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Farmington Field Office
Bureau of Land Management

Form 3160-5
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires. March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

***SUBMIT IN TRIPLICATE** – Other instructions on page 2*

1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other	5. Lease Serial No. NMSF-078772 6. If Indian, Allottee or Tribe Name 7. If Unit of CA/Agreement, Name and/or No. Rosa Unit 8. Well Name and No Rosa Unit COM #60C
2. Name of Operator Williams Production Company, LLC	9. API Well No. 30-045-34213
3a. Address PO Box 640 Aztec, NM 87410 3b. Phone No *(include area code)* 505-634-4208	10. Field and Pool or Exploratory Area Blanco Mesaverde/Basin Dakota
4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)* Sur.255' FSL & 1870' FEL – BHL: 1980' FSL & 1300' FEL, sec 4, T31N, R6W	11. Country or Parish, State San Juan

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Casing change
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Williams plans to change the casing design and cementing on this well as per attached drilling plan.

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

CBL Required if cmt not circulated

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JUN 2011
OIL CONS. DIV.

14. I hereby certify that the foregoing is true and correct.
Name *(Printed/Typed)* Larry Higgins
Title Permit Supervisor
Signature Larry Higgins
Date 5/24/11

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by TL Salyers
Title PE
Date 5/31/2011

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon
Office FFO

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on page 2)

NMOCD

WILLIAMS PRODUCTION COMPANY
Drilling Plan

(Note: This procedure will be adjusted on site based upon actual conditions)

DATE:	5/20/2011	**FIELD:**	Blanco MV/DK
WELL NAME:	**Rosa Unit #60-C**	**SURFACE:**	BLM
S. LOCATION:	NE/4 SE/4 Sec 4-31N-6W Rio Arriba, NM	**MINERALS:**	BLM
ELEVATION:	6,451 ft. GL	**LEASE #**	NMSF-078772
MEASURED DEPTH:	**8,832 ft. (MD)**	**API#:**	30-045-34213

I. GEOLOGY: Surface formation - San Jose

A. FORMATION TOPS: (KB)

	TVD	MD		TVD	MD
Ojo Alamo	2,420'	2,839'	Menefee	5,490'	6,076'
Kirtland	2,535'	2,999'	Point Lookout	5,730'	6,316'
Fruitland Fmtn	2,960'	3,515'	Mancos sh	6,065'	6,651'
Pictured Cliffs	3,240'	3,817'	Gallup	7,055'	7,641'
Lewis Sh	3,545'	4,130'	Greenhorn	7,770'	8,356'
Int. Casing	**3,715'**	**4,301'**	Graneros	7,810'	8,396'
Cliff House Trans	5,130'	5,716'	Dakota	7,946'	8,532'
Cliff House	5,445'	6,031'	Morrison	8,196'	8,782'
			5-1/2" Casing	**8,245'**	**8,831'**
			Total Depth	**8,246'**	**8,832'**

B. LOGGING PROGRAM: Mud Logger on from Int. Csg. to TD. Mud Logger will pick TD. (See attached Geological Prognosis for OH Logging Program).

C. NATURAL GAUGES: Gauge any noticeable increases in gas flow. Record all gauges in Tour book and on morning reports.

II. DRILLING

A. MUD PROGRAM: Use a LSND mud (+/-40 Vis.) to drill 9-7/8 in. Intermediate Hole. Increase vis to +/-60 to run Casing. Treat for lost circulation as necessary. Obtain 100% returns prior to cementing. Notify Engineering of any mud losses. Use air w/Air Hammer w/ 6-3/4 in. bit to drill-out 7-5/8 in. csg. to TD +/- 8,832 ft.

B. BOP TESTING: While drill pipe is in use, the pipe rams and the blind rams will be function tested once each trip. The anticipated reservoir is expected to be less than 1300 psi, so the BOPE will be tested to **250 psi (Low) for 5 minutes** and **1500 psi (High) for 10 minutes**. Utilize a BOPE Testing Unit with a recording chart and appropriate test plug for testing. The surface and Intermediate casing will be pressure tested **to 1500 psi for 30 minutes** after the BOPE test before drilling out cement. The drum brakes will be inspected and tested each tour. **All tests, inspections and SPR's will be recorded in the tour book as to time and results.**

III. MATERIALS

A. CASING PROGRAM:

CASING TYPE	HOLE SIZE	DEPTH (MD)	CASING SIZE	WT. & GRADE
Surface	14-3/4"	+310'	10-3/4"	40.5# K-55 STC
Intermediate (1)	9-7/8"	4,121'	7-5/8"	26.4# K-55 LTC
Intermediate (2)	9-7/8"	4,271'	7-5/8"	26.4# K-55 STC
Intermediate (3)	9-7/8"	4,300'	7-5/8"	26.4# M-95 LTC
Prod. Casing	6-3/4"	+/-8,832'-Surf.	5-1/2"	17# N-80 LTC

B. FLOAT EQUIPMENT:

1. SURFACE CASING: 10-3/4" notched regular pattern guide shoe. Run (1) standard centralizer on each of the bottom (3) joints of Surface Casing.

2. INTERMEDIATE CASING: INTERMEDIATE CASING: 7-5/8" cement nose guide shoe with a self-fill float Collar. Place Float Collar one joint above the shoe. Install (1) Turbulent centralizer on each of the bottom (3) joints. Run (1) Turbulent centralizer at 2,700 ft., 2,500 ft., 2,300ft. 2,000ft., 1,500 ft., and 1,000 ft. **(NTL-FRA 90-1). (Call this in to BLM for approval. If denied, follow what is in the Operations Plan in the Permit package.)**

3. PRODUCTION CASING: 5-1/2" whirler type cement nose guide shoe with a float collar on top of bottom joint. Place marker joint above 6,000'. Place one turbolizer every third joint thru Dakota and Mesa Verde intervals. **). (Call this in to BLM for approval. If denied, follow what is in the Operations Plan in the Permit package.)**

C. CEMENTING: *Note: Volumes may be adjusted onsite due to actual conditions)*

1. SURFACE: Slurry: 250sx (345 cu.ft.) of "Type III" + 2% $CaCl_2$ + ¼ # of cello-flake/sk (Yield = 1.39 cu.ft./sk, Weight = 14.5 #/gal.). **NO EXCESS PUMP AS WRITTEN SHOULD CIRCULATE TO SURFACE** WOC 12 hours. Test csg to 1500psi.

2. INTERMEDIATE: Lead - 650sx (1,372 cu.ft.) of Premium Light with 8% gel, 1% $CaCl_2$, 4% Phenoseal and 1/4# cello-flake/sk (Yield = 2.11 cu.ft./sk, Weight = 12.1 #/gal.). Tail - 100 sx (139cu.ft.) of "Type III" with 1/4# cello-flake/sk (Yield = 1.4 cu.ft./sk, Weight = 14.5#/gal.). **NO EXCESS IN EITHER SLURRY PUMP AS WRITTEN** Total volume = 1,512 cu.ft. Bump Plug to 1,500 psi. Notify engineering if cement is not circulated to surface.

3. PRODUCTION CASING: 10 bbl Gelled Water space. Lead: 85sx ($208ft^3$) of Premium Light HS + 1% FL-52 + .2% CD-32, 3 #/sk CSE + 1/4 #/sk cello-flake+ 5 #/sk LCM-1. (Yield = 2.61 cu.ft./sk, Weight = 11.6 #/gal:). Tail: 110 sx (234 ft^3) of Premium Light HS + 1% FL-52 + .2% CD-32, 3 #/sk CSE, ¼ #/sk cello flake and 5 #/sk LCM-1. (Yield = 2.13 ft^3/sk, Weight = 12.3 #/gal.). Displace cement at a minimum of 8 BPM. **NO EXCESS IN EITHER SLURRY PUMP AS WRITTEN**. Should cover 100 ft into intermediate casing. Total volume $443ft^3$. WOC 12 hours.

**** NOTE: Well must TD in Lot 9 (See Staking Plat).**

Gary Sizemore
Sr.Staff Drilling Engineer

Error! Objects cannot be created from editing field codes.