

# OIL CONSERVATION COMMISSION

HOBBS, NEW MEXICO

May 22, 1957

Southern Pet. Expl. Inc.  
Box 1017  
Roswell, New Mexico

Re: Casing leak on Morris A #1  
SW/4 SE/4 Sec. 2 T18S R38E  
Lea County, N. M.

Gentlemen:

On April 23, 1957 bradenhead pressures were observed on subject well. Between the 7" casing and the 5½" liner (hung from 0' to 592') and between the liner and 2" tubing there existed similar pressures of 150#. The 5½"-7" annulus was blown down in one minute to 20# and remained at 20#. On shut-in of the 5½"-7" annulus, pressure built up to 70# in ten minutes. On blowing down the 5½"-7" annulus, we actually killed the well. So, although there was a very slight vacuum on the 7" to 12½" annulus and although records show a prior leak at 318' had been squeezed with 1000 sacks of cement, we feel assured that there is a leak in the 7" casing below the 5½" liner and also that there is a leak in the 7" casing behind the liner in the interval from 592' to surface.

In the immediate vicinity of subject well, two fresh water wells are unfit for domestic use. This situation may or may not be caused by subject well. However, due to the critical situation of the fresh water supply in this area, and in accordance with the Rules and Regulations of the New Mexico Oil Conservation Commission (Rule 106 Sealing off Strata), you are hereby advised to make every effort to determine and repair such leak or leaks that are found to exist in subject well.

It will be necessary that you contact this office not later than June 10, 1957 of your proposed plan of repairing said leak(s) and to institute the actual work in the very near future.

Yours very truly,

OIL CONSERVATION COMMISSION

E. J. Fischer  
Engineer-District 1

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HOBBBS NEW MEXICO

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The number of transformed cells was determined by the number of colonies obtained on the selective medium. The results are the mean of three independent experiments. Error bars represent the standard deviation.

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The diagram illustrates a two-dimensional lattice structure. It consists of a grid of points. Arrows indicate the types of interactions between these points: solid arrows represent nearest-neighbor interactions, and dashed arrows represent next-nearest-neighbor interactions. The distance between nearest neighbors is labeled as 'a', and the distance between next-nearest neighbors is labeled as 'b'.

100

100

 $\mu_{\text{eff}} = 1.73$ 

100

10

Figure 1. Schematic diagram of the experimental setup.

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100

2010