CASE 6614: ATLANTIC KICHTIELD COMPANY FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MELICO

Continued &

Amberg

5923 T3

CASE NO.

64/4

APPlication,
Transcripts,
Small Exhibits,

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

APPEARANCES

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

3

8

9

10

11

13

15

16

17

18

19

21

22

23

INDEX

BOB MALAISE

Direct Examination by Mr. Coffiels.

Cross Examination by Mr. Nutter

EXHIBITS

Abbircaur	Exhibit O	ne, Plat	The state of	- 1 - 11 - 1	1.2
Applicant	Exhibit To	wo, Sketch			1.2
Applicant	Exhibit T	hree, Diagr	ams		12
Applicant	Exhibit Fo	our, Summar	ту		1.2

SALLY WALTON BOYD
CERTIFES SHORTHAND REPORTER
10212 Plant Blance (845) 471-444
SMIA PL. Now Marico 871-44

, ,

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?

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 BO CEMBFED SHOWTHAND REPORT 10307 MAIL BENGE (545) 471-SERIA Fo, NOW MONGO 577 3

6

7

8

10

11.

12

13

14

15

୍ର 16

17

18

19

20

21

22

23

24

SALLY WALTON BOY CENTERD SHORTHAND REPORT 1013 17 PAR BRIGGE (605) 471-4 Sacta Pe, New Meadon 871-4 2

3

6

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

And have you previously testified as a petroleum engineer before the Division?

A. Yes, I have.

O Are your qualifications accepted and a matter or record before the Division?

A. Yes, they were.

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

MR. NUTTER: Yes, he is.

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

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

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

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

ALLY WALTON BOYE

THERE SCORTIAND NEPORTE

10 Figure Blance (305) 471-546

Santa Fe, New Mexico 37001

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

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

- Okay, Mr. Malaise, I believe you may have already designated -- said this, but what is the -- again, what is the designation and location of this proposed injection well?
- This proposed injection well is located 1980 feet from the south line and 2010 feet from the west line of Section 35, Township 15 South, Range 36 East, in Lea County.
- Q Is Atlantic Richfield the operator on this property?
 - A. They are.
- Q Okay, would you please give a history of this injection well, when it was drilled and completion date, and so forth?
- A. This particular well had been drilled and had produced hydrocarbons from the Permo-Penn Field and also from the Devonian Field; for approximately the last two years the well has been temporarily abandoned and it has been our intent to use it as a backup well for our 396 Well

SALLY WALTON BOYD
CERTIFIED SHORTHAND NEFORTE
8930 Plaza Blanca (648) 411-446
Santa Fe, New Meadoo 31601

12.

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

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

- Q Mr. Malaise, was a log of this proposed injection well previously submitted to the Division?
 - A. Yes, it was.
 - Q When, when did you do that, do you recall?
- A. This was submitted when the original application was filed for administrative approval for this particular well to flow salt water into and the letter sent to the Commission was dated November the 29th, 1978, and it was sent to the Santa Fe office.
- Q. All right, would you go ahead and refer then to what has been marked as Exhibit Two and explain to the Examiner what this reveals?
- A. Exhibit Two is a diagrammatic sketch of the proposed salt water disposal well. Several points that should be noted on the sketch are that the fact that we have 7-inch casing that is set at 13,685 feet, and it's been cemented with 100 sacks of cement. By temperature survey we have located the top of that cement at 9749 feet.

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

.

SALLY WALTON BOY SETTING SHORTHAND REPORT 010 Place (645) 471-3 SAREA PO. NOT MOSIDO 571are open in the Penn that we propose to straddle with two packers. Those perforations are in the Penn are 10,380 feet to 395 feet, 10,630 feet to 665 feet and 11,510 feet to 590 feet.

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

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

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

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

five wells within a half a mile radius that have been plugged and abandoned and that penetrated the Devonian formation. The data that was collected to prepare these was some — one of the wells was operated by Atlantic Richfield. The four other wells are operated by other operators but it was collected from the District Office in Hobbs, the available well files, and it was prepared — in most cases we had setting depths and amounts of cement with temperature

N BOYD
D REPONTER
SE) 471-2462

2

3

4

5

ô

. 7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

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

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

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

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

Q Okay.

MR. NUTTER: No, go ahead.

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

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

SALLY WALTON BOY ENTIFED SHORTHAND NEPONT 910 Plaza Blaca (645) 471-9-Batta Ps. Now Mexico 173

SALLY WALTON BOY ERIFERD SHORTHAND REPORT BY PIETE BILLIAGE (8 6) 471-44 PERTA PS. New MALEO 8784

10

11

12

13

14

15

16

17

18

19

20

21

22

23

25

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

0 Mr. Malaise, what kind of fluid to you propose to be injected in this salt water disposal well?

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

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

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

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

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

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

A. Yes, there was one that was submitted on the Lea 396 Well No. 2 that, when we made our original application in November.

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

A That's correct.

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

10

11

12

13

14

15

16

17

20

22

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

- Q. So these are the identical fluids that --
- A. The same fluids that we've been injecting in the No. 3 will be injected in No. 1.
- Q Do you expect to inject this water by pressure?
- A. Yes. We have so indicated on the original application a maximum pressure of 2000 pounds. This would be the maximum that we would anticipate. The average pressure for the last 12-month period has been running between 900 and 1000 pounds.
- Q Mr. Malaise, do you already have the equipment necessary to inject this under pressure?
 - A. Yes, we do.
- Q. In fact is this the same equipment you had on your prior well that you had to abandon?
 - A. That's correct.
- Q In this case will the casing tubing annulus be filled with an inert fluid?
 - A. Yes, it will.
 - Q And will you attach a pressure gauge to the

23 24

SALLY WALTON BOYE CINTIFED SHORTHAND REPORTE SOLIT PLAN BEAND (661) (11-24, SARIC P., New Meadon 5171)

amulus?

3

5

6

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

A. Yes.

And are you aware of the Oil Conservation

Division's requirements that there be no surface injection

pressure in a project of this sort that is greater than

2 psi per foot?

A Yes, I am.

Q. Are the pressures which you anticipate within these guidelines?

A They are.

Have the offset operators been notified on
this?

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

And were there any objections, that you know of?

A No.

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

A Yes.

Q Do you have any further comments on these exhibits?

A No, I don't.

Were these exhibits prepared by you or under

your supervision?

2

3

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

- They were.
- And in your opinion is the approval of this application in the interest of conservation and the prevention of waste and the protection of correlative rights?
 - Yes.

MR. COFFIELD: Mr. Examiner, I move the admission of Exhibits One through Four.

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

MR. COFFIELD: And I have no further question of this witness on direct.

CROSS EXAMINATION

BY MR. NUTTER:

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

- That's correct.
- And is this water analysis that you showed
- That water analysis, I believe, was from the Permo-Penn at the time that was taken.
- I see, so we don't have an analysis of the Devonian-Pennsylvanian water.

SALLY WALTON BO CERFFED SHORTHAND REPORT 3010PINES, Billion (101) 471-4 Sentia Pt., New Mainto, 171-

	A. We	have	not s	submitted	one.	We	can	have	it.
If the	Commission	n so de	esires	s, we will	l have	one	fu	rnishe	ed.

- Now, what was the problem with the well that was formerly a disposal well and you had to abandon it?
- A. The well that we had prior, we had a casing problem below the packer and we had -- we had problems where we didn't feel like we could adequately control them, the water that was being disposed of. I don't have the exact depth but there were casing problems with that, and they were indicated by surface pressures.

We went into the well and it was discovered from a casing inspection log that it was -- it was not desireable to continue producing -- or continue injecting water into that well. It was an old well. It had been -- prior to converting it, it was 1971 we had converted it, there had been problems in the well originally upon completion.

- Q It wasn't a matter, then, of incompatibility of the water --
 - A. No.
 - a -- and plugging up, or anything like that?
- A. No, sir, we haven't had that big a problem with the water, as far as compatibility.
- And disposal in the other well was into the Devonian formation?

Okay.

of Mr. Malaise? He may be excused.

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

It was into the same formation.

MR. NUTTER: Does anyone have anything they

MR. NUTTER: Are there any further questions

Do you have anything further, Mr. Coffield?

wish to offer in Case Number 6414?

We'll take the case under advisement.

(Hearing concluded.)

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 Care to 644

Examiner

Oil Conservation Division

15 O. 16

2

7

10

11

12

13

14

17

18

19 2C

21

22

24

25

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 Pe, 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.

-2-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 Director 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

APPEARANCES

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:

21

12

15

16

17

18

19

20

22

23

24

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

MS. TESCHENDORF: Case 6414. Application of

Atlantic Richfield Company for salt water disposal,

Lea County, New Mexico.

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

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

19 20

13

15

16

17

18

21

22

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

I do hereby carlify that the foregoing in a complete record of the proceedings in the Examiner hearing of Case No. 6414.

5 Examiner

Oil Conservation Division

15 16

3

6

10

11

12

13

14

17

18 19

21 22

23

EXAMINER HEARING

IN THE MATTER OF:

BEFORE: Richard L. Stamets

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

CASE 6414

10

8

11

2

3

12

13

14

15

17

16

18 19

> 20 21

22

23

24

25

TRANSCRIPT OF HEARING

APPEARANCES

For the Oil Conservation

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

For the Applicant:

Division:

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

MS. TESCHENDORF: Case 6414. Application of

Atlantic Richfield Company for salt water disposal,

Lea County, New Mexico.

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

> The case will be so continued. MR. STAMETS:

> > (Hearing concluded.)

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Court Reporter, DO HEREBY

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

CERTIFY that the foregoing and attached Transcript of

10

11

12

13

14

15

16

17

18

19

20

21

22

23

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. 6415.

Examiner

Oll Conservation Division

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, 133,

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

 Hell 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 Morth 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 SU/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 CONSISSION - 2 A.M. - ROOM 205 STATE LAND OFFICE BUILDING, SANTA PE, 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-atyled 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 23. 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. Antweil 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 18 SOUTH, RANGE 25 EAST, NMPH 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

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

TOWNSHIP 16 SOUTH, RANGE 33 EAST, NMPM Section 12: W/2

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

TOWNSHIP 7 SOUTH, RANGE 31 EAST, NMPM Section 32: SE/4

TOWNSHIP & 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

(hli) 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

(11) 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, Renge 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 Motris 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:

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 Penton Draw-Morrow Gas Pool, the discovery well is Perry R. Bass Big Eddy Unit Well No. 53 located in Unit G 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

(1) 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, NHPM 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: A)1

(k) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Atoka production and designated as the Hume-Atoka Cas 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

(1) 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, NMFM. 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, NAPM. 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 FAST, NMPM Section 17: N/2

(p) CREATE a new pool in Les 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 0 Well No. 12 located in Unit J of Section 31, Township 16 South, Range 37 East, NMPM. Said pool would comprise:

15

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 0 of Section 28, Township 20 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSFIP 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 IA 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)

A STATE OF THE STA

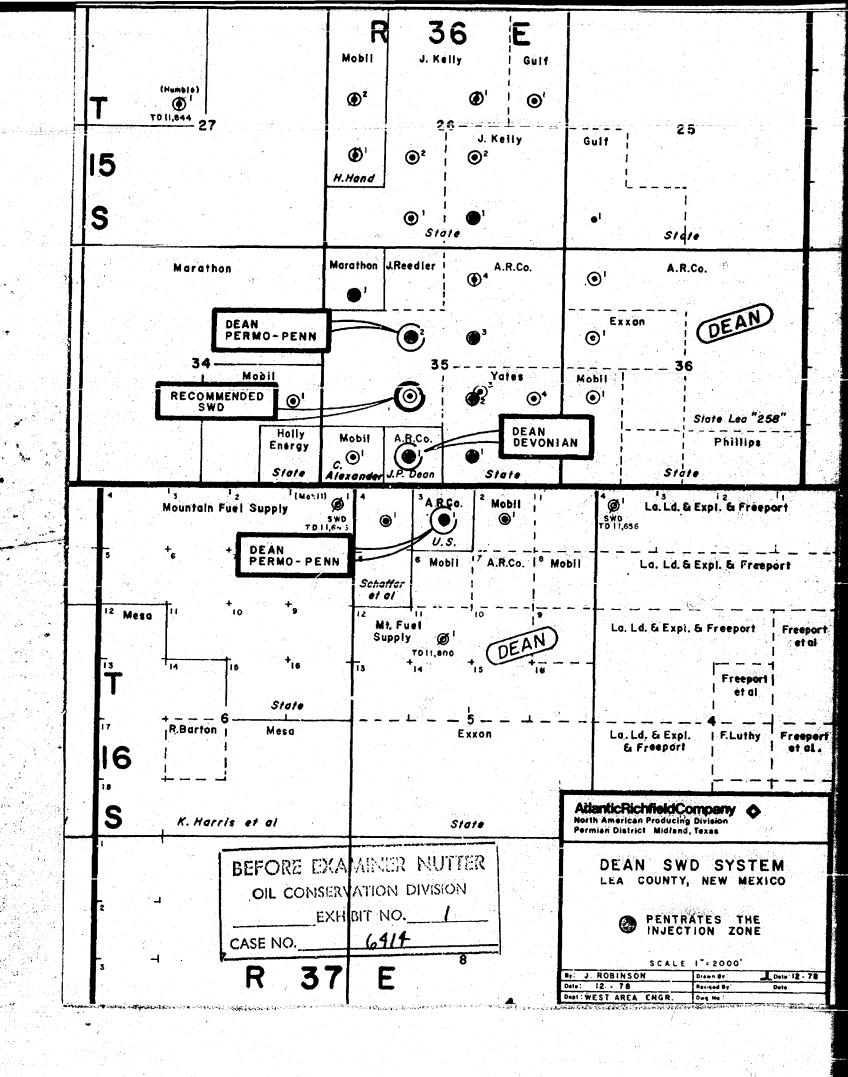
Application of Yates Petroleum Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp thru Devonian formations underlying the W/2 of Section 20, Township 14 South, Range 36 East, Lea County, New Mexico, 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 so 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:

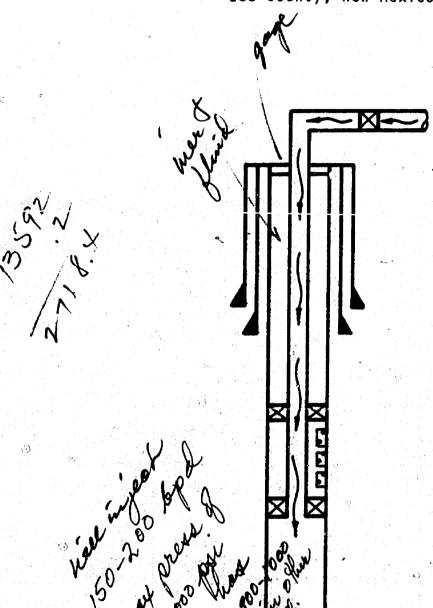
 Application of LaRue and Muncy for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Abo formation underlying the NW/4 SE/4 of Section 34, Township 18 South, Range 26 East, Dayton-Abo Pool, Eddy County, New Mexico, to 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. I 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' \(\nu\)

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

EXHIBIT NO. 2

CASE NO. 6414

BEFORE EXAMINER NUTTER

OIL CONSERVATION DIVISION

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

990' FNL & 660' FWL Section 35, T-158, R-36E Lea County, New Mexico

Plugged & Abandoned January 30, 1961

BEFORE EXAMENATION DIVISION

EXHIBIT NO. 3

CASE NO. 6414

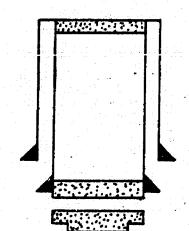
25 sx cmt plug @ 0-50'

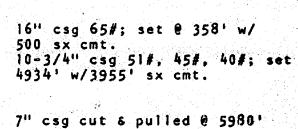
120 sx cmt plug @ 4934-5034*

65 sx cmt plug @ . 5880-6080'.

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

TD: 13781'





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

Permo Penn Perfs 11550-11590'

11604-11624

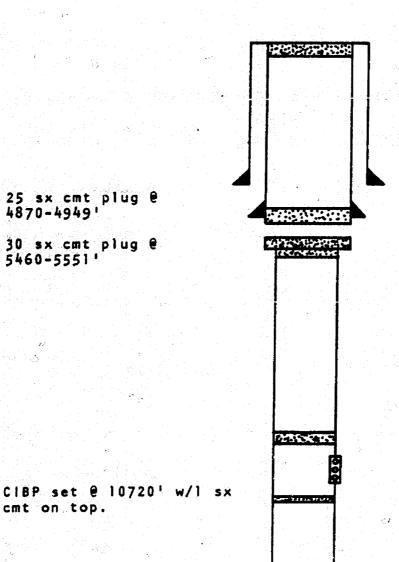
Devonian perfs 13756-13778

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-155, R-36E Lea County, New Mexico

Plugged & Abandoned July 16, 1969



10 sx cmt plug € 0-30'

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

8-5/8" csg 32#; set 2 4320 @ 4920' w/3748' sx cmt.

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

CIBP set @ 10615' w/l 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'.

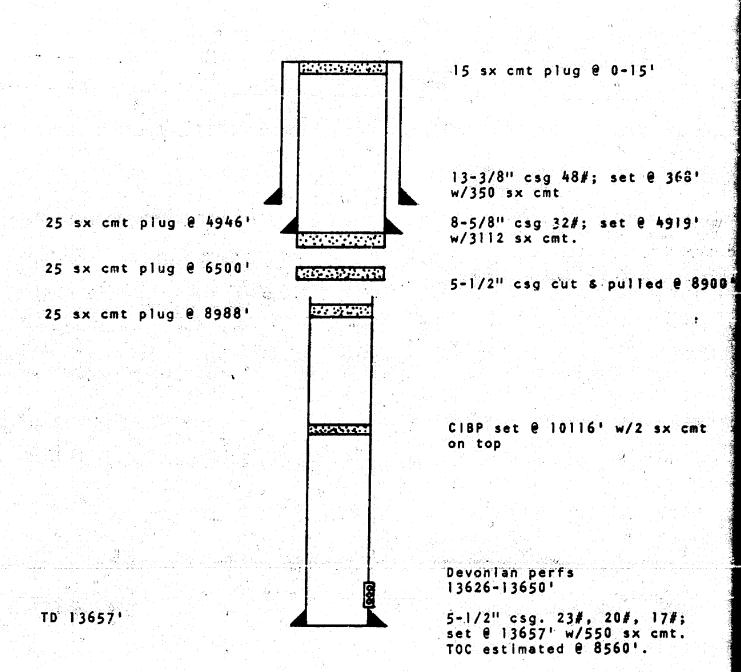
TD: 13700'

31.88 4×

CITIES SERVICE OIL COMPANY State AW No. 2

1980' FEL & 1980' FSL Section 35, T-158, 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, T155, R36E. Lea County, New Mexico November 30, 1978 Plugged & Abandoned

320 sx cmt plug @ 350'-2100' 100 sx cmt plug @ 3620-43201

260 sx cmt plug in 7" X 9-5/8" annulus

13-3/8" csg. 48# Set @ 319 w/350

9-5/8" csg. 40# & 36# Set @ 4939 2600 sx cmt. TOC @ 725'

Devonian Perfs Sqzd with 100 sx cmt

TD: 13,726

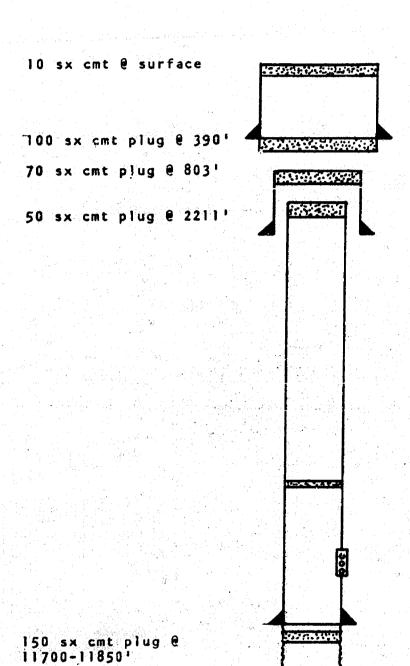
Devonian Perfs (SWD) 13,690+13,699' 13,710-13,720'

7" csg. 35#,32#,29# 6 26# Set @ 13,725 w/805 sx cmt TOC @ 9790'

EXXON State AJ No. 1

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

Plugged & Abandoned June 12, 1973



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'

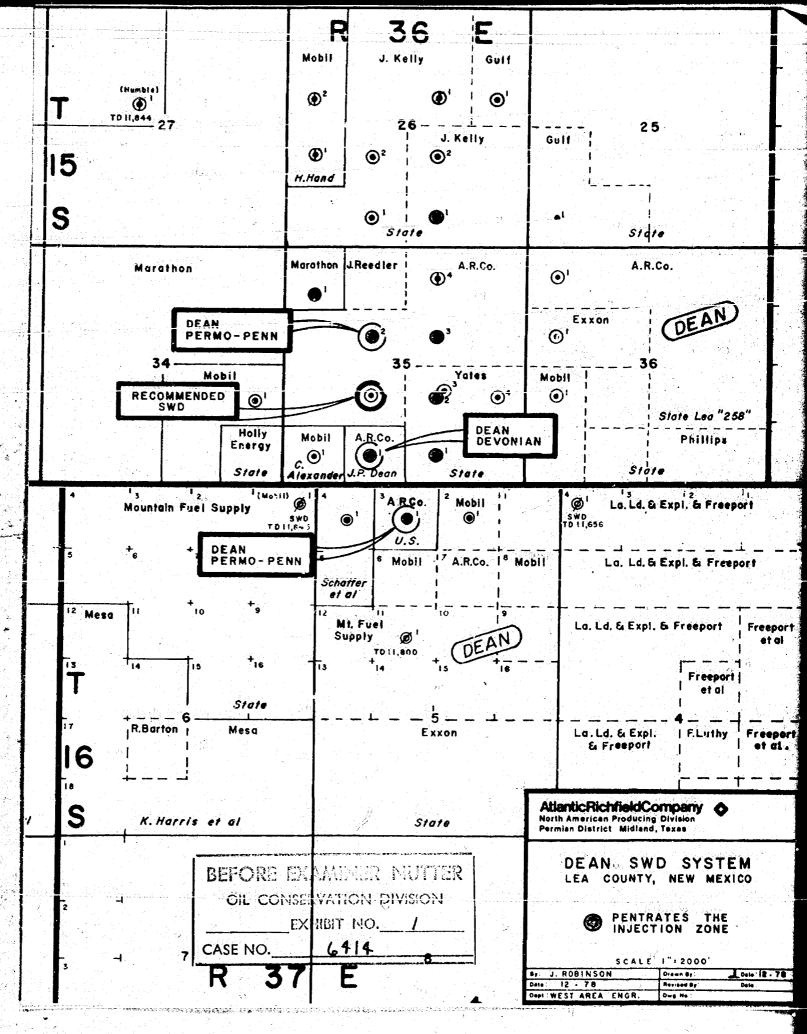
TD: 13813'

11,536 - 11,564	13,770 (a) hole)	Surface Surface 11,000 (a) (7-7/8" ho	300 2300 270	366 4955 13752	13-5/8, 48# 8-5/8, 32# 51, 23#,20#, 5 17#	ARCO DOW FEDERAL #1 660 FNL, 1980 FEL Sec 5, T16S, R36E
P en >	13,813	Surface 780 * - 2195 *	325 3070 1225	340 4750 11675	13-3/8, 48# 9-5/8, 36# 5½, 23#,20#,17#	Exxon State AJ #1 1980 FEL, 660 FSL Sec 26, T15S, R36E
11,504 -	13,729	Surface 725 * 9380 *	350 2600 700	309 4950 13700	13-3/8, 48# 9-5/8, 40# 7, 35#,32#,29#,26#	ARCO Lea State 396 #2 1980 FNL, 1980 FWL Awx 35, R14A, E36W
P & A	13,726	Surface 725* 9790 *	26350 805	319 4939 13725	13-3/8, 48E 9-5/8, 36#, 40# 7, 35#	ARCo Lea State 396 #3 1980 FNL, 1980 FEL Sec 35, T15S, R36E
7	13,657 hole)	Surface Surface 8560 (a) (7-7/8"	350 310 3100	368 4919 13657	13-3/8, 48# 8-5/8, 32# 5±, 23#,20#,17#	Cities Service State AW #2 1980 FEL, 1980 FSL Sec 35, T15S, R36E
** **	13,700 (a) hole)	Surface Surface 10,000' (7-7/8"	3065 400	379 4920 137 0 0	13-3/8, 36# 8-5/8, 32# 51, 23#, 20#, 17#	Cities Service State AV #1 1980 FEL, 660 FSL Sec 35, T15S, R36E
13,600- 13,725	13,910	Surface Surface 10,265*	375 2400 550	322 4979 13910	13-3/8, 48# 9-5/8, 40#,36# 51, 23#,20#,17#	ARCo JP Dean #1 660 FSL, 1980 FWL Sec 35, T15S, R36E
	13,781 hole)	Surface Surface 500(a) (8-3/4")	500 3955 1255	358 4934 13780	16, 65# 10-3/4, 51#, 45#,40# 51,35#,32#,29#,26#	Harethon Dean "A" #1 990 FNL. 660 FWL Sec 35, T15S,R36E
Producing Interval (ft)	Total Depth (ft)	Top of (ft)	Sacks of Cement Used	Setting Depths (ft)	Casing Strings O.D.(in.), WT (LB/ft)	Well Name and Location

Top of Cement Found By Temperature Survey.

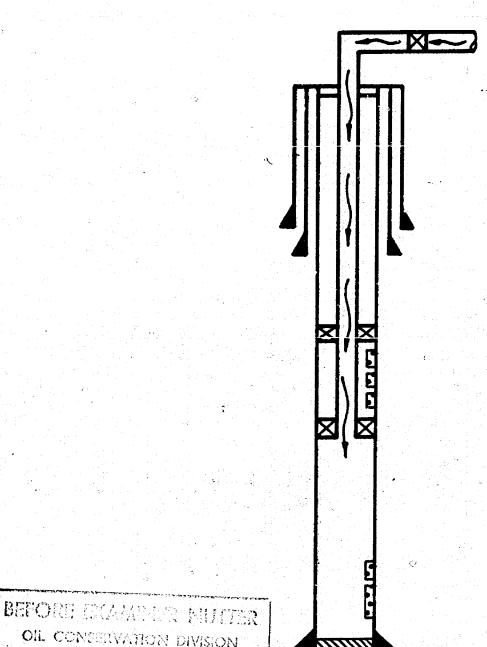
(a) Estimated Top of Cement

CASE NO. OIL CONSERVATION DIVISION EXHIBIT NO.



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

Lee County, New Mexico



OIL CONSERVATION DIVISION

CASE NO.

exhibit No. 2

6414

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

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

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

Pkc 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'.

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

990' FNL & 660' FWL Section 35, T-155, R-36E Lea County, New Mexico

Plugged & Abandoned January 30, 1961

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'

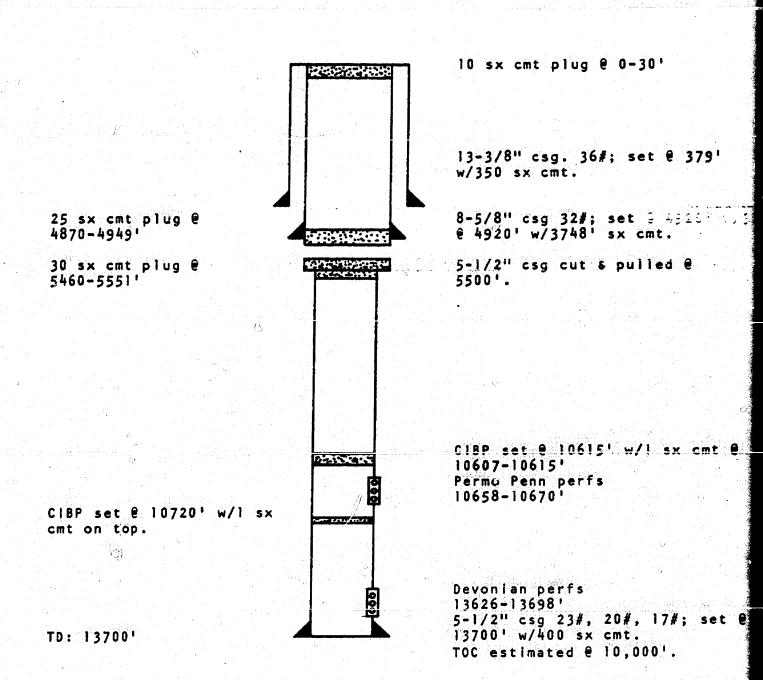
Devonian perfs 13756-13778

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-158, R-36E Lea County, New Mexico

Plugged & Abandoned July 16, 1969



[4

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

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. 25 sx cmt plug @ 4946' 25 sx cmt plug @ 6500' B355855555 5-1/2" csg cut & pulled @ 8900 100 00 000 25 sx cmt plug € 89881 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. TD 13657' TOC estimated @ 8560'.

ATLANTIC RICHFIELD CO.

Lea State 396 No. 3

1980 FNL, 1980 FEL

Section 35, T155, R36E

Lea County, New Mexico

Plugged & Abandoned November 30, 1978

260 sx cmt plug in 7" X 9-5/8" annulus

13-3/8" csg. 48# Set @ 319 w/350 s: cmt. 9-5/8" csg. 40# & 36# Set @ 4939 w 2600 sx cmt. TOC @ 725'

Devonian Perfs (SWD) 13,690+13,699' 13,710-13,720'

71 csg. 35#,32#,29# & 26# Set @ 13,725 w/805 sx cmt Tuc @ 9790'

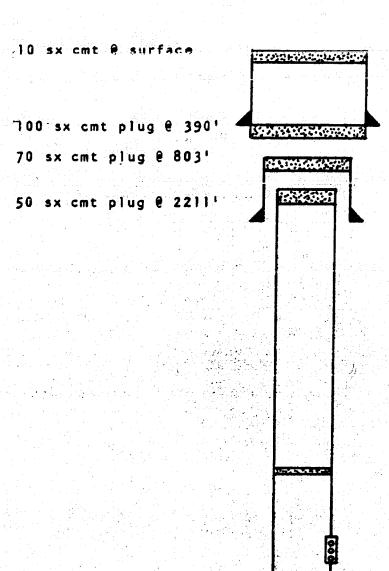
TD: 13,726

EXXON State AJ No. I

0.23

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

Plugged & Abandoned June 12, 1973



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*

150 sx cmt plug @ 11700-11850'

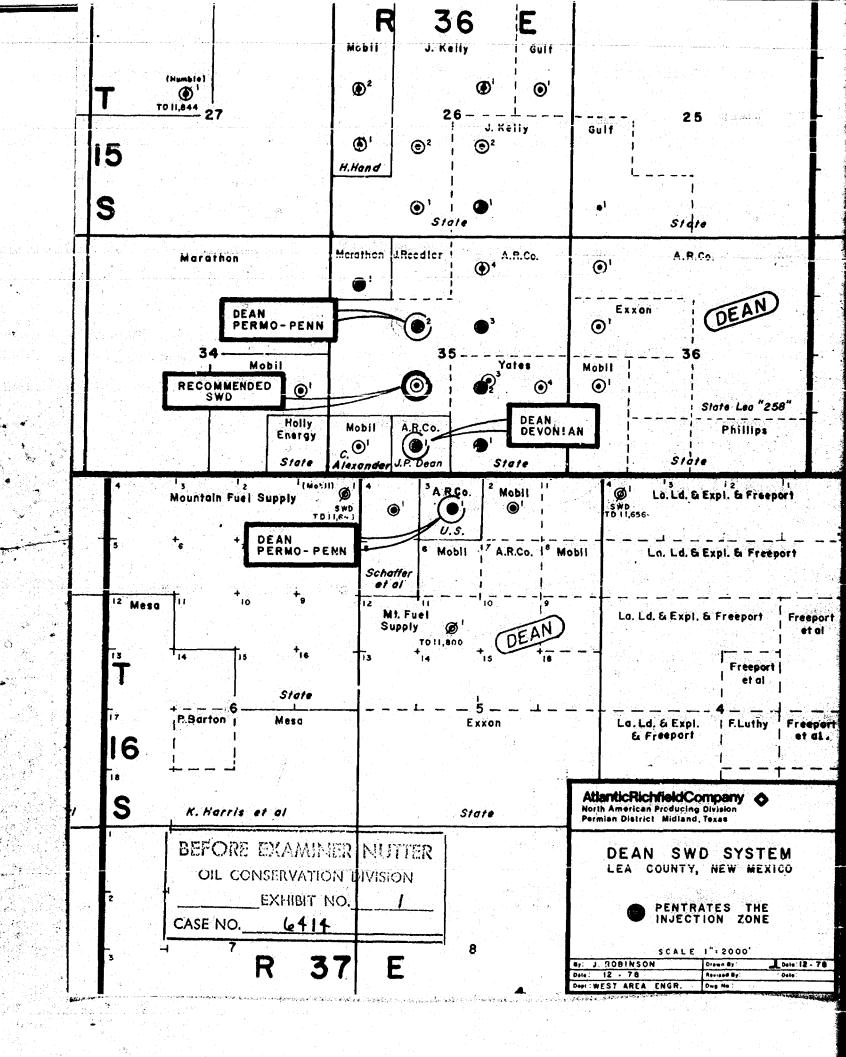
TD: 13813'

Name and ocation	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)
ethon Dean "A" #1 FNL. 660 FWL 35, T15S,R36E	16, 65# 10-3/4, 51#, 45#,40# 5½,35#,32#,29#,26#	358 4934 13780	500 3955 1255	Surface Surface 500(a) (8-3/4" h	13,781 ole)	P & A
o JP Dean #1 FSL, 1980 FWL 35, T15S, R36E	13-3/8, 48# 9-5/8, 40#,36# 5½, 23#,20#,17#	322 4979 13910	375 2400 550	Surface Surface 10,265*	13,910	13,600- 13,725
les Service State AW #1 10 FEL, 660 FSL 35, T159, R36E	13-3/8, 36# 8-5/8, 32# 5½, 23#, 20#, 17#	379 4920 13760	350 3065 400	Surface Surface 10,000'-((7-7/8" h		PUS A
les Service State AW #2 10 FEL, 1980 FSL , 35, T15S, R36E	13-3/8, 48# 8-5/8, 32# 5½, 23#,20#,17#	368 4919 13657	350 3112 3100	Surface Surface 8560 (a) (7-7/8" h	13,657 ole)	P & A
o Lea State 396 #3 10 FNL, 1980 FEL 235, TISS, R36E	13-3/8, 48E 9-5/8, 36#, 40# 7, 35#	319 4939 13725	350 2600 805	Surface 725* 9790 *	13,726	P. P. S. A . 21.
o Lea State 396 #2 10 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 10 FEL, 660 FSL 26, T15S, R36E	13-3/8, 48# 9-5/8, 36# 5½, 23#,20#,17#	340 4750 11675	325 3070 1225	Surface 780 * 2195 *	13,813	P&A
o Dow Federal #1 FNL, 1980 FEL 5, TI6S, R36E	13-5/8, 48# 8-5/8, 32# 5±, 23#,20#, & 17#	366 4955 13752	300 2300 270	Surface Surface 11,000 (a (7-7/8" h		11,536 - 11,564

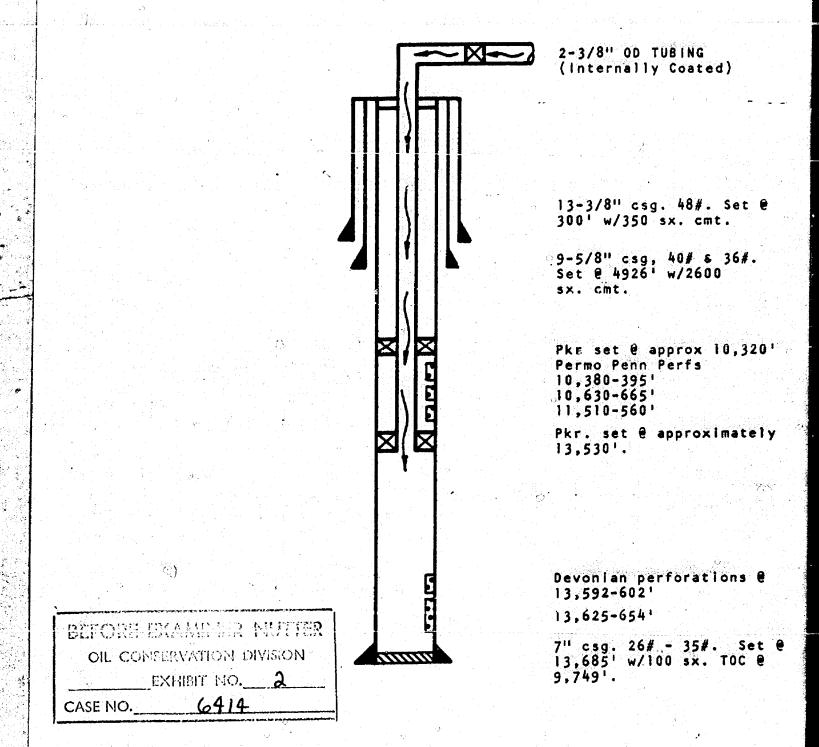
* Top of Cement Found By Temperature Survey.

(a) Estimated Top of Cement

DEFORE EXAMPLER MUTTER
OIL CONSERVATION DIVISION
_____EXHIBIT NO. 4
CASE NO. 6414



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



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

990' FNL & 660' FWL Section 35, T-158, R-36E Lea County, New Mexico

Plugged & Abandoned January 30, 1961

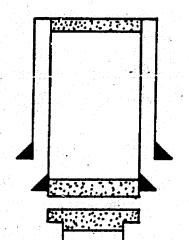
BEFORE EXAMINER MINTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 3
CASE NO. 64/4

120 sx cmt plug @ 4834-5034

65 sx cmt plug @ 5880-6080'.

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

TD: 13781'



1909

IXI

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'

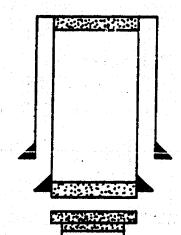
Devonian perfs 13756-137781

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-155, R-36E Lea County, New Mexico

Plugged & Abandoned July 16, 1969



10 sx cmt plug € 0-30'

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

8-5/8" csg 32#; set 2 4920 @ 4920' w/3748' sx cmt.

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

25 sx cmt plug @ 4870-4949'

30 sx cmt plug @ 5460-5551'

ρ: • × . CIBP set @ 10615' w/l sx cmt @ 10607-10615'

Permo Penn perfs 10658-10670

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

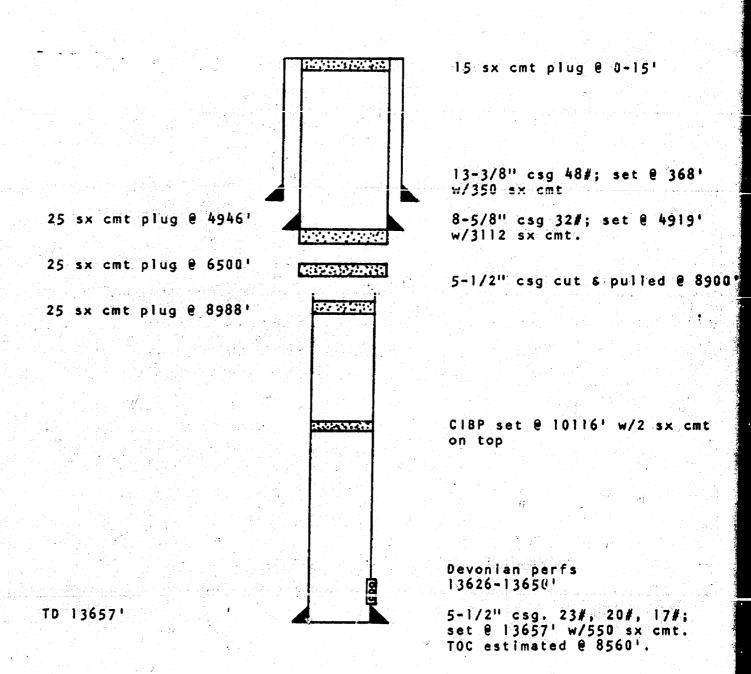
TD: 13700'

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-158, 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, T155, R36E

Lea County, New Mexico
Plugged & Abandoned November 30, 1978

Devonian Perfs Sqzd with

100 sx cmt

200 sx cmt

100 sx cmt

100 sx cmt

100 sx cmt

100 sx cmt

260 sx cmt plug in 7" X 9-5/8" annulus

13-3/8" csg. 48# Set @ 319 w/350 scmt. 9-5/8" csg. 40# & 36# Set @ 4939 w 2600 sx cmt. TOC @ 725'

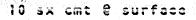
Devonian Perfs (SWD) 13,690+13,699 13,710-13,720

7" csg. 35#,32#,29# & 26# Sct @ 13,725 w/805 sx cmt TOC @ 9790'

TD: 13,726

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

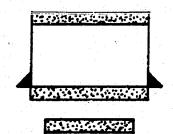
Plugged & Abandoned June 12, 1973



100 sx cmt plug @ 390'

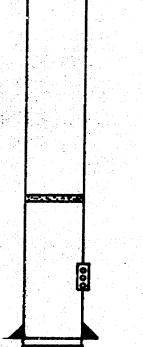
70 sx cmt plug @ 803'

50 sx cmt plug @ 2211'



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

5-1/2" esg 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 perfs 11552-11582'

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

200 sx cmt plug @ 13613-13813'

150 sx cmt plug @ 11700-11850

TD: 13813'

l Name and ocation	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)
ethon Dean "A" #1 FNL. 660 FWL 35, T15S,R36E	16, 65# 10-3/4, 51#, 45#,40# 5½,35#,32#,29#,26#	358 4934 13780	500 3955 1255	Surface Surface 500(a) (8-3/4" he	13,781 ole)	P & A
c JP Dean #1 FSL, 1980 FWL 35, T15S, R36E	13-3/8, 48# 9-5/8, 40#,36# 5½, 23#,20#,17#	322 4979 13910	375 2400 550	Surface Surface 10,265*	13,910	13,600- 13,725
les Service State AW #1 0 FEL, 660 FSL 35, 1155, R36E	13-3/8, 36# 8-5/8, 32# 5½, 23#, 20#, 17#	379 4920 13700	350 3065 400	Surface Surface 10,000' (((7-7/8" he		**************************************
les Service State AW #2 0 FEL, 1980 FSL 35, T15S, R36E	13-3/8, 48# 8-5/8, 32# 5½, 23#,20#,17#	368 4919 13657	350 3112 3100	Surface Surface 8560 (a) (7-7/8" ho	13,657 ole)	P 6 A
6 Lea Otate 396 #3 0 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
o Lea State 396 #2 0 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 0 FEL, 660 FSL 26, T15S, R36E	13-3/8, 48# 9-5/8, 36# 5½, 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# 5½, 23#,20#, & 17#	366 4955 13752	300 2300 270	Surface Surface 11,000 (a) (7-7/8" ho		11,536 - 11,564

^{*} Top of Cement Found By Temperature Survey.

(a) Estimated Top of Cement

CASE NO	1 4 1 4			40
	EXHIBIT	NO	4	
OIL COL	YŞERVAYI	ON D	AVISION	4
BEFORE	EXAME	13 (17) 13 (18)	HUT.	7.7



ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

JERRY APODACA

NICK FRANKLIN BECRETARY

Other

January 24, 1979

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO B7501 15051 827-2434

Mr. Conrad E. Coffield Re:	CASE NO. 6414 ORDER NO. R-5913
Hinkle, Cox, Eaton, Coffield & Hensley Attorneys at Law Post Office Box 3580	Applicant:
Midland, Texas 79702	Atlantic Richfield Company
Dear Sir:	
Yours very truly, JOE D. RAMEY Director	opies of the above-referenced ered in the subject case.
JDR/fd	
Copy of order also sent to:	
Hobbs OCC x Artesia OCC x Aztec OCC	

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

APPEARANCES

For the Oil Conservation

Lynn Teschendorf, Esq.

Division:

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

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

INDEX

BOB MALAISE

Direct Examination by Mr. Coffield 3

Cross Examination by Mr. Nutter 12

EXHIBITS

Applicant	Exhibit	One, Plat		12
Applicant	Exhibit	Two, Sketch		12
Applicant	Exhibit	Three, Diagrams		12
24413224	Publibit	Four Summary		12

(i)

.....

3

4

6

7

9

9

10

12

13

14

15 16

17

18 19

20 21

22

23

25

24

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.

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

A. Yes, I am.

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

A. Yes, I am.

And have you proviously testified as a petroleum engineer before the Division?

- A. Yes, I have.
- Are your qualifications accepted and a matter
 or record before the Division?
 - A. Yes, they were.

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

MR. NUTTER: Yes, he is.

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

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

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

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

SALLY WALTON BOY CERTIFED SHORTHAND REPORT 1027 FEAR BEARS (661) 411-26 SERVE PO, New Months 8170

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

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

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

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

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

Q Is Atlantic Richfield the operator on this property?

A. They are.

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

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

SALLY WALTON BOY CENTIFIED SHORTHAND REPORT 3012Falls Blaces (665) 271-3 Sents Fe, New Mexico 571-3 10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

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

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

- Q Mr. Malaise, was a log of this proposed injection well previously submitted to the Division?
 - A. Yes, it was.
 - Q. When, when did you do that, do you recall?
- A This was submitted when the original application was filed for administrative approval for this particular well to flow salt water into and the letter sent to the Commission was dated November the 29th, 1978, and it was sent to the Santa Fe office.
- Q. All right, would you go ahead and refer then to what has been marked as Exhibit Two and explain to the Examiner what this reveals?
- A. Exhibit Two is a diagrammatic sketch of the proposed salt water disposal well. Several points that should be noted on the sketch are that -- the fact that we have 7-inch casing that is set at 13,685 feet, and it's been cemented with 100 sacks of cement. By temperature survey we have located the top of that cement at 9749 feet.

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

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

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

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

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

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

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

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

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

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

- Q Okay, do you have anything further to comment on?
- A Not unless the Commission would like to go through each exhibit individually.
 - Q. Okay.

 MR. NUTTER: No, go ahead.
- Q Let's go on into Exhibit Four and explain what that represents.

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

SALLY WALTON BOYF CENTIFED SHORTHAND REPORTE OBSPIRES BROCK (065) 411-41 SERIA FO. NOW MONDO 57501

8

10

11

12

13

15

16

17

18

19

20

21

22

23

24

25

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

- Q Mr. Malaise, what kind of fluid to you propose to be injected in this salt water disposal well?
- A. We will have an inert fluid, a fluid that has been treated for --
 - Q No, I'm sorry, to be injected.
- A. Oh, to be injected we will be producing -- produced salt water will be injected into this well.
- Q. And what volume of salt water do you propose to inject?
- A. We would anticipate that the volumes will be in the neighborhood that we were currently injecting prior to losing the No. 3, and it will be a minimum of 150 barrels a day and a maximum of 200 barrels a day.
- Mr. Malaise, was a water analysis report already submitted to the Oil Conservation Division?
- A Yes, there was one that was submitted on the Lea 396 Well No. 2 that, when we made our original application in November.
- Q Was it submitted with your letter of November 29, '78?
 - A That's correct.
- Q In the analysis of that water does it appear that the fluids are compatible?

be visual proof that we did not have compatibility problems.

Well and I would -- it would indicate to me that that would

- Q. So these are the identical fluids that --
- A. The same fluids that we've been injecting in the No. 3 will be injected in No. 1.
- Q. Do you expect to inject this water by pressure?
- A. Yes. We have so indicated on the original application a maximum pressure of 2000 pounds. This would be the maximum that we would anticipate. The average pressure for the last 12-month period has been running between 900 and 1000 pounds.
- Q Mr. Malaise, do you already have the equipment necessary to inject this under pressure?
 - A. Yes, we do.
- Q In fact is this the same equipment you had on your prior well that you had to abandon?
 - A. That's correct.
- Q In this case will the casing tubing annulus be filled with an inert fluid?
 - A. Yes, it will.
 - Q. And will you attach a pressure gauge to the

SALLY WALTON BOY CERTIFIED SHORTHAMD REPORT 3330 Plant Bands (505) 411-44 Sania Pe, New Hondon 5110 8

9

10

11

12

13

14

15

16

17

18

19

20

21 22 23

24

FON BOYD

AND MEPONTER

(801) 411-2411

Mexico 87111

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

25

annulus?

A. Yes.

And are you aware of the Oil Conservation

Division's requirements that there be no surface injection

pressure in a project of this sort that is greater than

.2 psi per foot?

A. Yes, I am.

Q. Are the pressures which you anticipate within these guidelines?

A. They are.

Q. Have the offset operators been notified on this?

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

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

A. No.

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

A. Yes.

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

A. No, I don't.

Were these exhibits prepared by you or under

SALLY WALTON BO CENTRED SHORTHAND REPO 1910 Plan. Blanca (1915) 471-Santa Pe, New Moxico 877

SALLY WALTON BOY ENTIRED SHORTHALIO REPORT 190Plaza Blanca (6.16) 4711-24 Sauta Pe, New Mixton 8150 8

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

your supervision?

- A. They were.
- Q. And in your opinion is the approval of this application in the interest of conservation and the prevention of waste and the protection of correlative rights?
 - A. Yes.

MR. COFFIELD: Mr. Examiner, I move the admission of Exhibits One through Four.

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

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

CROSS EXAMINATION

BY MR. NUTTER:

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

- A. That's correct.
- Q. And is this water analysis that you showed us --
- A. That water analysis, I believe, was from the Permo-Penn at the time that was taken.
- Q I see, so we don't have an analysis of the Devonian-Pennsylvanian water.

SALLY WALTON BOYE CEMPEED SHORTMAND NEPONTE 312 PARK BENCA (615) AT1-544 SAREA PO, Now Maxico 37781

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

		A.	We	have	not	submitt	ed one.	We ca	an have	it
Τf	the	Commiss	sion	so de	sire	es. We w	vill hay	e one f	furnishe	ed.

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

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

we went into the well and it was discovered from a casing inspection log that it was -- it was not desireable to continue producing -- or continue injecting water into that well. It was an old well. It had been -- prior to converting it, it was 1971 we had converted it, there had been problems in the well originally upon completion.

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

A. No.

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

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

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

.

A. It was into the same formation.

Q. Okay.

_

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

wish to offer in Case Number 6414?

9

10

We'll take the case under advisement.

11

(Hearing concluded.)

12

13

15

16

17 18

19

20

21 22

23

24

25

1.4

1:

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.

I do hereby certify that the foregoing is a complete record of the proceedings in the examiner hearing of Case No. 64 Examiner

Oil Conservation Division

15

9

10

11

12

13

14

16

17 18

19

20

21

22 23

24

25

AtlanticRichfieldCompany

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

aanta fe



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

Attn: Mr. Joe Ramey
Secretary-Director

e: 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

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.

Case 6414

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

OPERAYOR			ADDRESS		
Atlantic	Richfiel	d Company	P. O. B	ox 1610. MI	dland, Texas 79702
Lea 396	State			Dean Devon	
LOCATION	v	109	0		
UNIT LETTER _	: w	ELL IS LOCATED 198	PEET PROM TH	south u	NE AND ZUIU PEET FROM
West LINE, SECTION	35 10	WHEHIP 155	NAME 31	6 Enman.	
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMEN	TOP DETERMINED BY
UNFACE CASING	13-3/8"	3001	350	Surface	Circulated
ITERMEDIATE		300	330 2000	Surrace	liculated
ONG STRING	9-5/8"	4926'	2600	1980	TOC
	7"	13685'	100	9749	TOC
UBTHS	0 0 (01)	N	AME, MODEL AND DEPTH O	PF TUBING PACKER	
ME OF PROPOSED INJECTION FOR	2-3/8"		TOP OF FORMATION		BOTTOM OF FORMATION
Devonian	IVA ON AVOID US	Taravas (Sua A	13,602	2	13,689 TD
<u></u>					al a ser alajaga
THIS A NEW WELL DRILLED FOR		Per			ZONE OTHER THAN THE PROPOSED INJEC
NO	COMPIE	ed 1/6/56 a	s Devonian/f	enn dual	Yes
	£ 10630-66				sqzd 11432-433'w
PTH OF BOTTOM OF DEEPEST ESH WATER ZONE IN THIS AREA 700 5	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	DEPTH OF BOTTOM OF N	EXT HIGHER IS AREA NA	DEPTH OF TOP OIL OR GAS ZO	OF NEXT LOWER 360 S. NE IN THIS AREA NA
TICIPATED DAILY MINIMUM	XXXMUM	OPEN OR CLOSED		JECTION TO BE BY GRAVI	TY OR APPROX. PRESSURE (PSI)
1 1 2 0	200	clo		pressur	
SWER YES OR NO WHETEER THE F ALIZED TO SUCH A DEGREE AS TO OCK, IRRIGATION, OR OTHER GENE	BE UNTIT FOR DOMES	TIC.	yes	yes	ARE WATER ANALYSES ATTACHED? YES
ME AND ADDRESS OF SURFACE OW		물리 사람들은 기계를 가지 않는 것이 없다.			- 00060
C. E. Alexande				, New Mexic	:0 00200
J. M. Kelley, 1	Elk 011 Comp	any, Box 310,	Roswell, New M	exico 88210	
J. P. Reedler,	501 Parkway	Schuvikiii	PA 17972		
					
Marathon, P. 0	. Box 552,	Midland, T	exas 79702		
Sulf Oil, P. O	. Box 1150	, Midland,	Texas 79702		
E COPIES OF THIS APPLICATION IT TO EACH OF THE FOLLOWING	BEEN SURFACE OWN	ER	EACH SPERATOR WIT	HIN ONE-HALF MILE	THE NEW MEXICO STATE ENGINEER
And the state of	Yes			Yes	Yes
E THE POLLOWING ITEMS ATTACHI TO APPLICATION (STY RULE 701-8	Yes		ELECTRICAL LOS	Yes	Yes
		ormation above is tru	e and complete to the		ige and belief.
A nereby c					
Let Im	Nelaise	Sr. I	Engineer		11/16/78

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 hyaring,
if the applicant so requests, SER RULE 701.

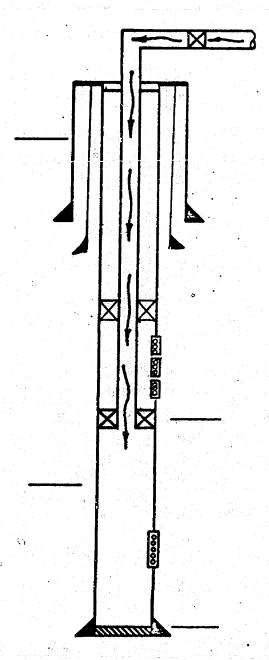
*Will be squeezed and tested prior to converting to salt water disposal well.

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



2³/8" 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'

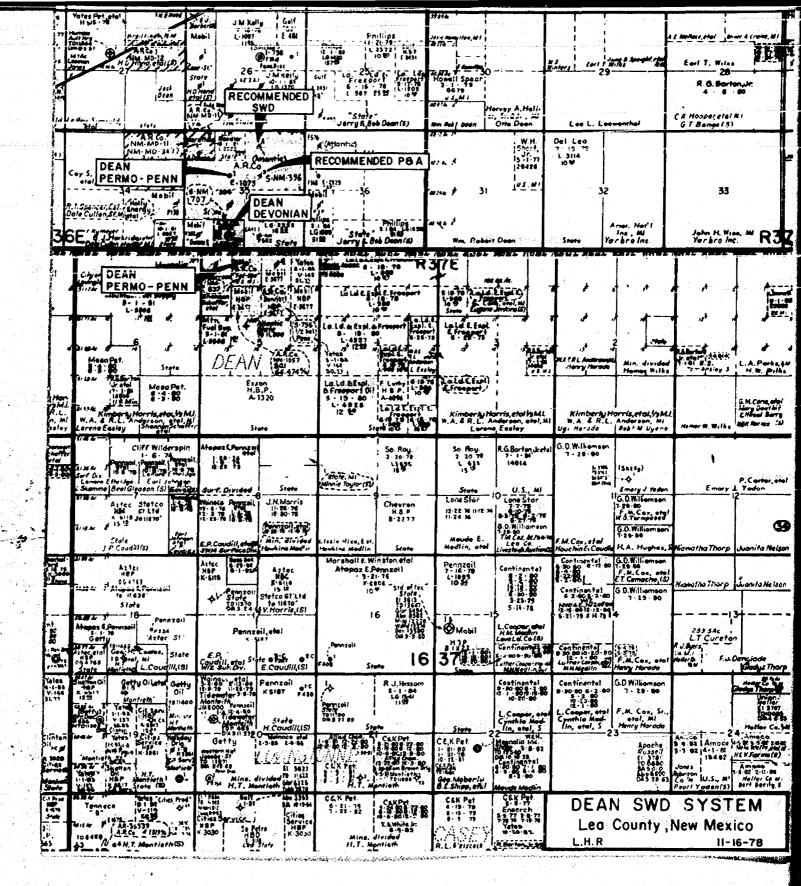
10,380-395' 10,630-665' 11,510-560' Pkr. set @ approx. 13,530'

Permo Penn Perfs:

Devonian perforations @ 13,590-13,685'

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

• •



**** Continue de la C

AtlanticRichfieldCompany

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

Attn: Mr. Joe Ramey Secretary-Director

> 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

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-

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 wellhore. 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.

BYEL BS VON

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

192

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 30 1978

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

			· ·		A Mile Service of the Control of the
<u> Atlantic</u>	Richfiel	d Company	P. O. B	ox 1610, Midl	and, Texas 79702
LEASE NAME		WELL NO.	PIELD	0.00	COUNTY
Lea 396	State			Dean Devonia	n Lea
	v	1.0	g o		2010
UNIT LETTER	К , и	VELL IS LOCATED 19	PEET FROM T	HE South LINE A	NO ZUIU FEET FROM 1
West LINE, SECTION	35 т	OWNSHIP 155	RANGE 3	6ENMPM.	
			AND TUBING DATA		
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	1	1400		1 100 421 30 #138 814 10 8 10	the country beautiful and
NTERMEDIATE	13-3/8"	3001	350	Surface	Circulated
al an margin (a	9-5/811	49261	2600	1980	TOC
ONG STRING	9-5/0	4920	2000	1900	TOC
	711	13685	100	9749	TOC
UBING	 		NAME, MODEL AND DEPTH		
antina di Paramanan di Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupatèn Kabupat Kabupatèn Kabupatèn	2-3/8"		Permanent		
AME OF PROPOSED INJECTION FORM	ATION		TOP OF FORMATION	15.	TOM OF FORMATION
Devonian SINJECTION THROUGH TUBING, CASI			13,60	2 I	13,689' TD
1 - <u></u>	NG OR ANNULUS?		Alexander Same	The second secon	\$2021
Tubing		Ye	rforation	13590-13	
S THIS A NEW WELL DRILLED FOR	IF ANSWER 1	S NO. FOR WHAT PURPOS	E WAS WELL DRIGINALLY	DRILLED? I HAS	
		na ing pagalawa a sa	E WAS WELL ORIGINALLY	ZONI	WELL EVER BEEN PERFORATED IN A E OTHER THAN THE PROPOSED INJEC-
S THIS A NEW WELL ORILLED FOR NO IST ALL SUCH PERFORATED INTERVA	complet	ted 1/6/56	as Devonian/	ZONI	other than the proposed injections Yes
NO	COMPlet	ted 1/6/56	as Devonian/	Penn dual	Yes
NO IST ALL SUCH PERFORATED INTERVA PENN/10380-3951	COMPlet	ted 1/6/56	as Devonian/ FF ON SQUEEZE EACH eezed)*. Peri	Penn dual zon no Penn sec. s	yes sqzd 11432-433'w/
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-3951 EPTH OF BOTTOM OF DEFEST RESH WATER 20ME IN THIS AREA 7001	COMPlet	EMENT USED TO SEAL OF TO SEAL OF THE OF SOUTH OF SOUTH OF SOUTH OF SOUTH OF THE	as Devonian/ FF OR SQUEEZE EACH eezed)*, Peri NEXT HIGHER NA	Penn dual TION TO Penn sec. S DEPTH OF TOP OF N OIL ON GAS ZONE IN	Sqzd 11432-433'W/ EXT LOWER 360 SX
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-395 6 EPTH OF BOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700 VICEPTION FOR THE SAME A VICEPTION OF DEEPEST VICEPTION OF DEEPEST VICEPTION OF DEEPEST VICEPTION OF DEEPEST	completals and sacks of completals and comple	EMENY USED TO SEAL OF	as Devonian/ FF OR SQUEEZE EACH eezed)*. Peri NEXT HIGHER HIS AREA NA D TYPE SYSTEM PRES	Penn dual zon no Penn sec. s	SQZD 11432-433 W/ EXT LOWER 360 SX NA IR APPROX. PRESSURE (PSI)
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-395 EPPH OF SOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700 NTICIPATED DAILY MINIMUM LIECTION VOLUME 150	complet LS AND SACKS OF C S 10630-66	TEGENT USED TO SEAL OF STATE OF SEAL O	as Devonian/ FF OR SQUEEZE EACH eezed)*. Peri NEXT HIGHER HIS AREA NA D TYPE SYSTEM D Sed *	Penn dual TION TO Penn sec. S DEPTH OF TOP OF NOTE OF CASE TO SEE BY GRAVITY CONTRET Pressure	SQZD 11432-433 W/ EXT LOWER 360 SX NA IR APPROX. PRESSURE (PSI) 2000
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-395 6 EPTH OF SOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700 NTICIPATED DAILY MINIMUM ISECTION O'CLUME 150 NAMER YES ON NO WHETER THE TO SUCH ADEGREE AS TO	COMPlet LES AND SACKS OF C S 10630-66 MAXIMUM 200 LLOWING WATERS AR	TEGENT USED TO SEAL OF STATE OF SEAL O	as Devonian/ FF OR SQUEEZE EACH BEZED * Peri NEXT HIGHER NA D TYPE SYSTEM D Sed TO BE DISPOSED OF NATAL SAL	Penn dual TION TO Penn sec. S DEPTH OF TOP OF N OIL OR GAS ZONE H PRESSURE PRESSURE PRESSURE JEAL WATER IN DISPO- ARE	SQZD 11432-433 W/ EXT LOWER 360 SX NA IR APPROX. PRESSURE (PSI) 2000 WAYER ANALYSES ATTACHED?
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-395 EPTH OF BOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700 NTICIPATED DAILY MECTION VOLUME SUCH SELS.) 150 (SWER YES ON NO WHETER THE FOR TO SUCH A DEGREE AS TO FORCE, IRRIGATION, OR OTHER GENER	MAXIMUM 200 LLOWING WATERS AR UNET FOR DOMES	TEMIN-	as Devonian/ FF OR SQUEEZE EACH BEZED * PETI NEXT HIGHER HIS AREA NA D TYPE SYSTEM D SED TO BE DISPOSED OF NATU YES	Penn dual TO Penn sec. S DEPTH OF TOP OF NOTION TO BE BY GRAVITY OF SURE? Pressure JEAL WATER IN DISPO- TARE	SQZD 11432-433 W/ EXT LOWER 360 SX NA IR APPROX. PRESSURE (PSI) 2000
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-395 6 EPPH OF BOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700 NTICIPATED DAILY LIECTION VOLUME MINIMUM LIECTION VOLUME 150 WAYNER YES OR NO WHETHER THE FOR TOCK, IRRIGATION, OR OTHER GENER AME AND ADDRESS OF SURFACE OWN	COMPTED LLS AND SACKS OF C S 10630-66 MAXIMUM 200 LLOWING WATERS ARE UNFOLKED FOR DOMES AL USE _ FOR DOMES ER (OR LESSEE, 17 S	OPEN OR CLOSE THE MIN- WATER STATE OR FEDERAL LANG	as Devonian/ FF OR SQUEEZE EACH BEZED * Peri NEXT HIGHER NA D TYPE SYSTEM D Sed TO BE DISPOSED OF NATL YES NATL	Penn dual TION TO Penn sec. S DEPTH OF TOP OF N OIL OR GAS ZONE IN PRESSURE PRESSURE PRESSURE YES YES	SQZD 11432-433 W/ EXT LOWER 360 SX NA IN APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? Y S
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-395 EFTH OF SOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700' VITICIPATED DAILY MINIMUM IJECTION VOLUME MINIMUM ISLS: 150 ISWER YES OR NO WHETHER THE FO ISWER YES OR NO WHETHER THE FO ISWER YES OR NO WHETHER THE FO ISWER AND ADDRESS OF SURFACE OWN C. E. Alexande I	MAXIMUM 200 LLOWING WATERS AR LUSE - , Route M	OPEN OR CLOSE THE MIN- STATE OR PEDERAL LANCE TEG 1/6/56 EMENT USED TO SEAL OF SEAL OF SEAL OF SEAL OF SEAL OF SEAL OF SEAL CANCEL TO 1, BOX	as Devonian/ FF OR SQUEEZE EACH eezed)*. Peri NEXT HIGHER NA O TYPE SYSTEM O Sed * TO BE DISPOSED OF NATU yes 10 10 10 10 10 10 10 10 10 1	Penn dual TION TO Penn sec. S DEPTH OF TOP OF N OIL OR GAS ZONE IN PRESSURE PRESSURE PRESSURE YES YES	SQZD 11432-433 W/ EXT LOWER 360 SX NA DR APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? Y S
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-395 C EPTH OF SOTTOM OF DEEPEST RESH WATER 20NE IN THIS AREA 700 NTICIPATED DAILY MINIMUM INCETION VOLUME 150 ISMER YES OR NO WHETHER THE FO INCLLIZED TO SUCH A DEGREE AS TO E COCK, IRRIGATION, OR OTHER STORE INME AND ADDRESS OF SURFACE OWN C. E. Alexande I ST HAMES AND ADDRESSES OF ALL	MAXIMUM 200 LLOWING WATERS ARE UNFIT FOR DOMES R (OR LESSEE, IF: , ROUTE N OPERATORS WITHIN	DEPTH OF BOTTOM OF OIL OR GAS ZONE IN TO THE MIN- WATER STATE OR FEDERAL LANG	as Devonian/ FF OR SQUEEZE EACH eezed)*, Peri NEXT HIGHER NA D TYPE SYSTEM D Sed * TO BE DISPOSED OF NATU SAL Yes 10, Lovington THIS INJECTION WELL	Penn dual TO Penn sec. S DEPTH OF TOP OF NOTICE OF THE SECTION TO BE BY GRAVITY OF THE SECTI	SQZD 11432-433 W/ EXT LOWER 360 SX NA DR APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? Y S
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-395 EFTH OF SOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700 INTICIPATED DAILY MINIMUM IJECTION VOLUME MINIMUM IJECTION VOLUME 150 ISSUED TO SUCH A GEGREE AS TO E INTICIPATED TO SUCH A GEGREE OWN C. E. Alexande I	MAXIMUM 200 LLOWING WATERS ARE UNFIT FOR DOMES R (OR LESSEE, IF: , ROUTE N OPERATORS WITHIN	DEPTH OF BOTTOM OF OIL OR GAS ZONE IN TO THE MIN- WATER STATE OR FEDERAL LANG	as Devonian/ FF OR SQUEEZE EACH eezed)*, Peri NEXT HIGHER NA D TYPE SYSTEM D Sed * TO BE DISPOSED OF NATU SAL Yes 10, Lovington THIS INJECTION WELL	Penn dual TO Penn sec. S DEPTH OF TOP OF NOTICE OF THE SECTION TO BE BY GRAVITY OF THE SECTI	SQZD 11432-433 W/ EXT LOWER 360 SX NA DR APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? Y S
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-395 C EPTH OF SOTTOM OF DEEPEST RESH WATER 20NE IN THIS AREA 700 NTICIPATED DAILY MINIMUM INCETION VOLUME 150 ISMER YES OR NO WHETHER THE FO INCLLIZED TO SUCH A DEGREE AS TO E COCK, IRRIGATION, OR OTHER STORE INME AND ADDRESS OF SURFACE OWN C. E. Alexande I ST HAMES AND ADDRESSES OF ALL	COMPlet Complete Comp	OFFIN OF SEAL OF STATE OF FEDERAL LANGE STATE OF FEDERAL LANGE ONE-HALF (1) MILE OF STATE OF	as Devonian/ FF OR SQUEEZE EACH eezed)*, Peri NEXT HIGHER NA DISTRIBUTION DISTRIBUTION NATION NATI	Penn dual TO Penn sec. S DEPTH OF TOP OF NOTICE OF THE SECTION TO BE BY GRAVITY OF THE SECTI	SQZD 11432-433 W/ EXT LOWER 360 SX NA DR APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? Y S
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-395 CONTINUENCE PETH OF BOTTOM OF OCCEPTS RESH WATER ZONE IN THIS AREA 700 INTERPRETED DAILY MINIMUM DISCTION VOLUME 150 INTERPRETED TO NO WHETER THE TO THE RESH OF SUCH A DEGREE AS TO THE ROCK, IRRIGATION, OR OTHER CHER INTERPRETED TO SUCH A DEGREE AS TO THE C. E. Alexande I ST HAMES AND ADDRESSES OF ALL J. M. Kelley, E J. P. Reedler,	COMPlet Complete Comp	OFFIN OF SOUTH OF STATE ON PEDERAL LANGE STATE STATE ON PEDERAL LANGE STATE STATE ON PEDERAL LANGE STATE	as Devonian/ FF OR SQUEEZE EACH eezed)*. Peri NEXT HIGHER NA DISTIPLE SYSTEM DISCO TYPE SYSTEM DISCO	Penn dual TO Penn sec. S DEPTH OF TOP OF NOTICE OF THE SECTION TO BE BY GRAVITY OF THE SECTI	SQZD 11432-433 W/ EXT LOWER 360 SX NA DR APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? Y S
No IST ALL SUCH PERFORATED INTERVA Penn/10380-395' EPPH OF SOTTOM OF OVERPEST RESH WATER ZONE IN THIS AREA 700' NTICIPATED DAILY I 50 WATER YES ON NO WHETHER THE FOR ALIZED TO SUCH A DEGREE AS TO E FOCK, IRRIGATION, OR OTHER GENER C. E. Alexande I ST HAMES AND ADDRESSES OF ALL J. M. Kelley, E J. P. Reedler, Marathon, P. O.	COMPlet Complete Comp	OFFIN OF SOUTH OF STATE ON PEDERAL LANGE STATE STATE ON PEDERAL LANGE STATE STATE ON PEDERAL LANGE STATE	as Devonian/ FF OR SQUEEZE EACH eezed)*. Peri NEXT HIGHER NA DISTIPLE SYSTEM DISCO TYPE SYSTEM DISCO	Penn dual TO Penn sec. S DEPTH OF TOP OF NOTICE OF THE SECTION TO BE BY GRAVITY OF THE SECTI	SQZD 11432-433 W/ EXT LOWER 360 SX NA DR APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? Y S
No IST ALL SUCH PERFORATED INTERVA Penn/10380-395 EPPH OF SOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700 NYICIPATED DAILY I 50 I 60 I 60 I 70 I	MAXIMUM 200 LLOWING WAYERS AREAL USEF. ROUTE N OPERATORS WITHIN 1k O11 Comp. 501 Parkway Box 552,	OFFIN OF SECRET OF STATE OF FEDERAL LANCE STATE OF FEDERAL LANCE ONE-HALF (1) MILE OF ANY, BOX 310, Midland, 1	as Devonian/ FF OR SQUEEZE EACH BEZED * Period	Penn dual TO Penn sec. S DEPTH OF TOP OF NOTICE OF THE SECTION TO BE BY GRAVITY OF THE SECTI	SQZD 11432-433 W/ EXT LOWER 360 SX NA IN APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? Y S
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-395 FITH OF BOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700 INTERPATED DAILY INTERPATED DAILY ISTER YES OR NO WATER THEF THE FOR ALLIZED TO SUCH A DEGREE AS TO E FOCK, IRRIGATION, OR OTHER GENER C. E. Alexander ST HAMES AND ADDRESSES OF ALL J. M. Kelley, E J. P. Reedler, Marathon, P. O.	MAXIMUM 200 LLOWING WAYERS AREAL USEF. ROUTE N OPERATORS WITHIN 1k O11 Comp. 501 Parkway Box 552,	OFFIN OF SECRET OF STATE OF FEDERAL LANCE STATE OF FEDERAL LANCE ONE-HALF (1) MILE OF ANY, BOX 310, Midland, 1	as Devonian/ FF OR SQUEEZE EACH BEZED * Period	Penn dual TO Penn sec. S DEPTH OF TOP OF NOTICE OF THE SECTION TO BE BY GRAVITY OF THE SECTI	SQZD 11432-433 W/ EXT LOWER 360 SX NA DR APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? Y S
NO STALL SUCH PERFORATED INTERVA Penn/10380-395 CPTH OF BOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700' ITICIPATED DAILY MINIMUM JECTION VOLUME STALLZED TO SUCH A DEGREE AS TO R OCK, IRRIGATION, OR OTHER GENER C. E. Alexander ST HAMES AND ADDRESSES OF ALL J. M. Kelley, E J. P. Reedler, Marathon, P. O.	MAXIMUM 200 LLOWING WAYERS AREAL USEF. ROUTE N OPERATORS WITHIN 1k O11 Comp. 501 Parkway Box 552,	OFFIN OF SECRET OF STATE OF FEDERAL LANCE STATE OF FEDERAL LANCE ONE-HALF (1) MILE OF ANY, BOX 310, Midland, 1	as Devonian/ FF OR SQUEEZE EACH BEZED * Period	Penn dual TO Penn sec. S DEPTH OF TOP OF NOTICE OF THE SECTION TO BE BY GRAVITY OF THE SECTI	SQZD 11432-433 W/ EXT LOWER 360 SX NA DR APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? Y S
NO IST ALL SUCH PERFORATED INTERVA Penn/10380-395' EPTH OF SOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700' INTICIPATED DAILY MINIMUM JECTION VOLUME JSOU JSOU JSOU JSOU JSOU JSOU JSOU JSOU	MAXIMUM 200 LLOWING WATERS AND SACKS OF C 10630-66 MAXIMUM 200 LLOWING WATERS AND SACK USET ROUTE N OPERATORS WITHIN 1k Oll Comp. 501 Parkway Box 552, Box 1150	OFFIT OR PEDERAL LANGE TO A STATE OR PEDERAL LANGE TO A ST	as Devonian/ FF OR SQUEEZE EACH eezed)*, Peri NEXT HIGHER NA D TYPE SYSTEM D Sed * TO BE DISPOSED OF NATU YES 10, Lovingtor THIS INJECTION WELL ROSWell, New M PA 17972 Texas 79702	Penn dual TO Penn sec. S DEPTH OF TOP OF NOTICE OF COLUMN CASE ZONE IN PRESSURE PRESSURE YES TO, New Mexico Mexico 88210	SQZD 11432-433 W/ EXT LOWER 360 SX NA DR APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? Y S
No IST ALL SUCH PERFORATED INTERVA Penn/10380-395' EPTH OF SOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700' VICEIPATED DAILY MINIMUM USECTION VOLUME MINIMUM USECTI	MAXIMUM 200 LLOWING WATERS AND SACKS OF C 10630-66 MAXIMUM 200 LLOWING WATERS AND SACK USET ROUTE N OPERATORS WITHIN 1k Oll Comp. 501 Parkway Box 552, Box 1150	OFFIT OR PEDERAL LANGE TO A STATE OR PEDERAL LANGE TO A ST	as Devonian/ FF OR SQUEEZE EACH BEZED * Period	Penn dual TO Penn sec. S DEPTH OF TOP OF NOTICE OF COLUMN CASE ZONE IN PRESSURE PRESSURE YES TO, New Mexico Mexico 88210	SQZD 11432-433 W/ EXT LOWER 360 SX NA OR APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? YES 88260
No IST ALL SUCH PERFORATED INTERVA Penn/10380-395 6 EPPH OF SOTTOM OF DEEPEST RESH WATER ZONE IN THIS AREA 700 NTICIPATED DAILY MINIMUM ISECTION VOLUME 150 NAME TO SUCH A DEGREE AS TO R TOCK, IRRIGATION, OR OTHER THE FOR TOCK, IRRIGATION, OR OTHER GENER AME AND ADDRESS OF SURFACE OWN C. E. Alexander J. M. Kelley, E J. P. Reedler, Marathon, P. O.	LOMP 1 et 10630-66 MAXIMUM 200 LLOWING WATERS AN AL USE FOR LESSEE, IF ST. ROUTE NOPERATORS WITHIN 1k Oll Comp. SO1 Parkway Box 552, Box 1150	OFFIN OF SOTTOM OF OIL OR GAS ZONE IN TO STATE OR FEDERAL LANGE AND STATE OF STATE OR FEDERAL LANGE AND STATE OF STATE OR FEDERAL LANGE AND STATE OF STATE O	as Devonian/ FF OR SQUEEZE EACH eezed)*, Peri NEXT HIGHER NA D TYPE SYSTEM D Sed * TO BE DISPOSED OF NATU YES 10, Lovingtor THIS INJECTION WELL ROSWell, New M PA 17972 Texas 79702	Penn dual TO Penn sec. S DEPTH OF TOP OF NOIL OR GAS ZONE IN PRESSURE PRESSURE PRESSURE YES THIN ONE-HALF MILE YES THIN ONE-HALF MILE YES	SQZD 11432-433 W/ EXT LOWER 360 SX NA IR APPROX. PRESSURE (PSI) 2000 WATER ANALYSES ATTACHED? YES 88260

	pebes M Malaiso	sr.	Engineer	en e	11/16/78
7	(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 NULE 701.

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

**

Dean Devonican Permo Pennsy branca LAIR RESEARCH LABORATORIF INC. TULSA, OKLAHOMA

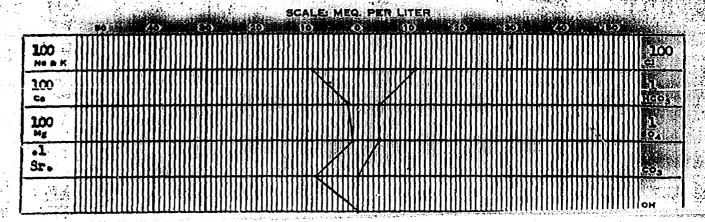
DESCRIPTION 5-0-96. State 396 #2, Dean-Devonian, 35-159-368

CONSTITUENTS	IN PARTS PER MILLION		MEQP PER LIYER	REACTING VALUES		
POTABBIUM (IK)	Present	ALKALIES POTASSIUM	Present	Present		
SODIUM (MAI	19,796	SODIUM	860.72):78	37.19		
LITHIUM (LI)	ster Fore	LITHIUM				
CALCIUM (Ca)	3,200	ALK. EARTHS CALCIUM	159.68000	6.90		
MAGNESIUM (Mg)	1,652	MAGNESIUM	135.86048	5.87		
DARIUM (BE)		BARIUM				
STRONTIUM (Sr)	35	STRONTIUM	0.79870	0 . QL		
HANGANESE:(MD)	Strong	MANGANESE	Strong	Strong		
CARBONATE (CO ₂)	None	WEAK AGIOS CARBONATE				
IIGARBONATE (HCO ₃)	ટીમે	BICARBONATE	3.67136	0.15		
CHOROXIDE (OH)	None	HYDROXIDE	•			
INCHALE (204)	1,970	STRONG ACIDS SULPHATE	11.01510	1.78		
HLORIDE (CI)	39.446	CHLORIDE	1112_37720	h8-07		

	PROPERTIES OF REACTION IN PERCENT	4
	PRIMARY SALINITY 74.38 PRIMARY ALKALINITY - SALINITY 96 1388 0.105 O.M. 81 04 1	1
	PRIMARY SALINITY 74.38 PRIMARY ALKALINITY SALINITY 96.13 RES 0.105 O.M. 81 04	
1	SECONDARY BALINITY 25-32 SECONDARY ALKALINITY 0.30 SALINITY 3.57NA CI EQ. 55,615 P.P.M.	7
	SECONDARY BALINITY 25.32 SECONDARY ALKALINITY 0.30 SALINITY 3.57NA CI EQ. 55,615 P.P.M.	J
		╼.

REMARKS "Devonian Water" JFS

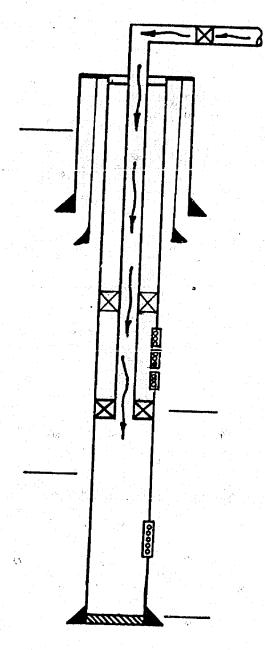
PATTERN WATER ANALYSIS SYSTEM



ATLANTIC RICHFIELD COMPANY

Lea 396 State No. | Proposed Salt Water Disposal Well

1980' FSL & 2010' FWL Section 35, T-158, R-36E Lea County, New Mexico



The second secon

2³/8" OD TUBING (Internally Coated)

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

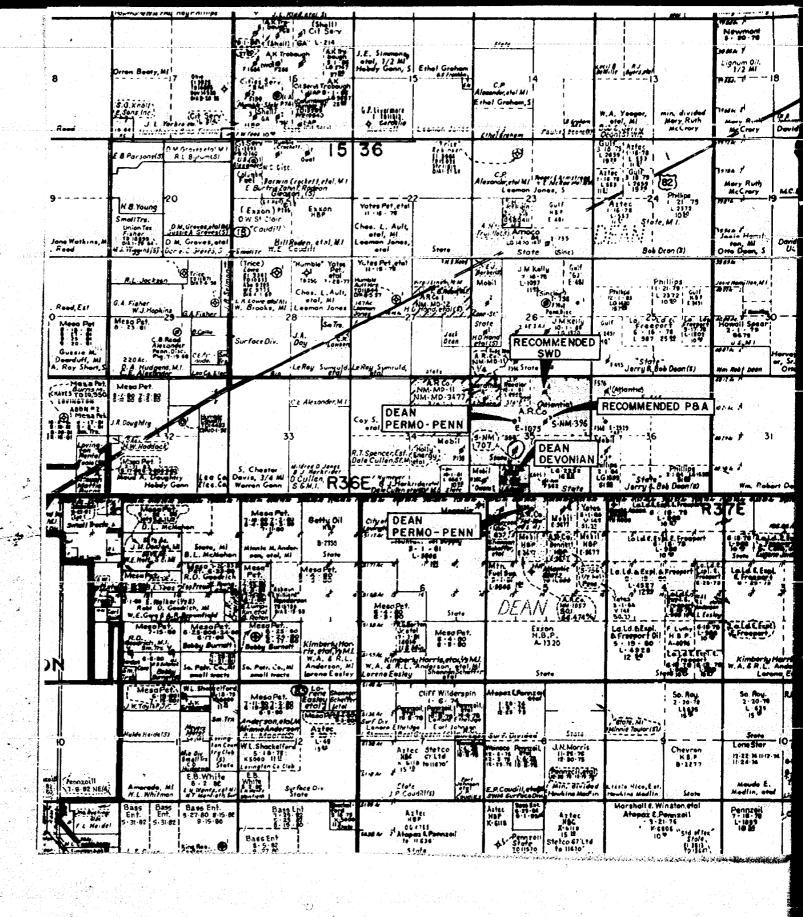
9-5/8" csg. 40# & 36#. Set @ 4926' w/2600 sx. cmt.

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'.



X,	Water H	rg Pipt orbig hill - 78		111100	124	• • • •	J M Kelly 7 M-78 L-1091	. 1 ,61		:			#194``							la di sama da	F
	100		1	ero(ch)	1 "		11 4 5	E 461	Ph 12 10	lliga Bu	Phillips 11-21-79 11-23-72 1-10-50	60 1 1 100 1	All Anny			V	Carl F H		& E Mollocs, etal	anne a cross, se	d,
		7115	27.22	Joei Dean	Stat HDM etai	يم امم	26-	MENDE	60H	(a - 2)	eport /		70 873, \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	,79)	Biolece .	- 29		R.G. 6	ictorule a ao	
yjd.	Le Reg	Symeuld			7.7	, J		ND.	ار [Sta	1		2037 X - 17 20 m - 1940 f	, I	larvey A.Hell- H, Sr.&Jr., MI Otto Pean	۱.۰۰	L. Los	wenthal	C A Hooperel G T Banga (
MI			P. A.	6.			iar Jes		FS76 FR'(A)	(tanhe)	NDED		4747	i Aut Tu	. W.H. Short, S (-77	Del Leo 7 : 15 79 L: 3114			TO STATE OF THE ST		L
Carabban Make M	Coy	DEA	MO-F	ENN	(S-N)		A.R.C.	S-NM-396	(M ² (₃)		INDEO		one s	31	29420 U.S. Mil	, φΨ	12			3	
	R.T.S. Dale (encer, Est.	Holly	Mebil	707	$\triangle G$		EAN EVONIAI				. 1 .	I	,				eraja di Arri Arangan			1
13	6E	173	ko i de pote	12	Madi Madi Madi Madi Madi Madi Madi Madi	1	THILL S	14 28 61 16 88 57070	LG 1639 S4 MB	Jerry 6	Pinis Pet Dec	n(2)		n, Pabai		Stere	Yo	ine, Nort. Ine, No Irbreine.	John H. Yerbro	ine. MR	玄
ş:	c		AN	<u> </u>				MAN YOU			Leater		沙 芹		997872 1 1786 6 46 At			NONE HON			
0	1	, LPE	RMO		Salari I		No.	Bandert His Mandert His Mandert Line	P.	iolde.	14 57	pepert		1	Espec ()	1	•				1705
	I	74.	. /* 1 <u>12</u> 6_			Min. Fuel See. 3-1-01 L-8066		The little	hel:	Le. & Exp L-4527	80	1	12/	i i i i i	3 1	1.		2 3404			
	T	Meso Pet		State		DE	ΑŃ	A. (2.0 1057 46-4747	} \	rtes -1-66 148 0.13_1		() ()		# 		MARKE A	retir parté Plor codo	Min. divide Homes Will		5 L.A.Porks	
370		بن. الأنه الأنه	e Min	Mesa Pe 8 - 4 - 80 8 - 8 - 80			Ex#0 H.B. A-13	ρ.		1.Ld & Exp FreePort 15 - 80 L - 4928	1.57		W. Frie		1					G.M.Cone et Mary Douthi Elitsel Barr	od i è
R.L on, A oslo		A. & R.L renn Easte	Ander Sh	ta, etca, fr son, etc englisher	#.,		Stat	14		12 😢	Signa in		w.A.	R.L. Leren	forris etalisM. Anderson, etal, re Easley	Kimi W.A. Ugi Mar.	8 R.L.	arris,etal,/sh Anderson, Mi Real M Uyen		. I was a second	30 30
Will state of the	3 3 . 1		per l'A	Wilders 6-74 mail 1	Groit.	Hopoz (Personal P		4	ing ta ta ta s		Ray. 6-71 8-75		Hoy. 20-78	R.G.Bortonulra 7-1-01 14014	fol 6. D. "Hilk 1 - 29		(Stellgi)	1		
T.	35 E- 25 27	anma Be	130 E 91 G/20 90	n (S) 60	E.	Sury: Di		State J.N.Morris	Min	Hale Mi nie layler (- الأ - أراق	<u>.</u>	1	State Star	10 Lone Stor		24 5346 Bar 2346	Emery J Yede		P.Certer, e y 1. Yedon 12	ete!
		, i.i. J. 15	tec 5te 16 er l 6118 tolle	70'		1,76	4 B	Pennach at			Э.	vron 8 P 2277	12-21 11-24	M 11-12-14	1 7.7.76			F.M.Cau. of W.O.Turnsood G.D.Williamso		-	3
	178	JPC	ole oudil(s)	<u>ئ</u> ور ئور	411		III, of any or co Direction and East 13 at 1	Min. divid	in. How		m S Winsten		Medi	in, etal	Lives loads Austria	Cantine	Coudle	Age of	.S Hiawatha Thor	p Juanita Nel	ison
The second	14.5	ear 2 Ale	Az fec HBP 16 4265 mpaz 6.Po 11 6361	nnzoi)		COND }	Sec. L	Artec NBC R'elle IS M Stetco 67 Lti			E Permizo 1-21-76 -6806 -51	d of lex	Penr 7-14 L:10	99	Continental		- Stal -	F.M.Cox. en ET.Camacho.(6	il Hamalaa Taux	p Juanita kiels	90n
Ent.			Stote 18	Pennzo	+		13.55	to 11670' V.Harris,(S			16		 - -		5:14:76	NW(4 6 7)	14.19	7-19-80 		- 3+	
388		Getty Getty Cetal Get 10 10 10 10 10		rzza Izfec Si	ote		Pennzei	19		Pennzeil	·.	#/ } # 16	37) 	L.Cooper et HAL Medin Level d.Co.(4) Confinential	Continer 9 90 90 10	19	(C. 1) (Cox. etc.) F.M.Cox. etc. Manny Horodo	LT Cure		
Yales 4:1-84 V-148	Jing	or all	Getty Oi	letal Ge	S)	Voing	300. [E.Coudill,(S	10 10		Stete R.J.	Hissom		ALCO TO	Continental 9-10-10-11-11-11-11-11-11-11-11-11-11-11-	Contine	ntel	G.D Williamson		J. Correlade Glodys The	
31.11			Montuell C.J.	Sarv Mir	***	6000	ennzoil 4-80	State H. Caudill.	37	mzeł!	, i	1 - 64			L. Cooper, of Cynthia Mad	L. Coope Cynthia	Ace.	F.M. Cox, Sr.		2 7 E	101
Cilile Oil K	1 14 E		in 19 Cit			No. 10	~ 1~		242-8-	e i y e	Septe S Cak	17.8	CEKP	en .	· //a atal \	: IIn, etc	N. 5 I	Henry Morado	An	24 America	-14
Former Second	17		ren H.	ion)			Mins. di	El 101 Floridad 79 1164 Florid Garage		X 7 1	Cak R R R R R R R R R R R R R R R R R R R	100 A	6.2 sh	nberly,	Magnetia inc.	3		Apache Pusse!! To 6460 Anso 600 OAS 28 6	Joses Assertion Co to U.S.	S-6-82 2-fi-98 W Heller Ce	-
Cri from		ennece	18 1 10 1	Crhes M	red :	ies Ser	Bull _	134 10 m i	4 C	4 K Pet	2 SAY	178	0 - 15	Pet 19	CEK Pet Enserch	DI	ΕΑΙ	y SWC	Peori Yaden(
3.P. 565	100		R-35139 RCs 4	Mrs.	33 ×	BP 3030	Se Bed	Cities Servi HBF X-30	ce xi	Mins H.T.	E E W	ide in	0.3	o r Oliv	Enserch 1977 1977 Vetes 1978 1978 1978 1979 1978 1979 1979	L.H		County	New Me	XICO ~16-78	content to the second

ii ii 50

OIL CONSERVATION COMMISSION HODBS DISTRICT

BOX 2088	DATE December 4, 1978
SANTA FE, NEW MEXICO	RE: Proposed MC
	Proposed DHC
	Proposed NSL
and the property of the most of the contract o	Proposed SWD X
	Proposed WFX
그는 그 이 그 아이트 나는 어느 수 하다는 그는 바쁜 바다 하다	Proposed PMX
Gentlemen:	
I have examined the application date	.a
for the Atlantic Richfield Co. Lea 39	6 State #1-K 35-15-36
	and Well No. Unit, S-T-R
and my recommendations are as follows:	
and my recommendations are as follows:	nd the pipe was in such shape that
Recently their old SWD well was plugged at plugs could not be set below 5100'. This	
Recently their old SWD well was plugged a	
Recently their old SWD well was plugged an plugs could not be set below 5100'. This	
Recently their old SWD well was plugged an plugs could not be set below 5100'. This	
Recently their old SWD well was plugged an plugs could not be set below 5100'. This	
Recently their old SWD well was plugged an plugs could not be set below 5100'. This	
Recently their old SWD well was plugged as plugs could not be set below 5100'. This and probably would not be a problem.	well is right at the ½ mile limit
Recently their old SWD well was plugged an plugs could not be set below 5100'. This	well is right at the ½ mile limit

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- <u>59/3</u>
APPLICATION OF ATLANTIC RICHFIELD COMPANY FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.
Ju July
ORDER OF THE DIVISION
BY THE DIVISION:
This cause came on for hearing at 9 a.m. on
19 79, at Santa Fe, New Mexico, before Examiner Daniel S. Nut
NOW, on this day of January, 1979, the Divisi
Director, having considered the testimony, the record, and the
recomendations 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
Pange OS Bust, NAPM,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
ormation, with injection into the perforated
nterval from approximately 13,592 feet to 13,654 feet.
(A) That the injection should be accomplished through 236

-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.

- with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 27/8psi.
- (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 of Section 35 , Township 15 South located in Unit K , NMPM, Dean-Devonian Pool 36 East Range Lea County, New Mexico, to dispose of produced salt water Devonian into the formation, injection to be accomplished through -inch tubing installed in a packer set at approximately /5,530 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 pressant in the well a pop-off valve or acceptable substitute 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.