

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 - 080917
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
2. Name of Operator BP AMERICA PRODUCTION COMPANY		7. If Unit or CA Agreement, Name and No.
3a. Address HOUSTON, TX 77253-3092		8. Lease Name and Well No. ATLANTIC B LS 4 M
3b. Phone No. (include area code) Ph: 281.366.4081		9. API Well No. 30-045 - 32826
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SESW Lot 18 930FSL 2470FWL 36.83583 N Lat, 107.90694 W Lon At proposed prod. zone SESW Lot 18 930FSL 2470FWL 36.83583 N Lat, 107.90694 W Lon		10. Field and Pool, or Exploratory BASIN DK & BLANCO MV
14. Distance in miles and direction from nearest town or post office* 6 MILES EAST OF AZTEC, NM		11. Sec., T., R., M., or Blk. and Survey or Area Sec 5 T30N R10W Mer NMP
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 930		12. County or Parish SAN JUAN
16. No. of Acres in Lease 322.12		13. State NM
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.		17. Spacing Unit dedicated to this well 322-125/2
19. Proposed Depth 7500 MD 7500 TVD		20. BLM/BIA Bord No. on file WY2924
21. Elevations (Show whether DF, KB, RT, GL, etc.) 6221 GL		23. Estimated duration 7
22. Approximate date work will start 03/01/2005		

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 Ph: 281.366.4081	Date 01/11/2005
Title AGENT		
Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 2-25-05
Title AFM	Office FFO	

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 #52875 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".

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

NMOCD

District I
PO Box 1980, Hobbs NM 88241-1980
District II
PO Drawer K.K. 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

API Number 30-045-32826		Pool Code 71599-72319		Pool Name Basin Dakota; Blanco Mesaverde	
Property Code 000282		Property Name Atlantic B LS			Well Number # 4M
OGRID No. 000778		Operator Name BP AMERICA PRODUCTION COMPANY			Elevation 6221

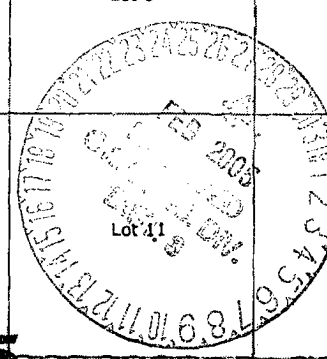
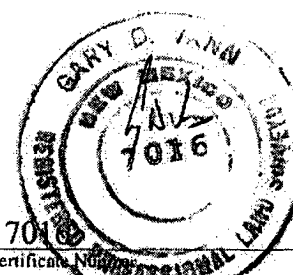
10 Surface Location

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Lot 18 (N)	5	30 N	10 W		930	SOUTH	2470	WEST	SAN JUAN

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 322.12		Joint or Infill		Consolidation Code		Order No.			

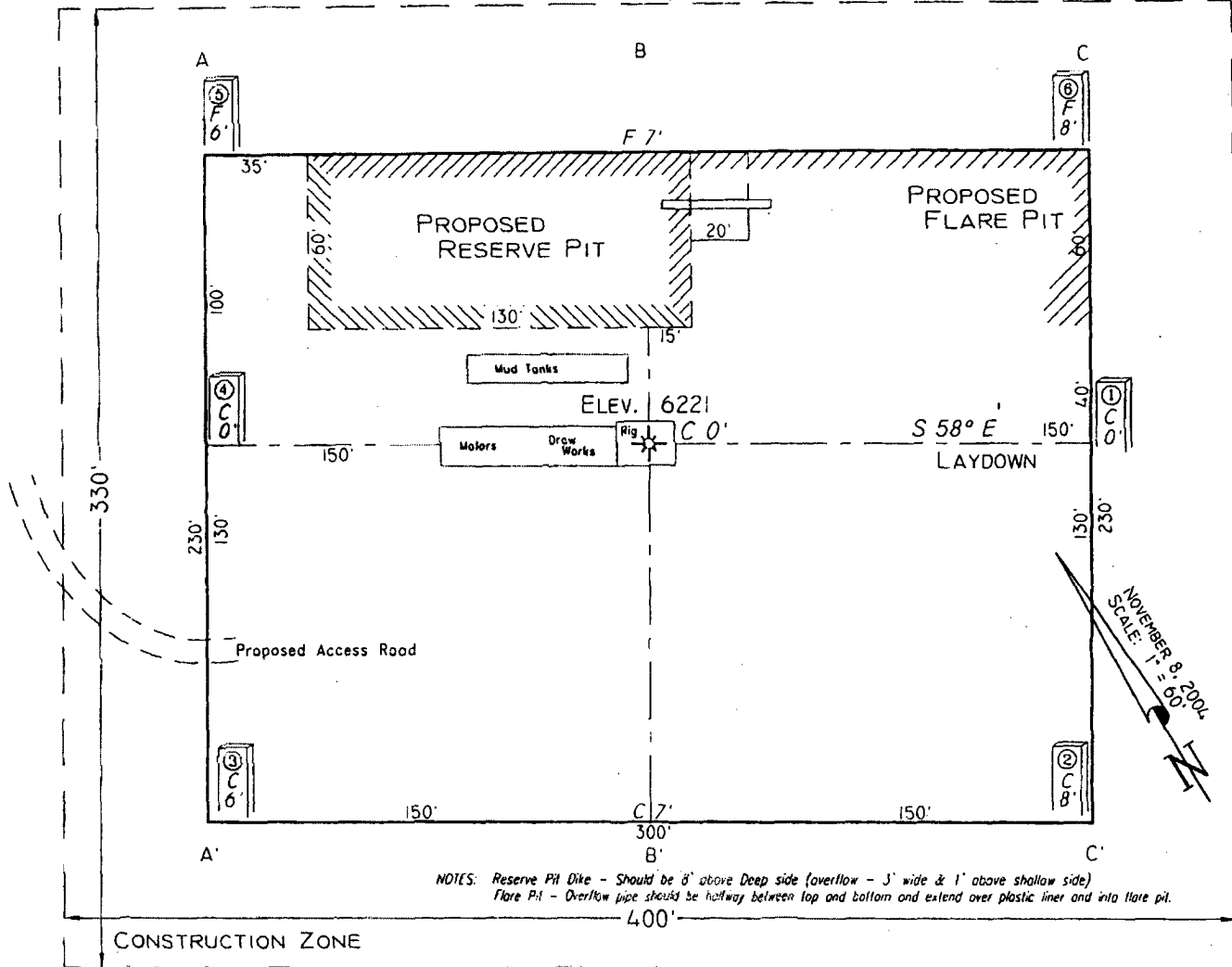
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16					17 OPERATOR CERTIFICATION				
1344(R)					I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.				
Lot 8		Lot 7		Lot 6		Lot 5		1324(R)	
1331(R)		Lot 9		Lot 10		Lot 11		1326(R)	
					Signature <i>Cherry Hlava</i>				
					Printed Name Cherry Hlava				
					Title Regulatory Analyst				
2660(R)					Date 12-31-04				
2638(R)					18 SURVEYOR CERTIFICATION				
2642(R)					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.				
2642(R)					Date of Survey November 8, 2004				
2642(R)					Signature and Seal of Professional Surveyor				
2642(R)									
2642(R)					Certificate No. 7016				

PAD LAYOUT PLAN & PROFILE
 BP AMERICA PRODUCTION COMPANY
 Atlantic B LS #4M
 930' F/SL 2470' F/WL
 SEC. 5, T30N, R10W, N.M.P.M.
 SAN JUAN COUNTY, NEW MEXICO

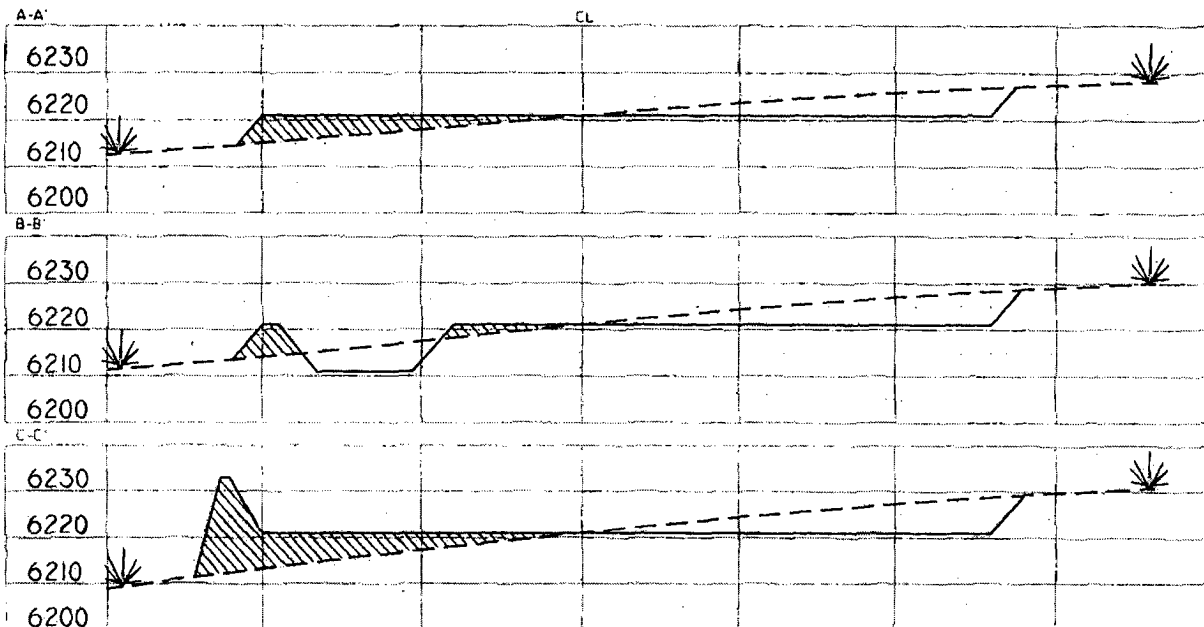
Lat = 36° 8' 58.2"
 Long = 107° 7' 16.9"

Lat: 36° 50' 09"
 Long: 107° 54' 25"



Area of Construction Zone - 330' x 150' or 3.03 acres, more or less.

SCALE: 1" = 60' - HORIZ.
 1" = 40' - 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

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.
NEW WELL
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Atlantic B LS (APD filed with BLM SF 080917)
8. Well Number 4 M
9. OGRID Number 000778
10. Pool name or Wildcat Basin Dakota & Blanco Mesaverde

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other	
2. Name of Operator BP AMERICA PRODUCTION COMPANY	
3. Address of Operator P.O. BOX 3092 HOUSTON, TX 77079-2064	
4. Well Location Unit Letter <u>N</u> : <u>930</u> feet from the <u>South</u> line and <u>2470</u> feet from the <u>West</u> line Section <u>5</u> Township <u>30N</u> Range <u>10W</u> NMPM SAN JUAN County	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6221'	
Pit or Below-grade Tank Application <input checked="" type="checkbox"/> or Closure <input type="checkbox"/>	
Pit type <u>DRILLING</u> Depth to Groundwater <u>>100'</u> Distance from nearest fresh water well <u>>1000'</u> Distance from nearest surface water <u>>1000'</u>	
Pit Liner Thickness: <u>12</u> mil Below-Grade Tank: Volume _____ bbls; Construction Material <u>IMPERVIOUS</u>	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: LINED DRILLING PIT <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

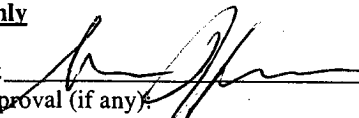
Construct a lined drilling pit per BP America – San Juan Basin Drilling/ Workover Pit Construction Plan issued date of 04/15/2004. Pit will be closed according to closure plan on file.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE _____ TITLE Regulatory Analyst DATE 12/31/2004

Type or print name Cherry Hlava E-mail address: hlavacl@bp.com Telephone No. 281-366-4081

For State Use Only

APPROVED BY:  TITLE DEPUTY OIL & GAS INSPECTOR, DIST. #00 DATE FEB 28 2005

Conditions of Approval (if any):

Additional Operator Remarks
Atlantic B LS 4M
APD

BP America Production Company respectfully requests permission to drill the subject well to a total depth of approximately 7500'. Complete in the Basin Dakota Pool, isolate the Dakota; complete into the Blanco Mesaverde, establish a production rate; drill out the bridge plug and commingle production downhole.

Application for Downhole Commingling authority (NMOCD order R-11363) will be submitted to all appropriate for approval after Permit to Drill has been approved.

If terrain allows it is our intent to pre-set the 9 5/8" casing on the above mentioned well by drilling a surface hole with air/air mist in lieu of drilling mud and the surface casing be cemented with 94.5 cu/ft type I-II, 20% FLYASH, 14.5 PPG, 7.41 gal/sk, 1.61 cf/sk Yield, 80 DEG BHST ready mix cement. If the area will not allow for pre-set the approved cement program will be followed.

SUPPLEMENTAL TO SURFACE USE PLAN

New Facilities:

A 4.5" diameter buried steel pipeline that is +/- 600 feet in length will be constructed. The pipe wall thickness is .156 and the pipe wall strength is 42,000#. It will be adjacent to the access road and tie the well into an existing gas meter operated by BP America Production Company. The pipeline will not be used to transport gas to drill the well. After the well is spud the pipeline will be authorized by a right-of-way issued by El Paso Field Services.

APD/ROW

BP AMERICA PRODUCTION COMPANY							
DRILLING AND COMPLETION PROGRAM							
11/22/2004							
Lease:	Atlantic B LS	Well Name & No.	Atlantic B LS #4M	Field:	Blanco Mesaverde/Basin Dakota		
County:	San Juan, New Mexico	Surface Location:	5-30N-10W : 930' FSL, 2470' FWL				
Minerals:		Surface:	Lat: 36.8352921 Long:-107.9061237				
Rlg :	Aztec 184	BH Location:	same				
OBJECTIVE: Drill 270' below the top of the Two Wells Mbr, set 4-1/2" production casing. Stimulate DK, MF, and PL intervals.							
METHOD OF DRILLING				APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
TYPE OF TOOLS		DEPTH OF DRILLING		Actual GL: 6221'	Estimated KB: 5,888.0'		
Rotary		0 - TD		Marker	SUBSEA	TVD	APPROX. MD
LOG PROGRAM				Ojo Alamo	4,805'	1,430'	1,430'
Type	Depth Interval			Kirtland	4,667'	1,568'	1,568'
Single Run				Fruitland	* 3,949'	2,286'	2,286'
				Fruitland Coal	* 3,706'	2,529'	2,529'
				Pictured Cliffs	* 3,370'	2,865'	2,865'
				Lewis	* 3,197'	3,038'	3,038'
Cased Hole				Cliff House	# 1,867'	4,368'	4,368'
TDT- CBL	TD to 7" shoe.			Menefee	# 1,562'	4,673'	4,673'
	Identify 4 1/2" cement top			Point Lookout	# 1,145'	5,090'	5,090'
REMARKS:				Mancos		719'	5,516'
				Greenhorn		-890'	7,125'
				Graneros (bent,mkr)		-943'	7,178'
				Two Wells	#	-995'	7,230'
				Paguate	#	-1,087'	7,322'
				Cubero	#	-1,126'	7,361'
				L. Cubero	#	-1,174'	7,409'
				Encinal Cyn	#	-1,209'	7,444'
				TOTAL DEPTH:		-1,265'	7,500'
				# Probable completion interval		* Possible Pay	
SPECIAL TESTS				DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE				FREQUENCY		DEPTH	
				30'/10' intervals		Geograph 0 - TD	
REMARKS:							
MUD PROGRAM:							
Interval	Type <input type="checkbox"/> Mud	#/gal	Vis, <input type="checkbox"/> sec/qt	/30 min	Other Specification		
200'	Spud	8.8 - 9.0	Sufficient to clean hole.				
3,138'	Water/LSND	8.4 - 9.0		<9	Sweep hole while whilst water drilling, LCM onsite		
7,500'	Air	1	1000 cfm for bit		Volume sufficient to maintain a stable and clean wellbore		
CASING PROGRAM:							
Casing <input type="checkbox"/> String	Depth	Size	Casing Size	Grade, Thread	Weight	Landing Point	Cement
Surface/Conductor	200'	13 1/2"	9-5/8"	H-40 ST&C	32#		cmt to surface
Intermediate 1	3,138'	8-3/4"	7"	J/K-55 ST&C	20#	100' below LWIS	cmt to surface
Production	7,500'	6-1/4"	4-1/2"	J-55	11.6#	DKOT	150' inside Intermediate - TOC survey required
CORING PROGRAM:							
None							
COMPLETION PROGRAM:							
Rigless, 2-3 Stage Limited Entry Hydraulic Frac, FMC Unihead							
GENERAL REMARKS:							
Notify BLM/NMOC 24 hours prior to Spud, BOP testing, and Casing and Cementing.							
BOP Pressure Testing Requirements							
Formation	Depth	Anticipated bottom hole pressure			Max anticipated surface pressure**		
Cliffhouse	4,368'	500			0		
Point Lookout	5,090'	600			0		
Dakota	7,230'	2600			1009.4		
Requested BOP Pressure Test Exception = 1500 psi				** Note: Determined using the following formula: ABHP - (.22*TVD) = ASP			
Form 46 Reviewed by:		Logging program reviewed by:					
PREPARED BY:		APPROVED:		DATE:	APPROVED:	DATE:	
HGJ JMP				22-Nov-04			
Form 46 7-84bw		For Drilling Dept.			For Production Dept.		

Cementing Program

Well Name: Atlantic B LS #4M
 Location: 5-30N-10W : 930' FSL, 2470' FWL
 County: San Juan
 State: New Mexico

Well Flac
 Formation: Blanco Mesaverde/Basin Dakota
 KB Elev (est) 5888
 GL Elev. (est) 5874

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	200	13.5	9.625	ST&C	Surface	NA	
Intermediate	3138	8.75	7	LT&C	Surface	NA	
Production -	7500	6.25	4.5	ST&C	3038	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	75	40
Excess %, Tail	NA	0	40
BHST (est deg. F)	75	120	183
Special Instructions	1,6,7	1,6,8	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.	Fresh Water	
Slurry 1	154 sx Class C Cement		195 cuft
TOC@Surface	+ 2% CaCl2 (accelerator)		
			0.4887 cuft/ft OH

Slurry Properties:

	Density (lb/gal)	Yield (ft ³ /sk)	Water (gal/sk)
Slurry 1	15.2	1.27	5.8

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 Slurry 1 TOC@Surface		257 sx Class "G" Cement + 3% D79 extender + 1/4 #/sk. Cellophane Flake + 5 lb/sk Gilsonite	676 cuft
Tail Slurry 2		59 sx 50/50 Class "G"/Poz + 2% gel (extender) + 1/4 #/sk. Cellophane Flake + 2% CaCl2 (accelerator) + 5 lb/sk Gilsonite	75 cuft
500 ft fill			0.1503 cuft/ft OH 0.1746 cuft/ft csg ann

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	11.4	2.63	15.8
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 Stop Ring
 Centralizers one in middle of first joint, then every third collar
 1 Top Rubber Plug
 1 Thread Lock Compound

Production:

Fresh Water	10 bbl	CW100	
Lead Slurry 1 TOC, 150' above 7" shoe		174 LiteCrete D961 / D124 / D154 + 0.03 gps D47 antifoam + 0.5% D112 fluid loss + 0.11% D65 TIC	438 cuft
Tail Slurry 2		148 sx 50/50 Class "G"/Poz + 5% D20 gel (extender) + 0.1% D46 antifoam + 1/4 #/sk. Cellophane Flake + 0.25% D167 Fluid Loss + 5 lb/sk Gilsonite	213 cuft
1484 ft fill			

Cementing Program

+0.1% d800, retarder
+0.15% D65, dispersant

0.1026 cuft/ft OH

Slurry Properties:

Density
(lb/gal)

Yield
(ft³/sk)

Water
(gal/sk)

0.1169 cuft/ft csg ann

Slurry 1

9.5

2.52

6.38

Slurry 2

13

1.44

6.5

Top of Mancos

5516

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, as needed

1 Top Rubber Plug

1 Thread Lock Compound

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

Background

The objective Dakota 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 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", 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.

BP American Production Company

Well Control Equipment Schematic

