

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	XXX	REPORT ON DEEPENING WELL REPORT ON PULLING OR OTHERWISE ALTERING CASING REPORT ON REPAIRING WELL
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Wink, Texas, Oct. 5, 1935

Mr. **F. J. Vesely** State **Geologist**
Carlsbad, ~~Carlsbad~~, N. Mex.

PLACE

DATE

Oil & Gas Inspector.

Following is a report on the work done and the results obtained under the heading noted above at the **The Texas Company's State "E"** Well No. **1** in the

Cen. of SW $\frac{1}{4}$ of SW $\frac{1}{4}$ COMPANY OR OPERATOR **1** of Sec. **1**, T. **20 S**, R. **36 E**, N. M. P. M.,
Monument Oil Field, **See below** **Lea** County.

The dates of this work were as follows: **See below**

Notice of intention to do the work was (~~was not~~) submitted on Form SG **103** on **9-28-35**, 19____, and approval of the proposed plan was (~~was not~~) obtained. (Cross out incorrect words.)

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

Set 9-5/8" OD 40# Seamless casing at 1187' in anhydrite and salt, cemented with 670 sacks El Toro common cement. Completed cementing at 4PM 9-27-35. Cement returned to surface.

Drilled plug 8PM 10-4-35. Tested pipe with 1500# pressure for 30 minutes before drilling plug; tested OK. tested pipe with 1200# pressure for 30 minutes after drilling plug; tested OK.

Subscribed and sworn to before me this

5th day of **October**, 19**35**.

W. E. Chapman

NOTARY PUBLIC.

My commission expires **5-31-37**

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

Name **Division Superintendent**

Position **Division Superintendent**

Representing **The Texas Company**

Address **Box A, Wink, Texas.**

COMPANY OR OPERATOR.

Remarks:

F. J. Vesely

NAME

TITLE

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
RESEARCH REPORT

THE KINETICS OF THE REACTION OF
HYDROGEN PEROXIDE WITH
HYDROXYLAMINE

The reaction of hydrogen peroxide with hydroxylamine has been studied in aqueous solution at various temperatures and concentrations. The reaction is first order with respect to hydrogen peroxide and first order with respect to hydroxylamine. The rate constant, k , has been determined at various temperatures and is given in the following table:

Temperature (°C)	Rate constant, k (min ⁻¹)
10	0.0012
20	0.0025
30	0.0050
40	0.0100
50	0.0200
60	0.0400
70	0.0800
80	0.1600
90	0.3200

The activation energy of the reaction has been determined from the Arrhenius plot and is found to be 14.5 kcal/mole. The reaction is believed to proceed via a bimolecular mechanism involving the formation of a cyclic intermediate. The reaction is reversible and the equilibrium constant has been determined to be 1.5 at 25°C. The reaction is also catalyzed by certain metal ions, particularly copper(II) and iron(II).

EXPERIMENTAL PROCEDURE

The reaction was studied in aqueous solution at various temperatures and concentrations. The rate of reaction was determined by measuring the decrease in the concentration of hydrogen peroxide over time. The concentration of hydrogen peroxide was determined by titration with potassium permanganate. The concentration of hydroxylamine was determined by titration with sodium hypochlorite.

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