



Well: Flaherty 18-7-1  
Site: Section 18-T04N-R62W  
Project: Weld County, Colorado  
Wellbore: Original Hole  
Design: plan3  
Rig:

#### 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	5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	KOP Begin 10°/100' build
3	5591.69	59.17	181.90	5491.99	-279.16	-9.24	10.00	84.42	Begin 59.17° tangent
4	6461.42	59.17	181.90	5937.74	-1025.57	-33.95	0.00	310.16	Begin 10°/100' build/turn
5	7355.83	90.15	271.15	6227.01	-1501.10	-617.34	10.00	1000.45	LP Begin 90.15° lateral section
6	11765.06	90.15	271.15	6215.17	-1412.39	-5025.66	0.00	5220.36	PBHL/TD 11765.06 MD/6215.17 TVD

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
Flaherty 18-7-1 BHL 840 FSL 470 FWL	6215.17	-1412.39	-5025.66	14639404.08	1809342.34
Flaherty 18-7-1 LP 840 FSL 470 FEL	6227.01	-1501.10	-617.34	14639346.44	1813751.17

Flaherty 18-7-1					
Surf Loc: 2359 FSL 160 FWL Sec18-T04N-R62W					
NAD83 Colorado - HARN					
Universal Transverse Mercator (US Survey Feet)					
Zone 13N (108 W to 102 W)					
GL=4550 @ 4550.01ft					
Northing	Easting	Latitude	Longitude		
14640851.84	1814357.92	40° 18' 42.120000 N	104° 22' 33.780000 W		

#### Azimuth Corrections:

To convert a Magnetic Direction to a True Direction, Add 8.23° East

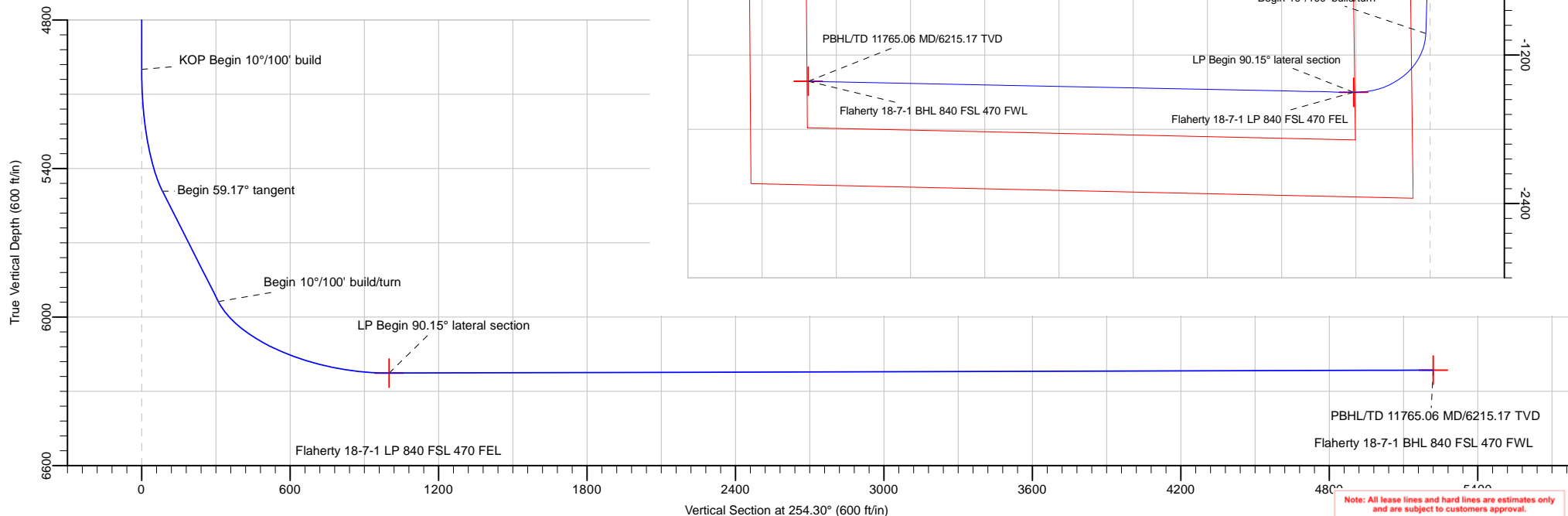


Azimuths to True North  
Magnetic North: 8.23°

Magnetic Field  
Strength: 52367.9snT  
Dip Angle: 66.97°  
Date: 4/28/2017  
Model: HDGM



PRODIRECTIONAL



Date: 13:11, October 04 2018

Note: All lease lines and hard lines are estimates only and are subject to customers approval.

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Flaherty 18-7-1
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	GL=4550 @ 4550.01ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	GL=4550 @ 4550.01ft
<b>Site:</b>	Section 18-T04N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Flaherty 18-7-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan3		

<b>Project</b>	Weld County, Colorado		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD83 Colorado - HARN		
<b>Map Zone:</b>	Zone 13N (108 W to 102 W)		

Site	Section 18-T04N-R62W				
Site Position:		Northing:	14,641,153.41 usft	Latitude:	40° 18' 45.072000 N
From:	Lat/Long	Easting:	1,814,773.97 usft	Longitude:	104° 22' 28.380000 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40 °

Well	Flaherty 18-7-1, Surf Loc: 2359 FSL 160 FWL Sec18-T04N-R62W					
Well Position	+N/-S	-298.62 ft	Northing:	14,640,851.84 usft	Latitude:	40° 18' 42.120000 N
	+E/-W	-418.18 ft	Easting:	1,814,357.92 usft	Longitude:	104° 22' 33.780000 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,550.01 ft

<b>Wellbore</b>	Original Hole				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	4/28/2017	8.23	66.97	52,367.90000000

<b>Design</b>	plan3			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	254.30

<b>Plan Survey Tool Program</b>	<b>Date</b>	10/4/2018		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	11,765.06	plan3 (Original Hole)	

<b>Plan Sections</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,591.69	59.17	181.90	5,491.99	-279.16	-9.24	10.00	10.00	0.00	181.90	
6,461.42	59.17	181.90	5,937.74	-1,025.57	-33.95	0.00	0.00	0.00	0.00	
7,355.83	90.15	271.15	6,227.01	-1,501.10	-617.34	10.00	3.46	9.98	89.49	Flaherty 18-7-1 LP 84
11,765.06	90.15	271.15	6,215.17	-1,412.39	-5,025.66	0.00	0.00	0.00	0.00	Flaherty 18-7-1 BHL 84

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<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	GL=4550 @ 4550.01ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	GL=4550 @ 4550.01ft
<b>Site:</b>	Section 18-T04N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Flaherty 18-7-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan3		

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
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 10°/100' build									
5,100.00	10.00	181.90	5,099.49	-8.70	-0.29	2.63	10.00	10.00	0.00
5,200.00	20.00	181.90	5,195.96	-34.53	-1.14	10.44	10.00	10.00	0.00

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<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	GL=4550 @ 4550.01ft
<b>Site:</b>	Section 18-T04N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Flaherty 18-7-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan3		

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)
5,300.00	30.00	181.90	5,286.48	-76.72	-2.54	23.20	10.00	10.00	0.00
5,400.00	40.00	181.90	5,368.29	-133.97	-4.43	40.52	10.00	10.00	0.00
5,500.00	50.00	181.90	5,438.91	-204.56	-6.77	61.86	10.00	10.00	0.00
5,591.69	59.17	181.90	5,491.99	-279.16	-9.24	84.42	10.00	10.00	0.00
Begin 59.17° tangent									
5,600.00	59.17	181.90	5,496.25	-286.29	-9.48	86.58	0.00	0.00	0.00
5,700.00	59.17	181.90	5,547.50	-372.11	-12.32	112.54	0.00	0.00	0.00
5,800.00	59.17	181.90	5,598.75	-457.93	-15.16	138.49	0.00	0.00	0.00
5,900.00	59.17	181.90	5,650.00	-543.75	-18.00	164.44	0.00	0.00	0.00
6,000.00	59.17	181.90	5,701.25	-629.57	-20.84	190.40	0.00	0.00	0.00
6,100.00	59.17	181.90	5,752.51	-715.40	-23.68	216.35	0.00	0.00	0.00
6,200.00	59.17	181.90	5,803.76	-801.22	-26.52	242.31	0.00	0.00	0.00
6,300.00	59.17	181.90	5,855.01	-887.04	-29.36	268.26	0.00	0.00	0.00
6,400.00	59.17	181.90	5,906.26	-972.86	-32.20	294.21	0.00	0.00	0.00
6,461.42	59.17	181.90	5,937.74	-1,025.57	-33.95	310.16	0.00	0.00	0.00
Begin 10°/100' build/turn									
6,500.00	59.28	186.38	5,957.49	-1,058.62	-36.34	321.40	10.00	0.29	11.63
6,600.00	60.28	197.90	6,007.94	-1,142.87	-54.52	361.69	10.00	1.00	11.52
6,700.00	62.25	209.09	6,056.14	-1,223.06	-89.47	417.04	10.00	1.97	11.19
6,800.00	65.08	219.80	6,100.60	-1,296.75	-140.14	485.75	10.00	2.83	10.71
6,900.00	68.64	229.96	6,139.97	-1,361.71	-204.98	565.75	10.00	3.56	10.17
7,000.00	72.78	239.61	6,173.07	-1,415.96	-282.02	654.60	10.00	4.14	9.65
7,100.00	77.35	248.82	6,198.89	-1,457.85	-368.93	749.60	10.00	4.58	9.21
7,200.00	82.24	257.69	6,216.63	-1,486.11	-463.07	847.87	10.00	4.88	8.87
7,300.00	87.29	266.36	6,225.77	-1,499.89	-561.56	946.42	10.00	5.06	8.66
7,355.83	90.15	271.15	6,227.01	-1,501.10	-617.34	1,000.45	10.00	5.12	8.59
LP Begin 90.15° lateral section									
7,400.00	90.15	271.15	6,226.89	-1,500.21	-661.50	1,042.72	0.00	0.00	0.00
7,500.00	90.15	271.15	6,226.63	-1,498.20	-761.48	1,138.43	0.00	0.00	0.00
7,600.00	90.15	271.15	6,226.36	-1,496.18	-861.46	1,234.13	0.00	0.00	0.00
7,700.00	90.15	271.15	6,226.09	-1,494.17	-961.44	1,329.84	0.00	0.00	0.00
7,800.00	90.15	271.15	6,225.82	-1,492.16	-1,061.42	1,425.55	0.00	0.00	0.00
7,900.00	90.15	271.15	6,225.55	-1,490.15	-1,161.40	1,521.25	0.00	0.00	0.00
8,000.00	90.15	271.15	6,225.28	-1,488.14	-1,261.38	1,616.96	0.00	0.00	0.00
8,100.00	90.15	271.15	6,225.01	-1,486.12	-1,361.36	1,712.66	0.00	0.00	0.00
8,200.00	90.15	271.15	6,224.75	-1,484.11	-1,461.34	1,808.37	0.00	0.00	0.00
8,300.00	90.15	271.15	6,224.48	-1,482.10	-1,561.32	1,904.08	0.00	0.00	0.00
8,400.00	90.15	271.15	6,224.21	-1,480.09	-1,661.30	1,999.78	0.00	0.00	0.00
8,500.00	90.15	271.15	6,223.94	-1,478.08	-1,761.28	2,095.49	0.00	0.00	0.00
8,600.00	90.15	271.15	6,223.67	-1,476.07	-1,861.26	2,191.20	0.00	0.00	0.00
8,700.00	90.15	271.15	6,223.40	-1,474.05	-1,961.24	2,286.90	0.00	0.00	0.00
8,800.00	90.15	271.15	6,223.13	-1,472.04	-2,061.21	2,382.61	0.00	0.00	0.00
8,900.00	90.15	271.15	6,222.87	-1,470.03	-2,161.19	2,478.32	0.00	0.00	0.00
9,000.00	90.15	271.15	6,222.60	-1,468.02	-2,261.17	2,574.02	0.00	0.00	0.00
9,100.00	90.15	271.15	6,222.33	-1,466.01	-2,361.15	2,669.73	0.00	0.00	0.00
9,200.00	90.15	271.15	6,222.06	-1,464.00	-2,461.13	2,765.43	0.00	0.00	0.00
9,300.00	90.15	271.15	6,221.79	-1,461.98	-2,561.11	2,861.14	0.00	0.00	0.00
9,400.00	90.15	271.15	6,221.52	-1,459.97	-2,661.09	2,956.85	0.00	0.00	0.00
9,500.00	90.15	271.15	6,221.25	-1,457.96	-2,761.07	3,052.55	0.00	0.00	0.00
9,600.00	90.15	271.15	6,220.99	-1,455.95	-2,861.05	3,148.26	0.00	0.00	0.00
9,700.00	90.15	271.15	6,220.72	-1,453.94	-2,961.03	3,243.97	0.00	0.00	0.00
9,800.00	90.15	271.15	6,220.45	-1,451.93	-3,061.01	3,339.67	0.00	0.00	0.00
9,900.00	90.15	271.15	6,220.18	-1,449.91	-3,160.99	3,435.38	0.00	0.00	0.00

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<b>Site:</b>	Section 18-T04N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Flaherty 18-7-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan3		

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	90.15	271.15	6,219.91	-1,447.90	-3,260.97	3,531.09	0.00	0.00	0.00	
10,100.00	90.15	271.15	6,219.64	-1,445.89	-3,360.95	3,626.79	0.00	0.00	0.00	
10,200.00	90.15	271.15	6,219.37	-1,443.88	-3,460.93	3,722.50	0.00	0.00	0.00	
10,300.00	90.15	271.15	6,219.11	-1,441.87	-3,560.91	3,818.20	0.00	0.00	0.00	
10,400.00	90.15	271.15	6,218.84	-1,439.85	-3,660.89	3,913.91	0.00	0.00	0.00	
10,500.00	90.15	271.15	6,218.57	-1,437.84	-3,760.86	4,009.62	0.00	0.00	0.00	
10,600.00	90.15	271.15	6,218.30	-1,435.83	-3,860.84	4,105.32	0.00	0.00	0.00	
10,700.00	90.15	271.15	6,218.03	-1,433.82	-3,960.82	4,201.03	0.00	0.00	0.00	
10,800.00	90.15	271.15	6,217.76	-1,431.81	-4,060.80	4,296.74	0.00	0.00	0.00	
10,900.00	90.15	271.15	6,217.49	-1,429.80	-4,160.78	4,392.44	0.00	0.00	0.00	
11,000.00	90.15	271.15	6,217.22	-1,427.78	-4,260.76	4,488.15	0.00	0.00	0.00	
11,100.00	90.15	271.15	6,216.96	-1,425.77	-4,360.74	4,583.86	0.00	0.00	0.00	
11,200.00	90.15	271.15	6,216.69	-1,423.76	-4,460.72	4,679.56	0.00	0.00	0.00	
11,300.00	90.15	271.15	6,216.42	-1,421.75	-4,560.70	4,775.27	0.00	0.00	0.00	
11,400.00	90.15	271.15	6,216.15	-1,419.74	-4,660.68	4,870.97	0.00	0.00	0.00	
11,500.00	90.15	271.15	6,215.88	-1,417.73	-4,760.66	4,966.68	0.00	0.00	0.00	
11,600.00	90.15	271.15	6,215.61	-1,415.71	-4,860.64	5,062.39	0.00	0.00	0.00	
11,700.00	90.15	271.15	6,215.34	-1,413.70	-4,960.62	5,158.09	0.00	0.00	0.00	
11,765.06	90.15	271.15	6,215.17	-1,412.39	-5,025.66	5,220.36	0.00	0.00	0.00	
PBHL/TD 11765.06 MD/6215.17 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									
Flaherty 18-7-1 BHL 84C	0.00	0.00	6,215.17	-1,412.39	-5,025.66	14,639,404.08	1,809,342.34	40° 18' 28.152819 N	104° 23' 38.673945 W
- plan hits target center									
- Point									
Flaherty 18-7-1 LP 840 f	0.00	0.00	6,227.01	-1,501.10	-617.34	14,639,346.44	1,813,751.17	40° 18' 27.280983 N	104° 22' 41.751374 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
5,000.00	5,000.00	0.00	0.00	KOP Begin 10°/100' build
5,591.69	5,491.99	-279.16	-9.24	Begin 59.17° tangent
6,461.42	5,937.74	-1,025.57	-33.95	Begin 10°/100' build/turn
7,355.83	6,227.01	-1,501.10	-617.34	LP Begin 90.15° lateral section
11,765.06	6,215.17	-1,412.39	-5,025.66	PBHL/TD 11765.06 MD/6215.17 TVD

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Flaherty 18-7-1
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	GL=4550 @ 4550.01ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	GL=4550 @ 4550.01ft
<b>Site:</b>	Section 18-T04N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Flaherty 18-7-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan3		

<b>Project</b>	Weld County, Colorado		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD83 Colorado - HARN		
<b>Map Zone:</b>	Zone 13N (108 W to 102 W)		

Site		Section 18-T04N-R62W			
Site Position:		Northing:	14,641,153.41 usft	Latitude:	40° 18' 45.072000 N
From:	Lat/Long	Easting:	1,814,773.97 usft	Longitude:	104° 22' 28.380000 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40 °

Well	Flaherty 18-7-1, Surf Loc: 2359 FSL 160 FWL Sec18-T04N-R62W					
Well Position	+N/-S	0.00 ft	Northing:	14,640,851.84 usft	Latitude:	40° 18' 42.120000 N
	+E/-W	0.00 ft	Easting:	1,814,357.92 usft	Longitude:	104° 22' 33.780000 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,550.01 ft

<b>Wellbore</b>	Original Hole				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	4/28/2017	8.23	66.97	52,367.90000000

<b>Design</b>	plan3			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	254.30

<b>Plan Survey Tool Program</b>	<b>Date</b>	10/4/2018		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	11,765.06 plan3 (Original Hole)		

<b>Plan Sections</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,591.69	59.17	181.90	5,491.99	-279.16	-9.24	10.00	10.00	0.00	181.90	
6,461.42	59.17	181.90	5,937.74	-1,025.57	-33.95	0.00	0.00	0.00	0.00	
7,355.83	90.15	271.15	6,227.01	-1,501.10	-617.34	10.00	3.46	9.98	89.49	Flaherty 18-7-1 LP 84
11,765.06	90.15	271.15	6,215.17	-1,412.39	-5,025.66	0.00	0.00	0.00	0.00	Flaherty 18-7-1 BHL 84

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Flaherty 18-7-1
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	GL=4550 @ 4550.01ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	GL=4550 @ 4550.01ft
<b>Site:</b>	Section 18-T04N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Flaherty 18-7-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan3		

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	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
100.00	0.00	0.00	100.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
200.00	0.00	0.00	200.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
300.00	0.00	0.00	300.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
400.00	0.00	0.00	400.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
500.00	0.00	0.00	500.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
600.00	0.00	0.00	600.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
700.00	0.00	0.00	700.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
800.00	0.00	0.00	800.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
900.00	0.00	0.00	900.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
2,100.00	0.00	0.00	2,100.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
2,200.00	0.00	0.00	2,200.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
2,300.00	0.00	0.00	2,300.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
2,400.00	0.00	0.00	2,400.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
2,500.00	0.00	0.00	2,500.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
2,600.00	0.00	0.00	2,600.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
2,700.00	0.00	0.00	2,700.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
2,800.00	0.00	0.00	2,800.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
2,900.00	0.00	0.00	2,900.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
3,000.00	0.00	0.00	3,000.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
3,100.00	0.00	0.00	3,100.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
3,200.00	0.00	0.00	3,200.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
3,300.00	0.00	0.00	3,300.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
3,400.00	0.00	0.00	3,400.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
3,500.00	0.00	0.00	3,500.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
3,600.00	0.00	0.00	3,600.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
3,700.00	0.00	0.00	3,700.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
3,800.00	0.00	0.00	3,800.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
3,900.00	0.00	0.00	3,900.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
4,000.00	0.00	0.00	4,000.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
4,100.00	0.00	0.00	4,100.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
4,200.00	0.00	0.00	4,200.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
4,300.00	0.00	0.00	4,300.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
4,400.00	0.00	0.00	4,400.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
4,500.00	0.00	0.00	4,500.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
4,600.00	0.00	0.00	4,600.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
4,700.00	0.00	0.00	4,700.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
4,800.00	0.00	0.00	4,800.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
4,900.00	0.00	0.00	4,900.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
5,000.00	0.00	0.00	5,000.00	0.00	0.00	14,640,851.84	1,814,357.92	40° 18' 42.120000 N	104° 22' 33.780000 W
<b>KOP Begin 10°/100' build</b>									
5,100.00	10.00	181.90	5,099.49	-8.70	-0.29	14,640,843.14	1,814,357.69	40° 18' 42.034000 N	104° 22' 33.783719 W
5,200.00	20.00	181.90	5,195.96	-34.53	-1.14	14,640,817.30	1,814,357.02	40° 18' 41.778612 N	104° 22' 33.794762 W



<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Flaherty 18-7-1
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	GL=4550 @ 4550.01ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	GL=4550 @ 4550.01ft
<b>Site:</b>	Section 18-T04N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Flaherty 18-7-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan3		

Planned Survey										
Measured			Vertical			Map	Map			
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)			
5,300.00	30.00	181.90	5,286.48	-76.72	-2.54	14,640,775.11	1,814,355.92	40° 18' 41.361596 N	104° 22' 33.812794 W	
5,400.00	40.00	181.90	5,368.29	-133.97	-4.43	14,640,717.84	1,814,354.43	40° 18' 40.795623 N	104° 22' 33.837268 W	
5,500.00	50.00	181.90	5,438.91	-204.56	-6.77	14,640,647.24	1,814,352.59	40° 18' 40.097890 N	104° 22' 33.867438 W	
5,591.69	59.17	181.90	5,491.99	-279.16	-9.24	14,640,572.63	1,814,350.64	40° 18' 39.360399 N	104° 22' 33.899327 W	
Begin 59.17° tangent										
5,600.00	59.17	181.90	5,496.25	-286.29	-9.48	14,640,565.49	1,814,350.46	40° 18' 39.289899 N	104° 22' 33.902376 W	
5,700.00	59.17	181.90	5,547.50	-372.11	-12.32	14,640,479.65	1,814,348.22	40° 18' 38.441526 N	104° 22' 33.939059 W	
5,800.00	59.17	181.90	5,598.75	-457.93	-15.16	14,640,393.81	1,814,345.99	40° 18' 37.593153 N	104° 22' 33.975743 W	
5,900.00	59.17	181.90	5,650.00	-543.75	-18.00	14,640,307.98	1,814,343.75	40° 18' 36.744779 N	104° 22' 34.012426 W	
6,000.00	59.17	181.90	5,701.25	-629.57	-20.84	14,640,222.14	1,814,341.51	40° 18' 35.896406 N	104° 22' 34.049109 W	
6,100.00	59.17	181.90	5,752.51	-715.40	-23.68	14,640,136.30	1,814,339.28	40° 18' 35.048032 N	104° 22' 34.085791 W	
6,200.00	59.17	181.90	5,803.76	-801.22	-26.52	14,640,050.46	1,814,337.04	40° 18' 34.199659 N	104° 22' 34.122473 W	
6,300.00	59.17	181.90	5,855.01	-887.04	-29.36	14,639,964.62	1,814,334.81	40° 18' 33.351285 N	104° 22' 34.159155 W	
6,400.00	59.17	181.90	5,906.26	-972.86	-32.20	14,639,878.78	1,814,332.57	40° 18' 32.502911 N	104° 22' 34.195837 W	
6,461.42	59.17	181.90	5,937.74	-1,025.57	-33.95	14,639,826.06	1,814,331.20	40° 18' 31.981840 N	104° 22' 34.218367 W	
Begin 10°/100' build/turn										
6,500.00	59.28	186.38	5,957.49	-1,058.62	-36.34	14,639,793.00	1,814,329.04	40° 18' 31.655151 N	104° 22' 34.249263 W	
6,600.00	60.28	197.90	6,007.94	-1,142.87	-54.52	14,639,708.62	1,814,311.46	40° 18' 30.822290 N	104° 22' 34.483951 W	
6,700.00	62.25	209.09	6,056.14	-1,223.06	-89.47	14,639,628.19	1,814,277.07	40° 18' 30.029564 N	104° 22' 34.935266 W	
6,800.00	65.08	219.80	6,100.60	-1,296.75	-140.14	14,639,554.14	1,814,226.92	40° 18' 29.301058 N	104° 22' 35.589492 W	
6,900.00	68.64	229.96	6,139.97	-1,361.71	-204.98	14,639,488.72	1,814,162.54	40° 18' 28.658907 N	104° 22' 36.426750 W	
7,000.00	72.78	239.61	6,173.07	-1,415.96	-282.02	14,639,433.93	1,814,085.88	40° 18' 28.122621 N	104° 22' 37.421602 W	
7,100.00	77.35	248.82	6,198.89	-1,457.85	-368.93	14,639,391.43	1,813,999.27	40° 18' 27.708494 N	104° 22' 38.543818 W	
7,200.00	82.24	257.69	6,216.63	-1,486.11	-463.07	14,639,362.50	1,813,905.34	40° 18' 27.429107 N	104° 22' 39.759302 W	
7,300.00	87.29	266.36	6,225.77	-1,499.89	-561.56	14,639,348.04	1,813,806.94	40° 18' 27.292950 N	104° 22' 41.031126 W	
7,355.83	90.15	271.15	6,227.01	-1,501.10	-617.34	14,639,346.44	1,813,751.17	40° 18' 27.280983 N	104° 22' 41.751393 W	
LP Begin 90.15° lateral section										
7,400.00	90.15	271.15	6,226.89	-1,500.21	-661.50	14,639,347.01	1,813,707.00	40° 18' 27.289756 N	104° 22' 42.321619 W	
7,500.00	90.15	271.15	6,226.63	-1,498.20	-761.48	14,639,348.32	1,813,607.01	40° 18' 27.309613 N	104° 22' 43.612600 W	
7,600.00	90.15	271.15	6,226.36	-1,496.18	-861.46	14,639,349.63	1,813,507.02	40° 18' 27.329466 N	104° 22' 44.903581 W	
7,700.00	90.15	271.15	6,226.09	-1,494.17	-961.44	14,639,350.94	1,813,407.03	40° 18' 27.349316 N	104° 22' 46.194562 W	
7,800.00	90.15	271.15	6,225.82	-1,492.16	-1,061.42	14,639,352.24	1,813,307.04	40° 18' 27.369161 N	104° 22' 47.485543 W	
7,900.00	90.15	271.15	6,225.55	-1,490.15	-1,161.40	14,639,353.55	1,813,207.05	40° 18' 27.389003 N	104° 22' 48.776525 W	
8,000.00	90.15	271.15	6,225.28	-1,488.14	-1,261.38	14,639,354.86	1,813,107.06	40° 18' 27.408840 N	104° 22' 50.067507 W	
8,100.00	90.15	271.15	6,225.01	-1,486.12	-1,361.36	14,639,356.17	1,813,007.07	40° 18' 27.428673 N	104° 22' 51.358490 W	
8,200.00	90.15	271.15	6,224.75	-1,484.11	-1,461.34	14,639,357.47	1,812,907.08	40° 18' 27.448503 N	104° 22' 52.649472 W	
8,300.00	90.15	271.15	6,224.48	-1,482.10	-1,561.32	14,639,358.78	1,812,807.09	40° 18' 27.468328 N	104° 22' 53.940455 W	
8,400.00	90.15	271.15	6,224.21	-1,480.09	-1,661.30	14,639,360.09	1,812,707.09	40° 18' 27.488150 N	104° 22' 55.231438 W	
8,500.00	90.15	271.15	6,223.94	-1,478.08	-1,761.28	14,639,361.39	1,812,607.10	40° 18' 27.507967 N	104° 22' 56.522421 W	
8,600.00	90.15	271.15	6,223.67	-1,476.07	-1,861.26	14,639,362.70	1,812,507.11	40° 18' 27.527780 N	104° 22' 57.813405 W	
8,700.00	90.15	271.15	6,223.40	-1,474.05	-1,961.24	14,639,364.01	1,812,407.12	40° 18' 27.547590 N	104° 22' 59.104389 W	
8,800.00	90.15	271.15	6,223.13	-1,472.04	-2,061.21	14,639,365.32	1,812,307.13	40° 18' 27.567395 N	104° 23' 0.395373 W	
8,900.00	90.15	271.15	6,222.87	-1,470.03	-2,161.19	14,639,366.62	1,812,207.14	40° 18' 27.587197 N	104° 23' 1.686357 W	
9,000.00	90.15	271.15	6,222.60	-1,468.02	-2,261.17	14,639,367.93	1,812,107.15	40° 18' 27.606994 N	104° 23' 2.977342 W	
9,100.00	90.15	271.15	6,222.33	-1,466.01	-2,361.15	14,639,369.24	1,812,007.16	40° 18' 27.626787 N	104° 23' 4.268327 W	
9,200.00	90.15	271.15	6,222.06	-1,464.00	-2,461.13	14,639,370.55	1,811,907.17	40° 18' 27.646577 N	104° 23' 5.559312 W	
9,300.00	90.15	271.15	6,221.79	-1,461.98	-2,561.11	14,639,371.85	1,811,807.18	40° 18' 27.666362 N	104° 23' 6.850297 W	
9,400.00	90.15	271.15	6,221.52	-1,459.97	-2,661.09	14,639,373.16	1,811,707.19	40° 18' 27.686143 N	104° 23' 8.141283 W	
9,500.00	90.15	271.15	6,221.25	-1,457.96	-2,761.07	14,639,374.47	1,811,607.19	40° 18' 27.705921 N	104° 23' 9.432269 W	
9,600.00	90.15	271.15	6,220.99	-1,455.95	-2,861.05	14,639,375.77	1,811,507.20	40° 18' 27.725694 N	104° 23' 10.723255 W	
9,700.00	90.15	271.15	6,220.72	-1,453.94	-2,961.03	14,639,377.08	1,811,407.21	40° 18' 27.745464 N	104° 23' 12.014242 W	
9,800.00	90.15	271.15	6,220.45	-1,451.93	-3,061.01	14,639,378.39	1,811,307.22	40° 18' 27.765229 N	104° 23' 13.305229 W	
9,900.00	90.15	271.15	6,220.18	-1,449.91	-3,160.99	14,639,379.70	1,811,207.23	40° 18' 27.784990 N	104° 23' 14.596216 W	
10,000.00	90.15	271.15	6,219.91	-1,447.90	-3,260.97	14,639,381.00	1,811,107.24	40° 18' 27.804748 N	104° 23' 15.887203 W	



<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Flaherty 18-7-1
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	GL=4550 @ 4550.01ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	GL=4550 @ 4550.01ft
<b>Site:</b>	Section 18-T04N-R62W	<b>North Reference:</b>	True
<b>Well:</b>	Flaherty 18-7-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan3		

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	90.15	271.15	6,219.64	-1,445.89	-3,360.95	14,639,382.31	1,811,007.25	40° 18' 27.824501 N	104° 23' 17.178190 W	
10,200.00	90.15	271.15	6,219.37	-1,443.88	-3,460.93	14,639,383.62	1,810,907.26	40° 18' 27.844250 N	104° 23' 18.469178 W	
10,300.00	90.15	271.15	6,219.11	-1,441.87	-3,560.91	14,639,384.93	1,810,807.27	40° 18' 27.863996 N	104° 23' 19.760166 W	
10,400.00	90.15	271.15	6,218.84	-1,439.85	-3,660.89	14,639,386.23	1,810,707.28	40° 18' 27.883737 N	104° 23' 21.051154 W	
10,500.00	90.15	271.15	6,218.57	-1,437.84	-3,760.86	14,639,387.54	1,810,607.29	40° 18' 27.903475 N	104° 23' 22.342143 W	
10,600.00	90.15	271.15	6,218.30	-1,435.83	-3,860.84	14,639,388.85	1,810,507.29	40° 18' 27.923208 N	104° 23' 23.633132 W	
10,700.00	90.15	271.15	6,218.03	-1,433.82	-3,960.82	14,639,390.15	1,810,407.30	40° 18' 27.942937 N	104° 23' 24.924121 W	
10,800.00	90.15	271.15	6,217.76	-1,431.81	-4,060.80	14,639,391.46	1,810,307.31	40° 18' 27.962663 N	104° 23' 26.215110 W	
10,900.00	90.15	271.15	6,217.49	-1,429.80	-4,160.78	14,639,392.77	1,810,207.32	40° 18' 27.982384 N	104° 23' 27.506100 W	
11,000.00	90.15	271.15	6,217.22	-1,427.78	-4,260.76	14,639,394.08	1,810,107.33	40° 18' 28.002102 N	104° 23' 28.797090 W	
11,100.00	90.15	271.15	6,216.96	-1,425.77	-4,360.74	14,639,395.38	1,810,007.34	40° 18' 28.021815 N	104° 23' 30.088080 W	
11,200.00	90.15	271.15	6,216.69	-1,423.76	-4,460.72	14,639,396.69	1,809,907.35	40° 18' 28.041524 N	104° 23' 31.379070 W	
11,300.00	90.15	271.15	6,216.42	-1,421.75	-4,560.70	14,639,398.00	1,809,807.36	40° 18' 28.061230 N	104° 23' 32.670061 W	
11,400.00	90.15	271.15	6,216.15	-1,419.74	-4,660.68	14,639,399.30	1,809,707.37	40° 18' 28.080931 N	104° 23' 33.961051 W	
11,500.00	90.15	271.15	6,215.88	-1,417.73	-4,760.66	14,639,400.61	1,809,607.38	40° 18' 28.100628 N	104° 23' 35.252043 W	
11,600.00	90.15	271.15	6,215.61	-1,415.71	-4,860.64	14,639,401.92	1,809,507.39	40° 18' 28.120322 N	104° 23' 36.543034 W	
11,700.00	90.15	271.15	6,215.34	-1,413.70	-4,960.62	14,639,403.23	1,809,407.39	40° 18' 28.140011 N	104° 23' 37.834026 W	
11,765.06	90.15	271.15	6,215.17	-1,412.39	-5,025.66	14,639,404.08	1,809,342.34	40° 18' 28.152819 N	104° 23' 38.673945 W	
PBHL/TD 11765.06 MD/6215.17 TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Flaherty 18-7-1 BHL 840	0.00	0.00	6,215.17	-1,412.39	-5,025.66	14,639,404.08	1,809,342.34	40° 18' 28.152819 N	104° 23' 38.673945 W	
- plan hits target center										
- Point										
Flaherty 18-7-1 LP 840 f	0.00	0.00	6,227.01	-1,501.10	-617.34	14,639,346.44	1,813,751.17	40° 18' 27.280983 N	104° 22' 41.751374 W	
- plan hits target center										
- Point										

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
5,000.00	5,000.00	0.00	0.00	KOP Begin 10°/100' build	
5,591.69	5,491.99	-279.16	-9.24	Begin 59.17° tangent	
6,461.42	5,937.74	-1,025.57	-33.95	Begin 10°/100' build/turn	
7,355.83	6,227.01	-1,501.10	-617.34	LP Begin 90.15° lateral section	
11,765.06	6,215.17	-1,412.39	-5,025.66	PBHL/TD 11765.06 MD/6215.17 TVD	