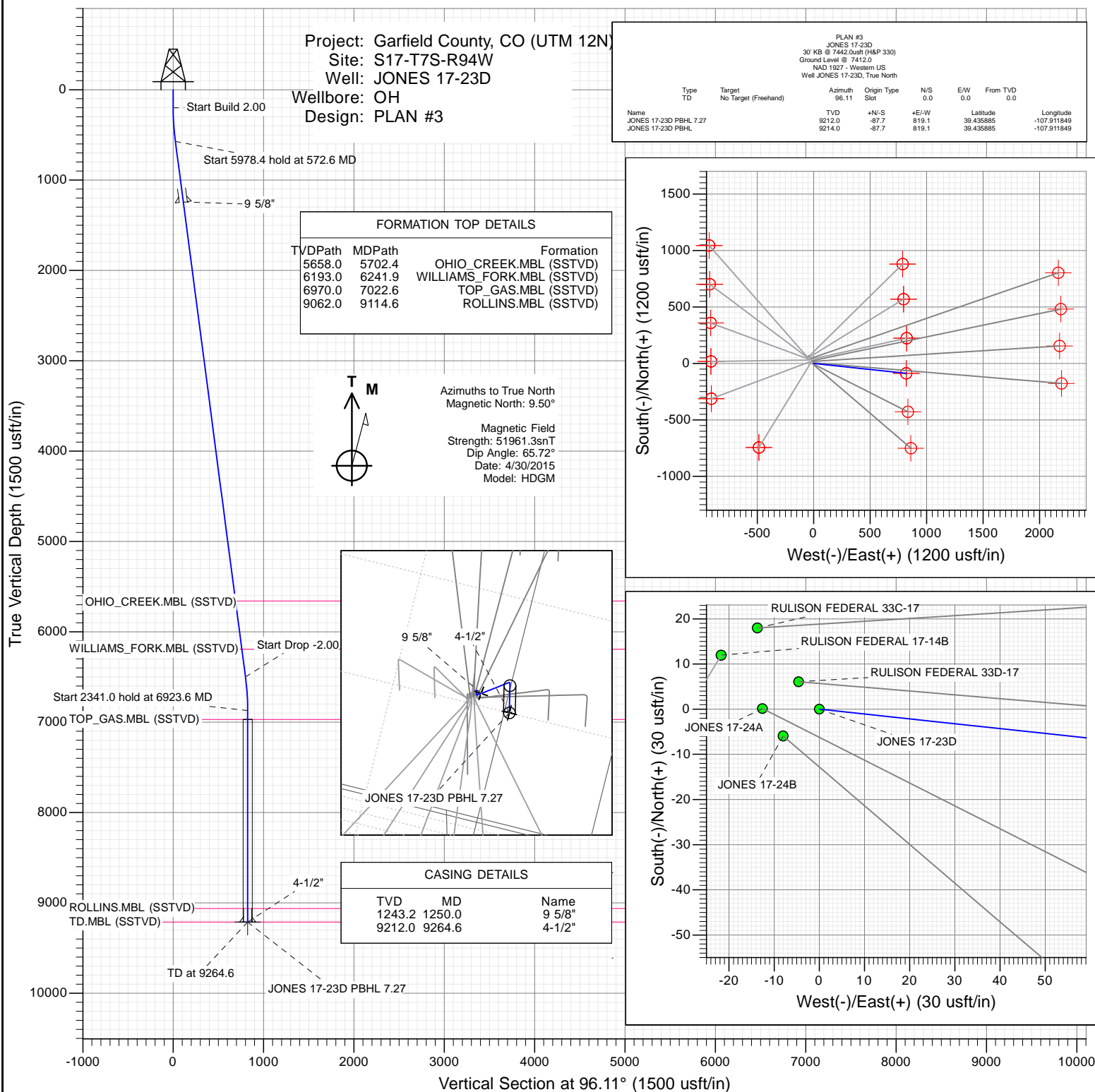




SECTION DETAILS

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	572.6	7.45	96.11	571.5	-2.6	24.1	2.00	96.11	24.2	
4	6551.0	7.45	96.11	6499.5	-85.1	795.0	0.00	0.00	799.6	
5	6923.6	0.00	0.00	6871.0	-87.7	819.1	2.00	180.00	823.8	
6	9264.6	0.00	0.00	9212.0	-87.7	819.1	0.00	0.00	823.8	



WELL DETAILS: JONES 17-23D

+N/-S	+E/-W	Northing	Ground Level:	7412.0	Easting	Latitude	Longitude
0.0	0.0	14335636.40			2511614.00	39.436126	-107.914748



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well JONES 17-23D
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 17-23D	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 17-23D					
Well Position	+N/-S	0.0 usft	Northing:	14,335,636.40 usft	Latitude:	39.436126
	+E/-W	0.0 usft	Easting:	2,511,614.00 usft	Longitude:	-107.914748
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	4/30/2015	9.50	65.72	51,961

Design	PLAN #3				
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	96.11	

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
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	
572.6	7.45	96.11	571.5	-2.6	24.1	2.00	2.00	0.00	96.11	
6,551.0	7.45	96.11	6,499.5	-85.1	795.0	0.00	0.00	0.00	0.00	
6,923.6	0.00	0.00	6,871.0	-87.7	819.1	2.00	-2.00	0.00	180.00	
9,264.6	0.00	0.00	9,212.0	-87.7	819.1	0.00	0.00	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well JONES 17-23D
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 17-23D	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 2.00
300.0	2.00	96.11	300.0	-0.2	1.7	1.7	2.00	2.00	
400.0	4.00	96.11	399.8	-0.7	6.9	7.0	2.00	2.00	
500.0	6.00	96.11	499.5	-1.7	15.6	15.7	2.00	2.00	
572.6	7.45	96.11	571.5	-2.6	24.1	24.2	2.00	2.00	Start 5978.4 hold at 572.6 MD
600.0	7.45	96.11	598.7	-3.0	27.6	27.8	0.00	0.00	
700.0	7.45	96.11	697.9	-4.3	40.5	40.7	0.00	0.00	
800.0	7.45	96.11	797.0	-5.7	53.4	53.7	0.00	0.00	
900.0	7.45	96.11	896.2	-7.1	66.3	66.7	0.00	0.00	
1,000.0	7.45	96.11	995.3	-8.5	79.2	79.6	0.00	0.00	
1,100.0	7.45	96.11	1,094.5	-9.9	92.1	92.6	0.00	0.00	
1,200.0	7.45	96.11	1,193.7	-11.2	105.0	105.6	0.00	0.00	
1,250.0	7.45	96.11	1,243.2	-11.9	111.4	112.1	0.00	0.00	9 5/8"
1,300.0	7.45	96.11	1,292.8	-12.6	117.9	118.5	0.00	0.00	
1,400.0	7.45	96.11	1,392.0	-14.0	130.8	131.5	0.00	0.00	
1,500.0	7.45	96.11	1,491.1	-15.4	143.7	144.5	0.00	0.00	
1,600.0	7.45	96.11	1,590.3	-16.8	156.6	157.4	0.00	0.00	
1,700.0	7.45	96.11	1,689.4	-18.1	169.4	170.4	0.00	0.00	
1,800.0	7.45	96.11	1,788.6	-19.5	182.3	183.4	0.00	0.00	
1,900.0	7.45	96.11	1,887.7	-20.9	195.2	196.4	0.00	0.00	
2,000.0	7.45	96.11	1,986.9	-22.3	208.1	209.3	0.00	0.00	
2,100.0	7.45	96.11	2,086.0	-23.7	221.0	222.3	0.00	0.00	
2,200.0	7.45	96.11	2,185.2	-25.0	233.9	235.3	0.00	0.00	
2,300.0	7.45	96.11	2,284.4	-26.4	246.8	248.2	0.00	0.00	
2,400.0	7.45	96.11	2,383.5	-27.8	259.7	261.2	0.00	0.00	
2,500.0	7.45	96.11	2,482.7	-29.2	272.6	274.2	0.00	0.00	
2,600.0	7.45	96.11	2,581.8	-30.6	285.5	287.1	0.00	0.00	
2,700.0	7.45	96.11	2,681.0	-31.9	298.4	300.1	0.00	0.00	
2,800.0	7.45	96.11	2,780.1	-33.3	311.3	313.1	0.00	0.00	
2,900.0	7.45	96.11	2,879.3	-34.7	324.2	326.0	0.00	0.00	
3,000.0	7.45	96.11	2,978.4	-36.1	337.1	339.0	0.00	0.00	
3,100.0	7.45	96.11	3,077.6	-37.5	350.0	352.0	0.00	0.00	
3,200.0	7.45	96.11	3,176.8	-38.8	362.9	365.0	0.00	0.00	
3,300.0	7.45	96.11	3,275.9	-40.2	375.8	377.9	0.00	0.00	
3,400.0	7.45	96.11	3,375.1	-41.6	388.7	390.9	0.00	0.00	
3,500.0	7.45	96.11	3,474.2	-43.0	401.6	403.9	0.00	0.00	
3,600.0	7.45	96.11	3,573.4	-44.4	414.5	416.8	0.00	0.00	
3,700.0	7.45	96.11	3,672.5	-45.7	427.4	429.8	0.00	0.00	
3,800.0	7.45	96.11	3,771.7	-47.1	440.3	442.8	0.00	0.00	
3,900.0	7.45	96.11	3,870.8	-48.5	453.2	455.7	0.00	0.00	
4,000.0	7.45	96.11	3,970.0	-49.9	466.0	468.7	0.00	0.00	
4,100.0	7.45	96.11	4,069.2	-51.3	478.9	481.7	0.00	0.00	
4,200.0	7.45	96.11	4,168.3	-52.7	491.8	494.7	0.00	0.00	
4,300.0	7.45	96.11	4,267.5	-54.0	504.7	507.6	0.00	0.00	
4,400.0	7.45	96.11	4,366.6	-55.4	517.6	520.6	0.00	0.00	
4,500.0	7.45	96.11	4,465.8	-56.8	530.5	533.6	0.00	0.00	
4,600.0	7.45	96.11	4,564.9	-58.2	543.4	546.5	0.00	0.00	
4,700.0	7.45	96.11	4,664.1	-59.6	556.3	559.5	0.00	0.00	
4,800.0	7.45	96.11	4,763.2	-60.9	569.2	572.5	0.00	0.00	
4,900.0	7.45	96.11	4,862.4	-62.3	582.1	585.4	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well JONES 17-23D
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 17-23D	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	7.45	96.11	4,961.6	-63.7	595.0	598.4	0.00	0.00	
5,100.0	7.45	96.11	5,060.7	-65.1	607.9	611.4	0.00	0.00	
5,200.0	7.45	96.11	5,159.9	-66.5	620.8	624.3	0.00	0.00	
5,300.0	7.45	96.11	5,259.0	-67.8	633.7	637.3	0.00	0.00	
5,400.0	7.45	96.11	5,358.2	-69.2	646.6	650.3	0.00	0.00	
5,500.0	7.45	96.11	5,457.3	-70.6	659.5	663.3	0.00	0.00	
5,600.0	7.45	96.11	5,556.5	-72.0	672.4	676.2	0.00	0.00	
5,700.0	7.45	96.11	5,655.6	-73.4	685.3	689.2	0.00	0.00	
5,702.4	7.45	96.11	5,658.0	-73.4	685.6	689.5	0.00	0.00	OHIO_CREEK.MBL (SSTVD)
5,800.0	7.45	96.11	5,754.8	-74.7	698.2	702.2	0.00	0.00	
5,900.0	7.45	96.11	5,854.0	-76.1	711.1	715.1	0.00	0.00	
6,000.0	7.45	96.11	5,953.1	-77.5	724.0	728.1	0.00	0.00	
6,100.0	7.45	96.11	6,052.3	-78.9	736.9	741.1	0.00	0.00	
6,200.0	7.45	96.11	6,151.4	-80.3	749.8	754.0	0.00	0.00	
6,241.9	7.45	96.11	6,193.0	-80.8	755.2	759.5	0.00	0.00	WILLIAMS_FORK.MBL (SSTVD)
6,300.0	7.45	96.11	6,250.6	-81.6	762.7	767.0	0.00	0.00	
6,400.0	7.45	96.11	6,349.7	-83.0	775.5	780.0	0.00	0.00	
6,500.0	7.45	96.11	6,448.9	-84.4	788.4	792.9	0.00	0.00	
6,551.0	7.45	96.11	6,499.5	-85.1	795.0	799.6	0.00	0.00	Start Drop -2.00
6,600.0	6.47	96.11	6,548.1	-85.7	800.9	805.5	2.00	-2.00	
6,700.0	4.47	96.11	6,647.6	-86.8	810.4	815.0	2.00	-2.00	
6,800.0	2.47	96.11	6,747.4	-87.4	816.4	821.1	2.00	-2.00	
6,900.0	0.47	96.11	6,847.4	-87.7	819.0	823.7	2.00	-2.00	
6,923.6	0.00	0.00	6,871.0	-87.7	819.1	823.8	2.00	-2.00	Start 2341.0 hold at 6923.6 MD
7,000.0	0.00	0.00	6,947.4	-87.7	819.1	823.8	0.00	0.00	
7,022.6	0.00	0.00	6,970.0	-87.7	819.1	823.8	0.00	0.00	TOP_GAS.MBL (SSTVD)
7,100.0	0.00	0.00	7,047.4	-87.7	819.1	823.8	0.00	0.00	
7,200.0	0.00	0.00	7,147.4	-87.7	819.1	823.8	0.00	0.00	
7,300.0	0.00	0.00	7,247.4	-87.7	819.1	823.8	0.00	0.00	
7,400.0	0.00	0.00	7,347.4	-87.7	819.1	823.8	0.00	0.00	
7,500.0	0.00	0.00	7,447.4	-87.7	819.1	823.8	0.00	0.00	
7,600.0	0.00	0.00	7,547.4	-87.7	819.1	823.8	0.00	0.00	
7,700.0	0.00	0.00	7,647.4	-87.7	819.1	823.8	0.00	0.00	
7,800.0	0.00	0.00	7,747.4	-87.7	819.1	823.8	0.00	0.00	
7,900.0	0.00	0.00	7,847.4	-87.7	819.1	823.8	0.00	0.00	
8,000.0	0.00	0.00	7,947.4	-87.7	819.1	823.8	0.00	0.00	
8,100.0	0.00	0.00	8,047.4	-87.7	819.1	823.8	0.00	0.00	
8,200.0	0.00	0.00	8,147.4	-87.7	819.1	823.8	0.00	0.00	
8,300.0	0.00	0.00	8,247.4	-87.7	819.1	823.8	0.00	0.00	
8,400.0	0.00	0.00	8,347.4	-87.7	819.1	823.8	0.00	0.00	
8,500.0	0.00	0.00	8,447.4	-87.7	819.1	823.8	0.00	0.00	
8,600.0	0.00	0.00	8,547.4	-87.7	819.1	823.8	0.00	0.00	
8,700.0	0.00	0.00	8,647.4	-87.7	819.1	823.8	0.00	0.00	
8,800.0	0.00	0.00	8,747.4	-87.7	819.1	823.8	0.00	0.00	
8,900.0	0.00	0.00	8,847.4	-87.7	819.1	823.8	0.00	0.00	
9,000.0	0.00	0.00	8,947.4	-87.7	819.1	823.8	0.00	0.00	
9,100.0	0.00	0.00	9,047.4	-87.7	819.1	823.8	0.00	0.00	
9,114.6	0.00	0.00	9,062.0	-87.7	819.1	823.8	0.00	0.00	ROLLINS.MBL (SSTVD)
9,200.0	0.00	0.00	9,147.4	-87.7	819.1	823.8	0.00	0.00	
9,264.6	0.00	0.00	9,212.0	-87.7	819.1	823.8	0.00	0.00	TD at 9264.6

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well JONES 17-23D
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 17-23D	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 17-23D PBHL	0.00	1.94	9,214.0	-87.7	819.1	14,335,576.80	2,512,435.60	39.435885	-107.911849
- plan misses target center by 2.0usft at 9264.6usft MD (9212.0 TVD, -87.7 N, 819.1 E)									
- Circle (radius 50.0)									
JONES 17-23D PBHL 7.	0.00	1.94	9,212.0	-87.7	819.1	14,335,576.80	2,512,435.60	39.435885	-107.911849
- plan hits target center									
- Circle (radius 50.0)									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(usft)	(usft)	Name	(")	(")
	1,250.0	1,243.2	9 5/8"	9-5/8	13-1/2
	9,264.6	9,212.0	4-1/2"	4-1/2	8-3/4

Formations					
	Measured Depth	Vertical Depth		Dip	Dip Direction
	(usft)	(usft)	Name	(°)	(°)
	5,702.4	5,658.0	OHIO_CREEK.MBL (SSTVD)	0.00	
	6,241.9	6,193.0	WILLIAMS_FORK.MBL (SSTVD)	0.00	
	7,022.6	6,970.0	TOP_GAS.MBL (SSTVD)	0.00	
	9,114.6	9,062.0	ROLLINS.MBL (SSTVD)	0.00	

Plan Annotations					
	Measured Depth	Vertical Depth	Local Coordinates		
	(usft)	(usft)	+N/-S	+E/-W	Comment
	(usft)	(usft)	(usft)	(usft)	
	200.0	200.0	0.0	0.0	Start Build 2.00
	572.6	571.5	-2.6	24.1	Start 5978.4 hold at 572.6 MD
	6,551.0	6,499.5	-85.1	795.0	Start Drop -2.00
	6,923.6	6,871.0	-87.7	819.1	Start 2341.0 hold at 6923.6 MD
	9,264.6	9,212.0	-87.7	819.1	TD at 9264.6