

(SUBMIT IN TRIPLICATE)

U. S. Land Office **032100**

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Lease or permit No.

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL.....		SUBSEQUENT REPORT OF WATER SHUT-OFF.....	
NOTICE OF INTENTION TO CHANGE PLANS.....		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING.....	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF.....		SUBSEQUENT REPORT OF ALTERING CASING.....	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL.....		SUBSEQUENT REPORT OF REDRILLING OR REPAIR.....	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE.....		SUBSEQUENT REPORT OF ABANDONMENT.....	
NOTICE OF INTENTION TO PULL OR ALTER CASING.....		SUPPLEMENTARY WELL HISTORY.....	
NOTICE OF INTENTION TO ABANDON WELL.....			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

C. H. Lookhart
2

Fort Worth, Texas, May 12 45

Well No. **2** is located **660** ft. from **N** line and **660** ft. from **E** line of sec. **18**
NW1/4 of Sec. **18** **T-22-S** **R-58-E** **NMPM**

Unassigned (Field) Sec. No. (Twp.) **Lea** (Range) (Meridian) **New Mexico**
(County or Subdivision) (State or Territory)

The elevation of the derrick floor above sea level is **3347** ft.

DETAILS OF WORK

FORMATIONS EXPECTED

Formations	Depth	Size	CASING PROGRAM (APPROX.)
Top of anhydrite	1270'		Set at 300'
Top of Salt	1420'	13-3/8" OD 48#	Cement 300 Sk.
Base of salt	2540'	9-5/8" OD 32.40#	1650 Sk.
Top of brown lime	2640'	7" OD 23#	500 Sk.
Top of San Andres	4060'		
Top of Glorieta	5250'		

First productive oil sand expected at approximately **6470'-6560'**.

Type Tools: Rotary

Drilling Contractor:

Thompson-Carr, Inc.
229 Shell Building
Houston, Texas

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company **The Texas Company**
P. O. Box 1720,

Address **Fort Worth 1, Texas**

B. C. Ray
H. M. M.

By **Assistant Division Manager**
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

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$
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 concave down for $x > 0$ and concave up for $x < 0$. The limits $\lim_{x \rightarrow \pm\infty} f(x) = \pm \frac{\pi}{2}$ are also established.

2. In the second part, we consider the function $g(x) = \arctan x$ and its Taylor series expansion around $x=0$. It is shown that the series converges for $|x| < 1$ and that the remainder term $R_n(x)$ satisfies the estimate

$$|R_n(x)| \leq \frac{|x|^{n+1}}{n+1}$$
for $|x| < 1$.

3. The third part of the paper is devoted to the study of the function $h(x) = \arctan x$ and its Taylor series expansion around $x=0$. It is shown that the series converges for $|x| < 1$ and that the remainder term $R_n(x)$ satisfies the estimate

$$|R_n(x)| \leq \frac{|x|^{n+1}}{n+1}$$
for $|x| < 1$.

4. In the fourth part, we consider the function $h(x) = \arctan x$ and its Taylor series expansion around $x=0$. It is shown that the series converges for $|x| < 1$ and that the remainder term $R_n(x)$ satisfies the estimate

$$|R_n(x)| \leq \frac{|x|^{n+1}}{n+1}$$
for $|x| < 1$.

5. The fifth part of the paper is devoted to the study of the function $h(x) = \arctan x$ and its Taylor series expansion around $x=0$. It is shown that the series converges for $|x| < 1$ and that the remainder term $R_n(x)$ satisfies the estimate

$$|R_n(x)| \leq \frac{|x|^{n+1}}{n+1}$$
for $|x| < 1$.

6. In the sixth part, we consider the function $h(x) = \arctan x$ and its Taylor series expansion around $x=0$. It is shown that the series converges for $|x| < 1$ and that the remainder term $R_n(x)$ satisfies the estimate

$$|R_n(x)| \leq \frac{|x|^{n+1}}{n+1}$$
for $|x| < 1$.