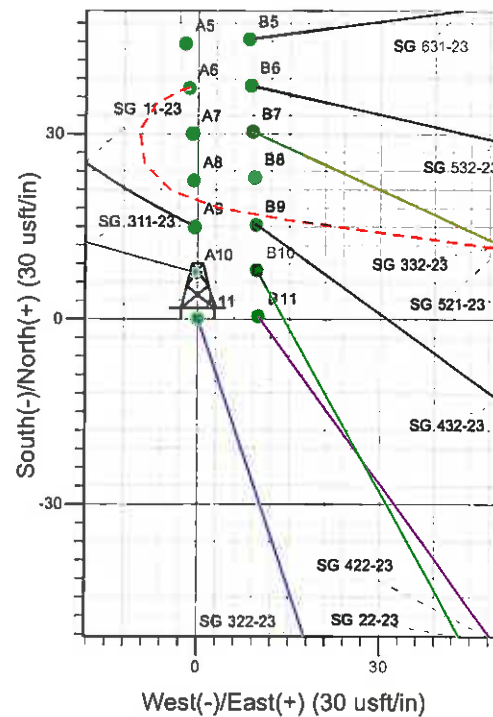
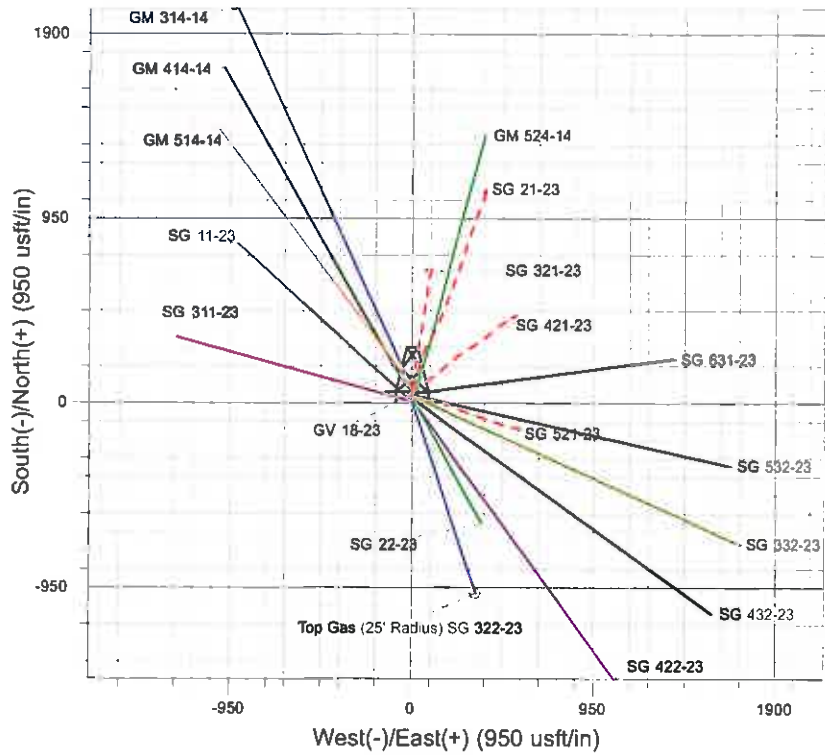
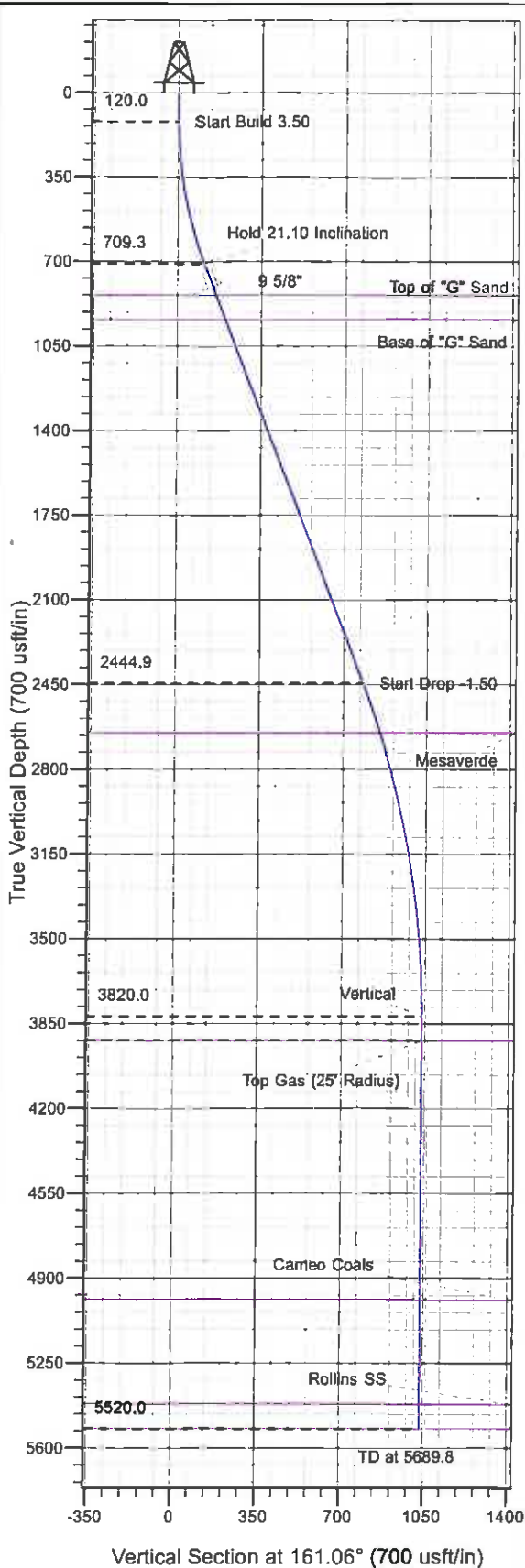




Well Name: SG 322-23
 Surface Location: GV 18-23 Pad
 North American Datum 1983, US State Plane 1983, Colorado Central Zone
 Ground Elevation: 5134.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1590846.50 2270829.80 39° 25' 37.895 N 108° 4' 54.110 W A11
 KELLY BUSHING @ 5158.0usft (H&P 278 (24' RKB) kjs)



Project: SG 23-07S-096W
 Site: GV 18-23 Pad
 Well: SG 322-23
 Design #1 06Apr11 kjs



Azimuths to True North
 Magnetic North: 10.40°
 Magnetic Field
 Strength: 52276.4nT
 Dip Angle: 65.69°
 Date: 2/4/2011
 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 3.50
709.3	722.8	21.10	161.06	-103.8	35.6	109.8	109.8	Hold 21.10 Inclination
2444.9	2583.2	21.10	161.06	-737.3	253.0	779.5	779.5	Start Drop -1.50
3820.0	3989.8	0.00	0.00	-979.5	336.1	1035.5	1035.5	Vertical
3920.0	4089.8	0.00	0.00	-979.5	336.1	1035.5	1035.5	Top Gas
5520.0	5689.8	0.00	0.00	-979.5	336.1	1035.5	1035.5	TD at 5689.8

PICEANCE VLY NAD 83

SG 23-07S-096W

GV 18-23 Pad

SG 322-23 - Slot A11

Wellbore #1

Plan: Design #1 06Apr11 kjs

Standard Planning Report - Geographic

01 June, 2011

Williams

Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well SG 322-23 - Slot A11
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5158.0usft (H&P 278 (24' RKB) kjs)
Project:	SG 23-07S-096W	MD Reference:	KELLY BUSHING @ 5158.0usft (H&P 278 (24' RKB) kjs)
Site:	GV 18-23 Pad	North Reference:	True
Well:	SG 322-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 06Apr11 kjs		

Project	SG 23-07S-096W, Garfield County, CO, 23-07S-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	GV 18-23 Pad				
Site Position:		Northing:	1,590,884.00 usft	Latitude:	39° 25' 38.266 N
From:	Map	Easting:	2,270,829.40 usft	Longitude:	108° 4' 54.128 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.628 °

Well	SG 322-23 - Slot A11					
Well Position	+N-S	0.0 usft	Northing:	1,590,846.50 usft	Latitude:	39° 25' 37.895 N
	+E-W	0.0 usft	Easting:	2,270,829.80 usft	Longitude:	108° 4' 54.110 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	5,134.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	2/4/2011	10.404	65.688	52,276

Design	Design #1 06Apr11 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	161.06

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	
722.8	21.10	161.06	709.3	-103.8	35.6	3.50	3.50	0.00	161.062	
2,583.2	21.10	161.06	2,444.9	-737.3	253.0	0.00	0.00	0.00	0.000	
3,989.8	0.00	0.00	3,820.0	-979.5	336.1	1.50	-1.50	0.00	180.000	
4,089.8	0.00	0.00	3,920.0	-979.5	336.1	0.00	0.00	0.00	0.000	Top Gas (25' Radius)
5,689.8	0.00	0.00	5,520.0	-979.5	336.1	0.00	0.00	0.00	0.000	

Williams
Planning Report - Geographic

Database: Compass R5000 WIN AUTH
Company: PICEANCE VLY NAD 83
Project: SG 23-07S-096W
Site: GV 18-23 Pad
Well: SG 322-23
Wellbore: Wellbore #1
Design: Design #1 06Apr11 kjs

Local Co-ordinate Reference: Well SG 322-23 - Slot A11
TVD Reference: KELLY BUSHING @ 5158.0usft (H&P 278 (24' RKB) kjs)
MD Reference: KELLY BUSHING @ 5158.0usft (H&P 278 (24' RKB) kjs)
North Reference: True
Survey Calculation Method: Minimum Curvature

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	1,590,846.50	2,270,829.80	39° 25' 37.895 N	108° 4' 54.110 W
120.0	0.00	0.00	120.0	0.0	0.0	1,590,846.50	2,270,829.80	39° 25' 37.895 N	108° 4' 54.110 W
Start Build 3.50									
722.8	21.10	161.06	709.3	-103.8	35.6	1,590,741.72	2,270,862.45	39° 25' 36.869 N	108° 4' 53.656 W
Hold 21.10 Inclination									
823.0	21.10	161.06	802.8	-137.9	47.3	1,590,707.30	2,270,873.18	39° 25' 36.532 N	108° 4' 53.507 W
9 5/8"									
862.9	21.10	161.06	840.0	-151.5	52.0	1,590,693.58	2,270,877.46	39° 25' 36.398 N	108° 4' 53.447 W
Top of "G" Sand									
970.1	21.10	161.06	940.0	-188.0	64.5	1,590,656.74	2,270,888.94	39° 25' 36.037 N	108° 4' 53.287 W
Base of "G" Sand									
2,583.2	21.10	161.06	2,444.9	-737.3	253.0	1,590,102.37	2,271,061.71	39° 25' 30.609 N	108° 4' 50.886 W
Start Drop -1.50									
2,800.7	17.84	161.06	2,650.0	-805.8	276.5	1,590,033.17	2,271,083.28	39° 25' 29.931 N	108° 4' 50.586 W
Mesaverde									
3,989.8	0.00	0.00	3,820.0	-979.5	336.1	1,589,857.90	2,271,137.90	39° 25' 28.215 N	108° 4' 49.827 W
Vertical									
4,089.8	0.00	0.00	3,920.0	-979.5	336.1	1,589,857.90	2,271,137.90	39° 25' 28.215 N	108° 4' 49.827 W
Top Gas - Approx. Top Gas									
5,159.8	0.00	0.00	4,990.0	-979.5	336.1	1,589,857.90	2,271,137.90	39° 25' 28.215 N	108° 4' 49.827 W
Cameo Coals									
5,589.8	0.00	0.00	5,420.0	-979.5	336.1	1,589,857.90	2,271,137.90	39° 25' 28.215 N	108° 4' 49.827 W
Rollins SS									
5,689.8	0.00	0.00	5,520.0	-979.5	336.1	1,589,857.90	2,271,137.90	39° 25' 28.215 N	108° 4' 49.827 W
TD at 5689.8 - TD									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Top Gas (25' Radius) SC - plan hits target center - Circle (radius 25.0)	0.00	0.00	3,920.0	-979.5	336.1	1,589,857.90	2,271,137.90	39° 25' 28.215 N	108° 4' 49.827 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
823.0	802.8	9 5/8"	9.625	12.250

Williams
Planning Report - Geographic

Database:	Compass R5000 WIN AUTH	Local Co-ordinate Reference:	Well SG 322-23 - Slot A11
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5158.0usft (H&P 278 (24' RKB) kjs)
Project:	SG 23-07S-096W	MD Reference:	KELLY BUSHING @ 5158.0usft (H&P 278 (24' RKB) kjs)
Site:	GV 18-23 Pad	North Reference:	True
Well:	SG 322-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 06Apr11 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (")	Dip Direction (")	
862.9	840.0	Top of "G" Sand				
970.1	940.0	Base of "G" Sand				
2,800.7	2,650.0	Mesaverde				
4,089.8	3,920.0	Approx. Top Gas				
5,159.8	4,990.0	Cameo Coals				
5,589.8	5,420.0	Rollins SS				
5,689.8	5,520.0	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 3.50	
722.8	709.3	-103.8	35.6	Hold 21.10 Inclination	
2,583.2	2,444.9	-737.3	253.0	Start Drop -1.50	
3,989.8	3,820.0	-979.5	336.1	Vertical	
4,089.8	3,920.0	-979.5	336.1	Top Gas	
5,689.8	5,520.0	-979.5	336.1	TD at 5689.8	