

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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 - 077123
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.
3a. Address P.O. BOX 3092 HOUSTON, TX 77253-3092		8. Lease Name and Well No. WARREN LS 5M
3b. Phone No. (include area code) Ph: 281.366.4081 Fx: 281.366.0700		9. API Well No. 3004532533
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface STATE 1000 FSL 1000 FEL 36.63500 N Lat, 107.73361 W Lon At proposed prod. zone 830 1560		10. Field and Pool, or Exploratory BASIN DAKOTA & BLANCO MV
14. Distance in miles and direction from nearest town or post office* 19.5 MILES S/E FROM AZTEC, NM		11. Sec., T., R., M., or Blk. and Survey or Area Sec 24 T28N R9W Mer NMP 0
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1000'		12. County or Parish SAN JUAN ✓
16. No. of Acres in Lease 6787 MD		13. State NM
17. Spacing Unit dedicated to this well 320.00 E/2		18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.
19. Proposed Depth 6787 MD		20. BLM/BIA Bond No. on file WY2924
21. Elevations (Show whether DF, KB, RT, GL, etc.) 5809 GL		22. Approximate date work will start 10/25/2004
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 08/11/2004
Title REGULATORY ANALYST		
Approved by (Signature) <i>Jim Hlava</i>	Name (Printed/Typed)	Date 12/7/04
Title Acting Field Manager - Minerals		

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 #34410 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the FarmingtonThis action is subject to technical and
procedural review pursuant to 43 CFR 3185.3
and appeal pursuant to 43 CFR 3185.4DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

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

NMOC

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 71599, 72319	³ Pool Name Basin Dakota: Blanco Mesquverde
⁴ Property Code 001212	⁵ Property Name Warren LS	⁶ Well Number # 5M
⁷ OGRID No. 000778	⁸ Operator Name BP AMERICA PRODUCTION COMPANY	⁹ Elevation 5831

¹⁰ Surface Location

UL or Lot No. O	Section 24	Township 28 N	Range 9 W	Lot Idn	Feet from the 830	North/South line SOUTH	Feet from the 1560	East/West line EAST	County SAN JUAN
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¹¹ 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 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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	5280(R)	24	5273(R)	830'	1560'	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Cherry Hlava Signature Cherry Hlava Printed Name Regulatory Analyst Title 10-14-04 Date	
							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. Restaked: August 21, 2004 July 21, 2004 Date of Survey Signature and Seal of Professional Surveyor GARY D. VANN NEW MEXICO REGISTERED PROFESSIONAL LAND SURVEYOR 7016 Certificate Number

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

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

Form C-103

March 4, 2004

WELL API NO.

NEW WELL

5. Indicate Type of Lease

STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name
Warren LS

8. Well Number

5 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 ☐ Gas Well ☒ Other

2. Name of Operator

BP AMERICA PRODUCTION CO

3. Address of Operator

P.O. BOX 3092 HOUSTON, TX 77079-2064

4. Well Location

Unit Letter P : 830 feet from the South line and 1560 feet from the East line

Section 24

Township 28N

Range 09W

NMPM SAN JUAN

County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
5809'

Pit or Below-grade Tank Application (For pit or below-grade tank closures, a form C-144 must be attached)

Pit Location: UL P Sect 24 Twp 28N Rng 09W Pit type DRILL Depth to Groundwater >100' Distance from nearest fresh water well >1000'

Distance from nearest surface water >1000' Below-grade Tank Location UL P Sect 24 Twp 28N Rng 09W ;

860 feet from the South line and 1545 feet from the East line PLEASE SEE ATTACHED PAD LAYOUT

New Surface location for well

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐

OTHER: Lined Drilling Pit Permit ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

CASING TEST AND CEMENT JOB ☐

OTHER: ☐

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.

Please reference BP America's San Juan Basin Drilling/Workover Pit construction Plan on file with the NMOCD. 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 Cherry Hlava TITLE Regulatory Analyst DATE 10/14/04

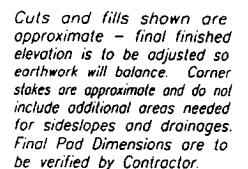
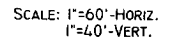
Type or print name Cherry Hlava E-mail address: hlavacl@bp.com Telephone No. 281-366-4081

(This space for State use)

APPROVED BY [Signature] TITLE DEPUTY OIL & GAS INSPECTION DIST. #3 DATE DEC 10 2004

Conditions of approval, if any: [Signature]

Lat: 36°38'34"
Long: 107°44'11"



VANN SURVEYS
P. O. Box 1306
Farmington, NM

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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.

FORM APPROVED
OMB No. 1004-0135
Expires November 30, 2000

5. Lease Serial No
SF-077123

6. If Indian, Allottee or tribe Name

7. If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
Warren LS 5M

2. Name of Operator
BP AMERICA PRODUCTION COMPANY

9. API Well No.
30-045- New Well 32533

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

3b. Phone No. (include area code)
281-366-4081

10. Field and Pool, or Exploratory Area
Basin Dakota & Blanco Mesaverde

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
NEW Surface Location
Surface: SEC 24 T28N & R09W SWSE 830' FSL 1560' FEL

11. County or Parish, State
SAN JUAN, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OR NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ Acidize

☐ Deepen

☐ Production (Start/Resume)

☐ Water shut-Off

☐ Alter Casing

☐ Fracture Treat

☐ Reclamation

☐ Well Integrity

☐ Casing Repair

☐ New Construction

☐ Recomplete

☒ Other Change to Original Drilling plan

☐ Change Plans

☐ Plug and Abandon

☐ Water Disposal

☐ Convert to Injection

☐ Plug Back

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 recomplate 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.

Original APD submitted on 08/11/04. Under advise from BLM, BP America requests permission to move the surface location of above mentioned well to an existing well pad. The previous location is: Sec 24 T28N & R9W 1000' FSL & 1060' FEL. The new location is: Sec 24 T28N & 09W 830' FSL & 1560' FEL

Attached in support of our request is amended Form C-102 and supporting plats.

14. I hereby certify that the foregoing is true and correct
Name (Printed/typed)

Cherry Hlava

Title Regulatory Analyst

Signature

Cherry Hlava

Date 10/14/2004

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Jim Lovato

Title

Acting Field Manager

Date

12/7/04

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

Minerals

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.

NMOC

BP AMERICA PRODUCTION COMPANY

DRILLING AND COMPLETION PROGRAM

8/6/2004

Lease:	Warren LS	Well Name & No.	Warren LS #5M	Field:	Blanco Mesaverde/Basin Dakota
County:	San Juan, New Mexico	Surface Location:	24-28N-9W:1000' FSL, 1060' FEL		
Minerals:	State	Surface:	Lat: 36.6430123 deg; Long: -107.7339753 deg		
Rig :	Aztec 184	BH Location:	vertical		
OBJECTIVE:	Drill 250' 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:	5809	Estimated KB:	5,823.0'
Rotary	0 - TD	Marker		SUBSEA	TVD
LOG PROGRAM					APPROX. MD
Type	Depth Interval	Ojo Alamo		4,709'	1,114'
Single Run		Kirtland		4,576'	1,247'
		Fruitland	*	4,168'	1,655'
		Fruitland Coal	*	3,927'	1,896'
		Pictured Cliffs	*	3,699'	2,124'
		Lewis	*	3,538'	2,285'
Cased Hole	TD to 7" shoe	Cliff House	#	2,199'	3,624'
TDT- CBL		Menefee	#	2,036'	3,787'
		Point Lookout	#	1,472'	4,351'
	Identify 4 1/2" cement top				

REMARKS:	Mancos	1,093'	4,730'	4,730'
- Please report any flares (magnitude & duration).	Greenhorn	-485'	6,308'	6,308'
	Graneros (bent,mkr)	-554'	6,377'	6,377'
	Two Wells	# -614'	6,437'	6,437'
	Paguate	# -674'	6,497'	6,497'
	Cubero	# -724'	6,547'	6,547'
	L. Cubero	# -770'	6,593'	6,593'
	Encinal Cyn	# -798'	6,621'	6,621'
	TOTAL DEPTH:	-864'	6,787'	6,787'
	# Probable completion interval			* Possible Pay

SPECIAL TESTS	DRILL CUTTING SAMPLES	DRILLING TIME
TYPE	FREQUENCY	DEPTH
None	30'/10' intervals	2385' to TD
REMARKS:	Geograph	0 - TD

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.		
2385'	Water/LSND	8.4 - 9.0		<9	Sweep hole while whilst water drilling, LCM onsite
6,787'	Air	1	1000 cfm for hammer		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	2385'	8-3/4"	7"	J/K-55 ST&C	20#	100' below LWIS	cmt to surface
Production	6,787'	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/NMOCD 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	3,624'	500	0
Point Lookout	4,351'	600	0
Dakota	6,437'	2600	1183.86

Requested BOP Pressure Test Exception = 1500 psi	** Note: Determined using the following formula: ABHP - (.22*TVD) = ASP
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Form 46 Reviewed by:	Logging program reviewed by:	DATE:	APPROVED:	DATE:
HGJ	JMP	6-Aug-04		
Form 46 7-84bw	For Drilling Dept.		For Production Dept.	

Additional Operator Remarks:

Notice of Staking was submitted on 08/05/2004.

BP America Production Company respectfully requests permission to drill the subject well to a total depth of approximately 6787 feet and complete into the Basin Dakota Pool, produce the well to establish a production rate, perform a deliverability test, isolate the Dakota then complete into the Blanco Mesaverde Pool and commingle production downhole.

SUPPLEMENTAL TO SURFACE USE PLAN

New Facilities:

A 4" diameter buried steel pipeline that is + or - 200 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 Services.

If conditions allow, 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.

APD/ROW

Cementing Program

Well Name: Warren LS #5M
 Location: 24-28N-9W:1000' FSL, 1060' FEL
 County: San Juan
 State: New Mexico

Well Flac
 Formation: Dakota MesaVerde
 KB Elev (est) 5823
 GL Elev. (est) 5809

Casing Program:

Casing String Est. Depth (ft.)	Hole Size (in.)	Casing Size (in.)	Threac TOC (ft.)	Stage Tool Cmt Cir. Out Or TOL (ft. (bbl.))
Surface 200	13.5	9.625	ST&C Surface	NA
Intermediate 2385	8.75	7	LT&C Surface	NA
Production - 6787	6.25	4.5	ST&C 2285	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	2270	1400	254	0.0787	8.845
Intermediate 7	20	K-55	3740	2270	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	Recommended Mud Properties Prio Cementing:
			PV <20
			YP <10
			Fluid L <15
0 - SCP	Water/Spud	8.6-9.2	
SCP - ICP	Water/LSNC	8.6-9.2	
ICP - ICP2	Gas/Air Mist	NA	
ICP2 - TD	LSND	8.6 - 9.2	

Cementing Program:

	Surface	Intermediate	Production
Excess %, Lead	100	75	40
Excess %, Tail	NA	0	40
BHST (est deg. F)	75	128	190
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.	FreshWater
Slurry 1	160 sx Class C Cement	195 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

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	190 sx Class "G" Cement	478 cuft
Slurry 1	+ 3% D79 extender	
TOC@Surface	+ 2% S1 Calcium Chloride	
	+1/4 #/sk. Cellophane Flake	

Cementing Program

Tail Slurry 2 500 ft fill		+ 0.1% D46 antifoam' 60 sx 50/50 Class "G"/Poz + 2% gel (extender) 0.1% D46 antifoam +1/4 #/sk. Cellophane Flake + 2% CaCl2 (accelerator)	75 cuft 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	2.61	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		
Production:			
Fresh Water	10 bbl	CW100	
Lead Slurry 1 TOC, 100' above 7" shoe		170 LiteCrete D961 / D124 / D154 + 0.03 gps D47 antifoam + 0.5% D112 fluid loss + 0.11% D65 TIC	409 cuft
Tail Slurry 2 1557 ft fill		160 sx 50/50 Class "G"/Poz + 5% D20 gel (extender) + 0.1% D46 antifoam + 1/4 #/sk. Cellophane Flake + 0.25% D167 Fluid Loss	224 cuft + 5 #/sk D24 gilsonite + 0.15% D65 TIC + 0.1% D800 retarder 0.1026 cuft/ft OH
Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	9.5	2.52	6.38
Slurry 2	13	1.44	6.5
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 1 Top Rubber Plug 1 Thread Lock Compound		
			Top of Mancos 4730

**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.
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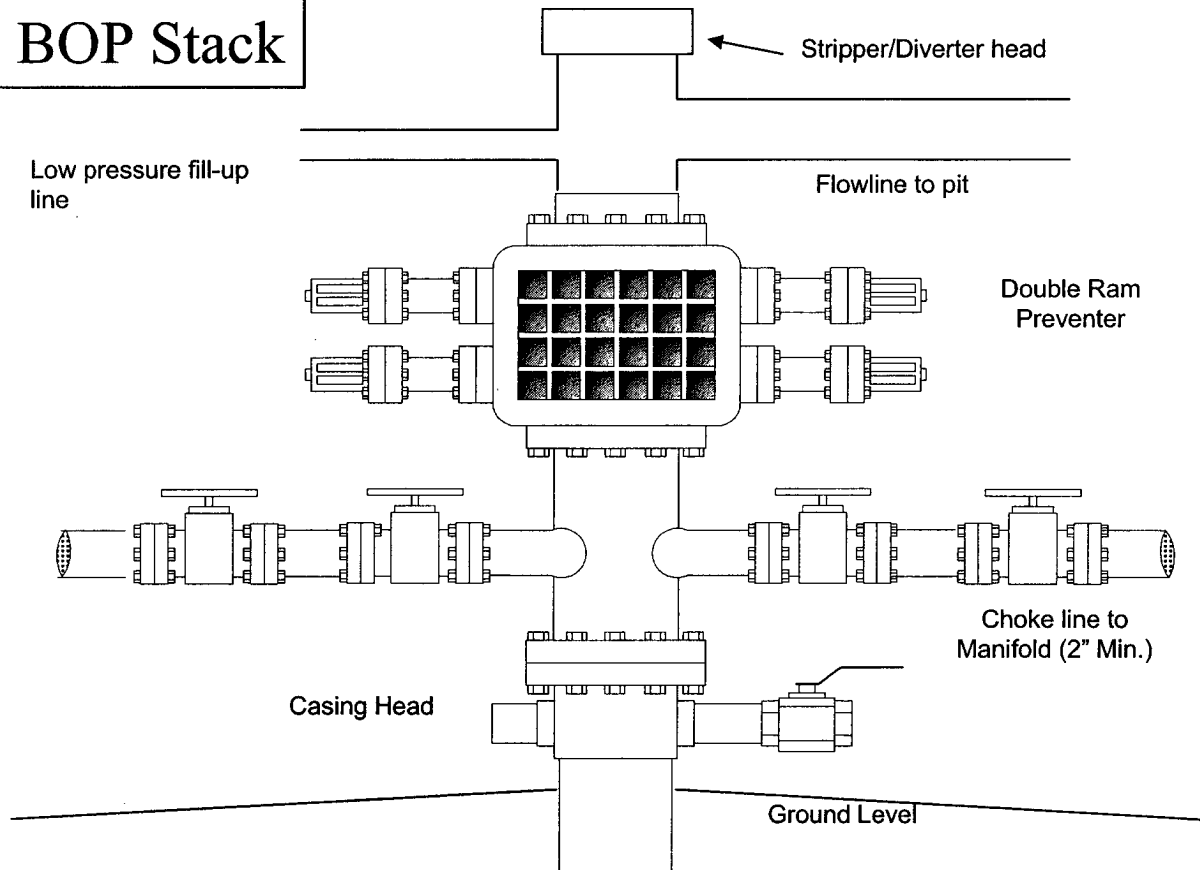
All ram type preventers and related control equipment will be hydraulically tested to 250 psi (low pressure) and 2000 psi (high pressure), upon installation, following any repairs or equipment replacements, or at 30 day intervals. Accessories to BOP equipment will include kelly cock, upper kelly cock with a handle available, floor safety valves and choke manifold which will also be tested to equivalent pressure.

BP America Production Company

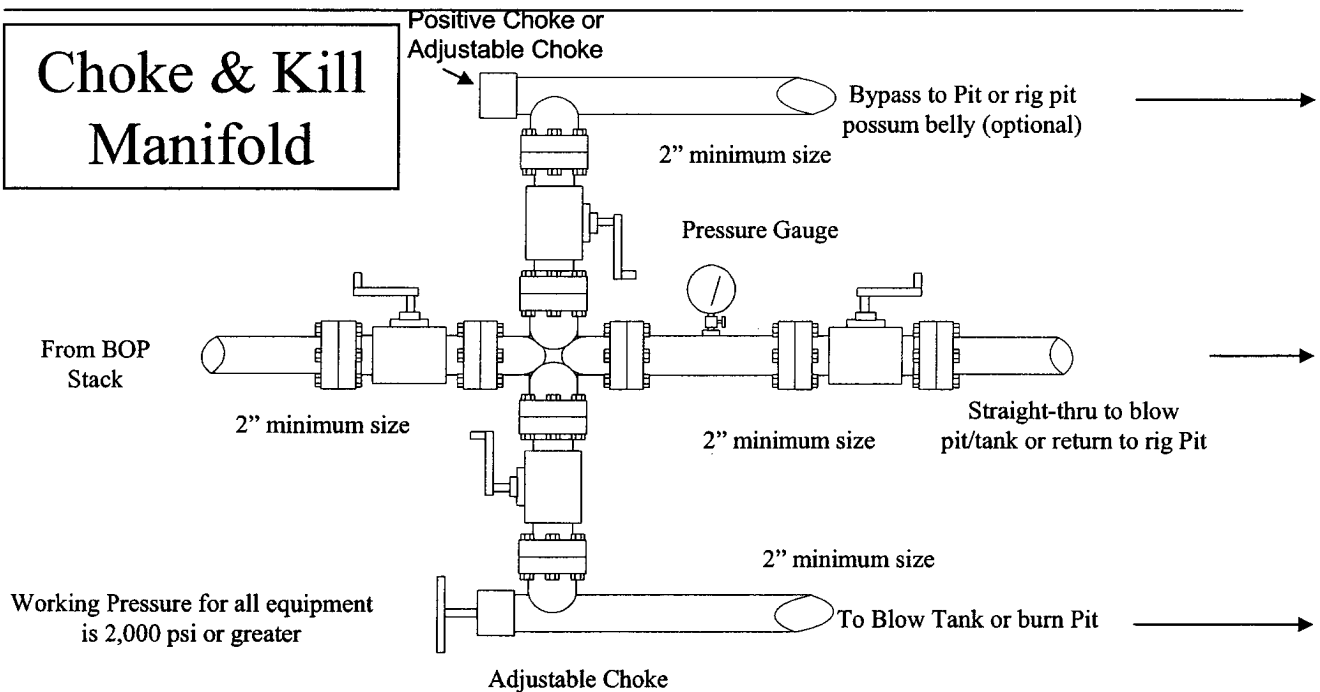
Well Control Equipment Schematic



BOP Stack



Choke & Kill Manifold

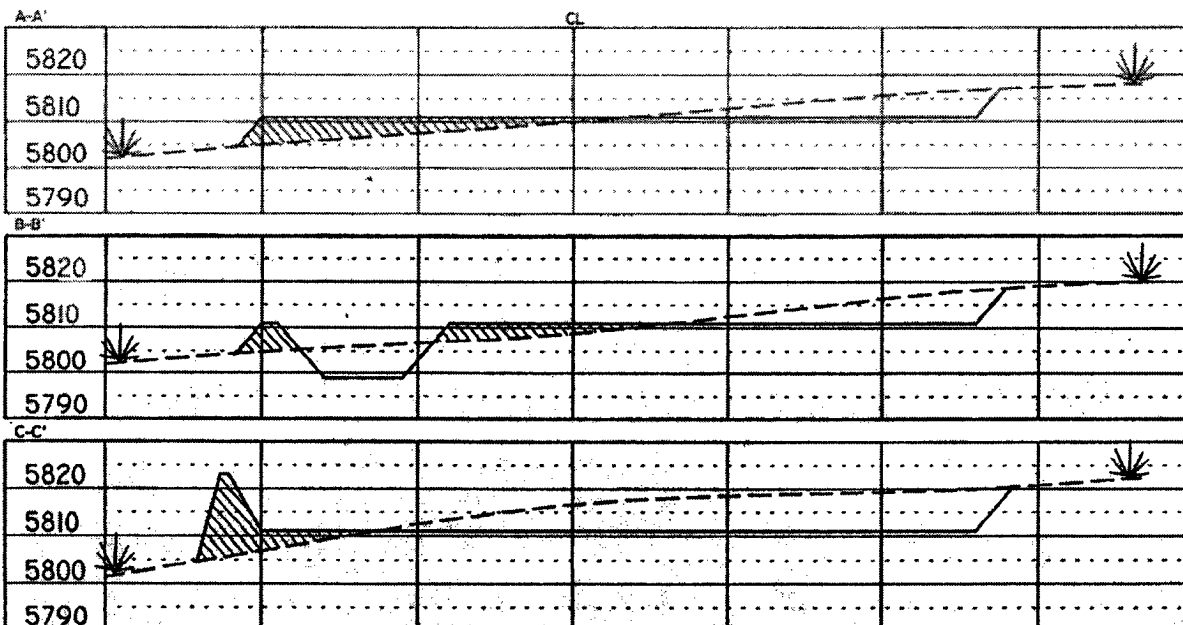


SEC. 24, T28N, R9W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO

Lat: 36°38'35"
Long: 107°44'05"



SCALE: H=60'-1500'
V=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 sidewalks and drainages. Final Pad Dimensions are to be verified by Contractor.

VANN SURVEYS
P. O. Box 1306
Farmington, NM