

## NEW MEXICO 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	10 3/4"	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 October 18th 1936

Place

Date

OIL CONSERVATION COMMISSION,  
Santa Fe, New Mexico.

Gentlemen:

Following is a notice of intentiton to do certain work as described below at the \_\_\_\_\_

Gulf Oil Corp - Gypsy Division - D. A. Williams Well No. 42 in SW/4  
Company or Operator Lease  
of Sec. 29, 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

On Oct 17th., 1936 the 10 3/4" 32.75# 8th New South Chester LW Steel casing was cemented in Red Bed at 273' 10" by the halliburton Cementing process with 250 sacks cement.

Propose to drill plug and test on Oct 19th., 1936

Approved \_\_\_\_\_, 19\_\_\_\_  
except as follows:

Gulf Oil Corporation - Gypsy Division  
Company or Operator

By C. C. Cummings  
Position District Supt.

Send communications regarding well to

OIL CONSERVATION COMMISSION,

By F. J. Vasey  
Title \_\_\_\_\_

Name C. C. Cummings  
Address Hobbs, New Mexico.

1. The first part of the paper is devoted to the study of the properties of the function  $f(x)$  defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt, \quad (1)$$

where  $x$  is a real number. It is well known that this function is increasing and concave down on the interval  $(-\infty, \infty)$ . Moreover, it is easy to see that  $f(x) \rightarrow 0$  as  $x \rightarrow -\infty$  and  $f(x) \rightarrow \frac{\pi}{2}$  as  $x \rightarrow \infty$ .

2. In the second part of the paper, we consider the function  $g(x)$  defined by the equation

$$g(x) = \int_0^x \frac{1}{1+t^4} dt, \quad (2)$$

where  $x$  is a real number. It is well known that this function is increasing and concave down on the interval  $(-\infty, \infty)$ . Moreover, it is easy to see that  $g(x) \rightarrow 0$  as  $x \rightarrow -\infty$  and  $g(x) \rightarrow \frac{\pi}{4}$  as  $x \rightarrow \infty$ .

3. In the third part of the paper, we consider the function  $h(x)$  defined by the equation

$$h(x) = \int_0^x \frac{1}{1+t^6} dt, \quad (3)$$

where  $x$  is a real number. It is well known that this function is increasing and concave down on the interval  $(-\infty, \infty)$ . Moreover, it is easy to see that  $h(x) \rightarrow 0$  as  $x \rightarrow -\infty$  and  $h(x) \rightarrow \frac{\pi}{6}$  as  $x \rightarrow \infty$ .

4. In the fourth part of the paper, we consider the function  $k(x)$  defined by the equation

$$k(x) = \int_0^x \frac{1}{1+t^8} dt, \quad (4)$$

where  $x$  is a real number. It is well known that this function is increasing and concave down on the interval  $(-\infty, \infty)$ . Moreover, it is easy to see that  $k(x) \rightarrow 0$  as  $x \rightarrow -\infty$  and  $k(x) \rightarrow \frac{\pi}{8}$  as  $x \rightarrow \infty$ .

5. In the fifth part of the paper, we consider the function  $l(x)$  defined by the equation

$$l(x) = \int_0^x \frac{1}{1+t^{10}} dt, \quad (5)$$

where  $x$  is a real number. It is well known that this function is increasing and concave down on the interval  $(-\infty, \infty)$ . Moreover, it is easy to see that  $l(x) \rightarrow 0$  as  $x \rightarrow -\infty$  and  $l(x) \rightarrow \frac{\pi}{10}$  as  $x \rightarrow \infty$ .

6. In the sixth part of the paper, we consider the function  $m(x)$  defined by the equation

$$m(x) = \int_0^x \frac{1}{1+t^{12}} dt, \quad (6)$$

where  $x$  is a real number. It is well known that this function is increasing and concave down on the interval  $(-\infty, \infty)$ . Moreover, it is easy to see that  $m(x) \rightarrow 0$  as  $x \rightarrow -\infty$  and  $m(x) \rightarrow \frac{\pi}{12}$  as  $x \rightarrow \infty$ .

7. In the seventh part of the paper, we consider the function  $n(x)$  defined by the equation

$$n(x) = \int_0^x \frac{1}{1+t^{14}} dt, \quad (7)$$

where  $x$  is a real number. It is well known that this function is increasing and concave down on the interval  $(-\infty, \infty)$ . Moreover, it is easy to see that  $n(x) \rightarrow 0$  as  $x \rightarrow -\infty$  and  $n(x) \rightarrow \frac{\pi}{14}$  as  $x \rightarrow \infty$ .

8. In the eighth part of the paper, we consider the function  $o(x)$  defined by the equation