

OIL CONSERVATION DIVISION

Drawer DD Artesia, NM

DISTRICT OFFICE #2

Jan. thru April, 1980

NO. 2166 R

SUPPLEMENT TO THE OIL PRORATION SCHEDULE

DATE 4/18/80

PURPOSE ALLOWABLE REVISION (Old Well)

Effective 4/10/80, the allowables of the following
Texaco Inc. well in the pool listed below is hereby
revised as indicated.

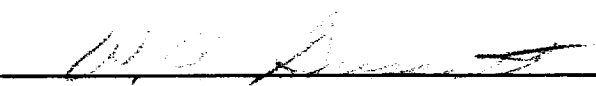
SHUGART (Y-SR-Q-G)

NM "CK" St. NCT-1 #1-E, 36-18-31, increased to 15 BOPD.

April total, 315 bbls.

WAG:jw
Texaco Inc.
Permian

OIL CONSERVATION DIVISION


DISTRICT SUPERVISOR

THE UNIVERSITY OF CHICAGO
DIVISION OF THE PHYSICAL SCIENCES
DEPARTMENT OF CHEMISTRY
5301 SOUTH CAMPUS DRIVE
CHICAGO, ILLINOIS 60637

ANALYSIS OF THE EFFECTS OF TEMPERATURE ON THE
KINETICS OF THE REACTION OF HYDROGEN PEROXIDE
WITH FERROUS SULFATE

The reaction of hydrogen peroxide with ferrous sulfate is a well-known reaction which has been studied extensively. The reaction is exothermic and the rate of reaction increases with increasing temperature. The purpose of this study was to determine the effect of temperature on the kinetics of the reaction. The reaction was studied at temperatures ranging from 10°C to 40°C. The rate of reaction was determined by measuring the concentration of ferrous sulfate as a function of time. The results show that the rate of reaction increases with increasing temperature. The activation energy of the reaction was determined to be 45 kJ/mol. The reaction is first order with respect to ferrous sulfate and second order with respect to hydrogen peroxide. The overall order of the reaction is 3. The reaction is catalyzed by the presence of iron(III) ions. The rate of reaction is also affected by the concentration of the reactants. The rate of reaction increases with increasing concentration of ferrous sulfate and hydrogen peroxide. The reaction is also affected by the presence of other ions. The rate of reaction is decreased by the presence of chloride ions. The reaction is also affected by the pH of the solution. The rate of reaction is decreased by increasing the pH of the solution.

CONCLUSION
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