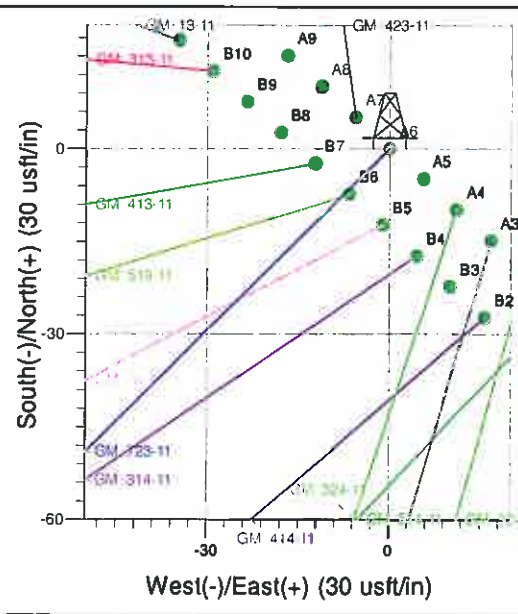
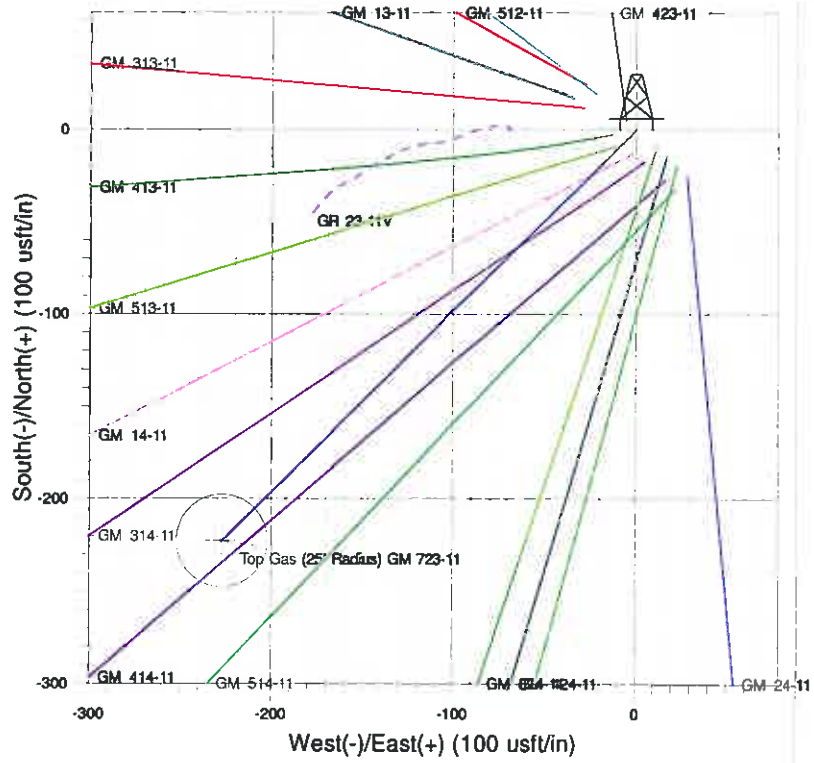
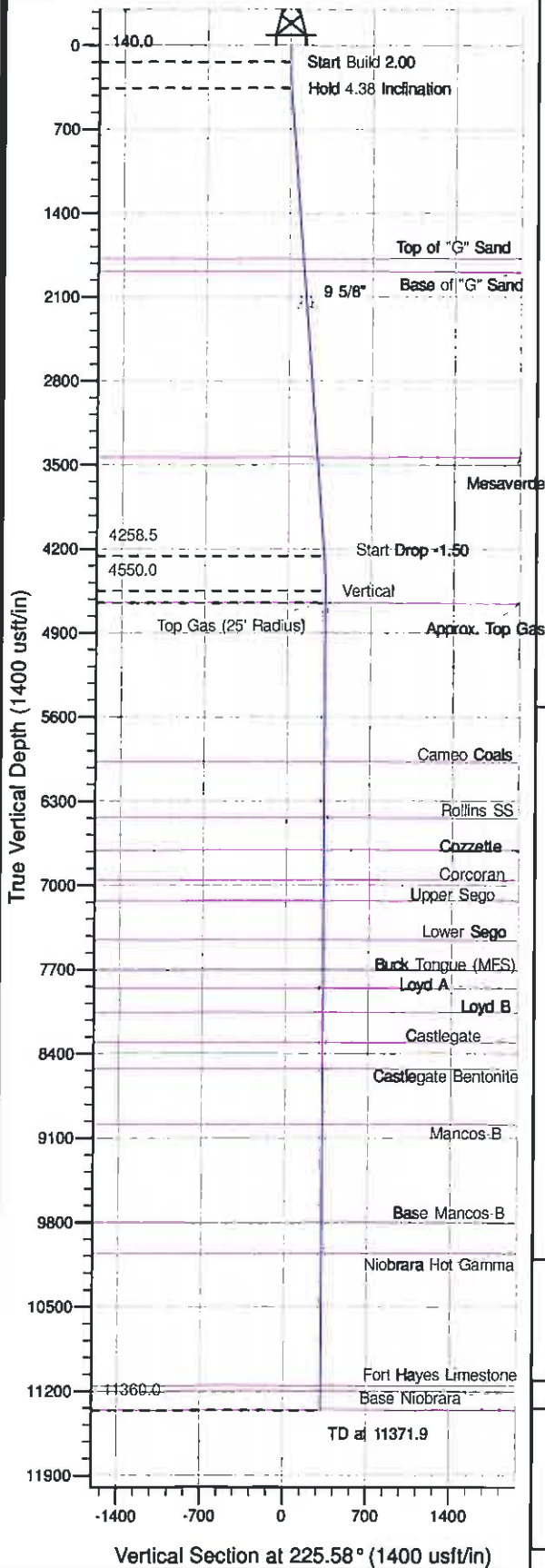




Well Name: GM 723-11
 Surface Location: GR 23-11V Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 5784.0
 Northing 1599170.03 Easting 2271945.31 Latitude 39° 27' 0.443 N Longitude 108° 4' 42.909 W
 Slot A6
 KB @ 5810.0usft (Nabors 574(26' RKB) rjc)



Project: GV 11-07S-066W
 Site: GR 23-11V Pad
 Well: GM 723-11
 Design #1 23May11 kjs

M Azimuths to True North
 Magnetic North: 10.37°
 Magnetic Field
 Strength: 52255.3snT
 Dip Angle: 65.70°
 Date: 5/23/2011
 Model: IGRF2005-10

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSecl	Departure	Annotation
140.0	140.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 2.00
358.8	358.8	4.38	225.58	-5.8	-6.0	8.4	8.4	Hold 4.38 Inclination
4258.5	4270.1	4.38	225.58	-214.8	-219.1	306.8	306.8	Start Drop -1.50
4550.0	4561.9	0.00	0.00	-222.8	-227.1	318.0	318.0	Vertical
4650.0	4681.9	0.00	0.00	-222.8	-227.1	318.0	318.0	Top Gas Target
11360.0	11371.9	0.00	0.00	-222.8	-227.1	318.0	318.0	TD at 11371.9

PICEANCE VLY NAD 83

GV 11-07S-096W

GR 23-11V Pad

GM 723-11 - Slot A6

Wellbore #1

Plan: Design #1 23May11 kjs

Standard Planning Report - Geographic

17 August, 2011

Williams

Planning Report - Geographic

Database: Compass R5000 WIN AUTH	Local Co-ordinate Reference: Well GM 723-11 - Slot A6	
Company: PICEANCE VLY NAD 83	TVD Reference: KB @ 5810.0usft (Nabors 574(26' RKB) rjc)	
Project: GV 11-07S-096W	MD Reference: KB @ 5810.0usft (Nabors 574(26' RKB) rjc)	
Site: GR 23-11V Pad	North Reference: True	
Well: GM 723-11	Survey Calculation Method: Minimum Curvature	
Wellbore: Wellbore #1		
Design: Design #1 23May11 kjs		

Project GV 11-07S-096W, Garfield County, CO, 11-07S-096W			
Map System: US Slate Plane 1983	System Datum: Mean Sea Level		
Geo Datum: North American Datum 1983			
Map Zone: Colorado Central Zone	Using geodetic scale factor		

Site GR 23-11V Pad			
Site Position:	Northing: 1,599,172.70 usft	Latitude: 39° 27' 0.450 N	
From: Map	Easting: 2,271,875.60 usft	Longitude: 108° 4' 43.799 W	
Position Uncertainty: 0.0 usft	Slot Radius: 13.200 in	Grid Convergence: -1.626 °	

Well GM 723-11 - Slot A6					
Well Position	+N/-S 0.0 usft	Northing: 1,599,170.03 usft	Latitude: 39° 27' 0.443 N		
	+E/-W 0.0 usft	Easting: 2,271,945.31 usft	Longitude: 108° 4' 42.909 W		
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level: 5,784.0 usft		

Wellbore Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (")	Dip Angle (")	Field Strength (nT)
	IGRF2005-10	5/23/2011	10.366	65.700	52,255

Design Design #1 23May11 kjs				
Audit Notes:				
Version:	Phase: PLAN	Tie On Depth: 0.0		
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (")
	0.0	0.0	0.0	225.58

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	
140.0	0.00	0.00	140.0	0.0	0.0	0.00	0.00	0.00	0.000	
358.8	4.38	225.58	358.6	-5.8	-6.0	2.00	2.00	0.00	225.575	
4,271.2	4.38	225.58	4,259.6	-214.8	-219.1	0.00	0.00	0.00	0.000	
4,562.9	0.00	0.00	4,551.0	-222.6	-227.1	1.50	-1.50	0.00	180.000	
4,662.9	0.00	0.00	4,651.0	-222.6	-227.1	0.00	0.00	0.00	0.000	Top Gas (25' Radiu
11,371.9	0.00	0.00	11,360.0	-222.6	-227.1	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well GM 723-11 - Slot A6
Company:	PICEANCE VLY NAD 83	TVD Reference:	KB @ 5810.0usft (Nabors 574(26' RKB) rjc)
Project:	GV 11-07S-096W	MD Reference:	KB @ 5810.0usft (Nabors 574(26' RKB) rjc)
Site:	GR 23-11V Pad	North Reference:	True
Well:	GM 723-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 23May11 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	1,599,170.03	2,271,945.31	39° 27' 0.443 N	108° 4' 42.909 W	
140.0	0.00	0.00	140.0	0.0	0.0	1,599,170.03	2,271,945.31	39° 27' 0.443 N	108° 4' 42.909 W	
Start Build 2.00										
358.8	4.38	225.58	358.6	-5.8	-6.0	1,599,164.35	2,271,939.18	39° 27' 0.385 N	108° 4' 42.985 W	
358.8	4.38	225.58	358.6	-5.8	-6.0	1,599,164.35	2,271,939.18	39° 27' 0.385 N	108° 4' 42.985 W	
Hold 4.38 Inclination										
1,784.4	4.38	225.58	1,780.0	-82.0	-83.6	1,599,090.46	2,271,859.38	39° 26' 59.633 N	108° 4' 43.976 W	
Top of "G" Sand										
1,894.7	4.38	225.58	1,890.0	-87.9	-89.7	1,599,084.74	2,271,853.20	39° 26' 59.575 N	108° 4' 44.052 W	
Base of "G" Sand										
2,199.6	4.38	225.58	2,194.0	-104.1	-106.3	1,599,068.94	2,271,836.13	39° 26' 59.414 N	108° 4' 44.264 W	
9 5/8"										
3,449.2	4.38	225.58	3,440.0	-170.9	-174.4	1,599,004.17	2,271,766.18	39° 26' 58.754 N	108° 4' 45.132 W	
Mesaverde										
4,270.1	4.38	225.58	4,258.5	-214.7	-219.1	1,598,961.61	2,271,720.23	39° 26' 58.321 N	108° 4' 45.702 W	
Start Drop -1.50										
4,271.2	4.38	225.58	4,259.6	-214.8	-219.1	1,598,961.56	2,271,720.17	39° 26' 58.320 N	108° 4' 45.703 W	
4,561.9	0.01	225.58	4,550.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Vertical										
4,562.9	0.00	0.00	4,551.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
4,661.9	0.00	0.00	4,650.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Top Gas Target - Approx. Top Gas										
4,662.9	0.00	0.00	4,651.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
5,991.9	0.00	0.00	5,980.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Cameo Coals										
6,456.9	0.00	0.00	6,445.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Rollins SS										
6,721.9	0.00	0.00	6,710.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Cozzette										
6,971.9	0.00	0.00	6,960.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Corcoran										
7,141.9	0.00	0.00	7,130.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Upper Segó										
7,471.9	0.00	0.00	7,460.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Lower Segó										
7,721.9	0.00	0.00	7,710.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Buck Tongue (MFS)										
7,871.9	0.00	0.00	7,860.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Loyd A										
8,071.9	0.00	0.00	8,060.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Loyd B										
8,321.9	0.00	0.00	8,310.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Castlegate										
8,541.9	0.00	0.00	8,530.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Castlegate Bentonite										
9,001.9	0.00	0.00	8,990.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Mancos-B										
9,821.9	0.00	0.00	9,810.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Base Mancos-B										
10,071.9	0.00	0.00	10,060.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	
Niobrara Hot Gamma										

Williams

Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well GM 723-11 - Slot A6
Company:	PICEANCE VLY NAD 83	TVD Reference:	KB @ 5810.0usft (Nabors 574(26' RKB) rjc)
Project:	GV 11-07S-096W	MD Reference:	KB @ 5810.0usft (Nabors 574(26' RKB) rjc)
Site:	GR 23-11V Pad	North Reference:	True
Well:	GM 723-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 23May11 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	
11,171.9	0.00	0.00	11,160.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	Fort Hayes Limestone
11,221.9	0.00	0.00	11,210.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	Base Niobrara
11,371.9	0.00	0.00	11,360.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	TD

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Top Gas (25' Radius) - hit/miss target - Shape - plan hils target center - Circle (radius 25.0)	0.00	0.00	4,651.0	-222.6	-227.1	1,598,954.00	2,271,712.00	39° 26' 58.243 N	108° 4' 45.804 W	

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,199.6	2,194.0	9 5/8"	9.625	12.250		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,784.4	1,780.0	Top of "G" Sand				
1,894.7	1,890.0	Base of "G" Sand				
3,449.2	3,440.0	Mesaverde				
4,661.9	4,650.0	Approx. Top Gas				
5,991.9	5,980.0	Cameo Coals				
6,456.9	6,445.0	Rollins SS				
6,721.9	6,710.0	Cozzette				
6,971.9	6,960.0	Corcoran				
7,141.9	7,130.0	Upper Sego				
7,471.9	7,460.0	Lower Sego				
7,721.9	7,710.0	Buck Tongue (MFS)				
7,871.9	7,860.0	Loyd A				
8,071.9	8,060.0	Loyd B				
8,321.9	8,310.0	Castlegate				
8,541.9	8,530.0	Castlegate Bentonite				
9,001.9	8,990.0	Mancos-B				
9,821.9	9,810.0	Base Mancos-B				
10,071.9	10,060.0	Niobrara Hot Gamma				
11,171.9	11,160.0	Fort Hayes Limestone				
11,221.9	11,210.0	Base Niobrara				
11,371.9	11,360.0	TD				

Williams
 Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Rerence:	Well GM723-11 - Slot A6
Company:	PICEANCE VLY NAD 83	TVD Reference:	KB @ 5810.0usft (Nabors 574(26' RKB) rjc)
Project:	GV 11-07S-096W	MD Reference:	KB @ 5810.0usft (Nabors 574(26' RKB) rjc)
Site:	GR 23-11V Pad	North Reference:	True
Well:	GM 723-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 23May11 kjs		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
140.0	140.0	0.0	0.0	Start Build 2.00
358.8	358.6	-5.8	-6.0	Hold 4.38 Inclination
4,270.1	4,258.5	-214.8	-219.1	Start Drop -1.50
4,561.9	4,550.0	-222.6	-227.1	Vertical
4,661.9	4,650.0	-222.6	-227.1	Top Gas Target
11,371.9	11,360.0	-222.6	-227.1	TD at 11371.9