



Well: Middlepark 18-06-3L
 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	1999.63	0.00	0.00	1999.63	0.00	0.00	0.00	0.00	KOP Begin 2°/100' build
3	3750.34	35.01	103.34	3643.39	-119.62	504.51	2.00	-20.16	Begin 35.01° tangent
4	6381.58	35.01	103.34	5798.39	-467.91	1973.54	0.00	-78.88	Begin 10°/100' build
5	7370.73	90.00	357.67	6347.00	112.72	2320.26	10.00	557.67	LP Begin 90° lateral
6	17072.55	90.00	357.67	6347.00	9806.51	1925.59	0.00	9993.77	PBHL/TD 17072.55 MD/6347.00 TVD

DESIGN TARGET DETAILS

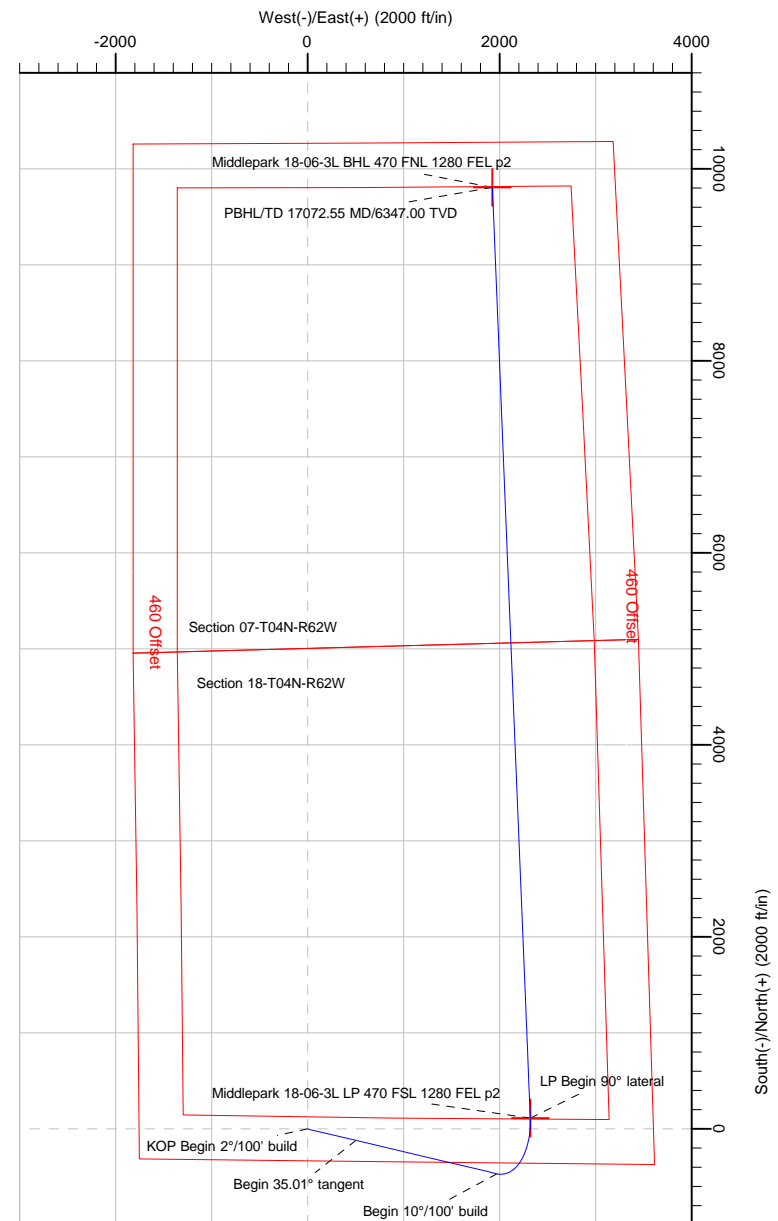
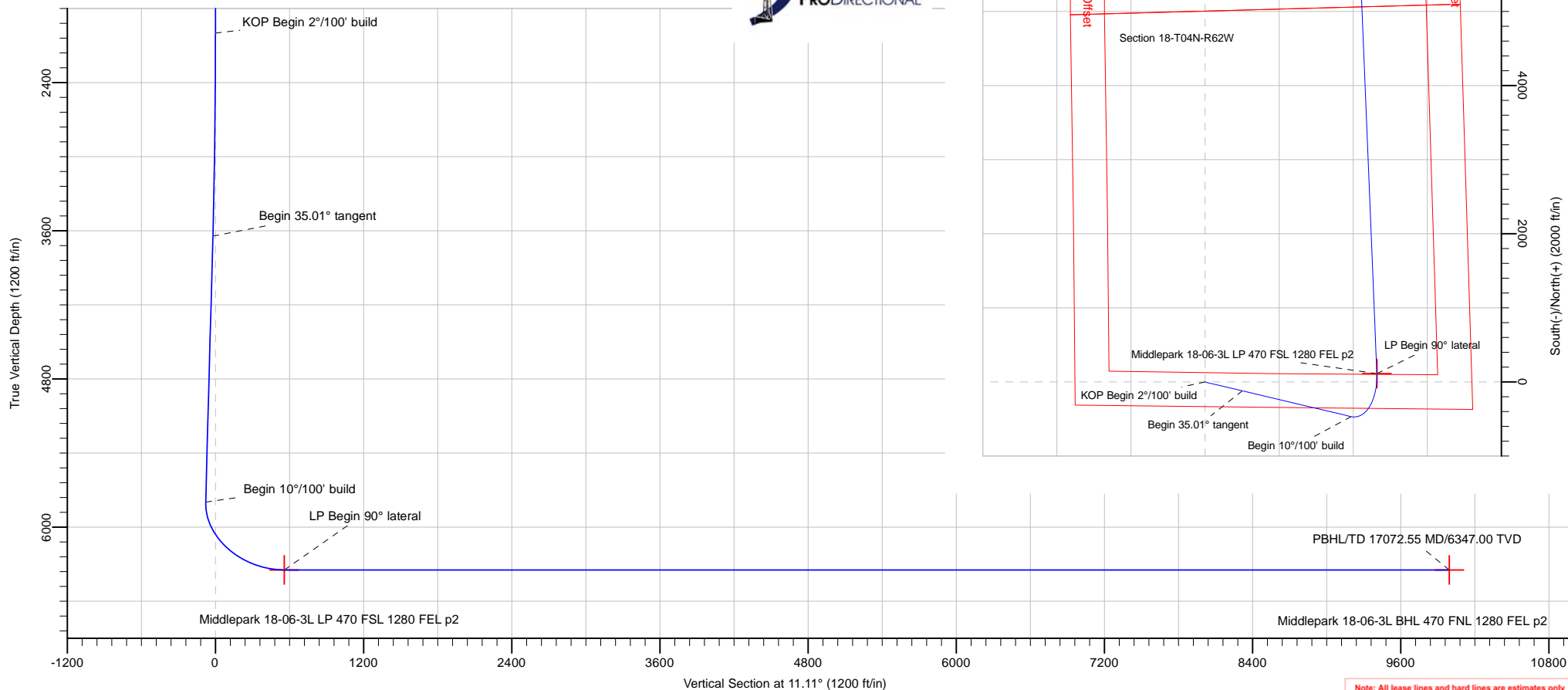
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Middlepark 18-06-3L BHL 470 FNL 1280 FEL p2	6347.00	9806.51	1925.59	14648640.72	1817842.67	40.33301915	-104.36334957
Middlepark 18-06-3L LP 470 FSL 1280 FEL p2	6347.00	112.72	2320.26	14638950.00	1818306.26	40.30640052	-104.36193675



Azimuths to True North
 Magnetic North: 8.18°

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

Middlepark 18-06-3L Surf loc: 334 FSL 1754 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
14638820.79	1815986.86	40.30609131	-104.37025891



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 18-06-3L
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 18-06-3L	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 18-06-3L, Surf loc: 334 FSL 1754 FWL Section 18-T04N-R62W					
Well Position	+N/-S	-2,341.13 ft	Northing:	14,638,820.79 usft	Latitude:	40.30609131
	+E/-W	1,196.38 ft	Easting:	1,815,986.86 usft	Longitude:	-104.37025891
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 (°)
	-0.37	0.00	0.00	11.11

Plan Survey Tool Program	Date	4/27/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,072.55	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	
1,999.63	0.00	0.00	1,999.63	0.00	0.00	0.00	0.00	0.00	0.00	
3,750.34	35.01	103.34	3,643.39	-119.62	504.51	2.00	2.00	0.00	103.34	
6,381.58	35.01	103.34	5,798.39	-467.91	1,973.54	0.00	0.00	0.00	0.00	
7,370.73	90.00	357.67	6,347.00	112.72	2,320.26	10.00	5.56	-10.68	-102.94	Middlepark 18-06-3L I
17,072.55	90.00	357.67	6,347.00	9,806.51	1,925.59	0.00	0.00	0.00	0.00	Middlepark 18-06-3L I

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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 18-06-3L	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
1,999.63	0.00	0.00	1,999.63	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 2°/100' build									
2,000.00	0.01	103.34	2,000.00	0.00	0.00	0.00	2.00	2.00	0.00
2,100.00	2.01	103.34	2,099.98	-0.41	1.71	-0.07	2.00	2.00	0.00
2,200.00	4.01	103.34	2,199.84	-1.62	6.82	-0.27	2.00	2.00	0.00
2,300.00	6.01	103.34	2,299.45	-3.63	15.31	-0.61	2.00	2.00	0.00
2,400.00	8.01	103.34	2,398.70	-6.44	27.18	-1.09	2.00	2.00	0.00
2,500.00	10.01	103.34	2,497.46	-10.06	42.41	-1.70	2.00	2.00	0.00
2,600.00	12.01	103.34	2,595.62	-14.46	60.99	-2.44	2.00	2.00	0.00
2,700.00	14.01	103.34	2,693.04	-19.65	82.89	-3.31	2.00	2.00	0.00
2,800.00	16.01	103.34	2,789.63	-25.63	108.08	-4.32	2.00	2.00	0.00
2,900.00	18.01	103.34	2,885.25	-32.37	136.54	-5.46	2.00	2.00	0.00
3,000.00	20.01	103.34	2,979.79	-39.89	168.23	-6.72	2.00	2.00	0.00
3,100.00	22.01	103.34	3,073.14	-48.16	203.11	-8.12	2.00	2.00	0.00
3,200.00	24.01	103.34	3,165.18	-57.17	241.14	-9.64	2.00	2.00	0.00
3,300.00	26.01	103.34	3,255.80	-66.92	282.27	-11.28	2.00	2.00	0.00
3,400.00	28.01	103.34	3,344.89	-77.40	326.45	-13.05	2.00	2.00	0.00
3,500.00	30.01	103.34	3,432.34	-88.59	373.64	-14.93	2.00	2.00	0.00
3,600.00	32.01	103.34	3,518.05	-100.47	423.76	-16.94	2.00	2.00	0.00
3,700.00	34.01	103.34	3,601.91	-113.04	476.76	-19.06	2.00	2.00	0.00
3,750.34	35.01	103.34	3,643.39	-119.61	504.51	-20.16	2.00	2.00	0.00
Begin 35.01° tangent									
3,800.00	35.01	103.34	3,684.06	-126.19	532.24	-21.27	0.00	0.00	0.00
3,900.00	35.01	103.34	3,765.96	-139.43	588.07	-23.50	0.00	0.00	0.00
4,000.00	35.01	103.34	3,847.86	-152.66	643.90	-25.74	0.00	0.00	0.00
4,100.00	35.01	103.34	3,929.76	-165.90	699.73	-27.97	0.00	0.00	0.00
4,200.00	35.01	103.34	4,011.66	-179.14	755.56	-30.20	0.00	0.00	0.00
4,300.00	35.01	103.34	4,093.56	-192.37	811.39	-32.43	0.00	0.00	0.00
4,400.00	35.01	103.34	4,175.46	-205.61	867.22	-34.66	0.00	0.00	0.00
4,500.00	35.01	103.34	4,257.37	-218.85	923.05	-36.89	0.00	0.00	0.00
4,600.00	35.01	103.34	4,339.27	-232.08	978.88	-39.12	0.00	0.00	0.00
4,700.00	35.01	103.34	4,421.17	-245.32	1,034.71	-41.36	0.00	0.00	0.00
4,800.00	35.01	103.34	4,503.07	-258.56	1,090.54	-43.59	0.00	0.00	0.00

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Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-06-3L	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)
4,900.00	35.01	103.34	4,584.97	-271.79	1,146.37	-45.82	0.00	0.00	0.00
5,000.00	35.01	103.34	4,666.87	-285.03	1,202.20	-48.05	0.00	0.00	0.00
5,100.00	35.01	103.34	4,748.77	-298.27	1,258.03	-50.28	0.00	0.00	0.00
5,200.00	35.01	103.34	4,830.67	-311.50	1,313.86	-52.51	0.00	0.00	0.00
5,300.00	35.01	103.34	4,912.57	-324.74	1,369.69	-54.74	0.00	0.00	0.00
5,400.00	35.01	103.34	4,994.47	-337.98	1,425.52	-56.98	0.00	0.00	0.00
5,500.00	35.01	103.34	5,076.38	-351.21	1,481.35	-59.21	0.00	0.00	0.00
5,600.00	35.01	103.34	5,158.28	-364.45	1,537.18	-61.44	0.00	0.00	0.00
5,700.00	35.01	103.34	5,240.18	-377.69	1,593.01	-63.67	0.00	0.00	0.00
5,800.00	35.01	103.34	5,322.08	-390.92	1,648.84	-65.90	0.00	0.00	0.00
5,900.00	35.01	103.34	5,403.98	-404.16	1,704.67	-68.13	0.00	0.00	0.00
6,000.00	35.01	103.34	5,485.88	-417.40	1,760.50	-70.36	0.00	0.00	0.00
6,100.00	35.01	103.34	5,567.78	-430.63	1,816.34	-72.60	0.00	0.00	0.00
6,200.00	35.01	103.34	5,649.68	-443.87	1,872.17	-74.83	0.00	0.00	0.00
6,300.00	35.01	103.34	5,731.58	-457.11	1,928.00	-77.06	0.00	0.00	0.00
6,381.58	35.01	103.34	5,798.40	-467.91	1,973.54	-78.88	0.00	0.00	0.00
Begin 10°/100' build									
6,400.00	34.64	100.18	5,813.52	-470.05	1,983.84	-79.00	10.00	-2.02	-17.15
6,500.00	34.11	82.44	5,896.26	-471.39	2,039.75	-69.54	10.00	-0.53	-17.73
6,600.00	36.10	65.35	5,978.27	-455.38	2,094.46	-43.28	10.00	1.99	-17.09
6,700.00	40.22	50.57	6,057.05	-422.50	2,146.31	-1.03	10.00	4.13	-14.79
6,800.00	45.90	38.48	6,130.20	-373.75	2,193.71	55.93	10.00	5.68	-12.09
6,900.00	52.63	28.68	6,195.51	-310.62	2,235.23	125.88	10.00	6.72	-9.80
7,000.00	60.02	20.57	6,250.99	-235.03	2,269.61	206.68	10.00	7.39	-8.11
7,100.00	67.83	13.62	6,294.95	-149.26	2,295.80	295.89	10.00	7.82	-6.95
7,200.00	75.91	7.41	6,326.07	-55.93	2,313.00	390.78	10.00	8.08	-6.21
7,300.00	84.14	1.64	6,343.39	42.13	2,320.70	488.49	10.00	8.23	-5.78
7,370.73	90.00	357.67	6,347.00	112.72	2,320.26	557.67	10.00	8.28	-5.61
LP Begin 90° lateral									
7,400.00	90.00	357.67	6,347.00	141.96	2,319.07	586.14	0.00	0.00	0.00
7,500.00	90.00	357.67	6,347.00	241.88	2,315.01	683.40	0.00	0.00	0.00
7,600.00	90.00	357.67	6,347.00	341.80	2,310.94	780.66	0.00	0.00	0.00
7,700.00	90.00	357.67	6,347.00	441.72	2,306.87	877.92	0.00	0.00	0.00
7,800.00	90.00	357.67	6,347.00	541.63	2,302.80	975.19	0.00	0.00	0.00
7,900.00	90.00	357.67	6,347.00	641.55	2,298.73	1,072.45	0.00	0.00	0.00
8,000.00	90.00	357.67	6,347.00	741.47	2,294.67	1,169.71	0.00	0.00	0.00
8,100.00	90.00	357.67	6,347.00	841.39	2,290.60	1,266.97	0.00	0.00	0.00
8,200.00	90.00	357.67	6,347.00	941.30	2,286.53	1,364.23	0.00	0.00	0.00
8,300.00	90.00	357.67	6,347.00	1,041.22	2,282.46	1,461.49	0.00	0.00	0.00
8,400.00	90.00	357.67	6,347.00	1,141.14	2,278.39	1,558.75	0.00	0.00	0.00
8,500.00	90.00	357.67	6,347.00	1,241.05	2,274.33	1,656.01	0.00	0.00	0.00
8,600.00	90.00	357.67	6,347.00	1,340.97	2,270.26	1,753.28	0.00	0.00	0.00
8,700.00	90.00	357.67	6,347.00	1,440.89	2,266.19	1,850.54	0.00	0.00	0.00
8,800.00	90.00	357.67	6,347.00	1,540.81	2,262.12	1,947.80	0.00	0.00	0.00
8,900.00	90.00	357.67	6,347.00	1,640.72	2,258.05	2,045.06	0.00	0.00	0.00
9,000.00	90.00	357.67	6,347.00	1,740.64	2,253.99	2,142.32	0.00	0.00	0.00
9,100.00	90.00	357.67	6,347.00	1,840.56	2,249.92	2,239.58	0.00	0.00	0.00
9,200.00	90.00	357.67	6,347.00	1,940.47	2,245.85	2,336.84	0.00	0.00	0.00
9,300.00	90.00	357.67	6,347.00	2,040.39	2,241.78	2,434.10	0.00	0.00	0.00
9,400.00	90.00	357.67	6,347.00	2,140.31	2,237.71	2,531.36	0.00	0.00	0.00
9,500.00	90.00	357.67	6,347.00	2,240.23	2,233.64	2,628.63	0.00	0.00	0.00
9,600.00	90.00	357.67	6,347.00	2,340.14	2,229.58	2,725.89	0.00	0.00	0.00
9,700.00	90.00	357.67	6,347.00	2,440.06	2,225.51	2,823.15	0.00	0.00	0.00
9,800.00	90.00	357.67	6,347.00	2,539.98	2,221.44	2,920.41	0.00	0.00	0.00

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Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-06-3L	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)
9,900.00	90.00	357.67	6,347.00	2,639.90	2,217.37	3,017.67	0.00	0.00	0.00
10,000.00	90.00	357.67	6,347.00	2,739.81	2,213.30	3,114.93	0.00	0.00	0.00
10,100.00	90.00	357.67	6,347.00	2,839.73	2,209.24	3,212.19	0.00	0.00	0.00
10,200.00	90.00	357.67	6,347.00	2,939.65	2,205.17	3,309.45	0.00	0.00	0.00
10,300.00	90.00	357.67	6,347.00	3,039.56	2,201.10	3,406.71	0.00	0.00	0.00
10,400.00	90.00	357.67	6,347.00	3,139.48	2,197.03	3,503.98	0.00	0.00	0.00
10,500.00	90.00	357.67	6,347.00	3,239.40	2,192.96	3,601.24	0.00	0.00	0.00
10,600.00	90.00	357.67	6,347.00	3,339.32	2,188.90	3,698.50	0.00	0.00	0.00
10,700.00	90.00	357.67	6,347.00	3,439.23	2,184.83	3,795.76	0.00	0.00	0.00
10,800.00	90.00	357.67	6,347.00	3,539.15	2,180.76	3,893.02	0.00	0.00	0.00
10,900.00	90.00	357.67	6,347.00	3,639.07	2,176.69	3,990.28	0.00	0.00	0.00
11,000.00	90.00	357.67	6,347.00	3,738.98	2,172.62	4,087.54	0.00	0.00	0.00
11,100.00	90.00	357.67	6,347.00	3,838.90	2,168.56	4,184.80	0.00	0.00	0.00
11,200.00	90.00	357.67	6,347.00	3,938.82	2,164.49	4,282.06	0.00	0.00	0.00
11,300.00	90.00	357.67	6,347.00	4,038.74	2,160.42	4,379.33	0.00	0.00	0.00
11,400.00	90.00	357.67	6,347.00	4,138.65	2,156.35	4,476.59	0.00	0.00	0.00
11,500.00	90.00	357.67	6,347.00	4,238.57	2,152.28	4,573.85	0.00	0.00	0.00
11,600.00	90.00	357.67	6,347.00	4,338.49	2,148.22	4,671.11	0.00	0.00	0.00
11,700.00	90.00	357.67	6,347.00	4,438.41	2,144.15	4,768.37	0.00	0.00	0.00
11,800.00	90.00	357.67	6,347.00	4,538.32	2,140.08	4,865.63	0.00	0.00	0.00
11,900.00	90.00	357.67	6,347.00	4,638.24	2,136.01	4,962.89	0.00	0.00	0.00
12,000.00	90.00	357.67	6,347.00	4,738.16	2,131.94	5,060.15	0.00	0.00	0.00
12,100.00	90.00	357.67	6,347.00	4,838.07	2,127.88	5,157.41	0.00	0.00	0.00
12,200.00	90.00	357.67	6,347.00	4,937.99	2,123.81	5,254.68	0.00	0.00	0.00
12,300.00	90.00	357.67	6,347.00	5,037.91	2,119.74	5,351.94	0.00	0.00	0.00
12,400.00	90.00	357.67	6,347.00	5,137.83	2,115.67	5,449.20	0.00	0.00	0.00
12,500.00	90.00	357.67	6,347.00	5,237.74	2,111.60	5,546.46	0.00	0.00	0.00
12,600.00	90.00	357.67	6,347.00	5,337.66	2,107.54	5,643.72	0.00	0.00	0.00
12,700.00	90.00	357.67	6,347.00	5,437.58	2,103.47	5,740.98	0.00	0.00	0.00
12,800.00	90.00	357.67	6,347.00	5,537.49	2,099.40	5,838.24	0.00	0.00	0.00
12,900.00	90.00	357.67	6,347.00	5,637.41	2,095.33	5,935.50	0.00	0.00	0.00
13,000.00	90.00	357.67	6,347.00	5,737.33	2,091.26	6,032.76	0.00	0.00	0.00
13,100.00	90.00	357.67	6,347.00	5,837.25	2,087.20	6,130.03	0.00	0.00	0.00
13,200.00	90.00	357.67	6,347.00	5,937.16	2,083.13	6,227.29	0.00	0.00	0.00
13,300.00	90.00	357.67	6,347.00	6,037.08	2,079.06	6,324.55	0.00	0.00	0.00
13,400.00	90.00	357.67	6,347.00	6,137.00	2,074.99	6,421.81	0.00	0.00	0.00
13,500.00	90.00	357.67	6,347.00	6,236.92	2,070.92	6,519.07	0.00	0.00	0.00
13,600.00	90.00	357.67	6,347.00	6,336.83	2,066.85	6,616.33	0.00	0.00	0.00
13,700.00	90.00	357.67	6,347.00	6,436.75	2,062.79	6,713.59	0.00	0.00	0.00
13,800.00	90.00	357.67	6,347.00	6,536.67	2,058.72	6,810.85	0.00	0.00	0.00
13,900.00	90.00	357.67	6,347.00	6,636.58	2,054.65	6,908.11	0.00	0.00	0.00
14,000.00	90.00	357.67	6,347.00	6,736.50	2,050.58	7,005.38	0.00	0.00	0.00
14,100.00	90.00	357.67	6,347.00	6,836.42	2,046.51	7,102.64	0.00	0.00	0.00
14,200.00	90.00	357.67	6,347.00	6,936.34	2,042.45	7,199.90	0.00	0.00	0.00
14,300.00	90.00	357.67	6,347.00	7,036.25	2,038.38	7,297.16	0.00	0.00	0.00
14,400.00	90.00	357.67	6,347.00	7,136.17	2,034.31	7,394.42	0.00	0.00	0.00
14,500.00	90.00	357.67	6,347.00	7,236.09	2,030.24	7,491.68	0.00	0.00	0.00
14,600.00	90.00	357.67	6,347.00	7,336.00	2,026.17	7,588.94	0.00	0.00	0.00
14,700.00	90.00	357.67	6,347.00	7,435.92	2,022.11	7,686.20	0.00	0.00	0.00
14,800.00	90.00	357.67	6,347.00	7,535.84	2,018.04	7,783.47	0.00	0.00	0.00
14,900.00	90.00	357.67	6,347.00	7,635.76	2,013.97	7,880.73	0.00	0.00	0.00
15,000.00	90.00	357.67	6,347.00	7,735.67	2,009.90	7,977.99	0.00	0.00	0.00
15,100.00	90.00	357.67	6,347.00	7,835.59	2,005.83	8,075.25	0.00	0.00	0.00
15,200.00	90.00	357.67	6,347.00	7,935.51	2,001.77	8,172.51	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-06-3L
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 18-06-3L	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)
15,300.00	90.00	357.67	6,347.00	8,035.43	1,997.70	8,269.77	0.00	0.00	0.00
15,400.00	90.00	357.67	6,347.00	8,135.34	1,993.63	8,367.03	0.00	0.00	0.00
15,500.00	90.00	357.67	6,347.00	8,235.26	1,989.56	8,464.29	0.00	0.00	0.00
15,600.00	90.00	357.67	6,347.00	8,335.18	1,985.49	8,561.55	0.00	0.00	0.00
15,700.00	90.00	357.67	6,347.00	8,435.09	1,981.43	8,658.82	0.00	0.00	0.00
15,800.00	90.00	357.67	6,347.00	8,535.01	1,977.36	8,756.08	0.00	0.00	0.00
15,900.00	90.00	357.67	6,347.00	8,634.93	1,973.29	8,853.34	0.00	0.00	0.00
16,000.00	90.00	357.67	6,347.00	8,734.85	1,969.22	8,950.60	0.00	0.00	0.00
16,100.00	90.00	357.67	6,347.00	8,834.76	1,965.15	9,047.86	0.00	0.00	0.00
16,200.00	90.00	357.67	6,347.00	8,934.68	1,961.09	9,145.12	0.00	0.00	0.00
16,300.00	90.00	357.67	6,347.00	9,034.60	1,957.02	9,242.38	0.00	0.00	0.00
16,400.00	90.00	357.67	6,347.00	9,134.51	1,952.95	9,339.64	0.00	0.00	0.00
16,500.00	90.00	357.67	6,347.00	9,234.43	1,948.88	9,436.90	0.00	0.00	0.00
16,600.00	90.00	357.67	6,347.00	9,334.35	1,944.81	9,534.17	0.00	0.00	0.00
16,700.00	90.00	357.67	6,347.00	9,434.27	1,940.75	9,631.43	0.00	0.00	0.00
16,800.00	90.00	357.67	6,347.00	9,534.18	1,936.68	9,728.69	0.00	0.00	0.00
16,900.00	90.00	357.67	6,347.00	9,634.10	1,932.61	9,825.95	0.00	0.00	0.00
17,000.00	90.00	357.67	6,347.00	9,734.02	1,928.54	9,923.21	0.00	0.00	0.00
17,072.55	90.00	357.67	6,347.00	9,806.51	1,925.59	9,993.77	0.00	0.00	0.00
PBHL/TD 17072.55 MD/6347.00 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 18-06-3L BH	0.00	0.00	6,347.00	9,806.51	1,925.59	14,648,640.72	1,817,842.67	40.33301914	-104.36334958
- plan hits target center									
- Point									
Middlepark 18-06-3L LP	0.00	0.00	6,347.00	112.72	2,320.26	14,638,950.00	1,818,306.26	40.30640052	-104.36193676
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,999.63	1,999.63	0.00	0.00	KOP Begin 2°/100' build
3,750.34	3,643.39	-119.61	504.51	Begin 35.01° tangent
6,381.58	5,798.40	-467.91	1,973.54	Begin 10°/100' build
7,370.73	6,347.00	112.72	2,320.26	LP Begin 90° lateral
17,072.55	6,347.00	9,806.51	1,925.59	PBHL/TD 17072.55 MD/6347.00 TVD

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-06-3L
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 18-06-3L	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 18-06-3L, Surf loc: 334 FSL 1754 FWL Section 18-T04N-R62W					
Well Position	+N/-S	0.00 ft	Northing:	14,638,820.79 usft	Latitude:	40.30609131
	+E/-W	0.00 ft	Easting:	1,815,986.86 usft	Longitude:	-104.37025891
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 (°)
	-0.37	0.00	0.00	11.11

Plan Survey Tool Program	Date	4/27/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,072.55 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	
1,999.63	0.00	0.00	1,999.63	0.00	0.00	0.00	0.00	0.00	0.00	
3,750.34	35.01	103.34	3,643.39	-119.62	504.51	2.00	2.00	0.00	103.34	
6,381.58	35.01	103.34	5,798.39	-467.91	1,973.54	0.00	0.00	0.00	0.00	
7,370.73	90.00	357.67	6,347.00	112.72	2,320.26	10.00	5.56	-10.68	-102.94	Middlepark 18-06-3L I
17,072.55	90.00	357.67	6,347.00	9,806.51	1,925.59	0.00	0.00	0.00	0.00	Middlepark 18-06-3L I

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-06-3L
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 18-06-3L	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	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
100.00	0.00	0.00	100.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
200.00	0.00	0.00	200.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
300.00	0.00	0.00	300.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
400.00	0.00	0.00	400.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
500.00	0.00	0.00	500.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
600.00	0.00	0.00	600.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
700.00	0.00	0.00	700.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
800.00	0.00	0.00	800.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
900.00	0.00	0.00	900.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
1,999.63	0.00	0.00	1,999.63	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
KOP Begin 2°/100' build									
2,000.00	0.01	103.34	2,000.00	0.00	0.00	14,638,820.79	1,815,986.86	40.30609131	-104.37025891
2,100.00	2.01	103.34	2,099.98	-0.41	1.71	14,638,820.39	1,815,988.57	40.30609020	-104.37025278
2,200.00	4.01	103.34	2,199.84	-1.62	6.82	14,638,819.22	1,815,993.69	40.30608687	-104.37023447
2,300.00	6.01	103.34	2,299.45	-3.63	15.31	14,638,817.27	1,816,002.19	40.30608134	-104.37020401
2,400.00	8.01	103.34	2,398.70	-6.44	27.18	14,638,814.54	1,816,014.08	40.30607362	-104.37016143
2,500.00	10.01	103.34	2,497.46	-10.06	42.41	14,638,811.03	1,816,029.34	40.30606370	-104.37010679
2,600.00	12.01	103.34	2,595.62	-14.46	60.99	14,638,806.76	1,816,047.95	40.30605160	-104.37004016
2,700.00	14.01	103.34	2,693.04	-19.65	82.89	14,638,801.73	1,816,069.89	40.30603735	-104.36996162
2,800.00	16.01	103.34	2,789.63	-25.63	108.08	14,638,795.93	1,816,095.12	40.30602094	-104.36987125
2,900.00	18.01	103.34	2,885.25	-32.37	136.54	14,638,789.39	1,816,123.63	40.30600242	-104.36976918
3,000.00	20.01	103.34	2,979.79	-39.89	168.23	14,638,782.10	1,816,155.37	40.30598178	-104.36965552
3,100.00	22.01	103.34	3,073.14	-48.16	203.11	14,638,774.08	1,816,190.31	40.30595908	-104.36953041
3,200.00	24.01	103.34	3,165.18	-57.17	241.14	14,638,765.33	1,816,228.40	40.30593432	-104.36939401
3,300.00	26.01	103.34	3,255.80	-66.92	282.27	14,638,755.87	1,816,269.60	40.30590754	-104.36924649
3,400.00	28.01	103.34	3,344.89	-77.40	326.45	14,638,745.71	1,816,313.86	40.30587877	-104.36908802
3,500.00	30.01	103.34	3,432.34	-88.59	373.64	14,638,734.86	1,816,361.12	40.30584805	-104.36891879
3,600.00	32.01	103.34	3,518.05	-100.47	423.76	14,638,723.33	1,816,411.32	40.30581542	-104.36873902
3,700.00	34.01	103.34	3,601.91	-113.04	476.76	14,638,711.14	1,816,464.41	40.30578091	-104.36854891
3,750.34	35.01	103.34	3,643.39	-119.61	504.51	14,638,704.76	1,816,492.21	40.30576284	-104.36844938
Begin 35.01° tangent									
3,800.00	35.01	103.34	3,684.06	-126.19	532.24	14,638,698.39	1,816,519.98	40.30574479	-104.36834994
3,900.00	35.01	103.34	3,765.96	-139.43	588.07	14,638,685.55	1,816,575.90	40.30570844	-104.36814969
4,000.00	35.01	103.34	3,847.86	-152.66	643.90	14,638,672.71	1,816,631.83	40.30567209	-104.36794945
4,100.00	35.01	103.34	3,929.76	-165.90	699.73	14,638,659.87	1,816,687.75	40.30563574	-104.36774920
4,200.00	35.01	103.34	4,011.66	-179.14	755.56	14,638,647.03	1,816,743.67	40.30559938	-104.36754896
4,300.00	35.01	103.34	4,093.56	-192.37	811.39	14,638,634.19	1,816,799.60	40.30556303	-104.36734871
4,400.00	35.01	103.34	4,175.46	-205.61	867.22	14,638,621.35	1,816,855.52	40.30552668	-104.36714847
4,500.00	35.01	103.34	4,257.37	-218.85	923.05	14,638,608.51	1,816,911.44	40.30549033	-104.36694823
4,600.00	35.01	103.34	4,339.27	-232.08	978.88	14,638,595.67	1,816,967.36	40.30545397	-104.36674798
4,700.00	35.01	103.34	4,421.17	-245.32	1,034.71	14,638,582.83	1,817,023.29	40.30541762	-104.36654774
4,800.00	35.01	103.34	4,503.07	-258.56	1,090.54	14,638,569.99	1,817,079.21	40.30538126	-104.36634750
4,900.00	35.01	103.34	4,584.97	-271.79	1,146.37	14,638,557.15	1,817,135.13	40.30534491	-104.36614725

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-06-3L
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 18-06-3L	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
5,000.00	35.01	103.34	4,666.87	-285.03	1,202.20	14,638,544.31	1,817,191.06	40.30530856	-104.36594701
5,100.00	35.01	103.34	4,748.77	-298.27	1,258.03	14,638,531.47	1,817,246.98	40.30527220	-104.36574677
5,200.00	35.01	103.34	4,830.67	-311.50	1,313.86	14,638,518.63	1,817,302.90	40.30523585	-104.36554653
5,300.00	35.01	103.34	4,912.57	-324.74	1,369.69	14,638,505.79	1,817,358.82	40.30519949	-104.36534628
5,400.00	35.01	103.34	4,994.47	-337.98	1,425.52	14,638,492.96	1,817,414.75	40.30516313	-104.36514604
5,500.00	35.01	103.34	5,076.38	-351.21	1,481.35	14,638,480.12	1,817,470.67	40.30512678	-104.36494580
5,600.00	35.01	103.34	5,158.28	-364.45	1,537.18	14,638,467.28	1,817,526.59	40.30509042	-104.36474556
5,700.00	35.01	103.34	5,240.18	-377.69	1,593.01	14,638,454.44	1,817,582.52	40.30505406	-104.36454532
5,800.00	35.01	103.34	5,322.08	-390.92	1,648.84	14,638,441.60	1,817,638.44	40.30501771	-104.36434508
5,900.00	35.01	103.34	5,403.98	-404.16	1,704.67	14,638,428.76	1,817,694.36	40.30498135	-104.36414484
6,000.00	35.01	103.34	5,485.88	-417.40	1,760.50	14,638,415.92	1,817,750.29	40.30494499	-104.36394460
6,100.00	35.01	103.34	5,567.78	-430.63	1,816.34	14,638,403.08	1,817,806.21	40.30490863	-104.36374436
6,200.00	35.01	103.34	5,649.68	-443.87	1,872.17	14,638,390.24	1,817,862.13	40.30487227	-104.36354412
6,300.00	35.01	103.34	5,731.58	-457.11	1,928.00	14,638,377.40	1,817,918.05	40.30483591	-104.36334388
6,381.58	35.01	103.34	5,798.40	-467.91	1,973.54	14,638,366.93	1,817,963.68	40.30480625	-104.36318052
Begin 10°/100' build									
6,400.00	34.64	100.18	5,813.52	-470.05	1,983.84	14,638,364.85	1,817,973.99	40.30480036	-104.36314359
6,500.00	34.11	82.44	5,896.26	-471.39	2,039.75	14,638,363.91	1,818,029.91	40.30479667	-104.36294305
6,600.00	36.10	65.35	5,978.27	-455.38	2,094.46	14,638,380.32	1,818,084.50	40.30484063	-104.36274682
6,700.00	40.22	50.57	6,057.05	-422.50	2,146.31	14,638,413.56	1,818,136.11	40.30493090	-104.36256086
6,800.00	45.90	38.48	6,130.20	-373.75	2,193.71	14,638,462.64	1,818,183.17	40.30506474	-104.36239083
6,900.00	52.63	28.68	6,195.51	-310.62	2,235.23	14,638,526.06	1,818,224.24	40.30523808	-104.36224189
7,000.00	60.02	20.57	6,250.99	-235.03	2,269.61	14,638,601.90	1,818,258.08	40.30544565	-104.36211857
7,100.00	67.83	13.62	6,294.95	-149.26	2,295.80	14,638,687.85	1,818,283.65	40.30568116	-104.36202461
7,200.00	75.91	7.41	6,326.07	-55.93	2,313.00	14,638,781.30	1,818,300.20	40.30593743	-104.36196287
7,300.00	84.14	1.64	6,343.39	42.13	2,320.70	14,638,879.41	1,818,307.20	40.30620669	-104.36193522
7,370.73	90.00	357.67	6,347.00	112.72	2,320.26	14,638,950.00	1,818,306.26	40.30640053	-104.36193676
LP Begin 90° lateral									
7,400.00	90.00	357.67	6,347.00	141.96	2,319.07	14,638,979.24	1,818,304.86	40.30648084	-104.36194102
7,500.00	90.00	357.67	6,347.00	241.88	2,315.01	14,639,079.12	1,818,300.08	40.30675521	-104.36195557
7,600.00	90.00	357.67	6,347.00	341.80	2,310.94	14,639,179.01	1,818,295.31	40.30702958	-104.36197013
7,700.00	90.00	357.67	6,347.00	441.72	2,306.87	14,639,278.89	1,818,290.53	40.30730395	-104.36198469
7,800.00	90.00	357.67	6,347.00	541.63	2,302.80	14,639,378.78	1,818,285.75	40.30757831	-104.36199925
7,900.00	90.00	357.67	6,347.00	641.55	2,298.73	14,639,478.67	1,818,280.97	40.30785268	-104.36201381
8,000.00	90.00	357.67	6,347.00	741.47	2,294.67	14,639,578.55	1,818,276.19	40.30812705	-104.36202836
8,100.00	90.00	357.67	6,347.00	841.39	2,290.60	14,639,678.44	1,818,271.41	40.30840142	-104.36204292
8,200.00	90.00	357.67	6,347.00	941.30	2,286.53	14,639,778.32	1,818,266.63	40.30867579	-104.36205748
8,300.00	90.00	357.67	6,347.00	1,041.22	2,282.46	14,639,878.21	1,818,261.86	40.30895015	-104.36207204
8,400.00	90.00	357.67	6,347.00	1,141.14	2,278.39	14,639,978.09	1,818,257.08	40.30922452	-104.36208660
8,500.00	90.00	357.67	6,347.00	1,241.05	2,274.33	14,640,077.98	1,818,252.30	40.30949889	-104.36210116
8,600.00	90.00	357.67	6,347.00	1,340.97	2,270.26	14,640,177.86	1,818,247.52	40.30977326	-104.36211571
8,700.00	90.00	357.67	6,347.00	1,440.89	2,266.19	14,640,277.75	1,818,242.74	40.31004762	-104.36213027
8,800.00	90.00	357.67	6,347.00	1,540.81	2,262.12	14,640,377.64	1,818,237.96	40.31032199	-104.36214483
8,900.00	90.00	357.67	6,347.00	1,640.72	2,258.05	14,640,477.52	1,818,233.19	40.31059636	-104.36215939
9,000.00	90.00	357.67	6,347.00	1,740.64	2,253.99	14,640,577.41	1,818,228.41	40.31087073	-104.36217395
9,100.00	90.00	357.67	6,347.00	1,840.56	2,249.92	14,640,677.29	1,818,223.63	40.31114510	-104.36218851
9,200.00	90.00	357.67	6,347.00	1,940.47	2,245.85	14,640,777.18	1,818,218.85	40.31141946	-104.36220307
9,300.00	90.00	357.67	6,347.00	2,040.39	2,241.78	14,640,877.06	1,818,214.07	40.31169383	-104.36221763
9,400.00	90.00	357.67	6,347.00	2,140.31	2,237.71	14,640,976.95	1,818,209.29	40.31196820	-104.36223219
9,500.00	90.00	357.67	6,347.00	2,240.23	2,233.64	14,641,076.83	1,818,204.52	40.31224257	-104.36224675
9,600.00	90.00	357.67	6,347.00	2,340.14	2,229.58	14,641,176.72	1,818,199.74	40.31251693	-104.36226131
9,700.00	90.00	357.67	6,347.00	2,440.06	2,225.51	14,641,276.61	1,818,194.96	40.31279130	-104.36227587
9,800.00	90.00	357.67	6,347.00	2,539.98	2,221.44	14,641,376.49	1,818,190.18	40.31306566	-104.36229043
9,900.00	90.00	357.67	6,347.00	2,639.90	2,217.37	14,641,476.38	1,818,185.40	40.31334003	-104.36230499

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-06-3L
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 18-06-3L	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
10,000.00	90.00	357.67	6,347.00	2,739.81	2,213.30	14,641,576.26	1,818,180.62	40.31361439	-104.36231955
10,100.00	90.00	357.67	6,347.00	2,839.73	2,209.24	14,641,676.15	1,818,175.85	40.31388876	-104.36233411
10,200.00	90.00	357.67	6,347.00	2,939.65	2,205.17	14,641,776.03	1,818,171.07	40.31416313	-104.36234867
10,300.00	90.00	357.67	6,347.00	3,039.56	2,201.10	14,641,875.92	1,818,166.29	40.31443750	-104.36236323
10,400.00	90.00	357.67	6,347.00	3,139.48	2,197.03	14,641,975.80	1,818,161.51	40.31471187	-104.36237779
10,500.00	90.00	357.67	6,347.00	3,239.40	2,192.96	14,642,075.69	1,818,156.73	40.31498623	-104.36239235
10,600.00	90.00	357.67	6,347.00	3,339.32	2,188.90	14,642,175.58	1,818,151.95	40.31526060	-104.36240691
10,700.00	90.00	357.67	6,347.00	3,439.23	2,184.83	14,642,275.46	1,818,147.18	40.31553497	-104.36242147
10,800.00	90.00	357.67	6,347.00	3,539.15	2,180.76	14,642,375.35	1,818,142.40	40.31580934	-104.36243603
10,900.00	90.00	357.67	6,347.00	3,639.07	2,176.69	14,642,475.23	1,818,137.62	40.31608370	-104.36245059
11,000.00	90.00	357.67	6,347.00	3,738.98	2,172.62	14,642,575.12	1,818,132.84	40.31635807	-104.36246515
11,100.00	90.00	357.67	6,347.00	3,838.90	2,168.56	14,642,675.00	1,818,128.06	40.31663244	-104.36247971
11,200.00	90.00	357.67	6,347.00	3,938.82	2,164.49	14,642,774.89	1,818,123.28	40.31690681	-104.36249428
11,300.00	90.00	357.67	6,347.00	4,038.74	2,160.42	14,642,874.77	1,818,118.50	40.31718117	-104.36250884
11,400.00	90.00	357.67	6,347.00	4,138.65	2,156.35	14,642,974.66	1,818,113.73	40.31745554	-104.36252340
11,500.00	90.00	357.67	6,347.00	4,238.57	2,152.28	14,643,074.55	1,818,108.95	40.31772991	-104.36253796
11,600.00	90.00	357.67	6,347.00	4,338.49	2,148.22	14,643,174.43	1,818,104.17	40.31800428	-104.36255252
11,700.00	90.00	357.67	6,347.00	4,438.41	2,144.15	14,643,274.32	1,818,099.39	40.31827864	-104.36256708
11,800.00	90.00	357.67	6,347.00	4,538.32	2,140.08	14,643,374.20	1,818,094.61	40.31855301	-104.36258165
11,900.00	90.00	357.67	6,347.00	4,638.24	2,136.01	14,643,474.09	1,818,089.83	40.31882738	-104.36259621
12,000.00	90.00	357.67	6,347.00	4,738.16	2,131.94	14,643,573.97	1,818,085.06	40.31910175	-104.36261077
12,100.00	90.00	357.67	6,347.00	4,838.07	2,127.88	14,643,673.86	1,818,080.28	40.31937611	-104.36262533
12,200.00	90.00	357.67	6,347.00	4,937.99	2,123.81	14,643,773.74	1,818,075.50	40.31965048	-104.36263989
12,300.00	90.00	357.67	6,347.00	5,037.91	2,119.74	14,643,873.63	1,818,070.72	40.31992485	-104.36265446
12,400.00	90.00	357.67	6,347.00	5,137.83	2,115.67	14,643,973.52	1,818,065.94	40.32019921	-104.36266902
12,500.00	90.00	357.67	6,347.00	5,237.74	2,111.60	14,644,073.40	1,818,061.16	40.32047358	-104.36268358
12,600.00	90.00	357.67	6,347.00	5,337.66	2,107.54	14,644,173.29	1,818,056.39	40.32074795	-104.36269815
12,700.00	90.00	357.67	6,347.00	5,437.58	2,103.47	14,644,273.17	1,818,051.61	40.32102232	-104.36271271
12,800.00	90.00	357.67	6,347.00	5,537.49	2,099.40	14,644,373.06	1,818,046.83	40.32129668	-104.36272727
12,900.00	90.00	357.67	6,347.00	5,637.41	2,095.33	14,644,472.94	1,818,042.05	40.32157105	-104.36274183
13,000.00	90.00	357.67	6,347.00	5,737.33	2,091.26	14,644,572.83	1,818,037.27	40.32184542	-104.36275640
13,100.00	90.00	357.67	6,347.00	5,837.25	2,087.20	14,644,672.72	1,818,032.49	40.32211979	-104.36277096
13,200.00	90.00	357.67	6,347.00	5,937.16	2,083.13	14,644,772.60	1,818,027.72	40.32239415	-104.36278552
13,300.00	90.00	357.67	6,347.00	6,037.08	2,079.06	14,644,872.49	1,818,022.94	40.32266852	-104.36280009
13,400.00	90.00	357.67	6,347.00	6,137.00	2,074.99	14,644,972.37	1,818,018.16	40.32294289	-104.36281465
13,500.00	90.00	357.67	6,347.00	6,236.92	2,070.92	14,645,072.26	1,818,013.38	40.32321725	-104.36282921
13,600.00	90.00	357.67	6,347.00	6,336.83	2,066.85	14,645,172.14	1,818,008.60	40.32349162	-104.36284378
13,700.00	90.00	357.67	6,347.00	6,436.75	2,062.79	14,645,272.03	1,818,003.82	40.32376599	-104.36285834
13,800.00	90.00	357.67	6,347.00	6,536.67	2,058.72	14,645,371.91	1,817,999.05	40.32404036	-104.36287291
13,900.00	90.00	357.67	6,347.00	6,636.58	2,054.65	14,645,471.80	1,817,994.27	40.32431472	-104.36288747
14,000.00	90.00	357.67	6,347.00	6,736.50	2,050.58	14,645,571.69	1,817,989.49	40.32458909	-104.36290203
14,100.00	90.00	357.67	6,347.00	6,836.42	2,046.51	14,645,671.57	1,817,984.71	40.32486346	-104.36291660
14,200.00	90.00	357.67	6,347.00	6,936.34	2,042.45	14,645,771.46	1,817,979.93	40.32513782	-104.36293116
14,300.00	90.00	357.67	6,347.00	7,036.25	2,038.38	14,645,871.34	1,817,975.15	40.32541219	-104.36294573
14,400.00	90.00	357.67	6,347.00	7,136.17	2,034.31	14,645,971.23	1,817,970.38	40.32568656	-104.36296029
14,500.00	90.00	357.67	6,347.00	7,236.09	2,030.24	14,646,071.11	1,817,965.60	40.32596093	-104.36297486
14,600.00	90.00	357.67	6,347.00	7,336.00	2,026.17	14,646,171.00	1,817,960.82	40.32623529	-104.36298942
14,700.00	90.00	357.67	6,347.00	7,435.92	2,022.11	14,646,270.88	1,817,956.04	40.32650966	-104.36300399
14,800.00	90.00	357.67	6,347.00	7,535.84	2,018.04	14,646,370.77	1,817,951.26	40.32678403	-104.36301855
14,900.00	90.00	357.67	6,347.00	7,635.76	2,013.97	14,646,470.66	1,817,946.48	40.32705839	-104.36303312
15,000.00	90.00	357.67	6,347.00	7,735.67	2,009.90	14,646,570.54	1,817,941.70	40.32733276	-104.36304768
15,100.00	90.00	357.67	6,347.00	7,835.59	2,005.83	14,646,670.43	1,817,936.93	40.32760713	-104.36306225
15,200.00	90.00	357.67	6,347.00	7,935.51	2,001.77	14,646,770.31	1,817,932.15	40.32788149	-104.36307681
15,300.00	90.00	357.67	6,347.00	8,035.43	1,997.70	14,646,870.20	1,817,927.37	40.32815586	-104.36309138
15,400.00	90.00	357.67	6,347.00	8,135.34	1,993.63	14,646,970.08	1,817,922.59	40.32843023	-104.36310595

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-06-3L
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 18-06-3L	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
15,500.00	90.00	357.67	6,347.00	8,235.26	1,989.56	14,647,069.97	1,817,917.81	40.32870459	-104.36312051
15,600.00	90.00	357.67	6,347.00	8,335.18	1,985.49	14,647,169.85	1,817,913.03	40.32897896	-104.36313508
15,700.00	90.00	357.67	6,347.00	8,435.09	1,981.43	14,647,269.74	1,817,908.26	40.32925333	-104.36314964
15,800.00	90.00	357.67	6,347.00	8,535.01	1,977.36	14,647,369.63	1,817,903.48	40.32952770	-104.36316421
15,900.00	90.00	357.67	6,347.00	8,634.93	1,973.29	14,647,469.51	1,817,898.70	40.32980206	-104.36317878
16,000.00	90.00	357.67	6,347.00	8,734.85	1,969.22	14,647,569.40	1,817,893.92	40.33007643	-104.36319334
16,100.00	90.00	357.67	6,347.00	8,834.76	1,965.15	14,647,669.28	1,817,889.14	40.33035080	-104.36320791
16,200.00	90.00	357.67	6,347.00	8,934.68	1,961.09	14,647,769.17	1,817,884.36	40.33062516	-104.36322247
16,300.00	90.00	357.67	6,347.00	9,034.60	1,957.02	14,647,869.05	1,817,879.59	40.33089953	-104.36323704
16,400.00	90.00	357.67	6,347.00	9,134.51	1,952.95	14,647,968.94	1,817,874.81	40.33117390	-104.36325161
16,500.00	90.00	357.67	6,347.00	9,234.43	1,948.88	14,648,068.82	1,817,870.03	40.33144826	-104.36326617
16,600.00	90.00	357.67	6,347.00	9,334.35	1,944.81	14,648,168.71	1,817,865.25	40.33172263	-104.36328074
16,700.00	90.00	357.67	6,347.00	9,434.27	1,940.75	14,648,268.60	1,817,860.47	40.33199700	-104.36329531
16,800.00	90.00	357.67	6,347.00	9,534.18	1,936.68	14,648,368.48	1,817,855.69	40.33227136	-104.36330988
16,900.00	90.00	357.67	6,347.00	9,634.10	1,932.61	14,648,468.37	1,817,850.92	40.33254573	-104.36332444
17,000.00	90.00	357.67	6,347.00	9,734.02	1,928.54	14,648,568.25	1,817,846.14	40.33282010	-104.36333901
17,072.55	90.00	357.67	6,347.00	9,806.51	1,925.59	14,648,640.72	1,817,842.67	40.33301914	-104.36334958
PBHL/TD 17072.55 MD/6347.00 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 18-06-3L BH	0.00	0.00	6,347.00	9,806.51	1,925.59	14,648,640.72	1,817,842.67	40.33301914	-104.36334958
- plan hits target center									
- Point									
Middlepark 18-06-3L LP	0.00	0.00	6,347.00	112.72	2,320.26	14,638,950.00	1,818,306.26	40.30640052	-104.36193676
- plan hits target center									
- Point									

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,999.63	1,999.63	0.00	0.00	KOP Begin 2°/100' build	
3,750.34	3,643.39	-119.61	504.51	Begin 35.01° tangent	
6,381.58	5,798.40	-467.91	1,973.54	Begin 10°/100' build	
7,370.73	6,347.00	112.72	2,320.26	LP Begin 90° lateral	
17,072.55	6,347.00	9,806.51	1,925.59	PBHL/TD 17072.55 MD/6347.00 TVD	