

CASE 3435: Appli. of TIDEWATER
— for a capacity allowable for its —
GO State "J" Well No. 1.

Case Number

3435

Application

Transcripts.

Small Exhibits

ETC.

State of New Mexico
Oil Conservation Commission



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

August 1, 1966

Re: Case No. 3435
Order No. R-3097
Applicant:

TIDEWATER OIL COMPANY

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

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

Carbon copy of order also sent to:

OTHER _____

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. 3435
Order No. R-3097

APPLICATION OF TIDEWATER OIL COMPANY
FOR A CAPACITY ALLOWABLE, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on July 19, 1966,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 1st day of August, 1966, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Tidewater Oil Company, is the oper-
ator of the GO State "J" Well No. 1, located in Unit H of Section
7, Township 17 South, Range 33 East, NMPM, Maljamar Pool, Lea
County, New Mexico.

(3) That the applicant seeks assignment of special allowable
to the subject well authorizing said well to produce at its capac-
ity.

(4) That the subject well is adjacent to the Milam Unit
Waterflood project operated by Great Western Drilling Company
and has received a response from the injection of water into
said waterflood project.

-2-

CASE No. 3435
Order No. R-3097

(5) That the subject well is now capable of producing in excess of its presently assigned allowable.

(6) That the applicant should be allowed to produce its GO State "J" Well No. 1 at its maximum capacity for a temporary 90-day period in order to avert the possibility of unrecoverable loss of oil presently being swept toward the subject well by the Malmar Unit Waterflood Project.

(7) That unitization of the SE/4 NE/4 of Section 7, Township 17 South, Range 33 East, NMPM, Lea County, New Mexico, with acreage lying directly south and west thereof and in the Malmar Unit Waterflood Project Area would tend to protect correlative rights and to eliminate the possibility of waste as the subject well would then be eligible to share in the Malmar Unit Waterflood Project allowable.

(8) That approval of the subject application will prevent waste in permitting the production of otherwise unrecoverable oil and will not violate correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Tidewater Oil Company, is hereby authorized to produce its GO State "J" Well No. 1, located in Unit H of Section 7, Township 17 South, Range 33 East, NMPM, Maljamar Pool, Lea County, New Mexico, at its maximum capacity for a temporary period not to exceed 90 days from the date of this order.

(2) That the GO State "J" Well No. 1 shall be eligible to share in the Malmar Unit Waterflood Project allowable at the termination of the temporary 90-day maximum capacity production period authorized by this order, provided the SE/4 NE/4 of Section 7, Township 17 South, Range 33 East, NMPM, Lea County, New Mexico, has been unitized with acreage lying directly south and west thereof and in the Malmar Unit Waterflood Project Area, and provided that said unitization agreement has been approved by the Commission.

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

-3-

CASE No. 3435

Order No. R-3097

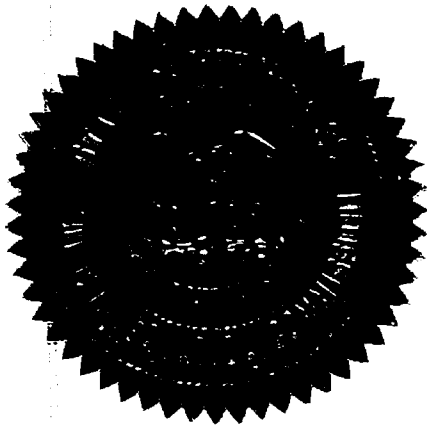
LONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Jack M. Campbell
JACK M. CAMPBELL, Chairman

Guston B. Hays
GUSTON B. HAYS, Member

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



enc/

JULY 19, 1966 EXAMINER HEARING

CASE 3433: Application of Skelly Oil Company for an exception to Rule 104, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 104 C I of the Commission Rules and Regulations to permit the production of oil from two wells located less than 660 feet apart in the West Dollarhide-Drinkard Pool, Lea County, New Mexico. Applicant's Mexico "L" Well No. 18 located 1656 feet from the North line and 990 feet from the East line of Section 5, Township 25 South, Range 38 East, is presently completed in said pool, and applicant proposes to recompleate its Well No. 2, located 1980 feet from the North line and 660 feet from the East line of said Section 5 in said pool, with the assignment of a single 40-acre allowable to both wells.

CASE 3259 (Reopened):

In the matter of Case No. 3259 being reopened pursuant to the provisions of Order No. R-2929, which order established 160-acre spacing units for the Nonombre-Upper Pennsylvanian and Nonombre-Lower Pennsylvanian Pools, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pools should not be developed on 40-acre or 80-acre spacing units.

CASE 3434: Application of Shell Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of the dual completion (conventional) of its South Wilson Deep Unit Well No. 2 located in Unit J of Section 33, Township 21 South, Range 34 East, Lea County, New Mexico, to produce oil from an undesignated Bone Springs Oil Pool and to produce gas from the Grama Ridge-Morrow Gas Pool through parallel strings of tubing.

CASE 3435: Application of Tidewater Oil Company for a capacity allowable, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the assignment of a capacity allowable to its GO State "J" Well No. 1 located in Unit H of Section 7, Township 17 South, Range 33 East, Maljamar Pool, Lea County, New Mexico. Said well offsets the waterflood project operated by Great Western Drilling Company on its Malmar Unit in said Section 7.

CASE 3436: Application of Leonard Latch for a gas injection project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a gas injection project in the Empire Yates-Seven Rivers Pool, Eddy County, New Mexico, by the injection of gas into the Yates formation through his Berry "A" Wells Nos. 11 and 26, located in Units K and O, respectively, of Section 24, Township 17 South, Range 27 East.

Docket No. 18-66

DOCKET: EXAMINER HEARING - TUESDAY - JULY 19, 1966

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

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

- CASE 3428: Application of Continental Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of its Eumont-Hardy Unit Area comprising 1,936 acres, more or less, of State, Federal and Fee lands in Township 20 South, Ranges 37 and 38 East, and Township 21 South, Ranges 36 and 37 East, Lea County, New Mexico.
- CASE 3429: Application of Continental Oil Company for two waterflood projects, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Yates, Seven Rivers, and Queen formations, Eumont Pool, through 28 wells in its Eumont Hardy Unit. Applicant further seeks the approval of an offsetting cooperative waterflood project to be conducted on its SEMU Eumont lease by the injection of water into two wells in Section 25, Township 20 South, Range 37 East, all in Lea County, New Mexico.
- CASE 3430: Application of Tenneco Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of its Hess Hills Unit Area comprising 16,801 acres, more or less, of State, Federal and Fee lands in Townships 23 and 24 South, Ranges 23 and 24 East, Eddy County, New Mexico.
- CASE 3431: Application of Sinclair Oil & Gas Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of the dual completion of its W. H. Turner Well No. 1 located in Unit L of Section 29, Township 21 South, Range 37 East, Lea County, New Mexico, to produce oil from the Drinkard Oil Pool through 2-inch tubing and to produce oil from the Blinebry Oil Pool through the casing-tubing annulus.
- CASE 3432: Application of Gulf Oil Corporation for down-hole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle in the well-bore marginal oil production from the Arrowhead Drinkard Pool and an undesignated Blinebry Pool in its Harry Leonard (NCT-C) Well No. 11 located in Unit K of Section 36, Township 21 South, Range 36 East, Lea County, New Mexico.

CASE 3252 (Reopened):

In the matter of Case No. 3252 being reopened pursuant to the provisions of Order No. R-2917, which order established 640-acre spacing units for the McMillan-Morrow Gas Pool, Eddy County, New Mexico, for a period of one year after first pipeline connection in the pool. All interested parties may appear and show cause why said pool should not be developed on 320-acre spacing units.



TIDEWATER OIL COMPANY

P. O. Box 249
Hobbs, New Mexico

June 28, 1966

RECEIVED
JUL 29 1966

Case 3935

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr., Secretary-Director

Gentlemen:

Tidewater Oil Company respectfully requests that an examiner hearing be set to consider this application for a capacity allowable for the GO State "J" Well No. 1. This well is completed in the Maljamar Grayburg-San Andres Pool. In support of this application, the following information is submitted:

1. Tidewater Oil Company is the operator and Getty Oil Company is the owner of the GO State "J" lease containing 80 acres and consisting of the S/2 NE/4 of Section 7, Township 17 South, Range 33 East, Lea County, New Mexico.
2. GO State "J" Well No. 1 is located in Unit H of said Section 7.
3. The GO State "J" Well No. 1 is adjacent to the Great Western Drilling Company Malmar Unit, Section 7, and has received response from the injection of water into said waterflood project.
4. A capacity allowable is requested for the GO State "J" Well No. 1 in order to avert unrecoverable loss of oil which is presently being swept toward the well by the Great Western Drilling Company Malmar Unit.
5. A capacity allowable for GO State "J" Well No. 1 would not impair correlative rights due to the location of said well on the edge of the field, and due to being offset by current producing wells only to the south and east. A plat of the area is attached.

It is respectfully requested that this application be included on the docket for the examiner hearing scheduled for July 20, 1966, in Santa Fe.

DOCKET MAILED

Date July 1, 1966

- 2 -

A list of names and addresses of all known interested parties is attached.

Very truly yours,

TIDEWATER OIL COMPANY



B. M. Breining
Area Engineer

BMB/ep

Attachments

cc: Mr. R. H. Coe
Tidewater Oil Co.
P. O. Box 1231
Midland, Texas

Mr. Dick Morris
Seth, Montgomery, Federici & Andrews
350 East Palace Avenue
Santa Fe, New Mexico

MALJAMAR GAYE-URG-
LEA COUNTY, NEW

SAN ANTONIO P.O.
MEXICO

1910

ADDRESSES OF INTERESTED PARTIES

Great Western Drilling Company
P. O. Box 1659
Midland, Texas

Shenandoah Oil Corporation
406 Mutual Savings Building
Fort Worth, Texas

Shell Oil Company
Shell Building
Midland, Texas

Case 3435

Heard 7-19-66

Rec 7-28-66

1. Grant Tidewater permission to produce their 50 state 'S' #1 H-7-175-32E at capacity.

2. Find that waste will accrue due to oil sweeping passed this ^{well} toward the edge of the Roberts-Hayburg-S.A. pool where there are no other wells completed in such a manner that could recover said oil.

3. Find that the ^{producing} wells in the Great Western-Malmar #7 waterflood cannot produce said oil since it has already swept outside the flood.

4. Find that said well has received response from the G.W. flood.

Memo

From

A. L. PORTER, JR.
SECRETARY-DIRECTOR

To

57 - 349,184
58 - 452,181
59 - 417,088
60 - 451,688
61 - 578,702
62 - 690,882
63 - 515,562
64 - 482,391
65 - 495,271
66 - 512,934

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS
1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



PAGE 1

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 19, 1966

EXAMINER HEARING

IN THE MATTER OF: Application of Tidewater Oil)
Company for a capacity allowable, Lea)
County, New Mexico.)
)
)
)
)
)
)
)
)
)

Case No. 3435

BEFORE: ELVIS A. UTZ, Examiner

TRANSCRIPT OF HEARING



MR. UTZ: 3435.

MR. HATCH: Application of Tidewater Oil Company for a capacity allowable, Lea County, New Mexico.

MR. MORRIS: Mr. Examiner, I am Dick Morris of Seth, Montgomery, Federici and Andrews, Santa Fe, appearing on behalf of Tidewater Oil Company in this case. We'll have one witness, Mr. Barry Breining, and ask that he stand and be sworn, please?

(Witness sworn).

* * *

B A R R Y B R E I N I N G, called as a witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. Breining, will you please state your name, where you reside?

A I am Barry Breining. I reside in Hobbs, New Mexico.

Q By whom are you employed and in what capacity?

A I am Area Engineer there for Tidewater Oil Company.

Q Have you previously testified before the New Mexico Oil Conservation Commission or one of its Examiners and had your qualifications accepted as a matter of record?

A Yes, I have.

Q Are you familiar with the application of Tidewater



for capacity allowable in Case 3435?

A Yes.

MR. MORRIS: Are the witness' qualifications acceptable?

MR. UTZ: Yes, they are.

Q (By Mr. Morris) Mr. Breining, what is it that Tidewater Oil Company is seeking by its application in this case?

A We seek the assignment of a capacity allowable for our GO State "J" Well Number 1 located in Unit H of Section 7, Township 17 South, Range 33 East, Maljamar Pool, Lea County. This well offsets the waterflood project operated by Great Western Drilling Company on its Maljamar Unit in that same Section 7. I might add that this lease is owned by Getty Oil Company and operated by Tidewater.

(Whereupon, Applicant's Exhibit 1 marked for identification.)

Q (By Mr. Morris) Just to get oriented, Mr. Breining, would you refer first to Exhibit 1, which is the area plat and does that show your State "J" lease in red?

A That's correct.

Q Which of the two wells shown on that lease is the well that we're concerned about in this Hearing?

A The well we are particularly concerned with is "J" Number 1 in Unit H.

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS
 ALBUQUERQUE, NEW MEXICO
 ALBUQUERQUE, NEW MEXICO
 P.O. BOX 1092 • PHONE 243-6691
 1120 SIMMS BLDG. • P.O. BOX 1294 • PHONE 256-1294
 1203 FIRST NATIONAL BANK EAST



Q That would be in the southeast of the northeast?

A That's correct.

Q What else does this plat, Exhibit Number 1, show?

A Well, it shows the current well status of all the wells in this nine section area. It also shows the Great Western and Murphy Baxter waterflood projects in this area, it shows they have been developed on, generally on five spot patterns.

It shows which wells are temporarily abandoned, the ones that have been plugged and abandoned, and the ones that were drilled as dry holes.

Q Now, you referred to the Great Western and Murphy Baxter projects. Can you state where your State "J" lease is situated with respect to the unit and waterflood project areas operated by Great Western and Murphy Baxter?

A We join the Great Western Maljamar Unit in Section 7, we're bounded on the south and west by that unit. We don't offset the Murphy Yates Baxter waterflood project.

MR. MORRIS: For the record, I might state at this point that the Great Western project, the unit and waterflood project was authorized by Order No. R2155. The Baxter project was authorized by Order R2156. Both of these orders do indicate the acreage involved in the projects, which will be shown to coincide with what Mr. Breining has just testified to.



MR. UTZ: Does either of these units involve any of Section 8?

MR. MORRIS: No, I don't believe so. Just by way of an aside, I think you'll find that Order R2155, the Great Western Order, involves the entire south half of Section 7, and also the south half of the northwest quarter. Also, then, some acreage in Section 12, 13 and 18. The Baxter project involves acreage in Sections 13, 18 and 17 across the lower tier there.

Q (By Mr. Morris) Now, you say, Mr. Breining, that this plat, your Exhibit Number 1, shows the status of all the wells in this area. What is the status of the other well on your State "J" lease?

A The status of that well in unit G is plugged and abandoned with both strings of casing shot off and pulled.

Q When was that well drilled and when was it plugged and abandoned?

A That well was drilled in 1949 by C. T. McGlothlin on a farm-out from Skelly Oil Company, who at that time operated the Getty Oil properties, and it was subsequently plugged after producing only 3200 barrels of oil.

(Whereupon, Applicant's Exhibit 2 marked for identification.)

Q (By Mr. Morris) Referring now both to Exhibit 1 and Exhibit 2, which is really just a blow-up of the portion of



the acreage under consideration here, would you give a history of the development of the pool in this area up until the time that the Great Western Drilling Company waterflood project was instituted?

A Yes. The northern part of Section 7, what is now Shenandoah Oil Corporation Wells One, Two and Four in Units C, B, and A, were originally drilled by C. T. McGlothlin and the well Number 1 was the discovery well in the old Roberts Pool. Development occurred in the 1940's and early 50's, Well Number 1 was drilled and completed in 1943. At that time, completion practice was to set casing above the pay and drill in and shoot with nitroglycerin in varying amounts.

All three of the wells there that I referred to were completed that way. Also, the dry hole offsetting Shenandoah's State A Well Number 1 was drilled by C. T. McGlothlin in about that same time.

Q Which three wells are you referring to, now?

A I am referring to the -- They are currently the Shenandoah Oil Corporation State A Well Number 1 in Unit B of Section 7.

Q All right.

A Well Number 2 in Unit C, and Well Number 4 in Unit A. I might go on to add that with the history of this thing that subsequent drilling in the late 1950's proved connection



with the Maljamar Pool, at that time it was reclassified and called the Maljamar Pool.

Q On your Exhibit Number 2 here, you have shown what other information that's not shown on the Exhibit Number 1, as far as wells in Sections 7 and 8 are concerned?

A Exhibit Number 2 shows the current oil and water production for the producing wells and the cumulative injection of water in barrels for the injection wells with all data being as of June 1st, 1966.

Q When was the Great Western Drilling Company unit and waterflood project approved?

A Great Western Drilling Company project, waterflood project was approved in April of 1962.

Q 1962. Was Tidewater or Getty Oil Company State "J" lease included within the unit and waterflood project of Great Western at that time?

A No, we were not.

Q As far as you know, Mr. Breining, were you offered the opportunity to join in that unit or waterflood project at that time?

A As far as I know, we were not invited to participate in the unitization negotiations.

Q Have you made inquiry beyond your own ordinary information to determine whether any opportunity was afforded



to either Tidewater or Getty Oil Company to participate in that unit?

A Yes. I have asked personnel who were directly over this property at that time, and also in our Unitization Department, according to them we never were invited to participate.

MR. UTZ: Did you ask to be included?

A Not that I know of. We weren't aware that they were forming the unit until the Hearing.

Q (By Mr. Morris) Now, this was approved, you say, back in 1962, and when did water actually start going into the ground on any of their injection wells in this area?

A In Section 7 they began injection in Wells Number 12 and 14.

Q That's down in the southwest quarter of the Section?

A Right. In July and August of 1962, and then, nearly a year later, they converted Wells 6, 10 and 16 in that same Section 7 to injection. That was in all of those around July 24, 1963.

Q So there was about a year lag when Wells 12 and 14 were put on and then 6, 10 and 16?

A That's correct.

Q Do I take it from that that their flood did progress in a northeasterly direction?

A Yes.

Q Now, I believe you stated earlier that the cumulative injection for each of these injections wells is shown on your Exhibit Number 2?

A That's correct. We might show, or mention, also the current production rates of these wells.

Q All right.

A Starting -- Well, the wells in Unit A of Section 7 are temporarily abandoned --

Q Excuse me. You are referring here to Exhibit 2 and will you just start up there in Unit A and work across and cover each of the wells in this Section 7, with respect to the current rate of oil and water production on each of the producing wells or temporarily abandoned wells in this area?

A All right.

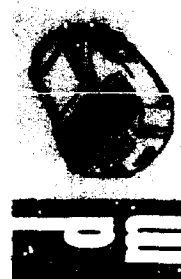
Q State what the status of the well is, if that's pertinent.

A In Section 7, Shenandoah Oil Corporation State A Wells Four and Seven in Unit A are both temporarily abandoned.

Q When were they temporarily abandoned?

A They have not produced any for several years. The last date of production was in April and May of 1963. That was the only month -- I don't remember.

Well Number Four produced in April and Number Seven



produced in May, just one month's production and that was the only production for that whole year.

Q Of 1963?

A Yes.

Q So there is no current rate of production of either oil or water with respect to those two wells?

A They have been classified as temporarily abandoned since that date.

Q All right.

A Shenandoah's State A Well Number 1 currently produces two barrels of oil and no water per day with a cumulative production of 95,957 barrels.

Q That was the well that you said referred to as being the discovery well on the Roberts Pool?

A That's correct.

Q That would account for its cumulative production?

A Yes, it was drilled, for instance, it was drilled about 16 years earlier than our Getty State "J" Well Number 1.

Q All right. What about Shenandoah's State A Number 2?

A This well has the same current rate as the Number 1 produces two barrels of oil and no water with a cumulative of 38,190 barrels.

Q Now, those wells 1 and 2 are diagonal and direct



offsets, respectively, to the injection Well Number 6 down in Unit F, is that correct?

A That's correct.

Q Great Western's Well Number 5 is also a direct offset to that injection well?

A That's correct. Current production for it is 4 barrels of oil and no water with a cumulative of 17,371 barrels.

Q What about the other producing wells in the Great Western project here?

A Well Number 11 currently produces 10 barrels of oil and 3 barrels of water per day. It's offset by four injection wells. Cumulative production of 32,741. Well Number 9 on Great Western's project produces 3 barrels of oil and no water per day with cumulative of 33,813.

Q Now, with respect to that Well Number 9, Mr. Breining, has that well ever received any substantial response to the injection?

A The response to injection is shown in our Exhibits 3 through 10.

Q Is there anything else you want to cover with respect to Exhibit Number 2 here before we take a look at the actual production from some of these other producing wells in this area?



A I would like to point out that the Getty State "J" Well Number 1 has a current allowable of 38 barrels, or as of 6-1-66, and that our latest test on this well on July 13, it produced 55 barrels of oil per day and no water with a GOR too small to measure.

Q Now, that's the subject well that we're talking about?

A That's correct.

Q Before we leave this Exhibit 2, I believe you already have given the status and history of the other well on the State "J" lease, have you not?

A I believe we've covered that.

(Whereupon, Applicant's Exhibits 3 through 10 marked for identification.)

Q (By Mr. Morris) All right, that's fine. Keeping Exhibit 2 handy so that you can refer to it and point out which well it is that we're talking about, would you refer to Exhibits 3 through 10 and without going into detail on any of these exhibits, just point out which well it is we're talking about, where the well is situated with respect to the injection wells in the area, and what performance these wells have demonstrated since the beginning of injection in this area?

A Great Western Drilling Company Maljamar Unit 7 Well



Number 5 in Unit E --

Q Just a minute. We are talking about Well Number 7 --
Excuse me, Well Number 5?

A That's correct.

Q Well Number 5.

A This well is offset to the west by Texaco Injection Well Number 20 on their State O lease, to the south by an injection well on the Great Western project, Number 12; and to the east by injection Well Number 6, and as you can see, there's no waterflood response.

Q Any response has been insignificant in this well?

A That is correct.

Q All right.

A Well Number 11 is the center well, Number 11 of Great Western Drilling Company Maljamar Unit.

Q What happened to Number 9?

A I got it out of order, I guess. Anyway, it's coming later.

Q That's fine.

A Number 11 is offset by four injections wells and has shown some response, an increase from approximately 220 barrels a month up to a maximum around 750 barrels a month with production being fairly erratic. It would be a maximum of about 25 barrels of oil per day. You'll note the water



production is very erratic. This is a well with a four-way push.

In Exhibit 5, which is a decline curve of Well Number 15 of the Great Western Drilling Company Maljamar Unit, this well has had good response to water injection, peaking at approximately 22 to 2300 barrels a month, or about 70 to 75 barrels a day. It is offset --

Q Excuse me just a minute. You are referring to Exhibit Number 5, now?

A Right.

MR. MORRIS: Your order is a little different from his. I have Well Number 15.

A I had them in the wrong order.

MR. MORRIS: Just so know which ones we are talking about here.

MR. UTZ: Well, this is the official Exhibit apparently, it's marked so.

MR. MORRIS: Why don't you mark your Well Number 11 as Exhibit 5?

MR. UTZ: It doesn't make any difference which one you change just so the Exhibit number matches the well you are talking about.

A I had discussed Number 11.

MR. MORRIS: All right.



A Then, we'll discuss now Well Number 15.

MR. PORTER: What Exhibit number will it be?

A Well, I am confused, now.

MR. UTZ: Maybe we had better run through these quickly. Number 5 was Number 3, was it?

A Correct.

MR. UTZ: I have been bypassing Number 4 here for some time now, and that was Well Number 9?

MR. MORRIS: Well Number 5 is Exhibit 3, then Well Number 9 is Exhibit 4.

MR. UTZ: Yes. Number 15 is 6. We already have 11 as 5?

MR. PORTER: State A 1 is 7.

MR. UTZ: State A 1 is 7.

A State A 2 Number 8.

MR. UTZ: Right.

A Shenandoah State Number 6 is 9.

MR. UTZ: Right.

A And Tidewater GO State "J" Number 1 is 10.

MR. UTZ: That's right.

A I'm sorry for the confusion.

MR. MORRIS: One of them just got out of order.

A We have talked about, then, Exhibit 3, 5, and we are on Number 15, I mean on Well Number 15, Exhibit 6, which



well did have good waterflood response. To go back then to Well Number 9, which is Exhibit Number 4, this well has a two-way push from injection wells offset to the west and south and as you can see has shown only very erratic response to water injection with a maximum rate in the last four years being a little over 10 barrels a day.

Q Now, that's the well that is a direct south offset to the subject well of this Hearing?

A That is correct. We have covered the wells for which we had decline curves on the Great Western Drilling Company Unit. Our Exhibit 7 is the Shenandoah, a decline curve for the Shenandoah State A Well Number 1 in Unit B of Section 7; as you can see, that well's production has been very low for the last, well, since we have history plotted. There's nothing that you could call response to waterflood there. The same comments would apply to Exhibit 8, which is a curve for Shenandoah State A Well Number 2 in Unit C.

Q Now, we haven't talked much about it, but the other offset well to your State "J" Number 1, that would be the east offset over here, the Well Number 6, do you have a decline on it?

A Yes. Shenandoah State Well Number 6 in Unit E of Section 8 showed no response to waterflooding. At the best, it made a maximum of four barrels a day and it looks like



March of 1964. We will go on to Exhibit 10.

Q Now, this is the subject well of the Hearing?

A That's correct. Tidewater Oil Company GO State "J" Well Number 1, which has shown outstanding response to the water injection in the wells to the southwest. The production is plotted through June and then we have tests in July indicating production rate of 55 barrels a day with no water.

Q What was the date of that test?

A July 13th.

Q Is there any indication, Mr. Breining, that that will be the upper limit of the production rate on that well?

A No. There is indication from production history of other wells in the Maljamar Field that it could go considerably higher than that. It went to 75 barrels a day on the Great Western Maljamar Unit Well Number 15; the Murphy H. Baxter State 17 Well Number 4 in Section 17, that would be Unit D, has a current allowable of 127 barrels a day.

Q So the subject well is capable at the present time as shown by the test of July 13th of producing in excess of the normal unit allowable?

A That's correct. The normal unit allowable for a well in this depth range is 45.

Q Now, you said earlier, Mr. Breining, that the direction of the flood, of the Great Western flood, was in a



northeasterly direction. Referring back here, if you would for a minute, to your Exhibit Number 1, this is your area plat, what conclusions have you reached concerning the characteristics of this flood and the production of oil that is receiving response from this flood in the northeast portion of Section 7?

A I would say the response and current production, the decline curves and all the evidence indicates there's an inhomogeneous reservoir with varying permeability, and that all the evidence shows that the oil will be lost unless it's recovered by Well Number 1 because it's the only well to the northeast that's capable of producing.

The well directly east, or the east offset well is drilled 330 out of the southeast corner of that proration unit. There's a dry hole in the center of that proration unit. The Shell State D Well Number 1 in Section 8 in Unit C was plugged and abandoned and the casing pulled in October, 1960. The wells to the north are temporarily abandoned and have been since 1963.

Q In other words, then, the wells in the Great Western project are not receiving a response from injection, the oil appears to be moving in a northeasterly direction toward and past your Number 1 Well and there are no other wells in that area that are capable of producing that oil?

A That is correct. I think it's pertinent here to



point out that even if either one of the Shenandoah State A Wells 4 or 7 were being produced, you have no assurance that they would produce any substantial amounts of oil because there are other wells closer to water injection that are not, and have not, and don't look like they ever will.

Q You are referring now, for example, to the unit Well Number 9 which is your south offset to the subject well?

A That's correct.

Q Do I take it from what you have said then, that unless the Number 1 Well is permitted to produce this oil, that it will not be recovered to the best of your anticipation by any other well, can not be recovered by any other well and will be wasted?

A That's correct.

Q What solution do you propose for this situation?

A The only solution would be a capacity allowable for the GO State "J" Number 1 in order to prevent waste.

Q Have you considered, Mr. Breining, re-entry, work-over, or any other work with respect to the other well on your State "J" lease?

A Yes. We investigated this possibility right after drilling the GO State "J" Well Number 1. That was in 1959, we looked and it didn't look good then and we checked it again in May, 1965. We have estimated the cost to re-enter that well



and just the equipment to get it in shape to produce would be \$31,000.00 with an additional expenditure of \$9,000.00 for pumping equipment. Besides being costly, I think it would be a real high risk venture, in view of the current production rates of the wells to the north and the south. Also because of the large volume of water injected by those two offset wells. I am referring to Number 6 and 10 of the Great Western Drilling Company.

Q In your opinion, Mr. Breining, if the Commission should grant your application in this case for capacity allowable for the Number 1 Well, would that be to the detriment of the correlative rights of any other operators in this area?

A No. It would not.

Q And by way of summary, perhaps, would you state again why this is your opinion and conclusion?

A Because of the lack of development and the lack of it being economical development and lack of any assurance that you could produce this oil from the other well.

Q Does it all tie back to the basic proposition that the oil will not be produced from any other well to the north-east of your Number 1 Well?

A That is correct.

Q Is there anything further that you could care to add to your testimony in this case?

A I believe not.

Q Were Exhibits 1 through 10 prepared by you or under your direction?

A Yes, they were.

MR. MORRIS: We offer into evidence Tidewater Oil Company's Exhibits 1 through 10.

MR. UTZ: Without objection, Exhibits 1 through 10 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits 1 through 10 offered and admitted in evidence.)

MR. MORRIS: That's all the questions I have of Mr. Breining at this time.

CROSS EXAMINATION

BY MR. UTZ:

Q What formation is being flooded here?

A It's the Grayburg-San Andres.

Q What depth is that?

A From around 42 to 4300.

Q Do you know what the injection rates are now on Well Number 10?

A Yes, sir. I checked the progress report in the Commission files for May, 1966 submitted by Great Western. The current daily injection rate on Well Number 6 was 257 barrels at 2325 pounds per square inch. For Number 10, it was



106 barrels per day at 2550. For Number 16 it was 226 barrels per day at 2500.

Q Did you look back to see whether that injection rate had been prevalent on Number 10 for some time?

A That Number 10 has always been what you would call a tight well.

MR. PORTER: You think they are injecting at capacity there?

A Yes, they have a higher injection pressure at the wellhead compared with 2325 on Well Number 6 with a higher rate.

Q (By Mr. Utz) Do you think that your response might be from the Number 6 rather than the Number 10?

A It's possible.

Q I don't suppose you know what their future intentions are as far as their future injection in Number 10 and Number 6?

A I would suppose they would continue to inject. They have the project in operation there. They may hope to maybe have better response from Well Number 11 later on, have a four-way push on it.

Q Had you ever considered the possibility of drilling you an unorthodox injection well and injecting water yourself up in the northeast corner of this 80 acre tract?

A No, sir, we had not considered that possibility. It



would involve negotiations with the adjoining owners, I am sure, lengthy negotiations; we could lose considerable amount of oil before we could get a well drilled or get partners to go along with it.

Q Do you think capacity allowables for this well would recover the oil that's possibly over in the 40 acre tract to the west of the Number 1 Well?

A Yes, possibly.

Q The chances are if you drilled a well over there you probably would have response right now?

A You might get 100 per cent water.

MR. PORTER: You can't look down there and see, can you?

A No.

MR. MORRIS: That would be a direct south offset to the Number 1 Well up there which is, you said, was the initial discovery well in the Roberts Pool with a cumulative of 95, almost 96,000 barrels to date. It wouldn't -- You wouldn't consider it too prudent to try to offset that well, would you?

A I mentioned once before we considered re-entering that, that was one of the considerations but due to the high cumulative on the north offset we supposed, or figured our location had been drained.



Q (By Mr. Utz) This oil you are producing now, you don't presume that that's all Getty Oil Company's oil, do you, that's under this 40 acre tract?

A It's possible that it is. I would not presume that all of it is, neither would I presume that Shenandoah's Number 1 up there produced all of their oil.

MR. PORTER: You are not going to look to see if it's earmarked?

A No, sir.

Q (By Mr. Utz) Do you know, have you talked to Shenandoah, do you know what their intentions are?

A Yes. Shenandoah approached us after our well kicked, to either buy or unitize or farm-out our lease. We told them that, well, Getty Oil Company was not prepared to sell the lease but that we would unitize if a suitable basis of participation could be agreed upon.

Q Has that gone any further?

A We didn't get any response to that letter.

MR. PORTER: How long ago has that been?

A I believe it was in May of this year.

MR. PORTER: You didn't set forth any basis for unitizing, you just said that you would be willing to work toward a basis for unitizing?

A That's right. They suggested primary recovery as

a basis, which we didn't think would probably be equitable in view of the current production rate of our well.

Q (By Mr. Utz) In view of your cumulative production?

A Yes, right. I have a copy of that letter.

MR. PORTER: You indicated this is from your Grayburg and San Andres, are these formations connected vertically except in the wellbore in this pool?

A Well, in this pool I would say probably.

MR. PORTER: They probably are outside the wellbore?

A Yes.

MR. UTZ: Are there other questions of the witness?

MR. MORRIS: I have a couple other questions, Mr.

Examiner.

REDIRECT EXAMINATION

BY MR. MORRIS:

Q Concerning the communication between the two zones, the Grayburg and the San Andres, would that communication have anything to do with the time at which some of these wells were drilled and the manner in which they were completed?

A I don't really know.

Q Well, what I mean is, I think you stated earlier that the wells were drilled back in the late '40's and were completed by shooting with nitroglycerine?

A Yes, that's correct.



dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

1203 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO



Q Do you know whether there was any distinction made between the zones as far as the stimulation there was concerned?

A No. I would say then there was not, mechanically there couldn't have been.

Q Concerning the Shenandoah's plans here, Mr. Breining, even if unitization could become feasible in this area, could that be accomplished in sufficient time to afford Tidewater any relief or to afford it the opportunity to catch this oil as it's going by the Number 1 Well?

A Well, from my experience in unitization negotiations I would say no.

Q Would the same be true with respect to any negotiations with Great Western with respect to joining or negotiating your way into their unit or waterflood project?

A It would be the same answer. By getting into that unit you wouldn't alter the operation.

Q Their unit has been approved and operating since 1962?

A That is correct.

Q Just to sum up our major point here again, Mr. Breining, is it your opinion that waste will be caused unless a capacity allowable is assigned to the subject well?

A That's right.



Q Do you see any alternative to that solution to the problem?

A I do not.

MR. MORRIS: I think that's all I have.

CROSS EXAMINATION

BY MR. PORTER:

Q Shenandoah is not in the Great Western flood unit?

A No, sir, they are not.

Q They are outside the same as you are, the same as Tidewater?

A Yes.

Q And they haven't had any response at all?

A No, sir, they have had no response.

Q So, they're just as well off out of it?

A Yes.

Q How did you know so well how to locate that well in advance?

A Well, --

MR. PORTER: You don't have to answer that.

MR. UTZ: You are not complaining about the economics of recovering this oil, are you?

A No.

MR. UTZ: No further questions? The witness will be excused.

(Witness excused.)

MR. UTZ: Statements? The case will be taken under advisement.

MR. MORRIS: I would like to point out -- Am I correct that there is no correspondence in the file, no objections from any offset operators or from Great Western or from Shenandoah in this case?

MR. UTZ: Not in this file.



I N D E X

WITNESS	PAGE
BARRY BREINING	
Direct Examination by Mr. Morris	2
Cross Examination by Mr. Utz	21
Redirect Examination by Mr. Morris	25
Cross Examination by Mr. Porter	27

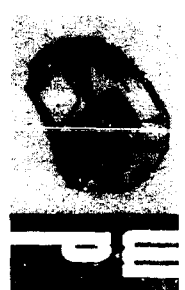
E X H I B I T S

EXHIBIT	MARKED FOR IDENTIFICATION	OFFERED	ADMITTED
App's 1	3	21	21
App's 2	5	21	21
App's 3-10	12	21	21

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO
1203 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO



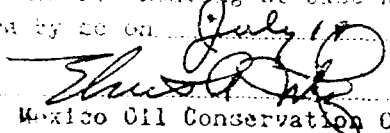
STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

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 before the New Mexico Oil Conservation Commission was reported by me; that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

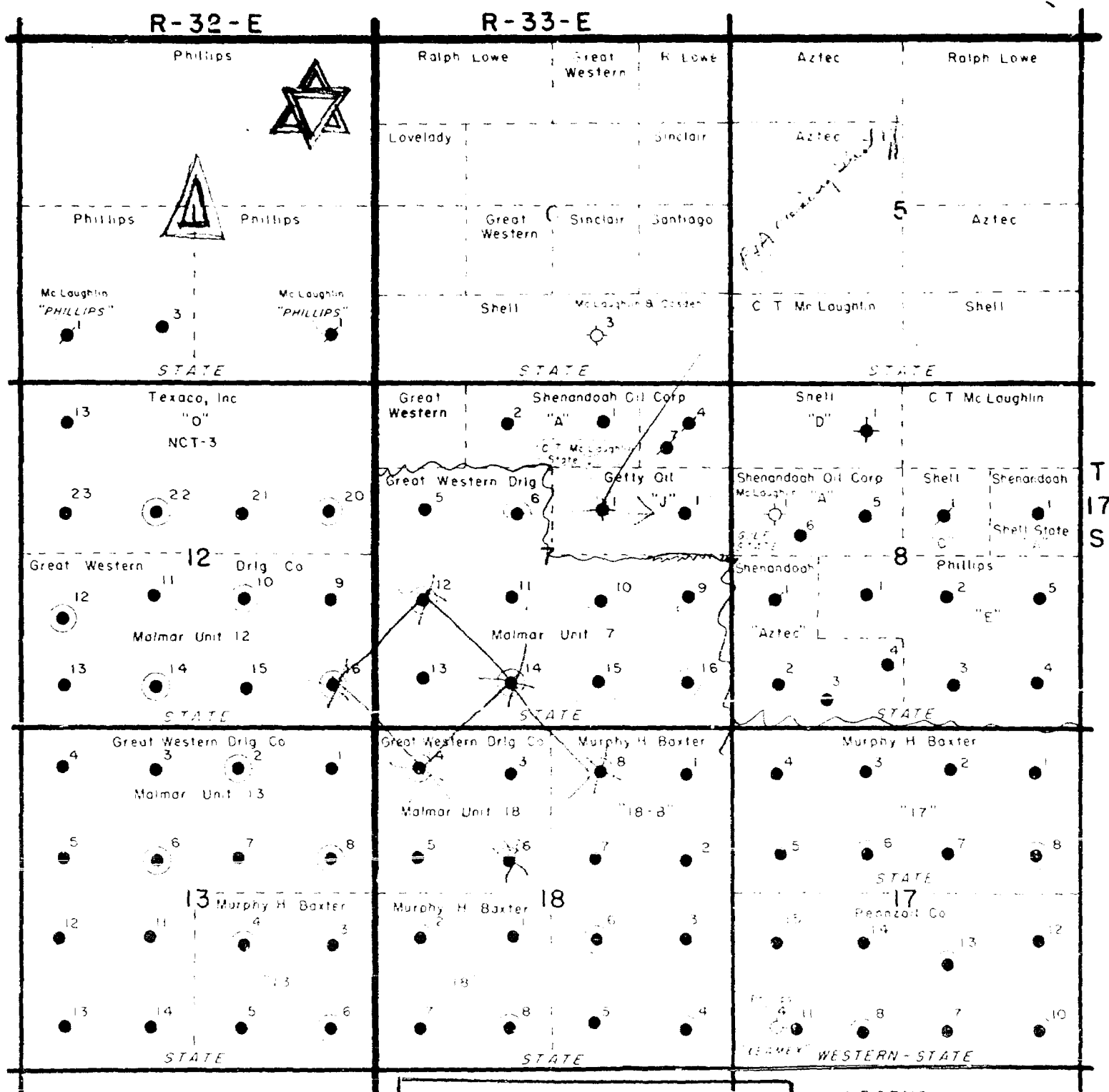
Witness my Hand and Seal this 24th day of July, 1966.


NOTARY PUBLIC

My Commission Expires:
June 19, 1967.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3435, heard by me on July 17, 1966.

Examiner
New Mexico Oil Conservation Commission

**TIDEWATER OIL COMPANY
MALJAMAR GRAYBURG-SAN ANDRES POOL
LEA COUNTY, NEW MEXICO**



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Exhibit EXHIBIT NO. 1
CASE NO. 3435