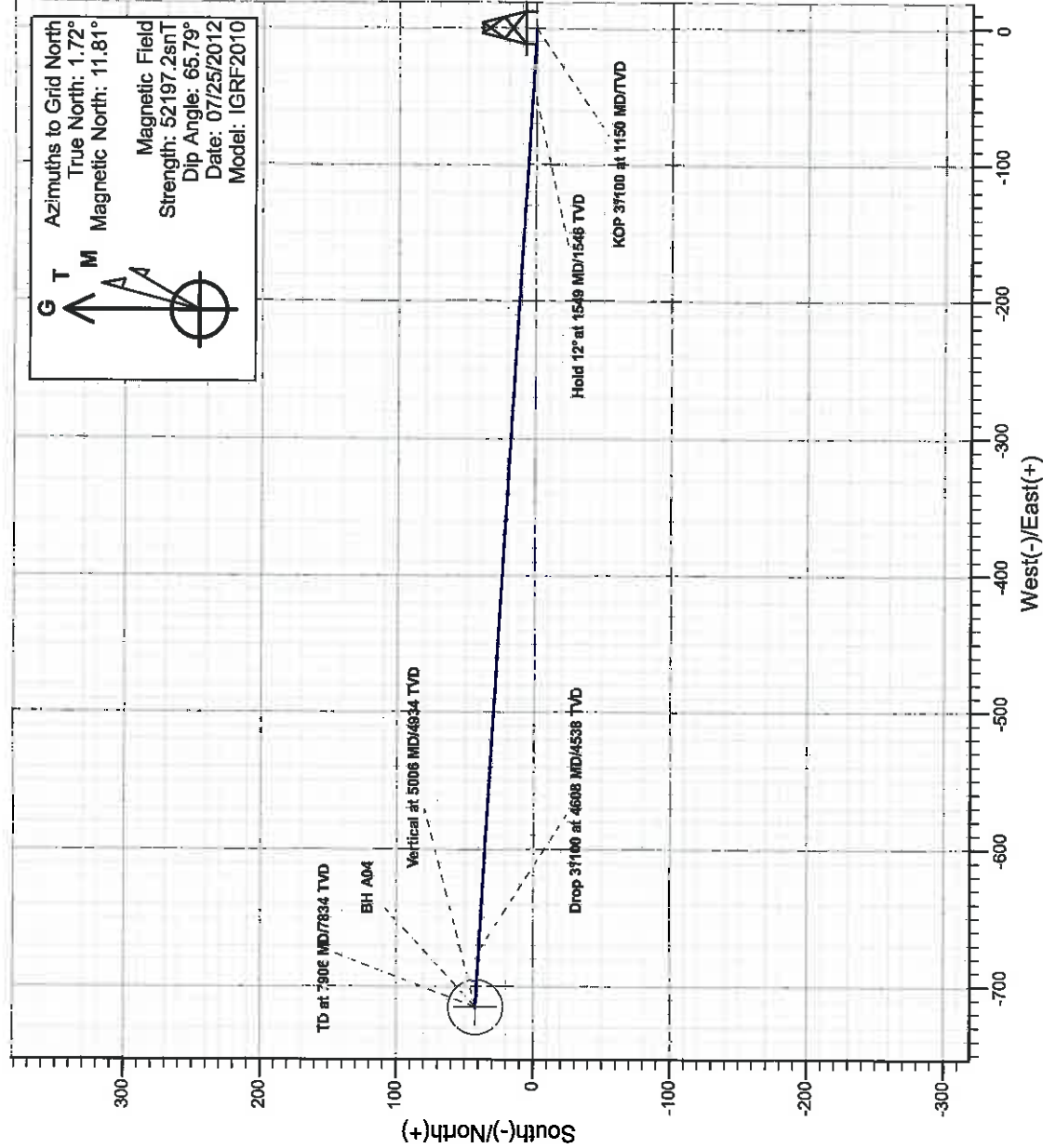


REFERENCE INFORMATION

rdinate (N/E) Reference: Well Dixon A04 (112010) - Slot A04, Grid North
erical (TVD) Reference: KB @ 5559.00ft (Original Well Elev)
Section (VS) Reference: Slot - A04(0.00N, 0.00E)
asured Depth Reference: KB @ 5559.00ft (Original Well Elev)
Calculation Method: Minimum Curvature



Azimuths to Grid North
True North: 1.72°
Magnetic North: 11.81°

Magnetic Field
Strength: 52197.2nT
Dip Angle: 65.79°
Date: 07/25/2012
Model: IGRF2010

PROJECT DETAILS: Dixon

Geodetic System: Universal Transverse Mercator
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Zone 13N (108 W to 102 W)
System Datum: Mean Sea Level

SECTION DETAILS

MD	Inc	Azi	TVD	+N/S	+E/W	Deg	Trace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1150.00	0.00	0.00	1150.00	0.00	0.00	0.00	0.00	0.00	
1549.53	11.98	273.38	1545.65	2.43	-41.96	3.00	273.38	41.43	
4607.60	11.98	273.38	4538.35	32.62	-673.39	0.00	0.00	673.15	
5006.13	0.00	273.38	4934.00	42.06	-715.35	3.00	180.00	716.58	BH A04
7906.13	0.00	273.38	7834.00	42.06	-715.35	3.00	273.38	716.58	BH A04

Antero Resources

Dixon

Dixon A

Dixon A04 (112010) - Slot A04

Dixon A04

Plan: Dixon A04 P01

Standard Planning Report - Geographic

27 April, 2012

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A04 (112010) - Slot A04
Company:	Artero Resources	TVD Reference:	KB @ 5559.00ft (Original Well Elev)
Project:	Dixon	MD Reference:	KB @ 5559.00ft (Original Well Elev)
Site:	Dixon A	North Reference:	Grid
Well:	Dixon A04 (112010)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A04		
Design:	Dixon A04 P01		

Project	Dixon		
Map System:	Universal Transverse Mercator	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	Dixon A				
Site Position:		Northing:	14,366,922.96 usft	Latitude:	39.529609988°N
From:	Map	Easting:	877,460.93 usft	Longitude:	107.705677999°W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.72 °

Well	Dixon A04 (112010) - Slot A04					
Well Position	+N/-S	0.00 ft	Northing:	14,366,924.95 usft	Latitude:	39.529604698°N
	+E/-W	0.00 ft	Easting:	877,330.79 usft	Longitude:	107.706139248°W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,535.00 ft

Wellbore	Dixon A04				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	07/25/12	10.08	65.79	52,197

Design	Dixon A04 P01			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	273.36

Plan Sections										
Measured Depth (ft)	Incination (°)	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	
1,150.00	0.00	0.00	1,150.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,548.53	11.96	273.36	1,545.65	2.43	-41.36	3.00	3.00	0.00	273.36	
4,607.60	11.96	273.36	4,538.35	39.62	-673.99	0.00	0.00	0.00	0.00	
5,006.13	0.00	273.36	4,934.00	42.06	-715.35	3.00	-3.00	0.00	180.00	
7,906.13	0.00	273.36	7,834.00	42.06	-715.35	0.00	0.00	0.00	273.36	BH A04

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A04 (112010) - Slot A04
Company:	Antero Resources	TVD Reference:	KB @ 5559.00ft (Original Well Elev)
Project:	Dixon	MD Reference:	KB @ 5559.00ft (Original Well Elev)
Site:	Dixon A	North Reference:	Gnd
Well:	Dixon A04 (112010)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A04		
Design:	Dixon A04 P01		

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	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
Wasatch										
100.00	0.00	0.00	100.00	0.00	0.00	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
200.00	0.00	0.00	200.00	0.00	0.00	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
300.00	0.00	0.00	300.00	0.00	0.00	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
400.00	0.00	0.00	400.00	0.00	0.00	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
500.00	0.00	0.00	500.00	0.00	0.00	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
600.00	0.00	0.00	600.00	0.00	0.00	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
700.00	0.00	0.00	700.00	0.00	0.00	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
800.00	0.00	0.00	800.00	0.00	0.00	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
900.00	0.00	0.00	900.00	0.00	0.00	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
Surf Csg at 1000 MD/TVD										
1,100.00	0.00	0.00	1,100.00	0.00	0.00	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
1,150.00	0.00	0.00	1,150.00	0.00	0.00	14,366,924.95	877,330.79	39.529604698°N	107.706139248°W	
KOP 3"/100 at 1150 MD/TVD										
1,200.00	1.50	273.36	1,199.99	0.04	-0.65	14,366,924.99	877,330.14	39.529604749°N	107.706141566°W	
1,300.00	4.50	273.36	1,299.85	0.35	-5.88	14,366,925.29	877,324.91	39.529605161°N	107.706160105°W	
1,400.00	7.50	273.36	1,399.29	0.96	-16.31	14,366,925.91	877,314.48	39.529605982°N	107.706197133°W	
1,500.00	10.50	273.36	1,498.04	1.88	-31.93	14,366,926.83	877,298.87	39.529607212°N	107.706252547°W	
1,548.53	11.96	273.36	1,545.65	2.43	-41.36	14,366,927.38	877,289.43	39.529607955°N	107.706286026°W	
Hold 12" at 1549 MD/1546 TVD										
1,600.00	11.96	273.36	1,596.00	3.06	-52.00	14,366,928.01	877,278.79	39.529608793°N	107.706323798°W	
1,700.00	11.96	273.36	1,693.83	4.27	-72.68	14,366,929.22	877,258.11	39.529610421°N	107.706397190°W	
1,800.00	11.96	273.36	1,791.66	5.49	-93.36	14,366,930.44	877,237.43	39.529612050°N	107.706470581°W	
1,900.00	11.96	273.36	1,889.49	6.70	-114.04	14,366,931.65	877,216.75	39.529613678°N	107.706543973°W	
2,000.00	11.96	273.36	1,987.32	7.92	-134.72	14,366,932.87	877,196.07	39.529615306°N	107.706617365°W	
2,100.00	11.96	273.36	2,085.15	9.14	-155.40	14,366,934.09	877,175.39	39.529616935°N	107.706690757°W	
2,200.00	11.96	273.36	2,182.98	10.35	-176.09	14,366,935.30	877,154.71	39.529618563°N	107.706764149°W	
2,300.00	11.96	273.36	2,280.81	11.57	-196.77	14,366,936.52	877,134.03	39.529620191°N	107.706837540°W	
2,400.00	11.96	273.36	2,378.64	12.78	-217.45	14,366,937.73	877,113.35	39.529621819°N	107.706910932°W	
2,500.00	11.96	273.36	2,476.47	14.00	-238.13	14,366,938.95	877,092.67	39.529623447°N	107.706984324°W	
2,600.00	11.96	273.36	2,574.30	15.22	-258.81	14,366,940.16	877,071.99	39.529625075°N	107.707057716°W	
2,700.00	11.96	273.36	2,672.14	16.43	-279.49	14,366,941.38	877,051.31	39.529626703°N	107.707131108°W	
2,800.00	11.96	273.36	2,769.97	17.65	-300.17	14,366,942.60	877,030.62	39.529628331°N	107.707204499°W	
2,900.00	11.96	273.36	2,867.80	18.86	-320.85	14,366,943.81	877,009.94	39.529629959°N	107.707277891°W	
3,000.00	11.96	273.36	2,965.63	20.08	-341.53	14,366,945.03	876,989.26	39.529631587°N	107.707351283°W	
3,100.00	11.96	273.36	3,063.46	21.29	-362.21	14,366,946.24	876,968.58	39.529633215°N	107.707424675°W	
3,200.00	11.96	273.36	3,161.29	22.51	-382.89	14,366,947.46	876,947.90	39.529634843°N	107.707498067°W	
3,300.00	11.96	273.36	3,259.12	23.73	-403.57	14,366,948.67	876,927.22	39.529636470°N	107.707571458°W	
3,400.00	11.96	273.36	3,356.95	24.94	-424.25	14,366,949.89	876,906.54	39.529638098°N	107.707644850°W	
3,500.00	11.96	273.36	3,454.78	26.16	-444.93	14,366,951.11	876,885.86	39.529639726°N	107.707718242°W	
3,600.00	11.96	273.36	3,552.61	27.37	-465.61	14,366,952.32	876,865.18	39.529641353°N	107.707791634°W	
3,700.00	11.96	273.36	3,650.44	28.59	-486.29	14,366,953.54	876,844.50	39.529642981°N	107.707865026°W	
3,800.00	11.96	273.36	3,748.27	29.80	-506.97	14,366,954.75	876,823.82	39.529644608°N	107.707938417°W	
3,900.00	11.96	273.36	3,846.10	31.02	-527.65	14,366,955.97	876,803.14	39.529646236°N	107.708011809°W	
4,000.00	11.96	273.36	3,943.93	32.24	-548.33	14,366,957.19	876,782.46	39.529647863°N	107.708085201°W	
4,100.00	11.96	273.36	4,041.76	33.45	-569.01	14,366,958.40	876,761.78	39.529649490°N	107.708158593°W	
4,194.28	11.96	273.36	4,134.00	34.60	-588.51	14,366,959.55	876,742.28	39.529651025°N	107.708227787°W	
Mesaverde										
4,200.00	11.96	273.36	4,139.60	34.67	-589.69	14,366,959.62	876,741.10	39.529651118°N	107.708231985°W	
4,300.00	11.96	273.36	4,237.43	35.88	-610.37	14,366,960.83	876,720.42	39.529652745°N	107.708305376°W	
4,400.00	11.96	273.36	4,335.26	37.10	-631.05	14,366,962.05	876,699.74	39.529654372°N	107.708378768°W	
4,500.00	11.96	273.36	4,433.09	38.32	-651.73	14,366,963.26	876,679.06	39.529655999°N	107.708452160°W	

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A04 (112010) - Slot A04
Company:	Antero Resources	TVD Reference:	KB @ 5559 00ft (Original Well Elev)
Project:	Dixon	MD Reference:	KB @ 5559 00ft (Original Well Elev)
Site:	Dixon A	North Reference:	Grnd
Well:	Dixon A04 (112010)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A04		
Design:	Dixon A04 P01		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,600.00	11.96	273.36	4,530.92	39.53	-672.41	14,366,964.48	876,658.38	39.529657626°N	107.708525552°W
4,607.60	11.96	273.36	4,538.35	39.62	-673.99	14,366,964.57	876,656.81	39.529657750°N	107.708531128°W
Drop 3°/100 at 4608 MD/4538 TVD									
4,700.00	9.18	273.36	4,629.18	40.62	-690.91	14,366,965.57	876,639.89	39.529659081°N	107.708591172°W
4,800.00	6.18	273.36	4,728.27	41.40	-704.25	14,366,966.35	876,626.54	39.529660131°N	107.708638536°W
4,900.00	3.18	273.36	4,827.92	41.88	-712.40	14,366,966.83	876,618.39	39.529660772°N	107.708667463°W
5,000.00	0.18	273.36	4,927.87	42.05	-715.34	14,366,967.00	876,615.46	39.529661003°N	107.708677872°W
5,006.13	0.00	273.36	4,934.00	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
Vertical at 5006 MD/4934 TVD - Price Coal									
5,100.00	0.00	273.36	5,027.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
5,200.00	0.00	273.36	5,127.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
5,300.00	0.00	273.36	5,227.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
5,400.00	0.00	273.36	5,327.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
5,500.00	0.00	273.36	5,427.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
5,600.00	0.00	273.36	5,527.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
5,700.00	0.00	273.36	5,627.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
5,706.13	0.00	273.36	5,634.00	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
Top Gas									
5,800.00	0.00	273.36	5,727.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
5,900.00	0.00	273.36	5,827.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
6,000.00	0.00	273.36	5,927.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
6,100.00	0.00	273.36	6,027.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
6,200.00	0.00	273.36	6,127.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
6,300.00	0.00	273.36	6,227.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
6,400.00	0.00	273.36	6,327.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
6,500.00	0.00	273.36	6,427.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
6,600.00	0.00	273.36	6,527.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
6,606.13	0.00	273.36	6,534.00	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
Cameo									
6,700.00	0.00	273.36	6,627.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
6,800.00	0.00	273.36	6,727.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
6,900.00	0.00	273.36	6,827.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
7,000.00	0.00	273.36	6,927.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
7,100.00	0.00	273.36	7,027.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
7,200.00	0.00	273.36	7,127.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
7,300.00	0.00	273.36	7,227.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
7,400.00	0.00	273.36	7,327.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
7,500.00	0.00	273.36	7,427.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
7,600.00	0.00	273.36	7,527.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
7,700.00	0.00	273.36	7,627.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
7,706.13	0.00	273.36	7,634.00	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
Rollins									
7,800.00	0.00	273.36	7,727.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
7,900.00	0.00	273.36	7,827.87	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
7,906.13	0.00	273.36	7,834.00	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
TD at 7906 MD/7834 TVD									

Planning Report - Geographic

Database:	EDM5000-New	Local Co-ordinate Reference:	Well Dixon A04 (112010) - Slope A04
Company:	Antero Resources	TVD Reference:	KB @ 5559 00ft (Original Well Elev)
Project:	Dixon	MD Reference:	KB @ 5559 00ft (Original Well Elev)
Site:	Dixon A	North Reference:	Grid
Well:	Dixon A04 (112010)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Dixon A04		
Design:	Dixon A04 P01		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
BH A04	0.00	360.00	7,834.00	42.06	-715.35	14,366,967.00	876,615.45	39.529661004°N	107.708677907°W
- plan hits target center									
- Circle (radius 20.00)									

Casing Points				
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(ft)	(ft)		(in)	(in)
1,000.00	1,000.00	Surf Csg at 1000 MD/TVD	5.500	6.000

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
0.00	0.00	Wasatch				
4,194.28	4,134.00	Mesaverde		0.00		
5,006.13	4,934.00	Price Coal				
5,706.13	5,634.00	Top Gas				
6,606.13	6,534.00	Cameo				
7,706.13	7,634.00	Rollins				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
1,150.00	1,150.00	0.00	0.00	KOP 3°/100 at 1150 MD/TVD
1,548.53	1,545.65	2.43	-41.36	Hold 12° at 1549 MD/1546 TVD
4,607.60	4,538.35	39.62	-673.99	Drop 3°/100 at 4608 MD/4538 TVD
5,006.13	4,934.00	42.06	-715.35	Vertical at 5006 MD/4934 TVD
7,906.13	7,834.00	42.06	-715.35	TD at 7906 MD/7834 TVD