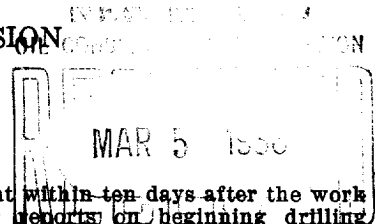


NEW MEXICO OIL CONSERVATION COMMISSION

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	X	REPORT ON DEEPENING WELL	
REPORT ON RESULT OF PLUGGING OF WELL			

Albuquerque, New Mexico February 14, 1938

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 _____

Chief Oil and Gas Company Martha V. Pace Well No. 1 in the _____
Company or Operator Lease
SE 1/4 of Sec. 12, T. 6N, R. 7E, N. M. P. M.,
Estancia Field, Torrance County.

The dates of this work were as follows: February 14, 1938

Notice of intention to do the work was [~~was not~~] submitted on Form C-102 on February 12 19 38
and approval of the proposed plan was [was not] obtained. (Cross out incorrect words.)

DETAILED ACCOUNT OF WORK DONE AND RESULTS OBTAINED

6 5/8 inch casing liner of 224 feet 5 inches was set and bottomed at 1594 feet, walling in caving at the approximate depth of 1500 feet.

Witnessed by Henry F. Tischhauser Chief Oil and Gas Company President
Name Company Title

Subscribed and sworn to before me this _____

25th day of February, 19 38
Arthur O. Day
Notary Public

My Commission expires 12/17/41

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

Name Otto F. Kassul
Position Secretary

Representing Chief Oil and Gas Company
Company or Operator

Address 312 Sunshine Bldg. Alb. N. Mexico

Remarks:

Arthur O. Day
Name
Arthur O. Day
Title

PHYSICS 551: QUANTUM MECHANICS

Problem Set 10: Scattering Theory

1. Consider a particle of mass m and energy E incident from the left on a potential barrier of height V_0 and width a .

(a) Find the transmission coefficient T and reflection coefficient R for a rectangular barrier.

(b) Show that $T + R = 1$ for any potential barrier.

(c) In the limit of a thin barrier ($a \ll \lambda$), show that $T \approx 1 - \frac{2mVa^2}{\hbar^2 k}$.

(d) In the limit of a thick barrier ($a \gg \lambda$), show that $T \approx e^{-2\kappa a}$.

(e) For a delta-function potential $V(x) = V_0 \delta(x)$, find T and R .

(f) For a delta-function potential, show that $R = \frac{1}{1 + \frac{2mV_0 a}{\hbar^2 k}}$.

(g) For a delta-function potential, show that $T = \frac{1}{1 + \frac{2mV_0 a}{\hbar^2 k}}$.

(h) For a delta-function potential, show that $R = \frac{1}{1 + \frac{2mV_0 a}{\hbar^2 k}}$.

(i) For a delta-function potential, show that $T = \frac{1}{1 + \frac{2mV_0 a}{\hbar^2 k}}$.

(j) For a delta-function potential, show that $R = \frac{1}{1 + \frac{2mV_0 a}{\hbar^2 k}}$.

(k) For a delta-function potential, show that $T = \frac{1}{1 + \frac{2mV_0 a}{\hbar^2 k}}$.

(l) For a delta-function potential, show that $R = \frac{1}{1 + \frac{2mV_0 a}{\hbar^2 k}}$.

(m) For a delta-function potential, show that $T = \frac{1}{1 + \frac{2mV_0 a}{\hbar^2 k}}$.

(n) For a delta-function potential, show that $R = \frac{1}{1 + \frac{2mV_0 a}{\hbar^2 k}}$.

(o) For a delta-function potential, show that $T = \frac{1}{1 + \frac{2mV_0 a}{\hbar^2 k}}$.

(p) For a delta-function potential, show that $R = \frac{1}{1 + \frac{2mV_0 a}{\hbar^2 k}}$.