

Case No.

1740

Application, Transcript,  
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. 1740  
Order No. R-1476

APPLICATION OF SHELL OIL COMPANY  
FOR AN ORDER AUTHORIZING TWO SALT  
WATER DISPOSAL WELLS IN SECTIONS  
26 AND 27, TOWNSHIP 19 SOUTH,  
RANGE 35 EAST, NMPM, LEA COUNTY,  
NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on August 19, 1959, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations,

NOW, on this 3rd day of September, 1959, the Commission, a quorum being present, having considered the application the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, 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, Shell Oil Company, is the owner and operator of the Allen Estate Well No. 3, located 660 feet from the South line and 660 feet from the East line of Section 27, and the Record Well No. 1, located 1980 feet from the South line and 660 feet from the West line of Section 26, both in Township 19 South, Range 35 East, NMPM, Lea County, New Mexico.

(3) That the applicant proposes to inject salt water down tubing in the said Allen Estate Well No. 3 and the said Record Well No. 1 and into the Queen Formation below the water-oil contact with the proposed injection zones from 4900 to 4918 feet, and from 4870 to 4884 feet respectively.

(4) That the applicant's proposed salt water injection program will not jeopardize the production of oil, gas, or fresh water in the area and is consonant with sound conservation practices.

-2-  
Case No. 1740  
Order No. R-1476

IT IS THEREFORE ORDERED:

(1) That the applicant Shell Oil Company, be and the same is hereby authorized to utilize its Allen Estate Well No. 3, located 660 feet from the South line and 660 feet from the East line of Section 27, and its Record Well No. 1, located 1980 feet from the South line and 660 feet from the West line of Section 26, both in Township 19 South, Range 35 East, NMPM, Lea County, New Mexico, for the purpose of disposing of produced salt water into the Queen formation below the water-oil contact in the zones from 4900 to 4918 feet, and 4870 to 4884 feet respectively.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1119 of the Commissions Rules and Regulations.

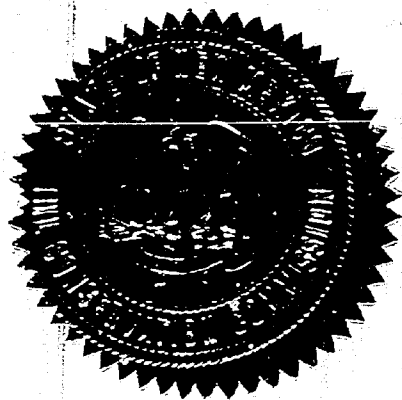
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*John Burroughs*  
JOHN BURROUGHS, Chairman

*Murray E. Morgan*  
MURRAY E. MORGAN, Member

*A. L. Porter*  
A. L. PORTER, Sec., Member & Secretary



lcr/

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

September 4, 1959

Mr. Oliver Seth  
Box 828  
Santa Fe, New Mexico

Dear Mr. Seth:

On behalf of your client, Shell Oil Company, we enclose  
two copies of Order No. R-1476 issued by the Oil Con-  
servation Commission on September 3, 1959 in Case No. 1740.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

ir/

Enclosures

*Copy sent to  
Hobbs Office  
9-4-59*

*AR*

C  
O  
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Y

No. 30-59

DOCKET: EXAMINER HEARING AUGUST 19, 1959

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

The following cases will be heard before Daniel S. Nutter, Examiner, or A. L. Porter, Jr., Secretary-Director.

CONTINUED CASE

CASE 1683:

(Continued)

Application of Gulf Oil Corporation for a non-standard gas proration unit and for an order force pooling the interests therein. Applicant, in the above-styled cause, seeks the establishment of a 477-acre non-standard gas proration unit in the Eumont Gas Pool consisting of the N/2 and the SE/4 of Section 19, Township 19 South, Range 37 East, Lea County, New Mexico, to be dedicated to applicant's B. V. Culp "A" Well No. 3, located 1980 feet from the North and West lines of said Section 19. Applicant further seeks an order force pooling the interests of those in said non-standard gas proration unit who have gas rights within the vertical limits of the Eumont Gas Pool.

NEW CASES

CASE 1739:

Application of Shell Oil Company for approval of a unit agreement. Applicant, in the above-styled cause, seeks an order approving its Henshaw Deep Unit Agreement comprising 4824 acres, more or less, of Federal and State lands in Township 16 South, Ranges 30 and 31 East, Eddy County, New Mexico.

CASE 1740:

Application of Shell Oil Company for two salt water disposal wells. Applicant, in the above-styled cause, seeks an order authorizing the disposal of produced salt water into the Queen Formation through its Allen Estate Well No. 3, located in the SE/4 SE/4 of Section 27 and through its Record Well No. 1, located in the NW/4 SW/4 of Section 26, both in Township 19 South, Range 35 East, Lea County, New Mexico. The proposed injection interval in said Allen Estate Well No. 3 is from 4900 feet to 4918 feet and the proposed injection interval in said Record Well No. 1 is from 4870 feet to 4884 feet.

CASE 1741:

Application of El Paso Natural Gas Company for a gas-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Hancock Well No. 4 in the SW/4 SW/4 of Section 23, Township 28 North, Range 9 West, San Juan County, New Mexico, in such a manner as to produce gas from the Aztec-Pictured Cliffs Pool and to produce gas from the Blanco-Mesaverde Pool through the casing-tubing annulus and tubing respectively. Applicant proposes to utilize a retrievable-type packer in said well.

CASE 1742:

Application of El Paso Natural Gas Company for a gas-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its San Juan 27-4 Unit Well No. 21, located in the NW/4 NE/4 of Section 30, Township 27 North, Range 4 West, Rio Arriba County, New Mexico, in such a manner as to produce gas from the Tapacito-Pictured Cliffs Pool and to produce gas from the Blanco-Mesaverde Pool through the casing-tubing annulus and the tubing respectively. Applicant proposes to utilize a retrievable-type packer in said well.

- CASE 1743: Application of Newmont Oil Company for an unorthodox water injection well location. Applicant, in the above-styled cause, seeks an order authorizing it to reopen and utilize for water injection a well located on an unorthodox location at a point 1620 feet from the North line and 1020 feet from the West line of Section 32, Township 16 South, Range 31 East, Square Lake Pool, Eddy County, New Mexico.
- CASE 1744: Application of Cities Service Oil Company for approval of a unit agreement. Applicant, in the above-styled cause, seeks an order approving its Drickey Queen Sand Unit embracing 5242 acres, more or less, of Federal, State and fee lands in Townships 13 and 14 South, Range 31 East, Caprock-Queen Pool, Lea and Chaves Counties, New Mexico.
- CASE 1745: Application of Phillips Petroleum Company for an automatic custody transfer system. Applicant, in the above-styled cause, seeks an order authorizing it to install an automatic custody transfer system to transfer the custody of oil produced on the West Ranger Unit comprising certain acreage in Township 12 South, Range 34 East, Ranger Lake-Pennsylvanian Pool, Lea County, New Mexico.
- CASE 1746: Application of Skelly Oil Company for an oil-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Mexico-Fed. "A" Well No. 1, located 1650 feet from the South line and 990 feet from the East line of Section 1, Township 24 North, Range 6 West, Rio Arriba County, New Mexico, in such a manner as to produce oil from an undesignated Gallup pool and to produce gas from an undesignated Dakota pool through parallel strings of tubing.
- CASE 1747: Application of George L. Buckles Company for a non-standard oil proration unit. Applicant, in the above-styled cause, seeks the establishment of a 49.82-acre non-standard oil proration unit in an undesignated Delaware pool consisting of lots 1 and 2 of section 34, Township 26 South, Range 32 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Elliott-Federal Well No. 1, located 330 feet from the South and East lines of said Section 34.
- CASE 1748: Application of Magnolia Petroleum Company for an automatic custody transfer system and for permission to produce more than 16 wells in a common tank battery. Applicant, in the above-styled cause, seeks an order authorizing it to install an automatic custody transfer system to transfer custody of oil from all Horseshoe-Gallup oil wells on its Navajo "A" Lease comprising certain acreage in Township 31 North, Range 17 West, San Juan County, New Mexico.

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE 1740

TRANSCRIPT OF HEARING

AUGUST 19, 1959

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

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO  
AUGUST 19, 1959

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IN THE MATTER OF:

CASE 1740 Application of Shell Oil Company for two salt water disposal wells. Applicant, in the above-styled cause, seeks an order authorizing the disposal of produced salt water into the Queen Formation through its Allen Estate Well No. 3, located in the SE/4 SE/4 of Section 27 and through its Record Well No. 1, located in the NW/4 SW/4 of Section 26, both in Township 19 South, Range 35 East, Lea County, New Mexico. The proposed injection interval in said Allen Estate Well No. 3 is from 4900 feet to 4918 feet and the proposed injection interval in said Record Well No. 1 is from 4870 feet to 4884 feet.

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BEFORE:

Daniel S. Nutter, Examiner.

T R A N S C R I P T    O F    P R O C E E D I N G S

MR. NUTTER: We will take next Case 1740.

MR. PAYNE: Case 1740. Application of Shell Oil Company for two salt water disposal wells.

MR. SETH: Oliver Seth, appearing for Shell Oil Company. We have one witness.

(Witness sworn)

C. P. ST. LAURENT,



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

DIRECT EXAMINATION

BY MR. SETH:

Q Will you state your name and position with Shell Oil Company?

A Charles P. St. Laurent, Division Reservoir Engineer with Shell Oil Company, Roswell, New Mexico.

Q Will you give the Examiner a brief summary of your education and practical experience, please?

A I was graduated from the University of Pittsburg in 1949 with a Bachelor of Science degree in petroleum engineering, and was employed by Shell Oil Company as a petroleum engineer in 1959. For five years following this time, I was engaged in general petroleum engineering duties, including drilling, recompletions, completions and workover activities in the Gulf Coast area. During this time it was my responsibility to originate and design various aspects of the drilling and recompletions and workovers. I am a registered professional engineer in the State of Texas, and for the past two and a half years I have been actively engaged in various phases of reservoir engineering problems. I am currently assigned as Division Reservoir Engineer for Shell's Roswell, New Mexico division, a post I've held for one and a half years.

Q Are you generally familiar with the Pearl Queen --

A Yes, sir, I am.

ies.

Mr. WATTS: May he testify?

Mr. WATTS: Yes, sir. Direct?

Q In connection with Shell's application in this case, do you have a plat showing the proposed disposal wells, do you have a plat showing the proposed well locations?

A Yes, sir, a plat which we propose as Exhibit 1. Would you describe to the Examiner, please, what this plat shows?

A Exhibit 1 is a plat showing the ownership and completed and drilling wells in the Pearl Queen Field, and identifying by the red circles the two wells proposed for disposal.

Q What does the cross-hatched area indicate?

A The cross-hatched area indicates Shell's ownership in the immediate vicinity of the disposal area; the four sections centering around the area we propose for disposal.

Q Now, referring to the Allen Estate No. 3 Well, which is one of the wells that you propose to use as an injection well, could you give us the location of this well first, sir?

A Allen Estate Well No. 3 is located 647 feet from the south and west corners of section 27, Township 1 North, Range 1 East, T1N, R1E, S22.

Q Is this a shell abandoned well?

A Yes, sir.

Q -- field? Are you familiar with Shell's application in this case?

A Yes, sir.

MR. SETH: May he testify?

MR. NUTTER: Yes, sir. Proceed.

Q In connection with Shell's application in this case for salt water disposal wells, do you have a plat showing the proposed well locations?

A Yes, sir, a plat which we propose as Exhibit 1.

Q Would you describe to the Examiner, please, what this plat shows?

A Exhibit 1 is a plat showing the ownership and completed and drilling wells in the Pearl Queen Field, and identifying by the red circles the two wells proposed for disposal.

Q What does the cross-hatched area indicate?

A The cross-hatched area indicates Shell's ownership in the immediate vicinity of the disposal area; the four sections centering around the area we propose for disposal.

Q Now, referring to the Allen Estate No. 3 Well, which is one of the wells that you propose to use as an injection well, could you give us the location of this well first, please?

A Allen Estate Well No. 3 is located 660 feet from the South and East lines of Section 27, Township 19 South, Range 35 East.

Q Is this a Shell abandoned well?

5  
A Yes, this is a well originally drilled to the Queen and abandoned.

Q Do you have a log on this well, Mr. St. Laurent?

A I believe I do, yes, sir.

Q Now, referring to this log which has been marked as Shell's Exhibit 2, would you describe, please, what this --

A Exhibit 2 is a later log run on Allen Estate 3 at the time the well was completed in May of 1959, and it indicates the Queen production formation, Pearl Queen Field, and indicates --

Q Where is this on Exhibit 2?

A The top of the Queen is at 4597 feet, and is so indicated on the log.

Q At what depth?

A 4597 feet. And shown on the log are the four stringers or zones of the Queen producing horizons in the Pearl Queen Field, and also indicated is zone 4, the proposed zone for disposal of salt water.

Q Where is zone 4 on Exhibit 2?

A The top of zone 4 is at 4900 feet.

Q You are referring now to the --

A State --

Q -- resistivity log in the center of Exhibit 2, is that right?

A Yes, sir, to the right hand side of Exhibit 2.

Q Is there anything further about this log that you would

like to mention?

A No, sir.

Q In connection with this proposal, has a diagram been prepared of the proposed completion of the Allen Estate Well No. 3?

A Yes, sir, we have a diagram that was prepared showing the anticipated disposal of the Allen Estate Well No. 3.

Q This has been marked as Exhibit No. 2-A. Will you describe in some detail what Exhibit No. 2-A shows, please, Mr. St. Laurent?

A Yes, sir, this Exhibit indicates --

Q Excuse me. Would you describe, first, it might be a little clearer, the current completion situation on this well?

A Yes, sir. Allen Estate 3 is currently bottomed at 5,015 feet with 8 5/8 inch 32 pound H 40 surface casing cemented to surface at 96 feet. The well is plugged and abandoned at the present time. We propose --

Q It is an open hole?

A Except for the surface casing, yes, sir. We propose to clean the well out to the original total depth and to cement 5 1/2 inch 15 1/2 pound J-55 casing at 4900 feet with 200 sacks. We estimate the top of the cement will be at 3700 feet. We will then run 2 1/2 inch plastic coated tubing and set same at 4875 feet on a Baker Model A tension packer with 10,000 pound tension. The 2 1/2 inch tubing and 5 1/2 inch casing annulus will be filled with inhibited fresh water, and the annulus at the surface equipment with a

pressure gauge to permit observation on a daily basis. We will then dispose of produced salt water through the open hole interval below the packer 4900 to 5015 feet.

Q In your opinion, will this method of completion protect the fresh water beds, if there be any in this area and any horizons above your zone for the Queen from contamination by salt water?

A Yes, sir, I believe it will, and with the pressure gauge on the annulus we will be able at all times to observe and notice any leaks that might be occurring around the packer or through the tubing.

Q Now, referring to your Record State No. 1 Well, do you have a log on that, Mr. St. Laurent?

A Yes, sir.

Q Now, referring to this as Exhibit 3, would you describe, please, what this Exhibit shows?

A Exhibit 3 is a laterlog on Shell's Record 1, which well is located 1980 feet from the South line and 660 feet from the West line of Section 26, Township 19 South, Range 35 East. This log was run at the time of completion in April of 1958, and indicates the Queen formation, Pearl-Queen Field, which top of the formation is shown annotated on the log at 4576 feet. The proposed zone of disposal, zone 4 of the Queen sand, is shown as top at 4,869 feet.

Q Is there anything unusual about the formation in this locality?

A No, sir, nothing unusual.

Q This well was drilled approximately what date?

A The well was drilled in April of 1958 and found no production from the Queen sand, and consequently has been abandoned.

Q Now, have you prepared a diagram of the proposed completion of this well, --

A Yes, sir, for --

Q -- salt water disposal?

A We have, sir, shown as Exhibit 3-A.

Q Referring to this as Exhibit 3-A, now, would you describe, please, to the Examiner what Exhibit 3-A indicates?

A At the present time Record No. 1 is an abandoned well and is equipped with 8 5/8 inch 32 pound J-55 casing cemented to the surface and cemented at 324 feet. The well is further equipped with 5 1/2 inch 15 1/2 pound J-55 casing cemented at 4,918 feet with 700 sacks. We estimate --

Q Excuse me, go ahead.

A We estimate top of the cement at 2000 feet.

Q Now, was this a Shell well --

A Yes, sir.

Q -- drilled for Shell?

A Drilled for Shell, yes, sir.

Q And you are familiar with the condition of the well, the completion data of the well?

A Yes, sir. At the time of the original completion attempt, the 5 1/2 inch casing was perforated in the intervals 4,687 to 4,689 feet, 4,690 to 4,696 feet, 4,843 to 4,845 feet, 4,847 to 4,849 feet. We propose, should we acquire this well for salt water disposal, to squeeze cement these perforations and perforate zone 4 from 4,870 to 4,884 feet for disposal of salt water. The well will then be equipped with 2 1/2 inch plastic coated tubing set on a Baker Model "A" tension packer at 4,008 -- 4,850 feet with 10,000 pound tension. The annulus will be filled with inhibited fresh water, and the annulus at the surface will be equipped with a pressure gauge for observation.

Q In your opinion, will this method of completion protect fresh water beds as well as any producing sections of the Queen, oil producing sections of the Queen?

A Yes, sir, I believe it will.

Q Now, would you indicate to the Examiner, please, the amount of water that's involved for disposal?

A Approximately 250 barrels per day from Shell's production in the Pearl-Queen Field, which amounts to approximately 7600 barrels of water per month.

Q Is this all of Shell's water in the field?

A Yes, sir.

Q And how will it be gathered?

A The water at present is gathered at our automatic central facility in the Pearl-Queen Field, and it will be picked



up there and delivered through 2 1/2 inch cement lined steel tubing to the disposal well, where it will be injected into zone 4.

Q Is this well on the Commission's critical list for salt water disposal?

A No, sir, it is not on the Commission's list.

Q Will these facilities that you've described take care of Shell's salt water for the foreseeable future?

A Yes, sir, I believe these facilities will handle Shell's salt water production in the foreseeable future.

Q In your opinion, will the formations take this quantity of water at the indicated rate?

A Yes, sir, I believe that Allen Estate 3 will take this quantity of water.

Q And this will not endanger the fresh water zones or the oil producing zones?

A No, sir, I don't believe it will.

MR. SETH: That's all the direct questions. We would like to ask that our Exhibits 1 through 3-A be admitted.

MR. NUTTER: No objection. Shell's Exhibits in this case will be entered.

Any questions of this witness?

MR. PAYNE: Yes, sir.

MR. NUTTER: Mr. Payne.

CROSS EXAMINATION

BY MR. PAYNE:

Q Are both of these wells located within the confines of the Lea County underground water basin?

A Yes, sir.

Q Now, you feel that the fresh water will be adequately protected inasmuch as you are going to inject the salt water through tubing and that you are going to have the casing filled with fresh water, is that right?

A Yes, sir, inhibited fresh water and equipped with the pressure gauge to let us know if there is any by-passing of the packer or leakage in the tube.

Q What purpose does this plastic coated tubing have?

A It's used, sir, to prevent rust or corrosion from forming.

Q How does the Baker Model "A" tension packer set work?

A It is set in tension. The slips are in effect reversed and set when you pull up on the packer, and the base, or packer element, is below, and the only contact the packer will have with the injected water will be solid metal base at the bottom and none of the workable parts will be in contact with the disposed water.

Q Where is the nearest producing well producing from the formation into which you intend to inject?

A The nearest oil production in zone 4 -- if you will refer to Exhibit 1, our plat there -- is approximately on, it's slightly in excess of a mile north and slightly west of the Allen Estate 3. It will be --

MR. SETH: Will you identify it, please?

A Yes, sir, I will. I would say the southern and central portion of Section 22 will be the nearest production that might be obtained from zone 4.

Q That is producing from the Queen Formation?

A Yes, sir.

Q Is the Pearl-Queen Field, is it a water drive pool?

A No, sir, it is a depletion type reservoir with no water drive.

Q You feel that the Queen Formation will be adequately protected and that you won't endanger the oil and gas producing strata by injecting through this well, is that right?

A I do, yes, sir.

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

QUESTIONS BY MR. NUTTER:

Q Now, you didn't mean that the nearest well that is producing from the Queen was a mile away, --

A No, sir.

Q -- but only producing from this one particular sand that we are talking about?

A Yes, sir, from zone 4. We have Queen production on the Allen Estate lease from other zones.

Q For instance, your well No. 2?

A Allen Estate 2, yes, sir.

Q They are north of the injection Well No. 3 and west of

that Well No. 1?

A Yes, sir.

Q What is that lease, Nora Scott?

A No, sir, the lease is the Allen Estate. The wells are Allen Estate 1, 2 and 3.

Q What formation is that producing from?

A From the Queen, sir.

Q What interval in the Queen, do you know?

A No, sir. Just a moment. I haven't the record available here, sir, but I would estimate the production is from zones 1 and 3 in the Queen.

Q What do you call zones 1 and 3 on the logs of these wells that you have here?

A Referring to the log of Allen Estate 3, the top of zone 1 is at approximately 4,712 feet. The top of zone 3 is approximately at 4,863 feet.

Q Where is zone No. 2, please?

A Zone 2 would be 4,818 feet.

Q And zone 4 in that well is 4,900?

A 4,900, yes, sir.

Q Do you think there is any communication between these zones, for instance, zone 3 and zone 4?

A You mean across the field, sir, or --

Q Well, I mean from your disposal well to the nearest producing well that is producing in zone 3?

A No, sir, I don't believe there will be. The zones here overlie one another with a fairly regular interval across the field, and we haven't noticed any interchange or communication between the zones.

Q Structurally, are your disposal wells No. 1 and 3 higher or lower than the other wells in the pool that are producing?

A Well, I would say that the proposed disposal wells are structurally lower than the majority of the other wells in the field. There are some on the extreme west flank not producing from zone 4.

Q Is the top of the Queen -- what, is your contour there based on the top of the Queen or one of the zones?

A Top of zone 4.

Q On zone 4?

A Yes, sir.

Q Is zone 4 on your contour map there in Wells No. 1 and 3, the injection wells, lower than in Record No. 1 and Allen Estate No. 2?

A Record 1 and Allen Estate 3 are the disposal wells, Allen Estate --

Q I meant this H. S. Record No. 1, in the SW of the SE of 27?

A Oh, I see. Yes.

Q Are these disposal wells higher or lower than those

two wells, being the --

A Allen Estate 3 is structurally lower than Allen Estate 1 or 2, and is approximately the same structural position as H. S. Record 1.

Q And how about --

A And Record 1 is approximately the same structural position as Allen Estate 2 and is structurally higher in zone 4 than H. S. Record 1.

MR. NUTTER: Any further questions?

Q (By Mr. Nutter) Neither one of these wells produced oil in commercial quantities?

A No, sir, each of the zones were water bearing in both of the wells. I mean all of the zones were water bearing in both of the zones.

MR. IRBY: Mr. Examiner, I would like to know the injection into the Allen Estate No. 3. He gave it on the other one, but I don't think he did on that.

A Sir, our total daily injection will be 250 barrels per day which we will dispose of in Allen Estate 3, and we don't intend to use Record 1 unless it becomes necessary at some future date due to plugging off of the No. 4, but the Allen Estate will handle the full daily requirement.

MR. NUTTER: Any further questions? The witness may be excused.

(Witness excused)

MR. SETH: That's all we have in this case.

MR. NUTTER: Does anyone have anything further to offer in Case 1740? Take the case under advisement and take a ten-minute recess.

I, J. A. Trujillo, Notary Public 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 in Stenotype and reduced to typewritten transcript by me, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this, the 4<sup>th</sup> day of September 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Joseph A. Luyck  
NOTARY PUBLIC

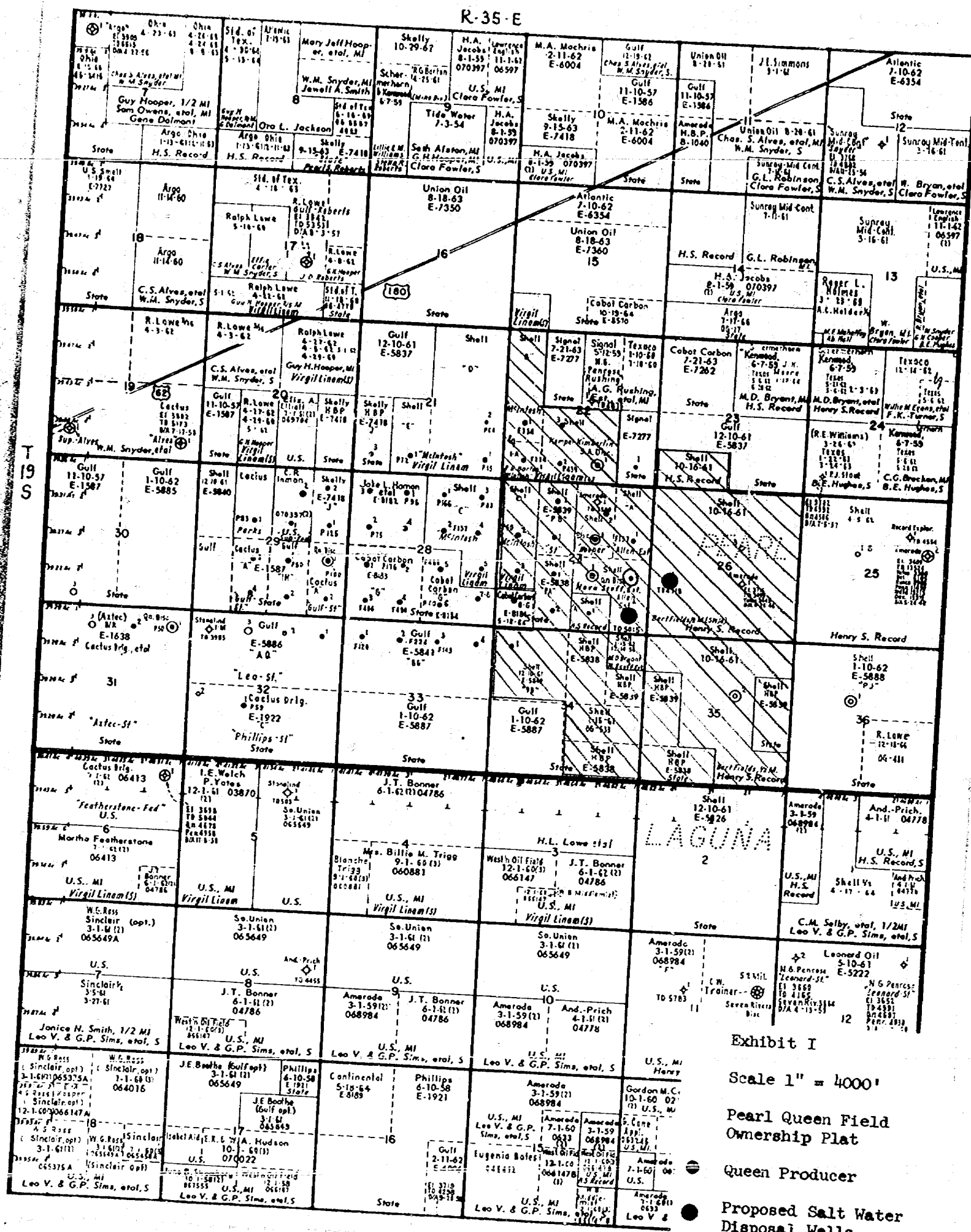
My Commission Expires:

October 5, 1960

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1740 heard by me on 8-19, 1957

*[Signature]*, Examiner  
New Mexico Oil Conservation Commission





Anticipated Status - SWD  
SHELL ALLEN ESTATE #3  
Pearl Queen Field  
660' FS and ELs of Section 27-19S-35E  
Lea County, New Mexico

*corrected*

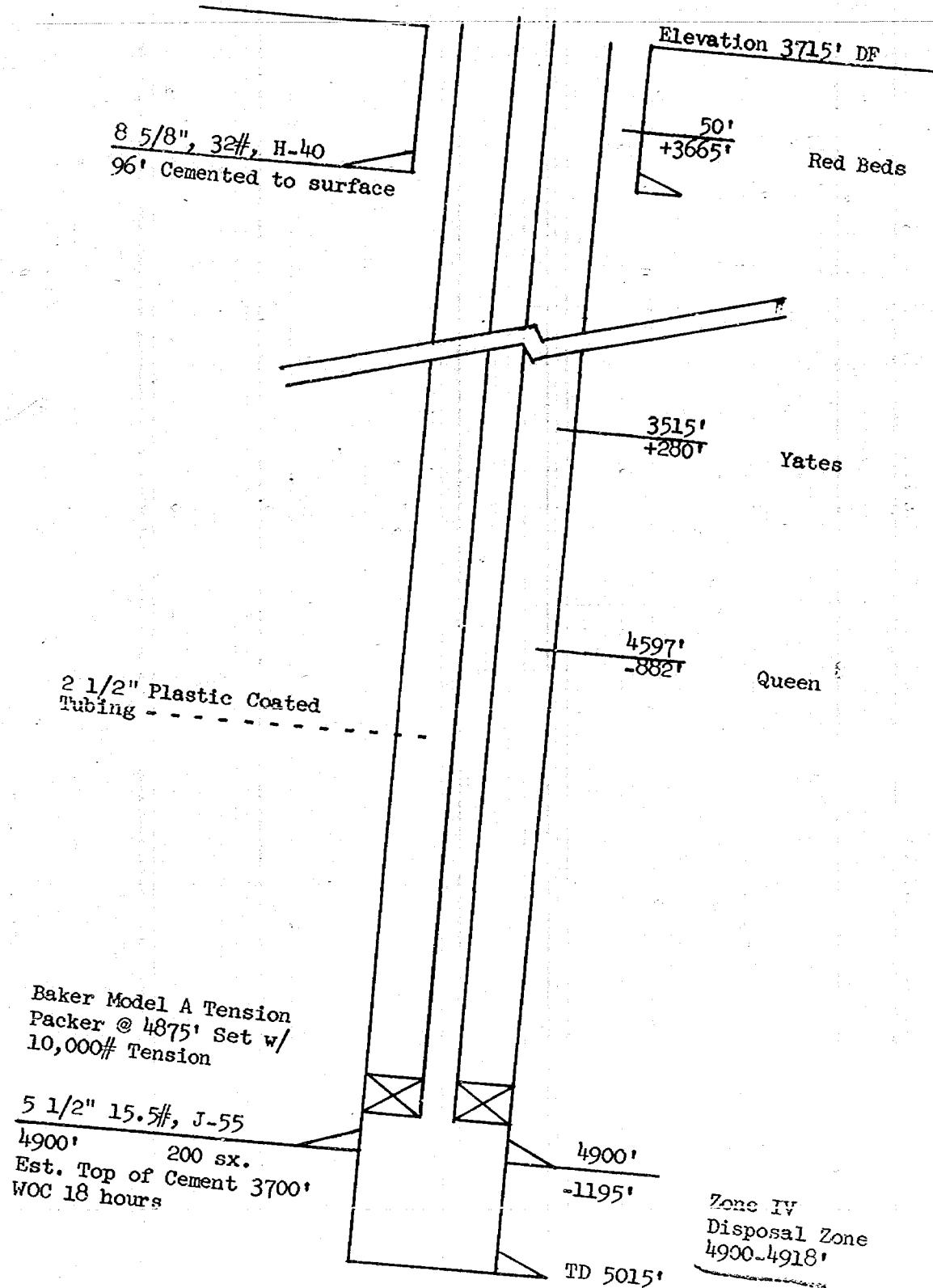


Exhibit II-A

Anticipated Status - SWD  
 SHELL RECORD #1  
 Pearl Queen Field  
 1980' FSL and 660' FWL Section 26-19S-35E  
 Lea County, New Mexico

*pressure range of sp.*

*currently  
abandoned*

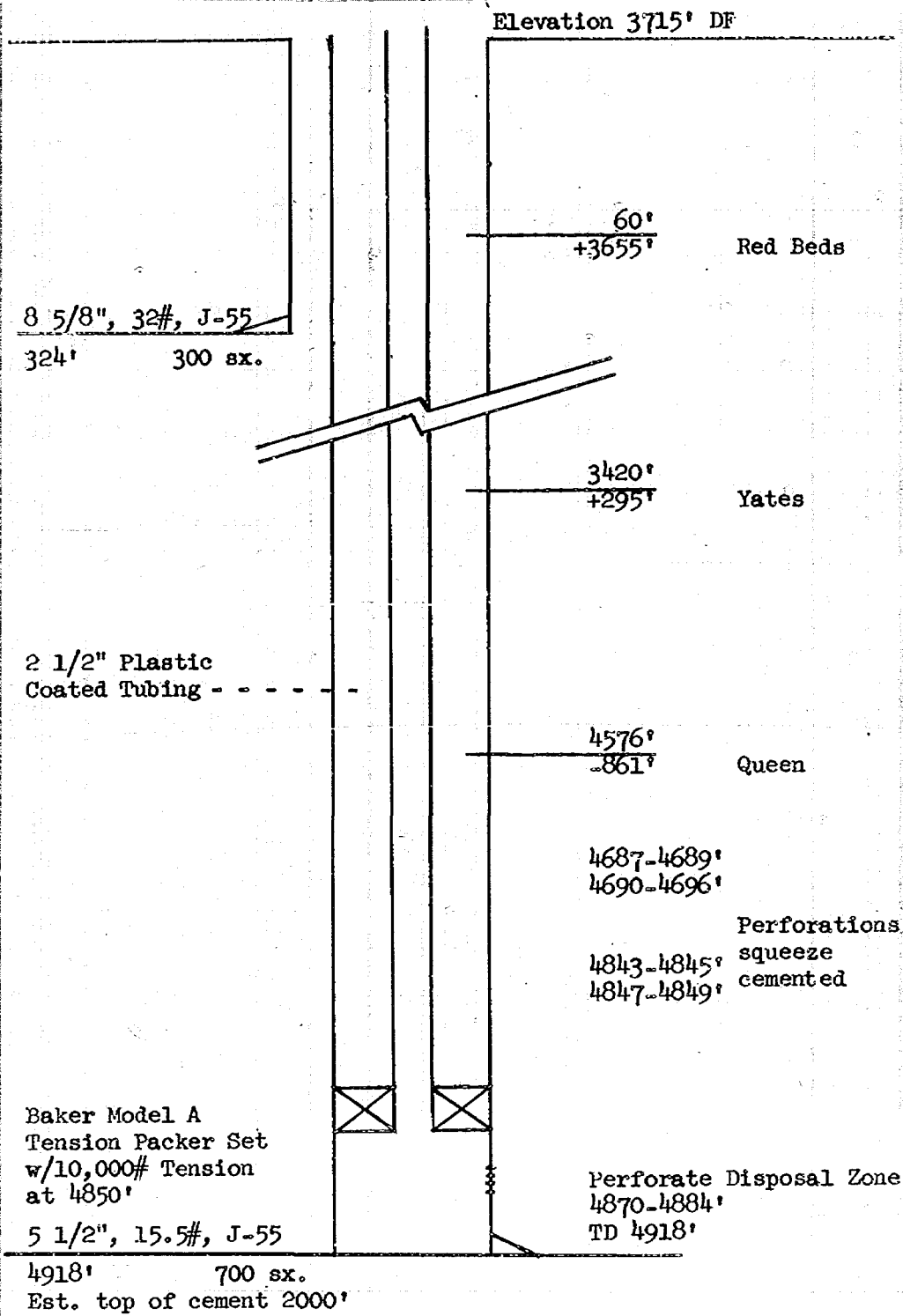


Exhibit III-A



# SHELL OIL COMPANY

MAIN OFFICE CCC

P. O. Box 871  
Roswell, New Mexico 85701 PM 2:30

July 24, 1959

Subject: Application by Shell Oil Company for  
Permission to Dispose of Produced  
Salt Water from the Pearl Queen  
Field in the Queen Formation

## AIR MAIL

New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico

Attention Mr. A. L. Porter, Jr.

Gentlemen:

By this letter of application, Shell Oil Company requests the following Application for a Permit to inject water as required by Rule 701 of the Rules and Regulations of the N.M.O.C.C. be heard at the scheduled August 19 Examiner's Hearing of the N.M.O.C.C. in Santa Fe, New Mexico.

It is Shell's desire to install a salt water disposal system for our properties in the Pearl Queen Field. It is proposed to complete our plugged and abandoned Allen Estate #3 well located in Unit P, Section 27, T-19-S, R-35-E, Lea County, New Mexico, in the Queen Formation in the interval 4,900 to 4,918 feet for disposal service. It is also proposed to complete our temporarily abandoned Record #1 located in Unit L, Section 26, T-19-S, R-35-E, Lea County, New Mexico, in the Queen Formation in the interval 4,870 to 4,884 for disposal service if the injectivity of Allen Estate #3 is insufficient to handle the 250 barrels of salt water produced per day from our properties. The attached plat (Exhibit I) shows the location of these two proposed injection wells and all of the oil and gas wells, drilling wells and dry holes within one-half mile of the disposal wells.

Allen Estate #3 has 8 5/8-inch casing set at 96 feet which is cemented to surface. It is proposed to complete Allen Estate #3 for disposal by cementing a string of 5 1/2-inch J-55 15.5# casing at 4,900 feet with 200 sx. of cement. This casing will be tested at 1,000 psi for 30 minutes prior to use for injection of salt water. Injection will be thru a string of 2 1/2-inch plastic coated tubing set with a packer at 4,875 feet.

Record #1 has 8 5/8-inch casing cemented to surface at 324 feet and 5 1/2-inch casing cemented with 500 sx. plus 40 per cent Diacel and 200 sx. Regular at 4,918 feet. If it is necessary to use this well to dispose of all of the produced water from our properties in this field, this

Case 1740

660 from  
South of  
East of  
Sec. 27

Rechecked  
waited  
8-4-59  
JH

1980 FS  
660 FW  
11/26/91

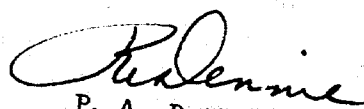
N.M.O.C.C.

II

well would be completed by squeezing the present perforations at 4,687 to 4,689, 4,690 to 4,696, 4,843 to 4,845, and 4,847 to 4,849 feet, and perforating the interval 4,870 to 4,884 feet. Plastic coated tubing would be set on a packer at 4,850 feet.

Attached are the Electrical Logs (Exhibits II and III) for both of the proposed injection wells.

Very truly yours,



P. A. Dennie  
Division Production Manager

Attachments