

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

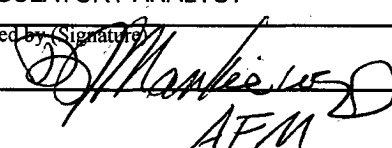
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SF - 078387A
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator BP AMERICA PRODUCTION COMPANY		7. If Unit or CA Agreement, Name and No.
Contact: CHERRY HLAVA E-Mail: hlavacl@bp.com		8. Lease Name and Well No. KERNAGHAN B 5S
3a. Address P.O. BOX 3092 HOUSTON, TX 77253-3092	3b. Phone No. (include area code) Ph: 281.366.4081 Fx: 281.366.0700	9. API Well No. 3004532180
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWSE 1700FSL 1805FEL 36.52000 N Lat, 107.40700 W Lon At proposed prod. zone		10. Field and Pool, or Exploratory BASIN FRUITLAND COAL
14. Distance in miles and direction from nearest town or post office* 27 MILES N/E FROM AZTEC, NM		11. Sec., T., R., M., or Blk. and Survey or Area J Sec 28 T31N R8W Mer NMP
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1700'	16. No. of Acres in Lease 1280.00	12. County or Parish SAN JUAN
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 75'	19. Proposed Depth 3325 MD	13. State NM
21. Elevations (Show whether DF, KB, RT, GL, etc.) 6282 GL	22. Approximate date work will start 04/01/2004	17. Spacing Unit dedicated to this well 320.00 E/2
		20. BLM/BIA Bond No. on file WY2924
		23. Estimated duration 7 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) CHERRY HLAVA	Date 02/12/2004
Title REGULATORY ANALYST		
Approved by (Signature) 	Name (Printed/Typed) AFM	Date 10/24/05
Title AFM	Office FTO	

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

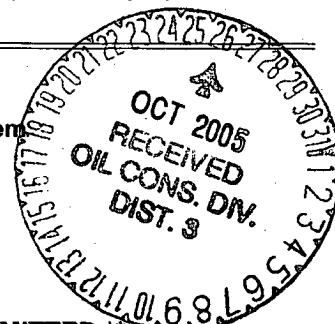
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #27850 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington

Drilling operations authorized are
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4



** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

NMOCD

☐ AMENDED REPORT

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-045-32180		2 Pool Code 71629		3 Pool Name Basin Fruitland Coal	
4 Property Code 766		5 Property Name Kernaghan B			6 Well Number # 5S
7 OGRID No. 000778		8 Operator Name BP AMERICA PRODUCTION COMPANY			9 Elevation 6282

¹⁰ Surface Location

UL or Lot No.	Section	Township	Range	Lot Lin	Feet from the	North/South line	Feet from the	East/West line	County
J	28	31 N	8 W		1700	SOUTH	1805	EAST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

7	UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
12	Dedicated Acres	13	Joint or Infill	14	Consolidation Code	15 Order No.				
	320									

**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION**

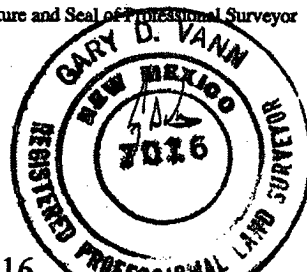
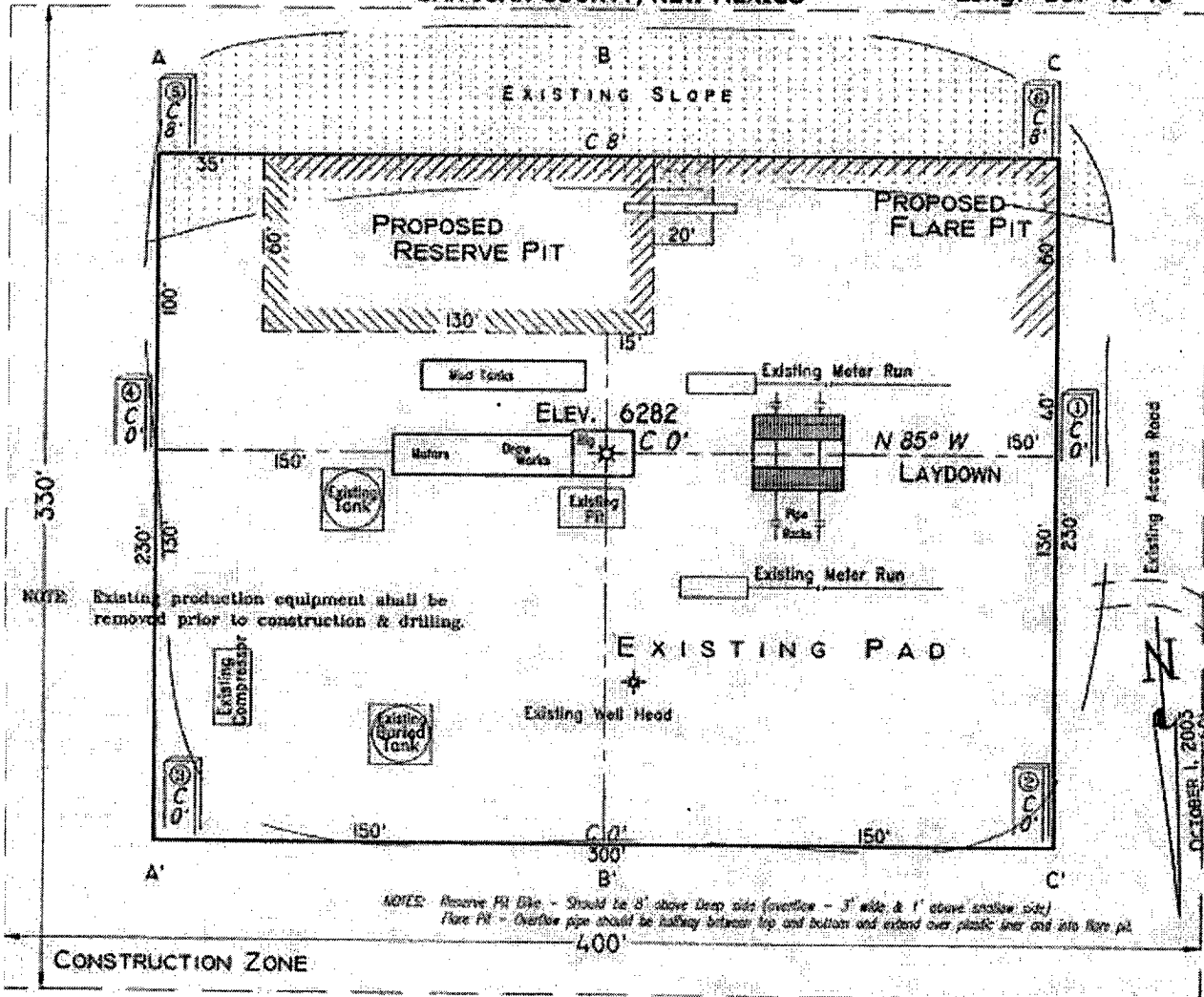
16	5225(R)	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature <u>Cherry Hlava</u> Printed Name <u>Cherry Hlava</u> Title <u>Regulatory Analyst</u> Date <u>1-21-04</u>
5211(R)	28	18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey <u>October 1, 2003</u> Signature and Seal of Professional Surveyor  Certificate Number <u>7016</u>
	5222(R)	

Diagram details:
- A well location is marked with a circle and crosshair.
- A horizontal dimension line from the well to the right boundary is labeled 1805'.
- A vertical dimension line from the well to the bottom boundary is labeled 1700'.

PAD LAYOUT PLAN & PROFILE
BP AMERICA PRODUCTION COMPANY
 Kernaghan B # 5S
 1700' F/SL 1805' F/EL
 SEC. 28, T31N, R8W, N.M.P.M.
 SAN JUAN COUNTY, NEW MEXICO

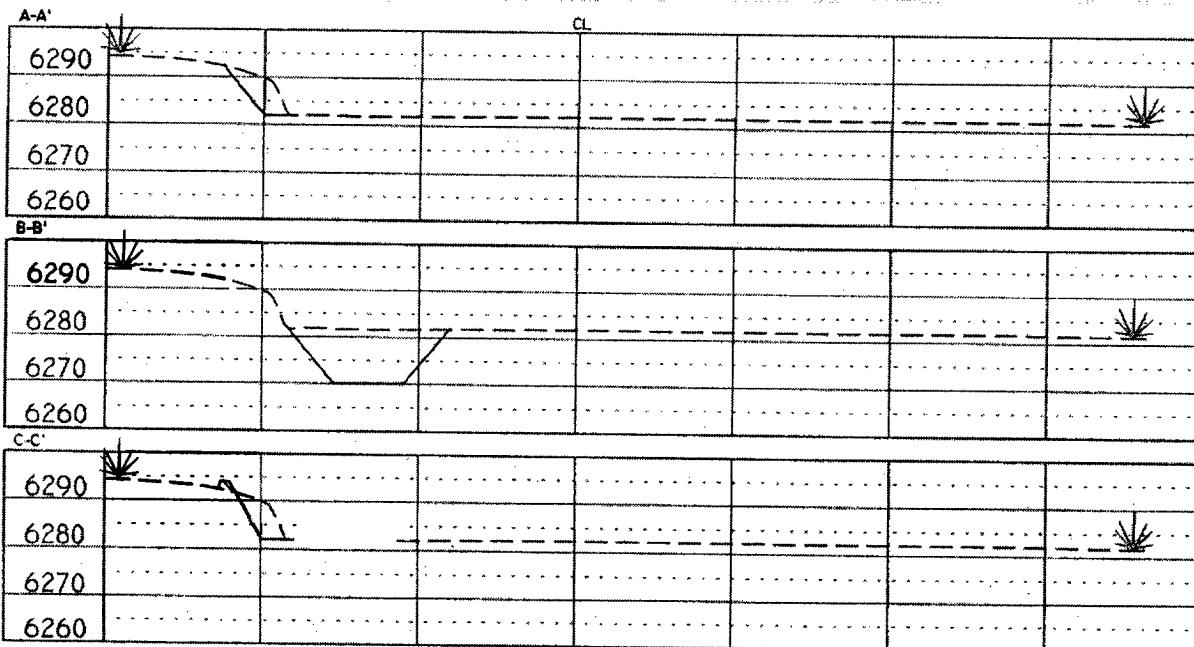
Lat: 36°51'58"
 Long: 107°40'40"



NOTE: Reserve Pit Elevation - Should be 8' above Deep side (overflow - 3' wide & 1' above shallow side)
 Flare Pit - Overflow pipe should be halfway between top and bottom and extend over plastic liner and into flare pit.

Area of Construction Zone - 330' x 620' or 103 acres, more or less.

SCALE: 1"=60'-HORIZ.
 1"=20'-VERT.



NOTE: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least two (2) working days prior to construction.

Cuts and fills shown are approximate - final finished elevation is to be adjusted so earthwork will balance. Corner stakes are approximate and do not include additional areas needed for sideslopes and drainages. Final Pad Dimensions are to be verified by Contractor.

VANN SURVEYS
 P. O. Box 1306
 Farmington, NM

DRILLING AND COMPLETION PROGRAM

Prospect Name: Kernaghan B
Lease:

Well No: 5S
Surface Location: Section 28 J, T31N, R8W; 1700
 FSL, 1805 FEL
Field: Basin Fruitland Coal

County: San Juan
State: New Mexico
Date: January 19, 2004

OBJECTIVE: Drill to a TD of 3325' kb - topset FT with 7" casing and air drill the Fruitland Coal interval.

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
TYPE OF TOOLS	DEPTH OF DRILLING	Estimated GL: 6282		Estimated KB: 6295	
Rotary	0 - 3312' MD, 3325' KB	MARKER		SUBSEA	MEAS. DEPTH
LOG PROGRAM TYPE Mud log & gas chromatograph DEPTH INVERAL 3000' - 3325' KB		Ojo Alamo		4326	1969
		Kirtland		4226	2069
		Fruitland		3606	2689
		Fruitland Coal	*#	3286	3009
		Pictured Cliffs	*	3120	3175
REMARKS: At TD and prior to completion of the Fruitland coal interval, the operator will FAX or email a copy of the mud log and gas chromatograph analysis 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) and to the BP geologist at hilkewdn@bp.com, fax (281) 366-7099.		TOTAL DEPTH 2970 3325 # Probable completion interval * Possible Pay			
SPECIAL TESTS TYPE None REMARKS:		DRILL CUTTING SAMPLES FREQUENCY DEPTH none none		DRILLING TIME FREQUENCY DEPTH Geolograph 0-3325	

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 - 3000 (1)	Water/LSND	8.6-9.2		<6	
3000 - 3325	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"	H-40, 8 RND	32.3	12.5"	1
Intermediate	3000	7"	J-55, 8 RND	20.0	8.75"	1
Production	2900 - 3325	5 1/2"	J-55, 8RND	15.5	11.0"	2

REMARKS:

(1) Circulate Cement to Surface

(2) Under-ream open-hole section from 6.25" to 11.0".

CORING PROGRAM:

None

COMPLETION PROGRAM:

No frac, open-hole completion. Run 2-3/8" reduced collar tubing to a depth of 3275' KB.

GENERAL REMARKS:

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

BOP Test Pressure

BP America Production Company BOP Pressure Testing Requirements

Well Name: Kernaghan B
County: San Juan

5S
State: New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo			
Kirtland			
Fruitland Coal		200	0
PC		250	0
Lewis Shale			
Cliff House			
Menefee Shale			
Point Lookout			
Mancos			
Dakota			

** Note: Determined using the following formula: $ABHP - (.22 \times TVD) = ASP$

Requested BOP Pressure Test Exception: 850 psi

**SAN JUAN BASIN
Fruitland Formation
Pressure Control Equipment**

Background

The objective Fruitland Coal formation maximum surface pressure is anticipated to be less than 1000 psi, based on shut-in surface pressures from adjacent wells. Pressure control equipment working pressure minimum requirements are therefore 2000 psi. Equipment to be used will conform to API RP-53 (Figure 2.C.2) for a 2000 psi system per Federal Onshore Order No. 2. Due to available conventional equipment within the area, 3000 psi rated pressure control equipment will typically be utilized in a double ram type arrangement. Regional drilling rights to be utilized have substructure height limitations which exclude the use of annular preventers; therefore a rotating head will be installed above these rams. This pressure control equipment will be utilized for conventional drilling below conductor to total depth in the Basin Dakota. No abnormal temperature, pressure, or H₂S anticipated.

Equipment Specification

Interval

BOP Equipment

Below conductor casing to total depth

11" nominal or 7 1/16", 3000 psi
double ram preventer with rotating
head.

All ram type preventers and related control equipment will be hydraulically tested to 250 psi (low pressure) and 2000 psi (high pressure), upon installation, following any repairs or equipment replacements, or at 30 day intervals. Accessories to BOP equipment will include kelly cock, upper kelly cock with a handle available, floor safety valves and choke manifold which will also be tested to equivalent pressure.

FEDERAL CEMENTING REQUIREMENTS

1. All permeable zones containing fresh water and other usable water containing 10,000 PPM or less total dissolved solids will be isolated and protected from contamination by cement circulated in place for the protection of permeable zones per the NTL-FRA 90-1 Section III A.
2. The hole size will be no smaller than 1 1/2" larger diameter than the casing O.D. across all water zones.
3. An adequate spacer will be pumped ahead of the cement slurry to help prevent mud contamination of the cement.
4. An adequate number of casing centralizers will be run through usable water zones to ensure that the casing is centralized through these zones. The adequate number of centralizers to use will be determined by API SPEC 10D.
5. Centralizers will impart a swirling action around the casing and will be used just below and into the base of the lowest usable water zone.
6. A chronological log will be kept recording the pump and slurry information and will be sent to the BLM with the subsequent sundry.

Cementing Program

Well Name: **Kernaghan B 5S**
 Location: **Sec 28 - 31N - 08W, 1700' FSL, 1805" FEL**
 County: **San Juan**
 State: **New Mexico**

Field: **Basin Fruitland Coal**
 API No.
 Well Fiac
 Formation: **Fruitland Coal**
 KB Elev (est) **6295**
 GL Elev. (est) **6282**

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	
Intermediate	3000	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		1400	254	0.0787
Production -		7	20 K-55	3740		2270	234	0.0405

Mud Program

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

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 minimize drillout.

Surface:

Preflush 20 bbl. FreshWater

Slurry 1 70 sx Class C Cement 83 cuft
 TOC@Surface + 2% CaCl2 (accelerator) 0.347 cuft/ft OH

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	15.2	1.27	5.8

Casing Equipment: 9-5/8", 8R, ST&C
 1 Guide Shoe

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**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.FORM APPROVED
OMB NO. 1004-0135
Expires: November 30, 20005. Lease Serial No.
NMSF078387A

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other8. Well Name and No.
KERNAGHAN B 5S2. Name of Operator
BP AMERICA PRODUCTION COContact: CHERRY HLAVA
E-Mail: hlavac@bp.com9. API Well No.
30-045-32180-00-X13a. Address
P. O. BOX 3092
HOUSTON, TX 772533b. Phone No. (include area code)
Ph: 281.366.4081
Fx: 281.366.070010. Field and Pool, or Exploratory
BASIN FRUITLAND COAL

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 28 T31N R8W NWSE 1700FSL 1805FEL
36.52000 N Lat, 107.40700 W Lon11. 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			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

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 recompleat 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 recompleat 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.)

Original APD was submitted on 2/12/04 (EC#27850)

Please see attached the revised cement program using the new type C slurry. The Schlumberger lab test report was sent with the original APD.

PRE-SET ALTERNATE TO NEW SLURRY:

Drilling of the surface hole may be with air/air mist in lieu of drilling mud and the surface casing to be cemented with 81 CU/FT TYPE I-II, 20% FLYASH, 14.5 PPG, 7.41 GAL/SK, 1.61 CF/SK YIELD, 80 DEG BHST READY MIX CMT.



14. I hereby certify that the foregoing is true and correct.

**Electronic Submission #28003 verified by the BLM Well Information System
For BP AMERICA PRODUCTION CO, sent to the Farmington
Committed to AFMSS for processing by ADRIENNE GARCIA on 02/24/2004 (04AXG1936SE)**

Name (Printed/Typed) CHERRY HLAVA

Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission)

Date 02/17/2004

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Title

Date

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

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.

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

NMOC

Cementing Program

1 Top Wooden Plug
 1 Autofill insert float valve
 Centralizers, 1 per joint except top joint
 1 Stop Ring
 1 Thread Lock Compound

Production:

Fresh Water 10 bbl CW100

Lead	200 sx Class "G" Cement	522 cuft
Slurry 1	+ 3% D79 extender	
TOC@Surface	+ 2% S1 Calcium Chloride	
	+1/4 #/sk. Cellophane Flake	
	+ 0.1% D46 antifoam	
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 (ft ³ /sk)	Water (gal/sk)
Slurry 1	11.4	2.61	17.77
Slurry 2	13.5	1.27	5.72

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

BP American Production Company

Well Control Equipment Schematic

