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LAND OFFICE	
TRANSPORTER	OIL
	GAS
OPERATOR	
PRORATION OFFICE	

NEW MEXICO OIL CONSERVATION COMMISSION
REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

Form C-104
Supersedes Old C-104 and C-110
Effective 1-1-65

OCT 4 2 27 PM '65

I.

Operator
Tenneco Oil Company

Address
P.O. Box 1031, Midland, Texas

Reason(s) for filing *(Check proper box)*
New Well [ ]
Recompletion [ ]
Change in Ownership [X]

Change in Transporter of:
Oil [ ] Dry Gas [ ]
Casinghead Gas [ ] Condensate [ ]

Other *(Please explain)*
Effective 10-1-65

If change of ownership give name and address of previous owner Leonard Oil Company, 10th Floor Security Life Bldg.,Roswell, New Mexico

II. DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, Including Formation	Kind of Lease
Bates	2	Jalmat (Gas)	State, Federal or Fee Fee

Location
Unit Letter D ; 660 Feet From The North Line and 660 Feet From The East

Line of Section k29 , Township 25S Range 37E , NMPM, Lea County

II. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil [ ] or Condensate [ ] — Address *(Give address to which approved copy of this form is to be sent)*
None

Name of Authorized Transporter of Casinghead Gas [ ] or Dry Gas [X] — Address *(Give address to which approved copy of this form is to be sent)*
El Paso Natural — Box 1384 Jal, New Mexico

If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When
					Yes	unknown

If this production is commingled with that from any other lease or pool, give commingling order number:

V. COMPLETION DATA

Designate Type of Completion – (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.

Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.
Pool	**Name of Producing Formation**	**Top Oil/Gas Pay**	**Tubing Depth**
Perforations			**Depth Casing Shoe**

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT

V. TEST DATA AND REQUEST FOR ALLOWABLE *(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)*

OIL WELL

Date First New Oil Run To Tanks	Date of Test	Producing Method *(Flow, pump, gas lift, etc.)*	
Length of Test	**Tubing Pressure**	**Casing Pressure**	**Choke Size**
Actual Prod. During Test	**Oil-Bbls.**	**Water-Bbls.**	**Gas-MCF**

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method *(pitot, back pr.)*	**Tubing Pressure**	**Casing Pressure**	**Choke Size**

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

R. L. Leggett
(Signature)
District Office Supervisor
(Title)
October 1, 1965
(Date)

OIL CONSERVATION COMMISSION

APPROVED _____, 19 ____

BY _____

TITLE _____

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out Sections I, II, III, and VI only for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool **Jalmat** Formation **Yates-7 Rivers** County **Lea**

Initial ____ Annual ____ Special **X** Date of Test **2-4/2-8-1957**

Company **Leonard Oil Co.** Lease **Bates** Well No. **2**

Unit **D** Sec. **29** Twp. **25** Rge. **37** Purchaser **EPNG**

Casing **5 1/2** Wt. **14.0** I.D. ____ Set at **2574** Perf. ____ To ____

Tubing **2 3/8** Wt. **4.7** I.D. ____ Set at **2715** Perf. ____ To ____

Gas Pay: From **2574** To **2740** L **2715** xG **0.660** GL **1792** Bar.Press. **13.2**

Producing Thru: Casing ____ Tubing **X** Type Well **Single**

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: **1-22-1952** Packer **None** Reservoir Temp. ____

OBSERVED DATA

Tested Through ~~(Prover)~~ ~~(Choke)~~ (Meter) Type Taps **Flange**

No.	Flow Data ~~(Prover)~~ (Line) Size	~~(Choke)~~ (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						400		410		72
1.	4	1.000	172	4.0	50	360		360		24
2.	4	1.000	177	9.0	54	321		322		24
3.	4	1.000	151	15.2	59	290		292		24
4.	4	1.000	160	28.1	62	208		213		24
5.										

FLOW CALCULATIONS

No.	Coefficient **Flange** (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	6.135	27.20		1.0098	.9535	1.019	164
2.	6.135	41.35		1.0058	.9535	1.019	248
3.	6.135	49.94		1.0010	.9535	1.016	297
4.	6.135	69.71		.9981	.9535	1.017	414
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **Dry** cf/bbl. Specific Gravity Separator Gas **0.660**

Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____

F_c **Measured** $(1-e^{-s})$ ____ P_c **423.2** P_c^2 **179.1**

No.	~~P_w~~ P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	373.2	139.3				139.3	39.8		.88
2.	334.8	111.7				112.4	66.7		.78
3.	303.2	91.9	Measured			93.1	86.0		.72
4.	221.2	48.9				51.2	127.9		.51
5.									

Absolute Potential: **560** MCFPD; n **.810**

COMPANY **Leonard Oil Co.**

ADDRESS **Box 708, Roswell, N.M.**

AGENT and TITLE **Fowler Hix, Production Supt.**

WITNESSED **Earl O. Smith**

COMPANY **EPNG**

REMARKS

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w). MCF/da. @ 15.025 psia and 60° F.

P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater. psia

P_w = Static wellhead working pressure as determined at the end of flow period. (Casing if flowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia

P_f = Meter pressure, psia.

h_w = Differential meter pressure, inches water.

F_g = Gravity correction factor.

F_t = Flowing temperature correction factor.

F_{pv} = Supercompressability factor.

n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t.

Leonard Oil Co.
Bates #2
Unit "D", Sec. 29, T-25-S, R-37-E
Lea Co., N.M.