State of New Mexico
Energy, Minerals and Natural Resources Department

New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-4 or 3160-5 form.

Operator Signature Date: 11/12/2019
Well information:

30-045-23257 BOLACK #002
BP AMERICA PRODUCTION COMPANY

Application Type:

☒ P&A ☐ Drilling/Casing Change ☐ Location Change

☐ Recomplete/DHC (For hydraulic fracturing operations review EPA Underground injection control Guidance #84; Submit Gas Capture Plan form prior to spudding or initiating recompletion operations)

☐ Other:

Conditions of Approval:

- Notify NMOCD 24hrs prior to beginning operations.

The following plugs concur with BLM tops:

- Change the Gallup plug 5642'-5542' to cover the Gallup top. BLM & OCD Gallup top pick @ 5592'
- Change the Mancos plug 4600-4500' to cover the Mancos top. BLM & OCD Mancos pick @ 4550'.
- Change the Mesaverde plug 3880-3780 to cover the Mesaverde top. BLM & OCD Mesaverde pick @ 3830'
- Add a Chacra plug 3180'-3080'. BLM & OCD Chacra pick @ 3130'.
- Change the PC/Fruitland plug 2190'-1800' to cover the PC/Fruitland tops. BLM & OCD PC pick @ 2140', Fruitland Pick @ 1850'.
- Change the Kirtland/Ojo Alamo plug 1351'-1090'. BLM & OCD Kirtland pick @ 1301', Ojo Alamo pick @ 1140'.

NMOCD Approved by Signature

2/25/20
Date

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

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 page 2

5. Lease Serial No.
NMNM03549

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.
BOLACK 2

2. Name of Operator
BP AMERICA PRODUCTION COMPANY
Contact: PATTI CAMPBELL
E-Mail: patti.campbell@bpx.com

9. API Well No.
30-045-23257-00-C1

3a. Address
1199 MAIN AVE
DURANGO, CO 81301

3b. Phone No. (include area code)
Ph: 970-712-5997

10. Field and Pool or Exploratory Area
BASIN DAKOTA
BLANCO MESAVERDE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 19 T28N R8W SWNE 2430FNL 1650FEL
36.647420 N Lat, 107.718350 W Lon

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

12. CHECK THE 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	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ 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 must 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 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

BP requests to P&A the subject well. Please see the attached P&A procedure, wellbore diagram, and BLM required reclamation plan documents.

In accordance with NMOCD Pit Rule 19.15.17.9 NMAC, BP will use a closed-loop system during operations.

NMOCD
FEB 10 2020
DISTRICT III

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

Electronic Submission #492143 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington
Committed to AFMSS for processing by JOHN HOFFMAN on 11/13/2019 (20JH0061SE)

Name *(Printed/Typed)* PATTI CAMPBELL — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 11/12/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JOHN HOFFMAN — Title PETROLEUM ENGINEER — Date 01/31/2020

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 Farmington

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.

(Instructions on page 2)

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

Plug and Abandonment Procedure – Bolack 002
2430' FNL & 1650' FEL, Section 19, T28N, R8W
San Juan County, NM / API 3004523257

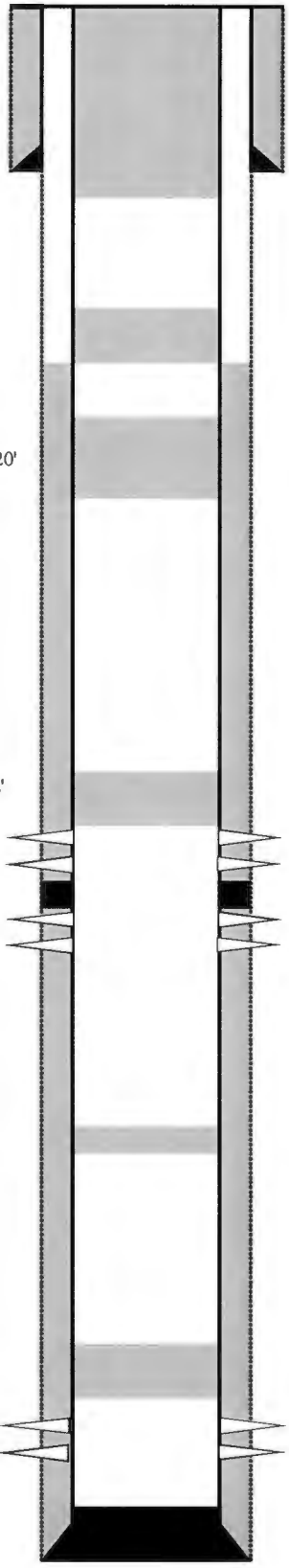
1. Hold pre-job safety meeting. Comply with all NMOCD, BLM safety and environmental regulations. Test rig anchors prior to moving in rig if not rigged to base beam.
2. Check casing, tubing, and bradenhead pressures.
3. Removed existing piping on casing valve. RU blow lines from casing valves and begin blowing down casing pressure. Kill well as necessary. Ensure well is dead or on a vacuum.
4. ND wellhead and NU BOP. Function test BOP.
5. P/U 4 1/2" bit or casing scraper on 2 3/8" string and round trip as deep as possible above top perforation.
6. P/U 4 1/2" CR, TIH and set CR 50' above top Dakota perforation. Pressure test tubing to 1000 psi. Sting out of CR. POOH w/ tubing.
7. RU wireline and run CBL with 500 psi on casing from CR to surface to identify TOC. Adjust plugs as necessary for new TOC. Email log copy to Jack Savage (BLM) at jwsavage@blm.gov and Brandon Powell at Brandon.powell@state.nm.us upon completion of logging operations.
8. Rig up to pump cement down tubing. Pump water to establish rate down tubing.
9. Plug 1 (Dakota Perforation and Dakota Formation Top 6375-6475', 12 sacks Class G Cement)
    a. Mix 12 sacks Class G cement and spot a balanced plug inside casing to cover the Dakota perforations and formation top.
10. Plug 2 (Gallup Formation top 5500-5600', 12 sacks Class G cement)
    a. Mix 12 sacks Class G cement and spot a balanced plug inside casing to cover the Gallup formation top.
11. Plug 3 (Mancos Formation top 4730-4830', 12 sacks Class G cement)
    a. Mix 12 sacks Class G cement and spot a balanced plug inside casing to cover the Mancos formation top.
12. Plug 4 (Mesaverde Perforation and Formation top 3742-3842', 12 sacks Class G cement)
    a. P/U 4 1/2" CR, TIH and set CR 50' above top Mesaverde perforation. Sting out of CR. Load hole, and pressure test casing to 800 psi. If casing does not test, then spot or tag subsequent plugs as appropriate. Mix 12 sacks Class G cement and spot a balanced plug inside casing to cover the Mesaverde formation top.
13. Plug 5 (Pictured Cliffs and Fruitland Formation top 1840-2220', 50 sacks Class G cement)
    a. Mix 50 sacks Class G cement and spot a balanced plug inside casing to cover the Pictured Cliffs and Fruitland formation top.
14. Plug 6 (Kirtland and Ojo Alamo Formation top 1120-1351', 28 sacks Class G cement)
    a. Mix 28 sacks Class G cement and spot a balanced plug inside casing to cover the Kirtland and Ojo Alamo formation top.
15. Plug 7 (Surface shoe and surface 331'-surface, 100 sacks Class G cement)
    a. Attempt to pressure test the bradenhead annulus to 300 psi; note the volume to load. If BH annulus holds pressure, then establish circulation out casing valve with water. Mix approximately 100 sx cement and spot a balanced plug from 331' to surface, circulate good cement out of casing valve. TOH and LD tubing. Shut well in and WOC. If BH annulus does not test, then perforate at the appropriate depth

and attempt to circulate cement to surface filling in the casing from 331' and the annulus from the squeeze holes to surface. Shut in well and WOC.

16. ND cement valves and cut off wellhead. Fill annuli with cement as necessary. Install P&A marker to comply with regulations. Record GPS coordinate for P&A marker on tower report. Photograph P&A marker in place. RD, MOL and restore location per BLM stipulations.

BOLACK 002
MESAVERDE/DAKOTA
API 30-045-23257
SEC 19, T28N, R8W
SAN JUAN COUNTY, NEW MEXICO

GL-5838'



TOC: Surface (circ.)

Surface Casing Data
13-3/4" Hole
9-5/8", 36#, K-55 ST&C @ 281'
250 sxs cls B cmt

Formation Tops

Ojo Alamo	1170'
Kirtland	1301'
Fruitland	1890'
Pictured Cliffs	2170'
Mesaverde	3892'
Mancos	4780'
Gallup	5550'

Surface Plug 331'-surface
100 sx Class G cement

Ojo Alamo/Kirtland Plug
1120-1351'
28 sx Class G Cement

Fruitland/PC Plug 1840-2220'
50 sx Class G Cement

2nd stage TOC: Unknown (lost returns while displacing plug)

Mesaverde Plug 3742'-3842'
12 sx Class G Cement

DV Tool @ 4319'
2nd stage: 800 sxs 65/35 Lite, tail w/ 50 sxs neat cmt

Mesaverde Perfs
3892-4735'

Mancos Plug 4730-4830
12 sx Class G Cement

1st stage TOC: est @ DV tool (circ.)

Gallup Plug 5500-5600'
12 sx Class G Cement

Dakota Plug 6375'-6475'
12 sx Class G Cement

Dakota Perfs
6525-6662'

Production Casing Data
8-3/4" Hole to 3000', 7-7/8" Hole 3000'-TD
4-1/2", 10.5#, K-55 ST&C @ 6714'
1st stage: 550 sxs 50/50 poz cmt

PBTD 6,700'
TD 6,717'

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE
6251 COLLEGE BLVD.
FARMINGTON, NEW MEXICO 87402

Attachment to notice of
Intention to Abandon:

Re: Permanent Abandonment
Well: Bolack 002 API: 30-045-23257

CONDITIONS OF APPROVAL

1. Plugging operations authorized are subject to the "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."

2. Forward CBL to John Hoffman jhoffman@blm.gov and Brandon Powell brandon.powell@state.nm.us.

3. Farmington Office is to be notified at least 24 hours before the plugging operations commence (505) 564-7750.

4. BLM picks formation tops as indicated in Geo Report attachment for use in determining TOC for all plugs. Please adjust plugs according to BLM tops.

6. Surface plug: perforate and circulate cement.

BLM FLUID MINERALS
Geologic Report

Date Completed: 1/21/20

Well No.	Bolack # 2		Location	2430' FNL	&	1650' FEL	
Lease No.	NMNM03549		Sec. 19	T28N		R8W	
Operator	BP		County	San Juan	State	New Mexico	
Total Depth	6717'	PBTD 6700'	Formation	Commingled Dakota & Mesa Verde			
Elevation (GL)	5838'		Elevation (KB)	5850' (est.)			

Geologic Formations	Est. Top	Est. Bottom	Log Top	Log Bottom	Remarks
San Jose Fm					
Nacimiento Fm			Surface	1140'	Surface/Fresh water sands
Ojo Alamo Ss			1140'	1301'	Aquifer (fresh water)
Kirtland Shale			1301'	1850'	
Fruitland Fm			1850'	2140'	Coal/Gas/Possible water
Pictured Cliffs Ss			2140'	2170'	Gas
Lewis Shale			2170'	3830'	
Chacra			3130'	3300'	Probable water or dry
La Ventana Tongue					Probable water or dry
Cliff House Ss			3830'	3904'	Water/Possible gas
Menefee Fm			3904'	4436'	Coal/Ss/Water/Possible O&G
Point Lookout Ss			4436'	4550'	Probable water/Possible O&G
Mancos Shale			4550'	6524'	Source rock
Gallup			5592'	5650'	O&G/Water
Dakota			6524'	TD	O&G/Water

Remarks:
P & A

- Log analysis of reference well #2 (attached worksheet) indicates the Ojo Alamo and the Nacimiento contain fresh water (≤ 5,000 ppm TDS).

- Please ensure that the tops of the Pictured Cliffs and Fruitland formations, as well as the entire Ojo Alamo aquifer, identified in this report, are isolated by proper placement of cement plugs. This will protect the freshwater sands in this well bore.

- BLM geologist's picks for the top of the Mancos formation vary from operator's pick in this well.

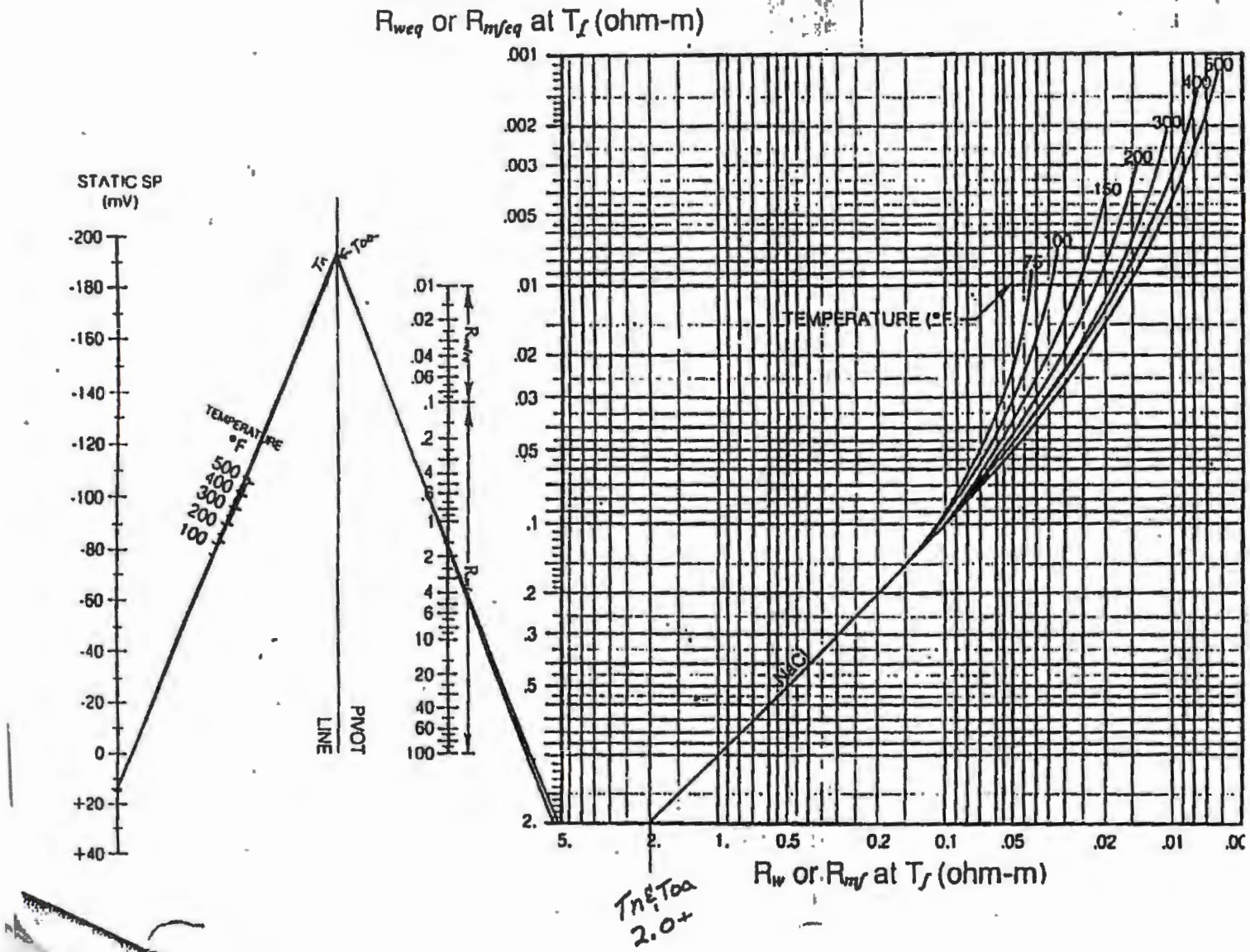
Reference Well:
1) BP — Fm. Tops
Same

2) Amoco Prod. — Water Analysis
Riddle F LS # 10
1180' FSL, 890' FWL
Sec 17, T28N, R8W
GL 5721', KB 5733'

Prepared by: *Walter Gage*

Amoco Prod. Co.
Riddle F LS #10
1180' FSL, 890' FWL
Sec. 17, 28N-8W
GL 5721' KB 5733'

R_{mF} = 1.51 @ 78°



	Tn	Toa
Formation		
Depth (BH)	8244'	2244'
T(BH)	90°	90°
Geo. Gradient	1.3	1.3
Depth (F)	550'	1204'
T(F)	67°	75°
R_{MF} @ T(F)	1.7	1.55
R_m @ T(F)		
$R_{(s)}$		
SP	+14mv	+15mv
$R_{(s)}/R_m$		
h		
SSP		
R_w @ T(F)		
R_w @ 77°F	2.0+	2.0+
R_w (core)	1.8	1.95
TDS	≈3600 ppm	≈365 ppm

GENERAL REQUIREMENTS FOR PERMANENT ABANDONMENT OF WELLS ON FEDERAL AND INDIAN LEASES FARMINGTON FIELD OFFICE

1.0 The approved plugging plans may contain variances from the following minimum general requirements.

1.1 Modification of the approved plugging procedure is allowed only with the prior approval of the Authorized Officer, Farmington Field Office.

1.2 Requirements may be added to address specific well conditions.

2.0 Materials used must be accurately measured. (densometer/scales)

3.0 A tank or lined pit must be used for containment of any fluids from the wellbore during plugging operations and all pits are to be fenced with woven wire. These pits will be fenced on three sides and once the rig leaves location, the fourth side will be fenced.

3.1 Pits are not to be used for disposal of any hydrocarbons. If hydrocarbons are present in the pit, the fluids must be removed prior to filling in.

4.0 All cement plugs are to be placed through a work string. Cement may be bull-headed down the casing with prior approval. Cement caps on top of bridge plugs or cement retainers may be placed by dump bailer.

4.1 The cement shall be as specified in the approved plugging plan.

4.2 All cement plugs placed inside casing shall have sufficient volume to fill a minimum of 100' of the casing, or annular void(s) between casings, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.3 Surface plugs may be no less than 50' in length.

4.4 All cement plugs placed to fill annular void(s) between casing and the formation shall be of sufficient volume to fill a minimum of 100' of the annular space plus 100% excess, calculated using the bit size, or 100' of annular capacity, determined from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.

4.5 All cement plugs placed to fill an open hole shall be of sufficient volume to fill a minimum of 100' of hole, as calculated from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug. In the absence of a caliper log, an excess of 100% shall be required.

4.6 **A cement bond log or other accepted cement evaluation tool is required to be run if one had not been previously ran or cement did not circulate to surface during the original casing cementing job or subsequent cementing jobs.**

5.0 All cement plugs spotted across, or above, any exposed zone(s), when; the wellbore is not full of fluid or the fluid level will not remain static, and in the case of lost circulation or partial returns during cement placement, shall be tested by tagging with the work string.

5.1 The top of any cement plug verified by tagging must be at or above the depth specified in the approved plan, without regard to any excess.

5.2 Testing will not be required for any cement plug that is mechanically contained by use of a bridge plug and/or cement retainer, if casing integrity has been established.

5.3 Any cement plug which is the only isolating medium, for a fresh water interval or a zone containing a prospectively valuable deposit of minerals, shall be tested by tagging.

5.4 If perforations are required below the surface casing shoe, a 30 minute minimum wait time will be required to determine if gas and/or water flows are present. If flow is present, the well will be shut-in for a minimum of one hour and the pressure recorded. Short or long term venting may be necessary to evacuate trapped gas. If only a water flow occurs with no associated gas, shut well in and record the pressures. Contact the Engineer as it may be necessary to change the cement weight and additives.

6.0 Before setting any cement plugs the hole needs to be rolled. All wells are to be controlled by means of a fluid that is to be of a weight and consistency necessary to stabilize the wellbore. This fluid shall be left in place as filler between all plugs.

6.1 Drilling mud may be used as the wellbore fluid in open hole plugging operations.

6.2 The wellbore fluid used in cased holes shall be of sufficient weight to balance known pore pressures in all exposed formations.

7.0 A blowout preventer and related equipment (BOPE) shall be installed and tested prior to working in a wellbore with any exposed zone(s); (1) that are over pressured, (2) where the pressures are unknown, or (3) known to contain H_2S.

8.0 Within 30 days after plugging work is completed, file a Sundry Notice, Subsequent Report of Abandonment (Form 3160-5), five copies, with the Field Manager, Bureau of Land Management, 6251 College Blvd., Suite A, Farmington, NM 87402. The report should show the manner in which the plugging work was carried out, the extent, by depth(s), of cement plugs placed, and the size and location, by depth(s), of casing left in the well. Show date well was plugged.

9.0 All permanently abandoned wells are to be marked with a permanent monument as specified in 43 CFR 3162.6(d). Unless otherwise approved.

10.0 If this well is located in a Specially Designated Area (SDA), compliance with the appropriate seasonal closure requirements will be necessary.

All of the above are minimum requirements. Failure to comply with the above conditions of approval may result in an assessment for noncompliance and/or a Shut-in Order being issued pursuant to 43 CFR 3163.1. You are further advised that any instructions, orders or decisions issued by the Bureau of Land Management are subject to administrative review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4 and 43 CFR 4.700.