



Well: Middlepark 18-12-3L
 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 1°/100' build
3	2964.08	19.28	121.48	2945.99	-83.93	137.04	2.00	-73.36	Begin 19.28° tangent
4	5881.42	19.28	121.48	5699.68	-587.05	958.55	0.00	-513.16	Begin 10°/100' build
5	6887.33	90.00	357.66	6351.00	-16.60	1124.71	10.00	68.19	LP Begin 90° lateral
6	16569.20	90.00	357.66	6351.00	9657.21	729.69	0.00	9684.74	PBHL/TD 16569.20 MD/6351.00 TVD

DESIGN TARGET DETAILS

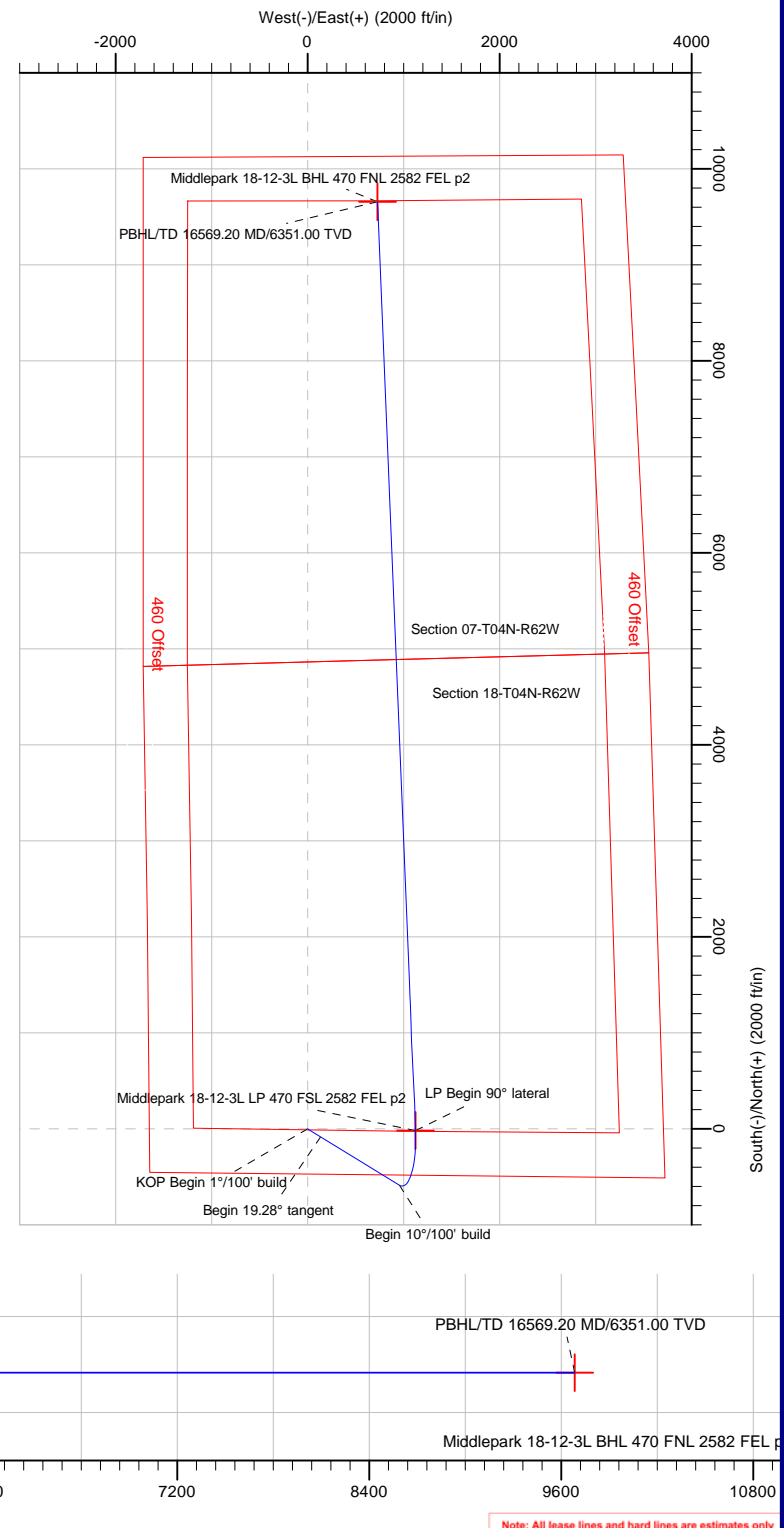
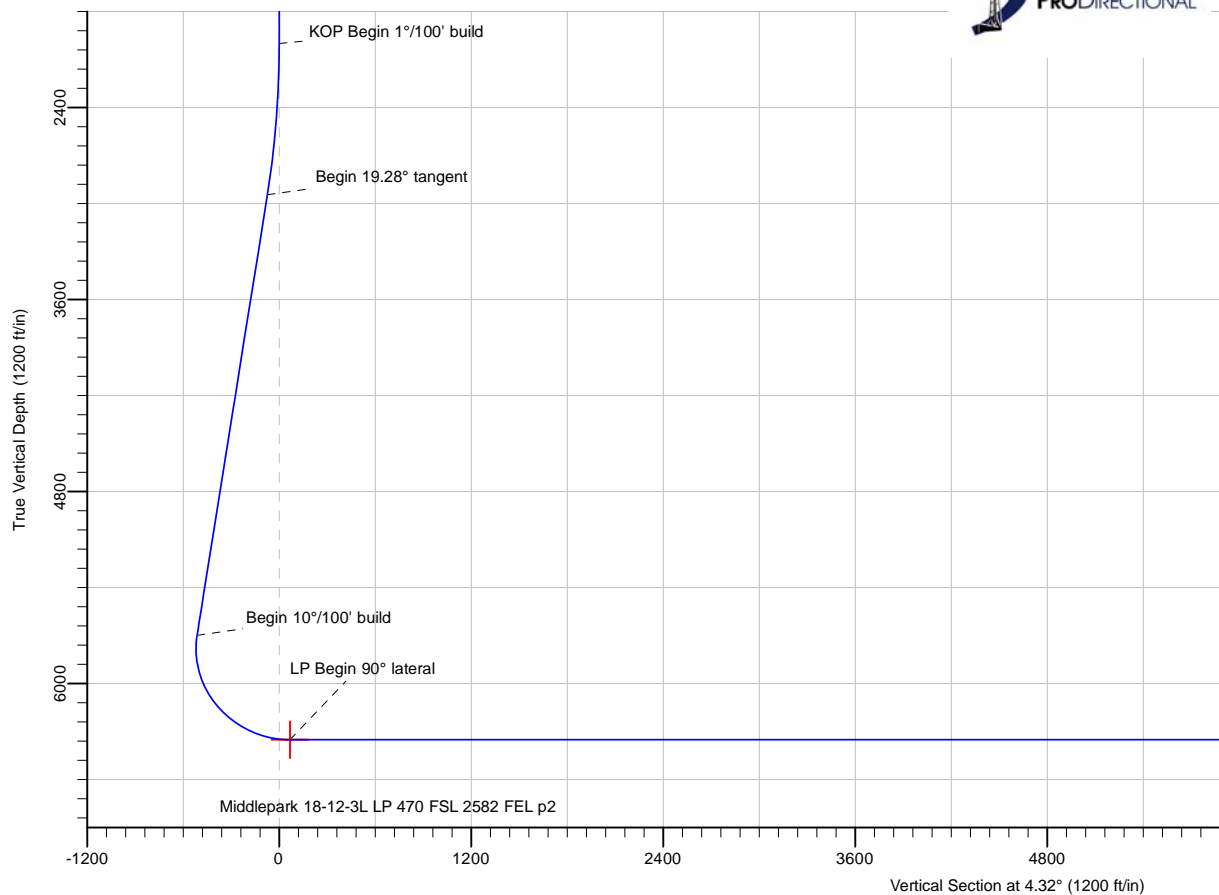
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Middlepark 18-12-3L BHL 470 FNL 2582 FEL p2	6351.00	9657.21	729.69	14648620.74	1816539.58	40.33298993	-104.36802564
Middlepark 18-12-3L LP 470 FSL 2582 FEL p2	6351.00	-16.60	1124.71	14638950.00	1817003.33	40.30642620	-104.36660989



Azimuths to True North
 Magnetic North: 8.18°

Magnetic Field
 Strength: 52247.4snT
 Dip Angle: 66.90°
 Date: 4/22/2018
 Model: HDGM

Middlepark 18-12-3L Surf loc: 471 FSL 1648 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
14638958.61	1815878.53	40.30647186	-104.37064393



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 18-12-3L
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 18-12-3L	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 18-12-3L, Surf loc: 471 FSL 1648 FWL Section 18-T04N-R62W					
Well Position	+N/-S	-2,202.55 ft	Northing:	14,638,958.61 usft	Latitude:	40.30647186
	+E/-W	1,089.03 ft	Easting:	1,815,878.53 usft	Longitude:	-104.37064394
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	52,247.40000000

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	4.32

Plan Survey Tool Program	Date	4/27/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,569.20	plan2 (Original Hole)	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,964.08	19.28	121.48	2,945.99	-83.93	137.04	2.00	2.00	0.00	121.48	
5,881.42	19.28	121.48	5,699.68	-587.05	958.55	0.00	0.00	0.00	0.00	
6,887.33	90.00	357.66	6,351.00	-16.60	1,124.71	10.00	7.03	-12.31	-122.31	Middlepark 18-12-3L I
16,569.20	90.00	357.66	6,351.00	9,657.21	729.69	0.00	0.00	0.00	0.00	Middlepark 18-12-3L 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 18-12-3L	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 1°/100' build									
2,100.00	2.00	121.48	2,099.98	-0.91	1.49	-0.80	2.00	2.00	0.00
2,200.00	4.00	121.48	2,199.84	-3.64	5.95	-3.19	2.00	2.00	0.00
2,300.00	6.00	121.48	2,299.45	-8.20	13.38	-7.16	2.00	2.00	0.00
2,400.00	8.00	121.48	2,398.70	-14.56	23.78	-12.73	2.00	2.00	0.00
2,500.00	10.00	121.48	2,497.47	-22.73	37.12	-19.87	2.00	2.00	0.00
2,600.00	12.00	121.48	2,595.62	-32.70	53.39	-28.58	2.00	2.00	0.00
2,700.00	14.00	121.48	2,693.06	-44.44	72.57	-38.85	2.00	2.00	0.00
2,800.00	16.00	121.48	2,789.64	-57.96	94.64	-50.66	2.00	2.00	0.00
2,900.00	18.00	121.48	2,885.27	-73.23	119.57	-64.01	2.00	2.00	0.00
2,964.08	19.28	121.48	2,945.99	-83.93	137.04	-73.36	2.00	2.00	0.00
Begin 19.28° tangent									
3,000.00	19.28	121.48	2,979.89	-90.12	147.15	-78.78	0.00	0.00	0.00
3,100.00	19.28	121.48	3,074.28	-107.37	175.31	-93.85	0.00	0.00	0.00
3,200.00	19.28	121.48	3,168.67	-124.61	203.47	-108.93	0.00	0.00	0.00
3,300.00	19.28	121.48	3,263.06	-141.86	231.63	-124.00	0.00	0.00	0.00
3,400.00	19.28	121.48	3,357.45	-159.11	259.79	-139.08	0.00	0.00	0.00
3,500.00	19.28	121.48	3,451.84	-176.35	287.95	-154.15	0.00	0.00	0.00
3,600.00	19.28	121.48	3,546.23	-193.60	316.11	-169.23	0.00	0.00	0.00
3,700.00	19.28	121.48	3,640.63	-210.84	344.27	-184.31	0.00	0.00	0.00
3,800.00	19.28	121.48	3,735.02	-228.09	372.43	-199.38	0.00	0.00	0.00
3,900.00	19.28	121.48	3,829.41	-245.34	400.59	-214.46	0.00	0.00	0.00
4,000.00	19.28	121.48	3,923.80	-262.58	428.75	-229.53	0.00	0.00	0.00
4,100.00	19.28	121.48	4,018.19	-279.83	456.91	-244.61	0.00	0.00	0.00
4,200.00	19.28	121.48	4,112.58	-297.07	485.07	-259.68	0.00	0.00	0.00
4,300.00	19.28	121.48	4,206.97	-314.32	513.23	-274.76	0.00	0.00	0.00
4,400.00	19.28	121.48	4,301.36	-331.57	541.39	-289.83	0.00	0.00	0.00
4,500.00	19.28	121.48	4,395.75	-348.81	569.55	-304.91	0.00	0.00	0.00
4,600.00	19.28	121.48	4,490.14	-366.06	597.71	-319.98	0.00	0.00	0.00
4,700.00	19.28	121.48	4,584.53	-383.30	625.87	-335.06	0.00	0.00	0.00
4,800.00	19.28	121.48	4,678.92	-400.55	654.03	-350.13	0.00	0.00	0.00
4,900.00	19.28	121.48	4,773.31	-417.80	682.19	-365.21	0.00	0.00	0.00

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Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-12-3L	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	19.28	121.48	4,867.70	-435.04	710.35	-380.29	0.00	0.00	0.00
5,100.00	19.28	121.48	4,962.09	-452.29	738.51	-395.36	0.00	0.00	0.00
5,200.00	19.28	121.48	5,056.49	-469.54	766.67	-410.44	0.00	0.00	0.00
5,300.00	19.28	121.48	5,150.88	-486.78	794.83	-425.51	0.00	0.00	0.00
5,400.00	19.28	121.48	5,245.27	-504.03	822.99	-440.59	0.00	0.00	0.00
5,500.00	19.28	121.48	5,339.66	-521.27	851.15	-455.66	0.00	0.00	0.00
5,600.00	19.28	121.48	5,434.05	-538.52	879.31	-470.74	0.00	0.00	0.00
5,700.00	19.28	121.48	5,528.44	-555.77	907.47	-485.81	0.00	0.00	0.00
5,800.00	19.28	121.48	5,622.83	-573.01	935.63	-500.89	0.00	0.00	0.00
5,881.42	19.28	121.48	5,699.68	-587.05	958.56	-513.16	0.00	0.00	0.00
Begin 10°/100' build									
5,900.00	18.35	116.49	5,717.27	-589.96	963.79	-515.67	10.00	-5.00	-26.88
6,000.00	16.25	83.13	5,812.97	-595.32	991.85	-518.90	10.00	-2.10	-33.36
6,100.00	19.65	52.14	5,908.30	-583.30	1,019.08	-504.86	10.00	3.40	-30.99
6,200.00	26.51	33.30	6,000.37	-554.26	1,044.68	-473.97	10.00	6.86	-18.84
6,300.00	34.84	22.35	6,086.37	-509.07	1,067.85	-427.17	10.00	8.33	-10.96
6,400.00	43.80	15.30	6,163.70	-449.13	1,087.89	-365.88	10.00	8.96	-7.04
6,500.00	53.07	10.28	6,230.00	-376.24	1,104.20	-291.97	10.00	9.27	-5.03
6,600.00	62.51	6.36	6,283.25	-292.62	1,116.28	-207.68	10.00	9.44	-3.92
6,700.00	72.04	3.07	6,321.85	-200.81	1,123.76	-115.57	10.00	9.53	-3.29
6,800.00	81.62	0.12	6,344.62	-103.60	1,126.41	-18.44	10.00	9.58	-2.95
6,887.33	90.00	357.66	6,351.00	-16.60	1,124.71	68.18	10.00	9.60	-2.81
LP Begin 90° lateral									
6,900.00	90.00	357.66	6,351.00	-3.95	1,124.20	80.77	0.00	0.00	0.00
7,000.00	90.00	357.66	6,351.00	95.97	1,120.12	180.09	0.00	0.00	0.00
7,100.00	90.00	357.66	6,351.00	195.89	1,116.04	279.42	0.00	0.00	0.00
7,200.00	90.00	357.66	6,351.00	295.80	1,111.96	378.74	0.00	0.00	0.00
7,300.00	90.00	357.66	6,351.00	395.72	1,107.88	478.07	0.00	0.00	0.00
7,400.00	90.00	357.66	6,351.00	495.64	1,103.80	577.39	0.00	0.00	0.00
7,500.00	90.00	357.66	6,351.00	595.56	1,099.72	676.72	0.00	0.00	0.00
7,600.00	90.00	357.66	6,351.00	695.47	1,095.64	776.05	0.00	0.00	0.00
7,700.00	90.00	357.66	6,351.00	795.39	1,091.56	875.37	0.00	0.00	0.00
7,800.00	90.00	357.66	6,351.00	895.31	1,087.48	974.70	0.00	0.00	0.00
7,900.00	90.00	357.66	6,351.00	995.22	1,083.40	1,074.02	0.00	0.00	0.00
8,000.00	90.00	357.66	6,351.00	1,095.14	1,079.32	1,173.35	0.00	0.00	0.00
8,100.00	90.00	357.66	6,351.00	1,195.06	1,075.24	1,272.67	0.00	0.00	0.00
8,200.00	90.00	357.66	6,351.00	1,294.97	1,071.16	1,372.00	0.00	0.00	0.00
8,300.00	90.00	357.66	6,351.00	1,394.89	1,067.08	1,471.32	0.00	0.00	0.00
8,400.00	90.00	357.66	6,351.00	1,494.81	1,063.00	1,570.65	0.00	0.00	0.00
8,500.00	90.00	357.66	6,351.00	1,594.72	1,058.92	1,669.97	0.00	0.00	0.00
8,600.00	90.00	357.66	6,351.00	1,694.64	1,054.84	1,769.30	0.00	0.00	0.00
8,700.00	90.00	357.66	6,351.00	1,794.56	1,050.76	1,868.62	0.00	0.00	0.00
8,800.00	90.00	357.66	6,351.00	1,894.47	1,046.68	1,967.95	0.00	0.00	0.00
8,900.00	90.00	357.66	6,351.00	1,994.39	1,042.60	2,067.27	0.00	0.00	0.00
9,000.00	90.00	357.66	6,351.00	2,094.31	1,038.52	2,166.60	0.00	0.00	0.00
9,100.00	90.00	357.66	6,351.00	2,194.22	1,034.44	2,265.93	0.00	0.00	0.00
9,200.00	90.00	357.66	6,351.00	2,294.14	1,030.36	2,365.25	0.00	0.00	0.00
9,300.00	90.00	357.66	6,351.00	2,394.06	1,026.28	2,464.58	0.00	0.00	0.00
9,400.00	90.00	357.66	6,351.00	2,493.97	1,022.20	2,563.90	0.00	0.00	0.00
9,500.00	90.00	357.66	6,351.00	2,593.89	1,018.12	2,663.23	0.00	0.00	0.00
9,600.00	90.00	357.66	6,351.00	2,693.81	1,014.04	2,762.55	0.00	0.00	0.00
9,700.00	90.00	357.66	6,351.00	2,793.72	1,009.96	2,861.88	0.00	0.00	0.00
9,800.00	90.00	357.66	6,351.00	2,893.64	1,005.88	2,961.20	0.00	0.00	0.00
9,900.00	90.00	357.66	6,351.00	2,993.56	1,001.80	3,060.53	0.00	0.00	0.00

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Site:	Section 18-T04N-R62W	North Reference:	True
Well:	Middlepark 18-12-3L	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	6,351.00	3,093.47	997.72	3,159.85	0.00	0.00	0.00
10,100.00	90.00	357.66	6,351.00	3,193.39	993.64	3,259.18	0.00	0.00	0.00
10,200.00	90.00	357.66	6,351.00	3,293.31	989.56	3,358.50	0.00	0.00	0.00
10,300.00	90.00	357.66	6,351.00	3,393.22	985.48	3,457.83	0.00	0.00	0.00
10,400.00	90.00	357.66	6,351.00	3,493.14	981.40	3,557.15	0.00	0.00	0.00
10,500.00	90.00	357.66	6,351.00	3,593.06	977.32	3,656.48	0.00	0.00	0.00
10,600.00	90.00	357.66	6,351.00	3,692.97	973.24	3,755.80	0.00	0.00	0.00
10,700.00	90.00	357.66	6,351.00	3,792.89	969.16	3,855.13	0.00	0.00	0.00
10,800.00	90.00	357.66	6,351.00	3,892.81	965.08	3,954.46	0.00	0.00	0.00
10,900.00	90.00	357.66	6,351.00	3,992.72	961.00	4,053.78	0.00	0.00	0.00
11,000.00	90.00	357.66	6,351.00	4,092.64	956.92	4,153.11	0.00	0.00	0.00
11,100.00	90.00	357.66	6,351.00	4,192.56	952.84	4,252.43	0.00	0.00	0.00
11,200.00	90.00	357.66	6,351.00	4,292.47	948.76	4,351.76	0.00	0.00	0.00
11,300.00	90.00	357.66	6,351.00	4,392.39	944.68	4,451.08	0.00	0.00	0.00
11,400.00	90.00	357.66	6,351.00	4,492.31	940.60	4,550.41	0.00	0.00	0.00
11,500.00	90.00	357.66	6,351.00	4,592.22	936.52	4,649.73	0.00	0.00	0.00
11,600.00	90.00	357.66	6,351.00	4,692.14	932.44	4,749.06	0.00	0.00	0.00
11,700.00	90.00	357.66	6,351.00	4,792.06	928.36	4,848.38	0.00	0.00	0.00
11,800.00	90.00	357.66	6,351.00	4,891.97	924.28	4,947.71	0.00	0.00	0.00
11,900.00	90.00	357.66	6,351.00	4,991.89	920.20	5,047.03	0.00	0.00	0.00
12,000.00	90.00	357.66	6,351.00	5,091.81	916.12	5,146.36	0.00	0.00	0.00
12,100.00	90.00	357.66	6,351.00	5,191.72	912.04	5,245.68	0.00	0.00	0.00
12,200.00	90.00	357.66	6,351.00	5,291.64	907.96	5,345.01	0.00	0.00	0.00
12,300.00	90.00	357.66	6,351.00	5,391.56	903.88	5,444.34	0.00	0.00	0.00
12,400.00	90.00	357.66	6,351.00	5,491.48	899.80	5,543.66	0.00	0.00	0.00
12,500.00	90.00	357.66	6,351.00	5,591.39	895.72	5,642.99	0.00	0.00	0.00
12,600.00	90.00	357.66	6,351.00	5,691.31	891.64	5,742.31	0.00	0.00	0.00
12,700.00	90.00	357.66	6,351.00	5,791.23	887.56	5,841.64	0.00	0.00	0.00
12,800.00	90.00	357.66	6,351.00	5,891.14	883.48	5,940.96	0.00	0.00	0.00
12,900.00	90.00	357.66	6,351.00	5,991.06	879.40	6,040.29	0.00	0.00	0.00
13,000.00	90.00	357.66	6,351.00	6,090.98	875.32	6,139.61	0.00	0.00	0.00
13,100.00	90.00	357.66	6,351.00	6,190.89	871.24	6,238.94	0.00	0.00	0.00
13,200.00	90.00	357.66	6,351.00	6,290.81	867.16	6,338.26	0.00	0.00	0.00
13,300.00	90.00	357.66	6,351.00	6,390.73	863.08	6,437.59	0.00	0.00	0.00
13,400.00	90.00	357.66	6,351.00	6,490.64	859.00	6,536.91	0.00	0.00	0.00
13,500.00	90.00	357.66	6,351.00	6,590.56	854.92	6,636.24	0.00	0.00	0.00
13,600.00	90.00	357.66	6,351.00	6,690.48	850.84	6,735.56	0.00	0.00	0.00
13,700.00	90.00	357.66	6,351.00	6,790.39	846.76	6,834.89	0.00	0.00	0.00
13,800.00	90.00	357.66	6,351.00	6,890.31	842.68	6,934.22	0.00	0.00	0.00
13,900.00	90.00	357.66	6,351.00	6,990.23	838.60	7,033.54	0.00	0.00	0.00
14,000.00	90.00	357.66	6,351.00	7,090.14	834.52	7,132.87	0.00	0.00	0.00
14,100.00	90.00	357.66	6,351.00	7,190.06	830.44	7,232.19	0.00	0.00	0.00
14,200.00	90.00	357.66	6,351.00	7,289.98	826.36	7,331.52	0.00	0.00	0.00
14,300.00	90.00	357.66	6,351.00	7,389.89	822.28	7,430.84	0.00	0.00	0.00
14,400.00	90.00	357.66	6,351.00	7,489.81	818.20	7,530.17	0.00	0.00	0.00
14,500.00	90.00	357.66	6,351.00	7,589.73	814.12	7,629.49	0.00	0.00	0.00
14,600.00	90.00	357.66	6,351.00	7,689.64	810.04	7,728.82	0.00	0.00	0.00
14,700.00	90.00	357.66	6,351.00	7,789.56	805.96	7,828.14	0.00	0.00	0.00
14,800.00	90.00	357.66	6,351.00	7,889.48	801.88	7,927.47	0.00	0.00	0.00
14,900.00	90.00	357.66	6,351.00	7,989.39	797.80	8,026.79	0.00	0.00	0.00
15,000.00	90.00	357.66	6,351.00	8,089.31	793.72	8,126.12	0.00	0.00	0.00
15,100.00	90.00	357.66	6,351.00	8,189.23	789.64	8,225.44	0.00	0.00	0.00
15,200.00	90.00	357.66	6,351.00	8,289.14	785.56	8,324.77	0.00	0.00	0.00
15,300.00	90.00	357.66	6,351.00	8,389.06	781.48	8,424.10	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-12-3L
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 18-12-3L	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	6,351.00	8,488.98	777.40	8,523.42	0.00	0.00	0.00
15,500.00	90.00	357.66	6,351.00	8,588.89	773.32	8,622.75	0.00	0.00	0.00
15,600.00	90.00	357.66	6,351.00	8,688.81	769.24	8,722.07	0.00	0.00	0.00
15,700.00	90.00	357.66	6,351.00	8,788.73	765.16	8,821.40	0.00	0.00	0.00
15,800.00	90.00	357.66	6,351.00	8,888.64	761.08	8,920.72	0.00	0.00	0.00
15,900.00	90.00	357.66	6,351.00	8,988.56	757.00	9,020.05	0.00	0.00	0.00
16,000.00	90.00	357.66	6,351.00	9,088.48	752.92	9,119.37	0.00	0.00	0.00
16,100.00	90.00	357.66	6,351.00	9,188.39	748.84	9,218.70	0.00	0.00	0.00
16,200.00	90.00	357.66	6,351.00	9,288.31	744.76	9,318.02	0.00	0.00	0.00
16,300.00	90.00	357.66	6,351.00	9,388.23	740.68	9,417.35	0.00	0.00	0.00
16,400.00	90.00	357.66	6,351.00	9,488.14	736.60	9,516.67	0.00	0.00	0.00
16,500.00	90.00	357.66	6,351.00	9,588.06	732.52	9,616.00	0.00	0.00	0.00
16,569.20	90.00	357.66	6,351.00	9,657.20	729.69	9,684.73	0.00	0.00	0.00
PBHL/TD 16569.20 MD/6351.00 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 18-12-3L BH	0.00	0.00	6,351.00	9,657.21	729.69	14,648,620.74	1,816,539.58	40.33298992	-104.36802564
- plan hits target center									
- Point									
Middlepark 18-12-3L LP	0.00	0.00	6,351.00	-16.60	1,124.71	14,638,950.00	1,817,003.33	40.30642620	-104.36660990
- 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 1°/100' build
2,964.08	2,945.99	-83.93	137.04	Begin 19.28° tangent
5,881.42	5,699.68	-587.05	958.56	Begin 10°/100' build
6,887.33	6,351.00	-16.60	1,124.71	LP Begin 90° lateral
16,569.20	6,351.00	9,657.20	729.69	PBHL/TD 16569.20 MD/6351.00 TVD

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-12-3L
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 18-12-3L	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 18-12-3L, Surf loc: 471 FSL 1648 FWL Section 18-T04N-R62W					
Well Position	+N/-S	0.00 ft	Northing:	14,638,958.61 usft	Latitude:	40.30647186
	+E/-W	0.00 ft	Easting:	1,815,878.53 usft	Longitude:	-104.37064394
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	52,247.40000000

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	4.32

Plan Survey Tool Program	Date	4/27/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,569.20 plan2 (Original Hole)		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,964.08	19.28	121.48	2,945.99	-83.93	137.04	2.00	2.00	0.00	121.48	
5,881.42	19.28	121.48	5,699.68	-587.05	958.55	0.00	0.00	0.00	0.00	
6,887.33	90.00	357.66	6,351.00	-16.60	1,124.71	10.00	7.03	-12.31	-122.31	Middlepark 18-12-3L I
16,569.20	90.00	357.66	6,351.00	9,657.21	729.69	0.00	0.00	0.00	0.00	Middlepark 18-12-3L I

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-12-3L
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 18-12-3L	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	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
100.00	0.00	0.00	100.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
200.00	0.00	0.00	200.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
300.00	0.00	0.00	300.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
400.00	0.00	0.00	400.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
500.00	0.00	0.00	500.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
600.00	0.00	0.00	600.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
700.00	0.00	0.00	700.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
800.00	0.00	0.00	800.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
900.00	0.00	0.00	900.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,638,958.61	1,815,878.53	40.30647186	-104.37064394
KOP Begin 1°/100' build									
2,100.00	2.00	121.48	2,099.98	-0.91	1.49	14,638,957.71	1,815,880.03	40.30646936	-104.37063860
2,200.00	4.00	121.48	2,199.84	-3.64	5.95	14,638,955.00	1,815,884.51	40.30646185	-104.37062259
2,300.00	6.00	121.48	2,299.45	-8.20	13.38	14,638,950.51	1,815,891.97	40.30644936	-104.37059594
2,400.00	8.00	121.48	2,398.70	-14.56	23.78	14,638,944.22	1,815,902.41	40.30643188	-104.37055866
2,500.00	10.00	121.48	2,497.47	-22.73	37.12	14,638,936.14	1,815,915.81	40.30640945	-104.37051082
2,600.00	12.00	121.48	2,595.62	-32.70	53.39	14,638,926.29	1,815,932.15	40.30638208	-104.37045246
2,700.00	14.00	121.48	2,693.06	-44.44	72.57	14,638,914.68	1,815,951.41	40.30634982	-104.37038365
2,800.00	16.00	121.48	2,789.64	-57.96	94.64	14,638,901.32	1,815,973.58	40.30631271	-104.37030449
2,900.00	18.00	121.48	2,885.27	-73.23	119.57	14,638,886.23	1,815,998.62	40.30627078	-104.37021507
2,964.08	19.28	121.48	2,945.99	-83.93	137.04	14,638,875.66	1,816,016.16	40.30624140	-104.37015243
Begin 19.28° tangent									
3,000.00	19.28	121.48	2,979.89	-90.12	147.15	14,638,869.53	1,816,026.32	40.30622439	-104.37011615
3,100.00	19.28	121.48	3,074.28	-107.37	175.31	14,638,852.49	1,816,054.60	40.30617704	-104.37001514
3,200.00	19.28	121.48	3,168.67	-124.61	203.47	14,638,835.44	1,816,082.88	40.30612968	-104.36991414
3,300.00	19.28	121.48	3,263.06	-141.86	231.63	14,638,818.40	1,816,111.16	40.30608232	-104.36981314
3,400.00	19.28	121.48	3,357.45	-159.11	259.79	14,638,801.35	1,816,139.45	40.30603496	-104.36971214
3,500.00	19.28	121.48	3,451.84	-176.35	287.95	14,638,784.31	1,816,167.73	40.30598761	-104.36961114
3,600.00	19.28	121.48	3,546.23	-193.60	316.11	14,638,767.26	1,816,196.01	40.30594025	-104.36951014
3,700.00	19.28	121.48	3,640.63	-210.84	344.27	14,638,750.22	1,816,224.29	40.30589289	-104.36940914
3,800.00	19.28	121.48	3,735.02	-228.09	372.43	14,638,733.17	1,816,252.57	40.30584553	-104.36930814
3,900.00	19.28	121.48	3,829.41	-245.34	400.59	14,638,716.12	1,816,280.85	40.30579818	-104.36920714
4,000.00	19.28	121.48	3,923.80	-262.58	428.75	14,638,699.08	1,816,309.14	40.30575082	-104.36910614
4,100.00	19.28	121.48	4,018.19	-279.83	456.91	14,638,682.03	1,816,337.42	40.30570346	-104.36900514
4,200.00	19.28	121.48	4,112.58	-297.07	485.07	14,638,664.99	1,816,365.70	40.30565610	-104.36890414
4,300.00	19.28	121.48	4,206.97	-314.32	513.23	14,638,647.94	1,816,393.98	40.30560874	-104.36880314
4,400.00	19.28	121.48	4,301.36	-331.57	541.39	14,638,630.90	1,816,422.26	40.30556138	-104.36870214
4,500.00	19.28	121.48	4,395.75	-348.81	569.55	14,638,613.85	1,816,450.54	40.30551403	-104.36860114
4,600.00	19.28	121.48	4,490.14	-366.06	597.71	14,638,596.81	1,816,478.83	40.30546667	-104.36850014
4,700.00	19.28	121.48	4,584.53	-383.30	625.87	14,638,579.76	1,816,507.11	40.30541931	-104.36839915
4,800.00	19.28	121.48	4,678.92	-400.55	654.03	14,638,562.71	1,816,535.39	40.30537195	-104.36829815
4,900.00	19.28	121.48	4,773.31	-417.80	682.19	14,638,545.67	1,816,563.67	40.30532459	-104.36819715
5,000.00	19.28	121.48	4,867.70	-435.04	710.35	14,638,528.62	1,816,591.95	40.30527723	-104.36809615

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-12-3L
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 18-12-3L	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	19.28	121.48	4,962.09	-452.29	738.51	14,638,511.58	1,816,620.23	40.30522987	-104.36799515
5,200.00	19.28	121.48	5,056.49	-469.54	766.67	14,638,494.53	1,816,648.52	40.30518251	-104.36789415
5,300.00	19.28	121.48	5,150.88	-486.78	794.83	14,638,477.49	1,816,676.80	40.30513515	-104.36779316
5,400.00	19.28	121.48	5,245.27	-504.03	822.99	14,638,460.44	1,816,705.08	40.30508779	-104.36769216
5,500.00	19.28	121.48	5,339.66	-521.27	851.15	14,638,443.40	1,816,733.36	40.30504044	-104.36759116
5,600.00	19.28	121.48	5,434.05	-538.52	879.31	14,638,426.35	1,816,761.64	40.30499308	-104.36749016
5,700.00	19.28	121.48	5,528.44	-555.77	907.47	14,638,409.31	1,816,789.92	40.30494572	-104.36738917
5,800.00	19.28	121.48	5,622.83	-573.01	935.63	14,638,392.26	1,816,818.20	40.30489836	-104.36728817
5,881.42	19.28	121.48	5,699.68	-587.05	958.56	14,638,378.38	1,816,841.23	40.30485980	-104.36720594
Begin 10°/100' build									
5,900.00	18.35	116.49	5,717.27	-589.96	963.79	14,638,375.51	1,816,846.49	40.30485181	-104.36718716
6,000.00	16.25	83.13	5,812.97	-595.32	991.85	14,638,370.35	1,816,874.58	40.30483708	-104.36708654
6,100.00	19.65	52.14	5,908.30	-583.30	1,019.08	14,638,382.56	1,816,901.73	40.30487010	-104.36698884
6,200.00	26.51	33.30	6,000.37	-554.26	1,044.68	14,638,411.79	1,816,927.12	40.30494985	-104.36689704
6,300.00	34.84	22.35	6,086.37	-509.07	1,067.85	14,638,457.14	1,816,949.97	40.30507391	-104.36681393
6,400.00	43.80	15.30	6,163.70	-449.13	1,087.89	14,638,517.22	1,816,969.59	40.30523852	-104.36674203
6,500.00	53.07	10.28	6,230.00	-376.24	1,104.20	14,638,590.23	1,816,985.37	40.30543867	-104.36668353
6,600.00	62.51	6.36	6,283.25	-292.62	1,116.28	14,638,673.93	1,816,996.86	40.30566829	-104.36664020
6,700.00	72.04	3.07	6,321.85	-200.81	1,123.76	14,638,765.79	1,817,003.68	40.30592039	-104.36661336
6,800.00	81.62	0.12	6,344.62	-103.60	1,126.41	14,638,863.01	1,817,005.65	40.30618731	-104.36660383
6,887.33	90.00	357.66	6,351.00	-16.60	1,124.71	14,638,950.00	1,817,003.33	40.30642620	-104.36660990
LP Begin 90° lateral									
6,900.00	90.00	357.66	6,351.00	-3.95	1,124.20	14,638,962.65	1,817,002.72	40.30646096	-104.36661175
7,000.00	90.00	357.66	6,351.00	95.97	1,120.12	14,639,062.54	1,816,997.93	40.30673533	-104.36662637
7,100.00	90.00	357.66	6,351.00	195.89	1,116.04	14,639,162.42	1,816,993.14	40.30700969	-104.36664099
7,200.00	90.00	357.66	6,351.00	295.80	1,111.96	14,639,262.31	1,816,988.35	40.30728406	-104.36665560
7,300.00	90.00	357.66	6,351.00	395.72	1,107.88	14,639,362.19	1,816,983.56	40.30755842	-104.36667022
7,400.00	90.00	357.66	6,351.00	495.64	1,103.80	14,639,462.08	1,816,978.77	40.30783279	-104.36668484
7,500.00	90.00	357.66	6,351.00	595.56	1,099.72	14,639,561.96	1,816,973.98	40.30810716	-104.36669946
7,600.00	90.00	357.66	6,351.00	695.47	1,095.64	14,639,661.85	1,816,969.19	40.30838152	-104.36671408
7,700.00	90.00	357.66	6,351.00	795.39	1,091.56	14,639,761.73	1,816,964.40	40.30865589	-104.36672869
7,800.00	90.00	357.66	6,351.00	895.31	1,087.48	14,639,861.62	1,816,959.61	40.30893026	-104.36674331
7,900.00	90.00	357.66	6,351.00	995.22	1,083.40	14,639,961.50	1,816,954.83	40.30920462	-104.36675793
8,000.00	90.00	357.66	6,351.00	1,095.14	1,079.32	14,640,061.39	1,816,950.04	40.30947899	-104.36677255
8,100.00	90.00	357.66	6,351.00	1,195.06	1,075.24	14,640,161.27	1,816,945.25	40.30975335	-104.36678717
8,200.00	90.00	357.66	6,351.00	1,294.97	1,071.16	14,640,261.16	1,816,940.46	40.31002772	-104.36680179
8,300.00	90.00	357.66	6,351.00	1,394.89	1,067.08	14,640,361.04	1,816,935.67	40.31030209	-104.36681641
8,400.00	90.00	357.66	6,351.00	1,494.81	1,063.00	14,640,460.93	1,816,930.88	40.31057645	-104.36683103
8,500.00	90.00	357.66	6,351.00	1,594.72	1,058.92	14,640,560.81	1,816,926.09	40.31085082	-104.36684565
8,600.00	90.00	357.66	6,351.00	1,694.64	1,054.84	14,640,660.70	1,816,921.30	40.31112518	-104.36686026
8,700.00	90.00	357.66	6,351.00	1,794.56	1,050.76	14,640,760.58	1,816,916.51	40.31139955	-104.36687488
8,800.00	90.00	357.66	6,351.00	1,894.47	1,046.68	14,640,860.47	1,816,911.72	40.31167392	-104.36688950
8,900.00	90.00	357.66	6,351.00	1,994.39	1,042.60	14,640,960.35	1,816,906.93	40.31194828	-104.36690412
9,000.00	90.00	357.66	6,351.00	2,094.31	1,038.52	14,641,060.24	1,816,902.14	40.31222265	-104.36691874
9,100.00	90.00	357.66	6,351.00	2,194.22	1,034.44	14,641,160.12	1,816,897.35	40.31249701	-104.36693336
9,200.00	90.00	357.66	6,351.00	2,294.14	1,030.36	14,641,260.01	1,816,892.56	40.31277138	-104.36694798
9,300.00	90.00	357.66	6,351.00	2,394.06	1,026.28	14,641,359.89	1,816,887.77	40.31304574	-104.36696260
9,400.00	90.00	357.66	6,351.00	2,493.97	1,022.20	14,641,459.78	1,816,882.98	40.31332010	-104.36697722
9,500.00	90.00	357.66	6,351.00	2,593.89	1,018.12	14,641,559.66	1,816,878.19	40.31359447	-104.36699184
9,600.00	90.00	357.66	6,351.00	2,693.81	1,014.04	14,641,659.55	1,816,873.40	40.31386883	-104.36700646
9,700.00	90.00	357.66	6,351.00	2,793.72	1,009.96	14,641,759.43	1,816,868.61	40.31414320	-104.36702108
9,800.00	90.00	357.66	6,351.00	2,893.64	1,005.88	14,641,859.32	1,816,863.82	40.31441757	-104.36703571
9,900.00	90.00	357.66	6,351.00	2,993.56	1,001.80	14,641,959.20	1,816,859.03	40.31469193	-104.36705033
10,000.00	90.00	357.66	6,351.00	3,093.47	997.72	14,642,059.09	1,816,854.24	40.31496630	-104.36706495

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-12-3L
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 18-12-3L	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	6,351.00	3,193.39	993.64	14,642,158.97	1,816,849.45	40.31524066	-104.36707957
10,200.00	90.00	357.66	6,351.00	3,293.31	989.56	14,642,258.86	1,816,844.66	40.31551503	-104.36709419
10,300.00	90.00	357.66	6,351.00	3,393.22	985.48	14,642,358.74	1,816,839.87	40.31578940	-104.36710881
10,400.00	90.00	357.66	6,351.00	3,493.14	981.40	14,642,458.63	1,816,835.08	40.31606376	-104.36712343
10,500.00	90.00	357.66	6,351.00	3,593.06	977.32	14,642,558.51	1,816,830.29	40.31633813	-104.36713805
10,600.00	90.00	357.66	6,351.00	3,692.97	973.24	14,642,658.40	1,816,825.50	40.31661249	-104.36715267
10,700.00	90.00	357.66	6,351.00	3,792.89	969.16	14,642,758.28	1,816,820.71	40.31688686	-104.36716729
10,800.00	90.00	357.66	6,351.00	3,892.81	965.08	14,642,858.17	1,816,815.92	40.31716122	-104.36718192
10,900.00	90.00	357.66	6,351.00	3,992.72	961.00	14,642,958.05	1,816,811.13	40.31743559	-104.36719654
11,000.00	90.00	357.66	6,351.00	4,092.64	956.92	14,643,057.94	1,816,806.34	40.31770996	-104.36721116
11,100.00	90.00	357.66	6,351.00	4,192.56	952.84	14,643,157.82	1,816,801.55	40.31798432	-104.36722578
11,200.00	90.00	357.66	6,351.00	4,292.47	948.76	14,643,257.71	1,816,796.76	40.31825869	-104.36724040
11,300.00	90.00	357.66	6,351.00	4,392.39	944.68	14,643,357.59	1,816,791.97	40.31853305	-104.36725503
11,400.00	90.00	357.66	6,351.00	4,492.31	940.60	14,643,457.48	1,816,787.18	40.31880742	-104.36726965
11,500.00	90.00	357.66	6,351.00	4,592.22	936.52	14,643,557.36	1,816,782.39	40.31908178	-104.36728427
11,600.00	90.00	357.66	6,351.00	4,692.14	932.44	14,643,657.25	1,816,777.60	40.31935615	-104.36729889
11,700.00	90.00	357.66	6,351.00	4,792.06	928.36	14,643,757.13	1,816,772.81	40.31963052	-104.36731352
11,800.00	90.00	357.66	6,351.00	4,891.97	924.28	14,643,857.02	1,816,768.02	40.31990488	-104.36732814
11,900.00	90.00	357.66	6,351.00	4,991.89	920.20	14,643,956.90	1,816,763.23	40.32017925	-104.36734276
12,000.00	90.00	357.66	6,351.00	5,091.81	916.12	14,644,056.79	1,816,758.44	40.32045361	-104.36735738
12,100.00	90.00	357.66	6,351.00	5,191.72	912.04	14,644,156.67	1,816,753.65	40.32072798	-104.36737201
12,200.00	90.00	357.66	6,351.00	5,291.64	907.96	14,644,256.56	1,816,748.86	40.32100234	-104.36738663
12,300.00	90.00	357.66	6,351.00	5,391.56	903.88	14,644,356.44	1,816,744.07	40.32127671	-104.36740125
12,400.00	90.00	357.66	6,351.00	5,491.48	899.80	14,644,456.33	1,816,739.28	40.32155107	-104.36741588
12,500.00	90.00	357.66	6,351.00	5,591.39	895.72	14,644,556.21	1,816,734.49	40.32182544	-104.36743050
12,600.00	90.00	357.66	6,351.00	5,691.31	891.64	14,644,656.10	1,816,729.70	40.32209980	-104.36744512
12,700.00	90.00	357.66	6,351.00	5,791.23	887.56	14,644,755.98	1,816,724.91	40.32237417	-104.36745975
12,800.00	90.00	357.66	6,351.00	5,891.14	883.48	14,644,855.87	1,816,720.12	40.32264854	-104.36747437
12,900.00	90.00	357.66	6,351.00	5,991.06	879.40	14,644,955.75	1,816,715.33	40.32292290	-104.36748899
13,000.00	90.00	357.66	6,351.00	6,090.98	875.32	14,645,055.64	1,816,710.54	40.32319727	-104.36750362
13,100.00	90.00	357.66	6,351.00	6,190.89	871.24	14,645,155.52	1,816,705.75	40.32347163	-104.36751824
13,200.00	90.00	357.66	6,351.00	6,290.81	867.16	14,645,255.41	1,816,700.96	40.32374600	-104.36753287
13,300.00	90.00	357.66	6,351.00	6,390.73	863.08	14,645,355.29	1,816,696.17	40.32402036	-104.36754749
13,400.00	90.00	357.66	6,351.00	6,490.64	859.00	14,645,455.18	1,816,691.38	40.32429473	-104.36756212
13,500.00	90.00	357.66	6,351.00	6,590.56	854.92	14,645,555.06	1,816,686.59	40.32456909	-104.36757674
13,600.00	90.00	357.66	6,351.00	6,690.48	850.84	14,645,654.95	1,816,681.80	40.32484346	-104.36759136
13,700.00	90.00	357.66	6,351.00	6,790.39	846.76	14,645,754.83	1,816,677.01	40.32511782	-104.36760599
13,800.00	90.00	357.66	6,351.00	6,890.31	842.68	14,645,854.72	1,816,672.22	40.32539219	-104.36762061
13,900.00	90.00	357.66	6,351.00	6,990.23	838.60	14,645,954.60	1,816,667.43	40.32566656	-104.36763524
14,000.00	90.00	357.66	6,351.00	7,090.14	834.52	14,646,054.49	1,816,662.64	40.32594092	-104.36764986
14,100.00	90.00	357.66	6,351.00	7,190.06	830.44	14,646,154.37	1,816,657.85	40.32621529	-104.36766449
14,200.00	90.00	357.66	6,351.00	7,289.98	826.36	14,646,254.26	1,816,653.06	40.32648965	-104.36767911
14,300.00	90.00	357.66	6,351.00	7,389.89	822.28	14,646,354.14	1,816,648.27	40.32676402	-104.36769374
14,400.00	90.00	357.66	6,351.00	7,489.81	818.20	14,646,454.03	1,816,643.48	40.32703838	-104.36770836
14,500.00	90.00	357.66	6,351.00	7,589.73	814.12	14,646,553.91	1,816,638.69	40.32731275	-104.36772299
14,600.00	90.00	357.66	6,351.00	7,689.64	810.04	14,646,653.80	1,816,633.90	40.32758711	-104.36773762
14,700.00	90.00	357.66	6,351.00	7,789.56	805.96	14,646,753.68	1,816,629.11	40.32786148	-104.36775224
14,800.00	90.00	357.66	6,351.00	7,889.48	801.88	14,646,853.57	1,816,624.32	40.32813584	-104.36776687
14,900.00	90.00	357.66	6,351.00	7,989.39	797.80	14,646,953.45	1,816,619.53	40.32841021	-104.36778149
15,000.00	90.00	357.66	6,351.00	8,089.31	793.72	14,647,053.34	1,816,614.74	40.32868457	-104.36779612
15,100.00	90.00	357.66	6,351.00	8,189.23	789.64	14,647,153.22	1,816,609.95	40.32895894	-104.36781074
15,200.00	90.00	357.66	6,351.00	8,289.14	785.56	14,647,253.11	1,816,605.16	40.32923330	-104.36782537
15,300.00	90.00	357.66	6,351.00	8,389.06	781.48	14,647,352.99	1,816,600.37	40.32950767	-104.36784000
15,400.00	90.00	357.66	6,351.00	8,488.98	777.40	14,647,452.88	1,816,595.58	40.32978203	-104.36785462
15,500.00	90.00	357.66	6,351.00	8,588.89	773.32	14,647,552.76	1,816,590.79	40.33005640	-104.36786925

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Middlepark 18-12-3L
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 18-12-3L	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	6,351.00	8,688.81	769.24	14,647,652.65	1,816,586.00	40.33033076	-104.36788388
15,700.00	90.00	357.66	6,351.00	8,788.73	765.16	14,647,752.53	1,816,581.21	40.33060513	-104.36789850
15,800.00	90.00	357.66	6,351.00	8,888.64	761.08	14,647,852.42	1,816,576.42	40.33087949	-104.36791313
15,900.00	90.00	357.66	6,351.00	8,988.56	757.00	14,647,952.30	1,816,571.63	40.33115386	-104.36792776
16,000.00	90.00	357.66	6,351.00	9,088.48	752.92	14,648,052.19	1,816,566.84	40.33142822	-104.36794238
16,100.00	90.00	357.66	6,351.00	9,188.39	748.84	14,648,152.07	1,816,562.05	40.33170259	-104.36795701
16,200.00	90.00	357.66	6,351.00	9,288.31	744.76	14,648,251.96	1,816,557.27	40.33197695	-104.36797164
16,300.00	90.00	357.66	6,351.00	9,388.23	740.68	14,648,351.84	1,816,552.48	40.33225132	-104.36798627
16,400.00	90.00	357.66	6,351.00	9,488.14	736.60	14,648,451.73	1,816,547.69	40.33252568	-104.36800089
16,500.00	90.00	357.66	6,351.00	9,588.06	732.52	14,648,551.61	1,816,542.90	40.33280005	-104.36801552
16,569.20	90.00	357.66	6,351.00	9,657.20	729.69	14,648,620.73	1,816,539.58	40.33298991	-104.36802564
PBHL/TD 16569.20 MD/6351.00 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 18-12-3L BH	0.00	0.00	6,351.00	9,657.21	729.69	14,648,620.74	1,816,539.58	40.33298992	-104.36802564
- plan hits target center									
- Point									
Middlepark 18-12-3L LP	0.00	0.00	6,351.00	-16.60	1,124.71	14,638,950.00	1,817,003.33	40.30642620	-104.36660990
- plan hits target center									
- Point									

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,000.00	2,000.00	0.00	0.00	KOP Begin 1°/100' build	
2,964.08	2,945.99	-83.93	137.04	Begin 19.28° tangent	
5,881.42	5,699.68	-587.05	958.56	Begin 10°/100' build	
6,887.33	6,351.00	-16.60	1,124.71	LP Begin 90° lateral	
16,569.20	6,351.00	9,657.20	729.69	PBHL/TD 16569.20 MD/6351.00 TVD	