

APR 03 2018

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.  
NMLC065478B

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.  
EMPIRE ABO UNIT B 048A

9. API Well No.  
30-015-03195

10. Field and Pool or Exploratory Area  
EMPIRE ABO

11. County or Parish, State  
EDDY COUNTY, NM

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

1. Type of Well  
 Oil Well  Gas Well  Other

2. Name of Operator  
APACHE CORPORATION  
Contact: ALICIA FULTON  
E-Mail: Alicia.fulton@apachecorp.com

3a. Address  
303 VETERANS AIRPARK LANE  
MIDLAND, TX 79705

3b. Phone No. (include area code)  
Ph: 432-818-1088

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Sec 30 T17S R29E 2310FNL 990FEL

**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 checked="" type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input 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.

APACHE WOULD LIKE TO PERFORM THE FOLLOWING WORK:

OBJECTIVE: REPLACE INJECTION, STRING SQUEEZE CASING LEAK

NOTE PREVIOUS ES #402218

SEE REVISED ATTACHED PROCEDURES:

TOP PERF @6183  
BOTTOM PERF @6277  
SET PACKER @6020

*work already done*

Accepted for record  
NMOCD RT  
4/9/18

Accepted for record  
NMOCD

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

Electronic Submission #405694 verified by the BLM Well Information System  
For APACHE CORPORATION, sent to the Carlsbad  
Committed to AFMSS for processing by PRISCILLA PEREZ on 03/08/2018

Name (Printed/Typed) ALICIA FULTON Title SR REGULATORY ANALYST

Signature (Electronic Submission) Date 02/26/2018

ACCEPTED FOR RECORD

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

Approved By \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

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.

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)

**\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\***



**AFE: 11-18-0077**

**Well name:** Empire Abo Unit B-48  
**API Number:** 30-015-03195  
**County, State:** Eddy, NM  
**Legals:** SEC-30 TWP-17S RGE-29E

**Depths:** 6306 MD 6295 PBSD  
**Producing Interval:** 6183-6277' (Abo)

CSG	OD	Wt/Ft	Cap (bbl/ft)	Top	Set @
Surface	8.625"	28#	0.0624	0'	753
Production	5.500"	15.5#	0.0238	0'	6306

**Engineer:** David Cummings 432-818-1845 (o) [davidr.cummings@apachecorp.com](mailto:davidr.cummings@apachecorp.com)  
**Assistant Foreman:** David Pedroza 575-910-3283 (c) [david.pedroza@apachecorp.com](mailto:david.pedroza@apachecorp.com)  
**Production Foreman:** Javier Berdoza 575-441-5755 (c) [javier.berdoza@apachecorp.com](mailto:javier.berdoza@apachecorp.com)

**What's New:**

- 1) **Replace injection string. Order new 6,200' of 2-7/8" 6.5#, J-55, IPC (Permian Enterprises 1505) tubing.** Contact Apache Buyer Vicki Wright at 432-894-0433.
- 2) **Schedule 6,200' of 2-7/8" work string.** Contact David Hicks with TFH Company at 575-631-8517.
- 3) **Squeeze suspected hole in casing.** Field preference.
- 4) **Replace packer. Install new 2-7/8" x 5-1/2" AS-1X packer.** Match existing, field preference.
- 5) **Schedule wireline to identify TOC, caliper log 5-1/2" casing.** David Olivas with Renegade Services at 575-915-8580

**WELL HISTORY**

The well was drilled on 1/20/1962 with a TD of 6406' and PBSD of 6295'. The well was perforated in the Abo at 6265'-6277' with 1,000 gallons of 20% HCl. In 5/1968 the well was perforated in the Abo at 6183'-88' and 6206'-13' w/ 2 JSPF and acidized with 1300 gallons of 28% HCl. In 10/30/1981 the production casing was perforated at 1608-1610' (which was identified to be TOC – verify) w/ 2 JSPF and squeezed with 400 sxs of Howco Lite and 200 sxs of class C cement (circulated to surface) to convert well from producer to water injection well. In 7/1982 the well was perforated in the Abo at 6226'-34' w/ 2 JSPF and acidized with 7500 gallons of 15% HCl. In 1/2018 the well failed a MIT (Mechanical Integrity Test). While pumping (1 bbl) down the injection string (tubing) and production casing annulus, pressure did not build and water was identified to be flowing from the production casing and surface casing annulus.

**WORKOVER SUMMARY:**

POOH w/ tubing and packer, RIH w/ wireline to identify TOC, run caliper log, perforate holes for cement. Pump cement and circulate to surface. Install new packer and injection string. Return to injection.



PROCEDURE

1. MIRU WOR. PU on 2-7/8" 6.5 J-55 LTC IPC tubing and release packer. TOOH w/ tubing and packer while laying down. Send tubing to Permian Enterprises for inspection.
2. If a point of failure on the tubing is identified, denote joint# in talley or approximate depth of failure and location (pin, collar, etc) in Well View report.
3. MIRU reverse unit and power swivel. Unload and talley WS. TIH to PBD w/ bit. TOOH while standing back.
4. MIRU WL unit and RIH with gauge ring to 6,100'. POOH with gauge ring. Set RBP (so hole can be loaded for CBL). RIH w/ CBL logging to 6100', POOH. RIH w/ caliper log to 6100', POOH w/ caliper log.
5. TOC was previously noted at +/-1620'. However, verify based on new CBL log.
6. TIH w/ RBP, 2-7/8" x 5-1/2" tension set test packer, and 2-7/8" WS. Set RBP at +/- 6100'. Pump down tubing and test to 500 psi to ensure RBP is holding (drop standing valve if RBP/tubing does not hold). Isolate casing leak as necessary. Spot sand on RBP.

Note: previous squeezed perforations are at 1608'.

7. Position test packer above suspected leak, open surface casing valve, and pump fresh water down tubing in attempt to establish circulation. Note rate and pressures. After establishing rate, SI surface casing valve and continue pumping to determine what pressure to expect while squeezing.
8. TOOH with 2-7/8" WS and test PKR while standing in the derrick. Contact engineer with location of hole.
9. TIH w/ cement retainer and 2-7/8" WS. Set retainer +/-20' above top of casing leak.
10. Load and test casing to 300 psi, hold for 5 minutes.
11. MIRU cement crew. Pressure test all lines to 5,000 psi. Pump squeeze job. Perform walking squeeze (hesitations). Leave enough cement in tubing to spot cement on top of cement retainer (will circulate out).
12. Sting out of cement retainer and reverse circulate the hole clean. TOOH with 2-7/8" WS.
13. SDFN before proceeding with next step to give cement time to cure.
14. TIH with rock bit, drill collars, and 2-7/8" WS to cement retainer and cement. Start rotating. TOOH.
15. Continue drilling until there is no resistance pull up 50' above cement retainer and pump down the casing. Pressure up to 300 psi for 15 minutes to verify squeeze job was successful. If pressure does not hold, contact Engineer.



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16. TIH with skirted overshot to reverse circulate on top of RBP to remove sand and cement debris from RBP. Continue until clean returns are observed.
17. Latch RBP with overshot and POOH with RBP and 2-7/8" WS while laying down.
18. Unload, tally, clean, and inspect +/- 6,200' of 2-7/8" 6.5# J-55 LTC IPC tubing.
19. TIH w/ 2-7/8" x 5-1/2" packer, on/off tool, and 2-7/8" IPC tubing.

**NOTES:** Leave thread protectors until joint has been picked up in elevators. Removed thread protectors and re-inspect coating. Inspect all connections and replace joint if necessary. Use stabbing guide while making connections

20. Pump backside capacity full of packer fluid w/ corrosion inhibitor and oxygen scavenger.
21. Set top of packer at +/- 6,020' and land tubing with compression at packer. Top off backside with packer fluid.
22. ND BOP and NU tree. Test annulus to 500 psi and hold for 30 minutes. Record test. Bleed off pressure. Report results to engineer.
23. Schedule MIT with NMOCD. RDMO.

2/26/2018



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COST ESTIMATE

<i>Account #</i>	<i>Description</i>	<i>Cost Estimate</i>
70011	Company Supervision	\$3,169
70019	Contract Rigs	
	Workover	\$14,259
	Wireline	\$17,744
70031	Equipment Rental	
	Reverse Unit w/ operator	\$11,407
	BOP	\$2,129
	Workstring	\$6,220
	Cementing Tools (retainer, bit, etc.)	\$12,675
70007	Chemicals	\$6,337
70187	Pump Truck Service	
	Workover Pump Truck	\$5,690
	Cementing Truck	\$18,966
70074	Trucking & Hauling	\$12,644
70017	Fishing Tool Supervisor	\$8,219
70031	Equipment Rental (potty)	\$253
70076	Tubular Inspection/ testing	\$6,322
71032	Other Subsurface Equipment (alloy jts, hanger, pkr)	\$18,966
	<b>Total</b>	<b>\$145,000</b>