

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Division Director
Oil Conservation Division



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: 9/30/2019

Well information:

30-045-24948 GALLEGOS CANYON UNIT #226E

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.
- In addition to BLM COAs, ensure the following tops are covered:
- 2990'-2890'. OCD Mesaverde pick @ 2940
 - 2353'-2253'. OCD Chacra pick @ 2303'
 - 550-0. OCD Kirtland pick @ 500'. Ojo Alamo pick @ 395'.



NMOCD Approved by Signature

1/24/20
Date

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.

5. Lease Serial No.
NMSF078106

6. If Indian, Allottee or Tribe Name
EASTERN NAVAJO

7. If Unit or CA/Agreement, Name and/or No.
892000844F

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. GALLEGOS CANYON UNIT 226E
2. Name of Operator BP AMERICA PRODUCTION CO Contact: PATTI CAMPBELL E-Mail: patti.campbell@bpx.com		9. API Well No. 30-045-24948-00-S1
3a. Address 1199 MAIN AVE SUITE 101 DURANGO, CO 81301	3b. Phone No. (include area code) Ph: 970-712-5997	10. Field and Pool or Exploratory Area BASIN DAKOTA
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 18 T28N R12W NENW 0980FNL 1400FWL 36.666720 N Lat, 108.156170 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			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input checked="" type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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.

This site is on private property. No BLM Reclamation Plan is attached.

NMOCD
DEC 19 2019
DISTRICT III

14. I hereby certify that the foregoing is true and correct. Electronic Submission #485736 verified by the BLM Well Information System For BP AMERICA PRODUCTION CO, sent to the Farmington Committed to AFMSS for processing by JOHN HOFFMAN on 10/01/2019 (20JH0002SE)	
Name (Printed/Typed) PATTI CAMPBELL	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 09/30/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>JOHN HOFFMAN</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>12/11/2019</u>
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 <u>Farmington</u>

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 ****

NMOCD

**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: GCU 226E API: 30-045-24948

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.
5. Add Fruitland plug from 979' to 1079'.
6. Surface plug: perforate and circulate cement.

**BLM FLUID MINERALS
Geologic Report**

Date Completed: 12/10/2019

Well No.	Gallegos Canyon Unit #226E	Location	980	FNL &	1400	FWL
Lease No.	NMSF078106	Sec. 18	T28N		R12W	
Operator	BP America Production Co.	County	San Juan	State	New Mexico	
Total Depth	6149	PBTD	6100	Formation	Dakota	
Elevation (GL)	5578	Elevation (KB)	5591			

Geologic Formations	Est. Top	Est. Bottom	Log Top	Log Bottom	Remarks
San Jose Fm					Surface/Fresh water sands
Nacimiento Fm					Fresh water sands
Ojo Alamo Ss			Surface		Aquifer (fresh water)
Kirtland Shale	125		estimated	1029	
Fruitland Fm			1029	1356	Coal/Gas/Possible water
Pictured Cliffs Ss			1356	1520	Gas
Lewis Shale			1520	2302	
Chacra			2302	2940	
Cliff House Ss			2940	2994	Water/Possible gas
Menefee Fm			2994	3862	Coal/Ss/Water/Possible O&G
Point Lookout Ss			3862	4126	Probable water/Possible O&G
Mancos Shale			4126	5049	
Gallup			5049	5942	O&G/Water
Graneros Shale			5942	6015	
Dakota Ss			6015	PBTD	O&G/Water

Remarks:

P & A

- BLM geologist's picks for the top of the Fruitland, Lewis, and Cliff House formations vary from operator's.
- Please add a Fruitland plug from 979'-1079.
- Log analysis of reference well #2 (attached worksheet) indicates the Ojo Alamo sands investigated contain fresh water ($\leq 5,000$ ppm TDS).
- Please ensure that the tops of the Dakota, Gallup, Mancos, Mesaverde (Cliff House), Lewis, Pictured Cliffs, and Fruitland formations, as well as the entire Ojo Alamo fresh water aquifer identified in this report are isolated by proper placement of cement plugs. This will protect the fresh water sands in this well bore.

Reference Well:

1) Same

Fm. Tops

2) BP America
GCU #314
1580' FNL, 1560' FWL
Sec. 17, T28N, R12W
GL 5648', KB 5653'

Water
Analysis

Prepared by: Chris Wenman

**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 H₂S.

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.

Plug and Abandonment Procedure – GCU 226E
980 FNL & 1400 FWL, Section 18, T28N, R12W
San Juan County, NM / API 3004524948

NMOCD
DEC 31 2019
DISTRICT III

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 perforation. Pressure test tubing to 1000 psi. 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. 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 5800-5900', 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 5000-5100', 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 4078-4178', 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 Formation top 2720-2820', 12 sacks Class G cement)
 - a. Mix 12 sacks Class G cement and spot a balanced plug inside casing to cover the Mesaverde formation top.
13. Plug 5 (Pictured Cliffs/Lewis Formation top 1310-1500', 25 sacks Class G cement)
 - a. Mix 24 sacks Class G cement and spot a balanced plug inside casing to cover the Pictured Cliffs formation top.
14. Plug 6 (Surface shoe and Fruitland 550'-surface, 175 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 175 sx cement and spot a balanced plug from 550' 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 550' and the annulus from the squeeze holes to surface. Shut in well and WOC.
15. 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.

GCU 226E
 Dakota
 30-045-24948
 T-28N, R-12-W, Sec. 18
 San Juan County, New Mexico

Formation Tops		
		Surface/Fruitland Plug 550'-surface
Fruitland	500	175 sx Class G cement
Pictured Cliffs	1360	PC/Lewis Plug 1310-1500'
Lewis Shale	1450	24 sx Class G Cement
Mesaverde	2770	Mesaverde Plug 2720-2820' 12 sx Class G Cement
Mancos	4128	Mancos Plug 4078-4178' 12 sx Class G Cement
Gallup	5050	Gallup Plug 5000-5100' 12 sx Class G Cement
		Dakota Plug 5800-5900' 12 sx Class G Cement
		Dakota Perforations
		5950-5960 5976-5983
		6017-6068 6072-6078

