

OIL CONSERVATION COMMISSION

BOX 2045

HOBBS, NEW MEXICO

DATE March 16, 1956

MR. W. B. MACEY
OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

RE: PROPOSED ORDER NO. DC 283

Dear Mr. Macey:

I have examined the application for dual completion dated 11/1/55
for Continental Oil Co. J. H. Nolan B-M 11-21-37
Operator Lease Name Well No. Unit S-T-R

and my recommendations are as follows:

O. K. ---C. R.

O. K. ---R. F. M.

Yours very truly,

OIL CONSERVATION COMMISSION

C. M. Rieder

Engineer-District 1

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

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

for $x \in \mathbb{R}$. It is shown that $f(x)$ is an odd function and that $f(x) \in C^1(\mathbb{R})$.

2. In the second part, it is shown that

$$\lim_{x \rightarrow \infty} f(x) = \frac{\pi}{2} \quad \text{and} \quad \lim_{x \rightarrow -\infty} f(x) = -\frac{\pi}{2}.$$

3. The third part of the paper is devoted to the study of the function $g(x)$ defined by the equation

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

for $x \in \mathbb{R}$. It is shown that $g(x)$ is an even function and that $g(x) \in C^1(\mathbb{R})$.

4. In the fourth part, it is shown that

$$\lim_{x \rightarrow \infty} g(x) = \frac{\pi}{2} \quad \text{and} \quad \lim_{x \rightarrow -\infty} g(x) = \frac{\pi}{2}.$$

5. The fifth part of the paper is devoted to the study of the function $h(x)$ defined by the equation

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

$$h(x) = \frac{x^2}{2} - \frac{1}{2} \ln(1+x^2)$$

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