Form 3160-3
(August 1999)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER	5. Lease Serial No. NM - 0606
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA Agreement, Name and No.
1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone	8. Lease Name and Well No. ATLANTIC A LS 3 M
2. Name of Operator BP AMERICA PRODUCTION COMPANY Contact: CHERRY HLAVA E-Mail: hlavacl@bp.com	9. API Well No. 30045 32466
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 DAKOTA & BLANCO MV
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface NESW 1885FSL 1630FWL 36.86667 N Lat, 107.88444 W Lon At proposed prod. zone	11. Sec., T., R., M., or Blk. and Survey or Area K Sec 28 T31N R10W Mer NMP
14. Distance in miles and direction from nearest town or post office* 7.7 MILES EAST FROM AZTEC, NM	12. County or Parish SAN JUAN / 13. State NM
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1630' / 16. No. of Acres in Lease 1732.68	17. Spacing Unit dedicated to this well ~~320.00~~ 317.8 W/2
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. / 19. Proposed Depth 7500 MD	20. BLM/BIA Bond No. on file WY2924
21. Elevations (Show whether DF, KB, RT, GL, etc. 6056 GL / 22. Approximate date work will start 09/15/2004	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 07/15/2004
Title REGULATORY ANALYST		
Approved by (Signature)	Name (Printed/Typed)	Date 11/02/04
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 #33062 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

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 API Number	2 Pool Code	3 Pool Name
30-045-32466	71599 ; 72319	Basin Dakota ; Blanco Mesaverde

4 Property Code	5 Property Name	6 Well Number
~~001767~~ 281	Atlantic A LS	# 3M

7 OGRID No.	8 Operator Name	9 Elevation
000778	BP AMERICA PRODUCTION COMPANY	6056

10 Surface Location

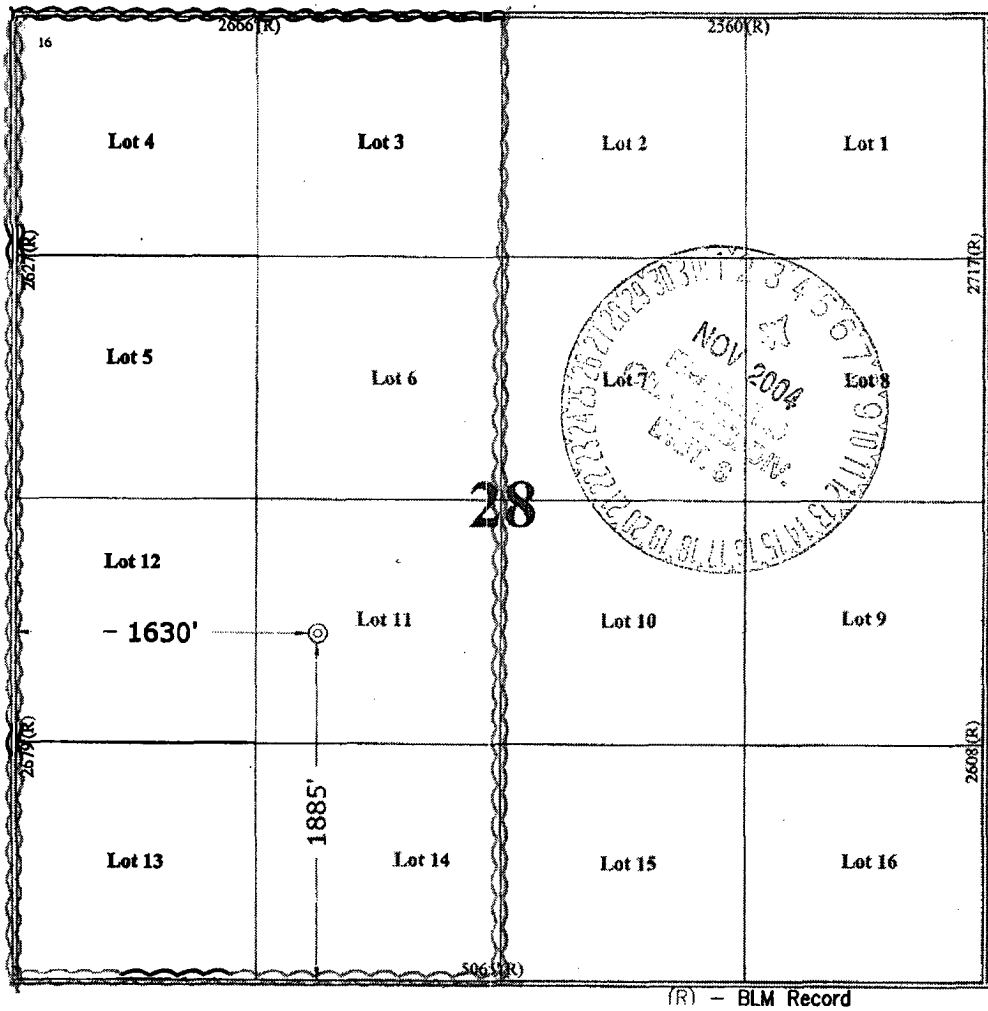
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K (Lot 11)	28	31 N	10 W		1885	SOUTH	1630	WEST	SAN JUAN

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~~ 317.78			

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



(R) – BLM Record

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature: Cherry Hlava
Printed Name: Cherry Hlava
Title: Regulatory Analyst
Date: 7-14-04

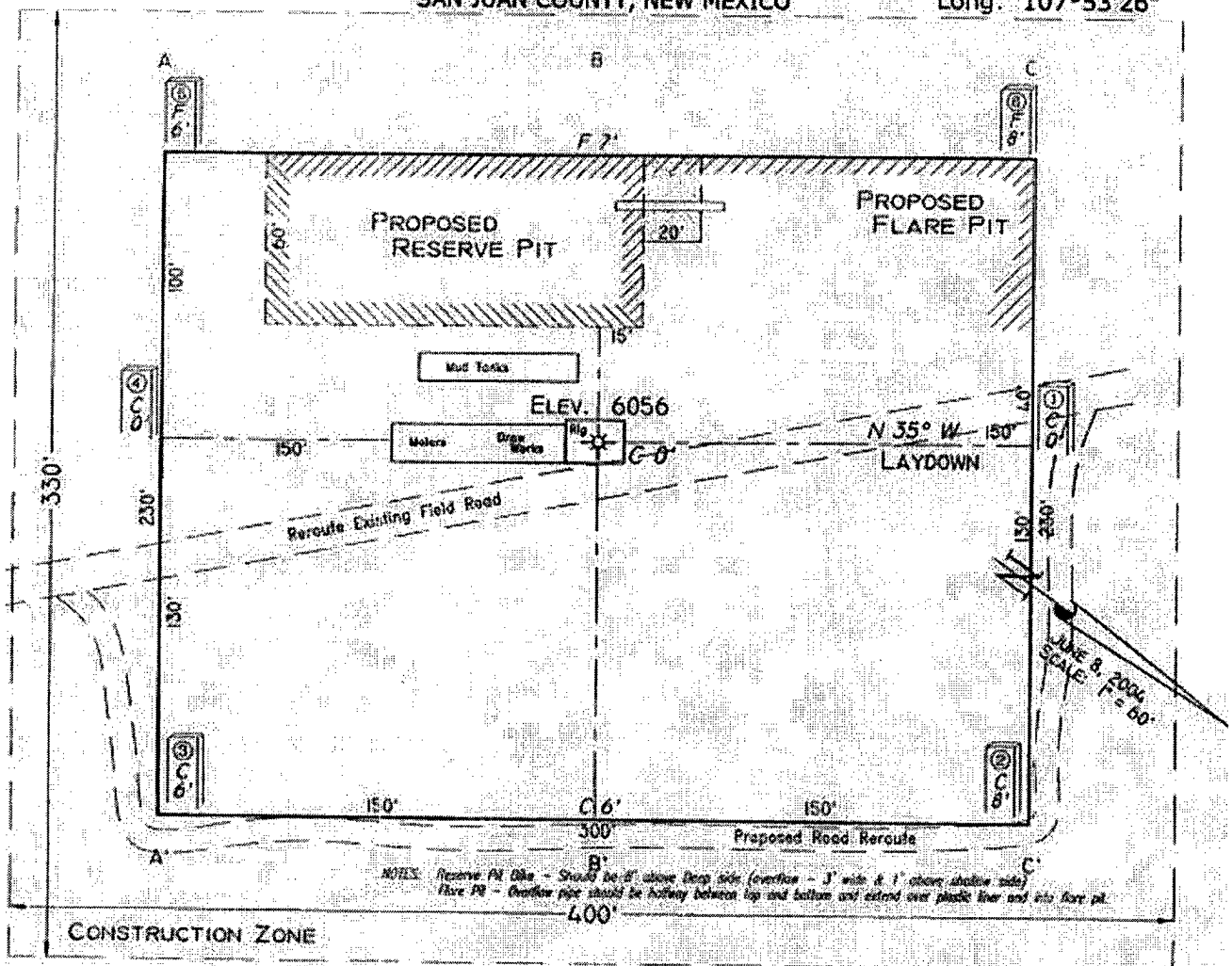
18 SURVEYOR CERTIFICATION

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: June 8, 2004
Signature and Seal of Professional Surveyor: GARY D. VANN, NEW MEXICO, 7016, REGISTERED PROFESSIONAL LAND SURVEYOR
Certificate Number: 7016

PAD LAYOUT PLAN & PROFILE
BP AMERICA PRODUCTION COMPANY
Atlantic A LS # 3M
1885' F/SL 1630' F/WL
SEC. 28, T31N, R10W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO

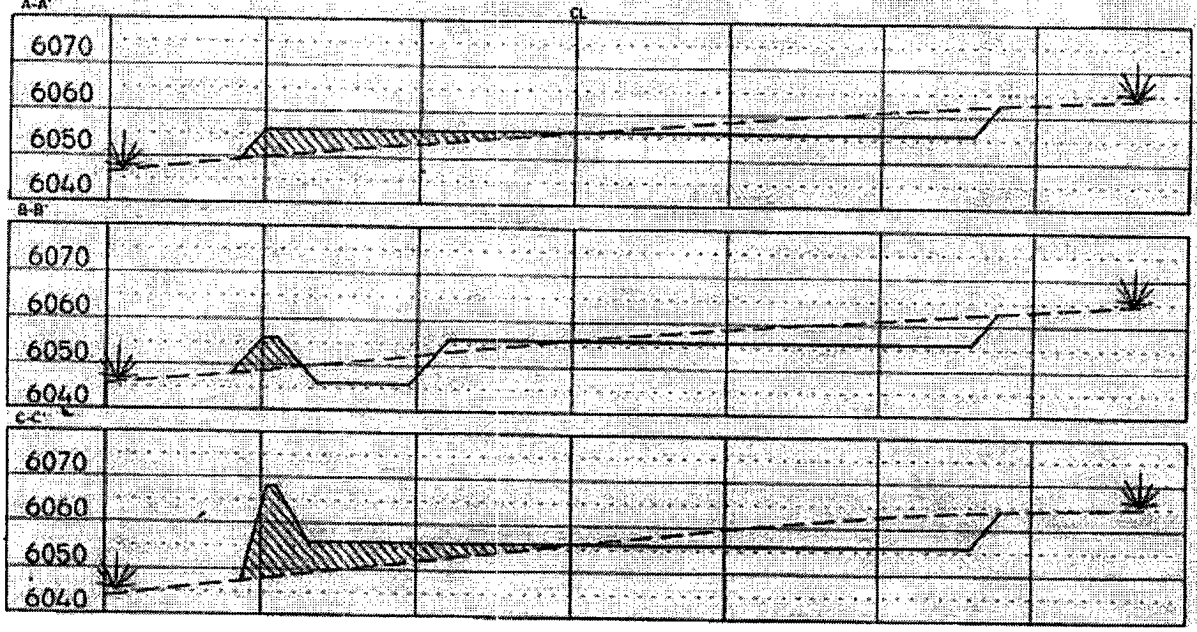
Lat: 36°52'03"
Long: 107°53'26"



NOTES: Reserve Pit Dike - Should be 6' 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 - 300'x400' 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

BP AMERICA PRODUCTION COMPANY

DRILLING AND COMPLETION PROGRAM

Lease:	Atlantic A LS	Well No. 3M	Atlantic A LS #3M
County, St.:	San Juan, New Mexico	Location:	28-31N-10W:1885' FSL, 1630' FWL
Minerals:	State	BHLOC:	**Vertical**
Rig :	Aztec 184	Surface:	Lat: 36..8674193 deg; Long: -107.8903636 deg

OBJECTIVE: Drill 250' below the top of the Two Wells Mbr, set 4-1/2" production casing, Stimulate DKOT & PNLK (MENF).

METHOD OF DRILLING	
TYPE OF TOOLS	DEPTH OF DRILLING
Rotary	0 - TD

LOG PROGRAM	
Type - single run	Depth Interval
Cased Hole TDT- CBL	TD to 7" shoe
	Identify 4 ½" cement top

APPROXIMATE DEPTHS OF GEOLOGICAL MARKER

Actual GL:	6056	Estimated KB:	6,070.0'
Marker	SUBSEA	TVD	APPROX. MD
Ojo Alamo	4,647'	1,423'	1,423'
Kirtland	4,514'	1,556'	1,556'
Fruitland *	3,796'	2,274'	2,274'
Fruitland Coal *	3,524'	2,546'	2,546'
Pictured Cliffs *	3,234'	2,836'	2,836'
Lewis *	3,056'	3,014'	3,014'
Cliff House #	1,704'	4,366'	4,366'
Menefee #	1,415'	4,655'	4,655'
Point Lookout #	1,007'	5,063'	5,063'
Mancos	586'	5,484'	5,484'
Greenhorn	-1,042'	7,112'	7,112'
Graneros	-1,098'	7,168'	7,168'
Two Wells Mbr #	-1,172'	7,242'	7,242'
Paguate Mbr #	-1,257'	7,327'	7,327'
Cubero Mbr #	-1,293'	7,363'	7,363'
L. Cubero Mbr #	-1,322'	7,392'	7,292'
Encinal Cyn Mbr#	-1,385'	7,455'	7,455'
TOTAL DEPTH:	-1,430'	7,500'	7,500'

Probable completion interval — * Possible Pay

DRILL CUTTING SAMPLES		**DRILLING TIME**	
FREQUENCY	DEPTH	FREQUENCY	DEPTH
30'/10' intervals	3100' TD	Geolograph	0 - TD

SPECIAL TESTS
TYPE
None

MUD PROGRAM:

Approx. Interval	Type Mud	Weight, #/gal	Vis sec/qt	W/L cc's/30 min	Other Specification
200'	Spud	8.8 - 9.0	Sufficient to clean hole.		
3114' TD	Water/LSND	8.4 - 9.0		<9	Sweep hole while whilst water drilling, LCM onsite
7500' TD	Air	1	1000 cfm for hammer		Volume sufficient to maintain a stable and clean wellbore

CASING PROGRAM:

Casing String	Estimated Depth	Hole Size	Casing Size	Wt, Grade, Thread	Landing Point	Cement
Surface/Cond	200'	13 1/2"	9-5/8"	32#, H-40 ST&C		cmt to surface
Intermediate 1	3100'	8-3/4"	7"	20#, J/K-55 ST&C	100' below LWIS	cmt to surface
Production	7490'	6-1/4"	4-1/2"	11.6#, J-55	DKOT	Cmt to 150' inside Intermediate 1
						TOC survey required

CORING PROGRAM:

None

COMPLETION PROGRAM:

Rigless, 2-3 Stage Limited Entry Hydraulic Frac, FMC Unihead

BOP Pressure Testing Requirements

Formation	Depth	Anticipated bottom hole pressure	Max anticipated surface pressure**
Cliffhouse	4,366'	500	0
Point Lookout	5,063'	600	0
Dakota	7,242'	2600	1080

Requested BOP Pressure Test Exception = 1500 psi

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

GENERAL REMARKS:

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

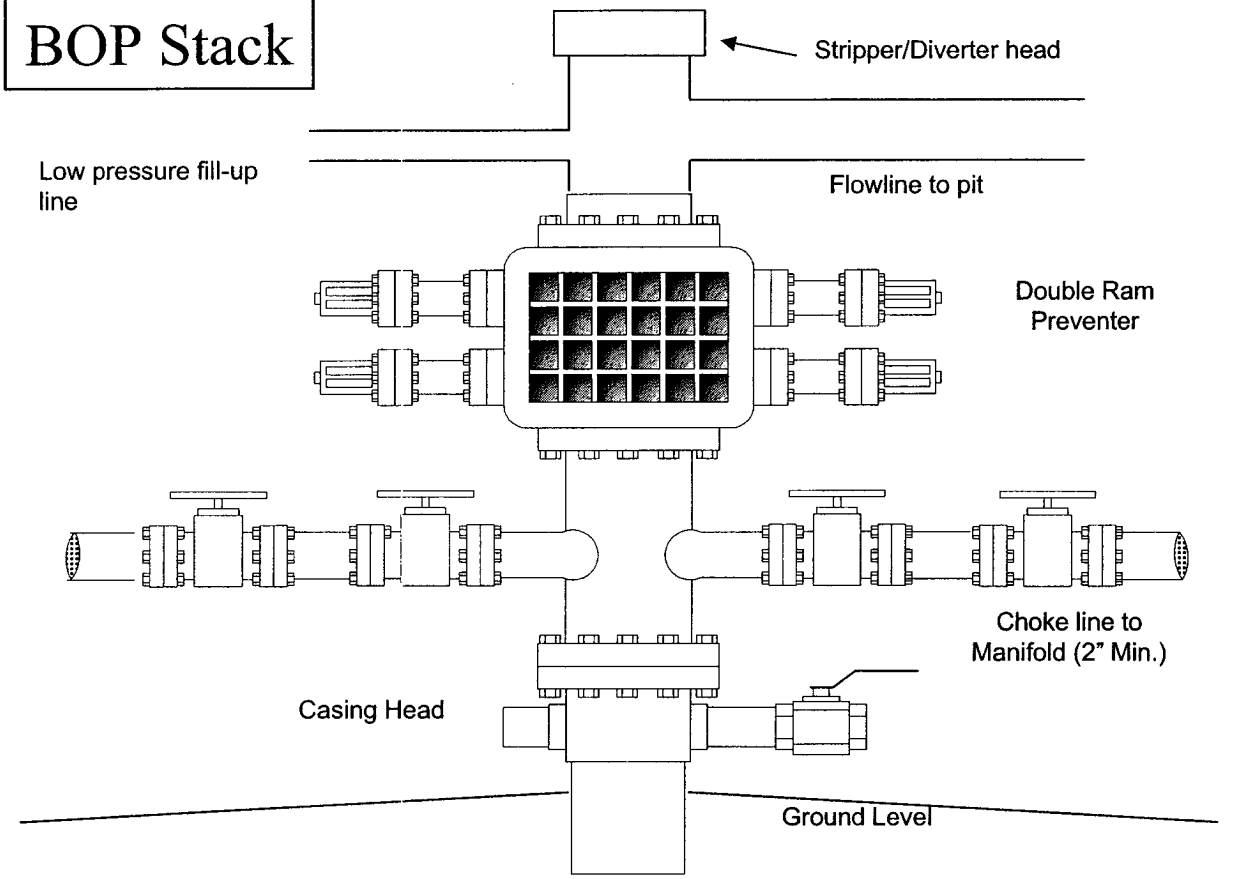
Form 46 Reviewed by: Logging program reviewed by:

PREPARED BY:		**APPROVED:**	**DATE:**	**APPROVED:**	**DATE:**
HGJ	MDD		9-Jul-04		
Form 46 7-84bw		For Drilling Dept.		For Production Dept.	

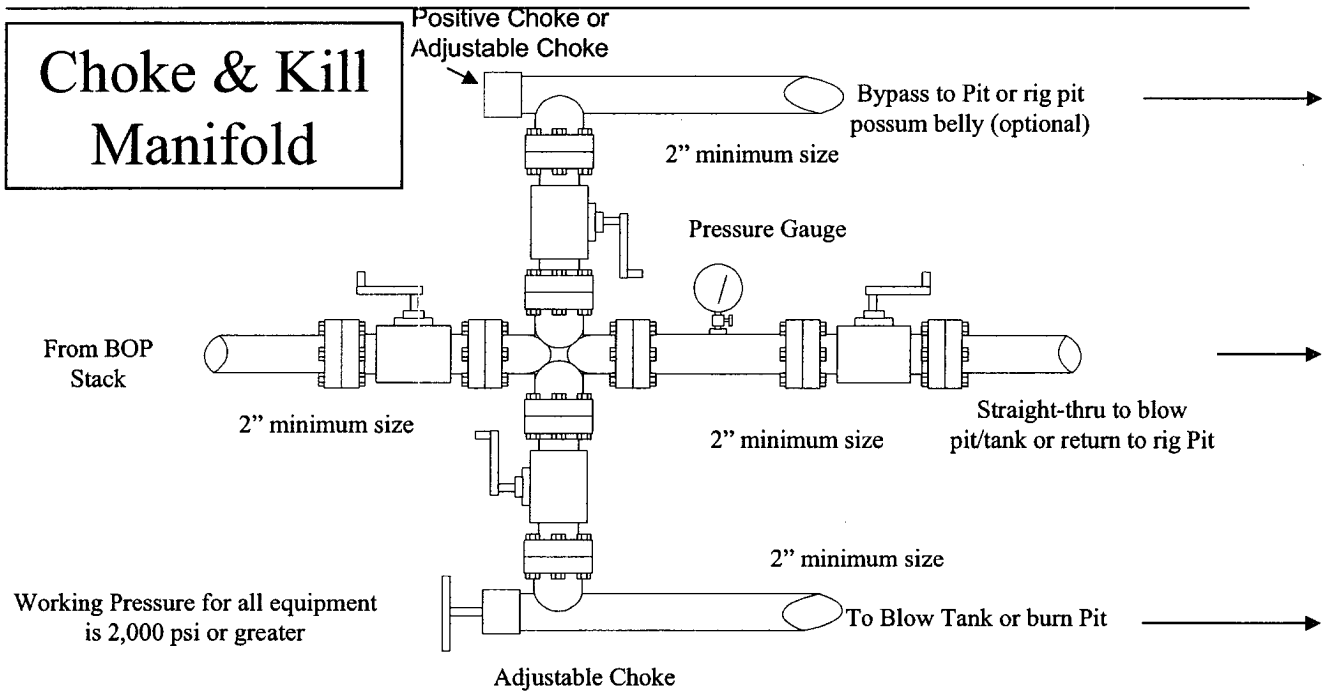
BP America Production Company

Well Control Equipment Schematic

BOP Stack



Choke & Kill Manifold



Cementing Program

Well Name:	Atlantic A LS 3M	Field:	Blanco Mesaverde / Basin Dakota
Location:	28-31N-10W, 1800 FSL, 1630 FWL	API No.	
County:	San Juan	Well Flac	
State:	New Mexico	Formation:	Blanco Mesaverde/Basin Dakota
		KB Elev (est)	6070
		GL Elev. (est)	6056

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~~ 200	13.5	9.625	ST&C	Surface	NA	
Intermediate	3100	8.75	7	~~LT&C~~ ST&C	Surface	NA	
Production -	7490	6.25	4.5	ST&C	3000	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~~ 3970	1400	254	0.0787	8.845
Intermediate	7	20	K-55	3740	2270	~~234~~ 254	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 minmize drillout.

Surface:

Preflush	20 bbl.	FreshWater	
Slurry 1	~~100~~ 160 sx Class C Cement		~~117~~ 203 cuft
TOC@Surface	+ 2% CaCl2 (accelerator)		
			0.4887 cuft/ft OH

Slurry Properties:	Density (lb/gal)	Yield (ft3/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	260 sx	Class "G" Cement	673 cuft
	Slurry 1		+ 3% D79 extender	
	TOC@Surface		+1/4 #/sk. Cellophane Flake	
			+ 5 lb/sk Gilsonite	
	Tail	60 sx	50/50 Class "G"/Poz	75 cuft
	Slurry 2		+ 2% gel (extender)	
	500 ft fill		+1/4 #/sk. Cellophane Flake	0.1503 cuft/ft OH
			+ 2% CaCl2 (accelerator)	0.1746 cuft/ft csg ann
			+ 5 lb/sk Gilsonite	

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	200	LiteCrete D961 / D124 / D154	480 cuft
	Slurry 1		+ 0.03 gps D47 antifoam	
	TOC, 400' above 7" shoe		+ 0.5% D112 fluid loss	
			+ 0.11% D65 TIC	
	Tail	160 sx	50/50 Class "G"/Poz	216 cuft
	Slurry 2		+ 5% D20 gel (extender)	
	1506 ft fill		+ 0.1% D46 antifoam	
			+ 1/4 #/sk. Cellophane Flake	
			+ 0.25% D167 Fluid Loss	
			+ 5 lb/sk Gilsonite	

Cementing Program

		+0.1% d800, retarder		
		+0.15% D65, dispersant		
				0.1026 cuft/ft OH
Slurry Properties:	Density	Yield	Water	
	(lb/gal)	(ft3/sk)	(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
				5484

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

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 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 ½" 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.