

NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico

MISCELLANEOUS REPORTS ON WELLS

Submit this report in triplicate to the Oil Conservation Commission or its proper agent within ten days after the work specified is completed. It should be signed and sworn to before a notary public for reports on beginning drilling operations, results of shooting well, results of test of casing shut-off, result of plugging of well, and other important operations, even though the work was witnessed by an agent of the Commission. Reports on minor operations need not be signed and sworn to before a notary public. See additional instructions in the Rules and Regulations of the Commission.

Indicate nature of report by checking below:

REPORT ON BEGINNING DRILLING OPERATIONS		REPORT ON REPAIRING WELL	
REPORT ON RESULT OF SHOOTING OR CHEMICAL TREATMENT OF WELL		REPORT ON PULLING OR OTHERWISE ALTERING CASING	
REPORT ON RESULT OF TEST OF CASING SHUT-OFF	7-5/8"	REPORT ON DEEPENING WELL	
REPORT ON RESULT OF PLUGGING OF WELL			

Hebbs, New Mexico. June 29th, 1936.  
Place Date

OIL CONSERVATION COMMISSION,  
Santa Fe, New Mexico.

Gentlemen:

Following is a report on the work done and the results obtained under the heading noted above at the \_\_\_\_\_

**Gulf Oil Corporation Gypsy Division Bell-Ramsay** Well No. **10** in the \_\_\_\_\_  
Company or Operator Lease  
**C Lot #4** of Sec. **4**, T. **21s**, R. **36e**, N. M. P. M.,  
**Runice** Field, **Lee** County.

The dates of this work were as follows: Cemented 6-24-36 Tested 6-27-1936.

Notice of intention to do the work was [~~present~~] submitted on Form C-102 on 6-25-1936. 19\_\_\_\_  
and approval of the proposed plan was [~~present~~] obtained. (Cross out incorrect words.)

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

The hole was washed down the casing tested with 1200# Pressure applied for 30 Min., the plug drilled and the hole tested with 1200# Pressure applied for 30 Min., Both tests were Ok and after approval of Mr. Vesely, State Oil & Gas Inspector, preparations were made to drill ahead.

DISTRICT SUPERINTENDENT

Witnessed by \_\_\_\_\_ Name Company Title

Subscribed and sworn to before me this 21

I hereby swear or affirm that the information given above is true and correct.

day of July, 1936  
Patricia Mahoney  
Notary Public

Name P. J. Vesely  
Position District Superintendent  
Representing Gulf Oil Corporation  
Company or Operator  
Address Gypsy Division  
Hebbs, New Mexico.

My Commission expires 10-24-39

Remarks:

P. J. Vesely Name  
Title

PHYSICS 551

1. The first part of the problem is to find the energy levels of a particle in a potential well. The potential is given by  $V(x) = \frac{1}{2}kx^2$  for  $|x| \leq a$  and  $V(x) = \infty$  for  $|x| > a$ . The energy levels are given by the eigenvalues of the Schrödinger equation  $\nabla^2 \psi + (E - V(x))\psi = 0$ .

2. The second part of the problem is to find the wave functions corresponding to the energy levels. The wave functions are given by the eigenfunctions of the Schrödinger equation.

3. The third part of the problem is to find the expectation values of the position and momentum operators. The expectation values are given by  $\langle x \rangle = \int \psi^* x \psi dx$  and  $\langle p \rangle = \int \psi^* (-i\hbar \nabla) \psi dx$ .

4. The fourth part of the problem is to find the expectation values of the energy and the variance of the energy. The expectation values are given by  $\langle E \rangle = \int \psi^* H \psi dx$  and  $\langle E^2 \rangle = \int \psi^* H^2 \psi dx$ .

5. The fifth part of the problem is to find the expectation values of the position and momentum operators for the ground state. The expectation values are given by  $\langle x \rangle = 0$  and  $\langle p \rangle = 0$ .

6. The sixth part of the problem is to find the expectation values of the energy and the variance of the energy for the ground state. The expectation values are given by  $\langle E \rangle = \frac{1}{2}k a^2$  and  $\langle E^2 \rangle = \frac{1}{2}k a^2$ .

7. The seventh part of the problem is to find the expectation values of the position and momentum operators for the first excited state. The expectation values are given by  $\langle x \rangle = 0$  and  $\langle p \rangle = 0$ .

8. The eighth part of the problem is to find the expectation values of the energy and the variance of the energy for the first excited state. The expectation values are given by  $\langle E \rangle = \frac{3}{2}k a^2$  and  $\langle E^2 \rangle = \frac{3}{2}k a^2$ .

9. The ninth part of the problem is to find the expectation values of the position and momentum operators for the second excited state. The expectation values are given by  $\langle x \rangle = 0$  and  $\langle p \rangle = 0$ .

10. The tenth part of the problem is to find the expectation values of the energy and the variance of the energy for the second excited state. The expectation values are given by  $\langle E \rangle = \frac{5}{2}k a^2$  and  $\langle E^2 \rangle = \frac{5}{2}k a^2$ .

11. The eleventh part of the problem is to find the expectation values of the position and momentum operators for the third excited state. The expectation values are given by  $\langle x \rangle = 0$  and  $\langle p \rangle = 0$ .

12. The twelfth part of the problem is to find the expectation values of the energy and the variance of the energy for the third excited state. The expectation values are given by  $\langle E \rangle = \frac{7}{2}k a^2$  and  $\langle E^2 \rangle = \frac{7}{2}k a^2$ .

13. The thirteenth part of the problem is to find the expectation values of the position and momentum operators for the fourth excited state. The expectation values are given by  $\langle x \rangle = 0$  and  $\langle p \rangle = 0$ .

14. The fourteenth part of the problem is to find the expectation values of the energy and the variance of the energy for the fourth excited state. The expectation values are given by  $\langle E \rangle = \frac{9}{2}k a^2$  and  $\langle E^2 \rangle = \frac{9}{2}k a^2$ .

15. The fifteenth part of the problem is to find the expectation values of the position and momentum operators for the fifth excited state. The expectation values are given by  $\langle x \rangle = 0$  and  $\langle p \rangle = 0$ .

16. The sixteenth part of the problem is to find the expectation values of the energy and the variance of the energy for the fifth excited state. The expectation values are given by  $\langle E \rangle = \frac{11}{2}k a^2$  and  $\langle E^2 \rangle = \frac{11}{2}k a^2$ .