

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. NMNM - 012200
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator BP AMERICA PRODUCTION COMPANY		7. If Unit or CA Agreement, Name and No.
Contact: MARY CORLEY E-Mail: corleyml@bp.com		8. Lease Name and Well No. DRYDEN 1M
3a. Address P.O. BOX 3092 HOUSTON, TX 77253	3b. Phone No. (include area code) Ph: 281.366.4491 Fx: 281.366.0700	9. API Well No. 3004532474
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSE Lot O 815FSL 2470FEL 36.37600 N Lat, 107.41100 W Lon At proposed prod. zone		10. Field and Pool, or Exploratory BASIN DAKOTA/BLANCO MESAVER
14. Distance in miles and direction from nearest town or post office* 21 MILES FROM BLOOMFIELD, NEW MEXICO		11. Sec., T., R., M., or Blk. and Survey or Area 0 Sec 28 T28N R8W Mer NMP
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 815	16. No. of Acres in Lease 320.00	12. County or Parish SAN JUAN
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 1850	19. Proposed Depth 6671 MD	13. State NM
21. Elevations (Show whether DF, KB, RT, GL, etc.) 5788 GL	22. Approximate date work will start 09/15/2004	17. Spacing Unit dedicated to this well 320.00 S/L
		20. BLM/BIA Bond No. on file WY2924
		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.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature (Electronic Submission)	Name (Printed/Typed) MARY CORLEY	Date 07/21/2004
Title AUTHORIZED REPRESENTATIVE		
Approved by (Signature) 	Name (Printed/Typed)	Date 1-20-05
Title AFM	Office FEO	

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 #33345 verified by the BLM Well Information System  
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington

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

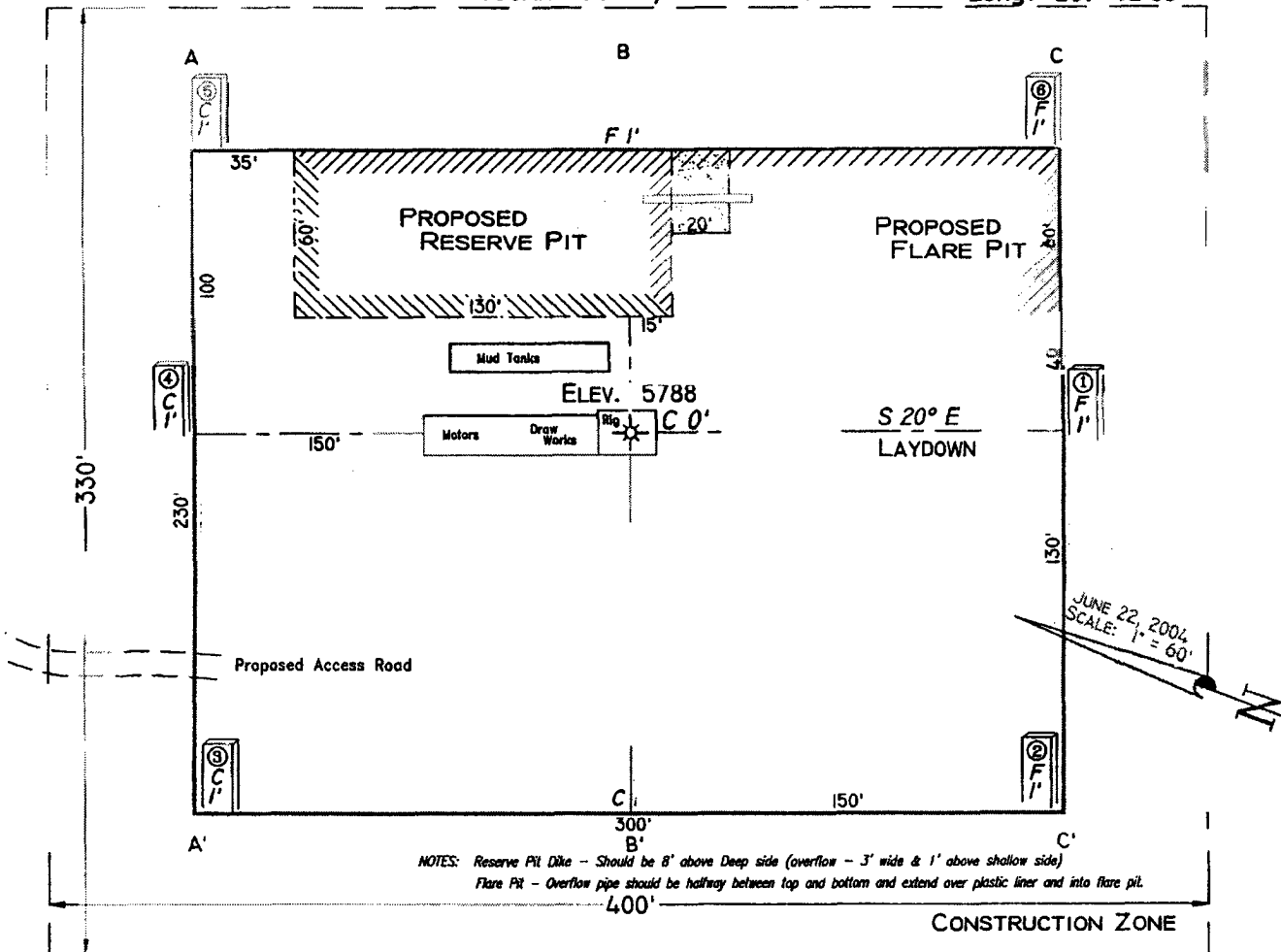
NMOCD

(R) - GLO Record

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

Dryden #1M  
 815' F/SL 2470' F/EL  
 SEC. 28, T28N, R8W, N.M.P.M.  
 SAN JUAN COUNTY, NEW MEXICO

Lat: 36°37'38"  
 Long: 107°41'09"

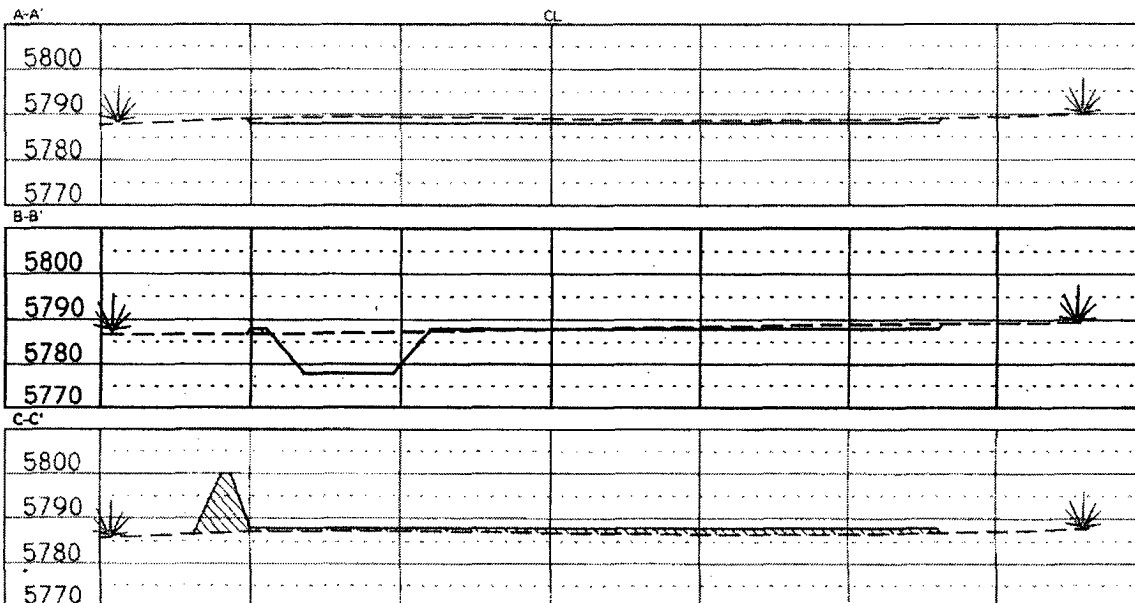


NOTES: Reserve Pit Dike - Should be 8' above Deep side (overflow - 3' wide & 1' above shallow side)  
 Flare Pit - Overflow pipe should be halfway between top and bottom and extend over plastic liner and into flare pit.

**CONSTRUCTION ZONE**

Area of Construction Zone - 330'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: Dryden  
 County: San Juan, New Mexico  
 Minerals: State  
 Rig : Aztec 184

Well Name & No. Dryden 1M  
 Location: 28-28N-8W:815' FSL, 2470' FEL  
 BHLOC: Vertical  
 Surface: Lat: 36.6272281 deg; Long: -107.6851447 deg

Field: Blanco Mesaverde/Basin Dakota

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

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
TYPE OF TOOLS	DEPTH OF DRILLING	Actual GL: 6262'		Estimated KB: 6,276.0'	
Rotary	0 - TD	Marker		SUBSEA	TVD
Type Single Run	LOG PROGRAM Depth Interval	Ojo Alamo		4607'	1184'
		Kirtland		4708'	1323'
		Fruitland	*	4166'	1625'
		Fruitland Coal	*	3878'	1913'
		Pictured Cliffs	*	3687'	2104'
		Lewis	*	3523'	2268'
		Cliff House	#	2137'	3654'
		Menefee	#	1984'	3807'
		Point Lookout	#	1442'	4349'
		Mancos		1067'	4724'
Cased Hole TDT- CBL	TD to 7" shoe Identify 4 1/2" cement top	Greenhorn		-526'	6317'
		Graneros (bent,mkr)		-593'	6384'
		Two Wells	#	-630'	6421'
		Paguate	#	-723'	6514'
		Cubero	#	-766'	6557'
		L. Cubero	#	-798'	6589'
		Encinal Cyn	#	-854'	6645'
		TOTAL DEPTH:		-880'	6,671'
		# Probable completion interval			* Possible Pay

SPECIAL TESTS	DRILL CUTTING SAMPLES	DRILLING TIME
TYPE	FREQUENCY DEPTH	FREQUENCY DEPTH
None	30'/10' intervals 2400 - TD	Geologist 0 - TD

**REMARKS:**

MUD PROGRAM:					
Approx. Interval	Type <input type="checkbox"/> Mud	Weight, #/gal	Vis, <input type="checkbox"/> sec/qt	W/L cc's /30 min	Other Specification
200'	Spud	8.8 - 9.0	Sufficient to clean hole.		
2400'	Water/LSND	8.4 - 9.0	<9		
6,671'	Air	1	1000 cfm for hammer		

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	2400'	8-3/4"	7"	J/K-55 ST&C	20#	100' below LWIS	cmt to surface
Production	6671'	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/NMOCDD 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	3645'	500	0
Point Lookout	4349'	600	0
Dakota	6421'	2600	1080

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:	DATE:	APPROVED:	DATE:
HGJ	JMP	2-Jun-04		
Form 46 7-84bw	For Drilling Dept.		For Production Dept.	

## CASING AND CEMENTING PROGRAM

### Casing Program:

#### 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	<del>3370</del> 2370	1400	254	0.0787	8.845
Intermediate	7	20	K-55	3740	2270	<del>254</del> 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	Recommended Mud Properties Prio Cementing
0 - SCP	Water/Spud	8.6-9.2	PV <20
SCP - ICP	Water/LSND	8.6-9.2	YP <10
ICP - ICP2	Gas/Air Mist	NA	Fluid Loss <15
ICP2 - TD	LSND	8.6 - 9.2	

### Cementing Program:

	Surface	Intermediate	Production	
Excess %, Lead	100	75	40	1. Do not wash pumps and lines.
Excess %, Tail	NA	0	40	2. Wash pumps and lines.
BHST (est deg. F)	75	128	190	3. Reverse out
Special Instructions	1,6,7	1,6,8	2,4,6	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

#### 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
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Slurry 1	100 sx Class C Cement	125 cuft
TOC@Surface	+ 2% CaCl <sub>2</sub> (accelerator)	
		0.3132 cuft/ft OH

Slurry Properties:	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water (gal/sk)
Slurry 1	15.2	1.27	5.8

#### 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
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Lead	190 sx Class "G" Cement	482 cuft
Slurry 1	+ 3% D79 extender	
TOC@Surface	+ 2% S1 Calcium Chloride	
	+1/4 #/sk. Cellophane Flake	
	+ 0.1% D46 antifoam'	
Tail	60 sx 50/50 Class "G"/Poz	75 cuft
Slurry 2	+ 2% gel (extender)	
500 ft fill	0.1% D46 antifoam	0.1503 cuft/ft OH
	+1/4 #/sk. Cellophane Flak	0.1746 cuft/ft csg ann
	+ 2% CaCl <sub>2</sub> (accelerator)	

Slurry Properties:	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water (gal/sk)
Slurry 1	11.4	2.61	17.77
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
- 14 Centralizers (one in middle of first joint, then every third collar)
- 2 Fluidmaster vane centralizers @ base of Ojo
- 1 Top Rubber Plug
- 1 Thread Lock Compound

# CASING AND CEMENTING PROGRAM

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## Production:

Fresh Water	10 bbl	CW100
<b>Lead</b>	170 LiteCrete D961 / D124 / D154	406 cuft
Slurry 1	+ 0.03 gps D47 antifoam	
TOC, 100' above 7" shoe	+ 0.5% D112 fluid loss	
	+ 0.11% D65 TIC	
<b>Tail</b>	150 sx 50/50 Class "G"/Poz	212 cuft
Slurry 2	+ 5% D20 gel (extender)	+ 5 #/sk D24 gilsonite
1476 ft fill	+ 0.1% D46 antifoam	+ 0.15% D65 TIC
	+ 1/4 #/sk. Cellophane Flake	+ 0.1% D800 retarder
	+ 0.25% D167 Fluid Loss	
		0.1026 cuft/ft OH

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, <del>none in air drilled holes.</del>
	1 Top Rubber Plug
	1 Thread Lock Compound

<b>Slurry Properties:</b>	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water (gal/sk)
Slurry 1	9.5	2.5	6.4
Slurry 2	13	1.4	6.5

0.1 cuft/ft csg ann  
Top of Mancos ###

## FEDERAL CEMENTING REQUIREMENTS

1. All permeable zones containing fresh water and other usable water containing 10,000 ppm or less total dissolved solids shall 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 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 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.

## 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

Below conductor casing to total depth

#### BOP Equipment

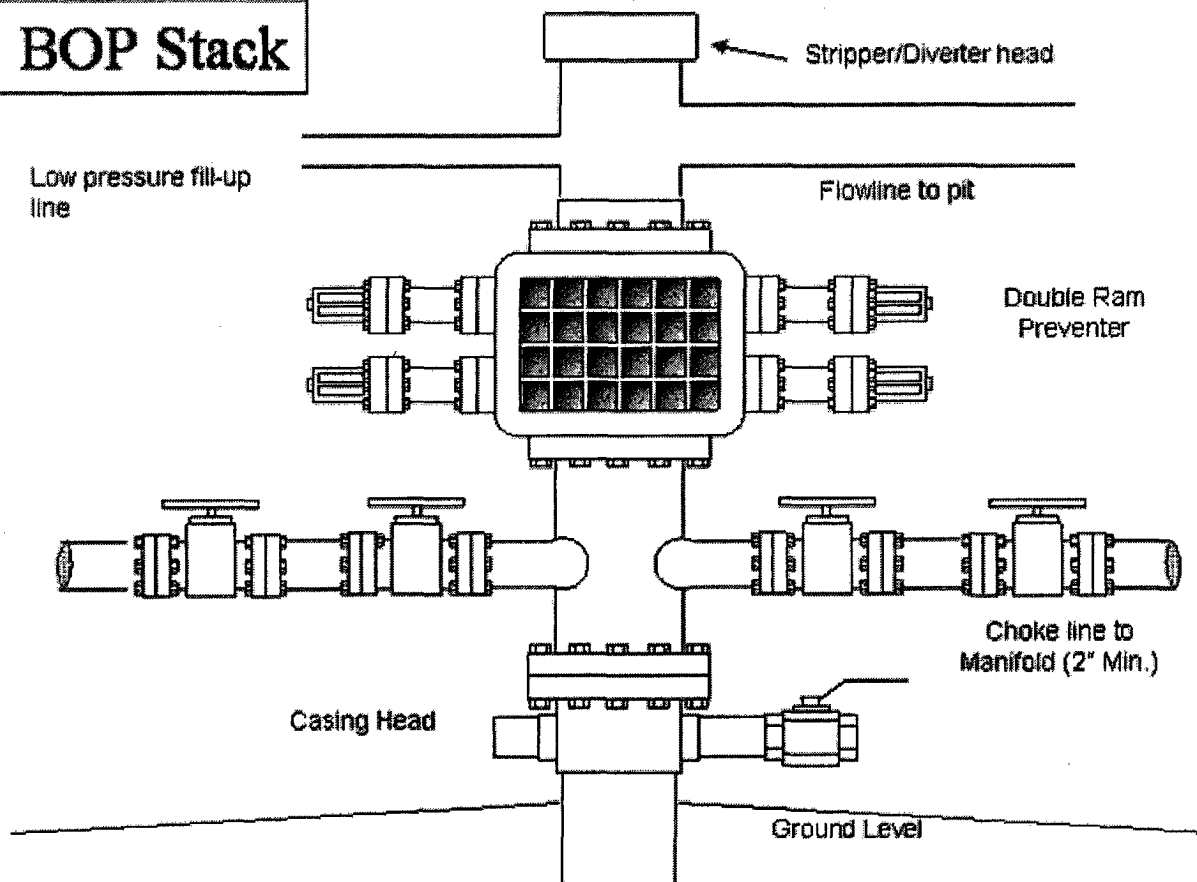
11" nominal or 7 1/16", 3000 psi double ram preventer with rotating head

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 with a handle available, floor safety valves and choke manifold which will also be tested to equivalent pressure.

**BP America Production Company**  
**Well Control Equipment Schematic**



**BOP Stack**



**Choke & Kill Manifold**

