

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

MISCELLANEOUS NOTICES

Submit this notice in triplicate to the Oil Conservation Commission or its proper agent 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 Commission or agent, of the plan submitted. The plan as approved should be followed, and work should not begin until approval is obtained. See additional instructions in the Rules and Regulations of the Commission.

Indicate nature of notice by checking below:

NOTICE OF INTENTION TO TEST CASING SHUT-OFF		NOTICE OF INTENTION TO SHOOT OR CHEMICALLY TREAT WELL	X
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 PLUG WELL	
NOTICE OF INTENTION TO DEEPEN WELL			

Midland, Texas

July 18, 1946

Place

Date

OIL CONSERVATION COMMISSION,
Santa Fe, New Mexico.

Gentlemen:

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

Humble Oil & Refining Co. **New Mexico State #3** Well No. **7** in **SE/4** of **SW/4**
Company or Operator Lease
of Sec. **2**, T. **22-S**, R. **37-E**, N. M. P. M., **Paddock** Field,
Lea County.

FULL DETAILS OF PROPOSED PLAN OF WORK

FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS OF THE COMMISSION

To perforate 5-1/2" casing from 5073' to 5101' and from 5115' to 5196' with 3 1/2" shots per foot and treat perforations with approximately 5,000 gallons acid.

Approved JUL 22 1946, 19____
except as follows:

OIL CONSERVATION COMMISSION,

By

Title

Humble Oil & Refining Company

Company or Operator

By

Position

Division Petroleum Engineer

Send communications regarding well to

Name

J. W. House

Address

Box 1600

Midland, Texas

Mathematical Induction

Example 1

Prove that $1 + 2 + 3 + \dots + n = \frac{n(n+1)}{2}$

Base

Step

Assume $1 + 2 + 3 + \dots + k = \frac{k(k+1)}{2}$

Step

Prove $1 + 2 + 3 + \dots + (k+1) = \frac{(k+1)(k+2)}{2}$

Proof: $1 + 2 + 3 + \dots + k + (k+1)$

By the induction hypothesis, $1 + 2 + 3 + \dots + k = \frac{k(k+1)}{2}$. Therefore,

$$1 + 2 + 3 + \dots + k + (k+1) = \frac{k(k+1)}{2} + (k+1)$$

$$= \frac{k(k+1) + 2(k+1)}{2}$$

$$= \frac{(k+1)(k+2)}{2}$$

Thus, $1 + 2 + 3 + \dots + (k+1) = \frac{(k+1)(k+2)}{2}$. \square

Example 2: Prove that $2^n > n$ for all $n \geq 1$.

Base Case: $2^1 > 1$

Step

Assume $2^k > k$ for some $k \geq 1$.

Prove $2^{k+1} > k+1$.

$$2^{k+1} = 2 \cdot 2^k > 2 \cdot k > k+1$$

Thus, $2^{k+1} > k+1$. \square

Example 3: Prove that $1^2 + 2^2 + 3^2 + \dots + n^2 = \frac{n(n+1)(2n+1)}{6}$