



**Weld County, Colorado**  
**Section 33-T01N-R65W**  
**Desha 4-08-4L**  
**plan1**

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	5304.89	30.49	127.69	5290.70	-48.44	62.69	10.00	54.48	Begin 30.49° tangent
4	7439.66	30.49	127.69	7130.29	-710.65	919.80	0.00	799.25	Begin 10°/100' build/turn
5	8158.49	89.90	180.12	7489.00	-1254.89	1085.73	10.00	1357.38	LP Begin 89.90° lateral section
6	17494.28	89.90	180.12	7506.00	-10590.64	1066.77	0.00	10644.23	PBHL/TD 17494.28 MD/7506.00 TVD

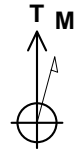
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP Desha 4-8-4L 470 FNL 1530 FWL	7489.00	-1254.89	1085.7314526625.74	1732013.46	39.99924265	-104.67293203	
BHL Desha 4-8-4L 470 FSL 1530 FWL	7506.00	-10590.64	1066.7714517290.00	1732028.35	39.97360511	-104.67300112	

Desha 4-08-4L			
Surf loc: 785 FSL 450 FWL Section 33-T01N-R65W			
NAD83 Colorado - HARN			
Universal Transverse Mercator (US Survey Feet)			
Zone 13N (108 W to 102 W)			
RKB=5078+25 @ 5103.00ft			
Northing	Easting	Latitude	Longitude
14527876.68	1730923.19	40.00268884	-104.67680884

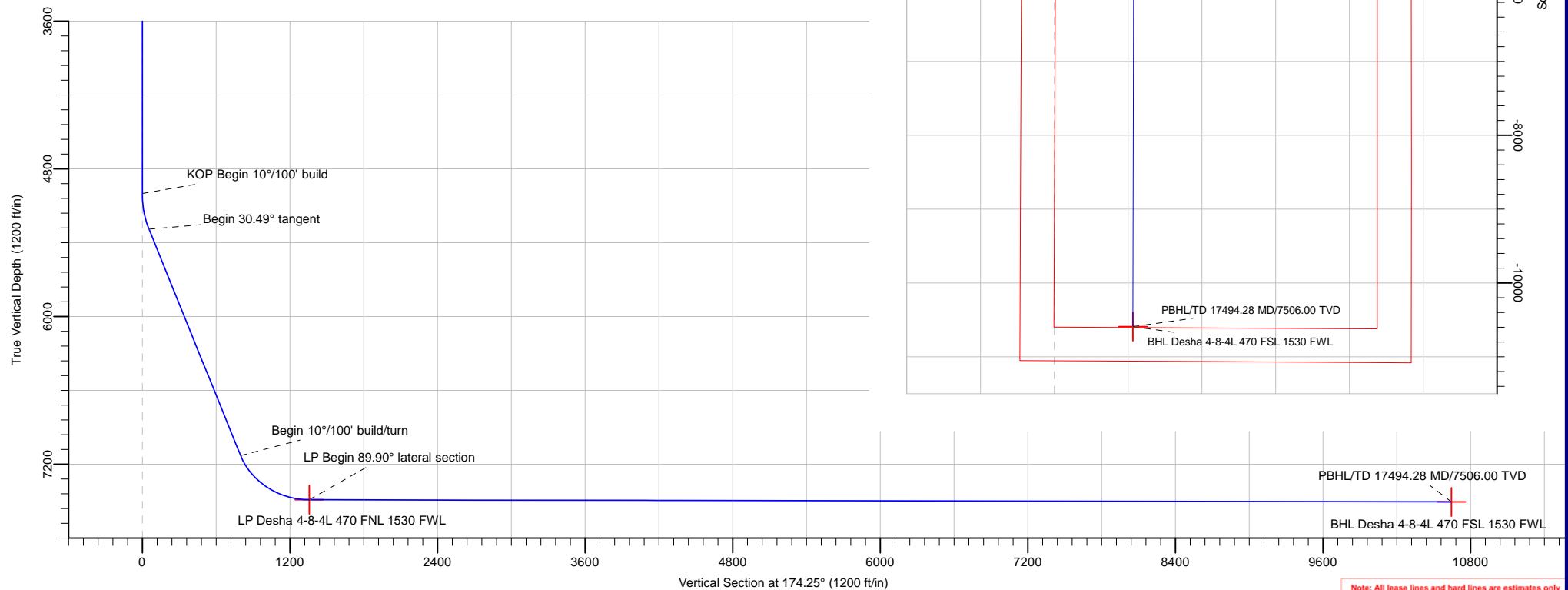
Azimuth Corrections:

To convert a Magnetic Direction to a True Direction, Add 8.28° East



Azimuths to True North  
Magnetic North: 8.28°

Magnetic Field  
Strength: 52146.2snT  
Dip Angle: 66.45°  
Date: 5/29/2017  
Model: HDGM



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 Desha 4-08-4L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Site:</b>	Section 33-T01N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Desha 4-08-4L	<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 33-T01N-R65W			
Site Position:		Northing:	14,527,751.12 usft	Latitude:	40.00234552
From:	Map	Easting:	1,730,774.27 usft	Longitude:	-104.67734224
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.21 °

Well	Desha 4-08-4L, Surf loc: 785 FSL 450 FWL Section 33-T01N-R65W					
Well Position	+N/-S	125.02 ft	Northing:	14,527,876.68 usft	Latitude:	40.00268884
	+E/-W	149.37 ft	Easting:	1,730,923.19 usft	Longitude:	-104.67680884
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,078.00 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	5/29/2017	8.28	66.45	52,146.20000000

<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	174.25

<b>Plan Survey Tool Program</b>	<b>Date</b>	8/29/2017		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	17,494.28	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	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,304.89	30.49	127.69	5,290.70	-48.44	62.69	10.00	10.00	0.00	127.69	
7,439.66	30.49	127.69	7,130.29	-710.65	919.80	0.00	0.00	0.00	0.00	
8,158.49	89.90	180.12	7,489.00	-1,254.89	1,085.73	10.00	8.26	7.29	56.50	LP Desha 4-8-4L 470
17,494.28	89.90	180.12	7,506.00	-10,590.64	1,066.77	0.00	0.00	0.00	0.00	BHL Desha 4-8-4L 47

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-08-4L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Site:</b>	Section 33-T01N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Desha 4-08-4L	<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
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
<b>KOP Begin 10°/100' build</b>									
5,100.00	10.00	127.69	5,099.49	-5.32	6.89	5.99	10.00	10.00	0.00
5,200.00	20.00	127.69	5,195.96	-21.13	27.34	23.76	10.00	10.00	0.00

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<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Site:</b>	Section 33-T01N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Desha 4-08-4L	<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)
5,300.00	30.00	127.69	5,286.48	-46.93	60.74	52.78	10.00	10.00	0.00
5,304.89	30.49	127.69	5,290.70	-48.44	62.69	54.48	10.00	10.00	0.00
Begin 30.49° tangent									
5,400.00	30.49	127.69	5,372.66	-77.94	100.88	87.66	0.00	0.00	0.00
5,500.00	30.49	127.69	5,458.84	-108.96	141.03	122.55	0.00	0.00	0.00
5,600.00	30.49	127.69	5,545.01	-139.98	181.18	157.43	0.00	0.00	0.00
5,700.00	30.49	127.69	5,631.18	-171.00	221.33	192.32	0.00	0.00	0.00
5,800.00	30.49	127.69	5,717.35	-202.02	261.48	227.21	0.00	0.00	0.00
5,900.00	30.49	127.69	5,803.53	-233.04	301.63	262.10	0.00	0.00	0.00
6,000.00	30.49	127.69	5,889.70	-264.06	341.78	296.99	0.00	0.00	0.00
6,100.00	30.49	127.69	5,975.87	-295.08	381.93	331.87	0.00	0.00	0.00
6,200.00	30.49	127.69	6,062.04	-326.10	422.08	366.76	0.00	0.00	0.00
6,300.00	30.49	127.69	6,148.22	-357.12	462.23	401.65	0.00	0.00	0.00
6,400.00	30.49	127.69	6,234.39	-388.14	502.38	436.54	0.00	0.00	0.00
6,500.00	30.49	127.69	6,320.56	-419.16	542.53	471.43	0.00	0.00	0.00
6,600.00	30.49	127.69	6,406.74	-450.18	582.68	506.31	0.00	0.00	0.00
6,700.00	30.49	127.69	6,492.91	-481.20	622.83	541.20	0.00	0.00	0.00
6,800.00	30.49	127.69	6,579.08	-512.22	662.97	576.09	0.00	0.00	0.00
6,900.00	30.49	127.69	6,665.25	-543.24	703.12	610.98	0.00	0.00	0.00
7,000.00	30.49	127.69	6,751.43	-574.27	743.27	645.86	0.00	0.00	0.00
7,100.00	30.49	127.69	6,837.60	-605.29	783.42	680.75	0.00	0.00	0.00
7,200.00	30.49	127.69	6,923.77	-636.31	823.57	715.64	0.00	0.00	0.00
7,300.00	30.49	127.69	7,009.94	-667.33	863.72	750.53	0.00	0.00	0.00
7,400.00	30.49	127.69	7,096.12	-698.35	903.87	785.42	0.00	0.00	0.00
7,439.66	30.49	127.69	7,130.29	-710.65	919.80	799.25	0.00	0.00	0.00
Begin 10°/100' build/turn									
7,500.00	34.16	136.67	7,181.31	-732.35	943.55	823.23	10.00	6.08	14.89
7,600.00	41.33	148.10	7,260.43	-780.93	980.36	875.25	10.00	7.18	11.43
7,700.00	49.35	156.53	7,330.72	-843.92	1,013.00	941.20	10.00	8.02	8.43
7,800.00	57.85	163.10	7,390.04	-919.42	1,040.49	1,019.07	10.00	8.50	6.57
7,900.00	66.63	168.52	7,436.60	-1,005.12	1,061.98	1,106.49	10.00	8.78	5.42
8,000.00	75.57	173.26	7,468.98	-1,098.43	1,076.83	1,200.82	10.00	8.94	4.74
8,100.00	84.60	177.63	7,486.19	-1,196.50	1,084.59	1,299.17	10.00	9.03	4.37
8,158.49	89.90	180.12	7,489.00	-1,254.89	1,085.73	1,357.38	10.00	9.06	4.24
LP Begin 89.90° lateral section									
8,200.00	89.90	180.12	7,489.08	-1,296.40	1,085.64	1,398.67	0.00	0.00	0.00
8,300.00	89.90	180.12	7,489.26	-1,396.40	1,085.44	1,498.15	0.00	0.00	0.00
8,400.00	89.90	180.12	7,489.44	-1,496.40	1,085.24	1,597.62	0.00	0.00	0.00
8,500.00	89.90	180.12	7,489.62	-1,596.39	1,085.04	1,697.10	0.00	0.00	0.00
8,600.00	89.90	180.12	7,489.80	-1,696.39	1,084.83	1,796.58	0.00	0.00	0.00
8,700.00	89.90	180.12	7,489.99	-1,796.39	1,084.63	1,896.05	0.00	0.00	0.00
8,800.00	89.90	180.12	7,490.17	-1,896.39	1,084.43	1,995.53	0.00	0.00	0.00
8,900.00	89.90	180.12	7,490.35	-1,996.39	1,084.22	2,095.00	0.00	0.00	0.00
9,000.00	89.90	180.12	7,490.53	-2,096.39	1,084.02	2,194.48	0.00	0.00	0.00
9,100.00	89.90	180.12	7,490.71	-2,196.39	1,083.82	2,293.95	0.00	0.00	0.00
9,200.00	89.90	180.12	7,490.90	-2,296.39	1,083.61	2,393.43	0.00	0.00	0.00
9,300.00	89.90	180.12	7,491.08	-2,396.39	1,083.41	2,492.91	0.00	0.00	0.00
9,400.00	89.90	180.12	7,491.26	-2,496.39	1,083.21	2,592.38	0.00	0.00	0.00
9,500.00	89.90	180.12	7,491.44	-2,596.39	1,083.00	2,691.86	0.00	0.00	0.00
9,600.00	89.90	180.12	7,491.63	-2,696.39	1,082.80	2,791.33	0.00	0.00	0.00
9,700.00	89.90	180.12	7,491.81	-2,796.39	1,082.60	2,890.81	0.00	0.00	0.00
9,800.00	89.90	180.12	7,491.99	-2,896.39	1,082.39	2,990.29	0.00	0.00	0.00
9,900.00	89.90	180.12	7,492.17	-2,996.39	1,082.19	3,089.76	0.00	0.00	0.00

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<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Site:</b>	Section 33-T01N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Desha 4-08-4L	<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	89.90	180.12	7,492.35	-3,096.39	1,081.99	3,189.24	0.00	0.00	0.00
10,100.00	89.90	180.12	7,492.54	-3,196.39	1,081.79	3,288.71	0.00	0.00	0.00
10,200.00	89.90	180.12	7,492.72	-3,296.39	1,081.58	3,388.19	0.00	0.00	0.00
10,300.00	89.90	180.12	7,492.90	-3,396.39	1,081.38	3,487.66	0.00	0.00	0.00
10,400.00	89.90	180.12	7,493.08	-3,496.39	1,081.18	3,587.14	0.00	0.00	0.00
10,500.00	89.90	180.12	7,493.26	-3,596.39	1,080.97	3,686.62	0.00	0.00	0.00
10,600.00	89.90	180.12	7,493.45	-3,696.39	1,080.77	3,786.09	0.00	0.00	0.00
10,700.00	89.90	180.12	7,493.63	-3,796.39	1,080.57	3,885.57	0.00	0.00	0.00
10,800.00	89.90	180.12	7,493.81	-3,896.39	1,080.36	3,985.04	0.00	0.00	0.00
10,900.00	89.90	180.12	7,493.99	-3,996.39	1,080.16	4,084.52	0.00	0.00	0.00
11,000.00	89.90	180.12	7,494.17	-4,096.39	1,079.96	4,183.99	0.00	0.00	0.00
11,100.00	89.90	180.12	7,494.36	-4,196.39	1,079.75	4,283.47	0.00	0.00	0.00
11,200.00	89.90	180.12	7,494.54	-4,296.38	1,079.55	4,382.95	0.00	0.00	0.00
11,300.00	89.90	180.12	7,494.72	-4,396.38	1,079.35	4,482.42	0.00	0.00	0.00
11,400.00	89.90	180.12	7,494.90	-4,496.38	1,079.14	4,581.90	0.00	0.00	0.00
11,500.00	89.90	180.12	7,495.08	-4,596.38	1,078.94	4,681.37	0.00	0.00	0.00
11,600.00	89.90	180.12	7,495.27	-4,696.38	1,078.74	4,780.85	0.00	0.00	0.00
11,700.00	89.90	180.12	7,495.45	-4,796.38	1,078.53	4,880.33	0.00	0.00	0.00
11,800.00	89.90	180.12	7,495.63	-4,896.38	1,078.33	4,979.80	0.00	0.00	0.00
11,900.00	89.90	180.12	7,495.81	-4,996.38	1,078.13	5,079.28	0.00	0.00	0.00
12,000.00	89.90	180.12	7,496.00	-5,096.38	1,077.93	5,178.75	0.00	0.00	0.00
12,100.00	89.90	180.12	7,496.18	-5,196.38	1,077.72	5,278.23	0.00	0.00	0.00
12,200.00	89.90	180.12	7,496.36	-5,296.38	1,077.52	5,377.70	0.00	0.00	0.00
12,300.00	89.90	180.12	7,496.54	-5,396.38	1,077.32	5,477.18	0.00	0.00	0.00
12,400.00	89.90	180.12	7,496.72	-5,496.38	1,077.11	5,576.66	0.00	0.00	0.00
12,500.00	89.90	180.12	7,496.91	-5,596.38	1,076.91	5,676.13	0.00	0.00	0.00
12,600.00	89.90	180.12	7,497.09	-5,696.38	1,076.71	5,775.61	0.00	0.00	0.00
12,700.00	89.90	180.12	7,497.27	-5,796.38	1,076.50	5,875.08	0.00	0.00	0.00
12,800.00	89.90	180.12	7,497.45	-5,896.38	1,076.30	5,974.56	0.00	0.00	0.00
12,900.00	89.90	180.12	7,497.63	-5,996.38	1,076.10	6,074.04	0.00	0.00	0.00
13,000.00	89.90	180.12	7,497.82	-6,096.38	1,075.89	6,173.51	0.00	0.00	0.00
13,100.00	89.90	180.12	7,498.00	-6,196.38	1,075.69	6,272.99	0.00	0.00	0.00
13,200.00	89.90	180.12	7,498.18	-6,296.38	1,075.49	6,372.46	0.00	0.00	0.00
13,300.00	89.90	180.12	7,498.36	-6,396.38	1,075.28	6,471.94	0.00	0.00	0.00
13,400.00	89.90	180.12	7,498.54	-6,496.38	1,075.08	6,571.41	0.00	0.00	0.00
13,500.00	89.90	180.12	7,498.73	-6,596.38	1,074.88	6,670.89	0.00	0.00	0.00
13,600.00	89.90	180.12	7,498.91	-6,696.38	1,074.68	6,770.37	0.00	0.00	0.00
13,700.00	89.90	180.12	7,499.09	-6,796.38	1,074.47	6,869.84	0.00	0.00	0.00
13,800.00	89.90	180.12	7,499.27	-6,896.38	1,074.27	6,969.32	0.00	0.00	0.00
13,900.00	89.90	180.12	7,499.46	-6,996.37	1,074.07	7,068.79	0.00	0.00	0.00
14,000.00	89.90	180.12	7,499.64	-7,096.37	1,073.86	7,168.27	0.00	0.00	0.00
14,100.00	89.90	180.12	7,499.82	-7,196.37	1,073.66	7,267.74	0.00	0.00	0.00
14,200.00	89.90	180.12	7,500.00	-7,296.37	1,073.46	7,367.22	0.00	0.00	0.00
14,300.00	89.90	180.12	7,500.18	-7,396.37	1,073.25	7,466.70	0.00	0.00	0.00
14,400.00	89.90	180.12	7,500.37	-7,496.37	1,073.05	7,566.17	0.00	0.00	0.00
14,500.00	89.90	180.12	7,500.55	-7,596.37	1,072.85	7,665.65	0.00	0.00	0.00
14,600.00	89.90	180.12	7,500.73	-7,696.37	1,072.64	7,765.12	0.00	0.00	0.00
14,700.00	89.90	180.12	7,500.91	-7,796.37	1,072.44	7,864.60	0.00	0.00	0.00
14,800.00	89.90	180.12	7,501.09	-7,896.37	1,072.24	7,964.08	0.00	0.00	0.00
14,900.00	89.90	180.12	7,501.28	-7,996.37	1,072.03	8,063.55	0.00	0.00	0.00
15,000.00	89.90	180.12	7,501.46	-8,096.37	1,071.83	8,163.03	0.00	0.00	0.00
15,100.00	89.90	180.12	7,501.64	-8,196.37	1,071.63	8,262.50	0.00	0.00	0.00
15,200.00	89.90	180.12	7,501.82	-8,296.37	1,071.43	8,361.98	0.00	0.00	0.00
15,300.00	89.90	180.12	7,502.00	-8,396.37	1,071.22	8,461.45	0.00	0.00	0.00

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-08-4L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Site:</b>	Section 33-T01N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Desha 4-08-4L	<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	89.90	180.12	7,502.19	-8,496.37	1,071.02	8,560.93	0.00	0.00	0.00
15,500.00	89.90	180.12	7,502.37	-8,596.37	1,070.82	8,660.41	0.00	0.00	0.00
15,600.00	89.90	180.12	7,502.55	-8,696.37	1,070.61	8,759.88	0.00	0.00	0.00
15,700.00	89.90	180.12	7,502.73	-8,796.37	1,070.41	8,859.36	0.00	0.00	0.00
15,800.00	89.90	180.12	7,502.91	-8,896.37	1,070.21	8,958.83	0.00	0.00	0.00
15,900.00	89.90	180.12	7,503.10	-8,996.37	1,070.00	9,058.31	0.00	0.00	0.00
16,000.00	89.90	180.12	7,503.28	-9,096.37	1,069.80	9,157.79	0.00	0.00	0.00
16,100.00	89.90	180.12	7,503.46	-9,196.37	1,069.60	9,257.26	0.00	0.00	0.00
16,200.00	89.90	180.12	7,503.64	-9,296.37	1,069.39	9,356.74	0.00	0.00	0.00
16,300.00	89.90	180.12	7,503.83	-9,396.37	1,069.19	9,456.21	0.00	0.00	0.00
16,400.00	89.90	180.12	7,504.01	-9,496.37	1,068.99	9,555.69	0.00	0.00	0.00
16,500.00	89.90	180.12	7,504.19	-9,596.37	1,068.78	9,655.16	0.00	0.00	0.00
16,600.00	89.90	180.12	7,504.37	-9,696.36	1,068.58	9,754.64	0.00	0.00	0.00
16,700.00	89.90	180.12	7,504.55	-9,796.36	1,068.38	9,854.12	0.00	0.00	0.00
16,800.00	89.90	180.12	7,504.74	-9,896.36	1,068.18	9,953.59	0.00	0.00	0.00
16,900.00	89.90	180.12	7,504.92	-9,996.36	1,067.97	10,053.07	0.00	0.00	0.00
17,000.00	89.90	180.12	7,505.10	-10,096.36	1,067.77	10,152.54	0.00	0.00	0.00
17,100.00	89.90	180.12	7,505.28	-10,196.36	1,067.57	10,252.02	0.00	0.00	0.00
17,200.00	89.90	180.12	7,505.46	-10,296.36	1,067.36	10,351.49	0.00	0.00	0.00
17,300.00	89.90	180.12	7,505.65	-10,396.36	1,067.16	10,450.97	0.00	0.00	0.00
17,400.00	89.90	180.12	7,505.83	-10,496.36	1,066.96	10,550.45	0.00	0.00	0.00
17,494.28	89.90	180.12	7,506.00	-10,590.64	1,066.77	10,644.23	0.00	0.00	0.00
PBHL/TD 17494.28 MD/7506.00 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
LP Desha 4-8-4L 470 F	0.00	0.00	7,489.00	-1,254.89	1,085.73	14,526,625.74	1,732,013.46	39.99924265	-104.67293203
- plan hits target center									
- Point									
BHL Desha 4-8-4L 470 F	0.00	0.00	7,506.00	-10,590.64	1,066.77	14,517,290.00	1,732,028.35	39.97360512	-104.67300112
- 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
5,304.89	5,290.70	-48.44	62.69	Begin 30.49° tangent
7,439.66	7,130.29	-710.65	919.80	Begin 10°/100' build/turn
8,158.49	7,489.00	-1,254.89	1,085.73	LP Begin 89.90° lateral section
17,494.28	7,506.00	-10,590.64	1,066.77	PBHL/TD 17494.28 MD/7506.00 TVD

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-08-4L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Site:</b>	Section 33-T01N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Desha 4-08-4L	<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 33-T01N-R65W			
Site Position:		Northing:	14,527,751.12 usft	Latitude:	40.00234552
From:	Map	Easting:	1,730,774.27 usft	Longitude:	-104.67734224
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.21 °

Well	Desha 4-08-4L, Surf loc: 785 FSL 450 FWL Section 33-T01N-R65W					
Well Position	+N/-S	0.00 ft	Northing:	14,527,876.68 usft	Latitude:	40.00268884
	+E/-W	0.00 ft	Easting:	1,730,923.19 usft	Longitude:	-104.67680884
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,078.00 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	5/29/2017	8.28	66.45	52,146.20000000

<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	174.25

<b>Plan Survey Tool Program</b>	<b>Date</b>	8/29/2017		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	17,494.28 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	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,304.89	30.49	127.69	5,290.70	-48.44	62.69	10.00	10.00	0.00	127.69	
7,439.66	30.49	127.69	7,130.29	-710.65	919.80	0.00	0.00	0.00	0.00	
8,158.49	89.90	180.12	7,489.00	-1,254.89	1,085.73	10.00	8.26	7.29	56.50	LP Desha 4-8-4L 470
17,494.28	89.90	180.12	7,506.00	-10,590.64	1,066.77	0.00	0.00	0.00	0.00	BHL Desha 4-8-4L 47



<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-08-4L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Site:</b>	Section 33-T01N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Desha 4-08-4L	<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	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
100.00	0.00	0.00	100.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
200.00	0.00	0.00	200.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
300.00	0.00	0.00	300.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
400.00	0.00	0.00	400.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
500.00	0.00	0.00	500.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
600.00	0.00	0.00	600.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
700.00	0.00	0.00	700.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
800.00	0.00	0.00	800.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
900.00	0.00	0.00	900.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
2,100.00	0.00	0.00	2,100.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
2,200.00	0.00	0.00	2,200.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
2,300.00	0.00	0.00	2,300.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
2,400.00	0.00	0.00	2,400.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
2,500.00	0.00	0.00	2,500.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
2,600.00	0.00	0.00	2,600.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
2,700.00	0.00	0.00	2,700.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
2,800.00	0.00	0.00	2,800.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
2,900.00	0.00	0.00	2,900.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
3,000.00	0.00	0.00	3,000.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
3,100.00	0.00	0.00	3,100.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
3,200.00	0.00	0.00	3,200.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
3,300.00	0.00	0.00	3,300.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
3,400.00	0.00	0.00	3,400.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
3,500.00	0.00	0.00	3,500.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
3,600.00	0.00	0.00	3,600.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
3,700.00	0.00	0.00	3,700.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
3,800.00	0.00	0.00	3,800.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
3,900.00	0.00	0.00	3,900.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
4,000.00	0.00	0.00	4,000.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
4,100.00	0.00	0.00	4,100.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
4,200.00	0.00	0.00	4,200.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
4,300.00	0.00	0.00	4,300.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
4,400.00	0.00	0.00	4,400.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
4,500.00	0.00	0.00	4,500.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
4,600.00	0.00	0.00	4,600.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
4,700.00	0.00	0.00	4,700.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
4,800.00	0.00	0.00	4,800.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
4,900.00	0.00	0.00	4,900.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
5,000.00	0.00	0.00	5,000.00	0.00	0.00	14,527,876.68	1,730,923.19	40.00268884	-104.67680884
KOP Begin 10°/100' build									
5,100.00	10.00	127.69	5,099.49	-5.32	6.89	14,527,871.39	1,730,930.10	40.00267423	-104.67678424
5,200.00	20.00	127.69	5,195.96	-21.13	27.34	14,527,855.66	1,730,950.61	40.00263083	-104.67671120



<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-08-4L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Site:</b>	Section 33-T01N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Desha 4-08-4L	<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
5,300.00	30.00	127.69	5,286.48	-46.93	60.74	14,527,829.97	1,730,984.10	40.00255996	-104.67659193
5,304.89	30.49	127.69	5,290.70	-48.44	62.69	14,527,828.48	1,730,986.06	40.00255583	-104.67658497
Begin 30.49° tangent									
5,400.00	30.49	127.69	5,372.66	-77.94	100.88	14,527,799.11	1,731,024.35	40.00247480	-104.67644861
5,500.00	30.49	127.69	5,458.84	-108.96	141.03	14,527,768.24	1,731,064.61	40.00238962	-104.67630525
5,600.00	30.49	127.69	5,545.01	-139.98	181.18	14,527,737.36	1,731,104.87	40.00230443	-104.67616188
5,700.00	30.49	127.69	5,631.18	-171.00	221.33	14,527,706.49	1,731,145.14	40.00221924	-104.67601851
5,800.00	30.49	127.69	5,717.35	-202.02	261.48	14,527,675.61	1,731,185.40	40.00213406	-104.67587514
5,900.00	30.49	127.69	5,803.53	-233.04	301.63	14,527,644.74	1,731,225.66	40.00204887	-104.67573178
6,000.00	30.49	127.69	5,889.70	-264.06	341.78	14,527,613.86	1,731,265.92	40.00196368	-104.67558841
6,100.00	30.49	127.69	5,975.87	-295.08	381.93	14,527,582.99	1,731,306.18	40.00187849	-104.67544504
6,200.00	30.49	127.69	6,062.04	-326.10	422.08	14,527,552.12	1,731,346.44	40.00179330	-104.67530168
6,300.00	30.49	127.69	6,148.22	-357.12	462.23	14,527,521.24	1,731,386.71	40.00170811	-104.67515831
6,400.00	30.49	127.69	6,234.39	-388.14	502.38	14,527,490.37	1,731,426.97	40.00162293	-104.67501494
6,500.00	30.49	127.69	6,320.56	-419.16	542.53	14,527,459.49	1,731,467.23	40.00153774	-104.67487158
6,600.00	30.49	127.69	6,406.74	-450.18	582.68	14,527,428.62	1,731,507.49	40.00145255	-104.67472822
6,700.00	30.49	127.69	6,492.91	-481.20	622.83	14,527,397.74	1,731,547.75	40.00136736	-104.67458485
6,800.00	30.49	127.69	6,579.08	-512.22	662.97	14,527,366.87	1,731,588.02	40.00128217	-104.67444149
6,900.00	30.49	127.69	6,665.25	-543.24	703.12	14,527,335.99	1,731,628.28	40.00119698	-104.67429812
7,000.00	30.49	127.69	6,751.43	-574.27	743.27	14,527,305.12	1,731,668.54	40.00111179	-104.67415476
7,100.00	30.49	127.69	6,837.60	-605.29	783.42	14,527,274.25	1,731,708.80	40.00102660	-104.67401140
7,200.00	30.49	127.69	6,923.77	-636.31	823.57	14,527,243.37	1,731,749.06	40.00094141	-104.67386803
7,300.00	30.49	127.69	7,009.94	-667.33	863.72	14,527,212.50	1,731,789.32	40.00085622	-104.67372467
7,400.00	30.49	127.69	7,096.12	-698.35	903.87	14,527,181.62	1,731,829.59	40.00077103	-104.67358131
7,439.66	30.49	127.69	7,130.29	-710.65	919.80	14,527,169.38	1,731,845.55	40.00073724	-104.67352445
Begin 10°/100' build/turn									
7,500.00	34.16	136.67	7,181.31	-732.35	943.55	14,527,147.76	1,731,869.39	40.00067764	-104.67343962
7,600.00	41.33	148.10	7,260.43	-780.93	980.36	14,527,099.32	1,731,906.37	40.00054423	-104.67330820
7,700.00	49.35	156.53	7,330.72	-843.92	1,013.00	14,527,036.44	1,731,939.24	40.00037123	-104.67319166
7,800.00	57.85	163.10	7,390.04	-919.42	1,040.49	14,526,961.05	1,731,967.00	40.00016391	-104.67309353
7,900.00	66.63	168.52	7,436.60	-1,005.12	1,061.98	14,526,875.42	1,731,988.81	39.99992855	-104.67301679
8,000.00	75.57	173.26	7,468.98	-1,098.43	1,076.83	14,526,782.17	1,732,003.99	39.99967232	-104.67296378
8,100.00	84.60	177.63	7,486.19	-1,196.50	1,084.59	14,526,684.13	1,732,012.10	39.99940300	-104.67293610
8,158.49	89.90	180.12	7,489.00	-1,254.89	1,085.73	14,526,625.74	1,732,013.46	39.99924265	-104.67293203
LP Begin 89.90° lateral section									
8,200.00	89.90	180.12	7,489.08	-1,296.40	1,085.64	14,526,584.24	1,732,013.52	39.99912867	-104.67293234
8,300.00	89.90	180.12	7,489.26	-1,396.40	1,085.44	14,526,484.24	1,732,013.68	39.99885405	-104.67293308
8,400.00	89.90	180.12	7,489.44	-1,496.40	1,085.24	14,526,384.24	1,732,013.84	39.99857944	-104.67293382
8,500.00	89.90	180.12	7,489.62	-1,596.39	1,085.04	14,526,284.24	1,732,014.00	39.99830482	-104.67293456
8,600.00	89.90	180.12	7,489.80	-1,696.39	1,084.83	14,526,184.24	1,732,014.16	39.99803021	-104.67293530
8,700.00	89.90	180.12	7,489.99	-1,796.39	1,084.63	14,526,084.24	1,732,014.32	39.99775559	-104.67293604
8,800.00	89.90	180.12	7,490.17	-1,896.39	1,084.43	14,525,984.24	1,732,014.48	39.99748098	-104.67293678
8,900.00	89.90	180.12	7,490.35	-1,996.39	1,084.22	14,525,884.24	1,732,014.64	39.99720636	-104.67293752
9,000.00	89.90	180.12	7,490.53	-2,096.39	1,084.02	14,525,784.24	1,732,014.80	39.99693175	-104.67293826
9,100.00	89.90	180.12	7,490.71	-2,196.39	1,083.82	14,525,684.24	1,732,014.96	39.99665713	-104.67293900
9,200.00	89.90	180.12	7,490.90	-2,296.39	1,083.61	14,525,584.24	1,732,015.12	39.99638251	-104.67293974
9,300.00	89.90	180.12	7,491.08	-2,396.39	1,083.41	14,525,484.24	1,732,015.28	39.99610790	-104.67294048
9,400.00	89.90	180.12	7,491.26	-2,496.39	1,083.21	14,525,384.24	1,732,015.44	39.99583328	-104.67294122
9,500.00	89.90	180.12	7,491.44	-2,596.39	1,083.00	14,525,284.24	1,732,015.60	39.99555867	-104.67294196
9,600.00	89.90	180.12	7,491.63	-2,696.39	1,082.80	14,525,184.24	1,732,015.76	39.99528405	-104.67294270
9,700.00	89.90	180.12	7,491.81	-2,796.39	1,082.60	14,525,084.24	1,732,015.92	39.99500944	-104.67294345
9,800.00	89.90	180.12	7,491.99	-2,896.39	1,082.39	14,524,984.24	1,732,016.08	39.99473482	-104.67294419
9,900.00	89.90	180.12	7,492.17	-2,996.39	1,082.19	14,524,884.25	1,732,016.24	39.99446021	-104.67294493
10,000.00	89.90	180.12	7,492.35	-3,096.39	1,081.99	14,524,784.25	1,732,016.40	39.99418559	-104.67294567

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-08-4L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Site:</b>	Section 33-T01N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Desha 4-08-4L	<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	89.90	180.12	7,492.54	-3,196.39	1,081.79	14,524,684.25	1,732,016.56	39.99391098	-104.67294641
10,200.00	89.90	180.12	7,492.72	-3,296.39	1,081.58	14,524,584.25	1,732,016.71	39.99363636	-104.67294715
10,300.00	89.90	180.12	7,492.90	-3,396.39	1,081.38	14,524,484.25	1,732,016.87	39.99336175	-104.67294789
10,400.00	89.90	180.12	7,493.08	-3,496.39	1,081.18	14,524,384.25	1,732,017.03	39.99308713	-104.67294863
10,500.00	89.90	180.12	7,493.26	-3,596.39	1,080.97	14,524,284.25	1,732,017.19	39.99281252	-104.67294937
10,600.00	89.90	180.12	7,493.45	-3,696.39	1,080.77	14,524,184.25	1,732,017.35	39.99253790	-104.67295011
10,700.00	89.90	180.12	7,493.63	-3,796.39	1,080.57	14,524,084.25	1,732,017.51	39.99226328	-104.67295085
10,800.00	89.90	180.12	7,493.81	-3,896.39	1,080.36	14,523,984.25	1,732,017.67	39.99198867	-104.67295159
10,900.00	89.90	180.12	7,493.99	-3,996.39	1,080.16	14,523,884.25	1,732,017.83	39.99171405	-104.67295233
11,000.00	89.90	180.12	7,494.17	-4,096.39	1,079.96	14,523,784.25	1,732,017.99	39.99143944	-104.67295307
11,100.00	89.90	180.12	7,494.36	-4,196.39	1,079.75	14,523,684.25	1,732,018.15	39.99116482	-104.67295381
11,200.00	89.90	180.12	7,494.54	-4,296.38	1,079.55	14,523,584.25	1,732,018.31	39.99089021	-104.67295455
11,300.00	89.90	180.12	7,494.72	-4,396.38	1,079.35	14,523,484.25	1,732,018.47	39.99061559	-104.67295529
11,400.00	89.90	180.12	7,494.90	-4,496.38	1,079.14	14,523,384.25	1,732,018.63	39.99034098	-104.67295603
11,500.00	89.90	180.12	7,495.08	-4,596.38	1,078.94	14,523,284.25	1,732,018.79	39.99006636	-104.67295677
11,600.00	89.90	180.12	7,495.27	-4,696.38	1,078.74	14,523,184.25	1,732,018.95	39.98979174	-104.67295751
11,700.00	89.90	180.12	7,495.45	-4,796.38	1,078.53	14,523,084.25	1,732,019.11	39.98951713	-104.67295825
11,800.00	89.90	180.12	7,495.63	-4,896.38	1,078.33	14,522,984.25	1,732,019.27	39.98924251	-104.67295899
11,900.00	89.90	180.12	7,495.81	-4,996.38	1,078.13	14,522,884.25	1,732,019.43	39.98896790	-104.67295973
12,000.00	89.90	180.12	7,496.00	-5,096.38	1,077.93	14,522,784.26	1,732,019.59	39.98869328	-104.67296047
12,100.00	89.90	180.12	7,496.18	-5,196.38	1,077.72	14,522,684.26	1,732,019.75	39.98841867	-104.67296121
12,200.00	89.90	180.12	7,496.36	-5,296.38	1,077.52	14,522,584.26	1,732,019.90	39.98814405	-104.67296195
12,300.00	89.90	180.12	7,496.54	-5,396.38	1,077.32	14,522,484.26	1,732,020.06	39.98786943	-104.67296269
12,400.00	89.90	180.12	7,496.72	-5,496.38	1,077.11	14,522,384.26	1,732,020.22	39.98759482	-104.67296343
12,500.00	89.90	180.12	7,496.91	-5,596.38	1,076.91	14,522,284.26	1,732,020.38	39.98732020	-104.67296417
12,600.00	89.90	180.12	7,497.09	-5,696.38	1,076.71	14,522,184.26	1,732,020.54	39.98704559	-104.67296491
12,700.00	89.90	180.12	7,497.27	-5,796.38	1,076.50	14,522,084.26	1,732,020.70	39.98677097	-104.67296565
12,800.00	89.90	180.12	7,497.45	-5,896.38	1,076.30	14,521,984.26	1,732,020.86	39.98649636	-104.67296639
12,900.00	89.90	180.12	7,497.63	-5,996.38	1,076.10	14,521,884.26	1,732,021.02	39.98622174	-104.67296713
13,000.00	89.90	180.12	7,497.82	-6,096.38	1,075.89	14,521,784.26	1,732,021.18	39.98594712	-104.67296787
13,100.00	89.90	180.12	7,498.00	-6,196.38	1,075.69	14,521,684.26	1,732,021.34	39.98567251	-104.67296861
13,200.00	89.90	180.12	7,498.18	-6,296.38	1,075.49	14,521,584.26	1,732,021.50	39.98539789	-104.67296935
13,300.00	89.90	180.12	7,498.36	-6,396.38	1,075.28	14,521,484.26	1,732,021.66	39.98512328	-104.67297009
13,400.00	89.90	180.12	7,498.54	-6,496.38	1,075.08	14,521,384.26	1,732,021.82	39.98484866	-104.67297083
13,500.00	89.90	180.12	7,498.73	-6,596.38	1,074.88	14,521,284.26	1,732,021.98	39.98457405	-104.67297157
13,600.00	89.90	180.12	7,498.91	-6,696.38	1,074.68	14,521,184.26	1,732,022.14	39.98429943	-104.67297231
13,700.00	89.90	180.12	7,499.09	-6,796.38	1,074.47	14,521,084.26	1,732,022.30	39.98402481	-104.67297305
13,800.00	89.90	180.12	7,499.27	-6,896.38	1,074.27	14,520,984.26	1,732,022.46	39.98375020	-104.67297379
13,900.00	89.90	180.12	7,499.46	-6,996.37	1,074.07	14,520,884.26	1,732,022.62	39.98347558	-104.67297453
14,000.00	89.90	180.12	7,499.64	-7,096.37	1,073.86	14,520,784.27	1,732,022.78	39.98320097	-104.67297527
14,100.00	89.90	180.12	7,499.82	-7,196.37	1,073.66	14,520,684.27	1,732,022.94	39.98292635	-104.67297601
14,200.00	89.90	180.12	7,500.00	-7,296.37	1,073.46	14,520,584.27	1,732,023.09	39.98265173	-104.67297675
14,300.00	89.90	180.12	7,500.18	-7,396.37	1,073.25	14,520,484.27	1,732,023.25	39.98237712	-104.67297749
14,400.00	89.90	180.12	7,500.37	-7,496.37	1,073.05	14,520,384.27	1,732,023.41	39.98210250	-104.67297823
14,500.00	89.90	180.12	7,500.55	-7,596.37	1,072.85	14,520,284.27	1,732,023.57	39.98182789	-104.67297897
14,600.00	89.90	180.12	7,500.73	-7,696.37	1,072.64	14,520,184.27	1,732,023.73	39.98155327	-104.67297971
14,700.00	89.90	180.12	7,500.91	-7,796.37	1,072.44	14,520,084.27	1,732,023.89	39.98127865	-104.67298045
14,800.00	89.90	180.12	7,501.09	-7,896.37	1,072.24	14,519,984.27	1,732,024.05	39.98100404	-104.67298119
14,900.00	89.90	180.12	7,501.28	-7,996.37	1,072.03	14,519,884.27	1,732,024.21	39.98072942	-104.67298193
15,000.00	89.90	180.12	7,501.46	-8,096.37	1,071.83	14,519,784.27	1,732,024.37	39.98045481	-104.67298267
15,100.00	89.90	180.12	7,501.64	-8,196.37	1,071.63	14,519,684.27	1,732,024.53	39.98018019	-104.67298341
15,200.00	89.90	180.12	7,501.82	-8,296.37	1,071.43	14,519,584.27	1,732,024.69	39.97990557	-104.67298415
15,300.00	89.90	180.12	7,502.00	-8,396.37	1,071.22	14,519,484.27	1,732,024.85	39.97963096	-104.67298489
15,400.00	89.90	180.12	7,502.19	-8,496.37	1,071.02	14,519,384.27	1,732,025.01	39.97935634	-104.67298563
15,500.00	89.90	180.12	7,502.37	-8,596.37	1,070.82	14,519,284.27	1,732,025.17	39.97908173	-104.67298637

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-08-4L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5078+25 @ 5103.00ft
<b>Site:</b>	Section 33-T01N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Desha 4-08-4L	<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	89.90	180.12	7,502.55	-8,696.37	1,070.61	14,519,184.27	1,732,025.33	39.97880711	-104.67298711
15,700.00	89.90	180.12	7,502.73	-8,796.37	1,070.41	14,519,084.27	1,732,025.49	39.97853249	-104.67298785
15,800.00	89.90	180.12	7,502.91	-8,896.37	1,070.21	14,518,984.27	1,732,025.65	39.97825788	-104.67298859
15,900.00	89.90	180.12	7,503.10	-8,996.37	1,070.00	14,518,884.27	1,732,025.81	39.97798326	-104.67298933
16,000.00	89.90	180.12	7,503.28	-9,096.37	1,069.80	14,518,784.27	1,732,025.97	39.97770865	-104.67299007
16,100.00	89.90	180.12	7,503.46	-9,196.37	1,069.60	14,518,684.28	1,732,026.12	39.97743403	-104.67299081
16,200.00	89.90	180.12	7,503.64	-9,296.37	1,069.39	14,518,584.28	1,732,026.28	39.97715941	-104.67299155
16,300.00	89.90	180.12	7,503.83	-9,396.37	1,069.19	14,518,484.28	1,732,026.44	39.97688480	-104.67299229
16,400.00	89.90	180.12	7,504.01	-9,496.37	1,068.99	14,518,384.28	1,732,026.60	39.97661018	-104.67299303
16,500.00	89.90	180.12	7,504.19	-9,596.37	1,068.78	14,518,284.28	1,732,026.76	39.97633556	-104.67299377
16,600.00	89.90	180.12	7,504.37	-9,696.36	1,068.58	14,518,184.28	1,732,026.92	39.97606095	-104.67299451
16,700.00	89.90	180.12	7,504.55	-9,796.36	1,068.38	14,518,084.28	1,732,027.08	39.97578633	-104.67299525
16,800.00	89.90	180.12	7,504.74	-9,896.36	1,068.18	14,517,984.28	1,732,027.24	39.97551172	-104.67299598
16,900.00	89.90	180.12	7,504.92	-9,996.36	1,067.97	14,517,884.28	1,732,027.40	39.97523710	-104.67299672
17,000.00	89.90	180.12	7,505.10	-10,096.36	1,067.77	14,517,784.28	1,732,027.56	39.97496248	-104.67299746
17,100.00	89.90	180.12	7,505.28	-10,196.36	1,067.57	14,517,684.28	1,732,027.72	39.97468787	-104.67299820
17,200.00	89.90	180.12	7,505.46	-10,296.36	1,067.36	14,517,584.28	1,732,027.88	39.97441325	-104.67299894
17,300.00	89.90	180.12	7,505.65	-10,396.36	1,067.16	14,517,484.28	1,732,028.04	39.97413863	-104.67299968
17,400.00	89.90	180.12	7,505.83	-10,496.36	1,066.96	14,517,384.28	1,732,028.20	39.97386402	-104.67300042
17,494.28	89.90	180.12	7,506.00	-10,590.64	1,066.77	14,517,290.00	1,732,028.35	39.97360512	-104.67300112
PBHL/TD 17494.28 MD/7506.00 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
LP Desha 4-8-4L 470 F	0.00	0.00	7,489.00	-1,254.89	1,085.73	14,526,625.74	1,732,013.46	39.99924265	-104.67293203
- plan hits target center									
- Point									
BHL Desha 4-8-4L 470 F	0.00	0.00	7,506.00	-10,590.64	1,066.77	14,517,290.00	1,732,028.35	39.97360512	-104.67300112
- 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	
5,304.89	5,290.70	-48.44	62.69	Begin 30.49° tangent	
7,439.66	7,130.29	-710.65	919.80	Begin 10°/100' build/turn	
8,158.49	7,489.00	-1,254.89	1,085.73	LP Begin 89.90° lateral section	
17,494.28	7,506.00	-10,590.64	1,066.77	PBHL/TD 17494.28 MD/7506.00 TVD	