

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. NMSF - 080917
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input 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. ATLANTIC B LS 3C
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. 3004532178
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSE Lot 19 720FSL 2445FEL 36.50700 N Lat, 107.53100 W Lon At proposed prod. zone		10. Field and Pool, or Exploratory BLANCO MESAVERDE
14. Distance in miles and direction from nearest town or post office* 7.5 MILES FROM AZTEC, NEW MEXICO		11. Sec., T., R., M., or Blk. and Survey or Area Sec 4 T30N R10W Mer NMP SME: BLM
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 720	16. No. of Acres in Lease 320.26	12. County or Parish SAN JUAN
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 1000	19. Proposed Depth 5756 MD	13. State NM
21. Elevations (Show whether DF, KB, RT, GL, etc.) 6448 GL	22. Approximate date work will start 03/03/2004	17. Spacing Unit dedicated to this well 320.26 5/2
		20. BLM/BIA Bond No. on file WY2924
		23. Estimated duration 5 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:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- 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 02/16/2004
Title AUTHORIZED REPRESENTATIVE		
Approved by (Signature)	Name (Printed/Typed) Acting Field Manager - Minerals	Date 4/21/04
Title	Office	

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 #27943 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 \*\*

NMOC

C.O.A. - compliance w/Rule 50

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

API Number <b>30045-32178</b>		Pool Code <b>72319</b>	Pool Name <b>BLANCO MESAVERDE</b>
Property Code <b>000282</b>	Property Name <b>Atlantic B LS</b>		Well Number <b>#3C</b>
GRID No. <b>000778</b>	Operator Name <b>BP AMERICA PRODUCTION COMPANY</b>		Elevation <b>6448</b>

## 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
<b>O (Lot 19)</b>	<b>4</b>	<b>30 N</b>	<b>10 W</b>		<b>720</b>	<b>SOUTH</b>	<b>2445</b>	<b>EAST</b>	<b>SAN JUAN</b>

## 11 Bottom Hole Location If Different From Surface

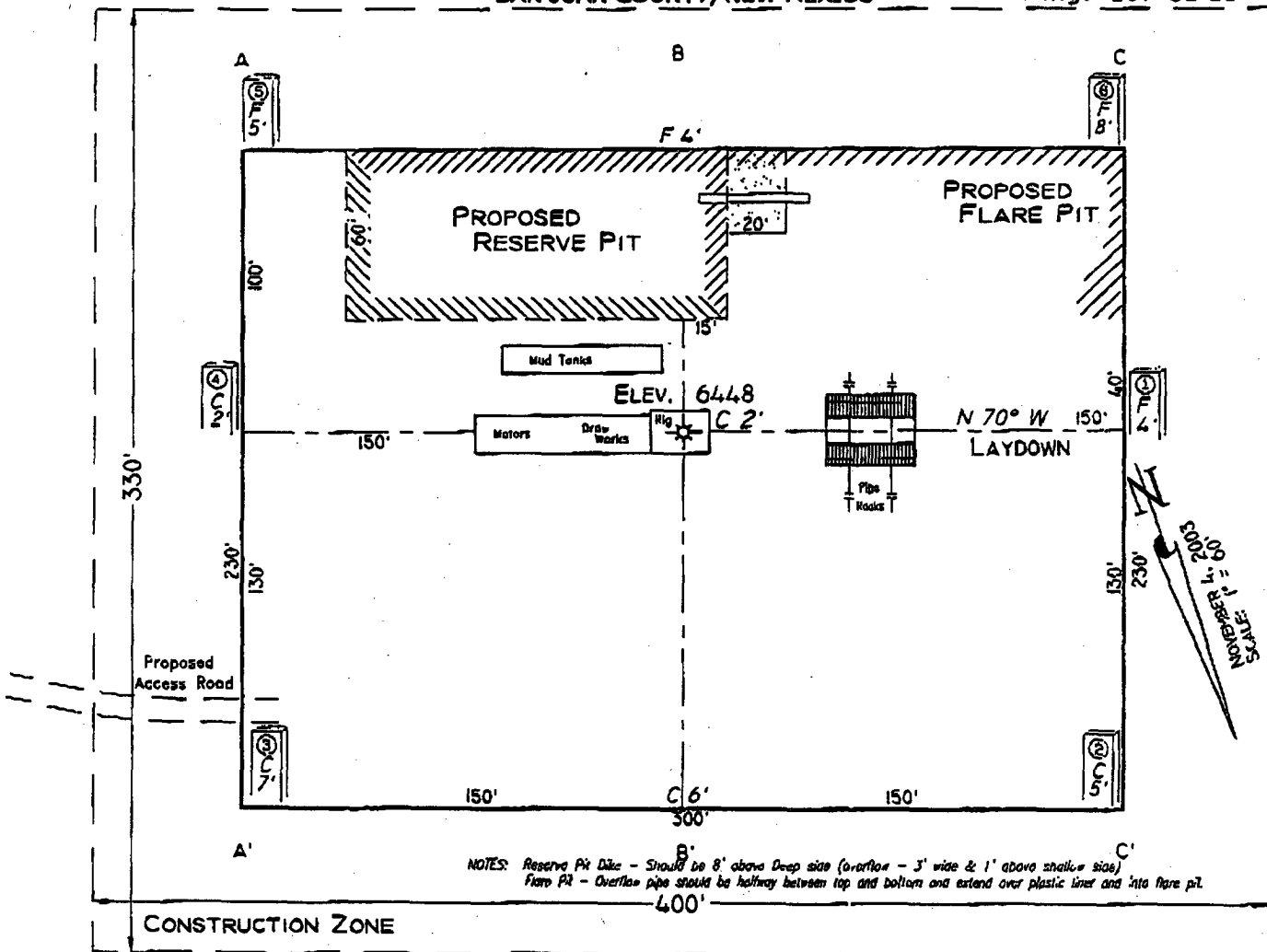
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres <b>320.26</b>		John or Infill		Consolidation Code		Order No.			

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

<p>16</p> <p>Lot 8</p> <p>Lot 7</p> <p>Lot 6</p> <p>Lot 5</p> <p>Lot 9</p> <p>Lot 10</p> <p>Lot 11</p> <p>Lot 12</p> <p>Lot 16</p> <p>Lot 15 #38</p> <p>Lot 14</p> <p>Lot 13</p> <p>Lot 17</p> <p>Lot 18</p> <p>Lot 19</p> <p>Lot 20</p> <p>2445'</p> <p>720'</p> <p>1650' FSL 790' FWL #3 30.045-09850</p> <p>1960' FSL 2245' FWL</p> <p>30.045-22989</p> <p>1860' FSL 825' FWL</p>				<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Mary Griley</i> Signature Mary Griley Printed Name Sr. Regulatory Analyst Title 02-05-2004 Date</p> <p>18 SURVEYOR CERTIFICATION</p> <p>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.</p> <p>November 4, 2003 Date of Survey</p> <p>Signature and Seal of Registered Professional Surveyor GARY R. VANDERKAM NEW MEXICO REGISTERED PROFESSIONAL LAND SURVEYOR 7016 Certificate Number</p>	
--	--	--	--	---	--

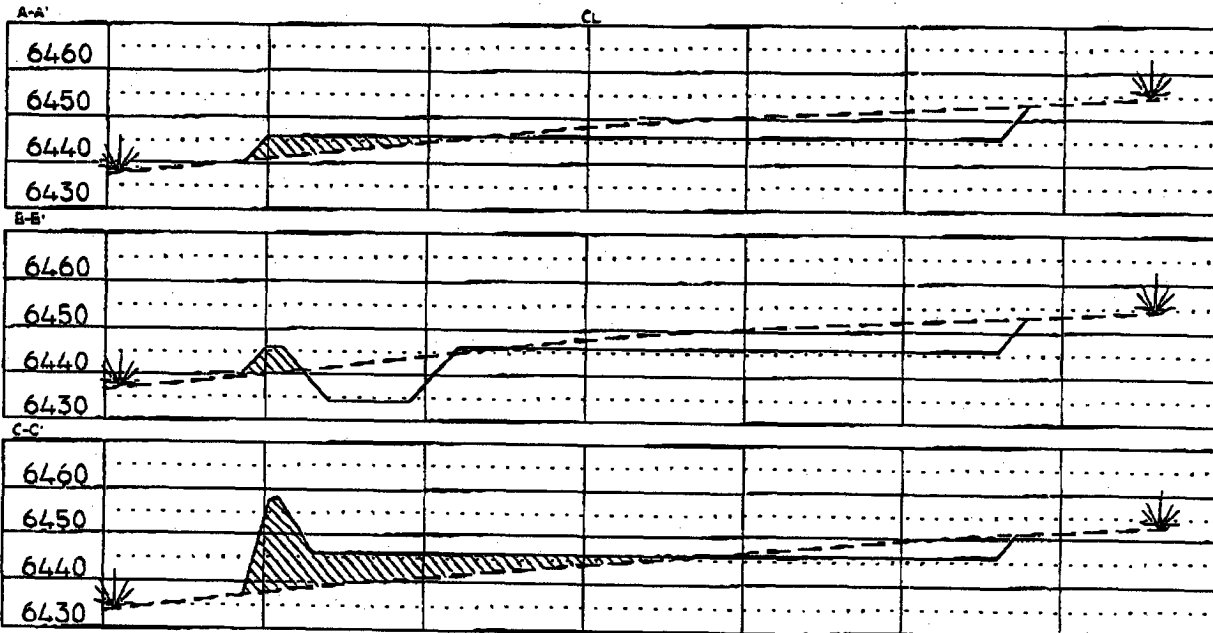
**PAD LAYOUT PLAN & PROFILE**  
**BP AMERICA PRODUCTION COMPANY**  
 Atlantic B LS #3C  
 720' R/SL 2445' F/EL  
 SEC. 4, T30N, R10W, N.M.P.M.  
 SAN JUAN COUNTY, NEW MEXICO

Lat: 36°50'07"  
 Long: 107°53'15"



Area of Construction Zone - 330'x400' or 3.03 acres, more or less.

SCALE: 1"=50'-HORIZ.  
 1"=40'-VERT.



VANN SURVEYS  
 P. O. Box 1306  
 Farmington, NM

**BP AMERICA PRODUCTION COMPANY  
DRILLING AND COMPLETION PROGRAM**

**Prospect Name:** Atlantic B LS

**Lease:** Atlantic B LS

**County:** San Juan

**State:** New Mexico

**Date:** November 13, 2003

**Well No:** 3 C

**Surface Location:** 4-30N-10W; 1720 FSL, 2445 FEL

**Field:** Blanco Mesaverde

**OBJECTIVE:** Drill 400' below the top of the Point Lookout Sandstone, set 2 7/8" production longstring, Stimulate CH, MF and PL intervals

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
TYPE OF TOOLS	DEPTH OF DRILLING	Estimated GL: 6448		Estimated KB: 6462	
Rotary	0 - TD	MARKER		SUBSEA	TVD
<b>LOG PROGRAM</b> TYPE <u>OPEN HOLE</u> None  <u>CASED HOLE</u> GR-CCL TD to 5 1/2" shoe		Ojo Alamo		4712	1750
		Kirtland		4612	1850
		Fruitland		3908	2554
		Fruitland Coal	*	3629	2833
		Pictured Cliffs	*	3325	3137
		Lewis	*	3146	3316
		Cliff House	#	1840	4623
		Menefee	#	1531	4931
		Point Lookout	#	1106	5356
		Mancos		812	5650
REMARKS: - Please report any flares (magnitude & duration).		TOTAL DEPTH		706	5756
		# Probable completion interval		* Possible Pay	
SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
		FREQUENCY	DEPTH	FREQUENCY	DEPT
None		None	Production hole	Geolograph	0-TD
REMARKS:					

MUD PROGRAM:					
Approx. Interval	Type Mud	Weight, #/gal	Vis, sec/qt	W/L cc's/30 min	Other Specification
0 - 120	Spud	8.6-9.2			
120 - 2783 (1)	Water/LSND	8.6-9.2		<6	
2783 - 5756	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, I
Surface/Conductor	120	8 5/8"	X-42 ST&C	20#	12.25"	1
Intermediate 1	2783	5 1/2"	J-55 ST&C	15.5#	7.875"	1,2
Production	5756	2 7/8"	J-55	6.5#	4.75"	3,4

REMARKS:

- (1) Circulate Cement to Surface
- (2) Set casing 50' above Fruitland Coal
- (3) Bring cement 100' above 5 1/2" shoe
- (4) 100' Overlap

**CORING PROGRAM:**

None

**COMPLETION PROGRAM:**

Rigless, 2-3 Stage Limited Entry Hydraulic Frac

## BP America Production Company BOP Pressure Testing Requirements

Well Name: Atlantic B LS  
County: San Juan

3 C  
State: New Mexico

Formation	Estimated TVD/MD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1750		
Fruitland Coal	2833		
PC	3137		
Lewis Shale	3318		
Cliff House	4623	500	0
Menefee Shale	4931		
Point Lookout	5356	600	0
Mancos	5650		

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

Requested BOP Pressure Test Exception: 750 psi

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

---

**Background**

The objective Mesaverde 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 rigs 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 Mesaverde. No abnormal temperature, pressure, or H2S anticipated.

**Equipment Specification**

**Interval**

**BOP Equipment**

Below conductor casing to total depth	9", 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 750 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.

---

**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 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 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.

## Cementing Program

Well Name: Atlantic B LS 3C	Field: Blanco Mesaverde
Location: 04-30N-10W, 1720' FSL, 2445' FEL	API No.
County: San Juan	Well Flac
State: New Mexico	Formation: MesaVerde
	KB Elev (est) 6462
	GL Elev. (est) 6448

### Casing Program:

Casing String	Est. Depth (ft.)	Hole Size (in.)	Casing Size (in.)	Thread	TOC (ft.)	Stage Tool Or TOL (ft.)
Surface	120	12 1/4	8 5/8	ST&C	Surface	NA
Intermediate	2783	7 7/8	5 1/2	ST&C	Surface	NA
Production -	5756	4 3/4	2 7/8		2683	NA

### Casing Properties:

Casing String	Size (in.)	(No Safety Factor Included)		Burst (psi.)	Collapse (psi.)	Joint St. (1000 lbs.)	Capacity (bbl/ft.)	Drift (in.)
		Weight (lb/ft)	Grade					
Surface	8 5/8	24	X42	2950	1370	244	0.06368	7.972
Intermediate	5 1/2	15.5	J55	4810	4040	202	0.0238	5.067
Production -	2 7/8	6.5	J-55	7264	7676	72	0.00579	2.375

### Mud Program

Apx. Interval (ft.)	Mud Type	Mud Weight	Recommended Mud Properties Prio Cementing:
0 - SCP	Water/Spud	8.6-9.2	Fluid Loss <6
SCP - ICP	Water/LSND	8.6-9.2	
ICP - TD	Gas/Air Mist	NA	

### 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.

### Surface:

Preflush	20 bbl.	FreshWater	
Slurry 1	90 sx Class G Cement		95 cuft
TOC@Surface	+ 3% CaCl <sub>2</sub> (accelerator)		
	0.25 #/sk Cellophane Flake (lost circulation additive)		0.3961 cuft/ft OH
	0.1% D46 antifoam		100 % excess
Slurry Properties:	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water (gal/sk)
Slurry 1	15.8	1.16	4.95

### Intermediate:

## Cementing Program

Fresh Water	20 bbl	fresh water
-------------	--------	-------------

Lead	300 sx Class "G" Cement	774 cuft
------	-------------------------	----------

Slurry 1 + 3% D79 extender

TOC@Surface +1/4 #/sk. Cellophane Flake  
+ 0.1% D46 antifoam'

70 sx 50/50 Class "G"/Poz

**Tail** + 2% gel (extender)

Slurry 2 0.1% D46 antifoam

500 ft fill +1/4 #/sk. Cellophane Flake

+ 2% S1 Calcium Chloride

774 cuft

87 cuft

0.1733 cuft/ft OH

0.2009 cuft/ft csg ann

80 % excess

Slurry Properties:	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water (gal/sk)
Slurry 1	11.7	2.61	17.77
Slurry 2	13.5	1.27	5.72

**Production:**

Fresh Water	10 bbl	CW100
-------------	--------	-------

**Slurry** 140 LiteCrete D961 / D124 / D154

+ 0.03 gps D47 antifoam

+ 0.5% D112 fluid loss

TOC@Liner Top + 0.11% D65 TIC

+ 0.11% D65 TIC

337 cuft

0.078 cuft/ft OH

40 % excess

Slurry Properties:	Density (lb/gal)	Yield (ft <sup>3</sup> /sk)	Water (gal/sk)
Slurry	9.5	2.52	6.38

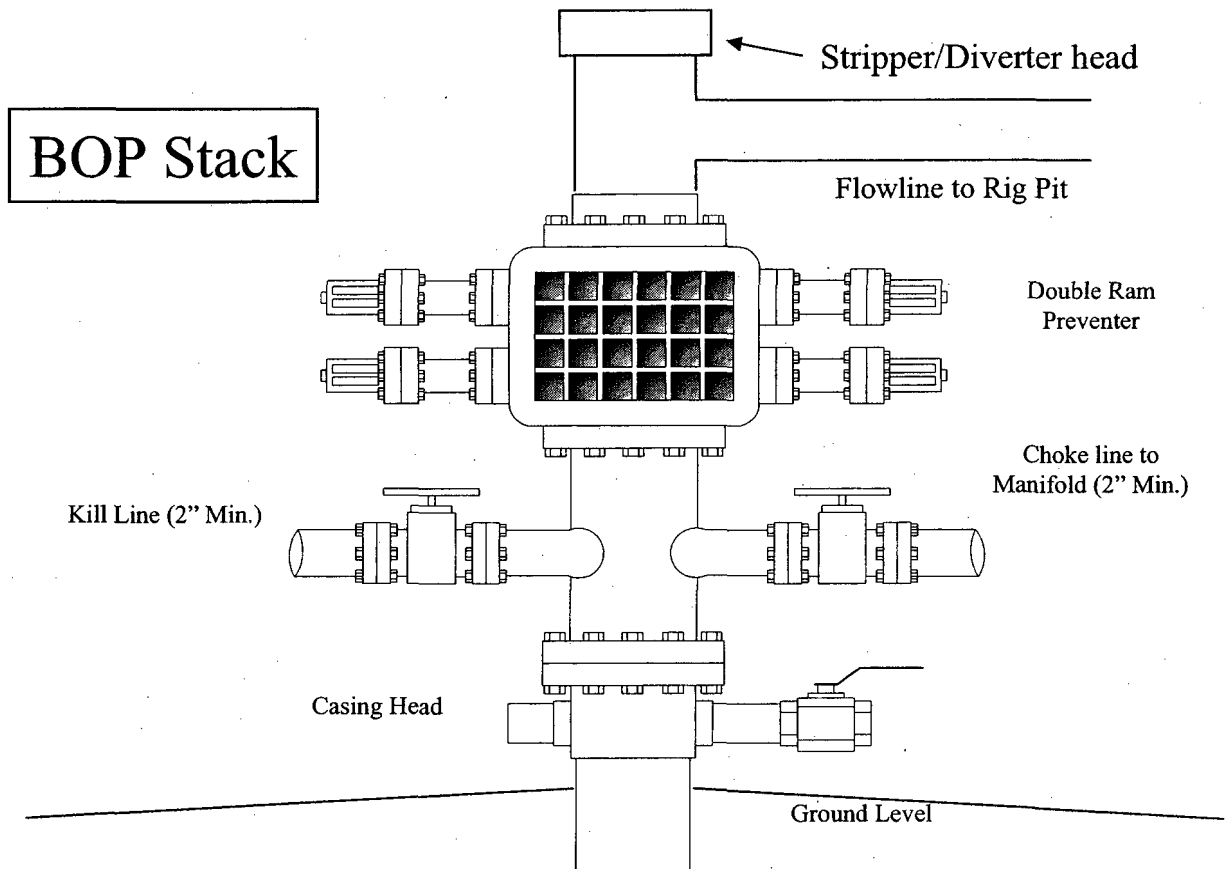
0.0886 cuft/ft csg ann

6.38

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



**BOP Stack**



**Choke & Kill Manifold**

