Form 3160-5
(June 1990)

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

5. Lease Designation and Serial No.
CONT 151

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation
AXI APACHE K

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
AXI APACHE K - 2

2. Name of Operator
CONOCO, INC.

9. API Well No.
30-039-06745

3. Address and Telephone No.
P.O. Box 2197 DU 3066 Houston, TX 77252-2197 (281) 293-1005

10. Field and Pool, or Exploratory Area
BLANCO MESAVERDE

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
B, SEC.4, T26N, R5W
807' FNL & 1354' FEL

11. County or Parish, State
RIO ARRIBA, NM

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☒ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☐ Other _____	☐ 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.)*

Conoco proposes to perform a cement squeeze on the casing leaks then return the well to production. Procedure and cementing recommendation attached.

MAR 2000
RECEIVED
OIL CON. DIV.
DIST. 3

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

Signed Deborah Moore Title Regulatory Analyst Date 3/2/00

(This space for Federal or State office use)

Approved by _____ Title Petro. Eng. Date 3/3/00
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.

*See Instruction on Reverse Side

Repair Casing
AXI Apache K-2
4B 26N 5W

Objective: Cement squeeze casing leaks at 2618-81', then return the well to production.

Well Information:

Casing: 5.5" 14 lb/ft set at 5306'
PBTD 5454' (fill and junk)
Capacity - .0238 bbl/ft or .9997 gals/ft

Tubing: 2 3/8" to 5397'
Capacity - .00387 bbls/ft or .1626 gals/ft
Total Volume – 20.9 bbls or 877 gals

Pictured Cliffs Perforations: 3220'-3244' (squeezed)

Mesa Verde Perforations:

Cliff House 4864'-4900', 4920'-40' 6BPF ✓

Point Lookout 5402'-18', 24'-28', 36'-44', 60'-84' 6BPF ✓

Lower Point Lookout 5513'-18', 22'-24' 6BPF (below cement plug @ 4596'-5507') ✓

Notify Aztec OCD 24 hours before work is initiated (334-6178, Charlie Perrin)

1. Move in and rig up pulling unit.
2. Release packer (45B Model R Double-grip), drop down and tag PBTD.
3. Pull packer and tubing (Note: packer in middle of string at 2741')
4. Run composite bridge plug on wireline and set at approximately 2820'.
5. Dump enough sand on top of the bridge plug to bring the sand level up to 2685' (Note: 14.66 lbs of 20/40 sand per foot in 14 lb/ft 5 ½" casing). Use wireline to tag sand to insure proper height.
6. Run in hole with cement retainer on 2 3/8" tubing and set at approximately 2570'. Establish injection into the casing leak.

7. Hesitation squeeze casing leak as per BJ cementing recommendation. If a 500 psi squeeze is not achieved with the recommended cement volumes, over displace with 30 barrels of water (tubing and casing volume est. 13 bbls. plus 17 barrels excess).
8. Pull out of retainer and reverse circulate the tubing clean. POOH with tubing. WOC over night.
9. Pick up a bit run in hole and run in to the retainer. Drill out retainer and cement to the top of the sand plug.
10. Pressure test squeeze to 500psi. If it holds, continue circulating out the sand plug and drill up the composite bridge plug and clean out hole to PBTD. If it doesn't hold confirm location of the leak and re-squeeze.
11. Pull out of hole with bit.
12. Run in hole with tubing to approximately 5400' with seating nipple for plunger operations.
13. Nipple up wellhead for plunger operation and connect to sales.
14. Swab in well. Note: that considerable swabbing may be necessary given the unknown amount of dump flooding that may have occurred. A call will have to be made on how long to swab with the pulling unit. If no gas is seen in the first few days we should switch to a swab unit or run a pump and rods.
15. Rig down and move off pulling unit.

Prepared by: Pat Bergman
March 3, 2000

Operator Name: Conoco
Well Name: AXI Apache K 2
Job Description: Casing Leak Repair
Date: March 2, 2000

Proposal No: 128866282A

JOB AT A GLANCE

Casing Size/Weight :	5 1/2in, 15.5 lbs/ft
Pump Via	Tubing 2 3/8" O.D. (1.995" .I.D) 4.7 #
Total Mix Water Required	479 gals
Spacer	
Fresh Water	40 bbls
Density	8.3 ppg
Lead Slurry	
Class H w/fluid loss	50 sacks
Density	16.0 ppg
Yield	1.12 cf/sack
Tail Slurry	
Class H	50 sacks
Density	16.0 ppg
Yield	1.13 cf/sack
Displacement	
Fresh Water	15 bbls
Density	8.3 ppg

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WELL GEOMETRY

Squeeze Depth	2,618 ft		
Tubing/Drill Pipe Size	2.375 in	1.995 in ID	4.7 lbs/ft
Casing Size	5.500 in	4.950 in ID	15.5 lbs/ft
Squeeze Temperature	0 ° F		
Est. Static Temperature	90 ° F		

FLUID SPECIFICATIONS

Spacer = 40.0 bbls Fresh Water @ 8.33 ppg

SLURRY NO.	VOLUME CU-FT		VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
1	56	/	1.12	= 50 sacks Class H Cement + 0.5% bwoc FL-50 + 0.2% bwoc Sodium Metasilicate + 42.1% Fresh Water
2	57	/	1.13	= 50 sacks Class H Cement + 3% bwow Sodium Chloride + 42.9% Fresh Water

Displacement = 15.0 bbls Fresh Water @ 8.33 ppg

CEMENT PROPERTIES

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	16.00	16.00
Slurry Yield (cf/sack)	1.12	1.13
Amount of Mix Water (gps)	4.75	4.84
Estimated Pumping Time - 70 BC (HH:MM)	3:00	2:15

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PROCEDURE

Cementing Procedure for:Casing Leak Repair

Rig up to cement the casing leak repair at 2,618' to 2,681' via 2 3/8" tubing.

Pump as scheduled below:

1. Perform all location Q.C. test on mix waters.
2. Conduct safety meeting with all location personnel.
3. Pressure treating lines to operator's specifications.
4. Verify squeeze technique to be utilized.
5. Isolate lower zones with RPB or retainer @ +/- 2,800'. Dump enough sand on tool to cover casing to bottom of leak.
6. Run in hole with tubing and retainer.
7. Set cement retainer @ +/- 2,568'.
9. Establish injection rate with 40 bbl of fresh water.
10. Mix and pump 50 sacks of lead slurry and 50 sacks of tail slurry.Total slurry volume is 20 bbl.
11. Once all slurry is in tubing slow displacement rate to 3/4 bpm.
12. With 4 bbl of slurry above retumer if no squeeze pressure is observed, start hesitation method. Continue with hesitation until slurry is below retainer.
13. Pull out of retainer. Reverse out remaining slurry if required.
14. Rig down equipment per operator's specifications.
15. WOC +/- 12 hours.