

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

**SUBMIT IN TRIPLICATE**

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Designation and Serial No. C-121
2. Name of Operator CONOCO INC.	6. If Indian, Allottee or Tribe Name Jicarilla Apache
3. Address and Telephone No. 3817 NW Expressway, Oklahoma City, OK 73112 (405) 948-3100	7. If Unit or CA, Agreement Designation
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 1850' fnl & 1850' fel Sec. 2-25N-04W	8. Well Name and No. AXI Apache "N" #13
	9. API Well No. 30-039-21428
	10. Field and Pool, or Exploratory Area Blanco Mesaverde
	11. County or Parish, State Rio Ariba Co., NM

12. CHECK APPROPRIATE BOX(s) 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"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input checked="" type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Other	<input type="checkbox"/> Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Squeeze Casing Leak in Ojo Alamo, Abandon Pictured Cliffs formation, complete additional Mesaverde Pay.

SEE ATTACHED COMPLETE PROCEDURE

RECEIVED  
MAR 13 1992  
OIL CON. DIV.  
DIST. 3

RECEIVED  
BLM  
92 MAR -9 AM 11:56  
019 FARMINGTON, N.M.

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

Signed <u>Barbara J. Bale</u>	Title <u>Sr. Oil &amp; Gas Asst., Regulatory</u>	<b>APPROVED</b>
(This space for Federal or State office use)		
Approved by <u>SC</u>	Title _____	Date <u>MAR 12 1992</u>
Conditions of approval, if any:		

Title 18 U.S.C. Section 1001, makes 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.

## AXI APACHE N 13

### SUMMARY OF WORK RECOMMENDED

- Cement squeeze Pictured Cliffs perms
- Locate casing leak in the Ojo Alamo
- Cement squeeze casing leak
- Perforate additional Mesaverde pay
- Acidize, cleanup and frac new pay
- Return to Production

### Well Data:

TD: 6258'  
 PBSD: 6210'  
 Elevation: 7300' GL  
 Zero: 12' AGL

Location: 1850' FEL & 1850' FNL, Section 2, T25N, R4W  
 Rio Arriba County, NM

Casing: 8 5/8", 24#, set @ 530' w\310 sxs class B 5 1/2", 15.5#, set @ 6256' Cement: lead w\115 sxs light weight, tail w\245 sxs class B DV Tool @ 4814' Cement: lead w\245 sxs light weight, tail w\110 sxs class B

Tubing: 2 3/8", 4.7# @ 6077'  
 1 1/4", 2.4# @ 3799'

Tops: Pictured Cliffs 3838'  
 Cliffhouse 5496'  
 Menefee 5611'  
 Point Lookout 5960'

Perfs: Pictured Cliffs: 3838-42, 3888-94 (1 spf, 10 shots). Frac'd w\ 40,000 gals gel & 62,500 # 20/40 sand. AIR 25 bpm, AIP 1900#, ISIP 2150#

Mesaverde: 6058-62, 6070-82, 6126-32 (2 spf, 44 shots). Frac'd w\ 24,000 gal x-link gel and 75,000# 20/40 sand. AIR 30 bpm, AIP 500#, ISIP 300# (10 min)

### Tubular Specs:

OD	GRADE	WT.	ID	DRIFT	CAPACITY		PRESSURE	
					BBL/FT	FT3/FT	COLLAPSE	BURST
8 5/8	K-55	24	8.097	7.972	.0637		959	2065
5 1/2	K-55	15.5	4.950	4.825	.0238	.1336	2828	3367
2 3/8	J-55	4.7	1.995	1.901	.00387	.02171	6480	6160
2 7/8	J-55	6.5	2.441	2.347	.00579	.0325	6144	5808

NOTE: Safety factor of 70% used for casing collapse and burst pressures. 80% safety factor used for tubing.

#### Safety/Environmental

Hazardous chemical reporting is required under SARA title III. A blank form, "CONOCO INC. OKLAHOMA CITY DIVISION CHEMICAL INVENTORY", is attached to this procedure. The form should be filled out by the service company representative delivering the chemicals to the location. Also, MSDS's and the amount of chemical used are to be provided. The Conoco representative on location is to forward the completed form and MSDS's to S. D. King, Coordinator-Environmental Affairs, in the OKC Division Office.

#### Recommended Procedure:

1. RU, blow well down, kill as needed w\ 2% KCl. NUBOP
2. PU tubing and RIH to check PBTD @ 6210'. POOH. Lay down 2 3/8" and 1 1/4" tbgs.
3. Pull Model 'D' packer at 6020'.
  - A. Latch onto and 'J' out packer.
  - B. POOH.
4. RIH with gauge ring and junk basket to 6150'
5. Squeeze Pictured Cliffs perms.
  - A. RIH with RBP and cement retainer on 2 7/8" work string. Set RBP at 3944' and test to 500 psi. Pull up and set cement retainer at 3738'.
  - B. Dump bail 2 sxs sand on RBP.
  - C. Establish pump-in rate down tubing w\ 15 bbls water, then squeeze the Pictured Cliffs w\ 100 sxs class B w\ 0.4% FLA and 2% Calcium Chloride accelerator. Note: Mix cement w\ fresh water.
  - D. Displace tubing w\ 22 bbls. Reduce pump rate at start of displacement to 1 BPM maximum.
  - E. Begin hesitation squeeze after clearing packer. Adjust shut-down time and volumes to well conditions.
  - F. If squeeze locks up before all displacement is pumped, release packer and reverse circulate tubing clean. Reset packer and repressure to 2000 psi

- G. Shut-in, WOC 18-24 hrs.
6. Locate casing leak in the Ojo Alamo.
- A. GIH w\ packer on 2-7/8" work string. Set RBP at 3700' and test to 500 psi. Pull up w\ packer and locate casing leak.
7. Squeeze casing leak
- A. Release packer and pull up-hole to 100' above casing leak. Reset packer.
- B. Establish pump-in rate down tubing w\ 10 bbls water, then squeeze the Ojo Alamo w\ 100 sxs class B w\ 0.4% FLA and 4% Calcium Chloride accelerator. Note: Mix cement w\ fresh water.
- C. Displace tubing w\ +/-10 bbls water. Reduce pump rate at start of displacement to 1 BPM maximum.
- D. Begin hesitation squeeze after clearing packer. Adjust shut-down time and volumes to well conditions.
- E. If squeeze locks up before all displacement is pumped, release packer and reverse circulate tubing clean. Reset packer and repressure to 2000 psi
- F. Shut-in, WOC 18-24 hrs.
8. Drill out cement.
- A. Release packer and POOH.
- B. GIH w\ 2-7/8" work string, bit, casing scraper, and drill collars. Drill out cement and test each squeeze to 1000 psi. Continue in hole and circulate sand off RBP. POOH w\ RBP.
9. Perforate additional Mesaverde pay under a lubricator as follows:
- A. Correlate to Schlumberger Density log run 6/25/77
- B. Perforate at 2 spf according to the following detail:

Gun	4" HSC
Phasing	120
EHD	0.45
TTD	11.1"
ECP	8.7"

<u>Depth</u>	<u>#ft</u>	<u>#shots</u>
5966-6000	34	70
6006-6012	6	14
6020-6030	10	22
6032-6036	4	10
<b>TOTAL</b>	54 feet	116 shots

10. Breakdown perfs.

- A. GIH w\ Baker SAP tool (5' spacing) on 2-7/8" tubing
- B. Set SAP tool at 6140' (blank pipe) and test seals.
- C. Pull up to 6129' and pump 3 bbls 7-1/2% HCl at a rate not to exceed 1 BPM.
- D. Continue up hole, pumping 1 bbl 7-1/2% HCl per foot of perforations being treated at a rate not to exceed 1 BPM.
- E. POOH and lay down 2-7/8" tubing and SAP tool.

11. Prepare to and Frac as follows:

NOTE- Review section 9 of the EPNA Safety Manual on nitrogen safety before rigging up.

- A. RIH w\ 5-1/2" RBP and packer on 2-7/8" work string.
- B. Set RBP at 6040'. Pull up hole and set packer at 5866'

Mix Water Requirements

- Clean mix water with 2% KCl.
- Add bactericide to first load in each tank.
- Pull sample and check the following
  - a) Iron less than 25 ppm
  - b) Bicarbonates less than 350 ppm
- Fluid temperature between 40-90 F

Rheology Data (Prepad Fluid)

30#/1000 gal. Guar System (@100 degrees)

<u>N'</u>	<u>K'</u>	<u>Vis</u>
0.451	0.0075	21 cp

Rheology Data (Frac Fluid)

30#/1000 gal. Guar System (@100 degrees)

<u>N'</u>	<u>K'</u>	<u>Vis</u>
0.381	0.0681	144 cp

Chemical Composition per 1000 gal of clean fluid

7.5 gal LGC-V	(Gelling agent)
1 gal Losurf-300	(Surfactant)
2 gal Clayfix-II	(Clay stabilizer)
0.5 lbs GBW-3	(Breaker)
5 gal AQF-2	(Foaming Agent)

C. Frac down tubing at 18 BPM with 70 quality Nitrogen foam as follows.

5000 gal linear 30# prepad. Shut down. Record ISIP, 5, and 10 minute shutin pressure.

Check frac gradient and recalculate N2 schedule if necessary.

15000 gal linear 30# 70Q N2 foam pad.

5000 gal linear 30# 70Q N2 foam w\ 0.5 ppg 40/70 Brady.

15000 gal linear 30# 70Q N2 foam pad.

7000 gal linear 30# 70Q N2 foam w\ 1 ppg 16/30 Brady.

7000 gal linear 30# 70Q N2 foam w\ 2 ppg 16/30 Brady.

7000 gal linear 30# 70Q N2 foam w\ 3 ppg 16/30 Brady.

7000 gal linear 30# 70Q N2 foam w\ 4 ppg 16/30 Brady.

7000 gal linear 30# 70Q N2 foam w\ 5 ppg 16/30 Brady.

1500 gal linear gel flush.

Total Sand - 2,500# 40/70 Brady

90,285# 16/30 Brady

D. Shut block valve to trucks and flow back well immediately following treatment through choke manifold equipped with 8/64", 1/4" and 1/2" chokes. Plot pressure vs. time during flowback of the well. RD treatment company.

12. Run production tubing and return well to production.