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. SF - 077123
	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. WARREN LS 12S
2. Name of Operator BP AMERICA PRODUCTION COMPANY Contact: CHERRY HLAVA E-Mail: hlavacl@bp.com	9. API Well No. 30045322283
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 FRUITLAND COAL
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface NWSE 1750FSL 1945FEL 36.38700 N Lat, 107.44300 W Lon At proposed prod. zone	11. Sec., T., R., M., or Blk. and Survey or Area J Sec 24 T28N R9W Mer NMP
14. Distance in miles and direction from nearest town or post office* 19.6 MILES SOUTH/EAST FROM BLOOMFIELD, 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) 1750' / 16. No. of Acres in Lease 1349.88	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 2300 MD	20. BLM/BIA Bond No. on file WY2924
21. Elevations (Show whether DF, KB, RT, GL, etc. 5854 GL / 22. Approximate date work will start 06/15/2004	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 04/06/2004
Title REGULATORY ANALYST		
Approved by (Signature) /s/ Manuel Mondragon	Name (Printed/Typed)	Date 5-28-04
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 #29242 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
30-045-32283	71629	Basin Fruitland Coal

4 Property Code	5 Property Name	6 Well Number
001212	Warren LS	# 12S

7 OGRID No.	8 Operator Name	9 Elevation
000778	BP AMERICA PRODUCTION COMPANY	5854

10 Surface Location

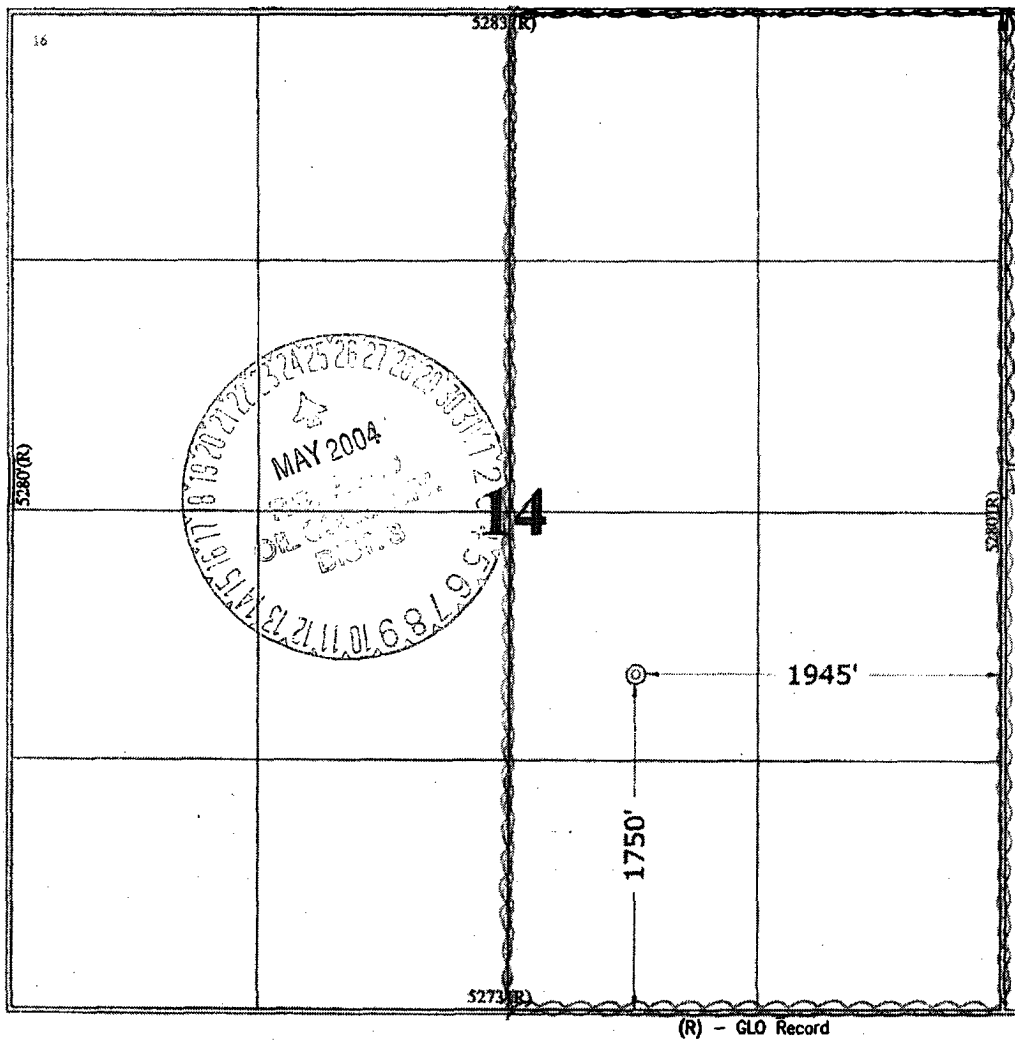
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	24	28 N	9 W		1750	SOUTH	1945	EAST	SAN JUAN

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			

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.

Cherry Hlava
Signature

Cherry Hlava
Printed Name

Regulatory Analyst
Title

3-25-04
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.

February 26, 2004
Date of Survey

Signature and Seal of Professional Surveyor

GARY D. VANN — NEW MEXICO — REGISTERED PROFESSIONAL LAND SURVEYOR — 1016

7016
Certificate Number

(R) – GLO Record

BP AMERICA PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM

Prospect Name: Warren LS 12S
Lease:
Well No: 12S
Surface Location: Section 24J, T28N, R9W; 1750' FSL, 1945' FEL
County: San Juan
State: New Mexico
Field: Basin Fruitland Coal
Date: March 31, 2004

OBJECTIVE: Drill to a TD of 2300' kb set 7" casing and perf and frac the Fruitland Coal interval.

METHOD OF DRILLING

TYPE OF TOOLS	DEPTH OF DRILLING
Rotary	0 – 2287' MD, 2300' KB

LOG PROGRAM

TYPE	DEPTH INVERAL
OPEN HOLE	
Run1: Run Platform Express (array induction, 3-detector Litho-Density, compensated neutron, caliper, microlog, SP and gamma ray). (**see Remarks section below**).	TD up to minimum charge.
Run 2: Run dipole sonic (compressional and shear delta t required for frac gradient log)	TD up to minimum charge.

REMARKS:
- Primary presentation is Bulk Density Presentation (5"=100') with <1.75 g/cc shaded as coal. High resolution pass across the Fruitland interval only. Three final prints to Dennis Hilkewich in Houston. Customer LAS file to Dennis Hilkewich in Houston – hilkewdn@bp.com

APPROXIMATE DEPTHS OF GEOLOGICAL MARKER

Estimated GL: 5854 Estimated KB: 5867

MARKER		SUBSEA	MEAS. DEPTH
Ojo Alamo		4712	1155
Kirtland		4579	1288
Fruitland		4026	1841
Fruitland Coal	*#	3884	1983
Pictured Cliffs	*	3715	2152
TOTAL DEPTH		3567	2300

Probable completion interval * Possible Pay

SPECIAL TESTS

TYPE
None

REMARKS:

DRILL CUTTING SAMPLES

FREQUENCY	DEPTH
none	none

DRILLING TIME

FREQUENCY	DEPTH
Geolograph	0-2300

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	- 2300	(1)	Water/LSND	8.6-9.2		<6	

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, 8 RND	32.3	12.5"	1
Production Casing	2300	7"	J-55, 8 RND	20.0	8.75"	1

REMARKS:
(1) Circulate Cement to Surface

CORING PROGRAM:
None

COMPLETION PROGRAM:
Rigless, Single 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:	
Daniel Crosby		3/31/2004	

Form 46 12-00 MNP

Form 3160-5
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMSF077123

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.
WARREN LS 12S

2. Name of Operator
BP AMERICA PRODUCTION CO
Contact: CHERRY HLAVA
E-Mail: hlavacl@bp.com

9. API Well No.
30-045-32283-00-X1

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

3b. Phone No. (include area code)
Ph: 281.366.4081
Fx: 281.366.0700

10. Field and Pool, or Exploratory
BASIN FRUITLAND COAL

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 24 T28N R9W NWSE 1750FSL 1945FEL
36.38700 N Lat, 107.44300 W Lon

11. County or Parish, and State
SAN JUAN COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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 recomplete 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 was submitted electronically (EC29242) on 4/6/04.

Please make change to pipeline company.
From Williams Field Services
To: El Paso

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #29935 verified by the BLM Well Information System
For BP AMERICA PRODUCTION CO, sent to the Farmington
Committed to AFMSS for processing by ADRIENNE GARCIA on 05/03/2004 (04AXG2336SE)

Name *(Printed/Typed)* CHERRY HLAVA — Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission) — Date 04/23/2004

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Duane W. Spencer — Title AFM — Date 5-20-04

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 FFO

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

NMOCD

Additional Operator Remarks:

This well is staked on an existing well pad.

Additional Operator Remarks:
Notice of Staking was submitted on 03/12/2004

BP America Production Company respectfully requests permission to drill the subject well to a total depth of approximately 2300 and complete into the Basin Fruitland Coal Pool as per the attached drilling and completion procedure.

SUPPLEMENTAL TO SURFACE USE PLAN

New Facilities:
A 4 diameter buried steel pipeline that is + or - 400 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 Williams Field Services.

If terrain allows 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.

BP America Production Company
BOP Pressure Testing Requirements

Well Name: Warren LS 12S
County: San Juan **State:** New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1155		
Kirtland	1288		
Fruitland Coal	1983	600	230
PC	2152		
Lewis Shale			
Cliff House			
Menefee Shale			
Point Lookout			
Mancos			
Dakota			

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

Requested BOP Pressure Test Exception: 850 psi

SAN JUAN BASIN
Fruitland Formation
Pressure Control Equipment

Background

The objective Fruitland Coal 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~~ Fruitland Coal. 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.

NEW MEXICO MULTIPOINT REQUIREMENTS

1. Existing Roads
   - A. The proposed location is staked as shown on the Certified Plat.
   - B. Route and distance from nearest town is identified on the form 3160-3, item #14.
   - C. Access road(s) to location are identified on Exhibits A & B.
   - D. Not applicable unless exploratory well.
   - E. All existing roads within one-mile radius of the well site are shown on Exhibit B.
   - F. Improvements and/or maintenance of existing roads may be done as deemed necessary for BP's operations, or as required by the surface management agency.

2. Access Roads
   - A. Width: NO NEW ROAD
   - B. Maximum Grades: 0 - 8%
   - C. Turnouts: None
   - D. Drainage will be used as required
   - E. Size and location of culverts, if needed. will be determined at the onsite inspection or during construction.
   - F. Surfacing materials may be applied to the proposed road and/or location if the conditions merit it.
   - G. Gates and/or cattle guards will be installed at fence crossings if deemed necessary by the land owner or the surface management agency.
   - H. The proposed new access road is center-line flagged if applicable.

3. Location and Existing Wells
   A - H All existing wells, to the best of our knowledge, are identified on Exhibit C (9 Section Plat).

4. Location of Existing and/or Proposed Facilities
   - A. All existing facilities owned or controlled by BPare shown on Exhibits D & E
   - B. If this proposed well is productive, BP America will own or have control of these facilities on location: storage tanks, well head production unit, and if applicable, a pump jack and/or compressor. Also there will be buried production lines from the wellhead to the production unit and/or storage tanks. BP will submit a Sundry Notice when off-pad plans are finalized.
   - C. Rehabilitation, whether the well is productive or not, will be made on all unused areas in accordance with surface owner or manager approval.

5. Location and Type of Water supply

Cementing Program

Well Name:	Warren LS 12S	Field:	Basin Fruitland Coal
Location:	Sec 24 - 28N - 09W, 1750' FSL, 1945' FEL	API No.	
County:	San Juan	Well Flac	
State:	New Mexico	Formation:	Fruitland Coal
		KB Elev (est)	5867
		GL Elev. (est)	5854

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	12.5	9.625	ST&C	Surface	NA	
Production -	2300	8.75	7	~~ST~~ LT&C	Surface	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~~ 2270	1400	254	0.0787	8.845
Production -	7	20	K-55	3740	2270	254~~234~~	0.0405	6.456

Mud Program

Apx. Interval (ft.)	Mud Type	Mud Weight
0 - SCP	Water/Spud	8.6-9.2
SCP - TD	Water/LSND	8.6-9.2
SCP - TD	Gas/Air/N2/Mist	NA

Recommended Mud Properties Prio Cementing:

PV	<20
YP	<10
Fluid Loss	<6

Cementing Program:

	Surface	Production
Excess %, Lead	100	40
Excess %, Tail	NA	40
BHST (est deg. F)	75	120
Special Instructions	1,6,7	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	70 sx Class C Cement		89 ~~83~~ cuft
TOC@Surface	+ 2% CaCl2 (accelerator)		0.347 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

Cementing Program

1 Top Wooden Plug
1 Autofill insert float valve
Centralizers, 1 per joint except top joint
1 Stop Ring
1 Thread Lock Compound

Production:

Fresh Water		10 bbl	CW100	
				392
Lead		150 sx	Class "G" Cement	~~374~~ cuft
Slurry 1			+ 3% D79 extender	
TOC@Surface			+ 2% S1 Calcium Chloride	
			+1/4 #/sk. Cellophane Flake	
			+ 0.1% D46 antifoam'	114
Tail		90 sx	50/50 Class "G"/Poz	~~105~~ cuft
Slurry 2			+ 2% gel (extender)	
	500 ft fill		0.1% D46 antifoam	0.1503 cuft/ft OH
			+1/4 #/sk. Cellophane Flake	0.1746 cuft/ft csg ann
			+ 2% CaCl2 (accelerator)	

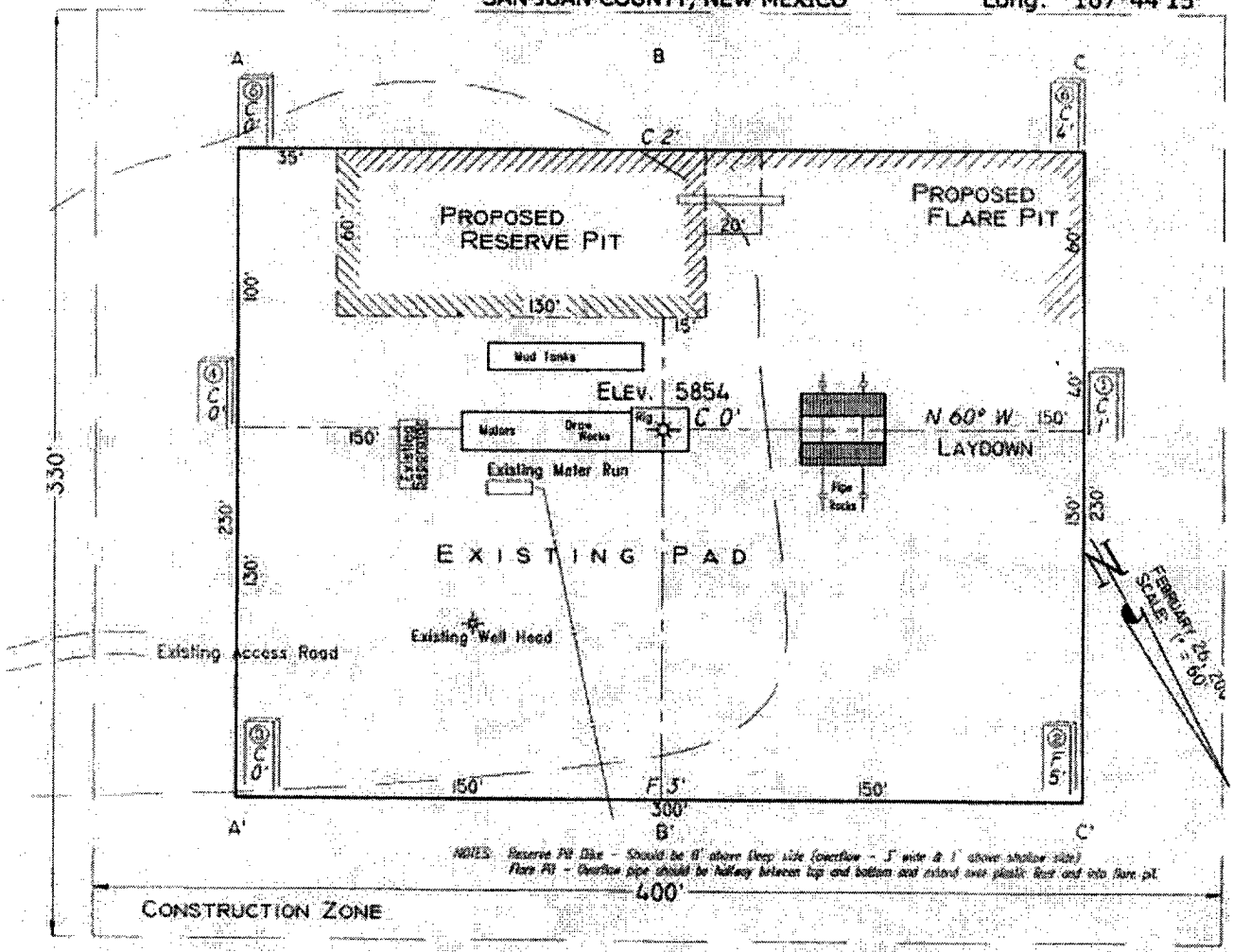
Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	11.4	2.61	17.77
Slurry 2	13.5	1.27	5.72

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 Top Rubber Plug
1 Thread Lock Compound

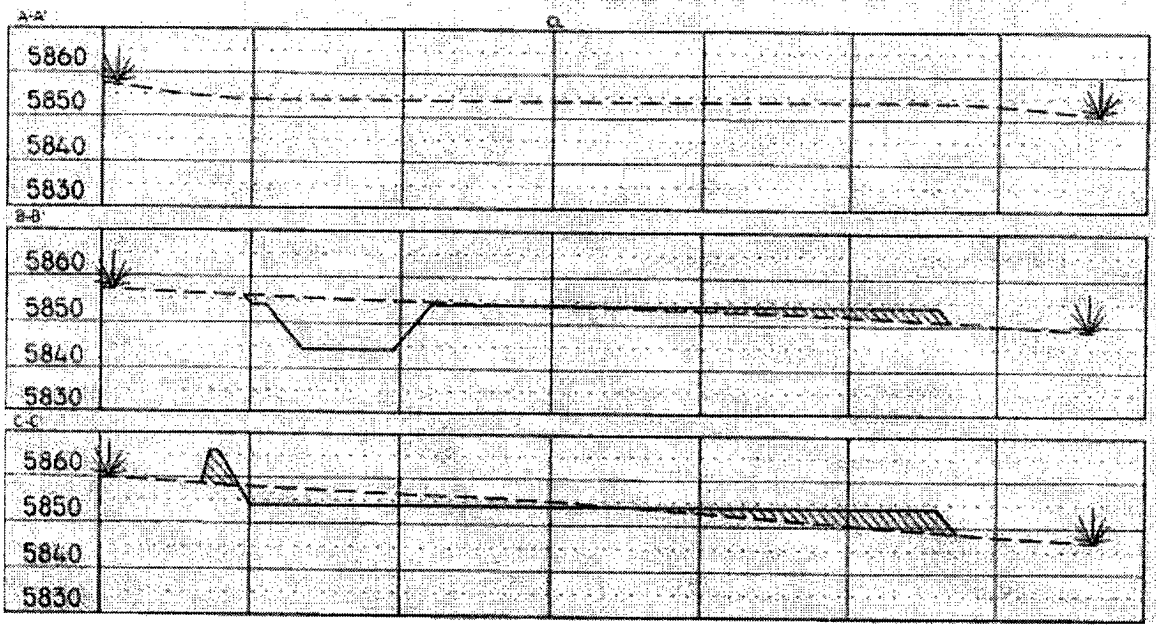
PAD LAYOUT PLAN & PROFILE
BP AMERICA PRODUCTION COMPANY
Warren LS # 12S
1750' F/SL 1945' F/EL
SEC. 24, T28N, R9W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO

Lat: 36°38'43"
Long: 107°44'15"



Area of Construction Zone - 130'x400' or 1.61 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.

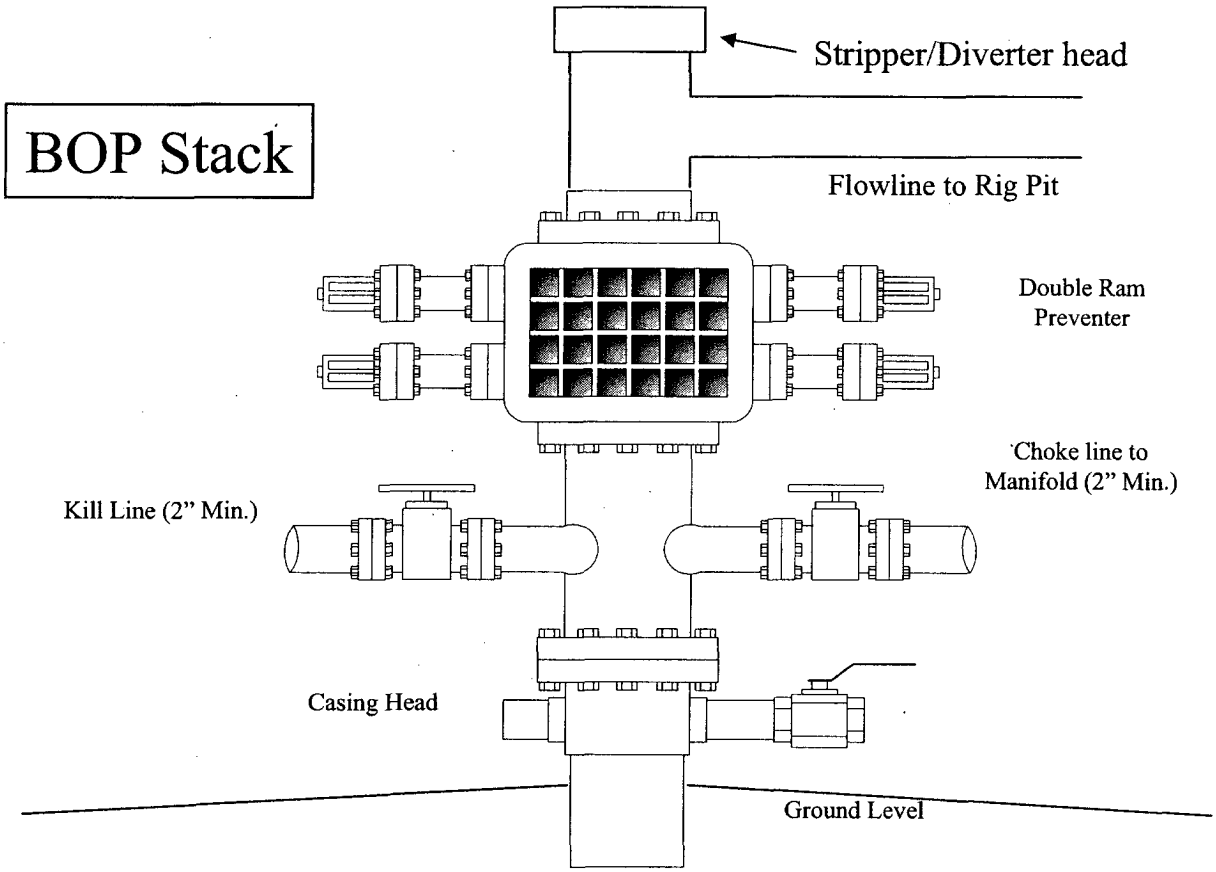
Cuts and fills shown are approximate - final finished elevation is to be adjusted so earthwork will balance. Corner slopes are approximate and do not include additional areas needed for sideslopes and drainages. Final Pad Dimensions are to be verified by Contractor.

VANN SURVEYS
P. O. Box 1306
Farmington, NM

BP American Production Company

Well Control Equipment Schematic

BOP Stack



Choke & Kill Manifold