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 1625 N. French Dr., Hobbs, NM 88240  
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 District IV  
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
 Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

Form C-103

June 19, 2008

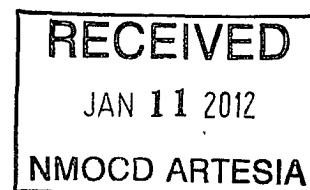
SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30 016 00724
1. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator APACHE CORPORATION		6. State Oil & Gas Lease No.
3. Address of Operator 303 VETERANS AIRPARK LN, STE 3000, MIDLAND, TX 79705		7. Lease Name or Unit Agreement Name EMPIRE ABO UNIT I
4. Well Location Unit Letter A : 330 feet from the E line and 990 feet from the N line Section 02 Township 18S Range 27E NMPM County EDDY		8. Well Number 16
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3618' GR		9. OGRID Number 873
		10. Pool name or Wildcat EMPIRE ABO

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/> PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/> DOWNHOLE COMMINGLE <input type="checkbox"/>		SUBSEQUENT REPORT OF: REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> COMMENCE DRILLING OPNS. <input type="checkbox"/> P AND A <input type="checkbox"/> CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: adding ABO perfs <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Apache Corporation plans to perform work on the Empire Abo Unit I #16 as per the attached procedure.



Spud Date: 08/01/1959

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Beverly Hainfeld TITLE Sr. Staff Regulatory Tech DATE 01/11/2012

Type or print name Bey Hainfeld E-mail address: beverly.hainfeld@apachecorp.com PHONE: 432-818-1906  
 For State Use Only

APPROVED BY: DR TITLE Dr. J. R. S. DATE 01/23/2012  
 Conditions of Approval (if any):

*Signature*

## COMPLETION PROCEDURE

AFE Number: PA-11-4534

Empire Abo Unit I-16  
990' FNL & 330' FEL  
Sec 2, T18S, R27E  
API: 30-015-00724  
Empire Abo Unit  
Eddy County, New Mexico

KB: 3628' GL: 3618' (KB 10' above GL)  
8-5/8" 28 lb/ft K-55 casing set @ 1102'  
5-1/2" 17 lb/ft K-55 casing set @ 5920'  
TD: 5920'; PBD: 5,845'  
Perforations at 5,773'-5,872'; 5,444'-5,786'

Casing: 5-1/2", 17# K-55  
ID = 4.892"  
Drift = 4.767"  
Capacity = 0.0232 BBL/ft  
Burst = 5320 psi; 80% = 4256 psi

Tubing: 3-1/2", 9.2#, N-80, 8rd, EUE  
Capacity = 0.00870 BBL/ft  
Burst = 10,160 psi; 80% = 8128 psi  
Collapse 10,530 psi; 80% = 8424 psi  
Yield 207,220 lbs; 80% = 165,776 lbs

### Frac Abo Shale formation

1. MIRU pulling unit. Kill well as necessary. Unseat pump. POOH w/ rods and pump. ND wellhead. NU BOP's. Unset TAC POOH w/ production tubing. Unload 3-1/2" 9.2 lb/ft N-80 tbg to be used for workstring.
2. RIH w/ 4-3/4" bit, bit sub, and 5-1/2" casing scraper to 5,600'. Clean out wellbore as necessary. POOH.
3. MIRU wireline. NU lubricator. RIH and set CIBP @ 5,580'. Spot 35' feet of cement on top of CIBP. Open perfs @ 5,444'-46'; 5,479'-82'; 5,504'-12'

### STAGE I

4. RIH w/ 3-3/8" csg gun or available equivalent perforator and perforate the Abo Shale from 5,444'-46'; 5,480'-82'; 5,512'-14' w/ 4 JSPP 90 degree phasing (24 holes, 6 net ft). (Charge specs: Connex 0.5" diameter BH). Correlate WELEX radioactivity log date 9/3/1959. POOH w/ perforator and RD wireline.
5. RIH w/ SN + Baker Hughes R-3 double grlp PKR or equivalent on 3-1/2" WS. Spot 200 gallons of 15% acid across perforations. POOH and set PKR just above new perfs ± 5, 390'. Acidize new perfs from 5,444'-5,514' w/ 1500 gallons 15% NEFE acid, dropping 1000# stages of rock salt. Adjust rock salt for maximum diversion. Max treating pressure = 4000 psi.
6. RU swab equipment to recover load and clean well up. RD swab equipment. ND BOP's. NU frac tree.

7. Prepare necessary clean 500 bbl frac tanks with water. Have service company test frac water for quality. Prepare necessary tanks for flowback. Spot tanks, sand support, etc. Prep for frac treatment.
8. MIRU Service Company. NU treesaver. NU and test surface lines to 8,500 psi. Max pressure to be 8,000 psi at surface, set pressure alarms and pop-offs accordingly.
9. Load hole and establish rate and pressure. Frac the Abo Shale perfs down the 3-1/2" WS w/ 38 klbs 100 mesh and 150 klbs 30/70 resin coated proppant as provided by Service Company. Flush w/ 48 bbls slick water to top perf with 200 gallons acid tailing flush. SD. Shut-in well for min. 2 hours.

**STAGE II**

Target Rate: 40 BPM

Max Pressure: 8000 psi

10. RDMO Frac Company. ND frac valve and tree. NU BOP's. Kill well as necessary. Release PKR and POOH w/ WS.
11. MIRU WL. NU lubricator. RIH w/ 5-1/2" CBP and set ~ 5,420'. Test casing to 3,400 psi. POOH w/ WL and setting tool.
12. RIH w/ 3-3/8" csg gun or available equivalent perforator and perforate the Abo Shale from 5,290'-92'; 5,340'-42'; 5,392'-94' w/ w/ 4 JSPF 90 degree phasing (24 holes, 6 net ft). (Charge specs: Connex 0.5" diameter BH). Correlate WELEX radioactivity log date 9/3/1959.
13. POOH w/ perforator and RDMO wireline. \*WL on standby to run gauge ring if necessary.
14. RIH w/ SN + Baker Hughes R-3 double grip PKR or equivalent on 3-1/2" WS. Spot 200 gal 15% NEFE HCL across perforations. Set PKR just above new perfs ± 5,240'. Test casing to 500 psi.
15. Load hole and break down Stage II perfs. Establish rate and pressure. Frac the Abo Shale perfs down the 3-1/2" tubing w/ 38 klbs 100 mesh and 150 klbs 30/70 resin coated proppant as provided by Service Company. Flush w/ 47 bbls slick water to top perf. SD. RDMO Service Company. Shut-in well for minimum 2 hours.

Target Rate: 40 BPM

Max Pressure: 8000 psi

16. Open well and flow back well. Recover as much load as possible.
17. ND frac valve and tree. NU BOP's. Kill well as necessary. Release PKR and POOH w/ WS.
18. RIH w/ 4-3/4" bit, bit sub, and drill out plug at 5,420' and continue to PBTD. Check for sand fill. Circulate hole clean. POOH.
19. If zone appears productive, run production equipment as directed by Apache Representative. RTP. *If unproductive, prepare well to be PA'd.*
20. RDMOPU. Turn well to tester and obtain well tests. Have chemical representative test fluids and put well on the appropriate chemical maintenance program.

## Apache Corporation – Empire Abo Unit #I-16

## Wellbore Diagram – Proposed

Date : 11/9/2011

API: 30-015-00724

## Surface Location

R. Taylor



990' FNL & 330' FEL, Unit  
Sec 2, T18S, R27E, Eddy County, NM

## Surface Casing

8-5/8" 28# K-55 @ 1102' w/ 300 sx to surface

TOC @ 960'

12/68: Perf @ 3,500'  
Sqz'd w/ 600 sxs

TAC @ TBD'  
SN @ TBD'

TBD: Perf Abo @ 5290'-5292'; 5340'-5342'; 5392'-5394' w/ 4 JSPP  
Frac'd w/ 5890 bbl slickwater, 188k# 100 mesh & 20/40 RC sand

TBD: Perf Abo @ 5444'-5446'; 5480'-5482'; 5512'-5514' w/ 4 JSPP  
Frac'd w/ 5890 bbl slickwater, 188k# 100 mesh & 20/40 RC sand

CIBP set @ 5,580' w/ 35' cmt

8/03: Perf Abo @ 5444'-46'; 5479'-82'; 5504'-12'; 5589'-91';  
5606'-42'; 5657'-66'; 5698'-5734'; 5772'-86' w/ 2 JSPP  
Acidize w/ 5700 gal 15% HCL

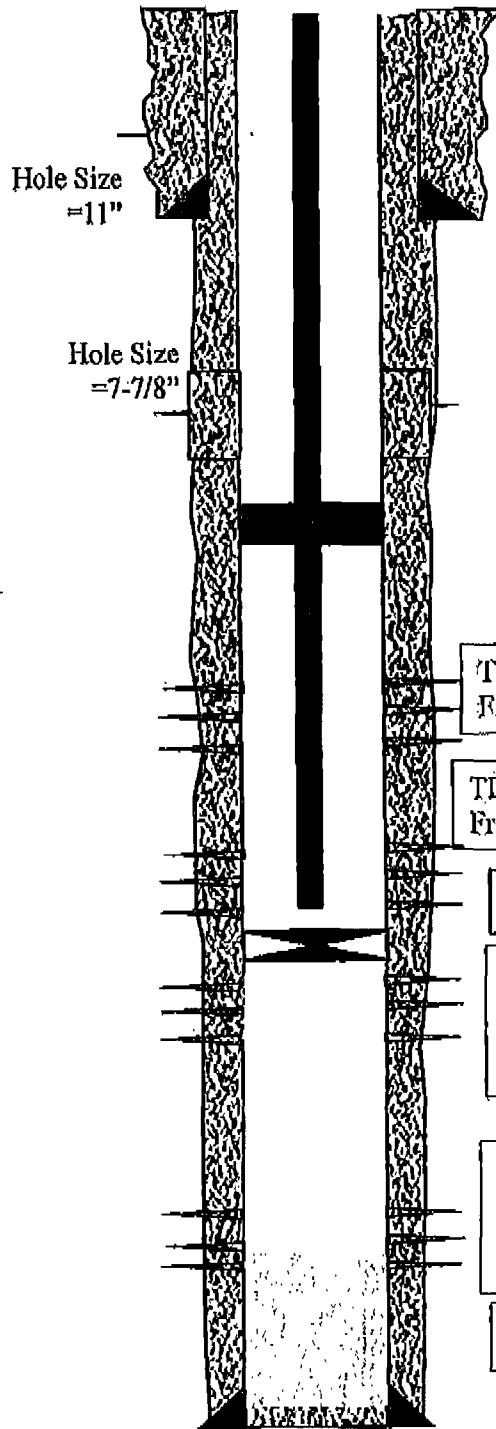
9/59: Perf Abo @ 5,773'-95'; 5,810'-18'; 5,831'-34'; 5,843'-52';  
5,863'-72' w/ 2 JSPP  
Acidized w/ 2000 gal 15% LSTNE  
9/72: Acidized w/ 1000 gal D.A.D acid

8/03: Fill tagged @ 5845'

## Production Casing

5-1/2" 17# K-55 @ 5920' w/ 300 sxs  
TOC @ 2635'

GL=3618'  
KB=3628'  
Spud: 8/1/59



PBTD = 5845'  
TD = 5920'