

**Weld County, Colorado  
Section 34-T01N-R65W  
Desha 4-1-1L  
plan1**

Section Details

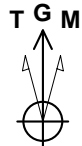
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSec	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	KOP Begin 10°/100' build
3	5387.17	38.72	245.26	5358.37	-52.69	-114.36	10.00	67.45	Begin 38.72° tangent
4	7249.79	38.72	245.26	6811.67	-540.21	-1172.47	0.00	691.56	Begin 10°/100' build/turn
5	7998.51	89.99	179.91	7154.00	-1093.65	-1420.92	10.00	1273.16	LP Begin 89.99° lateral section
6	17363.08	89.99	179.91	7156.00	-10458.20	-1405.43	0.00	10552.21	PBHL/TD 17363.08 MD/7156.00 TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP Desha 4-1-1L 460 FNL 480 FEL	7154.00	-1093.65	-1420.9214526646.35	1735304.91	39.99926549	-104.66117904	
BHL Desha 4-1-1L 460 FSL 480 FEL	7156.00	-10458.20	-1405.4314517281.82	1735320.40	39.97354891	-104.66125078	

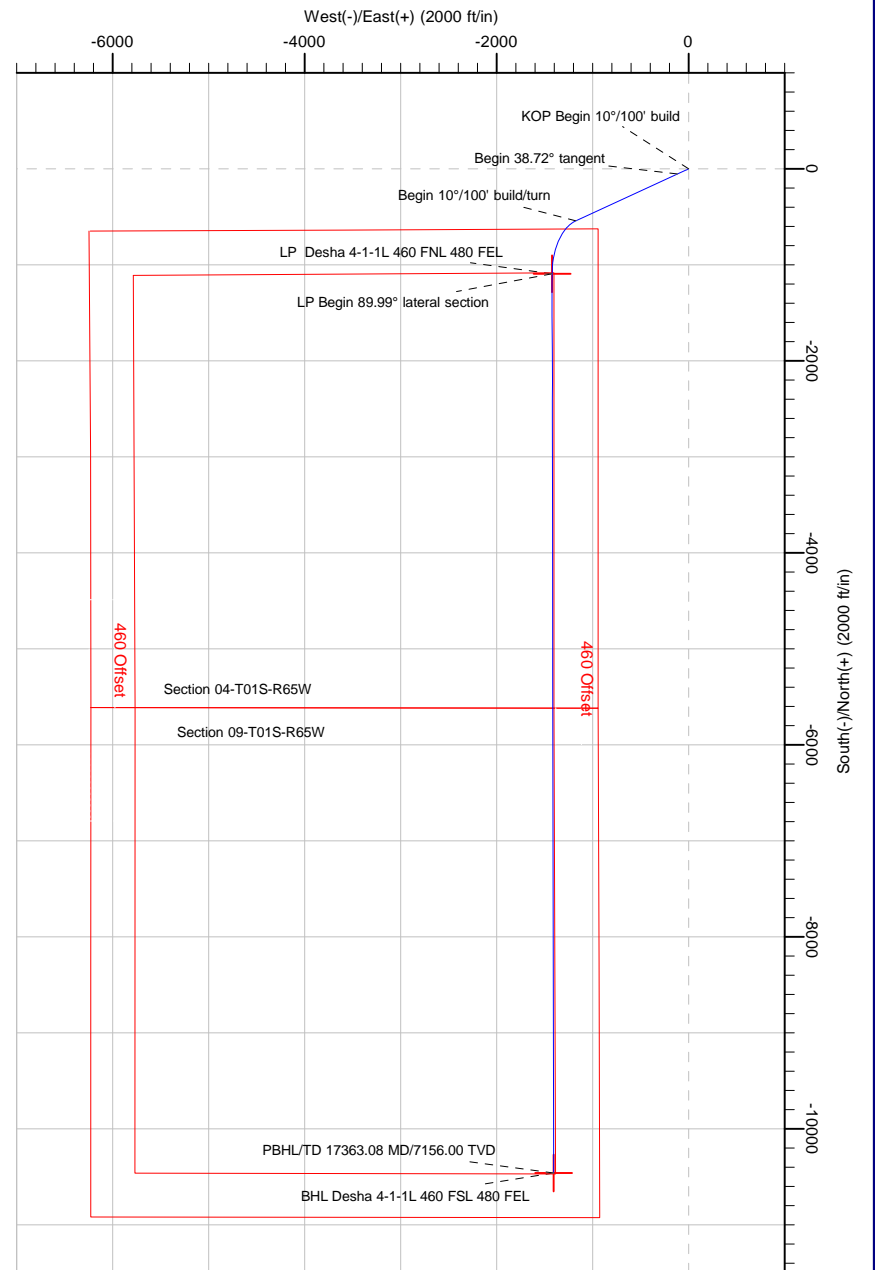
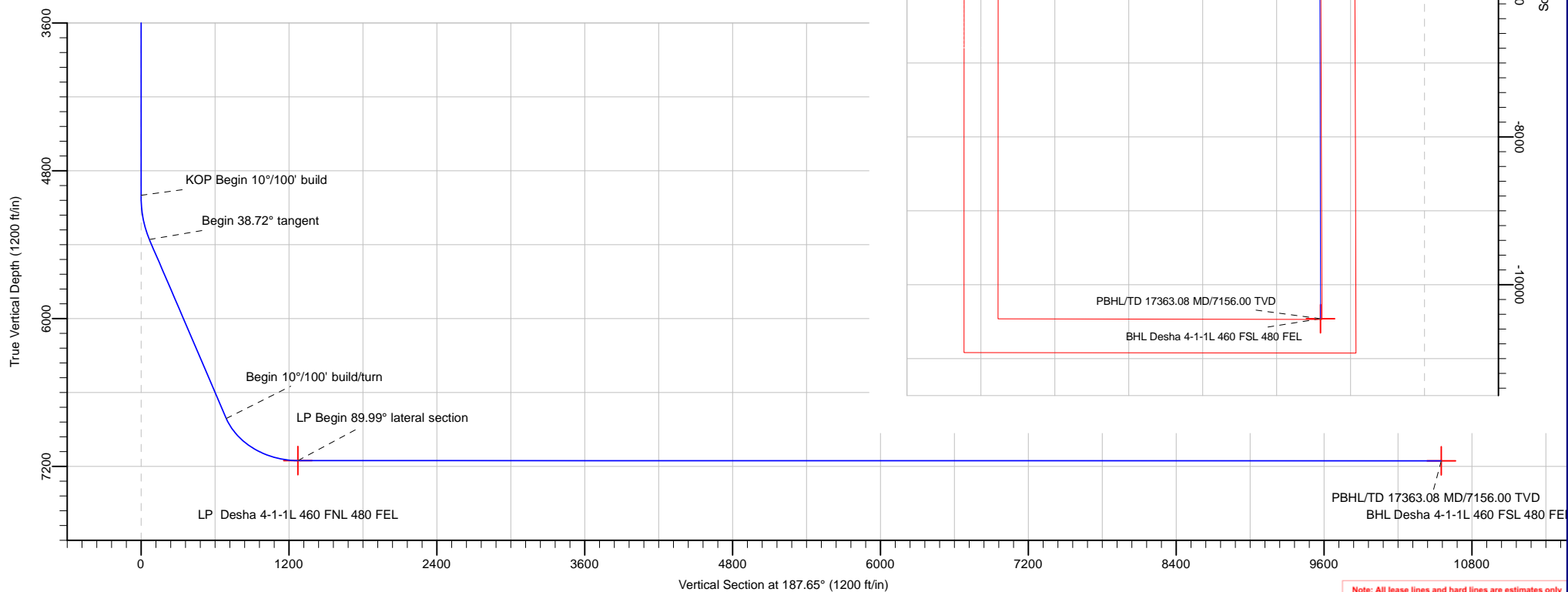
Desha 4-1-1L Surf loc: 620 FSL 993 FWL Sec34-T01N-R65W			
NAD83 Colorado - HARN Universal Transverse Mercator (US Survey Feet) Zone 13N (108 W to 102 W) RKB=5139+25 @ 5164.00ft			
Northing	Easting	Latitude	Longitude
14527740.00	1736725.83	40.00225386	-104.65609033

Azimuth Corrections:  
To convert a Magnetic Direction to a True Direction, Add 8.27° East



Azimuths to Grid North  
True North: -0.22°  
Magnetic North: 8.05°

Magnetic Field  
Strength: 52109.3snT  
Dip Angle: 66.45°  
Date: 8/30/2017  
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 4-1-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Site:</b>	Section 34-T01N-R65W	<b>North Reference:</b>	Grid
<b>Well:</b>	Desha 4-1-1L	<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 34-T01N-R65W			
Site Position:		Northing:	14,527,892.80 usft	Latitude:	40.00267560
From:	Map	Easting:	1,736,525.30 usft	Longitude:	-104.65680429
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.22 °

Well	Desha 4-1-1L, Surf loc: 620 FSL 993 FWL Sec34-T01N-R65W					
Well Position	+N/-S	-152.80 ft	Northing:	14,527,740.00 usft	Latitude:	40.00225387
	+E/-W	200.53 ft	Easting:	1,736,725.83 usft	Longitude:	-104.65609033
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,139.00 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	8/30/2017	8.27	66.45	52,109.30000000

<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	187.65

<b>Plan Survey Tool Program</b>	<b>Date</b>	8/30/2017		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	17,363.08	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	
5,387.17	38.72	245.26	5,358.37	-52.69	-114.36	10.00	10.00	0.00	245.26	
7,249.79	38.72	245.26	6,811.67	-540.21	-1,172.47	0.00	0.00	0.00	0.00	
7,998.51	89.99	179.91	7,154.00	-1,093.65	-1,420.92	10.00	6.85	-8.73	-70.31	LP Desha 4-1-1L 46C
17,363.08	89.99	179.91	7,156.00	-10,458.20	-1,405.43	0.00	0.00	0.00	0.00	BHL Desha 4-1-1L 46

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-1-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Site:</b>	Section 34-T01N-R65W	<b>North Reference:</b>	Grid
<b>Well:</b>	Desha 4-1-1L	<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
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	245.26	5,099.49	-3.64	-7.91	4.66	10.00	10.00	0.00
5,200.00	20.00	245.26	5,195.96	-14.46	-31.38	18.51	10.00	10.00	0.00

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-1-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Site:</b>	Section 34-T01N-R65W	<b>North Reference:</b>	Grid
<b>Well:</b>	Desha 4-1-1L	<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)
5,300.00	30.00	245.26	5,286.48	-32.12	-69.72	41.12	10.00	10.00	0.00
5,387.17	38.72	245.26	5,358.37	-52.69	-114.36	67.45	10.00	10.00	0.00
Begin 38.72° tangent									
5,400.00	38.72	245.26	5,368.38	-56.05	-121.64	71.75	0.00	0.00	0.00
5,500.00	38.72	245.26	5,446.41	-82.22	-178.45	105.26	0.00	0.00	0.00
5,600.00	38.72	245.26	5,524.43	-108.40	-235.26	138.76	0.00	0.00	0.00
5,700.00	38.72	245.26	5,602.45	-134.57	-292.07	172.27	0.00	0.00	0.00
5,800.00	38.72	245.26	5,680.48	-160.74	-348.88	205.78	0.00	0.00	0.00
5,900.00	38.72	245.26	5,758.50	-186.92	-405.68	239.28	0.00	0.00	0.00
6,000.00	38.72	245.26	5,836.53	-213.09	-462.49	272.79	0.00	0.00	0.00
6,100.00	38.72	245.26	5,914.55	-239.27	-519.30	306.30	0.00	0.00	0.00
6,200.00	38.72	245.26	5,992.58	-265.44	-576.11	339.80	0.00	0.00	0.00
6,300.00	38.72	245.26	6,070.60	-291.61	-632.92	373.31	0.00	0.00	0.00
6,400.00	38.72	245.26	6,148.62	-317.79	-689.72	406.82	0.00	0.00	0.00
6,500.00	38.72	245.26	6,226.65	-343.96	-746.53	440.33	0.00	0.00	0.00
6,600.00	38.72	245.26	6,304.67	-370.13	-803.34	473.83	0.00	0.00	0.00
6,700.00	38.72	245.26	6,382.70	-396.31	-860.15	507.34	0.00	0.00	0.00
6,800.00	38.72	245.26	6,460.72	-422.48	-916.95	540.85	0.00	0.00	0.00
6,900.00	38.72	245.26	6,538.75	-448.66	-973.76	574.35	0.00	0.00	0.00
7,000.00	38.72	245.26	6,616.77	-474.83	-1,030.57	607.86	0.00	0.00	0.00
7,100.00	38.72	245.26	6,694.79	-501.00	-1,087.38	641.37	0.00	0.00	0.00
7,200.00	38.72	245.26	6,772.82	-527.18	-1,144.19	674.87	0.00	0.00	0.00
7,249.79	38.72	245.26	6,811.67	-540.21	-1,172.47	691.56	0.00	0.00	0.00
Begin 10°/100' build/turn									
7,300.00	40.64	237.99	6,850.33	-555.46	-1,200.62	710.42	10.00	3.83	-14.48
7,400.00	45.66	225.31	6,923.40	-597.97	-1,253.79	759.64	10.00	5.01	-12.68
7,500.00	51.84	214.83	6,989.41	-655.54	-1,301.78	823.08	10.00	6.18	-10.48
7,600.00	58.80	206.09	7,046.36	-726.40	-1,343.15	898.82	10.00	6.96	-8.75
7,700.00	66.27	198.58	7,092.50	-808.40	-1,376.63	984.55	10.00	7.47	-7.50
7,800.00	74.06	191.91	7,126.44	-899.06	-1,401.19	1,077.67	10.00	7.79	-6.67
7,900.00	82.04	185.74	7,147.15	-995.62	-1,416.11	1,175.36	10.00	7.98	-6.16
7,998.51	89.99	179.91	7,154.00	-1,093.65	-1,420.92	1,273.16	10.00	8.07	-5.93
LP Begin 89.99° lateral section									
8,000.00	89.99	179.91	7,154.00	-1,095.14	-1,420.92	1,274.63	0.00	0.00	0.00
8,100.00	89.99	179.91	7,154.02	-1,195.14	-1,420.76	1,373.72	0.00	0.00	0.00
8,200.00	89.99	179.91	7,154.04	-1,295.14	-1,420.59	1,472.81	0.00	0.00	0.00
8,300.00	89.99	179.91	7,154.06	-1,395.14	-1,420.42	1,571.89	0.00	0.00	0.00
8,400.00	89.99	179.91	7,154.09	-1,495.14	-1,420.26	1,670.98	0.00	0.00	0.00
8,500.00	89.99	179.91	7,154.11	-1,595.14	-1,420.09	1,770.07	0.00	0.00	0.00
8,600.00	89.99	179.91	7,154.13	-1,695.14	-1,419.93	1,869.15	0.00	0.00	0.00
8,700.00	89.99	179.91	7,154.15	-1,795.14	-1,419.76	1,968.24	0.00	0.00	0.00
8,800.00	89.99	179.91	7,154.17	-1,895.14	-1,419.60	2,067.33	0.00	0.00	0.00
8,900.00	89.99	179.91	7,154.19	-1,995.14	-1,419.43	2,166.41	0.00	0.00	0.00
9,000.00	89.99	179.91	7,154.21	-2,095.14	-1,419.27	2,265.50	0.00	0.00	0.00
9,100.00	89.99	179.91	7,154.24	-2,195.14	-1,419.10	2,364.59	0.00	0.00	0.00
9,200.00	89.99	179.91	7,154.26	-2,295.14	-1,418.94	2,463.67	0.00	0.00	0.00
9,300.00	89.99	179.91	7,154.28	-2,395.14	-1,418.77	2,562.76	0.00	0.00	0.00
9,400.00	89.99	179.91	7,154.30	-2,495.14	-1,418.60	2,661.85	0.00	0.00	0.00
9,500.00	89.99	179.91	7,154.32	-2,595.14	-1,418.44	2,760.94	0.00	0.00	0.00
9,600.00	89.99	179.91	7,154.34	-2,695.14	-1,418.27	2,860.02	0.00	0.00	0.00
9,700.00	89.99	179.91	7,154.36	-2,795.14	-1,418.11	2,959.11	0.00	0.00	0.00
9,800.00	89.99	179.91	7,154.38	-2,895.14	-1,417.94	3,058.20	0.00	0.00	0.00
9,900.00	89.99	179.91	7,154.41	-2,995.14	-1,417.78	3,157.28	0.00	0.00	0.00

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<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Site:</b>	Section 34-T01N-R65W	<b>North Reference:</b>	Grid
<b>Well:</b>	Desha 4-1-1L	<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	89.99	179.91	7,154.43	-3,095.14	-1,417.61	3,256.37	0.00	0.00	0.00
10,100.00	89.99	179.91	7,154.45	-3,195.14	-1,417.45	3,355.46	0.00	0.00	0.00
10,200.00	89.99	179.91	7,154.47	-3,295.14	-1,417.28	3,454.54	0.00	0.00	0.00
10,300.00	89.99	179.91	7,154.49	-3,395.14	-1,417.12	3,553.63	0.00	0.00	0.00
10,400.00	89.99	179.91	7,154.51	-3,495.14	-1,416.95	3,652.72	0.00	0.00	0.00
10,500.00	89.99	179.91	7,154.53	-3,595.14	-1,416.79	3,751.80	0.00	0.00	0.00
10,600.00	89.99	179.91	7,154.56	-3,695.13	-1,416.62	3,850.89	0.00	0.00	0.00
10,700.00	89.99	179.91	7,154.58	-3,795.13	-1,416.45	3,949.98	0.00	0.00	0.00
10,800.00	89.99	179.91	7,154.60	-3,895.13	-1,416.29	4,049.07	0.00	0.00	0.00
10,900.00	89.99	179.91	7,154.62	-3,995.13	-1,416.12	4,148.15	0.00	0.00	0.00
11,000.00	89.99	179.91	7,154.64	-4,095.13	-1,415.96	4,247.24	0.00	0.00	0.00
11,100.00	89.99	179.91	7,154.66	-4,195.13	-1,415.79	4,346.33	0.00	0.00	0.00
11,200.00	89.99	179.91	7,154.68	-4,295.13	-1,415.63	4,445.41	0.00	0.00	0.00
11,300.00	89.99	179.91	7,154.71	-4,395.13	-1,415.46	4,544.50	0.00	0.00	0.00
11,400.00	89.99	179.91	7,154.73	-4,495.13	-1,415.30	4,643.59	0.00	0.00	0.00
11,500.00	89.99	179.91	7,154.75	-4,595.13	-1,415.13	4,742.67	0.00	0.00	0.00
11,600.00	89.99	179.91	7,154.77	-4,695.13	-1,414.97	4,841.76	0.00	0.00	0.00
11,700.00	89.99	179.91	7,154.79	-4,795.13	-1,414.80	4,940.85	0.00	0.00	0.00
11,800.00	89.99	179.91	7,154.81	-4,895.13	-1,414.63	5,039.93	0.00	0.00	0.00
11,900.00	89.99	179.91	7,154.83	-4,995.13	-1,414.47	5,139.02	0.00	0.00	0.00
12,000.00	89.99	179.91	7,154.85	-5,095.13	-1,414.30	5,238.11	0.00	0.00	0.00
12,100.00	89.99	179.91	7,154.88	-5,195.13	-1,414.14	5,337.20	0.00	0.00	0.00
12,200.00	89.99	179.91	7,154.90	-5,295.13	-1,413.97	5,436.28	0.00	0.00	0.00
12,300.00	89.99	179.91	7,154.92	-5,395.13	-1,413.81	5,535.37	0.00	0.00	0.00
12,400.00	89.99	179.91	7,154.94	-5,495.13	-1,413.64	5,634.46	0.00	0.00	0.00
12,500.00	89.99	179.91	7,154.96	-5,595.13	-1,413.48	5,733.54	0.00	0.00	0.00
12,600.00	89.99	179.91	7,154.98	-5,695.13	-1,413.31	5,832.63	0.00	0.00	0.00
12,700.00	89.99	179.91	7,155.00	-5,795.13	-1,413.15	5,931.72	0.00	0.00	0.00
12,800.00	89.99	179.91	7,155.03	-5,895.13	-1,412.98	6,030.80	0.00	0.00	0.00
12,900.00	89.99	179.91	7,155.05	-5,995.13	-1,412.82	6,129.89	0.00	0.00	0.00
13,000.00	89.99	179.91	7,155.07	-6,095.13	-1,412.65	6,228.98	0.00	0.00	0.00
13,100.00	89.99	179.91	7,155.09	-6,195.13	-1,412.48	6,328.06	0.00	0.00	0.00
13,200.00	89.99	179.91	7,155.11	-6,295.13	-1,412.32	6,427.15	0.00	0.00	0.00
13,300.00	89.99	179.91	7,155.13	-6,395.13	-1,412.15	6,526.24	0.00	0.00	0.00
13,400.00	89.99	179.91	7,155.15	-6,495.13	-1,411.99	6,625.32	0.00	0.00	0.00
13,500.00	89.99	179.91	7,155.18	-6,595.13	-1,411.82	6,724.41	0.00	0.00	0.00
13,600.00	89.99	179.91	7,155.20	-6,695.13	-1,411.66	6,823.50	0.00	0.00	0.00
13,700.00	89.99	179.91	7,155.22	-6,795.13	-1,411.49	6,922.59	0.00	0.00	0.00
13,800.00	89.99	179.91	7,155.24	-6,895.13	-1,411.33	7,021.67	0.00	0.00	0.00
13,900.00	89.99	179.91	7,155.26	-6,995.13	-1,411.16	7,120.76	0.00	0.00	0.00
14,000.00	89.99	179.91	7,155.28	-7,095.13	-1,411.00	7,219.85	0.00	0.00	0.00
14,100.00	89.99	179.91	7,155.30	-7,195.13	-1,410.83	7,318.93	0.00	0.00	0.00
14,200.00	89.99	179.91	7,155.32	-7,295.13	-1,410.66	7,418.02	0.00	0.00	0.00
14,300.00	89.99	179.91	7,155.35	-7,395.13	-1,410.50	7,517.11	0.00	0.00	0.00
14,400.00	89.99	179.91	7,155.37	-7,495.13	-1,410.33	7,616.19	0.00	0.00	0.00
14,500.00	89.99	179.91	7,155.39	-7,595.13	-1,410.17	7,715.28	0.00	0.00	0.00
14,600.00	89.99	179.91	7,155.41	-7,695.13	-1,410.00	7,814.37	0.00	0.00	0.00
14,700.00	89.99	179.91	7,155.43	-7,795.13	-1,409.84	7,913.45	0.00	0.00	0.00
14,800.00	89.99	179.91	7,155.45	-7,895.13	-1,409.67	8,012.54	0.00	0.00	0.00
14,900.00	89.99	179.91	7,155.47	-7,995.13	-1,409.51	8,111.63	0.00	0.00	0.00
15,000.00	89.99	179.91	7,155.50	-8,095.13	-1,409.34	8,210.72	0.00	0.00	0.00
15,100.00	89.99	179.91	7,155.52	-8,195.13	-1,409.18	8,309.80	0.00	0.00	0.00
15,200.00	89.99	179.91	7,155.54	-8,295.13	-1,409.01	8,408.89	0.00	0.00	0.00
15,300.00	89.99	179.91	7,155.56	-8,395.13	-1,408.85	8,507.98	0.00	0.00	0.00

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-1-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Site:</b>	Section 34-T01N-R65W	<b>North Reference:</b>	Grid
<b>Well:</b>	Desha 4-1-1L	<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	89.99	179.91	7,155.58	-8,495.13	-1,408.68	8,607.06	0.00	0.00	0.00	
15,500.00	89.99	179.91	7,155.60	-8,595.13	-1,408.51	8,706.15	0.00	0.00	0.00	
15,600.00	89.99	179.91	7,155.62	-8,695.13	-1,408.35	8,805.24	0.00	0.00	0.00	
15,700.00	89.99	179.91	7,155.64	-8,795.13	-1,408.18	8,904.32	0.00	0.00	0.00	
15,800.00	89.99	179.91	7,155.67	-8,895.13	-1,408.02	9,003.41	0.00	0.00	0.00	
15,900.00	89.99	179.91	7,155.69	-8,995.13	-1,407.85	9,102.50	0.00	0.00	0.00	
16,000.00	89.99	179.91	7,155.71	-9,095.13	-1,407.69	9,201.58	0.00	0.00	0.00	
16,100.00	89.99	179.91	7,155.73	-9,195.13	-1,407.52	9,300.67	0.00	0.00	0.00	
16,200.00	89.99	179.91	7,155.75	-9,295.13	-1,407.36	9,399.76	0.00	0.00	0.00	
16,300.00	89.99	179.91	7,155.77	-9,395.13	-1,407.19	9,498.85	0.00	0.00	0.00	
16,400.00	89.99	179.91	7,155.79	-9,495.13	-1,407.03	9,597.93	0.00	0.00	0.00	
16,500.00	89.99	179.91	7,155.82	-9,595.13	-1,406.86	9,697.02	0.00	0.00	0.00	
16,600.00	89.99	179.91	7,155.84	-9,695.13	-1,406.70	9,796.11	0.00	0.00	0.00	
16,700.00	89.99	179.91	7,155.86	-9,795.13	-1,406.53	9,895.19	0.00	0.00	0.00	
16,800.00	89.99	179.91	7,155.88	-9,895.13	-1,406.36	9,994.28	0.00	0.00	0.00	
16,900.00	89.99	179.91	7,155.90	-9,995.13	-1,406.20	10,093.37	0.00	0.00	0.00	
17,000.00	89.99	179.91	7,155.92	-10,095.13	-1,406.03	10,192.45	0.00	0.00	0.00	
17,100.00	89.99	179.91	7,155.94	-10,195.13	-1,405.87	10,291.54	0.00	0.00	0.00	
17,200.00	89.99	179.91	7,155.97	-10,295.13	-1,405.70	10,390.63	0.00	0.00	0.00	
17,300.00	89.99	179.91	7,155.99	-10,395.13	-1,405.54	10,489.71	0.00	0.00	0.00	
17,363.08	89.99	179.91	7,156.00	-10,458.20	-1,405.43	10,552.21	0.00	0.00	0.00	
PBHL/TD 17363.08 MD/7156.00 TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude		Longitude
LP Desha 4-1-1L 460 FI - hit/miss target - Shape - Point	0.00	0.00	7,154.00	-1,093.65	-1,420.92	14,526,646.35	1,735,304.91	39.99926549		-104.66117904
BHL Desha 4-1-1L 460 F - plan hits target center - Point	0.00	0.00	7,156.00	-10,458.20	-1,405.43	14,517,281.82	1,735,320.40	39.97354891		-104.66125077

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	
5,387.17	5,358.37	-52.69	-114.36	Begin 38.72° tangent	
7,249.79	6,811.67	-540.21	-1,172.47	Begin 10°/100' build/turn	
7,998.51	7,154.00	-1,093.65	-1,420.92	LP Begin 89.99° lateral section	
17,363.08	7,156.00	-10,458.20	-1,405.43	PBHL/TD 17363.08 MD/7156.00 TVD	

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-1-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Site:</b>	Section 34-T01N-R65W	<b>North Reference:</b>	Grid
<b>Well:</b>	Desha 4-1-1L	<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 34-T01N-R65W			
Site Position:		Northing:	14,527,892.80 usft	Latitude:	40.00267560
From:	Map	Easting:	1,736,525.30 usft	Longitude:	-104.65680429
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.22 °

Well	Desha 4-1-1L, Surf loc: 620 FSL 993 FWL Sec34-T01N-R65W					
Well Position	+N/-S	0.00 ft	Northing:	14,527,740.00 usft	Latitude:	40.00225387
	+E/-W	0.00 ft	Easting:	1,736,725.83 usft	Longitude:	-104.65609033
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,139.00 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	8/30/2017	8.27	66.45	52,109.30000000

<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	187.65

<b>Plan Survey Tool Program</b>	<b>Date</b>	8/30/2017		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	17,363.08 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	
5,387.17	38.72	245.26	5,358.37	-52.69	-114.36	10.00	10.00	0.00	245.26	
7,249.79	38.72	245.26	6,811.67	-540.21	-1,172.47	0.00	0.00	0.00	0.00	
7,998.51	89.99	179.91	7,154.00	-1,093.65	-1,420.92	10.00	6.85	-8.73	-70.31	LP Desha 4-1-1L 46C
17,363.08	89.99	179.91	7,156.00	-10,458.20	-1,405.43	0.00	0.00	0.00	0.00	BHL Desha 4-1-1L 46



<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-1-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Site:</b>	Section 34-T01N-R65W	<b>North Reference:</b>	Grid
<b>Well:</b>	Desha 4-1-1L	<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	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
100.00	0.00	0.00	100.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
200.00	0.00	0.00	200.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
300.00	0.00	0.00	300.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
400.00	0.00	0.00	400.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
500.00	0.00	0.00	500.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
600.00	0.00	0.00	600.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
700.00	0.00	0.00	700.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
800.00	0.00	0.00	800.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
900.00	0.00	0.00	900.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
2,100.00	0.00	0.00	2,100.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
2,200.00	0.00	0.00	2,200.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
2,300.00	0.00	0.00	2,300.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
2,400.00	0.00	0.00	2,400.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
2,500.00	0.00	0.00	2,500.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
2,600.00	0.00	0.00	2,600.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
2,700.00	0.00	0.00	2,700.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
2,800.00	0.00	0.00	2,800.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
2,900.00	0.00	0.00	2,900.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
3,000.00	0.00	0.00	3,000.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
3,100.00	0.00	0.00	3,100.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
3,200.00	0.00	0.00	3,200.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
3,300.00	0.00	0.00	3,300.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
3,400.00	0.00	0.00	3,400.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
3,500.00	0.00	0.00	3,500.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
3,600.00	0.00	0.00	3,600.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
3,700.00	0.00	0.00	3,700.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
3,800.00	0.00	0.00	3,800.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
3,900.00	0.00	0.00	3,900.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
4,000.00	0.00	0.00	4,000.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
4,100.00	0.00	0.00	4,100.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
4,200.00	0.00	0.00	4,200.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
4,300.00	0.00	0.00	4,300.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
4,400.00	0.00	0.00	4,400.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
4,500.00	0.00	0.00	4,500.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
4,600.00	0.00	0.00	4,600.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
4,700.00	0.00	0.00	4,700.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
4,800.00	0.00	0.00	4,800.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
4,900.00	0.00	0.00	4,900.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
5,000.00	0.00	0.00	5,000.00	0.00	0.00	14,527,740.00	1,736,725.83	40.00225387	-104.65609033
KOP Begin 10°/100' build									
5,100.00	10.00	245.26	5,099.49	-3.64	-7.91	14,527,736.36	1,736,717.92	40.00224395	-104.65611861
5,200.00	20.00	245.26	5,195.96	-14.46	-31.38	14,527,725.55	1,736,694.45	40.00221449	-104.65620259



<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-1-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Site:</b>	Section 34-T01N-R65W	<b>North Reference:</b>	Grid
<b>Well:</b>	Desha 4-1-1L	<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
5,300.00	30.00	245.26	5,286.48	-32.12	-69.72	14,527,707.88	1,736,656.11	40.00216639	-104.65633972
5,387.17	38.72	245.26	5,358.37	-52.69	-114.36	14,527,687.32	1,736,611.47	40.00211039	-104.65649940
<b>Begin 38.72° tangent</b>									
5,400.00	38.72	245.26	5,368.38	-56.05	-121.64	14,527,683.96	1,736,604.18	40.00210124	-104.65652547
5,500.00	38.72	245.26	5,446.41	-82.22	-178.45	14,527,657.78	1,736,547.38	40.00202997	-104.65672868
5,600.00	38.72	245.26	5,524.43	-108.40	-235.26	14,527,631.61	1,736,490.57	40.00195869	-104.65693189
5,700.00	38.72	245.26	5,602.45	-134.57	-292.07	14,527,605.44	1,736,433.76	40.00188741	-104.65713510
5,800.00	38.72	245.26	5,680.48	-160.74	-348.88	14,527,579.26	1,736,376.95	40.00181614	-104.65733831
5,900.00	38.72	245.26	5,758.50	-186.92	-405.68	14,527,553.09	1,736,320.15	40.00174486	-104.65754152
6,000.00	38.72	245.26	5,836.53	-213.09	-462.49	14,527,526.91	1,736,263.34	40.00167358	-104.65774473
6,100.00	38.72	245.26	5,914.55	-239.27	-519.30	14,527,500.74	1,736,206.53	40.00160230	-104.65794793
6,200.00	38.72	245.26	5,992.58	-265.44	-576.11	14,527,474.57	1,736,149.72	40.00153102	-104.65815114
6,300.00	38.72	245.26	6,070.60	-291.61	-632.92	14,527,448.39	1,736,092.91	40.00145974	-104.65835435
6,400.00	38.72	245.26	6,148.62	-317.79	-689.72	14,527,422.22	1,736,036.11	40.00138846	-104.65855756
6,500.00	38.72	245.26	6,226.65	-343.96	-746.53	14,527,396.04	1,735,979.30	40.00131718	-104.65876076
6,600.00	38.72	245.26	6,304.67	-370.13	-803.34	14,527,369.87	1,735,922.49	40.00124590	-104.65896397
6,700.00	38.72	245.26	6,382.70	-396.31	-860.15	14,527,343.70	1,735,865.68	40.00117462	-104.65916717
6,800.00	38.72	245.26	6,460.72	-422.48	-916.95	14,527,317.52	1,735,808.88	40.00110334	-104.65937038
6,900.00	38.72	245.26	6,538.75	-448.66	-973.76	14,527,291.35	1,735,752.07	40.00103206	-104.65957358
7,000.00	38.72	245.26	6,616.77	-474.83	-1,030.57	14,527,265.17	1,735,695.26	40.00096078	-104.65977679
7,100.00	38.72	245.26	6,694.79	-501.00	-1,087.38	14,527,239.00	1,735,638.45	40.00088950	-104.65997999
7,200.00	38.72	245.26	6,772.82	-527.18	-1,144.19	14,527,212.83	1,735,581.65	40.00081821	-104.66018319
7,249.79	38.72	245.26	6,811.67	-540.21	-1,172.47	14,527,199.80	1,735,553.36	40.00078272	-104.66028436
<b>Begin 10°/100' build/turn</b>									
7,300.00	40.64	237.99	6,850.33	-555.46	-1,200.62	14,527,184.55	1,735,525.22	40.00074114	-104.66038508
7,400.00	45.66	225.31	6,923.40	-597.97	-1,253.79	14,527,142.03	1,735,472.04	40.00062495	-104.66057552
7,500.00	51.84	214.83	6,989.41	-655.54	-1,301.78	14,527,084.47	1,735,424.05	40.00046738	-104.66074768
7,600.00	58.80	206.09	7,046.36	-726.40	-1,343.15	14,527,013.61	1,735,382.68	40.00027322	-104.66089635
7,700.00	66.27	198.58	7,092.50	-808.40	-1,376.63	14,526,931.61	1,735,349.21	40.00004837	-104.66101699
7,800.00	74.06	191.91	7,126.44	-899.06	-1,401.19	14,526,840.95	1,735,324.64	39.99979966	-104.66110595
7,900.00	82.04	185.74	7,147.15	-995.62	-1,416.11	14,526,744.39	1,735,309.72	39.99953466	-104.66116052
7,998.51	89.99	179.91	7,154.00	-1,093.65	-1,420.92	14,526,646.35	1,735,304.91	39.99926549	-104.66117904
<b>LP Begin 89.99° lateral section</b>									
8,000.00	89.99	179.91	7,154.00	-1,095.14	-1,420.92	14,526,644.87	1,735,304.91	39.99926141	-104.66117905
8,100.00	89.99	179.91	7,154.02	-1,195.14	-1,420.76	14,526,544.87	1,735,305.08	39.99898679	-104.66117982
8,200.00	89.99	179.91	7,154.04	-1,295.14	-1,420.59	14,526,444.87	1,735,305.24	39.99871218	-104.66118059
8,300.00	89.99	179.91	7,154.06	-1,395.14	-1,420.42	14,526,344.87	1,735,305.41	39.99843756	-104.66118135
8,400.00	89.99	179.91	7,154.09	-1,495.14	-1,420.26	14,526,244.87	1,735,305.57	39.99816295	-104.66118212
8,500.00	89.99	179.91	7,154.11	-1,595.14	-1,420.09	14,526,144.87	1,735,305.74	39.99788833	-104.66118289
8,600.00	89.99	179.91	7,154.13	-1,695.14	-1,419.93	14,526,044.87	1,735,305.90	39.99761372	-104.66118365
8,700.00	89.99	179.91	7,154.15	-1,795.14	-1,419.76	14,525,944.87	1,735,306.07	39.99733910	-104.66118442
8,800.00	89.99	179.91	7,154.17	-1,895.14	-1,419.60	14,525,844.87	1,735,306.23	39.99706449	-104.66118518
8,900.00	89.99	179.91	7,154.19	-1,995.14	-1,419.43	14,525,744.87	1,735,306.40	39.99678987	-104.66118595
9,000.00	89.99	179.91	7,154.21	-2,095.14	-1,419.27	14,525,644.87	1,735,306.57	39.99651526	-104.66118672
9,100.00	89.99	179.91	7,154.24	-2,195.14	-1,419.10	14,525,544.87	1,735,306.73	39.99624064	-104.66118748
9,200.00	89.99	179.91	7,154.26	-2,295.14	-1,418.94	14,525,444.87	1,735,306.90	39.99596602	-104.66118825
9,300.00	89.99	179.91	7,154.28	-2,395.14	-1,418.77	14,525,344.87	1,735,307.06	39.99569141	-104.66118902
9,400.00	89.99	179.91	7,154.30	-2,495.14	-1,418.60	14,525,244.87	1,735,307.23	39.99541679	-104.66118978
9,500.00	89.99	179.91	7,154.32	-2,595.14	-1,418.44	14,525,144.87	1,735,307.39	39.99514218	-104.66119055
9,600.00	89.99	179.91	7,154.34	-2,695.14	-1,418.27	14,525,044.87	1,735,307.56	39.99486756	-104.66119132
9,700.00	89.99	179.91	7,154.36	-2,795.14	-1,418.11	14,524,944.87	1,735,307.72	39.99459295	-104.66119208
9,800.00	89.99	179.91	7,154.38	-2,895.14	-1,417.94	14,524,844.87	1,735,307.89	39.99431833	-104.66119285
9,900.00	89.99	179.91	7,154.41	-2,995.14	-1,417.78	14,524,744.87	1,735,308.05	39.99404372	-104.66119362
10,000.00	89.99	179.91	7,154.43	-3,095.14	-1,417.61	14,524,644.88	1,735,308.22	39.99376910	-104.66119438

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-1-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Site:</b>	Section 34-T01N-R65W	<b>North Reference:</b>	Grid
<b>Well:</b>	Desha 4-1-1L	<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	89.99	179.91	7,154.45	-3,195.14	-1,417.45	14,524,544.88	1,735,308.38	39.99349448	-104.66119515
10,200.00	89.99	179.91	7,154.47	-3,295.14	-1,417.28	14,524,444.88	1,735,308.55	39.99321987	-104.66119591
10,300.00	89.99	179.91	7,154.49	-3,395.14	-1,417.12	14,524,344.88	1,735,308.72	39.99294525	-104.66119668
10,400.00	89.99	179.91	7,154.51	-3,495.14	-1,416.95	14,524,244.88	1,735,308.88	39.99267064	-104.66119745
10,500.00	89.99	179.91	7,154.53	-3,595.14	-1,416.79	14,524,144.88	1,735,309.05	39.99239602	-104.66119821
10,600.00	89.99	179.91	7,154.56	-3,695.13	-1,416.62	14,524,044.88	1,735,309.21	39.99212141	-104.66119898
10,700.00	89.99	179.91	7,154.58	-3,795.13	-1,416.45	14,523,944.88	1,735,309.38	39.99184679	-104.66119975
10,800.00	89.99	179.91	7,154.60	-3,895.13	-1,416.29	14,523,844.88	1,735,309.54	39.99157217	-104.66120051
10,900.00	89.99	179.91	7,154.62	-3,995.13	-1,416.12	14,523,744.88	1,735,309.71	39.99129756	-104.66120128
11,000.00	89.99	179.91	7,154.64	-4,095.13	-1,415.96	14,523,644.88	1,735,309.87	39.99102294	-104.66120205
11,100.00	89.99	179.91	7,154.66	-4,195.13	-1,415.79	14,523,544.88	1,735,310.04	39.99074833	-104.66120281
11,200.00	89.99	179.91	7,154.68	-4,295.13	-1,415.63	14,523,444.88	1,735,310.20	39.99047371	-104.66120358
11,300.00	89.99	179.91	7,154.71	-4,395.13	-1,415.46	14,523,344.88	1,735,310.37	39.99019910	-104.66120434
11,400.00	89.99	179.91	7,154.73	-4,495.13	-1,415.30	14,523,244.88	1,735,310.54	39.98992448	-104.66120511
11,500.00	89.99	179.91	7,154.75	-4,595.13	-1,415.13	14,523,144.88	1,735,310.70	39.98964986	-104.66120588
11,600.00	89.99	179.91	7,154.77	-4,695.13	-1,414.97	14,523,044.88	1,735,310.87	39.98937525	-104.66120664
11,700.00	89.99	179.91	7,154.79	-4,795.13	-1,414.80	14,522,944.88	1,735,311.03	39.98910063	-104.66120741
11,800.00	89.99	179.91	7,154.81	-4,895.13	-1,414.63	14,522,844.88	1,735,311.20	39.98882602	-104.66120817
11,900.00	89.99	179.91	7,154.83	-4,995.13	-1,414.47	14,522,744.88	1,735,311.36	39.98855140	-104.66120894
12,000.00	89.99	179.91	7,154.85	-5,095.13	-1,414.30	14,522,644.88	1,735,311.53	39.98827678	-104.66120971
12,100.00	89.99	179.91	7,154.88	-5,195.13	-1,414.14	14,522,544.88	1,735,311.69	39.98800217	-104.66121047
12,200.00	89.99	179.91	7,154.90	-5,295.13	-1,413.97	14,522,444.88	1,735,311.86	39.98772755	-104.66121124
12,300.00	89.99	179.91	7,154.92	-5,395.13	-1,413.81	14,522,344.88	1,735,312.02	39.98745294	-104.66121200
12,400.00	89.99	179.91	7,154.94	-5,495.13	-1,413.64	14,522,244.88	1,735,312.19	39.98717832	-104.66121277
12,500.00	89.99	179.91	7,154.96	-5,595.13	-1,413.48	14,522,144.88	1,735,312.35	39.98690370	-104.66121354
12,600.00	89.99	179.91	7,154.98	-5,695.13	-1,413.31	14,522,044.88	1,735,312.52	39.98662909	-104.66121430
12,700.00	89.99	179.91	7,155.00	-5,795.13	-1,413.15	14,521,944.88	1,735,312.69	39.98635447	-104.66121507
12,800.00	89.99	179.91	7,155.03	-5,895.13	-1,412.98	14,521,844.88	1,735,312.85	39.98607986	-104.66121583
12,900.00	89.99	179.91	7,155.05	-5,995.13	-1,412.82	14,521,744.88	1,735,313.02	39.98580524	-104.66121660
13,000.00	89.99	179.91	7,155.07	-6,095.13	-1,412.65	14,521,644.89	1,735,313.18	39.98553063	-104.66121737
13,100.00	89.99	179.91	7,155.09	-6,195.13	-1,412.48	14,521,544.89	1,735,313.35	39.98525601	-104.66121813
13,200.00	89.99	179.91	7,155.11	-6,295.13	-1,412.32	14,521,444.89	1,735,313.51	39.98498139	-104.66121890
13,300.00	89.99	179.91	7,155.13	-6,395.13	-1,412.15	14,521,344.89	1,735,313.68	39.98470678	-104.66121966
13,400.00	89.99	179.91	7,155.15	-6,495.13	-1,411.99	14,521,244.89	1,735,313.84	39.98443216	-104.66122043
13,500.00	89.99	179.91	7,155.18	-6,595.13	-1,411.82	14,521,144.89	1,735,314.01	39.98415754	-104.66122120
13,600.00	89.99	179.91	7,155.20	-6,695.13	-1,411.66	14,521,044.89	1,735,314.17	39.98388293	-104.66122196
13,700.00	89.99	179.91	7,155.22	-6,795.13	-1,411.49	14,520,944.89	1,735,314.34	39.98360831	-104.66122273
13,800.00	89.99	179.91	7,155.24	-6,895.13	-1,411.33	14,520,844.89	1,735,314.51	39.98333370	-104.66122349
13,900.00	89.99	179.91	7,155.26	-6,995.13	-1,411.16	14,520,744.89	1,735,314.67	39.98305908	-104.66122426
14,000.00	89.99	179.91	7,155.28	-7,095.13	-1,411.00	14,520,644.89	1,735,314.84	39.98278446	-104.66122503
14,100.00	89.99	179.91	7,155.30	-7,195.13	-1,410.83	14,520,544.89	1,735,315.00	39.98250985	-104.66122579
14,200.00	89.99	179.91	7,155.32	-7,295.13	-1,410.66	14,520,444.89	1,735,315.17	39.98223523	-104.66122656
14,300.00	89.99	179.91	7,155.35	-7,395.13	-1,410.50	14,520,344.89	1,735,315.33	39.98196062	-104.66122732
14,400.00	89.99	179.91	7,155.37	-7,495.13	-1,410.33	14,520,244.89	1,735,315.50	39.98168600	-104.66122809
14,500.00	89.99	179.91	7,155.39	-7,595.13	-1,410.17	14,520,144.89	1,735,315.66	39.98141138	-104.66122885
14,600.00	89.99	179.91	7,155.41	-7,695.13	-1,410.00	14,520,044.89	1,735,315.83	39.98113677	-104.66122962
14,700.00	89.99	179.91	7,155.43	-7,795.13	-1,409.84	14,519,944.89	1,735,315.99	39.98086215	-104.66123039
14,800.00	89.99	179.91	7,155.45	-7,895.13	-1,409.67	14,519,844.89	1,735,316.16	39.98058753	-104.66123115
14,900.00	89.99	179.91	7,155.47	-7,995.13	-1,409.51	14,519,744.89	1,735,316.32	39.98031292	-104.66123192
15,000.00	89.99	179.91	7,155.50	-8,095.13	-1,409.34	14,519,644.89	1,735,316.49	39.98003830	-104.66123268
15,100.00	89.99	179.91	7,155.52	-8,195.13	-1,409.18	14,519,544.89	1,735,316.66	39.97976369	-104.66123345
15,200.00	89.99	179.91	7,155.54	-8,295.13	-1,409.01	14,519,444.89	1,735,316.82	39.97948907	-104.66123421
15,300.00	89.99	179.91	7,155.56	-8,395.13	-1,408.85	14,519,344.89	1,735,316.99	39.97921445	-104.66123498
15,400.00	89.99	179.91	7,155.58	-8,495.13	-1,408.68	14,519,244.89	1,735,317.15	39.97893984	-104.66123574
15,500.00	89.99	179.91	7,155.60	-8,595.13	-1,408.51	14,519,144.89	1,735,317.32	39.97866522	-104.66123651

<b>Database:</b>	DB_Jul2216dt_v14	<b>Local Co-ordinate Reference:</b>	Well Desha 4-1-1L
<b>Company:</b>	Confluence Resources	<b>TVD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Project:</b>	Weld County, Colorado	<b>MD Reference:</b>	RKB=5139+25 @ 5164.00ft
<b>Site:</b>	Section 34-T01N-R65W	<b>North Reference:</b>	Grid
<b>Well:</b>	Desha 4-1-1L	<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	89.99	179.91	7,155.62	-8,695.13	-1,408.35	14,519,044.89	1,735,317.48	39.97839060	-104.66123728
15,700.00	89.99	179.91	7,155.64	-8,795.13	-1,408.18	14,518,944.89	1,735,317.65	39.97811599	-104.66123804
15,800.00	89.99	179.91	7,155.67	-8,895.13	-1,408.02	14,518,844.89	1,735,317.81	39.97784137	-104.66123881
15,900.00	89.99	179.91	7,155.69	-8,995.13	-1,407.85	14,518,744.89	1,735,317.98	39.97756676	-104.66123957
16,000.00	89.99	179.91	7,155.71	-9,095.13	-1,407.69	14,518,644.90	1,735,318.14	39.97729214	-104.66124034
16,100.00	89.99	179.91	7,155.73	-9,195.13	-1,407.52	14,518,544.90	1,735,318.31	39.97701752	-104.66124110
16,200.00	89.99	179.91	7,155.75	-9,295.13	-1,407.36	14,518,444.90	1,735,318.47	39.97674291	-104.66124187
16,300.00	89.99	179.91	7,155.77	-9,395.13	-1,407.19	14,518,344.90	1,735,318.64	39.97646829	-104.66124263
16,400.00	89.99	179.91	7,155.79	-9,495.13	-1,407.03	14,518,244.90	1,735,318.81	39.97619367	-104.66124340
16,500.00	89.99	179.91	7,155.82	-9,595.13	-1,406.86	14,518,144.90	1,735,318.97	39.97591906	-104.66124417
16,600.00	89.99	179.91	7,155.84	-9,695.13	-1,406.70	14,518,044.90	1,735,319.14	39.97564444	-104.66124493
16,700.00	89.99	179.91	7,155.86	-9,795.13	-1,406.53	14,517,944.90	1,735,319.30	39.97536982	-104.66124570
16,800.00	89.99	179.91	7,155.88	-9,895.13	-1,406.36	14,517,844.90	1,735,319.47	39.97509521	-104.66124646
16,900.00	89.99	179.91	7,155.90	-9,995.13	-1,406.20	14,517,744.90	1,735,319.63	39.97482059	-104.66124723
17,000.00	89.99	179.91	7,155.92	-10,095.13	-1,406.03	14,517,644.90	1,735,319.80	39.97454597	-104.66124799
17,100.00	89.99	179.91	7,155.94	-10,195.13	-1,405.87	14,517,544.90	1,735,319.96	39.97427136	-104.66124876
17,200.00	89.99	179.91	7,155.97	-10,295.13	-1,405.70	14,517,444.90	1,735,320.13	39.97399674	-104.66124952
17,300.00	89.99	179.91	7,155.99	-10,395.13	-1,405.54	14,517,344.90	1,735,320.29	39.97372212	-104.66125029
17,363.08	89.99	179.91	7,156.00	-10,458.20	-1,405.43	14,517,281.82	1,735,320.40	39.97354891	-104.66125077
PBHL/TD 17363.08 MD/7156.00 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 4-1-1L 460 FI	0.00	0.00	7,154.00	-1,093.65	-1,420.92	14,526,646.35	1,735,304.91	39.99926549	-104.66117904
- plan hits target center									
- Point									
BHL Desha 4-1-1L 460 F	0.00	0.00	7,156.00	-10,458.20	-1,405.43	14,517,281.82	1,735,320.40	39.97354891	-104.66125077
- 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
5,387.17	5,358.37	-52.69	-114.36	Begin 38.72° tangent
7,249.79	6,811.67	-540.21	-1,172.47	Begin 10°/100' build/turn
7,998.51	7,154.00	-1,093.65	-1,420.92	LP Begin 89.99° lateral section
17,363.08	7,156.00	-10,458.20	-1,405.43	PBHL/TD 17363.08 MD/7156.00 TVD