

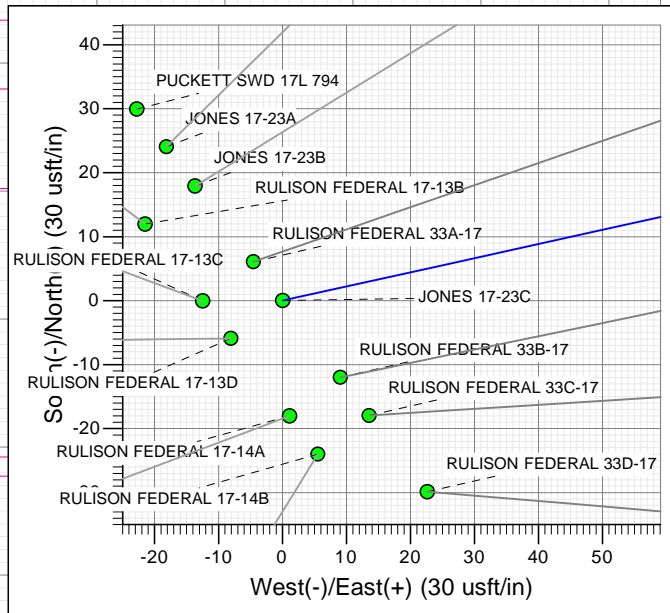
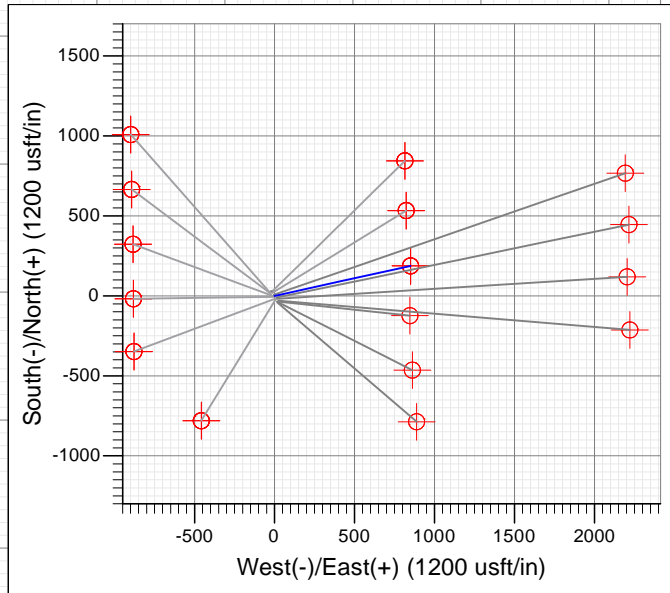
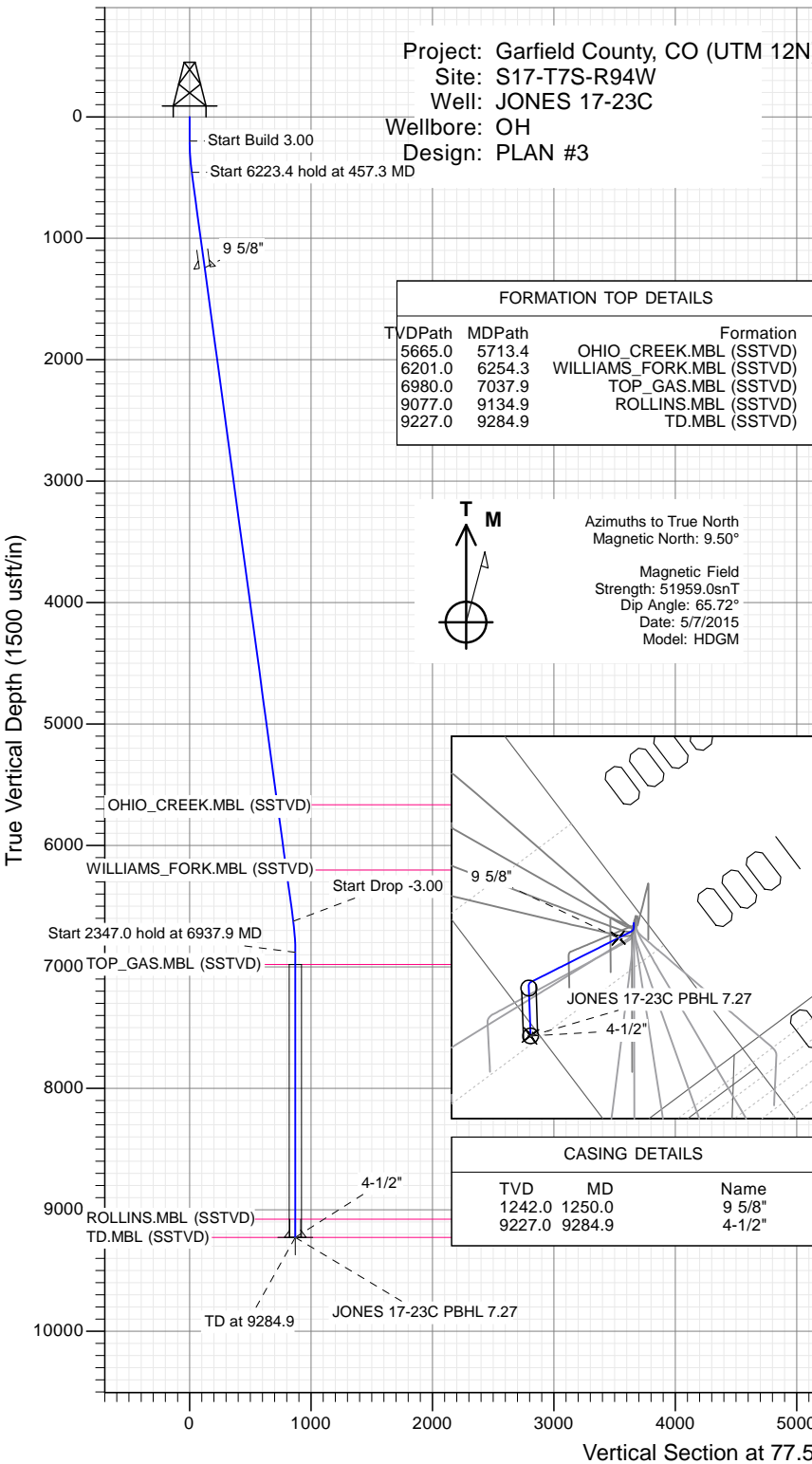


SECTION DETAILS

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	457.3	7.72	77.56	456.5	3.8	16.9	3.00	77.56	17.3	
4	6680.7	7.72	77.56	6623.5	183.8	833.1	0.00	0.00	853.1	
5	6937.9	0.00	0.00	6880.0	187.6	849.9	3.00	180.00	870.4	
6	9284.9	0.00	0.00	9227.0	187.6	849.9	0.00	0.00	870.4	JONES 17-23C PBHL 7.27

Project: Garfield County, CO (UTM 12N)
 Site: S17-T7S-R94W
 Well: JONES 17-23C
 Wellbore: OH
 Design: PLAN #3

PLAN #3 JONES 17-23C 15XXX; LR 30' KB @ 7442.0usft (H&P 330) Ground Level @ 7412.0 NAD 1927 - Western US Well JONES 17-23C, True North									
Type	Target	Azimuth	Origin	Type	N/S	E/W	From	TVD	
TD	No Target (Freehand)	77.56	Slot		0.0	0.0	0.0		
Name	JONES 17-23C PBHL 7.27	TVD	+N/-S	+E/-W	Latitude	Longitude			
	JONES 17-23C PBHL	9227.0	187.6	849.9	39.436739	-107.911837			
		9229.0	187.6	850.3	39.436739	-107.911835			



WELL DETAILS: JONES 17-23C

+N/-S	+E/-W	Northing	Ground Level:	7412.0	Latitude	Longitude
0.0	0.0	14335671.40	Easting	2511585.60	39.436224	-107.914844



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well JONES 17-23C
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 7442.0usft (H&P 330)
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 7442.0usft (H&P 330)
Site:	S17-T7S-R94W	North Reference:	True
Well:	JONES 17-23C	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #3		

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-R94W			
Site Position:		Northing:	14,335,694.75 usft	Latitude:	39.436290
From:	Map	Easting:	2,511,566.57 usft	Longitude:	-107.914909
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.96 °

Well	JONES 17-23C					
Well Position	+N/-S	0.0 usft	Northing:	14,335,671.40 usft	Latitude:	39.436224
	+E/-W	0.0 usft	Easting:	2,511,585.60 usft	Longitude:	-107.914844
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	7,412.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/7/2015	9.50	65.72	51,959

Design	PLAN #3			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	77.56

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	
457.3	7.72	77.56	456.5	3.8	16.9	3.00	3.00	0.00	77.56	
6,680.7	7.72	77.56	6,623.5	183.8	833.1	0.00	0.00	0.00	0.00	
6,937.9	0.00	0.00	6,880.0	187.6	849.9	3.00	-3.00	0.00	180.00	
9,284.9	0.00	0.00	9,227.0	187.6	849.9	0.00	0.00	0.00	0.00	JONES 17-23C PBHL

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well JONES 17-23C
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 7442.0usft (H&P 330)
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 7442.0usft (H&P 330)
Site:	S17-T7S-R94W	North Reference:	True
Well:	JONES 17-23C	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #3		

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	77.56	300.0	0.6	2.6	2.6	3.00	3.00	
400.0	6.00	77.56	399.6	2.3	10.2	10.5	3.00	3.00	
457.3	7.72	77.56	456.5	3.8	16.9	17.3	3.00	3.00	Start 6223.4 hold at 457.3 MD
500.0	7.72	77.56	498.8	5.0	22.5	23.0	0.00	0.00	
600.0	7.72	77.56	597.9	7.9	35.6	36.5	0.00	0.00	
700.0	7.72	77.56	697.0	10.8	48.8	49.9	0.00	0.00	
800.0	7.72	77.56	796.1	13.7	61.9	63.3	0.00	0.00	
900.0	7.72	77.56	895.2	16.6	75.0	76.8	0.00	0.00	
1,000.0	7.72	77.56	994.3	19.5	88.1	90.2	0.00	0.00	
1,100.0	7.72	77.56	1,093.4	22.4	101.2	103.6	0.00	0.00	
1,200.0	7.72	77.56	1,192.5	25.2	114.3	117.0	0.00	0.00	
1,250.0	7.72	77.56	1,242.0	26.7	120.9	123.8	0.00	0.00	9 5/8"
1,300.0	7.72	77.56	1,291.6	28.1	127.4	130.5	0.00	0.00	
1,400.0	7.72	77.56	1,390.7	31.0	140.6	143.9	0.00	0.00	
1,500.0	7.72	77.56	1,489.8	33.9	153.7	157.3	0.00	0.00	
1,600.0	7.72	77.56	1,588.9	36.8	166.8	170.8	0.00	0.00	
1,700.0	7.72	77.56	1,688.0	39.7	179.9	184.2	0.00	0.00	
1,800.0	7.72	77.56	1,787.1	42.6	193.0	197.6	0.00	0.00	
1,900.0	7.72	77.56	1,886.2	45.5	206.1	211.0	0.00	0.00	
2,000.0	7.72	77.56	1,985.2	48.4	219.2	224.5	0.00	0.00	
2,100.0	7.72	77.56	2,084.3	51.3	232.4	237.9	0.00	0.00	
2,200.0	7.72	77.56	2,183.4	54.2	245.5	251.3	0.00	0.00	
2,300.0	7.72	77.56	2,282.5	57.1	258.6	264.8	0.00	0.00	
2,400.0	7.72	77.56	2,381.6	60.0	271.7	278.2	0.00	0.00	
2,500.0	7.72	77.56	2,480.7	62.9	284.8	291.6	0.00	0.00	
2,600.0	7.72	77.56	2,579.8	65.8	297.9	305.1	0.00	0.00	
2,700.0	7.72	77.56	2,678.9	68.6	311.0	318.5	0.00	0.00	
2,800.0	7.72	77.56	2,778.0	71.5	324.1	331.9	0.00	0.00	
2,900.0	7.72	77.56	2,877.1	74.4	337.3	345.3	0.00	0.00	
3,000.0	7.72	77.56	2,976.2	77.3	350.4	358.8	0.00	0.00	
3,100.0	7.72	77.56	3,075.3	80.2	363.5	372.2	0.00	0.00	
3,200.0	7.72	77.56	3,174.4	83.1	376.6	385.6	0.00	0.00	
3,300.0	7.72	77.56	3,273.5	86.0	389.7	399.1	0.00	0.00	
3,400.0	7.72	77.56	3,372.6	88.9	402.8	412.5	0.00	0.00	
3,500.0	7.72	77.56	3,471.7	91.8	415.9	425.9	0.00	0.00	
3,600.0	7.72	77.56	3,570.8	94.7	429.1	439.3	0.00	0.00	
3,700.0	7.72	77.56	3,669.8	97.6	442.2	452.8	0.00	0.00	
3,800.0	7.72	77.56	3,768.9	100.5	455.3	466.2	0.00	0.00	
3,900.0	7.72	77.56	3,868.0	103.4	468.4	479.6	0.00	0.00	
4,000.0	7.72	77.56	3,967.1	106.3	481.5	493.1	0.00	0.00	
4,100.0	7.72	77.56	4,066.2	109.2	494.6	506.5	0.00	0.00	
4,200.0	7.72	77.56	4,165.3	112.1	507.7	519.9	0.00	0.00	
4,300.0	7.72	77.56	4,264.4	114.9	520.9	533.4	0.00	0.00	
4,400.0	7.72	77.56	4,363.5	117.8	534.0	546.8	0.00	0.00	
4,500.0	7.72	77.56	4,462.6	120.7	547.1	560.2	0.00	0.00	
4,600.0	7.72	77.56	4,561.7	123.6	560.2	573.6	0.00	0.00	
4,700.0	7.72	77.56	4,660.8	126.5	573.3	587.1	0.00	0.00	
4,800.0	7.72	77.56	4,759.9	129.4	586.4	600.5	0.00	0.00	
4,900.0	7.72	77.56	4,859.0	132.3	599.5	613.9	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well JONES 17-23C
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 7442.0usft (H&P 330)
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 7442.0usft (H&P 330)
Site:	S17-T7S-R94W	North Reference:	True
Well:	JONES 17-23C	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #3		

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
5,000.0	7.72	77.56	4,958.1	135.2	612.7	627.4	0.00	0.00	
5,100.0	7.72	77.56	5,057.2	138.1	625.8	640.8	0.00	0.00	
5,200.0	7.72	77.56	5,156.3	141.0	638.9	654.2	0.00	0.00	
5,300.0	7.72	77.56	5,255.4	143.9	652.0	667.6	0.00	0.00	
5,400.0	7.72	77.56	5,354.5	146.8	665.1	681.1	0.00	0.00	
5,500.0	7.72	77.56	5,453.5	149.7	678.2	694.5	0.00	0.00	
5,600.0	7.72	77.56	5,552.6	152.6	691.3	707.9	0.00	0.00	
5,700.0	7.72	77.56	5,651.7	155.5	704.4	721.4	0.00	0.00	
5,713.4	7.72	77.56	5,665.0	155.8	706.2	723.2	0.00	0.00	OHIO_CREEK.MBL (SSTVD)
5,800.0	7.72	77.56	5,750.8	158.3	717.6	734.8	0.00	0.00	
5,900.0	7.72	77.56	5,849.9	161.2	730.7	748.2	0.00	0.00	
6,000.0	7.72	77.56	5,949.0	164.1	743.8	761.6	0.00	0.00	
6,100.0	7.72	77.56	6,048.1	167.0	756.9	775.1	0.00	0.00	
6,200.0	7.72	77.56	6,147.2	169.9	770.0	788.5	0.00	0.00	
6,254.3	7.72	77.56	6,201.0	171.5	777.1	795.8	0.00	0.00	WILLIAMS_FORK.MBL (SSTVD)
6,300.0	7.72	77.56	6,246.3	172.8	783.1	801.9	0.00	0.00	
6,400.0	7.72	77.56	6,345.4	175.7	796.2	815.4	0.00	0.00	
6,500.0	7.72	77.56	6,444.5	178.6	809.4	828.8	0.00	0.00	
6,600.0	7.72	77.56	6,543.6	181.5	822.5	842.2	0.00	0.00	
6,680.7	7.72	77.56	6,623.5	183.8	833.1	853.1	0.00	0.00	Start Drop -3.00
6,700.0	7.14	77.56	6,642.7	184.4	835.5	855.6	3.00	-3.00	
6,800.0	4.14	77.56	6,742.2	186.5	845.1	865.4	3.00	-3.00	
6,900.0	1.14	77.56	6,842.1	187.5	849.6	870.0	3.00	-3.00	
6,937.9	0.00	0.00	6,880.0	187.6	849.9	870.4	3.00	-3.00	Start 2347.0 hold at 6937.9 MD
7,000.0	0.00	0.00	6,942.1	187.6	849.9	870.4	0.00	0.00	
7,037.9	0.00	0.00	6,980.0	187.6	849.9	870.4	0.00	0.00	TOP_GAS.MBL (SSTVD)
7,100.0	0.00	0.00	7,042.1	187.6	849.9	870.4	0.00	0.00	
7,200.0	0.00	0.00	7,142.1	187.6	849.9	870.4	0.00	0.00	
7,300.0	0.00	0.00	7,242.1	187.6	849.9	870.4	0.00	0.00	
7,400.0	0.00	0.00	7,342.1	187.6	849.9	870.4	0.00	0.00	
7,500.0	0.00	0.00	7,442.1	187.6	849.9	870.4	0.00	0.00	
7,600.0	0.00	0.00	7,542.1	187.6	849.9	870.4	0.00	0.00	
7,700.0	0.00	0.00	7,642.1	187.6	849.9	870.4	0.00	0.00	
7,800.0	0.00	0.00	7,742.1	187.6	849.9	870.4	0.00	0.00	
7,900.0	0.00	0.00	7,842.1	187.6	849.9	870.4	0.00	0.00	
8,000.0	0.00	0.00	7,942.1	187.6	849.9	870.4	0.00	0.00	
8,100.0	0.00	0.00	8,042.1	187.6	849.9	870.4	0.00	0.00	
8,200.0	0.00	0.00	8,142.1	187.6	849.9	870.4	0.00	0.00	
8,300.0	0.00	0.00	8,242.1	187.6	849.9	870.4	0.00	0.00	
8,400.0	0.00	0.00	8,342.1	187.6	849.9	870.4	0.00	0.00	
8,500.0	0.00	0.00	8,442.1	187.6	849.9	870.4	0.00	0.00	
8,600.0	0.00	0.00	8,542.1	187.6	849.9	870.4	0.00	0.00	
8,700.0	0.00	0.00	8,642.1	187.6	849.9	870.4	0.00	0.00	
8,800.0	0.00	0.00	8,742.1	187.6	849.9	870.4	0.00	0.00	
8,900.0	0.00	0.00	8,842.1	187.6	849.9	870.4	0.00	0.00	
9,000.0	0.00	0.00	8,942.1	187.6	849.9	870.4	0.00	0.00	
9,100.0	0.00	0.00	9,042.1	187.6	849.9	870.4	0.00	0.00	
9,134.9	0.00	0.00	9,077.0	187.6	849.9	870.4	0.00	0.00	ROLLINS.MBL (SSTVD)
9,200.0	0.00	0.00	9,142.1	187.6	849.9	870.4	0.00	0.00	
9,284.9	0.00	0.00	9,227.0	187.6	849.9	870.4	0.00	0.00	TD at 9284.9 - TD.MBL (SSTVD) - 4-1/2"

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well JONES 17-23C
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 7442.0usft (H&P 330)
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 7442.0usft (H&P 330)
Site:	S17-T7S-R94W	North Reference:	True
Well:	JONES 17-23C	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #3		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
JONES 17-23C PBHL 7. - plan hits target center - Circle (radius 50.0)	0.00	1.96	9,227.0	187.6	849.9	14,335,887.90	2,512,428.60	39.436739	-107.911837
JONES 17-23C PBHL - plan misses target center by 2.1usft at 9284.9usft MD (9227.0 TVD, 187.6 N, 849.9 E) - Circle (radius 50.0)	0.00	1.96	9,229.0	187.6	850.3	14,335,888.00	2,512,429.00	39.436739	-107.911835

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,250.0	1,242.0	9 5/8"	9-5/8	13-1/2
9,284.9	9,227.0	4-1/2"	4-1/2	8-3/4

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,713.4	5,665.0	OHIO_CREEK.MBL (SSTVD)		0.00	
6,254.3	6,201.0	WILLIAMS_FORK.MBL (SSTVD)		0.00	
7,037.9	6,980.0	TOP_GAS.MBL (SSTVD)		0.00	
9,134.9	9,077.0	ROLLINS.MBL (SSTVD)		0.00	
9,284.9	9,227.0	TD.MBL (SSTVD)		0.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
200.0	200.0	0.0	0.0	Start Build 3.00	
457.3	456.5	3.8	16.9	Start 6223.4 hold at 457.3 MD	
6,680.7	6,623.5	183.8	833.1	Start Drop -3.00	
6,937.9	6,880.0	187.6	849.9	Start 2347.0 hold at 6937.9 MD	
9,284.9	9,227.0	187.6	849.9	TD at 9284.9	