

Case No.

1727

Application, Transcript,
Small Exhibits, Etc.

OIL CONSERVATION COMMISSION

P. O. BOX 871
SANTA FE, NEW MEXICO

August 7, 1959

Mr. Charlie White
Bishop Building
Box 787
Santa Fe, New Mexico

On behalf of your client, Skelly Oil Company, we
enclose two copies of Order No. R-1461 in Case 1727,
issued by the Oil Conservation Commission on August
7, 1959.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

lr/

Enclosures

*Copies mailed to
Hobbs + Custer - 8-7-59 Jhr*

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 9-3-59

CASE NO. 1727

HEARING DATE 7-28-59

My recommendations for an order in the above numbered case(s) are as follows:

1. Approve Skelly's application for a Ctero-Gallup.
+ Undesignated Dakota Oil-Gas Dual.
2. Two strings of 2" EUE tubing used to produce both sections Pools.
3. A Baker Model D permanent type pump will be set at 7084'.
4. Meet Dual requirements.

Elmer A. [Signature]

Staff Member

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 28, 1959

EXAMINER HEARING

IN THE MATTER OF:

Case 1727

DEARNLEY - MEIER & ASSOCIATES
GENERAL LAW REPORTERS
ALBUQUERQUE NEW MEXICO
Phone CHapel 3-6691

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 28, 1959

EXAMINER HEARING

IN THE MATTER OF:)

Application of Skelly Oil Company for an oil-)
gas dual completion. Applicant, in the above-)
styled cause, seeks an order authorizing the)
dual completion of its Jicarilla "B" Well No.)
20, located in the NW/4 NW/4 of Section 31,)
Township 25 North, Range 5 West, Rio Arriba) Case 1727
County, New Mexico, in such a manner as to)
permit production of oil from the Otero-)
Gallup Oil Pool and the production of gas)
from an undesignated Dakota pool through)
parallel strings of tubing.)

BEFORE:

Mr. Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The hearing will come to order, please. The
next case will be 1727.

MR. PAYNE: Case 1727. "Application of Skelly Oil
Company for an oil-gas dual completion."

MR. WHITE: Charles White of Gilbert, White and Gilbert,
Santa Fe, New Mexico appearing on behalf of the applicant. We
have one witness we would like to have sworn at this time.

(Witness sworn.)

MR. UTZ: Any other statements to be made in this case

or appearances?

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HAROLD AAB

called as a witness, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Will you state your full name for the record, please?

A Harold Aab.

Q How do you spell your last name?

A A - a - b.

Q By whom are you employed and in what capacity?

A I am employed as District Production Foreman for Skelly Oil Company in Farmington, New Mexico.

Q Have you previously testified before this Commission?

A No, I have not.

Q Will you briefly state your educational background and your professional qualifications, Mr. Aab?

A I hold a Bachelor of Science Degree in Petroleum Engineering from the University of Tulsa in Tulsa, Oklahoma. I have been employed with Skelly Oil Company for nine years, eighteen months as District Engineer at Oklahoma City, and the remainder of the time as District Production Foreman in Oklahoma and New Mexico.

Q Are you acquainted with Skelly's application

in this case No. 1727?

A I am.

MR. WHITE: Are his qualifications acceptable?

MR. UTZ: Yes, sir, they are.

Q Are you familiar with Skelly's Jicarilla "B" Well No. 20?

A Yes.

Q Where is that located?

A It is located 1790 feet from the North and West lines of Section 31, Township 25 North, Range 5 West, Rio Arriba County.

Q Is Skelly the sole owner and operator of this well?

A Yes, we have one hundred percent working interest.

Q By this application Skelly requests permission to dually complete this well in order to permit production of oil from the Gallup and gas from an undesignated Dakota pool. Do you know, Mr. Aab, whether or not the Commission has ever approved a dual completion in this area involving these two pools?

A Not to my knowledge in the Otero-Gallup Pool.

Q Will you refer to what has been marked as Exhibit No. 1, being an ownership map, and explain what that is intended to show?

A This map shows our Jicarilla "B" 20 Well with relation to offset operators.

Q Does it show all the wells, offsetting wells?

A It shows all the offsetting wells.

Q And the names of the operators?

A And the names of the operators.

Q Will you discuss the nature of these reservoir fluids?

A The Gallup section, the upper zone produces sweet 41 gravity crude oil. The Dakota sand, which is the lower zone, produces gas and gas condensate, approximately 55 gravity.

Q Were any of these crudes sour?

A No, they aren't.

Q What type of solution drives do you have?

A The Gallup is gas solution drive with the total absence of water and the Dakota is a gas condensate reservoir.

Q Will you refer to what has been marked Exhibit 2 and state what that is and explain it, please?

A Exhibit 2 is a schematic drawing of the mechanical features of this dual completion.

Q What does it show?

A It shows that the well was drilled to a total depth of 7215 with 10 3/4 inch casing, surface casing, set at 298 feet and cemented with 300 sacks to the surface and 7 inch 20 pound and 23 pound casing set at 7211, with a Halliburton two stage cementing tool set at 3946 below the Calker formation.

The bottom section of this casing was cemented with

50-50 Paw cement, and the top of the cement is at 4960. The top section was cemented with 400 sections of 50-50 Pace mix cement, and the top of the cement is at 2600.

The Dakota sand is perforated 4 shots per foot, 7040 to 7050, 7063 to 7070. The Gallup formation is perforated 4 shots per foot, 6012 to 6016, 6044 to 6060, 6074 to 6090. A Baker oil tool Model D production packer is set at 7016, and one string of two inch upset 8 round tubing is set through the Baker packer to a depth of 7086 to produce the Dakota formation. Another string of two inch upset 8 round tubing is set at 6111 to produce the Gallup formation. This well is equipped with a Garbron Iron Works Split Donut Series 900 wellhead.

Q In your opinion, is there any possibility of communication between these zones?

A No, there is not.

Q Have you taken any packer production tests?

A Yes. We took the Oil Conservation Commission approved packer leakage test.

Q Is that Exhibit 3? A Exhibit 3.

Q When was that taken? A 6-25-59.

Q What was the result of the test?

A It showed that there was no communication between the zones?

Q Now, will you refer to what has been marked Exhibit

No. 4 and Exhibit No. 5? State what they are and explain them, please.

A Exhibits No. 4 and 5, Exhibit 4 is a Schlumberger induction electrolog which shows the relation of the Dakota to the Gallup zone, and the Exhibit 5 is a Schlumberger sonic log which also shows the same thing.

Q Were these Exhibits 1 through 5 either prepared by you or under your direction and supervision?

A Yes, they were.

Q Will the production from these two zones be in separate tank batteries?

A Yes, they will, each zone will be produced into separate tank batteries.

Q What economic advantages will be gained by the dual completion?

A It will save drilling a new well either to the Gallup or Dakota.

Q What is the cost of drilling to the Gallup?

A Around sixty-five thousand.

Q And to the Dakota?

A Eighty-five thousand approximately.

Q In regard to correlative rights, would it also prevent offset drainage?

A Yes, it will protect us from offset drainage from a

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well now being drilled in the Southwest corner of 25, 25 North
and 6 West.

MR. WHITE: I believe that's all the questions we have.

CROSS EXAMINATION

BY MR. UTZ:

Q What is your bottomhole pressure?

A On the Dakota zone bottom pressure on drillstem test
was 3107. We don't have a bottomhole pressure on the Gallup,
but we estimate it at between 15 and 1600. The shutin surface
pressure on the Gallup was 1337. The shutin surface pressure on
the Dakota is 2307.

MR. UTZ: Any other questions of the witness?

MR. WHITE: We would like to move the introduction of
all the exhibits.

MR. UTZ: Without objection the Exhibits 1 through 5
will be accepted. The witness will be excused. Any statements
to be made in this case? If not, the case will be taken under
advisement.

(Witness excused.)

STATE OF NEW MEXICO)
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 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 5th day of August, 1959.

Ada Dearnley
Notary Public - Court Reporter

My Commission Expires:

June 19, 1963.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 1227,
heard by me on July 28, 1959.
Thomas G. McPhee, Examiner
New Mexico Oil Conservation Commission

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. 1727
Order No. R-1461

APPLICATION OF SKELLY OIL
COMPANY FOR AN OIL-GAS DUAL
COMPLETION IN THE OTERO-
GALLUP OIL POOL AND IN AN
UNDESIGNATED DAKOTA POOL,
RIO ARriba COUNTY, NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on July 28, 1959, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, herein-after referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 7th day of August, 1959, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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, Skelly Oil Company, is the owner and operator of the Jicarilla "B" Well No. 20, located in the NW/4 NW/4 of Section 31, Township 25 North, Range 5 West, NMPM, Rio Arriba County, New Mexico.
- (3) That the applicant proposes to dually complete the above-described Jicarilla "B" Well No. 20 in such a manner as to permit the production of oil from the Otero-Gallup Oil Pool and the production of gas from an undesignated Dakota pool through parallel strings of 2-inch EUE tubing.
- (4) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

-2-

Case No. 1727
Order No. R-1461

(5) That approval of the subject application will neither cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

That the applicant be and the same is hereby authorized to dually complete the Jicarilla "B" Well No. 20, located in the NW/4 NW/4 of Section 31, Township 25 North, Range 5 West, Rio Arriba County, New Mexico, in such a manner as to permit the production of oil from the Otero-Gallup Oil Pool and the production of gas from an undesignated Dakota pool through parallel strings of 2-inch EUE tubing.

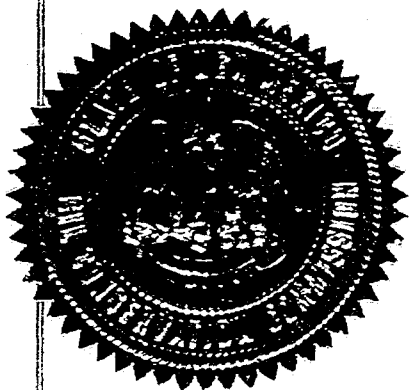
PROVIDED HOWEVER, That applicant shall complete, operate, and produce said well in accordance with the provisions of Section V, Rule 112-A.

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

IT IS FURTHER ORDERED:

That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order, after proper notice and hearing the Commission may terminate the authority hereby granted and require applicant or its successors and assigns to limit its activities to regular single-zone production in the interests of conservation.

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



STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

John T. Burroughs
JOHN BURROUGHS, Chairman

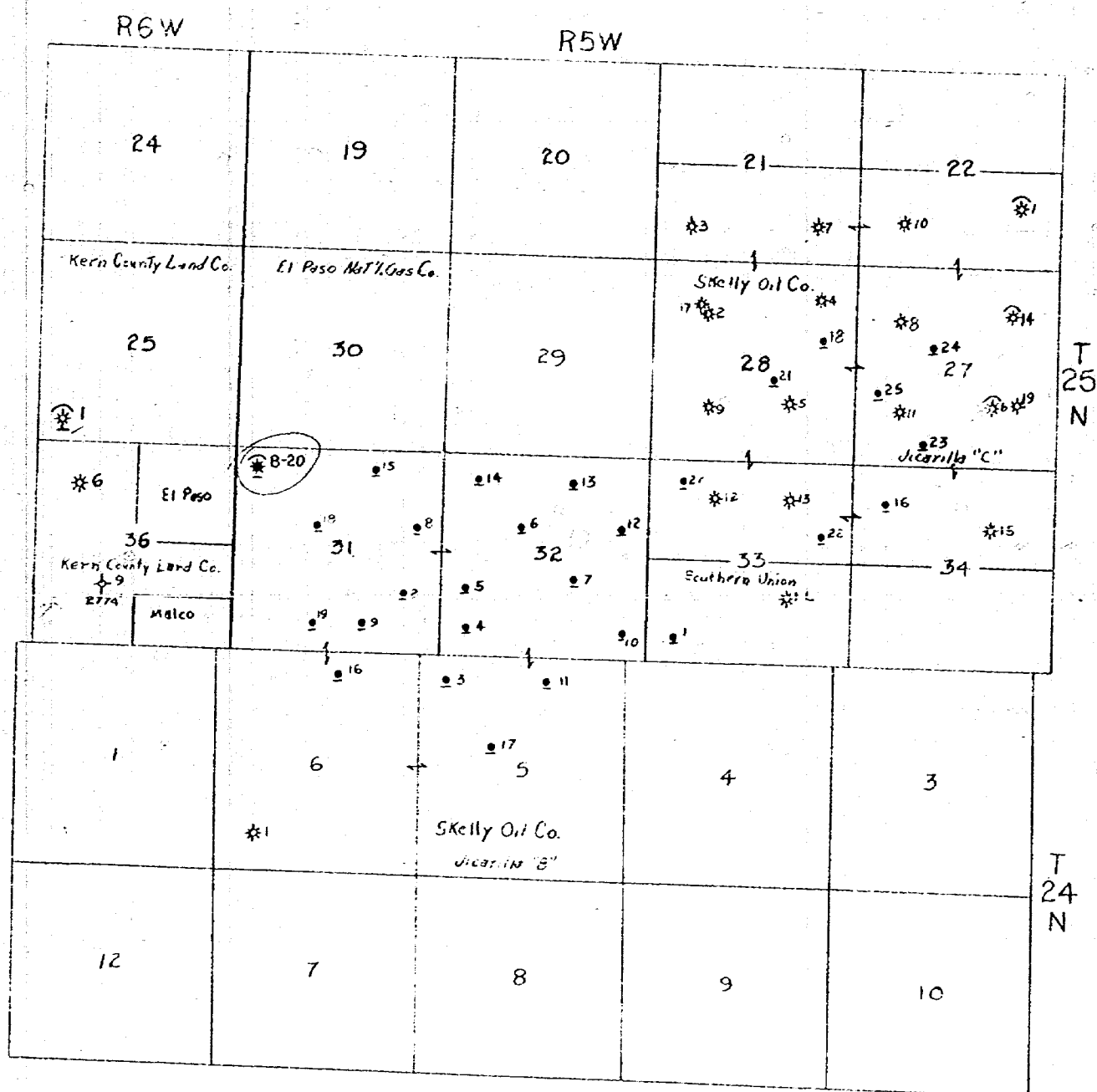
Murray E. Morgan
MURRAY E. MORGAN, Member

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

vem/

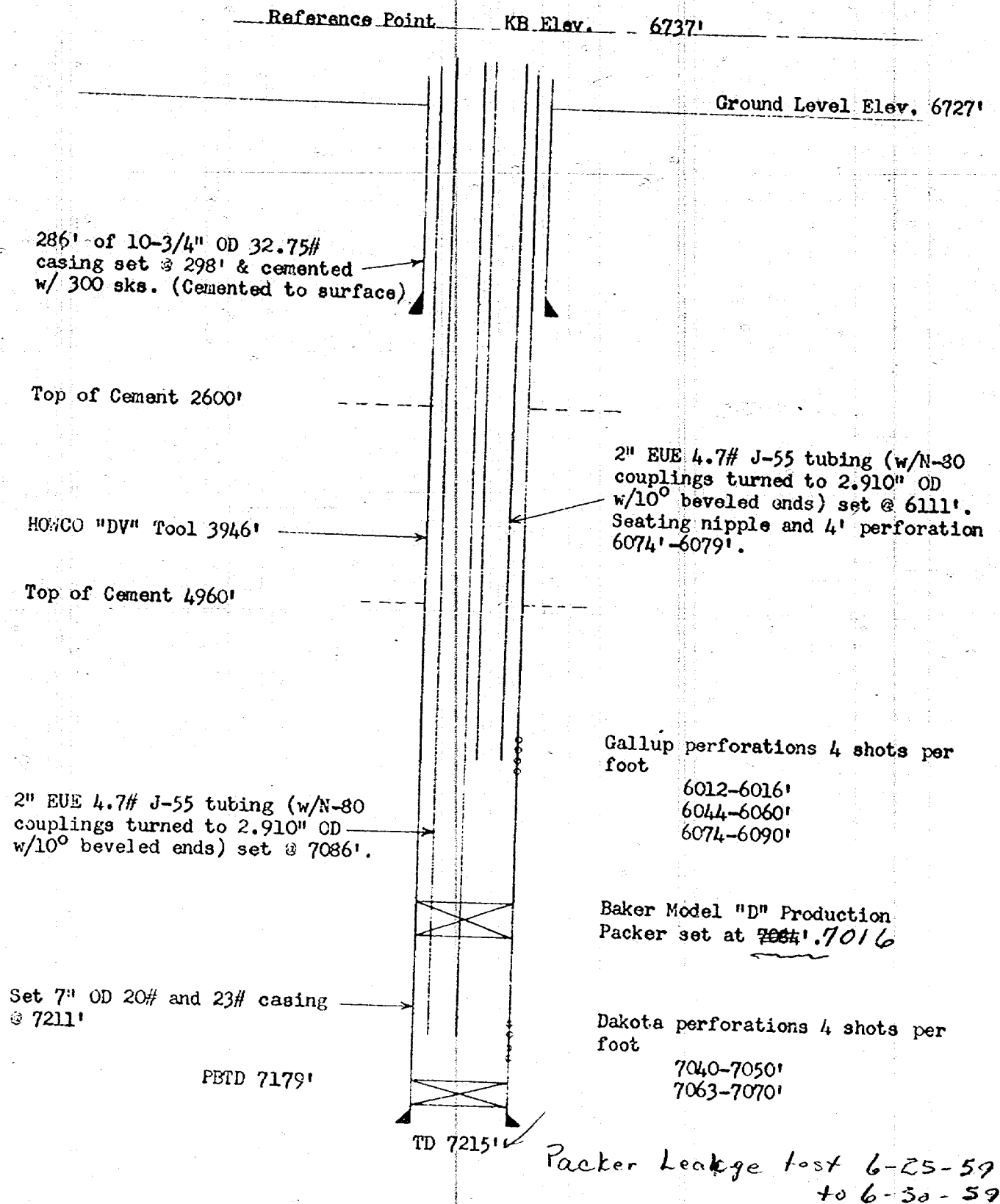
RIO ARriba COUNTY
NEW MEXICO

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Shelly EXHIBIT NO. 1
CASE NO. 1727



SKEILLY OIL COMPANY
Jicarilla "B" No. 20
NW/4, NW/4 31-25N-5W
Rio Arriba County, N. M.

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
<i>Skeilly</i> EXHIBIT NO. <u>2</u>
CASE NO. <u>1727</u>



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 1727

Well: Skelly Oil Company Lease: Lincoln No. 20
Locality: Rio Arriba
County: San Juan Twp. 25N Sec. 31 E. 5

Name of Reservoir or Pool: Gallup Type of Prod. Oil Method of Prod. Flow Prod. Medium Flow
(Oil or Gas) (Flow or Art.) (Flow or Gsg.)
Upper Completion: Dakota Gas Flow Tbg.
Lower Completion: Dakota Gas Flow Tbg.

Flow Test No. 1
Upper Hour, date 8:00 AM Length of time shut-in 7 days SI press. 1337# Stabilized? yes
Lower Hour, date 4:00 PM Length of time shut-in 8 days SI press. 2307# Stabilized? yes
Upper Shut-in 6-18-59 Lower Shut-in 6-17-59

Flow Test No. 1
Commenced at (hour, date) 9:30 AM 6-25-59 Zone producing (Upper or Lower): Upper

Time (hour, date)	Lapsed time since*	Pressure Upper Compl.	Pressure Lower Compl.	Prod. Zone Temp.	Remarks
<u>9:45 AM 6-25</u>	<u>15 min.</u>	<u>1353</u>	<u>750</u>		
<u>10:1 AM 6-25</u>	<u>30 min.</u>	<u>1358</u>	<u>685</u>		
<u>10:15 AM 6-25</u>	<u>45 min.</u>	<u>1360</u>	<u>634</u>		
<u>10:30 AM 6-25</u>	<u>1 hour</u>	<u>1360</u>	<u>613</u>		
<u>11:30 AM 6-25</u>	<u>2 hours</u>	<u>1361</u>	<u>564</u>		
<u>12:30 PM 6-25</u>	<u>3 hours</u>	<u>1360</u>	<u>555</u>		

Production rate during test
Oil: 6.983 BOPD based on MCPPD; Tested thru (Orifice or Meter): 3/4" choke
Gas: 6.983 Bbls. in 24 Hrs. Grav. 0.69 GOR 1313

Flow Test No. 2
Upper Hour, date 6:00 AM Length of time shut-in 11 days SI press. 1408 Stabilized? yes
Lower Hour, date 12:30 PM Length of time shut-in 93 hours SI press. 2264 Stabilized? yes
Upper Shut-in 6-18-59 Lower Shut-in 6-23-59

Flow Test No. 2
Commenced at (hour, date) 10:30 AM 6-29-59 Zone producing (Upper or Lower): Upper

Time (hour, date)	Lapsed time since **	Pressure Upper Compl.	Pressure Lower Compl.	Prod. Zone Temp.	Remarks
<u>11:30 AM 6-29</u>	<u>1 hour</u>	<u>285</u>	<u>2271</u>		<u>Flowed through 1" choke</u>
<u>2:30 PM 6-29</u>	<u>4 hours</u>	<u>333</u>	<u>2271</u>		<u>from 9:30 AM to 11:30 AM</u>
<u>10:00 AM 6-30</u>	<u>2 1/2 hours</u>	<u>215</u>	<u>2293</u>		<u>Flowed through 2 1/2" choke</u>
<u>10:30 AM 6-30</u>	<u>24 hours</u>	<u>214</u>	<u>2293</u>		<u>from 11:30 AM 6-29 to 10:30 AM 6-30-59</u>

Production rate during test
Oil: 231 BOPD based on 231 Bbls. in 24 Hrs. Grav. 0.69 GOR 1313
Gas: 304 MCPPD; Tested thru (Orifice or Meter): Orifice meter on Bolo Well
Checker

REMARKS:

I hereby certify that the information herein contained is true and complete to the best of my knowledge.

Operator Skelly Oil Company
Approved: 19 By Benjamin Strickling, Jr.
New Mexico Oil Conservation Commission
By Benjamin Strickling, Jr. Title Production Engineer
Title _____ Date June 30, 1959

DOCKET: EXAMINER HEARING JULY 28, 1959

Oil Conservation Commission - 9 a.m., Mabry Hall, State Capitol, Santa Fe, New Mexico

The following cases will be heard before Elvis A. Utz, Examiner, or A. L. Porter, Jr., Secretary-Director

Continued Case

✓ CASE 1720: (Continued) Application of Skelly Oil Company for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its W. P. Saunders Well No. 1, located in the SW/4 SE/4 of Section 11, Township 26 North, Range 11 West, San Juan County, New Mexico, in such a manner as to produce oil from the Gallegos-Gallup Oil Pool and to produce oil from an undesignated Dakota pool through parallel strings of tubing.

NEW CASES

✓ CASE 1725: Application of Amerada Petroleum Corporation for an oil-oil dual completion and for permission to commingle the production from two separate pools. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its State "Q" Well No. 1, located in the NW/4 SE/4 of Section 16, Township 20 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Eunice-Monument Pool and the production of oil from an undesignated Tubb pool, through parallel strings of tubing. Applicant further seeks permission to commingle the production from said pools produced from the said State "Q" Well No. 1.

✓ CASE 1726: Application of Amerada Petroleum Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Ka Da Pa Well No. 1, located in the SW/4 SW/4 of Section 4, Township 25 North, Range 12 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from the Bisti-Lower Gallup Oil Pool and the production of oil from an interval designated by the applicant as the Lower Mancos sand through parallel strings of tubing.

✓ CASE 1727: *Chas. White* Application of Skelly Oil Company for an oil-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Jicarilla "B" Well No. 20, located in the NW/4 NW/4 of Section 31, Township 25 North, Range 5 West, Rio Arriba County, New Mexico, in such a manner as to permit production of oil from the Otero-Gallup Oil Pool and the production of gas from an undesignated Dakota pool through parallel strings of tubing.

✓ CASE 1728: Application of Hanson, Waters and Williamson, for an order authorizing a pilot water flood project, for capacity allowable for twelve wells in said project area, and for establishment of an administrative procedure for expansion of said project, conversion of wells to water injection, and for granting capacity allowables. Applicant, in the above-styled cause, seeks an order authorizing it to institute a pilot water flood project in the Coyote-Queen Pool in Chaves County, New Mexico. Applicant proposes to inject water into the Queen formation through six wells located in Sections 15 and 16, Township 11 South, Range 27 East. Applicant also seeks capacity allowables for twelve wells in said project. Applicant further seeks the establishment of a procedure whereby the project area may be expanded, wells may be converted to water injection, and capacity allowables granted without notice and hearing.

CASE 1729:

Application of El Paso Natural Gas Products Company for permission to produce more than 16 wells in a common tank battery. Applicant, in the above-styled cause, seeks an order authorizing the production of more than 16 wells in the Horseshoe-Gallup Oil Pool into a common tank battery. Said wells are located on applicant's Horseshoe Ute Lease comprising portions of Sections 27, 28, 33 and 34, Township 31 North, Range 16 West, San Juan County, New Mexico.

CASE 1610:

Application of Wood River Oil & Refining Company, Inc., for an amendment of Order No. R-1352. Applicant, in the above-styled cause, seeks an amendment of Order No. R-1352, to provide that the unorthodox well locations for well Nos. 8 and 9 of the Wills Water Flood Project, Rhodes Pool, Lea County, New Mexico, be 1135 feet from the South line and 1315 feet from the West line of Section 35, and 1135 feet from the South line and 20 feet from the West line of Section 35 respectively, both in Township 26 South, Range 37 East.

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

7-3-58

MAIN OFFICE APPLICATION FOR DUAL COMPLETION

July 28 Ex

Case 1727

Field Name	1959 JUN 5 Otero Gallup	County	Rio Arriba	Date	
Operator	Skelly Oil Company	Lease	Jicarilla "B"	Well No.	20
Location of Well	Unit D	Section 31	Township 25N	Range	5W

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 X
2. If answer is yes, identify one such instance: Order No. _____ ; Operator, Lease, and Well No.:

3. The following facts are submitted:	Upper Zone	Lower Zone
a. Name of reservoir	Gallup	Dakota
b. Top and Bottom of Pay Section (Perforations)	6012' - 6090'	7040' - 7070'
c. Type of production (Oil or Gas)	Oil	Gas
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.
- No 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.

El Paso Natural Gas Co., Box 997, Farmington, New Mexico

Kern County Land Co., 304 Korber Bldg., Albuquerque, New Mexico

Malco Refineries, Inc., Artesia, New Mexico

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES _____ NO X. If answer is yes, give date of such notification _____.

CERTIFICATE: I, the undersigned, state that I am the resident counsel of the Skelly Oil Company (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.

Lawrence

Signature

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.

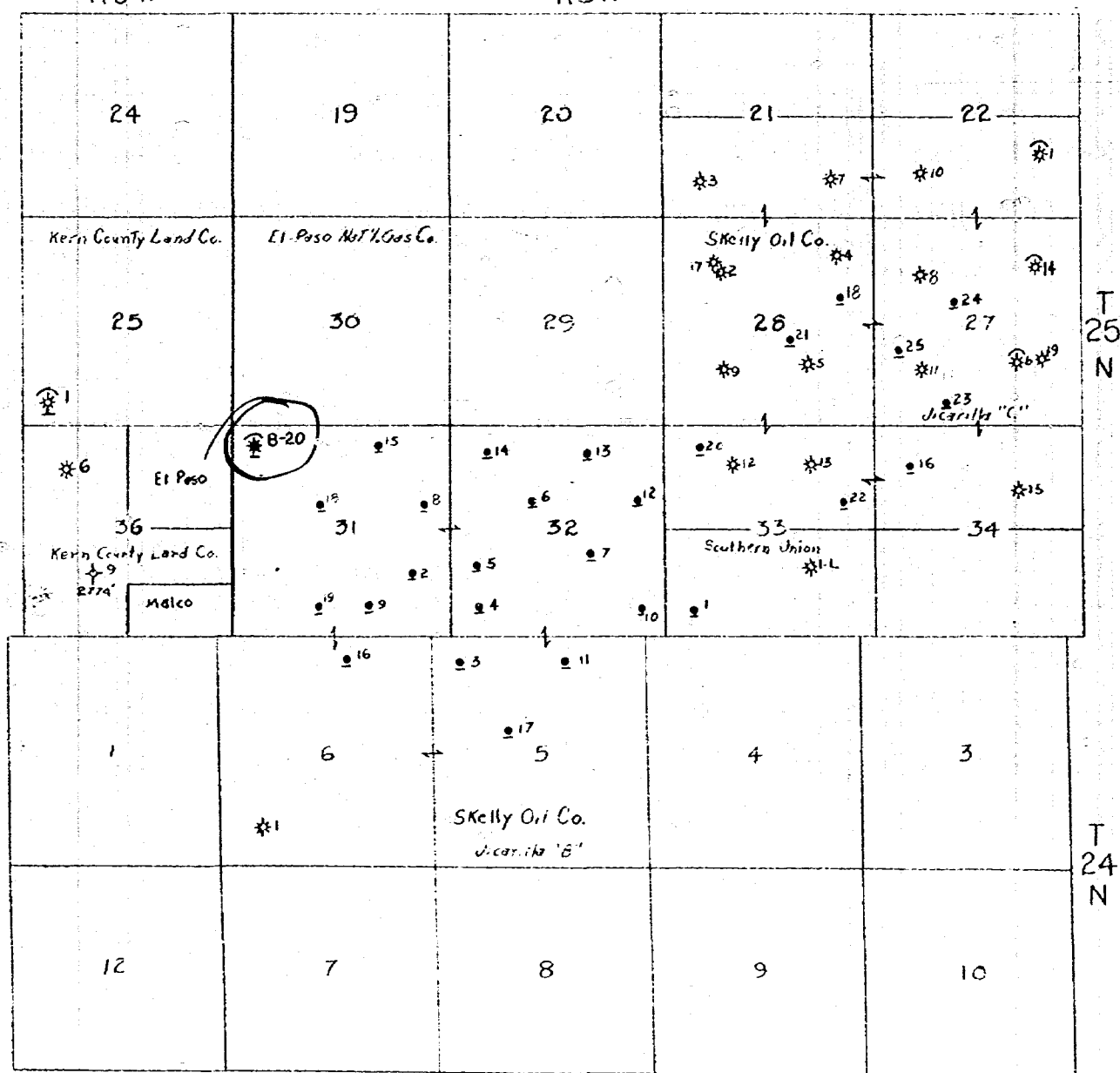
NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

Robert M. ...

RIO ARRIBA COUNTY NEW MEXICO

R6W

R5W



SKEILY OIL COMPANY

Jicarilla "B" No. 20

NW/4 NW/4 31-25N-5W

Rio Arriba County, N. M.

Reference Point KB Elev. 6737'

Ground Level Elev. 6727'

286' of 10-3/4" OD 32.75#
casing set @ 298' & cemented
w/ 300 sks. (Cemented to surface)

Top of Cement 2600'

HOWCO "DV" Tool 3946'

Top of Cement 4960'

✓ 2" EUE 4.7# J-55 tubing (w/N-80
couplings turned to 2.910" OD
w/10° beveled ends) set @ 7086'.

Set 7" OD 20# and 23# casing
@ 7211'

PBTD 7179'

TD 7215'

✓ 2" EUE 4.7# J-55 tubing (w/N-80
couplings turned to 2.910" OD
w/10° beveled ends) set @ 6111'.
Seating nipple and 4' perforation
6074'-6079'.

✓ Gallup perforations 4 shots per
foot
6012-6016'
6044-6060'
6074-6090'

✓ Baker Model "D" Production
Packer set at 7084'.

✓ Dakota perforations 4 shots per
foot
7040-7050'
7063-7070'