

NE MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

Notice of Intention to Drill

Notice must be given to the Oil Conservation Commission or its proper agent and approval obtained before drilling begins. If changes in the proposed plan are considered advisable, a copy of this notice showing such changes will be returned to the sender. Submit this notice in triplicate. One copy will be returned following approval. See additional instructions in Rules and Regulations of the Commission.

Midland, Texas,

August 18, 1939

OIL CONSERVATION COMMISSION,
Santa Fe, New Mexico.
Gentlemen:

Place

Date

DUPLICATE

Lsc. #24241

You are hereby notified that it is our intention to commence the drilling of a well to be known as Humble Oil & Refining Co. N. M. State "K" Well No. 9 in SE/4 of SW/4

of Sec. 28, T. 17-S, R. 35-E, N. M. P. M., Lease Vacuum Field, Lea County

N.

The well is 660 feet (N.) S. of the South line and 1992.2 feet (E.) W. of the West line of Center of SE/4 of SW/4 of Section 28

(Give location from section or other legal subdivision lines. Cross out wrong directions.)

If state land the oil and gas lease is No. _____, Assignment No. _____

If patented land the owner is _____

Address _____

If government land the permittee is _____

Address _____

The lessee is Humble Oil & Refining Company

Address Box 1600, Midland, Texas

We propose to drill well with drilling equipment as follows: _____

Rotary Rig

The status of a bond for this well in conformance with Rule 39 of the General Rules and Regulations of the Commission is as follows: Now on file in Commission Office

We propose to use the following strings of casing and to land or cement them as indicated:

Size of Hole	Size of Casing	Weight Per Foot	New or Second Hand	Depth	Landed or Cemented	Sacks Cement
13-3/4"	10-3/4"	40.5#	New	250'	Cemented	100
9-7/8"	7-5/8"	26.4#	"	1650'	"	525
6-3/4"	5-1/2"	17#	"	4200'	"	150

If changes in the above plan become advisable we will notify you before cementing or landing casing. We estimate that the first productive oil or gas sand should occur at a depth of about 4700 feet.

Additional information:

AUG 21 1939

Approved _____, 19____
except as follows:

Sincerely yours,

Humble Oil & Refining Company

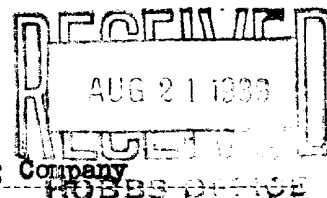
Company or Operator

By [Signature]Position Division Superintendent

Send communication regarding well to

Name J. W. HouseAddress Box 1600, Midland, Texas

OIL CONSERVATION COMMISSION,

By [Signature]Title Oil & Gas Inspector

Mathematical Induction

Prerequisites

Mathematical Induction

The principle of mathematical induction is a method for proving that a statement is true for all natural numbers. It consists of two steps: the base case and the inductive step.

• **Base Case:** Prove the statement is true for the smallest natural number (usually 1).

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• **Inductive Step:** Assume the statement is true for n , and prove it is true for $n+1$.

• **Conclusion:** If the base case and inductive step are proven, the statement is true for all natural numbers.

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• **Example:** Prove that the sum of the first n natural numbers is $\frac{n(n+1)}{2}$.

• **Base Case:** For $n=1$, the sum is 1 , and $\frac{1(1+1)}{2} = 1$. The statement is true.

• **Inductive Step:** Assume the statement is true for n . Then the sum of the first $n+1$ natural numbers is $\frac{n(n+1)}{2} + (n+1) = \frac{(n+1)(n+2)}{2}$. The statement is true for $n+1$.

• **Conclusion:** By the principle of mathematical induction, the statement is true for all natural numbers n .

• **Example:** Prove that $2^n > n$ for all natural numbers n .

• **Base Case:** For $n=1$, $2^1 = 2 > 1$. The statement is true.

• **Inductive Step:** Assume $2^n > n$. Then $2^{n+1} = 2 \cdot 2^n > 2n > n+1$. The statement is true for $n+1$.

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• **Conclusion:** By the principle of mathematical induction, $2^n > n$ for all natural numbers n .

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• **Example:** Prove that $3^n > n^2$ for all natural numbers n .

• **Base Case:** For $n=1$, $3^1 = 3 > 1^2 = 1$. The statement is true.

• **Inductive Step:** Assume $3^n > n^2$. Then $3^{n+1} = 3 \cdot 3^n > 3n^2 > (n+1)^2$. The statement is true for $n+1$.

• **Conclusion:** By the principle of mathematical induction, $3^n > n^2$ for all natural numbers n .

• **Example:** Prove that $4^n > n^3$ for all natural numbers n .

• **Base Case:** For $n=1$, $4^1 = 4 > 1^3 = 1$. The statement is true.

• **Inductive Step:** Assume $4^n > n^3$. Then $4^{n+1} = 4 \cdot 4^n > 4n^3 > (n+1)^3$. The statement is true for $n+1$.

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• **Example:** Prove that $5^n > n^4$ for all natural numbers n .

• **Base Case:** For $n=1$, $5^1 = 5 > 1^4 = 1$. The statement is true.

• **Inductive Step:** Assume $5^n > n^4$. Then $5^{n+1} = 5 \cdot 5^n > 5n^4 > (n+1)^4$. The statement is true for $n+1$.

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• **Example:** Prove that $6^n > n^5$ for all natural numbers n .

• **Base Case:** For $n=1$, $6^1 = 6 > 1^5 = 1$. The statement is true.

• **Inductive Step:** Assume $6^n > n^5$. Then $6^{n+1} = 6 \cdot 6^n > 6n^5 > (n+1)^5$. The statement is true for $n+1$.

• **Conclusion:** By the principle of mathematical induction, $6^n > n^5$ for all natural numbers n .

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• **Example:** Prove that $7^n > n^6$ for all natural numbers n .

• **Base Case:** For $n=1$, $7^1 = 7 > 1^6 = 1$. The statement is true.

• **Inductive Step:** Assume $7^n > n^6$. Then $7^{n+1} = 7 \cdot 7^n > 7n^6 > (n+1)^6$. The statement is true for $n+1$.

• **Conclusion:** By the principle of mathematical induction, $7^n > n^6$ for all natural numbers n .

• **Example:** Prove that $8^n > n^7$ for all natural numbers n .

• **Base Case:** For $n=1$, $8^1 = 8 > 1^7 = 1$. The statement is true.

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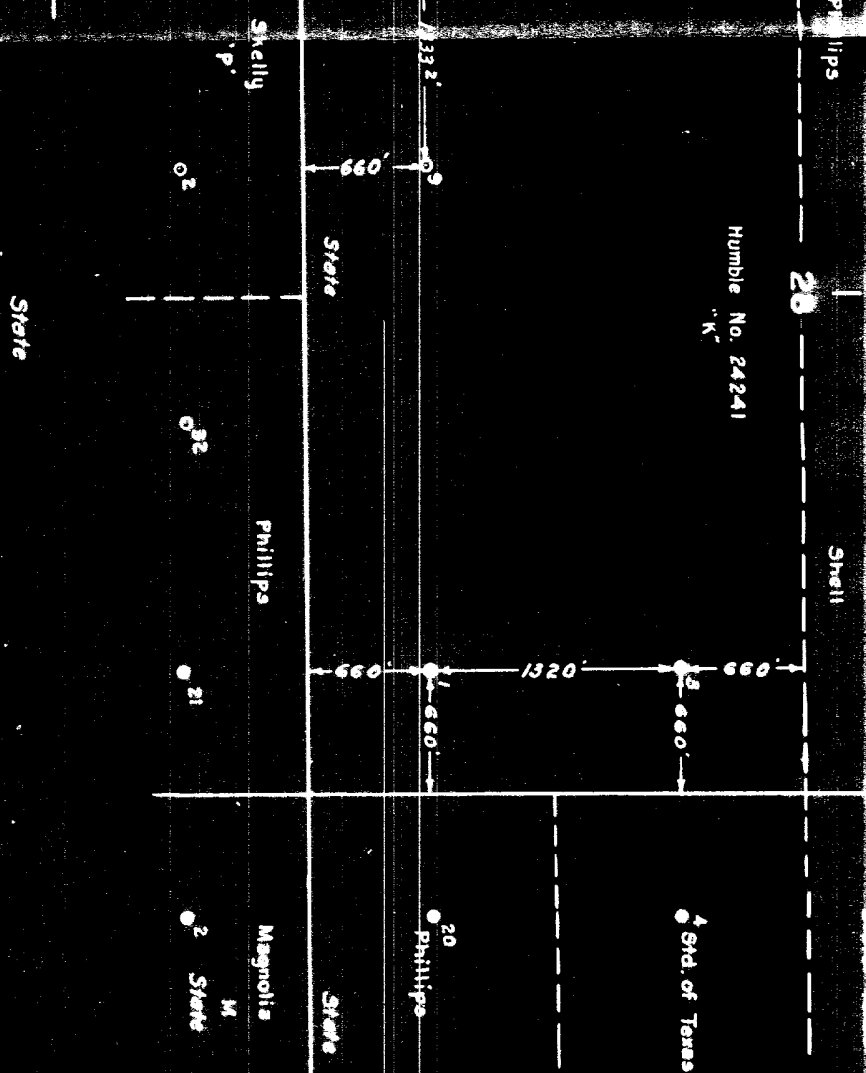
• **Inductive Step:** Assume $8^n > n^7$. Then $8^{n+1} = 8 \cdot 8^n > 8n^7 > (n+1)^7$. The statement is true for $n+1$.

• **Conclusion:** By the principle of mathematical induction, $8^n > n^7$ for all natural numbers n .

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N.M. STATE 'K' LEASE NO. 24241
S 1/2 SEC. 28 & E 1/2 SEC. 32 T17S-R36E LEA CO., N.M.

INTERNATIONAL DEPARTMENT

HUMBLE OIL & REFINING COMPANY

SEARCHED	INDEXED	FILE NO.
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