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 - 078319-A

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.
RIDDLE C LS 3B

2. Name of Operator
BP AMERICA PRODUCTION COMPANY

Contact: MARY CORLEY
E-Mail: corleym@bp.com

9. API Well No.
30-045-31084

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

3b. Phone No. (include area code)
Ph: 281.366.4491
Fx: 281.366.0700

10. Field and Pool, or Exploratory
BLANCO MESAVERDE

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

Sec 29 T31N R9W NESW 2180FSL 1425FWL
36.00000 N Lat, 107.00000 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 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.)

Application for Permit to Drill the subject well was filed with your office on April 25, 2002.
Please note BP America Production Company respectfully request the following changes to our drilling and completion program:

Change in the Bottom Hole Location:
From: 1600' FSL & 860' FWL Sec 29, T31N, R09W
To: 2500' FSL & 660' FWL Sec 29, T31N, R09W
Surface Location will not change.

Please find attached in support of our application revision to our drilling and completion program, cementing program, directional drilling plot and survey, and Form C-102.

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #12508 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington

Name *(Printed/Typed)* MARY CORLEY — Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission) — Date 07/02/2002

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.

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DRILLING FOR Directional Survey

NMOCD

BP AMERICA PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM

Prospect Name:	Riddle C LS	**Well No:**	3B
Lease:	Riddle C LS	**Surface Location:**	29-31N-9W, 2180 FSL x1425 FWL
County:	San Juan	**Field:**	Blanco Mesaverde
State:	New Mexico	**Bottom Location:**	29-31N-9W, 2500 FSL x 660 FWL
Date:	May 31, 2002		

OBJECTIVE: Drill 50' below the base of the Mancos Shale, set 41/2" production liner, Stimulate LS, CH, MF and PL intervals

METHOD OF DRILLING

TYPE OF TOOLS	DEPTH OF DRILLING
Rotary	0 - TD

LOG PROGRAM

TYPE	DEPTH INVERAL
OPEN HOLE	
None	
CASED HOLE	
GR-CCL-TDT	TDT – TD to 7" shoe
CBL	Identify 4 ½" cement top

REMARKS:
- Please report any flares (magnitude & duration).

APPROXIMATE DEPTHS OF GEOLOGICAL MARKER

Estimated GL: 6308 Estimated KB: 6322

MARKER		TVD	MEASURED
Ojo Alamo		1687	1749
Kirkland		1837	1909
Fruitland		2570	2691
Fruitland Coal	*	2769	2902
Pictured Cliffs	*	3121	3259
Lewis Shale	#	3297	3435
Cliff House	#	4776	4914
Menefee Shale	#	4965	5103
Point Lookout	#	5321	5459
Mancos		5671	5806
TOTAL DEPTH		5721	5859

Probable completion interval * Possible Pay

SPECIAL TESTS

TYPE
None

REMARKS:

DRILL CUTTING SAMPLES		DRILLING TIME	
FREQUENCY	DEPTH	FREQUENCY	DEPTH
none	Production hole	Geolograph	0-TD

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	- 2850	(1)	Water/LSND	8.6-9.2		<6	
2850	- 5855		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 ST&C	32#	12.25"	1
Intermediate	2840	7"	J/K-55 ST&C	20#	8.75"	1,2
Production Liner	5859	4 1/2"	J-55	10.5#	6.25"	3,4

REMARKS:
(1) Circulate Cement to Surface
(2) Set casing 50' above Fruitland Coal
(3) Bring cement 100' above 7" shoe
(4) 100' Overlap

CORING PROGRAM:
None

COMPLETION PROGRAM:
Rigless, 2-3 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

PREPARED BY:	APPROVED:	DATE:	
HGJ/MNP		31th May 2002 Version 2.0	

BP America Production Company
BOP Pressure Testing Requirements

Well Name: Riddle C LS 3B
County: San Juan **State:** New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1687		
Kirkland	1837		
Fruitland	2570		
Fruitland Coal	2769		
PC	3121		
Lewis Shale	3297		
Cliff House	4776	500	0
Menefee Shale	4965		
Point Lookout	5321	600	0
Mancos	5671		

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

Requested BOP Pressure Test Exception: 750 psi

Cementing Program

Well Name:	Riddle C LS 3B	Field:	Blanco Mesaverde
Location:	29-31N-9W, 2180 FSL, 1425 FWL	API No.	
County:	San Juan	Well Flac	
State:	New Mexico	Formation:	MesaVerde
		KB Elev (est)	6322
		GL Elev. (est)	6308

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	12.25	9.625	ST&C	Surface	NA	
Intermediate	2850	8.75	7	LT&C	Surface	NA	
Production -	5859	6.25	4.5		2750	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	8.845
Intermediate	7	20	K-55	3740	2270	234	0.0405	6.456
Production -	4.5	11.6	J-55	5350	4960	154	0.0155	3.875

Mud Program

Apx. Interval (ft.)	Mud Type	Mud Weight
0 - SCP	Water/Spud	8.6-9.2
SCP - ICP	Water/LSND	8.6-9.2
ICP - ICP2	Gas/Air Mist	NA
ICP2 - TD	LSND	8.6 - 9.2

Recommended Mud Properties Prio Cementing:

PV	<20
YP	<10
Fluid Loss	<15

Cementing Program:

	Surface	Intermediate	Production
Excess %, Lead	100	100	40
Excess %, Tail	NA	0	40
BHST (est deg. F)	72	110	159
Time Between Stages, (hr)	NA	NA	NA
Special Instructions	1,6	1,6	2,6

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	70 sx Class G Cement		75 cuft
TOC@Surface	+ 2% CaCl2 (accelerator)		
	0.25 #/sk Cellophane Flake (lost circulation additive)		0.3132 cuft/ft OH
	0.1% D46 antifoam		100 % excess

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

Cementing Program

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

Intermediate:

	Fresh Water	20 bbl	fresh water	
	Lead	270 sx	Class "G" Cement	691 cuft
	Slurry 1		+ 3% D79 extender	
	TOC@Surface		+1/4 #/sk. Cellophane Flake	
			+ 0.1% D46 antifoam'	
		60 sx	50/50 Class "G"/Poz	
	Tail		+ 2% gel (extender)	75 cuft
	Slurry 2		0.1% D46 antifoam	
	500 ft fill		+1/4 #/sk. Cellophane Flake	0.1503 cuft/ft OH
			+ 2% S1 Calcium Chloride	0.1746 cuft/ft csg ann
				80 % excess

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	11.7	2.61	17.77
Slurry 2	13.5	1.27	5.72

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

1 Float Shoe
1 Float Collar
1 Stop Ring
Centralizers, one every other joint to base of Ojo
2 Turbolizers across Ojo
Centalizers, one every 4th joint from Ojo to base of surface casing
1 Top Rubber Plug
1 Thread Lock Compound

Production:

	Fresh Water	10 bbl	CW100	
	Slurry	180	LiteCrete D961 / D124 / D154	
			+ 0.03 gps D47 antifoam	449 cuft
			+ 0.5% D112 fluid loss	
	TOC@Liner Top		+ 0.11% D65 TIC	
				0.1026 cuft/ft OH
				40 % excess
				0.1169 cuft/ft csg ann

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry	9.5	2.52	6.38

Cementing Program

Casing Equipment:	4-1/2", 8R, ST&C
	1 Float Shoe (autofill with minimal LCM in mud)
	1 Float Collar (autofill with minimal LCM in mud)
	1 Stop Ring
	Centralizers, every 4th joint in mud drilled holes, none in air drilled holes
	1 Top Rubber Plug
	1 Thread Lock Compound

Schlumberger

Proposed Well Profile

Report Date:	May 30, 2002	**Survey / DLS Computation Method:**	Minimum Curvature / Lubinski
Client:	BP San Juan Performance Unit	**Vertical Section Azimuth:**	292.729°
Field:	NM, San Juan County (NAD 83 WZ)	**Vertical Section Origin:**	N 0.000 ft, E 0.000 ft
Structure / Slot:	BP 29 31N 9W (Riddle C LS 3B) No Certified Plat / Riddle C LS 3B	**TVD Reference Datum:**	RKB
Well:	Riddle C LS 3B	**TVD Reference Elevation:**	6322.0 ft relative to MSL
Borehole:	Original Hole	**Sea Bed / Ground Level Elevation:**	6308.000 ft relative to MSL
UWI / API#:		**Magnetic Declination:**	
Survey Name / Date:	Rev2 jok 30-May-02 / May 30, 2002	**Total Field Strength:**	
Tort / AHD / DDI / ERD ratio:	40.620° / 828.06 ft / 4.537 / 0.145	**Magnetic Dip:**	
Grid Coordinate System:	NAD83 New Mexico State Planes, Western Zone, US Feet	**Declination Date:**	
Location Lat / Long:		**Magnetic Declination Model:**	
Location Grid N/E Y/X:		**North Reference:**	True North
Grid Convergence Angle:		**Total Corr Mag North -> True North:**	
Grid Scale Factor:		**Local Coordinates Referenced To:**	Well Head

Station ID	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	VSec (ft)	N/-S (ft)	E/-W (ft)	Closure (ft)	at Azim (°)	DLS (°/100ft)	TF (°)
Surface	0.00	0.000	292.729	0.00	0.00	0.000	0.000	0.00	0.00	0.00	-67.3MTF
9 5/8" Casing Point	120.00	0.000	292.729	120.00	0.00	0.000	0.000	0.00	0.00	0.00	-67.3MTF
KOP, Begin 3.00°/100' Build	300.00	0.000	292.729	300.00	0.00	0.000	0.000	0.00	0.00	0.00	-67.3MTF
	400.00	3.000	292.729	399.95	2.62	1.011	-2.414	2.62	292.73	3.00	-67.3MTF
	500.00	6.000	292.729	499.63	10.46	4.042	-9.650	10.46	292.73	3.00	0.0
	600.00	9.000	292.729	598.77	23.51	9.085	-21.688	23.51	292.73	3.00	0.0
	700.00	12.000	292.729	697.08	41.74	16.125	-38.494	41.74	292.73	3.00	0.0
	800.00	15.000	292.729	794.31	65.08	25.144	-60.023	65.08	292.73	3.00	0.0
	900.00	18.000	292.729	890.18	93.48	36.116	-86.216	93.48	292.73	3.00	0.0
Begin Tangent	977.01	20.310	292.729	962.92	118.74	45.878	-109.520	118.74	292.73	3.00	0.0
Ojo Alamo 1687 TVD	1749.09	20.310	292.729	1687.00	386.73	149.422	-356.701	386.73	292.73	0.00	0.0

Kirtland 1837 TVD	1909.04	20.310	292.729	1837.00	442.25	170.872	-407.907	442.25	292.73	0.00	0.0
Fruitland 2570 TVD	2690.63	20.310	292.729	2570.00	713.54	275.692	-658.132	713.54	292.73	0.00	0.0
7" Casing Point 2719 TVD	2849.51	20.310	292.729	2719.00	768.69	296.999	-708.997	768.69	292.73	0.00	0.0
Begin Natural Drop	2849.52	20.310	292.729	2719.01	768.69	297.000	-709.000	768.69	292.73	0.00	180.0
	2900.00	17.281	292.729	2766.79	784.96	303.284	-724.000	784.96	292.73	6.00	180.0
Fruitland Coals 2769 TVD	2902.31	17.143	292.729	2769.00	785.64	303.548	-724.630	785.64	292.73	6.00	180.0
	3000.00	11.281	292.729	2863.66	809.61	312.810	-746.742	809.61	292.73	6.00	180.0
	3100.00	5.281	292.729	2962.57	824.01	318.373	-760.021	824.01	292.73	6.00	180.0
Begin Vertical Hole Section	3188.02	0.000	292.729	3050.47	828.06	319.939	-763.760	828.06	292.73	6.00	-67.3MTF
Pictured Cliffs 3121 TVD	3258.55	0.000	292.729	3121.00	828.06	319.939	-763.760	828.06	292.73	0.00	-67.3MTF
Lewis 3297 TVD	3434.55	0.000	292.729	3297.00	828.06	319.939	-763.760	828.06	292.73	0.00	-67.3MTF
Cliff House 4776 TVD	4913.55	0.000	292.729	4776.00	828.06	319.939	-763.760	828.06	292.73	0.00	-67.3MTF
Menefee 4965 TVD	5102.55	0.000	292.729	4965.00	828.06	319.939	-763.760	828.06	292.73	0.00	-67.3MTF
Point Lookout 5321 TVD	5458.55	0.000	292.729	5321.00	828.06	319.939	-763.760	828.06	292.73	0.00	-67.3MTF
Mancos 5671 TVD	5808.55	0.000	292.729	5671.00	828.06	319.939	-763.760	828.06	292.73	0.00	-67.3MTF
PBHL/TD 5721 TVD	5858.55	0.000	292.729	5721.00	828.06	319.939	-763.760	828.06	292.73	0.00	0.0MTF

Survey Error Model: **Topographic 3-D 95.00% Confidence 2.7957 sigma**

Surveying Programme:

MD From (ft)	MD To (ft)	EOU Freq	Survey Tool Type
0.00	5858.55	Act-Stns	MWD2 (none assigned-default tool used)