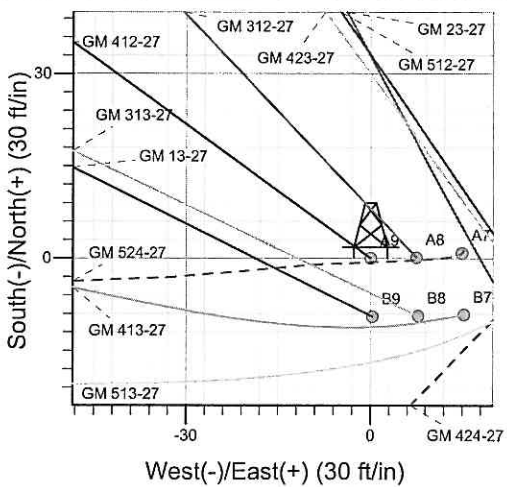
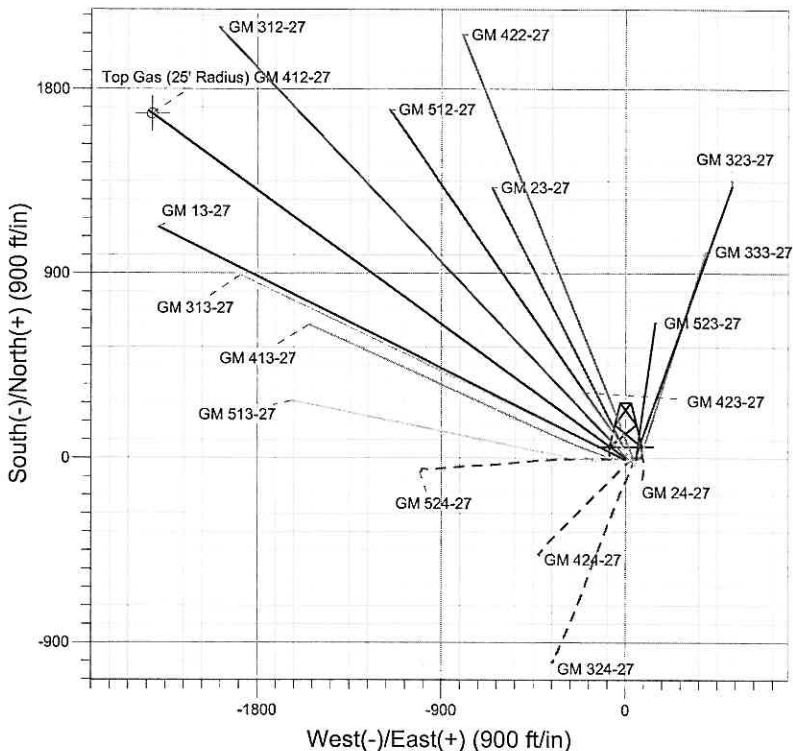
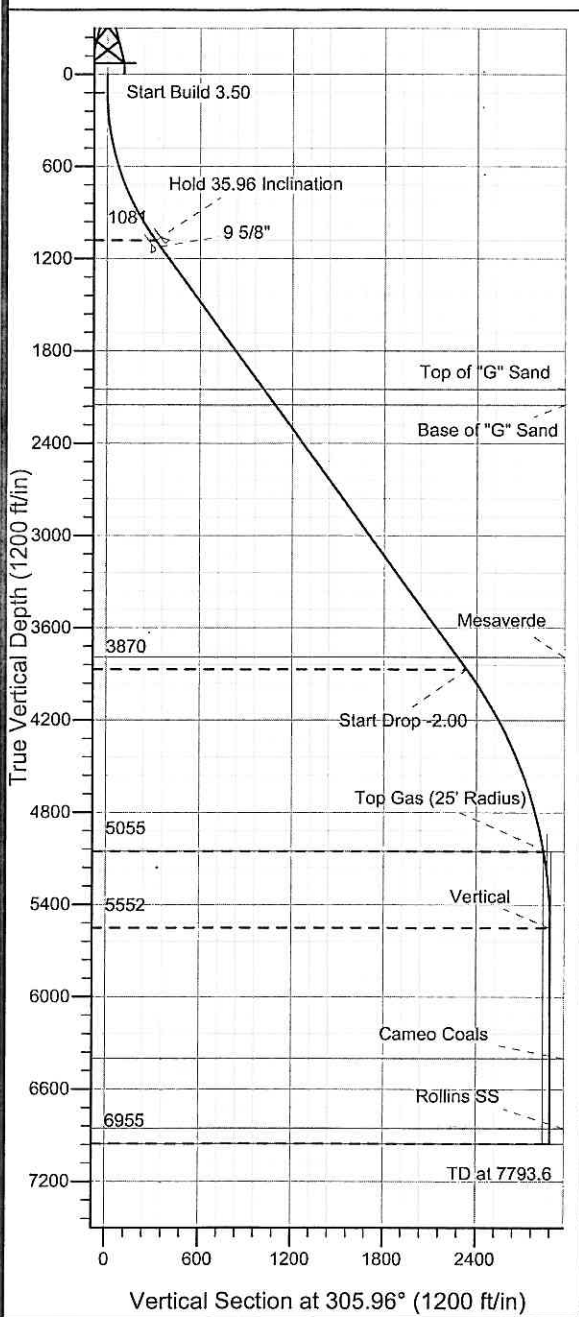




Well Name: GM 412-27
 Surface Location: GM 24-27 Pad
 North American Datum 1983, US State Plane 1983 Colorado Central Zone
 Ground Elevation: 5604.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1614217.80 2267652.80 39° 29' 27.902 N 108° 5' 43.090 W A9
 KELLY BUSHING @ 5628.0ft (H&P 278 (24') kjs)



Project: GV 27-06S-096W
 Site: GM 24-27 Pad
 Well: GM 412-27
 Plan #1 11Dec08 kjs

Azimuths to True North
 Magnetic North: 10.70°
 Magnetic Field
 Strength: 52560.6snT
 Dip Angle: 65.79°
 Date: 12/10/2008
 Model: IGRF2005-10

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSac	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.0	
3	1147.5	35.96	305.96	1081.3	183.2	-252.5	3.50	305.96	312.0	
4	4593.0	35.96	305.96	3870.1	1371.5	-1890.2	0.00	0.00	2335.3	
5	5891.0	10.00	305.96	5055.0	1666.5	-2296.9	2.00	180.00	2837.8	Top Gas (25' Radius) GM 412-27
6	6391.0	0.00	0.00	5552.5	1692.1	-2332.1	2.00	180.00	2881.3	
7	7793.6	0.00	0.00	6955.0	1692.1	-2332.1	0.00	0.00	2881.3	

ANNOTATIONS		
TVD	MD	Annotation
120.0	120.0	Start Build 3.50
1081.3	1147.5	Hold 35.96 Inclination
3870.1	4593.0	Start Drop -2.00
5055.0	5891.0	Top Gas
5552.5	6391.0	Vertical
6955.0	7793.6	TD at 7793.6

PICEANCE VLY NAD 83

GV 27-06S-096W

GM 24-27 Pad

GM 412-27 - Slot A9

Wellbore #1

Plan: Plan #1 11Dec08 kjs

Standard Planning Report - Geographic

11 August, 2009

Williams Production RMT Company

Planning Report - Geographic

Database:	EDMDB_COMPASS	Local Co-ordinate Reference:	Well GM 412-27 - Slot A9
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5628.0ft (H&P 278 (24') kjs)
Project:	GV 27-06S-096W	MD Reference:	KELLY BUSHING @ 5628.0ft (H&P 278 (24') kjs)
Site:	GM 24-27 Pad	North Reference:	True
Well:	GM 412-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 11Dec08 kjs		

Project	GV 27-06S-096W, Garfield County, CO, 27-06S-096W		
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	GM 24-27 Pad		
Site Position:		Northing:	1,614,217.60 ft
From:	Map	Easting:	2,267,712.90 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	39° 29' 27.917 N
		Longitude:	108° 5' 42.324 W
		Grid Convergence:	-1.64 °

Well	GM 412-27 - Slot A9		
Well Position	+N/-S	0.0 ft	Northing: 1,614,217.80 ft
	+E/-W	0.0 ft	Easting: 2,267,652.80 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	39° 29' 27.902 N
		Longitude:	108° 5' 43.090 W
		Ground Level:	5,604.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	12/10/2008	10.70	65.79	52,561

Design	Plan #1 11Dec08 kjs			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	305.96

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,147.5	35.96	305.96	1,081.3	183.2	-252.5	3.50	3.50	0.00	305.96	
4,593.0	35.96	305.96	3,870.1	1,371.5	-1,890.2	0.00	0.00	0.00	0.00	
5,891.0	10.00	305.96	5,055.0	1,666.5	-2,296.9	2.00	-2.00	0.00	180.00	Top Gas (25' Radius)
6,391.0	0.00	0.00	5,552.5	1,692.1	-2,332.1	2.00	-2.00	0.00	180.00	
7,793.6	0.00	0.00	6,955.0	1,692.1	-2,332.1	0.00	0.00	0.00	0.00	

Williams Production RMT Company

Planning Report - Geographic

Database: EDMDB_COMPASS
Company: PICEANCE VLY NAD 83
Project: GV 27-06S-096W
Site: GM 24-27 Pad
Well: GM 412-27
Wellbore: Wellbore #1
Design: Plan #1 11Dec08 kjs

Local Co-ordinate Reference: Well GM 412-27 - Slot A9
TVD Reference: KELLY BUSHING @ 5628.0ft (H&P 278 (24') kjs)
MD Reference: KELLY BUSHING @ 5628.0ft (H&P 278 (24') kjs)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,614,217.80	2,267,652.80	39° 29' 27.902 N	108° 5' 43.090 W
120.0	0.00	0.00	120.0	0.0	0.0	1,614,217.80	2,267,652.80	39° 29' 27.902 N	108° 5' 43.090 W
1,147.5	35.96	305.96	1,081.3	183.2	-252.5	1,614,408.15	2,267,405.62	39° 29' 29.713 N	108° 5' 46.311 W
1,198.0	35.96	305.96	1,122.2	200.7	-276.5	1,614,426.25	2,267,382.11	39° 29' 29.885 N	108° 5' 46.618 W
9 5/8"									
2,344.2	35.96	305.96	2,050.0	595.9	-821.4	1,614,836.94	2,266,848.83	39° 29' 33.792 N	108° 5' 53.567 W
Top of "G" Sand									
2,467.8	35.96	305.96	2,150.0	638.6	-880.1	1,614,881.20	2,266,791.35	39° 29' 34.213 N	108° 5' 54.316 W
Base of "G" Sand									
4,493.9	35.96	305.96	3,790.0	1,337.3	-1,843.2	1,615,607.16	2,265,848.67	39° 29' 41.118 N	108° 6' 6.602 W
Mesaverde									
4,593.0	35.96	305.96	3,870.1	1,371.5	-1,890.2	1,615,642.63	2,265,802.61	39° 29' 41.456 N	108° 6' 7.202 W
5,891.0	10.00	305.96	5,055.0	1,666.5	-2,296.9	1,615,949.20	2,265,404.52	39° 29' 44.372 N	108° 6' 12.390 W
Approx. Top Gas									
6,391.0	0.00	0.00	5,552.5	1,692.1	-2,332.1	1,615,975.75	2,265,370.04	39° 29' 44.624 N	108° 6' 12.840 W
7,238.6	0.00	0.00	6,400.0	1,692.1	-2,332.1	1,615,975.75	2,265,370.04	39° 29' 44.624 N	108° 6' 12.840 W
Cameo Coals									
7,693.6	0.00	0.00	6,855.0	1,692.1	-2,332.1	1,615,975.75	2,265,370.04	39° 29' 44.624 N	108° 6' 12.840 W
Rollins SS									
7,793.6	0.00	0.00	6,955.0	1,692.1	-2,332.1	1,615,975.75	2,265,370.04	39° 29' 44.624 N	108° 6' 12.840 W
TD									

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Top Gas (25' Radius) GI	0.00	0.00	5,055.0	1,679.5	-2,314.6	1,615,962.70	2,265,387.20	39° 29' 44.500 N	108° 6' 12.616 W
- plan misses by 21.7ft at 5893.0ft MD (5056.9 TVD, 1666.7 N, -2297.2 E)									
- Circle (radius 25.0)									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
1,198.0	1,122.2	9 5/8"	9-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,344.2	2,050.00	Top of "G" Sand			
2,467.8	2,150.00	Base of "G" Sand			
4,493.9	3,790.00	Mesaverde			
5,891.0	5,055.00	Approx. Top Gas			
7,238.6	6,400.00	Cameo Coals			
7,693.6	6,855.00	Rollins SS			
7,793.6	6,955.00	TD			

Williams Production RMT Company

Planning Report - Geographic

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Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5628.0ft (H&P 278 (24') kjs)
Project:	GV 27-06S-096W	MD Reference:	KELLY BUSHING @ 5628.0ft (H&P 278 (24') kjs)
Site:	GM 24-27 Pad	North Reference:	True
Well:	GM 412-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 11Dec08 kjs		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
120.0	120.0	0.0	0.0	Start Build 3.50
1,147.5	1,081.3	183.2	-252.5	Hold 35.96 Inclination
4,593.0	3,870.1	1,371.5	-1,890.2	Start Drop -2.00
5,891.0	5,055.0	1,666.5	-2,296.9	Top Gas
6,391.0	5,552.5	1,692.1	-2,332.1	Vertical
7,793.6	6,955.0	1,692.1	-2,332.1	TD at 7793.6