

NE MI CO 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 <del>SHOOTING</del> CHEMICAL TREATMENT OF WELL	<b>X</b>	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			

Hobbs, New Mexico

9/27/36

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 \_\_\_\_\_

**Tide Water Oil Company**

**Laughlin**

Well No. **1** in the \_\_\_\_\_

Company or Operator

Lease

**NW 1/4**

of Sec. **4**

T. **20**

R. **37**

N. M. P. M.,

**Monument**

Field, **Lee**

County.

The dates of this work were as follows: 9/26/36

Notice of intention to do the work was ~~submitted~~ submitted on Form C-102 on 9/26/36 19\_\_\_\_

and approval of the proposed plan was ~~obtained~~ obtained. (Cross out incorrect words.)

**DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED**

Before treatment of 3000-Gallons Dowell X Acid well averaged ~~22~~ 22-bbls per hour for 14-hours, was pinched down from 1" choke to 32/64" choke and made 10-bbls per hour for two hours and went dead. Was treated again with 3000-Gallons of Dowell X Acid on the 9/26/36, was swabbed in and made 14-bbls fluid per hour for 24-hours W/10% BS&Acid W/600,000 cu ft gas, 1" choke on tubing, casing pressure 250#. On 9/28/36 well averaged 10-bbls per hour W/4 1/2% BS&Acid 1" choke on tubing, CP 210#. On 9/29/36 well flowed 63-bbls in 8-hours and went dead, 4% BS&Acid. On 9/30/36 well flowed 20-bbls through tubing after being shut in for 24-hours and went dead. CP 550# TP Zero.

Preparing to deepen.

Witnessed by \_\_\_\_\_ Name \_\_\_\_\_ Company \_\_\_\_\_ Title \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_

day of Oct. 1936

*Catharine M. Mahoney*  
Notary Public

My Commission expires 11-24-39

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

Name J. F. Schneider - L. P.

Position Prod. Sup'v

Representing Tide Water Oil Company  
Company or Operator

Address Drawer KK Hobbs, New Mexico

Remarks:

*J. F. Schneider*  
Title

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

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

The function  $f(x)$  is defined for all real values of  $x$  and is continuous. It is also differentiable for all  $x$  and its derivative is given by the formula

$$f'(x) = \frac{1}{1+x^2}.$$

The function  $f(x)$  is an odd function, i.e.,  $f(-x) = -f(x)$ . It is also a periodic function with period  $\pi$ .

The function  $f(x)$  is bounded for all  $x$  and its range is the interval  $(-\frac{\pi}{2}, \frac{\pi}{2})$ . The function  $f(x)$  is also a concave down function for all  $x$ .

The function  $f(x)$  is a solution of the differential equation  $y' = \frac{1}{1+x^2}$  with the initial condition  $y(0) = 0$ .

$$f(x) = \arctan x.$$

Q.E.D.

2.

$$f(x) = \arctan x.$$

$$f'(x) = \frac{1}{1+x^2}.$$

$$f''(x) = -\frac{2x}{(1+x^2)^2}.$$

$$f'''(x) = \frac{2(1-x^2)}{(1+x^2)^3}.$$

$$f^{(4)}(x) = \frac{6x(1-x^2)}{(1+x^2)^4}.$$

$$f^{(5)}(x) = \frac{6(1-5x^2)}{(1+x^2)^5}.$$

$$f^{(6)}(x) = \frac{24x(5-x^2)}{(1+x^2)^6}.$$

$$f^{(7)}(x) = \frac{24(1-7x^2)}{(1+x^2)^7}.$$

$$f^{(8)}(x) = \frac{168x(7-x^2)}{(1+x^2)^8}.$$

$$f^{(9)}(x) = \frac{168(1-9x^2)}{(1+x^2)^9}.$$

$$f^{(10)}(x) = \frac{1440x(9-x^2)}{(1+x^2)^{10}}.$$

$$f^{(11)}(x) = \frac{1440(1-11x^2)}{(1+x^2)^{11}}.$$

$$f^{(12)}(x) = \frac{17280x(11-x^2)}{(1+x^2)^{12}}.$$

$$f^{(13)}(x) = \frac{17280(1-13x^2)}{(1+x^2)^{13}}.$$

$$f^{(14)}(x) = \frac{207360x(13-x^2)}{(1+x^2)^{14}}.$$

$$f^{(15)}(x) = \frac{207360(1-15x^2)}{(1+x^2)^{15}}.$$

$$f^{(16)}(x) = \frac{259200x(15-x^2)}{(1+x^2)^{16}}.$$

$$f^{(17)}(x) = \frac{259200(1-17x^2)}{(1+x^2)^{17}}.$$

$$f^{(18)}(x) = \frac{3110400x(17-x^2)}{(1+x^2)^{18}}.$$

$$f^{(19)}(x) = \frac{3110400(1-19x^2)}{(1+x^2)^{19}}.$$

$$f^{(20)}(x) = \frac{37324800x(19-x^2)}{(1+x^2)^{20}}.$$

$$f^{(21)}(x) = \frac{37324800(1-21x^2)}{(1+x^2)^{21}}.$$

$$f^{(22)}(x) = \frac{447897600x(21-x^2)}{(1+x^2)^{22}}.$$

$$f^{(23)}(x) = \frac{447897600(1-23x^2)}{(1+x^2)^{23}}.$$

$$f^{(24)}(x) = \frac{5476771200x(23-x^2)}{(1+x^2)^{24}}.$$