

CASE 3139: Application of SHELL

for a dual completion and a non-
standard gas proration unit.

also consider
SHELL R-1035

CASE No.

3139

Application,
TRANSCRIPTS,
SMALL Exhibits
ETC.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 3139
Order No. R-2808

APPLICATION OF SHELL OIL COMPANY
FOR A DUAL COMPLETION AND A NON-
STANDARD GAS PRORATION UNIT, LEA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on November 12, 1964, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 24th day of November, 1964, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Shell Oil Company, seeks approval of a 160-acre non-standard gas proration unit in the Tubb Gas Pool comprising the S/2 SW/4, NE/4 SW/4, and SW/4 SE/4 of Section 3, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, to be dedicated to its Livingston Well No. 7 located in Unit V of said Section 3.

(3) That by Order No. R-1035, as amended by Order No. R-1035-A, the Commission approved a 160-acre non-standard gas proration unit in the Tubb Gas Pool comprising the above-described acreage to be dedicated to the Livingston Well No. 2 located in Unit W of said Section 3.

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CASE No. 3139
Order No. R-2808

(4) That due to mechanical difficulties, the Livingston Well No. 2 is no longer capable of producing a 160-acre allowable in the Tubb Gas Pool.

(5) That the proposed non-standard gas proration unit can be efficiently and economically drained and developed by the Livingston Well No. 7.

(6) That approval of the proposed non-standard gas proration unit will afford to the applicant an opportunity to produce its just and equitable share of the gas in the Tubb Gas Pool.

(7) That the applicant also seeks authority to complete its Livingston Well No. 7 as a dual completion (conventional) to produce oil from the Drinkard Pool through 2 3/8-inch tubing and to produce gas from the Tubb Gas Pool through the casing-tubing annulus, with separation of zones by a packer set at approximately 6420 feet.

(8) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(9) That approval of the proposed dual completion will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That a 160-acre non-standard gas proration unit in the Tubb Gas Pool comprising the S/2 SW/4, NE/4 SW/4, and SW/4 SE/4 of Section 3, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, is hereby established and dedicated to the Shell Oil Company Livingston Well No. 7 located in Unit V of said Section 3;

PROVIDED HOWEVER, that said unit shall not be effective until a notice of disconnection for the Livingston Well No. 2 has been filed with the Commission.

(2) That the applicant, Shell Oil Company, is hereby authorized to complete its Livingston Well No. 7 located in Unit V of Section 3, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce oil from

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CASE No. 3139

Order No. R-2808

the Drinkard Pool through 2 3/8-inch tubing and to produce gas from the Tubb Gas Pool through the casing-tubing annulus, with separation of zones by a packer set at approximately 6420 feet;

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packer-leakage tests upon completion and annually thereafter during the Gas-Oil Ratio Test Period for the Drinkard Pool.

(3) That Order No. R-1035, as amended by Order No. R-1035-A, is hereby superseded.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


Jack M Campbell
JACK M. CAMPBELL, Chairman

E. S. Walker
E. S. WALKER, Member

A. L. Porter, Jr.
A. L. PORTER, Jr., Member & Secretary

esr/

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
L. S. JOHNNY WALKER
MEMBER

P. O. BOX 2088
SANTA FE

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

November 24, 1964

Mr. Richard S. Morris
Seth, Montgomery, Federici & Andrews
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico

Re: CASE NO. 3139
ORDER NO. R-2808
APPLICANT Shell Oil Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. Porter, Jr.
A. L. PORTER, Jr.
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

OTHER

DRAFT

JMD/esr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

CF Subj. _____

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 3139

Order No. R-2808

APPLICATION OF SHELL OIL COMPANY
FOR A DUAL COMPLETION AND A NON-
STANDARD GAS PRORATION UNIT, LEA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on
November 12, 1964, at Santa Fe, New Mexico, before Examiner
~~James K. S. Sutter~~ Elvis A. Utz.

NOW, on this _____ day of November, 1964, the Commission,
a quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Shell Oil Company, seeks approval
of a 160-acre non-standard gas proration unit in the Tubb Gas Pool
comprising the S/2 SW/4, NE/4 SW/4, and SW/4 SE/4 of Section 3,
Township 21 South, Range 37 East, NMPM, Lea County, New Mexico,
to be dedicated to its Livingston Well No. 7 located in Unit V
of said Section 3.

(3) That by Order No R-1035, as amended by Order No R-1035-A
the Commission approved a 160-acre non-standard gas proration unit in the
Tubb Gas Pool comprising the above described acreage to be dedicated to
the Livingston well No 7 located in unit V of said section 3.

(4) That due to mechanical difficulties the Livingston well
No 2 is no longer capable of producing a 160-acre allowable in
the Tubb Gas Pool.

(5) That the proposed non-standard gas proration unit can be efficiently and economically drained and developed by the Livingston well No 7.

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CASE No. 3139

(6)

(7) That the applicant also seeks authority to complete its said Livingston Well No. 7 as a dual completion (conventional) to produce oil from the Drinkard Pool through 2 3/8-inch tubing and to produce gas from the Tubb Gas Pool through the casing-tubing annulus, with separation of zones by a packer set at approximately 6420 feet.

(5) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(6) That approval of the ^{proposed dual completion} ~~subject application~~ will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That a 160-acre non-standard gas proration unit in the Tubb Gas Pool comprising the S/2 SW/4, NE/4 SW/4, and SW/4 SE/4 of Section 3, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, is hereby established and dedicated to the Shell Oil Company Livingston Well No. 7 located in Unit V of said Section 3;

~~Provided~~ ^{Provided} however, that said unit shall not be effective until a notice of disconnection for the Livingston Well No 7 has been filed with the Commission.

(2) That the applicant, Shell Oil Company, is hereby authorized to complete its Livingston Well No. 7 located in Unit V of Section 3, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce oil from the Drinkard Pool through 2 3/8-inch tubing and to produce gas from the Tubb Gas Pool through the casing-tubing annulus, with separation of zones by a packer set at approximately 6420 feet;

(5) That approval of the proposed non-standard gas proration unit will afford the applicant an opportunity to produce its joint and undivided share of the gas in the Tubb Gas Pool.

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CASE No. 3139

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take GOR

tests upon completion and annually thereafter during the GOR Test Period for the Wrinkled Pool.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

(4) That order No. R-1035 as amended by order No R-1035-A is hereby superseded.



SHELL OIL COMPANY

P. O. Box 1858
Roswell, New Mexico

October 15, 1964

MAIN OFFICE 000

*64 OCT 19 AM 8 23

2/10/64 3/13/64

Subject: Application for Administrative Approval
of Proposed Livingston Well No. 7 Dual
Completion, and a 160-Acre Non-Standard
Tubb Gas Proration Unit Dedicated to
Well No. 7

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Gentlemen:

Shell Oil Company hereby makes application for Administrative approval of:

- 1) The dual completion of Shell Livingston Well No. 7, located in Unit V of Section 3-21S-37E, Lea County, New Mexico, and
- 2) A 160-acre non-standard Tubb Gas proration unit to be dedicated to Livingston No. 7, consisting of the S/2 SW/4, NE/4 SW/4, and the SW/4 SE/4 of Section 3-21S-37E, Lea County, New Mexico.

Livingston No. 7, presently a Drinkard Oil single, will be recompleted as a Drinkard Oil-Tubb Gas dual. The Drinkard zone will be produced through tubing, and the Tubb Gas zone through the casing-tubing annulus.

The Tubb Gas proration unit described above is presently dedicated to the Shell Livingston No. 2, located in Unit W, one location east of Livingston No. 7. We wish to transfer the drainage point for this proration unit from Well No. 2 to Well No. 7. Livingston No. 2 will be abandoned after completion of Livingston No. 7 in the Tubb Gas Pool.

All operators listed in Item 5 of the attached application were furnished copies of the application and of this letter. Diagrammatic sketches of the proposed dual completion installation and ownership plats with the proposed proration unit outlined in red are attached. Please contact this office if additional information is desired.

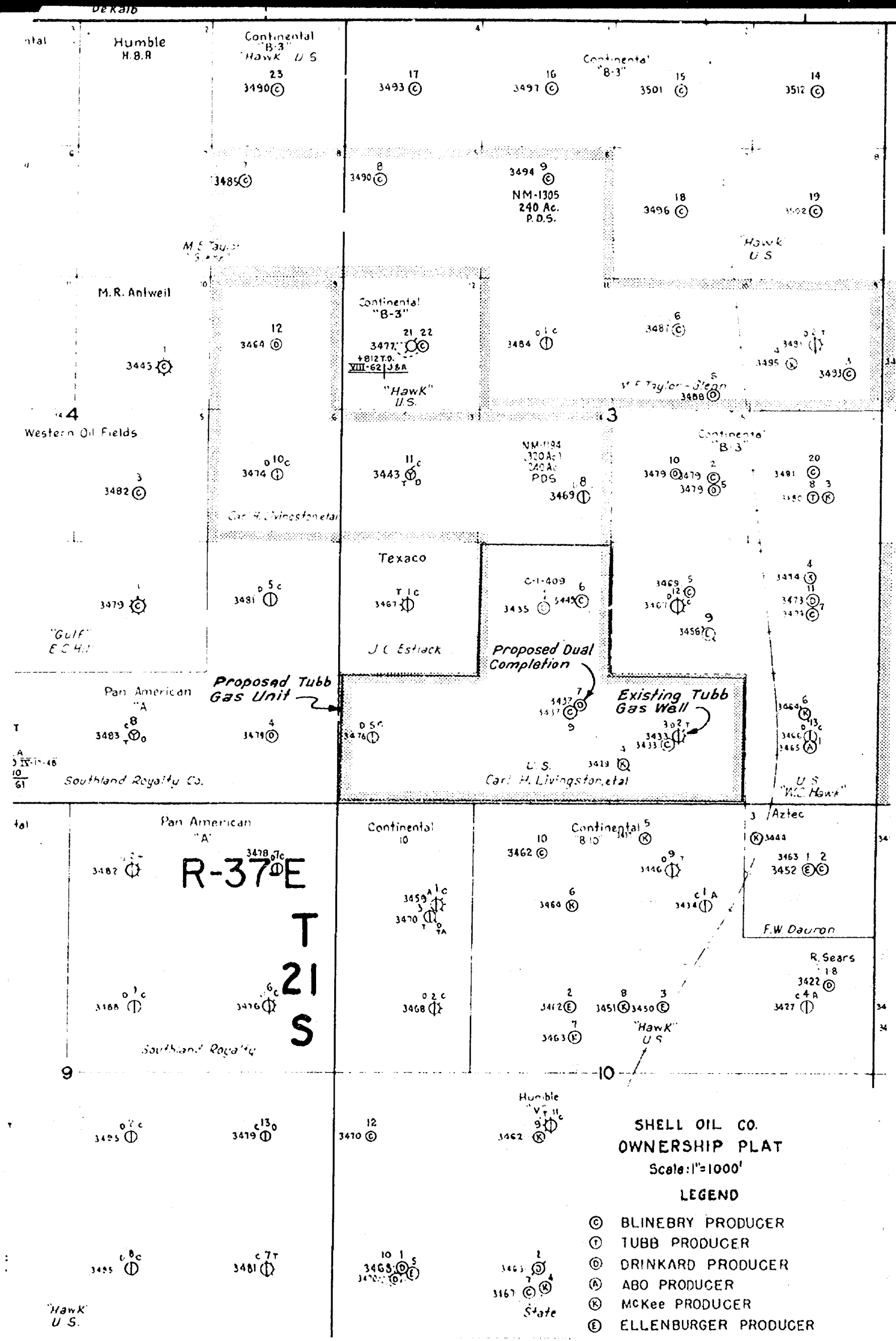
Yours very truly,

Original Signed By
T. H. DWYER

T. H. Dwyer
Division Production Manager

Attachments

cc: N.M.O.C.C. - Hobbs
Offset Operators



SHILL OIL CO.
OWNERSHIP PLAT
Scale: 1"=1000'
LEGEND

- © BLINEBRY PRODUCER
- Ⓣ TUBB PRODUCER
- ⓓ DRINKARD PRODUCER
- Ⓐ ABO PRODUCER
- Ⓚ McKee PRODUCER
- ⓔ ELLENBURGER PRODUCER

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

3139

October 22, 1964

C
O
P
Y

Shell Oil Company
P. O. Box 1858
Roswell, New Mexico

DOCKET MAILED

Attention: Mr. T. H. Dwyer

Date 10-30-64

Re: Application for Administrative Approval
of Proposed Livingston Well No. 7 Dual
Completion and a 160-acre Non-Standard
Tubb Gas Proration Unit Dedicated to
Well No. 7

Gentlemen:

Your application of October 15, 1964, for a 160-acre non-standard Tubb gas proration unit is not eligible for administrative approval as Rule 5(C) 5 of the General Rules and Regulations Governing Prorated Gas Pools in Southeast New Mexico provides that the length or width of a non-standard gas proration unit may not exceed 2640 feet in pools with 160-acre standard proration units. We therefore have docketed your application for approval of the dual completion and non-standard unit for the November 12, 1964, Examiner Hearing.

Please advise us if this date is not convenient and we will continue or dismiss the case in accordance with your request.

Very truly yours,

J. M. DURRETT, Jr.
Attorney

JMD/esr

cc: Oil Conservation Commission
P. O. Box 1980
Hobbs, New Mexico



SHELL OIL COMPANY

P. O. Box 1858
Roswell, New Mexico

October 15, 1964

Subject: Application for Administrative Approval
of Proposed Livingston Well No. 7 Dual
Completion, and a 160-Acre Non-Standard
Tubb Gas Proration Unit Dedicated to
Well No. 7

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Gentlemen:

Shell Oil Company hereby makes application for Administrative approval of:

- 1) The dual completion of Shell Livingston Well No. 7, located in Unit V of Section 3-21S-37E, Lea County, New Mexico, and
- 2) A 160-acre non-standard Tubb Gas proration unit to be dedicated to Livingston No. 7, consisting of the S/2 SW/4, NE/4 SW/4, and the SW/4 SE/4 of Section 3-21S-37E, Lea County, New Mexico.

Livingston No. 7, presently a Drinkard Oil single, will be recompleted as a Drinkard Oil-Tubb Gas dual. The Drinkard zone will be produced through tubing, and the Tubb Gas zone through the casing-tubing annulus.

The Tubb Gas proration unit described above is presently dedicated to the Shell Livingston No. 2, located in Unit W, one location east of Livingston No. 7. We wish to transfer the drainage point for this proration unit from Well No. 2 to Well No. 7. Livingston No. 2 will be abandoned after completion of Livingston No. 7 in the Tubb Gas Pool.

All operators listed in Item 5 of the attached application were furnished copies of the application and of this letter. Diagrammatic sketches of the proposed dual completion installation and ownership plats with the proposed proration unit outlined in red are attached. Please contact this office if additional information is desired.

Yours very truly,

T. H. Dwyer
Division Production Manager

Attachments

cc: N.M.O.C.C. - Hobbs
Offset Operators

RECEIVED

OCT 19 AM 8 22

3139

DUPLICATE ORIGINAL
NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

7-3-58

APPLICATION FOR DUAL COMPLETION

Field Name	Drinkard	County	Lea	Date	October 15, 1964
Operator	Shell Oil Company	Lease	Livingston	Well No.	37E
Location of Well	Unit V	Section	3	Township	21S

1. Has the New Mexico Oil Conservation Commission heretofore authorized the dual completion of a well in these same pools or in the same zones within one mile of the subject well? YES ☒ NO ☐

2. If answer is yes, identify one such instance: Order No. R-276; Operator, Lease, and Well No.: Shell Oil Company Livingston Well No. 2

3. The following facts are submitted:	Upper Zone	Lower Zone
a. Name of reservoir	Tubb	Drinkard
b. Top and Bottom of Pay Section (Perforations)	6067'-6392' (Perforations)	6491'-6517' (Producing Perforations)
c. Type of production (Oil or Gas)	Gas	Oil
d. Method of Production (Flowing or Artificial Lift)	Flowing	Flowing

4. The following are attached. (Please mark YES or NO)

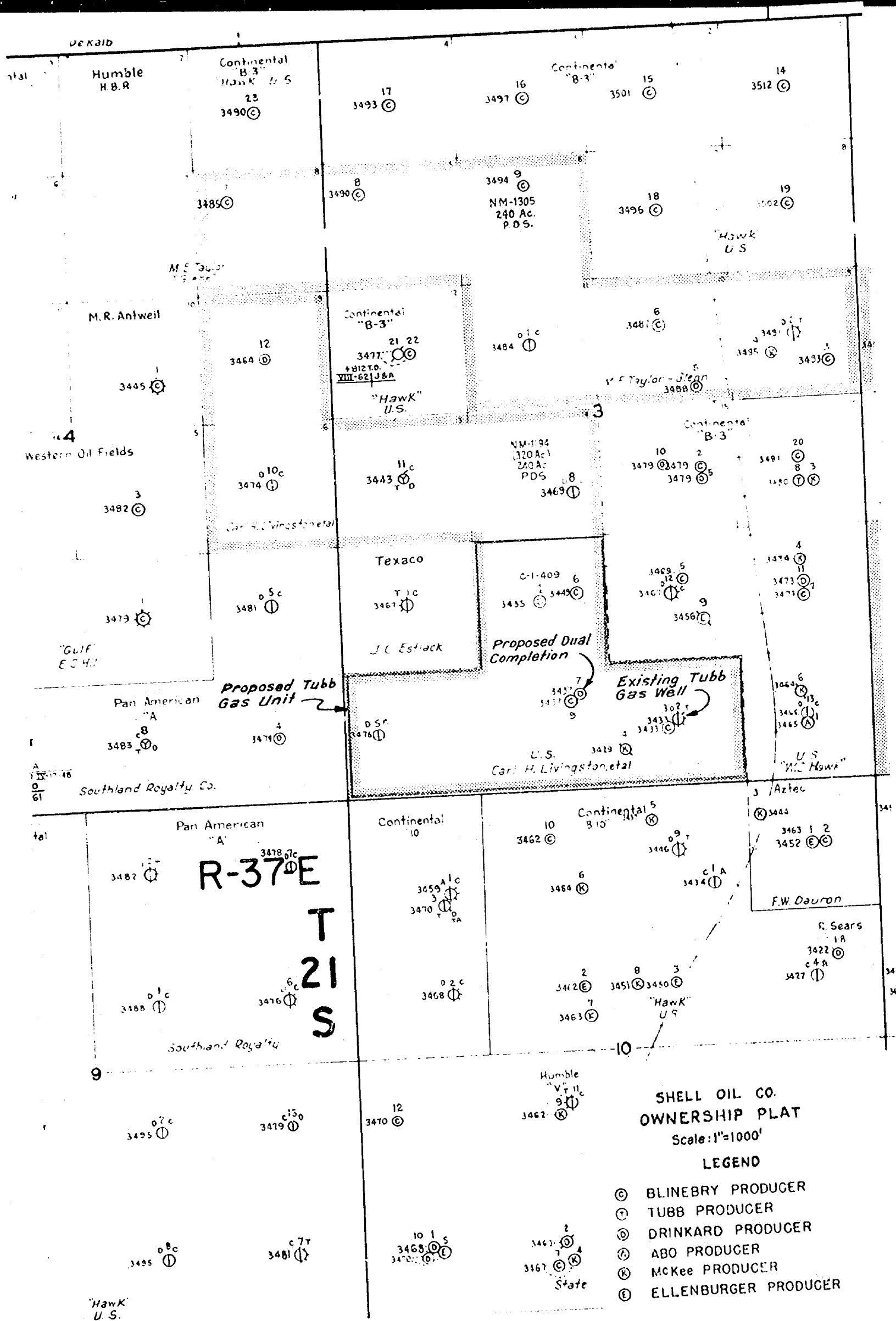
- Yes a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
- Yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
- Yes c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
- No d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.
- Continental Oil Company, P. O. Box 1377, Roswell, New Mexico
- Aztec Oil and Gas Company, P. O. Box 847, Hobbs, New Mexico
- Morris R. Antweil, 814 W. Marland, Hobbs, New Mexico
- Western Oil Fields, Inc., P. O. Box 1147, Hobbs, New Mexico
- Pan American Petroleum Corporation, P. O. Box 68, Hobbs, New Mexico
- Texaco Inc., P. O. Box 3109, Midland, Texas
- Humble Oil & Refining Company, P. O. Box 2100, Hobbs, New Mexico
6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES ☒ NO ☐ . If answer is yes, give date of such notification October 15, 1964, by registered mail.

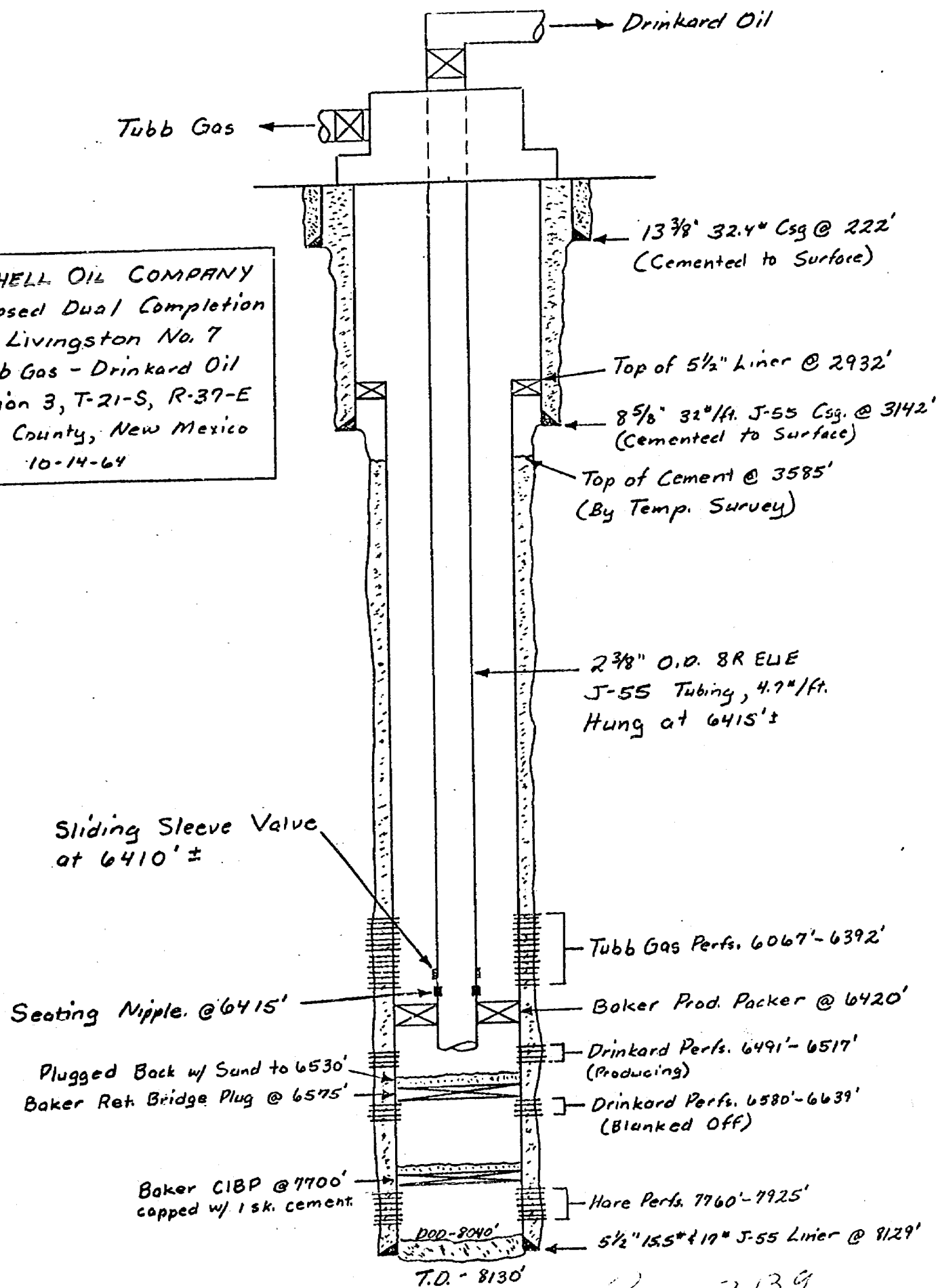
CERTIFICATE: I, the undersigned, state that I am the Division Prod. Manager of the Roswell Division of Shell Oil Co. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

* Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.



SHELL OIL COMPANY
Proposed Dual Completion
Livingston No. 7
Tubb Gas - Drinkard Oil
Section 3, T-21-S, R-37-E
Lea County, New Mexico
10-14-64



Case 3129

DOCKET: EXAMINER HEARING - THURSDAY - NOVEMBER 12, 1964

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner.

CASE 3129: (Continued from the October 13, 1964 Examiner Hearing).
Application of Shell Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the West Wilson Deep Unit Area comprising 3360 acres, more or less, of State and Fee lands in Township 21 South, Range 34 East, Lea County, New Mexico.

CASE 3138: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider exempting certain oil pools in Lea, Chaves, Roosevelt and Eddy Counties, New Mexico, from the gas-oil ratio testing requirements of Rule 301 of the Commission Rules and Regulations. The following pools will be considered for exemption:

ARTESIA DISTRICT

Atoka-San Andres	Leo-Queen-Grayburg, South
Atoka-Grayburg	Leslie Spring-San Andres
Benson-Yates, East	Linda-San Andres
Bitter Lakes-San Andres, South	Loco Hills-San Andres, South
Bitter Lakes-San Andres, West	Logan Draw-San Andres
Brown, Q. Gbr.	Malaga-Delaware
Brushy Draw-Delaware	McMillan Seven Rivers-Queen, East
Canyon-Wolfcamp	Millman-Seven Rivers, East
Carlsbad-Delaware	Palmillo-Seven Rivers
Cass Draw-Delaware	Parallel-Delaware
Cave (Gbr.)	Pecos-Delaware
Case-San Andres, West	Pecos-San Andres
Cedar Lake-Cisco	Penasco-San Andres
Chisum-Devonian	Penasco-Wolfcamp
Corral Canyon-Delaware	Quahada Ridge-Delaware
Cotton Draw-Brushy Canyon	Red Hills- Yates
Coyote-Queen	Red Lake-Queen-Grayburg, East
Dark Canyon-Delaware	Red Lake-Seven Rivers, South
Dayton-Abo	Remuda-Wolfcamp
Dayton-Grayburg, East	Round Tank-San Andres
Dayton-San Andres, West	Saladar-Yates
Diablo-San Andres	Sand Tank-Queen
Dog Canyon-Grayburg	Shugart-Bone Springs
Dos Hermanos, Yates-Seven Rivers	Shugart-Wolfcamp
Eagle Creek-San Andres	Square Lake Grayburg-San Andres, North
Empire Paddock	Sulphate Draw-Delaware
Empire-Yates-Seven Rivers, E.	Twin Lakes-Devonian
Four Mile Draw-San Andres	U. S. Delaware
Fren Paddock	Welch-Delaware
Hackberry-Seven Rivers	White Ranch Siluro-Devonian
Hackberry-Yates, North	White Ranch-Devonian, West
L. E. Ranch-San Andres	Windmill-San Andres

HOBBS DISTRICT

Baish-Wolfcamp, North
Baum-Wolfcamp
Bishop Canyon-Queen
Bowers-Seven Rivers
Caprock-Wolfcamp, East
CLR-San Andres
Corbin-Queen, South
Corbin-Yates
Crossroads-Mississippian
Crossroads-San Andres, West
Dollarhide-Queen
Dublin-Devonian
Echols-Devonian, East
Echols-Devonian, North
Edson-Pennsylvanian
Elliott-Abo
Field Ranch-Wolfcamp
Gladiola-Wolfcamp, South
Hume-Queen

Hume-Queen, West
Jenkins-Devonian
Jenkins-San Andres
King-Wolfcamp
Lea-Yates
Littman-San Andres
Lone-Wolfcamp
Lovington-San Andres
Lovington-San Andres, West
Lynch-Yates, Middle
Pearl-Pennsylvanian
Querecho Plains-Bone Springs
Querecho Plains-Delaware
Querecho Plains-Yates
Teague-Devonian
Teague-Ellenburger
Teague Simpson
Warren-Abo
Williams-Pennsylvanian, North
Young-San Andres

CASE 3139:

Application of Shell Oil Company for a dual completion and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard gas proration unit comprising the S/2 SW/4, NE/4 SW/4, and SW/4 SE/4 of Section 3, Township 21 South, Range 37 East, Tubb Gas Pool, Lea County, New Mexico, to be dedicated to its Livingston Well No. 7 located in Unit V of said Section 3. Applicant further seeks approval of said well as a dual completion (conventional) to produce oil from the Drinkard Pool through 2-3/8 inch tubing and to produce gas from the Tubb Gas Pool through the casing-tubing annulus.

CASE 3140:

Application of Caulkins Oil Company for a non-standard location and a dual completion, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location for its Breech B Well No. PD-123 to be located 700 feet from the North line and 1800 feet from the East line of Section 7, Township 26 North, Range 6 West, Rio Arriba County, New Mexico. Applicant further seeks authority to complete said well as a dual completion (conventional) to produce gas from the South Blanco-Pictured Cliffs Pool through 1-1/4 inch tubing and to produce gas from the Basin-Dakota Gas Pool through 2-3/8 inch tubing.

CASE 3141:

Application of Caulkins Oil Company for a non-standard location and a dual completion, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location for its Breech C Well No. D-144 to be located 990 feet from the North line and 1,090 feet from the East line of Section 12, Township 26 North, Range 6 West, Rio Arriba County, New Mexico. Applicant further seeks authority to complete said well as a dual completion (conventional) to produce oil from the South Blanco-Tocito Pool through 2-3/8 inch tubing and to produce gas from the Basin-Dakota Gas Pool through 1-1/4 inch tubing.

November 12 Examiner Hearing

- CASE 3142: Application of N. B. Hunt for a non-standard proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 280-acre non-standard gas proration unit comprising the SW/4, W/2 SE/4, and SE/4 SE/4 of Section 21, Township 21 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to his Wantz Well No. 2 located in Unit L of said Section 21. In the event all of said acreage is not approved for said Well No. 2, applicant seeks approval of another non-standard unit comprising the remaining acreage to be dedicated to his Wantz Well No. 1 in Unit A of said Section 21.
- CASE 3143: Application of Texaco Inc. for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its H. H. Harris Well No. 2 located in Unit O of Section 35, Township 12 South, Range 38 East, Lea County, New Mexico, as a dual completion (combination) to produce oil from the Bronco Wolfcamp Pool through 2-7/8 inch casing and to produce oil from the Bronco Siluro-Devonian Pool through tubing in a parallel string of 3-1/2 inch casing cemented in a common well bore.
- CASE 3144: Application of Texaco Inc. for force-pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Drinkard Pool underlying the SE/4 of the SW/4 of Section 17, Township 22 South, Range 38 East, Lea County, New Mexico.
- CASE 3145: Application of Sunray DX Oil Company for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its State "AS" Well No. 1 located in Unit G of Section 29, Township 11 South, Range 33 East, Lea County, New Mexico, as a dual completion to produce oil from the Pennsylvanian formation through tubing and to dispose of produced salt water down the production-intermediate casing annulus into the San Andres, Glorieta, and Tubb formations from 3840 feet to 8600 feet.
- CASE 2660: (Reopened and continued from the October 28th Examiner Hearing)
In the matter of Case No. 2660 being reopened pursuant to the provisions of Order No. R-2348-A, which continued the original order establishing 80-acre proration units for the Middle Lane-Pennsylvanian Pool, Lea County, New Mexico, for an additional year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF THE STATE OF NEW
MEXICO FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 1289
Order No. R-1035

APPLICATION OF SHELL OIL COMPANY
FOR THE ESTABLISHMENT OF A 160-
ACRE NON-STANDARD GAS PRORATION UNIT
IN THE TUBB GAS POOL, LEA COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on August 7, 1957, at Hobbs, New Mexico, before Warren W. Mankin, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 20th, day of August, 1957, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, Warren W. Mankin, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Shell Oil Company, is the owner and operator of an oil and gas lease known as the Livingston Lease, a portion of which consists of the S/2 SW/4, NE/4 SW/4, and the SW/4 SE/4 of Section 3, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico.
- (3) That the applicant is the owner and operator of the Livingston No. 2 Well, located 680 feet from the South line and 1980 feet from the East line of said Section 3.
- (4) That the applicant proposes to dedicate the above-described acreage to its said Livingston No. 2 Well.
- (5) That the establishment of the proposed non-standard gas proration unit will not cause waste nor impair correlative rights.

-2-

Case No. 1289
Order No. R-1035

IT IS THEREFORE ORDERED:

1. That the application of Shell Oil Company for a 160-acre non-standard gas proration unit in the Tubb Gas Pool, consisting of the S/2 SW/4, NE/4 SW/4, and the SW/4 SE/4 of Section 3, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico. Said unit to be dedicated to the applicant's Livingston No. 2 Well located in the SW/4 SE/4 of said Section 3.

2. That the said Livingston No. 2 Well be designated as the unit well and that the same be granted an allowable in the proportion that the above-described acreage bears to the standard proration unit for the Tubb Gas Pool, subject to the provisions of Rule 12 of the Special Rules and Regulations for the Tubb Gas Pool as set forth in Order R-586.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

MURRAY E. MORGAN, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

ir/

Case B/39

Heard 11-12-64

Rec. 11-13-64

Grant Shell permission to substitute
these Livingston # 7, 815/S 2308/W lines
sec. 3. 215-37E in place of these Livingston
2, 660/S, 1880/E lines of said sec. 3 as
the dedicated well for these 2nd gas
pool production unit. Unit consists of
S/2 SW/4, N/4 SW/4, SW/4 SE/4 said sec.
3.

The # 2 well shall file a disconnection
notice on or before Dec 1-1964. Effective
date of change shall be 12-1-64.

N.S.P. was granted by R-1035 & 1035A.
May be advisable to supersede both
orders.

Thos. W. J.

6-1-56

PACKER-SETTING AFFIDAVIT
(Dual Completions)

STATE OF NEW MEXICO)
County of Chaves) ss

Welton D. Moore, being first duly sworn according to law, upon his oath deposes and says:

That he is of lawful age and has full knowledge of the facts herein below set out.

That he is employed by Shell Oil Company in the capacity of Production Foreman and as such is its authorized agent.

That on October 13, 1964, he personally supervised the setting of a Baker Model "D" Production in Shell Oil Company's
(Make and Type of Packer) (Operator)

Livingston Well No. 7, located in Unit
(lease)
Letter V, Section 3, Township 21, Range 37-E, NMPM,
Lea County, New Mexico.

That said packer was set at a subsurface depth of 6420 feet,
said depth measurement having been furnished by Lane Wells Wire Line.

That the purpose of setting this packer was to effect a seal in the annular space between the two strings of pipe where the packer was set so as to prevent the commingling, within the well-bore, of fluids produced from a stratum below the packer with fluids produced from a stratum above the packer. That this packer was properly set and that it did, when set, effectively and absolutely seal off the annular space between the two strings of pipe where it was set in such manner as that it prevented any movement of fluids across the packer.

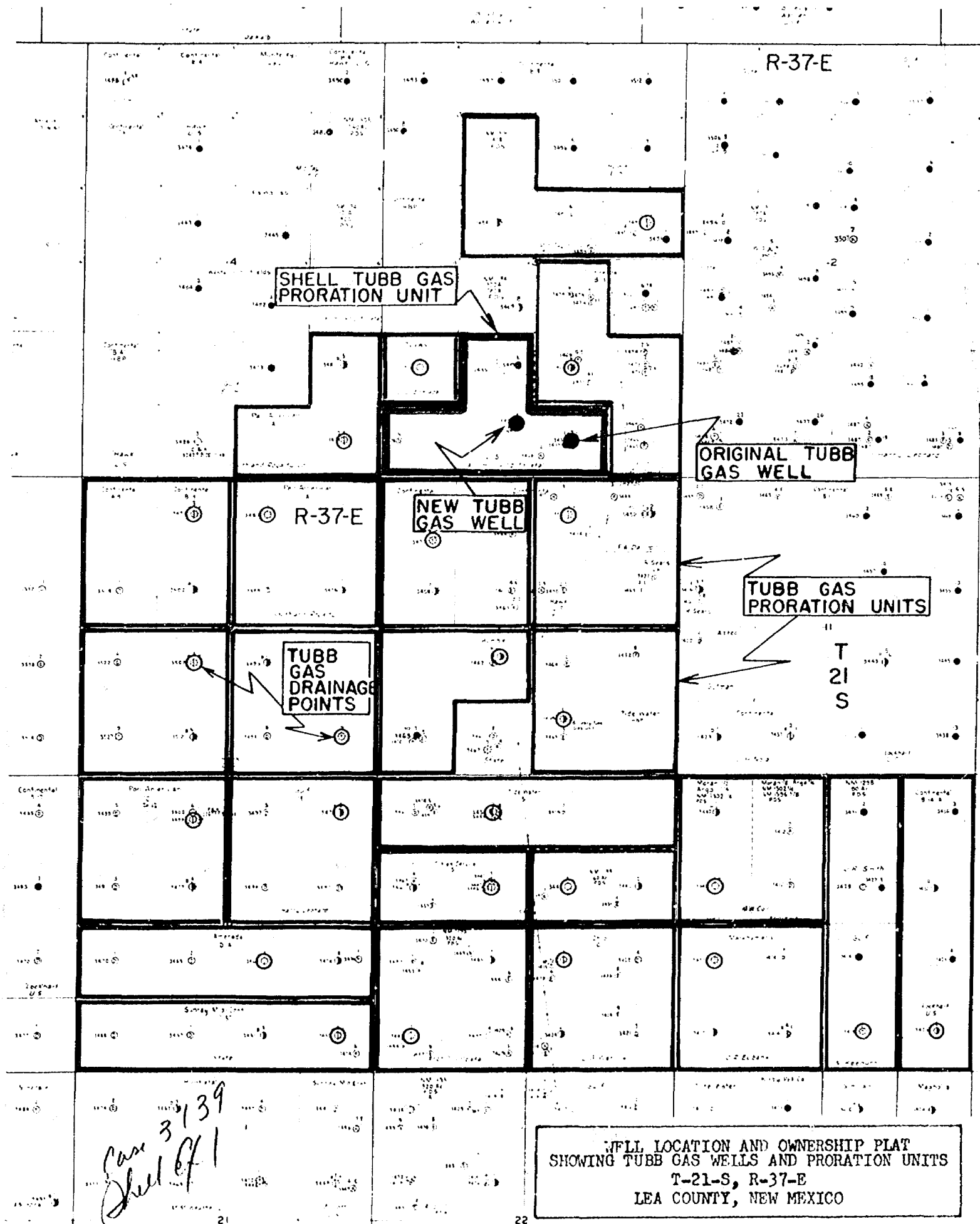
Shell Oil Company
(Company)

Welton D. Moore
(its Agent)

Subscribed and sworn to before me this the 9th day of Nov., AD, 1964.

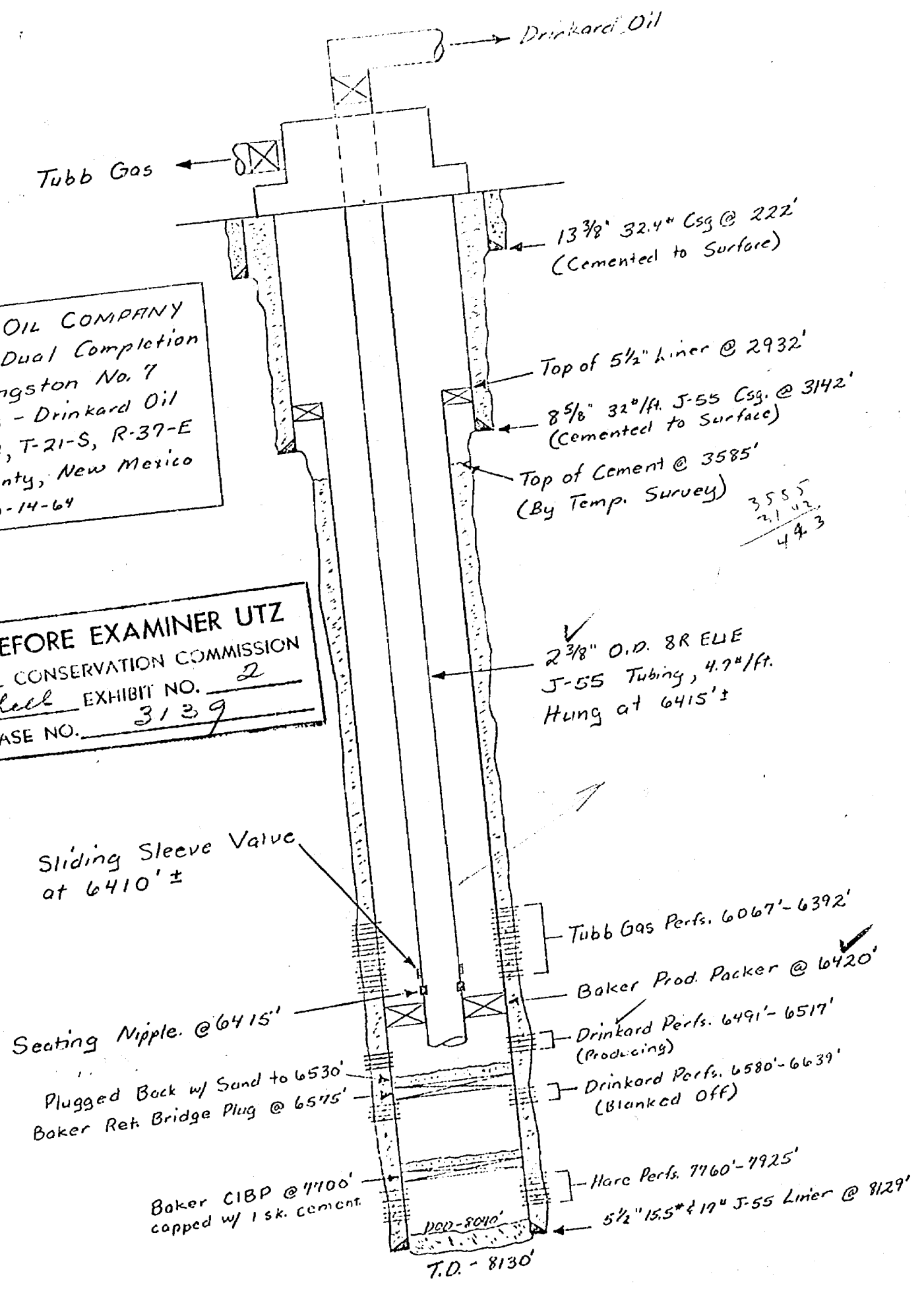
Arvid L. Garrison
Notary Public in and for the County
of Chaves.

MY COMMISSION EXPIRES FEBRUARY 7, 1965
My Commission Expires



SHELL OIL COMPANY
 Proposed Dual Completion
 Livingston No. 7
 Tubb Gas - Drinkard Oil
 Section 3, T-21-S, R-37-E
 Lea County, New Mexico
 10-14-64

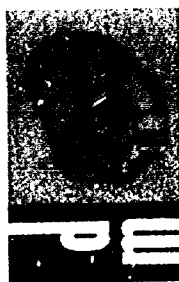
BEFORE EXAMINER UTZ
 OIL CONSERVATION COMMISSION
 SHELL EXHIBIT NO. 2
 CASE NO. 3139



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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 12, 1964

EXAMINER HEARING

IN THE MATTER OF: Application of Shell Oil
Company for a dual completion and a non-
standard gas proration unit, Lea County, New
Mexico. Applicant in the above-styled cause
seeks approval of a 160-acre non-standard gas
proration unit comprising the S/2 SW/4, NE/4
SW/4, and SW/4 SE/4 of Section 3, Township 21
South, Range 37 East, Tubb Gas Pool, Lea
County, New Mexico, to be dedicated to its
Livingston Well No. 7 located in Unit V of
said Section 3. Applicant further seeks
approval of said well as a dual completion to
produce oil from the Drinkard Pool through
2 3/8 inch tubing and to produce gas from the
Tubb Gas Pool through the casing-tubing annulus.

Case No. 3139

BEFORE:

ELVIS A. UTZ, EXAMINER

TRANSCRIPT OF HEARING

MR. UTZ: The next case will be Case 3139.

MR. DURRETT: Application of Shell Oil Company for a dual completion and a non-standard gas proration unit, Lea County, New Mexico.

MR. MORRIS: If the Examiner please, I am Richard Morris of Seth, Montgomery, Federici and Andrews, Santa Fe, New Mexico, appearing on behalf of the applicant, Shell Oil Company. We will have one witness in this case, Mr. Vic King. I ask that he be sworn at this time.

(Witness sworn.)

(Whereupon, Applicant's Exhibits 1 and 2 marked for identification.)

VICTOR L. KING, called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. King, please state your name, by whom employed and in what capacity, and where you are located.

A Victor King, Exploitation Engineer, Shell Oil Company, Roswell, New Mexico.

Q Mr. King, have you previously testified before the New Mexico Oil Conservation Commission, or one of its Examiners?

A Yes, I have.

Q Are you familiar with Shell's application in Case

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3139?

A Yes, I am.

Q What is it that Shell is seeking by this application, insofar as the unit well is concerned?

A We're seeking approval to change the designated drainage point for the Tubb gas production within the existing 160-acre Tubb gas proration unit. The unit was approved previously by New Mexico Oil Conservation Commission Order R1035 and 1035-A, in August of 1957.

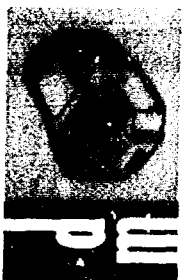
Q Referring to what's been marked as Exhibit Number 1 in this case, will you state what it is and what it shows?

A Yes. This is a location map showing the Shell Tubb Gas Unit outlined in red, along with the other nearby Tubb Gas Units in black.

The drainage points are circled, the red circles being the Shell wells, and the black circles being the drainage points within the outlying unit.

The original Tubb gas drainage point is Shell's Livingston Number 2, located in Unit W, which on the map is the east well circled in red, and is designated "Original Tubb Gas Well".

The Livingston 2, this original well, is a Drinkard Oil-Tubb Gas dual, conventional dual completion. The oil is produced through 2-inch tubing while the gas is produced through the



five and a half inch by two inch casing tubing annulus.

The Tubb production, Tubb gas production from the Livingston 2 averages 87 MCF per day into a 600 pound gathering system and through August of this year was 25,000 MCF under produced.

The well has a 72-hour shut-in surface pressure of 845 psi. This well has experienced a very rapid drop in capacity. Early in 1963 it had a measured deliverability of 1,524 MCF per day with a 72 hour shut-in surface pressure of 1,001 psi.

Now, this pressure is only 156 psi higher than the present shut-in pressure, yet the capacity was 18 times higher than the present capacity. This sharp drop in productivity, without any significant change in reservoir pressure indicated to Shell that a stimulation treatment was needed.

We believe that a sand-oil fracture treatment would restore Livingston 2 to it's original top allowable capacity of around 250 to 300 MCF per day. Yet the mechanical condition of the well prevented adequate stimulation.

The Livingston 2 in the Tubb was perforated from 6185 to 6329, which is a total of 144 feet, with 196 holes in four separate groups; and stimulation of all four groups would have been impractical, and, in fact, would have been impossible. In addition to that, not all of the potentially productive interval was open in the well.

Q In view of that situation, Mr. King, what alternatives were open to you?

A We selected to move the Tubb drainage point to Shell Livingston Number 7, one location west, to permit more effective stimulation of the Tubb by improved perforating and treatment design.

Livingston Number 7 is the west well circled in red and designated "New Tubb Gas Well" on the map. We perforated in Livingston 7, 25 holes, over a 325 foot interval; that's the Tubb pay that we perforated and then fracture treated the zone with 15,000 gallons of lease crude; afterwards Livingston potentialled for 1,350 MCF per day with a 72-hour shut-in surface pressure of 1,420 PSI.

Q What is the present status now of your Livingston 7?

A The well is dually completed conventionally in the Drinkard oil and Tubb gas pools. The oil flows through 2 3/8s inch tubing while the Tubb gas is produced through the 5 1/2 - 2-inch and larger space, and a permanent packer separates the two pools. I would refer you to Exhibit Number 2, which is a diagrammatic sketch of the installation.

Q Do you consider your Livingston 7 a good producer in the Tubb formation, and do you consider that it will adequately drain and develop the 160-acre proration unit as outlined in red on your Exhibit 1?

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A Yes, I do. The improved performance of the Tubb production in Livingston 7 is a direct result of opening the old pay that was opened in Livingston 2, along with additional pay that was not opened in the original well. Also, the Tubb pay was perforated with a reduced number of holes which permitted a better stimulation of all zones, with the fracture treatment.

I'd like to summarize it by saying that the production in the Livingston 2 could have been improved had the mechanical condition of the well permitted stimulation of the zone. Livingston 7 was selected for the drainage point as an alternative to permit adequate treatment of the pay. The more central location of the new well, combined with this improved productivity index does mean more effective drainage can be expected within the proration unit.

Q In your opinion, Mr. King, are the entire 160 acres comprising this Tubb Gas Unit productive in the Tubb formation?

A Yes, sir, it is.

Q What request do you make to the Commission in entering an order upon your application concerning this Well Number 7?

A We request approval to have Livingston 7 designated a Tubb gas drainage point for Shell's existing proration unit, and furthermore we request that the Tubb gas under production

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credited to this unit be allocated to Livingston 7.

Q Referring back for a moment to Exhibit 2, which was your schematic diagram of the dual completion of your Number 7, first let me ask you if this dual completion has been made by Shell Oil Company?

A Yes, it has.

Q Does this exhibit accurately reflect the present condition of the well?

A Yes, it does.

Q Would you briefly describe the Exhibit Number 2?

A Yes. The well has 8 5/8 inch casing set at 3142, cemented to surface, and a 5 1/2 inch liner from 2932 to the total depth of the well of 8130; the top of the cement around that casing string is at 3585 according to a temperature survey. The Drinkard perforations, the oil zone are from 6491 to 6517. The Tubb gas perforations are from 6067 to 6329. A permanent production packer is set between these two zones at 6420; 2 3/8 inch tubing is landed into the production packer, and this is the tubing string through which the Drinkard Oil is produced. The Tubb gas is produced through the annular space, as shown on the sketch.

Q Is there anything unusual about this dual completion between the Tubb and the Drinkard oil zones?

A No, sir. This is a conventional dual completion

which is quite common throughout this area.

Q Were Exhibits 1 and 2 prepared by you or under your direction?

A Yes, sir, they were.

MR. MORRIS: We offer Exhibits 1 and 2 into evidence.

MR. UTZ: Without objection Exhibits 1 and 2 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits 1 and 2 were admitted in evidence.)

MR. MORRIS: That's all I have of Mr. King at this time.

CROSS EXAMINATION

BY MR. UTZ:

Q You are not actually requesting a non-standard unit here, you're just asking for a relocation of a drainage point, is that true?

A That is correct.

Q I don't have A-1035 or our 1035 present, is it the same as 1035; what was the change?

A I believe that the change referred to a typographical error on the issued order of the 1035, and an alternate supplemental order was issued to correct that error.

Q What kind of a gas-liquid ratio would you have in this well?

A The well produces essentially no liquids at all. In

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the past few months the Livingston Number 2 produced no distillate whatever. So far Livingston 7 is producing lode oil from the fracture treatment, along with the gas. We expect after that is recovered for the well to produce essentially no liquids at all.

Q Isn't this somewhat unusual for the Tubb zone?

A Well, it varies somewhat. Nearby we have Tubb oil wells which are on downdip, but our wells in this area don't seem to produce any fluids at all.

Q That was the history of the Number 2 well?

A That is correct.

Q That is the reason you feel that you would be able to obtain a good flow efficiency through a 2 3/8's inch tubing?

A Yes, it is.

Q If the well did produce substantial liquids, do you think that you could produce this well in this manner?

A Our wells elsewhere which do produce substantial quantities of liquids with the gas exhibit no logging up of fluid in the wellbore. We seem to be able to keep the wellbore essentially dry or blown down, and recover all the liquids that come into the wellbore. I would say that in view of our performance in other wells that we should be able to handle any reasonable quantity of liquid that would be expected from the Tubb reservoir, with this type of hook-up.

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Q The effective diameter of the 2 3/8 by 5 1/2 inch annulus is substantially larger than the --

A It has a larger annular surface.

Q Therefore, it probably would not have as good lifting qualities for fluids as 2 3/8s tubing?

A There would be, I think I would go along with that, that's true, so that if the quantity of fluid became excessive we would see an accumulation of fluid in the hole which would be reflected both in a reduction in surface pressure and a reduced gas rate as well.

This we haven't observed in any of our wells in this particular Penrose-Skelly area producing by this manner; so that while the Tubb in some places produces liquids, we have been able to keep the fluid from accumulating in the bottom of the hole. We haven't been able to produce all of it.

Q What is the location of the Livingston 7, do you have that somewhere in your exhibits?

A The footage?

Q Yes.

A Yes, I do. Livingston 7 is located 915 feet from the south line and 2308 feet from the west line of Section 3, Township 21 South, Range 37 East.

Q It's actually more centrally located to the unit than the Number 2, is it not?

A This central location, combined with the better capacity of the well would mean better drainage of the unit.

Q On your Exhibit 2 you show the top of the cement behind the 5 1/2 inch at 3585, the bottom of the 8 5/8s is 3142, what do you have in between the two cement zones and behind the 5 1/2 inch casing?

A I believe that the base of the salt section, or perhaps the Yates interval would be at about that depth. I would state that probably it's the Yates.

Q Is the Yates productive in this area?

A The Yates has been drillstem tested in this area, actually by a Shell well approximately three-quarters of a mile north in 1962, we tested, drillstem tested the Yates, Seven Rivers and and Queen formations in this area and it was tight and non-productive.

Q No shows?

A No shows.

Q No water?

A No water, no porosity or permeability.

Q From that statement I gather that you conclude that the open hole in this area will not damage any other formations or be injurious to fresh waters or oil producing zones?

A Yes, sir, I certainly believe that.

MR. UTZ: Any other questions of the witness?

MR. DURRETT: I have a question, please.

BY MR. DURRETT:

Q Mr. King, I believe you stated that your Livingston Number 2 fell off rapidly on the productivity and that you thought you'd have to stimulate it. What caused your drop-down in the productivity, do you know?

A No, sir, I don't, other than the fact that the well has never been stimulated with any large volumes of treating fluids, either larger volumes of acid or lease oil and sand, and that we know fracture treating the Tubb in this area does vastly improve productivity in certain wells, so that I'm unable to explain just why the productivity fell off as it did, but do believe that the fracture treatment would have improved it, based on results from other wells.

Q Am I correct that you could not fracture treat this well because there were too many perforations?

A That is essentially it. There were too many holes perforated over too long an interval to expect fracture treatment, the fracture treatment to enter all of the productive zones.

Q When was the Number 2 completed?

A Number 2 was completed, well, it was completed in the Drinkard in 1950.

Q Do you have the date on the Tubb?

A It was completed in the Tubb in 1957.

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Q Do you anticipate that your Livingston Number 7 Well will have a similar history, well history, as far as falling off in productivity within a few years?

A I think that Livingston 7 will exhibit a normal decline now because we were able to more effectively complete the well, through a better engineering design of the perforations and better stimulation of the reservoir.

Q And the Number 7 can be stimulated and has been stimulated, is that correct?

A That is correct.

Q So that if it did fall off in productivity you would probably anticipate going back in and restimulating the Number 7?

A That is true, we could also retreat the well more effectively.

Q But you do not anticipate at this time stimulating the Livingston Number 2 in the future?

A No, sir, I don't.

Q Or putting it back on production in the Tubb zone?

A No, sir.

Q Referring to your Exhibit Number 1, the plat, I believe, and I'm not measuring it, I'm just looking at it, that the Livingston Number 7 would be closer to the Continental Lease line, the offsetting lease on the east, than your Number

2 was, is that correct?

A It will be closer. I think the distance would be in the order of three hundred fifty or sixty feet, something like that.

Q Have you contacted Continental concerning this well location, or your proposal?

A We originally requested administrative approval of this drainage point transfer, and we sent a copy of the application to all offset operators, which included Continental Oil Company.

Q You haven't received any communication from them?

A No, we have not.

MR. DURRETT: I think that's all I have, thank you.

BY MR. UTZ:

Q What other zones is the Number 2 completed in besides the Tubb?

A The Drinkard Oil Pool.

Q The same as Number 7?

A The same as Number 7.

MR. UTZ: Are there any other questions? The witness may be excused.

(Witness excused.)

MR. UTZ: Any statements in this case? The case will be taken under advisement.

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STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission Examiner at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 20th day of November, 1964.

Ada Dearnley
Notary Public - Court Reporter

My Commission Expires:
June 19, 1967

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3139, heard by me on Nov. 12, 1964.

Thurston, Examiner
New Mexico Oil Conservation Commission