rorm 3160-3 (August 1999)

UNITED STATES DEPARTMENT OF THE IN	FORM APPROVED OMB No. 1004-0136 Expires November 30, 2000								
BUREAU OF LAND MANO	BUREAU OF LAND MANGEMENT APPLICATION OFOR PERMIT TO TRILL OR REENE TER 1 42								
	6. If Indian, Allottee or trib	pe Name							
la. Type of Work: DRILL	7. If Unit or CA Agreemen	nt, Name and No							
lb. Type of Well: Oil Well Gas Well Gas Other	8. Lease Name and Well No. Largo 31B 18S								
2. Name of Operator BP AMERICA PRODUCTION COMPANY	9. 30-045-33	3227							
3a. Address P.O. BOX 3092 HOUSTON, TX 77079-2064	10. Field and Pool, or Explo								
4. Loction of Well (Report location clearly and in accordance	with any	State requirements.*)		11. Sec., T., R., M., or Blk,	•				
At surface 1700' FSL & 1605' FEL NWSE				SECTION 31 T29N & R08W					
At proposed prod. Zone 1700' FSL & 1605' FEL (same a	as above)		7					
14. Distance in miles and direction from nearest town or post off	fice*			12. County or Parish	13. State				
14.7 MILES S/E FROM BLOOMFIELD, NM				SAN JUAN NEW MEXICO					
15. Distance from proposed* Location to nearest		16. No. of Acres in lease	17. Spacing Unit dedicated to this well						
Property or lease line, ft. (Also to nearest drig. Ujnit line, if any) 997		320	320	ES					
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.		19. Proposed Depth 2438" MD	20. BLM/BIA Bond No. on file WY2924						
21. Elevations (show whether DF, KDB., RT, GL, etc.		22. Approximate date work v	vill star	rt* 23. Estimated durat	ion				
5892' GL		07/21/05		3 DAYS					
		24. Attachments							
The following, completed in accordance with the requirements of	Onshore	Oil and Gas Order No. 1, shall be	attache	ed to this form:					
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National forest SUPO shall be filed with the appropriate Forest Service Officence of the properties of		20 above). 5. Operator certi	ificatio	perations unless covered by an on. ecific information and/or plan					
25. Signature N	Date								
Title . C	herry l	ilava		: 07/01/2005					
Regulatory Analyst	_			•	. /				
Approved by Signalify (an lee w) Name (1	Printed/T	yped)		Date /G/	31/05				
Title AFM Office		FED							
Application approval does not warrant or certify the applicant hole Operations thereon. Conditions of approval, if any, are attached.	is legal o	r equitable title to those rights in t	he subj	ect lease which would entitle th	e applicant of godfuer 2				
Title 19 II C Section 1001 and title 43 II C Section 1212 mg	les is a se	ima for any namen languingly and	:116.	11. A. J. 1. 1. A	A CARD AND AND AND AND AND AND AND AND AND AN				

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

any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on reverse)

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

Form C-102 Revised February 21, 1994 Instructions on back Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

PO Box 2088 Santa Fe, NM 87504-2088

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	¹ Pool Code	' Pool Name	
30-045-332	27 71629	Basin Fruitland Coo	L/
Property Code		³ Property Name	6 Well Number
020214	Largo 31B		# 18S
OGRID No.		* Operator Name	⁹ Elevation
000778	BP AMERICA P	PRODUCTION COMPANY	5892
	10		

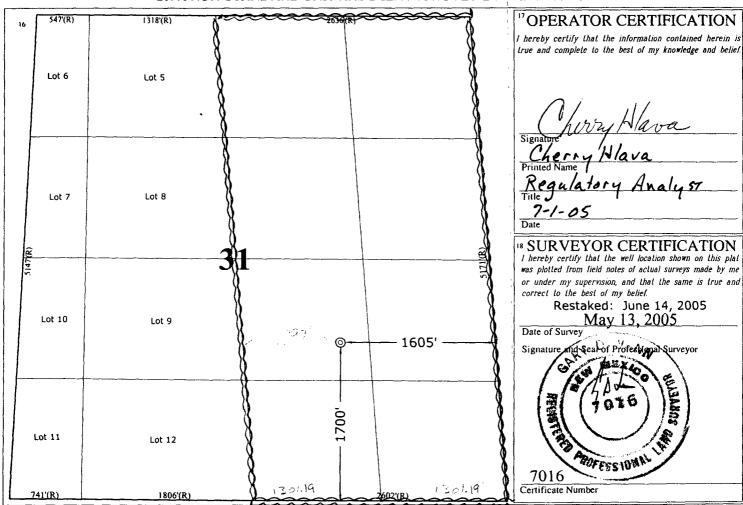
Surface Location

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	31	29 N	8 W		1700	SOUTH	1605	EAST	SAN JUAN

"Bottom Hole Location If Different From Surface

			DOU	tom riote	Boourion 1.	Different x 10	in Sairace			
¹ UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
12 Dedicated Acre	s ¹³ Joir	nt or Infill	Consolidation	on 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

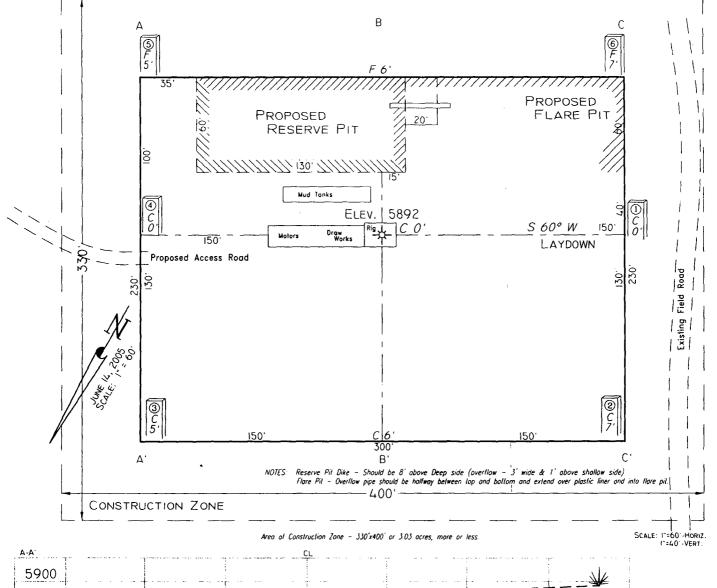


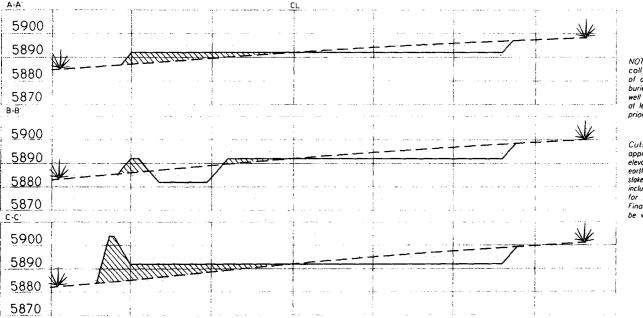
BLM Record

PAD LAYOUT PLAN & PROFILE BP AMERICA PRODUCTION COMPANY

Largo 31B #18S 1700' F/SL 1605' F/EL SEC. 31, T29N, R8W, N.M.P.M. SAN JUAN COUNTY, NEW MEXICO Lat: 36.6803° Long: 107.7136°

Lat: 36°40'49" Long: 107°42'49"





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

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

VANN SURVEYS P. O. Box 1306 Farmington, NM

	1	<u> </u>	BP AME	RICA PROI	DUCTION	CON	IPA	NY				
				NG AND CO								
				6/30	0/2005							
Lease:	Largo 31B		Well N	ame & No. Largo								
County:	San Juan, N	New Mexico	Surface	Location: SE 1/	SE 1/4, S 31, T29N, R8W : 1700' FSL, 1605' FEL							
Minerals:				Surface: Lat: 3								
Rig:	Aztec 507			Location: SE 1/		, R8W : 17	'00' F	SL, 1605' FE	L			
OBJECTIVE:	Drill to TD,	set 5.5" casing,	perf and frac th	e Fruitland Coal in	terval.							
		 						-				
		ETHOD OF DRI			APPROXIMATE DEPTHS OF GEOLOGICAL MARKER							
	OF TOOLS		DEPTH OF D		Actual	GL: 589	92		Estimated			
	Rotary		0 - T	D	Marker		_	SUBSE	<u>`</u>	TVD	APPROX. MD	
		LOG PROGR			Ojo Alamo			4,615			1,288'	
Туре			Depth Interval D to Min Charg		Kirtland		\longrightarrow	4,455'			1,448'	
GR/CCL ar	je	Fruitland Fm		-	3,879'			2,024'				
					Fruitland Coa Pictured Cliffs		*#	3,770' 3,565'			2,133' 2,338'	
					Fictured Cities	` —-		3,303			2,330	
Cased H	lolo											
Caseur	NIC .						\dashv					
REMARKS:							_					
Primary Log pre	esentation is	RST Coal interp	retation (5"=10	0') with coal								
shaded. Carbor		•						<u></u>				
only. Two final p	prints and cu	stomer LAS file	to Dennis Hilke	wich in Houston -								
hilkewdn@bp.c	om.						Ì					
					TOTAL D	EPTH:		3,465'			2,438'	
					# Probable c	ompletion i	interv	al		* Pos	sible Pay	
SPECIAL TEST	rs				DRILL	CUTTING	SAMI	PLES			LING TIME	
TYPE					FREQUI	JENCY DEPTH			FREQU	FREQUENCY DEPT		
None					none	е	no	ne to TD	Geolo	graph	0 - TD	
REMARKS:												

MUD PROGRA			·									
Interval	TypeMu			/is, sec/qt	/30 min			Othe	er Specific	ation		
200'	Spud	8.8 - 9		ent to clean hole.					1-11-4		- 1 014 14-	
2,438'	Water/LS	ND 8.4 - 9	.0		<9	5	weep	noie while v	vniist water	arıllır	g, LCM onsite	
	.l											
CASING PROG												
CasingSt		Depth	Size	Casing Size	Grade, Thre		ight	Landing	Point		Cement	
Surface/Condu	ctor	200'	12 1/4"	8-5/8"	H-40 ST&	C 20	O#				cmt to surface	
Production		2,438'	7 7/8"	5-1/2"	J-55	15	.5#					
COPING PRO	2044				l			<u>_</u>			cmt to surface	
CORING PROC	SKAM:										· · · · · · · · · · · · · · · · · · ·	
None COMPLETION	PROCEAM											
Rigless, Limited												
GENERAL REI		aulic riac										
		rs prior to Spud	BOP testing	and Casing and Ce	ementing							
BOP Pressure			, <u></u>		y.		*****					
Forma		·		nticinated batter	n hala ====		Γ	14	dial-st			
		Depth		inticipated bottor		ure	\vdash	max ar			e pressure**	
Fruitla		2,133'		500).74		
Pictured	Cliffs	2,338		200)		 	-		0		
		-					<u> </u>					
		ressure Test Ex			ote: Determin	ned using t	he fol	lowing formu	ıla: ABHP	- (.22	*TVD) = ASP	
Form 46 Review		Lo	gging program r		4			·				
PREPARED BY			APPROV	ED:		DATE:		APF	ROVED:		DATE:	
DNH/DDR	TT/HGJ		Ear Dallin -	Dont	30	-Jun-05		For Produc	tion Darit			
Form 46 7-84bw For Drilling Dept.								TOT PRODUC	uon Debt.			

Cementing Program

		 					
		_				Ļ	
Well Name:	Largo 31B #18S		400=:==:		ADILL		
Location:	Sec 31 - 29N - 0	8W, 1700' FSI	L, 1605' FEL		API No.		
County:	San Juan	-			Well Flac	Favilland Cool	
State:	New Mexico	ا.			Formation:	Fruitland Coal 5903	
					KB Elev (est)	5892	-
					GL Elev. (est)	5092	
Casing Program							
Casing String	Est. Depth	Hole Size	Casing Size	Thread	TOC		
Casing String	(ft.)	(in.)	(in.)	Tilleau	(ft.)		
Surface	200	12.25	8 5/8	8rd	Surface		
Production -	2438	7.875	5 1/2	8rd	Surface		
Casing Propertie			actor Included)				
Casing String	Size	Weight	Grade				
	(in.)	(lb/ft)					
Surface	` ´ 8 5/8) H-4	10			
Production -	5 1/2		5 J-5	55			
Mud Program							
Apx. Interval	Mud Type	Mud Weight				rties Prio Cementing:	
(ft.)				PV	<20		
				ΥP	<10		
0 - SCP	Water/Spud	8.6-9.2		Fluid Los	s <6		
SCP - TD	Water/LSND	8.6-9.2	2				
Cementing Progr	am:		Curtosa		Dan dunation		
Excess %, Lead			Surface 100		Production 40		
Excess %, Tail			NA		40		
BHST (est deg. F	Ξ/		75		120		
Special Instruction			75 1,6		2,4,6		
Opeoiai matruotio	1. Do not wash	numps and line	•		2,4,0		
	2. Wash pumps		.				
	3. Reverse out	and intoo.					
	4. Run Blend Te	est on Cement					
	5. Record Rate,			' disk			
	6. Confirm dens						
		·					
Surface:		· · · · · ·		·			
	Preflush		20 bbl.	FreshWa	ter		
	Slurry 1	130	0 sx Class C Ce	ment			165 cuft
	TOC@Surface		+ 2% CaCl2 (a	accelerator)			
							0.4127 cuft/ft OH
Slurry Properties	:	Density		Yield		Water	
		(lb/gal)		(ft3/sk)		(gal/sk)	
	Slurry 1	15.3	2	1.2	27	5.8	
	- -						
Casing Equipme	nt:	8-5/8", 8R, 9	ST&C				
.		1 Guide Sho					
		1 Top Wood					
		•	ert float valve				
			, 1 per joint exce	ent top joint			
		1 Stop Ring		opt top joint			
			ck Compound				
		i ilileau Lo	CK Compound				

Cementing Program

Production:			•			
	Fresh Water		10 bbl	CW100		
•						
	Lead		20	1 sx Class "G" Ceme	ent	523 cuft .
	Slurry 1			+ 3% D79 extende	г	
	TOC@Surface			+ 2% S1 Calcium (Chloride	
				+1/4 #/sk. Cellopha + 0.1% D46 antifoa		
	Tail			1 sx 50/50 Class "G"	'/Poz	141 cuft
	Slurry 2			+ 2% gel (extender	r)	
	50	00 ft fill		0.1% D46 antifoam	า	0.2009 cuft/ft OH
				+1/4 #/sk. Cellopha	ane Flake	0.1733 cuft/ft csg ann
				+ 2% CaCl2 (accel	lerator)	
Slurry Propertie	es:	Density		Yield	Water	
		(lb/gal)		(ft3/sk)	(gal/sk)	
Slurry 1		11.4		2.61	17.77	
Slurry 2		13.5		1.27	5.72	
Casing Equipm	ent:	5 1/2", 8R, ST	T&C			
		1 Float Shoe	(autofill with mi	nimal LCM in mud)		
		1 Float Collar	(autofill with m	inimal LCM in mud)		
		Centralizers a	is needed			
		1 Top Rubber	Plug			
		1 Thread Loc				

SAN JUAN BASIN Basin Fruitland Coal 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 single 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 Fruitland. No abnormal temperature, pressure, or H2S anticipated.

Equipment Specification

Interval

BOP Equipment

Below conductor casing to total depth 11" nominal or 7 1/16", 2000 psi Single ram preventer with 3000 psi annular preventer and rotating head.

All ram type and annular preventers as well as related control equipment will be hydraulically tested to 250 psi (low pressure) and 1500 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 $\frac{1}{2}$ " 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.

BP American Production Company

Well Control Equipment Schematic



