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. NMSF - 076934
	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. MANSFIELD 1N
2. Name of Operator BP AMERICA PRODUCTION COMPANY Contact: MARY CORLEY E-Mail: corleyml@bp.com	9. API Well No. 30045 32499
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 BASIN DAKOTA/BLANCO MESAVER
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface NWSE Lot J 1390FSL 1755FEL 36.47600 N Lat, 107.49100 W Lon At proposed prod. zone	11. Sec., T., R., M., or Blk. and Survey or Area J Sec 19 T30N R9W Mer NMP SME: BLM
14. Distance in miles and direction from nearest town or post office* 13.5 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) 835 / 16. No. of Acres in Lease 320.00	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. 1605 / 19. Proposed Depth 7415 MD	20. BLM/BIA Bond No. on file WY2924
21. Elevations (Show whether DF, KB, RT, GL, etc. 6165 GL / 22. Approximate date work will start 09/24/2004	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	Name (Printed/Typed)	Date
(Electronic Submission)	MARY CORLEY	08/02/2004

Title: AUTHORIZED REPRESENTATIVE

Approved by (Signature)	Name (Printed/Typed)	Date
Wayne Townsend	Wayne Townsend	10/5/04
Title: Acting 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 #33894 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
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised August 15, 2000

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
30-045-32499	71599 & 72319	Basin Dakota & Blanco Mesaverde

[4] Property Code	[5] Property Name	[6] Well Number
000816	Mansfield	1N

[7] OGRID No.	[8] Operator Name	[9] Elevation
000778	BP America Production Company	6165'

[10] Surface Location

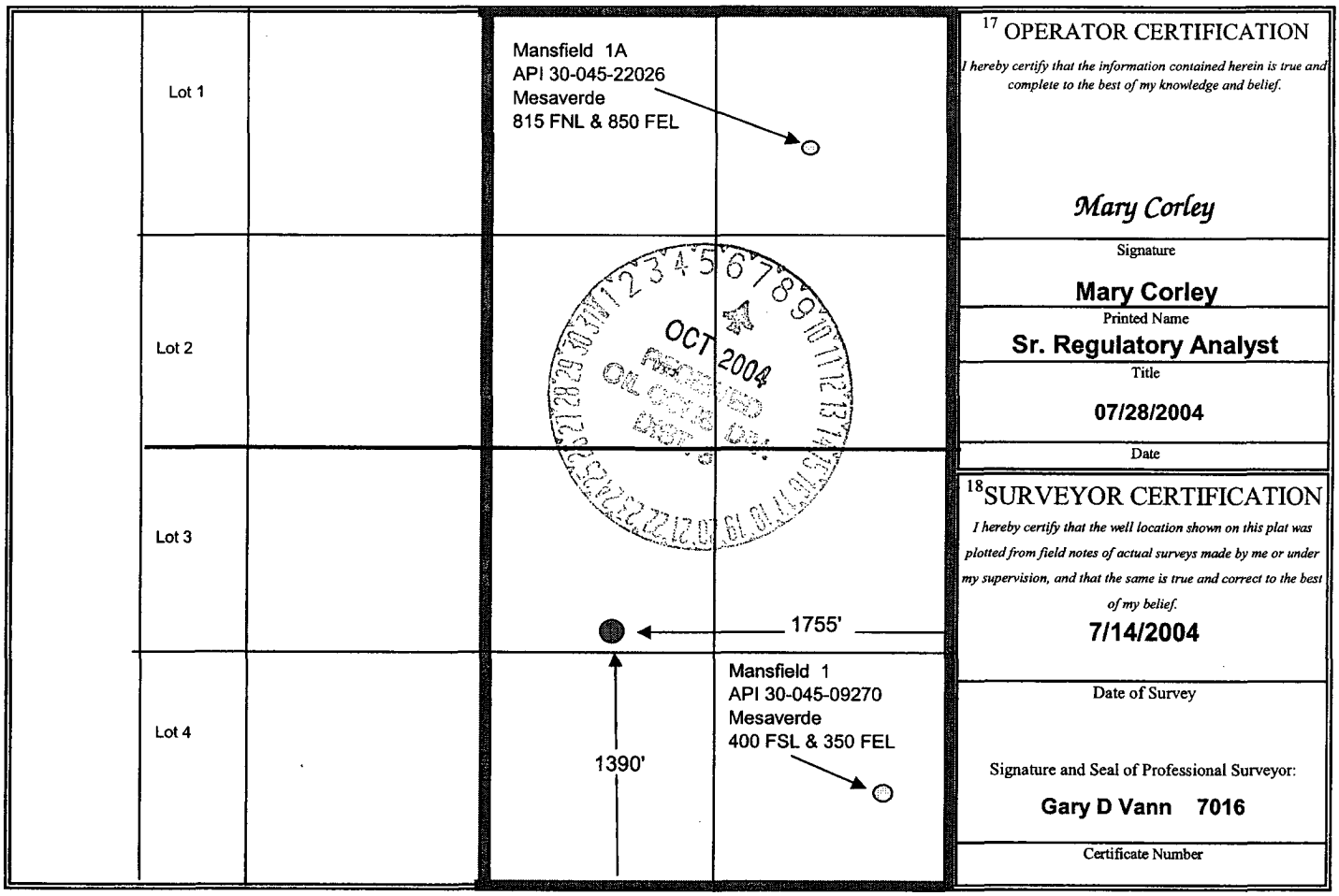
UL or lot no.	Section	Township	Range	Lot Idn	Feet from	North/South	Feet from	East/West	County
Unit J	19	30N	09W		1390	South	1755	East	San Juan

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from	North/South	Feet	East/West	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.

Mary Corley

Signature

Mary Corley

Printed Name

Sr. Regulatory Analyst

Title

07/28/2004

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.

7/14/2004

Date of Survey

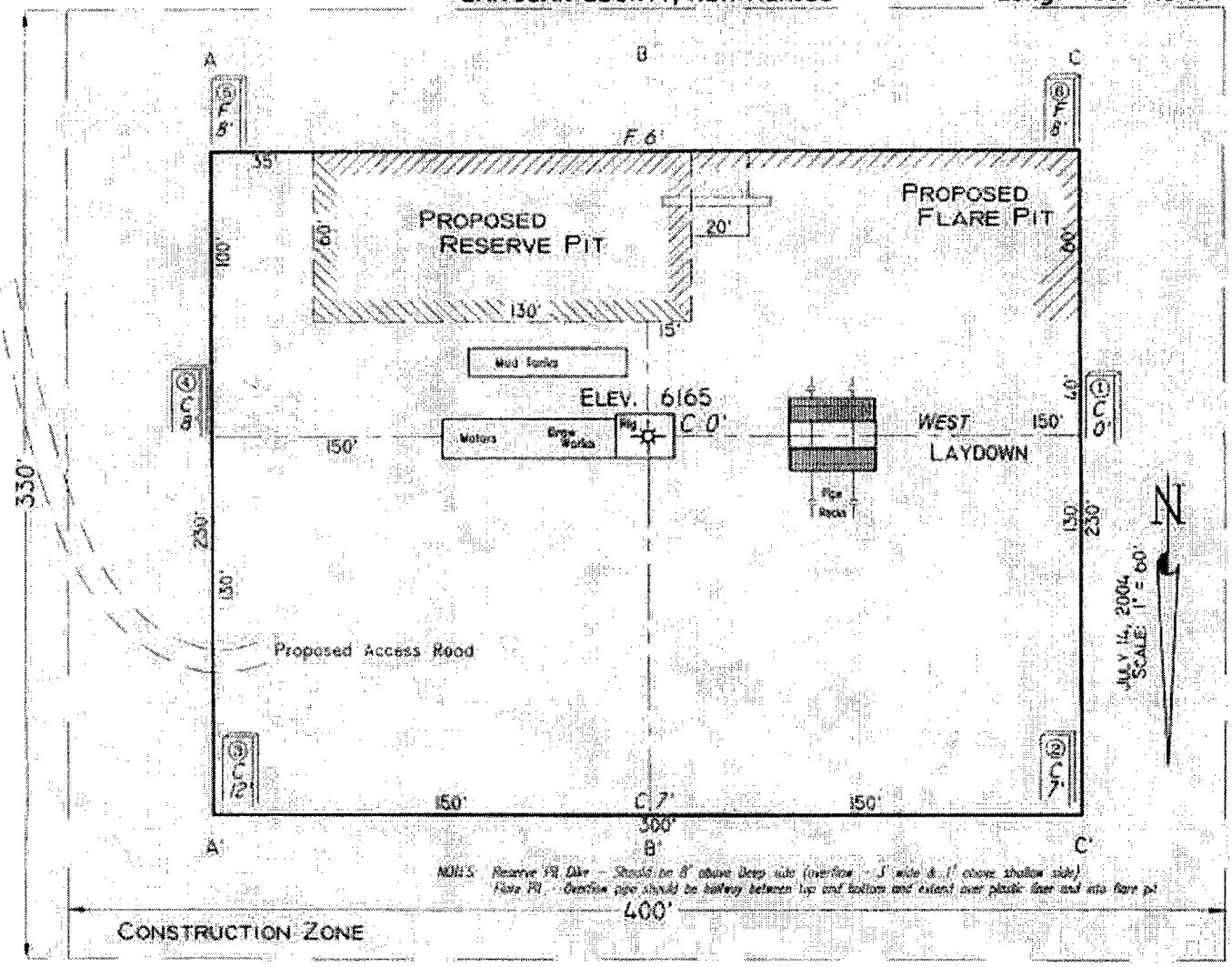
Signature and Seal of Professional Surveyor:

Gary D Vann 7016

Certificate Number

PAD LAYOUT PLAN & PROFILE
BP AMERICA PRODUCTION COMPANY
Mansfield # 1N
1390' F/SL 1755' F/EL
SEC. 19, T30N, R9W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO

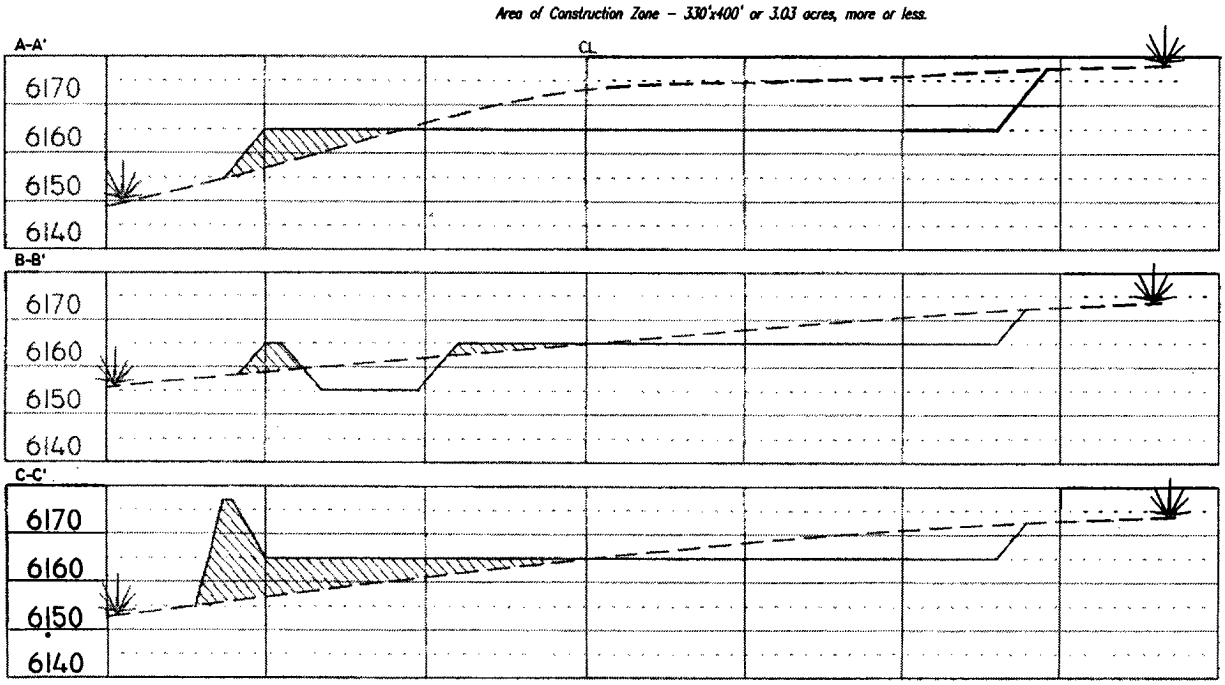
Lat: 36°47'38"
Long: 107°49'06"



NOTE: Reserve Pit Liner - 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

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

7/22/2004

Lease: Mansfield **Well Name & No.** Mansfield #1N **Field:** Blanco Mesaverde/Basin Dakota

County: San Juan, New Mexico **Surface Location:** 19-30N-9W:1390' FSL, 1755' FEL

Minerals: State **Surface:** Lat: 36.7938524 deg; Long:-107.8178885 deg

Rig : Aztec 184 **BH Location:** same

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

TYPE OF TOOLS	DEPTH OF DRILLING
Rotary	0 - TD

LOG PROGRAM

Type	Depth Interval
Single Run	
Cased Hole	
TDT- CBL	TD to 7" shoe
	Identify 4 ½" cement top

REMARKS:

- Please report any flares (magnitude & duration).

APPROXIMATE DEPTHS OF GEOLOGICAL MARKER

Actual GL: 6165 Estimated KB: 6,179.0'

Marker		SUBSEA	TVD	APPROX. MD
Ojo Alamo		4,571'	1,608'	1,608'
Kirtland		4,493'	1,686'	1,686'
Fruitland	*	3,964'	2,215'	2,215'
Fruitland Coal	*	3,522'	2,657'	2,657'
Pictured Cliffs	*	3,360'	2,819'	2,819'
Lewis	*	3,177'	3,002'	3,002'
Cliff House	#	1,837'	4,342'	4,342'
Menefee	#	1,595'	4,584'	4,584'
Point Lookout	#	1,116'	5,063'	5,063'
Mancos		761'	5,418'	5,418'
Greenhorn		-887'	7,066'	7,066'
Graneros (bent,mkr)		-943'	7,122'	7,122'
Two Wells	#	-986'	7,165'	7,165'
Paguate	#	-1,080'	7,259'	7,259'
Cubero	#	-1,123'	7,302'	7,302'
L. Cubero	#	-1,159'	7,338'	7,338'
Encinal Cyn	#	-1,188'	7,367'	7,367'
TOTAL DEPTH:		-1,236'	7,415'	7,415'

Probable completion interval * Possible Pay

SPECIAL TESTS

TYPE

None

REMARKS:

DRILL CUTTING SAMPLES		DRILLING TIME	
FREQUENCY	DEPTH	FREQUENCY	DEPTH
30'/10' intervals	3102 - TD	Geograph	0 - TD

MUD PROGRAM:

Approx. Interval	Type□Mud	Weight, #/gal	Vis, □sec/qt	W/L cc's /30 min	Other Specification
200'	Spud	8.8 - 9.0	Sufficient to clean hole.		
3,102'	Water/LSND	8.4 - 9.0		<9	Sweep hole while water drilling, LCM onsite
7,415'	Air	1	1000 cfm for hammer		Volume sufficient to maintain a stable and clean wellbore

CASING PROGRAM:

Casing□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	3,102'	8-3/4"	7"	J/K-55 ST&C	20#	100' below LWIS	cmt to surface
Production	7,415'	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	4,342'	500	0
Point Lookout	5,063'	600	0
Dakota	7,165'	2600	1023.7

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:			
PREPARED BY:	**APPROVED:**	**DATE:**	**APPROVED:**	**DATE:**
HGJ JMP		22-Jul-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	~~3370~~ 3520	1400	254	~~0.0787~~ 0.087	8.845
Intermediate	7	20	K-55	3740	2270	254 ~~234~~	~~0.0405~~ 0.0268	6.456
Production -	4.5	11.6	J-55	5350	4960	154	~~0.0155~~ 0.0183	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	75	40
Excess %, Tail	NA	0	40
BHST (est deg. F)	75	120	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

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	100 sx Class C Cement	.125 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	260 sx Class "G" Cement	~~667~~ cuft 679	
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% CaCl2 (accelerator)		

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	11.4	2.61	15.8
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	
Centralizers (one in middle of first joint, then every third collar	
1 Top Rubber Plug	
1 Thread Lock Compound	

CASING AND CEMENTING PROGRAM

Production:

Fresh Water	10 bbl	CW100

Lead	170 LiteCrete D961 / D124 / D154	~~404~~ cuft 425
Slurry 1	+ 0.03 gps D47 antifoam	
TOC, 100' above 7" shoe	+ 0.5% D112 fluid loss	
	+ 0.11% D65 TIC	
Tail	150 sx 50/50 Class "G"/Poz	215 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, none in air drilled holes.
1	Top Rubber Plug
1	Thread Lock Compound

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	9.5	2.5	6.4
Slurry 2	13	1.4	6.5

0.1169	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 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 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

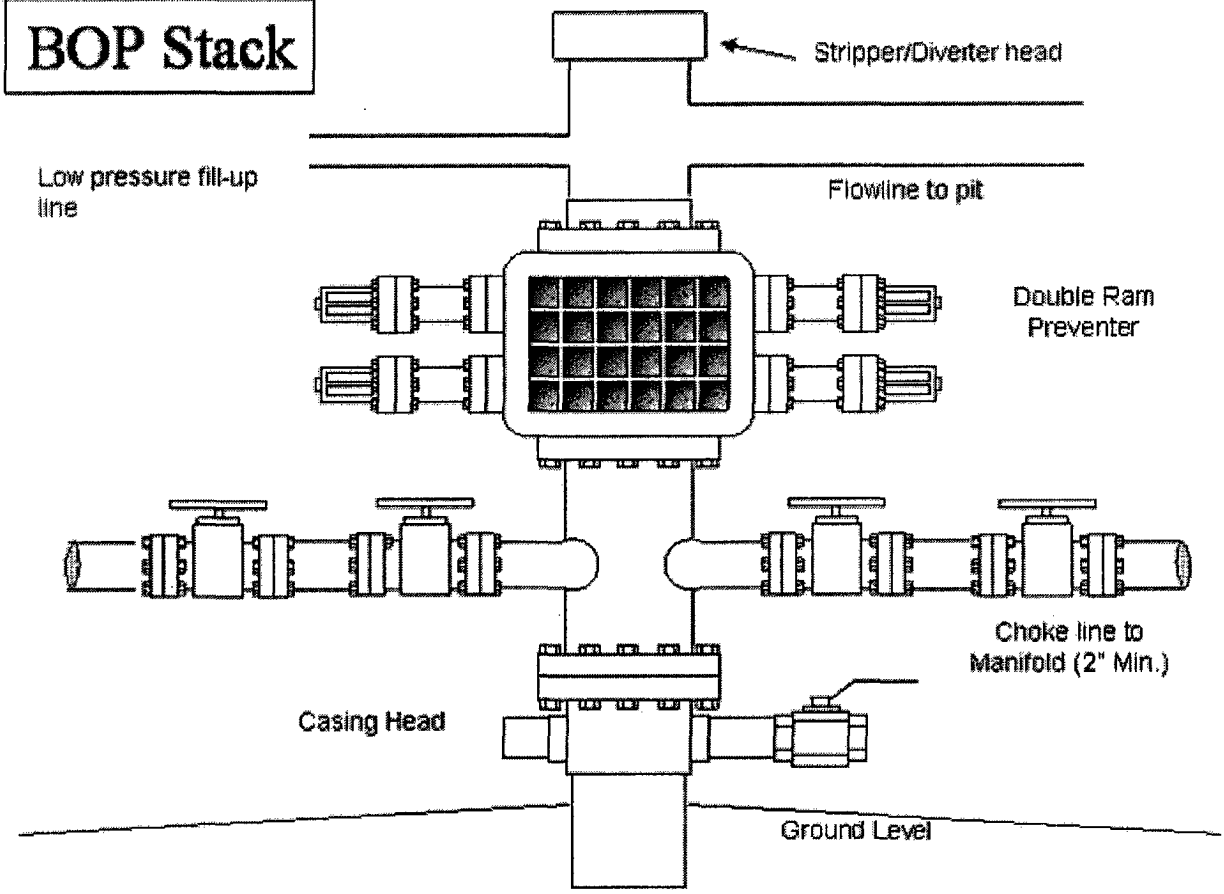
Interval	BOP Equipment
Below conductor casing to total depth	11" nominal or 7 1/16",3000 psi double ram preventer with rotating head

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

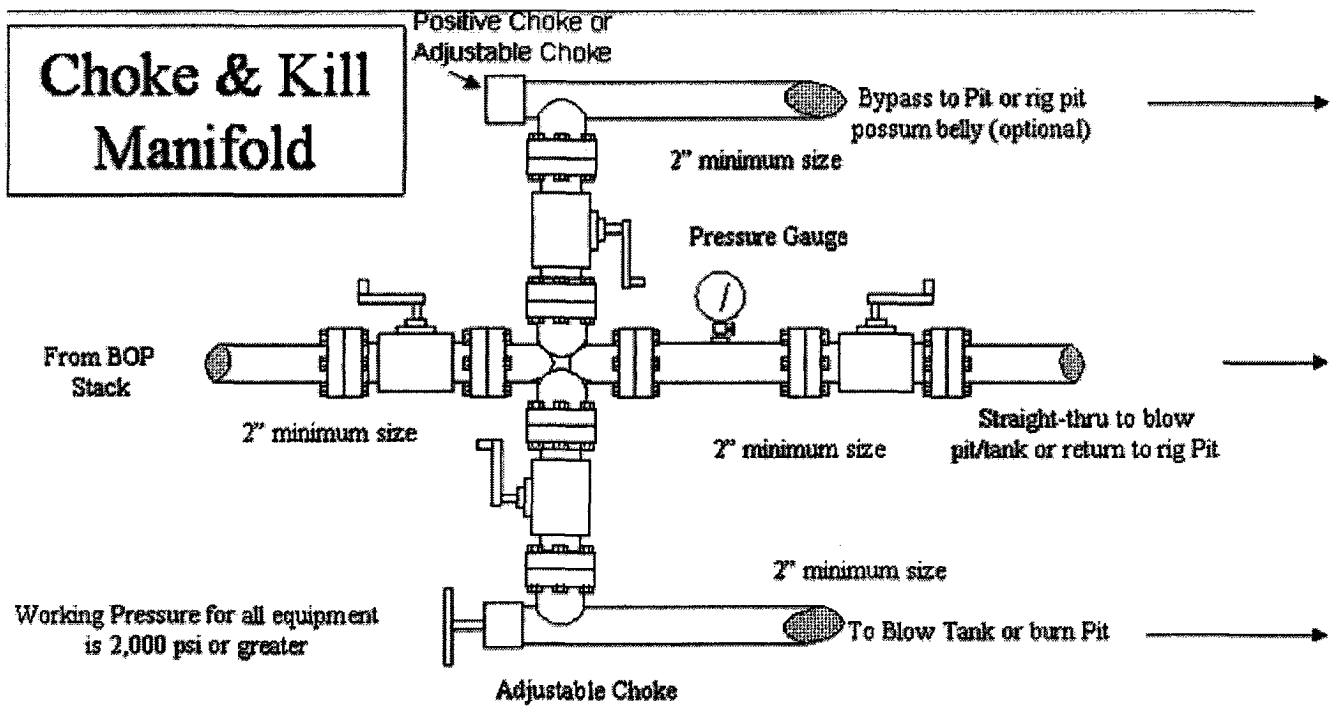
BP America Production Company

Well Control Equipment Schematic

BOP Stack



Choke & Kill Manifold



Additional Operator Remarks:

Notice of Staking Submitted 07/19/2004.

BP America Production Company respectfully request permission to drill the subject well to a total depth of approximately 7415', complete in the Basin Dakota Pool, produce the well to establish a production rate, isolate the Dakota then completed into the Blanco Mesaverde Pool, perform a deliverability test, and commingle production Downhole.

As an alternate to the drilling of the surface hole with drilling mud as stated on the attached Form 46, BP request permission to either drill with drilling mud or with air/air mist. Additionally, BP request as a possible alternate to the cementing of the surface casing to be either the cementing program stated on the attachment or with approximately 90 CU/FT TYPE I-II, 20% FLYASH, 14.5 PPG, 7.41 GAL/SK, 1.61 CF/SK YIELD, 80 DEG BHST READY MIX CMT.

Application for Downhole commingling authority (NMOCD order R-11363) will be submitted to all appropriate for approval after Permit to Drill has been approved.

SUPPLEMENTAL TO SURFACE USE PLAN

New facilities:

A 4 diameter buried steel pipeline that is + or 1700 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 well 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 to El Paso Field Services, refer to the attached survey plat.