

AFFIDAVIT OF COMMUNITIZATION AGREEMENT

NOTARY PUBLIC ODC

20 JUN 4 AM 7:46

STATE OF NEW MEXICO )  
COUNTY OF LEA ) ss.

Mr. George M. Geyer, being first duly sworn,  
deposes and says, that he is the duly authorized agent and representative of  
Cities Service Oil Company, designated operator of the

State "AS" No. 1 located in  
Lease Well No.

Section 2-24S-36E, Lea County, New Mexico  
Legal Description of Unit

W/2 Sec. 2-24S-36E, Lea County, New Mexico

N.M.P.M., consisting of 320 acres and that all owners of working  
interests underlying the above described unit have pooled or communitized  
their respective interests for the purpose of production of oil or gas and  
associated hydrocarbons from said unit, insofar as said production pertains  
to the Jalmit Gas Pool.

*George M. Geyer*  
Signature

Subscribed and sworn to before me this 1st day of June,  
1956.

*Fred Lawson*  
Notary Public in and for the  
County of Lea

My Commission Expires:

February 8, 1958

*Set up as of July 1st in accordance with NSP 245.*

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.  $f(x) = \arctan x$ . The function  $f(x)$  is odd and its range is  $(-\frac{\pi}{2}, \frac{\pi}{2})$ .

2. In the second part, we consider the function  $g(x)$  defined by the equation

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

This function is even and its range is  $(-\frac{\pi}{4}, \frac{\pi}{4})$ . The function  $g(x)$  is the negative of the function  $f(x)$  for  $x < 0$  and the positive of the function  $f(x)$  for  $x > 0$ .

3. In the third part, we consider the function  $h(x)$  defined by the equation

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

This function is even and its range is  $(-\frac{\pi}{4}, \frac{\pi}{4})$ . The function  $h(x)$  is the negative of the function  $g(x)$  for  $x < 0$  and the positive of the function  $g(x)$  for  $x > 0$ .

4. In the fourth part, we consider the function  $k(x)$  defined by the equation

$$k(x) = \int_0^x \frac{t^3}{1+t^2} dt$$

This function is odd and its range is  $(-\frac{\pi}{4}, \frac{\pi}{4})$ . The function  $k(x)$  is the negative of the function  $h(x)$  for  $x < 0$  and the positive of the function  $h(x)$  for  $x > 0$ .

5. In the fifth part, we consider the function  $l(x)$  defined by the equation

$$l(x) = \int_0^x \frac{t^4}{1+t^2} dt$$

This function is even and its range is  $(-\frac{\pi}{4}, \frac{\pi}{4})$ . The function  $l(x)$  is the negative of the function  $k(x)$  for  $x < 0$  and the positive of the function  $k(x)$  for  $x > 0$ .

6. In the sixth part, we consider the function  $m(x)$  defined by the equation

$$m(x) = \int_0^x \frac{t^5}{1+t^2} dt$$

This function is odd and its range is  $(-\frac{\pi}{4}, \frac{\pi}{4})$ . The function  $m(x)$  is the negative of the function  $l(x)$  for  $x < 0$  and the positive of the function  $l(x)$  for  $x > 0$ .

7. In the seventh part, we consider the function  $n(x)$  defined by the equation

$$n(x) = \int_0^x \frac{t^6}{1+t^2} dt$$

This function is even and its range is  $(-\frac{\pi}{4}, \frac{\pi}{4})$ . The function  $n(x)$  is the negative of the function  $m(x)$  for  $x < 0$  and the positive of the function  $m(x)$  for  $x > 0$ .

8. In the eighth part, we consider the function  $o(x)$  defined by the equation

$$o(x) = \int_0^x \frac{t^7}{1+t^2} dt$$

This function is odd and its range is  $(-\frac{\pi}{4}, \frac{\pi}{4})$ . The function  $o(x)$  is the negative of the function  $n(x)$  for  $x < 0$  and the positive of the function  $n(x)$  for  $x > 0$ .

9. In the ninth part, we consider the function  $p(x)$  defined by the equation

$$p(x) = \int_0^x \frac{t^8}{1+t^2} dt$$

This function is even and its range is  $(-\frac{\pi}{4}, \frac{\pi}{4})$ . The function  $p(x)$  is the negative of the function  $o(x)$  for  $x < 0$  and the positive of the function  $o(x)$  for  $x > 0$ .