

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO.

SEP 17 1951

# BUFFALO OIL COMPANY

A MARYLAND CORPORATION  
GULF STATES BUILDING

DALLAS, TEXAS

CARPER BUILDING  
ARTESIA, N. M.

September 13, 1951

New Mexico Oil Conservation Commission  
Attention: Mr. R. R. Spurrier, Director  
Box 871  
Santa Fe, New Mexico

Dear Sir:

The Buffalo Oil Company desires to extend gas injection operations now being carried on in the Maljamar Field. However, the present injection program only covers wells completed in the Maljamar pool which are producing from the Grayburg and San Andres formations below 3600 ft.

The attached map shows the wells in Section 21-T 17S-R 32E., in Lea County, New Mexico. Besides the wells completed in the Maljamar Pool, the Buffalo Oil Company has three wells completed in the Yates Sand at about 2500 ft. These are Baish A-17Y, 18-Y and 19-Y.

The map also indicates a proposed gas injection well at Baish A #7. This well was originally completed in the Yates Sand at a depth of 2365 ft., and had 10-3/4" casing set at 2301 ft. The well was deepened to the Maljamar pay in October, 1945. In deepening it was anticipated that it might be desirable to inject gas into the Yates Sand at some future date, so a string of 8-5/8" casing was cemented at 3050 ft. with 78 sacks of cement, which would leave the Yates sand open to the bradenhead between the 10-3/4" and 8-5/8" casing strings. The oil string for the Maljamar pay is 7" casing set at 3821 ft. Therefore our Baish A well #7 is now equipped in such a manner that we can produce from the Maljamar Pool through the 7" casing, and at the same time inject gas into the Yates Sand by putting the gas between the 8-5/8" and 10-3/4" casing strings.

The Yates Sand has not shown to be a profitable pay formation in this area, so only three wells have been drilled to this zone. However, it is possible that gas injection will increase the oil recovery. We are therefore, proposing to conduct this as a pilot test to determine if gas injection will increase oil recovery from the Yates Sand in this area. Future drilling and injection facilities would depend on what results we obtain from this experiment.

N.M. Oil Conservation Commission  
R. R. Spurrier  
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Gas for injection is available from the plant serving the Maljamar Cooperative Repressuring Agreement. The plant has an excess of gas suitable for injection, so we will use gas that would otherwise be vented to the air. Injection volume will be about 100 MCF per day.

As this is within the Maljamar Cooperative Repressuring Agreement, we have obtained permission from the operators within this Cooperative Area to proceed with this gas injection program. However, the program will not affect any other operator other than Buffalo.

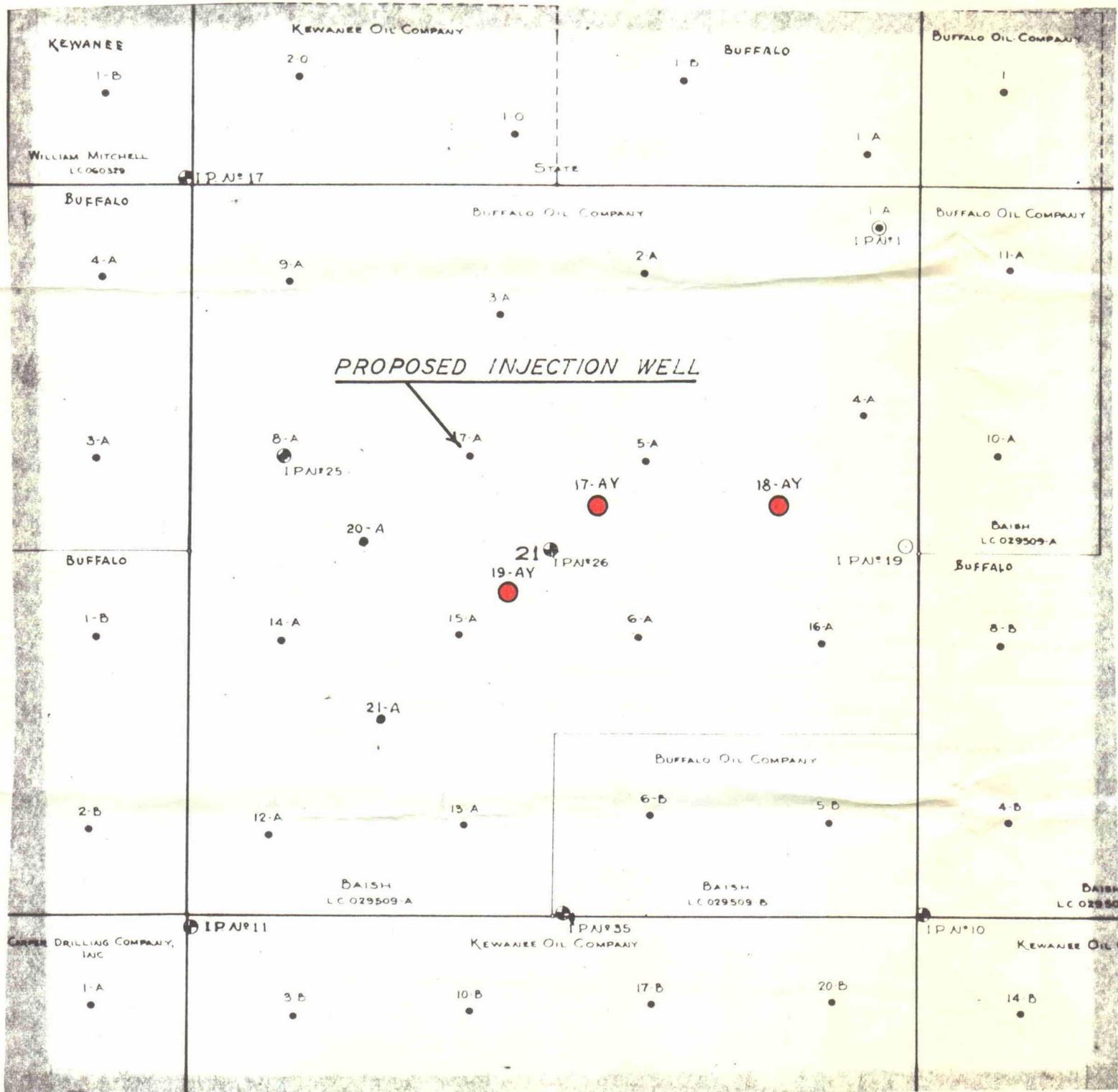
We shall appreciate your early approval of this proposal, so that we may start utilizing this gas that is now being burned.

Yours very truly,

BUFFALO OIL COMPANY

By *Ralph L. Gray*  
Asst. Supt.

RLG:lt



SEC. 21 - T 17 S - R 32 E.

MALJAMAR FIELD

LEA CO., N. MEX.

- WELL COMPLETED IN YATES SAND
- WELL COMPLETED IN MALJAMAR PAY
- ⊕ GAS INPUT WELL - MALJAMAR PAY

SCALE: 1" = 1000'

RLG 9-7-51