



## SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

RECEIVED  
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COGCCComplete the Attachment  
Checklist

OP OGCC

1. OGCC Operator Number: 96850	4. Contact Name: Howard Harris	Survey Plat	X	X	
2. Name of Operator: Williams Production RMT Company LLC	Phone: 303-606-4086		Directional Survey	X	X
3. Address: 1001 17th St., Suite 1200	Fax: 303-629-8268		Surface Eqpmnt Diagram		
City: Denver State: CO Zip: 80202			Technical Info Page	X	X
5. API Number 05-045-19535-00	OGCC Facility ID Number	Other			
6. Well/Facility Name: Federal	7. Well/Facility Number: PA 412-29				
8. Location (Qtr/Qtr, Sec, Twp, Rng, Meridian): SESW (Lot 12) Sec 29 T6S-R95W					
9. County: Garfield	10. Field Name: Parachute				
11. Federal, Indian or State Lease Number: COC62162					

## General Notice

☒ **CHANGE OF LOCATION:** Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)

Change of Surface Footage from Exterior Section Lines:	622	FNL/FSL	2226	FEL/FWL
Change of Surface Footage to Exterior Section Lines:	626	FSL	2201	FWL
Change of Bottomhole Footage from Exterior Section Lines:	1616	FNL	379	FWL
Change of Bottomhole Footage to Exterior Section Lines:	1446	FNL	302	FWL

Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer SWNW (Lot 5) Sec 29 T6S R95W

Latitude 39.489968 Distance to nearest property line 2513 Distance to nearest bldg, public rd, utility or RR 5577

Longitude 108.023293 Distance to nearest lease line 302 Is location in a High Density Area (rule 603b)? Yes/No NO

Ground Elevation 5675 Distance to nearest well same formation 305 Surface owner consultation date:

## GPS DATA:

Date of Measurement 11/18/11 PDOP Reading 2.37 Instrument Operator's Name J. Kirkpatrick

☐ **CHANGE SPACING UNIT**

Formation	Formation Code	Spacing order number	Unit Acreage	Unit configuration

☐ **Remove from surface bond**  
Signed surface use agreement attached

<input type="checkbox"/> <b>CHANGE OF OPERATOR (prior to drilling):</b> Effective Date: _____ Plugging Bond: <input type="checkbox"/> Blanket <input type="checkbox"/> Individual	<input type="checkbox"/> <b>CHANGE WELL NAME</b> <b>NUMBER</b> From: _____ To: _____ Effective Date: _____
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<input type="checkbox"/> <b>ABANDONED LOCATION:</b> Was location ever built? <input type="checkbox"/> Yes <input type="checkbox"/> No Is site ready for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No Date Ready for Inspection: _____	<input type="checkbox"/> <b>NOTICE OF CONTINUED SHUT IN STATUS</b> Date well shut in or temporarily abandoned: _____ Has Production Equipment been removed from site? <input type="checkbox"/> Yes <input type="checkbox"/> No MIT required if shut in longer than two years. Date of last MIT _____
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<input type="checkbox"/> <b>SPUD DATE:</b> _____	<input type="checkbox"/> <b>REQUEST FOR CONFIDENTIAL STATUS</b> (6 mos from date casing set)
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☐ **SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK** \*submit cbl and cement job summaries

Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date

☐ **RECLAMATION:** Attach technical page describing final reclamation procedures per Rule 1004.  
Final reclamation will commence on approximately \_\_\_\_\_ ☐ Final reclamation is completed and site is ready for inspection.

## Technical Engineering/Environmental Notice

<input checked="" type="checkbox"/> <b>Notice of Intent</b> Approximate Start Date: 1/1/12	<input type="checkbox"/> <b>Report of Work Done</b> Date Work Completed: _____
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Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

<input type="checkbox"/> Intent to Recomplete (submit form 2)	<input type="checkbox"/> Request to Vent or Flare	<input type="checkbox"/> E&P Waste Disposal
<input checked="" type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Beneficial Reuse of E&P Waste
<input type="checkbox"/> Gross Interval Changed?	<input type="checkbox"/> Rule 502 variance requested	<input type="checkbox"/> Status Update/Change of Remediation Plans
<input type="checkbox"/> Casing/Cementing Program Change	<input checked="" type="checkbox"/> Other: Change BHL & SHL	for Spills and Releases

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Howard Harris Date: 12/12/11 Email: Howard.Harris@Williams.com

Print Name: Howard Harris Title: Sr. Regulatory Specialist

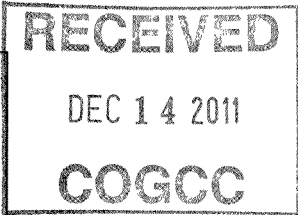
COGCC Approved: [Signature] Title: DWAE Date: 1/23/2012

CONDITIONS OF APPROVAL, IF ANY:

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY



1. OGCC Operator Number:	96850	API Number:	05-045-19535-00
2. Name of Operator:	Williams Production RMT Company LLC OGCC Facility ID #		
3. Well/Facility Name:	Federal	Well/Facility Number:	PA 412-29
4. Location (QtrQtr, Sec, Twp, Rng, Meridian):	SESW (Lot 12)Sec 29 T6S-R95W		

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

DESCRIBE PROPOSED OR COMPLETED OPERATIONS

Due to an FMI log being ran on a prior well drilled on this pad, the surface hole location and bottomhole location will need to be moved within accordance to that shown on the front page. The surface casing depth will be changed to 2824', Cmt w/717 SX. TMD will change to 8981'. 4 1/2" production casing will be set at 8981' with 656 sx cmt.  
See attached directional plan, prog and location plat

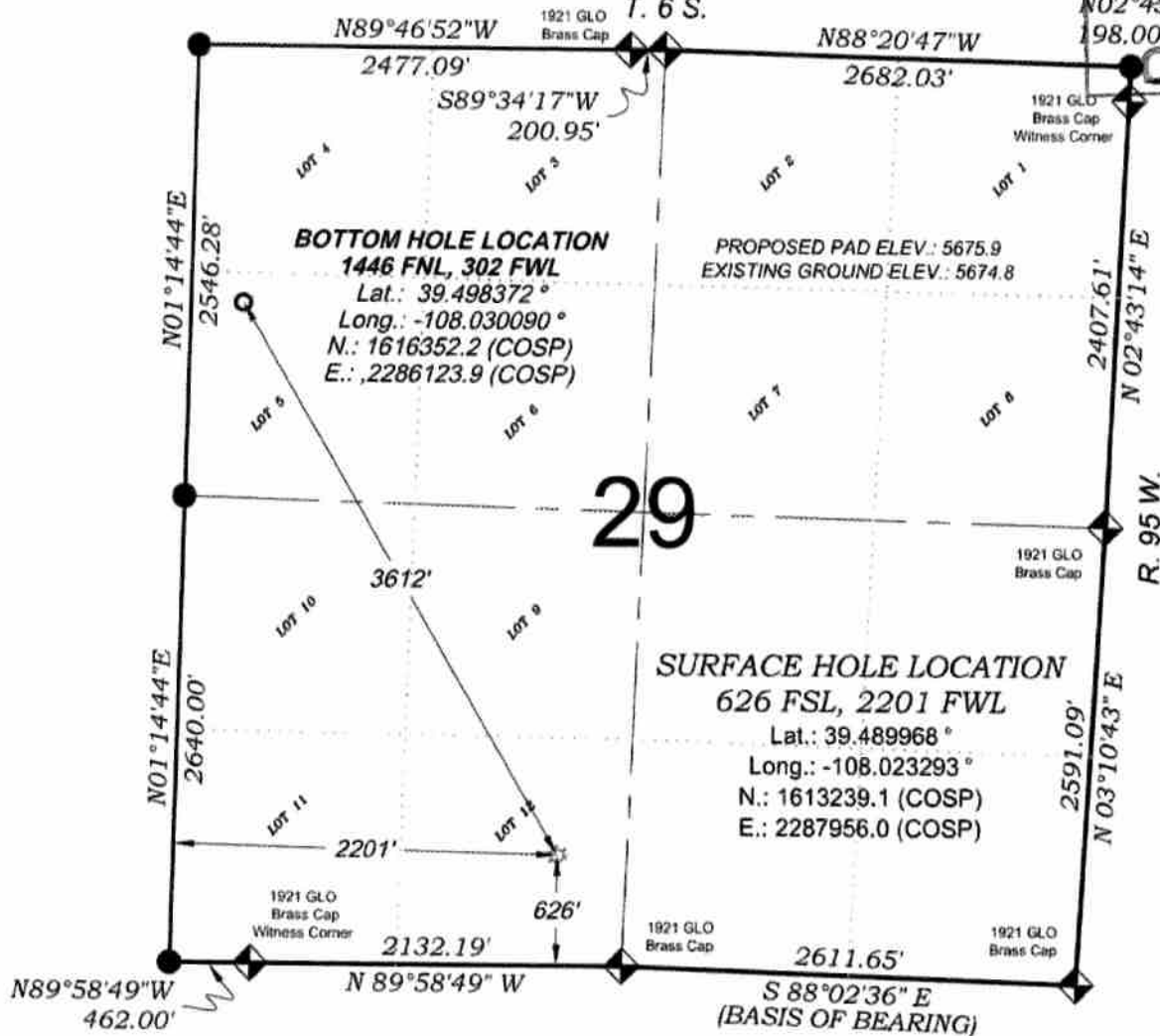
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COGCC

## Federal PA 412-29

T. 6 S.



THERE ARE NO VISIBLE  
IMPROVEMENTS WITHIN 400'  
OF THIS LOCATION



## - LEGEND -

FIELD LOCATED SECTION  
MONUMENTS AS DESCRIBED

FIELD SURVEYED  
WELL LOCATION

CALCULATED BOTTOM  
HOLE LOCATION

CALCULATED SECTION  
CORNER LOCATION

## SURVEYORS STATEMENT

I, MICHAEL J. LANGHORNE, A REGISTERED LAND SURVEYOR IN THE STATE OF COLORADO DO HEREBY CERTIFY THAT THE SURVEY SHOWN HEREON WAS PREPARED UNDER MY DIRECT SUPERVISION AND HAS BEEN STAKED ON THE GROUND AS SHOWN ON THE PLAT AND CHECKING THAT THIS MAP IS A TRUE REPRESENTATION THEREOF.

MICHAEL J. LANGHORNE, COLORADO REGISTRATION NO. 36572  
FOR AND ON BEHALF OF  
BOOKCLIFF SURVEY SERVICES, INC.

## REFERENCES

- 1) DEPENDENT RESURVEY T. 6 S., R. 95 W., 6th P.M. (GLO PLAT)
- 2) U.S.G.S. QUAD: PARACHUTE, CO

## NOTES

- 1) ELEVATIONS BASED ON N.A.V.D. 1988 PUBLISHED COORDINATES.
- 2) LATITUDES AND LONGITUDES ARE BASED ON NAD 83, PUBLISHED COORDINATES.
- 3) STATE PLANE COORDINATES ARE BASED ON COLORADO CENTRAL ZONE, U.S. SURVEY FEET.
- 4) ELEVATION MASK SET TO 15"
- 5) GPS OPERATOR J. KIRKPATRICK, OBSERVED A PDOP 2.37 ON SURVEY POINT NUMBER 92925.
- 6) SURFACE AND BOTTOM HOLE LOCATIONS ARE MEASURED 90° FROM SECTION LINES.

## WELL LOCATION PLAT Prepared for:

Williams Williams Production, RMT

SE1/4 SW1/4, SECTION 29  
T. 6 S., R. 95 W. of the 6th. P.M.  
GARFIELD COUNTY, COLORADO

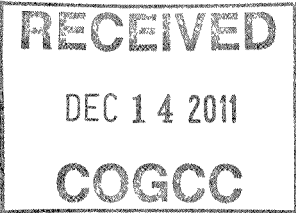
SURVEY DATE: 11/18/08  
MAP DATE: 9/21/11  
SCALE: 1" = 1000'  
PLAT: 1 of 9  
PROJECT: Williams Valley

Bookcliff Survey Services, Inc.  
1000 West 10th Street  
Boulder, Colorado 80501  
Ph: 303.441.2700  
Fax 303.441.2701

BOOKCLIFF  
Survey Services, Inc.

GEOLOGIC & DRILLING PROGNOSIS

Prepared: 26-Mar-10 KSR  
Updated BHL footages & csg pt 4-Oct-11 sda



WELL NAME: PA 412-29  
Directional from the DOE 3-W-29 pad

STATE: Colorado  
COUNTY: Garfield  
LOCATION: Sec. 29 T 6 S R 95 W; 10 ACRE FED  
TYPE OF UNIT: Unspaced Section  
SURFACE HOLE: 626' FSL, 2201' FWL  
BOTTOM HOLE: 1446' FNL, 302' FWL  
FEDERAL EA: Within scope of 2002 WW GAP EA  
WASATCH CEMENT: Yes

ELEVATION (ft): PAD: 5676  
GROUND: 5675  
KELLY BUSHING: 5702

RIG INFORMATION:  
RIG NAME: Nabors 577  
KB HEIGHT (ft): 26

Formation	TVD	MD	Comments
Wasatch	Surface	Surface	
Top of "G" Sand	1992	2525	
Base of "G" Sand	2092	2675	
Mesaverde	4112	5429	
Approx. Top Gas	5472	6831	(Water zones may be encountered within the upper portion of the Mesaverde)
Cameo Coals	6917	8276	
Rollins SS	7472	8831	
TD	7622	8981	If pay encountered within 150' of Rollins, drill 150' rathole below base last pay. If no pay is encountered within 150' of the Rollins, TD well at 8856 ft (md)

MUD LOGGING (md): 5229 to TD. (One man or computer unit with at least total gas and drill rate.)

LOGGING PROGRAM: Type of Log: Cased-hole Pulsed Neutron log (e.g. RMTE or RPM)

Interval (md): GR from TD to surface  
Pulsed Neutron from TD to 200ft above the Mesaverde top (md)

Strap drill pipe by latest trip prior to TD

CSG & CEMENT PROGRAM: SHOE TEST REQUIRED

	csg size (in)	depth set at (tvd)	depth set at (md)	hole size (in)	Approximate Cmt (ft3) Tail	Tail Yield ft <sup>3</sup> /Sx	Approx. Sx Tail	Approximate Cmt (ft3) Lead	Lead Yield ft <sup>3</sup> /Sx	Approx. Sx Lead	WOC (hrs)
Conductor:											
Surface:	9 5/8"	2192	2823.9	13 1/2"	352	2.11	167	1304	2.37	550	8
Intermediate:											
Liner or Production:	4 1/2"	7622	8981	7 7/8"	614	1.33	462	351	1.81	194	
					Surface (Sacks): 717		Prod (Sacks): 656				

Surface cement volumes are calculated w/ 20% excess in gauge hole,  
Production cement: tail is calculated to be 300 ft above geologists pick of top of gas, lead TOC is calculated 300 ft above top of MVRD. 10% Excess added.

ANTICIPATED PRESSURES

MASP	Prod Csg Test Pressure	Anticipated BHP	Pressure (psi)
2,150	7,000	4,954	

MUD PROGRAM: (Do not deviate from mud engineer's recommendation without prior consent from Parachute office)

FROM (md)	TO (md)	TYPE MUD	#/GAL	VIS	WL	CHEMICALS
0	2824	Spud	9.0-9.5	45-50		
2824	8981	LSND	9.0-12.5	40-50	8-10	Visease & 507

(Write mud added to system on tour sheets and report all mud mixed and daily cost in morning report)

LOST CIRCULATION: Report depth and bbls of mud lost on morning report and tour sheet - Any severe lost circulation problems should be reported immediately to well supervisor.

SURVEYS: Run every 100' on surface hole and trips unless otherwise instructed.

(note: if there are questions concerning TD or logging please call Geologist)

Williams Geologists:	Office	Cell	Home
Susan Anderson (PA/SP wells)	303-606-4069	303-385-7529	303-751-6019
Kim Roberts (PA/SP Wells)	303-629-8438	303-646-7411	303-979-2709
Marsha Satorius-Fox (RWF wells)	303-629-8421	303-507-9828	
Ryan Kowalski (GM/SG Wells)	303-606-4051	303-319-4329	303-888-2113
Trevor Gates (KP Wells)	303-629-8431	720-254-4913	
Scott Meade		970-260-8131	

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**COGCC**

# **PICEANCE VLY NAD 83**

**PA 29-06S-095W**

**DOE 3-W-29 Pad**

**PA 412-29 - Slot B11**

**Wellbore #1**

**Plan: Plan #3 31Aug11 kjs**

## **Standard Planning Report - Geographic**

**03 October, 2011**

Williams  
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 412-29 - Slot B11
Company:	PICEANCE VLY NAD 83	TVD Reference:	WELL @ 5702.0usft (Nabors 577 (26') kjs)
Project:	PA 29-06S-095W	MD Reference:	WELL @ 5702.0usft (Nabors 577 (26') kjs)
Site:	DOE 3-W-29 Pad	North Reference:	True
Well:	PA 412-29	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 31Aug11 kjs		

Project	PA 29-06S-095W, Garfield County, CO		
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	DOE 3-W-29 Pad		
Site Position:		Northing:	1,613,247.00 usft
From:	Map	Easting:	2,287,962.20 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in
		Latitude:	39° 29' 23.965 N
		Longitude:	108° 1' 23.779 W
		Grid Convergence:	-1.591 °

Well	PA 412-29 - Slot B11		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft		Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	Wellbore #1		
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Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	2/3/2009	10.666	65.794	52,486

Design	Plan #3 31Aug11 kjs		
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Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	327.93

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
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	
1,318.5	47.94	327.93	1,183.5	400.7	-251.0	4.00	4.00	0.00	327.931	
4,091.6	47.94	327.93	3,041.3	2,145.4	-1,344.2	0.00	0.00	0.00	0.000	
6,831.0	0.00	0.00	5,472.0	3,061.1	-1,917.9	1.75	-1.75	0.00	180.000	Top Gas (25' Radius)
8,981.0	0.00	0.00	7,622.0	3,061.1	-1,917.9	0.00	0.00	0.00	0.000	TD / PBHL PA 412-29

Williams  
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 412-29 - Slot B11
Company:	PICEANCE VLY NAD 83	TVD Reference:	WELL @ 5702.0usft (Nabors 577 (26') kjs)
Project:	PA 29-06S-095W	MD Reference:	WELL @ 5702.0usft (Nabors 577 (26') kjs)
Site:	DOE 3-W-29 Pad	North Reference:	True
Well:	PA 412-29	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 31Aug11 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	1,613,239.10	2,287,956.00	39° 29' 23.885 N	108° 1' 23.856 W
120.0	0.00	0.00	120.0	0.0	0.0	1,613,239.10	2,287,956.00	39° 29' 23.885 N	108° 1' 23.856 W
Start Build 4.00									
1,318.5	47.94	327.93	1,183.5	400.7	-251.0	1,613,646.55	2,287,716.21	39° 29' 27.845 N	108° 1' 27.058 W
Hold 47.94 Inclination									
2,525.4	47.94	327.93	1,992.0	1,160.0	-726.8	1,614,418.77	2,287,261.75	39° 29' 35.350 N	108° 1' 33.126 W
Top of "G" Sand									
2,674.7	47.94	327.93	2,092.0	1,253.9	-785.6	1,614,514.27	2,287,205.54	39° 29' 36.278 N	108° 1' 33.877 W
Base of "G" Sand									
2,823.9	47.94	327.93	2,192.0	1,347.8	-844.5	1,614,609.78	2,287,149.34	39° 29' 37.206 N	108° 1' 34.627 W
9 5/8"									
4,091.6	47.94	327.93	3,041.3	2,145.4	-1,344.2	1,615,420.87	2,286,672.00	39° 29' 45.088 N	108° 1' 41.002 W
Start Drop -1.75									
5,428.5	24.54	327.93	4,112.0	2,810.5	-1,760.9	1,616,097.25	2,286,273.94	39° 29' 51.661 N	108° 1' 46.318 W
Mesaverde									
6,831.0	0.00	0.00	5,472.0	3,061.1	-1,917.9	1,616,352.20	2,286,123.90	39° 29' 54.139 N	108° 1' 48.322 W
Top Gas - Approx. Top Gas - Top Gas (25' Radius) PA 412-29									
8,276.0	0.00	0.00	6,917.0	3,061.1	-1,917.9	1,616,352.20	2,286,123.90	39° 29' 54.139 N	108° 1' 48.322 W
Cameo Coals									
8,831.0	0.00	0.00	7,472.0	3,061.1	-1,917.9	1,616,352.20	2,286,123.90	39° 29' 54.139 N	108° 1' 48.322 W
Rollins SS									
8,981.0	0.00	0.00	7,622.0	3,061.1	-1,917.9	1,616,352.20	2,286,123.90	39° 29' 54.139 N	108° 1' 48.322 W
TD at 8981.0 - TD / PBHL PA 412-29									

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) P/ - plan hits target center - Circle (radius 25.0)	0.00	0.00	5,472.0	3,061.1	-1,917.9	1,616,352.20	2,286,123.90	39° 29' 54.139 N	108° 1' 48.322 W
TD / PBHL PA 412-29 - plan hits target center - Point	0.00	0.00	7,622.0	3,061.1	-1,917.9	1,616,352.20	2,286,123.90	39° 29' 54.139 N	108° 1' 48.322 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,823.9	2,192.0	9 5/8"	9.625	12.250



Williams  
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 412-29 - Slot B11
Company:	PICEANCE VLY NAD 83	TVD Reference:	WELL @ 5702.0usft (Nabors 577 (26') kjs)
Project:	PA 29-06S-095W	MD Reference:	WELL @ 5702.0usft (Nabors 577 (26') kjs)
Site:	DOE 3-W-29 Pad	North Reference:	True
Well:	PA 412-29	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 31Aug11 kjs		

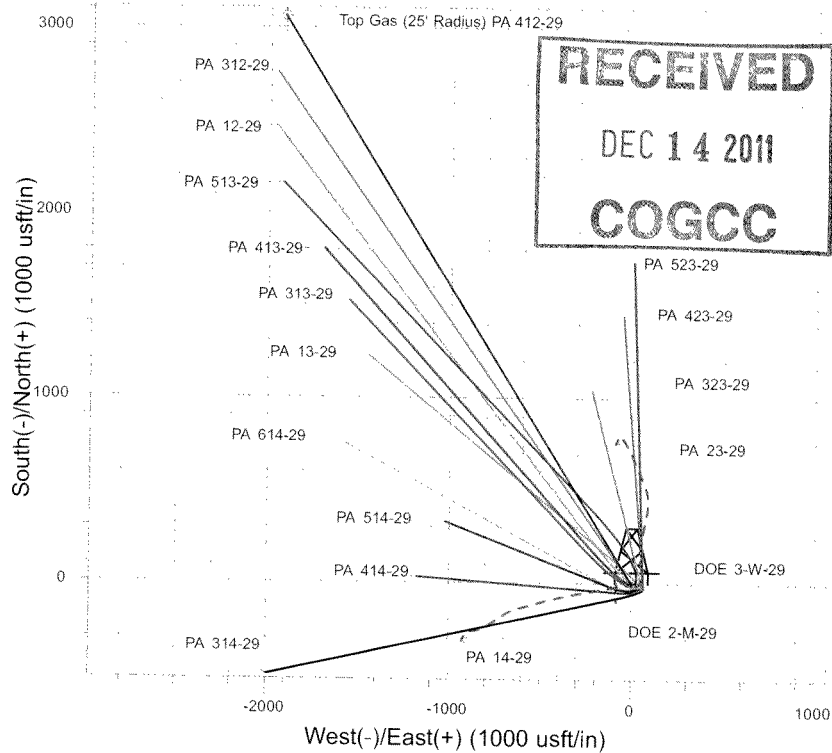
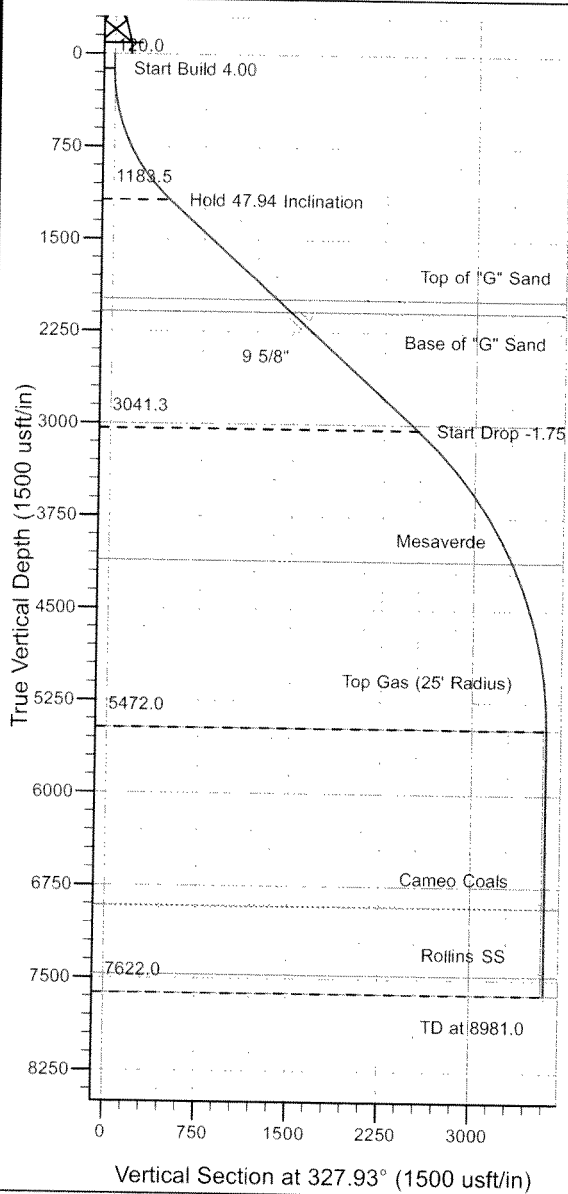
Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction	
2,525.4	1,992.0	Top of "G" Sand				
2,674.7	2,092.0	Base of "G" Sand				
5,428.5	4,112.0	Mesaverde				
6,831.0	5,472.0	Approx. Top Gas				
8,276.0	6,917.0	Cameo Coals				
8,831.0	7,472.0	Rollins SS				
8,981.0	7,622.0	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 4.00	
1,318.5	1,183.5	400.7	-251.0	Hold 47.94 Inclination	
4,091.6	3,041.3	2,145.4	-1,344.2	Start Drop -1.75	
6,831.0	5,472.0	3,061.1	-1,917.9	Top Gas	
8,981.0	7,622.0	3,061.1	-1,917.9	TD at 8981.0	

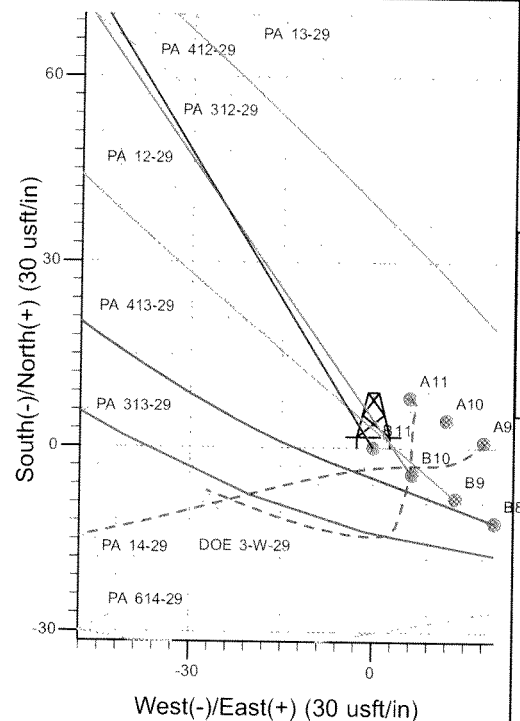




Well Name: PA 412-29  
Surface Location: DOE 3-W-29 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 5676.0  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 1613239.10 2287956.00 39° 29' 23.885 N 108° 1' 23.856 W B11  
WELL @ 5702.0usft (Nabors 577 (26') kjs)



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COGCC



Project: PA 29-06S-095W  
Site: DOE 3-W-29 Pad  
Well: PA 412-29  
Plan #3 31Aug11 kjs

↑ T M  
↑ A  
Azimuths to True North  
Magnetic North: 10.67°  
Magnetic Field  
Strength: 52485.7snT  
Dip Angle: 65.79°  
Date: 2/3/2009  
Model: IGRF2010

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 4.00
1183.5	1318.5	47.94	327.93	400.7	-251.0	472.8	472.8	Hold 47.94 Inclination
3041.3	4091.6	47.94	327.93	2145.4	-1344.2	2531.7	2531.7	Start Drop -1.75
5472.0	6831.0	0.00	0.00	3061.1	-1917.9	3612.3	3612.3	Top Gas
7622.0	8981.0	0.00	0.00	3061.1	-1917.9	3612.3	3612.3	TD at 8981.0