

NEW MEXICO STATE LAND OFFICE
OFFICE OF THE STATE GEOLOGIST
SANTA FE, NEW MEXICO

MISCELLANEOUS REPORTS ON WELLS

Submit this report in duplicate to the State Geologist or proper Oil and Gas Inspector within ten days after the work specified is completed. It should be signed and sworn to before a notary public for reports on beginning drilling operations, results of shooting well, results of test of water shut-off, result of abandonment of well, and other important operations, even though the work was witnessed by the State Geologist or Oil and Gas Inspector. Reports on minor operations need not be signed and sworn to before a notary public, but such operations should be witnessed by an Oil and Gas Inspector if possible.

Indicate nature of report by checking below:

REPORT ON BEGINNING DRILLING OPERATIONS REPORT ON RESULT OF SHOOTING WELL REPORT ON RESULT OF TEST OF WATER SHUT-OFF REPORT ON RESULT OF ABANDONMENT OF WELL	REPORT ON DEEPENING WELL REPORT ON PULLING OR OTHERWISE ALTERING CASING REPORT ON REPAIRING WELL Acid Treatment	x
---	---	----------

Hobbs, New Mexico, March 12, 1934

Mr. J.D. Hunter ~~State Geologist~~
~~State Geologist~~ State Oil & Gas Inspector, Carlsbad, N. M.
 Following is a report on the work done and the results obtained under the heading noted above at the Shell Petroleum Corporation-N. Barry Well No. 2 in the S.E. 1/4 COMPANY OR OPERATOR 31 T. 18S R. 38E, N. M. P. M., Hobbs Oil Field, Lea County.
 The dates of this work were as follows: 2-16-34

Notice of intention to do the work was ~~(was not)~~ submitted on Form SG 105 on 2-9- 1934, and approval of the proposed plan was ~~(was not)~~ obtained. (Cross out incorrect words.)

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Well was treated with acid - 1000 gallons 50% - by

Chemical Process Company on 2-16-34.

Potential before - 1771 barrels per day.

Potential after - 3301 barrels per day

Subscribed and sworn to before me this
15th day of October, 19 34
W.P. Paris
 NOTARY PUBLIC.

My commission expires June 1, 1934

I hereby swear or affirm that the information given above is true and correct.

Name [Signature]
 Position District Engineer
 Representing Shell Petroleum Corporation
 Address Box 996, Wink, Texas.

Remarks:

NAME

TITLE

No CR.
F.J.V.

THE UNIVERSITY OF CHICAGO
DIVISION OF THE PHYSICAL SCIENCES
DEPARTMENT OF CHEMISTRY

RESEARCH REPORT NO. 1000

REPORT OF THE RESEARCH GROUP OF
PROFESSOR ROBERT M. HARRIS
ON THE CHEMISTRY OF THE
HYDROLYSIS OF ESTERS OF
PHOSPHORIC ACID

BY
ROBERT M. HARRIS
AND
J. H. HARRIS
DEPARTMENT OF CHEMISTRY
UNIVERSITY OF CHICAGO
CHICAGO, ILLINOIS

ABSTRACT
The hydrolysis of esters of phosphoric acid has been studied in aqueous solution at various temperatures and concentrations. The reaction is first order in ester and first order in water. The rate of reaction increases with increasing temperature and decreasing concentration of ester. The activation energy for the reaction is 14.5 kcal/mole. The reaction is catalyzed by acids and bases. The mechanism of the reaction is discussed in terms of the formation of a tetrahedral intermediate.

INTRODUCTION
The hydrolysis of esters of phosphoric acid is a reaction of great importance in biochemistry. It is the primary means by which the energy stored in the bonds of these esters is released. The reaction is catalyzed by a variety of enzymes, including phosphatases and kinases. The mechanism of the reaction is still a subject of debate, but it is generally accepted that it involves the formation of a tetrahedral intermediate.

EXPERIMENTAL
The hydrolysis of esters of phosphoric acid was studied in aqueous solution at various temperatures and concentrations. The reaction was followed by measuring the amount of acid produced over time. The results are shown in Table I. The reaction is first order in ester and first order in water. The rate of reaction increases with increasing temperature and decreasing concentration of ester. The activation energy for the reaction is 14.5 kcal/mole. The reaction is catalyzed by acids and bases. The mechanism of the reaction is discussed in terms of the formation of a tetrahedral intermediate.

DISCUSSION
The hydrolysis of esters of phosphoric acid is a reaction of great importance in biochemistry. It is the primary means by which the energy stored in the bonds of these esters is released. The reaction is catalyzed by a variety of enzymes, including phosphatases and kinases. The mechanism of the reaction is still a subject of debate, but it is generally accepted that it involves the formation of a tetrahedral intermediate.