

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**

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMSF078194
2. Name of Operator BP AMERICA PRODUCTION COMPANY		6. If Indian, Allottee or Tribe Name
Contact: PATTI CAMPBELL Mail: patti.campbell@bpx.com		7. If Unit or CA/Agreement, Name and/or No.
3a. Address 1199 MAIN AVE. SUITE 101 DURANGO, CO 81301	3b. Phone No. (include area code) Ph: 970-712-5997	8. Well Name and No. LUDWICK LS 17
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 29 T30N R10W NWNE 0790FNL 1650FEL 36.788467 N Lat, 107.904144 W Lon		9. API Well No. 30-045-09246-00-S1
		10. Field and Pool or Exploratory Area BASIN DAKOTA
		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 recomple 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 diagrams 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.

Notify NMOCD 24 hrs  
prior to beginning  
operations

NMOCD  
DEC 12 2018  
DISTRICT III

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #434453 verified by the BLM Well Information System For BP AMERICA PRODUCTION COMPANY, sent to the Farmington Committed to AFMSS for processing by JACK SAVAGE on 12/04/2018 (19JWS0050SE)	
Name (Printed/Typed) PATTI CAMPBELL	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 09/10/2018

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By JACK SAVAGE	Title PETROLEUM ENGINEER	Date 12/04/2018
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 \*\***

NMOCD  
AY

13

## **BP America**

### **Plug And Abandonment Procedure**

#### **Ludwick LS #017**

790' FNL & 1650' FEL, Section 29, T30N, R10W

San Juan County, NM / API 30-045-09246

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. Remove 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 5 ½" bit or casing scraper on 2-3/8" work string and round trip as deep as possible above top perforation at 7045'.
6. P/U 5 ½" CR, TIH and set CR at +/- 6995'. 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. Rig up to pump cement down tubing. Pump water to establish rate down tubing.

**NOTE: All Plugs Include 100% excess outside casing and 50% Excess inside casing**

8. Plug 1 (**Dakota Perforations and Dakota Formation Top 6995'-6945', 6 Sacks Class B Cement**)

Mix 6 sx Class B cement and spot a balanced plug inside casing to cover Dakota perforations and formation top.

9. Plug 2 (**Gallup Formation Top 6245'-6095', 18 Sacks Class B Cement**)

Mix 18 sx Class B cement and spot a balanced plug inside casing to cover Gallup formation top.

10. Plug 3 (**Mancos Formation Top 5107'-4957', 18 Sacks Class B Cement**)

Mix 18 sx Class B cement and spot a balanced plug inside casing to cover Mancos formation top.

11. Plug 4 (**Mesa Verde Formation Top 5002'-4244', 90 Sacks Class B Cement**)

Mix 90 sx Class B cement and spot a balanced plug inside casing to cover Mesa Verde formation top.

12. Plug 5 (**Chacra Formation Top 3500'-3350', 18 Sacks Class B Cement**)

Mix 18 sx Class B cement and spot a balanced plug inside casing to cover Chacra formation top.

13. Plug 6 (**Pictured Cliffs Formation Top 2706'-2556', 36 Sacks Class B Cement**)

RIH and perforate at 2656'. P/U CR, TIH and set at 2606'. Mix 36 sx of Class G cement and squeeze 18 sx of cement through CR at 2656'. Sting out of CR and spot 18 sx of cement inside casing to cover Pictured Cliffs formation top.

14. Plug 7 (**Fruitland Formation Top 2000'-1850', 18 Sacks Class B Cement**)

Mix 18 sx Class B cement and spot a balanced plug inside casing to cover Fruitland formation top.

**15. Plug 8 (Kirtland Formation Top 1500'-1350', 18 Sacks Class B Cement)**

Mix 18 sx Class B cement and spot a balanced plug inside casing to cover Kirtland formation top.

**16. Plug 9 (Ojo Alamo Formation Top, Surface Shoe and Surface 400'-surface, 200 Sacks Class B Cement)**

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 200 sx cement and spot a balanced plug from 400' to surface, circulate good cement out of casing valve. 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 the casing from 400' and the annulus from the squeeze holes to surface. Shut in well and WOC.

**17. ND cementing 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.**



## Wellbore Diagram

Ludwick LS #017  
API #: 3004509246  
San Juan, New Mexico

### Plug 9

400 feet - Surface  
400 feet plug  
200 sacks of Class B Cement

### Plug 8

1500 feet - 1350 feet  
150 feet plug  
18 sacks of Class B Cement

### Plug 7

2000 feet - 1850 feet  
150 feet plug  
18 sacks of Class B Cement

### Plug 6

2706 feet - 2556 feet  
150 feet plug  
18 sacks of Class B Squeeze  
18 sacks of Class B Inside Casing

### Plug 5

3500 feet - 3350 feet  
150 feet plug  
18 sacks of Class B Cement

### Plug 4

5002 feet - 4244 feet  
758 feet plug  
90 sacks of Class B Cement

### Plug 3

5107 feet - 4957 feet  
150 feet plug  
18 sacks of Class B Cement

### Plug 2

6245 feet - 6095 feet  
150 feet plug  
18 sacks of Class B Cement

### Plug 1

6995 feet - 6945 feet  
50 feet plug  
6 sacks of Class B Cement

### Perforations

7045 ft - 7057 ft  
7124 ft - 7156 ft  
7178 ft - 7197 ft  
7224 ft - 7232 ft  
7250 ft - 7254 ft  
7286 ft - 7298 ft

### Surface Casing

10.75" @ 235ft

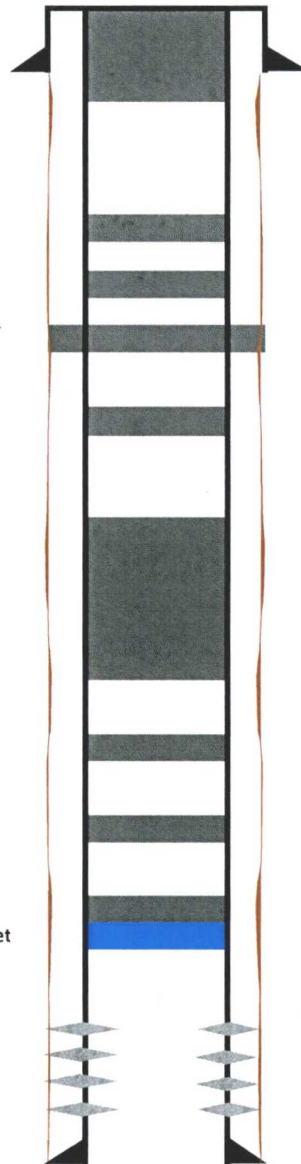
### Formation

Pictured Cliffs - 2656 feet  
Cliff House - 4344 feet  
Point Lookout - 4952 feet  
Mancos - 5057 feet  
Gallup - 6195 feet  
Dakota - 7123 feet  
Morrison - 7335 feet

Retainer @ 6995 feet

### Production Casing

5.5" 17# @ 7390 ft



Well name and no: LUDWICK LS 017  
API No. 30-045-09246

### Plugging & Abandonment Surface Reclamation Plan

Operator:	BP America	Location:	Sec.29, Twn: 30N, Range 10W
Well name & No:	LUDWICK LS 017	County, State:	San Juan County, NM
API No:	30-045-09246	Revision:	0
Surface:	BLM		
Date:	8/30/2018		

This document outlines the final reclamation plan for the LUDWICK LS 017 well site, API 30-045-09246, based on the BLM/BP on-site inspection conducted on 8/2/2018 and in accordance with Onshore Order No. 1 and the FFO Bare Soil Reclamation Procedures C (dated 2/2013).

### PROPOSED VEGETATION RECLAMATION PLAN

#### General Notes:

- BP will comply with the requirements in accordance with the approved Sundry Notice associated with this submittal.
- BP will notify the BLM forty-eight (48) hours prior to commencing earthwork.
- BP will notify the Authorized Officer forty-eight (48) hours prior to commencing with seed application.
- All underground production piping on the well site belonging to BP, associated with the LUDWICK LS 017 well, will be removed or abandoned-in-place if at depths greater than 36 inches.
- BP power poles, rectifier and/or radio equipment will be removed from the site.  
NO POWER POLES IDENTIFIED DURING SITE VISIT
- All rig anchors found on location belonging to the LUDWICK LS 017 will be removed.
- Disturbance will be limited to the well site and edge of well pad and access road boundaries.
- Disturbance will be limited to disturbance required to remove equipment and piping related to the LUDWICK LS 017 well.
- All surface equipment associated with the LUDWICK LS 017 identified and belonging to BP on location at time of P&A will be removed from location.
- BP has no authority to address other operator equipment or pipelines.
- BP will inform other Operators and Pipeline Companies of BLM/BIA equipment removal requests/requirements at the time of reclamation plan submission and when the LUDWICK LS 017 P&A marker is set.
- All trash, if any, will be removed from location.
- The P&A marker will be permanent and comply with all NMOCD regulations.

#### Well Site Reclamation:

(Note: some steps may occur in a different sequence than listed below)

For future reference, pre-construction conditions are documented in the attached Inspection Form and shown in the attached photos.

- Temporary and / or permanent storm water and erosion control BMP's will be employed at appropriate locations around the pad as dictated by local drainage patterns and expected areas of disturbance, slopes and across the access road. BMP's selection will be determined by local factors and will be a combination of sediment and erosion controls that are deemed effective and low maintenance. Straw wattles, diversion ditches, mulch, soil blankets, and/or other suitable BMP's may be used in various

Well name and no: LUDWICK LS 017  
API No. 30-045-09246

combinations, as appropriate, during and after construction activities. Any temporary means to control storm water will be removed before final reclamation is achieved.

- Vegetation and approximately 6 inches of soil will be stripped and stockpiled to use after grading operations to facilitate re-vegetation.
- Gravel on the well site surface will be removed.
- If there is a BGT on location it will be properly closed per NMOCD Rules and the area will be reclaimed along-side the entire well pad.
- Fill material on the location will be used to reclaim the site to near original and natural topography as is practical. The pad will be ripped and will just be disc 4-6 inches to break any clods and prepare the location for seeding. This locations reclamation will include the road leading to the well site.
- Mature, healthy vegetation on the site perimeter will be left intact to the extent possible to achieve contour.
- Natural drainage patterns will be established when possible and practical. Additional means for ensuring proper drainage, such as water bars or diversion ditches, may be employed. The natural drainage patterns already in existence will be maintained and enhanced with the fill material on site.
- Disturbed areas will be prepared for seeding.
- A seed drill will be utilized to create a firm bed.
- After the site has been prepared, the location will be seeded using appropriate equipment.
- All disturbed areas will be seeded in accordance with the FFO Bare Soil Reclamation Procedure C.

#### Access Road Reclamation:

The road into this location will reclaimed in the same manner as the well pad and blocked off to eliminate traffic through the reclamation area.

#### Re-vegetation:

The planned, initial seed mixture and application rates for the Badlands Community identified during the site visit will be as follows. The seed application rates may be adjusted according the based upon method of application.

Species of seed		Pound/Acre (PLS)
Fourwing Saltbush	Atriplex canescens	4.0
Rocky Mountain Bee Plant		1.0
Indian Ricegrass	Achnatherum hymendoides	5.0
Sand Dropseed	Sporobolus cryptandrus	1.0
Bottlebrush Squirreltail	Elymus elymoides	4.0
Small Flower Globemallow	Sphaeralcea parvifolia	0.25
Mormon Tea	Ephedra viridis	2.0
Sage Brush		2.0
Rubber Rabbitbush	Ericameria nauseosa	2.0

Seed mixtures will be certified weed-free and the seeding records (bag labels) or other official documentation will be available to the Authorized Officer prior to seeding upon request.



Well name and no: LUDWICK LS 017

API No. 30-045-09246

Seeding will occur as soon as reasonably possible following completion of earthwork activities and timed for successful germination.

To prepare the site for seeding, only the seed drill will be necessary to create a firm bed. The seed mix is designed to be applied at 60 Total PLS per square foot which will ensure adequate stand density and diversity. Seeding will be completed using a no-till drill or Brillion drill seeder, this method allows for the handling of a wide variety of seed types and sizes in addition to establishing good seed to soil contact without undo disruption of the soil surface. Using a no till or Brillion drill also provides proper seed planting depth which will be approximately 1/8 inch.

#### Weed Management:

BP's objective is to implement an integrated weed management program to control weed populations and establish desirable vegetation. No noxious weeds were noted during the onsite visit.

Weed management and control will be performed by a properly licensed contractor and within full compliance of all federal and state laws and regulations.

Weed management and control will be performed in an environmental conscious manner using BMP's.

#### Monitoring:

BP will submit a Sundry Notice informing the BLM the earthwork and seeding is completed and requesting a joint inspection to examine the site.

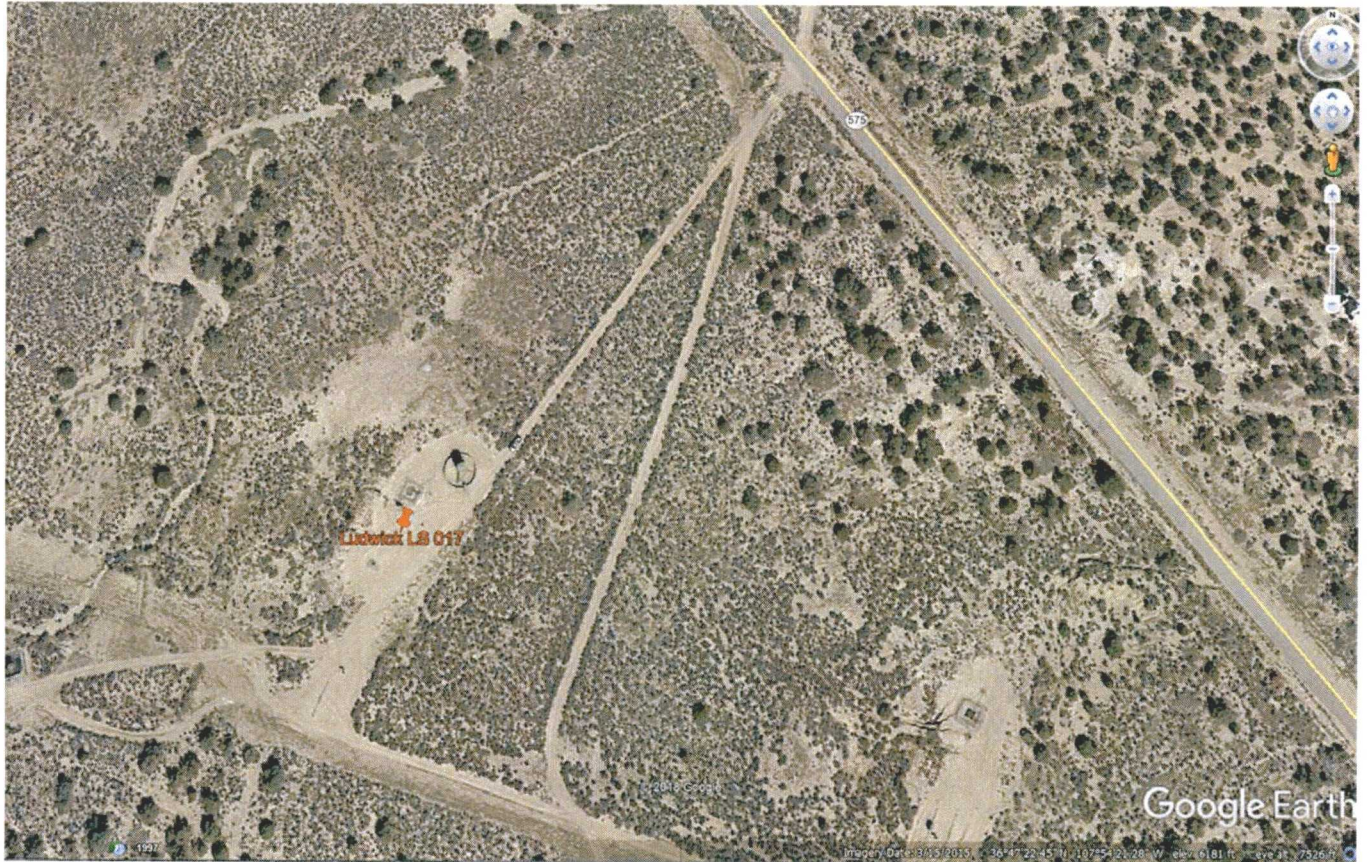
Any fencing installed to assist with re-vegetation will be removed once there is agreement from the BLM that the vegetation percent cover standard has been attained.

#### Attachments:

- P&A Field Inspection Sheet performed on 8/23/2018.
- Aerial of location.



Well name and no: LUDWICK LS 017  
API No. 30-045-09246



Well name and no  
API No. 30-045-09





## BP L48 San Juan



## P&amp;A Field Inspection Sheet

Date: 8/30/2018				Specialist Sabre Beebe, BP: Randy McKee, BLM	
Operator: BP America				Well Name & Number: Ludwick LS 017	
API Number: 30-045-09246				Section: 29	Township: 30N Range: 10W
Lease Number: NMSF078194				Footage: 790 FNL 1650 FEL	
				County: San Juan County	State: New Mexico
Surface:	BLM	Mineral:	BLM	Twinned/Collocated:	No
Active well name: Active well API:					

## Well Pad

Topography: SLIGHTLY SLOPING	Stockpile Topsoil	No
Soil Type: SANDY		
Vegetation Community: SAGEBRUSH		
VEGETATION NOTED IN AREA SURROUNDING WELL PAD		
Sage Brush Rocky Mountain Bee plant Sand DropSeed Needle and thread Four wing		

Vegetation Cages: No

Facilities on Location:

1 Tanks 300 bbl #16190

1 Meter Runs 72893 4 INCH

1 Separators #T-9699401-02

N/A Compressor

N/A Day Tanks

1 Pipeline riser belonging to: Enterprise

Enterprise lines and risers on and near location that Enterprise will need to address as BP cannot address other Operator's equipment. BLM is requiring [Click here to enter text.](#)

1 RTU 0192

1 Solar Panel

2 Batteries

N/A Lift Equipment [Click here to enter text.](#)

Steel Pits: Below Grade: Where on Location: northern edge in fill dirt

Drip or possible Drip NO

Gravel Present: Yes Bury No Place Gravel on Main Road: Yes

Cathodic Ground bed on location: Yes

In Service: Yes

Abandon: Yes

Plug: Yes

Remove Wire Yes

Remove Rectifier No

Power Poles: No

Remove Power Poles: N/A

Trash on location: No N/A

Construction Diversion Ditch: N/A

Side draining	Contaminated Soil: No
Side draining	Remove: <input type="checkbox"/> Yes, where on location:

Construction Silt Trap(s): Yes, PLACEMENT TO BE DETERMINED DURING DIRT WORK

Re-Contour Disturbed Areas to Near Natural Terrain: Yes



Special Features: \_\_\_\_\_  
Location & Access Barricade: Yes / How: Using water bar(s)  
Construction Comments / Concern

**Access Road**

Access Length: 219 feet Remediation Methods: ☒ Rip ☒ Disk ☒ Water Bars ☒ Re-establish Drainages  
Other: \_\_\_\_\_

Access Condition: At Grade

Culverts: No

Cattle Guard: No

Reconstruct Fence: N/A

Surface Material: N/A

What to do with Material	REMOVE ALL MATERIAL / GRAVEL FROM LOCATION
Road Comments/Concerns	

**Noxious weeds identified at time of on site?** No , if yes list noxious weeds found

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: Ludwick LS 17

CONDITIONS OF APPROVAL

1. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."
2. Farmington Office is to be notified at least 24 hours before the plugging operations commence (505) 564-7750.
3. The following modifications to your plugging program are to be made:
  - a) Set Plug #3 (5501 – 5401) ft. to cover the Mancos top. BLM picks top of Mancos at 5451 ft.
  - b) Set Plug #5 (3728 – 3628) ft. to cover the Chacra top. BLM picks top of Chacra at 3678 ft.
  - c) Set Plug #7 (2404 – 2304) ft. to cover the Fruitland top. BLM picks top of Fruitland at 2354 ft.
  - d) Set Plug #8 (1507 – 1240) ft. to cover the Kirtland and Ojo Alamo tops. BLM picks top of Kirtland at 1457 ft. BLM picks top of Ojo Alamo at 1290 ft.

Operator must run a CBL to verify cement top. Submit electronic copy of the log for verification to the following addresses: [jwsavage@blm.gov](mailto:jwsavage@blm.gov) [Brandon.Powell@state.nm.us](mailto:Brandon.Powell@state.nm.us)

H<sub>2</sub>S has not been reported in this section, however, **high to very high concentrations of H<sub>2</sub>S (180 – 800 ppm GSV)** have been reported in wells within a 1 mile radius of this location. **It is imperative that H<sub>2</sub>S monitoring and safety equipment be on location during P&A operations at this wellsite.**

You are also required to place cement excesses per 4.2 and 4.4 of the attached General Requirements.

Office Hours: 7:45 a.m. to 4:30 p.m.