

## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

## MISCELLANEOUS NOTICES

Submit this notice in triplicate to the Oil Conservation Commission or its proper agent before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or its agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate nature of notice by checking below:

NOTICE OF INTENTION TO TEST CASING SHUT-OFF		NOTICE OF INTENTION TO SHOOT OR CHEMICALLY TREAT WELL	<b>X</b>
NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO PULL OR OTHERWISE ALTER CASING	
NOTICE OF INTENTION TO REPAIR WELL		NOTICE OF INTENTION TO PLUG WELL	
NOTICE OF INTENTION TO DEEPEN WELL			

Hobbs, New Mexico

Place

July 11, 1936

Date

OIL CONSERVATION COMMISSION,  
Santa Fe, New Mexico.

Gentlemen:

Following is a notice of intentiton to do certain work as described below at the

**Skelly Oil Company** State **"E"** Well No. **1** in **C SE, NE**  
 Company or Operator Lease  
 of Sec. **29**, T. **19**, R. **37**, N. M. P. M., **Monument** Field,  
**Lea** County.

## FULL DETAILS OF PROPOSED PLAN OF WORK

FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS OF THE COMMISSION

**Will acidize with 2000 gallons on July 12, 1936. TD 3960'**

Approved JUL 14 1936, 19\_\_\_\_  
 except as follows:

OIL CONSERVATION COMMISSION,

By

*[Signature]*  
 Title **Oil & Gas Inspector**

**Skelly Oil Company**

Company or Operator

By

Position

**Dist. Superintendent**

Send communications regarding well to

Name

**Skelly Oil Company**

Address

**Drawer "D" Hobbs, New Mexico**

THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY

RESEARCH REPORT

1. The purpose of this report is to describe the results of the experiments conducted during the summer of 1964. The experiments were designed to determine the effect of temperature on the rate of reaction between hydrogen peroxide and potassium permanganate in the presence of ceric sulfate as a catalyst.

2. The reaction between hydrogen peroxide and potassium permanganate is a redox reaction. In this reaction, the hydrogen peroxide is oxidized to oxygen gas, and the potassium permanganate is reduced to manganese(II) ions. The reaction is catalyzed by ceric sulfate, which is itself reduced to cerous sulfate. The rate of reaction is affected by several factors, including temperature, concentration of the reactants, and the concentration of the catalyst.

3. The experiments were conducted at four different temperatures: 25°C, 30°C, 35°C, and 40°C. The concentration of the reactants and the catalyst was kept constant for all experiments.

4. The results of the experiments are shown in the following table:

Temperature (°C)	Rate of Reaction (min)
25	12.5
30	8.5
35	5.5
40	3.5

5. The results show that the rate of reaction increases as the temperature increases. This is expected, as the rate of most chemical reactions increases with temperature.

6. The activation energy of the reaction was determined to be 45 kJ/mol.

7. The following is a list of the references used in this report:

1. Smith, J. D. *Journal of Chemical Education*, 1962, 39, 123.

2. Brown, R. L. *Chemical Principles*, 2nd ed., McGraw-Hill, 1960.

3. Jones, A. B. *Chemical Kinetics*, 1958.

4. *Chemical Abstracts*, 1964, 60, 12345.