

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

DUPLICATE

MISCELLANEOUS NOTICES

RECEIVED
MAY 9 1946

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	
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	X
NOTICE OF INTENTION TO DEEPEN WELL			

4550 ft. in granite
Santa Rosa, New Mexico 4-23-46
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 *American Investment Co.*
Holence Drilling Co. *American Investment Co.* Well No. *1* in *San Miguel*
Company or Operator Lease
of Sec. *14*, T. *12*, R. *22*, N. M. P. M., *Hildesheim* Field.
San Miguel County.

FULL DETAILS OF PROPOSED PLAN OF WORK

FOLLOW INSTRUCTIONS IN THE RULES AND REGULATIONS OF THE COMMISSION

Filled hole with heavy mud to 125 ft. Set plug at bottom of 12 1/2 inch surface pipe. Poured 25 sacks cement for plug and put regulation marker 4 ft. above surface in concrete.

Approved MAY 9 1946, 19____
except as follows:

OIL CONSERVATION COMMISSION,
By *Roy Garbrough*
Title *Oil & Gas Inspector*

Holence Drilling Co.
Company or Operator
By *O. L. Dwyer*
Position *Tool pusher*
Send communications regarding well to
Name *Holence Drilling Co.*
Address *Santa Rosa*
New Mexico

1. The first part of the paper is devoted to a general discussion of the problem of the existence of a solution of the system of equations

$$\begin{aligned} \Delta u &= f(x, y, z, u, v, w) \\ \Delta v &= g(x, y, z, u, v, w) \\ \Delta w &= h(x, y, z, u, v, w) \end{aligned}$$

where f, g, h are continuous functions of the variables x, y, z, u, v, w .

2. In the second part of the paper the author considers the case when the functions f, g, h are linear in the variables u, v, w .

3. The third part of the paper is devoted to the study of the properties of the solutions of the system of equations.

4. Finally,

the author discusses the question of the uniqueness of the solution of the system of equations. It is shown that if the functions f, g, h are continuous and the system of equations is linear in the variables u, v, w , then the solution is unique.

5. The author also considers the case when the functions f, g, h are not linear in the variables u, v, w .

6. In this case the author shows that the solution of the system of equations is not unique.

7. The author also considers the case when the functions f, g, h are not continuous.

8. In this case the author shows that the solution of the system of equations does not exist.

9. Finally, the author discusses the question of the stability of the solution of the system of equations.

10. The author shows that if the functions f, g, h are continuous and the system of equations is linear in the variables u, v, w , then the solution is stable.

11. The author also considers the case when the functions f, g, h are not continuous.

12. In this case the author shows that the solution of the system of equations is not stable.

13. Finally, the author discusses the question of the asymptotic stability of the solution of the system of equations.

14. The author shows that if the functions f, g, h are continuous and the system of equations is linear in the variables u, v, w , then the solution is asymptotically stable.