

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

REQUEST FOR PERMISSION TO CONNECT WITH PIPE LINE

This request should be SUBMITTED IN TRIPLICATE. See instructions in the Rules and Regulations of the Commission.

Monument, New Mexico

Place

February 10, 1936

Date

OIL CONSERVATION COMMISSION,
Santa Fe, New Mexico.

Gentlemen:

Permission is requested to connect Amerada Petroleum Corporation State "D"
Company or Operator Lease
Wells No. 2 in SW NW of Sec. 1, T. 20, R. 36, N. M. P. M.

Monument Field, Lea County, with the pipe line of the
Texas Pipe Line Company Hobbs, N.M.
Pipe Line Co. Address

Status of land (State, Government or privately owned)

Location of tank battery Center of NW $\frac{1}{4}$ Sec. 1-20-36Description of tanks 2-600 barrels wood tanksLogs of the above wells were filed with the Oil Conservation Commission February 10, 19 36All other requirements of the Commission have [~~been~~] been complied with. (Cross out incorrect words.)

Additional information:

February 2, 1936 on 24 hour test well produced an average of 13 barrels per hour with gas at rate of 538,000 daily. Well is completed at total depth of 5015 and will go on prorated allowable February 16, 1936.

Yours truly,

Permission is hereby granted to make pipe line connections requested above.

OIL CONSERVATION COMMISSION,

By P. H. WellsTitle State GeologistDate Feb. 17-1936Amerada Petroleum Corporation

Owner or Operator

By L. H. StanleyPosition Farm BossAddress Monument, New Mexico

QUESTION 1

Consider the following two functions defined on the interval $[0, 1]$:

$$f(x) = \begin{cases} x^2 & \text{if } 0 \leq x < 1 \\ 1 & \text{if } x = 1 \end{cases}$$

$$g(x) = \begin{cases} 1 & \text{if } 0 \leq x < 1 \\ x^2 & \text{if } x = 1 \end{cases}$$

Find the value of the definite integral $\int_0^1 f(x)g(x)dx$.

Since $f(x)$ and $g(x)$ are both defined on the interval $[0, 1]$, we can write the integral as follows:

$$\int_0^1 f(x)g(x)dx = \int_0^1 x^2 \cdot 1 dx + \int_1^1 1 \cdot x^2 dx$$

The first integral is a standard power rule integral, and the second integral is zero because the limits of integration are the same.

Therefore, the value of the definite integral is:

$$\int_0^1 f(x)g(x)dx = \int_0^1 x^2 dx = \left[\frac{x^3}{3} \right]_0^1 = \frac{1}{3}$$

The value of the definite integral $\int_0^1 f(x)g(x)dx$ is $\frac{1}{3}$.

Since $f(x)$ and $g(x)$ are both defined on the interval $[0, 1]$, we can write the integral as follows:

$$\int_0^1 f(x)g(x)dx = \int_0^1 x^2 \cdot 1 dx + \int_1^1 1 \cdot x^2 dx$$

The first integral is a standard power rule integral, and the second integral is zero because the limits of integration are the same.

$$\int_0^1 f(x)g(x)dx = \int_0^1 x^2 dx = \left[\frac{x^3}{3} \right]_0^1 = \frac{1}{3}$$

Therefore, the value of the definite integral is:

$$\int_0^1 f(x)g(x)dx = \frac{1}{3}$$

The value of the definite integral $\int_0^1 f(x)g(x)dx$ is $\frac{1}{3}$.

The value of the definite integral $\int_0^1 f(x)g(x)dx$ is $\frac{1}{3}$.

The value of the definite integral $\int_0^1 f(x)g(x)dx$ is $\frac{1}{3}$.