



Well: Ries Fee 207-2821H
Site: Section 28-T12N-R64W
Project: Weld County, Colorado
Design: plan1

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Ries Fee 207-2821H PBHL 600 FNL 600 FWL	7949.00	9588.52	-1319.60	1608527.89	3259563.16	40.99998568	-104.55969037
Ries Fee 207-2821H EP 600 FSL 600 FWL	7959.00	-129.83	-1332.50	1598809.97	3259653.84	40.97331354	-104.55973517

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 2°/100' build
2	2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00	Begin 17.18° tangent
3	3358.97	17.18	239.09	3346.15	-65.66	-109.66	2.00	239.09	-50.09	Begin 10°/100' build/turn
4	7519.42	17.18	239.09	7320.99	-696.92	-1163.97	0.00	0.00	-531.72	Begin 90.06° lateral
5	8507.46	90.06	0.08	7959.00	-129.83	-1332.50	10.00	119.83	53.05	PBHL/TD 18225.83 MD/7949.00 TVD
6	18225.83	90.06	0.08	7949.00	9588.52	-1319.60	0.00	0.00	9678.90	

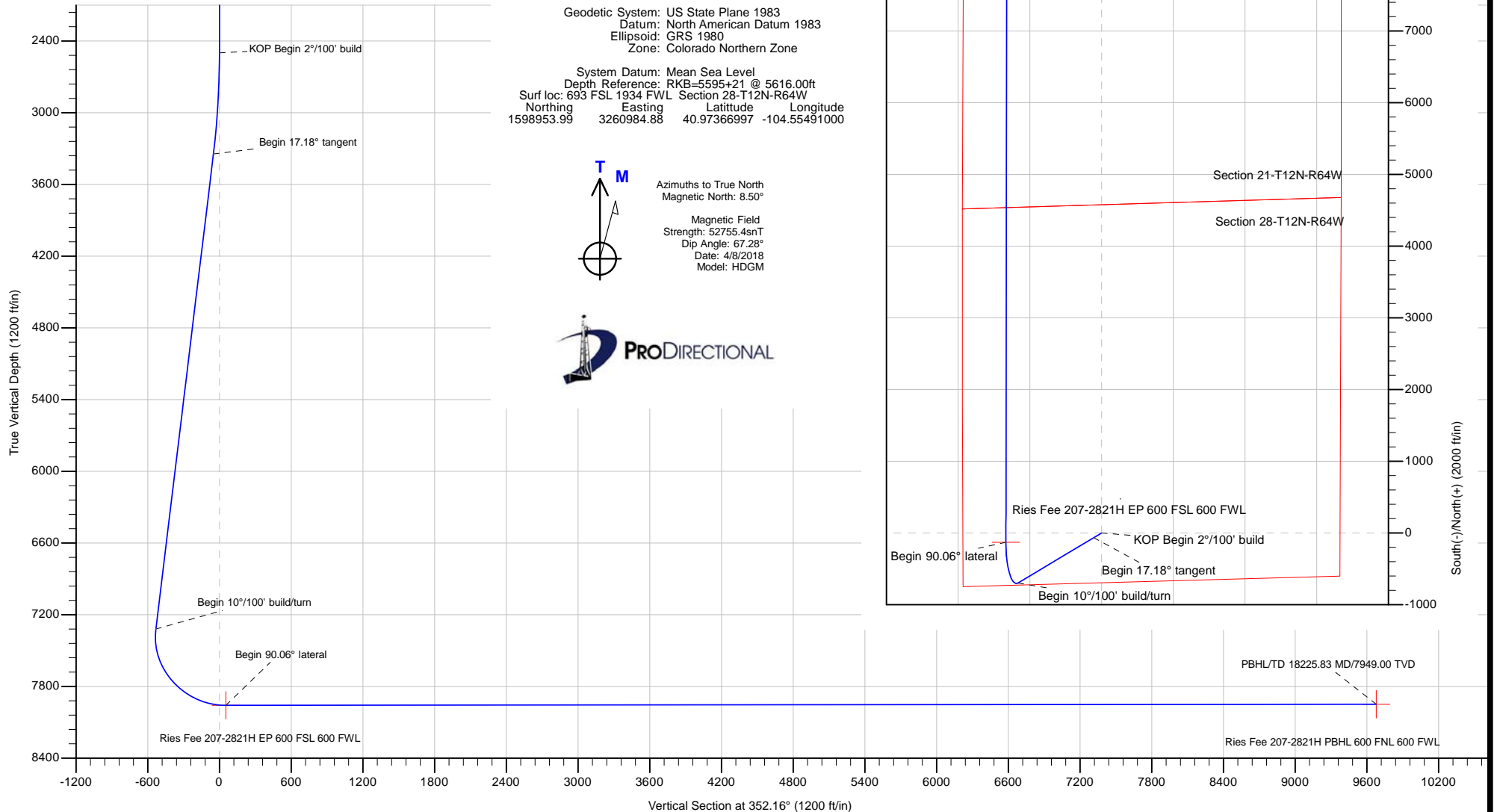
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level
Depth Reference: RKB=5595+21 @ 5616.00ft
Surf loc: 693 FSL 1934 FWL Section 28-T12N-R64W
Northing Easting Latitude Longitude
1598953.99 3260984.88 40.97366997 -104.55491000



Azimuths to True North
Magnetic North: 8.50°

Magnetic Field
Strength: 52755.4snT
Dip Angle: 67.28°
Date: 4/8/2018
Model: HDGM



Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ries Fee 207-2821H
Company:	Clear Creek Resources Partners	TVD Reference:	RKB=5595+21 @ 5616.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5595+21 @ 5616.00ft
Site:	Section 28-T12N-R64W	North Reference:	True
Well:	Ries Fee 207-2821H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Project	Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Section 28-T12N-R64W			
Site Position:		Northing:	1,600,935.50 usft	Latitude:	40.97908764
From:	Map	Easting:	3,261,678.61 usft	Longitude:	-104.55232132
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.61 °

Well	Ries Fee 207-2821H, Surf loc: 693 FSL 1934 FWL Section 28-T12N-R64W					
Well Position	+N/-S	-1,973.98 ft	Northing:	1,598,953.99 usft	Latitude:	40.97366997
	+E/-W	-714.87 ft	Easting:	3,260,984.88 usft	Longitude:	-104.55491000
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,595.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/8/2018	8.50	67.28	52,755.40000000

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	352.16

Plan Survey Tool Program	Date	4/8/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,225.83 plan1 (Original Hole)	MWD	
			OWSG MWD - Standard	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,358.97	17.18	239.09	3,346.15	-65.66	-109.66	2.00	2.00	0.00	239.09	
7,519.42	17.18	239.09	7,320.99	-696.92	-1,163.97	0.00	0.00	0.00	0.00	
8,507.46	90.06	0.08	7,959.00	-129.83	-1,332.50	10.00	7.38	12.25	119.83	Ries Fee 207-2821H
18,225.83	90.06	0.08	7,949.00	9,588.52	-1,319.60	0.00	0.00	0.00	0.00	Ries Fee 207-2821H

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ries Fee 207-2821H
Company:	Clear Creek Resources Partners	TVD Reference:	RKB=5595+21 @ 5616.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5595+21 @ 5616.00ft
Site:	Section 28-T12N-R64W	North Reference:	True
Well:	Ries Fee 207-2821H	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
KOP Begin 2°/100' build									
2,600.00	2.00	239.09	2,599.98	-0.90	-1.50	-0.68	2.00	2.00	0.00
2,700.00	4.00	239.09	2,699.84	-3.58	-5.99	-2.74	2.00	2.00	0.00
2,800.00	6.00	239.09	2,799.45	-8.06	-13.46	-6.15	2.00	2.00	0.00
2,900.00	8.00	239.09	2,898.70	-14.32	-23.92	-10.93	2.00	2.00	0.00
3,000.00	10.00	239.09	2,997.47	-22.36	-37.34	-17.06	2.00	2.00	0.00
3,100.00	12.00	239.09	3,095.62	-32.16	-53.71	-24.54	2.00	2.00	0.00
3,200.00	14.00	239.09	3,193.06	-43.71	-73.01	-33.35	2.00	2.00	0.00
3,300.00	16.00	239.09	3,289.64	-57.01	-95.21	-43.50	2.00	2.00	0.00
3,358.97	17.18	239.09	3,346.15	-65.66	-109.66	-50.09	2.00	2.00	0.00
Begin 17.18° tangent									
3,400.00	17.18	239.09	3,385.36	-71.88	-120.06	-54.84	0.00	0.00	0.00
3,500.00	17.18	239.09	3,480.90	-87.06	-145.40	-66.42	0.00	0.00	0.00
3,600.00	17.18	239.09	3,576.43	-102.23	-170.74	-78.00	0.00	0.00	0.00
3,700.00	17.18	239.09	3,671.97	-117.40	-196.08	-89.57	0.00	0.00	0.00
3,800.00	17.18	239.09	3,767.51	-132.58	-221.42	-101.15	0.00	0.00	0.00
3,900.00	17.18	239.09	3,863.05	-147.75	-246.76	-112.73	0.00	0.00	0.00
4,000.00	17.18	239.09	3,958.59	-162.92	-272.11	-124.30	0.00	0.00	0.00
4,100.00	17.18	239.09	4,054.13	-178.09	-297.45	-135.88	0.00	0.00	0.00
4,200.00	17.18	239.09	4,149.66	-193.27	-322.79	-147.45	0.00	0.00	0.00
4,300.00	17.18	239.09	4,245.20	-208.44	-348.13	-159.03	0.00	0.00	0.00
4,400.00	17.18	239.09	4,340.74	-223.61	-373.47	-170.61	0.00	0.00	0.00
4,500.00	17.18	239.09	4,436.28	-238.79	-398.81	-182.18	0.00	0.00	0.00
4,600.00	17.18	239.09	4,531.82	-253.96	-424.15	-193.76	0.00	0.00	0.00
4,700.00	17.18	239.09	4,627.36	-269.13	-449.49	-205.34	0.00	0.00	0.00
4,800.00	17.18	239.09	4,722.90	-284.30	-474.84	-216.91	0.00	0.00	0.00
4,900.00	17.18	239.09	4,818.43	-299.48	-500.18	-228.49	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ries Fee 207-2821H
Company:	Clear Creek Resources Partners	TVD Reference:	RKB=5595+21 @ 5616.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5595+21 @ 5616.00ft
Site:	Section 28-T12N-R64W	North Reference:	True
Well:	Ries Fee 207-2821H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,000.00	17.18	239.09	4,913.97	-314.65	-525.52	-240.06	0.00	0.00	0.00
5,100.00	17.18	239.09	5,009.51	-329.82	-550.86	-251.64	0.00	0.00	0.00
5,200.00	17.18	239.09	5,105.05	-345.00	-576.20	-263.22	0.00	0.00	0.00
5,300.00	17.18	239.09	5,200.59	-360.17	-601.54	-274.79	0.00	0.00	0.00
5,400.00	17.18	239.09	5,296.13	-375.34	-626.88	-286.37	0.00	0.00	0.00
5,500.00	17.18	239.09	5,391.67	-390.51	-652.22	-297.95	0.00	0.00	0.00
5,600.00	17.18	239.09	5,487.20	-405.69	-677.57	-309.52	0.00	0.00	0.00
5,700.00	17.18	239.09	5,582.74	-420.86	-702.91	-321.10	0.00	0.00	0.00
5,800.00	17.18	239.09	5,678.28	-436.03	-728.25	-332.67	0.00	0.00	0.00
5,900.00	17.18	239.09	5,773.82	-451.21	-753.59	-344.25	0.00	0.00	0.00
6,000.00	17.18	239.09	5,869.36	-466.38	-778.93	-355.83	0.00	0.00	0.00
6,100.00	17.18	239.09	5,964.90	-481.55	-804.27	-367.40	0.00	0.00	0.00
6,200.00	17.18	239.09	6,060.43	-496.72	-829.61	-378.98	0.00	0.00	0.00
6,300.00	17.18	239.09	6,155.97	-511.90	-854.95	-390.56	0.00	0.00	0.00
6,400.00	17.18	239.09	6,251.51	-527.07	-880.30	-402.13	0.00	0.00	0.00
6,500.00	17.18	239.09	6,347.05	-542.24	-905.64	-413.71	0.00	0.00	0.00
6,600.00	17.18	239.09	6,442.59	-557.42	-930.98	-425.28	0.00	0.00	0.00
6,700.00	17.18	239.09	6,538.13	-572.59	-956.32	-436.86	0.00	0.00	0.00
6,800.00	17.18	239.09	6,633.67	-587.76	-981.66	-448.44	0.00	0.00	0.00
6,900.00	17.18	239.09	6,729.20	-602.94	-1,007.00	-460.01	0.00	0.00	0.00
7,000.00	17.18	239.09	6,824.74	-618.11	-1,032.34	-471.59	0.00	0.00	0.00
7,100.00	17.18	239.09	6,920.28	-633.28	-1,057.68	-483.17	0.00	0.00	0.00
7,200.00	17.18	239.09	7,015.82	-648.45	-1,083.03	-494.74	0.00	0.00	0.00
7,300.00	17.18	239.09	7,111.36	-663.63	-1,108.37	-506.32	0.00	0.00	0.00
7,400.00	17.18	239.09	7,206.90	-678.80	-1,133.71	-517.89	0.00	0.00	0.00
7,500.00	17.18	239.09	7,302.43	-693.97	-1,159.05	-529.47	0.00	0.00	0.00
7,519.42	17.18	239.09	7,320.99	-696.92	-1,163.97	-531.72	0.00	0.00	0.00
Begin 10°/100' build/turn									
7,600.00	14.86	267.39	7,398.55	-703.51	-1,184.54	-535.45	10.00	-2.88	35.12
7,700.00	17.47	302.69	7,494.82	-695.97	-1,210.05	-524.50	10.00	2.61	35.30
7,800.00	24.19	323.89	7,588.36	-671.25	-1,234.82	-496.63	10.00	6.72	21.21
7,900.00	32.56	335.53	7,676.33	-630.10	-1,258.10	-452.69	10.00	8.37	11.64
8,000.00	41.60	342.69	7,756.07	-573.78	-1,279.17	-394.02	10.00	9.04	7.15
8,100.00	50.94	347.64	7,825.14	-503.99	-1,297.41	-322.40	10.00	9.34	4.95
8,200.00	60.44	351.42	7,881.46	-422.85	-1,312.25	-239.99	10.00	9.50	3.78
8,300.00	70.04	354.53	7,923.30	-332.83	-1,323.25	-149.32	10.00	9.59	3.12
8,400.00	79.68	357.29	7,949.40	-236.67	-1,330.06	-53.13	10.00	9.64	2.76
8,500.00	89.34	359.88	7,958.96	-137.29	-1,332.49	45.66	10.00	9.66	2.59
8,507.46	90.06	0.08	7,959.00	-129.83	-1,332.50	53.05	10.00	9.67	2.56
Begin 90.06° lateral									
8,600.00	90.06	0.08	7,958.90	-37.29	-1,332.37	144.71	0.00	0.00	0.00
8,700.00	90.06	0.08	7,958.80	62.71	-1,332.24	243.76	0.00	0.00	0.00
8,800.00	90.06	0.08	7,958.70	162.71	-1,332.11	342.81	0.00	0.00	0.00
8,900.00	90.06	0.08	7,958.60	262.71	-1,331.98	441.86	0.00	0.00	0.00
9,000.00	90.06	0.08	7,958.49	362.71	-1,331.84	540.90	0.00	0.00	0.00
9,100.00	90.06	0.08	7,958.39	462.71	-1,331.71	639.95	0.00	0.00	0.00
9,200.00	90.06	0.08	7,958.29	562.71	-1,331.58	739.00	0.00	0.00	0.00
9,300.00	90.06	0.08	7,958.18	662.71	-1,331.45	838.05	0.00	0.00	0.00
9,400.00	90.06	0.08	7,958.08	762.71	-1,331.31	937.10	0.00	0.00	0.00
9,500.00	90.06	0.08	7,957.98	862.71	-1,331.18	1,036.14	0.00	0.00	0.00
9,600.00	90.06	0.08	7,957.88	962.71	-1,331.05	1,135.19	0.00	0.00	0.00
9,700.00	90.06	0.08	7,957.77	1,062.71	-1,330.91	1,234.24	0.00	0.00	0.00
9,800.00	90.06	0.08	7,957.67	1,162.71	-1,330.78	1,333.29	0.00	0.00	0.00
9,900.00	90.06	0.08	7,957.57	1,262.71	-1,330.65	1,432.34	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ries Fee 207-2821H
Company:	Clear Creek Resources Partners	TVD Reference:	RKB=5595+21 @ 5616.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5595+21 @ 5616.00ft
Site:	Section 28-T12N-R64W	North Reference:	True
Well:	Ries Fee 207-2821H	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	90.06	0.08	7,957.46	1,362.71	-1,330.52	1,531.38	0.00	0.00	0.00
10,100.00	90.06	0.08	7,957.36	1,462.71	-1,330.38	1,630.43	0.00	0.00	0.00
10,200.00	90.06	0.08	7,957.26	1,562.71	-1,330.25	1,729.48	0.00	0.00	0.00
10,300.00	90.06	0.08	7,957.16	1,662.71	-1,330.12	1,828.53	0.00	0.00	0.00
10,400.00	90.06	0.08	7,957.05	1,762.71	-1,329.99	1,927.58	0.00	0.00	0.00
10,500.00	90.06	0.08	7,956.95	1,862.71	-1,329.85	2,026.62	0.00	0.00	0.00
10,600.00	90.06	0.08	7,956.85	1,962.71	-1,329.72	2,125.67	0.00	0.00	0.00
10,700.00	90.06	0.08	7,956.74	2,062.71	-1,329.59	2,224.72	0.00	0.00	0.00
10,800.00	90.06	0.08	7,956.64	2,162.71	-1,329.45	2,323.77	0.00	0.00	0.00
10,900.00	90.06	0.08	7,956.54	2,262.71	-1,329.32	2,422.82	0.00	0.00	0.00
11,000.00	90.06	0.08	7,956.44	2,362.71	-1,329.19	2,521.86	0.00	0.00	0.00
11,100.00	90.06	0.08	7,956.33	2,462.71	-1,329.06	2,620.91	0.00	0.00	0.00
11,200.00	90.06	0.08	7,956.23	2,562.71	-1,328.92	2,719.96	0.00	0.00	0.00
11,300.00	90.06	0.08	7,956.13	2,662.71	-1,328.79	2,819.01	0.00	0.00	0.00
11,400.00	90.06	0.08	7,956.02	2,762.71	-1,328.66	2,918.06	0.00	0.00	0.00
11,500.00	90.06	0.08	7,955.92	2,862.71	-1,328.53	3,017.10	0.00	0.00	0.00
11,600.00	90.06	0.08	7,955.82	2,962.71	-1,328.39	3,116.15	0.00	0.00	0.00
11,700.00	90.06	0.08	7,955.72	3,062.71	-1,328.26	3,215.20	0.00	0.00	0.00
11,800.00	90.06	0.08	7,955.61	3,162.71	-1,328.13	3,314.25	0.00	0.00	0.00
11,900.00	90.06	0.08	7,955.51	3,262.71	-1,328.00	3,413.30	0.00	0.00	0.00
12,000.00	90.06	0.08	7,955.41	3,362.71	-1,327.86	3,512.34	0.00	0.00	0.00
12,100.00	90.06	0.08	7,955.30	3,462.71	-1,327.73	3,611.39	0.00	0.00	0.00
12,200.00	90.06	0.08	7,955.20	3,562.71	-1,327.60	3,710.44	0.00	0.00	0.00
12,300.00	90.06	0.08	7,955.10	3,662.71	-1,327.46	3,809.49	0.00	0.00	0.00
12,400.00	90.06	0.08	7,954.99	3,762.71	-1,327.33	3,908.54	0.00	0.00	0.00
12,500.00	90.06	0.08	7,954.89	3,862.71	-1,327.20	4,007.58	0.00	0.00	0.00
12,600.00	90.06	0.08	7,954.79	3,962.71	-1,327.07	4,106.63	0.00	0.00	0.00
12,700.00	90.06	0.08	7,954.69	4,062.71	-1,326.93	4,205.68	0.00	0.00	0.00
12,800.00	90.06	0.08	7,954.58	4,162.71	-1,326.80	4,304.73	0.00	0.00	0.00
12,900.00	90.06	0.08	7,954.48	4,262.70	-1,326.67	4,403.78	0.00	0.00	0.00
13,000.00	90.06	0.08	7,954.38	4,362.70	-1,326.54	4,502.82	0.00	0.00	0.00
13,100.00	90.06	0.08	7,954.27	4,462.70	-1,326.40	4,601.87	0.00	0.00	0.00
13,200.00	90.06	0.08	7,954.17	4,562.70	-1,326.27	4,700.92	0.00	0.00	0.00
13,300.00	90.06	0.08	7,954.07	4,662.70	-1,326.14	4,799.97	0.00	0.00	0.00
13,400.00	90.06	0.08	7,953.97	4,762.70	-1,326.00	4,899.02	0.00	0.00	0.00
13,500.00	90.06	0.08	7,953.86	4,862.70	-1,325.87	4,998.06	0.00	0.00	0.00
13,600.00	90.06	0.08	7,953.76	4,962.70	-1,325.74	5,097.11	0.00	0.00	0.00
13,700.00	90.06	0.08	7,953.66	5,062.70	-1,325.61	5,196.16	0.00	0.00	0.00
13,800.00	90.06	0.08	7,953.55	5,162.70	-1,325.47	5,295.21	0.00	0.00	0.00
13,900.00	90.06	0.08	7,953.45	5,262.70	-1,325.34	5,394.26	0.00	0.00	0.00
14,000.00	90.06	0.08	7,953.35	5,362.70	-1,325.21	5,493.30	0.00	0.00	0.00
14,100.00	90.06	0.08	7,953.25	5,462.70	-1,325.08	5,592.35	0.00	0.00	0.00
14,200.00	90.06	0.08	7,953.14	5,562.70	-1,324.94	5,691.40	0.00	0.00	0.00
14,300.00	90.06	0.08	7,953.04	5,662.70	-1,324.81	5,790.45	0.00	0.00	0.00
14,400.00	90.06	0.08	7,952.94	5,762.70	-1,324.68	5,889.50	0.00	0.00	0.00
14,500.00	90.06	0.08	7,952.83	5,862.70	-1,324.55	5,988.54	0.00	0.00	0.00
14,600.00	90.06	0.08	7,952.73	5,962.70	-1,324.41	6,087.59	0.00	0.00	0.00
14,700.00	90.06	0.08	7,952.63	6,062.70	-1,324.28	6,186.64	0.00	0.00	0.00
14,800.00	90.06	0.08	7,952.53	6,162.70	-1,324.15	6,285.69	0.00	0.00	0.00
14,900.00	90.06	0.08	7,952.42	6,262.70	-1,324.01	6,384.74	0.00	0.00	0.00
15,000.00	90.06	0.08	7,952.32	6,362.70	-1,323.88	6,483.78	0.00	0.00	0.00
15,100.00	90.06	0.08	7,952.22	6,462.70	-1,323.75	6,582.83	0.00	0.00	0.00
15,200.00	90.06	0.08	7,952.11	6,562.70	-1,323.62	6,681.88	0.00	0.00	0.00
15,300.00	90.06	0.08	7,952.01	6,662.70	-1,323.48	6,780.93	0.00	0.00	0.00

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ries Fee 207-2821H
Company:	Clear Creek Resources Partners	TVD Reference:	RKB=5595+21 @ 5616.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5595+21 @ 5616.00ft
Site:	Section 28-T12N-R64W	North Reference:	True
Well:	Ries Fee 207-2821H	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	90.06	0.08	7,951.91	6,762.70	-1,323.35	6,879.98	0.00	0.00	0.00	
15,500.00	90.06	0.08	7,951.80	6,862.70	-1,323.22	6,979.02	0.00	0.00	0.00	
15,600.00	90.06	0.08	7,951.70	6,962.70	-1,323.09	7,078.07	0.00	0.00	0.00	
15,700.00	90.06	0.08	7,951.60	7,062.70	-1,322.95	7,177.12	0.00	0.00	0.00	
15,800.00	90.06	0.08	7,951.50	7,162.70	-1,322.82	7,276.17	0.00	0.00	0.00	
15,900.00	90.06	0.08	7,951.39	7,262.70	-1,322.69	7,375.22	0.00	0.00	0.00	
16,000.00	90.06	0.08	7,951.29	7,362.70	-1,322.55	7,474.26	0.00	0.00	0.00	
16,100.00	90.06	0.08	7,951.19	7,462.70	-1,322.42	7,573.31	0.00	0.00	0.00	
16,200.00	90.06	0.08	7,951.08	7,562.70	-1,322.29	7,672.36	0.00	0.00	0.00	
16,300.00	90.06	0.08	7,950.98	7,662.70	-1,322.16	7,771.41	0.00	0.00	0.00	
16,400.00	90.06	0.08	7,950.88	7,762.70	-1,322.02	7,870.46	0.00	0.00	0.00	
16,500.00	90.06	0.08	7,950.78	7,862.70	-1,321.89	7,969.50	0.00	0.00	0.00	
16,600.00	90.06	0.08	7,950.67	7,962.70	-1,321.76	8,068.55	0.00	0.00	0.00	
16,700.00	90.06	0.08	7,950.57	8,062.70	-1,321.63	8,167.60	0.00	0.00	0.00	
16,800.00	90.06	0.08	7,950.47	8,162.70	-1,321.49	8,266.65	0.00	0.00	0.00	
16,900.00	90.06	0.08	7,950.36	8,262.70	-1,321.36	8,365.70	0.00	0.00	0.00	
17,000.00	90.06	0.08	7,950.26	8,362.70	-1,321.23	8,464.75	0.00	0.00	0.00	
17,100.00	90.06	0.08	7,950.16	8,462.70	-1,321.09	8,563.79	0.00	0.00	0.00	
17,200.00	90.06	0.08	7,950.06	8,562.70	-1,320.96	8,662.84	0.00	0.00	0.00	
17,300.00	90.06	0.08	7,949.95	8,662.70	-1,320.83	8,761.89	0.00	0.00	0.00	
17,400.00	90.06	0.08	7,949.85	8,762.70	-1,320.70	8,860.94	0.00	0.00	0.00	
17,500.00	90.06	0.08	7,949.75	8,862.70	-1,320.56	8,959.99	0.00	0.00	0.00	
17,600.00	90.06	0.08	7,949.64	8,962.70	-1,320.43	9,059.03	0.00	0.00	0.00	
17,700.00	90.06	0.08	7,949.54	9,062.70	-1,320.30	9,158.08	0.00	0.00	0.00	
17,800.00	90.06	0.08	7,949.44	9,162.70	-1,320.17	9,257.13	0.00	0.00	0.00	
17,900.00	90.06	0.08	7,949.34	9,262.70	-1,320.03	9,356.18	0.00	0.00	0.00	
18,000.00	90.06	0.08	7,949.23	9,362.70	-1,319.90	9,455.23	0.00	0.00	0.00	
18,100.00	90.06	0.08	7,949.13	9,462.70	-1,319.77	9,554.27	0.00	0.00	0.00	
18,200.00	90.06	0.08	7,949.03	9,562.70	-1,319.64	9,653.32	0.00	0.00	0.00	
18,225.83	90.06	0.08	7,949.00	9,588.52	-1,319.60	9,678.90	0.00	0.00	0.00	
PBHL/TD 18225.83 MD/7949.00 TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Ries Fee 207-2821H PB - hit/miss target - Shape - Point	0.00	0.00	7,949.00	9,588.52	-1,319.60	1,608,527.89	3,259,563.16	40.99998568	-104.55969036	
Ries Fee 207-2821H EP - plan hits target center - Point	0.00	0.00	7,959.00	-129.83	-1,332.50	1,598,809.97	3,259,653.84	40.97331354	-104.55973517	

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ries Fee 207-2821H
Company:	Clear Creek Resources Partners	TVD Reference:	RKB=5595+21 @ 5616.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5595+21 @ 5616.00ft
Site:	Section 28-T12N-R64W	North Reference:	True
Well:	Ries Fee 207-2821H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
2,500.00	2,500.00	0.00	0.00	KOP Begin 2°/100' build	
3,358.97	3,346.15	-65.66	-109.66	Begin 17.18° tangent	
7,519.42	7,320.99	-696.92	-1,163.97	Begin 10°/100' build/turn	
8,507.46	7,959.00	-129.83	-1,332.50	Begin 90.06° lateral	
18,225.83	7,949.00	9,588.52	-1,319.60	PBHL/TD 18225.83 MD/7949.00 TVD	

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ries Fee 207-2821H
Company:	Clear Creek Resources Partners	TVD Reference:	RKB=5595+21 @ 5616.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5595+21 @ 5616.00ft
Site:	Section 28-T12N-R64W	North Reference:	True
Well:	Ries Fee 207-2821H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Project	Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Section 28-T12N-R64W			
Site Position:		Northing:	1,600,935.50 usft	Latitude:	40.97908764
From:	Map	Easting:	3,261,678.61 usft	Longitude:	-104.55232132
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.61 °

Well	Ries Fee 207-2821H, Surf loc: 693 FSL 1934 FWL Section 28-T12N-R64W					
Well Position	+N/-S	0.00 ft	Northing:	1,598,953.99 usft	Latitude:	40.97366997
	+E/-W	0.00 ft	Easting:	3,260,984.88 usft	Longitude:	-104.55491000
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,595.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/8/2018	8.50	67.28	52,755.40000000

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	352.16

Plan Survey Tool Program	Date	4/8/2018		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,225.83 plan1 (Original Hole)	MWD	
			OWSG MWD - Standard	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,358.97	17.18	239.09	3,346.15	-65.66	-109.66	2.00	2.00	0.00	239.09	
7,519.42	17.18	239.09	7,320.99	-696.92	-1,163.97	0.00	0.00	0.00	0.00	
8,507.46	90.06	0.08	7,959.00	-129.83	-1,332.50	10.00	7.38	12.25	119.83	Ries Fee 207-2821H
18,225.83	90.06	0.08	7,949.00	9,588.52	-1,319.60	0.00	0.00	0.00	0.00	Ries Fee 207-2821H

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ries Fee 207-2821H
Company:	Clear Creek Resources Partners	TVD Reference:	RKB=5595+21 @ 5616.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5595+21 @ 5616.00ft
Site:	Section 28-T12N-R64W	North Reference:	True
Well:	Ries Fee 207-2821H	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	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
100.00	0.00	0.00	100.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
200.00	0.00	0.00	200.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
300.00	0.00	0.00	300.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
400.00	0.00	0.00	400.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
500.00	0.00	0.00	500.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
600.00	0.00	0.00	600.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
700.00	0.00	0.00	700.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
800.00	0.00	0.00	800.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
900.00	0.00	0.00	900.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
1,500.00	0.00	0.00	1,500.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
1,700.00	0.00	0.00	1,700.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
1,800.00	0.00	0.00	1,800.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
1,900.00	0.00	0.00	1,900.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
2,000.00	0.00	0.00	2,000.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
2,100.00	0.00	0.00	2,100.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
2,200.00	0.00	0.00	2,200.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
2,300.00	0.00	0.00	2,300.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
2,400.00	0.00	0.00	2,400.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
2,500.00	0.00	0.00	2,500.00	0.00	0.00	1,598,953.99	3,260,984.88	40.97366997	-104.55491000
KOP Begin 2°/100' build									
2,600.00	2.00	239.09	2,599.98	-0.90	-1.50	1,598,953.08	3,260,983.39	40.97366751	-104.55491542
2,700.00	4.00	239.09	2,699.84	-3.58	-5.99	1,598,950.34	3,260,978.93	40.97366013	-104.55493168
2,800.00	6.00	239.09	2,799.45	-8.06	-13.46	1,598,945.79	3,260,971.50	40.97364784	-104.55495875
2,900.00	8.00	239.09	2,898.70	-14.32	-23.92	1,598,939.41	3,260,961.11	40.97363066	-104.55499661
3,000.00	10.00	239.09	2,997.47	-22.36	-37.34	1,598,931.24	3,260,947.78	40.97360861	-104.55504521
3,100.00	12.00	239.09	3,095.62	-32.16	-53.71	1,598,921.26	3,260,931.51	40.97358171	-104.55510449
3,200.00	14.00	239.09	3,193.06	-43.71	-73.01	1,598,909.50	3,260,912.34	40.97354999	-104.55517438
3,300.00	16.00	239.09	3,289.64	-57.01	-95.21	1,598,895.97	3,260,890.28	40.97351350	-104.55525478
3,358.97	17.18	239.09	3,346.15	-65.66	-109.66	1,598,887.17	3,260,875.92	40.97348977	-104.55530709
Begin 17.18° tangent									
3,400.00	17.18	239.09	3,385.36	-71.88	-120.06	1,598,880.83	3,260,865.59	40.97347268	-104.55534474
3,500.00	17.18	239.09	3,480.90	-87.06	-145.40	1,598,865.39	3,260,840.42	40.97343104	-104.55543651
3,600.00	17.18	239.09	3,576.43	-102.23	-170.74	1,598,849.95	3,260,815.24	40.97338939	-104.55552827
3,700.00	17.18	239.09	3,671.97	-117.40	-196.08	1,598,834.51	3,260,790.06	40.97334775	-104.55562004
3,800.00	17.18	239.09	3,767.51	-132.58	-221.42	1,598,819.06	3,260,764.88	40.97330611	-104.55571180
3,900.00	17.18	239.09	3,863.05	-147.75	-246.76	1,598,803.62	3,260,739.70	40.97326447	-104.55580356
4,000.00	17.18	239.09	3,958.59	-162.92	-272.11	1,598,788.18	3,260,714.53	40.97322282	-104.55589533
4,100.00	17.18	239.09	4,054.13	-178.09	-297.45	1,598,772.74	3,260,689.35	40.97318118	-104.55598709
4,200.00	17.18	239.09	4,149.66	-193.27	-322.79	1,598,757.29	3,260,664.17	40.97313954	-104.55607886
4,300.00	17.18	239.09	4,245.20	-208.44	-348.13	1,598,741.85	3,260,638.99	40.97309789	-104.55617062
4,400.00	17.18	239.09	4,340.74	-223.61	-373.47	1,598,726.41	3,260,613.81	40.97305625	-104.55626238
4,500.00	17.18	239.09	4,436.28	-238.79	-398.81	1,598,710.97	3,260,588.63	40.97301461	-104.55635415
4,600.00	17.18	239.09	4,531.82	-253.96	-424.15	1,598,695.53	3,260,563.46	40.97297296	-104.55644591
4,700.00	17.18	239.09	4,627.36	-269.13	-449.49	1,598,680.08	3,260,538.28	40.97293132	-104.55653767
4,800.00	17.18	239.09	4,722.90	-284.30	-474.84	1,598,664.64	3,260,513.10	40.97288967	-104.55662943
4,900.00	17.18	239.09	4,818.43	-299.48	-500.18	1,598,649.20	3,260,487.92	40.97284803	-104.55672120
5,000.00	17.18	239.09	4,913.97	-314.65	-525.52	1,598,633.76	3,260,462.74	40.97280639	-104.55681296

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ries Fee 207-2821H
Company:	Clear Creek Resources Partners	TVD Reference:	RKB=5595+21 @ 5616.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5595+21 @ 5616.00ft
Site:	Section 28-T12N-R64W	North Reference:	True
Well:	Ries Fee 207-2821H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	plan1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,100.00	17.18	239.09	5,009.51	-329.82	-550.86	1,598,618.32	3,260,437.57	40.97276474	-104.55690472
5,200.00	17.18	239.09	5,105.05	-345.00	-576.20	1,598,602.87	3,260,412.39	40.97272310	-104.55699649
5,300.00	17.18	239.09	5,200.59	-360.17	-601.54	1,598,587.43	3,260,387.21	40.97268145	-104.55708825
5,400.00	17.18	239.09	5,296.13	-375.34	-626.88	1,598,571.99	3,260,362.03	40.97263981	-104.55718001
5,500.00	17.18	239.09	5,391.67	-390.51	-652.22	1,598,556.55	3,260,336.85	40.97259817	-104.55727177
5,600.00	17.18	239.09	5,487.20	-405.69	-677.57	1,598,541.11	3,260,311.68	40.97255652	-104.55736353
5,700.00	17.18	239.09	5,582.74	-420.86	-702.91	1,598,525.66	3,260,286.50	40.97251488	-104.55745530
5,800.00	17.18	239.09	5,678.28	-436.03	-728.25	1,598,510.22	3,260,261.32	40.97247323	-104.55754706
5,900.00	17.18	239.09	5,773.82	-451.21	-753.59	1,598,494.78	3,260,236.14	40.97243159	-104.55763882
6,000.00	17.18	239.09	5,869.36	-466.38	-778.93	1,598,479.34	3,260,210.96	40.97238994	-104.55773058
6,100.00	17.18	239.09	5,964.90	-481.55	-804.27	1,598,463.89	3,260,185.79	40.97234830	-104.55782234
6,200.00	17.18	239.09	6,060.43	-496.72	-829.61	1,598,448.45	3,260,160.61	40.97230665	-104.55791410
6,300.00	17.18	239.09	6,155.97	-511.90	-854.95	1,598,433.01	3,260,135.43	40.97226501	-104.55800587
6,400.00	17.18	239.09	6,251.51	-527.07	-880.30	1,598,417.57	3,260,110.25	40.97222336	-104.55809763
6,500.00	17.18	239.09	6,347.05	-542.24	-905.64	1,598,402.13	3,260,085.07	40.97218172	-104.55818939
6,600.00	17.18	239.09	6,442.59	-557.42	-930.98	1,598,386.68	3,260,059.89	40.97214007	-104.55828115
6,700.00	17.18	239.09	6,538.13	-572.59	-956.32	1,598,371.24	3,260,034.72	40.97209843	-104.55837291
6,800.00	17.18	239.09	6,633.67	-587.76	-981.66	1,598,355.80	3,260,009.54	40.97205678	-104.55846467
6,900.00	17.18	239.09	6,729.20	-602.94	-1,007.00	1,598,340.36	3,259,984.36	40.97201514	-104.55855643
7,000.00	17.18	239.09	6,824.74	-618.11	-1,032.34	1,598,324.92	3,259,959.18	40.97197349	-104.55864819
7,100.00	17.18	239.09	6,920.28	-633.28	-1,057.68	1,598,309.47	3,259,934.00	40.97193185	-104.55873995
7,200.00	17.18	239.09	7,015.82	-648.45	-1,083.03	1,598,294.03	3,259,908.83	40.97189020	-104.55883171
7,300.00	17.18	239.09	7,111.36	-663.63	-1,108.37	1,598,278.59	3,259,883.65	40.97184856	-104.55892347
7,400.00	17.18	239.09	7,206.90	-678.80	-1,133.71	1,598,263.15	3,259,858.47	40.97180691	-104.55901523
7,500.00	17.18	239.09	7,302.43	-693.97	-1,159.05	1,598,247.71	3,259,833.29	40.97176527	-104.55910699
7,519.42	17.18	239.09	7,320.99	-696.92	-1,163.97	1,598,244.71	3,259,828.40	40.97175718	-104.55912481
Begin 10°/100' build/turn									
7,600.00	14.86	267.39	7,398.55	-703.51	-1,184.54	1,598,237.89	3,259,807.91	40.97173908	-104.55919929
7,700.00	17.47	302.69	7,494.82	-695.97	-1,210.05	1,598,245.16	3,259,782.32	40.97175977	-104.55929166
7,800.00	24.19	323.89	7,588.36	-671.25	-1,234.82	1,598,269.62	3,259,757.29	40.97182761	-104.55938136
7,900.00	32.56	335.53	7,676.33	-630.10	-1,258.10	1,598,310.51	3,259,733.57	40.97194054	-104.55946565
8,000.00	41.60	342.69	7,756.07	-573.78	-1,279.17	1,598,366.61	3,259,711.90	40.97209512	-104.55954199
8,100.00	50.94	347.64	7,825.14	-503.99	-1,297.41	1,598,436.20	3,259,692.92	40.97228667	-104.55960804
8,200.00	60.44	351.42	7,881.46	-422.85	-1,312.25	1,598,517.18	3,259,677.21	40.97250934	-104.55966180
8,300.00	70.04	354.53	7,923.30	-332.83	-1,323.25	1,598,607.07	3,259,665.26	40.97275640	-104.55970163
8,400.00	79.68	357.29	7,949.40	-236.67	-1,330.06	1,598,703.16	3,259,657.41	40.97302031	-104.55972634
8,500.00	89.34	359.88	7,958.96	-137.29	-1,332.49	1,598,802.51	3,259,653.92	40.97329307	-104.55973516
8,507.46	90.06	0.08	7,959.00	-129.83	-1,332.50	1,598,809.97	3,259,653.84	40.97331354	-104.55973517
Begin 90.06° lateral									
8,600.00	90.06	0.08	7,958.90	-37.29	-1,332.37	1,598,902.50	3,259,652.98	40.97356753	-104.55973474
8,700.00	90.06	0.08	7,958.80	62.71	-1,332.24	1,599,002.50	3,259,652.05	40.97384198	-104.55973428
8,800.00	90.06	0.08	7,958.70	162.71	-1,332.11	1,599,102.49	3,259,651.11	40.97411643	-104.55973382
8,900.00	90.06	0.08	7,958.60	262.71	-1,331.98	1,599,202.49	3,259,650.18	40.97439088	-104.55973336
9,000.00	90.06	0.08	7,958.49	362.71	-1,331.84	1,599,302.48	3,259,649.25	40.97466534	-104.55973290
9,100.00	90.06	0.08	7,958.39	462.71	-1,331.71	1,599,402.48	3,259,648.31	40.97493979	-104.55973244
9,200.00	90.06	0.08	7,958.29	562.71	-1,331.58	1,599,502.48	3,259,647.38	40.97521424	-104.55973198
9,300.00	90.06	0.08	7,958.18	662.71	-1,331.45	1,599,602.47	3,259,646.45	40.97548869	-104.55973151
9,400.00	90.06	0.08	7,958.08	762.71	-1,331.31	1,599,702.47	3,259,645.51	40.97576314	-104.55973105
9,500.00	90.06	0.08	7,957.98	862.71	-1,331.18	1,599,802.46	3,259,644.58	40.97603760	-104.55973059
9,600.00	90.06	0.08	7,957.88	962.71	-1,331.05	1,599,902.46	3,259,643.65	40.97631205	-104.55973013
9,700.00	90.06	0.08	7,957.77	1,062.71	-1,330.91	1,600,002.45	3,259,642.72	40.97658650	-104.55972967
9,800.00	90.06	0.08	7,957.67	1,162.71	-1,330.78	1,600,102.45	3,259,641.78	40.97686095	-104.55972921
9,900.00	90.06	0.08	7,957.57	1,262.71	-1,330.65	1,600,202.44	3,259,640.85	40.97713540	-104.55972875
10,000.00	90.06	0.08	7,957.46	1,362.71	-1,330.52	1,600,302.44	3,259,639.92	40.97740985	-104.55972829

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ries Fee 207-2821H
Company:	Clear Creek Resources Partners	TVD Reference:	RKB=5595+21 @ 5616.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5595+21 @ 5616.00ft
Site:	Section 28-T12N-R64W	North Reference:	True
Well:	Ries Fee 207-2821H	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	90.06	0.08	7,957.36	1,462.71	-1,330.38	1,600,402.43	3,259,638.98	40.97768431	-104.55972783
10,200.00	90.06	0.08	7,957.26	1,562.71	-1,330.25	1,600,502.43	3,259,638.05	40.97795876	-104.55972737
10,300.00	90.06	0.08	7,957.16	1,662.71	-1,330.12	1,600,602.43	3,259,637.12	40.97823321	-104.55972691
10,400.00	90.06	0.08	7,957.05	1,762.71	-1,329.99	1,600,702.42	3,259,636.18	40.97850766	-104.55972644
10,500.00	90.06	0.08	7,956.95	1,862.71	-1,329.85	1,600,802.42	3,259,635.25	40.97878211	-104.55972598
10,600.00	90.06	0.08	7,956.85	1,962.71	-1,329.72	1,600,902.41	3,259,634.32	40.97905656	-104.55972552
10,700.00	90.06	0.08	7,956.74	2,062.71	-1,329.59	1,601,002.41	3,259,633.38	40.97933102	-104.55972506
10,800.00	90.06	0.08	7,956.64	2,162.71	-1,329.45	1,601,102.40	3,259,632.45	40.97960547	-104.55972460
10,900.00	90.06	0.08	7,956.54	2,262.71	-1,329.32	1,601,202.40	3,259,631.52	40.97987992	-104.55972414
11,000.00	90.06	0.08	7,956.44	2,362.71	-1,329.19	1,601,302.39	3,259,630.59	40.98015437	-104.55972368
11,100.00	90.06	0.08	7,956.33	2,462.71	-1,329.06	1,601,402.39	3,259,629.65	40.98042882	-104.55972322
11,200.00	90.06	0.08	7,956.23	2,562.71	-1,328.92	1,601,502.38	3,259,628.72	40.98070327	-104.55972276
11,300.00	90.06	0.08	7,956.13	2,662.71	-1,328.79	1,601,602.38	3,259,627.79	40.98097773	-104.55972230
11,400.00	90.06	0.08	7,956.02	2,762.71	-1,328.66	1,601,702.37	3,259,626.85	40.98125218	-104.55972184
11,500.00	90.06	0.08	7,955.92	2,862.71	-1,328.53	1,601,802.37	3,259,625.92	40.98152663	-104.55972137
11,600.00	90.06	0.08	7,955.82	2,962.71	-1,328.39	1,601,902.37	3,259,624.99	40.98180108	-104.55972091
11,700.00	90.06	0.08	7,955.72	3,062.71	-1,328.26	1,602,002.36	3,259,624.05	40.98207553	-104.55972045
11,800.00	90.06	0.08	7,955.61	3,162.71	-1,328.13	1,602,102.36	3,259,623.12	40.98234998	-104.55971999
11,900.00	90.06	0.08	7,955.51	3,262.71	-1,328.00	1,602,202.35	3,259,622.19	40.98262443	-104.55971953
12,000.00	90.06	0.08	7,955.41	3,362.71	-1,327.86	1,602,302.35	3,259,621.25	40.98289888	-104.55971907
12,100.00	90.06	0.08	7,955.30	3,462.71	-1,327.73	1,602,402.34	3,259,620.32	40.98317334	-104.55971861
12,200.00	90.06	0.08	7,955.20	3,562.71	-1,327.60	1,602,502.34	3,259,619.39	40.98344779	-104.55971815
12,300.00	90.06	0.08	7,955.10	3,662.71	-1,327.46	1,602,602.33	3,259,618.46	40.98372224	-104.55971769
12,400.00	90.06	0.08	7,954.99	3,762.71	-1,327.33	1,602,702.33	3,259,617.52	40.98399669	-104.55971723
12,500.00	90.06	0.08	7,954.89	3,862.71	-1,327.20	1,602,802.32	3,259,616.59	40.98427114	-104.55971677
12,600.00	90.06	0.08	7,954.79	3,962.71	-1,327.07	1,602,902.32	3,259,615.66	40.98454559	-104.55971630
12,700.00	90.06	0.08	7,954.69	4,062.71	-1,326.93	1,603,002.31	3,259,614.72	40.98482004	-104.55971584
12,800.00	90.06	0.08	7,954.58	4,162.71	-1,326.80	1,603,102.31	3,259,613.79	40.98509449	-104.55971538
12,900.00	90.06	0.08	7,954.48	4,262.70	-1,326.67	1,603,202.31	3,259,612.86	40.98536894	-104.55971492
13,000.00	90.06	0.08	7,954.38	4,362.70	-1,326.54	1,603,302.30	3,259,611.92	40.98564339	-104.55971446
13,100.00	90.06	0.08	7,954.27	4,462.70	-1,326.40	1,603,402.30	3,259,610.99	40.98591785	-104.55971400
13,200.00	90.06	0.08	7,954.17	4,562.70	-1,326.27	1,603,502.29	3,259,610.06	40.98619230	-104.55971354
13,300.00	90.06	0.08	7,954.07	4,662.70	-1,326.14	1,603,602.29	3,259,609.12	40.98646675	-104.55971308
13,400.00	90.06	0.08	7,953.97	4,762.70	-1,326.00	1,603,702.28	3,259,608.19	40.98674120	-104.55971262
13,500.00	90.06	0.08	7,953.86	4,862.70	-1,325.87	1,603,802.28	3,259,607.26	40.98701565	-104.55971216
13,600.00	90.06	0.08	7,953.76	4,962.70	-1,325.74	1,603,902.27	3,259,606.33	40.98729010	-104.55971169
13,700.00	90.06	0.08	7,953.66	5,062.70	-1,325.61	1,604,002.27	3,259,605.39	40.98756455	-104.55971123
13,800.00	90.06	0.08	7,953.55	5,162.70	-1,325.47	1,604,102.26	3,259,604.46	40.98783900	-104.55971077
13,900.00	90.06	0.08	7,953.45	5,262.70	-1,325.34	1,604,202.26	3,259,603.53	40.98811345	-104.55971031
14,000.00	90.06	0.08	7,953.35	5,362.70	-1,325.21	1,604,302.25	3,259,602.59	40.98838790	-104.55970985
14,100.00	90.06	0.08	7,953.25	5,462.70	-1,325.08	1,604,402.25	3,259,601.66	40.98866235	-104.55970939
14,200.00	90.06	0.08	7,953.14	5,562.70	-1,324.94	1,604,502.25	3,259,600.73	40.98893680	-104.55970893
14,300.00	90.06	0.08	7,953.04	5,662.70	-1,324.81	1,604,602.24	3,259,599.79	40.98921125	-104.55970847
14,400.00	90.06	0.08	7,952.94	5,762.70	-1,324.68	1,604,702.24	3,259,598.86	40.98948570	-104.55970801
14,500.00	90.06	0.08	7,952.83	5,862.70	-1,324.55	1,604,802.23	3,259,597.93	40.98976015	-104.55970755
14,600.00	90.06	0.08	7,952.73	5,962.70	-1,324.41	1,604,902.23	3,259,596.99	40.99003461	-104.55970708
14,700.00	90.06	0.08	7,952.63	6,062.70	-1,324.28	1,605,002.22	3,259,596.06	40.99030906	-104.55970662
14,800.00	90.06	0.08	7,952.53	6,162.70	-1,324.15	1,605,102.22	3,259,595.13	40.99058351	-104.55970616
14,900.00	90.06	0.08	7,952.42	6,262.70	-1,324.01	1,605,202.21	3,259,594.20	40.99085796	-104.55970570
15,000.00	90.06	0.08	7,952.32	6,362.70	-1,323.88	1,605,302.21	3,259,593.26	40.99113241	-104.55970524
15,100.00	90.06	0.08	7,952.22	6,462.70	-1,323.75	1,605,402.20	3,259,592.33	40.99140686	-104.55970478
15,200.00	90.06	0.08	7,952.11	6,562.70	-1,323.62	1,605,502.20	3,259,591.40	40.99168131	-104.55970432
15,300.00	90.06	0.08	7,952.01	6,662.70	-1,323.48	1,605,602.19	3,259,590.46	40.99195576	-104.55970386
15,400.00	90.06	0.08	7,951.91	6,762.70	-1,323.35	1,605,702.19	3,259,589.53	40.99223021	-104.55970340
15,500.00	90.06	0.08	7,951.80	6,862.70	-1,323.22	1,605,802.19	3,259,588.60	40.99250466	-104.55970293

Database:	DB_Jul2216dt_v14	Local Co-ordinate Reference:	Well Ries Fee 207-2821H
Company:	Clear Creek Resources Partners	TVD Reference:	RKB=5595+21 @ 5616.00ft
Project:	Weld County, Colorado	MD Reference:	RKB=5595+21 @ 5616.00ft
Site:	Section 28-T12N-R64W	North Reference:	True
Well:	Ries Fee 207-2821H	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	90.06	0.08	7,951.70	6,962.70	-1,323.09	1,605,902.18	3,259,587.66	40.99277911	-104.55970247
15,700.00	90.06	0.08	7,951.60	7,062.70	-1,322.95	1,606,002.18	3,259,586.73	40.99305356	-104.55970201
15,800.00	90.06	0.08	7,951.50	7,162.70	-1,322.82	1,606,102.17	3,259,585.80	40.99332801	-104.55970155
15,900.00	90.06	0.08	7,951.39	7,262.70	-1,322.69	1,606,202.17	3,259,584.86	40.99360246	-104.55970109
16,000.00	90.06	0.08	7,951.29	7,362.70	-1,322.55	1,606,302.16	3,259,583.93	40.99387691	-104.55970063
16,100.00	90.06	0.08	7,951.19	7,462.70	-1,322.42	1,606,402.16	3,259,583.00	40.99415136	-104.55970017
16,200.00	90.06	0.08	7,951.08	7,562.70	-1,322.29	1,606,502.15	3,259,582.07	40.99442581	-104.55969971
16,300.00	90.06	0.08	7,950.98	7,662.70	-1,322.16	1,606,602.15	3,259,581.13	40.99470026	-104.55969925
16,400.00	90.06	0.08	7,950.88	7,762.70	-1,322.02	1,606,702.14	3,259,580.20	40.99497471	-104.55969878
16,500.00	90.06	0.08	7,950.78	7,862.70	-1,321.89	1,606,802.14	3,259,579.27	40.99524916	-104.55969832
16,600.00	90.06	0.08	7,950.67	7,962.70	-1,321.76	1,606,902.13	3,259,578.33	40.99552361	-104.55969786
16,700.00	90.06	0.08	7,950.57	8,062.70	-1,321.63	1,607,002.13	3,259,577.40	40.99579806	-104.55969740
16,800.00	90.06	0.08	7,950.47	8,162.70	-1,321.49	1,607,102.13	3,259,576.47	40.99607251	-104.55969694
16,900.00	90.06	0.08	7,950.36	8,262.70	-1,321.36	1,607,202.12	3,259,575.53	40.99634696	-104.55969648
17,000.00	90.06	0.08	7,950.26	8,362.70	-1,321.23	1,607,302.12	3,259,574.60	40.99662141	-104.55969602
17,100.00	90.06	0.08	7,950.16	8,462.70	-1,321.09	1,607,402.11	3,259,573.67	40.99689586	-104.55969556
17,200.00	90.06	0.08	7,950.06	8,562.70	-1,320.96	1,607,502.11	3,259,572.73	40.99717031	-104.55969510
17,300.00	90.06	0.08	7,949.95	8,662.70	-1,320.83	1,607,602.10	3,259,571.80	40.99744476	-104.55969463
17,400.00	90.06	0.08	7,949.85	8,762.70	-1,320.70	1,607,702.10	3,259,570.87	40.99771920	-104.55969417
17,500.00	90.06	0.08	7,949.75	8,862.70	-1,320.56	1,607,802.09	3,259,569.94	40.99799365	-104.55969371
17,600.00	90.06	0.08	7,949.64	8,962.70	-1,320.43	1,607,902.09	3,259,569.00	40.99826810	-104.55969325
17,700.00	90.06	0.08	7,949.54	9,062.70	-1,320.30	1,608,002.08	3,259,568.07	40.99854255	-104.55969279
17,800.00	90.06	0.08	7,949.44	9,162.70	-1,320.17	1,608,102.08	3,259,567.14	40.99881700	-104.55969233
17,900.00	90.06	0.08	7,949.34	9,262.70	-1,320.03	1,608,202.08	3,259,566.20	40.99909145	-104.55969187
18,000.00	90.06	0.08	7,949.23	9,362.70	-1,319.90	1,608,302.07	3,259,565.27	40.99936590	-104.55969141
18,100.00	90.06	0.08	7,949.13	9,462.70	-1,319.77	1,608,402.07	3,259,564.34	40.99964035	-104.55969095
18,200.00	90.06	0.08	7,949.03	9,562.70	-1,319.64	1,608,502.06	3,259,563.40	40.99991480	-104.55969048
18,225.83	90.06	0.08	7,949.00	9,588.52	-1,319.60	1,608,527.89	3,259,563.16	40.99998568	-104.55969036
PBHL/TD 18225.83 MD/7949.00 TVD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Ries Fee 207-2821H PB - hit/miss target - Shape - Point	0.00	0.00	7,949.00	9,588.52	-1,319.60	1,608,527.89	3,259,563.16	40.99998568	-104.55969036
Ries Fee 207-2821H EP - plan hits target center - Point	0.00	0.00	7,959.00	-129.83	-1,332.50	1,598,809.97	3,259,653.84	40.97331354	-104.55973517

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,500.00	2,500.00	0.00	0.00	KOP Begin 2°/100' build	
3,358.97	3,346.15	-65.66	-109.66	Begin 17.18° tangent	
7,519.42	7,320.99	-696.92	-1,163.97	Begin 10°/100' build/turn	
8,507.46	7,959.00	-129.83	-1,332.50	Begin 90.06° lateral	
18,225.83	7,949.00	9,588.52	-1,319.60	PBHL/TD 18225.83 MD/7949.00 TVD	