

## NEW OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

## MISCELLANEOUS NOTICES

Submit this notice in triplicate to the Oil Conservation Commission or its proper agent before the work specified is to begin. A copy will be returned to the sender on which will be given the approval, with any modifications considered advisable, or the rejection by the Commission or its agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate nature of notice by checking below:

NOTICE OF INTENTION TO TEST CASING SHUT-OFF	<b>7" OD</b>	NOTICE OF INTENTION TO SHOOT OR CHEMICALLY TREAT WELL
NOTICE OF INTENTION TO CHANGE PLANS		NOTICE OF INTENTION TO PULL OR OTHERWISE ALTER CASING
NOTICE OF INTENTION TO REPAIR WELL		NOTICE OF INTENTION TO PLUG WELL
NOTICE OF INTENTION TO DEEPEN WELL		

Hobbs, New Mexico May 10th 1937.

Place

Date

OIL CONSERVATION COMMISSION,

Santa Fe, New Mexico.

Gentlemen:

Following is a notice of intention to do certain work as described below at the

**Gulf Oil Corp - Gypsy Divn. - F. W. Kutter C** Well No. **#1** in **NE/4**  
 Company or Operator Lease  
 of Sec. **18**, T. **19**, R. **37**, N. M. P. M., **Monument** Field,  
 Lea. County.

## FULL DETAILS OF PROPOSED PLAN OF WORK

FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS OF THE COMMISSION

May 9th 1937 the 7" OD 22' 10thd New Grade "D" National SS casing was cemented in Lime at 3874' with 200 sacks by the Halliburton Cementing process.

Propose to drill plug and test on May 11th 1937.

DUPLICATE

Approved MAY 13 1937, 19\_\_\_\_  
 except as follows:

OIL CONSERVATION COMMISSION

By

Title

Inspector

Gulf Oil Corp - Gypsy Divn.

Company or Operator

By

Position

Send communications regarding well to

Name

Address

C. C. Cummings.

Hobbs, New Mexico.

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

properties of the operator

$$T_{\lambda} f(x) = \int_{\mathbb{R}^n} f(y) e^{i\lambda \phi(x,y)} dy$$

where  $\phi(x,y)$  is a real-valued function satisfying certain conditions. The main result of this part is the following theorem:

**Theorem 1.1.** Let  $\phi(x,y)$  satisfy

(1)  $\phi(x,y)$  is homogeneous of degree  $m$  in  $y$ , i.e.,  $\phi(x,ty) = t^m \phi(x,y)$  for all  $t > 0$ .

(2)  $\phi(x,y)$  is non-degenerate in  $y$ , i.e.,  $\nabla_y \phi(x,y) \neq 0$  for  $y \neq 0$ .

Then, for  $\lambda > 0$ , the operator  $T_{\lambda}$  is bounded on  $L^p(\mathbb{R}^n)$  for  $1 < p < \infty$  and

$$\|T_{\lambda} f\|_p \leq C \lambda^{-n/p} \|f\|_p$$

where  $C$  is a constant depending only on  $n$  and  $m$ .

The second part of the paper is devoted to the study of the

operator  $T_{\lambda}$  when  $\phi(x,y)$  is not homogeneous. The main result of this part is the following theorem:

**Theorem 1.2.** Let  $\phi(x,y)$  satisfy

(1)  $\phi(x,y)$  is homogeneous of degree  $m$  in  $y$ .

(2)  $\phi(x,y)$  is non-degenerate in  $y$ .

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The third part of the paper is devoted to the study of the operator  $T_{\lambda}$  when  $\phi(x,y)$  is not homogeneous and  $\lambda$  is small.

The main result of this part is the following theorem:

**Theorem 1.3.** Let  $\phi(x,y)$  satisfy

(1)  $\phi(x,y)$  is homogeneous of degree  $m$  in  $y$ .

(2)  $\phi(x,y)$  is non-degenerate in  $y$ .

Then, for  $\lambda > 0$ , the operator  $T_{\lambda}$  is bounded on  $L^p(\mathbb{R}^n)$  for  $1 < p < \infty$  and

$$\|T_{\lambda} f\|_p \leq C \lambda^{-n/p} \|f\|_p$$