

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

1. Type of Well GAS	5. Lease Number SF-077282
2. Name of Operator Meridian Oil Inc.	6. If Indian, All.or Tribe Name
3. Address & Phone No. of Operator Box 4289, Farmington, NM 87499 (505) 326-9700	7. Unit Agreement Name
4. Location of Well, Footage, Sec, T, R, M. 1700'N, 1600'W Sec.34, T-30-N, R-10-W, NMPM	8. Well Name & Number Grenier A #2
	9. API Well No.
	10. Field and Pool Aztec Pictured Cliffs
	11. County and State San Juan County, NM
12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA	
Type of Submission	Type of Action
<input checked="" type="checkbox"/> Notice of Intent	<input checked="" type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input type="checkbox"/> Other
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut Off
	<input type="checkbox"/> Conversion to Injection
13. Describe Proposed or Completed Operations	
It is intended to plug and abandon this well per the attached procedure.	

RECEIVED

JAN 3 0 1992

OIL CON. DIV.]  
DIST. 3

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct  
Signed [Signature] (G.L.) Title Regulatory Affairs Date 1-15-92

APPROVED

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_  
CONDITION OF APPROVAL, IF ANY:

JAN 27 1992  
DATE  
AREA MANAGER

RM000

Grenier A #2  
Unit F Section 34 T30N R10W  
P & A Procedure

1. Install and test rig anchors. MI blow tank. MOL and RUSU. Comply with all NMOC, BLM, & MOI rules and regulations. NU BOP and stripping head. Test operations of rams. Blow well down. Kill well if necessary.
2. TOOH w/ 1-1/2 " tubing.
3. Set cement retainer @ 2117' (50 feet above top of Fruitland)
4. Squeeze PC perfs with 91 Sacks of Class B cement. This will fill pipe from bottom perf (2507') to 2117' with 100 % excess and will cement across both the PC and Fruitland.
5. Sting out of cement retainer, dump 6 sacks of cement on top of plug and roll hole with 9 PPG, 50 sec/qt. mud. TOOH.
6. Run packer to locate casing leak. If leak is deeper than 1000' call office with depth, otherwise proceed as follows.
7. Perforate 2 squeeze holes at 1350' (50' below the top of the Kirtland).
8. Set cement retainer on tubing at 1110' (50' above top of Ojo Alamo). Squeeze with 113 sx. of Class B cement (this will cement the entire interval from 50' below the top of the Kirtland to 50' above the top of the Ojo Alamo, allowing for 100 % excess in the casing/borehole annulus and 50 % excess in the cased hole). Spot 50 ft. (6 sxs.) of cement on top of cement retainer. TOOH.
9. IF CASING LEAK IS AT 500' OR LESS, establish circulation through the bradenhead, then bullhead cement down casing until cement is circulated out of the bradenhead. Should it be impossible to establish circulation, cover casing leak with a plug then perf 2 squeeze holes at 150' and circulate cement through the bradenhead through the squeeze holes.
10. Cut off wellhead below surface casing flange and install dry hole marker to regulatory agency specifications.
11. Restore location to regulatory agency specifications.

Grenier A #2  
P & A Procedure  
Calculations

Constants.

1.  $5.6146 \text{ ft}^3/\text{bbl}$ .

2.  $1.18 \text{ ft}^3/\text{sk}$ .

3.  $4.78 \text{ sx}/\text{bbl}$ .

4. Capacities

a.  $5\text{-}1/2" \text{ 14\# casing} = .0244 \text{ bbl}/\text{ft}$ .

b.  $\text{annular space between } 7\text{-}7/8" \text{ hole \& } 5\text{-}1/2" \text{ casing} = .0309 \text{ bbl}/\text{ft}$ .

Step #3.  $(2507-2117) \text{ ft} * (.0244 \text{ bbl}/\text{ft}) = 9.516 \text{ bbl} * 4.78 \text{ sx}/\text{bbl} = 45.48 \text{ sx} * 2 = 91 \text{ sx}$ .

Step #7.  $(1350-1110) \text{ ft} * \{ (2 * .0309 \text{ bbl}/\text{ft}) + (1.5 * .0244 \text{ bbl}/\text{ft}) \} = 23.616 \text{ bbls} * 4.78 \text{ sx}/\text{bbl} = 113 \text{ sx}$ .

Steps #4 & 8.  $50 \text{ ft} * (.0244 \text{ bbl}/\text{ft}) = 1.22 \text{ bbls} * 4.78 \text{ sx}/\text{bbl} = 6 \text{ sx}$ .

IN REPLY REFER TO  
(019)

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: 2 Grenier A

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):

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  $\text{CaCl}_2$  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 withdrawal 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.