



Weld County, Colorado
Section 07-T07N-R64W
Pickaroon 7-08-02L
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	5266.90	26.69	34.57	5257.35	50.27	34.64	10.00	-29.72	Begin 26.69° tangent
4	6644.01	26.69	34.57	6487.74	559.61	385.59	0.00	-330.82	Begin 10°/100' build/turn
5	7689.96	90.00	270.44	7150.00	839.52	-166.73	10.00	245.54	Begin 90.00° lateral
6	17108.32	90.00	270.44	7150.00	912.56	-9584.81	0.00	9628.15	PBHL/TD 17108.31 MD/7150.00 TVD

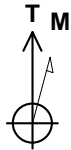
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Pickaroon 7-8-2L BHL 2517 FSL 470 FWL	7150.00	957.01	-9580.57	14740846.43	1746361.66	40.58733535	-104.61840483
Pickaroon 7-8-2L LP 2517 FSL 470 FEL	7150.00	839.52	-166.73	14740773.42	1755775.94	40.58701789	-104.58449831

Pickaroon 7-08-02L			
Surf loc: 1677 FSL 302 FEL Section 07-T07N-R64W			
NAD83 Colorado - HARN			
Universal Transverse Mercator (US Survey Feet)			
Zone 13N (108 W to 102 W)			
RKB=4986+24 @ 5010.00ft			
Northing	Easting	Latitude	Longitude
14739934.70	1755946.63	40.58471268	-104.58389780

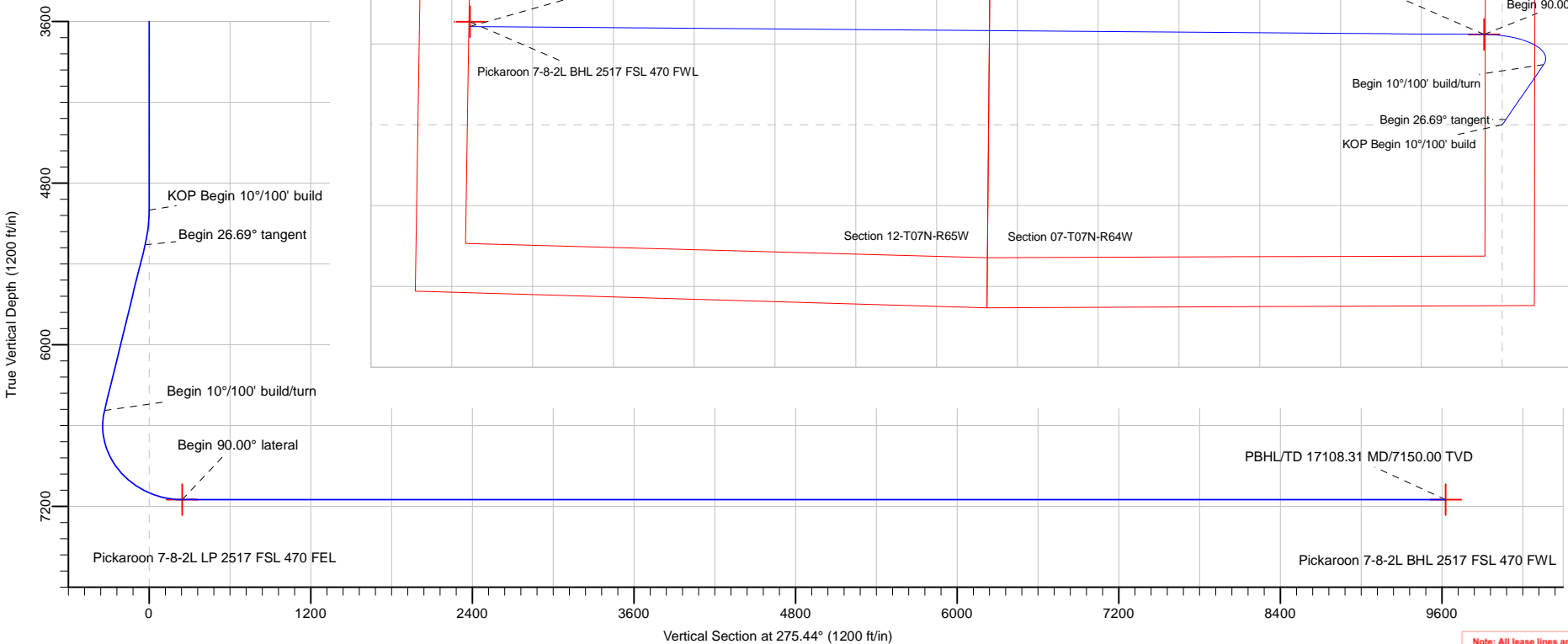
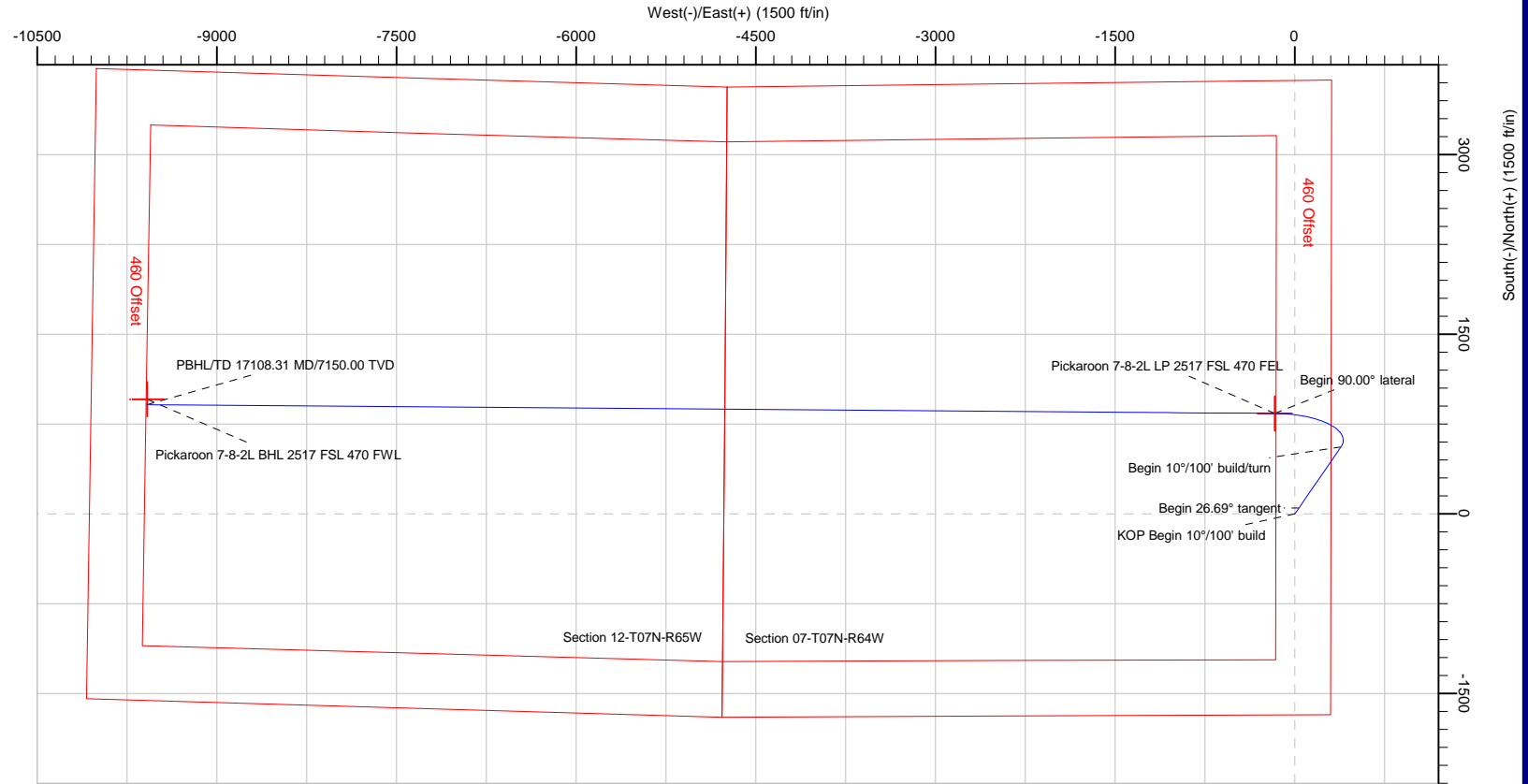
Azimuth Corrections:

To convert a Magnetic Direction to a True Direction, Add 7.98° East



Azimuths to True North
 Magnetic North: 7.98°

Magnetic Field
 Strength: 52351.8snT
 Dip Angle: 66.98°
 Date: 2/11/2018
 Model: HDGM



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 Pickaroon 7-08-02L
Company:	Confluence Resources	TVD Reference:	RKB=4986+24 @ 5010.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4986+24 @ 5010.00ft
Site:	Section 07-T07N-R64W	North Reference:	True
Well:	Pickaroon 7-08-02L	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 07-T07N-R64W				
Site Position:	Northing:	14,740,905.93 usft	Latitude:	40.58737934	
From: Map	Easting:	1,755,960.51 usft	Longitude:	-104.58383128	
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.27 °

Well	Pickaroon 7-08-02L, Surf loc: 1677 FSL 302 FEL Section 07-T07N-R64W					
Well Position	+N/-S	-971.16 ft	Northing:	14,739,934.70 usft	Latitude:	40.58471268
	+E/-W	-18.47 ft	Easting:	1,755,946.63 usft	Longitude:	-104.58389780
Position Uncertainty	0.00 ft	Wellhead Elevation:		Ground Level:	4,986.00 ft	

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	2/11/2018	7.98	66.98	52,351.80000000

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	275.44

Plan Survey Tool Program	Date	2/11/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,108.32	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	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,266.90	26.69	34.57	5,257.35	50.27	34.64	10.00	10.00	0.00	34.57	
6,644.01	26.69	34.57	6,487.74	559.61	385.59	0.00	0.00	0.00	0.00	
7,689.96	90.00	270.44	7,150.00	839.52	-166.73	10.00	6.05	-11.87	-121.19	Pickaroon 7-8-2L LP 2
17,108.32	90.00	270.44	7,150.00	912.56	-9,584.81	0.00	0.00	0.00	0.00	Pickaroon 7-8-2L BHL

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Pickaroon 7-08-02L
Company:	Confluence Resources	TVD Reference:	RKB=4986+24 @ 5010.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4986+24 @ 5010.00ft
Site:	Section 07-T07N-R64W	North Reference:	True
Well:	Pickaroon 7-08-02L	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
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 10°/100' build									
5,100.00	10.00	34.57	5,099.49	7.17	4.94	-4.24	10.00	10.00	0.00
5,200.00	20.00	34.57	5,195.96	28.45	19.61	-16.82	10.00	10.00	0.00

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Company:	Confluence Resources	TVD Reference:	RKB=4986+24 @ 5010.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4986+24 @ 5010.00ft
Site:	Section 07-T07N-R64W	North Reference:	True
Well:	Pickaroon 7-08-02L	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)	
5,266.90	26.69	34.57	5,257.35	50.27	34.64	-29.72	10.00	10.00	0.00	
Begin 26.69° tangent										
5,300.00	26.69	34.57	5,286.92	62.51	43.07	-36.95	0.00	0.00	0.00	
5,400.00	26.69	34.57	5,376.27	99.50	68.56	-58.82	0.00	0.00	0.00	
5,500.00	26.69	34.57	5,465.62	136.49	94.04	-80.68	0.00	0.00	0.00	
5,600.00	26.69	34.57	5,554.96	173.47	119.53	-102.55	0.00	0.00	0.00	
5,700.00	26.69	34.57	5,644.31	210.46	145.01	-124.41	0.00	0.00	0.00	
5,800.00	26.69	34.57	5,733.65	247.44	170.50	-146.28	0.00	0.00	0.00	
5,900.00	26.69	34.57	5,823.00	284.43	195.98	-168.14	0.00	0.00	0.00	
6,000.00	26.69	34.57	5,912.34	321.42	221.47	-190.01	0.00	0.00	0.00	
6,100.00	26.69	34.57	6,001.69	358.40	246.95	-211.87	0.00	0.00	0.00	
6,200.00	26.69	34.57	6,091.03	395.39	272.44	-233.73	0.00	0.00	0.00	
6,300.00	26.69	34.57	6,180.38	432.38	297.92	-255.60	0.00	0.00	0.00	
6,400.00	26.69	34.57	6,269.72	469.36	323.41	-277.46	0.00	0.00	0.00	
6,500.00	26.69	34.57	6,359.07	506.35	348.89	-299.33	0.00	0.00	0.00	
6,600.00	26.69	34.57	6,448.41	543.33	374.37	-321.19	0.00	0.00	0.00	
6,644.01	26.69	34.57	6,487.73	559.61	385.59	-330.81	0.00	0.00	0.00	
Begin 10°/100' build/turn										
6,700.00	24.23	22.84	6,538.31	580.57	397.19	-340.38	10.00	-4.39	-20.95	
6,800.00	22.62	357.83	6,630.30	618.80	404.45	-343.98	10.00	-1.62	-25.00	
6,900.00	25.01	333.60	6,722.00	657.04	394.30	-330.25	10.00	2.39	-24.23	
7,000.00	30.47	315.46	6,810.63	694.14	367.05	-299.61	10.00	5.46	-18.14	
7,100.00	37.69	303.04	6,893.50	728.97	323.53	-252.98	10.00	7.22	-12.43	
7,200.00	45.83	294.29	6,968.09	760.46	265.06	-191.79	10.00	8.15	-8.75	
7,300.00	54.48	287.72	7,032.14	787.68	193.42	-117.90	10.00	8.65	-6.56	
7,400.00	63.41	282.47	7,083.70	809.77	110.79	-33.54	10.00	8.93	-5.26	
7,500.00	72.51	277.98	7,121.19	826.08	19.67	58.71	10.00	9.10	-4.49	
7,600.00	81.70	273.93	7,143.49	836.12	-77.16	156.06	10.00	9.19	-4.05	
7,689.96	90.00	270.44	7,150.00	839.52	-166.73	245.55	10.00	9.23	-3.87	
Begin 90.00° lateral										
7,700.00	90.00	270.44	7,150.00	839.60	-176.77	255.55	0.00	0.00	0.00	
7,800.00	90.00	270.44	7,150.00	840.37	-276.77	355.17	0.00	0.00	0.00	
7,900.00	90.00	270.44	7,150.00	841.15	-376.76	454.79	0.00	0.00	0.00	
8,000.00	90.00	270.44	7,150.00	841.92	-476.76	554.41	0.00	0.00	0.00	
8,100.00	90.00	270.44	7,150.00	842.70	-576.76	654.03	0.00	0.00	0.00	
8,200.00	90.00	270.44	7,150.00	843.47	-676.75	753.65	0.00	0.00	0.00	
8,300.00	90.00	270.44	7,150.00	844.25	-776.75	853.27	0.00	0.00	0.00	
8,400.00	90.00	270.44	7,150.00	845.03	-876.75	952.89	0.00	0.00	0.00	
8,500.00	90.00	270.44	7,150.00	845.80	-976.75	1,052.51	0.00	0.00	0.00	
8,600.00	90.00	270.44	7,150.00	846.58	-1,076.74	1,152.13	0.00	0.00	0.00	
8,700.00	90.00	270.44	7,150.00	847.35	-1,176.74	1,251.75	0.00	0.00	0.00	
8,800.00	90.00	270.44	7,150.00	848.13	-1,276.74	1,351.37	0.00	0.00	0.00	
8,900.00	90.00	270.44	7,150.00	848.90	-1,376.73	1,450.99	0.00	0.00	0.00	
9,000.00	90.00	270.44	7,150.00	849.68	-1,476.73	1,550.62	0.00	0.00	0.00	
9,100.00	90.00	270.44	7,150.00	850.45	-1,576.73	1,650.24	0.00	0.00	0.00	
9,200.00	90.00	270.44	7,150.00	851.23	-1,676.72	1,749.86	0.00	0.00	0.00	
9,300.00	90.00	270.44	7,150.00	852.00	-1,776.72	1,849.48	0.00	0.00	0.00	
9,400.00	90.00	270.44	7,150.00	852.78	-1,876.72	1,949.10	0.00	0.00	0.00	
9,500.00	90.00	270.44	7,150.00	853.56	-1,976.72	2,048.72	0.00	0.00	0.00	
9,600.00	90.00	270.44	7,150.00	854.33	-2,076.71	2,148.34	0.00	0.00	0.00	
9,700.00	90.00	270.44	7,150.00	855.11	-2,176.71	2,247.96	0.00	0.00	0.00	
9,800.00	90.00	270.44	7,150.00	855.88	-2,276.71	2,347.58	0.00	0.00	0.00	
9,900.00	90.00	270.44	7,150.00	856.66	-2,376.70	2,447.20	0.00	0.00	0.00	

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Site:	Section 07-T07N-R64W	North Reference:	True
Well:	Pickaroon 7-08-02L	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	270.44	7,150.00	857.43	-2,476.70	2,546.82	0.00	0.00	0.00	
10,100.00	90.00	270.44	7,150.00	858.21	-2,576.70	2,646.44	0.00	0.00	0.00	
10,200.00	90.00	270.44	7,150.00	858.98	-2,676.69	2,746.06	0.00	0.00	0.00	
10,300.00	90.00	270.44	7,150.00	859.76	-2,776.69	2,845.68	0.00	0.00	0.00	
10,400.00	90.00	270.44	7,150.00	860.54	-2,876.69	2,945.30	0.00	0.00	0.00	
10,500.00	90.00	270.44	7,150.00	861.31	-2,976.69	3,044.92	0.00	0.00	0.00	
10,600.00	90.00	270.44	7,150.00	862.09	-3,076.68	3,144.54	0.00	0.00	0.00	
10,700.00	90.00	270.44	7,150.00	862.86	-3,176.68	3,244.16	0.00	0.00	0.00	
10,800.00	90.00	270.44	7,150.00	863.64	-3,276.68	3,343.78	0.00	0.00	0.00	
10,900.00	90.00	270.44	7,150.00	864.41	-3,376.67	3,443.40	0.00	0.00	0.00	
11,000.00	90.00	270.44	7,150.00	865.19	-3,476.67	3,543.02	0.00	0.00	0.00	
11,100.00	90.00	270.44	7,150.00	865.96	-3,576.67	3,642.64	0.00	0.00	0.00	
11,200.00	90.00	270.44	7,150.00	866.74	-3,676.66	3,742.26	0.00	0.00	0.00	
11,300.00	90.00	270.44	7,150.00	867.51	-3,776.66	3,841.88	0.00	0.00	0.00	
11,400.00	90.00	270.44	7,150.00	868.29	-3,876.66	3,941.50	0.00	0.00	0.00	
11,500.00	90.00	270.44	7,150.00	869.07	-3,976.66	4,041.12	0.00	0.00	0.00	
11,600.00	90.00	270.44	7,150.00	869.84	-4,076.65	4,140.74	0.00	0.00	0.00	
11,700.00	90.00	270.44	7,150.00	870.62	-4,176.65	4,240.36	0.00	0.00	0.00	
11,800.00	90.00	270.44	7,150.00	871.39	-4,276.65	4,339.98	0.00	0.00	0.00	
11,900.00	90.00	270.44	7,150.00	872.17	-4,376.64	4,439.60	0.00	0.00	0.00	
12,000.00	90.00	270.44	7,150.00	872.94	-4,476.64	4,539.23	0.00	0.00	0.00	
12,100.00	90.00	270.44	7,150.00	873.72	-4,576.64	4,638.85	0.00	0.00	0.00	
12,200.00	90.00	270.44	7,150.00	874.49	-4,676.63	4,738.47	0.00	0.00	0.00	
12,300.00	90.00	270.44	7,150.00	875.27	-4,776.63	4,838.09	0.00	0.00	0.00	
12,400.00	90.00	270.44	7,150.00	876.05	-4,876.63	4,937.71	0.00	0.00	0.00	
12,500.00	90.00	270.44	7,150.00	876.82	-4,976.63	5,037.33	0.00	0.00	0.00	
12,600.00	90.00	270.44	7,150.00	877.60	-5,076.62	5,136.95	0.00	0.00	0.00	
12,700.00	90.00	270.44	7,150.00	878.37	-5,176.62	5,236.57	0.00	0.00	0.00	
12,800.00	90.00	270.44	7,150.00	879.15	-5,276.62	5,336.19	0.00	0.00	0.00	
12,900.00	90.00	270.44	7,150.00	879.92	-5,376.61	5,435.81	0.00	0.00	0.00	
13,000.00	90.00	270.44	7,150.00	880.70	-5,476.61	5,535.43	0.00	0.00	0.00	
13,100.00	90.00	270.44	7,150.00	881.47	-5,576.61	5,635.05	0.00	0.00	0.00	
13,200.00	90.00	270.44	7,150.00	882.25	-5,676.60	5,734.67	0.00	0.00	0.00	
13,300.00	90.00	270.44	7,150.00	883.02	-5,776.60	5,834.29	0.00	0.00	0.00	
13,400.00	90.00	270.44	7,150.00	883.80	-5,876.60	5,933.91	0.00	0.00	0.00	
13,500.00	90.00	270.44	7,150.00	884.58	-5,976.60	6,033.53	0.00	0.00	0.00	
13,600.00	90.00	270.44	7,150.00	885.35	-6,076.59	6,133.15	0.00	0.00	0.00	
13,700.00	90.00	270.44	7,150.00	886.13	-6,176.59	6,232.77	0.00	0.00	0.00	
13,800.00	90.00	270.44	7,150.00	886.90	-6,276.59	6,332.39	0.00	0.00	0.00	
13,900.00	90.00	270.44	7,150.00	887.68	-6,376.58	6,432.01	0.00	0.00	0.00	
14,000.00	90.00	270.44	7,150.00	888.45	-6,476.58	6,531.63	0.00	0.00	0.00	
14,100.00	90.00	270.44	7,150.00	889.23	-6,576.58	6,631.25	0.00	0.00	0.00	
14,200.00	90.00	270.44	7,150.00	890.00	-6,676.57	6,730.87	0.00	0.00	0.00	
14,300.00	90.00	270.44	7,150.00	890.78	-6,776.57	6,830.49	0.00	0.00	0.00	
14,400.00	90.00	270.44	7,150.00	891.56	-6,876.57	6,930.11	0.00	0.00	0.00	
14,500.00	90.00	270.44	7,150.00	892.33	-6,976.57	7,029.73	0.00	0.00	0.00	
14,600.00	90.00	270.44	7,150.00	893.11	-7,076.56	7,129.35	0.00	0.00	0.00	
14,700.00	90.00	270.44	7,150.00	893.88	-7,176.56	7,228.97	0.00	0.00	0.00	
14,800.00	90.00	270.44	7,150.00	894.66	-7,276.56	7,328.59	0.00	0.00	0.00	
14,900.00	90.00	270.44	7,150.00	895.43	-7,376.55	7,428.21	0.00	0.00	0.00	
15,000.00	90.00	270.44	7,150.00	896.21	-7,476.55	7,527.84	0.00	0.00	0.00	
15,100.00	90.00	270.44	7,150.00	896.98	-7,576.55	7,627.46	0.00	0.00	0.00	
15,200.00	90.00	270.44	7,150.00	897.76	-7,676.54	7,727.08	0.00	0.00	0.00	
15,300.00	90.00	270.44	7,150.00	898.53	-7,776.54	7,826.70	0.00	0.00	0.00	

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Pickaroon 7-08-02L
Company:	Confluence Resources	TVD Reference:	RKB=4986+24 @ 5010.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4986+24 @ 5010.00ft
Site:	Section 07-T07N-R64W	North Reference:	True
Well:	Pickaroon 7-08-02L	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	270.44	7,150.00	899.31	-7,876.54	7,926.32	0.00	0.00	0.00	
15,500.00	90.00	270.44	7,150.00	900.09	-7,976.54	8,025.94	0.00	0.00	0.00	
15,600.00	90.00	270.44	7,150.00	900.86	-8,076.53	8,125.56	0.00	0.00	0.00	
15,700.00	90.00	270.44	7,150.00	901.64	-8,176.53	8,225.18	0.00	0.00	0.00	
15,800.00	90.00	270.44	7,150.00	902.41	-8,276.53	8,324.80	0.00	0.00	0.00	
15,900.00	90.00	270.44	7,150.00	903.19	-8,376.52	8,424.42	0.00	0.00	0.00	
16,000.00	90.00	270.44	7,150.00	903.96	-8,476.52	8,524.04	0.00	0.00	0.00	
16,100.00	90.00	270.44	7,150.00	904.74	-8,576.52	8,623.66	0.00	0.00	0.00	
16,200.00	90.00	270.44	7,150.00	905.51	-8,676.51	8,723.28	0.00	0.00	0.00	
16,300.00	90.00	270.44	7,150.00	906.29	-8,776.51	8,822.90	0.00	0.00	0.00	
16,400.00	90.00	270.44	7,150.00	907.07	-8,876.51	8,922.52	0.00	0.00	0.00	
16,500.00	90.00	270.44	7,150.00	907.84	-8,976.51	9,022.14	0.00	0.00	0.00	
16,600.00	90.00	270.44	7,150.00	908.62	-9,076.50	9,121.76	0.00	0.00	0.00	
16,700.00	90.00	270.44	7,150.00	909.39	-9,176.50	9,221.38	0.00	0.00	0.00	
16,800.00	90.00	270.44	7,150.00	910.17	-9,276.50	9,321.00	0.00	0.00	0.00	
16,900.00	90.00	270.44	7,150.00	910.94	-9,376.49	9,420.62	0.00	0.00	0.00	
17,000.00	90.00	270.44	7,150.00	911.72	-9,476.49	9,520.24	0.00	0.00	0.00	
17,100.00	90.00	270.44	7,150.00	912.49	-9,576.49	9,619.86	0.00	0.00	0.00	
17,108.31	90.00	270.44	7,150.00	912.56	-9,584.80	9,628.14	0.00	0.00	0.00	
PBHL/TD 17108.31 MD/7150.00 TVD										
17,108.32	90.00	270.44	7,150.00	912.56	-9,584.81	9,628.15	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Pickaroon 7-8-2L BHL 2!	0.00	0.25	7,150.00	957.01	-9,580.57	14,740,846.43	1,746,361.66	40.58733535	-104.61840483	
- hit/miss target										
- Shape										
- plan misses target center by 44.48ft at 17104.43ft MD (7150.00 TVD, 912.53 N, -9580.92 E)										
- Point										
Pickaroon 7-8-2L LP 251	0.00	0.27	7,150.00	839.52	-166.73	14,740,773.42	1,755,775.94	40.58701788	-104.58449830	
- hit/miss target										
- Shape										
- 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	
5,266.90	5,257.35	50.27	34.64	Begin 26.69° tangent	
6,644.01	6,487.73	559.61	385.59	Begin 10°/100' build/turn	
7,689.96	7,150.00	839.52	-166.73	Begin 90.00° lateral	
17,108.31	7,150.00	912.56	-9,584.80	PBHL/TD 17108.31 MD/7150.00 TVD	

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Pickaroon 7-08-02L
Company:	Confluence Resources	TVD Reference:	RKB=4986+24 @ 5010.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4986+24 @ 5010.00ft
Site:	Section 07-T07N-R64W	North Reference:	True
Well:	Pickaroon 7-08-02L	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 07-T07N-R64W				
Site Position:	Northing:	14,740,905.93 usft	Latitude:	40.58737934	
From: Map	Easting:	1,755,960.51 usft	Longitude:	-104.58383128	
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.27 °

Well	Pickaroon 7-08-02L, Surf loc: 1677 FSL 302 FEL Section 07-T07N-R64W					
Well Position	+N/-S	0.00 ft	Northing:	14,739,934.70 usft	Latitude:	40.58471268
	+E/-W	0.00 ft	Easting:	1,755,946.63 usft	Longitude:	-104.58389780
Position Uncertainty	0.00 ft	Wellhead Elevation:		Ground Level:	4,986.00 ft	

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	2/11/2018	7.98	66.98	52,351.80000000

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	275.44

Plan Survey Tool Program	Date	2/11/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,108.32 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	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,266.90	26.69	34.57	5,257.35	50.27	34.64	10.00	10.00	0.00	34.57	
6,644.01	26.69	34.57	6,487.74	559.61	385.59	0.00	0.00	0.00	0.00	
7,689.96	90.00	270.44	7,150.00	839.52	-166.73	10.00	6.05	-11.87	-121.19	Pickaroon 7-8-2L LP 2
17,108.32	90.00	270.44	7,150.00	912.56	-9,584.81	0.00	0.00	0.00	0.00	Pickaroon 7-8-2L BHL

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Pickaroon 7-08-02L
Company:	Confluence Resources	TVD Reference:	RKB=4986+24 @ 5010.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4986+24 @ 5010.00ft
Site:	Section 07-T07N-R64W	North Reference:	True
Well:	Pickaroon 7-08-02L	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	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
100.00	0.00	0.00	100.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
200.00	0.00	0.00	200.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
300.00	0.00	0.00	300.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
400.00	0.00	0.00	400.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
500.00	0.00	0.00	500.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
600.00	0.00	0.00	600.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
700.00	0.00	0.00	700.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
800.00	0.00	0.00	800.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
900.00	0.00	0.00	900.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
2,700.00	0.00	0.00	2,700.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
2,800.00	0.00	0.00	2,800.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
2,900.00	0.00	0.00	2,900.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
3,100.00	0.00	0.00	3,100.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
3,200.00	0.00	0.00	3,200.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
3,300.00	0.00	0.00	3,300.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
3,400.00	0.00	0.00	3,400.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
3,600.00	0.00	0.00	3,600.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
3,700.00	0.00	0.00	3,700.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
3,800.00	0.00	0.00	3,800.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
3,900.00	0.00	0.00	3,900.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
4,100.00	0.00	0.00	4,100.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
4,200.00	0.00	0.00	4,200.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
4,300.00	0.00	0.00	4,300.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
4,400.00	0.00	0.00	4,400.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
4,500.00	0.00	0.00	4,500.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
4,600.00	0.00	0.00	4,600.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
4,700.00	0.00	0.00	4,700.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
4,800.00	0.00	0.00	4,800.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
4,900.00	0.00	0.00	4,900.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	14,739,934.70	1,755,946.63	40.58471268	-104.58389780	
KOP Begin 10°/100' build										
5,100.00	10.00	34.57	5,099.49	7.17	4.94	14,739,941.89	1,755,951.53	40.58473236	-104.58388001	
5,200.00	20.00	34.57	5,195.96	28.45	19.61	14,739,963.24	1,755,966.10	40.58479081	-104.58382719	

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Pickaroon 7-08-02L
Company:	Confluence Resources	TVD Reference:	RKB=4986+24 @ 5010.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4986+24 @ 5010.00ft
Site:	Section 07-T07N-R64W	North Reference:	True
Well:	Pickaroon 7-08-02L	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	
5,266.90	26.69	34.57	5,257.35	50.27	34.64	14,739,985.13	1,755,981.03	40.58485071	-104.58377305	
Begin 26.69° tangent										
5,300.00	26.69	34.57	5,286.92	62.51	43.07	14,739,997.42	1,755,989.41	40.58488433	-104.58374267	
5,400.00	26.69	34.57	5,376.27	99.50	68.56	14,740,034.52	1,756,014.72	40.58498589	-104.58365088	
5,500.00	26.69	34.57	5,465.62	136.49	94.04	14,740,071.63	1,756,040.03	40.58508745	-104.58355909	
5,600.00	26.69	34.57	5,554.96	173.47	119.53	14,740,108.73	1,756,065.34	40.58518901	-104.58346730	
5,700.00	26.69	34.57	5,644.31	210.46	145.01	14,740,145.84	1,756,090.65	40.58529057	-104.58337552	
5,800.00	26.69	34.57	5,733.65	247.44	170.50	14,740,182.95	1,756,115.95	40.58539212	-104.58328373	
5,900.00	26.69	34.57	5,823.00	284.43	195.98	14,740,220.05	1,756,141.26	40.58549368	-104.58319194	
6,000.00	26.69	34.57	5,912.34	321.42	221.47	14,740,257.16	1,756,166.57	40.58559524	-104.58310015	
6,100.00	26.69	34.57	6,001.69	358.40	246.95	14,740,294.26	1,756,191.88	40.58569680	-104.58300836	
6,200.00	26.69	34.57	6,091.03	395.39	272.44	14,740,331.37	1,756,217.19	40.58579836	-104.58291657	
6,300.00	26.69	34.57	6,180.38	432.38	297.92	14,740,368.48	1,756,242.50	40.58589992	-104.58282478	
6,400.00	26.69	34.57	6,269.72	469.36	323.41	14,740,405.58	1,756,267.81	40.58600148	-104.58273299	
6,500.00	26.69	34.57	6,359.07	506.35	348.89	14,740,442.69	1,756,293.12	40.58610303	-104.58264120	
6,600.00	26.69	34.57	6,448.41	543.33	374.37	14,740,479.80	1,756,318.43	40.58620459	-104.58254941	
6,644.01	26.69	34.57	6,487.73	559.61	385.59	14,740,496.13	1,756,329.57	40.58624929	-104.58250902	
Begin 10°/100' build/turn										
6,700.00	24.23	22.84	6,538.31	580.57	397.19	14,740,517.14	1,756,341.07	40.58630684	-104.58246722	
6,800.00	22.62	357.83	6,630.30	618.80	404.45	14,740,555.40	1,756,348.15	40.58641180	-104.58244109	
6,900.00	25.01	333.60	6,722.00	657.04	394.30	14,740,593.59	1,756,337.82	40.58651681	-104.58247765	
7,000.00	30.47	315.46	6,810.63	694.14	367.05	14,740,630.56	1,756,310.39	40.58661868	-104.58257579	
7,100.00	37.69	303.04	6,893.50	728.97	323.53	14,740,665.19	1,756,266.71	40.58671432	-104.58273253	
7,200.00	45.83	294.29	6,968.09	760.46	265.06	14,740,696.41	1,756,208.09	40.58680081	-104.58294312	
7,300.00	54.48	287.72	7,032.14	787.68	193.42	14,740,723.28	1,756,136.33	40.58687553	-104.58320114	
7,400.00	63.41	282.47	7,083.70	809.77	110.79	14,740,744.98	1,756,053.59	40.58693620	-104.58349877	
7,500.00	72.51	277.98	7,121.19	826.08	19.67	14,740,760.87	1,755,962.40	40.58698100	-104.58382695	
7,600.00	81.70	273.93	7,143.49	836.12	-77.16	14,740,770.44	1,755,865.52	40.58700854	-104.58417572	
7,689.96	90.00	270.44	7,150.00	839.52	-166.73	14,740,773.42	1,755,775.93	40.58701788	-104.58449832	
Begin 90.00° lateral										
7,700.00	90.00	270.44	7,150.00	839.60	-176.77	14,740,773.45	1,755,765.89	40.58701810	-104.58453448	
7,800.00	90.00	270.44	7,150.00	840.37	-276.77	14,740,773.75	1,755,665.90	40.58702022	-104.58489464	
7,900.00	90.00	270.44	7,150.00	841.15	-376.76	14,740,774.06	1,755,565.90	40.58702235	-104.58525481	
8,000.00	90.00	270.44	7,150.00	841.92	-476.76	14,740,774.36	1,755,465.90	40.58702447	-104.58561497	
8,100.00	90.00	270.44	7,150.00	842.70	-576.76	14,740,774.66	1,755,365.90	40.58702660	-104.58597514	
8,200.00	90.00	270.44	7,150.00	843.47	-676.75	14,740,774.96	1,755,265.90	40.58702872	-104.58633530	
8,300.00	90.00	270.44	7,150.00	844.25	-776.75	14,740,775.27	1,755,165.90	40.58703084	-104.58669547	
8,400.00	90.00	270.44	7,150.00	845.03	-876.75	14,740,775.57	1,755,065.90	40.58703296	-104.58705563	
8,500.00	90.00	270.44	7,150.00	845.80	-976.75	14,740,775.87	1,754,965.90	40.58703508	-104.58741579	
8,600.00	90.00	270.44	7,150.00	846.58	-1,076.74	14,740,776.18	1,754,865.90	40.58703720	-104.58777596	
8,700.00	90.00	270.44	7,150.00	847.35	-1,176.74	14,740,776.48	1,754,765.90	40.58703931	-104.58813612	
8,800.00	90.00	270.44	7,150.00	848.13	-1,276.74	14,740,776.78	1,754,665.90	40.58704143	-104.58849629	
8,900.00	90.00	270.44	7,150.00	848.90	-1,376.73	14,740,777.09	1,754,565.90	40.58704354	-104.58885645	
9,000.00	90.00	270.44	7,150.00	849.68	-1,476.73	14,740,777.39	1,754,465.90	40.58704566	-104.58921662	
9,100.00	90.00	270.44	7,150.00	850.45	-1,576.73	14,740,777.69	1,754,365.90	40.58704777	-104.58957678	
9,200.00	90.00	270.44	7,150.00	851.23	-1,676.72	14,740,778.00	1,754,265.90	40.58704988	-104.58993694	
9,300.00	90.00	270.44	7,150.00	852.00	-1,776.72	14,740,778.30	1,754,165.91	40.58705199	-104.59029711	
9,400.00	90.00	270.44	7,150.00	852.78	-1,876.72	14,740,778.60	1,754,065.91	40.58705410	-104.59065727	
9,500.00	90.00	270.44	7,150.00	853.56	-1,976.72	14,740,778.90	1,753,965.91	40.58705621	-104.59101744	
9,600.00	90.00	270.44	7,150.00	854.33	-2,076.71	14,740,779.21	1,753,865.91	40.58705831	-104.59137760	
9,700.00	90.00	270.44	7,150.00	855.11	-2,176.71	14,740,779.51	1,753,765.91	40.58706042	-104.59173777	
9,800.00	90.00	270.44	7,150.00	855.88	-2,276.71	14,740,779.81	1,753,665.91	40.58706252	-104.59209793	
9,900.00	90.00	270.44	7,150.00	856.66	-2,376.70	14,740,780.12	1,753,565.91	40.58706463	-104.59245810	
10,000.00	90.00	270.44	7,150.00	857.43	-2,476.70	14,740,780.42	1,753,465.91	40.58706673	-104.59281826	

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Pickaroon 7-08-02L
Company:	Confluence Resources	TVD Reference:	RKB=4986+24 @ 5010.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4986+24 @ 5010.00ft
Site:	Section 07-T07N-R64W	North Reference:	True
Well:	Pickaroon 7-08-02L	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	270.44	7,150.00	858.21	-2,576.70	14,740,780.72	1,753,365.91	40.58706883	-104.59317843	
10,200.00	90.00	270.44	7,150.00	858.98	-2,676.69	14,740,781.03	1,753,265.91	40.58707093	-104.59353859	
10,300.00	90.00	270.44	7,150.00	859.76	-2,776.69	14,740,781.33	1,753,165.91	40.58707303	-104.59389876	
10,400.00	90.00	270.44	7,150.00	860.54	-2,876.69	14,740,781.63	1,753,065.91	40.58707513	-104.59425892	
10,500.00	90.00	270.44	7,150.00	861.31	-2,976.69	14,740,781.93	1,752,965.91	40.58707722	-104.59461909	
10,600.00	90.00	270.44	7,150.00	862.09	-3,076.68	14,740,782.24	1,752,865.91	40.58707932	-104.59497925	
10,700.00	90.00	270.44	7,150.00	862.86	-3,176.68	14,740,782.54	1,752,765.91	40.58708141	-104.59533942	
10,800.00	90.00	270.44	7,150.00	863.64	-3,276.68	14,740,782.84	1,752,665.92	40.58708351	-104.59569958	
10,900.00	90.00	270.44	7,150.00	864.41	-3,376.67	14,740,783.15	1,752,565.92	40.58708560	-104.59605975	
11,000.00	90.00	270.44	7,150.00	865.19	-3,476.67	14,740,783.45	1,752,465.92	40.58708769	-104.59641991	
11,100.00	90.00	270.44	7,150.00	865.96	-3,576.67	14,740,783.75	1,752,365.92	40.58708978	-104.59678008	
11,200.00	90.00	270.44	7,150.00	866.74	-3,676.66	14,740,784.06	1,752,265.92	40.58709187	-104.59714024	
11,300.00	90.00	270.44	7,150.00	867.51	-3,776.66	14,740,784.36	1,752,165.92	40.58709396	-104.59750041	
11,400.00	90.00	270.44	7,150.00	868.29	-3,876.66	14,740,784.66	1,752,065.92	40.58709604	-104.59786057	
11,500.00	90.00	270.44	7,150.00	869.07	-3,976.66	14,740,784.96	1,751,965.92	40.58709813	-104.59822074	
11,600.00	90.00	270.44	7,150.00	869.84	-4,076.65	14,740,785.27	1,751,865.92	40.58710021	-104.59858090	
11,700.00	90.00	270.44	7,150.00	870.62	-4,176.65	14,740,785.57	1,751,765.92	40.58710230	-104.59894107	
11,800.00	90.00	270.44	7,150.00	871.39	-4,276.65	14,740,785.87	1,751,665.92	40.58710438	-104.59930123	
11,900.00	90.00	270.44	7,150.00	872.17	-4,376.64	14,740,786.18	1,751,565.92	40.58710646	-104.59966140	
12,000.00	90.00	270.44	7,150.00	872.94	-4,476.64	14,740,786.48	1,751,465.92	40.58710854	-104.60002156	
12,100.00	90.00	270.44	7,150.00	873.72	-4,576.64	14,740,786.78	1,751,365.92	40.58711062	-104.60038173	
12,200.00	90.00	270.44	7,150.00	874.49	-4,676.63	14,740,787.09	1,751,265.92	40.58711269	-104.60074190	
12,300.00	90.00	270.44	7,150.00	875.27	-4,776.63	14,740,787.39	1,751,165.93	40.58711477	-104.60110206	
12,400.00	90.00	270.44	7,150.00	876.05	-4,876.63	14,740,787.69	1,751,065.93	40.58711685	-104.60146223	
12,500.00	90.00	270.44	7,150.00	876.82	-4,976.63	14,740,787.99	1,750,965.93	40.58711892	-104.60182239	
12,600.00	90.00	270.44	7,150.00	877.60	-5,076.62	14,740,788.30	1,750,865.93	40.58712099	-104.60218256	
12,700.00	90.00	270.44	7,150.00	878.37	-5,176.62	14,740,788.60	1,750,765.93	40.58712306	-104.60254272	
12,800.00	90.00	270.44	7,150.00	879.15	-5,276.62	14,740,788.90	1,750,665.93	40.58712513	-104.60290289	
12,900.00	90.00	270.44	7,150.00	879.92	-5,376.61	14,740,789.21	1,750,565.93	40.58712720	-104.60326305	
13,000.00	90.00	270.44	7,150.00	880.70	-5,476.61	14,740,789.51	1,750,465.93	40.58712927	-104.60362322	
13,100.00	90.00	270.44	7,150.00	881.47	-5,576.61	14,740,789.81	1,750,365.93	40.58713134	-104.60398339	
13,200.00	90.00	270.44	7,150.00	882.25	-5,676.60	14,740,790.12	1,750,265.93	40.58713341	-104.60434355	
13,300.00	90.00	270.44	7,150.00	883.02	-5,776.60	14,740,790.42	1,750,165.93	40.58713547	-104.60470372	
13,400.00	90.00	270.44	7,150.00	883.80	-5,876.60	14,740,790.72	1,750,065.93	40.58713754	-104.60506388	
13,500.00	90.00	270.44	7,150.00	884.58	-5,976.60	14,740,791.02	1,749,965.93	40.58713960	-104.60542405	
13,600.00	90.00	270.44	7,150.00	885.35	-6,076.59	14,740,791.33	1,749,865.93	40.58714166	-104.60578422	
13,700.00	90.00	270.44	7,150.00	886.13	-6,176.59	14,740,791.63	1,749,765.93	40.58714372	-104.60614438	
13,800.00	90.00	270.44	7,150.00	886.90	-6,276.59	14,740,791.93	1,749,665.94	40.58714578	-104.60650455	
13,900.00	90.00	270.44	7,150.00	887.68	-6,376.58	14,740,792.24	1,749,565.94	40.58714784	-104.60686471	
14,000.00	90.00	270.44	7,150.00	888.45	-6,476.58	14,740,792.54	1,749,465.94	40.58714990	-104.60722488	
14,100.00	90.00	270.44	7,150.00	889.23	-6,576.58	14,740,792.84	1,749,365.94	40.58715195	-104.60758505	
14,200.00	90.00	270.44	7,150.00	890.00	-6,676.57	14,740,793.15	1,749,265.94	40.58715401	-104.60794521	
14,300.00	90.00	270.44	7,150.00	890.78	-6,776.57	14,740,793.45	1,749,165.94	40.58715606	-104.60830538	
14,400.00	90.00	270.44	7,150.00	891.56	-6,876.57	14,740,793.75	1,749,065.94	40.58715811	-104.60866554	
14,500.00	90.00	270.44	7,150.00	892.33	-6,976.57	14,740,794.05	1,748,965.94	40.58716017	-104.60902571	
14,600.00	90.00	270.44	7,150.00	893.11	-7,076.56	14,740,794.36	1,748,865.94	40.58716222	-104.60938588	
14,700.00	90.00	270.44	7,150.00	893.88	-7,176.56	14,740,794.66	1,748,765.94	40.58716427	-104.60974604	
14,800.00	90.00	270.44	7,150.00	894.66	-7,276.56	14,740,794.96	1,748,665.94	40.58716631	-104.61010621	
14,900.00	90.00	270.44	7,150.00	895.43	-7,376.55	14,740,795.27	1,748,565.94	40.58716836	-104.61046637	
15,000.00	90.00	270.44	7,150.00	896.21	-7,476.55	14,740,795.57	1,748,465.94	40.58717041	-104.61082654	
15,100.00	90.00	270.44	7,150.00	896.98	-7,576.55	14,740,795.87	1,748,365.94	40.58717245	-104.61118671	
15,200.00	90.00	270.44	7,150.00	897.76	-7,676.54	14,740,796.18	1,748,265.94	40.58717450	-104.61154687	
15,300.00	90.00	270.44	7,150.00	898.53	-7,776.54	14,740,796.48	1,748,165.94	40.58717654	-104.61190704	
15,400.00	90.00	270.44	7,150.00	899.31	-7,876.54	14,740,796.78	1,748,065.95	40.58717858	-104.61226721	
15,500.00	90.00	270.44	7,150.00	900.09	-7,976.54	14,740,797.08	1,747,965.95	40.58718062	-104.61262737	

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Pickaroon 7-08-02L
Company:	Confluence Resources	TVD Reference:	RKB=4986+24 @ 5010.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=4986+24 @ 5010.00ft
Site:	Section 07-T07N-R64W	North Reference:	True
Well:	Pickaroon 7-08-02L	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	270.44	7,150.00	900.86	-8,076.53	14,740,797.39	1,747,865.95	40.58718266	-104.61298754	
15,700.00	90.00	270.44	7,150.00	901.64	-8,176.53	14,740,797.69	1,747,765.95	40.58718470	-104.61334771	
15,800.00	90.00	270.44	7,150.00	902.41	-8,276.53	14,740,797.99	1,747,665.95	40.58718673	-104.61370787	
15,900.00	90.00	270.44	7,150.00	903.19	-8,376.52	14,740,798.30	1,747,565.95	40.58718877	-104.61406804	
16,000.00	90.00	270.44	7,150.00	903.96	-8,476.52	14,740,798.60	1,747,465.95	40.58719080	-104.61442821	
16,100.00	90.00	270.44	7,150.00	904.74	-8,576.52	14,740,798.90	1,747,365.95	40.58719284	-104.61478837	
16,200.00	90.00	270.44	7,150.00	905.51	-8,676.51	14,740,799.21	1,747,265.95	40.58719487	-104.61514854	
16,300.00	90.00	270.44	7,150.00	906.29	-8,776.51	14,740,799.51	1,747,165.95	40.58719690	-104.61550871	
16,400.00	90.00	270.44	7,150.00	907.07	-8,876.51	14,740,799.81	1,747,065.95	40.58719893	-104.61586887	
16,500.00	90.00	270.44	7,150.00	907.84	-8,976.51	14,740,800.11	1,746,965.95	40.58720096	-104.61622904	
16,600.00	90.00	270.44	7,150.00	908.62	-9,076.50	14,740,800.42	1,746,865.95	40.58720299	-104.61658921	
16,700.00	90.00	270.44	7,150.00	909.39	-9,176.50	14,740,800.72	1,746,765.95	40.58720502	-104.61694937	
16,800.00	90.00	270.44	7,150.00	910.17	-9,276.50	14,740,801.02	1,746,665.95	40.58720704	-104.61730954	
16,900.00	90.00	270.44	7,150.00	910.94	-9,376.49	14,740,801.33	1,746,565.96	40.58720907	-104.61766971	
17,000.00	90.00	270.44	7,150.00	911.72	-9,476.49	14,740,801.63	1,746,465.96	40.58721109	-104.61802987	
17,100.00	90.00	270.44	7,150.00	912.49	-9,576.49	14,740,801.93	1,746,365.96	40.58721311	-104.61839004	
17,108.31	90.00	270.44	7,150.00	912.56	-9,584.80	14,740,801.96	1,746,357.65	40.58721328	-104.61841997	
PBHL/TD 17108.31 MD/7150.00 TVD										
17,108.32	90.00	270.44	7,150.00	912.56	-9,584.81	14,740,801.96	1,746,357.64	40.58721328	-104.61842001	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Pickaroon 7-8-2L BHL 2' - hit/miss target - Shape	0.00	0.25	7,150.00	957.01	-9,580.57	14,740,846.43	1,746,361.66	40.58733535	-104.61840483	
- plan misses target center by 44.48ft at 17104.43ft MD (7150.00 TVD, 912.53 N, -9580.92 E)										
- Point										
Pickaroon 7-8-2L LP 251 - plan hits target center - Point	0.00	0.27	7,150.00	839.52	-166.73	14,740,773.42	1,755,775.94	40.58701788	-104.58449830	

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	
5,266.90	5,257.35	50.27	34.64	Begin 26.69° tangent	
6,644.01	6,487.73	559.61	385.59	Begin 10°/100' build/turn	
7,689.96	7,150.00	839.52	-166.73	Begin 90.00° lateral	
17,108.31	7,150.00	912.56	-9,584.80	PBHL/TD 17108.31 MD/7150.00 TVD	