

CASE 4233: Application of AZTEC
OIL & GAS COMPANY FOR SALT WATER
DISPOSAL, LEA COUNTY, NEW MEXICO.

Case Number
4233

Application

Transcripts

Small Exhibits

ETC.

MR. NUTTER: Case 4233.

MR. HATCH: Case 4233. Application of Aztec Oil & Gas Company for salt water disposal, Lea County, New Mexico.

MR. MORRIS: Mr. Examiner, I am Dick Morris of Montgomery, Federici, Andrews, Hannahs and Morris, Santa Fe, appearing on behalf of the Applicant, Aztec Oil & Gas Company.

Associated with me and presenting the case will be Mr. Joe Starks of the Texas Bar, who is employed by Aztec Oil & Gas Company. We have one witness, Mr. Eaton, and I ask that he be sworn, please.

(Witness sworn.)

(Whereupon, Applicant's Exhibits 1 through 3 were marked for identification.)

MR. STARKS: Mr. Examiner, we have only the one witness here today, Mr. Lynn Eaton.

LYNN EATON

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

DIRECT EXAMINATION

BY MR. STARKS:

Q Mr. Eaton, will you state your name, present employment and your position with your present employer?

A I am L. D. Eaton, employed as a petroleum engineer

with Aztec Oil & Gas Company, with offices in Dallas, Texas.

Q Mr. Eaton, have you previously testified before this Commission?

A No, I haven't.

Q Mr. Eaton, will you briefly state your educational background as an engineer?

A I have a BS Degree in petroleum engineering from Oklahoma State University, which I received in 1951.

Q Since that date have you been regularly employed as an engineer -- petroleum engineer?

A I have.

Q Will you state briefly the employment?

A For six years with Pan-American Petroleum Corporation with work in northern Louisiana, Oklahoma and Kansas, followed by twelve years of employment by Burkfields, an independent in Dallas, Texas, whose operations covers primarily Texas and southern New Mexico.

Q You are presently employed by the Applicant; is that correct?

A Yes, sir.

Q During this entire period of time, you have practiced your profession as a professional engineer; is that not correct?

A Yes, sir.

Q For the purpose of this hearing, have you made a detailed study of the area in question?

A Yes, sir.

MR. STARKS: Mr. Examiner, are there any questions concerning this witness's qualifications?

MR. NUTTER: No. The witness is qualified.

Q (By Mr. Starks) Mr. Eaton, I would like for you to refer to Applicant's Exhibit 1, which is a plat showing the proposed salt water injection well, and other wells in the area.

I would like for you first to refer to some of the surrounding wells. There is a well in the south half of Section 9. Was that well completed as a producer or a dry hole?

A It was a dry hole.

Q Isn't the same true for the well in the southwest corner of Section 10?

A Yes, sir.

Q And also the same for the well located in the northeast corner of Section 21; is that not correct?

A That well has been abandoned. It was initially called a discovery well of the Yates Seven Rivers.

Q But, it is not producing at the present time; is

that correct?

A No.

Q Now, the water to be disposed of I believe is being produced from Applicant's SR Well No. 3; is that not correct?

A Yes, sir.

Q Is that well not the direct offset to the west to the proposed salt water well?

A It is.

Q Now, from what zone is the SR Well No. 3 producing?

A The SR 3 -- No. 3 is producing from the Yates Seven Rivers Tansill Zone.

Q Is it produced from an upper or lower member of the zone?

A From the upper section.

Q At the present time how much water and how much oil is that well producing?

A Approximately ten to twelve barrels of oil a day and in the neighborhood of one hundred barrels of water per day.

Q And is that one hundred barrels of water that we want to dispose of in the salt water injection well

which is the subject of this hearing; is that not correct?

A Yes, sir.

Q Now, what is the -- when was the SR Well No. 1 completed?

A No. 1 Well was completed in January of 1965.

Q What is the present status of that well?

A This well is now shut down.

Q Into what zone would you propose to be injecting the salt water?

A We propose to deepen the No. 1 Well approximately ninety feet below the present casing department of 3929 into what we refer to as the Reef Section of the Yates Seven Rivers.

Q Is that Reef Section a water-bearing formation?

A It is.

Q Now, the water in that formation; is that fresh water or is that salt water?

A That is salt water.

Q Is the water that that Reef bears at the present time normally fit for human consumption or irrigation or for livestock water?

A No, sir.

Q Let me ask you this: In making your study of the wells in the area of this proposed salt water injection well, do you find any of the wells that are presently or have in the past produced any oil from this formation in which you proposed to inject this salt water?

A No, I do not. The lowermost perforated interval that has produced from the Yates Seven Rivers Tansill Formation is a subsea minus 386 feet and we propose to inject at a minus 538 feet to the minus 599 feet.

Q In your opinion, then, is there a separation between the producing interval of the wells in this area and the zone into which you propose to inject the salt water?

A Yes, sir.

Q Where is the salt water being produced from the SR Well No. 3 being disposed of at the present time?

A It has been disposed of into the Skelly water system located directly to the west.

Q Have they requested that Applicant make other arrangements for the disposal of this water?

A They have.

Q Now, I would like you to refer to Applicant's

Exhibit No. 2, which is your schematic drawing of the proposed salt water injection well and will you briefly explain to the Examiner the present condition of the well bore and the work that Applicant proposes to perform and the results which the Applicant hopes to obtain in placing this well bore in condition to use it as a salt water injection well?

A The State SR No. 1 Well was drilled to a total depth of 3929 feet with eight and five-eighths inch surface casing set and cemented at 359 feet with cement circulated to surface.

Four and one-half inch casing -- production casing was set at total depth and cemented with two hundred sacks, the top of which was -- came to 3140 feet. The perforated -- producing perforated interval of 3725 feet and 3734 to 36 feet will be squeezed and then the well deepened from the present total depth to 3990 and injection will be through two-inch tubing set on a packer with the water injection zone being the open hole section.

We propose to inhibit water behind the tubing or in the annular section and will install a surface pressure gauge in case of any malfunction of the packer.

Q Would you propose to use a cement-lined or plastic-lined tubing in this injection well?

A I think it's quite possible that we will. It's -- it will depend on the future life of the number three.

Q How long do you expect that it would be necessary to use this salt water injection well for the purpose of disposing of the water from the SR No. 3 Well?

A From three and a half to four years, probably.

Q Is that because you feel that the economic limit of production will be reached at that time?

A Yes, sir.

Q In other words, it's producing at the present time only ten or twelve barrels per day; is that correct?

A Yes, sir.

Q Is there any alternative method available to the Applicant for the disposal of this produced salt water from the SR 3 Well?

A No, there isn't.

Q Does Applicant have any other wells in this immediate area?

A No, we do not.

Q In your opinion, would the utilization of the SR Well No. 1 as a salt water injection well as proposed by Applicant create any risk of contamination of any fresh water sources or would it create any possible risk of contamination or interference with the producing characteristics of any other oil producing wells in this area?

A Based on the evidence that I have presented thus far, I feel there would be no chance of any contamination.

Q Also, I believe that we have a shot of the electric log which will be Applicant's Exhibit No. 3. Is there anything that you would like to mention with reference to that log? Of course, it doesn't go to the total depth to which this well would be deepened.

A Only that it does indicate the perforated interval that will be squeezed.

MR. STARKS: I have nothing further, Mr. Examiner, from this witness unless the Examiner has some questions.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Eaton, you mentioned minus 386 was the low depth from which the Reef is productive of oil.

A Yes, sir.

Q What did you say your disposal interval would be in the subsea?

A Minus 538, a distance of 152 feet.

Q Now, that minus 538, will that be the casing shoe?

A Yes, sir.

Q So, you will be 538 to --

A To 599.

Q -- 599. What's the trouble that you can't stay in Skelly's system; is it getting overloaded or --

A Yes, sir. They have more water than they can take care of in their system and we have had -- although had been treating our water some chemically for waterflood purpose, it would require extensive filtering system and so forth to prepare our water for the system and then they do not need our water, either.

Q Now, you mentioned that the number one was completed in January of 1965. How long has it been shut in or inactive?

A Approximately ten months.

Q Your number three is making about one hundred barrels per day?

A Yes, sir.

MR. STARKS: May I ask one other question, Mr. Examiner?

Do you anticipate any substantial increase in the production -- in the water volumes to be produced from the SR 1 during its remaining life?

THE WITNESS: It's possible that the water volume might increase to as much as 200 barrels; but, not in excess of that.

MR. NUTTER: Is the number three producing from a zone equivalent to these perforations that you are going to squeeze in the number one?

THE WITNESS: Yes, sir.

MR. NUTTER: At about a 3,700 foot level?

THE WITNESS: Yes, sir.

MR. NUTTER: Are there further questions of the witness?

MR. STARKS: Applicant offers Exhibits 1 through 3 in evidence.

MR. NUTTER: Applicant's Exhibits 1 through 3 will be admitted in evidence.

Do you have anything further, Mr. Starks?

MR. STARKS: Nothing further, Mr. Examiner.

MR. NUTTER: Does anyone have anything they wish to offer in Case 4233? We will take the case under advisement and call a fifteen-minute recess.

(Whereupon, a short recess was taken.)

I N D E X

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E X H I B I T S

Applicant's Exhibits	
1 through 3	2

STATE OF NEW MEXICO)
) ss
 COUNTY OF BERNALILLO)

I, GLENDA BURKS, Court Reporter 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; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Glenda Burks
 Notary Public

My Commission Expires:

March 12, 1973

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4233, heard by me on 12/22, 1969.
[Signature] Examiner
 New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87501

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

October 28, 1969

Mr. Richard S. Morris
Montgomery, Federici, Andrews,
Hannahs & Morris
Attorneys at Law
Santa Fe, New Mexico

Re: Case No. 4233
Order No. R-3861
Applicant:
Aztec Oil & Gas Company

Dear Sir:

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

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/1r

Copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

Other State Engineer Office

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. 4233
Order No. R-3861

APPLICATION OF AZTEC OIL & GAS COMPANY
FOR SALT WATER DISPOSAL, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 22, 1969, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 28th day of October, 1969, 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, Aztec Oil & Gas Company, is the owner and operator of the State SR Well No. 1, located in Unit G of Section 16, Township 24 South, Range 36 East, NMPM, Jalmat Field, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the lower reef of the Seven Rivers formation, with injection into the open-hole interval from approximately 3929 feet to 3990 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set at approximately 3922 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should

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CASE No. 4233
Order No. R-3861

be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Aztec Oil & Gas Company, is hereby authorized to utilize its State SR Well No. 1, located in Unit G of Section 16, Township 24 South, Range 36 East, NMPM, Jalmat Field, Lea County, New Mexico, to dispose of produced salt water into the lower reef of the Seven Rivers formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3922 feet, with injection into the open-hole interval from approximately 3929 feet to 3990 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


ALEX J. ARMINO, Member


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


esr/

SEP 26 1969
HUMBLE OIL & REFINING COMPANY

MIDLAND, TEXAS 79701

PRODUCTION DEPARTMENT
SOUTHWESTERN DIVISION
E. C. BARFIELD
OPERATIONS MANAGER

September 24, 1969

POST OFFICE BOX 1600

Enc 4233

ENC

Re: Application to Dispose of Salt
Water, Aztec Oil & Gas Company
State SR No. 1, Jalmat Yates-
Seven Rivers Field, Lea County,
New Mexico

Mr. A. L. Porter
New Mexico Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico 87501

Gentlemen:

This will serve as our waiver of hearing for Aztec Oil & Gas Company's request for permission to dispose of salt water in their State SR Well No. 1, Jalmat Yates-Seven Rivers Field, Lea County, New Mexico. This well is located in Section 16, T-24-S, R-36-E and injection will be into the lower reef zone of the Seven Rivers formation from 3929 to 3990 feet.

Yours very truly,

E. C. Barfield
E. C. BARFIELD

HNK/rs

PRENTICE WATTS
VICE PRESIDENT
PRODUCTION

AZTEC OIL & GAS COMPANY
2000 FIRST NATIONAL BANK BUILDING
DALLAS, TEXAS 75202

October 14, 1969

OCT 20 1969

Case 4233

Gray

Mr. A. L. Porter, Jr.
New Mexico Oil Conservation Commission
P. O. Box 2038
Santa Fe, New Mexico 87501

Re: Application to Dispose of Salt
Water, Aztec Oil & Gas Company
State SR No. 1, Jalmat Yates-
Seven Rivers Field, Lea County,
New Mexico

Gentlemen:

As surface owner, this will serve as my waiver of hearing for
Aztec Oil & Gas Company's request for permission to dispose of salt
water in their State SR Well No. 1, Jalmat Yates-Seven Rivers Field,
Lea County, New Mexico.

Very truly yours,

Dated:

10-16-69, 1969

W.P. Whittle

PRENTICE WATTS
VICE PRESIDENT
PRODUCTION

AZTEC OIL & GAS COMPANY
2000 FIRST NATIONAL BANK BUILDING
DALLAS, TEXAS 75202

OCT 14 1968

Case 4233

GA

Mr. A. L. Porter, Jr.
New Mexico Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: Application to Dispose of Salt
Water, Aztec Oil & Gas Company
State SR No. 1, Jalmat Yates-
Seven Rivers Field, Lea County,
New Mexico

Gentlemen:

This will serve as ~~our waiver of hearing for~~ Aztec Oil & Gas Company's
request for permission to dispose of salt water in their State SR Well No. 1,
Jalmat Yates-Seven Rivers Field, Lea County, New Mexico.

Very truly yours,

J. J. O'Neill Jr.

COMPANY NAME

By: *E. L. Anderson*

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 22, 1969

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

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

CASE 4213: (Continued from the September 10, 1969, Examiner Hearing)

Application of Texo Oil Company for pool redelineation, creation of a new gas pool, an unorthodox gas well location, and non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the redelineation of the vertical limits of the South Corbin-Queen Pool to permit the creation of a new basal Penrose gas pool for its Buffalo Unit Well No. 11 located at an unorthodox gas well location 2310 feet from the South line and 330 feet from the West line of Section 35, Township 18 South, Range 33 East, Lea County, New Mexico. Applicant further seeks approval of an 80-acre non-standard gas proration unit comprising the N/2 SW/4 of said Section 35, to be dedicated to the above-described well.

CASE 4230: Application of Dalport Oil Corporation for an exception to Order No. R-3221, as amended, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico. Said exception would be for applicant's AMCO Federal Well No. 2 located in the SW/4 NW/4 of Section 31, Township 14 South, Range 30 East, Double L Field, Chaves County, New Mexico. Applicant seeks authority to dispose of salt water produced by said well in an unlined surface pit located in the vicinity of said well.

CASE 4231: Application of Western States Producing Company for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 4174 feet to 4388 feet in its State "30" Well No. 3, located in Unit B of Section 30, Township 7 South, Range 33 East, Chavero-San Andres Pool, Roosevelt County, New Mexico.

- CASE 4232: Application of Pan American Petroleum Corporation for a pressure maintenance project, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project on its Baskett "D" Lease by the injection of water into the San Andres formation through its Baskett "D" Well No. 4 located in Unit I of Section 11, Township 8 South, Range 30 East, Cato-San Andres Pool, Chaves County, New Mexico.
- CASE 4233: Application of Aztec Oil & Gas Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Yates-Seven Rivers formations in the open-hole interval from 3929 feet to 3990 feet in its State SR Well No. 1 located in Unit G of Section 16, Township 24 South, Range 36 East, Jalmat Field, Lea County, New Mexico.
- CASE 4234: Application of Gulf Oil Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the upper Morrow and lower Morrow formations underlying Section 12, Township 23 South, Range 24 East, Eddy County, New Mexico. Said acreage to be dedicated to a well to be drilled at a standard location 1650 feet from the North and East lines of said Section 12, and within one mile of the Rock Tank-Upper Morrow and Rock Tank-Lower Morrow Gas Pools. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.
- CASE 4235: Application of Continental Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project on its Jack A-29 lease by the injection of water into the Seven Rivers-Queen formations through its Jack A-29 Wells Nos. 2 and 4 located, respectively, in Units 2 and 0 of Section 29, Township 24 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.

CASE 4236: Application of Continental Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Anderson Ranch Unit Area by the injection of water into the Wolfcamp formation through its Anderson Ranch Unit Wells Nos. 4 and 5, located, respectively, in Units B and J of Section 11, Township 16 South, Range 32 East, Anderson Ranch-Wolfcamp Pool, Lea County, New Mexico.

CASE 4237: Application of Continental Oil Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Monument-Tubb and Weir-Blinbry Pools in the well-bores of the following four wells located in Township 20 South, Range 37 East, Lea County, New Mexico:

Britt "B" Well No. 18 - Unit N - Section 10
Britt "B" Well No. 19 - Unit B - Section 15
Britt "B" Well No. 20 - Unit L - Section 10
Britt "B" Well No. 21 - Unit J - Section 10

CASE 4238: Application of McCasland Disposal System for the amendment of Order No. R-3781, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3781, to permit the disposal of produced salt water in the Yates formation, in addition to the previously authorized Seven Rivers formation, in its Getty Oil Company J. H. Day Well No. 2 located in Unit D of Section 6, Township 22 South, Range 36 East, Jalmat Pool, Lea County, New Mexico. Overall disposal interval would be from 3543 feet to 3939 feet.

CASE 4239: Application of Amini Oil Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Upper Pennsylvanian formation underlying the SE/4 of Section 8, Township 14 South, Range 34 East, Lea County, New Mexico. Said acreage to be dedicated to a well to be drilled at a standard location in said quarter section and within one mile of the Cerca-Upper Pennsylvanian Pool. Also to be considered will be the costs of drilling said

Case 4239 - Continued from Page 3 -

well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.

CASE 4240: Application of Pan American Petroleum Corporation for an exception to Order No. R-3221, as amended, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks exceptions to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico. Said exceptions would be for applicant's Smernoff Federal Well No. 1 located in Unit B of Section 24 and LaRue Federal Well No. 1 located in Unit D of Section 25, both in Township 15 South, Range 29 East, Sulimar-Queen Pool, Chaves County, New Mexico. Applicant seeks authority to dispose of water produced by said wells in two unlined surface pits located in said Units B and D.

CASE 4241: Application of Pennzoil United, Inc., for a non-standard gas proration unit or the creation of a new gas pool, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 320-acre non-standard gas proration unit comprising the E/2 of Section 21, Township 24 South, Range 26 East, White City-Pennsylvanian Gas Pool, Eddy County, New Mexico, said unit to be dedicated to applicant's Allied Federal 21 Well No. 1 located at a standard location in Unit J of said Section 21. In the alternative, applicant seeks the deletion of said Section 21 from the White City-Pennsylvanian Gas Pool and the creation of a new Morrow gas pool for said Allied Federal 21 Well No. 1.

CASE 4242: Application of Pennzoil United, Inc., for a non-standard gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 104 C II, to permit the recompletion of its Mescalero Ridge Well No. 1 at a non-standard location 660 feet from the South and West lines of Section 20, Township 19 South, Range 34 East, and within one mile of the Quail Ridge-Morrow Gas Pool, Lea County, New Mexico.

October 22, 1969 - Examiner Hearing

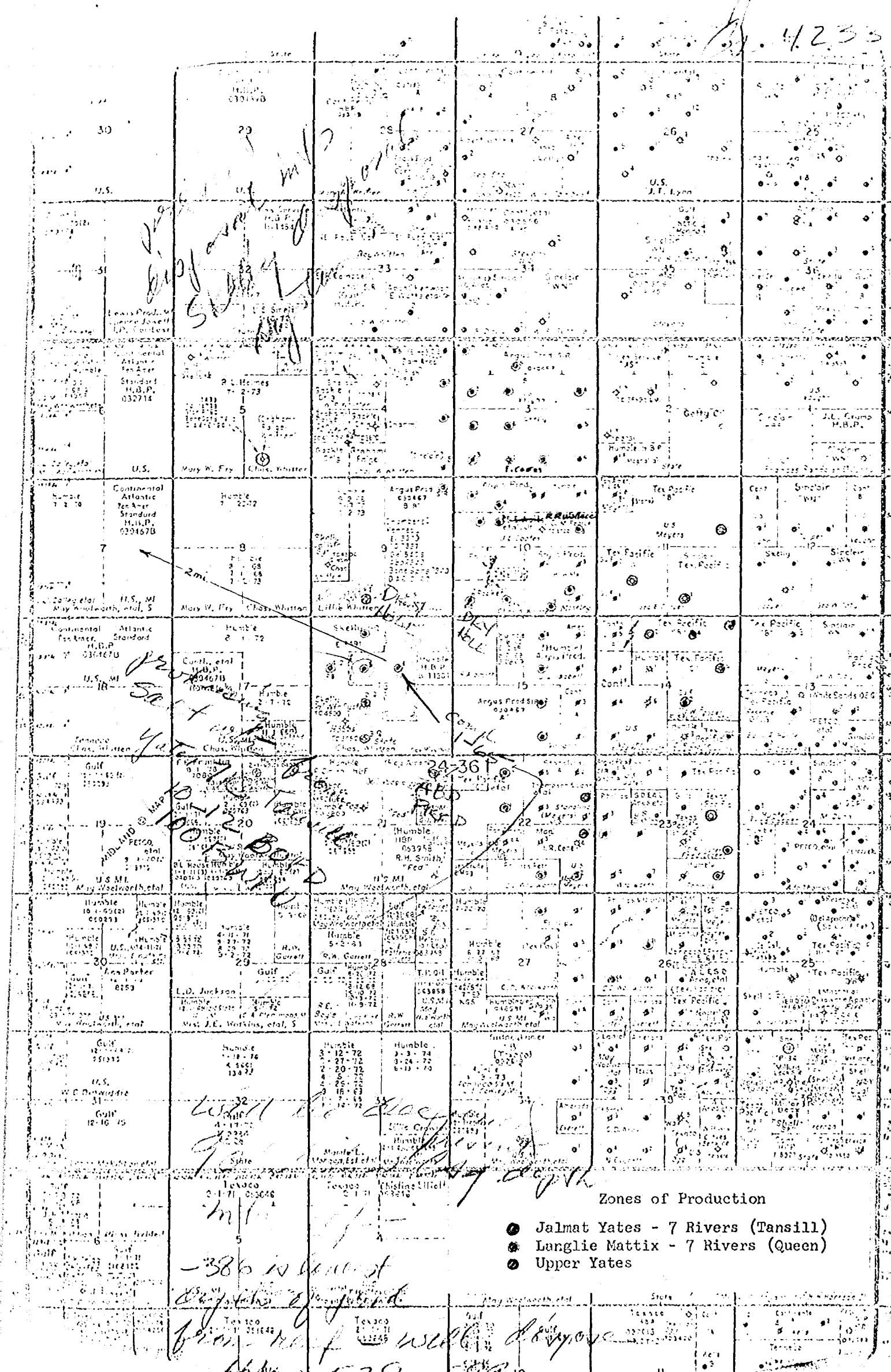
Docket No. 29-69

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(Continued from the October 8, 1969, Examiner Hearing)

CASE 4223: Application of Resler and Sheldon for two waterflood projects, Lea County, New Mexico. Applicants, in the above-styled cause, seek authority to institute two waterflood projects by the injection of water into the Grayburg, and possibly other formations in the perforated interval from approximately 3555 feet to 3617 feet in their Kelly Well No. 3 and into the Queen, and possibly other formations in the perforated interval from approximately 3439 feet to 3689 feet in their Steeler Well No. 1, said wells being located, respectively, in Unit M of Section 16, and Unit I of Section 20, Township 23 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico. In the alternative, applicants seek authority to dispose of produced salt water in said wells in the intervals as described above.

4233



Zones of Production

- ① Jalmat Yates - 7 Rivers (Tansill)
- ② Langlie Mattix - 7 Rivers (Queen)
- ③ Upper Yates

386 is best
 538 - 577

AZTEC OIL & GAS CO.
State SR #1 (SWD)

gang

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Appl EXHIBIT NO. 2
CASE NO. Q 11233

339'

8 ⁵/₈" 24# J-55 Casing
Cmt. w/ 250 sx., Circulated

*gas lift
plastic
lubricant
used
w/ 3 1/2 to 4 ft.
load
w/ inhibited wtr*

Perf. 3725-27'
3734-36'
(To Be Squeezed)

2" EUE Tubing @ 3920' (approx.)

4 1/2" R-3, Halliburton Packer
@ 3922' (approx.)

3929'

4 1/2" 9.5# Csg Cmt. w/ 200 sx.
Top of amt. @ 3140'

3990'

Proposed T.D.

SCHUMBERGER

SOUND LOG CALADIA RAY

SCHUMBERGER WELL SURVEYING CORPORATION
HOUSTON, TEXAS

COUNTY LEA
FIELD or LOCATION UNDESIGNATED
WELL STATE SR # 1

COMPANY AZTEC OIL & GAS CO

COMPANY AZTEC OIL & GAS COMPANY

WELL STATE SR # 1

FIELD UNDESIGNATED

COUNTY LEA STATE NEW MEXICO

LOCATION 1980' FROM N/L
1980' FROM E/L

Sec. 16 Twp. 24S Rge. 36E

Other Services:
LL, MLL

Permanent Datum: GL
Log Measured From KB, 9 Ft. Above Perm. Datum
Drilling Measured From

Elev.: K.B. 3391
D.F. 3390
G.L. 3382

Date 10-26-64

Run No. ONE

Depth—Driller 3930

Depth—Logger 3911

Log Interval 3904

Top Log Interval 0

Casing—Driller 8 5/8 @ 300

Casing—Logger -

Bit Size 7 7/8"

Type Fluid in Hole SALT GEL

Dens. Visc. - 34

pH Fluid Loss - ml

Source of Sample PIT

R_m @ Meas. Temp. 048 @ 78 °F

R_m @ Meas. Temp. 040 @ 75 °F

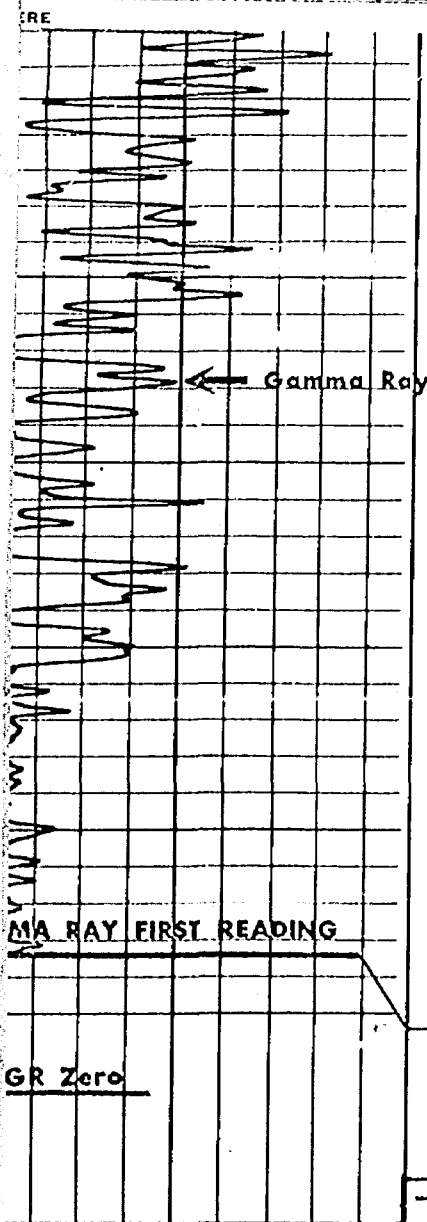
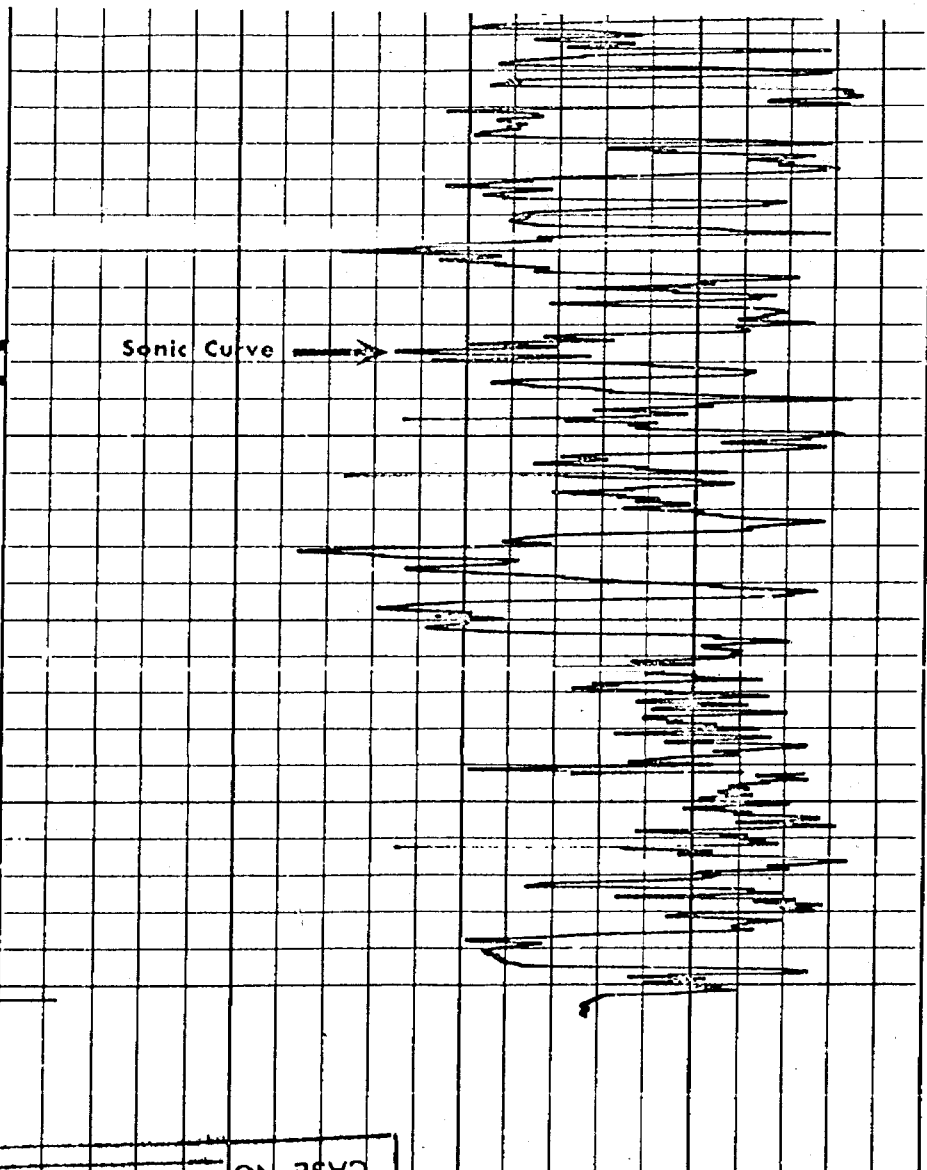
R_m @ Meas. Temp. - @ - °F

Source: R_m R_m M

R_m @ BHT 042 @ 90 °F

Time Since Circ. 2 HOURS

Well Sec. Temp. °F



BEFORE EXAMINER NUTTER
OF CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 10-26-64

SEP 22 1969

AZTEC OIL & GAS COMPANY

2000 FIRST NATIONAL BANK BUILDING
DALLAS, TEXAS 75202

PRENTICE WATTS
VICE PRESIDENT
PRODUCTION

September 18, 1969

Case 4233

Mr. A. L. Porter, Jr.
New Mexico Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: Application to Dispose of
Salt Water into the Lower Yates
Through Aztec Oil & Gas Company's
State SR #1, Jalmat Yates - 7
Rivers Field, Lea County, New Mexico

Dear Sir:

Under provisions of Statewide Rule 701, Aztec Oil & Gas Company hereby makes application for approval to dispose of salt water, produced from the Yates-Seven Rivers (Tansill) formation in Aztec's State SR #3, into the Yates Seven Rivers Reef formation of Aztec's State SR #1, Section 16, T-24-S, R-36-E, Lea County, New Mexico.

We propose to deepen the State SR #1 approximately 60 feet and inject into open hole through 2-3/8" tubing below a packer to minimize pressure on the 4-1/2" casing and protect from possible corrosion. Forms C-101 and C-102 will be filed with the OCC District Office.

In support of this application, we submit the following exhibits:

1. Three copies of Form C-108, Application to Dispose of Salt Water by Injection into a Porous Formation.
2. Three copies of a plat showing the location of the proposed injection well and all other wells within a 2 mile radius with producing zones indicated thereon.
3. Three copies of the original log of the injection well prior to deepening.
4. Three copies of a schematic diagram indicating casing depths and the proposed tubing and packer details.

DOCKET MARKED

Date 10-9-69

5. No analysis of the water to be disposed is available, however, same is unfit for domestic, stock, irrigation or general use and is of the same chemical nature as that of the injection zone.
6. Three copies of a letter to offset operators and lease owner giving notice of this application and requesting waivers for hearing.

This water is currently being used by Skelly Oil Company in a water-flood program, however, it is not compatible with other source water and it is necessary that we arrange for another disposal method. Proposed injection will be into the lower reef zone of the Seven Rivers formation which is not productive of oil or gas.

It is the purpose of this application to secure administrative approval for the use of the reef zone and in the proposed deepened State SR Well No. 1 for disposal of produced water from the State SR Well No. 3, if you receive no objections within 15 days from the parties notified in Exhibit 6. In the event you believe this Application cannot be approved administratively, please set the matter for hearing on the next scheduled docket.

Very truly yours,

AZTEC OIL & GAS COMPANY

L. D. Eaton
L. D. Eaton

LDE:bjr

Attachments

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Aztec Oil & Gas Company		ADDRESS 2000 First National Bank Bldg., Dallas, Texas	
LEASE NAME State SR	WELL NO. 1	FIELD Jalmat Yates - 7 Rivers	COUNTY Lea
LOCATION UNIT LETTER G WELL IS LOCATED 1980 FEET FROM THE North LINE AND 1980 FEET FROM THE East LINE, SECTION 16 TOWNSHIP 24S RANGE 36E NMPM.			
CASING AND TUBING DATA			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	8-5/8"	359'	250
INTERMEDIATE			
LONG STRING	4-1/2"	3929'	200
TUBING	2" EUE	3920'	NAME, MODEL AND DEPTH OF TUBING PACKER Halliburton R-3 @ 3922' (approx.)
NAME OF PROPOSED INJECTION FORMATION Seven Rivers Reef		TOP OF FORMATION 3929'	BOTTOM OF FORMATION 3990'
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLE? Open Hole	PROPOSED INTERVAL(S) OF INJECTION 3929-3990'
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Oil Production		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? Yes
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH 3725-27' & 3734-36' to be squeezed w/approximately 100 sxs.			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 300'	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA 3736'	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA None	
ANTICIPATED DAILY INJECTION VOLUME (BBL'S.) 100	MINIMUM 100	MAXIMUM 200	OPEN OR CLOSED TYPE SYSTEM Closed
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE Yes		IS INJECTION TO BE BY GRAVITY OR PRESSURE? Gravity	APPROX. PRESSURE (PSI) -
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Commissioner of Public Lands, P. O. Box 1148, Santa Fe, New Mexico		LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL	
Skelly Oil Company, Drawer H, Monahans, Texas 79756		J. I. O'Neill, Jr., 410 W. Ohio Street, Midland, Texas 79701	
Gackle Oil Company, 919 S. Grimes, Hobbs, New Mexico 88240		Humble Oil Company, Box 1600, Midland, Texas 79704	
Argus Production Company, 3313 Republic Bank Tower, Dallas, Texas 75201			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER Yes	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes	THE NEW MEXICO STATE ENGINEER Yes
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)	PLAY OF AREA Yes	ELECTRICAL LOG Yes	DIAGRAMMATIC SKETCH OF WELL Yes

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

L. S. Esten
(Signature)

Staff Engineer
(Title)

9-17-69
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

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AZTEC OIL & GAS COMPANY

2000 FIRST NATIONAL BANK BUILDING

DALLAS, TEXAS 75202

PRENTICE WATTS
VICE PRESIDENT
PRODUCTION

September 18, 1969

Commissioner of Public Lands
P. O. Box 1148
Santa Fe, New Mexico

J. I. O'Neill, Jr.
410 W. Ohio Street
Midland, Texas 79701

Skelly Oil Company
Drawer H
Monahans, Texas 79756

Gackle Oil Company
919 S. Grimes
Hobbs, New Mexico 88240

Argus Production Company
3313 Republic Bank Tower
Dallas, Texas 75201

Humble Oil & Refining Company
Box 1600
Midland, Texas 79701

Re: Application to Dispose of Salt
Water in Aztec Oil & Gas Company's
State SR No. 1, Jalmat Yates-Seven
Rivers Field, Lea County, New Mexico

Gentlemen:

Enclosed please find a copy of our Application for Salt Water Disposal for the captioned well in accordance with Statewide Rule 701. We are also furnishing three copies of a letter waiving hearing for this application. If you have no objection, we would appreciate your executing and forwarding the original to the New Mexico Oil Conservation Commission at your earliest convenience and returning one copy to this office.

Very truly yours,


L. D. Eaton

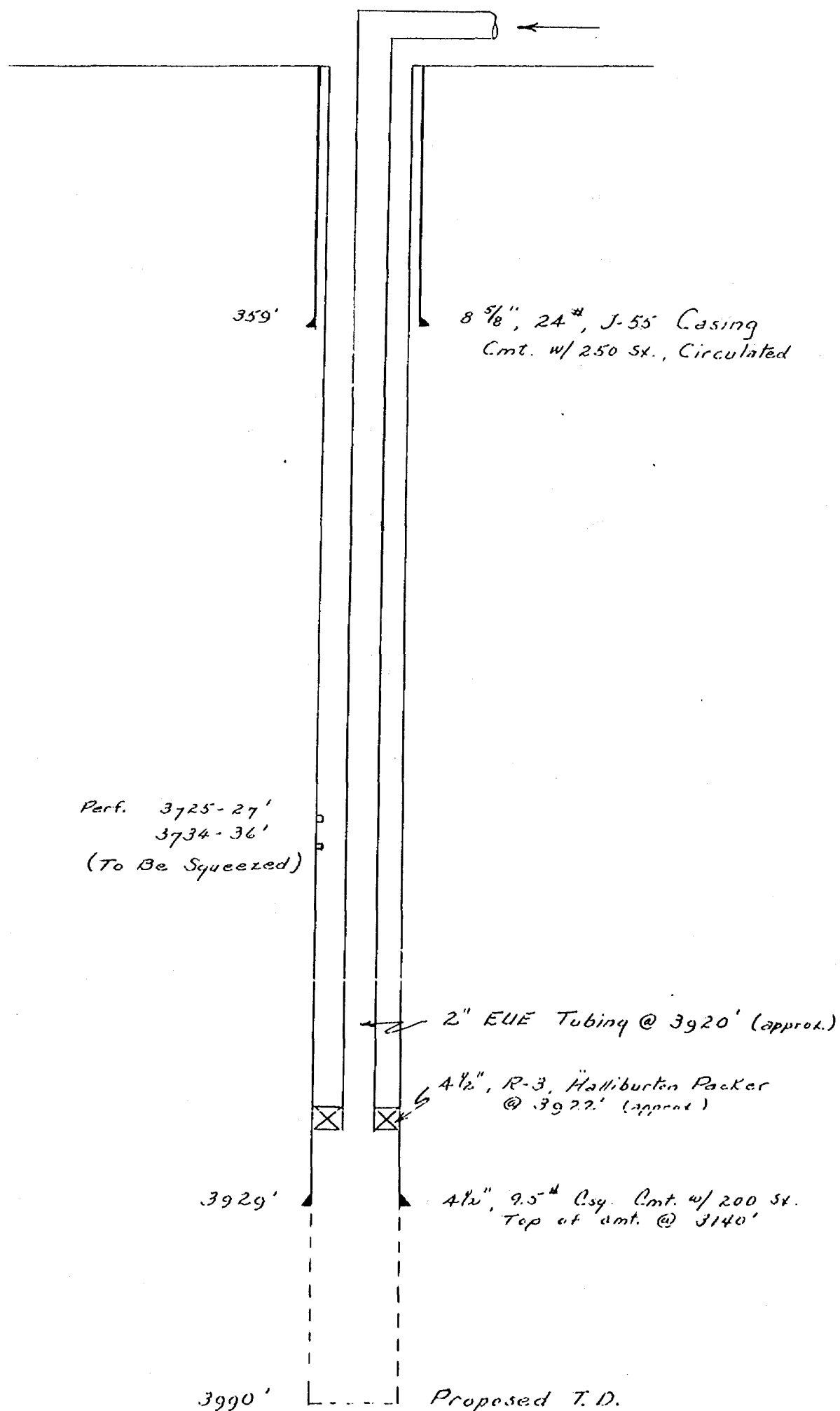
LDE:bjr

Encls.

Case 4233

AZTEC OIL & GAS CO.

State SR #1 (SWD)



Case #133

DRAFT

GMH/esr

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. 4233

Order No. R-3861

GMH
APPLICATION OF AZTEC OIL & GAS COMPANY
FOR SALT WATER DISPOSAL, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 22, 1969,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of October, 1969, 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, Aztec Oil & Gas Company,
is the owner and operator of the State SR Well No. 1,
located in Unit G of Section 16, Township 24 South, Range
36 East, NMPM, Jalmat Field, Lea
County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the lower part of the
Yates-Seven Rivers
formations, with injection into the open-hole interval
from approximately 3929 feet to 3990 feet.

(4) That the injection should be accomplished through
2 3/8-inch plastic-lined tubing installed in a packer set at

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3922

approximately ~~3922~~ feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus ~~or the annulus left open~~ at the surface in order to determine leakage in the casing, tubing, or packer.

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Aztec Oil & Gas Company, is hereby authorized to utilize its State SR Well No. 1 located in Unit G of Section 16, Township 24 South, Range 36 East, NMPM, Jalmat Field, Lea County, New Mexico, to dispose of produced salt water into the ~~lower~~ ^{part of the} Valles-Seven Rivers formation, injection to be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 3922 feet, with injection into the open-hole interval from approximately 3929 feet to 3990 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus ~~or the annulus left open~~ at the surface in order to determine leakage in the casing, tubing, or packer.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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

CASE 4234: Application of GULF
OIL CORPORATION FOR COMPULSORY
POOLING, EDDY COUNTY, NEW MEXICO.

Dismiss