Form 3160-5
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: November 30, 2000

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 reverse side.

5. Lease Serial No.
NMSF - 078513

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
ARNAUD A 2S

2. Name of Operator
BP AMERICA PRODUCTION COMPANY
Contact: CHERRY HLAVA
E-Mail: hlavacl@bp.com

9. API Well No.
30-045-31432

3a. Address
P.O. BOX 3092
HOUSTON, TX 77253

3b. Phone No. (include area code)
Ph: 281.366.4081
Fx: 281.366.0700

10. Field and Pool, or Exploratory
BASIN FRUITLAND COAL

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 17 T32N R9W SENW 2065FNL 1670FWL
36.59200 N Lat, 107.48400 W Lon

11. County or Parish, and State
SAN JUAN COUNTY, NM

12. CHECK 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 Change to Original A PD
	☐ 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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

OK w/Chip 6/30/03

CHANGE TO 7" CASING DEPTH; AIR DRILL & UNDER REAM TO 12" DIAMETER.

BP America production Company made application to drill the above mentioned well on 3/04/03. Approval was granted 4/15/03. We respectfully request to change our drilling plan as per the following:

We request to change the 7" csg depth from 3877' to 3300'. This will change the lead slurry from 280 sxs cement to 230 sxs cement.

It is our intent to drill into the Pictured Cliffs and under ream the Fruitland Coal to the base of the lowest coal seam. At TD & prior to completion of the Fruitland Coal interval, the operator will FAX or e-mail a copy of the mud log covering the lower basal Fruitland coal seam and PC formation

JUL 2003
RECEIVED
OIL CONS. DIV.
DIST. 3

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #23714 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington

Name *(Printed/Typed)* CHERRY HLAVA — Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission) — Date 06/26/2003

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Jim Lovato — Title Acting AFM — Date 6/30/03

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 BLM-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.

** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL **

NMOCD

Additional data for EC transaction #23714 that would not fit on the form

32. Additional remarks, continued

to the FFO-PMT geologist (Chip Harraden) We will also run a chromatograph to provide gas analysis of FC & PC formations.

If you have any technical questions please call Dan Crosby @ 281-366-0769.

DRILLING AND COMPLETION PROGRAM

Prospect Name: Arnaud A
Lease:
6-26-03
Well No: 2S
Surface Location: Section 17F, T32N, R9W; 2065' FNL, 1670' FWL
County: San Juan
State: New Mexico
Date: February 20, 2003
Field: Basin Fruitland Coal

OBJECTIVE: Drill to a TD of 3877' md - topset FT with 7" casing and air drill the Fruitland Coal interval.

METHOD OF DRILLING

TYPE OF TOOLS	DEPTH OF DRILLING
Rotary	0 – 3877' MD, 3889' KB

LOG PROGRAM

TYPE	DEPTH INVERAL
Mud log & gas chromatograph	3000 - 3750

REMARKS:
At TD and prior to completion of the Fruitland coal interval, the operator will FAX or email a copy of the mud log covering the lower basal Fruitland coal seam and Pictured Cliffs Formation to the FFO-PMT geologist (Chip Harraden @ 505-599- 8997 or chip_harraden@nm.blm.gov).

APPROXIMATE DEPTHS OF GEOLOGICAL MARKER

Estimated GL: 6872 Estimated KB: 6884

MARKER		SUBSEA	MEAS. DEPTH
Ojo Alamo		4737	2135
Kirtland		4599	2273
Fruitland		3685	3187
Fruitland Coal	*#	3532	3340
Pictured Cliffs	*	3143	3729
TOTAL DEPTH		2995	3877

Probable completion interval * Possible Pay

SPECIAL TESTS

TYPE
None

REMARKS: **Obtain reservoir pressures by individual coal seam before starting production.**

DRILL CUTTING SAMPLES		DRILLING TIME	
FREQUENCY	DEPTH	FREQUENCY	DEPTH
none	none	Geolograph	0-3877

MUD PROGRAM:

Approx. Interval			Type Mud	Weight, #/ga	Vis, sec/qt	W/L cc's/30 min	Other Specification
0	- 120		Spud	8.6-9.2			
120	- 3300	(1)	Water/LSND	8.6-9.2		<6	
3300	- 3877		Gas/Air/N2/Mist	Volume sufficient to maintain a stable and clean wellbore			

REMARKS:
(1) The hole will require sweeps to keep unloaded while fresh water drilling. Let hole conditions dictate frequency.

CASING PROGRAM: (Normally, tubular goods allocation letter specifies casing sizes to be used. Hole sizes will be governed by Contract)

Casing String	Estimated Depth	Casing Size	Grade	Weight	Hole Size	Landing Pt, Cmt, Etc.
Surface/Conductor	120	9 5/8"			12.5"	1
Intermediate	~~3300~~ 3877	7"			8.75"	1
Production						

REMARKS:
(1) Circulate Cement to Surface

CORING PROGRAM:
None

COMPLETION PROGRAM:
Rigless, Single Stage Limited Entry Hydraulic Frac

GENERAL REMARKS:
Notify BLM/NMOCD 24 hours prior to Spud, BOP testing, and Casing and Cementing.

Form 46 Reviewed by: Logging program reviewed by: N/A

6-26-03

BP America Production Company
BOP Pressure Testing Requirements

Well Name: Arnaud A 2S
County: San Juan **State:** New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	2135		
Kirtland	2273		
Fruitland Coal	3340	500	0
PC	3729	1300	480
Lewis Shale			
Cliff House			
Menefee Shale			
Point Lookout			
Mancos			
Dakota			

** Note: Determined using the following formula: ABHP – (.22*TVD) = ASP

Requested BOP Pressure Test Exception: 850 psi

Cementing Program

6-26-03

Well Name:	Arnaud A 2S	Field:	Basin Fruitland Coal
Location:	Sec 17 - 32N - 9W, 2065' FNL, 1670' FWL	API No.	
County:	San Juan	Well Flac	
State:	New Mexico	Formation:	Fruitland Coal
		KB Elev (est)	6884
		GL Elev. (est)	6872

Casing Program:

Casing String	Est. Depth (ft.)	Hole Size (in.)	Casing Size (in.)	Thread	TOC (ft.)	Stage Tool Or TOL (ft.)	Cmt Cir. Out (bbl.)
Surface	120	12.5	9.625	ST&C	Surface	NA	
Production -	3300	8.75	7	LT&C	Surface	NA	

Casing Properties: (No Safety Factor Included)

Casing String	Size (in.)	Weight (lb/ft)	Grade	Burst (psi.)	Collapse (psi.)	Joint St. (1000 lbs.)	Capacity (bbl/ft.)	Drift (in.)
Surface	9.625	32	H-40	~~3370~~ 2270	1400	254	0.0787	8.845
Production -	7	20	K-55	3740	2270	234	0.0405	6.456

Mud Program

Apx. Interval (ft.)	Mud Type	Mud Weight	Recommended Mud Properties Prio Cementing:	
			PV	<20
			YP	<10
0 - SCP	Water/Spud	8.6-9.2	Fluid Loss	<6
SCP - TD	Water/LSND	NA		
SCP - TD	Gas/Air/N2/Mist	Air		

Cementing Program:

	Surface	Production
Excess %, Lead	100	40
Excess %, Tail	NA	40
BHST (est deg. F)	75	120
Special Instructions	1,6,7	2,4,6

1. Do not wash pumps and lines.
2. Wash pumps and lines.
3. Reverse out
4. Run Blend Test on Cement
5. Record Rate, Pressure, and Density on 3.5" disk
6. Confirm densitometer with pressurized mud scales
7. 1" cement to surface if cement is not circulated.
8. If cement is not circulated to surface, run temp. survey 10-12 hr. after landing plug.

Notes:

*Do not wash up on top of plug. Wash lines before displacing production cement job to minmize drillout.

Surface:

Preflush	20 bbl.	FreshWater	
Slurry 1	80 sx Class G Cement		83 cuft
TOC@Surface	+ 2% CaCl2 (accelerator)		
	0.25 #/sk Cellophane Flake (lost circulation additive)		0.347 cuft/ft OH
	0.1% D46 antifoam		

93

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	15.8	1.16	4.95

Casing Equipment: 9-5/8", 8R, ST&C
1 Guide Shoe
1 Top Wooden Plug
1 Autofill insert float valve
Centralizers, 1 per joint except top joint
1 Stop Ring
1 Thread Lock Compound

Cementing Program

Production:

	Fresh Water	10 bbl	CW100	
				600
	Lead	230 sx	Class "G" Cement	585 cuft
	Slurry 1		+ 3% D79 extender	
	TOC@Surface		+ 2% S1 Calcium Chloride	
			+1/4 #/sk. Cellophane Flake	
			+ 0.1% D46 antifoam	114
	Tail	90 sx	50/50 Class "G"/Poz	105 cuft
	Slurry 2		+ 2% gel (extender)	
	500 ft fill		0.1% D46 antifoam	0.1503 cuft/ft OH
			+1/4 #/sk. Cellophane Flake	0.1746 cuft/ft csg ann
			+ 2% CaCl2 (accelerator)	

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	11.4	2.61	17.77
Slurry 2	13.5	1.27	5.72

714 ft3

Casing Equipment: 7", 8R, ST&C

1 Float Shoe (autofill with minimal LCM in mud)
1 Float Collar (autofill with minimal LCM in mud)
1 Top Rubber Plug
1 Thread Lock Compound