Form 3160-3 (August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

5.	Lease Serial No.
	SF - 078385

APPLICATION FOR PERMIT	TO DRILL OR REENTER	6. If Indian, Allottee or Tribe Name
Ta. Type of Work: ☑ DRILL ☐ REENTER		7. If Unit or CA Agreement, Name and No.
1b. Type of Well: ☐ Oil Well.     Gas Well ☐ Oti	her Single Zone	Lease Name and Well No.     FLORANCE P 3S
2. Name of Operator Contact: BP AMERICA PRODUCTION COMPANY	CHERRY HLAVA E-Mail: hlavacl@bp.com	9. API Well No. 3004532427
3a. Address P.O. BOX 3092 HOUSTON, TX 77253-3092	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 (Report location clearly and in accord	ance with any State requirements.	11. Sec., T., R., M., or Blk. and Survey or Area
At surface NESE 1745FSL 785FEL 3 At proposed prod. zone	6.76556 N Lat, 107.63889 W Lon	Sec 35 T30N R08W Mer NMP
<ol> <li>Distance in miles and direction from nearest town or post 22 MILES NORTH/EAST FROM BLOOMFIELD</li> </ol>	, NM O O O O O	12. County or Parish 13. State SAN JUAN NM
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 785'	16. No. of Acres in Lease	17. Spacing Unit dedicated to this well 320.00
<ol> <li>Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.</li> <li>75'</li> </ol>	19. Proposed Depth 3051 MD	20. BLM/BIA Bond No. on file WY2924
21. Elevations (Show whether DF, KB, RT, GL, etc. 6133 GL	22. Approximate date work will start 10/15/2004	23. Estimated duration 5 DAYS
	24. Attachments	
he following, completed in accordance with the requirements	of Onshore Oil and Gas Order No. 1, shall be attached to	this form:
<ul> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest Sys SUPO shall be filed with the appropriate Forest Service On the Company of the Property of the Company of the Com</li></ul>	4. Bond to cover the operation Item 20 above). stem Lands, the 5. Operator certification	ons unless covered by an existing bond on file (see
25. Signature (Electronic Submission)	Name (Printed/Typed): CHERRY HLAVA	Date 06/21/2004
Title REGULATORY ANALYST	1	
Approved by (Signature)	Name (Printed/Typed)	Date ~
Hill un toll		8-17-0

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

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 #32186 verified by the BLM Well Information System For BP AMERICA PRODUCTION COMPANY, sent to the Farmington

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

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"."

District I PO Box 1980, Hobbs NM 88241-1980 District II PO Drawer KK, Artesia, NM 87211-0719 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV

PO Box 2088, Santa Fe, NM 87504-2088

# State of New Mexico Energy, Minerals & Natural Resources Department

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

Form C-102 Revised February 21, 1994 Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies Fee Lease - 3 Copies

AMENDED REPORT

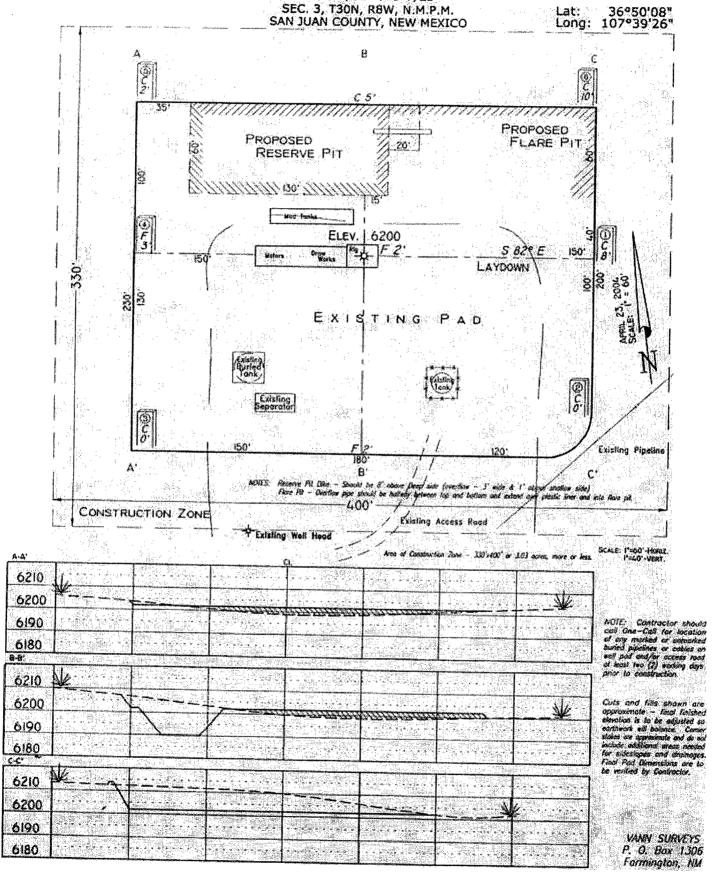
#### WELL LOCATION AND ACREAGE DEDICATION PLAT 1 Pool Code 71629 Well Number #3S Florance P OGRID No Operator Name Elevation 000778 **BP AMERICA PRODUCTION COMPANY** 6133 Surface Location North/South line Township Range Feet from the Feet from the Bast/West line County III. or Lot No. Lot Idn Section SAN JUAN I 35 30 N 8 W 1745 SOUTH 785 EAST <sup>11</sup> Bottom Hole Location If Different From Surface Bast/West line Lot Idn Peet from the County UL or lot no. Section Township Range Feet from the 12 Dedicated Acres Igint or Infill Consolidation Code is 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 51990 "OPERATOR CERTIFICATION 16 hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. 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. April 23, 2004 - 785' Signature and Seal of Professional Surveyor 2634 (R)

BLM Record

'Office		t New M		Form C-103
District I	Energy, Mineral	ls and Nat	ural Resources	March 4, 2004 WELL API NO.
1625 N. French Dr., Hobbs, NM 88240 <u>District II</u>	OIL CONSER	NATION	I DIVISION	WEBETH TIVE.
1301 W. Grand Ave., Artesia, NM 88210 District III	1220 Sou			5. Indicate Type of Lease
1000 Rio Brazos Rd., Aztec, NM 87410 District IV		Fe, NM 8		STATE FEE 6. State Oil & Gas Lease No.
1220 S. St. Francis Dr., Santa Fe, NM 87505				0. State On & Gas Lease IVO.
SUNDRY NOTICE (DO NOT USE THIS FORM FOR PROPOSAL	ES AND REPORTS			7. Lease Name or Unit Agreement Name
DIFFERENT RESERVOIR. USE "APPLICA" PROPOSALS.)				Florance P (Federal Well SF – 078385)
1. Type of Well: Oil Well Gas Well X Of	ther			8. Well Number 3 S
2. Name of Operator BP AMERICA PRODUCTION CO	)			9. OGRID Number
3. Address of Operator				10. Pool name or Wildcat
P.O. BOX 3092 HOUSTON, TX 7	7079-2064			Basin Fruitland Coal
4. Well Location				
Unit Letter I: 1745	_feet from theSO	<u>UTH</u>	line and _785	feet from the EAST line
Section 35	Township 301		Range 08W	NMPM SAN JUAN County
· 中国 (1985年)	11. Elevation (Show )	6133	GR	
Pit or Below-grade Tank Application (For pi				
			-	0'-200' Distance from nearest fresh water well >1000'
Distance from nearest surface water > 1000'	-			Rng08W;
1845' feet from the South line and 770 f	eet from the <u>East</u> line	PLEASE SEI	ATTACHED PAD	
10 61 1				D O.1 . D
NOTICE OF INTE		indicate N		Report or Other Data SEQUENT REPORT OF:
	PLUG AND ABANDO	N 🗆	REMEDIAL WOR	
TEMPORARILY ABANDON	CHANGE PLANS		COMMENCE DR	ILLING OPNS. PLUG AND ABANDONMENT
	MULTIPLE COMPLETION		CASING TEST A CEMENT JOB	ND 🗆
OTHER: Lined Drilling PIT PERMIT		X	OTHER:	
of starting any proposed work or recompletion.	). SEE RULE 1103.	For Multip	le Completions: A	d give pertinent dates, including estimated date ttach wellbore diagram of proposed completion
Please reference BP America's San J Construction Plan issued date of 04/1				
Constitution I fail issued date of 04/1	.5/2004. TH WIII BC	ciosca acco	rung to closure p	an on me
I hereby certify that the information abo	ove is true and compl	ete to the b	est of my knowledg	e and belief. I further certify that any pit or below-
				or an (attached) alternative OCD-approved plan .
SIGNATURE		_TITLE_R	egulatory Analyst	DATE 6/18/04
Type or print name Cherry Hlava	E-m	ail address	:	Telephone No. 281-366-4081
(This space for State use)	A/ 1			
APPPROVED BY	11 11/	TITLE	IT OIL & GAS INS	PECTOR, DIST. 202 DALLIG 2 0 2004
				DAILE C CLOUT

### PAD LAYOUT PLAN & PROFILE BP AMERICA PRODUCTION COMPANY

Florance G #3S 1245' F/SL 975' F/EL SEC. 3, T30N, R8W, N.M.P.M. SAN JUAN COUNTY, NEW MEXICO



### **BP AMERICA PRODUCTION COMPANY DRILLING AND COMPLETION PROGRAM**

Prospect Name: Florance P

Lease:

Well No: 3S

Surface Location: Section 35I, T30N, R08W; 1745'

FSL, 785' FEL Field: Basin Fruitland Coal

County: San Juan State: New Mexico Date: June 14, 2004

OBJECTIVE: Drill to a TD	of 3051' k	b set 7" casing	and perf and frac the	Fruitland Coal inter	val.			
MET	HOD OF	DRILLING		APPROXIM	ATE DEPT	THS OF	GEOLOGIC	AL MARKER
TYPE OF TOOLS		<b>DEPTH OF</b>	DRILLING	Estimated	GL: 613	3	Estimated	KB: 6146
Rotary		0 - 3051' K	В	MARKER	₹	S	UBSEA	MEAS. DEPTH
	OG PRO			Ojo Alamo Kirtland Fruitland			4257 4080 3492	1889 2066 2654
TYPE OPEN HOLE		DEPTH INVE	FRAL	Fruitland Coa Pictured Cliffs			3379 3245	2767 2901
Run1: Run Platform Expre- (array induction, 3-detector Density, compensated neu	r Litho-	TD up to min	imum charge.					
caliper, microlog, SP and g ray). (see Remarks section below).								
REMARKS: - Primary presentation is E	Ruik Densi	ity Presentatio	on (5"=100') with					
<1.75 g/cc shaded as coal. interval only. Three final p Customer LAS file to Denn	. High res	solution pass ennis Hilkewic	across the Fruitland th in Houston.	d				
hilkewdn@bp.com				TOTAL DEPI	гн		3095	3051
				# Probable co	ompletion int	erval	* Possible	Pay
S	PECIAL	TESTS		DRILL CUT	TING SAN	<b>IPLES</b>	DRIL	LING TIME
TYPE				FREQUENC	CY DEPT	Ή	FREQUEN	ICY DEPTH
l None				Inone	none		Geolograph	0-3051
None REMARKS:	<del></del>			none	none		Geolograph	0-3051
None REMARKS:				none	none		Geolograph	0-3051
REMARKS: MUD PROGRAM:		1 T Nad	Wolght #			- /20 ····		
REMARKS:  MUD PROGRAM: Approx. Interval		Type Mud				's/30 mi		0-3051 Specification
REMARKS: MUD PROGRAM:	(1)	Type Mud Spud Water/LSN	8.6-9.2			's/30 mi		
MUD PROGRAM: Approx. Interval 0 - 120 120 - 3051 REMARKS:		Spud Water/LSN	8.6-9.2 ND 8.6-9.2	ga   Vis, sec/qt	<b>W</b> /L cc <6		n Other	Specification
REMARKS:  MUD PROGRAM: Approx. Interval 0 - 120 120 - 3051 REMARKS: (1) The hole will require	sweeps	Spud Water/LSN to keep unl	8.6-9.2 ND 8.6-9.2 oaded while fresh	ga   Vis, sec/qt	<b>W/L cc</b> <6 Let hole co	nditions	n Other s	Specification
REMARKS:  MUD PROGRAM: Approx. Interval 0 - 120 120 - 3051 REMARKS: (1) The hole will require CASING PROGRAM: (1)	sweeps Normally, to	Spud Water/LSN to keep unlubular goods a	8.6-9.2 ND 8.6-9.2 oaded while fresh	ga Vis, sec/qt  n water drilling. es casing sizes to be	W/L cc <6 Let hole co	nditions sizes will b	n Other s	Specification  Jency. Contract)
REMARKS:  MUD PROGRAM: Approx. Interval 0 - 120 120 - 3051 REMARKS: (1) The hole will require CASING PROGRAM: (I) Casing String	sweeps Normally, to	Spud Water/LSN to keep unlubular goods a ted Depth	8.6-9.2 ND 8.6-9.2 coaded while fresh llocation letter specific Casing Size	y Vis, sec/qt  water drilling. es casing sizes to be	W/L cc <6 Let hole co sused. Holes Weight	nditions sizes will b <b>Hole S</b>	n Other s dictate freque governed by ize Landi	Specification
REMARKS:  MUD PROGRAM: Approx. Interval  0 - 120 120 - 3051  REMARKS: (1) The hole will require  CASING PROGRAM: (I) Casing String  Surface/Conductor	sweeps Normally, to	Spud Water/LSN to keep unlubular goods a ted Depth 120	8.6-9.2 ND 8.6-9.2 coaded while fresh llocation letter specific Casing Size 8-5/8"	y Vis, sec/qt  n water drilling. es casing sizes to be Grade H-40, 8 RND	W/L cc <6 Let hole co e used. Hole s Weight 20.0	nditions sizes will b <b>Hole S</b>	n Other s  dictate freque e governed by ize Landi 2.5" 1	Specification  Jency. Contract)
REMARKS:  MUD PROGRAM: Approx. Interval  0 - 120 120 - 3051  REMARKS: (1) The hole will require  CASING PROGRAM: (I) Casing String  Surface/Conductor Intermediate  REMARKS:	sweeps Normally, to Estima	Spud Water/LSN to keep unlubular goods a ted Depth	8.6-9.2 ND 8.6-9.2 coaded while fresh llocation letter specific Casing Size	y Vis, sec/qt  water drilling. es casing sizes to be	W/L cc <6 Let hole co sused. Holes Weight	nditions sizes will b <b>Hole S</b>	n Other s  dictate freque governed by ize Landi 2.5" 1	Specification  Jency. Contract)
REMARKS:  MUD PROGRAM: Approx. Interval  0 - 120 120 - 3051  REMARKS: (1) The hole will require  CASING PROGRAM: (I) Casing String Surface/Conductor Intermediate  REMARKS: (1) Circulate Cement to	sweeps Normally, to Estima	Spud Water/LSN to keep unlubular goods a ted Depth 120	8.6-9.2 ND 8.6-9.2 coaded while fresh llocation letter specific Casing Size 8-5/8"	y Vis, sec/qt  n water drilling. es casing sizes to be Grade H-40, 8 RND	W/L cc <6 Let hole co e used. Hole s Weight 20.0	nditions sizes will b <b>Hole S</b>	n Other s  dictate freque e governed by ize Landi 2.5" 1	Specification  Jency. Contract)
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REMARKS:  MUD PROGRAM: Approx. Interval  0 - 120 120 - 3051  REMARKS: (1) The hole will require  CASING PROGRAM: (Casing String  Surface/Conductor Intermediate  REMARKS: (1) Circulate Cement to  CORING PROGRAM: None  COMPLETION PROGRAM	e sweeps Normally, to Estima  Surface	Spud Water/LSN to keep unlubular goods a ted Depth 120 3051	8.6-9.2 ND 8.6-9.2 oaded while fresh llocation letter specific Casing Size 8-5/8" 5-1/2"	y Vis, sec/qt  n water drilling. es casing sizes to be Grade H-40, 8 RND	W/L cc <6 Let hole co e used. Hole s Weight 20.0	nditions sizes will b <b>Hole S</b>	n Other s  dictate freque e governed by ize Landi 2.5" 1	Specification  Jency. Contract)
REMARKS:  MUD PROGRAM: Approx. Interval  0 - 120  120 - 3051  REMARKS: (1) The hole will require  CASING PROGRAM: (Casing String  Surface/Conductor Intermediate  REMARKS: (1) Circulate Cement to  CORING PROGRAM: None  COMPLETION PROGRAM: Rigless, Single Stage Lii	e sweeps Normally, to Estima  Surface  AM: mited En	Spud Water/LSN to keep unlubular goods a ted Depth 120 3051	8.6-9.2 ND 8.6-9.2 oaded while fresh llocation letter specific Casing Size 8-5/8" 5-1/2"	y Vis, sec/qt  n water drilling. es casing sizes to be Grade H-40, 8 RND	W/L cc <6 Let hole co e used. Hole s Weight 20.0	nditions sizes will b <b>Hole S</b>	n Other s  dictate freque e governed by ize Landi 2.5" 1	Specification  Jency. Contract)
REMARKS:  MUD PROGRAM: Approx. Interval  0 - 120 120 - 3051  REMARKS: (1) The hole will require  CASING PROGRAM: (Casing String  Surface/Conductor Intermediate  REMARKS: (1) Circulate Cement to  CORING PROGRAM: None  COMPLETION PROGRAM: Rigless, Single Stage Lii  GENERAL REMARKS:	e sweeps Normally, to Estima  Surface  AM: mited En	Spud Water/LSN  to keep unlubular goods a ted Depth 120 3051	8.6-9.2 ND 8.6-9.2 coaded while fresh llocation letter specific Casing Size 8-5/8" 5-1/2"	water drilling. es casing sizes to be Grade H-40, 8 RND J-55, 8 RND	W/L cc <6 Let hole co used. Hole Weight 20.0 15.5	nditions sizes will b <b>Hole S</b>	n Other s  dictate freque e governed by ize Landi 2.5" 1	Specification  Jency. Contract)
MUD PROGRAM: Approx. Interval  0 - 120  120 - 3051  REMARKS: (1) The hole will require CASING PROGRAM: (Casing String Surface/Conductor Intermediate REMARKS: (1) Circulate Cement to  CORING PROGRAM: None COMPLETION PROGR Rigless, Single Stage Lin GENERAL REMARKS: Notify BLM/NMOCD 24	e sweeps Normally, to Estima  Surface  AM: mited En	Spud Water/LSN  to keep unlubular goods a ted Depth 120 3051	8.6-9.2 ND 8.6-9.2 coaded while fresh llocation letter specific Casing Size 8-5/8" 5-1/2"	ga Vis, sec/qt water drilling. es casing sizes to be Grade H-40, 8 RND J-55, 8 RND	W/L cc <6 Let hole co used. Hole s Weight 20.0 15.5 menting.	nditions sizes will b Hole S 12 8	dictate freque governed by ize   Landi 2.5"   1   1   1	Specification  Jency. Contract)
REMARKS:  MUD PROGRAM: Approx. Interval  0 - 120  120 - 3051  REMARKS: (1) The hole will require  CASING PROGRAM: (Casing String  Surface/Conductor Intermediate  REMARKS: (1) Circulate Cement to  CORING PROGRAM: None  COMPLETION PROGRAM: Rigless, Single Stage Lii  GENERAL REMARKS:	e sweeps Normally, to Estima  Surface  AM: mited En	Spud Water/LSN  to keep unlubular goods a ted Depth 120 3051  try Hydraulio	8.6-9.2 ND 8.6-9.2 coaded while fresh llocation letter specific Casing Size 8-5/8" 5-1/2"	water drilling. es casing sizes to be Grade H-40, 8 RND J-55, 8 RND	W/L cc <6 Let hole co used. Hole s Weight 20.0 15.5 menting.	nditions sizes will b Hole S 12 8.	dictate freque governed by ize   Landi 2.5"   1   1   1	Specification  Jency. Contract)
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## **BP America Production Company BOP Pressure Testing Requirements**

Well Name: Florance P 3S

County: San Juan

State: New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1889		
Kirtland	2066		
Fruitland Coal	2767	400	0
PC	2901		
Lewis Shale	Ī		
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

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.

Fruttourd Coal

#### **Equipment Specification**

#### <u>Interval</u>

#### **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.

## **Cementing Program**

Well Name: Location: County: State:	Florance P 3S Sec 35 - 30N - ( San Juan New Mexico	08W, 1745' FSI	L, 785' FEL		Field: API No. Well Flac Formation: KB Elev (est)	Basin Fro	Coal 6146	oal
					GL Elev. (est)	L	6133	
Casing Progran	n:							
Casing String	Est. Depth	Hole Size	Casing Size	Thread	TOC			
Surface	(ft.) 120	(in.) 12.5	(in.) 8 5/8	8rd	(ft.) Surface			
Production -	3051	8.75	5 1/2	8rd	Surface			
Casing Properti	ies:	(No Safety Fa	actor Included)				-	
Casing String	Size (in.)	Weight (lb/ft)	Grade					
Surface	8 5/	8 20	H-4	10				
Production -	5 1/	2 15.5	j -5	55				
lud Program								
px. Interval	Mud Type	Mud Weight		Recomme	nded Mud Prope	erties Prio C	ementing	1:
ft.)				PV	<20			
, ccp	Motor/Court	8.6-9.2		YP	<10			
) - SCP SCP - TD	Water/Spud Water/LSND	8.6-9.2		Fluid Loss	<b>~</b> 0			
			·	···	···			
Cementing Progr	ram:		0		Out desired			
xcess %, Lead			Surface 100		Production 40			
excess %, Tail			NA.		40			
BHST (est deg. F	=)		75		120			
			1,6,7		2,4,6			
	<ol> <li>Do not wash</li> <li>Wash pumps</li> <li>Reverse out</li> <li>Run Blend Te</li> </ol>	and lines.	es.	disk				
	Do not wash     Wash pumps     Reverse out	and lines. est on Cement Pressure, and itometer with pressurface if ceme	Density on 3.5" ressurized mud ent is not circulat	scales led.		ding plug.		
Special Instructio	1. Do not wash 2. Wash pumps 3. Reverse out 4. Run Blend Te 5. Record Rate, 6. Confirm dens 7. 1" cement to	and lines. est on Cement Pressure, and itometer with pi surface if ceme ot circulated to	Density on 3.5" ressurized mud ent is not circulat surface, run ten	scaies led. np. survey 10	0-12 hr. after land		minmize	drillout.
Special Instruction	1. Do not wash 2. Wash pumps 3. Reverse out 4. Run Blend Te 5. Record Rate, 6. Confirm dens 7. 1" cement to 8. If cement is n	and lines. est on Cement Pressure, and itometer with pi surface if ceme ot circulated to	Density on 3.5" ressurized mud ent is not circulat surface, run ten	scaies led. np. survey 10	0-12 hr. after land		minmize	drillout.
Special Instructio	1. Do not wash 2. Wash pumps 3. Reverse out 4. Run Blend Te 5. Record Rate, 6. Confirm dens 7. 1" cement to 8. If cement is n	and lines. est on Cement Pressure, and itometer with pi surface if ceme ot circulated to	Density on 3.5" ressurized mud ent is not circulat surface, run ten	scaies led. np. survey 10	0-12 hr. after land g production cer		minmize	drillout.
Special Instruction	1. Do not wash 2. Wash pumps 3. Reverse out 4. Run Blend Te 5. Record Rate, 6. Confirm dens 7. 1" cement to 8. If cement is n  *Do not wash up	and lines. est on Cement Pressure, and itometer with pi surface if ceme ot circulated to o on top of plug	Density on 3.5" ressurized mud ent is not circulat surface, run ten . Wash lines be	scales led. np. survey 10 fore displacin FreshWate	0-12 hr. after land g production cer		minmize	
pecial Instruction	1. Do not wash 2. Wash pumps 3. Reverse out 4. Run Blend Te 5. Record Rate, 6. Confirm dens 7. 1" cement to 8. If cement is n  *Do not wash up  Preflush  Slurry 1	and lines. est on Cement Pressure, and itometer with pi surface if ceme ot circulated to o on top of plug	Density on 3.5" ressurized mud ent is not circular surface, run ten . Wash lines be 20 bbl. sx Class C Cer	scales led. np. survey 10 fore displacin FreshWate	0-12 hr. after land g production cer		minmize	drillout. 99 cuft
Special Instruction	1. Do not wash 2. Wash pumps 3. Reverse out 4. Run Blend Te 5. Record Rate, 6. Confirm dens 7. 1" cement to 8. If cement is n  *Do not wash up	and lines. est on Cement Pressure, and itometer with pi surface if ceme ot circulated to o on top of plug	Density on 3.5" ressurized mud ent is not circulat surface, run ten . Wash lines be	scales led. np. survey 10 fore displacin FreshWate	0-12 hr. after land g production cer		minmize	
iotes:	1. Do not wash 2. Wash pumps 3. Reverse out 4. Run Blend Te 5. Record Rate, 6. Confirm dens 7. 1" cement to 8. If cement is n  *Do not wash up  Preflush  Slurry 1  TOC@Surface	and lines. est on Cement Pressure, and itometer with pi surface if ceme ot circulated to o on top of plug	Density on 3.5" ressurized mud ent is not circular surface, run ten . Wash lines be 20 bbl. sx Class C Cer	scales led. np. survey 10 fore displacin FreshWate ment ccelerator)	0-12 hr. after land g production cer	nent job to i	minmize	99 cuft
iotes:	1. Do not wash 2. Wash pumps 3. Reverse out 4. Run Blend Te 5. Record Rate, 6. Confirm dens 7. 1" cement to 8. If cement is n  *Do not wash up  Preflush  Slurry 1  TOC@Surface	and lines. est on Cement Pressure, and itometer with pi surface if ceme ot circulated to o on top of plug  80  Density	Density on 3.5" ressurized mud ent is not circular surface, run ten . Wash lines be 20 bbl. sx Class C Cer	scales led. np. survey 10 fore displacin FreshWate ment ccelerator)	0-12 hr. after land g production cer	nent job to i	minmize	99 cuft
iotes:	1. Do not wash 2. Wash pumps 3. Reverse out 4. Run Blend Te 5. Record Rate, 6. Confirm dens 7. 1" cement to 8. If cement is n "Do not wash up Preflush  Slurry 1  TOC@Surface	and lines. est on Cement Pressure, and itometer with pi surface if ceme ot circulated to o on top of plug  80  Density (lb/gal)	Density on 3.5" ressurized mud ent is not circulat surface, run ten . Wash lines be 20 bbl. sx Class C Cer + 2% CaCl2 (a	scales led. np. survey 10 fore displacin  FreshWate ment ccelerator)  Yield (ft3/sk)	0-12 hr. after land g production cer	nent job to i		99 cuft
Special Instruction	1. Do not wash 2. Wash pumps 3. Reverse out 4. Run Blend Te 5. Record Rate, 6. Confirm dens 7. 1" cement to 8. If cement is n  *Do not wash up  Preflush  Slurry 1  TOC@Surface	and lines. est on Cement Pressure, and itometer with pi surface if ceme ot circulated to o on top of plug  80  Density	Density on 3.5" ressurized mud ent is not circulat surface, run ten . Wash lines be 20 bbl. sx Class C Cer + 2% CaCl2 (a	scales led. np. survey 10 fore displacin FreshWate ment ccelerator)	0-12 hr. after land g production cer	nent job to i	minmize	99 cuft
lotes;	1. Do not wash 2. Wash pumps 3. Reverse out 4. Run Blend Te 5. Record Rate, 6. Confirm dens 7. 1" cement to 8. If cement is n  *Do not wash up  Preflush  Slurry 1  TOC@Surface	and lines. est on Cement Pressure, and itometer with pi surface if ceme ot circulated to o on top of plug  Bo Density (lb/gal) 15.2 8-5/8", 8R, S' 1 Guide Shoe 1 Top Woode 1 Autofill inser	Density on 3.5" ressurized mudent is not circulate surface, run ten  . Wash lines been 20 bbl.  sx Class C Cere + 2% CaCl2 (and ten and ten an	scales led. Inp. survey 10  fore displacin  FreshWate ment ccelerator)  Yield (ft3/sk) 1.27	0-12 hr. after land g production cer	nent job to i		99 cuft
Special Instruction	1. Do not wash 2. Wash pumps 3. Reverse out 4. Run Blend Te 5. Record Rate, 6. Confirm dens 7. 1" cement to 8. If cement is n  *Do not wash up  Preflush  Slurry 1  TOC@Surface	and lines. est on Cement Pressure, and itometer with pi surface if ceme ot circulated to on top of plug  Book Density (lb/gal) 15.2  8-5/8", 8R, S' 1 Guide Shoe 1 Top Woode 1 Autofill inser Centralizers, 1 Stop Ring	Density on 3.5" ressurized mudent is not circulate surface, run ten  . Wash lines been 20 bbl.  sx Class C Cere + 2% CaCl2 (and ten and ten an	scales led. Inp. survey 10  fore displacin  FreshWate ment ccelerator)  Yield (ft3/sk) 1.27	0-12 hr. after land g production cer	nent job to i		99 cuft

## **Cementing Program**

TOC@Surface

+ 2% S1 Calcium Chloride

+1/4 #/sk. Cellophane Flake

+ 0.1% D46 antifoam'

Tail

140 sx 50/50 Class "G"/Poz

177 cuft

Slurry 2

+ 2% gel (extender)

0.1% D46 antifoam

0.2526 cuft/ft OH 0.2009 cuft/ft csg ann

500 ft fill

+1/4 #/sk. Cellophane Flake + 2% CaCl2 (accelerator)

Slurry Properties:

Slurry 1

Slurry 2

Density (lb/gal) 11.4 Yield (ft3/sk) 2.61 1.27

Water (gal/sk) 17.77 5.72

Casing Equipment:

5 1/2", 8R, ST&C

13.5

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 Stripper/Diverter head **BOP Stack** Flowline to Rig Pit Double Ram Preventer Choke line to Manifold (2" Min.) Kill Line (2" Min.) Casing Head Ground Level Positive Choke or Adjustable Choke Choke & Kill Bypass to Pit or rig pit possum belly (optional) Manifold 2" minimum size Pressure Gauge From BOP Stack Straight-thru to blow 2" minimum size 2" minimum size pit/tank or return to rig Pit 2" minimum size

Adjustable Choke

To Blow Tank or burn Pit

Working Pressure for all equipment

is 2,000 psi or greater