Form 3160-5 (March 2012)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

**SUNDRY NOTICES AND REPORTS ON WELLS** 

OCD Hobbs

FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2014

5. Lease Serial No. LC-029410B

6. If Indian, Allottee or Tribe Name

		o drill or to re-enter ar PD) for such proposal			·
SUBMIT IN TRIPLICATE – Other instructions on page 2.				7. If Unit of CA/Agreement, Name and/or No.	
1. Type of Well					
☑ Oil Well ☐ Gas W	Vell Other	8. Well Name and No. FOX FEDERAL #	5		
2. Name of Operator LEGACY RESE	RVES OPERATING LP	9. API Well No. 30-025-36585			
3a. Address	3b. Phone No. (include area code) 432-689-5200		10. Field and Pool or Exploratory Area MALJAMAR; GRAYBURG-SAN ANDRES		
PO BOX 10848 MIDLAND, TX 79702					
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)				11. County or Parish, State	
2510' FNL & 1650' FWL, UNIT LETTER F, SEC. 31, T-17-S, R-32-E				LEA CO., NM	
12. CHEC	K THE APPROPRIATE BO	X(ES) TO INDICATE NATUR	E OF NOTIC	E, REPORT OR OTHE	ER DATA
TYPE OF SUBMISSION	TYPE OF ACTION :				. :
✓ Notice of Intent	Acidize	Deepen	Produ	uction (Start/Resume)	Water Shut-Off
	Alter Casing	Fracture Treat	Recla	amation	Well Integrity
Subsequent Report	Casing Repair	New Construction	Reco	mplete	Other ADD SEVEN
	Change Plans	Plug and Abandon	Temp	oorarily Abandon	RIVERS PAY & RTP
Final Abandonment Notice	Convert to Injection	Plug Back	☐ Wate	r Disposal	
13. Describe Proposed or Completed Of the proposal is to deepen directions. Attach the Bond under which the variable following completion of the involvatesting has been completed. Final determined that the site is ready forSEE ATTACHED PROCEDURE.	ally or recomplete horizontal york will be performed or pro- ed operations. If the operation Abandonment Notices must final inspection.)	ly, give subsurface locations and ovide the Bond No. on file with I on results in a multiple completion	measured and BLM/BIA. Room or recomp	nd true vertical depths of Required subsequent rep letion in a new interval,	f all pertinent markers and zones. orts must be filed within 30 days , a Form 3160-4 must be filed once
Operator with	rdrew com	mingling res	taang	-Blain Leu via	vis 5/3/13 e-mail

SUBJECT TO LIKE APPROVAL BY STATE SEE ATTACHED FOR CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)		
BLAIN LEWIS T	itle SENIOR ENGINEER	
Signature Rain Hours D	ate 01/28/2013	APPROVED
THIS SPACE FOR FEDERA	AL OR STATE OFFICE I	SE
Approved by	Title	MAY 7 2013
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certitat the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		BUKEAU OF LAND MANAGEMENT  CARLSBAD FIELD OFFICE
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person fictitious or fraudulent statements or representations as to any matter within its jurisdiction.	n knowingly and willfully to make t	to any department or agency of the United States.any false

#### PROCEDURE TO RECOMPLETE IN SEVEN RIVERS

# Fox Federal #5 Maljamar Field Lea County, New Mexico

Well Data:

KB 12' AGL

5-1/2", 17# casing at 4860' with 825 sx, TOC at surface Grayburg perfs: 3609'-3826', 3951'-3961' (total of 53 holes)

CIBP at 4040' above Grayburg/San Andres perfs 4053'-4233' (25 holes)

Un-perf'd Seven Rivers pay: 2642'-2839'

Unknown downhole rods and tubing

Volumes:

5-1/2" csg x 3-1/2" tbg annulus = 0.0113 bbls/ft

5-1/2" csg = 0.0232 bbls/ft 3-1/2" tbg = 0.0087 bbls/ft

- Day one: MIRU pulling unit. POH and visually inspect rods and pump (\$15,000 is in AFE to replace rods if necessary). NU BOP. POH with tubing. Unload 4200' of 3-1/2", 9.3#, N-80, EUE, 8R work string.
- 2) Day two: RIH with 4-3/4" bit, casing scraper and production tubing. RIH to bottom at +/- 4040'. POH and lay down casing scraper and bit.
- MIRU wireline unit. RIH with GR/CCL correlation log tools, get on depth with Schlumberger Litho-Density/ CNL log dated 4/4/04 and run GR/CCL log from bottom to 2600'. POH with logging tools. RIH with 3-1/8" slick gun and perf Seven Rivers with 1 shot at each of the following depths: 2839', 2775', 2744', 2729', 2728', 2727', 2710', 2683', 2643' and 2642' (10 holes). POH and RDMO wireline unit.
- 4) Day three: RIH with RBP, packer, SN and 3-1/2" tubing. Set RBP at +/- 3500'. MIRU acid equipment with 2,000 gallons 15% NEFE HCl, 21 7/8" RCN 1.3 SG ballsealers and +/- 150 bbls 2% KCl water. Pull one joint, set packer at +/- 3470' and test RBP to 5,000 psig for 5 min. Release packer, pull to +/- 2550', circulate hole with +/- 55 bbls 2% KCl water and reset packer at +/- 2550'. Test casing annulus to 500 psig for 15 min. and monitor throughout stimulations. RU to 3-1/2" tubing and treat Seven Rivers perfs 2642'-2839' at 4-6 BPM and 5,000 psig maximum with 2,000 gals (47.6 bbls) 15% NEFE HCl with 21 ballsealers in seven 3-ball groups every +/- 6 bbls acid. Flush to bottom perf with 28.9 bbls 2% KCl water. Report ISIP and 5-10-15 min. SIP's. RDMO acid equipment and prepare to frac.
- 5) Day four: MIRU frac equipment as per attached recommendation. NU frac valve and frac down 3-1/2" tubing at 15-20 BPM, 5000 psig maximum. Flush to top perf with 24.3 bbls 2% KCl water. Report ISIP and 5-10-15 min. SIP's. RDMO frac equipment and leave well SI overnight.
- 6) Day five: Open and flow down to tank. Release packer and POH laying down work string and packer.
- 7) RIH with BPMA, perf sub, SN, TAC and remainder of production tubing to set bottom of BPMA above perfs at +/- 2600', SN at +/- 2565' and TAC at +/- 2560'. ND BOP. NU wellhead.

- 8) **Day six:** RIH with 1.25" bore insert pump and rods, seat pump, space out and hang on pumping unit. Load and pressure test tubing. Put well on pump. RDMO pulling unit.
- Optimize production rate by adjusting SPM or pump size as necessary. After testing new production interval, move PU back on well, clean out sand fill above RBP, recover RBP and commingle Seven Rivers and Grayburg perfs (do not drill out CIBP at 4040'). NOTE: Perfs 3609'-3961' will likely add 3 BOPD, 10 MCFPD and +/- 70 BWPD so may need to design for lifting +/- 150 BPD total fluid when perfs are commingled.

#### **ESTIMATED COSTS:**

Pulling unit – 8 days	\$ 40,000
Stimulation services	\$ 80,000
Wireline services	\$ 15,000
Rental tools	\$ 15,000
Contract labor	\$ 15,000
Rod string	\$ 15,000
4000' 2-3/8" tbg	\$ 14,000
Misc. equip	\$ 7,000
5% contingencies	\$ 8,300
TOTAL	\$209,300

PREPARED BY: Blain Lewis Date: 01/21/13

## CURRENT WELLBORE DIAGRAM

#### Lease & Well # Fox Federal #5

CIBP @ 4040'

Marker jt-4304'

PBTD - 4849'

SPUD - 3/21/04

Elevation - 3858 GL

KB - 38701

13 3/8" J-55 @ 333', 400 sx CL C, circ 100 sx .

8 5/8" 32 # 8rd J-55 STC @ 2231', 850 sx 35/65/6 ,200 sx C, circ 125 sx .

Grayburg

3609-3825.5 40 holes Acidized w/2000 gal 15% NEFE Fraced w/99,000 gal lg, 98,722 # sd

3951-3961 13 holes Acidized w/2000 gal 15% NEFE Fraced w/35,784 gal lg, 30,420 # sd

4053 - 4233 25 holes Acidized w/2,000 gal 15% NEFE Frac w/87,696 gal lg,173,460 # sd

Cmt w/275 sx 35/65/6, 550 sx CL C, circ 59 sx

# PROPOSED WELLBORE DIAGRAM

### Lease & Well # Fox Federal #5

SPUD - 3/21/04

Elevation - 3858 GL

KB - 38701

13 3/8" J-55 @ 333', 400 sx CL C, circ 100 sx .

8 5/8" 32 # 8rd J-55 STC @ 2231', 850 sx 35/65/6 ,200 sx C, circ 125 sx .

SEVEN RIVERS 2642'-2839' 10 HOLES ACIDIZED WI 2,000 GAL 15% NEFE FRAC WI 50,000 # 16/30 SAND

Grayburg

3609-3825.5 40 holes Acidized w/2000 gal 15% NEFE Fraced w/99,000 gal lg, 98,722 # sd

3951-3961 13 holes Acidized w/2000 gal 15% NEFE Fraced w/35,784 gal lg, 30,420 # sd

GB/SA

4053 - 4233 25 holes Acidized w/2,000 gal 15% NEFE Frac w/87,696 gal lg,173,460 # sd

Cmt w/275 sx 35/65/6, 550 sx CL C, circ 59 sx 5 1/2" 17# J-55 LT&C csg @ 4860'.

CIBP @ 4040'

Marker jt-4304'

PBTD - 4849'

# **Conditions of Approval**

# Legacy Reserves Operating LP Fox Federal 5 API 30-025-36585 May 07, 2013

#### Work to be completed by August 07, 2013.

. . .

- 1. Due to being within the Lesser Prairie Chicken habitat, this workover activity will be restricted to the hours of 9:00am through 3:00am for the period of March 1 through June 15. Exceptions to these restrictions may be granted by BLM's Johnny Chopp <i heating the period of March 1 through June 15. Exceptions to these restrictions may be granted by BLM's Johnny Chopp <i heating the period of March 1 through June 15. Exceptions to these restrictions may be granted by BLM's Johnny Chopp <i heating the period of March 1 through June 15. Exceptions to these restrictions may be granted by BLM's Johnny Chopp <i heating the period of March 1 through June 15. Exceptions to these restrictions may be granted by BLM's Johnny Chopp <i heating the period of March 1 through June 15. Exceptions to these restrictions may be granted by BLM's Johnny Chopp <i heating the period of March 1 through June 15. Exceptions to these restrictions may be granted by BLM's Johnny Chopp <i heating the period of March 1 through June 15. Exceptions to these restrictions may be granted by BLM's Johnny Chopp <i heating the period of March 1 through June 15. Exceptions to these restrictions may be granted by BLM's Johnny Chopp <i heating the period of March 1 through June 15. Exceptions to the period of March 1 through June 15. Exceptions to the period of March 1 through June 15. Exceptions to the period of March 1 through June 15. Exceptions to the period of March 1 through June 15. Exceptions to the period of March 1 through June 15. Exceptions to the period of March 1 through June 15. Exceptions to the period of March 1 through June 15. Exceptions to the period of March 1 through June 15. Exceptions the period of March 1 through June 15. Exceptions the period of March 1 through June 15. Exceptions the period of March 1 through June 15. Exceptions the period of March 1 through June 15. Exceptions the period of March 1 through June 15. Exceptions the period of March 1 through June 15. Exceptions the period of March 1 through June 15. Exceptions
- 2. Operator shall place a CIBP at 3559' and place 35' neat class C cement on top. Tag required.
- 3. Must conduct a casing integrity test before perforating and fracturing. Submit results to BLM.
- 4. A CIT is to be performed on the production casing per Onshore Oil and Gas Order 2.III.B.1.h.
- 5. Make arrangements 24 hours before the test for BLM to witness. E-mail Paul R. Swartz <a href="mailto:pswartz@blm.gov">pswartz@blm.gov</a> or phone 575-200-7902, if there is no response, 575-361-2822. If no answer, leave a voice mail or email with the API#, workover purpose, and a call back phone number. Note the contact, time, & date in your subsequent report.
- 6. No commingling will be allowed without submitting an NOI. The NOI must be approved by both the BLM and NMOCD.
- 7. Before casing or a liner is added or replaced, prior BLM approval of the design is required. Use notice of intent Form 3160-5.
- 8. Surface disturbance beyond the originally approved pad must have prior approval.
- 9. Closed loop system required.

- 10. All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of work over operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.
- 11. Operator to have H2S monitoring equipment on location.
- 12. A minimum of a 2000 (2M) BOP to be used. All blowout preventer (BOP) and related equipment (BOPE) shall comply with reasonable well control requirements. A two ram system with a blind ram and a pipe ram designed for the size of the work string shall be adequate. Tapered work strings will require an additional pipe ram. The manifold shall comply with Onshore Oil and Gas Order #2 Attachment I (2M Diagrams of Choke Manifold Equipment). The accumulator system shall have an immediately available power source to close the rams and retain 200 psi above pre-charge. The pre-charge test shall follow requirements in Onshore Order #2.
- 13. Subsequent sundry required detailing work done and completion report for the new formation. Operator to include well bore schematic of current well condition when work is complete.

JAM 050713