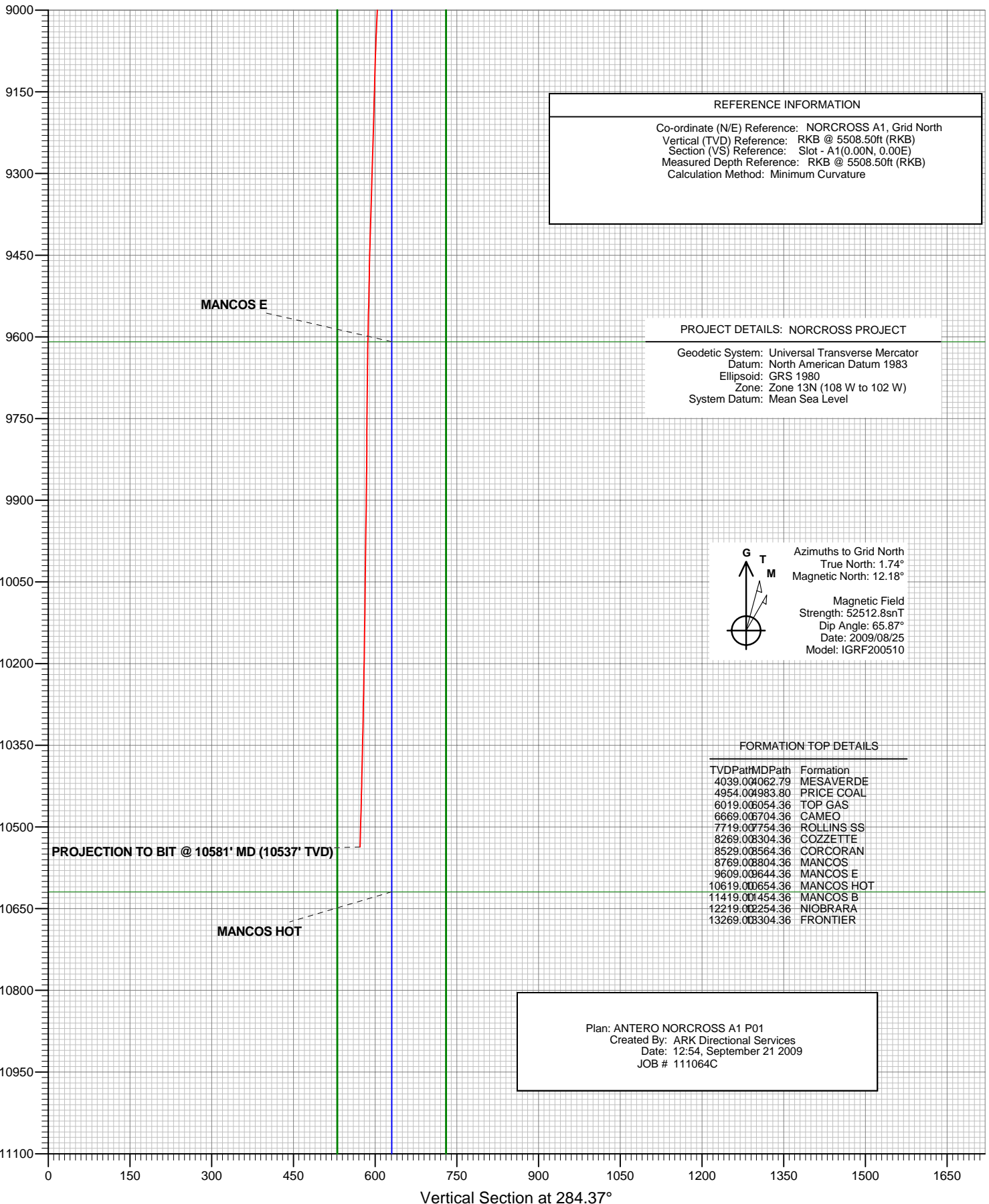




ANTERO RESOURCES

ANTERO NORCROSS A1 PLANNED VS ACTUAL



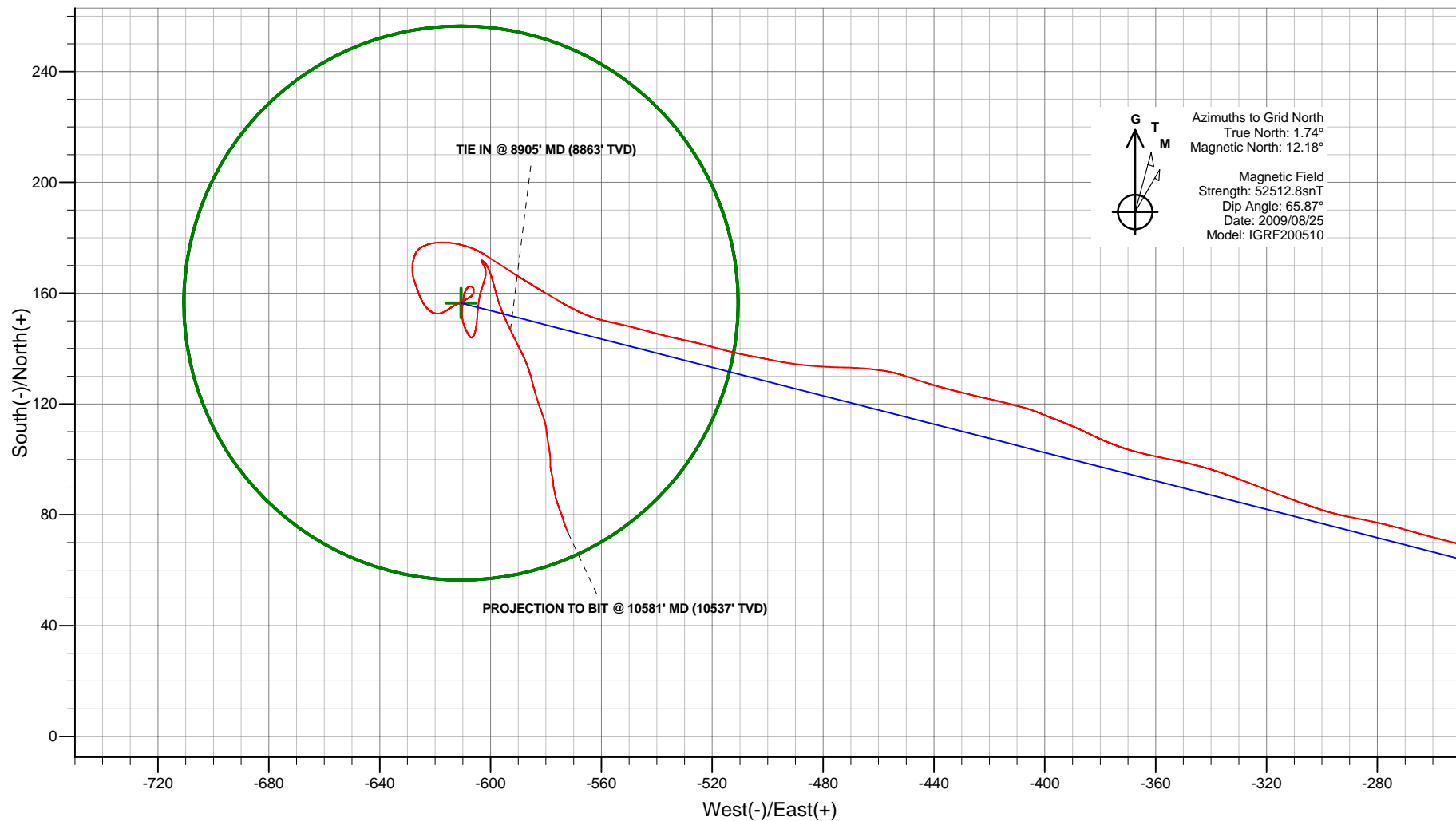


ANTERO RESOURCES

Project: NORCROSS PROJECT
Site: FRONTIER 14
Well: NORCROSS A1 (111064)
Wellbore: ANTERO NORCROSS A1
Design: ANTERO NORCROSS A1 P01
JOB #: 111064C



PLAN VIEW



Plan: ANTERO NORCROSS A1 P01 VS ACTUAL
Created By: ARK Directional Services
Date: 12:55, September 21 2009

PROJECT DETAILS: NORCROSS PROJECT

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

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: NORCROSS A1, Grid North
Vertical (TVD) Reference: RKB @ 5508.50ft (RKB)
Section (VS) Reference: Slot - A1(0.00N, 0.00E)
Measured Depth Reference: RKB @ 5508.50ft (RKB)
Calculation Method: Minimum Curvature

ANTERO RESOURCES

NORCROSS PROJECT

FRONTIER 14

NORCROSS A1 (111064) - Slot A1

ANTERO NORCROSS A1

Survey: ANTERO NORCROSS A1 SURVEY 111064C

Survey Report - Geographic

21 September, 2009

Survey Report - Geographic

Company:	ANTERO RESOURCES	Local Co-ordinate Reference:	Well NORCROSS A1 (111064) - Slot A1
Project:	NORCROSS PROJECT	TVD Reference:	RKB @ 5508.50ft (RKB)
Site:	FRONTIER 14	MD Reference:	RKB @ 5508.50ft (RKB)
Well:	NORCROSS A1 (111064)	North Reference:	Grid
Wellbore:	ANTERO NORCROSS A1	Survey Calculation Method:	Minimum Curvature
Design:	ANTERO NORCROSS A1	Database:	EDMDB

Project	NORCROSS PROJECT		
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		FRONTIER 14			
Site Position:		Northing:	14,364,692.64 ft	Latitude:	39° 31' 22.591 N
From:	Map	Easting:	870,829.65 ft	Longitude:	107° 43' 44.148 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	-1.74 °

Well	NORCROSS A1 (111064) - Slot A1					
Well Position	+N/-S	0.00 ft	Northing:	14,364,720.79 ft	Latitude:	39° 31' 22.858 N
	+E/-W	0.00 ft	Easting:	870,791.76 ft	Longitude:	107° 43' 44.642 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,492.00 ft

Wellbore	ANTERO NORCROSS A1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2009/08/25	10.45	65.87	52,513

Design	ANTERO NORCROSS A1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	285.75	

Survey Program	Date	2009/09/21			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
111.00	8,905.00	ANTERO NORCROSS A1 SURVEY (ANTE	MWD	MWD - Standard	
9,019.00	10,581.00	ANTERO NORCROSS A1 SURVEY 11106	MWD	MWD - Standard	

Survey Report - Geographic

Company:	ANTERO RESOURCES	Local Co-ordinate Reference:	Well NORCROSS A1 (111064) - Slot A1
Project:	NORCROSS PROJECT	TVD Reference:	RKB @ 5508.50ft (RKB)
Site:	FRONTIER 14	MD Reference:	RKB @ 5508.50ft (RKB)
Well:	NORCROSS A1 (111064)	North Reference:	Grid
Wellbore:	ANTERO NORCROSS A1	Survey Calculation Method:	Minimum Curvature
Design:	ANTERO NORCROSS A1	Database:	EDMDB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
8,905.00	4.40	154.30	8,862.63	146.67	-592.80	14,364,867.46	870,198.96	39° 31' 24.129 N	107° 43' 52.258 W
9,019.00	4.20	153.20	8,976.31	139.00	-589.02	14,364,859.80	870,202.74	39° 31' 24.054 N	107° 43' 52.207 W
9,084.00	4.10	158.10	9,041.14	134.72	-587.08	14,364,855.52	870,204.68	39° 31' 24.012 N	107° 43' 52.181 W
9,147.00	3.20	163.70	9,104.01	130.95	-585.75	14,364,851.74	870,206.02	39° 31' 23.976 N	107° 43' 52.162 W
9,210.00	3.00	166.50	9,166.92	127.66	-584.87	14,364,848.45	870,206.89	39° 31' 23.943 N	107° 43' 52.150 W
9,273.00	3.20	162.70	9,229.82	124.37	-583.96	14,364,845.17	870,207.80	39° 31' 23.911 N	107° 43' 52.137 W
9,336.00	3.20	163.40	9,292.73	121.01	-582.94	14,364,841.80	870,208.83	39° 31' 23.878 N	107° 43' 52.122 W
9,399.00	3.30	159.50	9,355.62	117.63	-581.80	14,364,838.42	870,209.96	39° 31' 23.845 N	107° 43' 52.107 W
9,462.00	3.20	162.70	9,418.52	114.25	-580.64	14,364,835.04	870,211.12	39° 31' 23.812 N	107° 43' 52.090 W
9,524.00	2.80	172.80	9,480.44	111.09	-579.94	14,364,831.89	870,211.83	39° 31' 23.781 N	107° 43' 52.080 W
9,586.00	3.20	172.10	9,542.35	107.88	-579.51	14,364,828.67	870,212.25	39° 31' 23.750 N	107° 43' 52.074 W
9,649.00	2.80	169.70	9,605.27	104.62	-578.99	14,364,825.41	870,212.77	39° 31' 23.718 N	107° 43' 52.066 W
9,712.00	1.90	173.90	9,668.21	102.07	-578.61	14,364,822.86	870,213.16	39° 31' 23.692 N	107° 43' 52.060 W
9,775.00	1.90	177.10	9,731.18	99.99	-578.44	14,364,820.78	870,213.32	39° 31' 23.672 N	107° 43' 52.057 W
9,839.00	1.20	182.70	9,795.15	98.26	-578.42	14,364,819.05	870,213.34	39° 31' 23.655 N	107° 43' 52.056 W
9,902.00	1.40	171.10	9,858.14	96.84	-578.33	14,364,817.63	870,213.43	39° 31' 23.641 N	107° 43' 52.054 W
9,965.00	1.80	167.20	9,921.11	95.11	-578.00	14,364,815.91	870,213.77	39° 31' 23.624 N	107° 43' 52.049 W
10,029.00	1.90	169.70	9,985.08	93.09	-577.58	14,364,813.88	870,214.18	39° 31' 23.604 N	107° 43' 52.043 W
10,091.00	1.90	178.10	10,047.05	91.05	-577.37	14,364,811.84	870,214.40	39° 31' 23.584 N	107° 43' 52.040 W
10,153.00	1.90	165.50	10,109.01	89.03	-577.07	14,364,809.82	870,214.69	39° 31' 23.564 N	107° 43' 52.035 W
10,216.00	1.80	170.70	10,171.98	87.04	-576.65	14,364,807.83	870,215.11	39° 31' 23.545 N	107° 43' 52.029 W
10,279.00	1.90	162.00	10,234.95	85.07	-576.17	14,364,805.86	870,215.60	39° 31' 23.525 N	107° 43' 52.022 W
10,343.00	2.10	160.50	10,298.91	82.96	-575.45	14,364,803.75	870,216.31	39° 31' 23.505 N	107° 43' 52.012 W
10,406.00	2.30	158.80	10,361.86	80.69	-574.61	14,364,801.48	870,217.16	39° 31' 23.483 N	107° 43' 52.001 W
10,470.00	2.50	164.40	10,425.81	78.15	-573.77	14,364,798.94	870,218.00	39° 31' 23.458 N	107° 43' 51.989 W
10,533.00	2.60	157.70	10,488.74	75.50	-572.86	14,364,796.30	870,218.91	39° 31' 23.432 N	107° 43' 51.976 W
10,581.00	2.60	157.70	10,536.69	73.49	-572.03	14,364,794.28	870,219.74	39° 31' 23.412 N	107° 43' 51.965 W
PROJECTION TO BIT @ 10581' MD (10537' TVD) - TD A1									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TD A1	0.00	360.00	13,669.00	156.44	-610.67	14,364,877.23	870,181.09	39° 31' 24.220 N	107° 43' 52.490 W
- survey misses by 3133.64ft at 10581.00ft MD (10536.69 TVD, 73.49 N, -572.03 E)									
- Circle (radius 100.00)									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
10,581.00	10,536.69	73.49	-572.03	PROJECTION TO BIT @ 10581' MD (10537' TVD)

Checked By: _____ Approved By: _____ Date: _____