

NEW MEXICO OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

IN THE MATTER OF THE APPLICATION )  
OF THE AURORA GASOLINE COMPANY )  
FOR APPROVAL OF AN UNORTHODOX )  
WELL LOCATION AND FOR APPROVAL )  
OF A WATER FLOODING PROGRAM FOR )  
SECONDARY RECOVERY IN THE NE $\frac{1}{4}$  )  
SEC. 34, TWP. 22 S, RGE. 37 E, )  
N.M.P.M., LEA COUNTY, NEW MEXICO. )

CASE NO. 297

APPLICATION FOR APPROVAL  
OF UNORTHODOX WELL LOCATION AND FOR APPROVAL  
OF WATER FLOODING PROGRAM

New Mexico Oil Conservation Commission  
Santa Fe  
New Mexico

Comes the undersigned, THE AURORA GASOLINE COMPANY, and hereby makes application for the approval of the drilling of a well at an unorthodox location in the NE $\frac{1}{4}$  of Sec. 34, Twp. 22 S, Rge. 37 E, N.M.P.M., in the Penrose-Skelly Field, Lea County, New Mexico, said well to be used for the purpose of injecting water into the "Queen" or "Penrose" Formation of the Guadalupe Group of the Permian Series for the purpose of maintaining reservoir pressure for secondary recovery, and in the event conditions are not found to be favorable for water flooding in said formation and said well should encounter oil or gas in paying quantities, that applicant be permitted to complete said well as a producing well, and that the allowable for the 40-acre legal subdivision upon which the same is located be shared or prorated between the two wells located upon said 40-acre legal subdivision.

In support of said application, the undersigned respectfully shows:

1. That the undersigned applicant is the owner by assignment of that certain Oil and Gas Lease dated October 2, 1935, made and entered into by Thomas O. May and wife, Ruby May, as lessors, and the Repollo Oil Company as lessee, insofar as said Oil and Gas Lease covers and affects the following described lands situated in Lea County, New Mexico, to-wit: SE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ , NE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$  Sec. 34, Twp. 22 S, Rge. 34 E, Lea County, New Mexico, containing 40 acres, more or less.

2. That there is attached hereto, made a part hereof, and for purposes of identification marked Exhibit "A", a plat showing the location of the proposed unorthodox well location, which is to be used as an intake well for water flooding, and which said well is located 1310 feet south of the north line, and 1310 feet west of the east line of Section 34, Twp. 22 S, Rge. 37 E, N.M.P.M. Said plat also shows the location of all surrounding producing wells in the Penrose-Skelly Field and the names of the lessees within one-half mile of the intake well and each offset operator.

3. That there is also attached hereto, made a part hereof and for purposes of identification marked Exhibit "B", a statement showing the production from the various surrounding wells in the Penrose-Skelly Field for the month of May, 1951.

4. That the proposed well, which is to be known as T. O. May No. 5, will be drilled to the "Queen" or "Penrose" Sand or Formation of the Guadalupe Group of the Permian Series. All surrounding wells indicated on the plat attached hereto as Exhibit "A" are producing from this formation at depths ranging from 3620 feet to 3714 feet. This formation generally consists of a finely grained sand of a tightly consolidated nature. The proposed well will be drilled to a depth of approximately 3500 feet with rotary tools and will be cored with a diamond core from that depth to a total depth of approximately 3700 feet. The cores are to be analyzed for bottom hole sample analysis, as well as other reservoir characteristics for determining the feasibility of a successful water flooding program. Should the results obtained from the core analysis indicate the possibility of a successful water flooding secondary recovery program, said well will be used as the initial injection well, and operations on such program

commenced as soon as possible after the completion of the same. Said well will be used as an experimental basis for determining the possibilities of a successful secondary recovery program in said area, and it is impossible at this time to state definitely the estimated amount of water to be injected daily.

That there is also attached hereto, made a part hereof, and for purposes of identification marked Exhibit "C", a copy of the notice of intention to drill said well, which has been heretofore filed with the New Mexico Oil Conservation Commission, and which shows the proposed casing program in connection with said well.

5. That said water flooding program will be under the supervision and direction of the undersigned applicant, whose address is 15911 Wyoming Avenue, Detroit 21, Michigan.

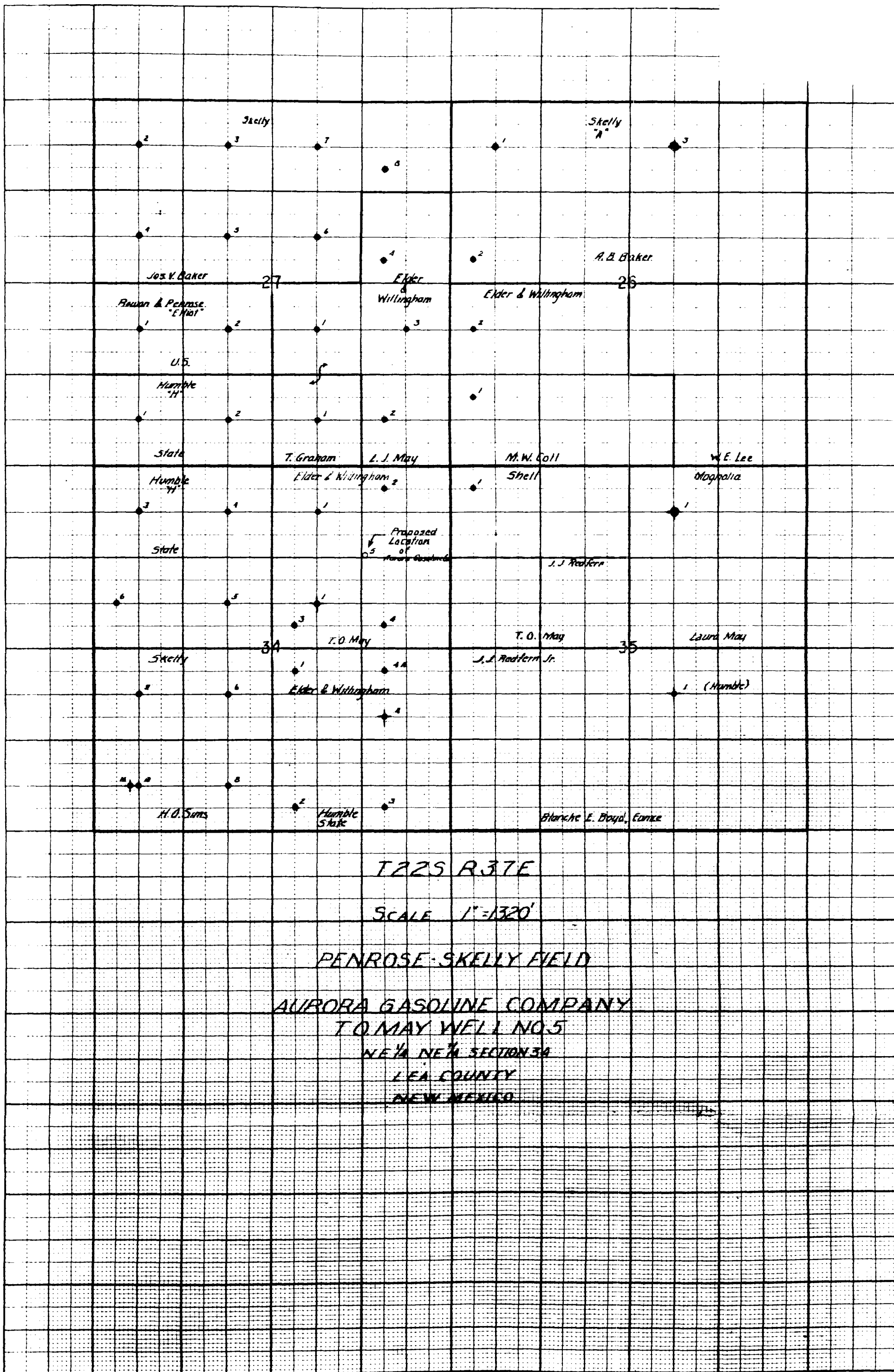
6. That in the event the core analysis or experiments carried on in connection with said well show that a water flooding secondary recovery program is not practicable or feasible in said formation, and said well is completed as a well capable of producing oil or gas in paying quantities, it would be desirable that said well be completed as a producing well, and in such event, the allowable for the 40-acre legal subdivision upon which the same is situated should be allocated between the two wells located upon said legal subdivision, to the end that the two wells may be permitted to produce, if capable of doing so, the full allowable for such 40-acre legal subdivision.

Respectfully submitted,  
AURORA GASOLINE COMPANY

By Jack Shier

HERVEY, DOW & HINKLE

By [Signature]  
Attorneys for Applicant



PENROSE-SKELLY FIELD  
LEA COUNTY, NEW MEXICO

PRODUCTION DATA

COMPANY	LEASE	WELL NO.	PRODUCTION MAY, 1951
Elder & Willingham	Coll	1	153
" " "	"	2	154
" " "	Graham E	1	172
" " "	Humble H	1	67
" " "	"	2	67
" " "	"	3	67
" " "	"	4	68
" " "	L. J. May	1	131
" " "	"	2	131
" " "	"	3	132
" " "	"	4	132
" " "	T. O. May	1	149
" " "	"	2	150
" " "	"	3	150
" " "	"	4	150
Humble Oil & Refg. Co.	State H	1	96
"	"	2	96
"	"	3	72
"	"	4	96
"	"	6	96
Shell Oil Co.	T. O. May	1	0
Skelly Oil Co.	Baker AB	1	50
"	"	2	151
"	Baker JV	2	165
"	"	3	115
"	"	4	122
"	"	5	115
"	"	6	132
"	"	7	138
"	"	8	139
"	H. O. Sims	6	184
"	"	8	159
"	"	9	184
"	"	10	115
Rowan & Penrose, Inc.	Elliott A-27	1	81
"	"	2	82

*Exhibit "B"*

## NEW 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

July 16, 1951

Place

Date

OIL CONSERVATION COMMISSION,  
Santa Fe, New Mexico,

Gentlemen:

You are hereby notified that it is our intention to commence the drilling of a well to be known as

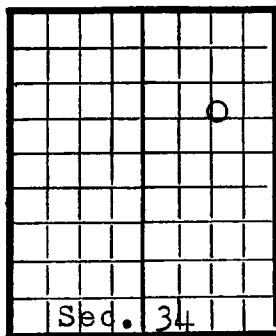
Aurora Gasoline Company, T. O. May well No. 5 in NE $\frac{1}{4}$

Company or Operator

Lease

of Sec. 34, T. 22S, R. 37E, N. M., P. M., Penrose-Skelly, Lea County.

N



AREA 640 ACRES

LOCATE WELL CORRECTLY

The well is 1310 feet (N.) (S.) of the North line and 1310 feet (E.) (W.) of the East line of Sec. 34, T-22S, R-37E

(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 T. O. May

Address Menard, Texas

If government land the permittee is \_\_\_\_\_

Address \_\_\_\_\_

The lessee is \_\_\_\_\_

Address \_\_\_\_\_

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

total depth of 3700'

The status of a bond for this well in conformance with Rule 89 of the General Rules and Regulations of the Commission is as follows: Bond already on file

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
11"	9-5/8"	36#	New	300	cemented	250
7-7/8"	5 1/2"	14#	New	3530	cemented	250

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 3550 feet.

Additional information:

Approved \_\_\_\_\_, 19\_\_\_\_  
except as follows:

OIL CONSERVATION COMMISSION,

By \_\_\_\_\_

Title \_\_\_\_\_

Sincerely yours,

Aurora Gasoline Company  
Company or Operator

By \_\_\_\_\_

G. D. Simon

Position Petroleum Engineer

Send communications regarding well to:

Name M. S. Schiller

308 Wright Building  
Address Tulsa, Oklahoma

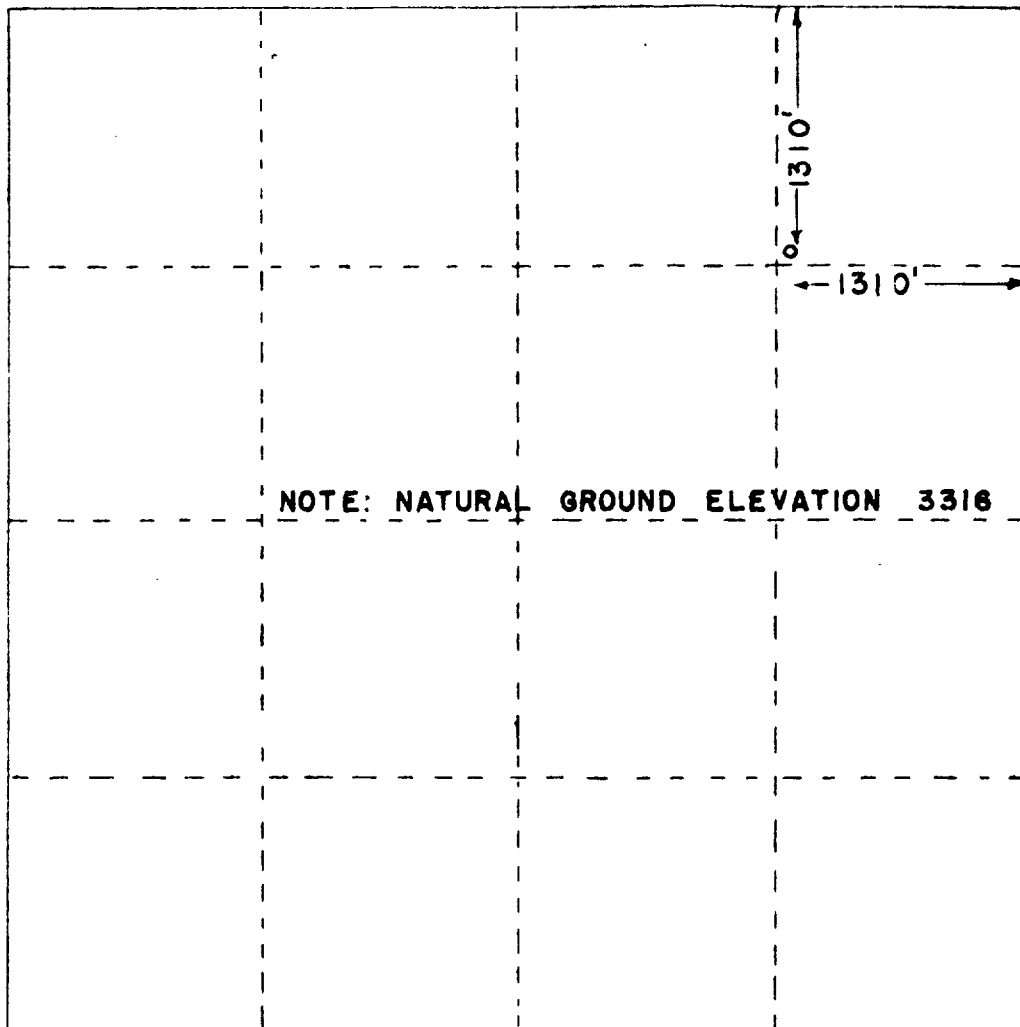
Exhibit "C"

WELL LOCATION SURVEY PLAT

COMPANY AURORA GASOLINE CO.

LEASE T.O. MAY

WELL NO. 5



SEC. 34, TWP. 22 S., RGE. 37 E., N.M.P.M.

I HEREBY CERTIFY THAT THIS PLAT WAS MADE  
FROM NOTES TAKEN IN THE FIELD BY ME AND THAT  
THE SAME IS TRUE AND CORRECT TO THE BEST  
OF MY KNOWLEDGE AND BELIEF.

*John W West*

JOHN W. WEST, P E & L S NO. 676

JULY 6. 1951