

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.*

**Carlsbad Field Office**  
**OCB Hobbs**

Case Serial No.  
13276

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

|  |   |  |
|--|---|--|
| 1. Type of Well<br><input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other |   | 6. If Indian, Allottee or Tribe Name           |
| 2. Name of Operator<br>LEGACY RESERVES OPERATING LP<br>Contact: MATT DICKSON<br>E-Mail: mdickson@legacylp.com                    |   | 7. If Unit or CA/Agreement, Name and/or No.    |
| 3a. Address<br>303 W WALL SUITE 1600<br>MIDLAND, TX 79702  | 3b. Phone No. (include area code)<br>Ph: 432-689-5200 | 8. Well Name and No.<br>HAMON FED COM A 9H     |
| 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)<br>Sec 18 T20S R34E Lot 1 320FNL 995FWL                   |   | 9. API Well No.<br>30-025-43250-00-X1          |
|  |   | 10. Field and Pool or Exploratory Area<br>TEAS |
|  |   | 11. County or Parish, State<br>LEA COUNTY, NM  |

**HOBBS OCB**  
**OCT 20 2017**  
**RECEIVED**

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 checked="" type="checkbox"/> Other |
|  | <input type="checkbox"/> Change Plans         | <input 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.

Legacy Reserves Operating respectfully request approval to add an additional option for the intermediate casing cement procedures. This option would allow for a three-stage cement job utilizing two DV tools. Both DV tools shall be set a minimum of 50 feet below the previous casing shoe and a minimum of 200 feet above the current shoe and adjust cement proportionately based on placement. Please see the following update to the cementing details for a three-stage cement job.

**SEE ATTACHED FOR  
CONDITIONS OF APPROVAL**

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

**Electronic Submission #379701 verified by the BLM Well Information System  
For LEGACY RESERVES OPERATING LP, sent to the Hobbs  
Committed to AFMSS for processing by DEBORAH MCKINNEY on 06/30/2017 (17DLM1404SE)**

|                                   |                         |
|-----------------------------------|-------------------------|
| Name (Printed/Typed) MATT DICKSON | Title DRILLING ENGINEER |
| Signature (Electronic Submission) | Date 06/23/2017         |

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

|   |                                 |                        |
|---|---------------------------------|------------------------|
| Approved By <u>MUSTAFA HAQUE</u>  | Title <u>PETROLEUM ENGINEER</u> | Date <u>10/03/2017</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 Hobbs           |

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 \*\***

*MSS/ocb*  
*10/23/2017*

**PECOS DISTRICT  
CONDITIONS OF APPROVAL**

|                       |                                     |
|-----------------------|-------------------------------------|
| OPERATOR'S NAME:      | Legacy Reserves Operating LP        |
| LEASE NO.:            | NM13276                             |
| WELL NAME & NO.:      | 9H-Hamon Fed Com A                  |
| SURFACE HOLE FOOTAGE: | 320'/N & 995'/W                     |
| BOTTOM HOLE FOOTAGE:  | 330'/N & 2400'/W, sec. 7            |
| LOCATION:             | Section 18, T. 20 S., R.34 E., NMPM |
| COUNTY:               | Lea County, New Mexico              |

**A. CASING**

**All previous COAs still apply except the following:**

1. The minimum required fill of cement behind the **9 5/8** inch intermediate casing, which shall be set at approximately **5600** feet, is:

**Option 1:**

- a. Cement to surface. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
- b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

**Option 2:**

**Operator has proposed DV tool at depth of 3950 feet, but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50 feet below previous shoe and a minimum of 200 feet above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.**

a. First stage to DV tool:

- Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate see A.1.Option 1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

**Option 3:**

**Operator has proposed DV tool at depth of 1800 feet and 3950 feet, but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50 feet below previous shoe and a minimum of 200 feet above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.**

a. First stage to DV tool:

- Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool:

- Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with third stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

c. Third stage above DV tool:

- Cement to surface. If cement does not circulate see A.1.Option 1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

**MHH 10032017**

## Hamon #9H

### Intermediate Casing

*In the event that circulation is lost (> 50%) while drilling the 12-1/4" intermediate hole in the Capitan Reef at +/-4000', we will plan to install a DV tool and external casing packer within 200' of the top depth where lost circulation occurred and will pump a two-stage cement job with the potential to add an additional DV tool for a three-stage cement job. If there is no lost circulation a single stage cementing procedure will be followed. Legacy plans to cement to surface regardless of whether a single stage, 2-stage or 3-stage procedure is implemented.*

#### **No DV tool** (80% excess on lead & 80% excess on tail to design for cement top at surface)

Lead: 1400 sx (35:65) poz (fly ash) class C cement+ 4% bwoc bentonite II + 5% bwoc MPA-5 + 0.25% bwoc FL- 52 + 5 lbs/sack LCM-1 + 0.125 lbs/sk cello flake+ 0.005 lbs/sk defoamer + 0.005 gps FP-6L + 1.2% bwoc Sodium Metasilicate + 5% bwow Sodium Chloride (12.5 ppg, 2.13 cfps, 8.81 gps wtr)

Tail: 200 sx class C cement (14.80 ppg, 1.33 cfps, 6.35 gps wtr)

#### **With (1) DV Tool** (100% excess on lead & 100% excess on tail to design for cement top at surface)

*Assuming DV tool set at 3950' but if the setting depth changes, cement volumes will be adjusted proportionately.*

##### **Stage 1**

Lead: 400 sx (35:65) paz (fly ash) class C cement+ 4% bwoc Bentonite II+ 5% bwoc MPA-5 + 0,25% bwoc FL-52 + 5 lbs/sack LCM-1 + 0.125 lbs/sk cello flake+ 0.005 lbs/sk defoamer + 0.005 gps FP-6L + 1.2% bwoc Sodium Metasilicate + 5% bwow Sodium Chloride (12.5 ppg, 2.13 cfps, 8.81 gps wtr)

Tail: 200 sx class C cement (14.80 ppg, 1.33 cfps, 6.35 gps wtr)

##### **Stage 2**

Lead: 1100 sx (35:65) paz (fly ash) class C cement+ 4% bwoc bentonite II + 5% bwoc MPA-5 + 0,25% bwoc FL-52 + 5 lbs/sack LCM-1 + 0.125 lbs/sk Cello Flake+ 0.005 lbs/sk Static Free+ 0.005 gps FP-6L + 1.2% bwoc Sodium Metasilicate + 5% bwow Sodium Chloride (12.5 ppg, 2.13 cfps, 8.81 gps wtr)

Tail: 200 sx class C cement (14.80 ppg, 1.33 cfps, 6.35 gps wtr)

#### **With (2) DV Tools** (100% excess on lead & 100% excess on tail to design for cement top at surface)

*Assuming one DV tool set at 3950' and one DV tool set at 1800' but if the setting depths change, cement volumes will be adjusted proportionately.*

##### **Stage 1**

Lead: 400 sx (35:65) paz (fly ash) class C cement+ 4% bwoc Bentonite II+ 5% bwoc MPA-5 + 0,25% bwoc FL-52 + 5 lbs/sack LCM-1 + 0.125 lbs/sk cello flake+ 0.005 lbs/sk defoamer + 0.005 gps FP-6L + 1.2% bwoc Sodium Metasilicate + 5% bwow Sodium Chloride (12.5 ppg, 2.13 cfps, 8.81 gps wtr)

Tail: 200 sx class C cement (14.80 ppg, 1.33 cfps, 6.35 gps wtr)

## **Stage 2**

Lead: 600 sx (35:65) paz (fly ash) class C cement+ 4% bwoc bentonite II + 5% bwoc MPA-5 + 0,25% bwoc FL-52 + 5 lbs/sack LCM-1 + 0.125 lbs/sk Cello Flake+ 0.005 lbs/sk Static Free+ 0.005 gps FP-6L + 1.2% bwoc Sodium Metasilicate + 5% bwow Sodium Chloride (12.5 ppg, 2.13 cfps, 8.81 gps wtr)

Tail: 200 sx class C cement (14.80 ppg, 1.33 cfps, 6.35 gps wtr)

## **Stage 3**

Lead: 600 sx (35:65) paz (fly ash) class C cement+ 4% bwoc bentonite II + 5% bwoc MPA-5 + 0,25% bwoc FL-52 + 5 lbs/sack LCM-1 + 0.125 lbs/sk Cello Flake+ 0.005 lbs/sk Static Free+ 0.005 gps FP-6L + 1.2% bwoc Sodium Metasilicate + 5% bwow Sodium Chloride (12.5 ppg, 2.13 cfps, 8.81 gps wtr)

Tail: 200 sx class C cement (14.80 ppg, 1.33 cfps, 6.35 gps wtr)

**Matt Dickson**  
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