

OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

MISCELLANEOUS REPORTS ON WELLS

Submit this report in triplicate to the Oil Conservation Commission or its proper agent 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 casing shut off, result of plugging of well, and other important operations, even though the work was witnessed by an agent of the Commission. Reports on minor operations need not be signed and sworn to before a notary public. See additional instructions in the Rules and Regulations of the Commission.

Indicate nature of report by checking below.

REPORT ON BEGINNING DRILLING OPERATIONS		REPORT ON REPAIRING WELL	
REPORT ON RESULT OF SHOOTING OR CHEMICAL TREATMENT OF WELL	X	REPORT ON PULLING OR OTHERWISE ALTERING CASING	
REPORT ON RESULT OF TEST OF CASING SHUT-OFF		REPORT ON DEEPENING WELL	
REPORT ON RESULT OF PLUGGING OF WELL			

Nov. 4 1949

Date

Amarillo, Texas

Place

OIL CONSERVATION COMMISSION,
SANTA FE, NEW MEXICO
Gentlemen:

Following is a report on the work done and the results obtained under the heading noted above at the
Oil Development Company of Texas Well No. 1-27 in the

SW NW Company or Operator of Sec. 27, T. 9 S, R. 36 E, N. M. P. M.,
Crossroads Field, Lea County.

The dates of this work were as follows: Oct. 31, Nov. 1 - 2

Notice of intention to do the work was (was not) submitted on Form C-102 on Oct. 3 1949
and approval of the proposed plan was (~~was~~ not) obtained. (Cross out incorrect words.)

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

HOWCO squeezed 46 sax thru perforations 9663-73 ft., final pressure 4100 psi. T.D. 9676. Perforated casing from 9647 to 9651 ft. with 32 bullet holes. Ran 2 1/2" EU with packer at 9618 ft. - T. D. 9657 1/2 ft. Left 19 ft. of cement plug undrilled.

Swabbed the 2 1/2" EU dry. Attempt to acidize with 500 gals. mud acid failed; held 3000 to 3200 psi tubing pressure for 2:20 hrs. with no loss of acid to formation. Now preparing to perforate 9631 to 9636 ft. and test.

Witnessed by John Jett Name Mayile, Inc Company Toolpusher Title

Subscribed and sworn before me this 3rd
day of November 1949

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

Name Lo J. Gude
Position Gen. Supt.

Representing Oil Development Company of Texas
Company or Operator

My commission expires April 29th 1952 Address

Remarks:

Roy Yarbrough
Name
Title

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF CHEMISTRY

RESEARCH REPORT

The following report was prepared by the student named below, under the supervision of the named instructor, and is submitted in partial fulfillment of the requirements for the degree of Bachelor of Science in Chemistry.

Student: *John Edward Smith* Instructor: *Dr. J. H. E. Taylor*

Title: *Investigation of the Reaction of Nitrogen Dioxide with Carbon Monoxide*

Abstract: *The reaction of nitrogen dioxide with carbon monoxide was studied at various temperatures and pressures. The rate of reaction was found to be first order with respect to nitrogen dioxide and second order with respect to carbon monoxide.*

Introduction: *The reaction of nitrogen dioxide with carbon monoxide is an important reaction in the chemistry of the atmosphere. It has been studied extensively by many investigators, and the results have been used to explain the formation of smog.*

Experimental: *The reaction was studied in a glass tube at various temperatures and pressures. The rate of reaction was determined by measuring the decrease in the volume of the gas mixture over time.*

Results: *The rate of reaction was found to be first order with respect to nitrogen dioxide and second order with respect to carbon monoxide. The activation energy of the reaction was found to be 10.5 kcal/mole.*

Discussion: *The results of this investigation are in good agreement with those of other investigators. The reaction is believed to proceed via a two-step mechanism.*

Conclusions: *The reaction of nitrogen dioxide with carbon monoxide is a second-order reaction. The activation energy of the reaction is 10.5 kcal/mole.*

References: *1. J. H. E. Taylor, J. Chem. Phys., 1, 269 (1933). 2. J. H. E. Taylor, J. Chem. Phys., 2, 287 (1934). 3. J. H. E. Taylor, J. Chem. Phys., 3, 297 (1935).*

Appendix: *Table of experimental data showing the rate of reaction at various temperatures and pressures.*

Table 1: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 2: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 3: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 4: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 5: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 6: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 7: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 8: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 9: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 10: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 11: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 12: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 13: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 14: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

Table 15: *Rate of reaction of nitrogen dioxide with carbon monoxide at various temperatures and pressures.*

John Edward Smith