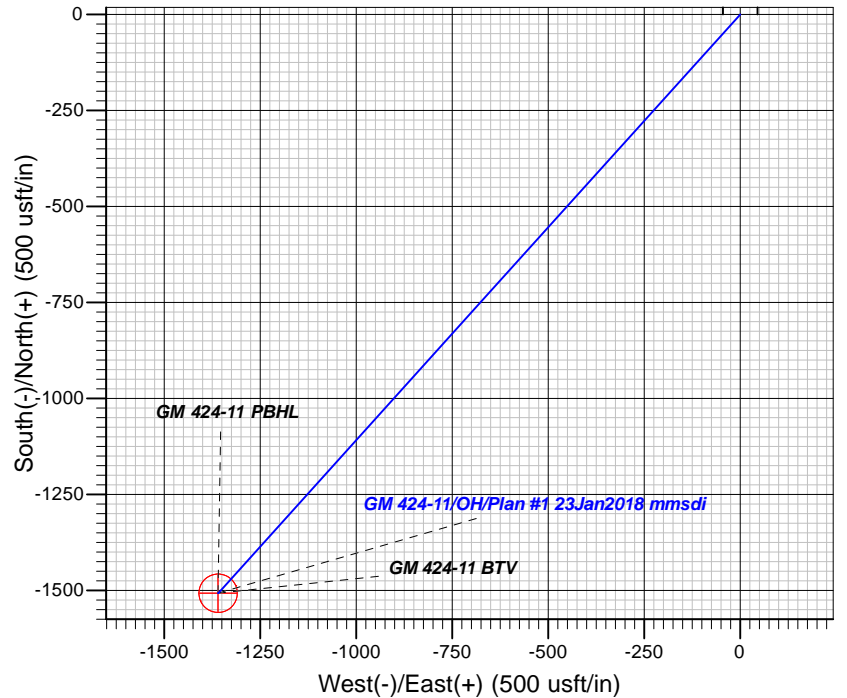
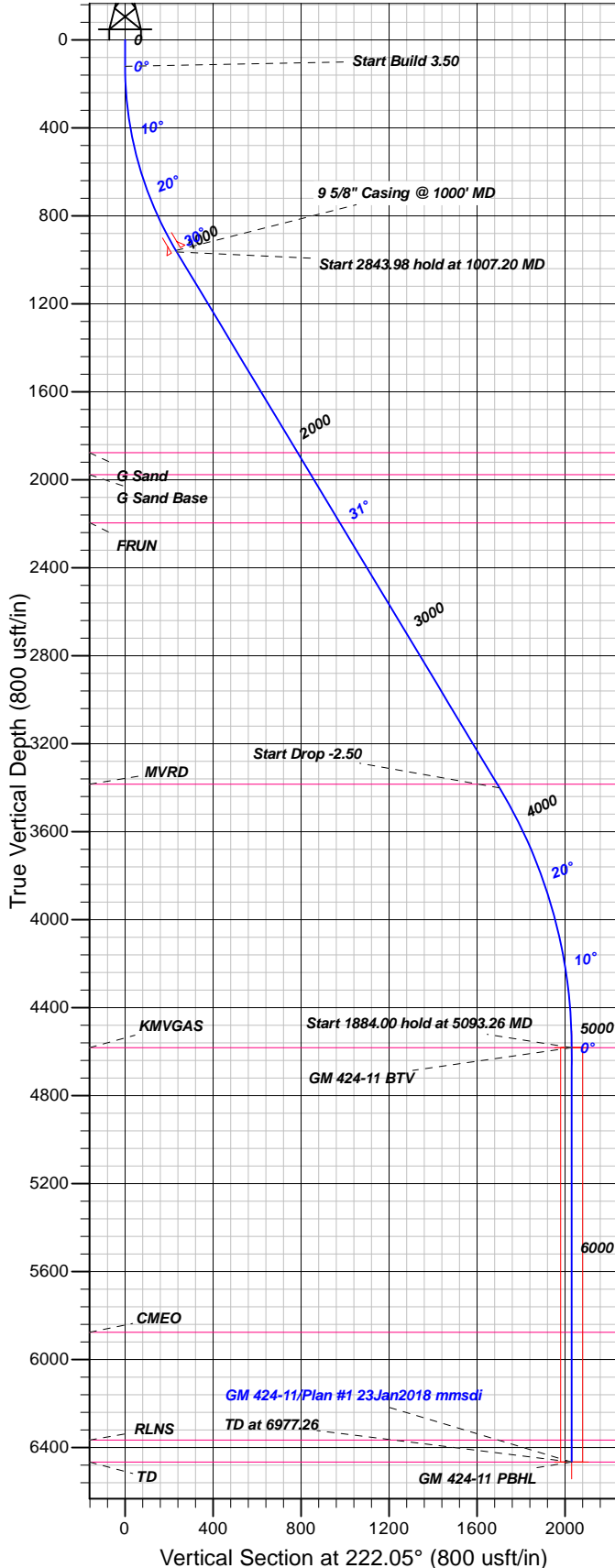




Azimuths to True North
Magnetic North: 9.47°
Magnetic Field
Strength: 51724.2snT
Dip Angle: 65.70°
Date: 1/23/2018
Model: HDGM

Well Details: GM 424-11

GL 5793' & RKB 24' @ 5817.00usft
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1599207.91 2271931.67 39.4502260 -108.0786380 GM 424-11



FORMATION TOP DETAILS

TVDPth	MDPath	Formation
1877.00	2072.45	G Sand
1977.00	2189.18	G Sand Base
2196.00	2444.81	FRUN
3384.00	3831.53	MVRD
4583.00	5093.26	KMGAS
5876.00	6386.26	CMEQ
6367.00	6877.26	RLNS
6467.00	6977.26	TD

Plan: Plan #1 23Jan2018 mmsdi

10:28, January 30 2018
Created By: Mel Mireles

PROJECT DETAILS: Garfield County, CO NAD83

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

System Datum: Mean Sea Level

CASING DETAILS

TVDP	MD	Name	Size
958.23	1000.00	5/8" Casing @ 1000' MD	9.62

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	
3	1007.20	31.05	222.05	964.40	-174.19	-157.13	3.50	222.05	234.59	
4	3851.18	31.05	222.05	3400.84	-1263.46	-1139.72	0.00	0.00	1701.56	
5	5093.26	0.00	0.00	4583.00	-1507.33	-1359.70	2.50	180.00	2029.98	GM 424-11 BTM
6	6977.26	0.00	0.00	6467.00	-1507.33	-1359.70	0.00	0.00	2029.98	GM 424-11 PBHL

DESIGN TARGET DETAILS

Name	TVDP	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GM 424-11 BTM	4583.00	-1507.33	-1359.70	1597739.78	2270529.74	39.4460875	-108.0834528	Circle (Radius: 50.00)
- plan hits target center								
GM 424-11 PBHL	6467.00	-1507.33	-1359.70	1597739.78	2270529.74	39.4460875	-108.0834528	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

GR 23-11V Pad

GM 424-11 - Slot GM 424-11

OH

Plan: Plan #1 23Jan2018 mmsdi

Standard Planning Report

30 January, 2018



Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 424-11 - Slot GM 424-11
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Site:	GR 23-11V Pad	North Reference:	True
Well:	GM 424-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 23Jan2018 mmsdi		

Project	Garfield County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	GR 23-11V Pad			
Site Position:		Northing:	1,599,230.76 usft	Latitude: 39.4502880
From: Map		Easting:	2,271,922.71 usft	Longitude: -108.0786721
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: -1.63 °

Well	GM 424-11 - Slot GM 424-11			
Well Position	+N/-S	-22.59 usft	Northing:	1,599,207.91 usft
	+E/-W	9.60 usft	Easting:	2,271,931.67 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	5,793.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	1/23/2018	9.47	65.70	51,724

Design	Plan #1 23Jan2018 mmsdi			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	222.05

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,007.20	31.05	222.05	964.40	-174.19	-157.13	3.50	3.50	0.00	222.05	
3,851.18	31.05	222.05	3,400.84	-1,263.46	-1,139.72	0.00	0.00	0.00	0.00	
5,093.26	0.00	0.00	4,583.00	-1,507.33	-1,359.70	2.50	-2.50	0.00	180.00	GM 424-11 BTV
6,977.26	0.00	0.00	6,467.00	-1,507.33	-1,359.70	0.00	0.00	0.00	0.00	GM 424-11 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 424-11 - Slot GM 424-11
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Site:	GR 23-11V Pad	North Reference:	True
Well:	GM 424-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 23Jan2018 mmsdi		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.50									
200.00	2.80	222.05	199.97	-1.45	-1.31	1.95	3.50	3.50	0.00
300.00	6.30	222.05	299.64	-7.34	-6.62	9.89	3.50	3.50	0.00
400.00	9.80	222.05	398.64	-17.74	-16.00	23.89	3.50	3.50	0.00
500.00	13.30	222.05	496.60	-32.60	-29.41	43.91	3.50	3.50	0.00
600.00	16.80	222.05	593.15	-51.88	-46.80	69.87	3.50	3.50	0.00
700.00	20.30	222.05	687.94	-75.50	-68.10	101.68	3.50	3.50	0.00
800.00	23.80	222.05	780.61	-103.37	-93.25	139.21	3.50	3.50	0.00
900.00	27.30	222.05	870.82	-135.39	-122.13	182.34	3.50	3.50	0.00
1,000.00	30.80	222.05	958.23	-171.44	-154.65	230.89	3.50	3.50	0.00
9 5/8" Casing @ 1000' MD									
1,007.20	31.05	222.05	964.40	-174.19	-157.13	234.59	3.50	3.50	0.00
Start 2843.98 hold at 1007.20 MD									
1,100.00	31.05	222.05	1,043.90	-209.73	-189.19	282.45	0.00	0.00	0.00
1,200.00	31.05	222.05	1,129.57	-248.03	-223.74	334.04	0.00	0.00	0.00
1,300.00	31.05	222.05	1,215.24	-286.33	-258.29	385.62	0.00	0.00	0.00
1,400.00	31.05	222.05	1,300.91	-324.63	-292.84	437.20	0.00	0.00	0.00
1,500.00	31.05	222.05	1,386.58	-362.94	-327.39	488.78	0.00	0.00	0.00
1,600.00	31.05	222.05	1,472.25	-401.24	-361.94	540.36	0.00	0.00	0.00
1,700.00	31.05	222.05	1,557.92	-439.54	-396.49	591.94	0.00	0.00	0.00
1,800.00	31.05	222.05	1,643.59	-477.84	-431.04	643.53	0.00	0.00	0.00
1,900.00	31.05	222.05	1,729.26	-516.14	-465.59	695.11	0.00	0.00	0.00
2,000.00	31.05	222.05	1,814.93	-554.44	-500.14	746.69	0.00	0.00	0.00
2,072.45	31.05	222.05	1,877.00	-582.19	-525.17	784.06	0.00	0.00	0.00
G Sand									
2,100.00	31.05	222.05	1,900.60	-592.74	-534.69	798.27	0.00	0.00	0.00
2,189.18	31.05	222.05	1,977.00	-626.90	-565.50	844.27	0.00	0.00	0.00
G Sand Base									
2,200.00	31.05	222.05	1,986.27	-631.04	-569.24	849.85	0.00	0.00	0.00
2,300.00	31.05	222.05	2,071.94	-669.34	-603.79	901.43	0.00	0.00	0.00
2,400.00	31.05	222.05	2,157.61	-707.65	-638.34	953.02	0.00	0.00	0.00
2,444.81	31.05	222.05	2,196.00	-724.81	-653.82	976.13	0.00	0.00	0.00
FRUN									
2,500.00	31.05	222.05	2,243.28	-745.95	-672.89	1,004.60	0.00	0.00	0.00
2,600.00	31.05	222.05	2,328.95	-784.25	-707.44	1,056.18	0.00	0.00	0.00
2,700.00	31.05	222.05	2,414.62	-822.55	-741.99	1,107.76	0.00	0.00	0.00
2,800.00	31.05	222.05	2,500.29	-860.85	-776.54	1,159.34	0.00	0.00	0.00
2,900.00	31.05	222.05	2,585.96	-899.15	-811.09	1,210.92	0.00	0.00	0.00
3,000.00	31.05	222.05	2,671.63	-937.45	-845.64	1,262.51	0.00	0.00	0.00
3,100.00	31.05	222.05	2,757.30	-975.75	-880.19	1,314.09	0.00	0.00	0.00
3,200.00	31.05	222.05	2,842.97	-1,014.05	-914.74	1,365.67	0.00	0.00	0.00
3,300.00	31.05	222.05	2,928.64	-1,052.36	-949.29	1,417.25	0.00	0.00	0.00
3,400.00	31.05	222.05	3,014.31	-1,090.66	-983.84	1,468.83	0.00	0.00	0.00
3,500.00	31.05	222.05	3,099.98	-1,128.96	-1,018.39	1,520.41	0.00	0.00	0.00
3,600.00	31.05	222.05	3,185.65	-1,167.26	-1,052.94	1,572.00	0.00	0.00	0.00
3,700.00	31.05	222.05	3,271.32	-1,205.56	-1,087.49	1,623.58	0.00	0.00	0.00
3,800.00	31.05	222.05	3,356.99	-1,243.86	-1,122.04	1,675.16	0.00	0.00	0.00
3,831.53	31.05	222.05	3,384.00	-1,255.94	-1,132.93	1,691.42	0.00	0.00	0.00
MVRD									
3,851.18	31.05	222.05	3,400.84	-1,263.46	-1,139.72	1,701.56	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 424-11 - Slot GM 424-11
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Site:	GR 23-11V Pad	North Reference:	True
Well:	GM 424-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 23Jan2018 mmsdi		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Start Drop -2.50									
3,900.00	29.83	222.05	3,442.93	-1,281.83	-1,156.29	1,726.29	2.50	-2.50	0.00
4,000.00	27.33	222.05	3,530.73	-1,317.35	-1,188.33	1,774.13	2.50	-2.50	0.00
4,100.00	24.83	222.05	3,620.54	-1,349.99	-1,217.77	1,818.09	2.50	-2.50	0.00
4,200.00	22.33	222.05	3,712.18	-1,379.70	-1,244.57	1,858.09	2.50	-2.50	0.00
4,300.00	19.83	222.05	3,805.48	-1,406.40	-1,268.66	1,894.06	2.50	-2.50	0.00
4,400.00	17.33	222.05	3,900.26	-1,430.06	-1,290.00	1,925.92	2.50	-2.50	0.00
4,500.00	14.83	222.05	3,996.34	-1,450.63	-1,308.55	1,953.62	2.50	-2.50	0.00
4,600.00	12.33	222.05	4,093.54	-1,468.06	-1,324.28	1,977.10	2.50	-2.50	0.00
4,700.00	9.83	222.05	4,191.67	-1,482.33	-1,337.15	1,996.32	2.50	-2.50	0.00
4,800.00	7.33	222.05	4,290.54	-1,493.41	-1,347.15	2,011.24	2.50	-2.50	0.00
4,900.00	4.83	222.05	4,389.97	-1,501.28	-1,354.24	2,021.84	2.50	-2.50	0.00
5,000.00	2.33	222.05	4,489.77	-1,505.92	-1,358.43	2,028.08	2.50	-2.50	0.00
5,093.26	0.00	0.00	4,583.00	-1,507.33	-1,359.70	2,029.98	2.50	-2.50	147.92
Start 1884.00 hold at 5093.26 MD - KMGAS - GM 424-11 BTV									
5,100.00	0.00	0.00	4,589.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
5,200.00	0.00	0.00	4,689.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
5,300.00	0.00	0.00	4,789.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
5,400.00	0.00	0.00	4,889.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
5,500.00	0.00	0.00	4,989.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
5,600.00	0.00	0.00	5,089.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
5,700.00	0.00	0.00	5,189.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
5,800.00	0.00	0.00	5,289.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
5,900.00	0.00	0.00	5,389.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
6,000.00	0.00	0.00	5,489.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
6,100.00	0.00	0.00	5,589.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
6,200.00	0.00	0.00	5,689.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
6,300.00	0.00	0.00	5,789.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
6,386.26	0.00	0.00	5,876.00	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
CME0									
6,400.00	0.00	0.00	5,889.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
6,500.00	0.00	0.00	5,989.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
6,600.00	0.00	0.00	6,089.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
6,700.00	0.00	0.00	6,189.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
6,800.00	0.00	0.00	6,289.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
6,877.26	0.00	0.00	6,367.00	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
RLNS									
6,900.00	0.00	0.00	6,389.74	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
6,977.26	0.00	0.00	6,467.00	-1,507.33	-1,359.70	2,029.98	0.00	0.00	0.00
TD at 6977.26 - TD - GM 424-11 PBHL									

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 424-11 - Slot GM 424-11
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5793' & RKB 24' @ 5817.00usft
Site:	GR 23-11V Pad	North Reference:	True
Well:	GM 424-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 23Jan2018 mmsdi		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
GM 424-11 BTV	0.00	0.00	4,583.00	-1,507.33	-1,359.70	1,597,739.78	2,270,529.74	39.4460876	-108.0834528
- plan hits target center									
- Circle (radius 50.00)									
GM 424-11 PBHL	0.00	0.00	6,467.00	-1,507.33	-1,359.70	1,597,739.78	2,270,529.74	39.4460876	-108.0834528
- plan hits target center									
- Point									

Casing Points				
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(usft)	(usft)		(in)	(in)
1,000.00	958.23	9 5/8" Casing @ 1000' MD	9.62	13.50

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
2,072.45	1,877.00	G Sand		0.00	0.00
2,189.18	1,977.00	G Sand Base		0.00	0.00
2,444.81	2,196.00	FRUN		0.00	0.00
3,831.53	3,384.00	MVRD		0.00	0.00
5,093.26	4,583.00	KMVGAS		0.00	0.00
6,386.26	5,876.00	CME0		0.00	0.00
6,877.26	6,367.00	RLNS		0.00	0.00
6,977.26	6,467.00	TD		0.00	0.00

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S	+E/-W	
(usft)	(usft)	(usft)	(usft)	
120.00	120.00	0.00	0.00	Start Build 3.50
1,007.20	964.40	-174.19	-157.13	Start 2843.98 hold at 1007.20 MD
3,851.18	3,400.84	-1,263.46	-1,139.72	Start Drop -2.50
5,093.26	4,583.00	-1,507.33	-1,359.70	Start 1884.00 hold at 5093.26 MD
6,977.26	6,467.00	-1,507.33	-1,359.70	TD at 6977.26