

CASE 3826: Application of EUGENE
E. NEARGURG FOR SALT WATER
DISPOSAL, CHAVES COUNTY, N. MEX.

Case Number

3826

Application

Transcripts.

Small Exhibits

ETC.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 3826
Order No. R-3483

APPLICATION OF EUGENE E. NEARBURG
FOR SALT WATER DISPOSAL, CHAVES
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 21, 1968,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 9th day of September, 1968, 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, Eugene E. Nearburg, is the owner
and operator of the Magnolia Burt Federal Well No. 1, a dry hole
located in Unit P of Section 5, Township 8 South, Range 30 East,
NMPN, Cato-Lightcap Field Area, Chaves County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the Devonian formation, with
injection into the open-hole interval from approximately 7965
feet to 8015 feet.

(4) That the injection should be accomplished through
3 1/2-inch plastic-lined tubing; that the casing-tubing annulus
should be filled with an inert fluid; and that a pressure gauge

-2-

CASE No. 3826
Order No. R-3483

should be attached to the annulus or the annulus left open at the surface in order to determine leakage in the tubing or casing.

(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:

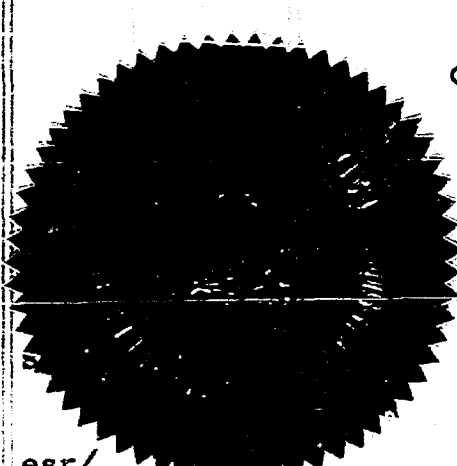
(1) That the applicant, Eugene E. Nearburg, is hereby authorized to utilize his Magnolia Burt Federal Well No. 1, located in Unit P of Section 5, Township 8 South, Range 30 East, NMPM, Cato-Lightcap Field Area, Chaves County, New Mexico, to dispose of produced salt water into the Devonian formation, injection to be accomplished through 3 1/2-inch tubing into the open-hole interval from approximately 7965 feet to 8015 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 tubing or casing.

(2) That the applicant shall submit monthly reports of his 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
DAVID F. CARGO, Chairman

Guston E. Hays
GUSTON E. HAYS, Member

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

esr/

State of New Mexico

P. O. BOX 2000
SANTA FE

3818✓	3848
3826	3838
3839	3817
3840	
3842	

Re: Case No. 3843
Order No. R-3482, 3483, 3484,
Applicant: 3485, 3487, 3488,
3489, 3490, 3491
Continental & Eugene Hearburg

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:

Hobbs OCC x
 Artesia OCC R-3483 & R-3489
 Aztec OCC
 Other

August 7, 1968 - Examiner Hearing

CASE 3803 (Continued and readvertised)

Application of Gulf Oil Corporation for an amendment to Order No. R-3345, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3345, which authorized a waterflood project in its Stuart Langlie Mattix Unit Area, Langlie Mattix Pool, Lea County, New Mexico, to delete the water injection wells previously authorized in Unit M of Section 2, Units A, C, and I of Section 10, and Unit C of Section 11, all in Township 25 South, Range 37 East, and to authorize for water injection four wells at the following unorthodox locations in Section 10: a well 100' from the North line and 1650' from the West line; a well 100' from the North line and 660' from the East line; a well 1315' from the North line and 100' from the West line; and a well 1420' from the South line and 100' from the East line. Applicant also seeks in the amendment authority to convert three additional wells located in Units M and F of said Section 10 and Unit F of said Section 11 to water injection. In the absence of objection, the case will be submitted and an order issued upon the evidence presented in said Case July 10, 1968.

CASE 3826:

Application of Eugene E. Nearburg for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the open-hole interval from approximate 7965 feet to 8015 feet in his Magnolia Burt Federal Well No. 1 located in Unit P, Section 5, Township 8 South, Range 30 East, Cato Field, Chaves County, New Mexico.

CASE 3827:

Application of Tri-Service Drilling Company to directionally drill, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its T. P. State Well No. 1 located 1887 feet from the East line and 2126 feet from the South line of Section 1, Township 16 South, Range 38 East, Lea County, New Mexico. Said well was drilled to a total depth of 13,014 feet and has subsequently been whipstocked to a location 596.5 feet east and 181.5 feet north of said surface location. Applicant proposes to set a whipstock at 11,570 feet and directionally drill to a depth of approximately 13,000 feet and to bottom said well in the Devonian formation at a point approximately 300 feet east and 300 feet south of its surface location.

CASE 3828:

Application of W. M. Gallaway for a non-standard gas proration unit, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 197.77-acre non-standard gas proration unit comprising the S/2 of Section 18, Township 23 North, Range 3 West, Ballard-Pictured Cliffs Gas Pool, Rio Arriba County, New Mexico, said unit to be dedicated to applicant's Apache Well No. 1 located 835 feet from the South line and 875 feet from the East line of said Section 18.

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 21, 1968

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 3825: Application of Pan American Petroleum Corporation for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the East Buffalo Valley Unit Area comprising 15,350 acres, more or less, of Federal, State and Fee lands in Township 14 South, Ranges 28 and 29 East, Chaves County, New Mexico.

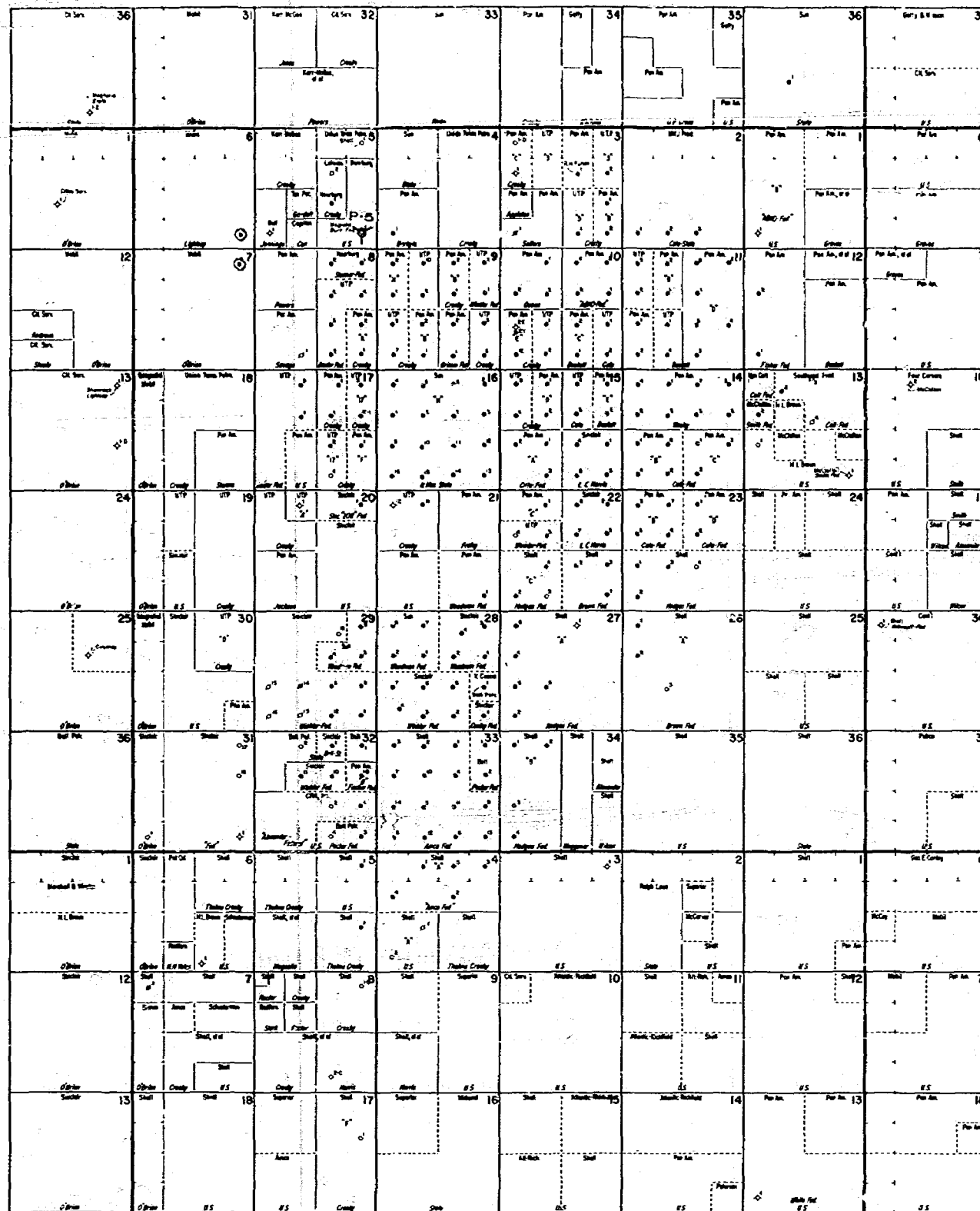
CASE 3826: Application of Eugene E. Nearburg for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the open-hole interval from approximately 7965 feet to 8015 feet in his Magnolia Burt Federal Well No. 1 located in Unit P, Section 5, Township 8 South, Range 30 East, Cato Field, Chaves County, New Mexico.

CASE 3837: Application of Continental Oil Company for the consolidation of three non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a 640-acre standard gas proration unit comprising all of Section 26, Township 23 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico, to be simultaneously dedicated to its Lynn B-1 Wells Nos. 1, 3, and 4 located in Units J, C, and M, respectively, of said Section 26, and authority to produce the allowable assigned to the unit from the subject wells in any proportion. Said Well No. 1 is presently dedicated to a 320-acre unit comprising the E/2 of said Section 26, said Well No. 3 is presently dedicated to a 160-acre unit comprising the NW/4 of said Section 26, and said Well No. 4 is presently dedicated to a 160-acre unit comprising the SW/4 of said Section 26.

In the alternative, applicant seeks the consolidation of the non-standard units comprising the E/2 and the SW/4 of said Section 26 into one 480-acre non-standard unit to be dedicated to said Well No. 1.

CASE 3838: Application of Continental Oil Company for an amendment to Order No. R-872 and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-872 to permit the dedication of the non-standard proration unit authorized therein to its Lockhart "B" Well No. 4 located in Unit H of Section 14 and its Lockhart "B" Well No. 7 located at an unorthodox location 330 feet from the North line and 330 feet from the West line of Section 13, both in Township 21 South, Range 36 East, Eumoni Gas Pool, Lea County, New Mexico. Applicant further seeks authority to produce the allowable assigned to said unit from either of the aforesaid wells in any proportion.

CASE 3839: Application of Continental Oil Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks

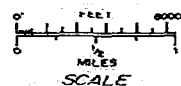


R 29 E

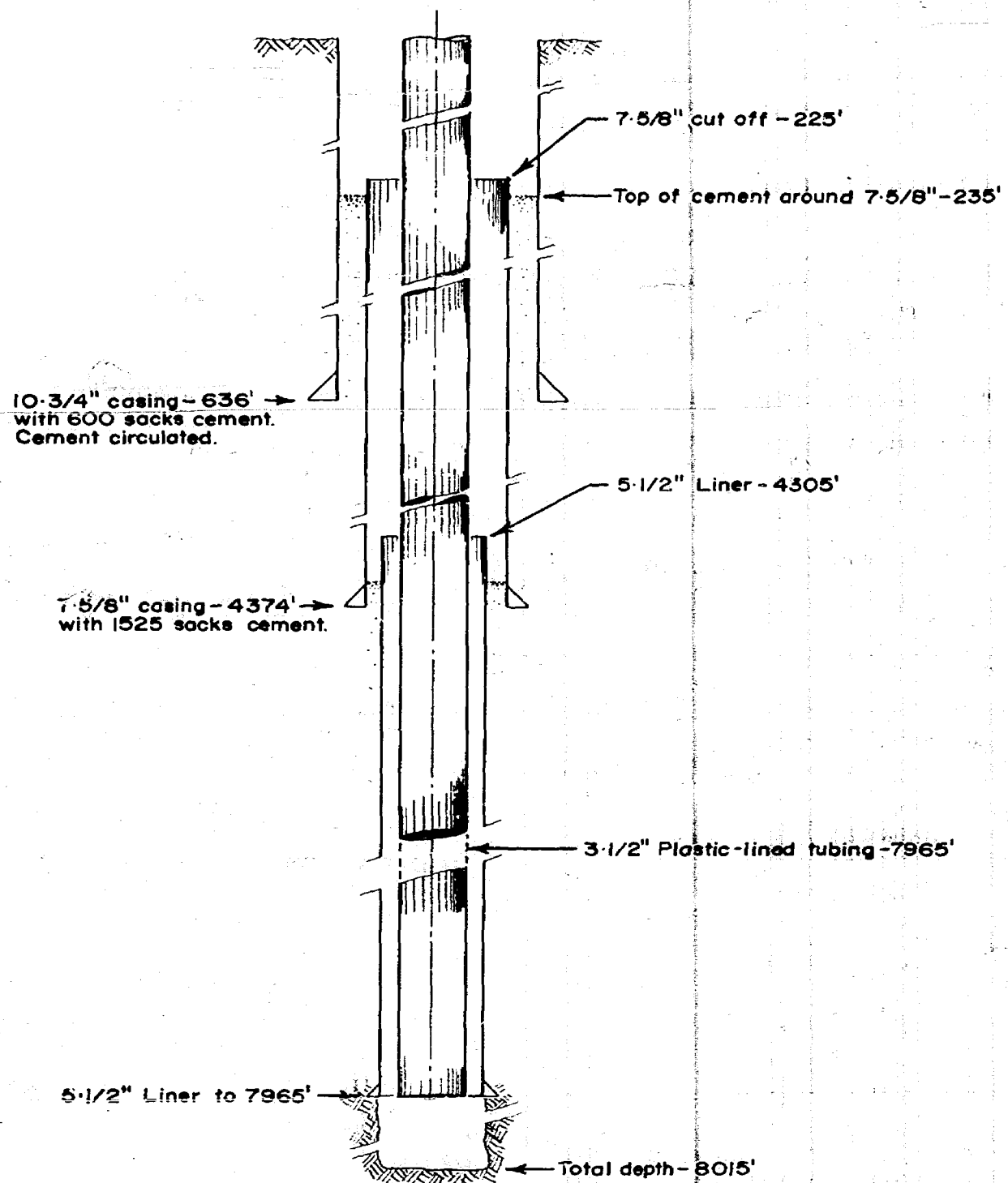
R 30 E

R 31 E

⊙ - Deviation Well
⊙ - Newburg Well P-5 (SWD)



CATO SALT WATER DISPOSAL SYSTEM CHAVES COUNTY, NEW MEXICO			
WELL MAP 8 & AREA			
DATE: 8/88		SCALE: As Shown	
DRAWN BY: [Signature]		DWG. NO. [Number]	
AGUA, INC. Hobbs, New Mexico			



CATO SALT WATER DISPOSAL SYSTEM
NEARBURG WELL P-5
SE/4 SE/4, Sec. 5,
Township 8 South, Range 30 East
PLAT OF WELL

EXHIBIT "B"

DWN	DATE
7B.	7/68

AGUA, INC.

Hobbs, New Mexico

SCALE
"None"

DWG. NO.

1968 JUL 8 PM 1 58

BEFORE THE

OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF
EUGENE E. NEARBURG FOR APPROVAL OF
A SALT WATER DISPOSAL WELL, CHAVES
COUNTY, NEW MEXICO

Case 3826

A P P L I C A T I O N

Comes now EUGENE E. NEARBURG and applies to the Oil Conservation Commission of New Mexico for an order approving the disposal of salt water in applicant's Magnolia Burt Federal Well No. 1, located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 5, Township 8 South, Range 30 East, Chaves County, New Mexico, and in support thereof would show the Commission:

1. Applicant is the owner of the Magnolia Burt Federal Well No. 1.
2. Said well was drilled to a total depth of 8,015 feet to test the Devonian formation, and was dry in the Devonian.
3. Said well was completed with 10 3/4 inch surface string set at 636 feet, cemented with 600 sacks of cement, the cement was circulated; the 7 5/8 inch intermediate string was set at 4374 feet, and cemented with 1525 sacks of cement, with top of the cement at 235 feet. The 7 5/8 inch string was cut at 225 feet and pulled. The well was drilled to a total depth of 8015 feet. At present there are cement plugs at the surface, at 130 feet, 4325 feet, 7030 feet and 7940 feet.
4. Applicant proposes to drill the plugs, clean the well to total depth, set a 5 1/2 inch liner from 4305 feet to

DOCKET MAILED

DOCKET MAILED

Date 8/

Date 7-26-68

7965 feet and cement the liner in place. The hole would then be drilled out to total depth, and the open-hole interval would be acidized from 7965 feet to 8015 feet.

5. For purposes of salt water disposal, applicant proposes to run 7965 feet of plastic-lined 3½ inch tubing. The casing-tubing annulus would be filled with an oil blanket. Disposal would be in the open-hole interval from 7965 feet to 8015 feet.

6. It is proposed to utilize the well to dispose of produced water from the Cato Pool. Initial injection volumes are expected to be approximately 1230 barrels of water per day.

7. Approval of this application will result in the prevention of waste, and the protection of correlative rights.

WHEREFORE, applicant prays that this application be set for hearing before the Commission's duly appointed examiner, and that after notice and hearing as required by law, the Commission enter its order approving the salt water disposal well as applied for.

Respectfully submitted,

EUGENE E. NEARBURG

BY: Jason W. Kellahin
Kellahin & Fox
Post Office Box 1769
Santa Fe, New Mexico

ATTORNEYS FOR APPLICANT

MR. UTZ: The next case will be 3826.

MR. HATCH: Case 3826. Application of Eugene E. Nearburg for salt water disposal, Chaves County, New Mexico.

If the Examiner please, the Roswell paper failed to run the advertisement on time and, in essence, it's been re-advertised for August 21st.

MR. UTZ: 3826 will be continued until the August 21st Hearing.

I, CHARLOTTE J. MACIAS, 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; and 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 30th day of August, 1968.

Charlotte Macias
Notary Public

My Commission Expires:

Feb 10, 1971

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3826, heard by me on Dec 7, 1968.

W. H. ... Treasurer
New Mexico Oil Conservation Commission

dearnley-meier reporting service, inc.

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

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



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 21, 1968

IN THE MATTER OF:

Application of Eugene E. Nearburg for
salt water disposal, Chaves County,
New Mexico.

Case No. 3826

BEFORE: D. S. NUTTER,
Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: Case 3826.

MR. HATCH: Application of Eugene E. Nearburg for salt water disposal, Chaves County, New Mexico.

MR. KELLAHIN: If the Examiner please, Jason Kellahin, Kellahin & Fox, appearing for the Applicant. I have one witness I would like to have sworn.

(Witness sworn.)

(Applicant's Exhibits marked for identification.)

* * * * *

W. G. A B B O T T , called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A My name is W. G. Abbott.

Q By whom are you employed and in what position, Mr. Abbott?

A I am manager of Agua, Incorporated.

Q In connection with your work as manager of Agua, Inc., have you done any work in connection with the application of Eugene Nearburg in Case No. 3826?

A Yes, sir. In this case, I am representing Mr. Eugene E. Nearburg.

Q Briefly, what is proposed in Case 3826?

A This is an application for a disposal well. The well is a conversion of a dry hole drilled by Magnolia Petroleum Corporation and it's located in the southeast quarter of the southeast quarter of Section 5, 8, 30, Chaves County.

Q Referring to what has been marked as Exhibit A would you identify that exhibit?

A Exhibit A shows the Cato Pool which is a San Andres producing oil pool and on this exhibit is shown our proposed disposal well conversion, this Magnolia Burt Federal, the location being given. The Agua designation was SWDP 5, and that's shown on the map. Also there are two wells circled in red, one in Section 6 and one in Section 7 and those wells are Devonian completions. The reason for this hearing, we propose to convert this Magnolia Burt Federal No. 1 for a disposal well in the Devonian. Since they are within about a mile of these producing wells, we had to have this hearing.

Q Are those Devonian wells operated by Mobil?

A Yes, sir.

Q Did you receive any objection from Mobil on your proposal to dispose of water in the Devonian?

A No, sir.

Q Referring to what has been marked as Exhibit B, will you explain that exhibit, please?

A Exhibit B shows the condition of this dry hole, with our proposed workover showing the, first of all, the ten and three-quarter-inch casing is set at 636 feet with 600 sacks of cement and the cement circulated. Then there is seven and five-eighths-inch casing set at 235 feet, excuse me, the seven and five-eighths-inch is set at 4374 with 1525 sacks. The top of the cement is at 235 feet. The seven and five-eighths has been cut off at 225 feet. We propose to clean this well out to the total depth of 8,015 and then run a five and a half-inch liner from 4305 to the top of the Devonian at 7965 and then run a three and a half-inch plastic-lined tubing string which will be set at 7965.

Q Injection then, would be through plastic-lined tubing, is that correct?

A Yes, sir.

Q Will you use a packer in connection with this completion?

A No, we wouldn't use a packer, we propose to load the annulus between the five and a half-inch liner and the three and a half-inch tubing with oil and this oil will cover the exterior of the tubing and the interior of the casing.

Q Mr. Abbott, what is the source of water that will be disposed of in this well?

A Water to be disposed in this well will be produced water from the Cato Pool which would be San Andres water.

Q Now, is that a potable water?

A No, it's pretty salty water.

Q Referring to what has been marked as Exhibit No. C, will you identify that exhibit?

A This is a typical San Andres formation water now from the Cato Pool; you'll note the chlorides are 149,800.

Q Do you anticipate any difficulty in injecting that type of water into the Devonian?

A No, sir, we shouldn't have any trouble.

Q Referring to what has been marked as Exhibits D and E, would you identify those exhibits?

A These exhibits show water analyses that I got from Mobil on their two producing wells, their two Devonian producing wells. You'll notice the sodium chloride content is on the Well No. 1, on the O'Brien Lease shows 52,145 parts per million Chloride. The Well No. 1 of the Lightcap Land Company, this is also a Mobil well, the sodium chloride content is 60,870 parts per million.

Q Now, referring to what has been marked as Exhibit F,

Q would you identify that exhibit?

A Exhibit F shows a comparison of the Devonian tops and the test on these Lightcap Devonian wells of Mobil's and then the tops and the interval tested in this dry hole, this Magnolia Burt Federal. You'll note that the top of the Devonian in this dry hole is at a minus 3925 and the Lightcap No. 1 is a minus 3877 and the O'Brien is a minus 3832.

Q Do you anticipate that injection of water into the Devonian formation will interfere with the Lightcap and the O'Brien wells?

A No, sir, I don't expect it will give them any trouble.

Q Is the Devonian in this reservoir a water-drive reservoir?

A Yes, sir.

Q Referring to what has been marked as Exhibit G would you identify that exhibit?

A Exhibit G is presented to show a proposed disposal system made up of the tank batteries, wells of the various operators in the Cato Pool. The reason for this hearing, Mr. Nearburg thought it would be a good idea to have the hearing to clear the way for this proposed jointly-owned disposal system, and other operators have concurred with Mr. Nearburg that it would be a good idea to have the hearing at

this time.

Q Have they entered into an agreement for the installation of the system as yet?

A No, sir, the agreements are out to the operators, but as yet, they have not signed the agreement. Incidentally, we propose to have a meeting this afternoon to discuss this Cato system.

Q Now, as the installation is proposed, will it take the water on gravity?

A We think it will take the water by gravity, yes, sir.

Q And will the well take it on gravity in the Devonian?

A Yes, sir.

Q You won't have to put any pressure at the surface?

A We don't expect that we will have to pump, no, sir.

Q What volume of water do you anticipate you will be injecting into this well?

A At the present time, if all the operators in this proposed system join the system, the present water is about 1230 barrels a day.

Q Now, in connection with the application, logs of the subject wells were filed with the Commission, were they not?

A Yes, sir.

Q Were Exhibits A through G, inclusive, prepared by you or under your supervision?

A Yes, sir.

MR. KELLAHIN: At this time, I offer Applicant's Exhibits A through G.

MR. NUTTER: Applicant's Exhibits A through G will be admitted in evidence.

(Whereupon, Applicant's Exhibits A through G offered and admitted in evidence.)

MR. KELLAHIN: That's all I have on direct examination, Mr. Nutter.

MR. NUTTER: Are there any questions of Mr. Abbott?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Abbott, I notice some of your exhibits show that this is Agua's well; the application is for Eugene Nearburg. What is correct?

A At the present time, it's the Nearburg Magnolia Burt Federal No. 1.

Q And the applicant is Eugene Nearburg?

A Yes, sir.

Q Exhibit G shows the installation of the gathering system as currently proposed. Will there be any additions to this to your knowledge?

A Not to our knowledge.

Q And you are not sure you will get all these because they haven't been signed. This is your tentative maximum here?

A Right. This proposed well of Mr. Nearburg's is located in such a place that all the tank batteries in this system, with the exception of the southernmost tank battery, would gravity to the well, so it's a very important location.

Q The drainage then, is from south to north and east to west in this particular area?

A Yes, sir.

Q This is off the caprock, right?

A Yes, sir, it is off the caprock.

Q I notice that you have some Pan American batteries here. Does this take care of all of Pan American's production in this area?

A No, I believe Pan American is planning a disposal system of their own for some of their properties.

Q You do have Shell's and Sinclair and Sun?

A Yes, sir, it's designed for them and also Union Texas.

Q Does that take care of all of Union Texas production in the area?

A Yes, sir.

Q Now, is it your contention, Mr. Abbott, that because this old Magnolia well recovered salt water on the drillstem test from minus 3925 to a minus of 3944, that the well was tested below the oil-water contact in the Devonian formation?

A It appears to be, yes.

Q And that injection of water below the oil-water contact won't damage the production in the Devonian?

A That's right, it might even help it.

Q How much oil is presently being produced from the Devonian here?

A I don't know the present production; I don't think the wells are really big wells at this time.

Q How long ago were they completed?

A Oh, it was back in '57 - '58.

Q Referring to Exhibit B, Mr. Abbott, it appears that while the seven and five-eighths has been cut off at 225, the top of the seven and five-eighths is well up in the surface casing, correct?

A That's right and with all the cement up there, four hundred some feet of cement around it, we hadn't planned to splice onto this seven - five; we thought the cement would be sufficient.

Q And you have an overlap there of casing with four

hundred feet of cement?

A Yes, sir.

Q And you will have an overlap between the seven and five-eighths and the top of the five and a half-inch that you propose?

A Yes.

Q What will be the top of the cement on the five and a half-inch liner?

A We hope to bring it back over the liner and circulate cement off the top of the liner.

Q In other words, from the shoe of the five and a half clear up into the seven and five-eighths?

A Yes.

Q And up to the top of the five and a half liner?

A Yes.

Q What is the producing interval for the San Andres here, it would be in the neighborhood of four thousand feet, would it not?

A Yes, about thirty-six hundred, I believe.

Q This annulus being loaded with oil, would be hydrostatically balanced and the column of oil would remain in place?

A Yes.

Q How will you know from the surface whether you have a leak or not, will the annulus be left open or equipped with

a gauge?

A It will be equipped with a pressure gauge and there should be a positive pressure on that gauge at all times.

MR. NUTTER: Are there any other questions of this witness? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: That's all I have.

MR. NUTTER: Does anyone have anything to offer in Case 3826? We will take the case under advisement.

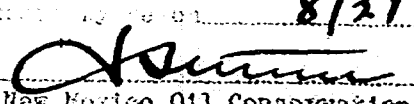
STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my hand this 29th day of August, 1968.


ADA DEARNLEY

I do hereby certify that the foregoing is a complete record of the proceedings in the hearing of Case No. 3826, held on 8/21, 1968.

 , President
New Mexico Oil Conservation Commission

I N D E X

WITNESS	PAGE
<u>W. G. ABBOTT</u>	
Direct Examination by Mr. Kellanin	2
Cross Examination by Mr. Nutter	8

E X H I B I T S

	Marked	Offered and Admitted
Applicant's A through G	2	8

10-3/4" casing - 636' →
with 600 sacks cement.
Cement circulated.

7-5/8" casing - 4374' →
with 1525 sacks cement.

7-5/8" cut off - 225'

Top of cement around 7-5/8" - 235'

*annulus will
be loaded w/ oil
egpd w/ gauge.*

5-1/2" Liner - 4305'

3-1/2" Plastic-lined tubing - 7965'

5-1/2" Liner to 7965'

Total depth - 8015'

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Appl EXHIBIT NO. B

CASE NO. 382C

Ex B

CATO SALT WATER DISPOSAL SYSTEM

NEARBURG WELL P-5

SE/4 SE/4, Sec. 5,
Township 6 South, Range 30 East

PLAT OF WELL

EXHIBIT "B"

DWN	DATE
7B.	7/68

AGUA, INC.

Hobbs, New Mexico

SCALE
"None"

DWG. NO.

BETHE EXAMINER NUTTER

RESERVATION COMMISSION

Applied AIRLIT NO. *C*

C. NO. 3826

SAN ANDRES FORMATION WATER ANALYSIS

Milligrams per Liter

Na	57,754
Ca	26,400
Mg	4,310
Cl	149,800
SO ₄	145
CO ₃	2,180
HCO ₃	<u>nil</u>
Total Solids	240,589
Iron	None
Specific Gravity @ 60° F	1.185

Exc

Type Sample Water from Tanks
 Source Well #1, C. L. O'Brien Lease
 Location Lightcamp Field, Lea District
 Container No. 18
 Date Sampled 12/7/57
 Remarks from the Field Devonian Sand
Well elevation 4079, depth 8077
Perforations 7963-8026, shots 4/ft.

Analysis No. 4675
 Date Analyzed 12/26/57
 Analyzed By Sims

ION CONCENTRATIONS				HYPOTHETICAL COMBINATION			
		P.P.M. (as such)	P.P.M. (as CaCO ₃)		P.P.M. (as such)	P.P.M. (as CaCO ₃)	
Carbonate	(CO ₃ --)			Calcium Carbonate			
Bicarbonate	(HCO ₃ -)	902		Calcium Bicarbonate	1,198		
Sulfate	(SO ₄ --)	731		Calcium Sulfate	1,035		
Chloride	(Cl-)	38,773		Calcium Chloride	5,013		
				Magnesium Carbonate			
				Magnesium Bicarbonate			
				Magnesium Sulfate			
Iron	(Fe+++)	28		Magnesium Chloride	5,317		
Calcium	(Ca++)	2,411		Sodium Carbonate			
Magnesium	(Mg++)	1,359		Sodium Bicarbonate			
Sodium	(Na+)	20,490		Sodium Sulfate			
				Sodium Chloride	52,145		

SUMMARY

Total Hardness, Calc. (as CaCO₃) _____
 Total Hardness, Soap (as CaCO₃) _____
 Non-Incrusting Solids #/1000 Gal. 436
 Incrusting Solids #/1000 Gal. 106
 Oil (as such) _____
 Color _____
 Total Dissolved Solids, Calculated 64,778
 Total Dissolved Solids, Weighed 62,271

Alkalinity (as CaCO₃) P _____ M.O. 739
 Free CO₂ (as such) _____
 Silica (as SiO₂) 30
 Suspended Matter _____
 Turbidity _____
 Sp. Gravity = 1.0450 @ 26° C
 Sp. Rest. = .119 @ 80° F

pH 7.0

FACTORS: ppm ÷ 17.1 = grains/gal.

grains/gal. ÷ 7 = lbs/1000 gals.

Remarks from the Laboratory To: C. T. Evans
cc: IBS DVC REM EEC ATH AVH RP File/kw
Attach: Analyses #4670-4675

Ex D

G. E. McIver
 for E. L. Stovall

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Appl. EXHIBIT NO. D
CASE NO. 3826

X-6074

SUMMARY

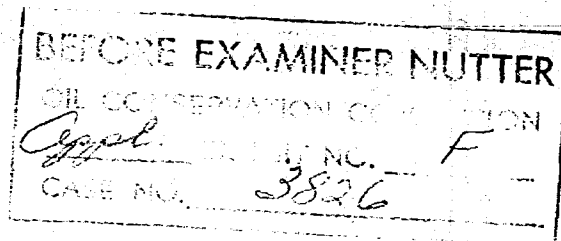
pH 6.9

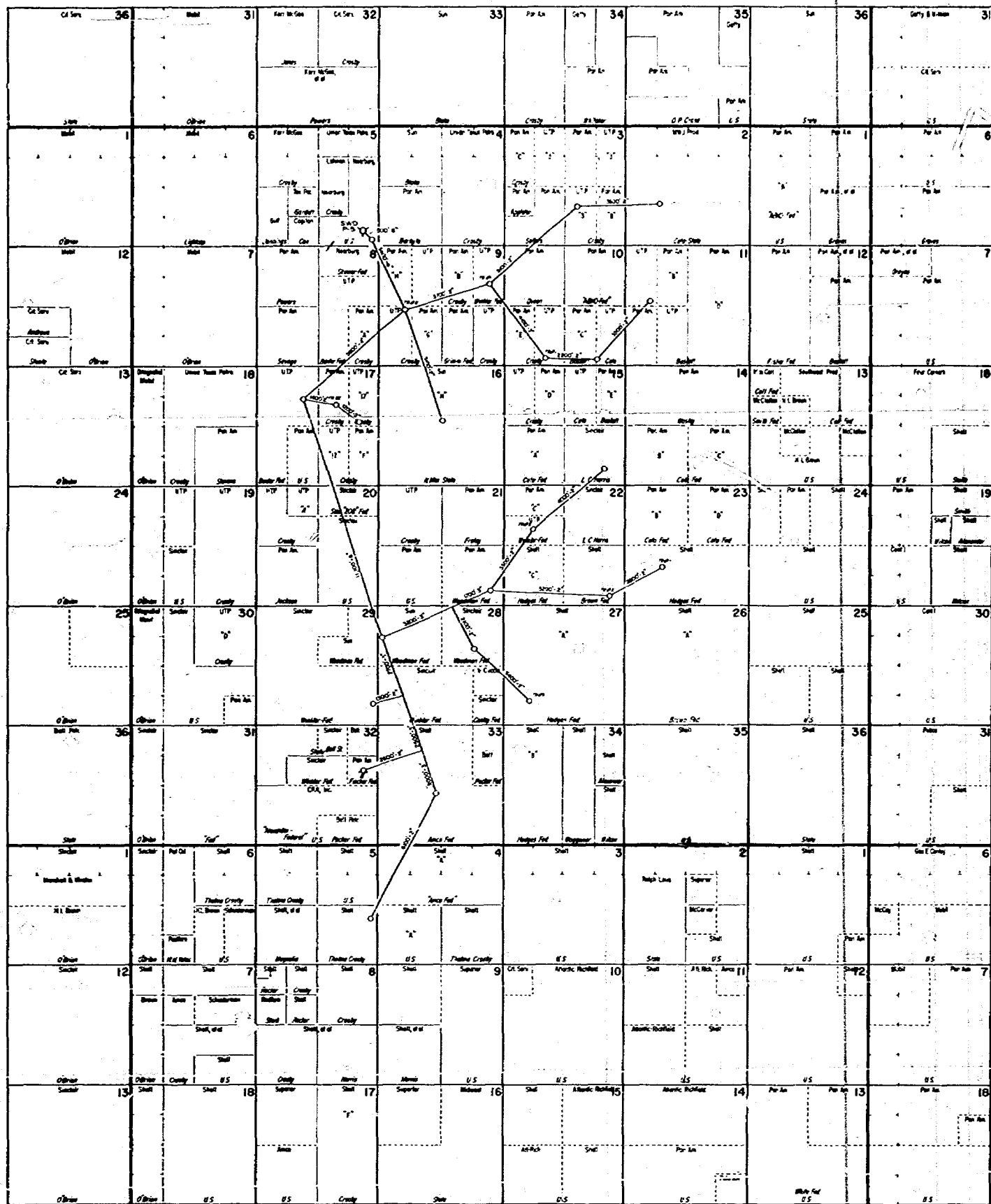
$$\text{grains/gal.} \div 7 = \text{lbs/1000 gals.}$$

G. E. McIver 1/21/58
for E. L. Stovall/mlb

COMPARISON OF DEVONIAN TOPS AND TESTS
LIGHTCAP DEVONIAN POOL

<u>Company</u>	<u>Lease</u>	<u>Well Number</u>	<u>Top Devonian</u>	<u>Interval</u>	<u>Tests Recovery</u>
Mobil	Lightcap	1	7955 (-3877)	7940-7978 (-3862 -3900)	DST flowed 147 bbls. of oil, 2.5 hrs., no water
Mobil	O'Brien	1	7911 (-3832)	8006-8026 (-3927 -3947) 8100-8115 (-4021 -4036)	Swabbed 26% salt water DST recovered 2340' salt water
AGUA, INC.	SWD Well	P-5	7965 (-3925)	7965-7984 (-3925 -3944)	DST recovered 6770' salt water



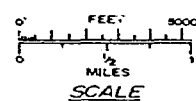


R 29 E

R 30 E

R 31 E

EX G
Present water 1240 B/D



CATO SALT WATER DISPOSAL SYSTEM CHAVES COUNTY, NEW MEXICO			
PLAT OF SYSTEM			
OWN	DATE	APV	EXHIBIT A
000	2/1/00		
AGUA, INC. Hobbs, New Mexico			SCALE As shown DWG. NO.