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

Date 10/04/2017

	Lease	Serial No.	
ď	MAN	M40406	

SUNDRY Do not use thi	NOTICES AND REPORT	RTS ON WE	<b>Elsbad</b>	Field	5. Lease Serial No.	
abandoned wel	NOTICES AND REPOR is form for proposals to II. Use form 3160-3 (APL	D) for such p	opo a CD	Hob	6. If Indian, Allottee of	or Tribe Name
SUBMIT IN 1	7. If Unit or CA/Agre	ement, Name and/or No.				
Type of Well     Gas Well ☐ Oth	ner	HOBBS	8. Well Name and No. HAMON FED COM A 6H			
Name of Operator     LEGACY RESERVES OPERA	Contact: ATING LRE-Mail: mdickson@	MATT DICKS glegacylp.com	ON OCT	EIVED	9. API Well No. 30-025-43214-0	00-X1
3a. Address 303 W WALL SUITE 1600 MIDLAND, TX 79702	3b. Phone No. Ph: 432-689	o. (include a cold) 10. Field and Pool TEAS			Exploratory Area	
4. Location of Well (Footage, Sec., T.	., R., M., or Survey Description,	)			11. County or Parish,	State
Sec 6 T20S R34E SWSE 579	FSL 1956FEL	/	LEA COUN			NM
12. CHECK THE AF	PPROPRIATE BOX(ES)	TO INDICAT	E NATURE O	F NOTICE,	REPORT, OR OTI	HER DATA
TYPE OF SUBMISSION	TYPE OF ACTION					
Notice of Intent	☐ Acidize	☐ Deep	en	☐ Producti	ion (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydr	aulic Fracturing	☐ Reclama	ation	■ Well Integrity
☐ Subsequent Report	☐ Casing Repair	□ New	Construction	☐ Recomp	lete	Other
☐ Final Abandonment Notice	☐ Change Plans	☐ Plug	and Abandon	☐ Tempora	arily Abandon	
	☐ Convert to Injection	□ Plug	Back	■ Water D	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 BLMBIA. 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.  CONDITIONS OF APPROVAL						
14. I hereby certify that the foregoing is	Electronic Submission #3					2
Commi	For LEGACY RES itted to AFMSS for process					
Name (Printed/Typed) MATT DIC	Title DRILLI	NG ENGINE	ER			
Signature (Electronic S	Submission)		Date 06/23/2	2017		
	THIS SPACE FO	R FEDERA	L OR STATE	OFFICE US	SE	

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.

Approved By MUSTAFA HAQUE

which would entitle the applicant to conduct operations thereon.

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

(Instructions on page 2) \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED

TitlePETROLEUM ENGINEER

Office Hobbs

#### Hamon #6H

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)

<u>Lead:</u> 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)

<u>Tail:</u> 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

<u>Lead:</u> 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

<u>Lead</u>: 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

<u>Lead:</u> 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

<u>Lead</u>: 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)

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

## Stage 3

<u>Lead</u>: 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
Drilling Engineer
(432)689-5204
mdickson@legacylp.com

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:

Legacy Reserves Operating

LEASE NO.:

NMNM040406

WELL NAME & NO.:

6H - Hamon Fed Com A

SURFACE HOLE FOOTAGE:

579'/S & 1956'/E

**BOTTOM HOLE FOOTAGE** 

330'/S & 1520'/E SEC. 07

LOCATION:

Section 06, 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:	
proportion and a min	has proposed DV tool at depth of 1800 feet and 3950 feet, but will adjust cement mately if moved. DV tool shall be set a minimum of 50 feet below previous shoe nimum of 200 feet above current shoe. Operator shall submit sundry if DV tool mot 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 10042017