

Case No.

1756

Application, Transcript,
Small Exhibits, Etc.

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

September 30, 1959

Mr. W. J. Cooley
413½ West Main
Farmington, New Mexico

Dear Mr. Cooley:

On behalf of your client, Union Oil Company of California, we enclose two copies of Order No. R-1492 issued by the Oil Conservation Commission on September 30, 1959, in Case No. 1756.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ir/

Enclosures

*copy to
L.H.H.*

C
O
P
Y

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. 1756
Order No. R-1492

APPLICATION OF UNION OIL COMPANY
OF CALIFORNIA FOR AN ORDER ESTA-
BLISHING SPECIAL RULES AND REGU-
LATIONS FOR THE TATUM-WOLFCAMP
POOL, LEA COUNTY, NEW MEXICO TO
PROVIDE FOR 80-ACRE PRORATION
UNITS

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 16, 1959, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 30th day of September, 1959, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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, Union Oil Company of California, seeks the promulgation of special rules and regulations for the Tatum-Wolfcamp Pool in Lea County, New Mexico, to provide for 80-acre proration units.

(3) That the applicant has proved by a preponderance of the evidence that the Tatum-Wolfcamp Pool can be efficiently and economically drained and developed on 80-acre proration units.

(4) That to require development of the Tatum-Wolfcamp Pool on 40-acre proration units might cause the drilling of unnecessary wells.

(5) That the evidence presented indicates that it is uneconomical to drill wells on 40-acre proration units in the Tatum-Wolfcamp Pool and to remain on such a spacing pattern might impede further development in said pool.

(6) That 80-acre proration units should be established in the Tatum-Wolfcamp Pool.

IT IS THEREFORE ORDERED:

That special rules and regulations for the Tatum-Wolfcamp Pool in Lea County, New Mexico, be and the same are hereby promulgated as follows, effective October 1, 1959; provided, however, that the increased allowable provisions contained herein shall not become effective until November 1, 1959.

SPECIAL RULES AND REGULATIONS FOR THE
TATUM-WOLFCAMP POOL

Rule 1. Each well completed or recompleted in the Tatum-Wolfcamp Pool or in the Wolfcamp formation within one mile of the Tatum-Wolfcamp Pool, and not nearer to nor within the limits of another designated Wolfcamp pool, shall be spaced, drilled, operated, and prorated in accordance with the Special Rules and Regulations hereinafter set forth.

Rule 2. Each well completed or recompleted in the Tatum-Wolfcamp Pool shall be located on a unit containing 80 acres, more or less which consists of the N/2, S/2, E/2, or W/2 of a single governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

Rule 3. The initial well on any 80-acre proration unit in said pool shall be located within 150 feet of the center of either the NW/4 or the SE/4 of the quarter section on which the well is located. Any well which was drilling to or completed in the Tatum-Wolfcamp Pool prior to October 1, 1959, is granted an exception to the well location requirements of this rule.

Rule 4. For good cause shown, the Secretary-Director may grant exception to the requirements of Rule 2 without notice and hearing when the application is for a non-standard unit comprising a single quarter-quarter section or lot, or when the application is for the purpose of joining fractional lots not exceeding 20.49 acres each with a standard unit. All operators offsetting the proposed non-standard unit shall be notified of the application by registered mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application if, after a period of 30 days, no offset operator has entered an objection to the formation of such non-standard unit.

-3-

Case No. 1756
Order No. R-1492

The allowable assigned to any such non-standard unit shall bear the same ratio to a standard allowable in the Tatum-Wolfcamp Pool as the acreage in such non-standard unit bears to 80 acres.

Rule 5. An 80-acre proration unit (79 through 81 acres) in the Tatum-Wolfcamp Pool shall be assigned an 80-acre proportional factor of 5.67 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

IT IS FURTHER ORDERED:

That Operators who propose to dedicate 80 acres to a well in the Tatum-Wolfcamp Pool must file an amended Commission Form C-128 with the Hobbs District Office of the Commission by October 15, 1959, in order that the well may be assigned an 80-acre allowable on the November proration schedule.

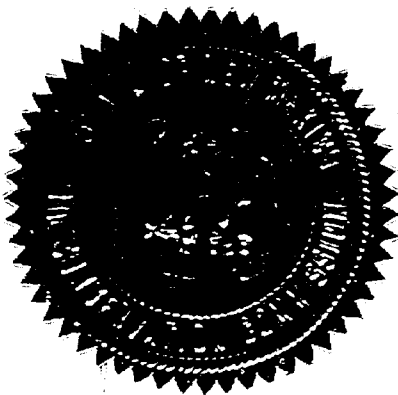
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

John Burroughs
JOHN BURROUGHS, Chairman

Murray E. Morgan
MURRAY E. MORGAN, Member

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



lcr/

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL, PRESIDENT

SYMBOLS

DL=Day Letter
NL=Night Letter
LT=International Letter Telegram

1201

The filing time shown in the date line on domestic telegrams is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

LA035 KB041

15 00 8 52

K TUC016 PD=FAX TULSA OKLA 15 856 AMC=

NEW MEXICO OIL CONSERVATION COMMISSION=

107 MABREY HALL CAPITOL BLDG SANTA FE NMEX=

WE CONCUR IN PROPOSED 80 ACRE SPACING, SOUTH TATUM
FIELD, LEA COUNTY, WITH OPTIONAL NORTH SOUTH OR EAST
WEST GOVERNMENTAL SUB-DIVISION, CASE 1756 SET FOR
SEPTEMBER 16=

SKELLY OIL CO GEORGE W SELINGER

11:06 AM 15 SEP 1956

MAIN OFFICE OKC

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

DOCKET: REGULAR HEARING SEPTEMBER 16, 1959

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

- ALLOWABLE:
- (1) Consideration of the oil allowable for October, 1959.
 - (2) (Show Cause Hearing) In the matter of the hearing called by the Oil Conservation Commission to require El Paso Natural Gas Products Company to appear and present testimony as to whether it prorated oil purchases in any county in Northwest New Mexico during July, 1959, without notifying the Commission, and if so whether such prorationing was on a ratable basis.
 - (3) Consideration of the allowable production of gas for October, 1959, from six prorated pools in Lea County, New Mexico, also consideration of the allowable production of gas from seven prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico.

CONTINUED CASE

CASE 1600: In the matter of the application of M. A. Romero and Robert Critchfield concerning the operation of gas prorationing in the Blanco Mesaverde Gas Pool in Rio Arriba and San Juan Counties, New Mexico, as well as from the Choza Mesa-Pictured Cliffs Gas Pool in Rio Arriba County, New Mexico.

NEW CASES

CASE 1755: Application of El Paso Natural Gas Company for an amendment of Rule 112-A of the Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an amendment of Rule 112-A of the Commission Rules and Regulations to provide for administrative approval of dual completions utilizing retrievable-type packers.

CASE 1756: Application of Union Oil Company of California for an order promulgating special rules and regulations for the Tatum-Wolfcamp Pool in Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order promulgating special rules and regulations for the Tatum-Wolfcamp Pool in Lea County, New Mexico, to provide for 80-acre proration units.

CASE 1757: Application of J. C. Williamson for an order establishing 80-acre proration units in an undesignated Devonian pool in Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order establishing 80-acre proration units in an undesignated Devonian pool in Chaves County, New Mexico. The discovery well is located 660 feet from the North and East lines of Section 1, Township 12 South, Range 28 East.

CASE 1758: Southeastern New Mexico nomenclature case calling for an order creating and extending existing pools in Eddy and Lea Counties, New Mexico.

(a) Create a new oil pool for Pennsylvanian production, designated as the Baish-Pennsylvanian Pool and described as:

TOWNSHIP 17 SOUTH, RANGE 32 EAST, NMPM
Section 21: SE/4

- (b) Create a new oil pool for Brushy Canyon production, designated as the Cotton Draw-Brushy Canyon Pool and described as:

TOWNSHIP 24 SOUTH, RANGE 31 EAST, NMPM
Section 24: SE/4

- (c) Create a new oil pool for Devonian production, designated as the King Camp-Devonian Pool and described as:

TOWNSHIP 14 SOUTH, RANGE 29 EAST, NMPM
Section 27: NE/4

- (d) Create a new gas pool for Tubb production, designated as the Weir-Tubb Gas Pool and described as:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
Section 15: SE/4

- (e) Extend the Bishop Canyon Pool to include therein:

TOWNSHIP 18 SOUTH, RANGE 38 EAST, NMPM
Section 9: NE/4

- (f) Extend the Four Lakes-Devonian Gas Pool to include therein:

TOWNSHIP 12 SOUTH, RANGE 34 EAST, NMPM
Section 2: SE/4

- (g) Extend the Jalmat Gas Pool to include therein:

TOWNSHIP 25 SOUTH, RANGE 36 EAST, NMPM
Section 23: SE/4

TOWNSHIP 26 SOUTH, RANGE 36 EAST, NMPM
Section 12: NE/4

- (h) Extend the Justis Drinkard Pool to include therein:

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM
Section 13: NW/4

- (i) Extend the Little Lucky Lake-Devonian Pool to include therein:

TOWNSHIP 15 SOUTH, RANGE 30 EAST, NMPM
Section 29: SE/4

- (j) Extend the Maljamar Pool to include therein:

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM
Section 16: NW/4

- (k) Extend the Roberts Pool to include therein:

TOWNSHIP 17 SOUTH, RANGE 32 EAST, NMPM
Section 12: SE/4

- (1) Extend the Robinson Pool to include therein:

TOWNSHIP 17 SOUTH, RANGE 31 EAST, NMPM
Section 11: NE/4 NW/4

- (m) Extend the Skaggs Pool to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 20: NW/4

- (n) Extend the Teas Pool to include therein:

TOWNSHIP 20 SOUTH, RANGE 33 EAST, NMPM
Section 23: NW/4

- (o) Extend the Wilson Pool to include therein:

TOWNSHIP 21 SOUTH, RANGE 35 EAST, NMPM
Section 29: NW/4

CASE 1759:

Northwestern New Mexico nomenclature case for an order extending existing pools in San Juan and Rio Arriba Counties, New Mexico.

- (a) Abolish the Chimney Rock-Gallup Oil Pool for the purpose of joining two pools producing from a common source of supply, to be known as the Horseshoe-Gallup Oil Pool.

- (b) Extend the Blanco-Pictured Cliffs Pool to include therein:

TOWNSHIP 29 NORTH, RANGE 9 WEST, NMPM,
Section 16: S/2

- (c) Extend the South Blanco-Pictured Cliffs Pool to include therein:

TOWNSHIP 25 NORTH, RANGE 3 WEST, NMPM,
Section 22: E/2
Section 26: N/2

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM,
Section 19: NW/4

- (d) Extend the Tapacito-Pictured Cliffs Pool to include therein:

TOWNSHIP 25 NORTH, RANGE 3 WEST, NMPM
Section 14: E/2

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM,
Section 25: E/2

TOWNSHIP 27 NORTH, RANGE 5 WEST, NMPM,

Section 15: W/2
Section 16: All
Section 17: E/2
Section 20: E/2
Section 21: All
Section 22: All
Section 23: All
Section 26: NW/4

- (e) Extend the Otero-Chacra Pool to include therein:

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM

Section 19: NE/4

Section 20: N/2 & SE/4

- (f) Extend the Blanco-Mesaverde Pool to include therein:

TOWNSHIP 27 NORTH, RANGE 6 WEST, NMPM

Section 33: All

- (g) Extend the Angels Peak-Gallup Oil Pool to include therein:

TOWNSHIP 27 NORTH, RANGE 10 WEST, NMPM,

Section 28: S/2 NW/4

- (h) Extend the Horseshoe-Gallup Oil Pool to include therein:

TOWNSHIP 30 NORTH, RANGE 16 WEST, NMPM,

Section 6: SE/4 NE/4

Section 8: NE/4 NE/4

Section 9: NW/4 NW/4

Section 13: S/2 SW/4

TOWNSHIP 31 NORTH, RANGE 16 WEST, NMPM,

Section 27: SW/4 SW/4

TOWNSHIP 31 NORTH, RANGE 17 WEST, NMPM,

Section 3: SW/4 SW/4

Section 4: All

Section 5: NE/4, E/2 SE/4, & NW/4 SE/4

Section 9: NE/4, N/2 NW/4, SE/4 NW/4, & N/2 SE/4

Section 10: W/2, SE/4, & S/2 NE/4

Section 11: SW/4

Section 13: SE/4 SW/4

Section 14: N/2 & SE/4

Section 23: E/2 NE/4

Section 25: SE/4 SE/4

TOWNSHIP 32 NORTH, RANGE 17 WEST, NMPM,

Section 33: SW/4 SW/4

- (i) Extend the Otero-Gallup Oil Pool to include therein:

TOWNSHIP 24 NORTH, RANGE 5 WEST, NMPM,

Section 5: SW/4

Section 8: NW/4 NW/4

- (j) Extend the Verde-Gallup Oil Pool to include therein:

TOWNSHIP 31 NORTH, RANGE 14 WEST, NMPM,

Section 21: SW/4 & SW/4 SE/4

- (k) Extend the Angels Peak-Dakota Pool to include therein:

TOWNSHIP 28 NORTH, RANGE 10 WEST, NMPM

Section 31: All

Docket No. 32-59

-5-

- (1) Extend the West Kutz-Dakota Pool to include therein:

TOWNSHIP 27 NORTH, RANGE 12 WEST, NMPM,
Section 18: N/2

ig/

STATE OF NEW MEXICO

BEFORE THE

AUG 17 AM 9:09

OIL CONSERVATION COMMISSION OF NEW MEXICO

*Self
Hearings
on
Res.*

IN THE MATTER OF THE APPLICATION)
of Union Oil Company of California)
for the establishment of 80-acre)
spacing and the promulgation of)
special pool rules in and for the)
Tatum-Wolfcamp Pool in Lea County,)
New Mexico.)

Case No. 1756
1757

APPLICATION FOR HEARING

COMES NOW Union Oil Company of California by and through
its attorneys, Burr & Cooley, and hereby makes application to
the Commission to be heard at the regular Commission hearing
on September 16, 1959, on the following:

- (a) The establishment of 80-acre well spacing and proration units in the Tatum-Wolfcamp Pool in Lea County, New Mexico; and
- (b) The promulgation of special rules and regulations for the Tatum-Wolfcamp Pool to govern the spacing location, drilling, completion, and production of wells in the Tatum-Wolfcamp Pool, and such other rules and regulations for said pool as the Commission may deem necessary and proper.

Respectfully submitted,

UNION OIL COMPANY OF CALIFORNIA

By Burr & Cooley

William J. Cooley
William J. Cooley

*Docket
Mailed*
Burr & Cooley
ATTORNEYS AT LAW
413½ W. MAIN
FARMINGTON,
NEW MEXICO

9-4-59
JK

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
DECEMBER 14, 1960

IN THE MATTER OF:

CASE 1757 Application of J. C. Williamson for an order per-
manently establishing 30-acre proration units in
the West White Ranch-Devonian Pool in Chaves
County, New Mexico. Applicant, in the above-
styled cause, seeks an order permanently estab-
lishing 30-acre proration units in the West White
Ranch-Devonian Pool in Chaves County, New Mexico.
Temporary 30-acre pool rules were established by
Order No. R-1549.

BEFORE:

Mr. Murray Morgan
Mr. A. L. Porter

TRANSCRIPT OF PROCEEDINGS

MR. PORTER: The hearing will come to order, please. The
Commission will take up next Case 1757.

MR. MORRIS: Case 1757. Application of J. C. Williamson
for an order permanently establishing 30-acre proration units in
the West White Ranch-Devonian Pool in Chaves County, New Mexico.

MR. CAMPBELL: Jack M. Campbell, Campbell & Russell, Ros-
well, New Mexico, appearing on behalf of Lampher and May of Mid-
land, Texas, H. R. Suker, J. C. Williamson.

MR. PORTER: Any other appearances? Will the witness
stand and be sworn, please?



(Witness sworn)

JOHN A. WEIDEMAN,
called as a witness, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. CAMPBELL:

Q Will you state your name, please?

A John A. Weideman.

Q Where do you live and what is your profession?

A I reside at 4509 Pasadena Drive, Midland, Texas. I am a consulting engineer.

Q Have you previously testified before the Commission or its examiners?

A Yes, sir, I have.

Q By whom were you at that time employed?

A I was employed by Continental Oil Company in their Hobbs District Office.

MR. PORTER: The Commission will accept the witness' qualifications.

Q (By Mr. Campbell) Have you now been employed by Lamphere & May, in Case 1757 now before the Commission?

A Yes, sir.

Q When did Mr. Lamphere & May acquire this property?

A We acquired the operators of this on the -- effective July 1st, 1959.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, NEW MEXICO

PHONE CH 3-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

Q At the time they acquired this property, to your knowledge, were they aware of the existence of the temporary order regarding appraising and proration units?

A No, sir, they were not. This was their first adventure into New Mexico. This is the one and only well they operate. Mr. Williamson failed to inform them this was only a temporary order.

Q When did they become aware of the hearing that is being held here today?

A One week ago Monday when they received the docket through the normal mail channels.

Q Since the time they became aware of it, have they had occasion to examine the transcript of the hearing in this case in December of 1959?

A Yes, sir, they -- the following day after they received the docket, he examined the transcript at Hobbs District office of the O.C.C.

Q Have you made some additional studies and obtained some additional information with regard to this area since that time?

A Yes, sir, I have.

(Whereupon, Applicant's Exhibit No. 4 was marked for identification.)

Q I will refer to what has been identified as Exhibit No. 4 in this case, and ask you to state what that is?

A Exhibit No. 4 is a structure contour map of the area of the West White Ranch-Devonian Pool drawn on top of the Devonian.



It is a revision of the original map submitted as Exhibit No. 1.

Q What additional drilling has been done since the last hearing?

A There has been one dry hole drilled.

Q Where is that located?

A That is located in Unit D "F", Section 6, Range 29 East, Township 12 South.

Q This was also drilled by Mr. C. J. Williamson?

A As White No. 2.

Q That well was a dry hole?

A Yes, sir, it was.

Q So that this Williamson White No. 1 Well shown on Exhibit No. 4 is essentially completely surrounded by dry holes, is it not?

A Yes, the No. 1 is surrounded by dry holes.

Q Now, have you made any additional study since the last hearing with regard to the area of drainage by this one well in this Pool?

A Yes, sir, I have. If you will refer, again, to Exhibit 4, you will notice and compare it with Exhibit No. 1, the revision is due principally to the point established by the drilling of the White No. 2. There was an unfortunate discrepancy between the seismic point and the core analysis, which they did exactly as they could.

If you'll notice, on your map where the No. 2 dry hole is situated, there is a point right next to it where the value is



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

eliminated because it proved to be false. This was the only point that proved to be false and a costly one, because theoretically this should have been the highest well in the field. Actually, it was 103 feet high at the seismic point and 63 feet low to the White No. 1. So the limits of the reservoir are now defined in this very small anticlinal steeply dipped structure, as this fault to the north is a normal fault and oil-water contact was established as minus 4465.

Q And based upon that interpretation, is the 80-acres presently dedicated to the White No. 1 Well all currently productive of oil?

A Yes, sir, all the 80 acres dedicated to the White No. 1 overlies productive formation.

Q Now, inasmuch as the White No. 2 Well was a dry hole, of course, you do not have cores that you can refer to insofar as this particular -- these particular two wells are concerned?

A This well ran so low they did not actually penetrate the Devonian. When they felt by samples and drilling time data they were that low, they stopped, which is unfortunate because at the time they were only 13 feet above the approach to top of the Devonian, since they thought it was very easy to actually approach the top of the Devonian.

Q Do you feel that they did not penetrate the Devonian



A. Yes.

Q Have you had an opportunity since that time to obtain current bottom hole pressure tests to White No. 1 Well?

A No, sir, I have been faced with some very serious lack of communication during that last week. We have not been able to get into the location to run this test. We have been unable to gain any communication with our operator personnel at Tatum. Our pumper who operates this well, is a long distance from the place, for one thing. As far as I know, communications have not been reestablished, so it's been physically impossible to obtain this bottom hole pressure.

Q Well, do you intend, as soon as you can get into the well to make a proper retest?

A Yes, sir, we do. In this particular test it will require pulling tubing and rods since the well is pumping from the depth of 5,000 feet and will go into 800 feet. As you know, a lot of this information would be nonconclusive because of the dual density fluid in the hole and long column of fluid.

Q Are you willing and prepared to furnish that bottom hole pressure information to the Commission as soon as it is available to you?

A If the Commission desires the test, we will run it. There is expense involved, of course, we will certainly be happy to supply it.



(Whereupon, Applicant's Exhibit No. 5 was marked for identification)

Q I refer you to what has been identified as Exhibit No. 5 in this case, and ask you to state what that is?

A Exhibit No. 5 is a drill stem test data. It's an actual report by the service company, Halliburton, that took the test.

Q Referring to that, will you indicate to the Commission what is reflected to you in connection with the reservoirs situation in connection with drainage?

A This was an initial test in this, the No. 1. It was taken when, in effect, there was no recovery from the reservoir. You will notice the valves here. Of particular interest is thirty minute close-in pressure which when the pool was closed you had a low, medium build-up of pressure to almost full initial reservoir pressure. The value given here is 3313, the initial bottom hole pressure for the pool, I believe, is 3340. So the build-up was within a very few pounds of the original bottom hole pressure, which indicates excellent communication, and good permeability in the order of this rapid rate of build-up.

Q Do you believe from the information you have available at this time, this is water drive reservoir?

A There is every indication of it, although, to the best of my knowledge, all Devonian reservoirs in this particular area of the northwest shelf, are in direct communication with a common aquifer, and have active water drive mechanisms.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, NEW MEXICO

PHONE CH 3-6691

PAGE 3

Q What additional information do you have with regard to the possible drainage acreage of this particular well?

A A study of the logs in this area shows that the actual net pay is just a little thin 5-foot section that is found just below the top of the Devonian, from the Devonian down below the top you will encounter this gross section, which is only 8 feet, and has 5 feet effective pay within the gross section. This zone is continuous over the structure, it is found in the logs of all the wells and, I believe, this to be the only producing reservoir.

Q What information do you have concerning the production history from this well or from the wells to the east in the White Ranch, Devonian Pool that would indicate to you that the well is drilling more than 40 acres?

A Well, first of all, I refer you to the White Ranch-Devonian Pool as the nearest comparable production. It's three miles east, it's a three-well pool developed on 40-acre tracts in the very latter stages of completion. Its history is practically a closed book, and the recoveries there prove conclusively this opinion, they are definitely recovering, definitely draining more than 40 acres. I have some figures here that I would like to read in this connection. To date, the possible recovery to 1/1/50 -- incidentally, this pool was discovered in April, 1953. The pool recovery to 10/1/60 is 439,643 barrels. By declining curve and offset, pattern offset and established decline rate. Now, one well; it's getting very close to economic limit, the ultimate re-



covery from the pool 559,700 barrels. The recoverable oil in place under the 40-acre tracts underlying these three wells is as follows: Well No. 1, 127,000 barrels based on 22 feet net effective pay. Well No. 2, 107,000 barrels based on 18 $\frac{1}{2}$ feet net effective pay. Well No. 3, 31,000 barrels, based on 14 feet of net effective pay. My data, in calculating this, came from the operators, the El Paso Natural Gas Company. They have very extensive information core data, bottom hole pressure, PI data, good logging and just about anything you would need to make a good reservoir analysis. So that gives a total recovery for 120 acres of 315,000. The pool has already recovered 489,643 with the ultimate 559,700, so it's obviously draining more than a 40-acre tract. There are, it will total 223.5 productive acres overlying the reservoir.

Q Do you have any comparable data with regard to the production history and the ultimate recovery from the White Well No. 1 in the West White Ranch-Devonian Pool?

A Yes, sir. Based on this 5 feet net effective pay, I have calculated that there are 384,000 barrels in place in the reservoir and the recoverable oil is 134,000 barrels. The oil in place under 40-acre tract would be 25,320 barrels or the recovery to 11/1/60 is 52,197 barrels, which is nearly double what would underly the 40-acre tract.

Q You have been producing this well at top allowable, have you?

A Since installing additional lift equipment and getting it



operating properly, yes.

Q Are you producing any substantial amounts of water?

A I will read you the average daily production as of this date. For the month of October, the allowable was 4092 based on 80-acre spacing. The oil production was 4053, the water production was 2200. The gas volume too small to measure. This is an unsaturated reservoir, as all these Devonian reservoirs, with solution GOR of about 32 given an average day oil for 1960, 131 daily. Water 71 percent 35.1.

Q Do you feel in view of the type of equipment you have and the present rate of production, that there is any danger of waste in connection with the rate at which you are presently producing this well?

A No, sir. With our present pumping equipment with the 320,000 API perforated unit which is a unit, large storage unit, we definitely do not anticipate any difficulty in artificial lift equipment. Our physical capacity on this equipment is approximately 285 barrels of fluid per day. That is all we can handle. I don't think this rate of withdrawal is detrimental compared to the rate of withdrawal and percent of water with other Devonian pools in the area.

Q Do you feel that it compares favorably insofar as that phase of it is concerned?

A Yes, even in Devonian pools with excellent or better permeability and porosity characteristics than this, it is quite

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, NEW MEXICO

PHONE CH 3-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

common for them to start making water early in their producing life. But you do not get a rapid increase in water, your well is not later fluid, but in my opinion, you do not by-pass large volumes of oil. It's a characteristic in Devonian production. I might call your attention to No. 1 Well, which is the highest, has the highest recovery to date in the White Ranch-Devonian. I have some figures on it too. It started cutting 20 percent water after it produced just 65,681 barrels. And to date, it is produced -- to 70/1/60 it has produced 237,344 barrels, so quite early in its producing life it started producing water, and this definitely did not cause a low recovery.

Q Do you believe this one well that is shown on Exhibit 4 can efficiently and economically drain the area that appears to be productive of oil here?

A Yes, sir, I do. I think the permeability and porosity characteristics of the reservoir plus the establishment of inactive water drive will result in efficient drainage of the pool on 80-acre spacing.

Q Have you made any calculations with regard to the economic factors involved and the drilling of additional wells in this pool?

A Yes, sir, I have.

Q What type of calculations have you made?

A The cost to drill, complete, and the equipment to pump, assuming no additional expenditures for tank battery facilities,



and a very limited expense for roads, would be 127,000 dollars.

Q Would you state to the Commission how that relates to the possible recovery, ultimate recovery of oil from this area on 40-acre basis?

A As you can see from Exhibit No. 4, a well drilled on it as a south offset to White No. 1 would be a little higher, structurally, in my calculations, the greatest amount of additional oil that you can recover by drilling additional wells is only 38,000 barrels, and in order to pay out an additional well you would have to recover at least 67,000 barrels of oil.

Q Do you believe it would not be economically feasible to drill another well on this installation?

A No, it would not in this very limited reservoir.

Q At the time of the last hearing, it appeared this oil was being trucked a considerable distance to market. Have there been any changes in this situation?

A The marketing situation has improved. At the time this well got its first purchaser, there we were hauling the oil all the way from the well to the Sprayberry Pool southeast of Midland. The trucking cost of 86 cents per barrel very definitely hindered the economics. Now, the purchaser is the Permian Corporation of Midland, Texas, previously the Permian Oil Company. The crude is trucked approximately 31 miles from the Permian Well to their more deliverable point in the Caprock area where it is delivered to Texas-New Mexico Pipeline Company. Cost of trucking this oil is

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



now 31 cents a barrel based on the present tariff scale.

Q Do you believe, Mr. Weideman, this pool can be efficiently drained by the existing well without waste and without impairing correlative rights?

A Yes, sir, I do.

MR. CAMPBELL: I would like to offer Exhibits 4 and 5 in evidence.

MR. PORTER: Without exception the Exhibits will be admitted.

(Whereupon, Applicant's Exhibits Nos. 4 and 5 were received in evidence.)

MR. PORTER: Does anyone have any questions?

CROSS-EXAMINATION

BY MR. PAYNE:

Q Mr. Weideman, do you anticipate any more wells will be drilled in this Pool?

A No, sir.

Q You are aware that one basis for the permanent order was that to remain on 40-acre proration unit might retard further development?

A Yes, sir.

Q So, presumably, we don't have to worry about any further development anyway?

A No, sir. We are trying to make the 30 spacing for the present well permanent.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



Q Are the working interest and royalty interest common under the entire 80 acres?

A It's a common royalty and working interest, that's correct.

Q So that whether the Commission retains the 80 spacing Order or reverts to 40-acre proration units, this Well No. 1 is going to drain the pool, in any event?

A Yes, sir.

Q It comes down to the matter of how quickly you get the oil production, then?

A Right, as far as this case is concerned.

MR. PAYNE: Thank you.

BY MR. NUTTER:

Q Mr. Weideman, what is the initial GOR on this well?

A 32, this is based on the fluid analysis of the White Ranch-Devonian. You've got the same conditions here, not enough water to run the pumping units, but necessary to use button.

Q Your GOR is 32. Is that the White-Ranch or analysis of White-Devonian Plat. Is the initial GOR on this too small to measure? What's the GOR at the present time?

A Still too small to measure. I imagine in the same range. 32 gas-oil ratio, very small.

Q Bottom hole pressures initially were some 3300 pounds?

A Let me get my bottom hole information here. The initial bottom hole pressure which represents original reservoir bottom



hole pressure is 3340.

Q And have you taken any bottom hole pressures at any time during the life of the well?

A Yes, one taken a month later, the first test was taken 7/25/59, the second test was 8/26/59. There was a drawdown of 21 pounds from 3340 to 3319 with accumulative oil production of 3,452 barrels. This represents a drop of 0.00686 PSI per day produced.

Q No evident bottom hole pressure?

A There have not been. They attempted to get one last week, we couldn't.

Q I presume from this low GOR and from the encroachment of water in here, you would anticipate that this is probably a water drive field, is this correct?

A Yes, sir. If it isn't, it's an exception to every pool in that area. I think when the bottom hole pressure is run, it will confirm the bottom hole pressure take a small drop unless the full force of the water drive is felt and they establish and show this fluctuation. This has been bottom hole pressure history of White Ranch-Devonian Pool.

Q So, even though you don't have a bottom hole pressure, you would expect the bottom hole pressure would be relatively high?

A Yes, sir, I would.

Q Now, you stated this well had a 35 percent water cut at that time. How long has it been making water?

A Let me refer again to my production data.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



Q I would also like to know the cumulative production.

A It started cutting water actually in September.

Q Of this year?

A Of September of '59.

Q '59?

A And the cumulative production at the end of September was approximately 4,300 barrels.

Q What is the cumulative production to date?

A Cumulative production to 11/1/60, oil production, is 52,197. The water production, as I say, this operator is unfamiliar. He has been reporting the water wrong. I have, based on percentage figures I have given my own figures for a cumulative water production. These are not as reported. We will have to submit corrections if they are required. I have cumulative water production to 11,160 of 13,561 barrels.

Q What is the perforated interval on this well?

A On previous question, I might mention one thing that might establish it in the last month, we never noticed any appreciable change in the last several months in the water percentage.

Q How about oil? Is the oil stabilized?

A We are producing from the maximum capacity of equipment and have established delivery for water oil-water of, established this well has been completed in open hole. It has 5 $\frac{1}{2}$ -inch casing set at 3128. The top of the Devonian is 3130. The total depth is 3,145. You have open hole in 3,128 to 3,145.



Q I presume this depth factor is in the range from 8 to 9,000 feet?

A Yes, sir, 4.040 and 3.0049.

Q What factor on that?

A 4.040 as to 3.0049. This is for 8 to 9,000 depth range.

Q That would indicate, then, with normal unit allowable of 34 barrels, the top allowable would be 136?

A Yes, sir, that's correct.

Q Is this well making the allowable of 131 as the ability of the pump to produce?

A That it is capable of making more. A breakdown to the fluid for a day's production will be 185 oil per day, this is when you are operating consistently. Total fluid production is 285 due to the remote of necessity we are considerably down time. It averages out, we can make our allowable even with the down time.

Q In other words, if we show a decline curve, it would show itself up at the peak?

A No decline curve.

Q It hasn't started any decline as yet?

A No, it hasn't.

Q Mr. Weideman, you stated if a well were drilled as south offset, it would produce approximately 33,000 barrels of oil, which wouldn't be enough to pay out?

A That's correct, assuming you would have some up structure from the No. 1 well that would be recovered in the No. 2, the maxi-



maximum amount you could recover in two wells over one well would be 38,000 barrels. It takes 67,000 barrels to recover your initial investment, in other words, to pay it out and, of course, this is far below that.

Q Well, it is your opinion, then, that by not drilling the second well, the 38,000 barrels of oil is going to be left in the ground?

A Possibly.

Q I see.

A This would be the maximum. I don't know what, how much is actually going to be trapped up there at the time of the abandonment of the well.

Q You don't expect any well will be drilled to the south of this producing well?

A No, sir.

Q What difference does it make whether the pool is on 40 or 80?

A If it's on 80, there is no question of drilling another well of any interest, and also this additional allowable because it's proven theory the 30 acres is entirely productive of oil.

Q How about in the southeast quarter of that section? Do you think there is any possibility of getting a producing well down there?

A No. It's way below the contact.

Q What was the seismic point over in the northwest-north-



west of Section 6?

A The seismic point, and this is, as I say again, the only one there, this cost them sixty-five thousand dollars to find this out, was minus 4385 which is 1034 feet, the actual surface, 13 feet to the seismic point.

Q This 4475, actually, then, you were 13 feet away from it?

A Correct.

Q Is the top of the Devonian given there at the White No. 1, the total top or seismic?

A No, where you see the little word "Devonian" preceding the subsurface depth, that is the actual point, as you will notice down in your legend.

Q Did you state that the No. 2 Well had actually penetrated water although it had not reached the Devonian?

A No, sir, it hasn't. That subsurface point where it bottomed up, if it had been in the reservoir, and it was already below the contact.

Q Had you gone into the Devonian, you feel sure you would have encountered water?

A Very definitely.

Q Mr. Weideman, if the Commission should authorize 80 acres or continues use of 80-acre pool, do you think it should be on the temporary order until more data is obtained, or do you think any more data will be available?

A All the data is available now except continuing bottom



DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, NEW MEXICO

PHONE CH 3-6691

PAGE 20

hole pressure tests. As you can see, there will not be another test well drilled that will penetrate the oil section. Therefore, I would say we have all data available right now, other than the bottom hole pressure test in the future.

MR. PAYNE: I believe that's all. Thank you.

MR. PORTER: Anyone else have a question of Mr. Weideman? The witness may be excused.

(Witness excused)

MR. PORTER: Any further testimony to be offered in the case? Is there any statement at this time? The Commission will take the case under advisement.



STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, LEWELLYN F. NELSON, 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 19th day of December, 1960.

Lewellyn F. Nelson
NOTARY PUBLIC - COURT REPORTER

MY commission expires:

June 14, 1964

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. _____, heard by me on _____, 19____.

_____, Examiner
New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



See note

Page 1

NEW MEXICO OIL CONSERVATION COMMISSION

REGULAR HEARING

1 extra copy

SANTA FE, NEW MEXICO

of statements at conclusions - after completion of Carr testimony

Is: Mr Millard Carr. REGISTER
Dallas Texas

HEARING DATE

DECEMBER 14, 1960

TIME:

9 a.m.

NAME:	REPRESENTING:	LOCATION:
Jack M Campbell	Campbell & Russell	Roswell
John A. Weidenman	Langhorne & May	Midland, Texas
J. M. Zellock	Permian Basin Pipeline	Hobby
D. L. Wilkerson	Gulf Oil	Denver
W. E. Bauman	Gulf Oil	Denver
R. L. McPherson	McPherson Corp	Midland
E. L. Shoemaker	Indiana Oil Prod. Co	✓
R. W. Pileggi	✓	Tulsa
N. J. Payne	Continental Oil Co	Porter City, Okla.
Logan K. Allen	Gulf Oil	Denver
R. W. Pileggi	Continental Oil Co	Tulsa
Frank F. Gardner	Sunchem Crude Oil Co.	Tulsa
W. G. Shuman	✓	Midland T-125
John Mills	✓	✓
W. B. McComb	DePasco	✓
R. L. Pileggi	Waco Oil & Gas Co	Roswell, N.M.
J. N. Ellis	✓	✓
	Texaco Inc	Houston

NEW MEXICO OIL CONSERVATION COMMISSION

REGULAR HEARINGSANTA FE, , NEW MEXICOREGISTERHEARING DATE DECEMBER 14, 1960 TIME: 9 a.m.

NAME:	REPRESENTING:	LOCATION:
Tom Popp	Sunset Int	Denver Colo
Rudy Motto	Southern Union Gas Co	Farmington
Fred M. Springer	Mobil Oil Co.	Midland, Tex
M.T. Smith	Agua Caliente Gas Co	Midland, Tex.
H.D. Bushnell	Amesbury Pet. Corp	Tulsa Okla
Herb Miller		
Dick Booker	Cities Service Oil	Midland
D.H. Hanning	El Paso Natural Gas	El Paso
E.C. Hunter	N.M.O.C.	Artco
BILL SULLIVAN	EPNG Products Co	EL PASO
James T. Lott	El Paso Products Co.	Farmington
R. L. Denton	Mobil Oil	Midland
J.E. Kreeger	El Paso Products	Farmington
Art Kendrick	O.C.	Artco
H.P. [unclear]	[unclear]	[unclear]
William D. Carr	Delhi-Taylor	Tulsa Okla
Bob Wambrough	Delhi-Taylor	Dallas

NEW MEXICO OIL CONSERVATION COMMISSION

REGULAR HEARINGSANTA FE, NEW MEXICOREGISTER

HEARING DATE

DECEMBER 14, 1960

TIME: 9 a.m.

NAME:

REPRESENTING:

LOCATION:

W. C. Mayfield

PUBCO

AZTEC, N.M.

GUY BUELL

PAN AMERICAN PET CORP

FT. WORTH

GLENN KING

BOH WAGCHOFF

Pubco

AZTEC, N.M.

William S. Jansen

Southern Union Gas

Dallas, Tex

O. W. Wiedersheim

E. L. Speles

Oro Oil Co

Casper, Wyo

Charles S. Lucas

The Permian Corp.

Midland, Texas

G. J. Serin Jr

Pecos Pet Corp

Alb., N.M.

WENDEL COLE

" " "

" " "

O. Beth

S. Fe

P. J. McEach

V S G S

Farmington

R. M. Anderson

Simba Oil Co

Midland

J. E. Robinson, Jr.

TEYACO INC

Midland

Geo. A. Kewitt

Southern Union

Farmington

A. F. Housh

C. B. Housh Oil Co

Denver

NEW MEXICO OIL CONSERVATION COMMISSION

REGULAR HEARINGSANTA FE, NEW MEXICOREGISTERHEARING DATE DECEMBER 14, 1960TIME: 9 a.m.

NAME:	REPRESENTING:	LOCATION:
Jason Kellah	Kellah & Fox	Santa Fe, N.M.
Ray Bynum	Acv. Union Gas Co	Dallas
Oran L. Haseltine	Southern Union	Farmington
Garrett C. Whitworth	El Paso Natural Gas Co	El Paso, Texas
Robert B. Tension	Consolidated OGC	Farmington
John J. Peapack	Edfer & Herd	Midland
L. W. Katow, Jr.	Pan American	Farmington
Merrill Horton	Zimmer & Smith	Lovington
Brooks Kelly	Sun Ray Mkt Control	S.F.

dis
or
Kell
Mutter
2 Payne
2 Mutter
2 W
2 Allen
2 Arnold
2 Payne

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

REGULAR HEARING

IN THE MATTER OF:

Application of J. C. Williamson for an
order establishing 80-acre proration
units in an undesignated Devonian pool
in Chaves County.

Case 1757

November 18, 1959

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 18, 1959
REGULAR HEARING

IN THE MATTER OF:

Application of J. C. Williamson for an order
establishing 80-acre proration units in an
undesignated Devonian pool in Chaves County,
New Mexico. Applicant, in the above-styled
cause, seeks an order establishing 80-acre
proration units in an undesignated Devonian
pool in Chaves County, New Mexico. The dis-
covery well is located 660 feet from the
North and East lines of Section 1, Township
12 South, Range 28 East.

Case 1757

BEFORE:

Mr. A. L. Porter, Jr.
Mr. Murray Morgan
Governor John Burroughs

TRANSCRIPT OF HEARING

MR. PORTER: The hearing will come to order, please.
The next case to be taken up will be Case 1757.

MR. PAYNE: Case 1757: Application of J. C.
Williamson for an order establishing 80-acre proration units in
an undesignated Devonian pool in Chaves County, New Mexico.

MR. CAMPBELL: If the Commission please, Jack Campbell,
Campbell and Russell, Roswell, New Mexico, appearing on behalf of
the Applicant. I have one witness.

MR. PORTER: Will the witness stand and be sworn,
please?

(Witness sworn.)



CHARLES C. LOVELESS, JR.

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

DIRECT EXAMINATION

BY MR. CAMPBELL:

Q Will you state your name, please?

A Charles C. Loveless, Jr.

Q Where do you live, Mr. Loveless?

A Roswell.

Q What's your profession?

A I am an independent producer and do some consulting work, petroleum engineering.

Q Have you previously testified before this Commission?

A I don't think so. Not in my recollection.

Q Will you give the Commission a brief resume of your educational and professional background, please?

A I have a Bachelor of Science degree in Engineering from Oklahoma University, and Bachelor of Law degree from the University of Texas; and eight years practicing as an engineer for two major oil companies, and five or six years of practical experience and production on my own behalf.

Q You say you have both an engineering and law degree?

A Yes.

Q Do you also operate an exploration company?

A Yes, I do.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

Q What is the name of that company?

A New Province Exploration.

Q Did that company do some geophysical work in the vicinity of where the J. C. Williamson No. 1 J. P. White Ranch well is now situated?

A That's right.

(Applicant's Exhibits Nos. 1, 2, and 3 marked for identification.)

Q I hand you what has been identified as Applicant's Exhibit No. 1 in this case and ask you if you will please state what that is.

A This is a seismic map interpretation, being at or near the top of the so-called Devonian formation at a datum around a minus 4400 feet. It also shows the dry holes and the one producing well surrounding the structure in the instant structure.

Q Where is the producing well situated?

A The producing well is located 660 feet from the North line and 660 feet from the East line, Section 1, Township 12 South, Range 28 East.

Q To what depth was that well drilled?

A 8140 feet total depth.

Q From what formation is it producing?

A The so-called Devonian or Siluro-Devonian, as the case may be.

Q I believe you stated that this is a seismic map. Has



the map been correlated to any extent with the logs on the wells that have been drilled in that area?

A Yes. The wells have been correlated with the seismic map and if you will pardon the commercial, they were as shown originally with seismic data.

Q Will you point out to the Commission the location of the dry holes that have been drilled in the vicinity of the well here?

A The Richfield No. 1 White located in the Southeast Southwest Section 6, Township 12 South, Range 29 East is approximately one mile southeast of the instant well.

The Great Western No. 1 White drilled in the Southeast Northwest, Section 1, Township 12 South, 28 East, is also a Devonian dry hole and lies about one-half mile southwest of the Williamson discovery well.

The Markham No. 1 White in the Southwest Southwest of Section 1, Township 12 South, Range 28 East, is also a Devonian test which was plugged and abandoned as dry.

The Ohio Oil Company No. 1 State, drilled in the Southeast Southeast, Section 36, Township 11 South, Range 28 East, a Devonian test; and the Murphy Dyer No. 1 White drilled in the Southwest Southwest of Section 25, Township 11 South, Range 28 East. All of these are shown on the exhibit.

Q All of those were drilled into this Siluro-Devonian formation?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

A That is true.

Q Which was the most recent well drilled?

A The Ohio No. 1 State in the Southeast Southeast of Section 36.

Q That well has just recently been finished as a dry hole?

A Within the last two or three weeks, yes.

Q I notice that your map shows an apparent fault lying just south of that Ohio well, is that correct?

A That is true.

Q How much lower was the Ohio well?

A 196 feet at the top of the Devonian.

Q What had your seismic map indicated would be the situation there?

A We estimated it would be 200 feet below.

Q Based on that and upon the dry holes that have been drilled around this area, do you feel that this seismic map is a reasonable representation of the actual contour of the Devonian formation in this area?

A Yes, I believe it is.

Q Does it appear from that map and from the experience of the dry holes surrounding this area that this is a small Devonian pool with sharply dipping exterior boundaries?

A That is true. It appears to be a small sharply dipping anticlinal structure enclosed on the northwest by a fault with some 200 feet of throw on the north side, down-throw on the



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

north side.

Q Is this fairly indicative of Siluro-Devonian formations in this general area, to your knowledge and based on your experience of the geophysical work in the area?

A Yes, our geophysical work has illustrated almost consistently that the Devonian structures are very small and usually faulted on one of the flanks, usually the west or northwest.

Q Would a well in this area of the undesignated pool adequately and efficiently drain 80 acres?

A Yes, sir, I believe so.

Q May I ask you, Mr. Loveless, did you core this particular well?

A No, the discovery well was not cored.

Q Will you state why it was not cored, please?

A We think that the Great Western well on the southwest flank of the structure had apparently encountered a water table at approximately a minus 4465, and the fact that we thought at the time the well was spudded that we could not get more than 30 to 40 feet higher than the water datum, Mr. Williamson decided to, as he said, it, scratch the surface and drop a long spear to complete.

Q How far into the Devonian formation is this well completed?

A The casing is set at 8128 and the bottom of the hole is at 8140; however, we feel there is approximately a maximum of five feet of Devonian section open in the hole.



Q I hand you what has been identified as Applicant's Exhibit No. 2, Mr. Loveless, and ask you to state what that is, please.

A Exhibit No. 2 is the record of drillstem testing in the so-called Siluro-Devonian section in the Great Western No. 1 White located in the Southeast of the Northwest, Section 1, Township 11 South, Range 28 East. That well is located approximately a half mile southwest of the instant well.

Q You have stated that in your opinion a well in this area will efficiently and economically and adequately drain 80 acres. What does this drillstem test information on the Great Western No. 1 White well indicate to you in that regard?

A It indicates that the producing formation is highly permeable and that there is relatively free movement of fluids through the reservoir rock.

Q What is there in that tabulation that indicates that, Mr. Loveless?

A Well, there's a cumulative total of approximately 4,000 feet of fluids which rose in that hole during a two and a half hour drillstem test, which to me indicates that the producing formation freely gives up its fluids, and that it is affected by some kind of an active reservoir drive, probably salt water.

I might add, if you will excuse me, though the Commission heard the testimony, I believe, from one of the witnesses this morning relative to a source of water in the case preceding



this one, and gave several illustrations of the productivity and the apparent permeability of the Devonian. I believe one well that he entered into testimony indicated it flowed 15 barrels salt water per hour, and another about 10 from the same formation.

The point I'm making, from our experience in the area, and I might add from this Murphy Dyer Well in Section 25, the Devonian section seems to be very permeable in the vicinity; in fact, practically all the wells drilled to the Devonian in this whole area have been very prolific as water producers. The three wells in the Siluro-Devonian Pool to the east have been very prolific and have exhibited strong tendency for a vertical water drive.

MR. PORTER: Is that the White Ranch Pool?

A Yes, the Siluro-Devonian Pool.

Q (By Mr. Campbell) In that regard, Mr. Loveless, are you generally acquainted with that White Ranch Pool?

A Yes, we shot in the area and I am familiar with that production to some extent.

Q Are you acquainted generally with the cumulative production from the wells in that pool?

A Yes, I am. The last check that I made at the time I was making an economic study of the general Devonian section, that pool had produced in excess of 450,000 barrels from three wells on 40-acre spacing.

Q On the basis of volumetric calculations, is that more

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



oil than could be expected to underlie each 40-acre unit?

A Yes, it is my best recollection the section above water averages about 20 feet in thickness with an average porosity of about eight and a half percent; volumetrically that is considerably more oil than could be contained in 120 acres, which is attributed to the three wells.

Q What information do you have, Mr. Loveless, concerning the average permeability of the Devonian formation in this area?

A The only -- inasmuch as we did not core the instant well, I cannot tell you, I can only refer you to the Symposium of Oil and Gas Fields prepared by the Roswell Geologic Society and published in 1956, which indicates the horizontal permeability in the White Ranch Siluro-Devonian Field three miles east, approximately, is around 150 millidarcies per foot. I believe that in the Chisholm Pool the compilers estimated the horizontal and vertical permeabilities were in the order of 150 millidarcies per foot.

Q Is that in your opinion a fairly good permeability in the Siluro-Devonian formation?

A Yes, I think it is.

Q Have you examined any cores or core records with regard to the Murphy Dyer well to which you referred?

A Yes, I was on the location when the cores from the top, the base of the Mississippian and the top of the Devonian were brought out, and this formation might be described as a white to

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, NEW MEXICO

PHONE CH 3-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

tan to gray dolomite vulgular, and in fact cavernous in some instances. In fact, some of the core you could stick your finger well into, practically through the four and three-eighths core that was pulled out, which indicates there's extremely high permeability, that the averages of 150 are in order of reasonableness.

Q What amount of gas do you find in so far as this production of the J. C. Williamson well is concerned?

A The GOR's are extremely low, it's my observation in the order of 80 to 100 cubic feet per barrel.

Q Then do you think that this well exhibits a strong water drive?

A Oh, without question, and I might point to the fact that the reservoir mechanics indicated in this Symposium, in both instances the authors state that it is a strong water drive reservoir.

Q With regard to the J. C. Williamson well itself, what information do you have with regard to possible area of drainage?

A Well, it would appear to me from the bottomhole pressure tests that have been taken by the John W. West Engineering Company of Hobbs, you will note from Exhibit 3 that on July 25, 1959, at a datum of total depth of 8100 or minus -- well, I don't know, let's see what it is, they don't give it -- it's approximately 4400, the pressure was 343 pounds per square inch. The well produced in the following thirty days approximately 3,000 barrels



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

when this test, that is the graph represents the test taken about a month later, and the pressure had declined 21 pounds after withdrawal of 3,000 barrels, which is in the order of about seven hundredths of a pound per barrel of withdrawal over a thirty-day period; which to me indicates that the reservoir is very communicative and that withdrawals of that order did not largely affect the bottomhole pressures, which means the energy is being derived from the wide radius area around the well.

Q Mr. Loveless, do you believe that the drilling of a well at this time on the basis of 40-acre drilling proration units would be the drilling of unnecessary wells?

A Yes, I do. I think it would be, if I may say so, highly inadvisable from the standpoint of waste, if that may be reflected in economic waste, to say the least.

Q In that regard, what is the approximate cost of the J. C. Williams well into the tank?

A That well cost with the battery and all equipment right around \$150,000.00.

Q What is the present market for the oil that's been produced from this well?

A This oil is being transported by truck from the location to a point in the Sprayberry Pool southeast of Midland, Texas, at a cost in excess of 85 cents a barrel for transportation.

Q Where is the nearest pipe line to this well?

A Approximately eight miles west there is a pipe line,



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

which I believe by test this morning is averaging throughput of 74,414 barrels of unprorated oil per day.

Q That's the nearest line?

A Yes. Oil from the Siluro-Devonian Pool which is being purchased by Cactus, I believe, is going to a port of entry in the Moore-Devonian Pool up on the cap about twenty-five miles.

MR. PORTER: Again is that the White Ranch Siluro-Devonian?

A Yes, that's the White Ranch.

Q (By Mr. Campbell) Based upon the cost of approximately 86 cents a barrel for transportation to market for this oil, and upon the cost of the well and the royalties, taxes, and so forth, have you estimated what the payout would be on this well?

A Yes, I have. It would be in the order of 450 days, assumed that lifting costs did not increase substantially, and of course, we have in the offing that eventuality because we expect to lift considerable quantities of water.

Q I believe you said 450 days?

A That's slightly over a year. Pardon me, I meant around 950 days, excuse me.

Q Approximately the vicinity of three and a half years, is that correct?

A That's right.

Q What type of order are you seeking from the Commission here, Mr. Loveless?



A We're seeking an order to provide if we must on a temporary basis for 80-acre spacing in this pool.

Q With regard to the direction of the units, what are you asking for?

A If reference to the geophysical map indicates that the only feasible orientation would be north-south 80's; namely, under the discovery well, the East Half of the Northeast of Section 1 in Township 12 South, Range 28 East; a second 80-acre unit on which a well is now drilling, it being the No. 2 Well, the West Half of the Northwest Quarter of Section 6, 12 South, Range 29 East.

Q Where is that well drilling?

MR. PORTER: Pardon me, is that, the No. 2 Well also a Williamson well?

A Yes, it is the second well on the structure.

MR. PORTER: Go ahead.

Q (By Mr. Campbell) Is the royalty ownership common in this area?

A Yes, it is.

Q The No. 2 Well is being drilled in the north 40 acres of the Tract No. 2 you referred to there?

A The No. 2 Well is located 990 feet from the North line and 330 feet from the West line at a point approximating shot point 1-3 as shown on the Exhibit.

Q Now, Mr. Loveless, since the royalty ownership is

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, NEW MEXICO

PHONE CH 3-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

commen, it's obvious that one of the reasons for the request for 80-acre spacing is an economic reason, that is, that you would be permitted to have a slightly higher allowable on the basis of 80-acre units than you would on 40-acre units, is that not correct?

A That's true.

Q Do you think that that would affect the drilling program with regard to developing this obviously small pool?

A I think it would, decidedly.

Q Do you believe that this pool being situated as it is and the size that it is obviously is going to have relatively few wells drilled in it?

A I could reach no other conclusion than that.

Q And it is your opinion that one well will adequately, efficiently, and economically drain 80 acres in this particular pool?

A Yes, that is my opinion.

Q Based upon your knowledge with regard to the geophysical work you did in this area and your knowledge of this well and the dry holes that have been drilled surrounding it, do you believe there's any substantial reason to believe that the situation is going to change sufficiently over a period of a year or so to mitigate against a permanent 80-acre order at this time?

A I should think not. Our sub-surface information, we have learned with the drilling of the Ohio well, as well as the No. 1 Williamson White, our shooting seems to be fairly accurate, and I have no reason to believe that we will have to reinterpret



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

the data at any future time.

Q There is a possibility, of course, that the structure of that fault might be changed to some extent by further drilling, is there not?

A That's possible. With just one well to orient it, we are not positive.

Q And if the Commission sees fit to grant a temporary order, then you would be willing and prepared to come back in at the expiration of that order and furnish the Commission with such additional evidence as they might require?

A That's true.

MR. CAMPBELL: That's all I have.

MR. PORTER: Anyone have a question?

Q (By Mr. Campbell) I would like to ask Mr. Loveless if Exhibit No. 1 was prepared in cooperation with you, and based upon the information obtained from your seismic work in that area.

A Yes. These are records all taken by the crew directly under my supervision.

Q Were Exhibits 2 and 3 prepared by you or under your supervision?

A That's correct.

MR. CAMPBELL: I would like to offer Exhibits 1, 2, and 3 in evidence.

MR. PORTER: Without objection these exhibits will be admitted. Mr. Nutter, I believe you had a question.



MR.NUTTER: Yes, sir.

CROSS EXAMINATION

BY MR. NUTTER:

Q When you first drew a seismic picture of this structure, did you draw a fault in there, or did you have a deeply dipping structure?

A No, we originally put the fault in before the Ohio well was drilled.

Q Did the Ohio well actually cut through a fault, or was it merely low?

A There was no evidence to my knowledge that it did, but it was extremely low, it was 200 feet below the discovery well.

Q It would appear that for the Williamson and White well to have 80 acres dedicated to it, that would be productive, it would be mandatory that the East Half of the Northeast Quarter of Section 1 be dedicated to the well, wouldn't it?

A Yes.

Q Where do you suppose a third well would likely be located?

A I presume in the Southwest corner of Section 31, which of course raises the question where does the 80 go from there.

Q Do you have any knowledge of where the water-oil contact is in this pool at the present time?

A I can say that this No. 1 Well is cutting a small amount of water which we feel may possibly be due to the proximity

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



to the fault and some vertical fracturing that generally occurs in the Devonian in this area, though we have no positive evidence of it in the No. 1 Well.

Q Now the productive limits of the pool on the East, the South, and the West will probably be divided by a water-oil contact being established?

A Yes, I think that's right.

Q Do you have the bottomhole pressure survey curve for the first bottomhole pressure?

A No, I do not have, and I'm not sure that a curve was made. I think it may have just been a single.

Q Single pressure reading?

A A single pressure reading, yes, sir.

Q But in the interim, from the time the first test was taken in July to the time the second test was taken in August, there has been how much oil produced?

A Approximately 3,000 barrels. I can give you the exact amount. For the month of August there were 3,063 barrels produced from the well. The test was actually, the preceding test was actually run on the 25th and the date of this test was the 26th, so there is a five day --

Q It would have included a little of July's production and not all of August's production?

A That's right.

Q Have any individual P.I. tests been made on the well?

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, NEW MEXICO

PHONE CH 3-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

A Not to my knowledge.

Q Do you have any estimate of the reserves that lay under a single 40 or single 80-acre tract?

A I have made some estimates for my own information. The first one I made approximated five million barrels within the closure shown.

Q To what closure, this minus 4600?

A To the water datum, which is approximately 10 feet above it. Well, the water datum would be approximately minus 4485, if it can be established on the basis of the Great Western well to the southwest.

Q Do you anticipate that Mr. Williamson will core the No. 2 Well that's drilling now?

A I would say that largely depends on where he tops the Devonian pay. If it's high enough, then I feel he probably will core it.

Q It will be beneficial in making estimates of the reserves to have some core data?

A Yes, very decidedly, sure would. I might add that knowing Mr. Williamson, he does not have the academic drive or urge that a major company might have in that respect, in view of the fact that he's afraid that water would be encountered very quickly after topping the Devonian.

Q Well, now, if the Commission should authorize what you're seeking here today, a temporary order, and if the either



denial or the sustainment of that order in a year from now depends on sufficient information, I imagine Mr. Williamson would make an effort to get whatever information we needed?

A Oh, yes, I'm sure he would do that.

MR. NUTTER: That's all.

MR. PORTER: Does anyone have a question?

MR. PAYNE: Yes.

MR. PORTER: Mr. Payne.

BY MR. PAYNE:

Q If it wasn't necessary to pay this high transportation cost, would this well pay out within a reasonable period of time on a 40-acre development?

A It's a matter of arithmetic, Mr. Payne. I would be lead to believe that it possibly would. Of course, all my training indicates we have to accept in any kind of an economic prognosis indication the information at hand, so I cannot say that any relief is in the offing to remove that burden at this point. So certainly if we did not have that transportation burden, the payout would be approximately 33 percent earlier because we figure we are netting at this point about \$1.75 a barrel after lifting.

Q I believe you testified that it would be highly inadvisable to drill wells in here on 40-acre spacing, is that right?

A Yes. I certainly would at this juncture advise against it.

Q And yet Mr. Williamson is drilling one now on 40-acre



spacing?

A Mr. Williamson is drilling one now on the basis of what he knows about the surface, being a prudent operator, he is locating this well at a point indicated by the geophysics to be the highest point in the field.

Q You don't feel it highly inadvisable to drill wells anywhere in here, would you?

A Would you state --

Q To drill any more.

A I do not have an opinion one way or another. I would say possibly it would be advisable to drill one in the Southwest of Section 31 at pain of having to do it later if the royalty owner insists.

Q Do you know if Mr. Williamson anticipates taking interference tests upon completion of the drilling well?

A He has not revealed his plans in that regard to me, Mr. Payne.

MR. PAYNE: Thank you. That's all.

MR. PORTER: Mr. Loveless, did you testify as to how many wells you thought might eventually be drilled?

A I think one additional well at the present moment is his well.

MR. NUTTER: In addition to the No. 2 that is drilling now?

A Yes.



MR. PORTER: I see. Anyone else have a question?

Mr. Nutter.

BY MR. NUTTER:

Q Mr. Loveless, you mentioned this other pool that's three miles away. What's the name of that?

A That's the White Ranch Siluro-Devonian Pool.

Q Does that pool have a market for its oil?

A Yes, that oil is being trucked to the Moore-Devonian Pool and put into the pipe line there.

Q Is there any possibility for your oil to be trucked to the Moore-Devonian Pool and put into the pipe line?

A No, we have exerted every effort from all sources that we know to prevail on someone to put the oil in a pipe line in the proximity of the well, and to this date it has been to no avail.

Q And the nearest outlet that you have is the one that you mentioned?

A Yes, that oil is being, as I said, being trucked to a point in the Sprayberry Pool southeast of Midland, Texas.

MR. NUTTER: Thank you.

BY MR. PORTER:

Q Is that White Ranch, that pool must be some six or seven years old, is that right, Mr. Loveless?

A I can give you the exact date. The discovery was August the 6th, 1956.



Q Oh, it's not as old as I thought.

A No, sir.

Q Is that the pool --

A Let me correct that. That was April 7, 1953, I am sorry.

Q Is that the Republic National Gas Company Pool?

A They're the operators, yes, sir.

MR. PORTER: Anyone else have a question?

REDIRECT EXAMINATION

BY MR. CAMPBELL:

Q With regard to the pipe line situation, what have you been advised by purchasers or pipe line companies with regard to taking oil from this pool?

A One purchaser that I asked to consider taking the oil told me that at that date, in the morning, he received a letter from his company advising him not to take on any new connections and to take on as few as possible where he was obligated. That seems to be the attitude of nearly everyone. We were attempting, I myself -- this is off the record, if I may.

MR. PORTER: Off the record.

(Discussion off the record.)

MR. PORTER: Does that conclude your testimony?

MR. CAMPBELL: Yes, it does.

MR. PORTER: The witness may be excused.

(Witness excused.)



MR. PORTER: Do you have anything further to present in the case, Mr. Campbell? Does anyone else have anything to offer in this case? Mr. White.

MR. WHITE: Charles White of Gilbert, White and Gilbert, appearing on behalf of Texas, Incorporated. Texas Company is an interested party to this hearing. They are a leasehold owner of two separate 320-acre tracts in Section 12, immediately to the south of Section 1. Texas Company agrees with the proposed 80-acre spacing for this pool. We believe that the testimony not only on direct but on cross examination clearly demonstrates that drilling of a well on a 40-acre pattern would be not only unnecessary but wholly uneconomical. We, therefore, strenuously urge the Commission to grant the petition.

MR. PORTER: If nothing further to be offered in this case, we will take the case under advisement.



STATE OF NEW MEXICO)
) ss
 COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in Stenotype, and that the same was reduced to typewritten transcript under my personal supervision, and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 4th day of December, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
 NOTARY PUBLIC

My commission expires:

June 19, 1963.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, NEW MEXICO

PHONE CH 3-6691



GOVERNOR
JOHN BURROUGHS
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
MURRAY E. MORGAN
MEMBER



P. O. BOX 871
SANTA FE

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

December 21, 1960

Mr. Jack Campbell
Campbell & Russell
Box 766
Roswell, New Mexico

Re: Case No. 1757
Order No. R-1549-A
Applicant:
J. C. Williamson

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.,
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other

DOCKET: REGULAR HEARING NOVEMBER 18, 1959

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

Allowable: (1) Consideration of the oil allowable for December, 1959.

(2) Consideration of the allowable production of gas for December, 1959, for six prorated pools in Lea County, New Mexico and for the allowable production of gas for seven prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for December, 1959; also presentation of purchasers' nominations for the six-month period beginning January 1, 1960, for the six prorated pools in Lea County, New Mexico.

CASE 1728:

(Hearing de Novo)

Application of Hanson, Waters, and Williamson for a hearing de novo before the Oil Conservation Commission in Case No. 1728, Order No. R-1473, which was an application for a pilot water flood project in the Coyote-Queen Pool, Chaves County, New Mexico, and for capacity allowables for 12 wells in said project, and for the establishment of an administrative procedure for expanding said project and for granting capacity allowables to wells in said project.

NEW CASES

CASE 1757:

Application of J. C. Williamson for an order establishing 80-acre proration units in an undesignated Devonian pool in Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order establishing 80-acre proration units in an undesignated Devonian pool in Chaves County, New Mexico. The discovery well is located 660 feet from the North and East lines of Section 1, Township 12 South, Range 28 East.

CASE 1809:

Southeastern New Mexico nomenclature case calling for an order creating and extending existing pools in Lea, Eddy, and Chaves Counties, New Mexico:

(a) Create a new pool, classified as an oil pool for Abo production, designated as the Baish-Abo Pool, and described as:

TOWNSHIP 17 SOUTH, RANGE 32 EAST, NMPM
Section 21: SE/4

(b) Create a new pool, classified as an oil pool for Silurian production, designated as the Fowler-Upper Silurian Pool, and described as:

TOWNSHIP 24 SOUTH, RANGE 37 EAST, NMPM
Section 22: E/2

(c) Create a new pool, classified as an oil pool for Tubb production, designated as the Monument-Tubb Pool, and described as:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
Section 16: SE/4

(d) Create a new pool classified as an oil pool for Wolfcamp production, designated as the Canyon-Wolfcamp Pool, and described as:

TOWNSHIP 19 SOUTH, RANGE 24 EAST, NMPM
Section 36: NW/4

(e) Extend the East Crossroads-Devonian Pool to include therein:

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM
Section 19: N/2 SE/4

(f) Extend the Culwin-Queen Pool to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 31: SW/4

(g) Extend the Dayton-Abo Pool to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM
Section 25: W/2
Section 26: S/2
Section 36: NW/4

(h) Extend the High Lonesome Pool to include therein:

TOWNSHIP 16 SOUTH, RANGE 29 EAST, NMPM
Section 12: SE/4

(i) Extend the Little Lucky Lake-Devonian Pool to include therein:

TOWNSHIP 15 SOUTH, RANGE 30 EAST, NMPM
Section 29: SW/4

(j) Extend the Red Lake-Pennsylvanian Gas Pool to include therein:

TOWNSHIP 18 SOUTH, RANGE 27 EAST, NMPM
Section 8: SE/4
Section 17: NE/4

-3-
No. 39-59

(k) Extend the Robinson Pool to include therein:

TOWNSHIP 16 SOUTH, RANGE 32 EAST, NMPM

Section 30: SE/4
Section 31: SW/4

CASE 1810:

Northwestern New Mexico nomenclature case calling for an order creating and extending existing pools in Rio Arriba and San Juan Counties, New Mexico:

(a) Create a new gas pool for Pictured Cliffs production, designated as the Pine Lake-Pictured Cliffs Pool and described as:

TOWNSHIP 26 NORTH, RANGE 2 WEST, NMPM

Section 7: S/2 (partial)
Section 8: SW/4
Section 18: All (partial)
Section 19: All (partial)
Section 20: W/2

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

Section 1: All
Section 2: All
Section 3: E/2
Section 10: E/2
Section 11: All
Section 12: All
Section 13: All
Section 14: E/2
Section 23: NE/4
Section 24: All

TOWNSHIP 27 NORTH, RANGE 3 WEST, NMPM

Section 11: All (partial)
Section 14: All
Section 15: All
Section 16: All
Section 17: All
Section 18: All
Section 22: All
Section 23: All
Section 24: S/2
Section 25: All
Section 26: All
Section 27: All
Section 34: E/2
Section 35: All
Section 36: W/2

(b) Extend the Blanco-Pictured Cliffs Pool to include therein:

TOWNSHIP 29 NORTH, RANGE 9 WEST, NMPM

Section 1: W/2
Section 2: All
Section 3: All
Section 4: NE/4

TOWNSHIP 30 NORTH, RANGE 9 WEST, NMPM

Section 27: SE/4
Section 33: E/2
Section 34: All
Section 35: All
Section 36: S/2

(c) Extend the Gavilan-Pictured Cliffs Pool to include therein:

TOWNSHIP 25 NORTH, RANGE 2 WEST, NMPM

Section 9: NE/4

(d) Extend the Tapacito-Pictured Cliffs Pool to include therein:

TOWNSHIP 27 NORTH, RANGE 5 WEST, NMPM

Section 29: NE/4

(e) Extend the Blanco-Mesaverde Pool to include therein:

TOWNSHIP 27 NORTH, RANGE 9 WEST, NMPM

Section 1: E/2
Section 12: E/2

(f) Extend the Bisti-Lower Gallup Oil Pool to include therein:

TOWNSHIP 25 NORTH, RANGE 11 WEST, NMPM

Section 15: S/2 NW/4
Section 16: S/2 NE/4

(g) Extend the Horseshoe-Gallup Oil Pool to include therein:

TOWNSHIP 31 NORTH, RANGE 16 WEST, NMPM

Section 34: SW/4 NE/4 & NW/4 SE/4

TOWNSHIP 31 NORTH, RANGE 17 WEST, NMPM

Section 13: NW/4 SW/4

(h) Extend the Verde-Gallup Oil Pool to include therein:

TOWNSHIP 31 NORTH, RANGE 14 WEST, NMPM
Section 21: SE/4 NW/4 & SW/4 NE/4

(i) Extend the South Blanco-Dakota Pool to include therein:

TOWNSHIP 26 NORTH, RANGE 5 WEST, NMPM
Section 5: All
Section 6: All
Section 7: All
Section 8: W/2

TOWNSHIP 26 NORTH, RANGE 6 WEST, NMPM
Section 1: All
Section 2: All
Section 3: All
Section 4: E/2 & NW/4
Section 7: All
Section 8: W/2 & SE/4
Section 9: NE/4
Section 10: N/2 & SE/4
Section 11: All
Section 12: All
Section 14: N/2

TOWNSHIP 26 NORTH, RANGE 7 WEST, NMPM
Section 1: SE/4
Section 12: E/2
Section 13: N/2

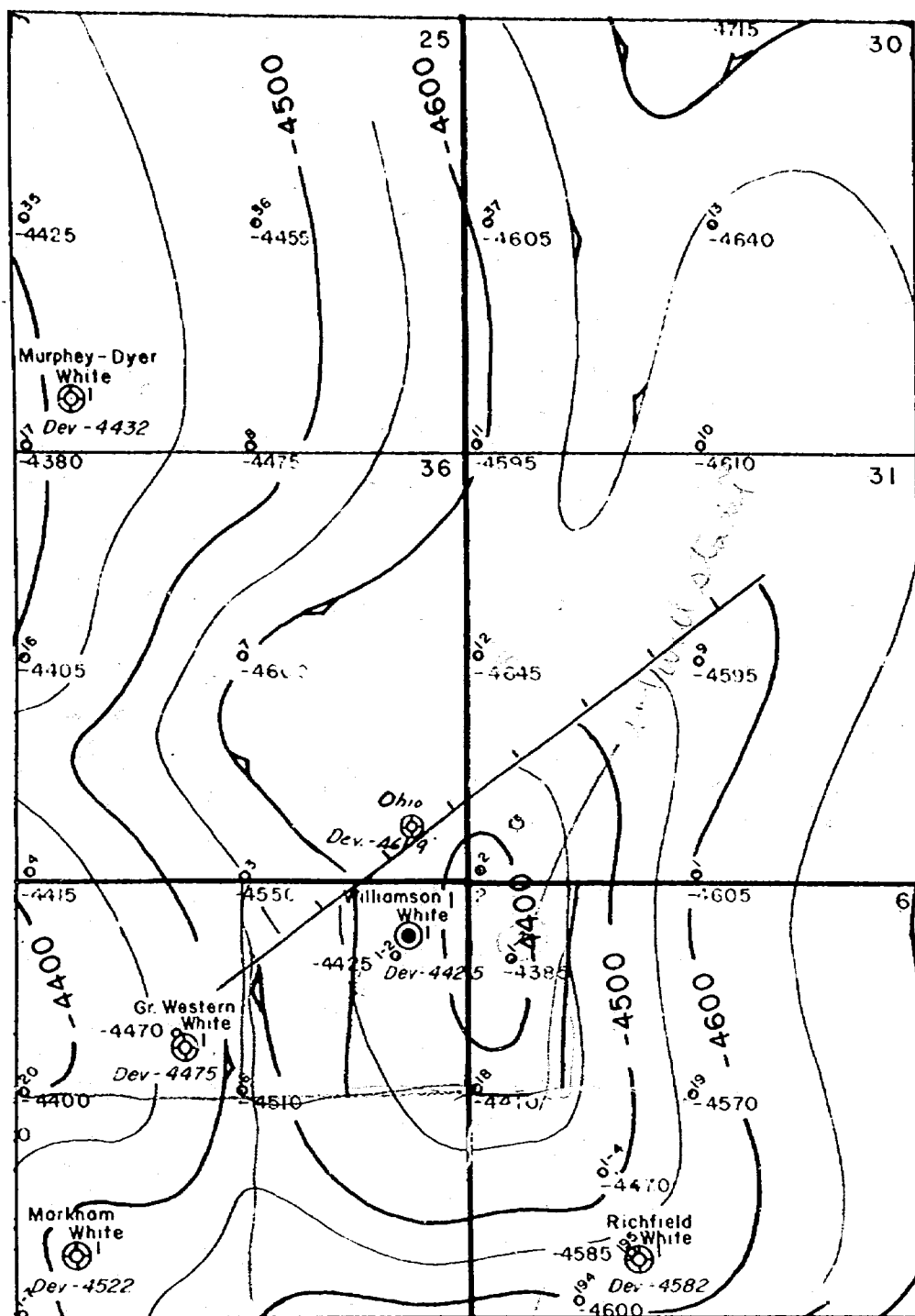
TOWNSHIP 27 NORTH, RANGE 6 WEST, NMPM
Section 32: E/2
Section 33: All
Section 34: All

R 28 E

R 29 E

T
11
S

T
12
S



J. C. WILLIAMSON

MIDLAND, TEXAS

20/100
EAST WALLER - SOUTH WHITE AREA

Chaves County, New Mexico

SEISMIC MAP
of

DEVONIAN

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

EXHIBIT No.

Appl
CASE *1757*

Contour Interval = 50 feet

Scale 1 inch = 2000 feet

August 21, 1959

Ray H. Haskins

8140'
TD

DRILL STEM TEST
GREAT WESTERN No. 1
WHITE

SE 1/4 NW 1/4 of B. 2 1

Located in the SE/4 NW/4 Section 1-11 South, Range 28 East.
Chaves County, New Mexico.

DST 8144 to 8167. Open 2 1/2 hours.
Shut in 15 minutes, Strong blow throughout.
Recovered 30 feet gas in drill pipe plus 4140' fluid -
broken down as follows:

indicating light formation
+ probably some water
drive (quite active)

- 450 feet slightly oil and gas cut mud
- 900 feet oil cut & slightly gas cut mud, no odor
- 900 feet oil & gas cut water, salty with sulphur odor
- 1350 feet heavily oil and gas cut sulphur water
- 540 feet salty sulphur water

Flowing pressure zero to 1920
Shut-in pressure 3120, 15 minutes
Total depth 8167
Plugged and abandoned 8/25/53
Cored 8157 to 67
Recovered 10 feet of white fractured vuggy Dolomite with blue
fluorescence throughout.
Cut 20 to 24 minutes to the foot.
Top of the Devonian 8150.

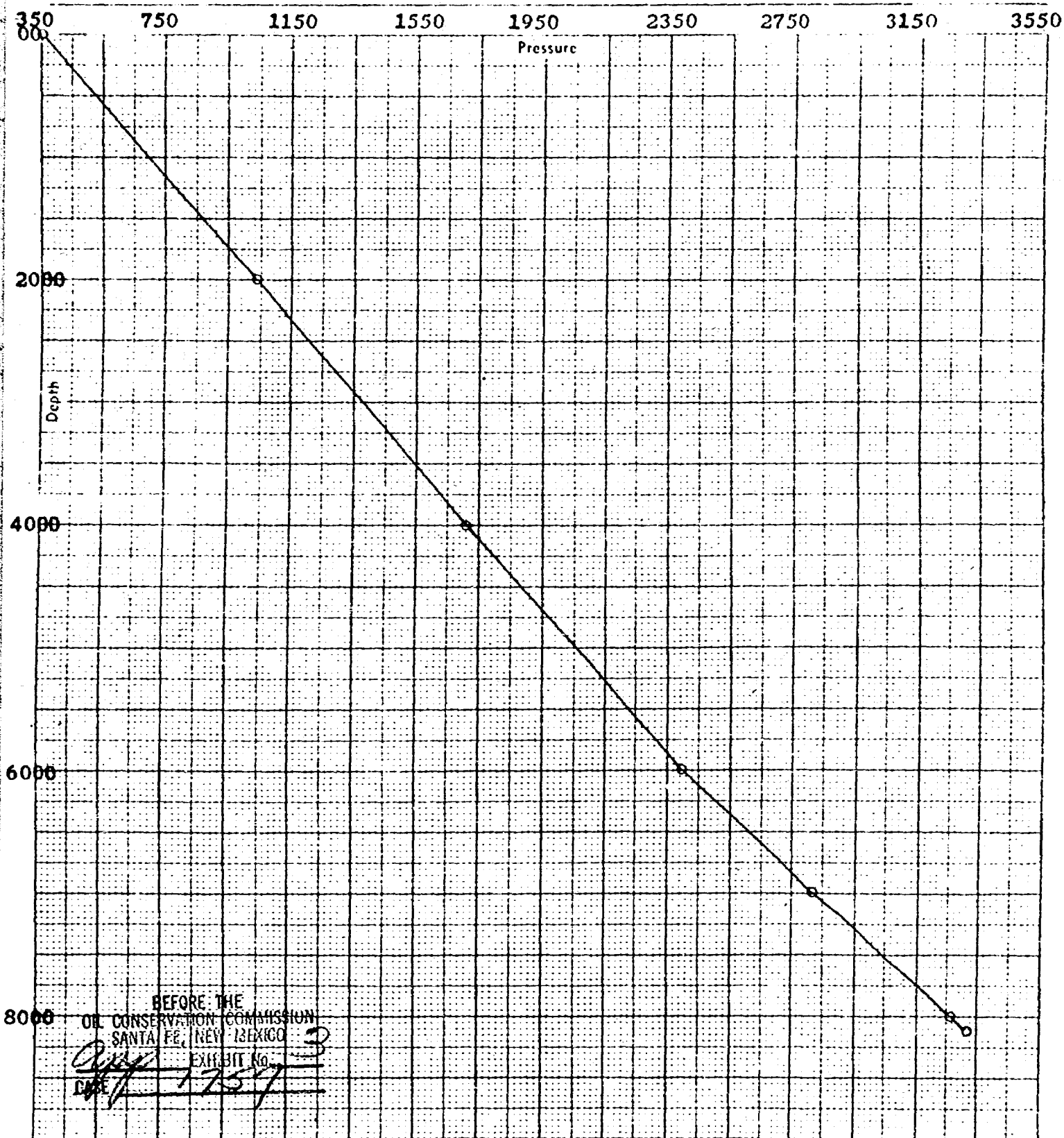
BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
CASE 1757

BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR J.C. Williamson
LEASE White Ranch
WELL NO. 1
FIELD
DATE 8-26-59 TIME 12:30 P.M.
STATUS Shut In TEST DEPTH 8100
TIME SI 48 Hrs. LAST TEST DATE 7-25-59
CAS. PRES. BHP LAST TEST 3340
TUB. PRES. 354 BHP CHANGE -21
ELEV 3691 FLUID TOP
DATUM -4409 WATER TOP
TEMP 136°F. RUN BY M.C.T.
CLOCK NO 3596 GAUGE NO. 12434
ELEMENT NO 13421

DEPTH	PRESSURE	GRADIENT
000	354	
2000	1036	.341
4000	1715	.340
6000	2394	.340
7000	2819	.425
8000	3269	.450
8100	3319	.500

*Pressure test 3340 psi
8100' - 7-25-59*



BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT NO. 3
DATE 1-25-59