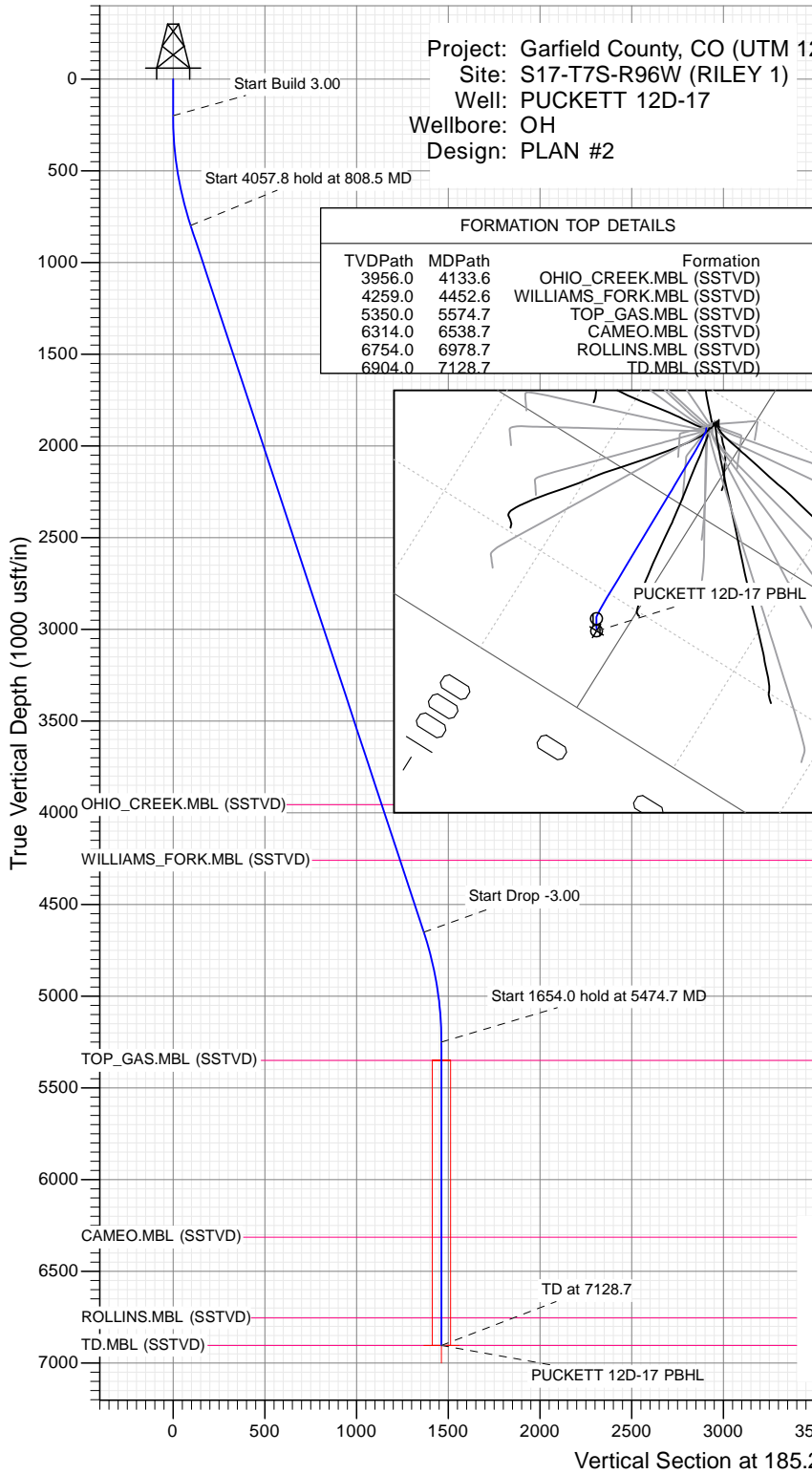




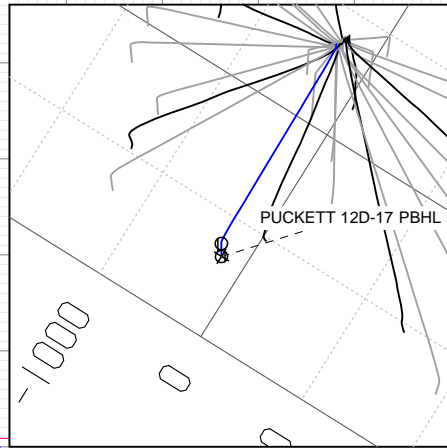
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	808.5	18.25	185.24	798.2	-95.7	-8.8	3.00	185.24	96.1	
4	4866.2	18.25	185.24	4651.8	-1361.4	-124.8	0.00	0.00	1367.1	
5	5474.7	0.00	0.00	5250.0	-1457.1	-133.6	3.00	180.00	1463.2	
6	7128.7	0.00	0.00	6904.0	-1457.1	-133.6	0.00	0.00	1463.2	PUCKETT 12D-17 PBHL



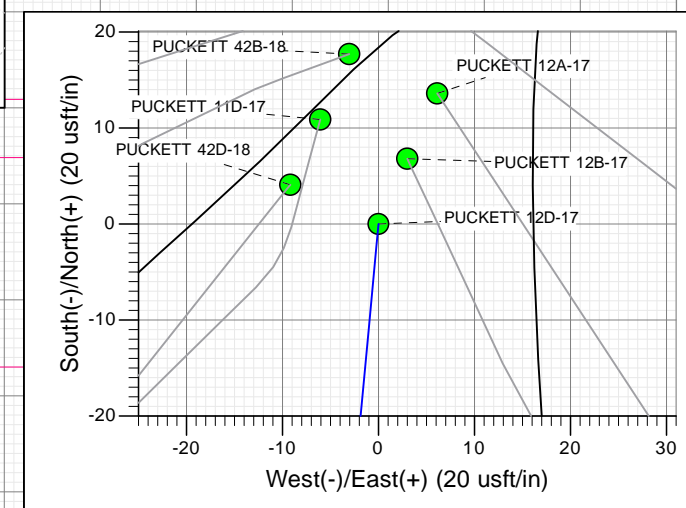
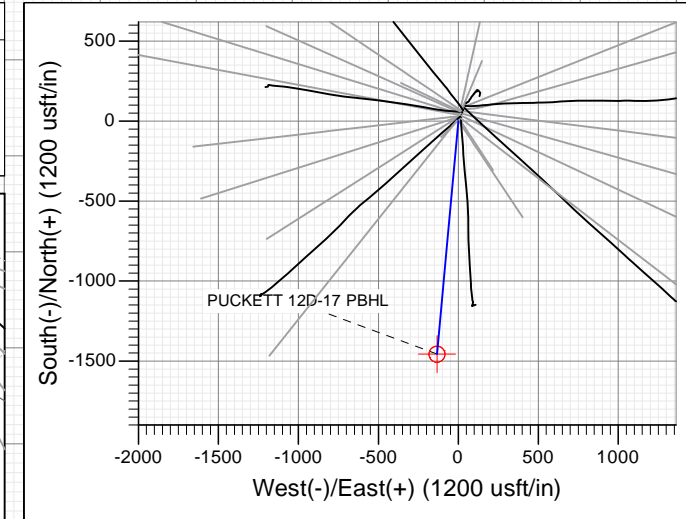
Project: Garfield County, CO (UTM 12
Site: S17-T7S-R96W (RILEY 1)
Well: PUCKETT 12D-17
Wellbore: OH
Design: PLAN #2

FORMATION TOP DETAILS		
TVDPATH	MDPATH	FORMATION
3956.0	4133.6	OHIO_CREEK.MBL (SSTVD)
4259.0	4452.6	WILLIAMS_FORK.MBL (SSTVD)
5350.0	5574.7	TOP_GAS.MBL (SSTVD)
6314.0	6538.7	CAMEO.MBL (SSTVD)
6754.0	6978.7	ROLLINS.MBL (SSTVD)
6904.0	7128.7	TD.MBL (SSTVD)



PLAN #2
PUCKETT 12D-17
15XXX; LR
KB @ 6764.0usft
Ground Level @ 6734.0
NAD 1927 - Western US
Well PUCKETT 12D-17, True North

Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
TD	No Target (Freehand)	185.24	Slot	0.0	0.0	0.0
Name		TVD	+N/-S	+E/-W	Latitude	Longitude
PUCKETT 12D-17 PBHL		6904.0	-1457.1	-133.6	39.437808	-108.138507



TM

Azimuths to True North
Magnetic North: 9.75°

Magnetic Field
Strength: 51971.4snT
Dip Angle: 65.73°
Date: 11/19/2015
Model: HDGM

CASING DETAILS	
No casing data is available	

CATHEDRAL

WELL DETAILS: PUCKETT 12D-17

Ground Level: 6734.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14335624.70	2448487.30	39.441807	-108.138034

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 12D-17
Company:	Caerus Oil & Gas	TVD Reference:	KB @ 6764.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	KB @ 6764.0usft
Site:	S17-T7S-R96W (RILEY 1)	North Reference:	True
Well:	PUCKETT 12D-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Project	Garfield County, CO (UTM 12N)		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	S17-T7S-R96W (RILEY 1)				
Site Position:		Northing:	14,335,697.50 usft	Latitude:	39.442005
From:	Map	Easting:	2,448,508.30 usft	Longitude:	-108.137952
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	1.82 °

Well	PUCKETT 12D-17					
Well Position	+N/-S	0.0 usft	Northing:	14,335,624.70 usft	Latitude:	39.441807
	+E/-W	0.0 usft	Easting:	2,448,487.30 usft	Longitude:	-108.138034
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	6,734.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	11/19/2015	9.75	65.73	51,971

Design	PLAN #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	185.24

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
808.5	18.25	185.24	798.2	-95.7	-8.8	3.00	3.00	0.00	185.24	
4,866.2	18.25	185.24	4,651.8	-1,361.4	-124.8	0.00	0.00	0.00	0.00	
5,474.7	0.00	0.00	5,250.0	-1,457.1	-133.6	3.00	-3.00	0.00	180.00	
7,128.7	0.00	0.00	6,904.0	-1,457.1	-133.6	0.00	0.00	0.00	0.00	PUCKETT 12D-17 PE

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 12D-17
Company:	Caerus Oil & Gas	TVD Reference:	KB @ 6764.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	KB @ 6764.0usft
Site:	S17-T7S-R96W (RILEY 1)	North Reference:	True
Well:	PUCKETT 12D-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	Start Build 3.00
300.0	3.00	185.24	300.0	-2.6	-0.2	2.6	3.00	3.00	
400.0	6.00	185.24	399.6	-10.4	-1.0	10.5	3.00	3.00	
500.0	9.00	185.24	498.8	-23.4	-2.1	23.5	3.00	3.00	
600.0	12.00	185.24	597.1	-41.6	-3.8	41.7	3.00	3.00	
700.0	15.00	185.24	694.3	-64.8	-5.9	65.1	3.00	3.00	
800.0	18.00	185.24	790.2	-93.1	-8.5	93.5	3.00	3.00	
808.5	18.25	185.24	798.2	-95.7	-8.8	96.1	3.00	3.00	Start 4057.8 hold at 808.5 MD
900.0	18.25	185.24	885.2	-124.3	-11.4	124.8	0.00	0.00	
1,000.0	18.25	185.24	980.1	-155.5	-14.3	156.1	0.00	0.00	
1,100.0	18.25	185.24	1,075.1	-186.6	-17.1	187.4	0.00	0.00	
1,200.0	18.25	185.24	1,170.1	-217.8	-20.0	218.7	0.00	0.00	
1,300.0	18.25	185.24	1,265.0	-249.0	-22.8	250.1	0.00	0.00	
1,400.0	18.25	185.24	1,360.0	-280.2	-25.7	281.4	0.00	0.00	
1,500.0	18.25	185.24	1,455.0	-311.4	-28.6	312.7	0.00	0.00	
1,600.0	18.25	185.24	1,549.9	-342.6	-31.4	344.0	0.00	0.00	
1,700.0	18.25	185.24	1,644.9	-373.8	-34.3	375.4	0.00	0.00	
1,800.0	18.25	185.24	1,739.9	-405.0	-37.1	406.7	0.00	0.00	
1,900.0	18.25	185.24	1,834.8	-436.2	-40.0	438.0	0.00	0.00	
2,000.0	18.25	185.24	1,929.8	-467.4	-42.9	469.3	0.00	0.00	
2,100.0	18.25	185.24	2,024.8	-498.6	-45.7	500.7	0.00	0.00	
2,200.0	18.25	185.24	2,119.7	-529.8	-48.6	532.0	0.00	0.00	
2,300.0	18.25	185.24	2,214.7	-560.9	-51.4	563.3	0.00	0.00	
2,400.0	18.25	185.24	2,309.7	-592.1	-54.3	594.6	0.00	0.00	
2,500.0	18.25	185.24	2,404.6	-623.3	-57.2	625.9	0.00	0.00	
2,600.0	18.25	185.24	2,499.6	-654.5	-60.0	657.3	0.00	0.00	
2,700.0	18.25	185.24	2,594.6	-685.7	-62.9	688.6	0.00	0.00	
2,800.0	18.25	185.24	2,689.5	-716.9	-65.7	719.9	0.00	0.00	
2,900.0	18.25	185.24	2,784.5	-748.1	-68.6	751.2	0.00	0.00	
3,000.0	18.25	185.24	2,879.5	-779.3	-71.5	782.6	0.00	0.00	
3,100.0	18.25	185.24	2,974.4	-810.5	-74.3	813.9	0.00	0.00	
3,200.0	18.25	185.24	3,069.4	-841.7	-77.2	845.2	0.00	0.00	
3,300.0	18.25	185.24	3,164.4	-872.9	-80.0	876.5	0.00	0.00	
3,400.0	18.25	185.24	3,259.3	-904.1	-82.9	907.8	0.00	0.00	
3,500.0	18.25	185.24	3,354.3	-935.2	-85.8	939.2	0.00	0.00	
3,600.0	18.25	185.24	3,449.3	-966.4	-88.6	970.5	0.00	0.00	
3,700.0	18.25	185.24	3,544.3	-997.6	-91.5	1,001.8	0.00	0.00	
3,800.0	18.25	185.24	3,639.2	-1,028.8	-94.3	1,033.1	0.00	0.00	
3,900.0	18.25	185.24	3,734.2	-1,060.0	-97.2	1,064.5	0.00	0.00	
4,000.0	18.25	185.24	3,829.2	-1,091.2	-100.1	1,095.8	0.00	0.00	
4,100.0	18.25	185.24	3,924.1	-1,122.4	-102.9	1,127.1	0.00	0.00	
4,133.6	18.25	185.24	3,956.0	-1,132.9	-103.9	1,137.6	0.00	0.00	OHIO_CREEK.MBL (SSTVD)
4,200.0	18.25	185.24	4,019.1	-1,153.6	-105.8	1,158.4	0.00	0.00	
4,300.0	18.25	185.24	4,114.1	-1,184.8	-108.7	1,189.7	0.00	0.00	
4,400.0	18.25	185.24	4,209.0	-1,216.0	-111.5	1,221.1	0.00	0.00	
4,452.6	18.25	185.24	4,259.0	-1,232.4	-113.0	1,237.6	0.00	0.00	WILLIAMS_FORK.MBL (SSTVD)
4,500.0	18.25	185.24	4,304.0	-1,247.2	-114.4	1,252.4	0.00	0.00	
4,600.0	18.25	185.24	4,399.0	-1,278.4	-117.2	1,283.7	0.00	0.00	
4,700.0	18.25	185.24	4,493.9	-1,309.5	-120.1	1,315.0	0.00	0.00	
4,800.0	18.25	185.24	4,588.9	-1,340.7	-123.0	1,346.4	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 12D-17
Company:	Caerus Oil & Gas	TVD Reference:	KB @ 6764.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	KB @ 6764.0usft
Site:	S17-T7S-R96W (RILEY 1)	North Reference:	True
Well:	PUCKETT 12D-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
4,866.2	18.25	185.24	4,651.8	-1,361.4	-124.8	1,367.1	0.00	0.00	Start Drop -3.00
4,900.0	17.24	185.24	4,684.0	-1,371.6	-125.8	1,377.4	3.00	-3.00	
5,000.0	14.24	185.24	4,780.2	-1,398.7	-128.3	1,404.5	3.00	-3.00	
5,100.0	11.24	185.24	4,877.7	-1,420.6	-130.3	1,426.6	3.00	-3.00	
5,200.0	8.24	185.24	4,976.3	-1,437.5	-131.8	1,443.5	3.00	-3.00	
5,300.0	5.24	185.24	5,075.6	-1,449.1	-132.9	1,455.2	3.00	-3.00	
5,400.0	2.24	185.24	5,175.3	-1,455.6	-133.5	1,461.7	3.00	-3.00	
5,474.7	0.00	0.00	5,250.0	-1,457.1	-133.6	1,463.2	3.00	-3.00	Start 1654.0 hold at 5474.7 MD
5,500.0	0.00	0.00	5,275.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
5,574.7	0.00	0.00	5,350.0	-1,457.1	-133.6	1,463.2	0.00	0.00	TOP_GAS.MBL (SSTVD)
5,600.0	0.00	0.00	5,375.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
5,700.0	0.00	0.00	5,475.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
5,800.0	0.00	0.00	5,575.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
5,900.0	0.00	0.00	5,675.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
6,000.0	0.00	0.00	5,775.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
6,100.0	0.00	0.00	5,875.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
6,200.0	0.00	0.00	5,975.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
6,300.0	0.00	0.00	6,075.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
6,400.0	0.00	0.00	6,175.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
6,500.0	0.00	0.00	6,275.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
6,538.7	0.00	0.00	6,314.0	-1,457.1	-133.6	1,463.2	0.00	0.00	CAMEO.MBL (SSTVD)
6,600.0	0.00	0.00	6,375.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
6,700.0	0.00	0.00	6,475.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
6,800.0	0.00	0.00	6,575.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
6,900.0	0.00	0.00	6,675.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
6,978.7	0.00	0.00	6,754.0	-1,457.1	-133.6	1,463.2	0.00	0.00	ROLLINS.MBL (SSTVD)
7,000.0	0.00	0.00	6,775.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
7,100.0	0.00	0.00	6,875.3	-1,457.1	-133.6	1,463.2	0.00	0.00	
7,128.7	0.00	0.00	6,904.0	-1,457.1	-133.6	1,463.2	0.00	0.00	TD at 7128.7 - TD.MBL (SSTVD)

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PUCKETT 12D-17 PBHI - hit/miss target - Shape - Circle (radius 50.0)	0.00	0.00	6,904.0	-1,457.1	-133.6	14,334,164.10	2,448,400.00	39.437808	-108.138507

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 12D-17
Company:	Caerus Oil & Gas	TVD Reference:	KB @ 6764.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	KB @ 6764.0usft
Site:	S17-T7S-R96W (RILEY 1)	North Reference:	True
Well:	PUCKETT 12D-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,133.6	3,956.0	OHIO_CREEK.MBL (SSTVD)		0.00	
4,452.6	4,259.0	WILLIAMS_FORK.MBL (SSTVD)		0.00	
5,574.7	5,350.0	TOP_GAS.MBL (SSTVD)		0.00	
6,538.7	6,314.0	CAMEO.MBL (SSTVD)		0.00	
6,978.7	6,754.0	ROLLINS.MBL (SSTVD)		0.00	
7,128.7	6,904.0	TD.MBL (SSTVD)		0.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
200.0	200.0	0.0	0.0	Start Build 3.00	
808.5	798.2	-95.7	-8.8	Start 4057.8 hold at 808.5 MD	
4,866.2	4,651.8	-1,361.4	-124.8	Start Drop -3.00	
5,474.7	5,250.0	-1,457.1	-133.6	Start 1654.0 hold at 5474.7 MD	
7,128.7	6,904.0	-1,457.1	-133.6	TD at 7128.7	