



Weld County, Colorado
Section 33-T01N-R65W
Walla 5-2-4L
plan1

Azimuth Corrections:

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

Walla 5-2-4L			
Surf loc: 735 FSL 300 FWL Sec33-T01N-R65W			
NAD83 Colorado - HARN			
Universal Transverse Mercator (US Survey Feet)			
Zone 13N (108 W to 102 W)			
RKB=5073+25 @ 5098.00ft			
Northing	Easting	Latitude	Longitude
14527826.11	1730773.62	40.00255146	-104.67734359

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	5270.42	27.04	229.35	5260.49	-40.80	-47.53	10.00	44.84	Begin 27.04° tangent section
4	7360.51	27.04	229.35	7122.08	-659.77	-768.52	0.00	725.08	Begin 10°/100' build/turn
5	8086.40	89.85	180.12	7498.00	-1205.18	-914.53	10.00	1281.25	LP Begin 89.85° lateral section
6	17407.01	89.85	180.12	7523.00	-10525.74	-933.37	0.00	10567.04	PBHL/TD 17407.01 MD/7523.00 TVD

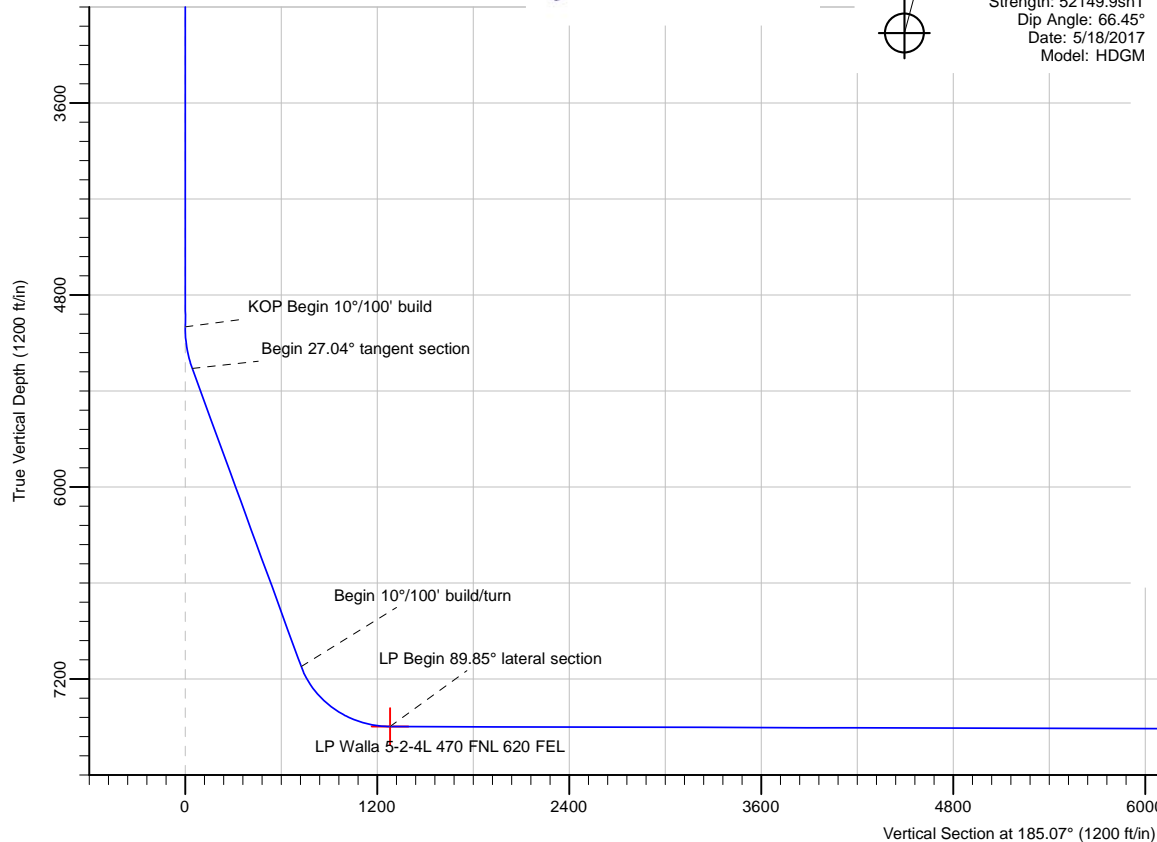
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP Walla 5-2-4L 470 FNL 620 FEL	7498.00	-1205.18	-914.53	14526617.63	1729863.46	39.99924179	-104.68060911
BHL Walla 5-2-4L 470 FSL 620 FEL	7523.00	-10525.74	-933.37	14517297.08	1729878.36	39.97364595	-104.68067510



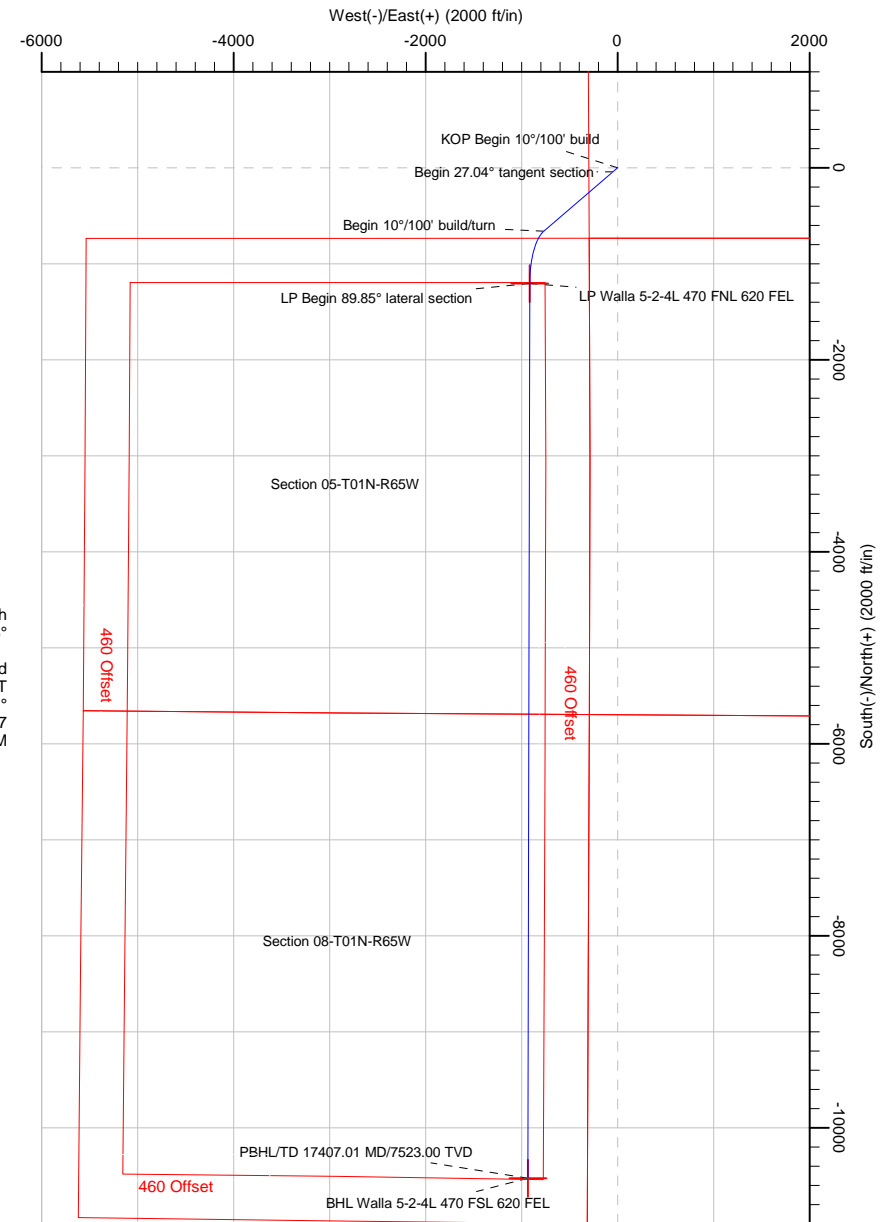
Azimuths to True North
Magnetic North: 8.28°

Magnetic Field
Strength: 52149.9snT
Dip Angle: 66.45°
Date: 5/18/2017
Model: HDGM



Date: 20:38, May 18 2017

Vertical Section at 185.07° (1200 ft/in)



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 Walla 5-2-4L
Company:	Confluence Resources	TVD Reference:	RKB=5073+25 @ 5098.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5073+25 @ 5098.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-2-4L	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 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	Walla 5-2-4L, Surf loc: 735 FSL 300 FWL Sec33-T01N-R65W					
Well Position	+N/-S	74.99 ft	Northing:	14,527,826.11 usft	Latitude:	40.00255146
	+E/-W	-0.38 ft	Easting:	1,730,773.62 usft	Longitude:	-104.67734359
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,073.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/18/2017	8.28	66.45	52,149.90000000

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	185.07

Plan Survey Tool Program	Date	5/18/2017		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,407.01	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	
5,270.42	27.04	229.35	5,260.49	-40.80	-47.53	10.00	10.00	0.00	229.35	
7,360.51	27.04	229.35	7,122.08	-659.77	-768.52	0.00	0.00	0.00	0.00	
8,086.40	89.85	180.12	7,498.00	-1,205.18	-914.53	10.00	8.65	-6.78	-52.54	LP Walla 5-2-4L 470 F
17,407.01	89.85	180.12	7,523.00	-10,525.74	-933.37	0.00	0.00	0.00	0.00	BHL Walla 5-2-4L 470

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-2-4L
Company:	Confluence Resources	TVD Reference:	RKB=5073+25 @ 5098.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5073+25 @ 5098.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-2-4L	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
2,500.01	0.00	0.00	2,500.01	0.00	0.00	0.00	0.00	0.00	0.00
2,600.01	0.00	0.00	2,600.01	0.00	0.00	0.00	0.00	0.00	0.00
2,700.01	0.00	0.00	2,700.01	0.00	0.00	0.00	0.00	0.00	0.00
2,800.01	0.00	0.00	2,800.01	0.00	0.00	0.00	0.00	0.00	0.00
2,900.01	0.00	0.00	2,900.01	0.00	0.00	0.00	0.00	0.00	0.00
3,000.01	0.00	0.00	3,000.01	0.00	0.00	0.00	0.00	0.00	0.00
3,100.01	0.00	0.00	3,100.01	0.00	0.00	0.00	0.00	0.00	0.00
3,200.01	0.00	0.00	3,200.01	0.00	0.00	0.00	0.00	0.00	0.00
3,300.01	0.00	0.00	3,300.01	0.00	0.00	0.00	0.00	0.00	0.00
3,400.01	0.00	0.00	3,400.01	0.00	0.00	0.00	0.00	0.00	0.00
3,500.01	0.00	0.00	3,500.01	0.00	0.00	0.00	0.00	0.00	0.00
3,600.01	0.00	0.00	3,600.01	0.00	0.00	0.00	0.00	0.00	0.00
3,700.01	0.00	0.00	3,700.01	0.00	0.00	0.00	0.00	0.00	0.00
3,800.01	0.00	0.00	3,800.01	0.00	0.00	0.00	0.00	0.00	0.00
3,900.01	0.00	0.00	3,900.01	0.00	0.00	0.00	0.00	0.00	0.00
4,000.01	0.00	0.00	4,000.01	0.00	0.00	0.00	0.00	0.00	0.00
4,100.01	0.00	0.00	4,100.01	0.00	0.00	0.00	0.00	0.00	0.00
4,200.01	0.00	0.00	4,200.01	0.00	0.00	0.00	0.00	0.00	0.00
4,300.01	0.00	0.00	4,300.01	0.00	0.00	0.00	0.00	0.00	0.00
4,400.01	0.00	0.00	4,400.01	0.00	0.00	0.00	0.00	0.00	0.00
4,500.01	0.00	0.00	4,500.01	0.00	0.00	0.00	0.00	0.00	0.00
4,600.01	0.00	0.00	4,600.01	0.00	0.00	0.00	0.00	0.00	0.00
4,700.01	0.00	0.00	4,700.01	0.00	0.00	0.00	0.00	0.00	0.00
4,800.01	0.00	0.00	4,800.01	0.00	0.00	0.00	0.00	0.00	0.00
4,900.01	0.00	0.00	4,900.01	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									
5,000.01	0.00	229.35	5,000.01	0.00	0.00	0.00	0.00	0.00	0.00
5,100.01	10.00	229.35	5,099.50	-5.67	-6.61	6.23	10.00	10.00	0.00

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Project:	Weld County, Colorado	MD Reference:	RKB=5073+25 @ 5098.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-2-4L	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)
5,200.01	20.00	229.35	5,195.97	-22.51	-26.22	24.74	10.00	10.00	0.00
5,270.42	27.04	229.35	5,260.49	-40.80	-47.53	44.84	10.00	10.00	0.00
Begin 27.04° tangent section									
5,300.01	27.04	229.35	5,286.85	-49.57	-57.74	54.47	0.00	0.00	0.00
5,400.01	27.04	229.35	5,375.91	-79.18	-92.23	87.02	0.00	0.00	0.00
5,500.01	27.04	229.35	5,464.98	-108.79	-126.73	119.56	0.00	0.00	0.00
5,600.01	27.04	229.35	5,554.05	-138.41	-161.22	152.11	0.00	0.00	0.00
5,700.01	27.04	229.35	5,643.12	-168.02	-195.72	184.65	0.00	0.00	0.00
5,800.01	27.04	229.35	5,732.19	-197.64	-230.22	217.20	0.00	0.00	0.00
5,900.01	27.04	229.35	5,821.25	-227.25	-264.71	249.75	0.00	0.00	0.00
6,000.01	27.04	229.35	5,910.32	-256.87	-299.21	282.29	0.00	0.00	0.00
6,100.01	27.04	229.35	5,999.39	-286.48	-333.70	314.84	0.00	0.00	0.00
6,200.01	27.04	229.35	6,088.46	-316.10	-368.20	347.38	0.00	0.00	0.00
6,300.01	27.04	229.35	6,177.52	-345.71	-402.70	379.93	0.00	0.00	0.00
6,400.01	27.04	229.35	6,266.59	-375.33	-437.19	412.48	0.00	0.00	0.00
6,500.01	27.04	229.35	6,355.66	-404.94	-471.69	445.02	0.00	0.00	0.00
6,600.01	27.04	229.35	6,444.73	-434.56	-506.18	477.57	0.00	0.00	0.00
6,700.01	27.04	229.35	6,533.79	-464.17	-540.68	510.11	0.00	0.00	0.00
6,800.01	27.04	229.35	6,622.86	-493.79	-575.18	542.66	0.00	0.00	0.00
6,900.01	27.04	229.35	6,711.93	-523.40	-609.67	575.21	0.00	0.00	0.00
7,000.01	27.04	229.35	6,801.00	-553.01	-644.17	607.75	0.00	0.00	0.00
7,100.01	27.04	229.35	6,890.06	-582.63	-678.66	640.30	0.00	0.00	0.00
7,200.01	27.04	229.35	6,979.13	-612.24	-713.16	672.84	0.00	0.00	0.00
7,300.01	27.04	229.35	7,068.20	-641.86	-747.66	705.39	0.00	0.00	0.00
7,360.51	27.04	229.35	7,122.08	-659.77	-768.52	725.08	0.00	0.00	0.00
Begin 10°/100' build/turn									
7,400.01	29.60	223.00	7,156.86	-672.76	-782.00	739.21	10.00	6.47	-16.09
7,500.02	37.08	210.85	7,240.44	-716.82	-814.38	785.95	10.00	7.49	-12.15
7,600.02	45.43	202.46	7,315.60	-775.77	-843.53	847.25	10.00	8.35	-8.39
7,700.02	54.24	196.24	7,380.07	-847.83	-868.55	921.23	10.00	8.81	-6.22
7,800.02	63.30	191.28	7,431.89	-930.80	-888.68	1,005.66	10.00	9.06	-4.96
7,900.02	72.51	187.06	7,469.49	-1,022.16	-903.32	1,097.96	10.00	9.21	-4.22
8,000.02	81.79	183.26	7,491.71	-1,119.15	-912.01	1,195.33	10.00	9.29	-3.81
8,086.40	89.85	180.12	7,498.00	-1,205.18	-914.53	1,281.25	10.00	9.32	-3.63
LP Begin 89.85° lateral section									
8,100.02	89.85	180.12	7,498.04	-1,218.80	-914.56	1,294.82	0.00	0.00	0.00
8,200.02	89.85	180.12	7,498.30	-1,318.80	-914.76	1,394.44	0.00	0.00	0.00
8,300.02	89.85	180.12	7,498.57	-1,418.80	-914.96	1,494.07	0.00	0.00	0.00
8,400.02	89.85	180.12	7,498.84	-1,518.80	-915.16	1,593.70	0.00	0.00	0.00
8,500.02	89.85	180.12	7,499.11	-1,618.80	-915.37	1,693.32	0.00	0.00	0.00
8,600.02	89.85	180.12	7,499.38	-1,718.80	-915.57	1,792.95	0.00	0.00	0.00
8,700.02	89.85	180.12	7,499.65	-1,818.80	-915.77	1,892.58	0.00	0.00	0.00
8,800.02	89.85	180.12	7,499.91	-1,918.79	-915.97	1,992.20	0.00	0.00	0.00
8,900.02	89.85	180.12	7,500.18	-2,018.79	-916.18	2,091.83	0.00	0.00	0.00
9,000.02	89.85	180.12	7,500.45	-2,118.79	-916.38	2,191.46	0.00	0.00	0.00
9,100.02	89.85	180.12	7,500.72	-2,218.79	-916.58	2,291.08	0.00	0.00	0.00
9,200.02	89.85	180.12	7,500.99	-2,318.79	-916.78	2,390.71	0.00	0.00	0.00
9,300.02	89.85	180.12	7,501.26	-2,418.79	-916.98	2,490.33	0.00	0.00	0.00
9,400.02	89.85	180.12	7,501.52	-2,518.79	-917.19	2,589.96	0.00	0.00	0.00
9,500.02	89.85	180.12	7,501.79	-2,618.79	-917.39	2,689.59	0.00	0.00	0.00
9,600.02	89.85	180.12	7,502.06	-2,718.79	-917.59	2,789.21	0.00	0.00	0.00
9,700.02	89.85	180.12	7,502.33	-2,818.79	-917.79	2,888.84	0.00	0.00	0.00
9,800.02	89.85	180.12	7,502.60	-2,918.79	-918.00	2,988.47	0.00	0.00	0.00

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Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-2-4L	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)
9,900.02	89.85	180.12	7,502.86	-3,018.79	-918.20	3,088.09	0.00	0.00	0.00
10,000.02	89.85	180.12	7,503.13	-3,118.79	-918.40	3,187.72	0.00	0.00	0.00
10,100.02	89.85	180.12	7,503.40	-3,218.79	-918.60	3,287.35	0.00	0.00	0.00
10,200.02	89.85	180.12	7,503.67	-3,318.79	-918.80	3,386.97	0.00	0.00	0.00
10,300.02	89.85	180.12	7,503.94	-3,418.79	-919.01	3,486.60	0.00	0.00	0.00
10,400.02	89.85	180.12	7,504.21	-3,518.79	-919.21	3,586.23	0.00	0.00	0.00
10,500.02	89.85	180.12	7,504.47	-3,618.79	-919.41	3,685.85	0.00	0.00	0.00
10,600.02	89.85	180.12	7,504.74	-3,718.79	-919.61	3,785.48	0.00	0.00	0.00
10,700.02	89.85	180.12	7,505.01	-3,818.79	-919.81	3,885.11	0.00	0.00	0.00
10,800.02	89.85	180.12	7,505.28	-3,918.79	-920.02	3,984.73	0.00	0.00	0.00
10,900.02	89.85	180.12	7,505.55	-4,018.79	-920.22	4,084.36	0.00	0.00	0.00
11,000.02	89.85	180.12	7,505.82	-4,118.79	-920.42	4,183.99	0.00	0.00	0.00
11,100.02	89.85	180.12	7,506.08	-4,218.79	-920.62	4,283.61	0.00	0.00	0.00
11,200.02	89.85	180.12	7,506.35	-4,318.79	-920.83	4,383.24	0.00	0.00	0.00
11,300.02	89.85	180.12	7,506.62	-4,418.79	-921.03	4,482.87	0.00	0.00	0.00
11,400.02	89.85	180.12	7,506.89	-4,518.79	-921.23	4,582.49	0.00	0.00	0.00
11,500.02	89.85	180.12	7,507.16	-4,618.79	-921.43	4,682.12	0.00	0.00	0.00
11,600.02	89.85	180.12	7,507.42	-4,718.78	-921.63	4,781.75	0.00	0.00	0.00
11,700.02	89.85	180.12	7,507.69	-4,818.78	-921.84	4,881.37	0.00	0.00	0.00
11,800.02	89.85	180.12	7,507.96	-4,918.78	-922.04	4,981.00	0.00	0.00	0.00
11,900.02	89.85	180.12	7,508.23	-5,018.78	-922.24	5,080.63	0.00	0.00	0.00
12,000.02	89.85	180.12	7,508.50	-5,118.78	-922.44	5,180.25	0.00	0.00	0.00
12,100.02	89.85	180.12	7,508.77	-5,218.78	-922.64	5,279.88	0.00	0.00	0.00
12,200.02	89.85	180.12	7,509.03	-5,318.78	-922.85	5,379.51	0.00	0.00	0.00
12,300.02	89.85	180.12	7,509.30	-5,418.78	-923.05	5,479.13	0.00	0.00	0.00
12,400.03	89.85	180.12	7,509.57	-5,518.78	-923.25	5,578.76	0.00	0.00	0.00
12,500.03	89.85	180.12	7,509.84	-5,618.78	-923.45	5,678.39	0.00	0.00	0.00
12,600.03	89.85	180.12	7,510.11	-5,718.78	-923.66	5,778.01	0.00	0.00	0.00
12,700.03	89.85	180.12	7,510.37	-5,818.78	-923.86	5,877.64	0.00	0.00	0.00
12,800.03	89.85	180.12	7,510.64	-5,918.78	-924.06	5,977.27	0.00	0.00	0.00
12,900.03	89.85	180.12	7,510.91	-6,018.78	-924.26	6,076.89	0.00	0.00	0.00
13,000.03	89.85	180.12	7,511.18	-6,118.78	-924.46	6,176.52	0.00	0.00	0.00
13,100.03	89.85	180.12	7,511.45	-6,218.78	-924.67	6,276.15	0.00	0.00	0.00
13,200.03	89.85	180.12	7,511.72	-6,318.78	-924.87	6,375.77	0.00	0.00	0.00
13,300.03	89.85	180.12	7,511.98	-6,418.78	-925.07	6,475.40	0.00	0.00	0.00
13,400.03	89.85	180.12	7,512.25	-6,518.78	-925.27	6,575.03	0.00	0.00	0.00
13,500.03	89.85	180.12	7,512.52	-6,618.78	-925.48	6,674.65	0.00	0.00	0.00
13,600.03	89.85	180.12	7,512.79	-6,718.78	-925.68	6,774.28	0.00	0.00	0.00
13,700.03	89.85	180.12	7,513.06	-6,818.78	-925.88	6,873.91	0.00	0.00	0.00
13,800.03	89.85	180.12	7,513.33	-6,918.78	-926.08	6,973.53	0.00	0.00	0.00
13,900.03	89.85	180.12	7,513.59	-7,018.78	-926.28	7,073.16	0.00	0.00	0.00
14,000.03	89.85	180.12	7,513.86	-7,118.78	-926.49	7,172.79	0.00	0.00	0.00
14,100.03	89.85	180.12	7,514.13	-7,218.78	-926.69	7,272.41	0.00	0.00	0.00
14,200.03	89.85	180.12	7,514.40	-7,318.78	-926.89	7,372.04	0.00	0.00	0.00
14,300.03	89.85	180.12	7,514.67	-7,418.77	-927.09	7,471.67	0.00	0.00	0.00
14,400.03	89.85	180.12	7,514.93	-7,518.77	-927.29	7,571.29	0.00	0.00	0.00
14,500.03	89.85	180.12	7,515.20	-7,618.77	-927.50	7,670.92	0.00	0.00	0.00
14,600.03	89.85	180.12	7,515.47	-7,718.77	-927.70	7,770.55	0.00	0.00	0.00
14,700.03	89.85	180.12	7,515.74	-7,818.77	-927.90	7,870.17	0.00	0.00	0.00
14,800.03	89.85	180.12	7,516.01	-7,918.77	-928.10	7,969.80	0.00	0.00	0.00
14,900.03	89.85	180.12	7,516.28	-8,018.77	-928.31	8,069.43	0.00	0.00	0.00
15,000.03	89.85	180.12	7,516.54	-8,118.77	-928.51	8,169.05	0.00	0.00	0.00
15,100.03	89.85	180.12	7,516.81	-8,218.77	-928.71	8,268.68	0.00	0.00	0.00
15,200.03	89.85	180.12	7,517.08	-8,318.77	-928.91	8,368.31	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-2-4L
Company:	Confluence Resources	TVD Reference:	RKB=5073+25 @ 5098.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5073+25 @ 5098.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-2-4L	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)	
15,300.03	89.85	180.12	7,517.35	-8,418.77	-929.11	8,467.93	0.00	0.00	0.00	
15,400.03	89.85	180.12	7,517.62	-8,518.77	-929.32	8,567.56	0.00	0.00	0.00	
15,500.03	89.85	180.12	7,517.89	-8,618.77	-929.52	8,667.19	0.00	0.00	0.00	
15,600.03	89.85	180.12	7,518.15	-8,718.77	-929.72	8,766.81	0.00	0.00	0.00	
15,700.03	89.85	180.12	7,518.42	-8,818.77	-929.92	8,866.44	0.00	0.00	0.00	
15,800.03	89.85	180.12	7,518.69	-8,918.77	-930.12	8,966.07	0.00	0.00	0.00	
15,900.03	89.85	180.12	7,518.96	-9,018.77	-930.33	9,065.69	0.00	0.00	0.00	
16,000.03	89.85	180.12	7,519.23	-9,118.77	-930.53	9,165.32	0.00	0.00	0.00	
16,100.03	89.85	180.12	7,519.49	-9,218.77	-930.73	9,264.95	0.00	0.00	0.00	
16,200.03	89.85	180.12	7,519.76	-9,318.77	-930.93	9,364.57	0.00	0.00	0.00	
16,300.03	89.85	180.12	7,520.03	-9,418.77	-931.14	9,464.20	0.00	0.00	0.00	
16,400.03	89.85	180.12	7,520.30	-9,518.77	-931.34	9,563.83	0.00	0.00	0.00	
16,500.03	89.85	180.12	7,520.57	-9,618.77	-931.54	9,663.45	0.00	0.00	0.00	
16,600.03	89.85	180.12	7,520.84	-9,718.77	-931.74	9,763.08	0.00	0.00	0.00	
16,700.03	89.85	180.12	7,521.10	-9,818.77	-931.94	9,862.71	0.00	0.00	0.00	
16,800.03	89.85	180.12	7,521.37	-9,918.77	-932.15	9,962.33	0.00	0.00	0.00	
16,900.03	89.85	180.12	7,521.64	-10,018.77	-932.35	10,061.96	0.00	0.00	0.00	
17,000.03	89.85	180.12	7,521.91	-10,118.77	-932.55	10,161.59	0.00	0.00	0.00	
17,100.03	89.85	180.12	7,522.18	-10,218.76	-932.75	10,261.21	0.00	0.00	0.00	
17,200.03	89.85	180.12	7,522.45	-10,318.76	-932.96	10,360.84	0.00	0.00	0.00	
17,300.03	89.85	180.12	7,522.71	-10,418.76	-933.16	10,460.47	0.00	0.00	0.00	
17,400.04	89.85	180.12	7,522.98	-10,518.76	-933.36	10,560.09	0.00	0.00	0.00	
17,407.01	89.85	180.12	7,523.00	-10,525.74	-933.37	10,567.04	0.00	0.00	0.00	
PBHL/TD 17407.01 MD/7523.00 TVD										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude		Longitude
LP Walla 5-2-4L 470 FNI - plan hits target center - Point	0.00	0.00	7,498.00	-1,205.18	-914.53	14,526,617.63	1,729,863.46	39.99924179		-104.68060910
BHL Walla 5-2-4L 470 F: - plan hits target center - Point	0.00	0.00	7,523.00	-10,525.74	-933.37	14,517,297.08	1,729,878.36	39.97364595		-104.68067509

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	
5,270.42	5,260.49	-40.80	-47.53	Begin 27.04° tangent section	
7,360.51	7,122.08	-659.77	-768.52	Begin 10°/100' build/turn	
8,086.40	7,498.00	-1,205.18	-914.53	LP Begin 89.85° lateral section	
17,407.01	7,523.00	-10,525.74	-933.37	PBHL/TD 17407.01 MD/7523.00 TVD	

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-2-4L
Company:	Confluence Resources	TVD Reference:	RKB=5073+25 @ 5098.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5073+25 @ 5098.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-2-4L	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 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	Walla 5-2-4L, Surf loc: 735 FSL 300 FWL Sec33-T01N-R65W					
Well Position	+N/-S	0.00 ft	Northing:	14,527,826.11 usft	Latitude:	40.00255146
	+E/-W	0.00 ft	Easting:	1,730,773.62 usft	Longitude:	-104.67734359
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,073.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/18/2017	8.28	66.45	52,149.90000000

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	185.07

Plan Survey Tool Program	Date	5/18/2017		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,407.01 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	
5,270.42	27.04	229.35	5,260.49	-40.80	-47.53	10.00	10.00	0.00	229.35	
7,360.51	27.04	229.35	7,122.08	-659.77	-768.52	0.00	0.00	0.00	0.00	
8,086.40	89.85	180.12	7,498.00	-1,205.18	-914.53	10.00	8.65	-6.78	-52.54	LP Walla 5-2-4L 470 F
17,407.01	89.85	180.12	7,523.00	-10,525.74	-933.37	0.00	0.00	0.00	0.00	BHL Walla 5-2-4L 470

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-2-4L
Company:	Confluence Resources	TVD Reference:	RKB=5073+25 @ 5098.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5073+25 @ 5098.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-2-4L	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	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
100.00	0.00	0.00	100.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
200.00	0.00	0.00	200.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
300.00	0.00	0.00	300.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
400.00	0.00	0.00	400.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
500.00	0.00	0.00	500.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
600.00	0.00	0.00	600.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
700.00	0.00	0.00	700.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
800.00	0.00	0.00	800.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
900.00	0.00	0.00	900.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
1,200.00	0.00	0.00	1,200.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
1,300.00	0.00	0.00	1,300.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
1,400.00	0.00	0.00	1,400.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
1,500.00	0.00	0.00	1,500.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
1,600.00	0.00	0.00	1,600.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
1,700.00	0.00	0.00	1,700.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
1,800.00	0.00	0.00	1,800.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
1,900.00	0.00	0.00	1,900.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
2,000.00	0.00	0.00	2,000.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
2,100.00	0.00	0.00	2,100.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
2,200.00	0.00	0.00	2,200.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
2,300.00	0.00	0.00	2,300.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
2,400.00	0.00	0.00	2,400.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
2,500.01	0.00	0.00	2,500.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
2,600.01	0.00	0.00	2,600.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
2,700.01	0.00	0.00	2,700.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
2,800.01	0.00	0.00	2,800.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
2,900.01	0.00	0.00	2,900.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
3,000.01	0.00	0.00	3,000.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
3,100.01	0.00	0.00	3,100.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
3,200.01	0.00	0.00	3,200.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
3,300.01	0.00	0.00	3,300.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
3,400.01	0.00	0.00	3,400.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
3,500.01	0.00	0.00	3,500.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
3,600.01	0.00	0.00	3,600.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
3,700.01	0.00	0.00	3,700.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
3,800.01	0.00	0.00	3,800.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
3,900.01	0.00	0.00	3,900.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
4,000.01	0.00	0.00	4,000.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
4,100.01	0.00	0.00	4,100.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
4,200.01	0.00	0.00	4,200.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
4,300.01	0.00	0.00	4,300.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
4,400.01	0.00	0.00	4,400.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
4,500.01	0.00	0.00	4,500.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
4,600.01	0.00	0.00	4,600.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
4,700.01	0.00	0.00	4,700.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
4,800.01	0.00	0.00	4,800.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
4,900.01	0.00	0.00	4,900.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
5,000.00	0.00	0.00	5,000.00	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
KOP Begin 10°/100' build									
5,000.01	0.00	229.35	5,000.01	0.00	0.00	14,527,826.11	1,730,773.62	40.00255146	-104.67734359
5,100.01	10.00	229.35	5,099.50	-5.67	-6.61	14,527,820.42	1,730,767.03	40.00253588	-104.67736718

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-2-4L
Company:	Confluence Resources	TVD Reference:	RKB=5073+25 @ 5098.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5073+25 @ 5098.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-2-4L	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
5,200.01	20.00	229.35	5,195.97	-22.51	-26.22	14,527,803.51	1,730,747.48	40.00248964	-104.67743722
5,270.42	27.04	229.35	5,260.49	-40.80	-47.53	14,527,785.14	1,730,726.24	40.00243941	-104.67751330
Begin 27.04° tangent section									
5,300.01	27.04	229.35	5,286.85	-49.57	-57.74	14,527,776.34	1,730,716.06	40.00241534	-104.67754975
5,400.01	27.04	229.35	5,375.91	-79.18	-92.23	14,527,746.60	1,730,681.67	40.00233402	-104.67767293
5,500.01	27.04	229.35	5,464.98	-108.79	-126.73	14,527,716.86	1,730,647.29	40.00225269	-104.67779611
5,600.01	27.04	229.35	5,554.05	-138.41	-161.22	14,527,687.12	1,730,612.90	40.00217136	-104.67791929
5,700.01	27.04	229.35	5,643.12	-168.02	-195.72	14,527,657.38	1,730,578.51	40.00209004	-104.67804247
5,800.01	27.04	229.35	5,732.19	-197.64	-230.22	14,527,627.64	1,730,544.12	40.00200871	-104.67816565
5,900.01	27.04	229.35	5,821.25	-227.25	-264.71	14,527,597.91	1,730,509.73	40.00192738	-104.67828883
6,000.01	27.04	229.35	5,910.32	-256.87	-299.21	14,527,568.17	1,730,475.34	40.00184605	-104.67841201
6,100.01	27.04	229.35	5,999.39	-286.48	-333.70	14,527,538.43	1,730,440.96	40.00176472	-104.67853519
6,200.01	27.04	229.35	6,088.46	-316.10	-368.20	14,527,508.69	1,730,406.57	40.00168340	-104.67865836
6,300.01	27.04	229.35	6,177.52	-345.71	-402.70	14,527,478.95	1,730,372.18	40.00160207	-104.67878154
6,400.01	27.04	229.35	6,266.59	-375.33	-437.19	14,527,449.21	1,730,337.79	40.00152074	-104.67890472
6,500.01	27.04	229.35	6,355.66	-404.94	-471.69	14,527,419.47	1,730,303.40	40.00143941	-104.67902789
6,600.01	27.04	229.35	6,444.73	-434.56	-506.18	14,527,389.73	1,730,269.01	40.00135808	-104.67915107
6,700.01	27.04	229.35	6,533.79	-464.17	-540.68	14,527,359.99	1,730,234.62	40.00127676	-104.67927425
6,800.01	27.04	229.35	6,622.86	-493.79	-575.18	14,527,330.25	1,730,200.24	40.00119543	-104.67939742
6,900.01	27.04	229.35	6,711.93	-523.40	-609.67	14,527,300.51	1,730,165.85	40.00111410	-104.67952060
7,000.01	27.04	229.35	6,801.00	-553.01	-644.17	14,527,270.77	1,730,131.46	40.00103277	-104.67964377
7,100.01	27.04	229.35	6,890.06	-582.63	-678.66	14,527,241.03	1,730,097.07	40.00095144	-104.67976695
7,200.01	27.04	229.35	6,979.13	-612.24	-713.16	14,527,211.29	1,730,062.68	40.00087011	-104.67989012
7,300.01	27.04	229.35	7,068.20	-641.86	-747.66	14,527,181.56	1,730,028.29	40.00078878	-104.68001330
7,360.51	27.04	229.35	7,122.08	-659.77	-768.52	14,527,163.56	1,730,007.49	40.00073958	-104.68008782
Begin 10°/100' build/turn									
7,400.01	29.60	223.00	7,156.86	-672.76	-782.00	14,527,150.53	1,729,994.07	40.00070391	-104.68013592
7,500.02	37.08	210.85	7,240.44	-716.82	-814.38	14,527,106.35	1,729,961.84	40.00058291	-104.68025155
7,600.02	45.43	202.46	7,315.60	-775.77	-843.53	14,527,047.29	1,729,932.91	40.00042102	-104.68035562
7,700.02	54.24	196.24	7,380.07	-847.83	-868.55	14,526,975.15	1,729,908.15	40.00022314	-104.68044495
7,800.02	63.30	191.28	7,431.89	-930.80	-888.68	14,526,892.10	1,729,888.32	39.99999528	-104.68051683
7,900.02	72.51	187.06	7,469.49	-1,022.16	-903.32	14,526,800.69	1,729,874.01	39.99974438	-104.68056908
8,000.02	81.79	183.26	7,491.71	-1,119.15	-912.01	14,526,703.68	1,729,865.67	39.99947806	-104.68060012
8,086.40	89.85	180.12	7,498.00	-1,205.18	-914.53	14,526,617.63	1,729,863.46	39.99924179	-104.68060910
LP Begin 89.85° lateral section									
8,100.02	89.85	180.12	7,498.04	-1,218.80	-914.56	14,526,604.02	1,729,863.48	39.99920440	-104.68060920
8,200.02	89.85	180.12	7,498.30	-1,318.80	-914.76	14,526,504.02	1,729,863.64	39.99892978	-104.68060991
8,300.02	89.85	180.12	7,498.57	-1,418.80	-914.96	14,526,404.02	1,729,863.80	39.99865517	-104.68061062
8,400.02	89.85	180.12	7,498.84	-1,518.80	-915.16	14,526,304.02	1,729,863.96	39.99838055	-104.68061132
8,500.02	89.85	180.12	7,499.11	-1,618.80	-915.37	14,526,204.02	1,729,864.12	39.99810594	-104.68061203
8,600.02	89.85	180.12	7,499.38	-1,718.80	-915.57	14,526,104.02	1,729,864.28	39.99783132	-104.68061274
8,700.02	89.85	180.12	7,499.65	-1,818.80	-915.77	14,526,004.02	1,729,864.44	39.99755670	-104.68061345
8,800.02	89.85	180.12	7,499.91	-1,918.79	-915.97	14,525,904.02	1,729,864.60	39.99728209	-104.68061416
8,900.02	89.85	180.12	7,500.18	-2,018.79	-916.18	14,525,804.02	1,729,864.76	39.99700747	-104.68061487
9,000.02	89.85	180.12	7,500.45	-2,118.79	-916.38	14,525,704.02	1,729,864.92	39.99673286	-104.68061557
9,100.02	89.85	180.12	7,500.72	-2,218.79	-916.58	14,525,604.02	1,729,865.08	39.99645824	-104.68061628
9,200.02	89.85	180.12	7,500.99	-2,318.79	-916.78	14,525,504.02	1,729,865.24	39.99618363	-104.68061699
9,300.02	89.85	180.12	7,501.26	-2,418.79	-916.98	14,525,404.02	1,729,865.40	39.99590901	-104.68061770
9,400.02	89.85	180.12	7,501.52	-2,518.79	-917.19	14,525,304.02	1,729,865.56	39.99563440	-104.68061841
9,500.02	89.85	180.12	7,501.79	-2,618.79	-917.39	14,525,204.02	1,729,865.72	39.99535978	-104.68061912
9,600.02	89.85	180.12	7,502.06	-2,718.79	-917.59	14,525,104.02	1,729,865.88	39.99508517	-104.68061983
9,700.02	89.85	180.12	7,502.33	-2,818.79	-917.79	14,525,004.02	1,729,866.04	39.99481055	-104.68062053
9,800.02	89.85	180.12	7,502.60	-2,918.79	-918.00	14,524,904.03	1,729,866.20	39.99453593	-104.68062124
9,900.02	89.85	180.12	7,502.86	-3,018.79	-918.20	14,524,804.03	1,729,866.36	39.99426132	-104.68062195

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-2-4L
Company:	Confluence Resources	TVD Reference:	RKB=5073+25 @ 5098.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5073+25 @ 5098.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-2-4L	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
10,000.02	89.85	180.12	7,503.13	-3,118.79	-918.40	14,524,704.03	1,729,866.52	39.99398670	-104.68062266
10,100.02	89.85	180.12	7,503.40	-3,218.79	-918.60	14,524,604.03	1,729,866.68	39.99371209	-104.68062337
10,200.02	89.85	180.12	7,503.67	-3,318.79	-918.80	14,524,504.03	1,729,866.84	39.99343747	-104.68062408
10,300.02	89.85	180.12	7,503.94	-3,418.79	-919.01	14,524,404.03	1,729,867.00	39.99316286	-104.68062478
10,400.02	89.85	180.12	7,504.21	-3,518.79	-919.21	14,524,304.03	1,729,867.16	39.99288824	-104.68062549
10,500.02	89.85	180.12	7,504.47	-3,618.79	-919.41	14,524,204.03	1,729,867.32	39.99261362	-104.68062620
10,600.02	89.85	180.12	7,504.74	-3,718.79	-919.61	14,524,104.03	1,729,867.48	39.99233901	-104.68062691
10,700.02	89.85	180.12	7,505.01	-3,818.79	-919.81	14,524,004.03	1,729,867.64	39.99206439	-104.68062762
10,800.02	89.85	180.12	7,505.28	-3,918.79	-920.02	14,523,904.03	1,729,867.80	39.99178978	-104.68062833
10,900.02	89.85	180.12	7,505.55	-4,018.79	-920.22	14,523,804.03	1,729,867.96	39.99151516	-104.68062903
11,000.02	89.85	180.12	7,505.82	-4,118.79	-920.42	14,523,704.03	1,729,868.12	39.99124055	-104.68062974
11,100.02	89.85	180.12	7,506.08	-4,218.79	-920.62	14,523,604.03	1,729,868.28	39.99096593	-104.68063045
11,200.02	89.85	180.12	7,506.35	-4,318.79	-920.83	14,523,504.03	1,729,868.44	39.99069131	-104.68063116
11,300.02	89.85	180.12	7,506.62	-4,418.79	-921.03	14,523,404.03	1,729,868.60	39.99041670	-104.68063187
11,400.02	89.85	180.12	7,506.89	-4,518.79	-921.23	14,523,304.03	1,729,868.76	39.99014208	-104.68063257
11,500.02	89.85	180.12	7,507.16	-4,618.79	-921.43	14,523,204.03	1,729,868.92	39.98986747	-104.68063328
11,600.02	89.85	180.12	7,507.42	-4,718.78	-921.63	14,523,104.03	1,729,869.08	39.98959285	-104.68063399
11,700.02	89.85	180.12	7,507.69	-4,818.78	-921.84	14,523,004.03	1,729,869.24	39.98931824	-104.68063470
11,800.02	89.85	180.12	7,507.96	-4,918.78	-922.04	14,522,904.03	1,729,869.40	39.98904362	-104.68063541
11,900.02	89.85	180.12	7,508.23	-5,018.78	-922.24	14,522,804.04	1,729,869.56	39.98876900	-104.68063612
12,000.02	89.85	180.12	7,508.50	-5,118.78	-922.44	14,522,704.04	1,729,869.72	39.98849439	-104.68063682
12,100.02	89.85	180.12	7,508.77	-5,218.78	-922.64	14,522,604.04	1,729,869.87	39.98821977	-104.68063753
12,200.02	89.85	180.12	7,509.03	-5,318.78	-922.85	14,522,504.04	1,729,870.03	39.98794516	-104.68063824
12,300.02	89.85	180.12	7,509.30	-5,418.78	-923.05	14,522,404.04	1,729,870.19	39.98767054	-104.68063895
12,400.03	89.85	180.12	7,509.57	-5,518.78	-923.25	14,522,304.04	1,729,870.35	39.98739593	-104.68063966
12,500.03	89.85	180.12	7,509.84	-5,618.78	-923.45	14,522,204.04	1,729,870.51	39.98712131	-104.68064036
12,600.03	89.85	180.12	7,510.11	-5,718.78	-923.66	14,522,104.04	1,729,870.67	39.98684669	-104.68064107
12,700.03	89.85	180.12	7,510.37	-5,818.78	-923.86	14,522,004.04	1,729,870.83	39.98657208	-104.68064178
12,800.03	89.85	180.12	7,510.64	-5,918.78	-924.06	14,521,904.04	1,729,870.99	39.98629746	-104.68064249
12,900.03	89.85	180.12	7,510.91	-6,018.78	-924.26	14,521,804.04	1,729,871.15	39.98602285	-104.68064320
13,000.03	89.85	180.12	7,511.18	-6,118.78	-924.46	14,521,704.04	1,729,871.31	39.98574823	-104.68064390
13,100.03	89.85	180.12	7,511.45	-6,218.78	-924.67	14,521,604.04	1,729,871.47	39.98547361	-104.68064461
13,200.03	89.85	180.12	7,511.72	-6,318.78	-924.87	14,521,504.04	1,729,871.63	39.98519900	-104.68064532
13,300.03	89.85	180.12	7,511.98	-6,418.78	-925.07	14,521,404.04	1,729,871.79	39.98492438	-104.68064603
13,400.03	89.85	180.12	7,512.25	-6,518.78	-925.27	14,521,304.04	1,729,871.95	39.98464977	-104.68064674
13,500.03	89.85	180.12	7,512.52	-6,618.78	-925.48	14,521,204.04	1,729,872.11	39.98437515	-104.68064744
13,600.03	89.85	180.12	7,512.79	-6,718.78	-925.68	14,521,104.04	1,729,872.27	39.98410053	-104.68064815
13,700.03	89.85	180.12	7,513.06	-6,818.78	-925.88	14,521,004.04	1,729,872.43	39.98382592	-104.68064886
13,800.03	89.85	180.12	7,513.33	-6,918.78	-926.08	14,520,904.04	1,729,872.59	39.98355130	-104.68064957
13,900.03	89.85	180.12	7,513.59	-7,018.78	-926.28	14,520,804.04	1,729,872.75	39.98327669	-104.68065028
14,000.03	89.85	180.12	7,513.86	-7,118.78	-926.49	14,520,704.05	1,729,872.91	39.98300207	-104.68065098
14,100.03	89.85	180.12	7,514.13	-7,218.78	-926.69	14,520,604.05	1,729,873.07	39.98272745	-104.68065169
14,200.03	89.85	180.12	7,514.40	-7,318.78	-926.89	14,520,504.05	1,729,873.23	39.98245284	-104.68065240
14,300.03	89.85	180.12	7,514.67	-7,418.77	-927.09	14,520,404.05	1,729,873.39	39.98217822	-104.68065311
14,400.03	89.85	180.12	7,514.93	-7,518.77	-927.29	14,520,304.05	1,729,873.55	39.98190360	-104.68065381
14,500.03	89.85	180.12	7,515.20	-7,618.77	-927.50	14,520,204.05	1,729,873.71	39.98162899	-104.68065452
14,600.03	89.85	180.12	7,515.47	-7,718.77	-927.70	14,520,104.05	1,729,873.87	39.98135437	-104.68065523
14,700.03	89.85	180.12	7,515.74	-7,818.77	-927.90	14,520,004.05	1,729,874.03	39.98107976	-104.68065594
14,800.03	89.85	180.12	7,516.01	-7,918.77	-928.10	14,519,904.05	1,729,874.19	39.98080514	-104.68065665
14,900.03	89.85	180.12	7,516.28	-8,018.77	-928.31	14,519,804.05	1,729,874.35	39.98053052	-104.68065735
15,000.03	89.85	180.12	7,516.54	-8,118.77	-928.51	14,519,704.05	1,729,874.51	39.98025591	-104.68065806
15,100.03	89.85	180.12	7,516.81	-8,218.77	-928.71	14,519,604.05	1,729,874.67	39.97998129	-104.68065877
15,200.03	89.85	180.12	7,517.08	-8,318.77	-928.91	14,519,504.05	1,729,874.83	39.97970667	-104.68065948
15,300.03	89.85	180.12	7,517.35	-8,418.77	-929.11	14,519,404.05	1,729,874.99	39.97943206	-104.68066018
15,400.03	89.85	180.12	7,517.62	-8,518.77	-929.32	14,519,304.05	1,729,875.15	39.97915744	-104.68066089

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Walla 5-2-4L
Company:	Confluence Resources	TVD Reference:	RKB=5073+25 @ 5098.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5073+25 @ 5098.00ft
Site:	Section 33-T01N-R65W	North Reference:	True
Well:	Walla 5-2-4L	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
15,500.03	89.85	180.12	7,517.89	-8,618.77	-929.52	14,519,204.05	1,729,875.31	39.97888283	-104.68066160
15,600.03	89.85	180.12	7,518.15	-8,718.77	-929.72	14,519,104.05	1,729,875.47	39.97860821	-104.68066231
15,700.03	89.85	180.12	7,518.42	-8,818.77	-929.92	14,519,004.05	1,729,875.63	39.97833359	-104.68066301
15,800.03	89.85	180.12	7,518.69	-8,918.77	-930.12	14,518,904.05	1,729,875.79	39.97805898	-104.68066372
15,900.03	89.85	180.12	7,518.96	-9,018.77	-930.33	14,518,804.05	1,729,875.95	39.97778436	-104.68066443
16,000.03	89.85	180.12	7,519.23	-9,118.77	-930.53	14,518,704.06	1,729,876.11	39.97750974	-104.68066514
16,100.03	89.85	180.12	7,519.49	-9,218.77	-930.73	14,518,604.06	1,729,876.27	39.97723513	-104.68066585
16,200.03	89.85	180.12	7,519.76	-9,318.77	-930.93	14,518,504.06	1,729,876.43	39.97696051	-104.68066655
16,300.03	89.85	180.12	7,520.03	-9,418.77	-931.14	14,518,404.06	1,729,876.59	39.97668589	-104.68066726
16,400.03	89.85	180.12	7,520.30	-9,518.77	-931.34	14,518,304.06	1,729,876.75	39.97641128	-104.68066797
16,500.03	89.85	180.12	7,520.57	-9,618.77	-931.54	14,518,204.06	1,729,876.91	39.97613666	-104.68066868
16,600.03	89.85	180.12	7,520.84	-9,718.77	-931.74	14,518,104.06	1,729,877.07	39.97586205	-104.68066938
16,700.03	89.85	180.12	7,521.10	-9,818.77	-931.94	14,518,004.06	1,729,877.23	39.97558743	-104.68067009
16,800.03	89.85	180.12	7,521.37	-9,918.77	-932.15	14,517,904.06	1,729,877.39	39.97531281	-104.68067080
16,900.03	89.85	180.12	7,521.64	-10,018.77	-932.35	14,517,804.06	1,729,877.55	39.97503820	-104.68067151
17,000.03	89.85	180.12	7,521.91	-10,118.77	-932.55	14,517,704.06	1,729,877.71	39.97476358	-104.68067221
17,100.03	89.85	180.12	7,522.18	-10,218.76	-932.75	14,517,604.06	1,729,877.87	39.97448896	-104.68067292
17,200.03	89.85	180.12	7,522.45	-10,318.76	-932.96	14,517,504.06	1,729,878.03	39.97421435	-104.68067363
17,300.03	89.85	180.12	7,522.71	-10,418.76	-933.16	14,517,404.06	1,729,878.19	39.97393973	-104.68067434
17,400.04	89.85	180.12	7,522.98	-10,518.76	-933.36	14,517,304.06	1,729,878.35	39.97366511	-104.68067504
17,407.01	89.85	180.12	7,523.00	-10,525.74	-933.37	14,517,297.08	1,729,878.36	39.97364595	-104.68067509
PBHL/TD 17407.01 MD/7523.00 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 Walla 5-2-4L 470 FNI	0.00	0.00	7,498.00	-1,205.18	-914.53	14,526,617.63	1,729,863.46	39.99924179	-104.68060910
- plan hits target center									
- Point									
BHL Walla 5-2-4L 470 F:	0.00	0.00	7,523.00	-10,525.74	-933.37	14,517,297.08	1,729,878.36	39.97364595	-104.68067509
- 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	
5,270.42	5,260.49	-40.80	-47.53	Begin 27.04° tangent section	
7,360.51	7,122.08	-659.77	-768.52	Begin 10°/100' build/turn	
8,086.40	7,498.00	-1,205.18	-914.53	LP Begin 89.85° lateral section	
17,407.01	7,523.00	-10,525.74	-933.37	PBHL/TD 17407.01 MD/7523.00 TVD	