

CASE 6414: ATLANTIC RICHFIELD COMPANY
FOR SALT WATER DISPOSAL, LEA COUNTY,
NEW MEXICO

*Continued to
January 17th*

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CASE NO.

6414

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,
ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
17 January 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Atlantic Richfield
Company for salt water disposal,
Lea County, New Mexico.

CASE
6414

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

Lynn Teschendorf, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

Conrad Coffield, Esq.
HINKLE, COX, EATON, COFFIELD &
HENSLEY
Midland, Texas

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I N D E X

BOB MALAISE

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1 MR. NOTTER: Call next Case 6414.

2 MS. TESCHENDORF: Case 6414. Application of
3 Atlantic Richfield Company for salt water disposal, Lea
4 County, New Mexico.

5 MR. COFFIELD: Conrad Coffield of the Hinkle
6 Law Firm, Midland, Texas, appearing on behalf of Atlantic
7 Richfield Company, and I have one witness, who has already
8 been sworn.

9
10 BOB MALAISE

11 being called as a witness and having been duly sworn upon
12 his oath, testified as follows, to-wit:

13
14 DIRECT EXAMINATION

15 BY MR. COFFIELD:

16 Q Please state your name, address, occupation,
17 and employer.

18 A My name is Bob Malaise. I'm employed by
19 Atlantic Richfield and I'm employed in Midland, Texas.

20 Q Mr. Malaise, are you familiar with the ap-
21 plication of Atlantic Richfield in this case?

22 A Yes, I am.

23 Q Are you familiar with the property and the
24 proposed well location involved in this case?

25 A Yes, I am.

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1 Q And have you previously testified as a petro-
2 leum engineer before the Division?

3 A Yes, I have.

4 Q Are your qualifications accepted and a matter
5 of record before the Division?

6 A Yes, they were.

7 MR. COFFIELD: Is the witness considered
8 qualified, Mr. Examiner?

9 MR. NUTTER: Yes, he is.

10 Q (Mr. Coffield continuing.) Mr. Malaise,
11 what does Atlantic Richfield seek by this application?

12 A Atlantic Richfield is seeking authority to
13 dispose of produced salt water into the Devonian formation
14 through a perforated interval 13,590 feet to 13,685 feet
15 in the Lea 396 State Well No. 1, which is located in Unit
16 K of Section 35, Township 15 South, 36 East, in the Dean-
17 Devonian Pool, Lea County, New Mexico.

18 Q Mr. Malaise, refer to what has been marked
19 as Exhibit One and explain what this represents.

20 A Exhibit One is a location plat of this area.
21 It shows the recommended or proposed salt water disposal
22 well that is encircled in red. It also shows three other
23 producing wells in this field that Atlantic Richfield
24 operates. They are the J. P. Dean No. 1, the Dow Federal
25 No. 1, and the 396 Well No. 2. These are circled in blue

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1 and are the three producing wells that we propose go into
2 the Dean salt water disposal system.

3 In addition, the plat shows four or five
4 other wells that are colored orange and are not encircled
5 in blue that are wells that penetrate the Devonian formation
6 which have been plugged and abandoned.

7 Q Okay, Mr. Malaise, I believe you may have
8 already designated -- said this, but what is the -- again,
9 what is the designation and location of this proposed in-
10 jection well?

11 A This proposed injection well is located 1980
12 feet from the south line and 2010 feet from the west line
13 of Section 35, Township 15 South, Range 36 East, in Lea
14 County.

15 Q Is Atlantic Richfield the operator on this
16 property?

17 A They are.

18 Q Okay, would you please give a history of
19 this injection well, when it was drilled and completion
20 date, and so forth?

21 A This particular well had been drilled and
22 had produced hydrocarbons from the Permo-Penn Field and
23 also from the Devonian Field; for approximately the last two
24 years the well has been temporarily abandoned and it has
25 been our intent to use it as a backup well for our 396 Well

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1 No. 3, which was the disposal well in this particular field.

2 This particular well has been P&A'd and we
3 are without a disposal well. This is one of the purposes
4 for this particular application.

5 Q Mr. Malaize, was a log of this proposed in-
6 jection well previously submitted to the Division?

7 A Yes, it was.

8 Q When, when did you do that, do you recall?

9 A This was submitted when the original appli-
10 cation was filed for administrative approval for this parti-
11 cular well to flow salt water into and the letter sent to
12 the Commission was dated November the 29th, 1978, and it
13 was sent to the Santa Fe office.

14 Q All right, would you go ahead and refer then
15 to what has been marked as Exhibit Two and explain to the
16 Examiner what this reveals?

17 A Exhibit Two is a diagrammatic sketch of the
18 proposed salt water disposal well. Several points that
19 should be noted on the sketch are that -- the fact that we
20 have 7-inch casing that is set at 13,685 feet, and it's been
21 cemented with 100 sacks of cement. By temperature survey
22 we have located the top of that cement at 9749 feet.

23 Our diagrammatic sketch indicates that we
24 plan to inject down 2-3/8ths inch tubing, which we propose
25 to be internally coated. We have a set of perforations that

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1 are open in the Penn that we propose to straddle with two
2 packers. Those perforations are in the Penn are 10,380 feet
3 to 395 feet, 10,630 feet to 665 feet and 11,510 feet to
4 590 feet.

5 It would be 11,510 feet to 11,560 feet, I'm
6 sorry.

7 The perforated interval in the Devonian that
8 we propose to inject into is from 13,592 feet to 602 feet
9 and 13,625 feet to 654 feet.

10 This particular well we would also anticipate
11 and it's not on the sketch, having a pressure gauge where
12 we could visually monitor the pressure on the casing tubing
13 annulus.

14 Q Okay, let's go on to what's been marked as
15 Exhibit Three, Mr. Malaise, and please explain what that
16 represents.

17 A Exhibit Three are wellbore diagrams of the
18 five wells within a half a mile radius that have been
19 plugged and abandoned and that penetrated the Devonian
20 formation. The data that was collected to prepare these
21 was some -- one of the wells was operated by Atlantic Rich-
22 field. The four other wells are operated by other operators
23 but it was collected from the District Office in Hobbs, the
24 available well files, and it was prepared -- in most cases
25 we had setting depths and amounts of cement with temperature

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1 surveys and got additional information from the plugged and
2 abandoned data that was submitted to the Commission.

3 In certain cases we did not have cement tops
4 on some strings of casing. We made an estimate of the
5 cement tops and it's so noted on the next exhibit.

6 Q Okay, do you have anything further to comment
7 on?

8 A Not unless the Commission would like to go
9 through each exhibit individually.

10 Q Okay.

11 MR. NUTTER: No, go ahead.

12 Q Let's go on into Exhibit Four and explain
13 what that represents.

14 A Exhibit Four is a summary of all the wells
15 within a half a mile both producing and P&A'd. It gives
16 a description of the wells, both a description of the well
17 name as well as the well location, the casing strings that
18 were run in these wells, their setting depths, the amounts
19 of cement that were used to cement these strings, and
20 where available, as I mentioned before, we have indicated
21 either the cement was circulated to surface or we had a
22 temperature survey to indicate the top. In certain cases
23 we estimated where the top of the cement was by available
24 data. Also gives the total depth of the well and either
25 the current producing interval that is open in a wellbore

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1 or in certain cases where the wells are P&A'd, we have so
2 indicated.

3 Q Mr. Malaise, what kind of fluid do you pro-
4 pose to be injected in this salt water disposal well?

5 A We will have an inert fluid, a fluid that
6 has been treated for --

7 Q No, I'm sorry, to be injected.

8 A Oh, to be injected we will be producing --
9 produced salt water will be injected into this well.

10 Q And what volume of salt water do you propose
11 to inject?

12 A We would anticipate that the volumes will
13 be in the neighborhood that we were currently injecting
14 prior to losing the No. 3, and it will be a minimum of
15 150 barrels a day and a maximum of 200 barrels a day.

16 Q Mr. Malaise, was a water analysis report
17 already submitted to the Oil Conservation Division?

18 A Yes, there was one that was submitted on the
19 Lea 396 Well No. 2 that, when we made our original appli-
20 cation in November.

21 Q Was it submitted with your letter of
22 November 29, '78?

23 A That's correct.

24 Q In the analysis of that water does it appear
25 that the fluids are compatible?

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1 A The analysis, if you'll note, is an older
2 analysis. It does indicate they were compatible. We have
3 had no problems in the injection of the water in the No. 3
4 Well and I would -- it would indicate to me that that would
5 be visual proof that we did not have compatibility problems.

6 Q So these are the identical fluids that --

7 A The same fluids that we've been injecting
8 in the No. 3 will be injected in No. 1.

9 Q Do you expect to inject this water by pres-
10 sure?

11 A Yes. We have so indicated on the original
12 application a maximum pressure of 2000 pounds. This would
13 be the maximum that we would anticipate. The average pres-
14 sure for the last 12-month period has been running between
15 900 and 1000 pounds.

16 Q Mr. Malaise, do you already have the equip-
17 ment necessary to inject this under pressure?

18 A Yes, we do.

19 Q In fact is this the same equipment you had
20 on your prior well that you had to abandon?

21 A That's correct.

22 Q In this case will the casing tubing annulus
23 be filled with an inert fluid?

24 A Yes, it will.

25 Q And will you attach a pressure gauge to the

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1 annulus?

2 A Yes.

3 Q And are you aware of the Oil Conservation
4 Division's requirements that there be no surface injection
5 pressure in a project of this sort that is greater than
6 .2 psi per foot?

7 A Yes, I am.

8 Q Are the pressures which you anticipate with-
9 in these guidelines?

10 A They are.

11 Q Have the offset operators been notified on
12 this?

13 A They were notified at the same time the
14 November 29th letter was sent to the Commission.

15 Q And were there any objections, that you know
16 of?

17 A No.

18 Q Mr. Malaise, in your opinion is this well
19 cased and cemented in such a manner that there is no danger
20 to oil or gas or fresh water which you might encounter?

21 A Yes.

22 Q Do you have any further comments on these
23 exhibits?

24 A No, I don't.

25 Q Were these exhibits prepared by you or under

1 your supervision?

2 A. They were.

3 Q And in your opinion is the approval of this
4 application in the interest of conservation and the pre-
5 vention of waste and the protection of correlative rights?

6 A. Yes.

7 MR. COFFIELD: Mr. Examiner, I move the ad-
8 mission of Exhibits One through Four.

9 MR. NUTTER: Atlantic Exhibits One through
10 Four will be admitted in evidence.

11 MR. COFFIELD: And I have no further questions
12 of this witness on direct.

13 CROSS EXAMINATION

14 BY MR. NUTTER:

15 Q Mr. Malaise, the water that's going to be
16 disposed of is produced from the Devonian formation and
17 also the Pennsylvanian?
18

19 A. That's correct.

20 Q And is this water analysis that you showed
21 us --

22 A That water analysis, I believe, was from the
23 Permo-Penn at the time that was taken.

24 Q I see, so we don't have an analysis of the
25 Devonian-Pennsylvanian water.

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1 A We have not submitted one. We can have it.
2 If the Commission so desires, we will have one furnished.

3 Q Now, what was the problem with the well that
4 was formerly a disposal well and you had to abandon it?

5 A The well that we had prior, we had a casing
6 problem below the packer and we had -- we had problems
7 where we didn't feel like we could adequately control them,
8 the water that was being disposed of. I don't have the
9 exact depth but there were casing problems with that, and
10 they were indicated by surface pressures.

11 We went into the well and it was discovered
12 from a casing inspection log that it was -- it was not
13 desirable to continue producing -- or continue injecting
14 water into that well. It was an old well. It had been --
15 prior to converting it, it was 1971 we had converted it,
16 there had been problems in the well originally upon comple-
17 tion.

18 Q It wasn't a matter, then, of incompatibility
19 of the water --

20 A No.

21 Q -- and plugging up, or anything like that?

22 A No, sir, we haven't had that big a problem
23 with the water, as far as compatibility.

24 Q And disposal in the other well was into the
25 Devonian formation?

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1 A. It was into the same formation.

2 Q. Okay.

3 MR. NUTTER: Are there any further questions
4 of Mr. Malaise? He may be excused.

5 Do you have anything further, Mr. Coffield?

6 MR. COFFIELD: No, sir, I do not.

7 MR. NUTTER: Does anyone have anything they
8 wish to offer in Case Number 6414?

9 We'll take the case under advisement.

10 (Hearing concluded.)

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REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6414, heard by me on 1/17 1979.

[Signature], Examiner
Oil Conservation Division

SALLY WALTON BOYD
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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6414
Order No. R-5913

APPLICATION OF ATLANTIC RICHFIELD
COMPANY FOR SALT WATER DISPOSAL,
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on January 17, 1979, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 23rd day of January, 1979, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Atlantic Richfield Company, is the owner and operator of the Lea 396 State Well No. 1, located in Unit K of Section 35, Township 15 South, Range 36 East, NMPM, Dean-Devonian Pool, Lea 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 perforated interval from approximately 13,592 feet to 13,654 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic lined tubing installed in a packer set at approximately 13,530 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

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Case No. 6414

Order No. R-5913

(5) That the injection well or system should be equipped with a pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 2718 psi.

(6) That the operator should notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(7) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(8) 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, Atlantic Richfield Company, is hereby authorized to utilize its Lea 396 State Well No. 1, located in Unit K of Section 35, Township 15 South, Range 36 East, NMPM, Dean-Devonian Pool, Lea County, New Mexico, to dispose of produced salt water into the Devonian formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 13,530 feet, with injection into the perforated interval from approximately 13,592 feet to 13,654 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 shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 2718 psi.

(3) That the operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

-3-

Case No. 6414

Order No. R-5913

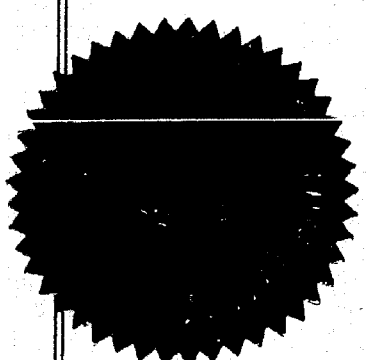
(4) That the operator shall immediately notify the supervisor of the Division's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

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

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



Joe D. Ramey
JOE D. RAMEY
Director

fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
3 January 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Atlantic Richfield) CASE
Company for salt water disposal,) 6414
Lea County, New Mexico.)

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Lynn Teschendorf, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

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1 MR. STAMETS: We'll call Case Number 6414.

2 MS. TESCHENDORF: Case 6414. Application of
3 Atlantic Richfield Company for salt water disposal,
4 Lea County, New Mexico.

5 The applicant has requested that the case be
6 continued to the Examiner Hearing to be held January 17,
7 1979.

8 MR. STAMETS: The case will be so continued.
9 (Hearing concluded.)

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REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Court Reporter, DO HEREBY
CERTIFY that the foregoing and attached Transcript of
Hearing before the Oil Conservation Division was reported
by me; that said transcript is a full, true, and correct
record of the hearing, prepared by me to the best of my
ability, knowledge, and skill, from my notes taken at the
time of the hearing.

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Sally W. Boyd CSR
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 6414,
heard by me on 1-3 1979.
Richard L. Starn, Examiner
Oil Conservation Division

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
3 January 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Atlantic Richfield
Company for salt water disposal,
Lea County, New Mexico.

CASE
6414

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

Lynn Teschendorf, Esq.
Legal Counsel for the Division
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Santa Fe, New Mexico 87501

For the Applicant:

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1 MR. STAMETS: We'll call Case Number 6414.

2 MS. TESCHENDORF: Case 6414. Application of
3 Atlantic Richfield Company for salt water disposal,
4 Lea County, New Mexico.

5 The applicant has requested that the case be
6 continued to the Examiner Hearing to be held January 17,
7 1979.

8 MR. STAMETS: The case will be so continued.
9 (Hearing concluded.)

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REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Court Reporter, DO HEREBY
CERTIFY that the foregoing and attached Transcript of
Hearing before the Oil Conservation Division was reported
by me; that said transcript is a full, true, and correct
record of the hearing, prepared by me to the best of my
ability, knowledge, and skill, from my notes taken at the
time of the hearing.

Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 6414
heard by me on 1/3 1979.

Richard A. Stumb, Examiner
Oil Conservation Division

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Dockets Nos. 2-79 and 3-79 are tentatively set for hearing on January 17 and 31, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 3, 1979

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

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

- CASE 6413: Application of Atlantic Richfield Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Langley Getty Com Well No. 1 located in Unit N of Section 21, Township 22 South, Range 36 East, Langley Field, Lea County, New Mexico, to produce gas from the Devonian and Ellenburger formations, through parallel strings of tubing.
- CASE 6414: Application of Atlantic Richfield 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 Devonian formation through the perforated interval from 13,590 feet to 13,685 feet in its Lea 396 State Well No. 1 located in Unit K of Section 35, Township 15 South, Range 36 East, Dean-Devonian Pool, Lea County, New Mexico.
- CASE 6415: Application of Yates Petroleum Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp thru Devonian formations underlying the W/2 of Section 20, Township 14 South, Range 36 East, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6416: Application of Anadarko Production Company for special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Cedar Lake-Morrow Gas Pool, Eddy County, New Mexico, to provide for 320-acre spacing rather than 160 acres. In the absence of objection, this pool will be placed on the standard 320-acre spacing for Wolfcamp and Pennsylvanian gas pools rather than the present 160-acre spacing.
- CASE 6417: Application of Morris R. Antweil for compulsory pooling and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying the W/2 of Section 9, Township 12 South, Range 32 East, Lea County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location 660 feet from the North and West lines of said section. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6390: (Continued and readvertised)
- Application of C & E Operators for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down thru the Pictured Cliffs formation underlying the SW/4 of Section 10, Township 30 North, Range 11 West, San Juan County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

DOCKET: COMMISSION HEARING - WEDNESDAY - JANUARY 24, 1979

OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases are continued from the December 12, 1978, Commission Hearing.

CASE 6231: (DE NOVO) (Continued and Readvertised)

Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its State "JM" Well No. 1, a Morrow test to be located 660 feet from the North and East lines of Section 25, Township 18 South, Range 24 East, Eddy County, New Mexico, the N/2 of said Section 25 to be dedicated to the well.

Upon application of Gulf Oil Corporation this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 6232: (DE NOVO) (Continued and Readvertised)

Application of Yates Petroleum Corporation for an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Cities "JG" Well No. 1 to be located 660 feet from the South and East lines of Section 13, Township 18 South, Range 24 East, Fordinkus Field, Eddy County, New Mexico, the E/2 of said Section 13 to be dedicated to the well.

Upon application of Gulf Oil Corporation this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 6213: (DE NOVO) (Continued and Readvertised)

Application of Morris K. Antwell for an unorthodox location and simultaneous dedication, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of his Rio Well No. 2, a Morrow test to be drilled at a point 660 feet from the North and West lines of Section 29, Township 18 South, Range 25 East, Eddy County, New Mexico, the N/2 of said Section 29 to be simultaneously dedicated to the aforesaid well and to applicant's Rio Well No. 1 located in Unit G of Section 29.

Upon application of Gulf Oil Corporation this case will be heard De Novo pursuant to the provisions of Rule 1220.

(bb) EXTEND the Penasco Draw-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM

Section 27: W/2

Section 28: All

(cc) EXTEND the South Peterson-Pennsylvanian Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM

Section 31: SE/4 SE/4

(dd) EXTEND the Sioux-Yates Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 26 SOUTH, RANGE 36 EAST, NMPM

Section 8: N/2

Section 9: NW/4

(ee) EXTEND the Sombrero-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 33 EAST, NMPM

Section 12: W/2

(ff) EXTEND the Tom-Tom San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 31 EAST, NMPM

Section 32: SE/4

TOWNSHIP 8 SOUTH, RANGE 31 EAST, NMPM

Section 5: NE/4

(gg) EXTEND the West Tonto-Pennsylvanian Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM

Section 8: W/2

(hh) EXTEND the Tubb Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM

Section 6: SW/4

Section 7: NW/4

(ii) EXTEND the North Turkey Track-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM

Section 5: N/2

(jj) EXTEND the Wantz-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM

Section 34: NE/4

(kk) EXTEND the Warren-Tubb Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM

Section 26: SE/4

(q) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the South Millman-Atoka Gas Pool. The discovery well is Hondo Oil and Gas Company Hondo 22 State Well No. 1 located in Unit H of Section 22, Township 19 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 28 EAST, NMPM
Section 22: E/2

(r) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Premier production and designated as the Pavo Mesa-Premier Gas Pool. The discovery well is Carl A. Schellinger Exxon Federal Well No. 1 located in Unit M of Section 29, Township 16 South, Range 29 East, NMPM. Said pool would comprise:

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

(s) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Penasco Draw-Morrow Gas Pool. The discovery well is Morris R. Antwell Dinkus Com Well No. 1 located in Unit O of Section 20, Township 18 South, Range 25 East, NMPM. Said pool would comprise:

TOWNSHIP 18 SOUTH, RANGE 24 EAST, NMPM
Section 24: E/2

TOWNSHIP 18 SOUTH, RANGE 25 EAST, NMPM
Section 19: All
Section 20: S/2
Section 29: All
Section 30: N/2
Section 32: N/2

(t) EXTEND the vertical limits of the Monument-Tubb Pool in Lea County, New Mexico, to include the Drinkard formation and redesignate said Monument-Tubb Pool as the Monument Tubb-Drinkard Pool.

(u) EXTEND the Blinebry Oil and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
Section 8: S/2

(v) EXTEND the Southeast Chaves Queen Gas Area in Chaves County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 31 EAST, NMPM
Section 3: S/2

(w) EXTEND the South Empire-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM
Section 36: E/2

(x) EXTEND the Jenkins-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 35 EAST, NMPM
Section 27: SW/4

(y) EXTEND the Langley-Ellenburger Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 36 EAST, NMPM
Section 21: S/2

(z) EXTEND the Lovington-Queen Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM
Section 1: S/2
Section 12: W/2

(aa) EXTEND the South Millman-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 28 EAST, NMPM
Section 19: S/2

(h) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Fenton Draw-Morrow Gas Pool, the discovery well is Perry R. Bass Big Eddy Unit Well No. 53 located in Unit C of Section 8, Township 21 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPM
Section 8: E/2

(i) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Cherry Canyon production and designated as the Herradura Bend-Cherry Canyon Pool. The discovery well is Eastland Oil Company City of Carlsbad Well No. 1 located in Unit K of Section 29, Township 22 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM
Section 29: SW/4

(j) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the East High Hope-Atoka Gas Pool. The discovery well is Beard Oil Company Hagstrom Well No. 1 located in Unit K of Section 3, Township 17 South, Range 24 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 24 EAST, NMPM
Section 8: W/2
Section 17: W/2
Section 18: A11

(k) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Atoka production and designated as the Hume-Atoka Gas Pool. The discovery well is Mewbourne Oil Company State E Com Well No. 1 located in Unit V of Section 6, Township 16 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 6: S/2

(l) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Strawn production and designated as the Loafer Draw-Strawn Gas Pool. The discovery well is Inexco Oil Company Arroyo Federal Well No. 1 located in Unit K of Section 26, Township 21 South, Range 22 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 22 EAST, NMPM
Section 26: S/2

(m) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Cisco-Canyon production and designated as the Logan Draw Cisco-Canyon Gas Pool. The discovery well is Mesa Petroleum Company Potter Federal Com Well No. 1 located in Unit B of Section 29, Township 17 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 27 EAST, NMPM
Section 29: N/2

(n) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the North Loving-Morrow Gas Pool. The discovery well is Cities Service Company Polk A Com Well No. 1 located in Unit B of Section 17, Township 23 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM
Section 16: W/2
Section 17: N/2

(o) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Strawn production and designated as the North Loving-Strawn Gas Pool. The discovery well is Cities Service Company Polk A Com Well No. 1 located in Unit B of Section 17, Township 23 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM
Section 17: N/2

(p) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Drinkard production and designated as the Lovington-Drinkard Pool. The discovery well is Getty Oil Company State O Well No. 12 located in Unit J of Section 31, Township 16 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 31: SE/4

CASE 6390: (Continued from January 3, 1979, Examiner Hearing)

Application of C & E Operators for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down thru the Pictured Cliffs formation underlying the SW/4 of Section 10, Township 30 North, Range 11 West, San Juan County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6421: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating and extending vertical and horizontal limits of certain pools in Chaves, Eddy, Lea, and Roosevelt Counties, New Mexico:

(a) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the Avalon-Wolfcamp Pool. The discovery well is Maralo, Inc. Hanson Federal Well No. 2 located in Unit O of Section 28, Township 20 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM
Section 28: SE/4

(b) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the Black River-Atoka Gas Pool. The discovery well is HNG Oil Company Bowden 25 Federal Com. Well No. 1 located in Unit I of Section 25, Township 24 South, Range 26 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 26 EAST, NMPM
Section 25: E/2

(c) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Strawn production and designated as the Box Canyon-Strawn Gas Pool. The discovery well is Yates Petroleum Corporation Huber 1A Federal Well No. 2 located in Unit P of Section 15, Township 21 South, Range 21 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 21 EAST, NMPM
Section 15: S/2

(d) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Delaware production and designated as the Cotton Draw-Delaware Pool. The discovery well is Coquina Oil Corporation El Paso Federal Well No. 1 located in Unit K of Section 12, Township 24 South, Range 31 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 31 EAST, NMPM
Section 12: SW/4

(e) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the East Cottonwood Creek-Atoka Gas Pool. The discovery well is Yates Petroleum Corporation Lizzie Howard HK Well No. 1 located in Unit K of Section 13, Township 16 South, Range 25 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 25 EAST, NMPM
Section 13: W/2

(f) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Yates-Seven Rivers production and designated as the North Custer Yates-Seven Rivers Pool. The discovery well is Gifford, Mitchell & Wisenbaker Amoco State Well No. 1 located in Unit B of Section 36, Township 24 South, Range 35 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 35 EAST, NMPM
Section 36: NE/4

(g) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the Diamond Mound-Atoka Gas Pool. The discovery well is Northern Natural Gas Company Vandagriff Federal Well No. 1 located in Unit K of Section 1, Township 16 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 27 EAST, NMPM
Section 1: All
Section 2: Lots 1, 2, 7, 8, 9, 10, 15 and 16

Dockets Nos. 3-79 and 4-79 are tentatively set for hearing on January 24 and 31, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 17, 1979

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

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas for February, 1979, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.
- (2) Consideration of the allowable production of gas for February, 1979, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 6418: Application of Gulf Oil Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Eddy "GR" State Well No. 1 located in Unit E of Section 16, Township 23 South, Range 28 East, Eddy County, New Mexico, to produce gas from the Atoka and Morrow formations through parallel strings of tubing.

CASE 6413: (Continued from January 3, 1979, Examiner Hearing)

Application of Atlantic Richfield Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Langley Getty Com Well No. 1 located in Unit N of Section 21, Township 22 South, Range 36 East, Langley Field, Lea County, New Mexico, to produce gas from the Devonian and Ellenburger formations, through parallel strings of tubing.

CASE 6414: (Continued from January 3, 1979, Examiner Hearing)

Application of Atlantic Richfield 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 Devonian formation through the perforated interval from 13,590 feet to 13,685 feet in its Lea 396 State Well No. 1 located in Unit K of Section 35, Township 15 South, Range 36 East, Dean-Devonian Pool, Lea County, New Mexico.

CASE 6415: (Continued from January 3, 1979, Examiner Hearing)

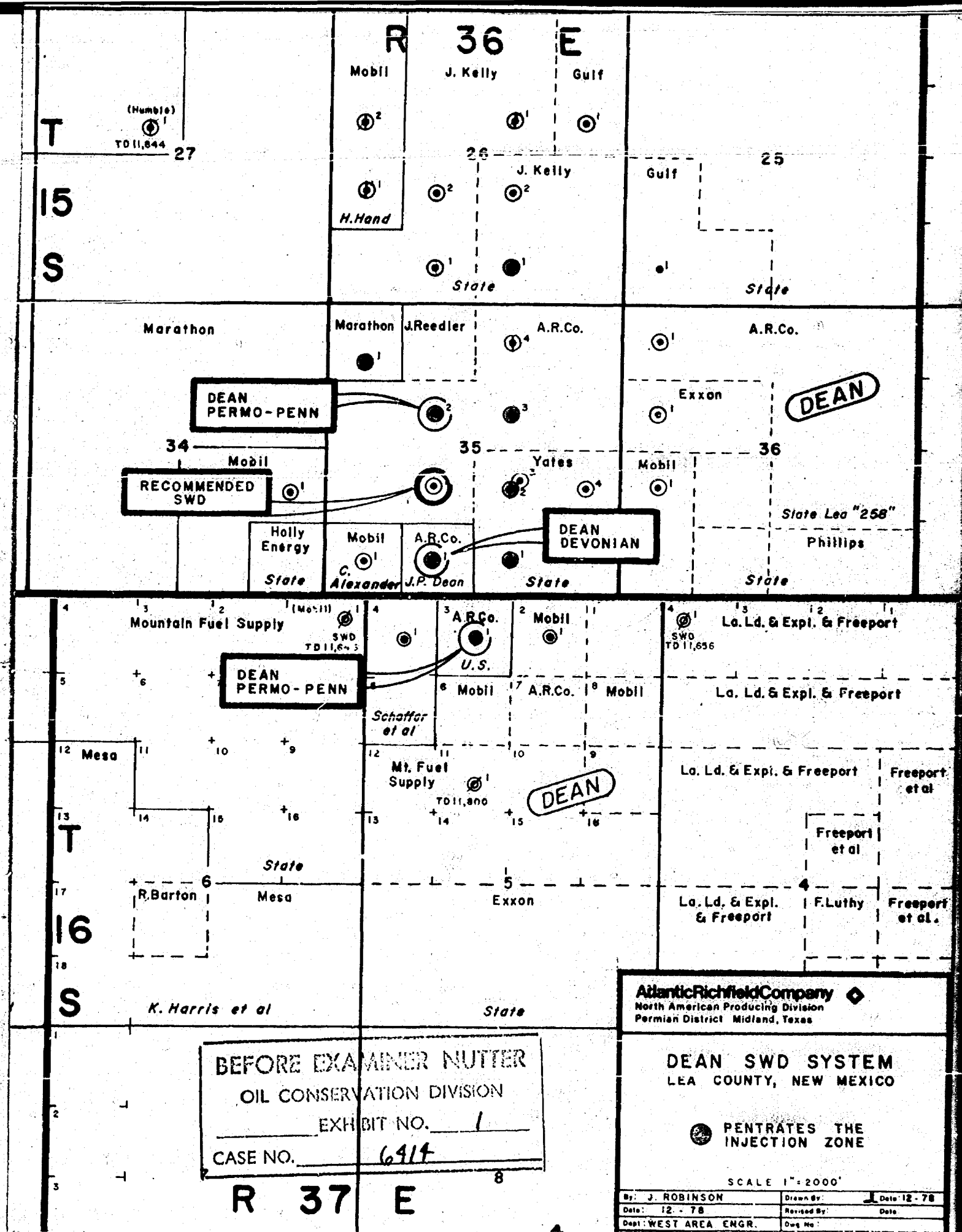
Application of Yates Petroleum Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp thru Devonian formations underlying the W/2 of Section 20, Township 14 South, Range 36 East, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6419: Application of Yates Petroleum Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Lanning JC Well No. 1 located in Unit B of Section 7, Township 18 South, Range 26 East, Eagle Creek Field, Eddy County, New Mexico, to produce gas from the Strawn formation through the casing-tubing annulus and from the Morrow formation through tubing.

CASE 6420: Application of LaRue and Muncy for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Abo formation underlying the NW/4 SE/4 of Section 34, Township 18 South, Range 26 East, Dayton-Abo Pool, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6416: (Continued from January 3, 1979, Examiner Hearing)

Application of Anadarko Production Company for special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Cedar Lake-Morrow Gas Pool, Eddy County, New Mexico, to provide for 320-acre spacing rather than 160 acres. In the absence of objection, this pool will be placed on the standard 320-acre spacing for Wolfcamp and Pennsylvanian gas pools rather than the present 160-acre spacing.

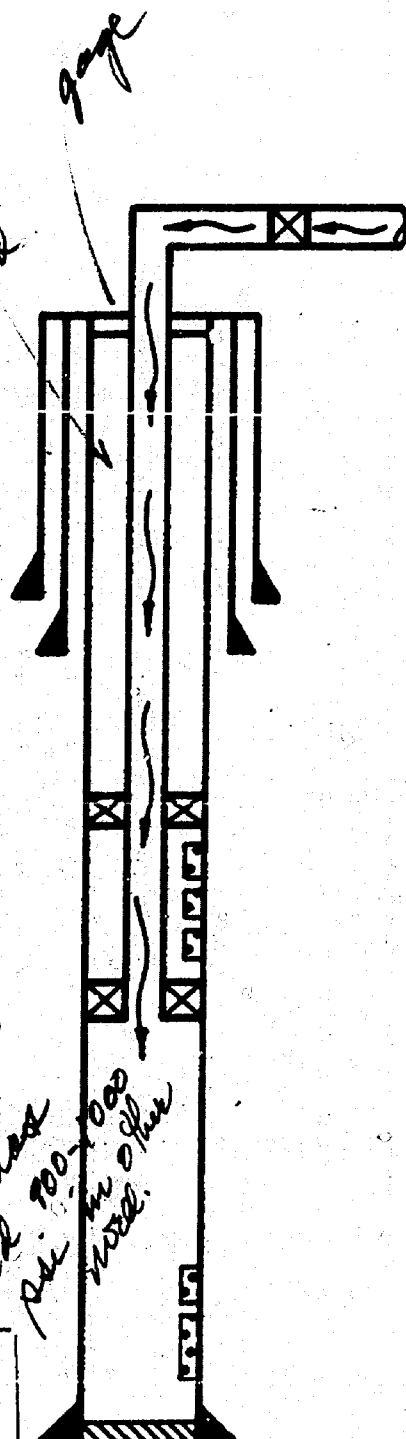


ATLANTIC RICHFIELD COMPANY
Lea 396 State No. 1
Proposed Salt Water Disposal Well

1980' FSL & 2010' FWL
Section 35, T-15S, R-36E
Lea County, New Mexico

13592
2718.4

will inject
150-200 bpd
may press. of
2000 psi
press. has
over 700-1000
psi in other
wells.



2-3/8" OD TUBING
(Internally Coated)

13-3/8" csg. 48#. Set @
300' w/350 sx. cmt.

9-5/8" csg. 40# & 36#.
Set @ 4926' w/2600
sx. cmt.

Pke set @ approx 10,320'
Permo Penn Perfs
10,380-395' ✓
10,630-665' ✓
11,510-560' ✓

Pkr. set @ approximately
13,530'.

Devonian perforations @
13,592-602' ✓
13,625-654' ✓

7" csg. 26# - 35#. Set @
13,685' w/100 sx. TOC @
9,749' by survey

BEFORE EXAMINER NUTTER

OIL CONSERVATION DIVISION

EXHIBIT NO. 2

CASE NO. 6414

MARATHON OIL COMPANY
A. C. Dean "A" No. 1

990' FNL & 660' FWL
Section 35, T-15S, R-36E
Lea County, New Mexico

Plugged & Abandoned January 30, 1961

BEFORE EXAMINER MUTTER

OIL CONSERVATION DIVISION

EXHIBIT NO. 3

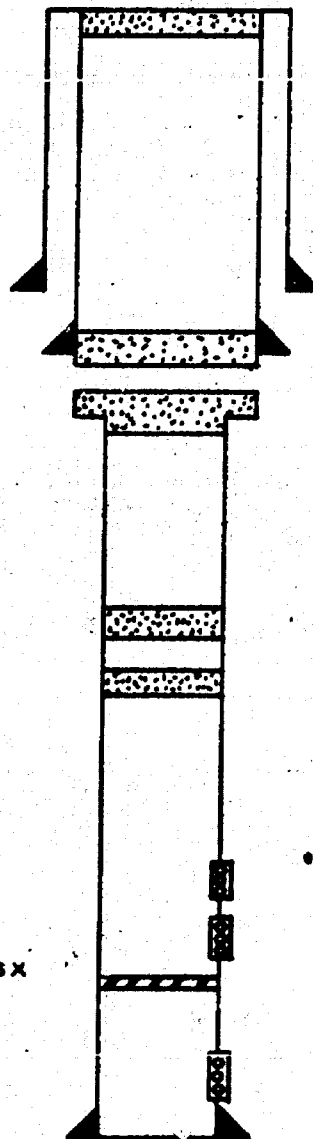
CASE NO. 6414

120 sx cmt plug @
4934-5034'

65 sx cmt plug @
5880-6080'

CIBP set @ 11720' w/2 sx
cmt on top

TD: 13781'



25 sx cmt plug @ 0-50'

16" csg 65#; set @ 358' w/
500 sx cmt.
10-3/4" csg 51#, 45#, 40#; set
4934' w/3955' sx cmt.

7" csg cut & pulled @ 5980'

CIBP set @ 10204' w/25 sx cmt
plug @ 10038-10204'
25 sx cmt plug @ 10282-10420'

Permo Penn Perfs
11550-11590'

11604-11624'

Devonian perfs
13756-13778'

7" csg 35#, 32#, 29#, 26#; set
@ 13780' w/1255 sx cmt.
TDC estimated @ 500'.

CITIES SERVICE OIL COMPANY
State AW No. 1

1980' FEL & 660' FSL
Section 35, T-15S, R-36E
Lea County, New Mexico

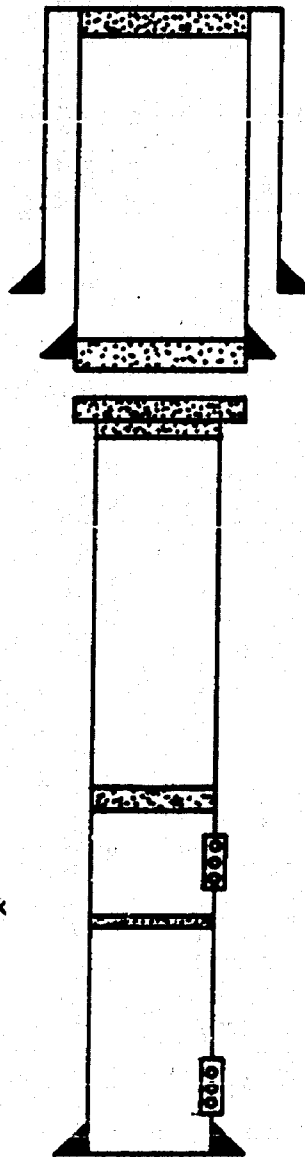
Plugged & Abandoned July 16, 1969

25 sx cmt plug @
4870-4949'

30 sx cmt plug @
5460-5551'

CIBP set @ 10720' w/1 sx
cmt on top.

TD: 13700'



10 sx cmt plug @ 0-30'

13-3/8" csg. 36#; set @ 379'
w/350 sx cmt.

8-5/8" csg 32#; set @ 4920'
@ 4920' w/3748' sx cmt.

5-1/2" csg cut & pulled @
5500'.

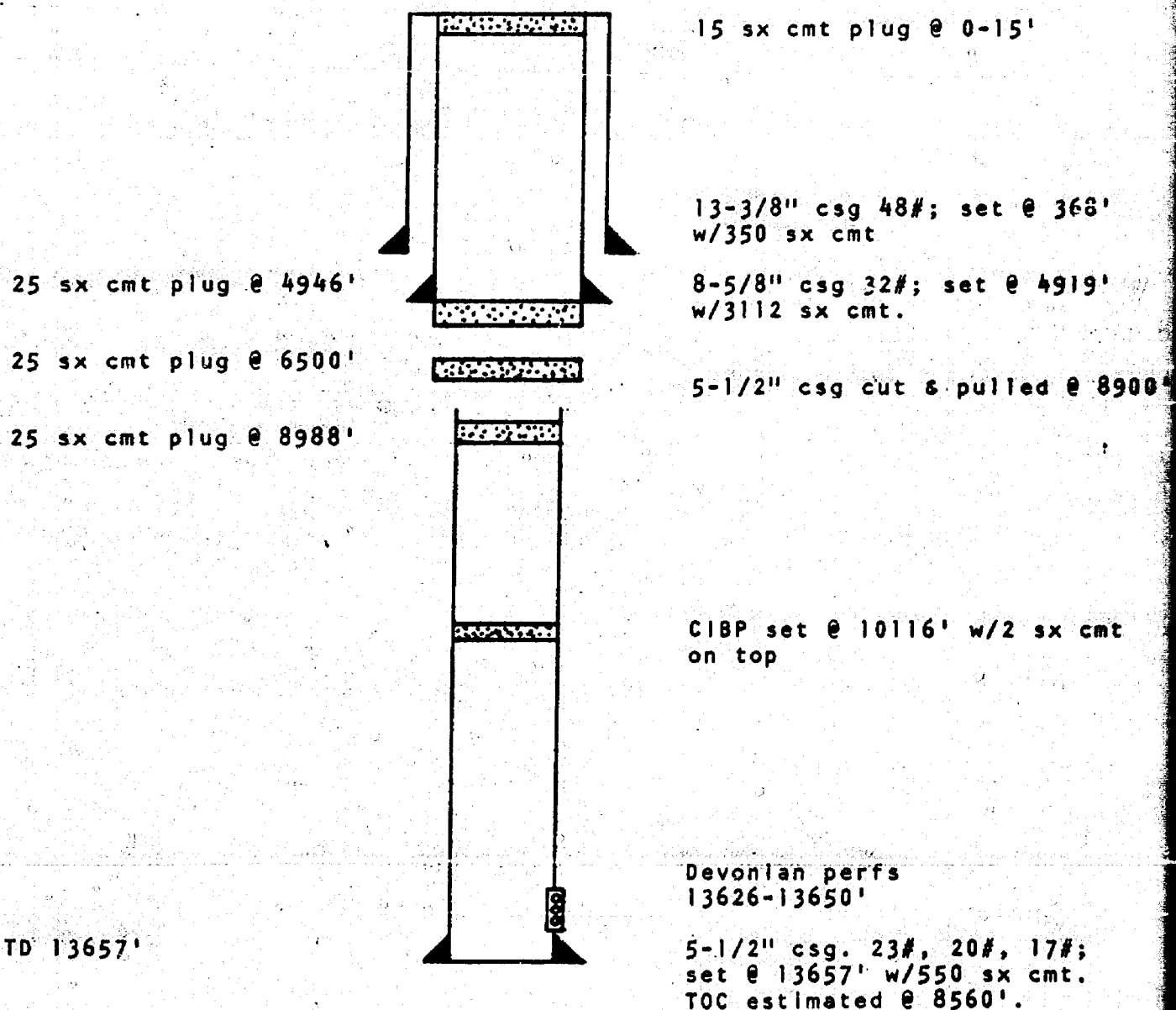
CIBP set @ 10615' w/1 sx cmt @
10607-10615'
Permo Penn perfs
10658-10670'

Devonian perfs
13626-13698'
5-1/2" csg 23#, 20#, 17#; set @
13700' w/400 sx cmt.
TOC estimated @ 10,000'.

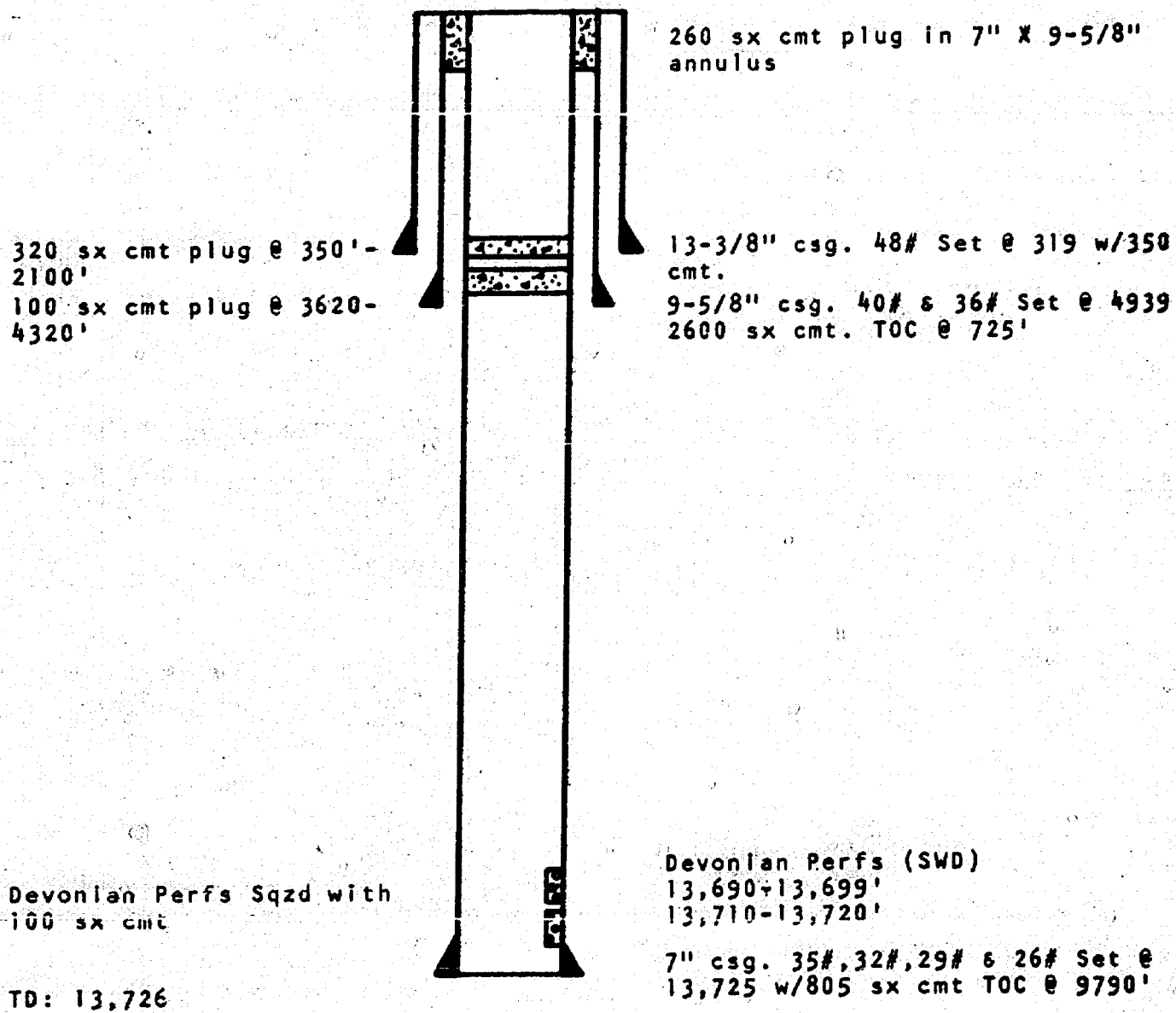
CITIES SERVICE OIL COMPANY
State AW No. 2

1980' FEL & 1980' FSL
Section 35, T-15S, R-36E
Lea County, New Mexico

Plugged & Abandoned September 8, 1970



ATLANTIC RICHFIELD CO.
 Lea State 396 No. 3
 1980 FNL, 1980 FEL
 Section 35, T15S, R36E
 Lea County, New Mexico
 Plugged & Abandoned November 30, 1978



EXXON
State AJ No. 1

1980' FEL & 660' FSL
Section 26, T-15S, R-36E
Lea County, New Mexico

Plugged & Abandoned June 12, 1973

10 sx cmt @ surface

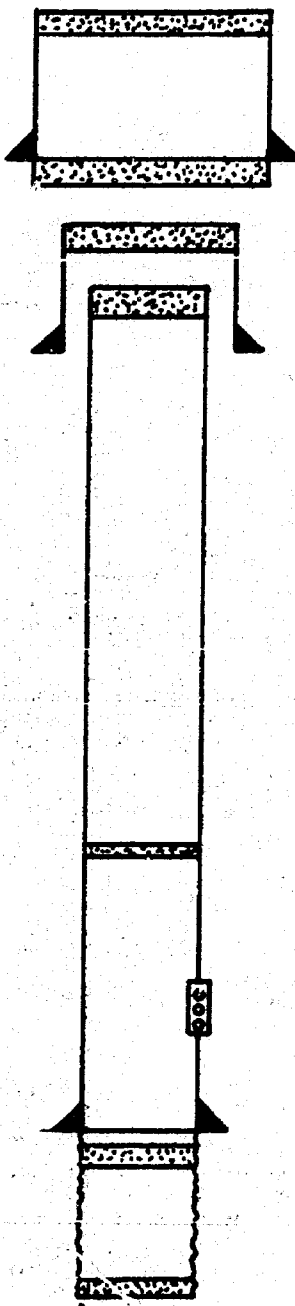
700 sx cmt plug @ 390'

70 sx cmt plug @ 803'

50 sx cmt plug @ 2211'

150 sx cmt plug @
11700-11850'

TD: 13813'



13-3/8" csg 48# set @ 340' w/
325 sx cmt.

9-5/8" esg cut & pulled @ 753'

5-1/2" csg cut & pulled @ 2610'
9-5/8" esg 36#; set @ 4750'
w/3070 sx cmt.

CIBP set @ 10300' w/4 sx cmt
on top

Permo Penn perms
11552-11582'

5-1/2" csg 23#, 20#, 17#;
set @ 11675' w/1225 sx cmt
TOC @ 2195'.

200 sx cmt plug @ 13613-13813'

Well Name and Location	Casing Strings O.D. (In.), WT (LB/ft)	Setting Depths (ft)	Sacks of Cement Used	Top of Cement (ft)	Total Depth (ft)	Producing Interval (ft)
Harethon Dean "A" #1 990 FNL, 660 FNL Sec 35, T15S, R36E	16, 65# 10-3/4, 51#, 45#, 40# 5 1/2, 35#, 32#, 29#, 26#	358 4934 13780	500 3955 1255	Surface Surface 500 (a) (8-3/4" hole)	13,781	P & A
ARCo JP Dean #1 660 FSL, 1980 FNL Sec 35, T15S, R36E	13-3/8, 48# 9-5/8, 40#, 36# 5 1/2, 23#, 20#, 17#	322 4979 13910	375 2400 550	Surface Surface 10,265+	13,910	13,600- 13,725
Cities Service State AW #1 1980 FEL, 660 FSL Sec 35, T15S, R36E	13-3/8, 36# 8-5/8, 32# 5 1/2, 23#, 20#, 17#	379 4920 13700	350 3065 400	Surface Surface 10,000' (a) (7-7/8" hole)	13,700	P & A
Cities Service State AW #2 1980 FEL, 1980 FSL Sec 35, T15S, R36E	13-3/8, 48# 8-5/8, 32# 5 1/2, 23#, 20#, 17#	368 4919 13657	350 3112 3100	Surface Surface 8560 (a) (7-7/8" hole)	13,657	P & A
ARCo Lea State 396 #3 1980 FNL, 1980 FEL Sec 35, T15S, R36E	13-3/8, 48E 9-5/8, 36#, 40# 7, 35#	319 4939 13725	350 2600 805	Surface 725* 9790 *	13,726	P & A
ARCo Lea State 396 #2 1980 FNL, 1980 FNL AWX 35, R14A, E36W	13-3/8, 48# 9-5/8, 40# 7, 35#, 32#, 29#, 26#	309 4950 13700	350 2600 700	Surface 725* 9380 *	13,729	11,504 - 11,540
Exxon State AJ #1 1980 FEL, 660 FSL Sec 26, T15S, R36E	13-3/8, 48# 9-5/8, 36# 5 1/2, 23#, 20#, 17#	340 4750 11675	325 3070 1225	Surface 780* 2195 *	13,813	P & A
ARCo Dow Federal #1 660 FNL, 1980 FEL Sec 5, T16S, R36E	13-5/8, 48# 8-5/8, 32# 5 1/2, 23#, 20#, 17#	366 4955 13752	300 2300 270	Surface Surface 11,000 (a) (7-7/8" hole)	13,770	11,536 - 11,564

* Top of Cement Found By Temperature Survey.

(a) Estimated Top of Cement

BEFORE EXAMINED NUMBER
OIL CONSERVATION DIVISION
EXHIBIT NO. 4
CASE NO. 6414

T
15
S

(Humble)
TD 11,844

27

R 36 E

Mobil J. Kelly Gulf
②¹ ①¹ ①¹
26 J. Kelly
①¹ ②² ②²
H. Hand
①¹ ①¹
State

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Gulf
State

Marathon

Marathon J. Reedler

A.R.Co.

A.R.Co.

DEAN
PERMO-PENN

DEAN

34

Mobil

35

Yates

36

Mobil

RECOMMENDED
SWD

DEAN
DEVONIAN

State Lea "258"
Phillips

Holly
Energy
State

Mobil
C. Alexander

A.R.Co.
J.P. Dean

State

State

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Mountain Fuel Supply
SWD
TD 11,643
DEAN
PERMO-PENN
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S
R. Barton
6
Mesa
State
K. Harris et al

4
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A.R.Co.
U.S.
Schaffer et al
Mt. Fuel Supply
TD 11,800
DEAN
12
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Exxon
State

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La. Ld. & Expl. & Freeport
SWD
TD 11,656
La. Ld. & Expl. & Freeport
La. Ld. & Expl. & Freeport
Freeport et al
Freeport et al
F. Luthy
Freeport et al.

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 1
CASE NO. 6414

R 37 E

Atlantic Richfield Company
North American Producing Division
Permian District Midland, Texas

DEAN SWD SYSTEM
LEA COUNTY, NEW MEXICO

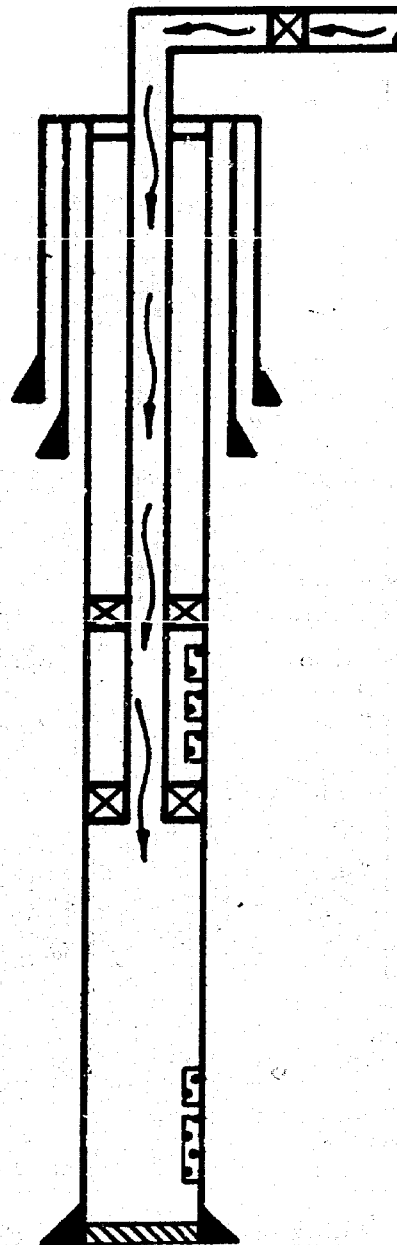
PENTRATES THE
INJECTION ZONE

SCALE 1" = 2000'

By: J. ROBINSON	Drawn By:	Date: 12-78
Date: 12-78	Revised By:	Date:
Dept: WEST AREA ENGR.	Dwg No:	

ATLANTIC RICHFIELD COMPANY
Lea 396 State No. 1
Proposed Salt Water Disposal Well

1980' FSL & 2010' FWL
Section 35, T-15S, R-36E
Lea County, New Mexico



2-3/8" OD TUBING
(Internally Coated)

13-3/8" csg. 48#. Set @
300' w/350 sq. cmt.

9-5/8" csg. 40# & 36#.
Set @ 4926' w/2600
sq. cmt.

Pkr set @ approx 10,320'
Permo Penn Perfs
10,380-395'
10,630-665'
11,510-560'

Pkr. set @ approximately
13,530'.

Devonian perforations @
13,592-602'
13,625-654'

7" csg. 26# - 35#. Set @
13,685' w/100 sq. TOC @
9,749'.

BEFORE EXAMINER MUTTER

OIL CONSERVATION DIVISION

EXHIBIT NO. 2

CASE NO. 6414

MARATHON OIL COMPANY
A. C. Dean "A" No. 1

990' FNL & 660' FWL
Section 35, T-15S, R-36E
Lea County, New Mexico

Plugged & Abandoned January 30, 1961

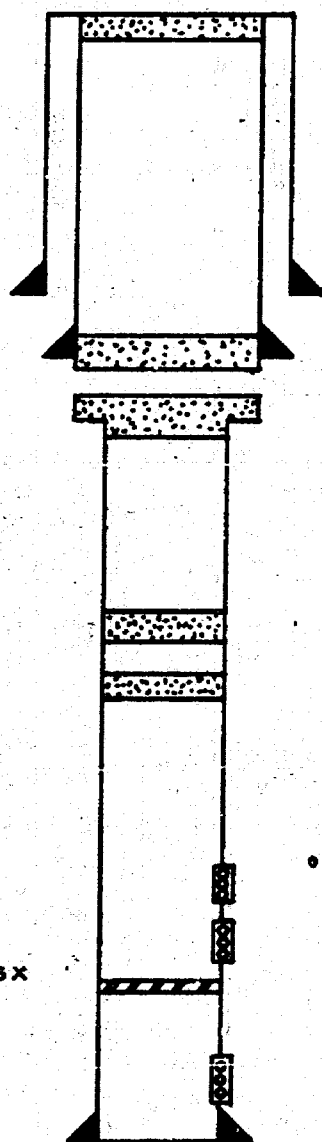
BEFORE EXAMINER NOTED
OIL CONSERVATION DIVISION
EXHIBIT NO. 3
CASE NO. 6414

120 sx cmt plug @
4834-5034'

65 sx cmt plug @
5880-6080'.

CIBP set @ 11720' w/2 sx
cmt on top

TD: 13781'



25 sx cmt plug @ 0-50'

16" csg 65#; set @ 358' w/
500 sx cmt.
10-3/4" csg 51#, 45#, 40#; set
4934' w/3955' sx cmt.

7" csg cut & pulled @ 5980'

CIBP set @ 10204' w/25 sx cmt
plug @ 10038-10204'
25 sx cmt plug @ 10282-10420'

Permo Penn Perfs
11550-11590'

11604-11624'

Devonian perfs
13756-13778'

7" csg 35#, 32#, 29#, 26#; set
@ 13780' w/1255 sx cmt.
TOC estimated @ 500'.

CITIES SERVICE OIL COMPANY
State AW No. 1

1980' FEL & 660' FSL
Section 35, T-15S, R-36E
Lea County, New Mexico

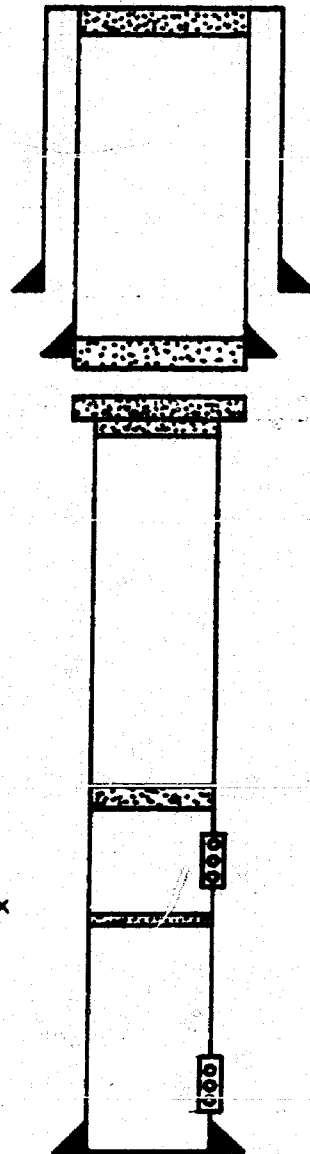
Plugged & Abandoned July 16, 1969

25 sx cmt plug @
4870-4949'

30 sx cmt plug @
5460-5551'

CIBP set @ 10720' w/1 sx
cmt on top.

TD: 13700'



10 sx cmt plug @ 0-30'

13-3/8" csg. 36#; set @ 379'
w/350 sx cmt.

8-5/8" csg 32#; set @ 4920'
@ 4920' w/3748' sx cmt.

5-1/2" csg cut & pulled @
5500'.

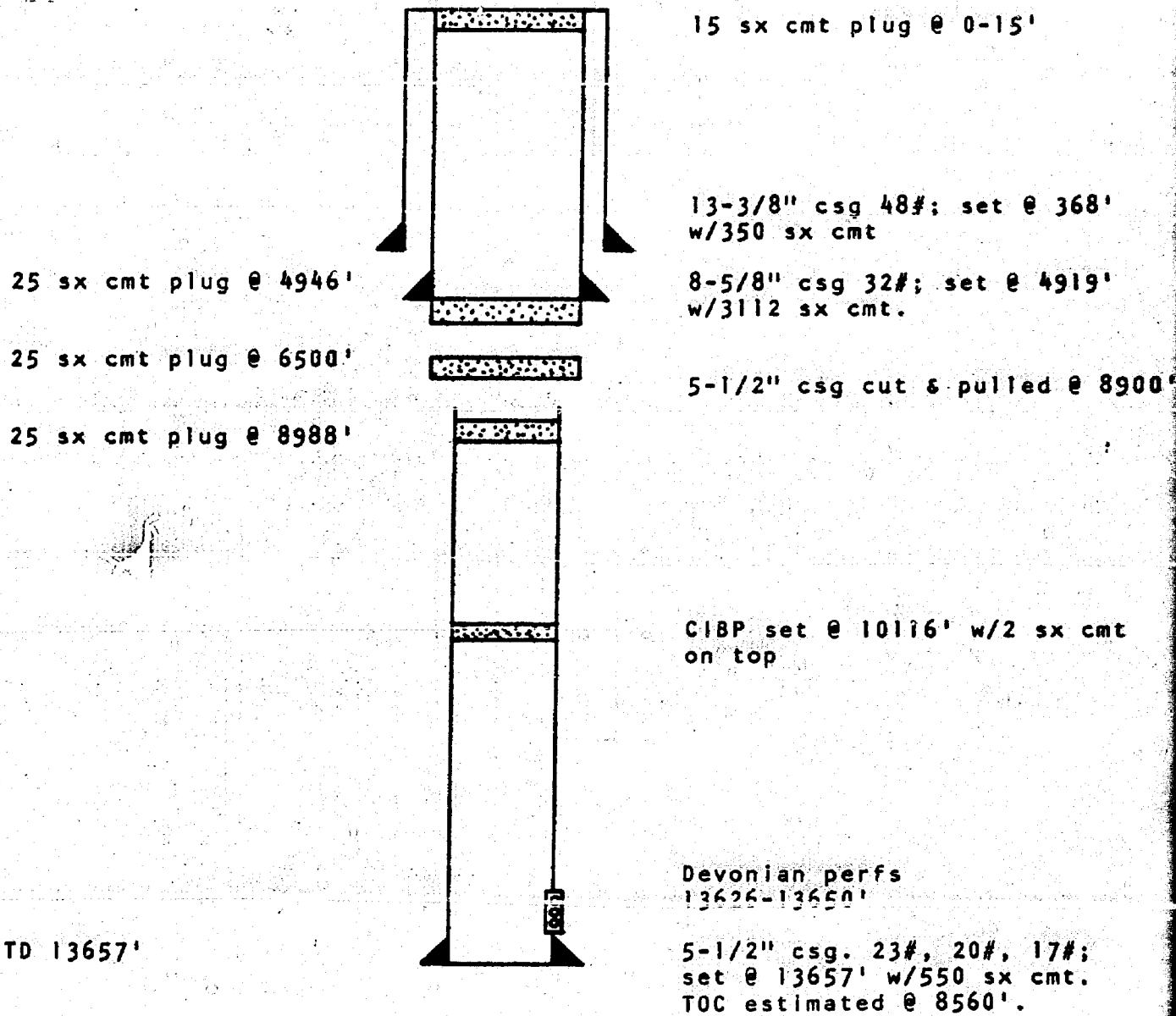
CIBP set @ 10615' w/1 sx cmt @
10607-10615'
Perm Penn perms
10658-10670'

Devonian perms
13626-13698'
5-1/2" csg 23#, 20#, 17#; set @
13700' w/400 sx cmt.
TOC estimated @ 10,000'.

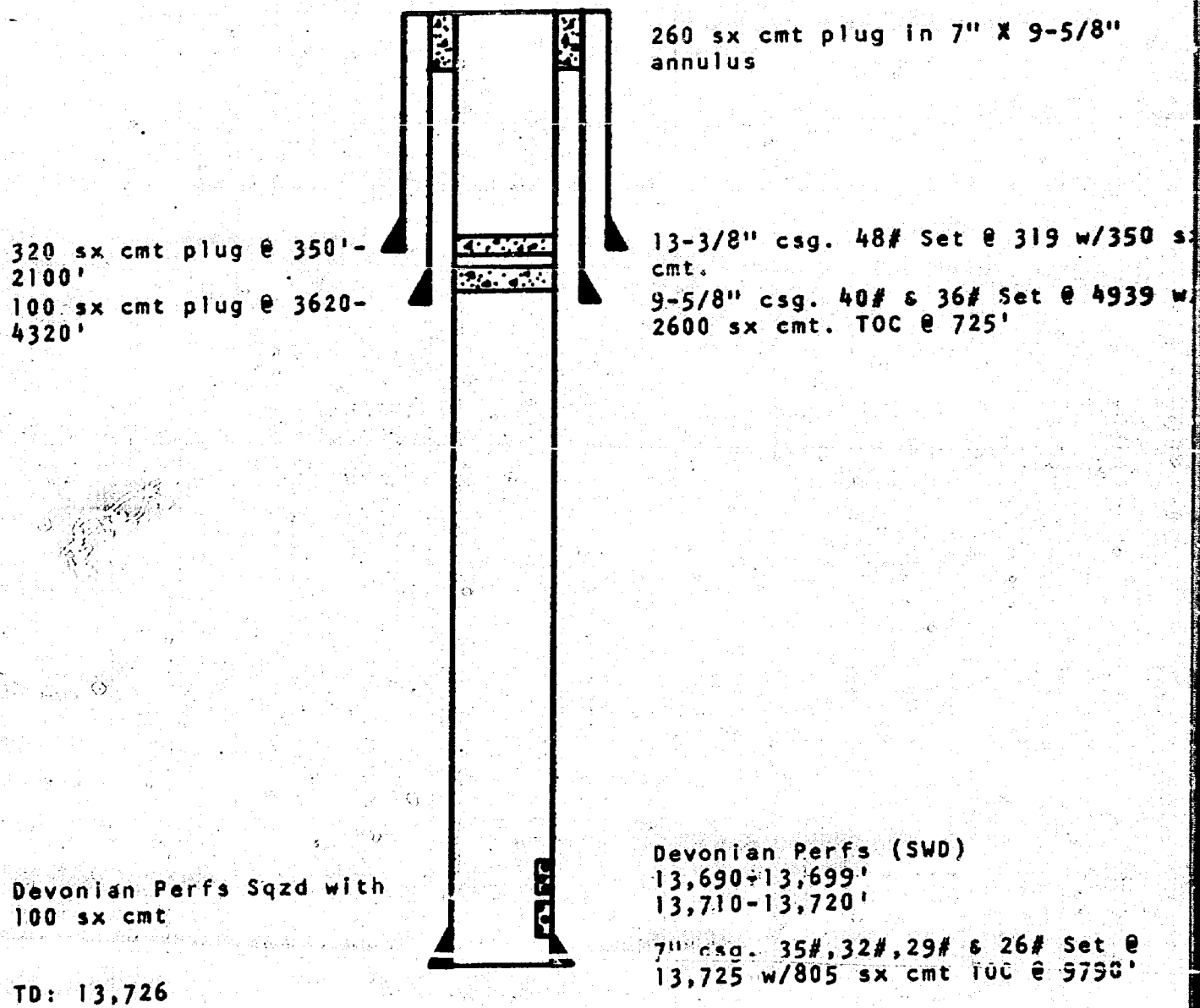
CITIES SERVICE OIL COMPANY
State AW No. 2

1980' FEL & 1980' FSL
Section 35, T-15S, R-36E
Lea County, New Mexico

Plugged & Abandoned September 8, 1970



ATLANTIC RICHFIELD CO.
 Lea State 396 No. 3
 1980 FNL, 1980 FEL
 Section 35, T15S, R36E
 Lea County, New Mexico
 Plugged & Abandoned November 30, 1978



EXXON
State AJ No. 1

1980' FEL & 660' FSL
Section 26, T-15S, R-36E
Lea County, New Mexico

Plugged & Abandoned June 12, 1973

10 sx cmt @ surface

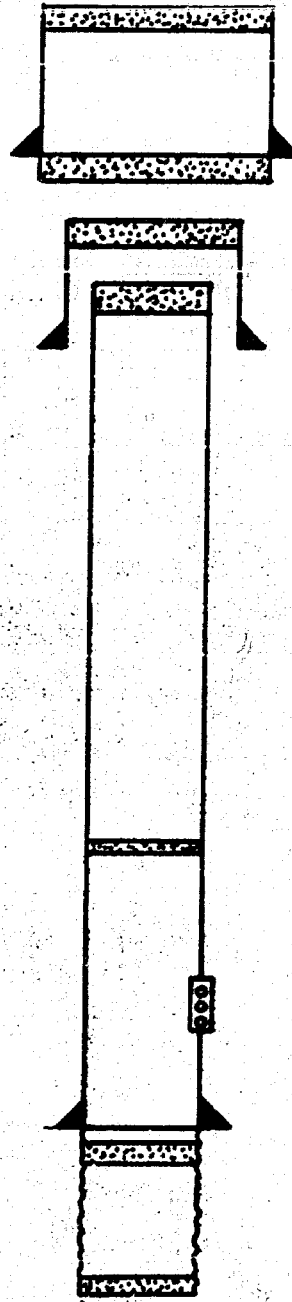
700 sx cmt plug @ 390'

70 sx cmt plug @ 803'

50 sx cmt plug @ 2211'

150 sx cmt plug @
11700-11850'

TD: 13813'



13-3/8" csg 48# set @ 340' w/
325 sx cmt.
9-5/8" csg cut & pulled @ 753'

5-1/2" csg cut & pulled @ 2610'
9-5/8" csg 36#; set @ 4750'
w/3070 sx cmt.

CIBP set @ 10300' w/4 sx cmt
on top

Permo Penn perfs
11552-11582'

5-1/2" csg 23#, 20#, 17#;
set @ 11675' w/1225 sx cmt
TDC @ 2195'.

200 sx cmt plug @ 13613-13813'

Well Name and Location	Casing Strings O.D. (In.), WT (LB/ft)	Setting Depths (ft)	Sacks of Cement Used	Top of Cement (ft)	Total Depth (ft)	Producing Interval (ft)
Arthon Dean "A" #1 FNL, 660 FWL 35, T15S, R36E	16, 65# 10-3/4, 51#, 45#, 40# 5 1/2, 35#, 32#, 29#, 26#	358 4934 13780	500 3955 1255	Surface Surface 500(a) (8-3/4" hole)	13,781	P & A
Co JP Dean #1 FSL, 1980 FWL 35, T15S, R36E	13-3/8, 48# 9-5/8, 40#, 36# 5 1/2, 23#, 20#, 17#	322 4979 13910	375 2400 550	Surface Surface 10,265*	13,910	13,600- 13,725
Les Service State AW #1 FEL, 660 FSL 35, T15S, R36E	13-3/8, 36# 8-5/8, 32# 5 1/2, 23#, 20#, 17#	379 4920 13700	350 3065 400	Surface Surface 10,000' (a) (7-7/8" hole)	13,700	P & A
Les Service State AW #2 FEL, 1980 FSL 35, T15S, R36E	13-3/8, 48# 8-5/8, 32# 5 1/2, 23#, 20#, 17#	368 4919 13657	350 3112 3100	Surface Surface 8560 (a) (7-7/8" hole)	13,657	P & A
Co Lea State 396 #3 FNL, 1980 FEL 35, T15S, R36E	13-3/8, 48E 9-5/8, 36#, 40# 7, 35#	319 4939 13725	350 2600 805	Surface 725* 9790 *	13,726	P & A
Co Lea State 396 #2 FNL, 1980 FWL 35, R14A, E36W	13-3/8, 48# 9-5/8, 40# 7, 35#, 32#, 29#, 26#	309 4950 13700	350 2600 700	Surface 725 * 9380 *	13,720	11,504 - 11,540
on State AJ #1 FEL, 660 FSL 26, T15S, R36E	13-3/8, 48# 9-5/8, 36# 5 1/2, 23#, 20#, 17#	340 4750 11675	325 3070 1225	Surface 780 * 2195 *	13,813	P & A
o Dow Federal #1 FNL, 1980 FEL 5, T16S, R36E	13-5/8, 48# 8-5/8, 32# 5 1/2, 23#, 20#, & 17#	366 4955 13752	300 2300 270	Surface Surface 11,000 (a) (7-7/8" hole)	13,770	11,536 - 11,564

* Top of Cement Found By Temperature Survey.

(a) Estimated Top of Cement

BEFORE EXAMINER MUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 4
CASE NO. 6414

T
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(Humble)
TO 11,844 27

Mobil

J. Kelly

Gulf

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J. Kelly

Gulf

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H. Hand

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State

State

Marathon

Marathon

J. Reedler

A.R.Co.

A.R.Co.

DEAN
PERMO-PENN

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Mobil

RECOMMENDED
SWD

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Yates

Mobil

36

Exxon

DEAN

Holly
Energy

Mobil

A.R.Co.

DEAN
DEVONIAN

State - Lea "258"

Phillips

State

C. Alexander

J.P. Dean

State

State

Mountain Fuel Supply

(Mobil)

SWD
TO 11,643

DEAN
PERMO-PENN

A.R.Co.

U.S.

Mobil

La. Ld. & Expl. & Freeport

SWD
TO 11,656

La. Ld. & Expl. & Freeport

Mesa

Mt. Fuel
Supply

TO 11,800

DEAN

La. Ld. & Expl. & Freeport

Freeport
et al

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BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION

EXHIBIT NO. 1

CASE NO. 6414

R 37 E

Atlantic Richfield Company
North American Producing Division
Permian District Midland, Texas

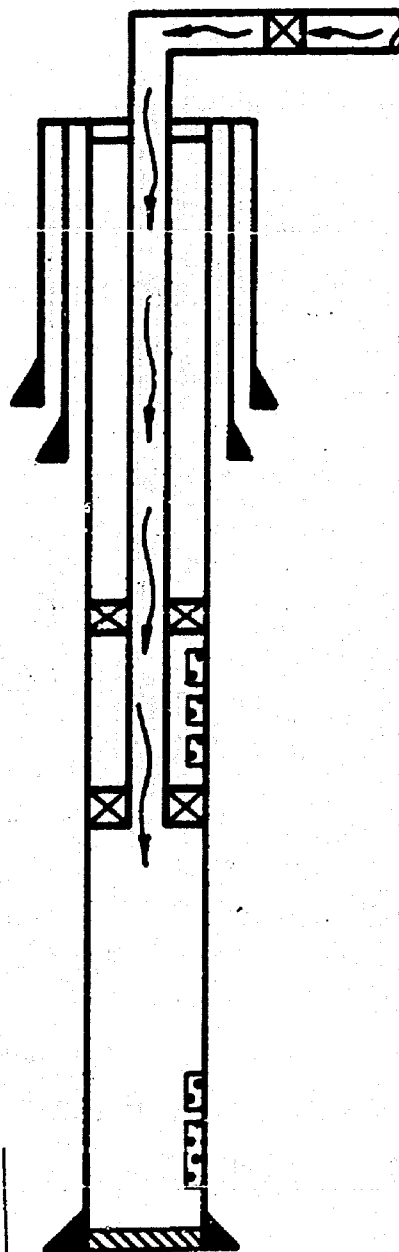
DEAN SWD SYSTEM
LEA COUNTY, NEW MEXICO

PENTRATES THE
INJECTION ZONE

SCALE 1" = 2000'

By: J. ROBINSON	Drawn By:	Date: 12-78
Date: 12-78	Revised By:	Date:
Dept: WEST AREA ENGR.	Dwg No:	

ATLANTIC RICHFIELD COMPANY
 Lea 396 State No. 1
 Proposed Salt Water Disposal Well
 1980' FSL & 2010' FWL
 Section 35, T-15S, R-36E
 Lea County, New Mexico



2-3/8" OD TUBING
 (Internally Coated)

13-3/8" csg. 48#. Set @
 300' w/350 sx. cmt.

9-5/8" csg. 40# & 36#.
 Set @ 4926' w/2600
 sx. cmt.

Pkr set @ approx 10,320'
 Permo Penn Perfs
 10,380-395'
 10,630-665'
 11,510-560'

Pkr. set @ approximately
 13,530'.

Devonian perforations @
 13,592-602'
 13,625-654'

7" csg. 26# - 35#. Set @
 13,685' w/100 sx. TOC @
 9,749'.

BEFORE EXAMINER MUTTER
 OIL CONSERVATION DIVISION
 EXHIBIT NO. 2
 CASE NO. 6414

MARATHON OIL COMPANY
A. C. Dean "A" No. 1

990' FNL & 660' FWL
Section 35, T-15S, R-36E
Lea County, New Mexico

Plugged & Abandoned January 30, 1961

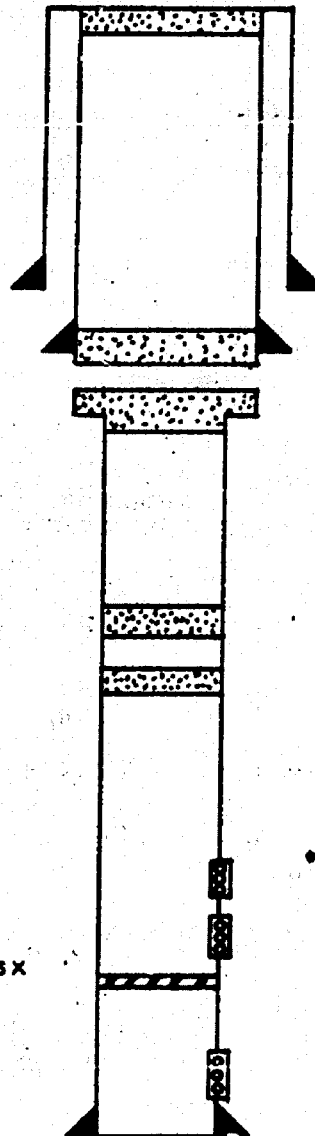
BEFORE EXAMINER MUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 3
CASE NO. 6414

120 sx cmt plug @
4834-5034'

65 sx cmt plug @
5880-6080'.

CIBP set @ 11720' w/2 sx
cmt on top

TD: 13781'



25 sx cmt plug @ 0-50'

16" csg 65#; set @ 358' w/
500 sx cmt.
10-3/4" csg 51#, 45#, 40#; set
4934' w/3955' sx cmt.

7" csg cut & pulled @ 5980'

CIBP set @ 10204' w/25 sx cmt
plug @ 10038-10204'
25 sx cmt plug @ 10282-10420'

Permo Penn Perfs
11550-11590'

11604-11624'

Devonian perfs
13756-13778'

7" csg 35#, 32#, 29#, 26#; set
@ 13780' w/1255' sx cmt.
TOC estimated @ 500'.

CITIES SERVICE OIL COMPANY
State AW No. 1

1980' FEL & 660' FSL
Section 35, T-15S, R-36E
Lea County, New Mexico

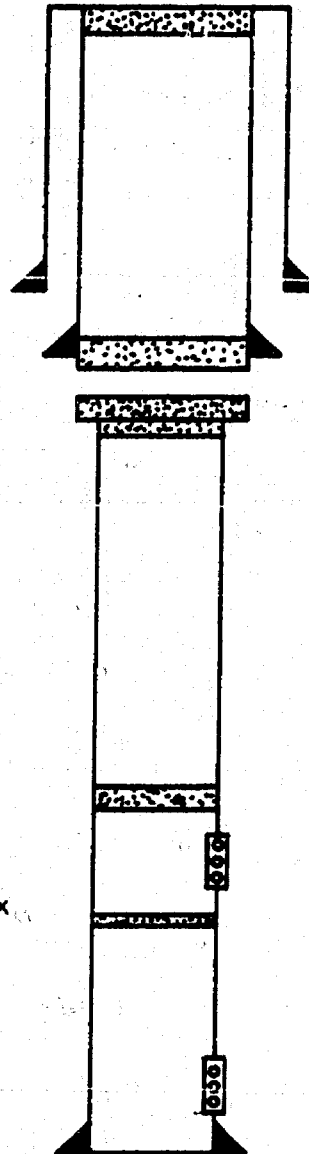
Plugged & Abandoned July 16, 1969

25 sx cmt plug @
4870-4949'

30 sx cmt plug @
5460-5551'

CIBP set @ 10720' w/1 sx
cmt on top.

TD: 13700'



10 sx cmt plug @ 0-30'

13-3/8" csg. 36#; set @ 379'
w/350 sx cmt.

8-5/8" csg 32#; set @ 4920'
@ 4920' w/3748' sx cmt.

5-1/2" csg cut & pulled @
5500'.

CIBP set @ 10615' w/1 sx cmt @
10607-10615'
Permo Penn perms
10658-10670'

Devonian perms
13626-13698'
5-1/2" csg 23#, 20#, 17#; set @
13700' w/400 sx cmt.
TOC estimated @ 10,000'.

CITIES SERVICE OIL COMPANY
State AW No. 2

1980' FEL & 1980' FSL
Section 35, T-15S, R-36E
Lea County, New Mexico

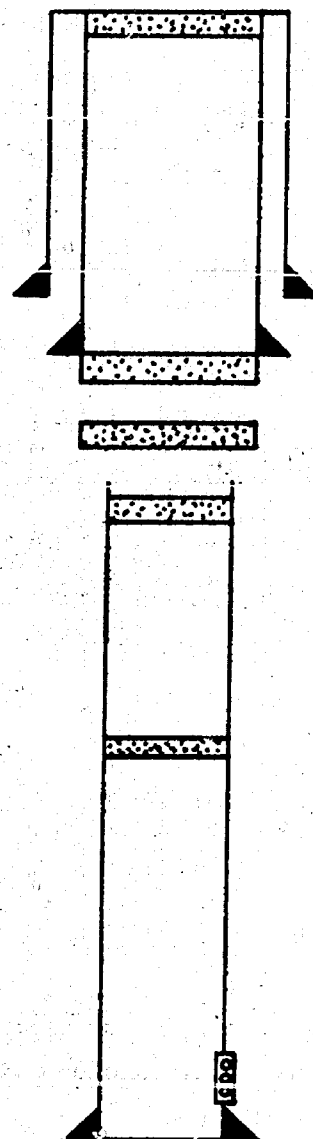
Plugged & Abandoned September 8, 1970

25 sx cmt plug @ 4946'

25 sx cmt plug @ 6500'

25 sx cmt plug @ 8988'

TD 13657'



15 sx cmt plug @ 0-15'

13-3/8" csg 48#; set @ 368'
w/350 sx cmt

8-5/8" csg 32#; set @ 4919'
w/3112 sx cmt.

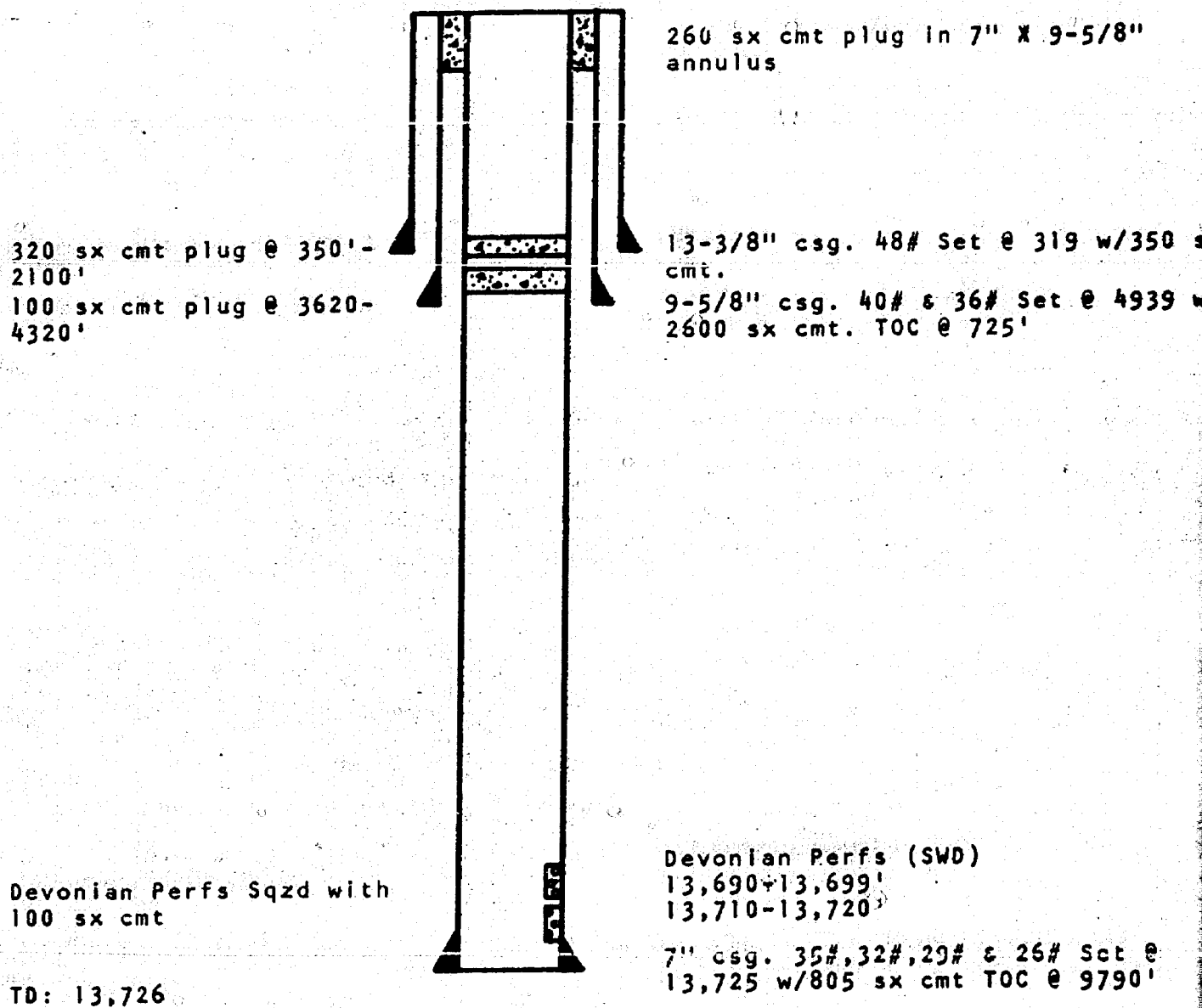
5-1/2" csg cut & pulled @ 8900'

CIBP set @ 10116' w/2 sx cmt
on top

Devonian perfs
13626-13650'

5-1/2" csg. 23#, 20#, 17#;
set @ 13657' w/550 sx cmt.
TOC estimated @ 8560'.

ATLANTIC RICHFIELD CO.
 Lea State 396 No. 3
 1980 FNL, 1980 FEL
 Section 35, T15S, R36E
 Lea County, New Mexico
 Plugged & Abandoned November 30, 1978



EXXON
State AJ No. 1

1980' FEL & 660' FSL
Section 26, T-15S, R-36E
Lea County, New Mexico

Plugged & Abandoned June 12, 1973

10 sx cmt @ surface

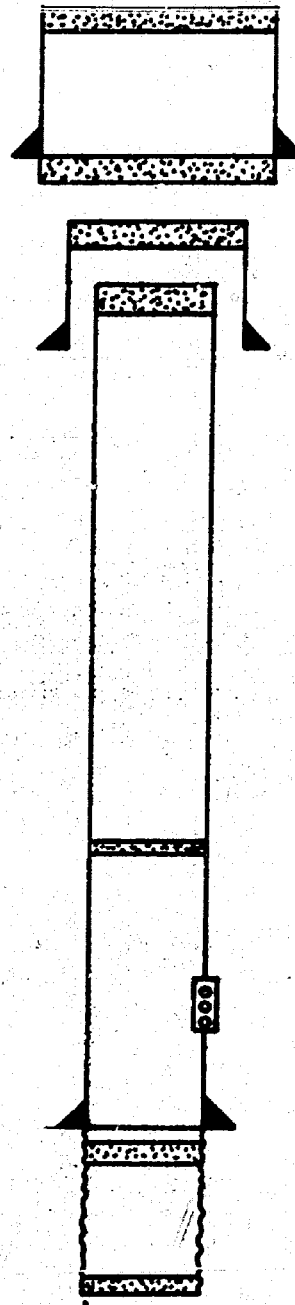
100 sx cmt plug @ 390'

70 sx cmt plug @ 803'

50 sx cmt plug @ 2211'

150 sx cmt plug @
11700-11850'

TD: 13813'



13-3/8" csg 48# set @ 340' w/
325 sx cmt.

9-5/8" csg cut & pulled @ 753'

5-1/2" csg cut & pulled @ 2610'
9-5/8" csg 36#; set @ 4750'
w/3070 sx cmt.

CIBP set @ 10300' w/4 sx cmt
on top

Permo Penn perfs
11552-11582'

5-1/2" csg 23#, 20#, 17#;
set @ 11675' w/1225 sx cmt
TOC @ 2195'.

200 sx cmt plug @ 13613-13813'

Well Name and Location	Casing Strings O.D. (In.), WT (LB/ft)	Setting Depths (ft)	Sacks of Cement Used	Top of Cement (ft)	Total Depth (ft)	Producing Interval (ft)
Lea State "A" #1 FNL, 660 FWL 35, T15S, R36E	16, 65# 10-3/4, 51#, 45#, 40# 5 1/2, 35#, 32#, 29#, 26#	358 4934 13780	500 3955 1255	Surface Surface 500 (a) (8-3/4" hole)	13,781	P & A
Lea State #1 FSL, 1980 FWL 35, T15S, R36E	13-3/8, 48# 9-5/8, 40#, 36# 5 1/2, 23#, 20#, 17#	322 4979 13910	375 2400 550	Surface Surface 10,265*	13,910	13,600- 13,725
Lea Service State AW #1 FEL, 660 FSL 35, T15S, R36E	13-3/8, 36# 8-5/8, 32# 5 1/2, 23#, 20#, 17#	379 4920 13700	350 3065 400	Surface Surface 10,000' (a) (7-7/8" hole)	13,700	P & A
Lea Service State AW #2 FEL, 1980 FSL 35, T15S, R36E	13-3/8, 48# 8-5/8, 32# 5 1/2, 23#, 20#, 17#	368 4919 13657	350 3112 3100	Surface Surface 8560 (a) (7-7/8" hole)	13,657	P & A
Lea State 396 #3 FNL, 1980 FEL 35, T15S, R36E	13-3/8, 48E 9-5/8, 36#, 40# 7, 35#	319 4939 13725	350 2600 805	Surface 725* 9790 *	13,726	P & A
Lea State 396 #2 FNL, 1980 FWL 35, R14A, E36W	13-3/8, 48# 9-5/8, 40# 7, 35#, 32#, 29#, 26#	309 4950 13700	350 2600 700	Surface 725 * 9380 *	13,720	11,504 - 11,540
Lea State AJ #1 FEL, 660 FSL 26, T15S, R36E	13-3/8, 48# 9-5/8, 36# 5 1/2, 23#, 20#, 17#	340 4750 11675	325 3070 1225	Surface 780 * 2195 *	13,813	P & A
Dow Federal #1 FNL, 1980 FEL 5, T16S, R36E	13-5/8, 48# 8-5/8, 32# 5 1/2, 23#, 20#, & 17#	366 4955 13752	300 2300 270	Surface Surface 11,000 (a) (7-7/8" hole)	13,770	11,536 - 11,564

* Top of Cement Found By Temperature Survey.

(a) Estimated Top of Cement

BEFORE EXAMINER MUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. <u>7</u>
CASE NO. <u>6414</u>

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
17 January 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Atlantic Richfield) CASE
Company for salt water disposal,) 6414
Lea County, New Mexico.)

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Lynn Teschendorf, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: Conrad Coffield, Esq.
HINKLE, COX, EATON, COFFIELD &
HENSLEY
Midland, Texas

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
1024 Pina Blanca (603) 471-2462
Santa Fe, New Mexico 87501

I N D E X

BOB MALAISE

Direct Examination by Mr. Coffield 3

Cross Examination by Mr. Nutter 12

E X H I B I T S

Applicant Exhibit One, Plat 12

Applicant Exhibit Two, Sketch 12

Applicant Exhibit Three, Diagrams 12

Applicant Exhibit Four, Summary 12

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Elancon (SOS) 471-2462
Santa Fe, New Mexico 87501

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MR. NUTTER: Call next Case 6414.

MS. TESCHENDORF: Case 6414. Application of Atlantic Richfield Company for salt water disposal, Lea County, New Mexico.

MR. COFFIELD: Conrad Coffield of the Hinkle Law Firm, Midland, Texas, appearing on behalf of Atlantic Richfield Company, and I have one witness, who has already been sworn.

BOB MALAISE

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. COFFIELD:

Q Please state your name, address, occupation, and employer.

A My name is Bob Malaise. I'm employed by Atlantic Richfield and I'm employed in Midland, Texas.

Q Mr. Malaise, are you familiar with the application of Atlantic Richfield in this case?

A Yes, I am.

Q Are you familiar with the property and the proposed well location involved in this case?

A Yes, I am.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2030 Plaza Blanca (903) 471-2463
Santa Fe, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2020 Plaza Blanca (955) 471-2462
Santa Fe, New Mexico 87501

1 Q And have you previously testified as a petro-
2 leum engineer before the Division?

3 A Yes, I have.

4 Q Are your qualifications accepted and a matter
5 or record before the Division?

6 A Yes, they were.

7 MR. COFFIELD: Is the witness considered
8 qualified, Mr. Examiner?

9 MR. NUTTER: Yes, he is.

10 Q (Mr. Coffield continuing.) Mr. Malaise,
11 what does Atlantic Richfield seek by this application?

12 A Atlantic Richfield is seeking authority to
13 dispose of produced salt water into the Devonian formation
14 through a perforated interval 13,590 feet to 13,685 feet
15 in the Lea 396 State Well No. 1, which is located in Unit
16 K of Section 35, Township 15 South, 36 East, in the Dean-
17 Devonian Pool, Lea County, New Mexico.

18 Q Mr. Malaise, refer to what has been marked
19 as Exhibit One and explain what this represents.

20 A Exhibit One is a location plat of this area.
21 It shows the recommended or proposed salt water disposal
22 well that is encircled in red. It also shows three other
23 producing wells in this field that Atlantic Richfield
24 operates. They are the J. P. Dean No. 1, the Dow Federal
25 No. 1, and the 396 Well No. 2. These are circled in blue

1 and are the three producing wells that we propose go into
2 the Dean salt water disposal system.

3 In addition, the plat shows four or five
4 other wells that are colored orange and are not encircled
5 in blue that are wells that penetrate the Devonian formation
6 which have been plugged and abandoned.

7 Q Okay, Mr. Malaise, I believe you may have
8 already designated -- said this, but what is the -- again,
9 what is the designation and location of this proposed in-
10 jection well?

11 A This proposed injection well is located 1980
12 feet from the south line and 2010 feet from the west line
13 of Section 35, Township 15 South, Range 36 East, in Lea
14 County.

15 Q Is Atlantic Richfield the operator on this
16 property?

17 A They are.

18 Q Okay, would you please give a history of
19 this injection well, when it was drilled and completion
20 date, and so forth?

21 A This particular well had been drilled and
22 had produced hydrocarbons from the Permo-Penn Field and
23 also from the Devonian Field; for approximately the last two
24 years the well has been temporarily abandoned and it has
25 been our intent to use it as a backup well for our 396 Well

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1 No. 3, which was the disposal well in this particular field.

2 This particular well has been P&A'd and we
3 are without a disposal well. This is one of the purposes
4 for this particular application.

5 Q Mr. Malaise, was a log of this proposed in-
6 jection well previously submitted to the Division?

7 A Yes, it was.

8 Q When, when did you do that, do you recall?

9 A This was submitted when the original appli-
10 cation was filed for administrative approval for this parti-
11 cular well to flow salt water into and the letter sent to
12 the Commission was dated November the 29th, 1978, and it
13 was sent to the Santa Fe office.

14 Q All right, would you go ahead and refer then
15 to what has been marked as Exhibit Two and explain to the
16 Examiner what this reveals?

17 A Exhibit Two is a diagrammatic sketch of the
18 proposed salt water disposal well. Several points that
19 should be noted on the sketch are that -- the fact that we
20 have 7-inch casing that is set at 13,685 feet, and it's been
21 cemented with 100 sacks of cement. By temperature survey
22 we have located the top of that cement at 9749 feet.

23 Our diagrammatic sketch indicates that we
24 plan to inject down 2-3/8ths inch tubing, which we propose
25 to be internally coated. We have a set of perforations that

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1 are open in the Penn that we propose to straddle with two
2 packers. Those perforations are in the Penn are 10,380 feet
3 to 395 feet, 10,630 feet to 665 feet and 11,510 feet to
4 590 feet.

5 It would be 11,510 feet to 11,560 feet, I'm
6 sorry.

7 The perforated interval in the Devonian that
8 we propose to inject into is from 13,592 feet to 602 feet
9 and 13,625 feet to 654 feet.

10 This particular well we would also anticipate
11 and it's not on the sketch, having a pressure gauge where
12 we could visually monitor the pressure on the casing tubing
13 annulus.

14 Q Okay, let's go on to what's been marked as
15 Exhibit Three, Mr. Malaise, and please explain what that
16 represents.

17 A Exhibit Three are wellbore diagrams of the
18 five wells within a half a mile radius that have been
19 plugged and abandoned and that penetrated the Devonian
20 formation. The data that was collected to prepare these
21 was some -- one of the wells was operated by Atlantic Rich-
22 field. The four other wells are operated by other operators
23 but it was collected from the District Office in Hobbs, the
24 available well files, and it was prepared -- in most cases
25 we had setting depths and amounts of cement with temperature

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1 surveys and got additional information from the plugged and
2 abandoned data that was submitted to the Commission.

3 In certain cases we did not have cement tops
4 on some strings of casing. We made an estimate of the
5 cement tops and it's so noted on the next exhibit.

6 Q Okay, do you have anything further to comment
7 on?

8 A Not unless the Commission would like to go
9 through each exhibit individually.

10 Q Okay.

11 MR. NUTTER: No, go ahead.

12 Q Let's go on into Exhibit Four and explain
13 what that represents.

14 A Exhibit Four is a summary of all the wells
15 within a half a mile both producing and P&A'd. It gives
16 a description of the wells, both a description of the well
17 name as well as the well location, the casing strings that
18 were run in these wells, their setting depths, the amounts
19 of cement that were used to cement these strings, and
20 where available, as I mentioned before, we have indicated
21 either the cement was circulated to surface or we had a
22 temperature survey to indicate the top. In certain cases
23 we estimated where the top of the cement was by available
24 data. Also gives the total depth of the well and either
25 the current producing interval that is open in a wellbore

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1 or in certain cases where the wells are P&A'd, we have so
2 indicated.

3 Q Mr. Malaise, what kind of fluid to you pro-
4 pose to be injected in this salt water disposal well?

5 A We will have an inert fluid, a fluid that
6 has been treated for --

7 Q No, I'm sorry, to be injected.

8 A Oh, to be injected we will be producing --
9 produced salt water will be injected into this well.

10 Q And what volume of salt water do you propose
11 to inject?

12 A We would anticipate that the volumes will
13 be in the neighborhood that we were currently injecting
14 prior to losing the No. 3, and it will be a minimum of
15 150 barrels a day and a maximum of 200 barrels a day.

16 Q Mr. Malaise, was a water analysis report
17 already submitted to the Oil Conservation Division?

18 A Yes, there was one that was submitted on the
19 Lea 396 Well No. 2 that, when we made our original appli-
20 cation in November.

21 Q Was it submitted with your letter of
22 November 29, '78?

23 A That's correct.

24 Q In the analysis of that water does it appear
25 that the fluids are compatible?

1 A The analysis, if you'll note, is an older
2 analysis. It does indicate they were compatible. We have
3 had no problems in the injection of the water in the No. 3
4 Well and I would -- it would indicate to me that that would
5 be visual proof that we did not have compatibility problems.

6 Q So these are the identical fluids that --

7 A The same fluids that we've been injecting
8 in the No. 3 will be injected in No. 1.

9 Q Do you expect to inject this water by pres-
10 sure?

11 A Yes. We have so indicated on the original
12 application a maximum pressure of 2000 pounds. This would
13 be the maximum that we would anticipate. The average pres-
14 sure for the last 12-month period has been running between
15 900 and 1000 pounds.

16 Q Mr. Malaise, do you already have the equip-
17 ment necessary to inject this under pressure?

18 A Yes, we do.

19 Q In fact is this the same equipment you had
20 on your prior well that you had to abandon?

21 A That's correct.

22 Q In this case will the casing tubing annulus
23 be filled with an inert fluid?

24 A Yes, it will.

25 Q And will you attach a pressure gauge to the

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1 annulus?

2 A. Yes.

3 Q. And are you aware of the Oil Conservation
4 Division's requirements that there be no surface injection
5 pressure in a project of this sort that is greater than
6 .2 psi per foot?

7 A. Yes, I am.

8 Q. Are the pressures which you anticipate with-
9 in these guidelines?

10 A. They are.

11 Q. Have the offset operators been notified on
12 this?

13 A. They were notified at the same time the
14 November 29th letter was sent to the Commission.

15 Q. And were there any objections, that you know
16 of?

17 A. No.

18 Q. Mr. Malaise, in your opinion is this well
19 cased and cemented in such a manner that there is no danger
20 to oil or gas or fresh water which you might encounter?

21 A. Yes.

22 Q. Do you have any further comments on these
23 exhibits?

24 A. No, I don't.

25 Q. Were these exhibits prepared by you or under

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1 your supervision?

2 A. They were.

3 Q. And in your opinion is the approval of this
4 application in the interest of conservation and the pre-
5 vention of waste and the protection of correlative rights?

6 A. Yes.

7 MR. COFFIELD: Mr. Examiner, I move the ad-
8 mission of Exhibits One through Four.

9 MR. NUTTER: Atlantic Exhibits One through
10 Four will be admitted in evidence.

11 MR. COFFIELD: And I have no further questions
12 of this witness on direct.

13
14 CROSS EXAMINATION

15 BY MR. NUTTER:

16 Q. Mr. Malaise, the water that's going to be
17 disposed of is produced from the Devonian formation and
18 also the Pennsylvanian?

19 A. That's correct.

20 Q. And is this water analysis that you showed
21 us --

22 A. That water analysis, I believe, was from the
23 Permo-Penn at the time that was taken.

24 Q. I see, so we don't have an analysis of the
25 Devonian-Pennsylvanian water.

1 A We have not submitted one. We can have it.
2 If the Commission so desires, we will have one furnished.

3 Q Now, what was the problem with the well that
4 was formerly a disposal well and you had to abandon it?

5 A The well that we had prior, we had a casing
6 problem below the packer and we had -- we had problems
7 where we didn't feel like we could adequately control them,
8 the water that was being disposed of. I don't have the
9 exact depth but there were casing problems with that, and
10 they were indicated by surface pressures.

11 We went into the well and it was discovered
12 from a casing inspection log that it was -- it was not
13 desirable to continue producing -- or continue injecting
14 water into that well. It was an old well. It had been --
15 prior to converting it, it was 1971 we had converted it,
16 there had been problems in the well originally upon comple-
17 tion.

18 Q It wasn't a matter, then, of incompatibility
19 of the water --

20 A No.

21 Q -- and plugging up, or anything like that?

22 A No, sir, we haven't had that big a problem
23 with the water, as far as compatibility.

24 Q And disposal in the other well was into the
25 Devonian formation?

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1 A. It was into the same formation.

2 Q. Okay.

3 MR. NUTTER: Are there any further questions
4 of Mr. Malaise? He may be excused.

5 Do you have anything further, Mr. Coffield?

6 MR. COFFIELD: No, sir, I do not.

7 MR. NUTTER: Does anyone have anything they
8 wish to offer in Case Number 6414?

9 We'll take the case under advisement.

10 (Hearing concluded.)
11
12
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25

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Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2000 Plaza Blanca (SOS) 411-2462
Santa Fe, New Mexico 87501

Sally W. Boyd CSR
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 6414
heard by me on 1/17 1979.

[Signature], Examiner
Oil Conservation Division

Atlantic Richfield Company

North American Producing Division
Permian District - West Area
Post Office Box 1710
Hobbs, New Mexico 88240
Telephone 505 393 7163

George V. Ricks, Superintendent
Production & Drilling

November 29, 1978

Oil Conservation Division
Department of Energy & Minerals
State of New Mexico
P. O. Box 2088
Santa Fe, New Mexico

DEC 1 1978

Attn: Mr. Joe Ramey
Secretary-Director

Re: Application to Dispose of Salt Water
by Injection into a Porous Formation
Form C-108
Lea 396 State No. 1
Dean Field
Lea County, New Mexico
Section 35, T15S, R36E
1980' FSL & 2010' FWL

Case 6414

Gentlemen:

Atlantic Richfield Company makes application to convert to a Salt Water Disposal Well its Lea 396 State No. 1 in Section 35, T15S, R36E, Lea County, New Mexico. The application is being submitted under Rule 701-C which allows the Secretary-Director to grant an exception to the requirements of Rule 701-A. In support we are submitting Commission Form C-108 in triplicate. Copies of the application have been sent to all offset operators and to the surface owners.

It is our intention to dispose of produced water from three wells which are shown on the attached plat. These wells are the Dow Federal No. 1 (Dean Permo Penn), the Lea 396 State No. 2 (Dean Permo Penn), and the J. P. Dean No. 1 (Dean Devonian). The total produced water will average from 150-200 BWPD.

The subject well is presently temporarily abandoned in the Dean Permo Penn and Dean Devonian Field. The Commission was notified by Form C-103 on 3/29/76 of our intention to plug and abandon this wellbore. The well has been held as a backup for the Lea 396 State No. 3, the former disposal well. The No. 3 has developed communication and is presently being plugged.

Oil Conservation Division
Department of Energy & Minerals
November 29, 1978
Page 2

We intend to dispose of produced water into the Devonian perforations at 13592-602' and 13625-654'. All open perforations in the Penn section will be isolated with packers prior to converting to an injection well.

If we can supply additional information in support of the application, please advise.

Very truly yours,



L. D. Lane

LDL:kd

cc: NMOCC
P. O. Box 1980
Hobbs, New Mexico
Offset Operators
G. V. Ricks - Hobbs
L. C. Hudry - Hobbs
W. D. Farris - Hobbs
NMOCC Engineer
P. O. Box 2088
Santa Fe, New Mexico

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

OPERATOR Atlantic Richfield Company		ADDRESS P. O. Box 1610, Midland, Texas 79702	
LEASE NAME Lea 396 State	WELL NO. 1	FIELD Dean Devonian	COUNTY Lea
LOCATION UNIT LETTER K WELL IS LOCATED 1980 FEET FROM THE South LINE AND 2010 FEET FROM THE West LINE, SECTION 35 TOWNSHIP 15S RANGE 36E NMPM.			

CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8"	300'	350	Surface	Circulated
INTERMEDIATE	9-5/8"	4926'	2600	1980	TOC
LONG STRING	7"	13685'	100	9749	TOC
TUBING	2-3/8"		NAME, MODEL AND DEPTH OF TUBING PACKER Permanent		
NAME OF PROPOSED INJECTION FORMATION Devonian		TOP OF FORMATION 13,602'		BOTTOM OF FORMATION 13,689' TO	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES Perforation		PROPOSED INTERVAL(S) OF INJECTION 13590-13685'	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? completed 1/6/56 as Devonian/Penn dual		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 Penn/10380-395' & 10630-665' (not squeezed)*. Permo Penn sec. sqzd 11432-433'w/					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 700'		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA NA		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA 360' sx. NA	
ANTICIPATED DAILY INJECTION VOLUME (BBL/D.) 150	MINIMUM 150	MAXIMUM 200	OPEN OR CLOSED TYPE SYSTEM closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? pressure	APPROX. PRESSURE (PSI) 2000
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			WATER TO BE DISPOSED OF yes		
			NATURAL WATER IN DISPOSAL ZONE yes		
			ARE WATER ANALYSES ATTACHED? yes		
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) C. E. Alexander, Route No. 1, Box 40, Lovington, New Mexico 88260					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL J. M. Kelley, Elk Oil Company, Box 310, Roswell, New Mexico 88210					
J. P. Reedler, 501 Parkway, Schuylkill, PA 17972					
Marathon, P. O. Box 552, Midland, Texas 79702					
Gulf Oil, P. O. Box 1150, Midland, Texas 79702					
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	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)?		FLAT OF AREA Yes		ELECTRICAL LOG Yes	
				THE NEW MEXICO STATE ENGINEER 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.

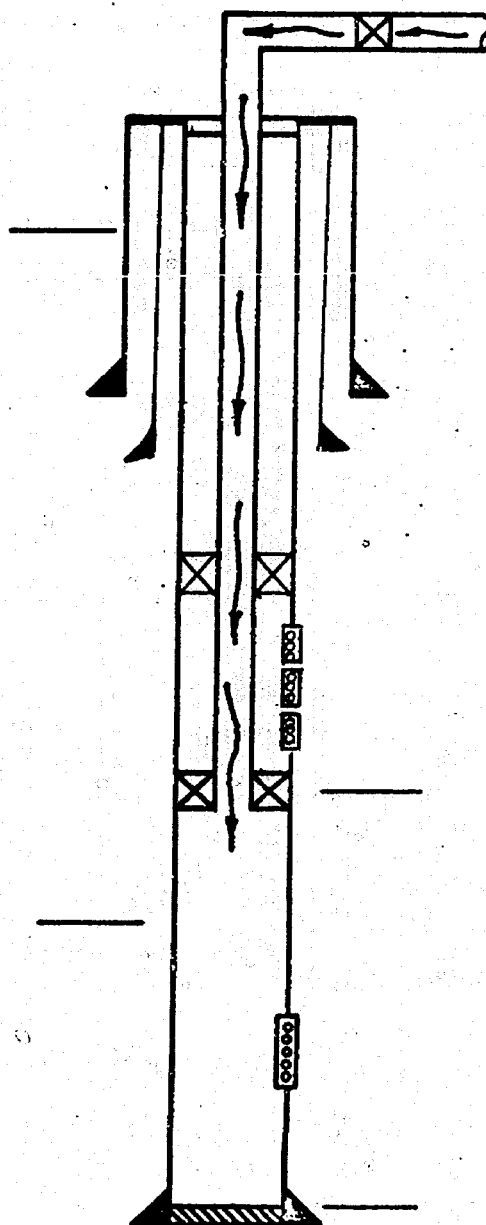
Robert M. Malaisio Sr. Engineer 11/16/78
(Signature) (Title) (Date)

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.

*Will be squeezed and tested prior to converting to salt water disposal well.

ATLANTIC RICHFIELD COMPANY
Lea 396 State No. 1
Proposed Salt Water Disposal Well

1980' FSL & 2010' FWL
Section 35, T-15S, R-36E
Lea County, New Mexico



2 3/8" OD TUBING
(Internally Coated)

13-3/8" csg. 48#. Set
@ 300' w/350 sx. cmt.

9-5/8" csg. 40# & 36#. Set
@ 4926' w/2600
sx. cmt.

Pkr set @ approx 10,320'

Permo Penn Perfs:
10,380-395'

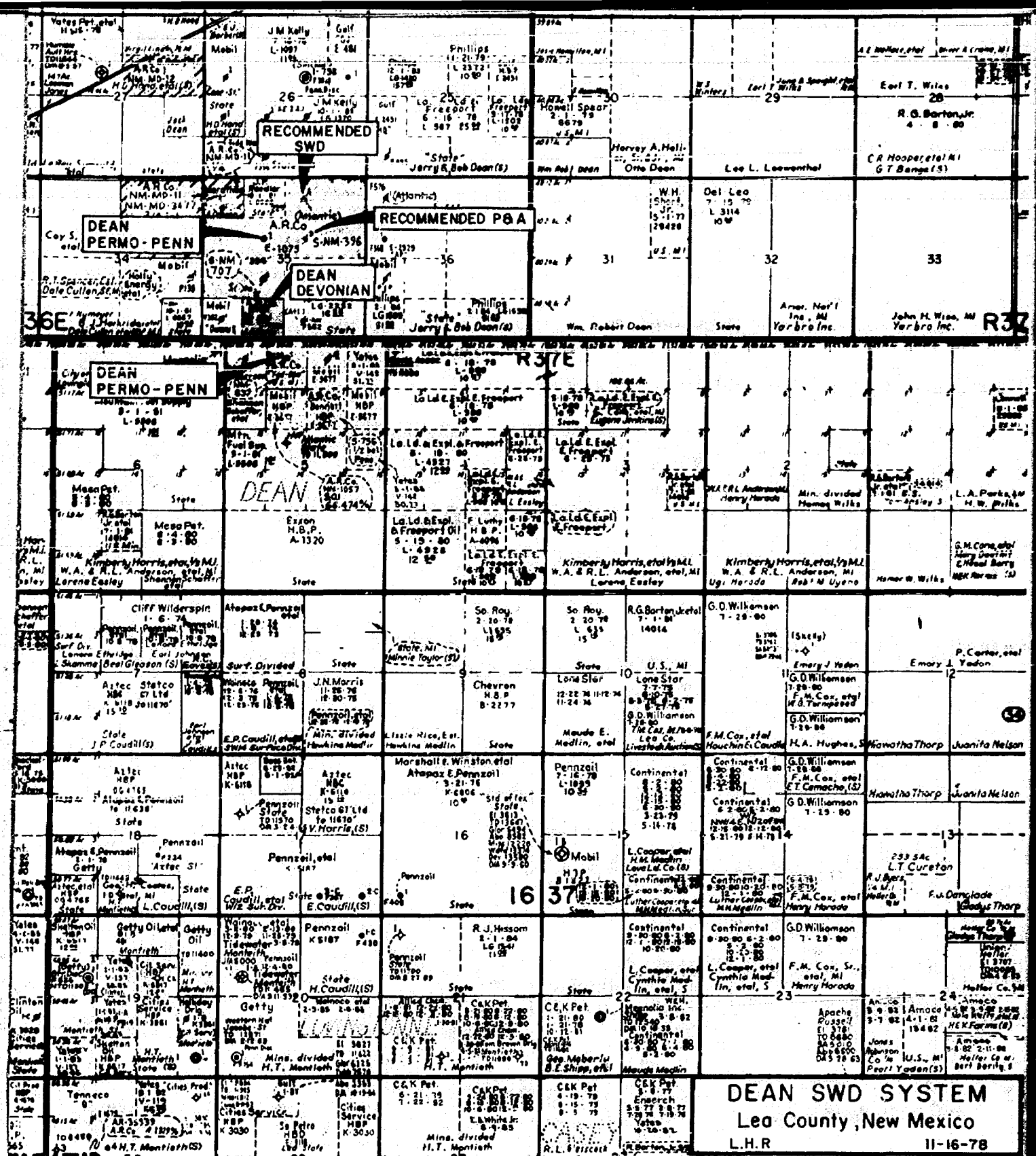
10,630-665'

11,510-560'

Pkr. set @ approx.
13,530'

Devonian perforations @
13,590-13,685'

7" csg. 26#-35#. Set @
13,685' w/100 sx. TOC @
9,749'.



Atlantic Richfield Company

North American Producing Division
Permian District - West Area
Post Office Box 1710
Hobbs, New Mexico 88240
Telephone 505 393 7163

George V. Ricks, Superintendent
Production & Drilling

NOV 29 1978

November 29, 1978

Oil Conservation Division
Department of Energy & Minerals
State of New Mexico
P. O. Box 2088
Santa Fe, New Mexico

Attn: Mr. Joe Ramey
Secretary-Director

Re: Application to Dispose of Salt Water
by Injection into a Porous Formation
Form C-108
Lea 396 State No. 1
Dean Field
Lea County, New Mexico
Section 35, T15S, R36E
1980' FSL & 2010' FWL

Hrg
Jan 2
Case 6414

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Oil Conservation Division
Department of Energy & Minerals
November 29, 1978
Page 2

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If we can supply additional information in support of the application, please advise.

Very truly yours,



L. D. Lane

LDL:kd

cc: NMOCC

P. O. Box 1980
Hobbs, New Mexico
Offset Operators
G. V. Ricks - Hobbs
L. C. Hudry - Hobbs
W. D. Farris - Hobbs
NMOCC Engineer
P. O. Box 2088
Santa Fe, New Mexico

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Atlantic Richfield Company		ADDRESS P. O. Box 1610, Midland, Texas 79702	
LEASE NAME Lea 396 State	WELL NO. 1	FIELD Dean Devonian	COUNTY Lea
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IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES Perforation		PROPOSED INTERVAL(S) OF INJECTION 13590-13685'	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? completed 1/6/56 as Devonian/Penn dual			HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? Yes
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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			WATER TO BE DISPOSED OF yes	NATURAL WATER IN DISPOSAL ZONE yes	ARE WATER ANALYSES ATTACHED? yes
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) C. E. Alexander, Route No. 1, Box 40, Lovington, New Mexico 88260					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL					
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J. P. Reedler, 501 Parkway, Schuylkill, PA 17972					
Marathon, P. O. Box 552, Midland, Texas 79702					
Gulf Oil, P. O. Box 1150, Midland, Texas 79702					
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	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)		PLAT OF AREA Yes		ELECTRICAL LOG Yes	
				THE NEW MEXICO STATE ENGINEER 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.

Robert M. Malaisio
(Signature)

Sr. Engineer

(Title)

11/16/78

(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.

*Will be squeezed and tested prior to converting to salt water disposal well.

Dean Devonian Permo Pennsylvanian

BLAIR RESEARCH LABORATORIES INC.
TULSA, OKLAHOMA

SR-3000-2H-2-20

SAMPLE NO. 8-6138 ANALYST SK&JLB FORMATION Devonian DEPTH 13610-13710'
DESCRIPTION S.O.D., State 396 #2, Dean-Devonian, 35-159-26r
COUNTY Lea STATE New Mexico TAKEN 5-30-56 REC'D 6-7-56 ANALYZED 6-20-56

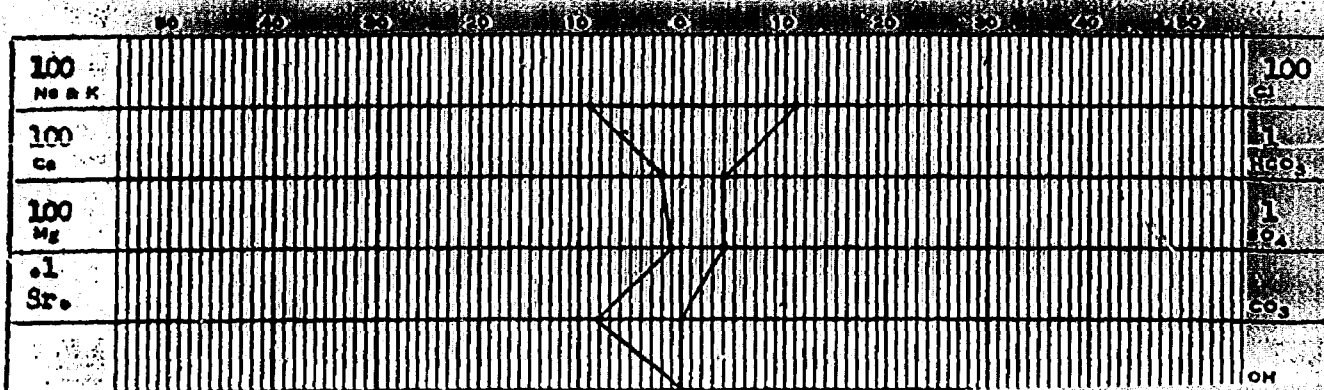
CONSTITUENTS IN PARTS PER MILLION			MEQ PER LITER	REACTING VALUES IN PERCENT
POTASSIUM (K)	Present	ALKALIES POTASSIUM	Present	Present
SODIUM (Na)	19,796	SODIUM	860.72178	37.19
LITHIUM (Li)	None	LITHIUM	-	-
CALCIUM (Ca)	3,200	ALK. EARTHS CALCIUM	159.68000	6.90
MAGNESIUM (Mg)	1,652	MAGNESIUM	135.86048	5.87
BARIUM (Ba)	-	BARIUM	-	-
STRONTIUM (Sr)	35	STRONTIUM	0.79870	0.04
MANGANESE (Mn)	Strong	MANGANESE	Strong	Strong
CARBONATE (CO ₃)	None	WEAK ACIDS CARBONATE	-	-
BICARBONATE (HCO ₃)	244	BICARBONATE	3.67136	0.15
HYDROXIDE (OH)	None	HYDROXIDE	-	-
SULPHATE (SO ₄)	1,970	STRONG ACIDS SULPHATE	11.01510	1.78
CHLORIDE (Cl)	39,446	CHLORIDE	1112.37720	48.07
TOTAL SOLIDS	66,343	SPECIFIC GRAVITY AT 15.5°C	1.053	pH 6.15 81°

PROPERTIES OF REACTION IN PERCENT				
PRIMARY SALINITY	74.38	PRIMARY ALKALINITY	CHLORIDE SALINITY	96.43 RES 0.105 O.M. 81 °F
SECONDARY SALINITY	25.32	SECONDARY ALKALINITY	SULPHATE SALINITY	3.57 Na Cl EQ. 55.615 P.P.M.

REMARKS "Devonian Water" JFS

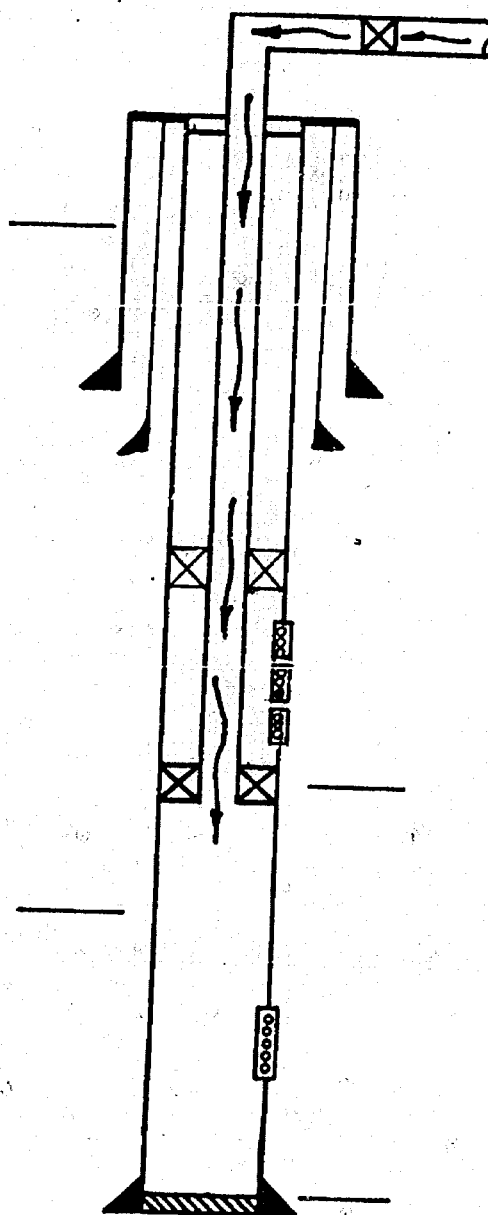
PATTERN WATER ANALYSIS SYSTEM

SCALE: MEQ. PER LITER



ATLANTIC RICHFIELD COMPANY
Lea 396 State No. 1
Proposed Salt Water Disposal Well

1980' FSL & 2010' FWL
Section 35, T-15S, R-36E
Lea County, New Mexico



2 3/8" OD TUBING
(Internally Coated)

13-3/8" csg. 48#. Set
@ 300' w/350 sx. cmt.

9-5/8" csg. 40# & 36#. Set @ 4926' w/2600
sx. cmt.

Pkr set @ approx 10,320'

Permo Penn Perfs:
10,380-395'

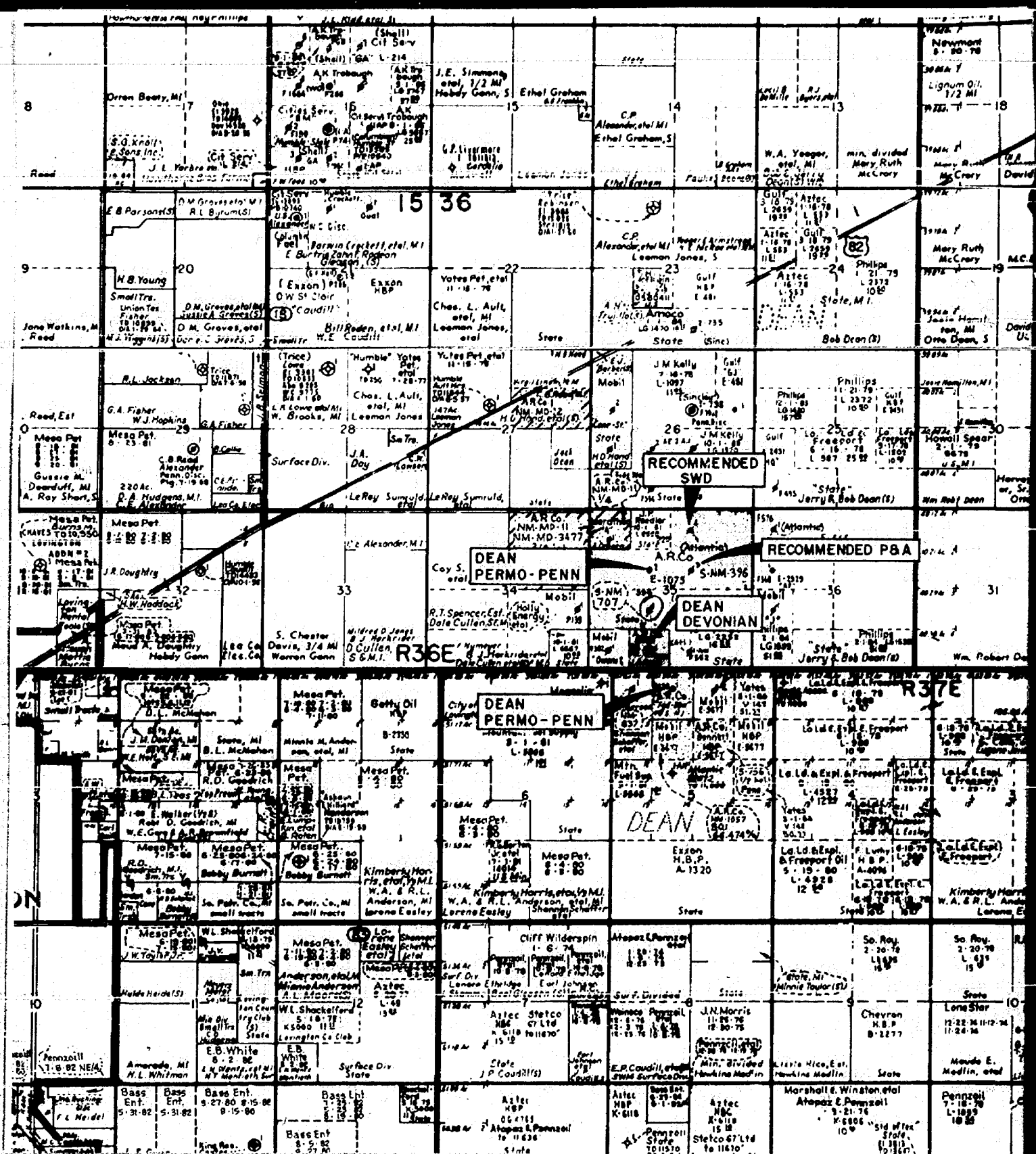
10,630-665'

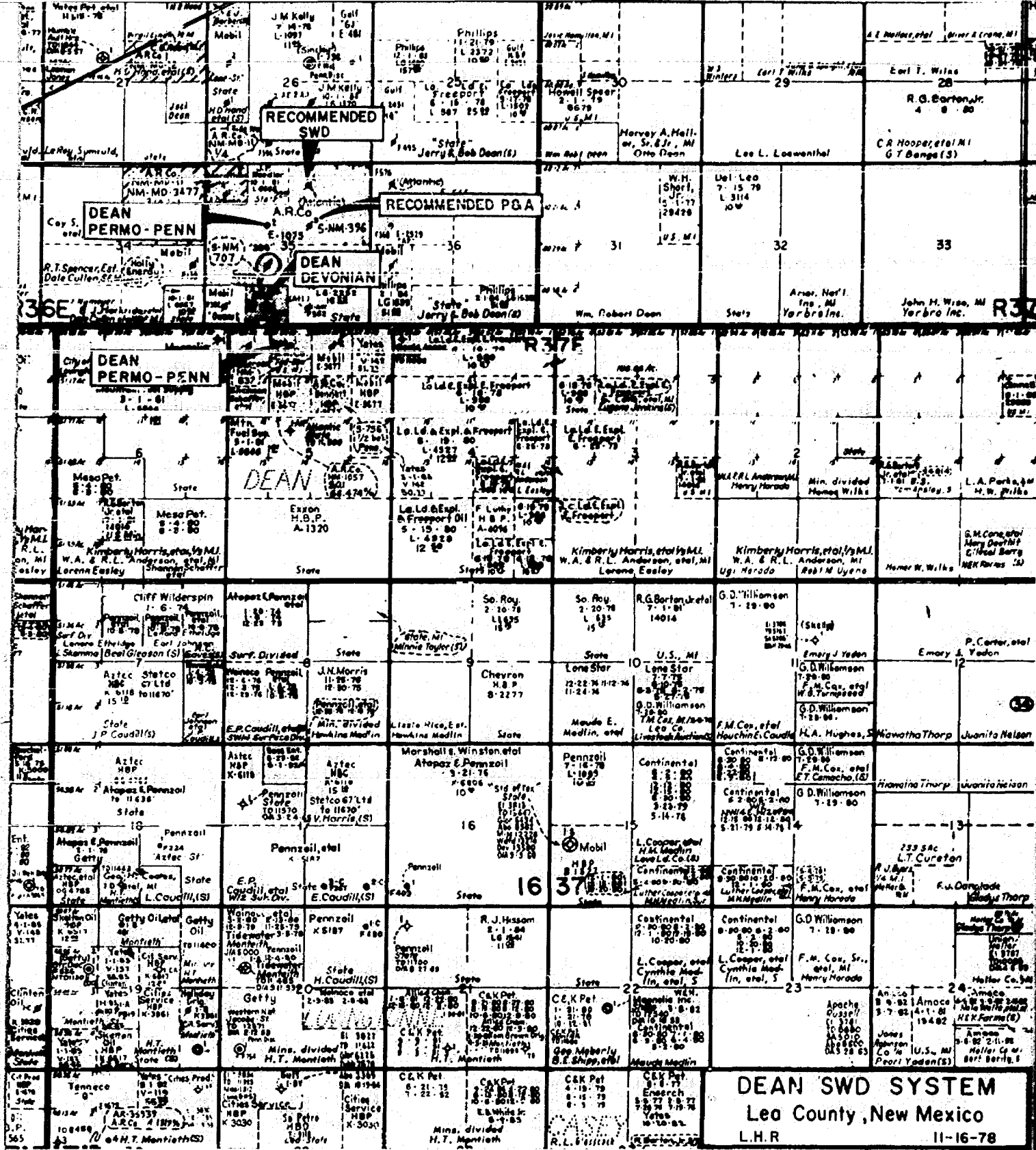
11,510-560'

Pkr. set @ approx.
13,530'

Devonian perforations @
13,590-13,685'

7" csg. 26#-35#. Set @
13,685' w/100 sx. TOC @
9,749'.





OIL CONSERVATION COMMISSION
HOBBS DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE December 4, 1978

RE: Proposed MC _____
Proposed NWC _____
Proposed NSL _____
Proposed SWD X _____
Proposed WFX _____
Proposed PMX _____

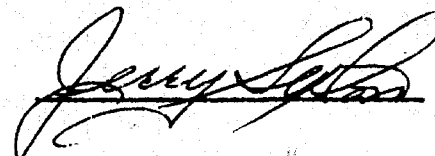
Gentlemen:

I have examined the application dated _____
for the Atlantic Richfield Co. Lea 396 State #1-K 35-15-36
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Recently their old SWD well was plugged and the pipe was in such shape that
plugs could not be set below 5100'. This well is right at the ½ mile limit
and probably would not be a problem.

Yours very truly,



DEC 8 1978

ROUGH

dr/

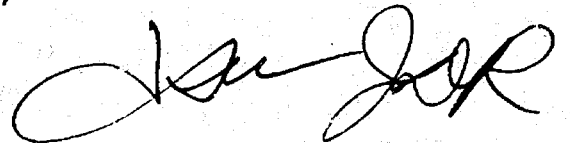
STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6414

Order No. R- 5913

APPLICATION OF ATLANTIC RICHFIELD
COMPANY FOR SALT WATER DISPOSAL,
LEA COUNTY, NEW MEXICO.



ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on January 17
19 79, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter
NOW, on this _____ day of January, 1979, the Division
Director, 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 Division has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Atlantic Richfield Company,
is the owner and operator of the Lea 396 State Well No. 1,
located in Unit K of Section 35, Township 15 South,
Range 36 East, NMPM, Dean-Devonian Pool,
Lea 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 perforated
interval from approximately 13,592 feet to 13,654 feet.

(4) That the injection should be accomplished through 2 3/8
-inch plastic lined tubing installed in a packer set at approxi-
mately 13,530 feet; that the casing-tubing annulus should be
filled with an inert fluid; and that a pressure gauge or approved
leak detection device should be attached to the annulus in order

to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a ^{Pressure limiting switch} ~~pop-off valve~~ or ^{other} acceptable ^{device} ~~substitute~~ which will limit the wellhead pressure on the injection well to no more than 2718 psi.

(6) That the operator should notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(7) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(8) 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, Atlantic Richfield Company is hereby authorized to utilize its Lea 396 State Well No. 1 located in Unit K of Section 35, Township 15 South Range 36 East, NMPM, Dean-Devonian Pool Lea County, New Mexico, to dispose of produced salt water into the Devonian formation, injection to be accomplished through 2 3/8 -inch tubing installed in a packer set at approximately 13,530 feet, with injection into the perforated interval from approximately 13,592 feet to 13,654 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 shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a ^{pressure limiting switch} ~~pop-off valve~~ or acceptable ^{other} ~~substitute~~ ^{device} which will limit the wellhead pressure on the injection well to no more than 2718 psi.

(3) That the operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(4) That the operator shall immediately notify the supervisor of the Division's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

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

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

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