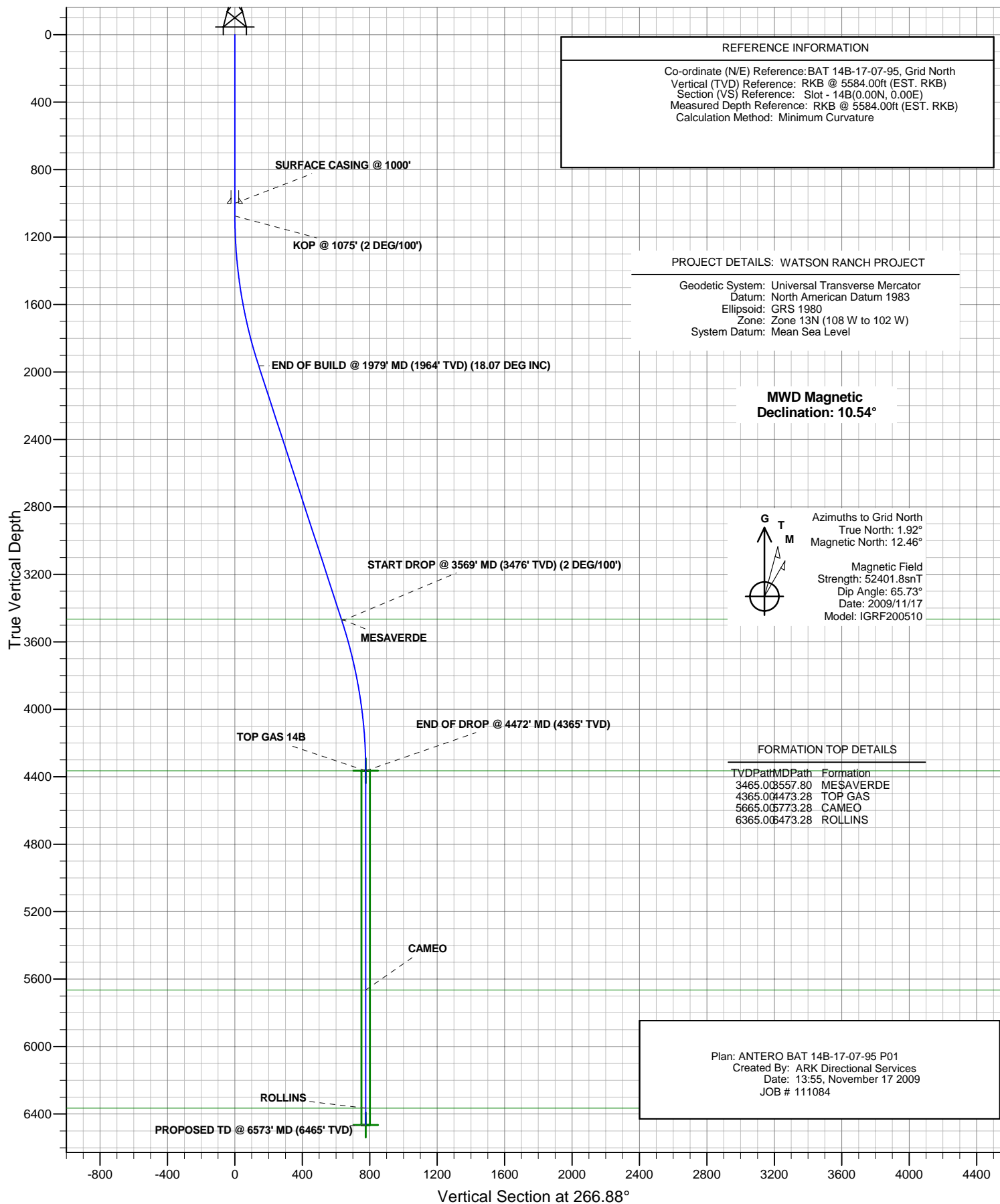




ANTERO RESOURCES

BAT 14B-17-07-95



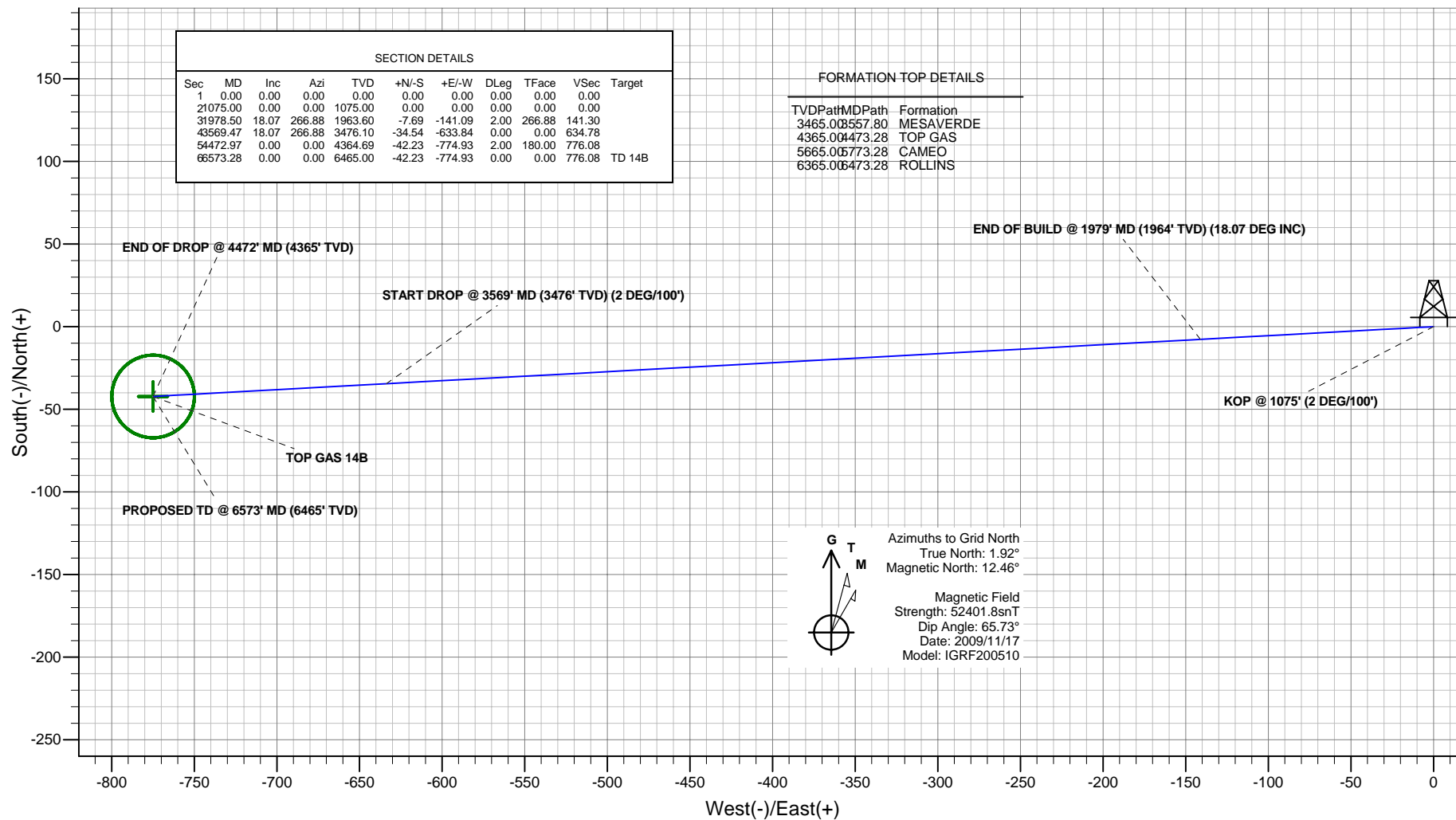


ANTERO RESOURCES

Project: WATSON RANCH PROJECT
Site: FRONTIER 12
Well: BAT 14B-17-07-95 (111084)
Wellbore: BAT 14B-17-07-95
Design: ANTERO BAT 14B-17-07-95 P01
JOB # 111084



PLAN VIEW



Plan: ANTERO BAT 14B-17-07-95 P01
Created By: ARK Directional Services
Date: 13:57, November 17 2009

PROJECT DETAILS: WATSON RANCH 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: BAT 14B-17-07-95, Grid North
Vertical (TVD) Reference: RKB @ 5584.00ft (EST. RKB)
Section (VS) Reference: Slot - 14B(0.00N, 0.00E)
Measured Depth Reference: RKB @ 5584.00ft (EST. RKB)
Calculation Method: Minimum Curvature

ANTERO RESOURCES

**WATSON RANCH PROJECT
FRONTIER 12**

Plan: ANTERO BAT 14B-17-07-95 P01

Standard Planning Report - Geographic

17 November, 2009

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well BAT 14B-17-07-95 (111084) - Slot 14B
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5584.00ft (EST. RKB)
Project:	WATSON RANCH PROJECT	MD Reference:	RKB @ 5584.00ft (EST. RKB)
Site:	FRONTIER 12	North Reference:	Grid
Well:	BAT 14B-17-07-95 (111084)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 14B-17-07-95		
Design:	ANTERO BAT 14B-17-07-95 P01		

Project	WATSON RANCH 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 12			
Site Position:		Northing:	14,334,677.52 ft	Latitude:	39° 25' 59.496 N
From:	Map	Easting:	786,189.76 ft	Longitude:	108° 1' 30.416 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	-1.92 °

Well	BAT 14B-17-07-95 (111084) - Slot 14B					
Well Position	+N/-S	-77.93 ft	Northing:	14,334,599.59 ft	Latitude:	39° 25' 58.710 N
	+E/-W	-49.30 ft	Easting:	786,140.46 ft	Longitude:	108° 1' 31.011 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,560.00 ft

Wellbore	BAT 14B-17-07-95				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2009/11/17	10.54	65.73	52,402

Design	ANTERO BAT 14B-17-07-95 P01			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	266.88

Plan Sections										
Measured Depth (ft)	Inclination (°)	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	
1,075.00	0.00	0.00	1,075.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,978.50	18.07	266.88	1,963.60	-7.69	-141.09	2.00	2.00	0.00	266.88	
3,569.47	18.07	266.88	3,476.10	-34.54	-633.84	0.00	0.00	0.00	0.00	
4,472.97	0.00	0.00	4,364.69	-42.23	-774.93	2.00	-2.00	0.00	180.00	
6,573.28	0.00	0.00	6,465.00	-42.23	-774.93	0.00	0.00	0.00	0.00	TD 14B

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well BAT 14B-17-07-95 (111084) - Slot 14B
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5584.00ft (EST. RKB)
Project:	WATSON RANCH PROJECT	MD Reference:	RKB @ 5584.00ft (EST. RKB)
Site:	FRONTIER 12	North Reference:	Grid
Well:	BAT 14B-17-07-95 (111084)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 14B-17-07-95		
Design:	ANTERO BAT 14B-17-07-95 P01		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,334,599.59	786,140.46	39° 25' 58.710 N	108° 1' 31.011 W
100.00	0.00	0.00	100.00	0.00	0.00	14,334,599.59	786,140.46	39° 25' 58.710 N	108° 1' 31.011 W
200.00	0.00	0.00	200.00	0.00	0.00	14,334,599.59	786,140.46	39° 25' 58.710 N	108° 1' 31.011 W
300.00	0.00	0.00	300.00	0.00	0.00	14,334,599.59	786,140.46	39° 25' 58.710 N	108° 1' 31.011 W
400.00	0.00	0.00	400.00	0.00	0.00	14,334,599.59	786,140.46	39° 25' 58.710 N	108° 1' 31.011 W
500.00	0.00	0.00	500.00	0.00	0.00	14,334,599.59	786,140.46	39° 25' 58.710 N	108° 1' 31.011 W
600.00	0.00	0.00	600.00	0.00	0.00	14,334,599.59	786,140.46	39° 25' 58.710 N	108° 1' 31.011 W
700.00	0.00	0.00	700.00	0.00	0.00	14,334,599.59	786,140.46	39° 25' 58.710 N	108° 1' 31.011 W
800.00	0.00	0.00	800.00	0.00	0.00	14,334,599.59	786,140.46	39° 25' 58.710 N	108° 1' 31.011 W
900.00	0.00	0.00	900.00	0.00	0.00	14,334,599.59	786,140.46	39° 25' 58.710 N	108° 1' 31.011 W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	14,334,599.59	786,140.46	39° 25' 58.710 N	108° 1' 31.011 W
SURFACE CASING @ 1000'									
1,075.00	0.00	0.00	1,075.00	0.00	0.00	14,334,599.59	786,140.46	39° 25' 58.710 N	108° 1' 31.011 W
KOP @ 1075' (2 DEG/100')									
1,100.00	0.50	266.88	1,100.00	-0.01	-0.11	14,334,599.58	786,140.35	39° 25' 58.710 N	108° 1' 31.012 W
1,200.00	2.50	266.88	1,199.96	-0.15	-2.72	14,334,599.44	786,137.74	39° 25' 58.708 N	108° 1' 31.045 W
1,300.00	4.50	266.88	1,299.77	-0.48	-8.82	14,334,599.11	786,131.64	39° 25' 58.702 N	108° 1' 31.123 W
1,400.00	6.50	266.88	1,399.30	-1.00	-18.39	14,334,598.59	786,122.07	39° 25' 58.694 N	108° 1' 31.244 W
1,500.00	8.50	266.88	1,498.44	-1.71	-31.42	14,334,597.88	786,109.04	39° 25' 58.683 N	108° 1' 31.410 W
1,600.00	10.50	266.88	1,597.07	-2.61	-47.90	14,334,596.98	786,092.56	39° 25' 58.669 N	108° 1' 31.619 W
1,700.00	12.50	266.88	1,695.05	-3.70	-67.81	14,334,595.89	786,072.65	39° 25' 58.651 N	108° 1' 31.872 W
1,800.00	14.50	266.88	1,792.29	-4.97	-91.12	14,334,594.62	786,049.35	39° 25' 58.631 N	108° 1' 32.168 W
1,900.00	16.50	266.88	1,888.64	-6.42	-117.80	14,334,593.17	786,022.66	39° 25' 58.608 N	108° 1' 32.508 W
1,978.50	18.07	266.88	1,963.60	-7.69	-141.09	14,334,591.90	785,999.37	39° 25' 58.587 N	108° 1' 32.804 W
END OF BUILD @ 1979' MD (1964' TVD) (18.07 DEG INC)									
2,000.00	18.07	266.88	1,984.04	-8.05	-147.75	14,334,591.54	785,992.71	39° 25' 58.582 N	108° 1' 32.888 W
2,100.00	18.07	266.88	2,079.10	-9.74	-178.72	14,334,589.85	785,961.74	39° 25' 58.555 N	108° 1' 33.282 W
2,200.00	18.07	266.88	2,174.17	-11.43	-209.69	14,334,588.16	785,930.77	39° 25' 58.528 N	108° 1' 33.675 W
2,300.00	18.07	266.88	2,269.24	-13.12	-240.66	14,334,586.47	785,899.80	39° 25' 58.501 N	108° 1' 34.069 W
2,400.00	18.07	266.88	2,364.31	-14.80	-271.63	14,334,584.79	785,868.83	39° 25' 58.474 N	108° 1' 34.463 W
2,500.00	18.07	266.88	2,459.38	-16.49	-302.61	14,334,583.10	785,837.86	39° 25' 58.447 N	108° 1' 34.856 W
2,600.00	18.07	266.88	2,554.44	-18.18	-333.58	14,334,581.41	785,806.88	39° 25' 58.420 N	108° 1' 35.250 W
2,700.00	18.07	266.88	2,649.51	-19.87	-364.55	14,334,579.72	785,775.91	39° 25' 58.393 N	108° 1' 35.644 W
2,800.00	18.07	266.88	2,744.58	-21.56	-395.52	14,334,578.03	785,744.94	39° 25' 58.366 N	108° 1' 36.037 W
2,900.00	18.07	266.88	2,839.65	-23.24	-426.49	14,334,576.35	785,713.97	39° 25' 58.339 N	108° 1' 36.431 W
3,000.00	18.07	266.88	2,934.71	-24.93	-457.46	14,334,574.66	785,683.00	39° 25' 58.312 N	108° 1' 36.824 W
3,100.00	18.07	266.88	3,029.78	-26.62	-488.44	14,334,572.97	785,652.02	39° 25' 58.285 N	108° 1' 37.218 W
3,200.00	18.07	266.88	3,124.85	-28.31	-519.41	14,334,571.28	785,621.05	39° 25' 58.258 N	108° 1' 37.612 W
3,300.00	18.07	266.88	3,219.92	-30.00	-550.38	14,334,569.59	785,590.08	39° 25' 58.232 N	108° 1' 38.005 W
3,400.00	18.07	266.88	3,314.99	-31.68	-581.35	14,334,567.91	785,559.11	39° 25' 58.205 N	108° 1' 38.399 W
3,500.00	18.07	266.88	3,410.05	-33.37	-612.32	14,334,566.22	785,528.14	39° 25' 58.178 N	108° 1' 38.792 W
3,557.80	18.07	266.88	3,465.00	-34.35	-630.23	14,334,565.24	785,510.24	39° 25' 58.162 N	108° 1' 39.020 W
MESAVERDE									
3,569.47	18.07	266.88	3,476.10	-34.54	-633.84	14,334,565.05	785,506.62	39° 25' 58.159 N	108° 1' 39.066 W
START DROP @ 3569' MD (3476' TVD) (2 DEG/100')									
3,600.00	17.46	266.88	3,505.17	-35.05	-643.14	14,334,564.54	785,497.32	39° 25' 58.151 N	108° 1' 39.184 W
3,700.00	15.46	266.88	3,601.07	-36.59	-671.43	14,334,563.00	785,469.03	39° 25' 58.126 N	108° 1' 39.544 W
3,800.00	13.46	266.88	3,697.90	-37.95	-696.36	14,334,561.64	785,444.10	39° 25' 58.105 N	108° 1' 39.860 W
3,900.00	11.46	266.88	3,795.54	-39.13	-717.90	14,334,560.46	785,422.56	39° 25' 58.086 N	108° 1' 40.134 W
4,000.00	9.46	266.88	3,893.87	-40.11	-736.03	14,334,559.48	785,404.43	39° 25' 58.070 N	108° 1' 40.365 W
4,100.00	7.46	266.88	3,992.78	-40.91	-750.72	14,334,558.68	785,389.74	39° 25' 58.057 N	108° 1' 40.551 W
4,200.00	5.46	266.88	4,092.14	-41.53	-761.95	14,334,558.06	785,378.51	39° 25' 58.047 N	108° 1' 40.694 W
4,300.00	3.46	266.88	4,191.83	-41.95	-769.72	14,334,557.64	785,370.75	39° 25' 58.041 N	108° 1' 40.793 W
4,400.00	1.46	266.88	4,291.73	-42.18	-774.00	14,334,557.41	785,366.46	39° 25' 58.037 N	108° 1' 40.847 W

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well BAT 14B-17-07-95 (111084) - Slot 14B
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5584.00ft (EST. RKB)
Project:	WATSON RANCH PROJECT	MD Reference:	RKB @ 5584.00ft (EST. RKB)
Site:	FRONTIER 12	North Reference:	Grid
Well:	BAT 14B-17-07-95 (111084)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 14B-17-07-95		
Design:	ANTERO BAT 14B-17-07-95 P01		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,472.97	0.00	0.00	4,364.69	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
END OF DROP @ 4472' MD (4365' TVD)									
4,473.28	0.00	0.00	4,365.00	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
TOP GAS - TOP GAS 14B									
4,500.00	0.00	0.00	4,391.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
4,600.00	0.00	0.00	4,491.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
4,700.00	0.00	0.00	4,591.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
4,800.00	0.00	0.00	4,691.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
4,900.00	0.00	0.00	4,791.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
5,000.00	0.00	0.00	4,891.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
5,100.00	0.00	0.00	4,991.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
5,200.00	0.00	0.00	5,091.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
5,300.00	0.00	0.00	5,191.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
5,400.00	0.00	0.00	5,291.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
5,500.00	0.00	0.00	5,391.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
5,600.00	0.00	0.00	5,491.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
5,700.00	0.00	0.00	5,591.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
5,773.28	0.00	0.00	5,665.00	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
CAMEO									
5,800.00	0.00	0.00	5,691.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
5,900.00	0.00	0.00	5,791.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
6,000.00	0.00	0.00	5,891.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
6,100.00	0.00	0.00	5,991.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
6,200.00	0.00	0.00	6,091.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
6,300.00	0.00	0.00	6,191.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
6,400.00	0.00	0.00	6,291.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
6,473.28	0.00	0.00	6,365.00	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
ROLLINS									
6,500.00	0.00	0.00	6,391.72	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
6,573.26	0.00	0.00	6,464.98	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
PROPOSED TD @ 6573' MD (6465' TVD)									
6,573.28	0.00	0.00	6,465.00	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W
TD 14B									

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
TOP GAS 14B		0.00	4,365.00	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W	
- hit/miss target										
- Shape										
TD 14B	0.00	0.00	6,465.00	-42.23	-774.93	14,334,557.36	785,365.53	39° 25' 58.036 N	108° 1' 40.859 W	
- plan hits target										
- Circle (radius 25.00)										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,000.00	1,000.00	SURFACE CASING @ 1000'	8.62	12.25	

Planning Report - Geographic

Database:	EDMDB	Local Co-ordinate Reference:	Well BAT 14B-17-07-95 (111084) - Slot 14B
Company:	ANTERO RESOURCES	TVD Reference:	RKB @ 5584.00ft (EST. RKB)
Project:	WATSON RANCH PROJECT	MD Reference:	RKB @ 5584.00ft (EST. RKB)
Site:	FRONTIER 12	North Reference:	Grid
Well:	BAT 14B-17-07-95 (111084)	Survey Calculation Method:	Minimum Curvature
Wellbore:	BAT 14B-17-07-95		
Design:	ANTERO BAT 14B-17-07-95 P01		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,557.80	3,465.00	MESAVERDE		0.00	
4,473.28	4,365.00	TOP GAS		0.00	
5,773.28	5,665.00	CAMEO		0.00	
6,473.28	6,365.00	ROLLINS		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,075.00	1,075.00	0.00	0.00	KOP @ 1075' (2 DEG/100')
1,978.50	1,963.60	-7.69	-141.09	END OF BUILD @ 1979' MD (1964' TVD) (18.07 DEG INC)
3,569.47	3,476.10	-34.54	-633.84	START DROP @ 3569' MD (3476' TVD) (2 DEG/100')
4,472.97	4,364.69	-42.23	-774.93	END OF DROP @ 4472' MD (4365' TVD)
6,573.26	6,464.98	-42.23	-774.93	PROPOSED TD @ 6573' MD (6465' TVD)