



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Indian Agency Santa Fe
New Mexico
Allottee Tidewater Oil Company
Lease No. 14-30-600-3530
Navajo-Ute Mtn.

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 REDRILL 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	<u>Subsequent Report of Altering lease</u>	
	<u>name and Well Number</u>	<u>X</u>

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

May 20, 1963

Well No. Navajo Unit
1 is located 2310 ft. from N line and 2310 ft. from E line of sec. 7

NE 1/4 Sec. 7 T-31-N, R-14-W NMPM
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)
Northeast Horseshoe San Juan New Mexico
(Field) (County or Subdivision) (State or Territory)

The elevation of the ground level
surface above sea level is 5769 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

To correct lease and well number:-

From: Navajo Well No. 2

To : Navajo Unit Well No. 1



RECEIVED

MAY 21 1963

U. S. GEOLOGICAL SURVEY
ALBUQUERQUE, NEW MEXICO

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

Company Tidewater Oil Company

Address Area Office Box - 547, Hobbs, New Mexico

District Office, Box 1231, Midland, Texas

By K. W. L. Henry

Division Office, Box 1404, Houston, Texas

Title Asst. Dist. Production Mgr.

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

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

It is well known that this function is the arctangent function, i.e.

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

and that it satisfies the differential equation

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

2. The second part of the paper is devoted to the study of the properties of the function $g(x)$ defined by the equation

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

It is well known that this function is the logarithm of the square root of $1+x^2$, i.e.

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

and that it satisfies the differential equation

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

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