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 - 04208
	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. MCCULLEY LS 5N
2. Name of Operator BP AMERICA PRODUCTION COMPANY Contact: CHERRY HLAVA E-Mail: hlavacl@bp.com	9. API Well No. 30045 32306
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 DAKOTA & BLANCO MESAVE
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface SENW 2460FNL 1740FWL 36.38900 N Lat, 107.44600 W Lon At proposed prod. zone	11. Sec., T., R., M., or Blk. and Survey or Area F Sec 24 T28N R9W Mer NMP
14. Distance in miles and direction from nearest town or post office* 20.1 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) 1740' / 16. No. of Acres in Lease	17. Spacing Unit dedicated to this well 320.00 W/2
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 1200' / 19. Proposed Depth 6780 MD	20. BLM/BIA Bond No. on file WY2924
21. Elevations (Show whether DF, KB, RT, GL, etc. 5896 GL / 22. Approximate date work will start 07/15/2004	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 04/14/2004
Title REGULATORY ANALYST		
Approved by (Signature)	Name (Printed/Typed)	Date 5-20-04
Title AFM	Office FFO	

MAY 2004

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 #29538 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

**** 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
30-045-32306	71599 ; 72319	Basin Dakota ; Blanco Mesaverde

4 Property Code	5 Property Name	6 Well Number
000854	McCulley LS	# 5N

7 OGRID No.	8 Operator Name	9 Elevation
000778	BP AMERICA PRODUCTION COMPANY	5896

10 Surface Location

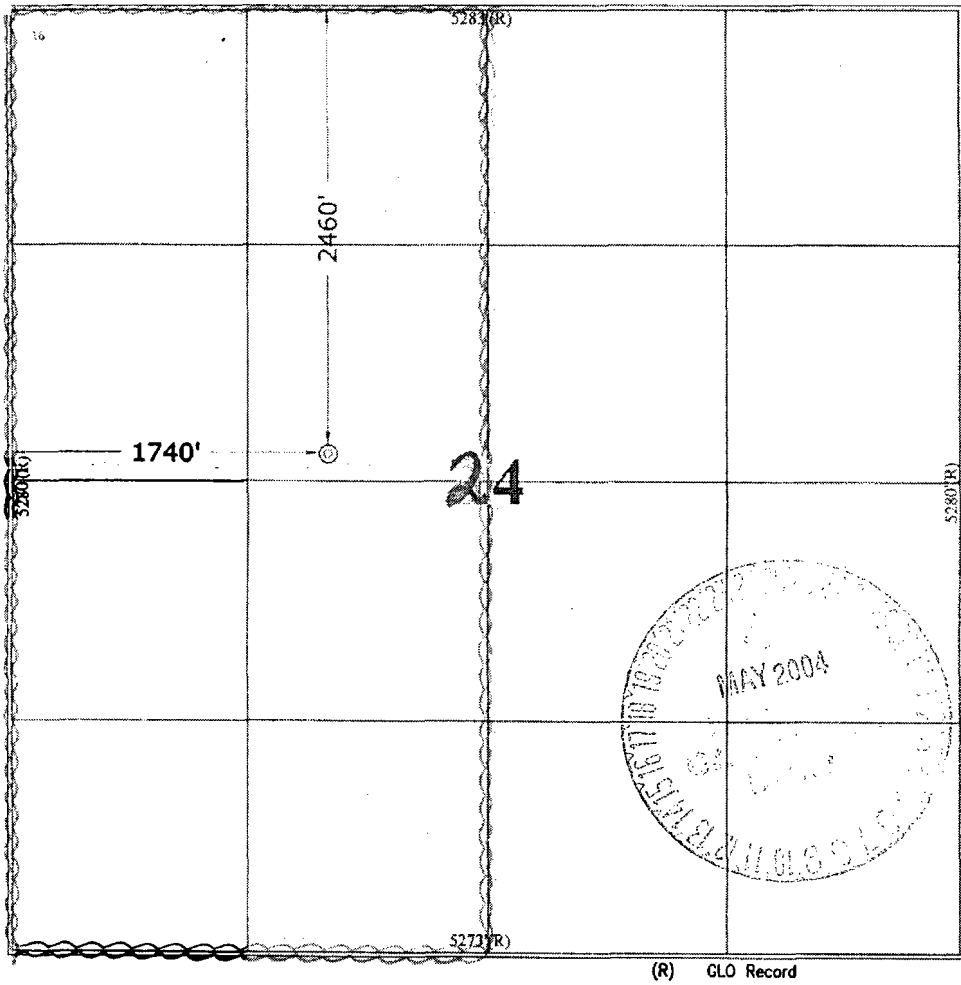
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	24	28 N	9 W		2460	NORTH	1740	WEST	SAN JUAN

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.
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
3-26-04
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 25, 2004
Date of Survey

Signature and Seal of Professional Surveyor

GARY D. VANN — NEW MEXICO — 7016 — REGISTERED PROFESSIONAL LAND SURVEYOR

7016
Certificate Number

(R) GLO Record

BP AMERICA PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM

Prospect Name: McCulley LS
Lease: McCulley
County: San Juan
State: New Mexico

Well No: 5 N
Surface Location: 24-28N-9W, 2460 FNL, 1740 FWL

Field: Blanco Mesaverde/Basin Dakota

Date: April 6, 2004

OBJECTIVE: Drill 250' below the top of the Two Wells; set 41/2" production casing. Stimulate CH, MF, PL and DK intervals

METHOD OF DRILLING

TYPE OF TOOLS	DEPTH OF DRILLING
Rotary	0 - TD

LOG PROGRAM

TYPE	DEPTH INTERVAL
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: 5896' Estimated KB: 5910'

MARKER		SUBSEA	TVD.
Ojo Alamo		4645'	1265'
Kirkland		4589'	1321'
Fruitland		4301'	1609'
Fruitland Coal	*	3979'	1932'
Pictured Cliffs	*	3695'	2215'
Lewis Shale	#	3502'	2408'
Cliff House	#	2314'	3596'
Menefee Shale	#	2000'	3910'
Point Lookout	#	1441'	4469'
Mancos		1086'	4824'
Greenhorn		-499'	6409'
Bentonite Marker		-560'	6470'
Two Wells	#	-620'	6530'
Paguate	#	-677'	6587'
Cubero Upper	#	-732'	6642'
Cubero Lower	#	-768'	6678'
Encinal Canyon	#	-811'	6721'
TOTAL DEPTH		-870'	6780'

Probable completion interval * Possible Pay

SPECIAL TESTS

TYPE
None

REMARKS:

DRILL CUTTING SAMPLES

FREQUENCY	DEPTH
10'	2508' -TD

DRILLING TIME

FREQUENCY	DEPTH
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	- 2508	(1)	Water/LSND	8.6-9.2		<6	
2508	- 6780		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#	13.5"	1
Intermediate 1	2508	7"	J/K-55 ST&C	20#	8.75"	1,2
Production	6780	4 1/2"	J-55	11.6#	6.25"	3

REMARKS:
(1) Circulate Cement to Surface
(2) Set casing 100' into Lewis Shale
(3) Bring cement 100' above 7" shoe

CORING PROGRAM:
None

COMPLETION PROGRAM:
Rigless, 3-4 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/JMP		April 6, 2004 Version 1.0	

Form 46 12-00 MNP

BP America Production Company
BOP Pressure Testing Requirements

Well Name: McCulley LS 5 N
County: San Juan **State:** New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1265		
Fruitland Coal	1932		
PC	2215		
Lewis Shale	2408		
Cliff House	3596	500	0
Menefee Shale	3910		
Point Lookout	4469	600	0
Mancos	4824		
Dakota	6530	2600	1449

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

Requested BOP Pressure Test Exception: 1500 psi

SAN JUAN BASIN
Dakota/MV 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, upper kelly cock with a handle available, floor safety valves and choke manifold which will also be tested to equivalent pressure.

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.
NMNM04208

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.
MCCULLEY LS 5N

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

9. API Well No.
30-045-32306-00-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 DAKOTA
BLANCO MESAVERDE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 24 T28N R9W SENW 2460FNL 1740FWL
36.38900 N Lat, 107.44600 W Lon

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

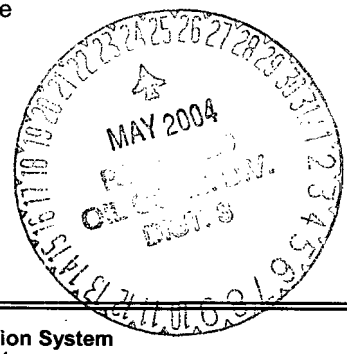
12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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.)

APD was submitted on 4/14/04.

This sundry is submitted to show corrected cement volume for the surface casing. Please see attached corrected surface hole of 13.5 and corrected sacks of cement to 100.



14. I hereby certify that the foregoing is true and correct.
Electronic Submission #29884 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 (04AXG2358SE)

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

Signature (Electronic Submission) — Date 04/22/2004

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Matthew J. Kresse — 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

Cementing Program

Well Name:	McCulley LS 5N	Field:	Blanco Mesaverde / Basin Dakota
Location:	24-28N-09W, 2460 FNL, 1740 FWL	API No.	
County:	San Juan	Well Flac	
State:	New Mexico	Formation:	Dakota MesaVerde
		KB Elev (est)	5910
		GL Elev. (est)	5896

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	**13.5**	9.625	ST&C	Surface	NA	
Intermediate	2508	8.75	7	~~ST LT~~&C	Surface	NA	
Production -	6780	6.25	4.5	ST&C	2408	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
Intermediate	7	20	K-55	3740	2270	~~234~~ 284	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	75	40
Excess %, Tail	NA	0	40
BHST (est deg. F)	75	120	183
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 minmize drillout.

Surface:

Preflush	20 bbl.	FreshWater
Slurry 1	**100**	sx Class C Cement
TOC@Surface		+ 2% CaCl2 (accelerator)

127
~~117~~ cuft

0.4887 cuft/ft OH

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)		Water (gal/sk)
Slurry 1	15.2	1.27		5.8

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		200 sx	Class "G" Cement	520 ~~518~~ cuft
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 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 Stop Ring
14 Centralizers (one in middle of first joint, then every third collar)
2 Fluidmaster vane centalizers @ base of Ojo
1 Top Rubber Plug
1 Thread Lock Compound

Production:

Fresh Water		10 bbl	CW100	
Lead		170	LiteCrete D961 / D124 / D154	428 ~~404~~ cuft
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	214 ~~209~~ cuft
Slurry 2			+ 5% D20 gel (extender)	+ 5 #/sk D24 gilsonite
	1456 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

Cementing Program

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)	0.1169 cuft/ft csg ann
Slurry 1	9.5	2.52	6.38	
Slurry 2	13	1.44	6.5	Top of Mancos 4824

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

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 6780 feet and complete into the Basin Dakota, 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.

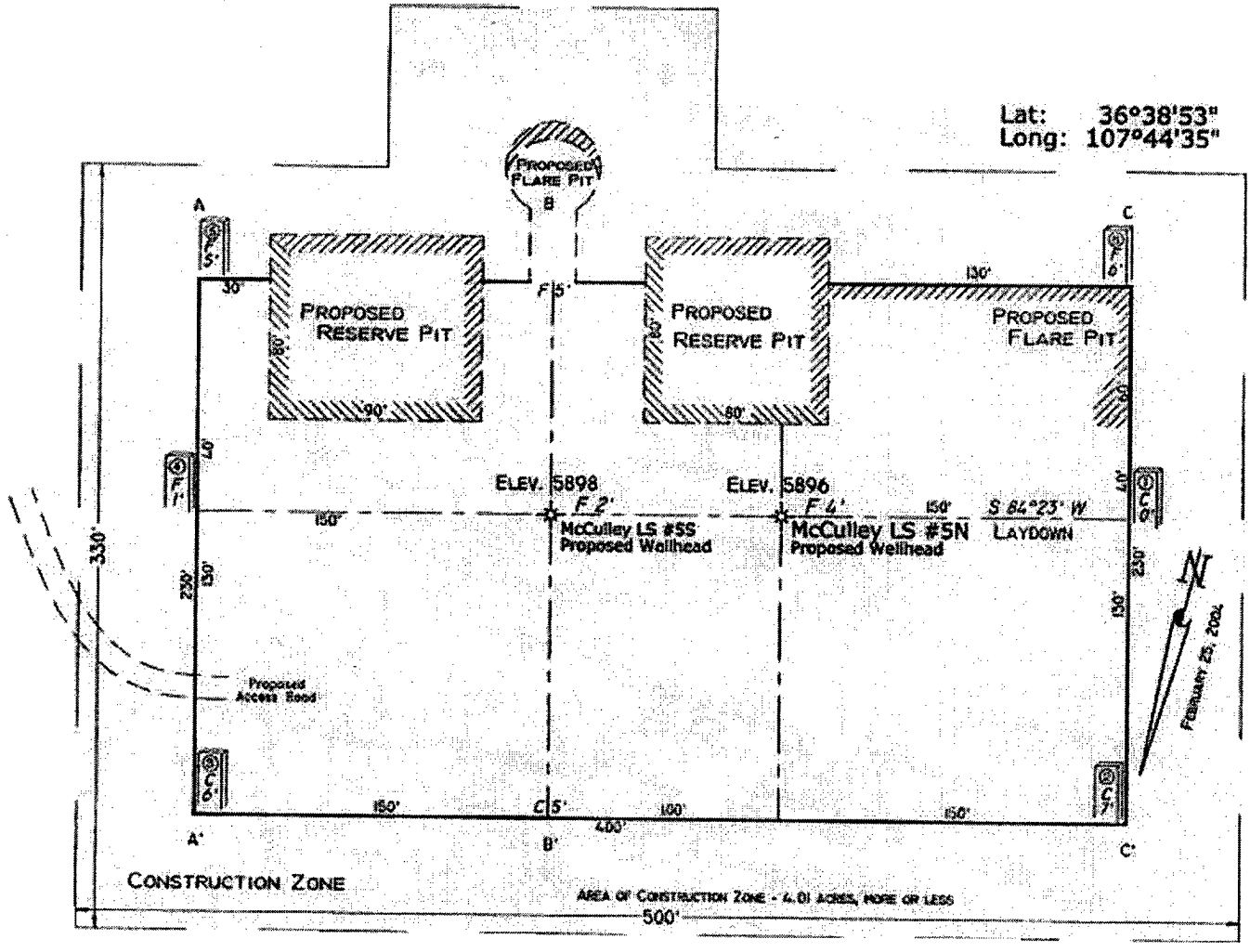
Application for Downhole commingling authority (NMOCD order R-11363) will be submitted to NMOCD after Permit to Drill has been approved.

SUPPLEMENTAL TO SURFACE USE PLAN
New Facilities:
A 4 diameter buried steel pipeline that is + or - 800 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.

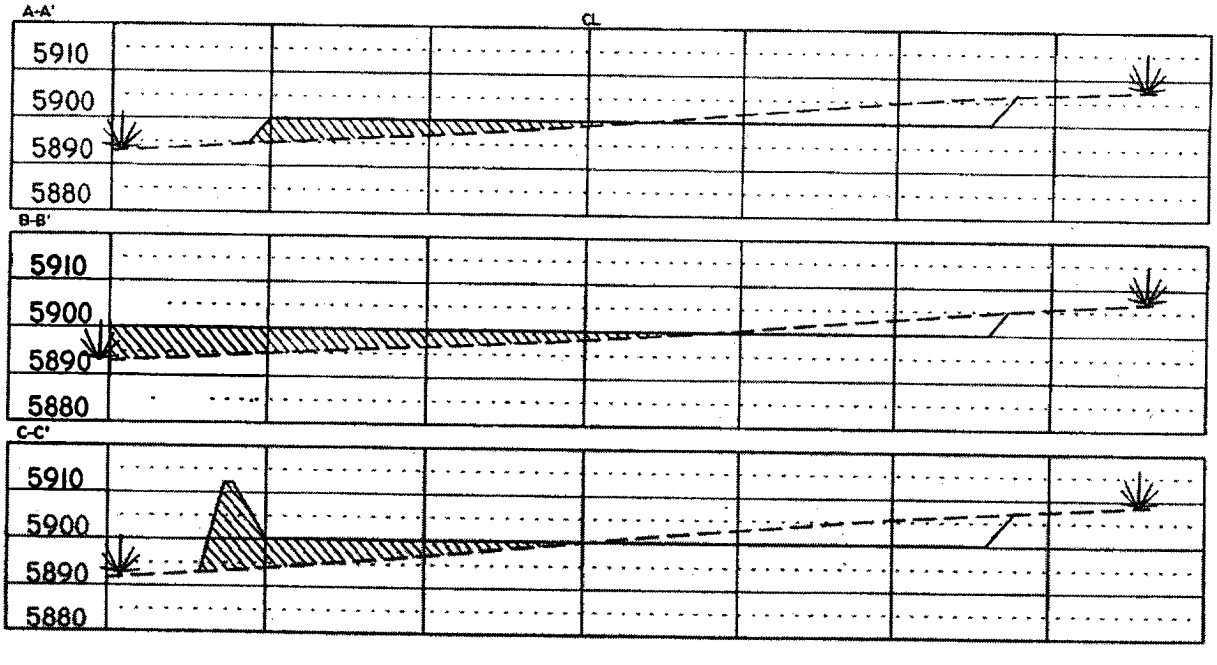
If terrain allows it is our intent to pre-set the 9 5/8" casing on the above mentioned well by drilling a surface hole with air/air mist in lieu of drilling mud and the surface casing be cemented with 94.5 cu/ft type I-II, 20% FLYASH, 14.5 PPG, 7.41 gal/sk, 1.61 cf/sk Yield, 80 DEG BHST ready mix cement. If the area will not allow for pre-set the approved cement program will be followed.

A 12 1/4" hole will be drilled if casing is to be pre-set.

PAD LAYOUT PLAN & PROFILE
BP AMERICA PRODUCTION COMPANY
McCulley LS # 5N
2460' F/NL 1740' F/WL
SEC.24, T28N, R9W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO



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.

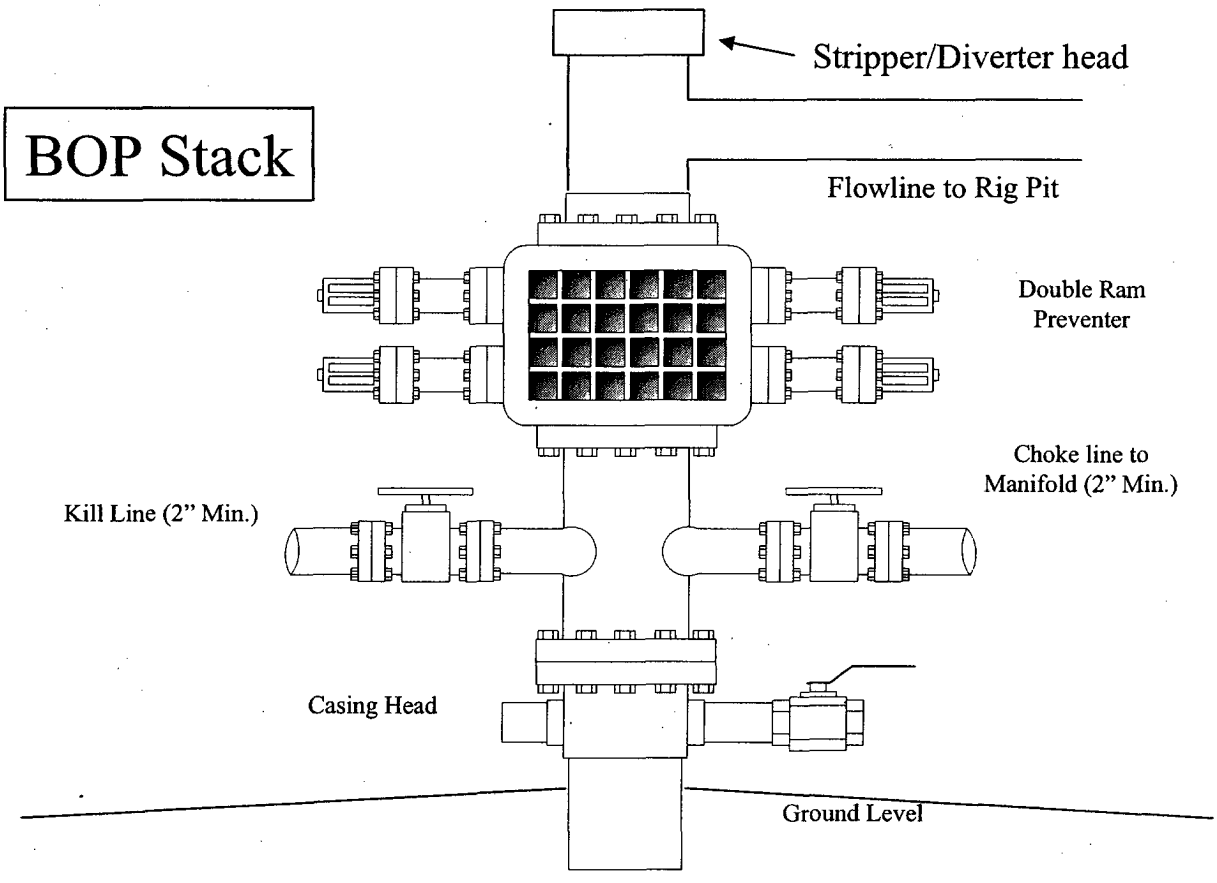
Cuts and fills shown are approximate - final finished elevation is to be adjusted so earthwork will balance. Corner stakes are approximate and do not include additional areas needed for sideslopes and drainages. Final Pad Dimensions are to be verified by Contractor.

VANN SURVEYS
P. O. Box 1306
Farmington, NM

BP American Production Company

Well Control Equipment Schematic

BOP Stack



Choke & Kill Manifold