

NEW MEXICO STATE LAND OFFICE
OFFICE OF THE STATE GEOLOGIST
SANTA FE, NEW MEXICO

MISCELLANEOUS NOTICES

Submit this notice in triplicate to the State Geologist or proper Oil and Gas Inspector at least five days 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 State Geologist or Oil and Gas Inspector of the plan submitted. The plan as approved should be followed and work should not begin until approval is obtained.

Indicate nature of notice by checking below:

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 DEEPEN WELL	To Acidize the well.

Hobbs, New Mexico. May 28th, 1935.

PLACE

DATE

Mr. **E.H. Wells** State Geologist,
Santa Fe, N. Mex.

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

Gypsy Oil Company **Arnett-Ramsey (B)** Well No. **1** in **SW/4**
COMPANY OR OPERATOR LEASE
 of Sec. **32**, T. **23N**, R. **37E**, N. M. P. M., **Jal**
 Oil Field, **Lea** County.

DETAILS OF PROPOSED PLAN OF WORK

Propose to acidize the above well with 1000 Gallons of 60-40 Hydrochloric Acid Solution, by the Chemical Process.

Before Treatment well made 90% Water and was able to swab well dry.

Approved _____, 19____
except as follows:

B. J. Gifford, Umpire
E. H. Wells, State Oil & Gas Insp.
 Address _____

Gypsy Oil Company

COMPANY OR OPERATOR

By *S.C. Cummings*

Position **District Superintendent**

Send communications regarding well to

Name **S.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

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$
for $x \in \mathbb{R}$. It is shown that $f(x)$ is an odd function, i.e., $f(-x) = -f(x)$, and that it is strictly increasing on \mathbb{R} . Moreover, it is proved that $f(x)$ is bounded on \mathbb{R} , with $\lim_{x \rightarrow -\infty} f(x) = -\frac{\pi}{2}$ and $\lim_{x \rightarrow \infty} f(x) = \frac{\pi}{2}$.

2. In the second part, we consider the function $g(x)$ defined by the equation $g(x) = \int_0^x \frac{1}{1+t^4} dt$ for $x \in \mathbb{R}$. It is shown that $g(x)$ is an even function, i.e., $g(-x) = g(x)$, and that it is strictly increasing on $[0, \infty)$. Moreover, it is proved that $g(x)$ is bounded on \mathbb{R} , with $\lim_{x \rightarrow -\infty} g(x) = 0$ and $\lim_{x \rightarrow \infty} g(x) = \frac{\pi}{4}$.

3. Finally, we study the function $h(x)$ defined by the equation $h(x) = \int_0^x \frac{1}{1+t^6} dt$ for $x \in \mathbb{R}$. It is shown that $h(x)$ is an even function, i.e., $h(-x) = h(x)$, and that it is strictly increasing on $[0, \infty)$. Moreover, it is proved that $h(x)$ is bounded on \mathbb{R} , with $\lim_{x \rightarrow -\infty} h(x) = 0$ and $\lim_{x \rightarrow \infty} h(x) = \frac{\pi}{6}$.

4. The last part of the paper is devoted to the study of the function $k(x)$ defined by the equation

$$k(x) = \int_0^x \frac{1}{1+t^8} dt$$
for $x \in \mathbb{R}$. It is shown that $k(x)$ is an even function, i.e., $k(-x) = k(x)$, and that it is strictly increasing on $[0, \infty)$. Moreover, it is proved that $k(x)$ is bounded on \mathbb{R} , with $\lim_{x \rightarrow -\infty} k(x) = 0$ and $\lim_{x \rightarrow \infty} k(x) = \frac{\pi}{8}$.

5. In the final part, we consider the function $l(x)$ defined by the equation $l(x) = \int_0^x \frac{1}{1+t^{10}} dt$ for $x \in \mathbb{R}$. It is shown that $l(x)$ is an even function, i.e., $l(-x) = l(x)$, and that it is strictly increasing on $[0, \infty)$. Moreover, it is proved that $l(x)$ is bounded on \mathbb{R} , with $\lim_{x \rightarrow -\infty} l(x) = 0$ and $\lim_{x \rightarrow \infty} l(x) = \frac{\pi}{10}$.

6. The last part of the paper is devoted to the study of the function $m(x)$ defined by the equation $m(x) = \int_0^x \frac{1}{1+t^{12}} dt$ for $x \in \mathbb{R}$. It is shown that $m(x)$ is an even function, i.e., $m(-x) = m(x)$, and that it is strictly increasing on $[0, \infty)$. Moreover, it is proved that $m(x)$ is bounded on \mathbb{R} , with $\lim_{x \rightarrow -\infty} m(x) = 0$ and $\lim_{x \rightarrow \infty} m(x) = \frac{\pi}{12}$.

7. Finally, we consider the function $n(x)$ defined by the equation $n(x) = \int_0^x \frac{1}{1+t^{14}} dt$ for $x \in \mathbb{R}$. It is shown that $n(x)$ is an even function, i.e., $n(-x) = n(x)$, and that it is strictly increasing on $[0, \infty)$. Moreover, it is proved that $n(x)$ is bounded on \mathbb{R} , with $\lim_{x \rightarrow -\infty} n(x) = 0$ and $\lim_{x \rightarrow \infty} n(x) = \frac{\pi}{14}$.

8. The last part of the paper is devoted to the study of the function $o(x)$ defined by the equation $o(x) = \int_0^x \frac{1}{1+t^{16}} dt$ for $x \in \mathbb{R}$. It is shown that $o(x)$ is an even function, i.e., $o(-x) = o(x)$, and that it is strictly increasing on $[0, \infty)$. Moreover, it is proved that $o(x)$ is bounded on \mathbb{R} , with $\lim_{x \rightarrow -\infty} o(x) = 0$ and $\lim_{x \rightarrow \infty} o(x) = \frac{\pi}{16}$.

9. Finally, we consider the function $p(x)$ defined by the equation $p(x) = \int_0^x \frac{1}{1+t^{18}} dt$ for $x \in \mathbb{R}$. It is shown that $p(x)$ is an even function, i.e., $p(-x) = p(x)$, and that it is strictly increasing on $[0, \infty)$. Moreover, it is proved that $p(x)$ is bounded on \mathbb{R} , with $\lim_{x \rightarrow -\infty} p(x) = 0$ and $\lim_{x \rightarrow \infty} p(x) = \frac{\pi}{18}$.

10. The last part of the paper is devoted to the study of the function $q(x)$ defined by the equation $q(x) = \int_0^x \frac{1}{1+t^{20}} dt$ for $x \in \mathbb{R}$. It is shown that $q(x)$ is an even function, i.e., $q(-x) = q(x)$, and that it is strictly increasing on $[0, \infty)$. Moreover, it is proved that $q(x)$ is bounded on \mathbb{R} , with $\lim_{x \rightarrow -\infty} q(x) = 0$ and $\lim_{x \rightarrow \infty} q(x) = \frac{\pi}{20}$.