



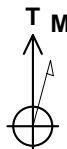
Well: 70 Ranch 10-08-2L
 Site: Section 03-T04N-R63W
 Project: Weld County, Colorado
 Wellbore: Original Hole
 Design: plan1

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
70 Ranch 10-08-2L SL 260 FSL 1087 FWL	24.00	-29.27	-3.7914649108.52	1799278.11	40.33465113	-104.42994990	
70 Ranch 10-08-2L BHL 470 FSL 730 FWL	6372.00	-10396.10	-299.7214638740.02	1799048.95	40.30618426	-104.43101124	
70 Ranch 10-08-2L LP 470 FNL 730 FWL	6372.00	-780.55	-371.2614648354.89	1798915.48	40.33258815	-104.43126845	

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	2058.40	5.84	237.66	2058.30	-1.59	-2.51	10.00	1.66	Begin 5.84° tangent
4	5851.69	5.84	237.66	5831.90	-208.09	-328.63	0.00	217.48	Begin 10°/100' build/turn
5	6720.85	90.00	179.57	6372.00	-780.55	-371.26	10.00	790.93	LP Begin 90° lateral
6	16336.67	90.00	179.57	6372.00	-10396.10	-299.72	0.00	10400.42	PBHL/TD 16336.67 MD/6372.00 TVD



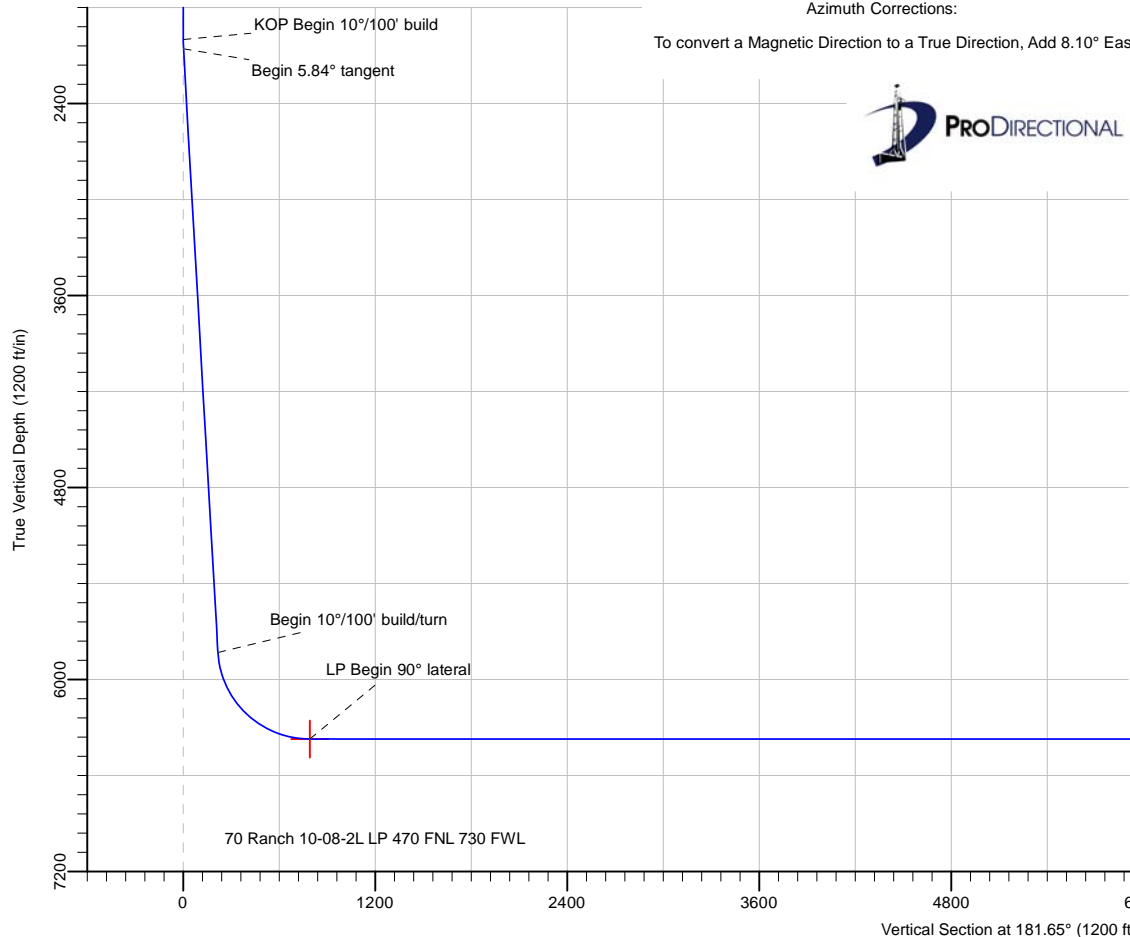
Azimuths to True North
 Magnetic North: 8.10°

Magnetic Field
 Strength: 52228.5nT
 Dip Angle: 66.90°
 Date: 5/21/2018
 Model: HDGM

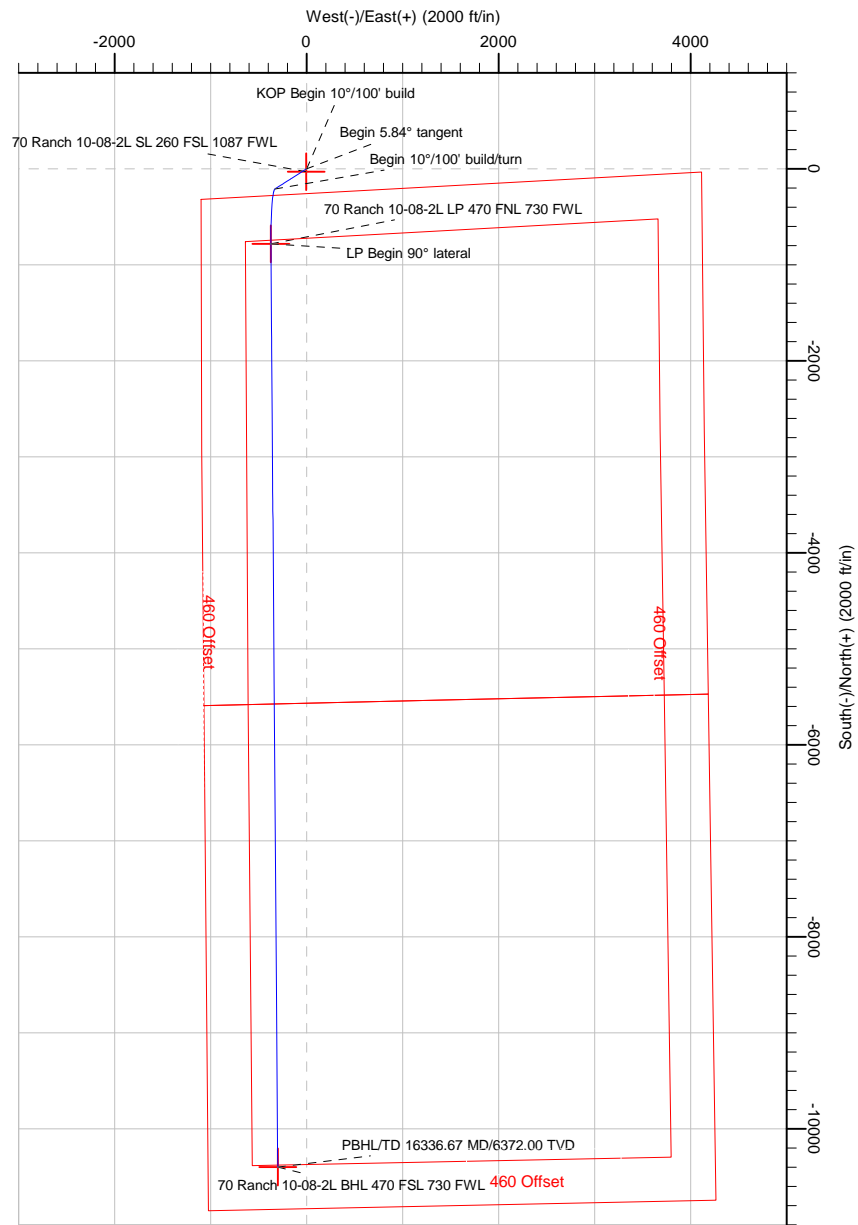
70 Ranch 10-08-2L Surf loc: 260 FSL 1087 FWL Section 03-T04N-R63W			
NAD83 Colorado - HARN Universal Transverse Mercator (US Survey Feet) Zone 13N (108 W to 102 W) RKB=4593+24 @ 4617.00ft			
Northing	Easting	Latitude	Longitude
14649137.82	1799281.71	40.33473152	-104.42993631

Azimuth Corrections:

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



Date: 3:24, May 21 2018



PBHL/TD 16336.67 MD/6372.00 TVD

70 Ranch 10-08-2L BHL 470 FSL 730 FWL

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 70 Ranch 10-08-2L
Company:	Confluence Resources	TVD Reference:	RKB=4593+24 @ 4617.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4593+24 @ 4617.00ft
Site:	Section 03-T04N-R63W	North Reference:	True
Well:	70 Ranch 10-08-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

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 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 10-08-2L, Surf loc: 260 FSL 1087 FWL Section 03-T04N-R63W					
Well Position	+N/-S	-1,095.68 ft	Northing:	14,649,137.82 usft	Latitude:	40.33473151
	+E/-W	-1,665.70 ft	Easting:	1,799,281.71 usft	Longitude:	-104.42993632
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,593.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/21/2018	8.10	66.90	52,228.50000000

Design	plan1			
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	181.65

Plan Survey Tool Program	Date	5/21/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,336.67	plan1 (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	
2,058.40	5.84	237.66	2,058.30	-1.59	-2.51	10.00	10.00	0.00	237.66	
5,851.69	5.84	237.66	5,831.90	-208.09	-328.63	0.00	0.00	0.00	0.00	
6,720.85	90.00	179.57	6,372.00	-780.55	-371.26	10.00	9.68	-6.68	-58.22	70 Ranch 10-08-2L LI
16,336.67	90.00	179.57	6,372.00	-10,396.10	-299.72	0.00	0.00	0.00	0.00	70 Ranch 10-08-2L BI

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well 70 Ranch 10-08-2L
Company:	Confluence Resources	TVD Reference:	RKB=4593+24 @ 4617.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4593+24 @ 4617.00ft
Site:	Section 03-T04N-R63W	North Reference:	True
Well:	70 Ranch 10-08-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	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
KOP Begin 10°/100' build									
2,058.40	5.84	237.66	2,058.30	-1.59	-2.51	1.66	10.00	10.00	0.00
Begin 5.84° tangent									
2,100.00	5.84	237.66	2,099.68	-3.86	-6.09	4.03	0.00	0.00	0.00
2,200.00	5.84	237.66	2,199.16	-9.30	-14.69	9.72	0.00	0.00	0.00
2,300.00	5.84	237.66	2,298.64	-14.74	-23.28	15.41	0.00	0.00	0.00
2,400.00	5.84	237.66	2,398.13	-20.19	-31.88	21.10	0.00	0.00	0.00
2,500.00	5.84	237.66	2,497.61	-25.63	-40.48	26.79	0.00	0.00	0.00
2,600.00	5.84	237.66	2,597.09	-31.07	-49.07	32.48	0.00	0.00	0.00
2,700.00	5.84	237.66	2,696.57	-36.52	-57.67	38.17	0.00	0.00	0.00
2,800.00	5.84	237.66	2,796.05	-41.96	-66.27	43.85	0.00	0.00	0.00
2,900.00	5.84	237.66	2,895.53	-47.41	-74.87	49.54	0.00	0.00	0.00
3,000.00	5.84	237.66	2,995.01	-52.85	-83.46	55.23	0.00	0.00	0.00
3,100.00	5.84	237.66	3,094.49	-58.29	-92.06	60.92	0.00	0.00	0.00
3,200.00	5.84	237.66	3,193.97	-63.74	-100.66	66.61	0.00	0.00	0.00
3,300.00	5.84	237.66	3,293.45	-69.18	-109.25	72.30	0.00	0.00	0.00
3,400.00	5.84	237.66	3,392.94	-74.63	-117.85	77.99	0.00	0.00	0.00
3,500.00	5.84	237.66	3,492.42	-80.07	-126.45	83.68	0.00	0.00	0.00
3,600.00	5.84	237.66	3,591.90	-85.51	-135.05	89.37	0.00	0.00	0.00
3,700.00	5.84	237.66	3,691.38	-90.96	-143.64	95.06	0.00	0.00	0.00
3,800.00	5.84	237.66	3,790.86	-96.40	-152.24	100.75	0.00	0.00	0.00
3,900.00	5.84	237.66	3,890.34	-101.85	-160.84	106.44	0.00	0.00	0.00
4,000.00	5.84	237.66	3,989.82	-107.29	-169.43	112.13	0.00	0.00	0.00
4,100.00	5.84	237.66	4,089.30	-112.73	-178.03	117.82	0.00	0.00	0.00
4,200.00	5.84	237.66	4,188.78	-118.18	-186.63	123.51	0.00	0.00	0.00
4,300.00	5.84	237.66	4,288.26	-123.62	-195.23	129.20	0.00	0.00	0.00
4,400.00	5.84	237.66	4,387.74	-129.06	-203.82	134.88	0.00	0.00	0.00
4,500.00	5.84	237.66	4,487.23	-134.51	-212.42	140.57	0.00	0.00	0.00
4,600.00	5.84	237.66	4,586.71	-139.95	-221.02	146.26	0.00	0.00	0.00
4,700.00	5.84	237.66	4,686.19	-145.40	-229.61	151.95	0.00	0.00	0.00
4,800.00	5.84	237.66	4,785.67	-150.84	-238.21	157.64	0.00	0.00	0.00
4,900.00	5.84	237.66	4,885.15	-156.28	-246.81	163.33	0.00	0.00	0.00

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Project:	Weld County, Colorado	MD Reference:	RKB=4593+24 @ 4617.00ft
Site:	Section 03-T04N-R63W	North Reference:	True
Well:	70 Ranch 10-08-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	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	5.84	237.66	4,984.63	-161.73	-255.41	169.02	0.00	0.00	0.00
5,100.00	5.84	237.66	5,084.11	-167.17	-264.00	174.71	0.00	0.00	0.00
5,200.00	5.84	237.66	5,183.59	-172.62	-272.60	180.40	0.00	0.00	0.00
5,300.00	5.84	237.66	5,283.07	-178.06	-281.20	186.09	0.00	0.00	0.00
5,400.00	5.84	237.66	5,382.55	-183.50	-289.79	191.78	0.00	0.00	0.00
5,500.00	5.84	237.66	5,482.03	-188.95	-298.39	197.47	0.00	0.00	0.00
5,600.00	5.84	237.66	5,581.52	-194.39	-306.99	203.16	0.00	0.00	0.00
5,700.00	5.84	237.66	5,681.00	-199.83	-315.59	208.85	0.00	0.00	0.00
5,800.00	5.84	237.66	5,780.48	-205.28	-324.18	214.54	0.00	0.00	0.00
5,851.69	5.84	237.66	5,831.90	-208.09	-328.63	217.48	0.00	0.00	0.00
Begin 10°/100' build/turn									
5,900.00	9.33	211.46	5,879.79	-212.75	-332.75	222.25	10.00	7.23	-54.22
6,000.00	18.57	194.55	5,976.77	-235.14	-341.01	244.87	10.00	9.23	-16.91
6,100.00	28.32	188.85	6,068.42	-274.08	-348.67	284.02	10.00	9.75	-5.71
6,200.00	38.19	185.91	6,151.95	-328.40	-355.52	338.51	10.00	9.87	-2.94
6,300.00	48.11	184.04	6,224.82	-396.45	-361.34	406.70	10.00	9.92	-1.87
6,400.00	58.05	182.68	6,284.81	-476.16	-365.96	486.51	10.00	9.94	-1.36
6,500.00	68.00	181.58	6,330.12	-565.11	-369.23	575.52	10.00	9.95	-1.09
6,600.00	77.96	180.63	6,359.35	-660.59	-371.06	671.01	10.00	9.96	-0.95
6,700.00	87.92	179.75	6,371.62	-759.71	-371.39	770.09	10.00	9.96	-0.88
6,720.85	90.00	179.57	6,372.00	-780.55	-371.26	790.93	10.00	9.96	-0.87
LP Begin 90° lateral									
6,800.00	90.00	179.57	6,372.00	-859.70	-370.67	870.03	0.00	0.00	0.00
6,900.00	90.00	179.57	6,372.00	-959.70	-369.93	969.96	0.00	0.00	0.00
7,000.00	90.00	179.57	6,372.00	-1,059.70	-369.19	1,069.89	0.00	0.00	0.00
7,100.00	90.00	179.57	6,372.00	-1,159.69	-368.44	1,169.83	0.00	0.00	0.00
7,200.00	90.00	179.57	6,372.00	-1,259.69	-367.70	1,269.76	0.00	0.00	0.00
7,300.00	90.00	179.57	6,372.00	-1,359.69	-366.95	1,369.70	0.00	0.00	0.00
7,400.00	90.00	179.57	6,372.00	-1,459.68	-366.21	1,469.63	0.00	0.00	0.00
7,500.00	90.00	179.57	6,372.00	-1,559.68	-365.47	1,569.57	0.00	0.00	0.00
7,600.00	90.00	179.57	6,372.00	-1,659.68	-364.72	1,669.50	0.00	0.00	0.00
7,700.00	90.00	179.57	6,372.00	-1,759.68	-363.98	1,769.43	0.00	0.00	0.00
7,800.00	90.00	179.57	6,372.00	-1,859.67	-363.23	1,869.37	0.00	0.00	0.00
7,900.00	90.00	179.57	6,372.00	-1,959.67	-362.49	1,969.30	0.00	0.00	0.00
8,000.00	90.00	179.57	6,372.00	-2,059.67	-361.75	2,069.24	0.00	0.00	0.00
8,100.00	90.00	179.57	6,372.00	-2,159.66	-361.00	2,169.17	0.00	0.00	0.00
8,200.00	90.00	179.57	6,372.00	-2,259.66	-360.26	2,269.11	0.00	0.00	0.00
8,300.00	90.00	179.57	6,372.00	-2,359.66	-359.51	2,369.04	0.00	0.00	0.00
8,400.00	90.00	179.57	6,372.00	-2,459.66	-358.77	2,468.97	0.00	0.00	0.00
8,500.00	90.00	179.57	6,372.00	-2,559.65	-358.03	2,568.91	0.00	0.00	0.00
8,600.00	90.00	179.57	6,372.00	-2,659.65	-357.28	2,668.84	0.00	0.00	0.00
8,700.00	90.00	179.57	6,372.00	-2,759.65	-356.54	2,768.78	0.00	0.00	0.00
8,800.00	90.00	179.57	6,372.00	-2,859.65	-355.79	2,868.71	0.00	0.00	0.00
8,900.00	90.00	179.57	6,372.00	-2,959.64	-355.05	2,968.65	0.00	0.00	0.00
9,000.00	90.00	179.57	6,372.00	-3,059.64	-354.31	3,068.58	0.00	0.00	0.00
9,100.00	90.00	179.57	6,372.00	-3,159.64	-353.56	3,168.51	0.00	0.00	0.00
9,200.00	90.00	179.57	6,372.00	-3,259.63	-352.82	3,268.45	0.00	0.00	0.00
9,300.00	90.00	179.57	6,372.00	-3,359.63	-352.07	3,368.38	0.00	0.00	0.00
9,400.00	90.00	179.57	6,372.00	-3,459.63	-351.33	3,468.32	0.00	0.00	0.00
9,500.00	90.00	179.57	6,372.00	-3,559.63	-350.59	3,568.25	0.00	0.00	0.00
9,600.00	90.00	179.57	6,372.00	-3,659.62	-349.84	3,668.19	0.00	0.00	0.00
9,700.00	90.00	179.57	6,372.00	-3,759.62	-349.10	3,768.12	0.00	0.00	0.00
9,800.00	90.00	179.57	6,372.00	-3,859.62	-348.35	3,868.05	0.00	0.00	0.00
9,900.00	90.00	179.57	6,372.00	-3,959.61	-347.61	3,967.99	0.00	0.00	0.00

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Site:	Section 03-T04N-R63W	North Reference:	True
Well:	70 Ranch 10-08-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	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	6,372.00	-4,059.61	-346.87	4,067.92	0.00	0.00	0.00
10,100.00	90.00	179.57	6,372.00	-4,159.61	-346.12	4,167.86	0.00	0.00	0.00
10,200.00	90.00	179.57	6,372.00	-4,259.61	-345.38	4,267.79	0.00	0.00	0.00
10,300.00	90.00	179.57	6,372.00	-4,359.60	-344.63	4,367.72	0.00	0.00	0.00
10,400.00	90.00	179.57	6,372.00	-4,459.60	-343.89	4,467.66	0.00	0.00	0.00
10,500.00	90.00	179.57	6,372.00	-4,559.60	-343.15	4,567.59	0.00	0.00	0.00
10,600.00	90.00	179.57	6,372.00	-4,659.60	-342.40	4,667.53	0.00	0.00	0.00
10,700.00	90.00	179.57	6,372.00	-4,759.59	-341.66	4,767.46	0.00	0.00	0.00
10,800.00	90.00	179.57	6,372.00	-4,859.59	-340.91	4,867.40	0.00	0.00	0.00
10,900.00	90.00	179.57	6,372.00	-4,959.59	-340.17	4,967.33	0.00	0.00	0.00
11,000.00	90.00	179.57	6,372.00	-5,059.58	-339.43	5,067.26	0.00	0.00	0.00
11,100.00	90.00	179.57	6,372.00	-5,159.58	-338.68	5,167.20	0.00	0.00	0.00
11,200.00	90.00	179.57	6,372.00	-5,259.58	-337.94	5,267.13	0.00	0.00	0.00
11,300.00	90.00	179.57	6,372.00	-5,359.58	-337.19	5,367.07	0.00	0.00	0.00
11,400.00	90.00	179.57	6,372.00	-5,459.57	-336.45	5,467.00	0.00	0.00	0.00
11,500.00	90.00	179.57	6,372.00	-5,559.57	-335.70	5,566.94	0.00	0.00	0.00
11,600.00	90.00	179.57	6,372.00	-5,659.57	-334.96	5,666.87	0.00	0.00	0.00
11,700.00	90.00	179.57	6,372.00	-5,759.57	-334.22	5,766.80	0.00	0.00	0.00
11,800.00	90.00	179.57	6,372.00	-5,859.56	-333.47	5,866.74	0.00	0.00	0.00
11,900.00	90.00	179.57	6,372.00	-5,959.56	-332.73	5,966.67	0.00	0.00	0.00
12,000.00	90.00	179.57	6,372.00	-6,059.56	-331.98	6,066.61	0.00	0.00	0.00
12,100.00	90.00	179.57	6,372.00	-6,159.55	-331.24	6,166.54	0.00	0.00	0.00
12,200.00	90.00	179.57	6,372.00	-6,259.55	-330.50	6,266.48	0.00	0.00	0.00
12,300.00	90.00	179.57	6,372.00	-6,359.55	-329.75	6,366.41	0.00	0.00	0.00
12,400.00	90.00	179.57	6,372.00	-6,459.55	-329.01	6,466.34	0.00	0.00	0.00
12,500.00	90.00	179.57	6,372.00	-6,559.54	-328.26	6,566.28	0.00	0.00	0.00
12,600.00	90.00	179.57	6,372.00	-6,659.54	-327.52	6,666.21	0.00	0.00	0.00
12,700.00	90.00	179.57	6,372.00	-6,759.54	-326.78	6,766.15	0.00	0.00	0.00
12,800.00	90.00	179.57	6,372.00	-6,859.53	-326.03	6,866.08	0.00	0.00	0.00
12,900.00	90.00	179.57	6,372.00	-6,959.53	-325.29	6,966.02	0.00	0.00	0.00
13,000.00	90.00	179.57	6,372.00	-7,059.53	-324.54	7,065.95	0.00	0.00	0.00
13,100.00	90.00	179.57	6,372.00	-7,159.53	-323.80	7,165.88	0.00	0.00	0.00
13,200.00	90.00	179.57	6,372.00	-7,259.52	-323.06	7,265.82	0.00	0.00	0.00
13,300.00	90.00	179.57	6,372.00	-7,359.52	-322.31	7,365.75	0.00	0.00	0.00
13,400.00	90.00	179.57	6,372.00	-7,459.52	-321.57	7,465.69	0.00	0.00	0.00
13,500.00	90.00	179.57	6,372.00	-7,559.52	-320.82	7,565.62	0.00	0.00	0.00
13,600.00	90.00	179.57	6,372.00	-7,659.51	-320.08	7,665.56	0.00	0.00	0.00
13,700.00	90.00	179.57	6,372.00	-7,759.51	-319.34	7,765.49	0.00	0.00	0.00
13,800.00	90.00	179.57	6,372.00	-7,859.51	-318.59	7,865.42	0.00	0.00	0.00
13,900.00	90.00	179.57	6,372.00	-7,959.50	-317.85	7,965.36	0.00	0.00	0.00
14,000.00	90.00	179.57	6,372.00	-8,059.50	-317.10	8,065.29	0.00	0.00	0.00
14,100.00	90.00	179.57	6,372.00	-8,159.50	-316.36	8,165.23	0.00	0.00	0.00
14,200.00	90.00	179.57	6,372.00	-8,259.50	-315.62	8,265.16	0.00	0.00	0.00
14,300.00	90.00	179.57	6,372.00	-8,359.49	-314.87	8,365.10	0.00	0.00	0.00
14,400.00	90.00	179.57	6,372.00	-8,459.49	-314.13	8,465.03	0.00	0.00	0.00
14,500.00	90.00	179.57	6,372.00	-8,559.49	-313.38	8,564.96	0.00	0.00	0.00
14,600.00	90.00	179.57	6,372.00	-8,659.49	-312.64	8,664.90	0.00	0.00	0.00
14,700.00	90.00	179.57	6,372.00	-8,759.48	-311.90	8,764.83	0.00	0.00	0.00
14,800.00	90.00	179.57	6,372.00	-8,859.48	-311.15	8,864.77	0.00	0.00	0.00
14,900.00	90.00	179.57	6,372.00	-8,959.48	-310.41	8,964.70	0.00	0.00	0.00
15,000.00	90.00	179.57	6,372.00	-9,059.47	-309.66	9,064.64	0.00	0.00	0.00
15,100.00	90.00	179.57	6,372.00	-9,159.47	-308.92	9,164.57	0.00	0.00	0.00
15,200.00	90.00	179.57	6,372.00	-9,259.47	-308.18	9,264.50	0.00	0.00	0.00
15,300.00	90.00	179.57	6,372.00	-9,359.47	-307.43	9,364.44	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well 70 Ranch 10-08-2L
Company:	Confluence Resources	TVD Reference:	RKB=4593+24 @ 4617.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4593+24 @ 4617.00ft
Site:	Section 03-T04N-R63W	North Reference:	True
Well:	70 Ranch 10-08-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	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	6,372.00	-9,459.46	-306.69	9,464.37	0.00	0.00	0.00
15,500.00	90.00	179.57	6,372.00	-9,559.46	-305.94	9,564.31	0.00	0.00	0.00
15,600.00	90.00	179.57	6,372.00	-9,659.46	-305.20	9,664.24	0.00	0.00	0.00
15,700.00	90.00	179.57	6,372.00	-9,759.45	-304.46	9,764.18	0.00	0.00	0.00
15,800.00	90.00	179.57	6,372.00	-9,859.45	-303.71	9,864.11	0.00	0.00	0.00
15,900.00	90.00	179.57	6,372.00	-9,959.45	-302.97	9,964.04	0.00	0.00	0.00
16,000.00	90.00	179.57	6,372.00	-10,059.45	-302.22	10,063.98	0.00	0.00	0.00
16,100.00	90.00	179.57	6,372.00	-10,159.44	-301.48	10,163.91	0.00	0.00	0.00
16,200.00	90.00	179.57	6,372.00	-10,259.44	-300.74	10,263.85	0.00	0.00	0.00
16,300.00	90.00	179.57	6,372.00	-10,359.44	-299.99	10,363.78	0.00	0.00	0.00
16,336.67	90.00	179.57	6,372.00	-10,396.10	-299.72	10,400.42	0.00	0.00	0.00
PBHL/TD 16336.67 MD/6372.00 TVD									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
70 Ranch 10-08-2L SL 2 - plan misses target center by 29.52ft at 24.00ft MD (24.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.37	24.00	-29.27	-3.79	14,649,108.52	1,799,278.11	40.33465112	-104.42994990
70 Ranch 10-08-2L BHL - plan hits target center - Point	0.00	0.37	6,372.00	-10,396.10	-299.72	14,638,740.02	1,799,048.95	40.30618427	-104.43101124
70 Ranch 10-08-2L LP 4 - plan hits target center - Point	0.00	0.37	6,372.00	-780.55	-371.26	14,648,354.89	1,798,915.48	40.33258814	-104.43126846

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
2,058.40	2,058.30	-1.59	-2.51	Begin 5.84° tangent
5,851.69	5,831.90	-208.09	-328.63	Begin 10°/100' build/turn
6,720.85	6,372.00	-780.55	-371.26	LP Begin 90° lateral
16,336.67	6,372.00	-10,396.10	-299.72	PBHL/TD 16336.67 MD/6372.00 TVD

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well 70 Ranch 10-08-2L
Company:	Confluence Resources	TVD Reference:	RKB=4593+24 @ 4617.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4593+24 @ 4617.00ft
Site:	Section 03-T04N-R63W	North Reference:	True
Well:	70 Ranch 10-08-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

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 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 10-08-2L, Surf loc: 260 FSL 1087 FWL Section 03-T04N-R63W					
Well Position	+N/-S	0.00 ft	Northing:	14,649,137.82 usft	Latitude:	40.33473151
	+E/-W	0.00 ft	Easting:	1,799,281.71 usft	Longitude:	-104.42993632
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,593.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/21/2018	8.10	66.90	52,228.50000000

Design	plan1			
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	181.65

Plan Survey Tool Program	Date	5/21/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,336.67 plan1 (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	
2,058.40	5.84	237.66	2,058.30	-1.59	-2.51	10.00	10.00	0.00	237.66	
5,851.69	5.84	237.66	5,831.90	-208.09	-328.63	0.00	0.00	0.00	0.00	
6,720.85	90.00	179.57	6,372.00	-780.55	-371.26	10.00	9.68	-6.68	-58.22	70 Ranch 10-08-2L LI
16,336.67	90.00	179.57	6,372.00	-10,396.10	-299.72	0.00	0.00	0.00	0.00	70 Ranch 10-08-2L BI

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well 70 Ranch 10-08-2L
Company:	Confluence Resources	TVD Reference:	RKB=4593+24 @ 4617.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4593+24 @ 4617.00ft
Site:	Section 03-T04N-R63W	North Reference:	True
Well:	70 Ranch 10-08-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	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	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
100.00	0.00	0.00	100.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
200.00	0.00	0.00	200.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
300.00	0.00	0.00	300.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
400.00	0.00	0.00	400.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
500.00	0.00	0.00	500.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
600.00	0.00	0.00	600.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
700.00	0.00	0.00	700.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
800.00	0.00	0.00	800.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
900.00	0.00	0.00	900.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,649,137.82	1,799,281.71	40.33473151	-104.42993632
KOP Begin 10°/100' build									
2,058.40	5.84	237.66	2,058.30	-1.59	-2.51	14,649,136.21	1,799,279.21	40.33472714	-104.42994533
Begin 5.84° tangent									
2,100.00	5.84	237.66	2,099.68	-3.86	-6.09	14,649,133.92	1,799,275.65	40.33472092	-104.42995816
2,200.00	5.84	237.66	2,199.16	-9.30	-14.69	14,649,128.42	1,799,267.08	40.33470598	-104.42998901
2,300.00	5.84	237.66	2,298.64	-14.74	-23.28	14,649,122.92	1,799,258.52	40.33469103	-104.43001986
2,400.00	5.84	237.66	2,398.13	-20.19	-31.88	14,649,117.43	1,799,249.96	40.33467608	-104.43005071
2,500.00	5.84	237.66	2,497.61	-25.63	-40.48	14,649,111.93	1,799,241.40	40.33466113	-104.43008156
2,600.00	5.84	237.66	2,597.09	-31.07	-49.07	14,649,106.43	1,799,232.84	40.33464618	-104.43011241
2,700.00	5.84	237.66	2,696.57	-36.52	-57.67	14,649,100.93	1,799,224.28	40.33463123	-104.43014326
2,800.00	5.84	237.66	2,796.05	-41.96	-66.27	14,649,095.43	1,799,215.71	40.33461628	-104.43017410
2,900.00	5.84	237.66	2,895.53	-47.41	-74.87	14,649,089.93	1,799,207.15	40.33460133	-104.43020495
3,000.00	5.84	237.66	2,995.01	-52.85	-83.46	14,649,084.43	1,799,198.59	40.33458639	-104.43023580
3,100.00	5.84	237.66	3,094.49	-58.29	-92.06	14,649,078.93	1,799,190.03	40.33457144	-104.43026665
3,200.00	5.84	237.66	3,193.97	-63.74	-100.66	14,649,073.43	1,799,181.47	40.33455649	-104.43029750
3,300.00	5.84	237.66	3,293.45	-69.18	-109.25	14,649,067.93	1,799,172.90	40.33454154	-104.43032835
3,400.00	5.84	237.66	3,392.94	-74.63	-117.85	14,649,062.43	1,799,164.34	40.33452659	-104.43035920
3,500.00	5.84	237.66	3,492.42	-80.07	-126.45	14,649,056.94	1,799,155.78	40.33451164	-104.43039004
3,600.00	5.84	237.66	3,591.90	-85.51	-135.05	14,649,051.44	1,799,147.22	40.33449669	-104.43042089
3,700.00	5.84	237.66	3,691.38	-90.96	-143.64	14,649,045.94	1,799,138.66	40.33448175	-104.43045174
3,800.00	5.84	237.66	3,790.86	-96.40	-152.24	14,649,040.44	1,799,130.09	40.33446680	-104.43048259
3,900.00	5.84	237.66	3,890.34	-101.85	-160.84	14,649,034.94	1,799,121.53	40.33445185	-104.43051344
4,000.00	5.84	237.66	3,989.82	-107.29	-169.43	14,649,029.44	1,799,112.97	40.33443690	-104.43054429
4,100.00	5.84	237.66	4,089.30	-112.73	-178.03	14,649,023.94	1,799,104.41	40.33442195	-104.43057514
4,200.00	5.84	237.66	4,188.78	-118.18	-186.63	14,649,018.44	1,799,095.85	40.33440700	-104.43060598
4,300.00	5.84	237.66	4,288.26	-123.62	-195.23	14,649,012.94	1,799,087.28	40.33439205	-104.43063683
4,400.00	5.84	237.66	4,387.74	-129.06	-203.82	14,649,007.44	1,799,078.72	40.33437710	-104.43066768
4,500.00	5.84	237.66	4,487.23	-134.51	-212.42	14,649,001.94	1,799,070.16	40.33436216	-104.43069853
4,600.00	5.84	237.66	4,586.71	-139.95	-221.02	14,648,996.45	1,799,061.60	40.33434721	-104.43072938
4,700.00	5.84	237.66	4,686.19	-145.40	-229.61	14,648,990.95	1,799,053.04	40.33433226	-104.43076023
4,800.00	5.84	237.66	4,785.67	-150.84	-238.21	14,648,985.45	1,799,044.48	40.33431731	-104.43079107
4,900.00	5.84	237.66	4,885.15	-156.28	-246.81	14,648,979.95	1,799,035.91	40.33430236	-104.43082192
5,000.00	5.84	237.66	4,984.63	-161.73	-255.41	14,648,974.45	1,799,027.35	40.33428741	-104.43085277

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well 70 Ranch 10-08-2L
Company:	Confluence Resources	TVD Reference:	RKB=4593+24 @ 4617.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4593+24 @ 4617.00ft
Site:	Section 03-T04N-R63W	North Reference:	True
Well:	70 Ranch 10-08-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	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	5.84	237.66	5,084.11	-167.17	-264.00	14,648,968.95	1,799,018.79	40.33427246	-104.43088362	
5,200.00	5.84	237.66	5,183.59	-172.62	-272.60	14,648,963.45	1,799,010.23	40.33425751	-104.43091447	
5,300.00	5.84	237.66	5,283.07	-178.06	-281.20	14,648,957.95	1,799,001.67	40.33424256	-104.43094532	
5,400.00	5.84	237.66	5,382.55	-183.50	-289.79	14,648,952.45	1,798,993.10	40.33422762	-104.43097616	
5,500.00	5.84	237.66	5,482.03	-188.95	-298.39	14,648,946.95	1,798,984.54	40.33421267	-104.43100701	
5,600.00	5.84	237.66	5,581.52	-194.39	-306.99	14,648,941.45	1,798,975.98	40.33419772	-104.43103786	
5,700.00	5.84	237.66	5,681.00	-199.83	-315.59	14,648,935.95	1,798,967.42	40.33418277	-104.43106871	
5,800.00	5.84	237.66	5,780.48	-205.28	-324.18	14,648,930.46	1,798,958.86	40.33416782	-104.43109956	
5,851.69	5.84	237.66	5,831.90	-208.09	-328.63	14,648,927.61	1,798,954.43	40.33416009	-104.43111550	
Begin 10°/100' build/turn										
5,900.00	9.33	211.46	5,879.79	-212.75	-332.75	14,648,922.93	1,798,950.34	40.33414730	-104.43113030	
6,000.00	18.57	194.55	5,976.77	-235.14	-341.01	14,648,900.49	1,798,942.23	40.33408583	-104.43115992	
6,100.00	28.32	188.85	6,068.42	-274.08	-348.67	14,648,861.50	1,798,934.81	40.33397889	-104.43118743	
6,200.00	38.19	185.91	6,151.95	-328.40	-355.52	14,648,807.13	1,798,928.31	40.33382972	-104.43121200	
6,300.00	48.11	184.04	6,224.82	-396.45	-361.34	14,648,739.05	1,798,922.93	40.33364286	-104.43123288	
6,400.00	58.05	182.68	6,284.81	-476.16	-365.96	14,648,659.31	1,798,918.83	40.33342398	-104.43124944	
6,500.00	68.00	181.58	6,330.12	-565.11	-369.23	14,648,570.34	1,798,916.13	40.33317974	-104.43126117	
6,600.00	77.96	180.63	6,359.35	-660.59	-371.06	14,648,474.85	1,798,914.92	40.33291755	-104.43126773	
6,700.00	87.92	179.75	6,371.62	-759.71	-371.39	14,648,375.74	1,798,915.23	40.33264538	-104.43126890	
6,720.85	90.00	179.57	6,372.00	-780.55	-371.26	14,648,354.89	1,798,915.48	40.33258814	-104.43126846	
LP Begin 90° lateral										
6,800.00	90.00	179.57	6,372.00	-859.70	-370.67	14,648,275.75	1,798,916.58	40.33237081	-104.43126634	
6,900.00	90.00	179.57	6,372.00	-959.70	-369.93	14,648,175.76	1,798,917.97	40.33209622	-104.43126366	
7,000.00	90.00	179.57	6,372.00	-1,059.70	-369.19	14,648,075.77	1,798,919.36	40.33182163	-104.43126099	
7,100.00	90.00	179.57	6,372.00	-1,159.69	-368.44	14,647,975.78	1,798,920.75	40.33154705	-104.43125831	
7,200.00	90.00	179.57	6,372.00	-1,259.69	-367.70	14,647,875.79	1,798,922.13	40.33127246	-104.43125564	
7,300.00	90.00	179.57	6,372.00	-1,359.69	-366.95	14,647,775.80	1,798,923.52	40.33099787	-104.43125296	
7,400.00	90.00	179.57	6,372.00	-1,459.68	-366.21	14,647,675.81	1,798,924.91	40.33072328	-104.43125029	
7,500.00	90.00	179.57	6,372.00	-1,559.68	-365.47	14,647,575.82	1,798,926.30	40.33044869	-104.43124761	
7,600.00	90.00	179.57	6,372.00	-1,659.68	-364.72	14,647,475.83	1,798,927.69	40.33017411	-104.43124494	
7,700.00	90.00	179.57	6,372.00	-1,759.68	-363.98	14,647,375.84	1,798,929.07	40.32989952	-104.43124226	
7,800.00	90.00	179.57	6,372.00	-1,859.67	-363.23	14,647,275.85	1,798,930.46	40.32962493	-104.43123959	
7,900.00	90.00	179.57	6,372.00	-1,959.67	-362.49	14,647,175.86	1,798,931.85	40.32935034	-104.43123691	
8,000.00	90.00	179.57	6,372.00	-2,059.67	-361.75	14,647,075.87	1,798,933.24	40.32907576	-104.43123424	
8,100.00	90.00	179.57	6,372.00	-2,159.66	-361.00	14,646,975.88	1,798,934.63	40.32880117	-104.43123156	
8,200.00	90.00	179.57	6,372.00	-2,259.66	-360.26	14,646,875.89	1,798,936.01	40.32852658	-104.43122889	
8,300.00	90.00	179.57	6,372.00	-2,359.66	-359.51	14,646,775.90	1,798,937.40	40.32825199	-104.43122621	
8,400.00	90.00	179.57	6,372.00	-2,459.66	-358.77	14,646,675.91	1,798,938.79	40.32797741	-104.43122354	
8,500.00	90.00	179.57	6,372.00	-2,559.65	-358.03	14,646,575.92	1,798,940.18	40.32770282	-104.43122086	
8,600.00	90.00	179.57	6,372.00	-2,659.65	-357.28	14,646,475.93	1,798,941.57	40.32742823	-104.43121819	
8,700.00	90.00	179.57	6,372.00	-2,759.65	-356.54	14,646,375.94	1,798,942.95	40.32715364	-104.43121551	
8,800.00	90.00	179.57	6,372.00	-2,859.65	-355.79	14,646,275.95	1,798,944.34	40.32687906	-104.43121284	
8,900.00	90.00	179.57	6,372.00	-2,959.64	-355.05	14,646,175.96	1,798,945.73	40.32660447	-104.43121016	
9,000.00	90.00	179.57	6,372.00	-3,059.64	-354.31	14,646,075.97	1,798,947.12	40.32632988	-104.43120749	
9,100.00	90.00	179.57	6,372.00	-3,159.64	-353.56	14,645,975.98	1,798,948.51	40.32605529	-104.43120481	
9,200.00	90.00	179.57	6,372.00	-3,259.63	-352.82	14,645,875.98	1,798,949.89	40.32578070	-104.43120214	
9,300.00	90.00	179.57	6,372.00	-3,359.63	-352.07	14,645,775.99	1,798,951.28	40.32550612	-104.43119946	
9,400.00	90.00	179.57	6,372.00	-3,459.63	-351.33	14,645,676.00	1,798,952.67	40.32523153	-104.43119678	
9,500.00	90.00	179.57	6,372.00	-3,559.63	-350.59	14,645,576.01	1,798,954.06	40.32495694	-104.43119411	
9,600.00	90.00	179.57	6,372.00	-3,659.62	-349.84	14,645,476.02	1,798,955.45	40.32468235	-104.43119143	
9,700.00	90.00	179.57	6,372.00	-3,759.62	-349.10	14,645,376.03	1,798,956.83	40.32440777	-104.43118876	
9,800.00	90.00	179.57	6,372.00	-3,859.62	-348.35	14,645,276.04	1,798,958.22	40.32413318	-104.43118608	
9,900.00	90.00	179.57	6,372.00	-3,959.61	-347.61	14,645,176.05	1,798,959.61	40.32385859	-104.43118341	
10,000.00	90.00	179.57	6,372.00	-4,059.61	-346.87	14,645,076.06	1,798,961.00	40.32358400	-104.43118073	

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well 70 Ranch 10-08-2L
Company:	Confluence Resources	TVD Reference:	RKB=4593+24 @ 4617.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4593+24 @ 4617.00ft
Site:	Section 03-T04N-R63W	North Reference:	True
Well:	70 Ranch 10-08-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	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	6,372.00	-4,159.61	-346.12	14,644,976.07	1,798,962.39	40.32330941	-104.43117806
10,200.00	90.00	179.57	6,372.00	-4,259.61	-345.38	14,644,876.08	1,798,963.77	40.32303483	-104.43117538
10,300.00	90.00	179.57	6,372.00	-4,359.60	-344.63	14,644,776.09	1,798,965.16	40.32276024	-104.43117271
10,400.00	90.00	179.57	6,372.00	-4,459.60	-343.89	14,644,676.10	1,798,966.55	40.32248565	-104.43117003
10,500.00	90.00	179.57	6,372.00	-4,559.60	-343.15	14,644,576.11	1,798,967.94	40.32221106	-104.43116736
10,600.00	90.00	179.57	6,372.00	-4,659.60	-342.40	14,644,476.12	1,798,969.33	40.32193647	-104.43116468
10,700.00	90.00	179.57	6,372.00	-4,759.59	-341.66	14,644,376.13	1,798,970.71	40.32166189	-104.43116201
10,800.00	90.00	179.57	6,372.00	-4,859.59	-340.91	14,644,276.14	1,798,972.10	40.32138730	-104.43115933
10,900.00	90.00	179.57	6,372.00	-4,959.59	-340.17	14,644,176.15	1,798,973.49	40.32111271	-104.43115666
11,000.00	90.00	179.57	6,372.00	-5,059.58	-339.43	14,644,076.16	1,798,974.88	40.32083812	-104.43115398
11,100.00	90.00	179.57	6,372.00	-5,159.58	-338.68	14,643,976.17	1,798,976.27	40.32056353	-104.43115131
11,200.00	90.00	179.57	6,372.00	-5,259.58	-337.94	14,643,876.18	1,798,977.65	40.32028895	-104.43114863
11,300.00	90.00	179.57	6,372.00	-5,359.58	-337.19	14,643,776.19	1,798,979.04	40.32001436	-104.43114596
11,400.00	90.00	179.57	6,372.00	-5,459.57	-336.45	14,643,676.20	1,798,980.43	40.31973977	-104.43114328
11,500.00	90.00	179.57	6,372.00	-5,559.57	-335.70	14,643,576.21	1,798,981.82	40.31946518	-104.43114061
11,600.00	90.00	179.57	6,372.00	-5,659.57	-334.96	14,643,476.22	1,798,983.21	40.31919059	-104.43113794
11,700.00	90.00	179.57	6,372.00	-5,759.57	-334.22	14,643,376.23	1,798,984.59	40.31891601	-104.43113526
11,800.00	90.00	179.57	6,372.00	-5,859.56	-333.47	14,643,276.24	1,798,985.98	40.31864142	-104.43113259
11,900.00	90.00	179.57	6,372.00	-5,959.56	-332.73	14,643,176.25	1,798,987.37	40.31836683	-104.43112991
12,000.00	90.00	179.57	6,372.00	-6,059.56	-331.98	14,643,076.26	1,798,988.76	40.31809224	-104.43112724
12,100.00	90.00	179.57	6,372.00	-6,159.55	-331.24	14,642,976.27	1,798,990.15	40.31781765	-104.43112456
12,200.00	90.00	179.57	6,372.00	-6,259.55	-330.50	14,642,876.28	1,798,991.53	40.31754307	-104.43112189
12,300.00	90.00	179.57	6,372.00	-6,359.55	-329.75	14,642,776.29	1,798,992.92	40.31726848	-104.43111921
12,400.00	90.00	179.57	6,372.00	-6,459.55	-329.01	14,642,676.30	1,798,994.31	40.31699389	-104.43111654
12,500.00	90.00	179.57	6,372.00	-6,559.54	-328.26	14,642,576.31	1,798,995.70	40.31671930	-104.43111386
12,600.00	90.00	179.57	6,372.00	-6,659.54	-327.52	14,642,476.32	1,798,997.09	40.31644471	-104.43111119
12,700.00	90.00	179.57	6,372.00	-6,759.54	-326.78	14,642,376.33	1,798,998.47	40.31617013	-104.43110851
12,800.00	90.00	179.57	6,372.00	-6,859.53	-326.03	14,642,276.34	1,798,999.86	40.31589554	-104.43110584
12,900.00	90.00	179.57	6,372.00	-6,959.53	-325.29	14,642,176.35	1,799,001.25	40.31562095	-104.43110316
13,000.00	90.00	179.57	6,372.00	-7,059.53	-324.54	14,642,076.36	1,799,002.64	40.31534636	-104.43110049
13,100.00	90.00	179.57	6,372.00	-7,159.53	-323.80	14,641,976.37	1,799,004.03	40.31507177	-104.43109781
13,200.00	90.00	179.57	6,372.00	-7,259.52	-323.06	14,641,876.38	1,799,005.41	40.31479718	-104.43109514
13,300.00	90.00	179.57	6,372.00	-7,359.52	-322.31	14,641,776.39	1,799,006.80	40.31452260	-104.43109246
13,400.00	90.00	179.57	6,372.00	-7,459.52	-321.57	14,641,676.40	1,799,008.19	40.31424801	-104.43108979
13,500.00	90.00	179.57	6,372.00	-7,559.52	-320.82	14,641,576.41	1,799,009.58	40.31397342	-104.43108711
13,600.00	90.00	179.57	6,372.00	-7,659.51	-320.08	14,641,476.42	1,799,010.97	40.31369883	-104.43108444
13,700.00	90.00	179.57	6,372.00	-7,759.51	-319.34	14,641,376.43	1,799,012.35	40.31342424	-104.43108176
13,800.00	90.00	179.57	6,372.00	-7,859.51	-318.59	14,641,276.44	1,799,013.74	40.31314965	-104.43107909
13,900.00	90.00	179.57	6,372.00	-7,959.50	-317.85	14,641,176.45	1,799,015.13	40.31287507	-104.43107641
14,000.00	90.00	179.57	6,372.00	-8,059.50	-317.10	14,641,076.46	1,799,016.52	40.31260049	-104.43107374
14,100.00	90.00	179.57	6,372.00	-8,159.50	-316.36	14,640,976.47	1,799,017.91	40.31232590	-104.43107107
14,200.00	90.00	179.57	6,372.00	-8,259.50	-315.62	14,640,876.48	1,799,019.29	40.31205131	-104.43106839
14,300.00	90.00	179.57	6,372.00	-8,359.49	-314.87	14,640,776.49	1,799,020.68	40.31177672	-104.43106572
14,400.00	90.00	179.57	6,372.00	-8,459.49	-314.13	14,640,676.50	1,799,022.07	40.31150213	-104.43106304
14,500.00	90.00	179.57	6,372.00	-8,559.49	-313.38	14,640,576.51	1,799,023.46	40.31122754	-104.43106037
14,600.00	90.00	179.57	6,372.00	-8,659.49	-312.64	14,640,476.52	1,799,024.85	40.31095296	-104.43105769
14,700.00	90.00	179.57	6,372.00	-8,759.48	-311.90	14,640,376.53	1,799,026.23	40.31067837	-104.43105502
14,800.00	90.00	179.57	6,372.00	-8,859.48	-311.15	14,640,276.54	1,799,027.62	40.31040378	-104.43105234
14,900.00	90.00	179.57	6,372.00	-8,959.48	-310.41	14,640,176.55	1,799,029.01	40.31012919	-104.43104967
15,000.00	90.00	179.57	6,372.00	-9,059.47	-309.66	14,640,076.56	1,799,030.40	40.30985460	-104.43104699
15,100.00	90.00	179.57	6,372.00	-9,159.47	-308.92	14,639,976.57	1,799,031.79	40.30958001	-104.43104432
15,200.00	90.00	179.57	6,372.00	-9,259.47	-308.18	14,639,876.57	1,799,033.17	40.30930543	-104.43104164
15,300.00	90.00	179.57	6,372.00	-9,359.47	-307.43	14,639,776.58	1,799,034.56	40.30903084	-104.43103897
15,400.00	90.00	179.57	6,372.00	-9,459.46	-306.69	14,639,676.59	1,799,035.95	40.30875625	-104.43103630
15,500.00	90.00	179.57	6,372.00	-9,559.46	-305.94	14,639,576.60	1,799,037.34	40.30848166	-104.43103362

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well 70 Ranch 10-08-2L
Company:	Confluence Resources	TVD Reference:	RKB=4593+24 @ 4617.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4593+24 @ 4617.00ft
Site:	Section 03-T04N-R63W	North Reference:	True
Well:	70 Ranch 10-08-2L	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	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	6,372.00	-9,659.46	-305.20	14,639,476.61	1,799,038.73	40.30820707	-104.43103095
15,700.00	90.00	179.57	6,372.00	-9,759.45	-304.46	14,639,376.62	1,799,040.12	40.30793248	-104.43102827
15,800.00	90.00	179.57	6,372.00	-9,859.45	-303.71	14,639,276.63	1,799,041.50	40.30765789	-104.43102560
15,900.00	90.00	179.57	6,372.00	-9,959.45	-302.97	14,639,176.64	1,799,042.89	40.30738331	-104.43102292
16,000.00	90.00	179.57	6,372.00	-10,059.45	-302.22	14,639,076.65	1,799,044.28	40.30710872	-104.43102025
16,100.00	90.00	179.57	6,372.00	-10,159.44	-301.48	14,638,976.66	1,799,045.67	40.30683413	-104.43101757
16,200.00	90.00	179.57	6,372.00	-10,259.44	-300.74	14,638,876.67	1,799,047.06	40.30655954	-104.43101490
16,300.00	90.00	179.57	6,372.00	-10,359.44	-299.99	14,638,776.68	1,799,048.44	40.30628495	-104.43101222
16,336.67	90.00	179.57	6,372.00	-10,396.10	-299.72	14,638,740.02	1,799,048.95	40.30618427	-104.43101124
PBHL/TD 16336.67 MD/6372.00 TVD									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
70 Ranch 10-08-2L SL 2 - plan misses target center by 29.52ft at 24.00ft MD (24.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.37	24.00	-29.27	-3.79	14,649,108.52	1,799,278.11	40.33465112	-104.42994990
70 Ranch 10-08-2L BHL - plan hits target center - Point	0.00	0.37	6,372.00	-10,396.10	-299.72	14,638,740.02	1,799,048.95	40.30618427	-104.43101124
70 Ranch 10-08-2L LP 4 - plan hits target center - Point	0.00	0.37	6,372.00	-780.55	-371.26	14,648,354.89	1,798,915.48	40.33258814	-104.43126846

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
2,058.40	2,058.30	-1.59	-2.51	Begin 5.84° tangent
5,851.69	5,831.90	-208.09	-328.63	Begin 10°/100' build/turn
6,720.85	6,372.00	-780.55	-371.26	LP Begin 90° lateral
16,336.67	6,372.00	-10,396.10	-299.72	PBHL/TD 16336.67 MD/6372.00 TVD