90.00	357.67	6,377.00	2,737.21	2,807.27	3,344.89	0.00	0.00	0.00
10,400.00	90.00	357.67	6,377.00	2,837.13	2,803.21	3,440.72	0.00	0.00	0.00
10,500.00	90.00	357.67	6,377.00	2,937.05	2,799.15	3,536.55	0.00	0.00	0.00
10,600.00	90.00	357.67	6,377.00	3,036.96	2,795.09	3,632.38	0.00	0.00	0.00
10,700.00	90.00	357.67	6,377.00	3,136.88	2,791.02	3,728.21	0.00	0.00	0.00
10,800.00	90.00	357.67	6,377.00	3,236.80	2,786.96	3,824.04	0.00	0.00	0.00
10,900.00	90.00	357.67	6,377.00	3,336.72	2,782.90	3,919.87	0.00	0.00	0.00
11,000.00	90.00	357.67	6,377.00	3,436.63	2,778.84	4,015.70	0.00	0.00	0.00
11,100.00	90.00	357.67	6,377.00	3,536.55	2,774.78	4,111.53	0.00	0.00	0.00
11,200.00	90.00	357.67	6,377.00	3,636.47	2,770.71	4,207.36	0.00	0.00	0.00
11,300.00	90.00	357.67	6,377.00	3,736.39	2,766.65	4,303.20	0.00	0.00	0.00
11,400.00	90.00	357.67	6,377.00	3,836.30	2,762.59	4,399.03	0.00	0.00	0.00
11,500.00	90.00	357.67	6,377.00	3,936.22	2,758.53	4,494.86	0.00	0.00	0.00
11,600.00	90.00	357.67	6,377.00	4,036.14	2,754.46	4,590.69	0.00	0.00	0.00
11,700.00	90.00	357.67	6,377.00	4,136.06	2,750.40	4,686.52	0.00	0.00	0.00
11,800.00	90.00	357.67	6,377.00	4,235.97	2,746.34	4,782.35	0.00	0.00	0.00
11,900.00	90.00	357.67	6,377.00	4,335.89	2,742.28	4,878.18	0.00	0.00	0.00
12,000.00	90.00	357.67	6,377.00	4,435.81	2,738.22	4,974.01	0.00	0.00	0.00
12,100.00	90.00	357.67	6,377.00	4,535.72	2,734.15	5,069.84	0.00	0.00	0.00
12,200.00	90.00	357.67	6,377.00	4,635.64	2,730.09	5,165.67	0.00	0.00	0.00
12,300.00	90.00	357.67	6,377.00	4,735.56	2,726.03	5,261.50	0.00	0.00	0.00
12,400.00	90.00	357.67	6,377.00	4,835.48	2,721.97	5,357.34	0.00	0.00	0.00
12,500.00	90.00	357.67	6,377.00	4,935.39	2,717.91	5,453.17	0.00	0.00	0.00
12,600.00	90.00	357.67	6,377.00	5,035.31	2,713.84	5,549.00	0.00	0.00	0.00
12,700.00	90.00	357.67	6,377.00	5,135.23	2,709.78	5,644.83	0.00	0.00	0.00
12,800.00	90.00	357.67	6,377.00	5,235.15	2,705.72	5,740.66	0.00	0.00	0.00
12,900.00	90.00	357.67	6,377.00	5,335.06	2,701.66	5,836.49	0.00	0.00	0.00
13,000.00	90.00	357.67	6,377.00	5,434.98	2,697.60	5,932.32	0.00	0.00	0.00
13,100.00	90.00	357.67	6,377.00	5,534.90	2,693.53	6,028.15	0.00	0.00	0.00
13,200.00	90.00	357.67	6,377.00	5,634.82	2,689.47	6,123.98	0.00	0.00	0.00
13,300.00	90.00	357.67	6,377.00	5,734.73	2,685.41	6,219.81	0.00	0.00	0.00
13,400.00	90.00	357.67	6,377.00	5,834.65	2,681.35	6,315.65	0.00	0.00	0.00
13,500.00	90.00	357.67	6,377.00	5,934.57	2,677.29	6,411.48	0.00	0.00	0.00
13,600.00	90.00	357.67	6,377.00	6,034.49	2,673.22	6,507.31	0.00	0.00	0.00
13,700.00	90.00	357.67	6,377.00	6,134.40	2,669.16	6,603.14	0.00	0.00	0.00
13,800.00	90.00	357.67	6,377.00	6,234.32	2,665.10	6,698.97	0.00	0.00	0.00
13,900.00	90.00	357.67	6,377.00	6,334.24	2,661.04	6,794.80	0.00	0.00	0.00
14,000.00	90.00	357.67	6,377.00	6,434.16	2,656.97	6,890.63	0.00	0.00	0.00
14,100.00	90.00	357.67	6,377.00	6,534.07	2,652.91	6,986.46	0.00	0.00	0.00
14,200.00	90.00	357.67	6,377.00	6,633.99	2,648.85	7,082.29	0.00	0.00	0.00
14,300.00	90.00	357.67	6,377.00	6,733.91	2,644.79	7,178.12	0.00	0.00	0.00
14,400.00	90.00	357.67	6,377.00	6,833.83	2,640.73	7,273.96	0.00	0.00	0.00
14,500.00	90.00	357.67	6,377.00	6,933.74	2,636.66	7,369.79	0.00	0.00	0.00
14,600.00	90.00	357.67	6,377.00	7,033.66	2,632.60	7,465.62	0.00	0.00	0.00
14,700.00	90.00	357.67	6,377.00	7,133.58	2,628.54	7,561.45	0.00	0.00	0.00
14,800.00	90.00	357.67	6,377.00	7,233.50	2,624.48	7,657.28	0.00	0.00	0.00
14,900.00	90.00	357.67	6,377.00	7,333.41	2,620.42	7,753.11	0.00	0.00	0.00
15,000.00	90.00	357.67	6,377.00	7,433.33	2,616.35	7,848.94	0.00	0.00	0.00
15,100.00	90.00	357.67	6,377.00	7,533.25	2,612.29	7,944.77	0.00	0.00	0.00
15,200.00	90.00	357.67	6,377.00	7,633.17	2,608.23	8,040.60	0.00	0.00	0.00
15,300.00	90.00	357.67	6,377.00	7,733.08	2,604.17	8,136.43	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-03-3L
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 18-03-3L	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	357.67	6,377.00	7,833.00	2,600.11	8,232.26	0.00	0.00	0.00
15,500.00	90.00	357.67	6,377.00	7,932.92	2,596.04	8,328.10	0.00	0.00	0.00
15,600.00	90.00	357.67	6,377.00	8,032.84	2,591.98	8,423.93	0.00	0.00	0.00
15,700.00	90.00	357.67	6,377.00	8,132.75	2,587.92	8,519.76	0.00	0.00	0.00
15,800.00	90.00	357.67	6,377.00	8,232.67	2,583.86	8,615.59	0.00	0.00	0.00
15,900.00	90.00	357.67	6,377.00	8,332.59	2,579.80	8,711.42	0.00	0.00	0.00
16,000.00	90.00	357.67	6,377.00	8,432.51	2,575.73	8,807.25	0.00	0.00	0.00
16,100.00	90.00	357.67	6,377.00	8,532.42	2,571.67	8,903.08	0.00	0.00	0.00
16,200.00	90.00	357.67	6,377.00	8,632.34	2,567.61	8,998.91	0.00	0.00	0.00
16,300.00	90.00	357.67	6,377.00	8,732.26	2,563.55	9,094.74	0.00	0.00	0.00
16,400.00	90.00	357.67	6,377.00	8,832.18	2,559.49	9,190.57	0.00	0.00	0.00
16,500.00	90.00	357.67	6,377.00	8,932.09	2,555.42	9,286.41	0.00	0.00	0.00
16,600.00	90.00	357.67	6,377.00	9,032.01	2,551.36	9,382.24	0.00	0.00	0.00
16,700.00	90.00	357.67	6,377.00	9,131.93	2,547.30	9,478.07	0.00	0.00	0.00
16,800.00	90.00	357.67	6,377.00	9,231.85	2,543.24	9,573.90	0.00	0.00	0.00
16,900.00	90.00	357.67	6,377.00	9,331.76	2,539.17	9,669.73	0.00	0.00	0.00
17,000.00	90.00	357.67	6,377.00	9,431.68	2,535.11	9,765.56	0.00	0.00	0.00
17,100.00	90.00	357.67	6,377.00	9,531.60	2,531.05	9,861.39	0.00	0.00	0.00
17,200.00	90.00	357.67	6,377.00	9,631.52	2,526.99	9,957.22	0.00	0.00	0.00
17,300.00	90.00	357.67	6,377.00	9,731.43	2,522.93	10,053.05	0.00	0.00	0.00
17,400.00	90.00	357.67	6,377.00	9,831.35	2,518.86	10,148.88	0.00	0.00	0.00
17,459.46	90.00	357.67	6,377.00	9,890.76	2,516.45	10,205.86	0.00	0.00	0.00
PBHL/TD 17459.46 MD/6377.00 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 18-03-3L BH	0.00	0.00	6,377.00	9,890.76	2,516.45	14,648,650.71	1,818,494.22	40.33303368	-104.36101153
- plan hits target center									
- Point									
Middlepark 18-03-3L LP	0.00	0.00	6,377.00	186.98	2,910.95	14,638,950.00	1,818,957.73	40.30638761	-104.35960017
- 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
4,115.12	3,928.13	-117.17	736.72	Begin 42.30° tangent
6,771.45	5,892.76	-398.00	2,502.35	Begin 10°/100' build
7,747.66	6,377.00	186.98	2,910.95	LP Begin 90° lateral
17,459.46	6,377.00	9,890.76	2,516.45	PBHL/TD 17459.46 MD/6377.00 TVD

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-03-3L
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 18-03-3L	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 18-03-3L, Surf loc: 256 FSL 1814 FWL Section 18-T04N-R62W					
Well Position	+N/-S	0.00 ft	Northing:	14,638,742.32 usft	Latitude:	40.30587464
	+E/-W	0.00 ft	Easting:	1,816,048.19 usft	Longitude:	-104.37004094
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	14.27

Plan Survey Tool Program	Date	4/26/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,459.46 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	
4,115.12	42.30	99.04	3,928.13	-117.17	736.72	2.00	2.00	0.00	99.04	
6,771.45	42.30	99.04	5,892.76	-398.00	2,502.35	0.00	0.00	0.00	0.00	
7,747.66	90.00	357.67	6,377.00	186.98	2,910.95	10.00	4.89	-10.38	-98.46	Middlepark 18-03-3L I
17,459.46	90.00	357.67	6,377.00	9,890.76	2,516.45	0.00	0.00	0.00	0.00	Middlepark 18-03-3L I

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-03-3L
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 18-03-3L	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	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
100.00	0.00	0.00	100.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
200.00	0.00	0.00	200.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
300.00	0.00	0.00	300.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
400.00	0.00	0.00	400.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
500.00	0.00	0.00	500.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
600.00	0.00	0.00	600.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
700.00	0.00	0.00	700.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
800.00	0.00	0.00	800.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
900.00	0.00	0.00	900.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,638,742.32	1,816,048.19	40.30587464	-104.37004094
KOP Begin 2°/100' build									
2,100.00	2.00	99.04	2,099.98	-0.27	1.72	14,638,742.06	1,816,049.92	40.30587389	-104.37003476
2,200.00	4.00	99.04	2,199.84	-1.10	6.89	14,638,741.27	1,816,055.09	40.30587163	-104.37001623
2,300.00	6.00	99.04	2,299.45	-2.47	15.50	14,638,739.96	1,816,063.71	40.30586787	-104.36998536
2,400.00	8.00	99.04	2,398.70	-4.38	27.53	14,638,738.13	1,816,075.75	40.30586262	-104.36994219
2,500.00	10.00	99.04	2,497.47	-6.84	42.98	14,638,735.79	1,816,091.22	40.30585587	-104.36988678
2,600.00	12.00	99.04	2,595.62	-9.83	61.83	14,638,732.92	1,816,110.08	40.30584764	-104.36981920
2,700.00	14.00	99.04	2,693.06	-13.37	84.04	14,638,729.55	1,816,132.32	40.30583794	-104.36973952
2,800.00	16.00	99.04	2,789.64	-17.43	109.60	14,638,725.67	1,816,157.91	40.30582678	-104.36964784
2,900.00	18.00	99.04	2,885.27	-22.02	138.47	14,638,721.28	1,816,186.82	40.30581417	-104.36954429
3,000.00	20.00	99.04	2,979.82	-27.14	170.62	14,638,716.39	1,816,219.00	40.30580012	-104.36942897
3,100.00	22.00	99.04	3,073.17	-32.77	206.01	14,638,711.02	1,816,254.43	40.30578467	-104.36930204
3,200.00	24.00	99.04	3,165.21	-38.90	244.60	14,638,705.15	1,816,293.06	40.30576781	-104.36916364
3,300.00	26.00	99.04	3,255.84	-45.54	286.33	14,638,698.81	1,816,334.84	40.30574959	-104.36901395
3,400.00	28.00	99.04	3,344.94	-52.67	331.17	14,638,692.00	1,816,379.72	40.30573000	-104.36885315
3,500.00	30.00	99.04	3,432.39	-60.29	379.04	14,638,684.73	1,816,427.65	40.30570909	-104.36868143
3,600.00	32.00	99.04	3,518.11	-68.38	429.91	14,638,677.00	1,816,478.57	40.30568688	-104.36849900
3,700.00	34.00	99.04	3,601.97	-76.93	483.69	14,638,668.83	1,816,532.42	40.30566338	-104.36830609
3,800.00	36.00	99.04	3,683.88	-85.94	540.33	14,638,660.22	1,816,589.12	40.30563864	-104.36810293
3,900.00	38.00	99.04	3,763.74	-95.39	599.77	14,638,651.19	1,816,648.62	40.30561268	-104.36788977
4,000.00	40.00	99.04	3,841.45	-105.28	661.91	14,638,641.75	1,816,710.83	40.30558554	-104.36766687
4,100.00	42.00	99.04	3,916.92	-115.58	726.70	14,638,631.91	1,816,775.69	40.30555724	-104.36743450
4,115.12	42.30	99.04	3,928.13	-117.17	736.72	14,638,630.39	1,816,785.73	40.30555286	-104.36739855
Begin 42.30° tangent									
4,200.00	42.30	99.04	3,990.91	-126.15	793.14	14,638,621.81	1,816,842.21	40.30552821	-104.36719620
4,300.00	42.30	99.04	4,064.87	-136.72	859.61	14,638,611.72	1,816,908.75	40.30549918	-104.36695780
4,400.00	42.30	99.04	4,138.83	-147.29	926.08	14,638,601.62	1,816,975.29	40.30547014	-104.36671940
4,500.00	42.30	99.04	4,212.79	-157.86	992.55	14,638,591.52	1,817,041.83	40.30544111	-104.36648100
4,600.00	42.30	99.04	4,286.75	-168.44	1,059.02	14,638,581.42	1,817,108.38	40.30541207	-104.36624260
4,700.00	42.30	99.04	4,360.71	-179.01	1,125.49	14,638,571.32	1,817,174.92	40.30538303	-104.36600420
4,800.00	42.30	99.04	4,434.67	-189.58	1,191.95	14,638,561.22	1,817,241.46	40.30535399	-104.36576580
4,900.00	42.30	99.04	4,508.63	-200.15	1,258.42	14,638,551.12	1,817,308.00	40.30532495	-104.36552740
5,000.00	42.30	99.04	4,582.59	-210.72	1,324.89	14,638,541.02	1,817,374.55	40.30529592	-104.36528900

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-03-3L
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 18-03-3L	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	42.30	99.04	4,656.55	-221.29	1,391.36	14,638,530.93	1,817,441.09	40.30526688	-104.36505060
5,200.00	42.30	99.04	4,730.51	-231.87	1,457.83	14,638,520.83	1,817,507.63	40.30523784	-104.36481220
5,300.00	42.30	99.04	4,804.47	-242.44	1,524.30	14,638,510.73	1,817,574.17	40.30520880	-104.36457380
5,400.00	42.30	99.04	4,878.43	-253.01	1,590.77	14,638,500.63	1,817,640.71	40.30517975	-104.36433540
5,500.00	42.30	99.04	4,952.39	-263.58	1,657.24	14,638,490.53	1,817,707.26	40.30515071	-104.36409700
5,600.00	42.30	99.04	5,026.35	-274.15	1,723.70	14,638,480.43	1,817,773.80	40.30512167	-104.36385860
5,700.00	42.30	99.04	5,100.31	-284.73	1,790.17	14,638,470.33	1,817,840.34	40.30509263	-104.36362020
5,800.00	42.30	99.04	5,174.27	-295.30	1,856.64	14,638,460.23	1,817,906.88	40.30506359	-104.36338181
5,900.00	42.30	99.04	5,248.23	-305.87	1,923.11	14,638,450.14	1,817,973.42	40.30503454	-104.36314341
6,000.00	42.30	99.04	5,322.19	-316.44	1,989.58	14,638,440.04	1,818,039.97	40.30500550	-104.36290501
6,100.00	42.30	99.04	5,396.15	-327.01	2,056.05	14,638,429.94	1,818,106.51	40.30497645	-104.36266661
6,200.00	42.30	99.04	5,470.11	-337.58	2,122.52	14,638,419.84	1,818,173.05	40.30494741	-104.36242822
6,300.00	42.30	99.04	5,544.07	-348.16	2,188.99	14,638,409.74	1,818,239.59	40.30491836	-104.36218982
6,400.00	42.30	99.04	5,618.03	-358.73	2,255.46	14,638,399.64	1,818,306.14	40.30488932	-104.36195142
6,500.00	42.30	99.04	5,691.99	-369.30	2,321.92	14,638,389.54	1,818,372.68	40.30486027	-104.36171303
6,600.00	42.30	99.04	5,765.95	-379.87	2,388.39	14,638,379.44	1,818,439.22	40.30483122	-104.36147463
6,700.00	42.30	99.04	5,839.91	-390.44	2,454.86	14,638,369.35	1,818,505.76	40.30480218	-104.36123623
6,771.45	42.30	99.04	5,892.76	-398.00	2,502.35	14,638,362.13	1,818,553.31	40.30478142	-104.36106590
Begin 10°/100' build									
6,800.00	41.96	94.81	5,913.94	-400.31	2,521.36	14,638,359.96	1,818,572.33	40.30477507	-104.36099774
6,900.00	42.01	79.84	5,988.46	-397.20	2,587.77	14,638,363.54	1,818,638.72	40.30478359	-104.36075953
7,000.00	43.95	65.42	6,061.80	-376.81	2,652.43	14,638,384.38	1,818,703.23	40.30483955	-104.36052763
7,100.00	47.55	52.38	6,131.73	-339.76	2,713.36	14,638,421.86	1,818,763.89	40.30494126	-104.36030908
7,200.00	52.45	40.98	6,196.11	-287.18	2,768.71	14,638,474.83	1,818,818.87	40.30508563	-104.36011052
7,300.00	58.30	31.11	6,253.01	-220.67	2,816.81	14,638,541.69	1,818,866.49	40.30526827	-104.35993799
7,400.00	64.82	22.47	6,300.68	-142.23	2,856.19	14,638,620.40	1,818,905.31	40.30548363	-104.35979673
7,500.00	71.78	14.75	6,337.68	-54.27	2,885.65	14,638,708.57	1,818,934.14	40.30572516	-104.35969103
7,600.00	79.04	7.62	6,362.88	40.56	2,904.29	14,638,803.53	1,818,952.12	40.30598554	-104.35962410
7,700.00	86.45	0.85	6,375.52	139.36	2,911.57	14,638,902.38	1,818,958.69	40.30625684	-104.35959798
7,747.66	90.00	357.67	6,377.00	186.98	2,910.95	14,638,949.99	1,818,957.73	40.30638760	-104.35960017
LP Begin 90° lateral									
7,800.00	90.00	357.67	6,377.00	239.27	2,908.82	14,639,002.27	1,818,955.23	40.30653121	-104.35960777
7,900.00	90.00	357.67	6,377.00	339.19	2,904.76	14,639,102.16	1,818,950.46	40.30680558	-104.35962230
8,000.00	90.00	357.67	6,377.00	439.11	2,900.70	14,639,202.05	1,818,945.69	40.30707995	-104.35963683
8,100.00	90.00	357.67	6,377.00	539.03	2,896.64	14,639,301.93	1,818,940.91	40.30735432	-104.35965135
8,200.00	90.00	357.67	6,377.00	638.94	2,892.58	14,639,401.82	1,818,936.14	40.30762868	-104.35966588
8,300.00	90.00	357.67	6,377.00	738.86	2,888.51	14,639,501.70	1,818,931.37	40.30790305	-104.35968041
8,400.00	90.00	357.67	6,377.00	838.78	2,884.45	14,639,601.59	1,818,926.60	40.30817742	-104.35969494
8,500.00	90.00	357.67	6,377.00	938.70	2,880.39	14,639,701.48	1,818,921.82	40.30845179	-104.35970947
8,600.00	90.00	357.67	6,377.00	1,038.61	2,876.33	14,639,801.36	1,818,917.05	40.30872616	-104.35972399
8,700.00	90.00	357.67	6,377.00	1,138.53	2,872.26	14,639,901.25	1,818,912.28	40.30900053	-104.35973852
8,800.00	90.00	357.67	6,377.00	1,238.45	2,868.20	14,640,001.13	1,818,907.51	40.30927490	-104.35975305
8,900.00	90.00	357.67	6,377.00	1,338.37	2,864.14	14,640,101.02	1,818,902.73	40.30954927	-104.35976758
9,000.00	90.00	357.67	6,377.00	1,438.28	2,860.08	14,640,200.90	1,818,897.96	40.30982363	-104.35978211
9,100.00	90.00	357.67	6,377.00	1,538.20	2,856.02	14,640,300.79	1,818,893.19	40.31009800	-104.35979664
9,200.00	90.00	357.67	6,377.00	1,638.12	2,851.95	14,640,400.68	1,818,888.42	40.31037237	-104.35981117
9,300.00	90.00	357.67	6,377.00	1,738.04	2,847.89	14,640,500.56	1,818,883.64	40.31064674	-104.35982570
9,400.00	90.00	357.67	6,377.00	1,837.95	2,843.83	14,640,600.45	1,818,878.87	40.31092111	-104.35984022
9,500.00	90.00	357.67	6,377.00	1,937.87	2,839.77	14,640,700.33	1,818,874.10	40.31119548	-104.35985475
9,600.00	90.00	357.67	6,377.00	2,037.79	2,835.71	14,640,800.22	1,818,869.33	40.31146985	-104.35986928
9,700.00	90.00	357.67	6,377.00	2,137.71	2,831.64	14,640,900.11	1,818,864.55	40.31174421	-104.35988381
9,800.00	90.00	357.67	6,377.00	2,237.62	2,827.58	14,640,999.99	1,818,859.78	40.31201858	-104.35989834
9,900.00	90.00	357.67	6,377.00	2,337.54	2,823.52	14,641,099.88	1,818,855.01	40.31229295	-104.35991287
10,000.00	90.00	357.67	6,377.00	2,437.46	2,819.46	14,641,199.76	1,818,850.23	40.31256732	-104.35992740

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-03-3L
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 18-03-3L	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	357.67	6,377.00	2,537.38	2,815.40	14,641,299.65	1,818,845.46	40.31284168	-104.35994193
10,200.00	90.00	357.67	6,377.00	2,637.29	2,811.33	14,641,399.53	1,818,840.69	40.31311605	-104.35995646
10,300.00	90.00	357.67	6,377.00	2,737.21	2,807.27	14,641,499.42	1,818,835.92	40.31339042	-104.35997099
10,400.00	90.00	357.67	6,377.00	2,837.13	2,803.21	14,641,599.31	1,818,831.14	40.31366478	-104.35998552
10,500.00	90.00	357.67	6,377.00	2,937.05	2,799.15	14,641,699.19	1,818,826.37	40.31393915	-104.36000005
10,600.00	90.00	357.67	6,377.00	3,036.96	2,795.09	14,641,799.08	1,818,821.60	40.31421352	-104.36001458
10,700.00	90.00	357.67	6,377.00	3,136.88	2,791.02	14,641,898.96	1,818,816.83	40.31448789	-104.36002911
10,800.00	90.00	357.67	6,377.00	3,236.80	2,786.96	14,641,998.85	1,818,812.05	40.31476226	-104.36004364
10,900.00	90.00	357.67	6,377.00	3,336.72	2,782.90	14,642,098.74	1,818,807.28	40.31503663	-104.36005817
11,000.00	90.00	357.67	6,377.00	3,436.63	2,778.84	14,642,198.62	1,818,802.51	40.31531100	-104.36007270
11,100.00	90.00	357.67	6,377.00	3,536.55	2,774.78	14,642,298.51	1,818,797.74	40.31558536	-104.36008723
11,200.00	90.00	357.67	6,377.00	3,636.47	2,770.71	14,642,398.39	1,818,792.96	40.31585973	-104.36010177
11,300.00	90.00	357.67	6,377.00	3,736.39	2,766.65	14,642,498.28	1,818,788.19	40.31613410	-104.36011630
11,400.00	90.00	357.67	6,377.00	3,836.30	2,762.59	14,642,598.16	1,818,783.42	40.31640847	-104.36013083
11,500.00	90.00	357.67	6,377.00	3,936.22	2,758.53	14,642,698.05	1,818,778.64	40.31668284	-104.36014536
11,600.00	90.00	357.67	6,377.00	4,036.14	2,754.46	14,642,797.94	1,818,773.87	40.31695721	-104.36015989
11,700.00	90.00	357.67	6,377.00	4,136.06	2,750.40	14,642,897.82	1,818,769.10	40.31723157	-104.36017442
11,800.00	90.00	357.67	6,377.00	4,235.97	2,746.34	14,642,997.71	1,818,764.33	40.31750594	-104.36018895
11,900.00	90.00	357.67	6,377.00	4,335.89	2,742.28	14,643,097.59	1,818,759.55	40.31778031	-104.36020348
12,000.00	90.00	357.67	6,377.00	4,435.81	2,738.22	14,643,197.48	1,818,754.78	40.31805468	-104.36021802
12,100.00	90.00	357.67	6,377.00	4,535.72	2,734.15	14,643,297.37	1,818,750.01	40.31832905	-104.36023255
12,200.00	90.00	357.67	6,377.00	4,635.64	2,730.09	14,643,397.25	1,818,745.24	40.31860342	-104.36024708
12,300.00	90.00	357.67	6,377.00	4,735.56	2,726.03	14,643,497.14	1,818,740.46	40.31887778	-104.36026161
12,400.00	90.00	357.67	6,377.00	4,835.48	2,721.97	14,643,597.02	1,818,735.69	40.31915215	-104.36027614
12,500.00	90.00	357.67	6,377.00	4,935.39	2,717.91	14,643,696.91	1,818,730.92	40.31942652	-104.36029068
12,600.00	90.00	357.67	6,377.00	5,035.31	2,713.84	14,643,796.79	1,818,726.15	40.31970089	-104.36030521
12,700.00	90.00	357.67	6,377.00	5,135.23	2,709.78	14,643,896.68	1,818,721.37	40.31997526	-104.36031974
12,800.00	90.00	357.67	6,377.00	5,235.15	2,705.72	14,643,996.57	1,818,716.60	40.32024962	-104.36033427
12,900.00	90.00	357.67	6,377.00	5,335.06	2,701.66	14,644,096.45	1,818,711.83	40.32052399	-104.36034881
13,000.00	90.00	357.67	6,377.00	5,434.98	2,697.60	14,644,196.34	1,818,707.06	40.32079836	-104.36036334
13,100.00	90.00	357.67	6,377.00	5,534.90	2,693.53	14,644,296.22	1,818,702.28	40.32107273	-104.36037787
13,200.00	90.00	357.67	6,377.00	5,634.82	2,689.47	14,644,396.11	1,818,697.51	40.32134710	-104.36039241
13,300.00	90.00	357.67	6,377.00	5,734.73	2,685.41	14,644,496.00	1,818,692.74	40.32162147	-104.36040694
13,400.00	90.00	357.67	6,377.00	5,834.65	2,681.35	14,644,595.88	1,818,687.96	40.32189583	-104.36042147
13,500.00	90.00	357.67	6,377.00	5,934.57	2,677.29	14,644,695.77	1,818,683.19	40.32217020	-104.36043600
13,600.00	90.00	357.67	6,377.00	6,034.49	2,673.22	14,644,795.65	1,818,678.42	40.32244457	-104.36045054
13,700.00	90.00	357.67	6,377.00	6,134.40	2,669.16	14,644,895.54	1,818,673.65	40.32271894	-104.36046507
13,800.00	90.00	357.67	6,377.00	6,234.32	2,665.10	14,644,995.42	1,818,668.87	40.32299331	-104.36047961
13,900.00	90.00	357.67	6,377.00	6,334.24	2,661.04	14,645,095.31	1,818,664.10	40.32326767	-104.36049414
14,000.00	90.00	357.67	6,377.00	6,434.16	2,656.97	14,645,195.20	1,818,659.33	40.32354204	-104.36050867
14,100.00	90.00	357.67	6,377.00	6,534.07	2,652.91	14,645,295.08	1,818,654.56	40.32381641	-104.36052321
14,200.00	90.00	357.67	6,377.00	6,633.99	2,648.85	14,645,394.97	1,818,649.78	40.32409078	-104.36053774
14,300.00	90.00	357.67	6,377.00	6,733.91	2,644.79	14,645,494.85	1,818,645.01	40.32436515	-104.36055227
14,400.00	90.00	357.67	6,377.00	6,833.83	2,640.73	14,645,594.74	1,818,640.24	40.32463951	-104.36056681
14,500.00	90.00	357.67	6,377.00	6,933.74	2,636.66	14,645,694.63	1,818,635.47	40.32491388	-104.36058134
14,600.00	90.00	357.67	6,377.00	7,033.66	2,632.60	14,645,794.51	1,818,630.69	40.32518825	-104.36059588
14,700.00	90.00	357.67	6,377.00	7,133.58	2,628.54	14,645,894.40	1,818,625.92	40.32546262	-104.36061041
14,800.00	90.00	357.67	6,377.00	7,233.50	2,624.48	14,645,994.28	1,818,621.15	40.32573699	-104.36062495
14,900.00	90.00	357.67	6,377.00	7,333.41	2,620.42	14,646,094.17	1,818,616.37	40.32601135	-104.36063948
15,000.00	90.00	357.67	6,377.00	7,433.33	2,616.35	14,646,194.06	1,818,611.60	40.32628572	-104.36065402
15,100.00	90.00	357.67	6,377.00	7,533.25	2,612.29	14,646,293.94	1,818,606.83	40.32656009	-104.36066855
15,200.00	90.00	357.67	6,377.00	7,633.17	2,608.23	14,646,393.83	1,818,602.06	40.32683446	-104.36068309
15,300.00	90.00	357.67	6,377.00	7,733.08	2,604.17	14,646,493.71	1,818,597.28	40.32710882	-104.36069762
15,400.00	90.00	357.67	6,377.00	7,833.00	2,600.11	14,646,593.60	1,818,592.51	40.32738319	-104.36071216
15,500.00	90.00	357.67	6,377.00	7,932.92	2,596.04	14,646,693.48	1,818,587.74	40.32765756	-104.36072669

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-03-3L
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 18-03-3L	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	357.67	6,377.00	8,032.84	2,591.98	14,646,793.37	1,818,582.97	40.32793193	-104.36074123
15,700.00	90.00	357.67	6,377.00	8,132.75	2,587.92	14,646,893.26	1,818,578.19	40.32820630	-104.36075576
15,800.00	90.00	357.67	6,377.00	8,232.67	2,583.86	14,646,993.14	1,818,573.42	40.32848066	-104.36077030
15,900.00	90.00	357.67	6,377.00	8,332.59	2,579.80	14,647,093.03	1,818,568.65	40.32875503	-104.36078483
16,000.00	90.00	357.67	6,377.00	8,432.51	2,575.73	14,647,192.91	1,818,563.88	40.32902940	-104.36079937
16,100.00	90.00	357.67	6,377.00	8,532.42	2,571.67	14,647,292.80	1,818,559.10	40.32930377	-104.36081391
16,200.00	90.00	357.67	6,377.00	8,632.34	2,567.61	14,647,392.69	1,818,554.33	40.32957813	-104.36082844
16,300.00	90.00	357.67	6,377.00	8,732.26	2,563.55	14,647,492.57	1,818,549.56	40.32985250	-104.36084298
16,400.00	90.00	357.67	6,377.00	8,832.18	2,559.49	14,647,592.46	1,818,544.78	40.33012687	-104.36085751
16,500.00	90.00	357.67	6,377.00	8,932.09	2,555.42	14,647,692.34	1,818,540.01	40.33040124	-104.36087205
16,600.00	90.00	357.67	6,377.00	9,032.01	2,551.36	14,647,792.23	1,818,535.24	40.33067561	-104.36088659
16,700.00	90.00	357.67	6,377.00	9,131.93	2,547.30	14,647,892.11	1,818,530.47	40.33094997	-104.36090112
16,800.00	90.00	357.67	6,377.00	9,231.85	2,543.24	14,647,992.00	1,818,525.69	40.33122434	-104.36091566
16,900.00	90.00	357.67	6,377.00	9,331.76	2,539.17	14,648,091.89	1,818,520.92	40.33149871	-104.36093020
17,000.00	90.00	357.67	6,377.00	9,431.68	2,535.11	14,648,191.77	1,818,516.15	40.33177308	-104.36094473
17,100.00	90.00	357.67	6,377.00	9,531.60	2,531.05	14,648,291.66	1,818,511.38	40.33204744	-104.36095927
17,200.00	90.00	357.67	6,377.00	9,631.52	2,526.99	14,648,391.54	1,818,506.60	40.33232181	-104.36097381
17,300.00	90.00	357.67	6,377.00	9,731.43	2,522.93	14,648,491.43	1,818,501.83	40.33259618	-104.36098835
17,400.00	90.00	357.67	6,377.00	9,831.35	2,518.86	14,648,591.32	1,818,497.06	40.33287055	-104.36100288
17,459.46	90.00	357.67	6,377.00	9,890.76	2,516.45	14,648,650.71	1,818,494.22	40.33303368	-104.36101153
PBHL/TD 17459.46 MD/6377.00 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 18-03-3L BH	0.00	0.00	6,377.00	9,890.76	2,516.45	14,648,650.71	1,818,494.22	40.33303368	-104.36101153
- plan hits target center									
- Point									
Middlepark 18-03-3L LP	0.00	0.00	6,377.00	186.98	2,910.95	14,638,950.00	1,818,957.73	40.30638761	-104.35960017
- 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
4,115.12	3,928.13	-117.17	736.72	Begin 42.30° tangent
6,771.45	5,892.76	-398.00	2,502.35	Begin 10°/100' build
7,747.66	6,377.00	186.98	2,910.95	LP Begin 90° lateral
17,459.46	6,377.00	9,890.76	2,516.45	PBHL/TD 17459.46 MD/6377.00 TVD