

## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

## MISCELLANEOUS REPORTS ON WELL

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-offs, 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		REPORT ON PULLING OR OTHERWISE ALTERING CASING	
REPORT ON RESULT OF TEST OF CASING SHUT-OFF <b>5 1/8"</b>	<b>XX</b>	REPORT ON DEEPENING WELL	
REPORT ON RESULT OF PLUGGING OF WELL			

Hobbs, New Mexico.September 15, 1939.

Place

Date

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

**Gulf Oil Corp-Gypsy Prodn. Div.** **W. T. McCormack** Well No. **8** in the  
Company or Operator Lease

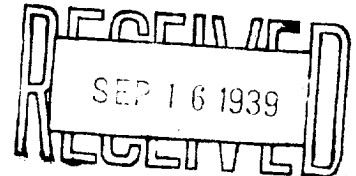
**SE ME** of Sec. **32**, T. **21S**, R. **37E**, N. M. P. M.,  
**Hardy** Field, **Lea** County

The dates of this work were as follows: **Cemented Sept 12, 1939. Tested Sept 14, 1939**

Notice of intention to do the work was ~~submitted~~ submitted on Form C-102 on **Sept 12, 1939** 19  
and approval of the proposed plan was ~~obtained~~ obtained. (Cross out incorrect words)

## DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

The hole was washed down, the casing tested with 1200# pressure applied for 30 mins., the plug drilled and the hole tested with 1200# pressure applied for 30 mint., both tests were OK and after approval of Mr. Yarbrough, State Oil and Gas Inspector, preparations were made to drill ahead.



Witnessed by	<b>C. C. Cummings</b> <b>V. M. Roe</b>	<b>Gulf Oil Corp</b> <b>Gulf Oil Corp</b>	<b>District Superintendent</b> <b>Rotary Foreman</b>
	Name	Company	Title

Subscribed and sworn to before me this

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

**15th** day of **September**, 19**39**Name **C. C. Cummings**Position **District Superintendent**Representing **Gulf Oil Corp-Gypsy Prodn. Division**  
Company or OperatorMy Commission expires **February 25, 1942.**Address **Hobbs, New Mexico.**

Remarks:

**Prof. Yarbrough**  
Name

**OIL & GAS INSPECTOR**  
Title

1. The first part of the paper is devoted to the study of the

properties of the

operator  $T$  defined by the formula

$$Tf(x) = \int_{\mathbb{R}^n} K(x-y) f(y) dy$$

where  $K$  is a kernel satisfying the conditions

$$|K(x)| \leq C |x|^{-n}$$

and  $K$  is homogeneous of degree  $-n$ . The operator  $T$  is called a Riesz potential.

The main result of the paper is the following theorem.

**Theorem 1.** Let  $f$  be a function satisfying the conditions

$$|f(x)| \leq C |x|^{-n/p}$$

and  $f$  is homogeneous of degree  $-n/p$ .

Then the function  $Tf$  is homogeneous of degree  $-n/p$  and

$$|Tf(x)| \leq C |x|^{-n/p}$$

where  $C$  is a constant depending only on  $n$  and  $p$ . The constant  $C$  is the best possible.

The proof of the theorem is given in the next section.

2.

Let  $f$  be a function satisfying the conditions

$$|f(x)| \leq C |x|^{-n/p}$$

and  $f$  is homogeneous of degree  $-n/p$ .

Let  $T$  be the operator defined by the formula

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