



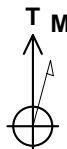
Well: 70 Ranch 10-19-1L  
Site: Section 03-T04N-R63W  
Project: Weld County, Colorado  
Wellbore: Original Hole  
Design: plan1

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
70 Ranch 10-19-1L SL 260 FSL 1112 FWL	24.00	-29.27	-3.7914649110.06	1799303.17	40.33465492	-104.42985994	
70 Ranch 10-19-1L BHL 470 FSL 904 FWL	6323.00	-10393.99	-150.8214638744.63	1799222.90	40.30619385	-104.43038723	
70 Ranch 10-19-1L LP 470 FNL 904 FWL	6323.00	-772.38	-222.3614648365.56	1799089.39	40.33261438	-104.43064421	

#### 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 10°/100' build
3	2042.80	4.28	224.69	2042.76	-1.14	-1.12	10.00	1.15	Begin 4.28° tangent
4	5791.47	4.28	224.69	5780.98	-200.02	-197.87	0.00	202.87	Begin 10°/100' build/turn
5	6661.28	90.00	179.57	6323.00	-772.38	-222.36	10.00	775.53	LP Begin 90° lateral
6	16283.16	90.00	179.57	6323.00	-10393.99	-150.82	0.00	10395.09	PBHL/TD 16283.16 MD/6323.00 TVD



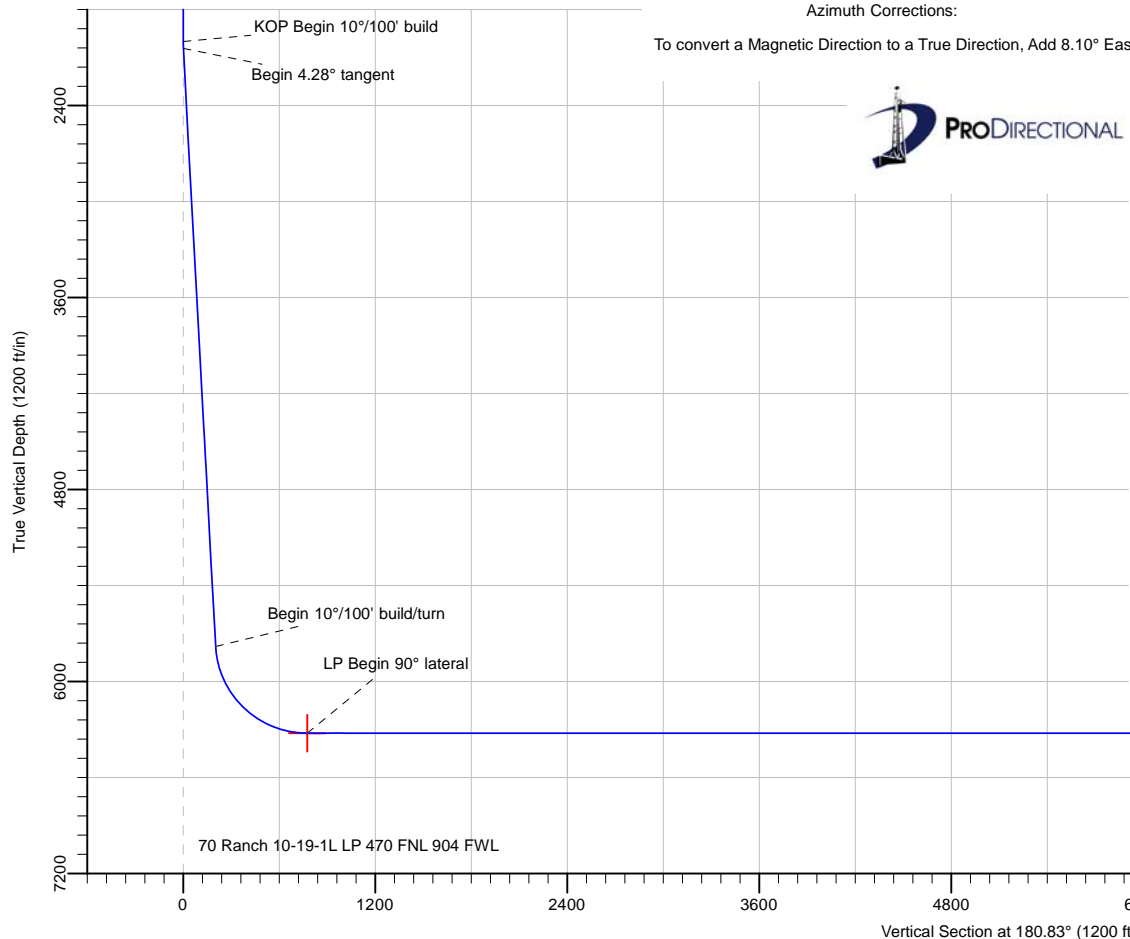
Azimuths to True North  
Magnetic North: 8.10°

Magnetic Field  
Strength: 52228.4snT  
Dip Angle: 66.90°  
Date: 5/21/2018  
Model: HDGM

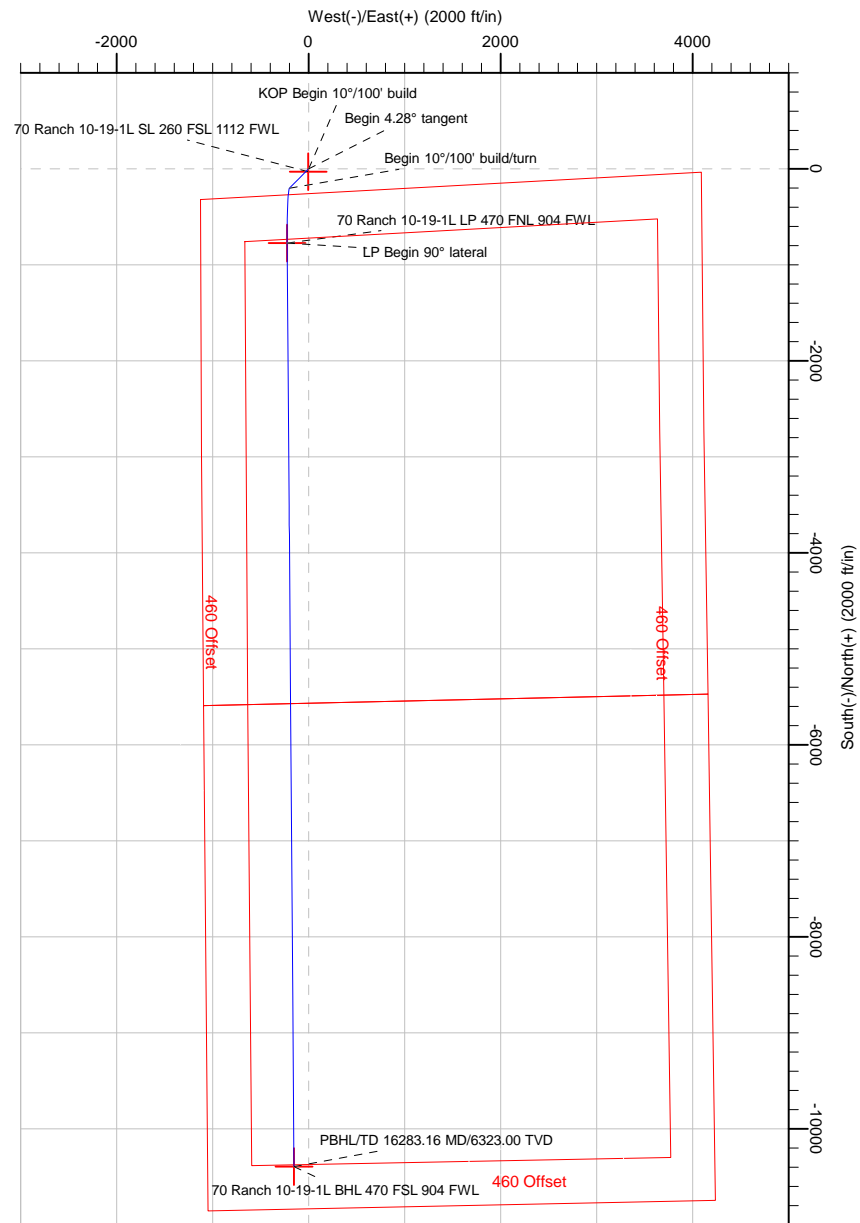
70 Ranch 10-19-1L Surf loc: 260 FSL 1112 FWL Section 03-T04N-R63W			
NAD83 Colorado - HARN Universal Transverse Mercator (US Survey Feet) Zone 13N (108 W to 102 W) RKB=4594+24 @ 4618.00ft			
Northing	Easting	Latitude	Longitude
14649139.36	1799306.77	40.33473530	-104.42984636

#### Azimuth Corrections:

To convert a Magnetic Direction to a True Direction, Add 8.10° East



Date: 3:17, May 21 2018



PBHL/TD 16283.16 MD/6323.00 TVD

70 Ranch 10-19-1L BHL 470 FSL 904 FWL

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 70 Ranch 10-19-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Site:</b>	Section 03-T04N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	70 Ranch 10-19-1L	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan1		

<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 03-T04N-R63W			
Site Position:		Northing:	14,650,244.32 usft	Latitude:	40.33774036
From:	Map	Easting:	1,800,940.24 usft	Longitude:	-104.42395937
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.37 °

Well	70 Ranch 10-19-1L, Surf loc: 260 FSL 1112 FWL Section 03-T04N-R63W					
Well Position	+N/-S	-1,094.31 ft	Northing:	14,649,139.36 usft	Latitude:	40.33473530
	+E/-W	-1,640.63 ft	Easting:	1,799,306.77 usft	Longitude:	-104.42984636
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,594.00 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	5/21/2018	8.10	66.90	52,228.40000000

<b>Design</b>	plan1			
<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	180.83

<b>Plan Survey Tool Program</b>	<b>Date</b>	5/21/2018		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	16,283.16	plan1 (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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,042.80	4.28	224.69	2,042.76	-1.14	-1.12	10.00	10.00	0.00	224.69	
5,791.47	4.28	224.69	5,780.98	-200.02	-197.87	0.00	0.00	0.00	0.00	
6,661.28	90.00	179.57	6,323.00	-772.38	-222.36	10.00	9.86	-5.19	-45.20	70 Ranch 10-19-1L LI
16,283.16	90.00	179.57	6,323.00	-10,393.99	-150.82	0.00	0.00	0.00	0.00	70 Ranch 10-19-1L BI

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<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Site:</b>	Section 03-T04N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	70 Ranch 10-19-1L	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan1		

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
<b>KOP Begin 10°/100' build</b>									
2,042.80	4.28	224.69	2,042.76	-1.14	-1.12	1.15	10.00	10.00	0.00
<b>Begin 4.28° tangent</b>									
2,100.00	4.28	224.69	2,099.80	-4.17	-4.13	4.23	0.00	0.00	0.00
2,200.00	4.28	224.69	2,199.52	-9.48	-9.37	9.61	0.00	0.00	0.00
2,300.00	4.28	224.69	2,299.24	-14.78	-14.62	14.99	0.00	0.00	0.00
2,400.00	4.28	224.69	2,398.96	-20.09	-19.87	20.37	0.00	0.00	0.00
2,500.00	4.28	224.69	2,498.69	-25.39	-25.12	25.75	0.00	0.00	0.00
2,600.00	4.28	224.69	2,598.41	-30.70	-30.37	31.14	0.00	0.00	0.00
2,700.00	4.28	224.69	2,698.13	-36.00	-35.62	36.52	0.00	0.00	0.00
2,800.00	4.28	224.69	2,797.85	-41.31	-40.87	41.90	0.00	0.00	0.00
2,900.00	4.28	224.69	2,897.57	-46.61	-46.11	47.28	0.00	0.00	0.00
3,000.00	4.28	224.69	2,997.29	-51.92	-51.36	52.66	0.00	0.00	0.00
3,100.00	4.28	224.69	3,097.01	-57.23	-56.61	58.04	0.00	0.00	0.00
3,200.00	4.28	224.69	3,196.73	-62.53	-61.86	63.42	0.00	0.00	0.00
3,300.00	4.28	224.69	3,296.45	-67.84	-67.11	68.80	0.00	0.00	0.00
3,400.00	4.28	224.69	3,396.18	-73.14	-72.36	74.18	0.00	0.00	0.00
3,500.00	4.28	224.69	3,495.90	-78.45	-77.60	79.57	0.00	0.00	0.00
3,600.00	4.28	224.69	3,595.62	-83.75	-82.85	84.95	0.00	0.00	0.00
3,700.00	4.28	224.69	3,695.34	-89.06	-88.10	90.33	0.00	0.00	0.00
3,800.00	4.28	224.69	3,795.06	-94.36	-93.35	95.71	0.00	0.00	0.00
3,900.00	4.28	224.69	3,894.78	-99.67	-98.60	101.09	0.00	0.00	0.00
4,000.00	4.28	224.69	3,994.50	-104.98	-103.85	106.47	0.00	0.00	0.00
4,100.00	4.28	224.69	4,094.22	-110.28	-109.10	111.85	0.00	0.00	0.00
4,200.00	4.28	224.69	4,193.94	-115.59	-114.34	117.23	0.00	0.00	0.00
4,300.00	4.28	224.69	4,293.67	-120.89	-119.59	122.61	0.00	0.00	0.00
4,400.00	4.28	224.69	4,393.39	-126.20	-124.84	128.00	0.00	0.00	0.00
4,500.00	4.28	224.69	4,493.11	-131.50	-130.09	133.38	0.00	0.00	0.00
4,600.00	4.28	224.69	4,592.83	-136.81	-135.34	138.76	0.00	0.00	0.00
4,700.00	4.28	224.69	4,692.55	-142.11	-140.59	144.14	0.00	0.00	0.00
4,800.00	4.28	224.69	4,792.27	-147.42	-145.83	149.52	0.00	0.00	0.00
4,900.00	4.28	224.69	4,891.99	-152.72	-151.08	154.90	0.00	0.00	0.00

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<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Site:</b>	Section 03-T04N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	70 Ranch 10-19-1L	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan1		

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	4.28	224.69	4,991.71	-158.03	-156.33	160.28	0.00	0.00	0.00
5,100.00	4.28	224.69	5,091.43	-163.34	-161.58	165.66	0.00	0.00	0.00
5,200.00	4.28	224.69	5,191.16	-168.64	-166.83	171.04	0.00	0.00	0.00
5,300.00	4.28	224.69	5,290.88	-173.95	-172.08	176.42	0.00	0.00	0.00
5,400.00	4.28	224.69	5,390.60	-179.25	-177.33	181.81	0.00	0.00	0.00
5,500.00	4.28	224.69	5,490.32	-184.56	-182.57	187.19	0.00	0.00	0.00
5,600.00	4.28	224.69	5,590.04	-189.86	-187.82	192.57	0.00	0.00	0.00
5,700.00	4.28	224.69	5,689.76	-195.17	-193.07	197.95	0.00	0.00	0.00
5,791.47	4.28	224.69	5,780.98	-200.02	-197.87	202.87	0.00	0.00	0.00
Begin 10°/100' build/turn									
5,800.00	4.92	217.61	5,789.48	-200.54	-198.32	203.39	10.00	7.48	-82.97
5,900.00	14.19	191.68	5,888.02	-215.98	-203.43	218.91	10.00	9.28	-25.94
6,000.00	24.05	186.40	5,982.39	-248.32	-208.19	251.31	10.00	9.86	-5.28
6,100.00	33.99	184.08	6,069.73	-296.58	-212.47	299.63	10.00	9.94	-2.31
6,200.00	43.96	182.73	6,147.38	-359.28	-216.12	362.38	10.00	9.96	-1.36
6,300.00	53.93	181.79	6,212.97	-434.53	-219.04	437.67	10.00	9.98	-0.94
6,400.00	63.91	181.06	6,264.53	-520.05	-221.13	523.20	10.00	9.98	-0.73
6,500.00	73.89	180.45	6,300.48	-613.22	-222.35	616.38	10.00	9.98	-0.61
6,600.00	83.88	179.90	6,319.73	-711.22	-222.64	714.37	10.00	9.99	-0.55
6,661.28	90.00	179.57	6,323.00	-772.38	-222.36	775.53	10.00	9.99	-0.53
LP Begin 90° lateral									
6,700.00	90.00	179.57	6,323.00	-811.10	-222.07	814.23	0.00	0.00	0.00
6,800.00	90.00	179.57	6,323.00	-911.10	-221.33	914.21	0.00	0.00	0.00
6,900.00	90.00	179.57	6,323.00	-1,011.09	-220.58	1,014.19	0.00	0.00	0.00
7,000.00	90.00	179.57	6,323.00	-1,111.09	-219.84	1,114.16	0.00	0.00	0.00
7,100.00	90.00	179.57	6,323.00	-1,211.09	-219.10	1,214.14	0.00	0.00	0.00
7,200.00	90.00	179.57	6,323.00	-1,311.08	-218.35	1,314.11	0.00	0.00	0.00
7,300.00	90.00	179.57	6,323.00	-1,411.08	-217.61	1,414.09	0.00	0.00	0.00
7,400.00	90.00	179.57	6,323.00	-1,511.08	-216.87	1,514.07	0.00	0.00	0.00
7,500.00	90.00	179.57	6,323.00	-1,611.08	-216.12	1,614.04	0.00	0.00	0.00
7,600.00	90.00	179.57	6,323.00	-1,711.07	-215.38	1,714.02	0.00	0.00	0.00
7,700.00	90.00	179.57	6,323.00	-1,811.07	-214.64	1,813.99	0.00	0.00	0.00
7,800.00	90.00	179.57	6,323.00	-1,911.07	-213.89	1,913.97	0.00	0.00	0.00
7,900.00	90.00	179.57	6,323.00	-2,011.06	-213.15	2,013.95	0.00	0.00	0.00
8,000.00	90.00	179.57	6,323.00	-2,111.06	-212.41	2,113.92	0.00	0.00	0.00
8,100.00	90.00	179.57	6,323.00	-2,211.06	-211.66	2,213.90	0.00	0.00	0.00
8,200.00	90.00	179.57	6,323.00	-2,311.06	-210.92	2,313.87	0.00	0.00	0.00
8,300.00	90.00	179.57	6,323.00	-2,411.05	-210.18	2,413.85	0.00	0.00	0.00
8,400.00	90.00	179.57	6,323.00	-2,511.05	-209.43	2,513.83	0.00	0.00	0.00
8,500.00	90.00	179.57	6,323.00	-2,611.05	-208.69	2,613.80	0.00	0.00	0.00
8,600.00	90.00	179.57	6,323.00	-2,711.05	-207.94	2,713.78	0.00	0.00	0.00
8,700.00	90.00	179.57	6,323.00	-2,811.04	-207.20	2,813.75	0.00	0.00	0.00
8,800.00	90.00	179.57	6,323.00	-2,911.04	-206.46	2,913.73	0.00	0.00	0.00
8,900.00	90.00	179.57	6,323.00	-3,011.04	-205.71	3,013.70	0.00	0.00	0.00
9,000.00	90.00	179.57	6,323.00	-3,111.03	-204.97	3,113.68	0.00	0.00	0.00
9,100.00	90.00	179.57	6,323.00	-3,211.03	-204.23	3,213.66	0.00	0.00	0.00
9,200.00	90.00	179.57	6,323.00	-3,311.03	-203.48	3,313.63	0.00	0.00	0.00
9,300.00	90.00	179.57	6,323.00	-3,411.03	-202.74	3,413.61	0.00	0.00	0.00
9,400.00	90.00	179.57	6,323.00	-3,511.02	-202.00	3,513.58	0.00	0.00	0.00
9,500.00	90.00	179.57	6,323.00	-3,611.02	-201.25	3,613.56	0.00	0.00	0.00
9,600.00	90.00	179.57	6,323.00	-3,711.02	-200.51	3,713.54	0.00	0.00	0.00
9,700.00	90.00	179.57	6,323.00	-3,811.02	-199.77	3,813.51	0.00	0.00	0.00
9,800.00	90.00	179.57	6,323.00	-3,911.01	-199.02	3,913.49	0.00	0.00	0.00
9,900.00	90.00	179.57	6,323.00	-4,011.01	-198.28	4,013.46	0.00	0.00	0.00

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<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Site:</b>	Section 03-T04N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	70 Ranch 10-19-1L	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan1		

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	179.57	6,323.00	-4,111.01	-197.54	4,113.44	0.00	0.00	0.00
10,100.00	90.00	179.57	6,323.00	-4,211.00	-196.79	4,213.42	0.00	0.00	0.00
10,200.00	90.00	179.57	6,323.00	-4,311.00	-196.05	4,313.39	0.00	0.00	0.00
10,300.00	90.00	179.57	6,323.00	-4,411.00	-195.31	4,413.37	0.00	0.00	0.00
10,400.00	90.00	179.57	6,323.00	-4,511.00	-194.56	4,513.34	0.00	0.00	0.00
10,500.00	90.00	179.57	6,323.00	-4,610.99	-193.82	4,613.32	0.00	0.00	0.00
10,600.00	90.00	179.57	6,323.00	-4,710.99	-193.08	4,713.30	0.00	0.00	0.00
10,700.00	90.00	179.57	6,323.00	-4,810.99	-192.33	4,813.27	0.00	0.00	0.00
10,800.00	90.00	179.57	6,323.00	-4,910.98	-191.59	4,913.25	0.00	0.00	0.00
10,900.00	90.00	179.57	6,323.00	-5,010.98	-190.84	5,013.22	0.00	0.00	0.00
11,000.00	90.00	179.57	6,323.00	-5,110.98	-190.10	5,113.20	0.00	0.00	0.00
11,100.00	90.00	179.57	6,323.00	-5,210.98	-189.36	5,213.18	0.00	0.00	0.00
11,200.00	90.00	179.57	6,323.00	-5,310.97	-188.61	5,313.15	0.00	0.00	0.00
11,300.00	90.00	179.57	6,323.00	-5,410.97	-187.87	5,413.13	0.00	0.00	0.00
11,400.00	90.00	179.57	6,323.00	-5,510.97	-187.13	5,513.10	0.00	0.00	0.00
11,500.00	90.00	179.57	6,323.00	-5,610.97	-186.38	5,613.08	0.00	0.00	0.00
11,600.00	90.00	179.57	6,323.00	-5,710.96	-185.64	5,713.05	0.00	0.00	0.00
11,700.00	90.00	179.57	6,323.00	-5,810.96	-184.90	5,813.03	0.00	0.00	0.00
11,800.00	90.00	179.57	6,323.00	-5,910.96	-184.15	5,913.01	0.00	0.00	0.00
11,900.00	90.00	179.57	6,323.00	-6,010.95	-183.41	6,012.98	0.00	0.00	0.00
12,000.00	90.00	179.57	6,323.00	-6,110.95	-182.67	6,112.96	0.00	0.00	0.00
12,100.00	90.00	179.57	6,323.00	-6,210.95	-181.92	6,212.93	0.00	0.00	0.00
12,200.00	90.00	179.57	6,323.00	-6,310.95	-181.18	6,312.91	0.00	0.00	0.00
12,300.00	90.00	179.57	6,323.00	-6,410.94	-180.44	6,412.89	0.00	0.00	0.00
12,400.00	90.00	179.57	6,323.00	-6,510.94	-179.69	6,512.86	0.00	0.00	0.00
12,500.00	90.00	179.57	6,323.00	-6,610.94	-178.95	6,612.84	0.00	0.00	0.00
12,600.00	90.00	179.57	6,323.00	-6,710.93	-178.21	6,712.81	0.00	0.00	0.00
12,700.00	90.00	179.57	6,323.00	-6,810.93	-177.46	6,812.79	0.00	0.00	0.00
12,800.00	90.00	179.57	6,323.00	-6,910.93	-176.72	6,912.77	0.00	0.00	0.00
12,900.00	90.00	179.57	6,323.00	-7,010.93	-175.98	7,012.74	0.00	0.00	0.00
13,000.00	90.00	179.57	6,323.00	-7,110.92	-175.23	7,112.72	0.00	0.00	0.00
13,100.00	90.00	179.57	6,323.00	-7,210.92	-174.49	7,212.69	0.00	0.00	0.00
13,200.00	90.00	179.57	6,323.00	-7,310.92	-173.74	7,312.67	0.00	0.00	0.00
13,300.00	90.00	179.57	6,323.00	-7,410.92	-173.00	7,412.65	0.00	0.00	0.00
13,400.00	90.00	179.57	6,323.00	-7,510.91	-172.26	7,512.62	0.00	0.00	0.00
13,500.00	90.00	179.57	6,323.00	-7,610.91	-171.51	7,612.60	0.00	0.00	0.00
13,600.00	90.00	179.57	6,323.00	-7,710.91	-170.77	7,712.57	0.00	0.00	0.00
13,700.00	90.00	179.57	6,323.00	-7,810.90	-170.03	7,812.55	0.00	0.00	0.00
13,800.00	90.00	179.57	6,323.00	-7,910.90	-169.28	7,912.53	0.00	0.00	0.00
13,900.00	90.00	179.57	6,323.00	-8,010.90	-168.54	8,012.50	0.00	0.00	0.00
14,000.00	90.00	179.57	6,323.00	-8,110.90	-167.80	8,112.48	0.00	0.00	0.00
14,100.00	90.00	179.57	6,323.00	-8,210.89	-167.05	8,212.45	0.00	0.00	0.00
14,200.00	90.00	179.57	6,323.00	-8,310.89	-166.31	8,312.43	0.00	0.00	0.00
14,300.00	90.00	179.57	6,323.00	-8,410.89	-165.57	8,412.40	0.00	0.00	0.00
14,400.00	90.00	179.57	6,323.00	-8,510.89	-164.82	8,512.38	0.00	0.00	0.00
14,500.00	90.00	179.57	6,323.00	-8,610.88	-164.08	8,612.36	0.00	0.00	0.00
14,600.00	90.00	179.57	6,323.00	-8,710.88	-163.34	8,712.33	0.00	0.00	0.00
14,700.00	90.00	179.57	6,323.00	-8,810.88	-162.59	8,812.31	0.00	0.00	0.00
14,800.00	90.00	179.57	6,323.00	-8,910.87	-161.85	8,912.28	0.00	0.00	0.00
14,900.00	90.00	179.57	6,323.00	-9,010.87	-161.11	9,012.26	0.00	0.00	0.00
15,000.00	90.00	179.57	6,323.00	-9,110.87	-160.36	9,112.24	0.00	0.00	0.00
15,100.00	90.00	179.57	6,323.00	-9,210.87	-159.62	9,212.21	0.00	0.00	0.00
15,200.00	90.00	179.57	6,323.00	-9,310.86	-158.88	9,312.19	0.00	0.00	0.00
15,300.00	90.00	179.57	6,323.00	-9,410.86	-158.13	9,412.16	0.00	0.00	0.00

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well 70 Ranch 10-19-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Site:</b>	Section 03-T04N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	70 Ranch 10-19-1L	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan1		

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	179.57	6,323.00	-9,510.86	-157.39	9,512.14	0.00	0.00	0.00
15,500.00	90.00	179.57	6,323.00	-9,610.85	-156.65	9,612.12	0.00	0.00	0.00
15,600.00	90.00	179.57	6,323.00	-9,710.85	-155.90	9,712.09	0.00	0.00	0.00
15,700.00	90.00	179.57	6,323.00	-9,810.85	-155.16	9,812.07	0.00	0.00	0.00
15,800.00	90.00	179.57	6,323.00	-9,910.85	-154.41	9,912.04	0.00	0.00	0.00
15,900.00	90.00	179.57	6,323.00	-10,010.84	-153.67	10,012.02	0.00	0.00	0.00
16,000.00	90.00	179.57	6,323.00	-10,110.84	-152.93	10,112.00	0.00	0.00	0.00
16,100.00	90.00	179.57	6,323.00	-10,210.84	-152.18	10,211.97	0.00	0.00	0.00
16,200.00	90.00	179.57	6,323.00	-10,310.84	-151.44	10,311.95	0.00	0.00	0.00
16,283.16	90.00	179.57	6,323.00	-10,393.99	-150.82	10,395.09	0.00	0.00	0.00
PBHL/TD 16283.16 MD/6323.00 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
70 Ranch 10-19-1L SL 2	0.00	0.37	24.00	-29.27	-3.79	14,649,110.06	1,799,303.17	40.33465491	-104.42985995
- hit/miss target									
- plan misses target center by 29.52ft at 24.00ft MD (24.00 TVD, 0.00 N, 0.00 E)									
- Point									
70 Ranch 10-19-1L BHL	0.00	0.37	6,323.00	-10,393.99	-150.82	14,638,744.63	1,799,222.90	40.30619386	-104.43038724
- plan hits target center									
- Point									
70 Ranch 10-19-1L LP 4	0.00	0.37	6,323.00	-772.38	-222.36	14,648,365.56	1,799,089.39	40.33261437	-104.43064421
- 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 10°/100' build
2,042.80	2,042.76	-1.14	-1.12	Begin 4.28° tangent
5,791.47	5,780.98	-200.02	-197.87	Begin 10°/100' build/turn
6,661.28	6,323.00	-772.38	-222.36	LP Begin 90° lateral
16,283.16	6,323.00	-10,393.99	-150.82	PBHL/TD 16283.16 MD/6323.00 TVD

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well 70 Ranch 10-19-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Site:</b>	Section 03-T04N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	70 Ranch 10-19-1L	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan1		

<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 03-T04N-R63W			
Site Position:		Northing:	14,650,244.32 usft	Latitude:	40.33774036
From:	Map	Easting:	1,800,940.24 usft	Longitude:	-104.42395937
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.37 °

Well	70 Ranch 10-19-1L, Surf loc: 260 FSL 1112 FWL Section 03-T04N-R63W					
Well Position	+N/-S	0.00 ft	Northing:	14,649,139.36 usft	Latitude:	40.33473530
	+E/-W	0.00 ft	Easting:	1,799,306.77 usft	Longitude:	-104.42984636
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,594.00 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	5/21/2018	8.10	66.90	52,228.40000000

<b>Design</b>	plan1			
<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	180.83

<b>Plan Survey Tool Program</b>	<b>Date</b>	5/21/2018		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	16,283.16 plan1 (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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,042.80	4.28	224.69	2,042.76	-1.14	-1.12	10.00	10.00	0.00	224.69	
5,791.47	4.28	224.69	5,780.98	-200.02	-197.87	0.00	0.00	0.00	0.00	
6,661.28	90.00	179.57	6,323.00	-772.38	-222.36	10.00	9.86	-5.19	-45.20	70 Ranch 10-19-1L LI
16,283.16	90.00	179.57	6,323.00	-10,393.99	-150.82	0.00	0.00	0.00	0.00	70 Ranch 10-19-1L BI



<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well 70 Ranch 10-19-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Site:</b>	Section 03-T04N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	70 Ranch 10-19-1L	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan1		

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	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
100.00	0.00	0.00	100.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
200.00	0.00	0.00	200.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
300.00	0.00	0.00	300.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
400.00	0.00	0.00	400.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
500.00	0.00	0.00	500.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
600.00	0.00	0.00	600.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
700.00	0.00	0.00	700.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
800.00	0.00	0.00	800.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
900.00	0.00	0.00	900.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,649,139.36	1,799,306.77	40.33473530	-104.42984636
<b>KOP Begin 10°/100' build</b>									
2,042.80	4.28	224.69	2,042.76	-1.14	-1.12	14,649,138.21	1,799,305.65	40.33473218	-104.42985039
<b>Begin 4.28° tangent</b>									
2,100.00	4.28	224.69	2,099.80	-4.17	-4.13	14,649,135.16	1,799,302.67	40.33472384	-104.42986116
2,200.00	4.28	224.69	2,199.52	-9.48	-9.37	14,649,129.82	1,799,297.46	40.33470928	-104.42988000
2,300.00	4.28	224.69	2,299.24	-14.78	-14.62	14,649,124.48	1,799,292.24	40.33469471	-104.42989883
2,400.00	4.28	224.69	2,398.96	-20.09	-19.87	14,649,119.14	1,799,287.03	40.33468014	-104.42991766
2,500.00	4.28	224.69	2,498.69	-25.39	-25.12	14,649,113.80	1,799,281.81	40.33466557	-104.42993650
2,600.00	4.28	224.69	2,598.41	-30.70	-30.37	14,649,108.46	1,799,276.60	40.33465100	-104.42995533
2,700.00	4.28	224.69	2,698.13	-36.00	-35.62	14,649,103.13	1,799,271.39	40.33463643	-104.42997416
2,800.00	4.28	224.69	2,797.85	-41.31	-40.87	14,649,097.79	1,799,266.17	40.33462186	-104.42999299
2,900.00	4.28	224.69	2,897.57	-46.61	-46.11	14,649,092.45	1,799,260.96	40.33460729	-104.43001183
3,000.00	4.28	224.69	2,997.29	-51.92	-51.36	14,649,087.11	1,799,255.74	40.33459273	-104.43003066
3,100.00	4.28	224.69	3,097.01	-57.23	-56.61	14,649,081.77	1,799,250.53	40.33457816	-104.43004949
3,200.00	4.28	224.69	3,196.73	-62.53	-61.86	14,649,076.43	1,799,245.32	40.33456359	-104.43006833
3,300.00	4.28	224.69	3,296.45	-67.84	-67.11	14,649,071.09	1,799,240.10	40.33454902	-104.43008716
3,400.00	4.28	224.69	3,396.18	-73.14	-72.36	14,649,065.75	1,799,234.89	40.33453445	-104.43010599
3,500.00	4.28	224.69	3,495.90	-78.45	-77.60	14,649,060.41	1,799,229.67	40.33451988	-104.43012482
3,600.00	4.28	224.69	3,595.62	-83.75	-82.85	14,649,055.07	1,799,224.46	40.33450531	-104.43014366
3,700.00	4.28	224.69	3,695.34	-89.06	-88.10	14,649,049.73	1,799,219.24	40.33449075	-104.43016249
3,800.00	4.28	224.69	3,795.06	-94.36	-93.35	14,649,044.39	1,799,214.03	40.33447618	-104.43018132
3,900.00	4.28	224.69	3,894.78	-99.67	-98.60	14,649,039.06	1,799,208.82	40.33446161	-104.43020015
4,000.00	4.28	224.69	3,994.50	-104.98	-103.85	14,649,033.72	1,799,203.60	40.33444704	-104.43021899
4,100.00	4.28	224.69	4,094.22	-110.28	-109.10	14,649,028.38	1,799,198.39	40.33443247	-104.43023782
4,200.00	4.28	224.69	4,193.94	-115.59	-114.34	14,649,023.04	1,799,193.17	40.33441790	-104.43025665
4,300.00	4.28	224.69	4,293.67	-120.89	-119.59	14,649,017.70	1,799,187.96	40.33440333	-104.43027549
4,400.00	4.28	224.69	4,393.39	-126.20	-124.84	14,649,012.36	1,799,182.75	40.33438876	-104.43029432
4,500.00	4.28	224.69	4,493.11	-131.50	-130.09	14,649,007.02	1,799,177.53	40.33437420	-104.43031315
4,600.00	4.28	224.69	4,592.83	-136.81	-135.34	14,649,001.68	1,799,172.32	40.33435963	-104.43033198
4,700.00	4.28	224.69	4,692.55	-142.11	-140.59	14,648,996.34	1,799,167.10	40.33434506	-104.43035082
4,800.00	4.28	224.69	4,792.27	-147.42	-145.83	14,648,991.00	1,799,161.89	40.33433049	-104.43036965
4,900.00	4.28	224.69	4,891.99	-152.72	-151.08	14,648,985.66	1,799,156.67	40.33431592	-104.43038848
5,000.00	4.28	224.69	4,991.71	-158.03	-156.33	14,648,980.32	1,799,151.46	40.33430135	-104.43040731



<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well 70 Ranch 10-19-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Site:</b>	Section 03-T04N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	70 Ranch 10-19-1L	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan1		

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	4.28	224.69	5,091.43	-163.34	-161.58	14,648,974.98	1,799,146.25	40.33428678	-104.43042615
5,200.00	4.28	224.69	5,191.16	-168.64	-166.83	14,648,969.65	1,799,141.03	40.33427222	-104.43044498
5,300.00	4.28	224.69	5,290.88	-173.95	-172.08	14,648,964.31	1,799,135.82	40.33425765	-104.43046381
5,400.00	4.28	224.69	5,390.60	-179.25	-177.33	14,648,958.97	1,799,130.60	40.33424308	-104.43048264
5,500.00	4.28	224.69	5,490.32	-184.56	-182.57	14,648,953.63	1,799,125.39	40.33422851	-104.43050148
5,600.00	4.28	224.69	5,590.04	-189.86	-187.82	14,648,948.29	1,799,120.17	40.33421394	-104.43052031
5,700.00	4.28	224.69	5,689.76	-195.17	-193.07	14,648,942.95	1,799,114.96	40.33419937	-104.43053914
5,791.47	4.28	224.69	5,780.98	-200.02	-197.87	14,648,938.07	1,799,110.19	40.33418605	-104.43055637
Begin 10°/100' build/turn									
5,800.00	4.92	217.61	5,789.48	-200.54	-198.32	14,648,937.55	1,799,109.75	40.33418463	-104.43055797
5,900.00	14.19	191.68	5,888.02	-215.98	-203.43	14,648,922.07	1,799,104.74	40.33414223	-104.43057631
6,000.00	24.05	186.40	5,982.39	-248.32	-208.19	14,648,889.70	1,799,100.18	40.33405342	-104.43059340
6,100.00	33.99	184.08	6,069.73	-296.58	-212.47	14,648,841.42	1,799,096.22	40.33392091	-104.43060873
6,200.00	43.96	182.73	6,147.38	-359.28	-216.12	14,648,778.69	1,799,092.97	40.33374872	-104.43062183
6,300.00	53.93	181.79	6,212.97	-434.53	-219.04	14,648,703.42	1,799,090.54	40.33354208	-104.43063230
6,400.00	63.91	181.06	6,264.53	-520.05	-221.13	14,648,617.90	1,799,088.99	40.33330728	-104.43063983
6,500.00	73.89	180.45	6,300.48	-613.22	-222.35	14,648,524.72	1,799,088.38	40.33305143	-104.43064418
6,600.00	83.88	179.90	6,319.73	-711.22	-222.64	14,648,426.72	1,799,088.72	40.33278233	-104.43064522
6,661.28	90.00	179.57	6,323.00	-772.38	-222.36	14,648,365.56	1,799,089.39	40.33261437	-104.43064421
LP Begin 90° lateral									
6,700.00	90.00	179.57	6,323.00	-811.10	-222.07	14,648,326.85	1,799,089.93	40.33250806	-104.43064318
6,800.00	90.00	179.57	6,323.00	-911.10	-221.33	14,648,226.86	1,799,091.32	40.33223347	-104.43064051
6,900.00	90.00	179.57	6,323.00	-1,011.09	-220.58	14,648,126.87	1,799,092.70	40.33195888	-104.43063783
7,000.00	90.00	179.57	6,323.00	-1,111.09	-219.84	14,648,026.88	1,799,094.09	40.33168430	-104.43063516
7,100.00	90.00	179.57	6,323.00	-1,211.09	-219.10	14,647,926.89	1,799,095.48	40.33140971	-104.43063249
7,200.00	90.00	179.57	6,323.00	-1,311.08	-218.35	14,647,826.90	1,799,096.87	40.33113512	-104.43062982
7,300.00	90.00	179.57	6,323.00	-1,411.08	-217.61	14,647,726.91	1,799,098.25	40.33086053	-104.43062715
7,400.00	90.00	179.57	6,323.00	-1,511.08	-216.87	14,647,626.92	1,799,099.64	40.33058595	-104.43062448
7,500.00	90.00	179.57	6,323.00	-1,611.08	-216.12	14,647,526.93	1,799,101.03	40.33031136	-104.43062181
7,600.00	90.00	179.57	6,323.00	-1,711.07	-215.38	14,647,426.94	1,799,102.42	40.33003677	-104.43061914
7,700.00	90.00	179.57	6,323.00	-1,811.07	-214.64	14,647,326.95	1,799,103.80	40.32976218	-104.43061647
7,800.00	90.00	179.57	6,323.00	-1,911.07	-213.89	14,647,226.96	1,799,105.19	40.32948760	-104.43061380
7,900.00	90.00	179.57	6,323.00	-2,011.06	-213.15	14,647,126.97	1,799,106.58	40.32921301	-104.43061112
8,000.00	90.00	179.57	6,323.00	-2,111.06	-212.41	14,647,026.98	1,799,107.97	40.32893842	-104.43060845
8,100.00	90.00	179.57	6,323.00	-2,211.06	-211.66	14,646,926.99	1,799,109.36	40.32866383	-104.43060578
8,200.00	90.00	179.57	6,323.00	-2,311.06	-210.92	14,646,826.99	1,799,110.74	40.32838925	-104.43060311
8,300.00	90.00	179.57	6,323.00	-2,411.05	-210.18	14,646,727.00	1,799,112.13	40.32811466	-104.43060044
8,400.00	90.00	179.57	6,323.00	-2,511.05	-209.43	14,646,627.01	1,799,113.52	40.32784007	-104.43059777
8,500.00	90.00	179.57	6,323.00	-2,611.05	-208.69	14,646,527.02	1,799,114.91	40.32756548	-104.43059510
8,600.00	90.00	179.57	6,323.00	-2,711.05	-207.94	14,646,427.03	1,799,116.29	40.32729090	-104.43059243
8,700.00	90.00	179.57	6,323.00	-2,811.04	-207.20	14,646,327.04	1,799,117.68	40.32701631	-104.43058976
8,800.00	90.00	179.57	6,323.00	-2,911.04	-206.46	14,646,227.05	1,799,119.07	40.32674172	-104.43058709
8,900.00	90.00	179.57	6,323.00	-3,011.04	-205.71	14,646,127.06	1,799,120.46	40.32646713	-104.43058441
9,000.00	90.00	179.57	6,323.00	-3,111.03	-204.97	14,646,027.07	1,799,121.84	40.32619254	-104.43058174
9,100.00	90.00	179.57	6,323.00	-3,211.03	-204.23	14,645,927.08	1,799,123.23	40.32591796	-104.43057907
9,200.00	90.00	179.57	6,323.00	-3,311.03	-203.48	14,645,827.09	1,799,124.62	40.32564337	-104.43057640
9,300.00	90.00	179.57	6,323.00	-3,411.03	-202.74	14,645,727.10	1,799,126.01	40.32536878	-104.43057373
9,400.00	90.00	179.57	6,323.00	-3,511.02	-202.00	14,645,627.11	1,799,127.39	40.32509419	-104.43057106
9,500.00	90.00	179.57	6,323.00	-3,611.02	-201.25	14,645,527.12	1,799,128.78	40.32481961	-104.43056839
9,600.00	90.00	179.57	6,323.00	-3,711.02	-200.51	14,645,427.13	1,799,130.17	40.32454502	-104.43056572
9,700.00	90.00	179.57	6,323.00	-3,811.02	-199.77	14,645,327.14	1,799,131.56	40.32427043	-104.43056305
9,800.00	90.00	179.57	6,323.00	-3,911.01	-199.02	14,645,227.15	1,799,132.94	40.32399584	-104.43056038
9,900.00	90.00	179.57	6,323.00	-4,011.01	-198.28	14,645,127.16	1,799,134.33	40.32372125	-104.43055771
10,000.00	90.00	179.57	6,323.00	-4,111.01	-197.54	14,645,027.17	1,799,135.72	40.32344667	-104.43055503

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well 70 Ranch 10-19-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Site:</b>	Section 03-T04N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	70 Ranch 10-19-1L	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan1		

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	179.57	6,323.00	-4,211.00	-196.79	14,644,927.18	1,799,137.11	40.32317208	-104.43055236	
10,200.00	90.00	179.57	6,323.00	-4,311.00	-196.05	14,644,827.19	1,799,138.49	40.32289749	-104.43054969	
10,300.00	90.00	179.57	6,323.00	-4,411.00	-195.31	14,644,727.20	1,799,139.88	40.32262290	-104.43054702	
10,400.00	90.00	179.57	6,323.00	-4,511.00	-194.56	14,644,627.21	1,799,141.27	40.32234831	-104.43054435	
10,500.00	90.00	179.57	6,323.00	-4,610.99	-193.82	14,644,527.22	1,799,142.66	40.32207373	-104.43054168	
10,600.00	90.00	179.57	6,323.00	-4,710.99	-193.08	14,644,427.23	1,799,144.04	40.32179914	-104.43053901	
10,700.00	90.00	179.57	6,323.00	-4,810.99	-192.33	14,644,327.24	1,799,145.43	40.32152455	-104.43053634	
10,800.00	90.00	179.57	6,323.00	-4,910.98	-191.59	14,644,227.25	1,799,146.82	40.32124996	-104.43053367	
10,900.00	90.00	179.57	6,323.00	-5,010.98	-190.84	14,644,127.26	1,799,148.21	40.32097537	-104.43053100	
11,000.00	90.00	179.57	6,323.00	-5,110.98	-190.10	14,644,027.27	1,799,149.59	40.32070079	-104.43052833	
11,100.00	90.00	179.57	6,323.00	-5,210.98	-189.36	14,643,927.28	1,799,150.98	40.32042620	-104.43052566	
11,200.00	90.00	179.57	6,323.00	-5,310.97	-188.61	14,643,827.29	1,799,152.37	40.32015161	-104.43052298	
11,300.00	90.00	179.57	6,323.00	-5,410.97	-187.87	14,643,727.30	1,799,153.76	40.31987702	-104.43052031	
11,400.00	90.00	179.57	6,323.00	-5,510.97	-187.13	14,643,627.31	1,799,155.14	40.31960243	-104.43051764	
11,500.00	90.00	179.57	6,323.00	-5,610.97	-186.38	14,643,527.32	1,799,156.53	40.31932785	-104.43051497	
11,600.00	90.00	179.57	6,323.00	-5,710.96	-185.64	14,643,427.33	1,799,157.92	40.31905326	-104.43051230	
11,700.00	90.00	179.57	6,323.00	-5,810.96	-184.90	14,643,327.34	1,799,159.31	40.31877867	-104.43050963	
11,800.00	90.00	179.57	6,323.00	-5,910.96	-184.15	14,643,227.35	1,799,160.70	40.31850408	-104.43050696	
11,900.00	90.00	179.57	6,323.00	-6,010.95	-183.41	14,643,127.36	1,799,162.08	40.31822949	-104.43050429	
12,000.00	90.00	179.57	6,323.00	-6,110.95	-182.67	14,643,027.37	1,799,163.47	40.31795491	-104.43050162	
12,100.00	90.00	179.57	6,323.00	-6,210.95	-181.92	14,642,927.38	1,799,164.86	40.31768032	-104.43049895	
12,200.00	90.00	179.57	6,323.00	-6,310.95	-181.18	14,642,827.39	1,799,166.25	40.31740573	-104.43049628	
12,300.00	90.00	179.57	6,323.00	-6,410.94	-180.44	14,642,727.40	1,799,167.63	40.31713114	-104.43049361	
12,400.00	90.00	179.57	6,323.00	-6,510.94	-179.69	14,642,627.41	1,799,169.02	40.31685655	-104.43049094	
12,500.00	90.00	179.57	6,323.00	-6,610.94	-178.95	14,642,527.42	1,799,170.41	40.31658196	-104.43048827	
12,600.00	90.00	179.57	6,323.00	-6,710.93	-178.21	14,642,427.43	1,799,171.80	40.31630738	-104.43048559	
12,700.00	90.00	179.57	6,323.00	-6,810.93	-177.46	14,642,327.44	1,799,173.18	40.31603279	-104.43048292	
12,800.00	90.00	179.57	6,323.00	-6,910.93	-176.72	14,642,227.45	1,799,174.57	40.31575820	-104.43048025	
12,900.00	90.00	179.57	6,323.00	-7,010.93	-175.98	14,642,127.46	1,799,175.96	40.31548361	-104.43047758	
13,000.00	90.00	179.57	6,323.00	-7,110.92	-175.23	14,642,027.47	1,799,177.35	40.31520902	-104.43047491	
13,100.00	90.00	179.57	6,323.00	-7,210.92	-174.49	14,641,927.48	1,799,178.73	40.31493444	-104.43047224	
13,200.00	90.00	179.57	6,323.00	-7,310.92	-173.74	14,641,827.49	1,799,180.12	40.31465985	-104.43046957	
13,300.00	90.00	179.57	6,323.00	-7,410.92	-173.00	14,641,727.50	1,799,181.51	40.31438526	-104.43046690	
13,400.00	90.00	179.57	6,323.00	-7,510.91	-172.26	14,641,627.51	1,799,182.90	40.31411067	-104.43046423	
13,500.00	90.00	179.57	6,323.00	-7,610.91	-171.51	14,641,527.52	1,799,184.28	40.31383608	-104.43046156	
13,600.00	90.00	179.57	6,323.00	-7,710.91	-170.77	14,641,427.53	1,799,185.67	40.31356149	-104.43045889	
13,700.00	90.00	179.57	6,323.00	-7,810.90	-170.03	14,641,327.54	1,799,187.06	40.31328691	-104.43045622	
13,800.00	90.00	179.57	6,323.00	-7,910.90	-169.28	14,641,227.55	1,799,188.45	40.31301232	-104.43045355	
13,900.00	90.00	179.57	6,323.00	-8,010.90	-168.54	14,641,127.55	1,799,189.83	40.31273774	-104.43045088	
14,000.00	90.00	179.57	6,323.00	-8,110.90	-167.80	14,641,027.56	1,799,191.22	40.31246315	-104.43044821	
14,100.00	90.00	179.57	6,323.00	-8,210.89	-167.05	14,640,927.57	1,799,192.61	40.31218856	-104.43044554	
14,200.00	90.00	179.57	6,323.00	-8,310.89	-166.31	14,640,827.58	1,799,194.00	40.31191397	-104.43044287	
14,300.00	90.00	179.57	6,323.00	-8,410.89	-165.57	14,640,727.59	1,799,195.38	40.31163939	-104.43044020	
14,400.00	90.00	179.57	6,323.00	-8,510.89	-164.82	14,640,627.60	1,799,196.77	40.31136480	-104.43043752	
14,500.00	90.00	179.57	6,323.00	-8,610.88	-164.08	14,640,527.61	1,799,198.16	40.31109021	-104.43043485	
14,600.00	90.00	179.57	6,323.00	-8,710.88	-163.34	14,640,427.62	1,799,199.55	40.31081562	-104.43043218	
14,700.00	90.00	179.57	6,323.00	-8,810.88	-162.59	14,640,327.63	1,799,200.93	40.31054103	-104.43042951	
14,800.00	90.00	179.57	6,323.00	-8,910.87	-161.85	14,640,227.64	1,799,202.32	40.31026644	-104.43042684	
14,900.00	90.00	179.57	6,323.00	-9,010.87	-161.11	14,640,127.65	1,799,203.71	40.30999185	-104.43042417	
15,000.00	90.00	179.57	6,323.00	-9,110.87	-160.36	14,640,027.66	1,799,205.10	40.30971727	-104.43042150	
15,100.00	90.00	179.57	6,323.00	-9,210.87	-159.62	14,639,927.67	1,799,206.48	40.30944268	-104.43041883	
15,200.00	90.00	179.57	6,323.00	-9,310.86	-158.88	14,639,827.68	1,799,207.87	40.30916809	-104.43041616	
15,300.00	90.00	179.57	6,323.00	-9,410.86	-158.13	14,639,727.69	1,799,209.26	40.30889350	-104.43041349	
15,400.00	90.00	179.57	6,323.00	-9,510.86	-157.39	14,639,627.70	1,799,210.65	40.30861891	-104.43041082	
15,500.00	90.00	179.57	6,323.00	-9,610.85	-156.65	14,639,527.71	1,799,212.03	40.30834432	-104.43040815	

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well 70 Ranch 10-19-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=4594+24 @ 4618.00ft
<b>Site:</b>	Section 03-T04N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	70 Ranch 10-19-1L	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<b>Design:</b>	plan1		

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	179.57	6,323.00	-9,710.85	-155.90	14,639,427.72	1,799,213.42	40.30806973	-104.43040548
15,700.00	90.00	179.57	6,323.00	-9,810.85	-155.16	14,639,327.73	1,799,214.81	40.30779515	-104.43040281
15,800.00	90.00	179.57	6,323.00	-9,910.85	-154.41	14,639,227.74	1,799,216.20	40.30752056	-104.43040014
15,900.00	90.00	179.57	6,323.00	-10,010.84	-153.67	14,639,127.75	1,799,217.59	40.30724597	-104.43039747
16,000.00	90.00	179.57	6,323.00	-10,110.84	-152.93	14,639,027.76	1,799,218.97	40.30697138	-104.43039480
16,100.00	90.00	179.57	6,323.00	-10,210.84	-152.18	14,638,927.77	1,799,220.36	40.30669679	-104.43039213
16,200.00	90.00	179.57	6,323.00	-10,310.84	-151.44	14,638,827.78	1,799,221.75	40.30642220	-104.43038946
16,283.16	90.00	179.57	6,323.00	-10,393.99	-150.82	14,638,744.63	1,799,222.90	40.30619386	-104.43038724
PBHL/TD 16283.16 MD/6323.00 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
70 Ranch 10-19-1L SL 2	0.00	0.37	24.00	-29.27	-3.79	14,649,110.06	1,799,303.17	40.33465491	-104.42985995
- hit/miss target									
- plan misses target center by 29.52ft at 24.00ft MD (24.00 TVD, 0.00 N, 0.00 E)									
- Point									
70 Ranch 10-19-1L BHL	0.00	0.37	6,323.00	-10,393.99	-150.82	14,638,744.63	1,799,222.90	40.30619386	-104.43038724
- plan hits target center									
- Point									
70 Ranch 10-19-1L LP 4	0.00	0.37	6,323.00	-772.38	-222.36	14,648,365.56	1,799,089.39	40.33261437	-104.43064421
- 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 10°/100' build
2,042.80	2,042.76	-1.14	-1.12	Begin 4.28° tangent
5,791.47	5,780.98	-200.02	-197.87	Begin 10°/100' build/turn
6,661.28	6,323.00	-772.38	-222.36	LP Begin 90° lateral
16,283.16	6,323.00	-10,393.99	-150.82	PBHL/TD 16283.16 MD/6323.00 TVD