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NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
TO TRANSPORT OIL AND NATURAL GAS

FORM C-110
 (Rev. 7-60)

FILE THE ORIGINAL AND 4 COPIES WITH THE APPROPRIATE OFFICE PM 1 43

Company or Operator Tenneco Corporation				Lease Kennitz Wellcamp Unit		Well No. 25	
Unit Letter G	Section 29	Township 16-S	Range 34-E	County Lee			
Pool Kennitz Wellcamp				Kind of Lease (State, Fed Fee) State			
If well produces oil or condensate give location of tanks			Unit Letter 0	Section 20	Township 16-S	Range 34-E	
Authorized transporter of oil <input checked="" type="checkbox"/> or condensate <input type="checkbox"/> Gulf Refining Company				Address (give address to which approved copy of this form is to be sent) Box 1508, Hobbs, New Mexico			
Is Gas Actually Connected? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
Authorized transporter of casing head gas <input checked="" type="checkbox"/> or dry gas <input type="checkbox"/> Phillips Petroleum Company			Date Connected	Address (give address to which approved copy of this form is to be sent) Box 758, Hobbs, New Mexico			

If gas is not being sold, give reasons and also explain its present disposition:

REASON(S) FOR FILING (please check proper box)

New Well <input type="checkbox"/>	Change in Ownership <input type="checkbox"/>
Change in Transporter (check one)	Other (explain below)
Oil <input type="checkbox"/> Dry Gas <input type="checkbox"/>	Change in lease name.
Casing head gas <input type="checkbox"/> Condensate <input type="checkbox"/>	Change in well number.

Remarks **Lease formerly State Western "A" Well No. 3 operated by Tenneco Oil Company.**
Changes effective June 1, 1961.

The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with.

Executed this the 23rd day of May, 19 61.

OIL CONSERVATION COMMISSION

Approved by

Title

Date

By

Title

Company

Address

A. W. Lang
A. W. Lang
District Production Superintendent
Tenneco Oil Company
Box 307, Hobbs, New Mexico

Example: Find the Laplace transform of $f(t) = e^{-t} \cos(2t)$.
 Solution: We use the definition of the Laplace transform:

$$\mathcal{L}\{f(t)\} = \int_0^\infty e^{-st} f(t) dt = \int_0^\infty e^{-st} e^{-t} \cos(2t) dt$$

We can use integration by parts to evaluate this integral. Let $u = e^{-st} e^{-t}$ and $dv = \cos(2t) dt$. Then $du = (-s-1)e^{-(s+1)t} dt$ and $v = \frac{1}{2} \sin(2t)$.
 Then
$$\int_0^\infty e^{-st} e^{-t} \cos(2t) dt = \left[\frac{1}{2} e^{-(s+1)t} \sin(2t) \right]_0^\infty - \int_0^\infty \frac{1}{2} \sin(2t) (-s-1)e^{-(s+1)t} dt$$

The first term is zero. The second term is $\frac{s+1}{2} \int_0^\infty e^{-(s+1)t} \sin(2t) dt$.
 We can use integration by parts again. Let $u = e^{-(s+1)t}$ and $dv = \sin(2t) dt$. Then $du = -(s+1)e^{-(s+1)t} dt$ and $v = -\frac{1}{2} \cos(2t)$.
 Then
$$\int_0^\infty e^{-(s+1)t} \sin(2t) dt = \left[-\frac{1}{2} e^{-(s+1)t} \cos(2t) \right]_0^\infty - \int_0^\infty -\frac{1}{2} \cos(2t) (-(s+1)) e^{-(s+1)t} dt$$

- The Laplace transform of $f(t) = e^{-t} \cos(2t)$ is $\frac{s+1}{s^2 + 2s + 5}$.
- The Laplace transform of $f(t) = e^{-t} \sin(2t)$ is $\frac{2}{s^2 + 2s + 5}$.

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