Form 3160-3
(August 1999)

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: ☒ DRILL ☐ REENTER	5. Lease Serial No. NM - 012647
	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. RIDDLE D LS 3B
2. Name of Operator BP AMERICA PRODUCTION COMPANY Contact: MARY CORLEY E-Mail: corleyml@bp.com	9. API Well No. 30 045 31172
3a. Address P.O. BOX 3092 HOUSTON, TX 77253 / 3b. Phone No. (include area code) Ph: 281.366.4491 Fx: 281.366.0700	10. Field and Pool, or Exploratory BLANCO MESAVERDE
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface SESW Lot 14 1210FSL 1535FWL 36.52800 N Lat, 107.46300 W Lon At proposed prod. zone	11. Sec., T., R., M., or Blk. and Survey or Area N Sec 22 T31N R9W Mer NMP
14. Distance in miles and direction from nearest town or post office* 19 MILES FROM AZTEC, NEW MEXICO	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) 1210 / 16. No. of Acres in Lease 312.88	17. Spacing Unit dedicated to this well 312.88 S/2
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 600 / 19. Proposed Depth 5787 MD	20. BLM/BIA Bond No. on file WY2924
21. Elevations (Show whether DF, KB, RT, GL, etc. 6301 GL / 22. Approximate date work will start 10/16/2002	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	Name (Printed/Typed)	Date
(Electronic Submission)	MARY CORLEY	08/15/2002

Title: AUTHORIZED REPRESENTATIVE

Approved by (Signature)	Name (Printed/Typed)	Date
/s/ David J. Mankiewicz		OCT 30 2002
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 #13583 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

** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL **

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
30-045-31172	72319	BLANCO MESAVERDE

4 Property Code	5 Property Name	6 Well Number
000977	Riddle D LS	# 3B

7 OGRID No.	8 Operator Name	9 Elevation
000778	BP AMERICA PRODUCTION COMPANY	6301

10 Surface Location

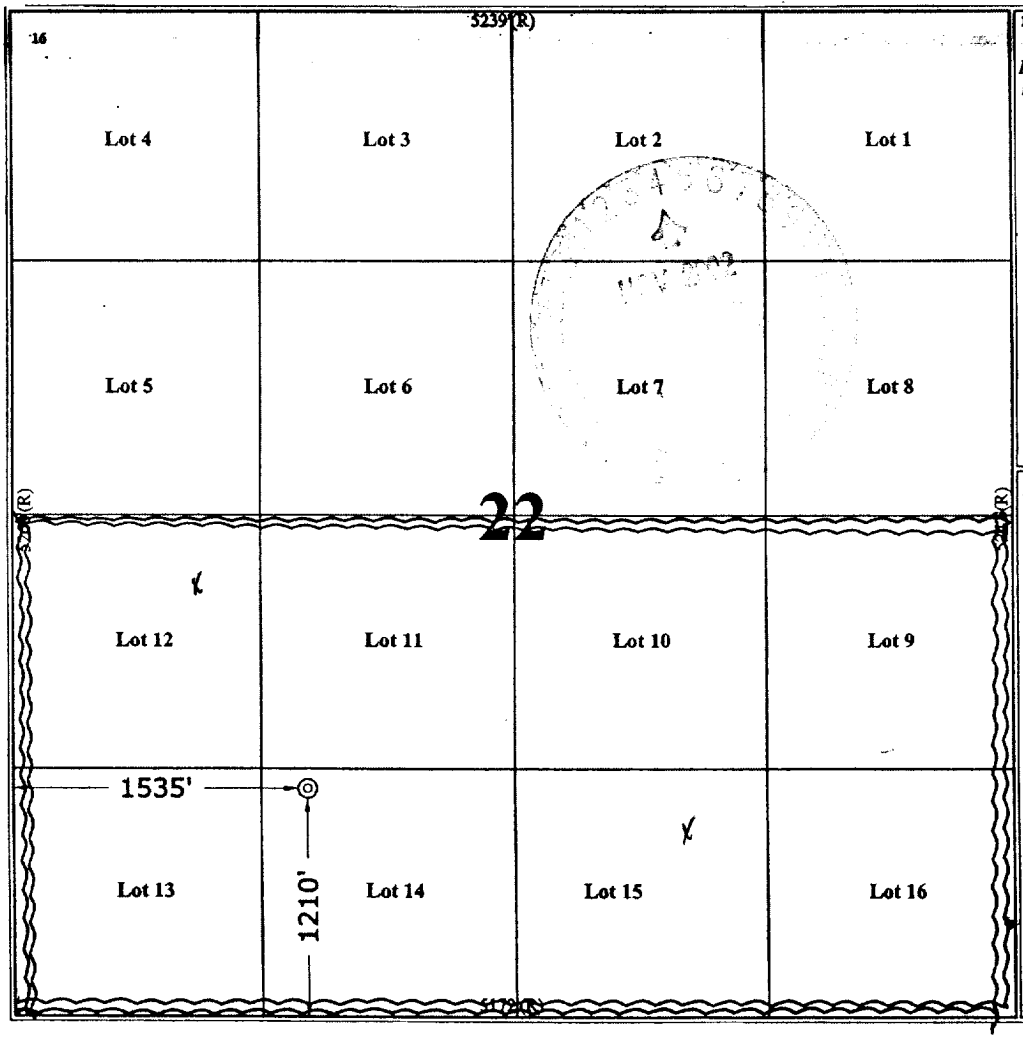
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N (Lot 14)	22	31 N	9 W		1210	South	1535	West	SAN JUAN

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

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
312.88			

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



17 OPERATOR CERTIFICATION

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

Mary Corley
Signature

MARY CORLEY
Printed Name

Sr. Regulatory Analyst
Title

08.15.2002
Date

18 SURVEYOR CERTIFICATION

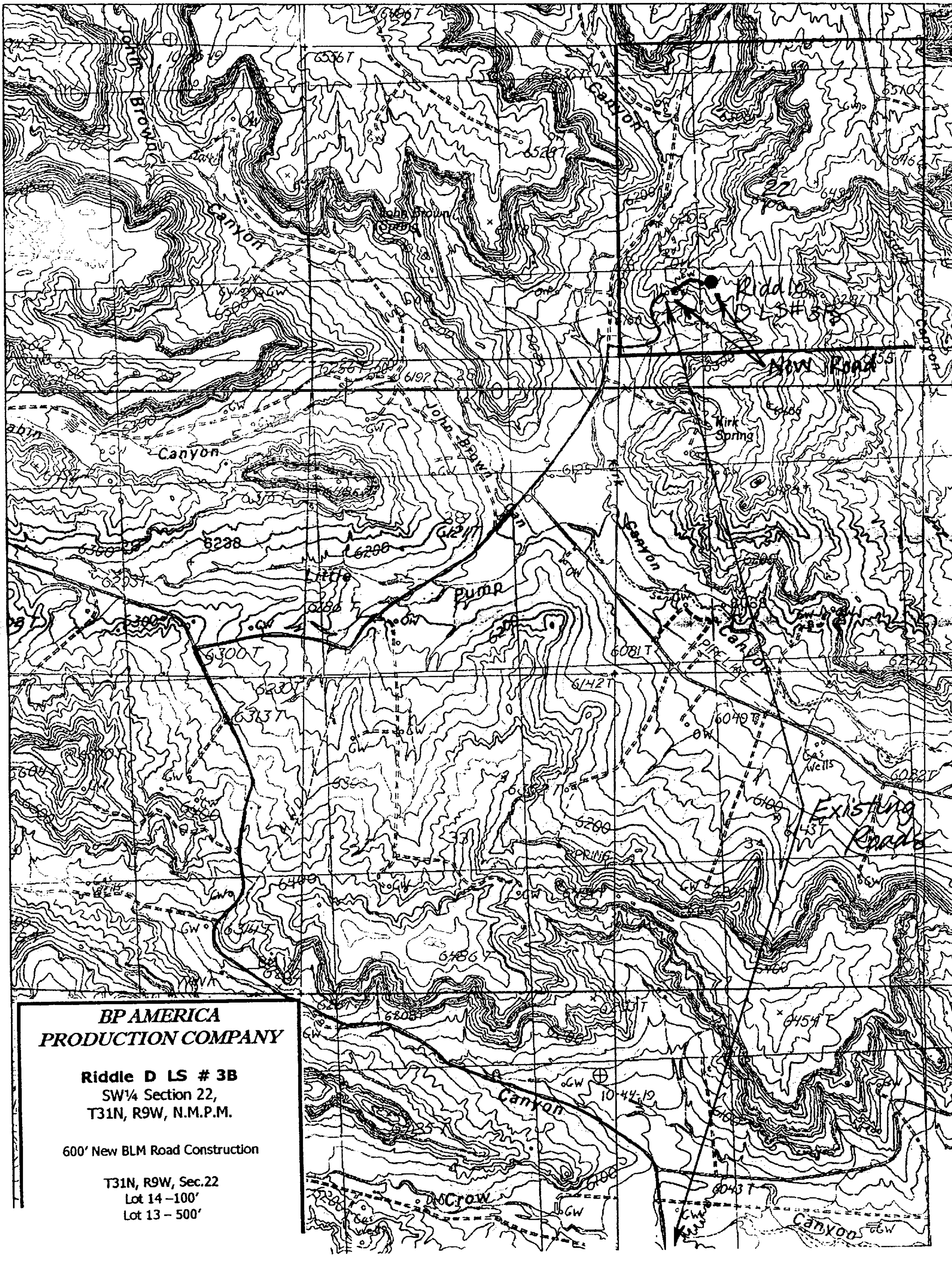
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

April 15, 2002
Date of Survey

Signature and Seal of Professional Surveyor

GARY D. VANN
NEW MEXICO
7016
REGISTERED PROFESSIONAL LAND SURVEYOR

7016
Certificate Number



BP AMERICA PRODUCTION COMPANY

Riddle D LS # 3B
SW¼ Section 22,
T31N, R9W, N.M.P.M.

600' New BLM Road Construction

T31N, R9W, Sec.22
Lot 14 – 100'
Lot 13 – 500'

BP AMERICA PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM

Prospect Name: Riddle D LS
Lease: Riddle D LS
County: San Juan
State: New Mexico
Date: August 14, 2002

Well No: 3B
Surface Location: 22-31N-9W, 1210 FSL x1535 FWL
Field: Blanco Mesaverde

OBJECTIVE: Drill 50' below the base of the Mancos Shale, set 41/2" production liner, Stimulate LS, CH, MF and PL intervals

METHOD OF DRILLING

TYPE OF TOOLS	DEPTH OF DRILLING
Rotary	0 - TD

LOG PROGRAM

TYPE	DEPTH INVERAL
OPEN HOLE	
None	
CASED HOLE	
GR-CCL-TDT	TDT – TD to 7" shoe
CBL	Identify 4 ½" cement top

REMARKS:
- Please report any flares (magnitude & duration).

APPROXIMATE DEPTHS OF GEOLOGICAL MARKER

Estimated GL: 6301 Estimated KB: 6315

MARKER		SUBSEA	TVD
Ojo Alamo		4666	1649
Kirkland		4502	1813
Fruitland		3752	2563
Fruitland Coal	*	3398	2917
Pictured Cliffs	*	3188	3127
Lewis Shale	#	2983	3332
Cliff House	#	1435	4880
Menefee Shale	#	1283	5032
Point Lookout	#	943	5372
Mancos		578	5737
TOTAL DEPTH		528	5787

Probable completion interval * Possible Pay

SPECIAL TESTS

TYPE
None

REMARKS:

DRILL CUTTING SAMPLES		DRILLING TIME	
FREQUENCY	DEPTH	FREQUENCY	DEPTH
none	Production hole	Geolograph	0-TD

MUD PROGRAM:

Approx. Interval			Type Mud	Weight, #/ga	Vis, sec/qt	W/L cc's/30 min	Other Specification
0	- 120		Spud	8.6-9.2			
120	- 2867	(1)	Water/LSND	8.6-9.2		<6	
2867	- 5787		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, Etc.
Surface/Conductor	120	9 5/8"	H-40 ST&C	32#	12.25"	1
Intermediate	2867	7"	J/K-55 ST&C	20#	8.75"	1,2
Production Liner	5787	4 1/2"	J-55	10.5#	6.25"	3,4

REMARKS:
(1) Circulate Cement to Surface
(2) Set casing 50' above Fruitland Coal
(3) Bring cement 100' above 7" shoe
(4) 100' Overlap

CORING PROGRAM:
None

COMPLETION PROGRAM:
Rigless, 2-3 Stage Limited Entry Hydraulic Frac

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

Form 46 Reviewed by: Logging program reviewed by: N/A

PREPARED BY:	APPROVED:	DATE:	
HGJ/MNP		14th August 2002 Version 2.0	

Cementing Program

Well Name:	Riddle D LS 3B	Field:	Blanco Mesaverde / Basin Dakota
Location:	22-31N-9W, 1210 FSL, 1535 FWL	API No.	
County:	San Juan	Well Flac	
State:	New Mexico	Formation:	MesaVerde
		KB Elev (est)	6322
		GL Elev. (est)	6308

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	12.25	9.625	ST&C	Surface	NA	
Intermediate	2936	8.75	7	LT&C	Surface	NA	
Production -	5856	6.25	4.5		2836	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	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.

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	70 sx Class G Cement		75 cuft
TOC@Surface	+ 2% CaCl2 (accelerator)		
	0.25 #/sk Cellophane Flake (lost circulation additive)		0.3132 cuft/ft OH
	0.1% D46 antifoam		100 % excess

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	15.8	1.16	4.95

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		280 sx Class "G" Cement + 3% D79 extender +1/4 #/sk. Cellophane Flake + 0.1% D46 antifoam'	717 cuft
Tail Slurry 2 500 ft fill		60 sx 50/50 Class "G"/Poz + 2% gel (extender) 0.1% D46 antifoam +1/4 #/sk. Cellophane Flake + 2% S1 Calcium Chloride	75 cuft 0.1503 cuft/ft OH 0.1746 cuft/ft csg ann **80 % excess**

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	**11.7**	2.61	17.77
Slurry 2	**13.5**	**1.27**	**5.72**

Casing Equipment: 7", 8R, ST&C

1 Float Shoe
1 Float Collar
1 Stop Ring
Centralizers, one every other joint to base of Ojo
2 Turbolizers across Ojo
Centalizers, one every 4th joint from Ojo to base of surface casing
1 Top Rubber Plug
1 Thread Lock Compound

Production:

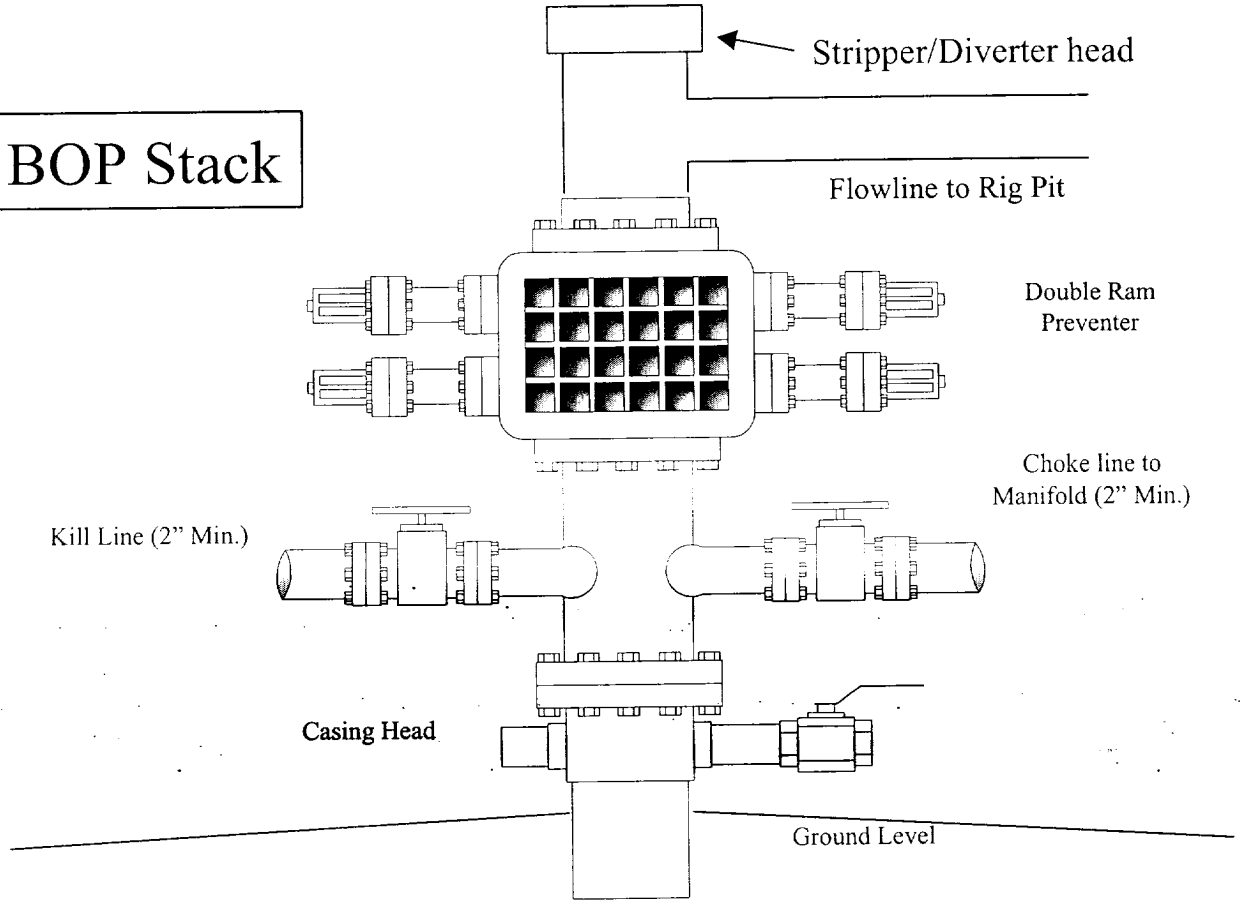
Fresh Water	10 bbl	CW100	
Slurry TOC@Liner Top		180 LiteCrete D961 / D124 / D154 + 0.03 gps D47 antifoam + 0.5% D112 fluid loss + 0.11% D65 TIC	436 cuft 0.1026 cuft/ft OH 40 % excess 0.1169 cuft/ft csg ann

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry	9.5	2.52	6.38

BP American Production Company

Well Control Equipment Schematic

BOP Stack



Choke & Kill Manifold