

**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

SUBMIT IN TRIPLICATE*
(Other instructions on re-verse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.
Tract 241-Contract 000154

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—" for such proposals.)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Jicarilla Apache

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Jicarilla Apache

9. WELL NO.
13

10. FIELD AND POOL, OR WILDCAT
Jicarilla-Basin Dakota

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 33 T26N R5W

12. COUNTY OR PARISH Rio Arriba	13. STATE New Mexico
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1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
Marathon Oil Company

3. ADDRESS OF OPERATOR
P. O. Box 97, McFadden, Wyoming 82080

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

1190' FSL, 1190' FWL, Sec 33, T26N, R5W

14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.) 6598 GR 6611 AB
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16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>
(Other) <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
(Other) <input checked="" type="checkbox"/> Production Casing	

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

17. 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.)*

2/11/67 Drilled to total depth of 7395'.

2/12/67 Ran 230 joints of 5 1/2" OD casing, 15.5# and 17.0#, S&C and L&C, 8rd thd, J55, R2, Cond 1. Overall length 7419.16, effective length 7363.67. First stage, pumped 500 gallons mud sweep ahead of cement. Cemented thru show by Byron Jackson, with 85 units HYSC 400 filler cement and 120 units of quality cement. Displaced with 47 bbls. water and 128 bbls. mud at final pressure 1300 psi. Bumped plug with 2000 psi, released pressure, float held OK. Dropped bomb to open lower stage collar, circulated mud with rig pump, no cement circulated. Cemented 2nd stage, 20 bbls. of water ahead of cement, with 200 units of HYSC 400 filler cement, displaced with 51 bbls. water and 77 bbls. mud at final pressure of 1000 psi, closed tool with 2500 psi. Dropped bomb and opened upper stage collar, circulated cement from 1st stage, circulated after Byron Jackson started mixing cement for 2nd stage. Good mud returns at all times. Circulated mud with rig pump, got cement returns from 2nd stage. Cemented 3rd stage, 500 gallons (BJ) mud sweep ahead of cement, thru tool at 3229 with 210 units of filler cement and 160 units of quality cement. Displaced with 74 bbls. water, circulated cement.

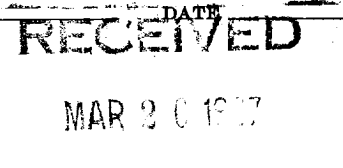
18. I hereby certify that the foregoing is true and correct

SIGNED [Signature] TITLE Area Superintendent DATE March 17, 1967

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL, IF ANY:



*See Instructions on Reverse Side



Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

	Overall Length	Effective Length
17 joints of 5 1/2"OD 17# LT&C	536.04	531.39
19 joints of 5 1/2"OD 15.5# LT&C	611.60	605.48
194 joints of 5 1/2"OD 15.5# ST&C	6271.52	7363.67
1 Baker Model JI Stage Cementing Collar	2.07	1.83
1 Baker Model JB Stage Cementing Collar	2.07	1.83
1 Baker Model G Circulating Differential Fillup Collar	1.91	1.67
1 Baker Model G Cir. Diff Fillup Shoe(down whirler)	<u>2.00</u>	<u>2.00</u>
	7427.21	7371.00

Landed 7384 KB.

W. O. C.

PHYS 441

STATISTICAL MECHANICS

- 1.1
- 1.2
- 1.3
- 1.4
- 1.5
- 1.6
- 1.7
- 1.8
- 1.9
- 1.10

- 2.1
- 2.2
- 2.3
- 2.4
- 2.5
- 2.6
- 2.7
- 2.8
- 2.9
- 2.10

These notes are based on the lectures given by Prof. David Chandler in the course PHYS 441 at the University of Chicago. The course is a graduate-level course in statistical mechanics, covering topics such as the microcanonical ensemble, the canonical ensemble, and the grand canonical ensemble. The notes are intended to provide a comprehensive overview of the course material, including derivations of the partition function and the thermodynamic quantities derived from it. The notes are organized into chapters, with each chapter corresponding to a lecture. The chapters are: 1. The Microcanonical Ensemble, 2. The Canonical Ensemble, 3. The Grand Canonical Ensemble, 4. Fluctuations, 5. Phase Transitions, 6. The Ising Model, 7. The Lennard-Jones Potential, 8. The Virial Theorem, 9. The Equipartition Theorem, 10. The Boltzmann Distribution.

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