Form 31:00-5 (June 1990)

UNITED STATES DEPARTMENT OF THE INTERIOR DELIVED BUREAU OF LAND MANAGEMENT OF DECIMAL

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

5. Lease Designation and Serial No.

	NMSF078863
6.	If Indian, Allottee or Tribe Name

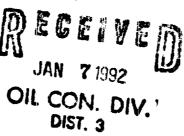
Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.

Use "APPLICATION FOR PERMIT—", for such proposals AREA	
SUBMIT IN TRIPLICATE	7. If Unit or CA, Agreement Designation
i. Type or Well Oil Well Well Other	8. Well Name and No.
2. Name of Operator Arco Oil & Gas Company, a division of Atlantic Richfield Company	Krause WN Federal #6 9. API Well No.
3. Address and Telephone No. 1816 E. Mojave, Farmington, New Mexico 87401	30-045-07227 10. Field and Pool, or Exploratory Area
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Unit B (NW NE) 995 FNL and 1590 FEL	Basin Dakota II. County or Parish, State
Sec. 29, T28N, R11W	San Juan, New Mexico

12.	CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA					
	TYPE OF SUBMISSION	TYPE OF ACTION				
	Notice of Intent Subsequent Report Final Abandonment Notice	Abandonment Recompletion Plugging Back Casing Repair Altering Casing Other	Change of Plans New Construction Non-Routine Fracturing Water Shut-Off Conversion to Injection Dispose Water (Note: Report results of multiple completion on Well Completion or Recombletion 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.)*

Attached is a plugging procedure for the subject well. Upon your approval, Arco will plug and abandon this well.



SEE ATTACHED FOR CONDITIONS OF APPROVAL

4. I heretry certify that the foregoing is true and correct Signed Rules Chancel	Title	Production Supervisor	APPROVED_
(This space for Federal or State office use)			AS AMENDED
Approved by	Tide		- JAN 0 3 1992
title 18 U.S.C. Section 1001, makes at a crime for any person kin	owingly and willfi	ully to make to any department or agency of the United	States any raise, rictitious or fraudulent statement

Plugging Procedure - Krause Federal # 6 NE, Sec. 29, T28N, R11W

Note: All cement plug volumes include excesses of 150 % for inside casing plugs; and 200 % for external.

Mud, 9.0 ppg, will separate all cement plugs.

Procedure:

- 1. MO RU; Blow well down; ND wellhead; NU BOPs.
- 2. Pull out of hole with tubing; inspect and tally, 192 jts.
- 3. RIH with tubing open ended to 6227'; need 5 to 6 more jts.
- 4. Plug #1 Dakota and Graneros perfs from 6227' to 5988' with 27 sacks Class B neat cement.
- 5. POG cement then WOC; tag cement.
- 6. Circulate hole and spot mud from top of cement to 5240', 12 bbls.
- 7. Plug #2 Gallup top from 5240' to 5140' with 12 sacks Class B cement.
- 8. POO cement to 5080' and spot mud from 5080' to 3188', 30 bbls. Pull tubing up to 3188'.
- 9. Plug #3 Mesa Verde top from 3188' to 3088' with 12 sacks Class B cement.
- 10. Spot mud from 3040' to 1648', 22 bbls.
- 13. Plug #4 PC and Fruitland tops from 1648' to 1355' with 33 sacks cement.
- 14. POO cement and then spot mud from 1220' to 1130', 2 bbls. POOH to 1000'.
- 15. Rig up wireline unit and perforate squeeze holes at 1130'.
- 16. Plug #5 Ojo Alamo top from 1130' to 1030' with 50 sacks cement, POO cement and squeeze 39 sacks outside casing.
- 17. WOC then tag cement. Spot mud from top of cement to 421', 10 bbls.; POOH to 421'.
- 13. Rig up wireline unit and perforate squeeze holes at 421'; establish circulation out bradenhead valve.
- 19. Plug #6 421' to surface with sufficient volume to circulate, approximately 120 sacks.
- 20. Cut off wellhead and install P&A marker; RD and move off.
- 21. Restore location and reseed per BLM stipulations.

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT FARMINGTON RESOURCE AREA 1235 LA PLATA HIGHWAY FARMINGTON, NEW MEXICO 87401

Attachment to Notice of

Re: Permanent Abandonment

Intention to Abandon

Well: 6 Krause WN Federal

CONDITIONS OF APPROVAL

- 1. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal Leases."
- 2. Mark Kelly with the Farmington Office is to be notified at least 24 hours before the plugging operations commence (505) 326-6201.
- 3. Blowout prevention equipment is required.
- 4. The following modifications to your plugging program are to be made (when applicable):

Plug Ojo Alamo from 597 -0 inside a our side 4/2" csing

Office Hours: 7:45 a.m. to 4:30 p.m.

GENERAL REQUIREMENTS FOR PERMANENT ABANDONMENT OF WELLS ON FEDERAL AND INDIAN LEASES FARMINGTON RESOURCE AREA

- 1. Secure prior approval either on a Sundry Notice (Form 3160-5) or verbally from the Fluids Drilling & Production Section at this office before changing the approved plugging program.
- 2. Plugging equipment used shall have separate mixing and displacement pumps and a calibrated tank to assure proper displacement of plugs. The Operator is responsible for providing all measuring devices needed to assure proper measurement of materials being used.
- 3. A proper tank or pit will be used to contain all fluids pumped from the well during plugging operations. Unattended pits are to be fenced.
- 4. All cement plugs are to be placed through tubing (or drillpipe) and shall be a minimum of 100 feet in length with 50% excess inside casing or 100% excess when plug is set in open hole or squeezed into perforations. 15.6#/gal slurry weight is to be used when using class B neat cement or when CaCl₂ is used. Use the recommended slurry weight of other type cements when they are used (Class C, Pozzolan etc.).
- 5. Any cement plugs placed when well is not full of fluid, or when well may be taking fluid, (i.e. across perfs-unless bridge plug or retainer is used, across bad csg., or fresh water formations) will be tagged (touched) after cement has set to verify proper location.
 - 5a. Testing The first plug below the surface plug shall generally be tested by either tagging the plug with the working pipe string, or pressuring to a minimum pump (surface) pressure of 1000 psig, with no more than a 10 percent drop during a 15-minute period (cased hole only). If the integrity of any other plug is questioned, it must be tested in the same manner. Also, any cement plug which is the only isolating medium for a fresh water interval or a zone containing a valuable mineral deposit should be tested by tagging with the drill string.
- 6. Mud must be placed between plugs. Plugging mud is to be made up with a minimum of 15 lbs/bbl of sodium bentonite, and a nonfermenting polymer.

 Minimum consistency of plugging mud must be 9 lbs/gal and with a minimum viscosity of 50 sec/qt. Fresh water is to be utilized for mixing mud.
- 7. Following the placement of a cement plug, the withdrawl rate for at least the length of the cement plug shall not exceed 30 ft/min, in order to minimize the contamination of the plug.

- 8. Within 30 days after plugging work is completed, file a Sundry Notice (Subsequent Report of Abandonment, Form 3160-5), in quintuplicate with Area Manager, Bureau of Land Management, 1235 La Plata Highway, Farmington, NM 87401. The report should give in detail the manner in which the plugging work was carried out, the extent (by depths) of cement plugs placed, and the size and location (by depths) of casing left in the well. Show date well was plugged.
- 9. All permanently abandoned wells are to be marked with a regulation marker (4" pipe extending 4' above the ground line) containing the information as specified in 43 CFR 3162.6(d). Unless otherwise approved.
- 10. After plugging work is completed the surface is to be rehabilitated in accord with instructions from the Fluids Surface Management Section of the Farmington Resource Area Office.

All above are minimum requirements. The period of liability under the bond of record will not be terminated until the lease is inspected and surface work approved.

Please advise this office when the well location is ready for final inspection.

Failure to comply with the above conditions of approval may result in an assessment for noncompliance and/or a Shut-in Order being issued pursuant to 43 CFR 3163.1.

You are further advised that any instructions, orders or decisions issued by the Bureau of Land Management are subject to administrative review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4 and 43 CFR 4.700.