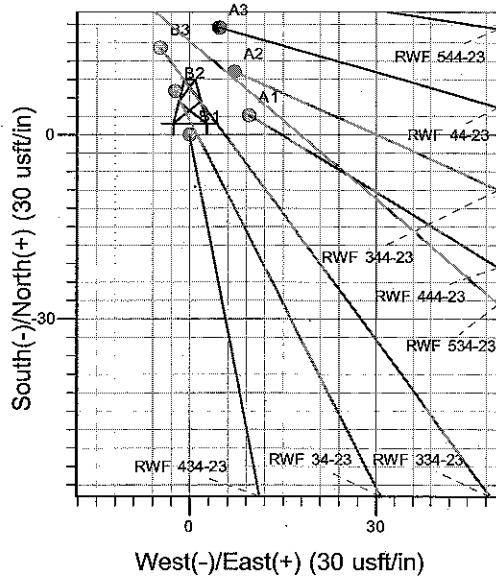
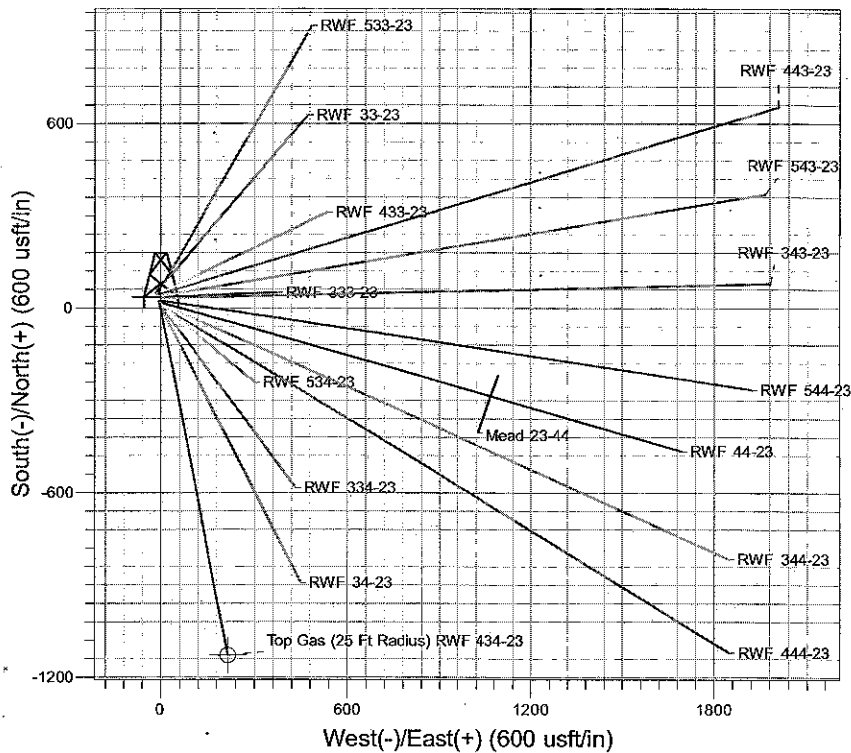
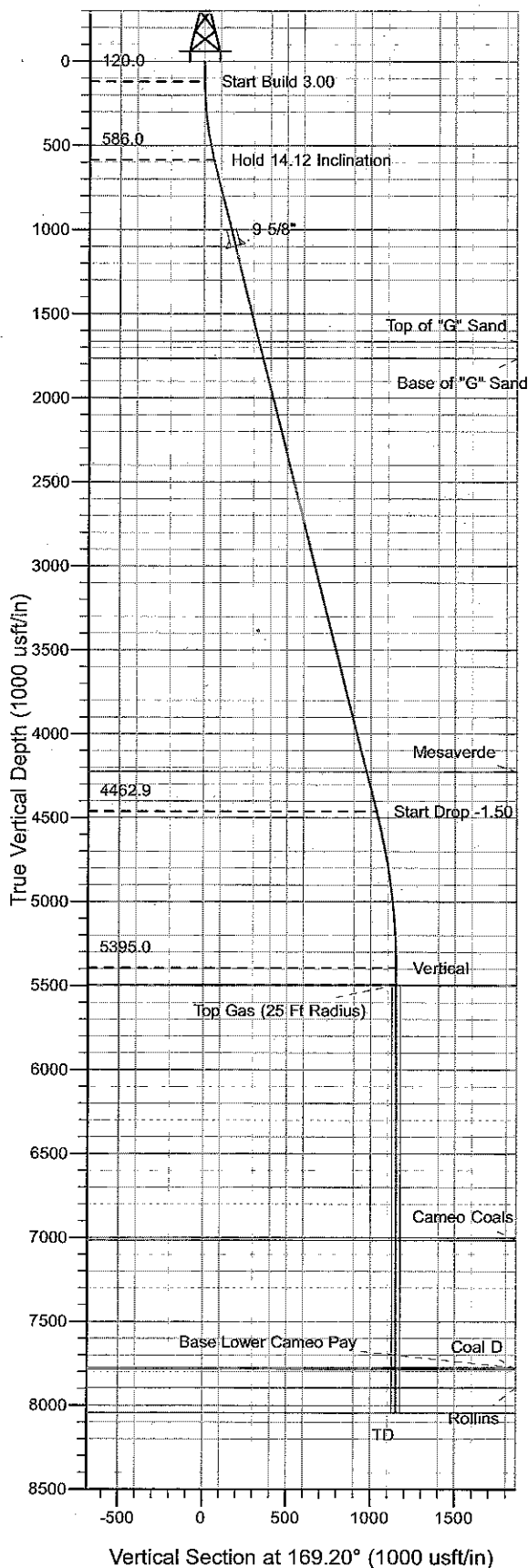




Well Name: RWF 434-23
 Surface Location: RWF 33-23 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 5501.5
 +N/-S 0.0 +E/-W 0.0 Northing 1618304.20 Easting 2335779.00 Latitude 39° 30' 26.616 N Longitude 107° 51' 15.714 W Slot B1
 WELL @ 5525.5usft (Original Well Elev)



Project: RU 23-06S-094W
 Site: RWF 33-23 Pad
 Well: RWF 434-23
 Plan #3 22Jul10 kjs

Azimuths to True North
 Magnetic North: 10.61°
 Magnetic Field
 Strength: 52571.5nT
 Dip Angle: 65.86°
 Date: 10/16/2008
 Model: IGRF2005-10

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation
120.0	120.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 3.00
586.0	590.8	14.12	169.20	-56.7	10.8	57.7	57.7	Hold 14.12 Inclination
4462.9	4588.5	14.12	169.20	-1014.9	193.6	1033.2	1033.2	Start Drop -1.50
5395.0	5530.1	0.00	0.00	-1128.3	215.2	1148.7	1148.7	Vertical
5495.0	5630.1	0.00	0.00	-1128.3	215.2	1148.7	1148.7	Top Gas
8045.0	8180.1	0.00	0.00	-1128.3	215.2	1148.7	1148.7	TD at 8180.1

PICEANCE VLY NAD 83

RU 23-06S-094W

RWF 33-23 Pad

RWF 434-23 - Slot B1

Wellbore #1

Plan: Plan #3 22Jul10 kjs

Standard Planning Report - Geographic

22 July, 2010

Williams

Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 434-23 - Slot B1
Company:	PICEANCE VLY NAD 83	TVD Reference:	WELL @ 5525.5usft (Original Well Elev)
Project:	RU 23-06S-094W	MD Reference:	WELL @ 5525.5usft (Original Well Elev)
Site:	RWF 33-23 Pad	North Reference:	True
Well:	RWF 434-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 22Jul10 kjs		

Project	RU 23-06S-094W, Garfield County, CO, 23-06S-094W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site	RWF 33-23 Pad		
Site Position:		Northing:	1,618,354.40 usft
From:	Map	Easting:	2,335,763.80 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in
		Latitude:	39° 30' 27.108 N
		Longitude:	107° 51' 15.924 W
		Grid Convergence:	-1.485 °

Well	RWF 434-23 - Slot B1		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	
		Latitude:	39° 30' 26.616 N
		Longitude:	107° 51' 15.714 W
		Ground Level:	5,501.5 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2005-10	10/16/2008	10.614
			Dip Angle
			65.857
			Field Strength
			52,572

Design	Plan #3 22Jul10 kjs		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			169.20

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	0.000	
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.00	0.000	
590.8	14.12	169.20	586.0	-56.7	10.8	3.00	3.00	0.00	169.201	
4,588.5	14.12	169.20	4,462.9	-1,014.9	193.6	0.00	0.00	0.00	0.000	
5,530.1	0.00	0.00	5,395.0	-1,128.3	215.2	1.50	-1.50	0.00	180.000	
5,630.1	0.00	0.00	5,495.0	-1,128.3	215.2	0.00	0.00	0.00	0.000	Top Gas (25 Ft Radu
8,180.1	0.00	0.00	8,045.0	-1,128.3	215.2	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 434-23 - Slot B1
Company:	PICEANCE VLY NAD 83	TVD Reference:	WELL @ 5525.5usft (Original Well Elev)
Project:	RU 23-06S-094W	MD Reference:	WELL @ 5525.5usft (Original Well Elev)
Site:	RWF 33-23 Pad	North Reference:	True
Well:	RWF 434-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 22Jul10 kjs		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,618,304.20	2,335,779.00	39° 30' 26.616 N	107° 51' 15.714 W
120.0	0.00	0.00	120.0	0.0	0.0	1,618,304.20	2,335,779.00	39° 30' 26.616 N	107° 51' 15.714 W
Start Build 3.00									
590.8	14.12	169.20	586.0	-56.7	10.8	1,618,247.23	2,335,788.35	39° 30' 26.056 N	107° 51' 15.576 W
Hold 14.12 Inclination									
1,120.8	14.12	169.20	1,100.0	-183.7	35.0	1,618,119.61	2,335,809.27	39° 30' 24.800 N	107° 51' 15.267 W
9 5/8"									
1,703.4	14.12	169.20	1,665.0	-323.4	61.7	1,617,979.33	2,335,832.28	39° 30' 23.420 N	107° 51' 14.927 W
Top of "G" Sand									
1,806.5	14.12	169.20	1,765.0	-348.1	66.4	1,617,954.50	2,335,836.35	39° 30' 23.176 N	107° 51' 14.867 W
Base of "G" Sand									
4,343.2	14.12	169.20	4,225.0	-956.1	182.4	1,617,343.71	2,335,936.53	39° 30' 17.167 N	107° 51' 13.387 W
Mesaverde									
4,588.5	14.12	169.20	4,462.9	-1,014.9	193.6	1,617,284.63	2,335,946.22	39° 30' 16.585 N	107° 51' 13.244 W
Start Drop -1.50									
5,530.1	0.00	0.00	5,395.0	-1,128.3	215.2	1,617,170.70	2,335,964.90	39° 30' 15.464 N	107° 51' 12.968 W
Vertical									
5,630.1	0.00	0.00	5,495.0	-1,128.3	215.2	1,617,170.70	2,335,964.90	39° 30' 15.464 N	107° 51' 12.968 W
Top Gas - Approx. Top Gas									
7,150.1	0.00	0.00	7,015.0	-1,128.3	215.2	1,617,170.70	2,335,964.90	39° 30' 15.464 N	107° 51' 12.968 W
Cameo Coals									
7,910.1	0.00	0.00	7,775.0	-1,128.3	215.2	1,617,170.70	2,335,964.90	39° 30' 15.464 N	107° 51' 12.968 W
Base Lower Cameo Pay									
7,920.1	0.00	0.00	7,785.0	-1,128.3	215.2	1,617,170.70	2,335,964.90	39° 30' 15.464 N	107° 51' 12.968 W
Coal D									
8,030.1	0.00	0.00	7,895.0	-1,128.3	215.2	1,617,170.70	2,335,964.90	39° 30' 15.464 N	107° 51' 12.968 W
Rollins									
8,180.1	0.00	0.00	8,045.0	-1,128.3	215.2	1,617,170.70	2,335,964.90	39° 30' 15.464 N	107° 51' 12.968 W
TD at 8180.1 - TD									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Top Gas (25 Ft Radius)	0.00	0.00	5,495.0	-1,128.3	215.2	1,617,170.70	2,335,964.90	39° 30' 15.464 N	107° 51' 12.968 W
- plan hits target center									
- Circle (radius 25.0)									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,120.8	1,100.0	9 5/8"	9.625	12.250

Williams

Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well RWF 434-23 - Slot B1
Company:	PICEANCE VLY NAD 83	TVD Reference:	WELL @ 5525.5usft (Original Well Elev)
Project:	RU 23-06S-094W	MD Reference:	WELL @ 5525.5usft (Original Well Elev)
Site:	RWF 33-23 Pad	North Reference:	True
Well:	RWF 434-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 22Jul10 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,703.4	1,665.0	Top of "G" Sand				
1,806.5	1,765.0	Base of "G" Sand				
4,343.2	4,225.0	Mesaverde				
5,630.1	5,495.0	Approx. Top Gas				
7,150.1	7,015.0	Cameo Coals				
7,910.1	7,775.0	Base Lower Cameo Pay				
7,920.1	7,785.0	Coal D				
8,030.1	7,895.0	Rollins				
8,180.1	8,045.0	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
120.0	120.0	0.0	0.0	Start Build 3.00	
590.8	586.0	-56.7	10.8	Hold 14.12 Inclination	
4,588.5	4,462.9	-1,014.9	193.6	Start Drop -1.50	
5,530.1	5,395.0	-1,128.3	215.2	Vertical	
5,630.1	5,495.0	-1,128.3	215.2	Top Gas	
8,180.1	8,045.0	-1,128.3	215.2	TD at 8180.1	