

CASE NO.

7483

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,
ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
17 February 1982

EXAMINER HEARING

IN THE MATTER OF:

Application of Adams Exploration
Company for salt water disposal,
Chaves County, New Mexico.

CASE
7483

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

Owen Lopez, Esq.
MONTGOMERY AND ADREWS
Paseo de Peralta
Santa Fe, New Mexico 87501

CASE NO.

7483

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,
ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
17 February 1982

EXAMINER HEARING

IN THE MATTER OF:

Application of Adams Exploration
Company for salt water disposal,
Chaves County, New Mexico.

CASE
7483

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

Owen Lopez, Esq.
MONTGOMERY AND ADREWS
Paseo de Peralta
Santa Fe, New Mexico 87501

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

2

I N D E X

JOHN MALLOY

Direct Examination by Mr. Lopez

3

E X H I B I T S

Applicant Exhibit One, Map

4

Applicant Exhibit Two, Schematic

5

Applicant Exhibit Three, Data Sheet

5

Applicant Exhibit Four, Water Analysis

8

Applicant Exhibit Five, Letters

8

1
2 MR. STAMETS: We'll call next Case 7483.

3 MR. PEARCE: Application of Adams Ex-
4 ploration Company for salt water disposal, Chaves County,
5 New Mexico.

6 MR. LOPEZ: Mr. Examiner, my name is
7 Owen Lopez with the law firm of Montgomery and Andrews, Santa
8 Fe, New Mexico, appearing on behalf of the applicant.

9 I have one witness to be sworn.

10
11 (Witness sworn.)

12
13 JOHN MALLOY

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

16
17 DIRECT EXAMINATION

18 BY MR. LOPEZ:

19 Q Would you please state your name, by
20 whom you're employed, and in what capacity?

21 A My name is John Malloy. I am employed
22 by Loy Boyd and Associates and represent Adams Exploration
23 as a consulting engineer.

24 Q Are you familiar with this application
25 in Case Number 7483?

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

A. Yes, I am.

Q. Have you previously testified before this Commission and had your qualifications accepted as a matter of record?

A. Yes, I have.

Q. What does Adams Exploration Company seek in this case?

A. The authority to dispose of produced water into the San Andres formation in the perforated interval from 4176 feet to 4293 feet in its Griffin Well No. 4, located in Unit A, Section 10, Township 8 South, Range 32 East, in the Chaveroo San Andres Pool.

MR. LOPEZ: Are the witness' qualifications acceptable?

MR. STAMETS: They are.

Q. Would you please now turn to Exhibit Number One and identify it?

A. Exhibit Number One is a map showing a half mile radius, indicating all of the producing -- all of the wells within that -- within that radius, and also indicating the 2-mile radius and the wells located in the 2-mile radius.

Also attached are the well records of each well located in the one-half mile radius and all of the

1
2 pertinent data that pertains to each one of those wells.

3 Q These are all the wells within a half
4 mile of the proposed injection well.

5 A Yes, they are.

6 Q Now I would ask you to turn to --

7 MR. STAMETS: Could you hold it just a
8 second while I take a quick look through those?

9 Okay, my examination indicates that each
10 one of the wells within the half mile radius is -- has
11 casing set through and cemented well above the proposed
12 injection interval, is that correct?

13 A That is true. It might also be added
14 that -- that surface casing is set to the vicinity of 17 to
15 1800 feet and each well has cement circulated to the surface.

16 MR. STAMETS: Thank you very much.

17 Q Now I'd ask you to turn to Exhibit
18 Number Two and identify it.

19 A Exhibit Number Two is a schematic
20 showing the distance to the nearest and only fresh water well,
21 located within this one-half mile radius. This water is --
22 this fresh water well is used for stock water and is produced
23 by a windmill.

24 Q Now if you would turn to Exhibit Number
25 Three and identify it.

1
2 A. Exhibit Number Three is the injection
3 well data sheet. It shows the casing, the casing, the per-
4 foration, and the schematic of the proposed completion of
5 the salt water disposal injection well.

6 It also includes, on page two of that
7 sheet, the name of the formation; it indicates the date at
8 which the permit was issued for the original well; that the
9 well has never been perforated in any zone other than the
10 San Andres; and also points out the geologic, or the pro-
11 ducing pays that exist below the proposed injection zone.

12 Q What is the geological data with respect
13 to the proposed injection zone?

14 A The injection zone in the proposed well
15 is the San Andres formation. It is composed of a dolomite.
16 Gross thickness of this injection zone is 117 feet. The
17 top of the San Andres formation in the proposed injection
18 well is 3449 feet and the well was still in the San Andres
19 at a total depth of 4315 feet.

20 The depth to the bottom of the under-
21 ground source of drinking water would be at 380 feet, which
22 is the base of the Tertiary formation in this well.

23 Q Okay, and what is the nature of the
24 proposed operation of the well?

25 A Adams Exploration proposed to utilize

1
2 this injection well to dispose of produced water from its
3 Hooper Lease Wells Nos. 1 and 2, and the Griffin Lease Wells
4 No. 1 and 2.

5 Present water production from the Hooper
6 Lease is 70 barrels per day and from the Griffin Lease is
7 90 barrels per day. The proposed average volume of water to
8 be injected is 160 barrels per day. Maximum anticipated
9 water volume to be injected would be 200 barrels per day.
10 The average anticipated injection rate is 1/2 barrel per
11 minute at an average pressure of 50 psi. Maximum anticipated
12 rate is one barrel per minute at a maximum pressure of 200
13 psi.

14 This proposal is to re-inject water
15 produced from the San Andres formation back into the San
16 Andres formation.

17 Q. And how had the well been stimulated?

18 A. The San Andres formation, perforations
19 4176 to 4293, have been stimulated with 5500 gallons of acid.
20 The well was produced -- the well has produced an average
21 of 140 barrels of water per day and no oil during the testing
22 period.

23 The only additional stimulation antici-
24 pated would be an occasional acid job after the well is
25 being utilized for injection.

1

2

3

Q. And how would you propose to monitor casing leaks?

4

5

6

7

8

A. The casing will be monitored by casing leakage test. Also there will be packers in the well and fresh water analysis from -- on the fresh water well and water analysis in the producers, and the producing wells will be continually monitored.

9

10

Q. Would you now turn to Exhibit Number Four and identify it?

11

12

13

14

A. Exhibit Number Four is a series of water analysis taken from each one of the producing wells and a water analysis by Tretolite taken from the fresh water well.

15

16

Q. Okay. And now with respect to Exhibit Number Five, would you identify it?

17

18

19

A. Exhibit Number Five is a series of letters with certified mail certificates notifying all the offset operators, of which there were three.

20

21

22

Q. In your opinion will the granting of this application be in the interest of the prevention of waste and the protection of correlative rights?

23

24

25

A. Yes, it will.

Q. Were Exhibits One through Five prepared with your knowledge and assistance and can you testify as

1
2 to their accuracy?

3 A. Yes, I can.

4 MR. LOPEZ: I'd offer at this time Ex-
5 hibits One through Five.

6 MR. STAMETS: These exhibits will be
7 admitted.

8 I believe you identified Exhibit Five
9 as only going to offset operators, but it would appear that
10 the top letter to Tom Gainer is the --

11 A. I stand corrected. You're right. I
12 believe that is the -- that is the land owner, surface owner.

13 MR. STAMETS: Are there any questions
14 of this witness? He may be excused.

15 Anything further in this case?

16 The case will be taken under advisement.

17
18 (Hearing concluded.)
19
20
21
22
23
24
25

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7483 heard by me on 2-17-82

Richard A. Plummer, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.

Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409



BRUCE KING
GOVERNOR
LARRY KEHOE
SECRETARY

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

POS* OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

March 3, 1982

Mr. Owen Lopez
Montgomery & Andrews
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico

Re: CASE NO. 7483
ORDER NO. R-6910

Applicant:

Adams Exploration Company

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

| | |
|-------------|----------|
| Hobbs OCD | <u>x</u> |
| Artesia OCD | <u>x</u> |
| Aztec OCD | |

Other

STATE OF NEW MEXICO
DEPT. OF REVENUE 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. 7483
Order No. F-6910

APPLICATION OF ADAMS EXPLORATION COMPANY
FOR SALT WATER DISPOSAL, CHAVES COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on February 17, 1982, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 2nd day of March, 1982, 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, Adams Exploration Company, is the owner and operator of the Griffin Well No. 4, located in Unit A of Section 10, Township 8 South, Range 32 East, NMPM, Chaves County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the San Andres formation, with injection into the perforated interval from approximately 4176 feet to 4293 feet.

(4) That the injection should be accomplished through 2 3/8-inch epoxy lined tubing installed in a packer set at approximately 4100 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a pressure limiting switch or other acceptable device which

Case No. 3452

Order No. 8-6910

will limit the wellhead pressure on the injection well to no more than 835 psi.

(6) That the Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the San Andres formation.

(7) That the operator should notify the supervisor of the Public District Office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(8) 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.

(9) 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, Adams Exploration Company, is hereby authorized to utilize its Griffin Well No. 4, located in Unit A of Section 10, Township 8 South, Range 32 East, NMDM, Chaves County, New Mexico, to dispose of produced salt water into the San Andres formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 4100 feet, with injection into the perforated interval from approximately 4176 feet to 4293 feet;

PROVIDED HOWEVER, that the tubing shall be epoxy-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 835 psi.

(3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result

Case No. 7422
Order No. 1-6310

in violation of the interest filed from the San Pedro
operation.

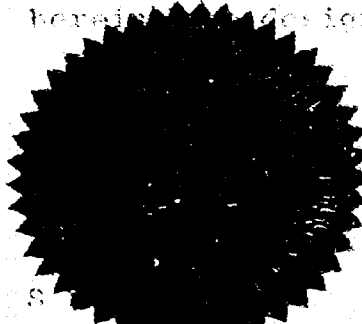
(4) That the operator shall notify the supervisor of the
Neble district office of the Division of the date and time of
the installation of disposal equipment so that the same may be
inspected.

(5) That the operator shall immediately notify the
supervisor of the Division's Neble 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.

(6) That the applicant shall submit monthly reports of its
disposal operations in accordance with Rules 702, 703, 704, 705,
706, 708, and 1120 of the Division Rules and Regulations.

(7) 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
herein designated.



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Joe D. Pahey
JOE D. PAHEY
Director

SMALL CIRCLE - $\frac{1}{2}$ MILE RADIUS
"AREA OF REVIEW"
LARGE CIRCLE - 2 MILE RADIUS

ADAMS EXPLORATION COMPANY
GRIFFIN #4

SMALL CIRCLE - 1/2 MILE RADIUS
 "AREA OF REVIEW"
 LARGE CIRCLE - 2 MILE RADIUS

SCALE 1" = 4000 FT.

LEGEND

- Oil Field
- Well
- Geological Feature
- Section Number
- State
- County
- Township
- Range
- Section

The map shows a grid of sections with various labels for oil fields, wells, and geological features. A large circle is drawn around the central part of the map, labeled "AREA OF REVIEW". A scale bar indicates 1 inch equals 4000 feet. The map includes a title block with the company name and well number, and a legend explaining the symbols used.

VI.

WELLS WITHIN AREA OF REVIEW (1/2 MILE RADIUS)

OPERATOR: Adams Exploration Company

LEASE NAME: Griffin

WELL NO.: 1

FIELD NAME: Chaveroo San Andres

LOCATION OF WELL: Unit Letter B, 330' FNL & 1980' FEL,
Sec. 10, T-8-S, R-32-E, Chaves County, New Mexico

TYPE OF LEASE: Fee

WELL STATUS: Pumping oil well

PRODUCING FORMATION: San Andres

SPUD DATE: 11-9-80

COMPLETION DATE: 12-21-80

TOTAL DEPTH: 4400'

PLUG BACK DEPTH: 4355'

CASING RECORD:

| SIZE | WEIGHT | DEPTH | CEMENTING RECORD & TOP OF CEMENT |
|--------|--------|-------|--|
| 8 5/8" | 24 # | 1842' | 450 sx. "LW" + 200 sx. Class "C" Top of cement at surface |
| 4 1/2" | 10.5 # | 4400' | 300 sx. Class "C" Top of cement at <u>2660'</u> |

TUBING RECORD:

| SIZE | DEPTH | PACKER DEPTH |
|--------|-------|--------------|
| 2 3/8" | 4180' | None |

PERFORATIONS AND TREATMENT:

| INTERVAL | TREATMENT |
|-------------------------|--------------------------------|
| 4176' - 4199' (4 holes) | Acidized w/ 250 gals. 20% HCl |
| 4242' - 4313' (7 holes) | Acidized w/ 1250 gals. 20% HCl |

POTENTIAL TEST:

| DATE | PRODUCTION |
|----------|---|
| 12-23-80 | Pumped 55 BBLs. OIL + 10 BBLs. WATER in 24 hours |

VI.

WELLS WITHIN AREA OF REVIEW (1/2 MILE RADIUS)

OPERATOR: Adams Exploration Company

LEASE NAME: Hooper

WELL NO.: 1

FIELD NAME: Chaveroo San Andres

LOCATION OF WELL: Unit Letter G, 1650' FNL + 2310' FEL,
Sec. 10, T-8-S, R-32-E, Chaves County, New Mexico

TYPE OF LEASE: Fee

WELL STATUS: Pumping oil well

PRODUCING FORMATION: San Andres

SPUD DATE: 3-27-81

COMPLETION DATE: 5-14-81

TOTAL DEPTH: 4338'

PLUG BACK DEPTH: 4330'

CASING RECORD:

| SIZE | WEIGHT | DEPTH | CEMENTING RECORD + TOP OF CEMENT |
|--------|--------|-------|---|
| 8 5/8" | 24# | 1810' | 600 sx. "LW" + 200 sx. Class "C" Top of cement at surface. |
| 4 1/2" | 10.5# | 4338' | 400 sx. 50:50 Pozmix Top of cement at 2500' |

TUBING RECORD:

| SIZE | DEPTH | PACKER DEPTH |
|--------|-------|--------------|
| 2 3/8" | 4283' | None |

PERFORATIONS AND TREATMENT:

| INTERVAL | TREATMENT |
|------------------------|--------------------------------|
| 4175'-4195' (8 holes) | Acidized w/ 4300 gals. 15% HCl |
| 4234'-4248' (10 holes) | Acidized w/ 4300 gals. 15% HCl |

POTENTIAL TEST:

| DATE | PRODUCTION |
|---------|--|
| 8-24-81 | Pumped 8 BBLs. OIL + 30 BBLs. WATER + 2.6 MCF in 24 hours |

VI.

WELLS WITHIN AREA OF REVIEW (1/2 MILE RADIUS)

OPERATOR: Adams Exploration Company

LEASE NAME: Hooper

WELL NO.: 2

FIELD NAME: Chaveroo San Andres

LOCATION OF WELL: Unit Letter H, 1980' FNL + 660' FEL,
Sec. 10, T-8-S, R-32-E, Chaves County, New Mexico

TYPE OF LEASE: Fee

WELL STATUS: Pumping oil well

PRODUCING FORMATION: San Andres

SPUD DATE: 7-26-81

COMPLETION DATE: 9-2-81

TOTAL DEPTH: 4294'

PLUG BACK DEPTH: 4290'

CASING RECORD:

| SIZE | WEIGHT | DEPTH | CEMENTING RECORD & TOP OF CEMENT |
|--------|--------|-------|--|
| 8 5/8" | 24 # | 1861' | 500 sx. "LW" + 200 sx. Class "C" Top of cement at surface |
| 4 1/2" | 10.5 # | 4294' | 300 sx. Class "H" Top of cement at 2700' |

TUBING RECORD:

| SIZE | DEPTH | PACKER DEPTH |
|--------|-------|--------------|
| 2 3/8" | 4239' | None |

PERFORATIONS AND TREATMENT:

| INTERVAL | TREATMENT |
|--------------------------|-------------------------------|
| 4180' - 4206' (10 holes) | Acidized w/ 300 gals. 15% HCl |
| 4232' - 4278' (18 holes) | Acidized w/ 500 gals. 15% HCl |

POTENTIAL TEST:

| DATE | PRODUCTION |
|---------|--|
| 9-27-81 | Pumped 5 BBLs. OIL + 70 BBLs. WATER + 1.2 MCF in 24 hours |

VI.

WELLS WITHIN AREA OF REVIEW (1/2 MILE RADIUS)

OPERATOR: El Ran, Inc.

LEASE NAME: Sarah

WELL NO.: 1

FIELD NAME: Chaveroo

LOCATION OF WELL: Unit Letter O, 990' FSL + 2200' FEL,
Sec. 3, T8S, R32E, Chaves County, New Mexico

TYPE OF LEASE: Fee

WELL STATUS: Pumping oil well

PRODUCING FORMATION: San Andres

SPUD DATE: 4-8-80

COMPLETION DATE: 4-23-80

TOTAL DEPTH: 4390'

PLUG BACK DEPTH: 4387'

CASING RECORD:

| SIZE | WEIGHT | DEPTH | CEMENTING RECORD & TOP OF CEMENT | |
|--------|--------|-------|----------------------------------|---------------------------------------|
| 8 5/8" | | 1682' | 550 sx. | Circulated |
| 4 1/2" | | 4389' | 175 sx. | Top of cement 3620' by calculation |

TUBING RECORD:

| SIZE | DEPTH | PACKER DEPTH |
|--------|-------|--------------|
| 2 3/8" | 4285' | |

PERFORATIONS AND TREATMENT:

| INTERVAL | TREATMENT |
|-------------|-------------------------------|
| 4172'-4284' | Acidize w/ 6000 gals. 20% HCl |

POTENTIAL TEST:

DATEPRODUCTIONPumped 82 BBLs. OIL + 10 BBLs. WATER
in 24 hours. GOR TSTM

VI.

WELLS WITHIN AREA OF REVIEW (1/2 MILE RADIUS)

OPERATOR: El Ran, Inc.

LEASE NAME: Carroll

WELL NO.: 2

FIELD NAME: Chaveroo

LOCATION OF WELL: Unit Letter P, 990' FSL + 990' FEL,
Sec. 3, T8S, R32E, Chaves County, New Mexico

TYPE OF LEASE: Fee

WELL STATUS: Flowing oil well

PRODUCING FORMATION: San Andres

SPUD DATE: 10-17-80

COMPLETION DATE: 10-31-80

TOTAL DEPTH: 4313'

PLUG BACK DEPTH: 4312'

CASING RECORD:

| SIZE | WEIGHT | DEPTH | CEMENTING RECORD + TOP OF CEMENT |
|--------|--------|-------|---|
| 8 5/8" | | 1665' | 575 sx. Circulated |
| 4 1/2" | | 4312' | 175 sx. Top of cement (3545') by calculation |

TUBING RECORD:

| SIZE | DEPTH | PACKER DEPTH |
|--------|-------|--------------|
| 2 3/8" | 4263' | None |

PERFORATIONS AND TREATMENT:

| INTERVAL | TREATMENT |
|---------------|-------------------------------|
| 4193' - 4281' | Acidize w/ 6000 gals. 20% HCl |

POTENTIAL TEST:

DATEPRODUCTION

Flowed 45 BBLS. OIL + 0 BBLS. WATER
+ 28.8 MCF in 24 hours through
1" choke. Tubing press. 135 psi.
Casing press. 385 psi.

VI.

WELLS WITHIN AREA OF REVIEW (1/2 MILE RADIUS)

OPERATOR: MWJ Producing Co.

LEASE NAME: Chaveroo State

WELL NO.: 8

FIELD NAME: Chaveroo

LOCATION OF WELL: Unit Letter M, 990' FSL + 330' FWL,
Sec. 2, T8S, R 32 E, Chaves County, New Mexico

TYPE OF LEASE: State

WELL STATUS: Pumping oil well

PRODUCING FORMATION: San Andres

SPUD DATE: 4-2-81

COMPLETION DATE: 7-23-81

TOTAL DEPTH: 4330'

PLUG BACK DEPTH: 4322'

CASING RECORD:

| SIZE | WEIGHT | DEPTH | CEMENTING RECORD + TOP OF CEMENT | |
|--------|--------|-------|----------------------------------|---------------------------------------|
| 8 5/8" | | 1785' | 625 sx. | Circulated |
| 4 1/2" | | 4330' | 325 sx. | Top of cement 2900' by calculation |

TUBING RECORD:

| SIZE | DEPTH | PACKER DEPTH |
|--------|-------|--------------|
| 2 3/8" | 4219' | None |

PERFORATIONS AND TREATMENT:

| INTERVAL | TREATMENT |
|-------------|-----------------------|
| 4202'-4318' | Acidize w/ 1500 gals. |

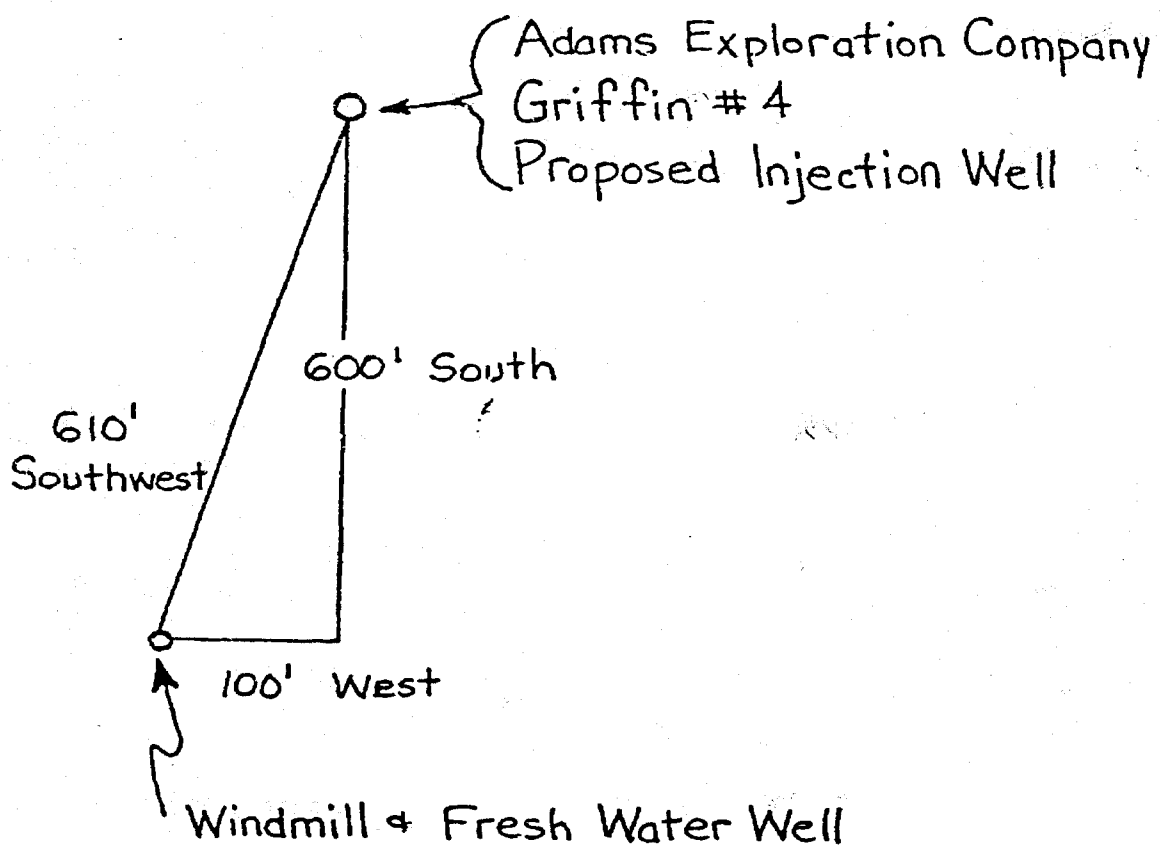
POTENTIAL TEST:

DATEPRODUCTION

Pumped 31 BBLs. OIL + 55 BBLs. WATER
+ 41 MCF in 24 hours

XI.

There is only one fresh water well within a one mile radius of this proposed injection well. The location of the well is shown below. The water well is pumped by a windmill and the water is used for livestock consumption.



| |
|---------------------------|
| BEFORE EXAMINER STAMETS |
| OIL CONSERVATION DIVISION |
| Adams EXHIBIT NO. 2 |
| CASE NO. 7483 |
| Submitted by J. Mullen |
| Hearing Date 2-17-82 |

| | |
|--------------------|-----------|
| BEFORE EXAMINATION | |
| OIL COMPANY | 1 |
| Adams | 7483 |
| CASE NO. | J. Mallon |
| Substance | 2-17-82 |
| Heard | |

BEFORE EXAMINER STARTS
OIL COMPANY

Adams

CN 100

Subm 100

Heading 100

7483

J. Hall/A/

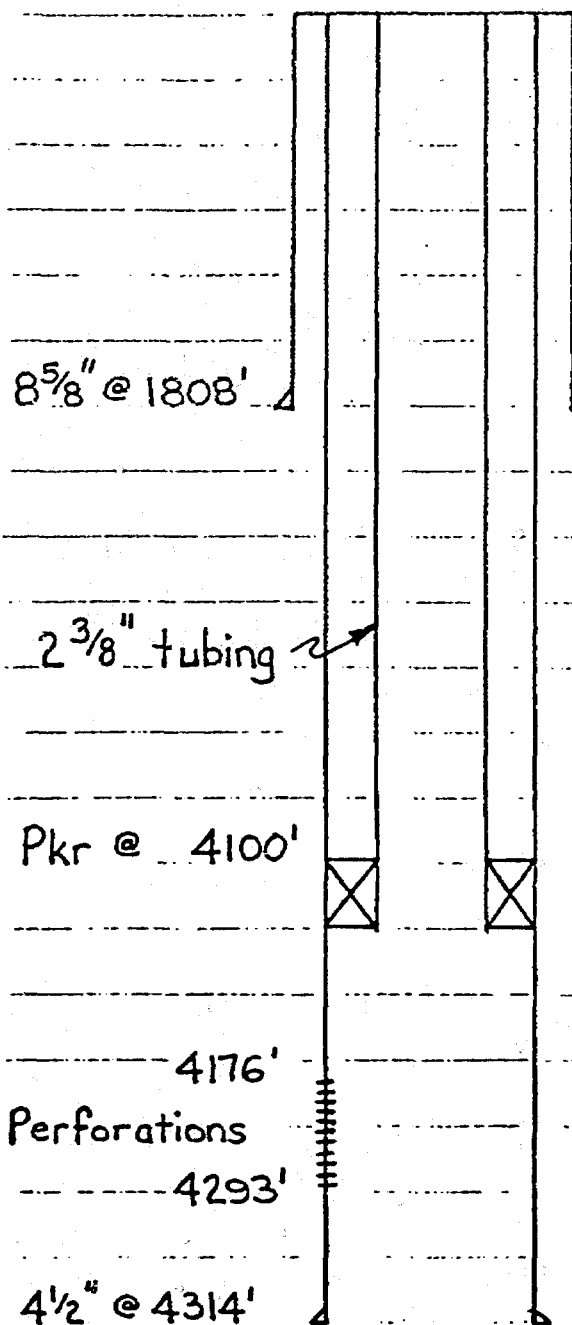
2-17-82

III.

INJECTION WELL DATA SHEET

Adams Exploration Company Griffin Well No. 4
660' FNL + 660' FEL, Section 10, T-8-S, R-32-E
Chaves County, New Mexico

Schematic



Tubular Data

Surface Casing

8 5/8", 24 #, K-55, ST+C. Set at 1808'.
Cemented with 550 sx. Lightweight
followed by 200 sx. Class "C".
Cement circulated to surface.
Hole size 12 1/4".

Long String

4 1/2", 10.5 #, K-55, ST+C. Set at 4314'.
Cemented with 300 sx. 50:50 Pozmix.
Top of cement is 2500' determined
by calculation.
Hole size 7 7/8".
Total Depth 4315'.

Injection interval through
perforations 4176'-4293' (24 holes)

Tubing size is 2 3/8" which will be lined with
a powered epoxy coating (Tuboscope TK-75 coating).
Tubing will be set in a Baker AD-i tension packer
set at approximately 4100'.

INJECTION WELL DATA SHEET PAGE 2.

1. The name of the injection formation is San Andres.
2. The name of the field is Chaveroo San Andres.
3. This is not a new well drilled for injection. This well was originally drilled as a San Andres oil well. The original permit to drill is dated 7-7-81.
4. This well has never been perforated in any zone other than the San Andres formation 4176' - 4293'.
5. The underlying oil or gas pools in this area are listed below. There are apparently no overlying pools in this area.

| <u>Pool</u> | <u>Average Producing Depth</u> | <u>Township</u> | <u>Range</u> |
|--------------|--------------------------------|-----------------|--------------|
| Sqyers Penn | 8380' | 7S | 32E |
| Flying M Abo | 8603' | 9S | 33E |
| Bar U Penn | 9210' | 9S | 32E |
| Tobac Penn | 9061' | 8S | 33E |



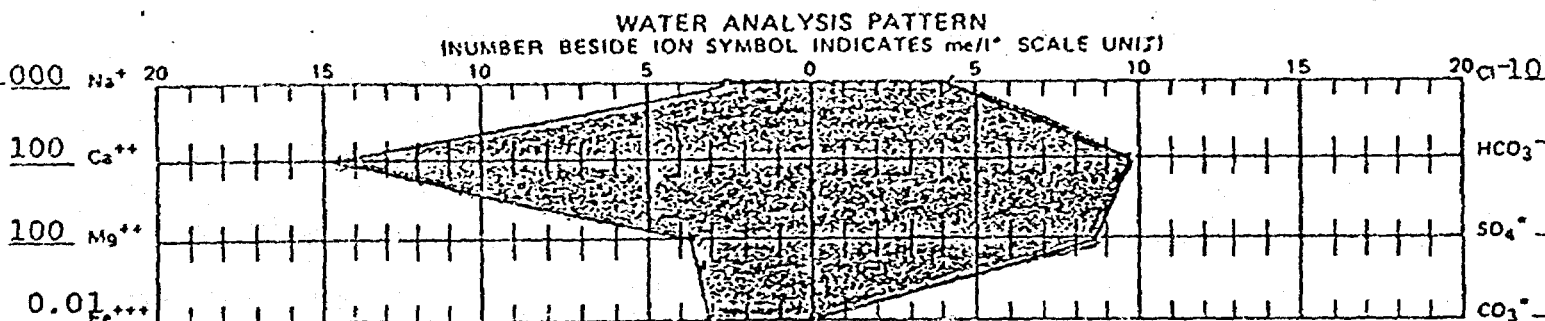
RECEIVED

SEP 18 1981

ADAMS EXPLORATION COMPANY

WATER ANALYSIS REPORT

| | | | | | | | |
|-------------------|---------|---|---------------------|----------------|--------------------------|---------------|--|
| COMPANY | | | | | ANALYSIS NUMBER | | |
| Adams Exploration | | | | | 1018 | | |
| COMPANY ADDRESS | | | | | DATE | | |
| Midland, Texas | | | | | 8/27/81 | | |
| FIELD | | | | | STATE | | |
| Chaveroo | | | | | N.M. | | |
| LEASE OR UNIT | | | WELL(S) NAME OR NO. | | WATER SOURCE (FORMATION) | | |
| Griffin | | | #1 | | San Andres | | |
| DEPTH, FT. | GHT. OF | SAMPLE SOURCE | TEMP. OF | WATER, BBL/DAY | OIL, BBL/DAY | GAS, MMCF/DAY | |
| | | | | | | | |
| DATE SAMPLED | | TYPE OF WATER | | | | | |
| 8/20/81 | | <input checked="" type="checkbox"/> PRODUCED <input type="checkbox"/> SUPPLY <input type="checkbox"/> WATERFLOOD <input type="checkbox"/> SALT WATER DISPOSAL | | | | | |



DISSOLVED SOLIDS

CATIONS

| | me/l* | mg/l* |
|---------------------------------|---------|---------|
| Total Hardness | 1780 | |
| Calcium, Ca ⁺⁺ | 1440 | 28800 |
| Magnesium, Mg ⁺⁺ | 340 | 4148 |
| Iron (Total) Fe ⁺⁺⁺ | 0.03 | 0.6 |
| Barium, Ba ⁺⁺ | -- | -- |
| Sodium, Na ⁺ (calc.) | 2548.42 | 58613.7 |

ANIONS

| | me/l* | mg/l* |
|--|--------|--------|
| Chloride, Cl ⁻ | 4309.9 | 153000 |
| Sulfate, SO ₄ ⁼ | 8.75 | 420 |
| Carbonate, CO ₃ ⁼ | 0 | 0 |
| Bicarbonate, HCO ₃ ⁼ | 9.8 | 597.8 |
| Hydroxyl, OH ⁻ | 0 | 0 |
| Sulfide, S ⁼ | -- | -- |

DISSOLVED GASES

| | |
|------------------------------------|-------|
| Hydrogen Sulfide, H ₂ S | mg/l* |
| Carbon Dioxide, CO ₂ | mg/l* |
| Oxygen, O ₂ | mg/l* |

PHYSICAL PROPERTIES

| | |
|---|--------------|
| pH | 6.1 |
| Specific Gravity | |
| Total Dissolved Solids (calc.) | 245580 mg/l* |
| Stability Index @ 20 °C | +2.11 |
| CaSO ₄ Solubility @ 20 °C | 6.29 me/l* |
| Max. CaSO ₄ Possible (calc.) | 8.75 me/l* |
| Residual Hydrocarbons | ppm(Vol) |
| Residual Hydrocarbons | ppm(Vol) |

TOTAL SOLIDS (QUANTITATIVE)

245580.1

REMARKS AND RECOMMENDATIONS.

@ 20 C Carbonate scaling is indicated.
Sulfate scaling is likely.

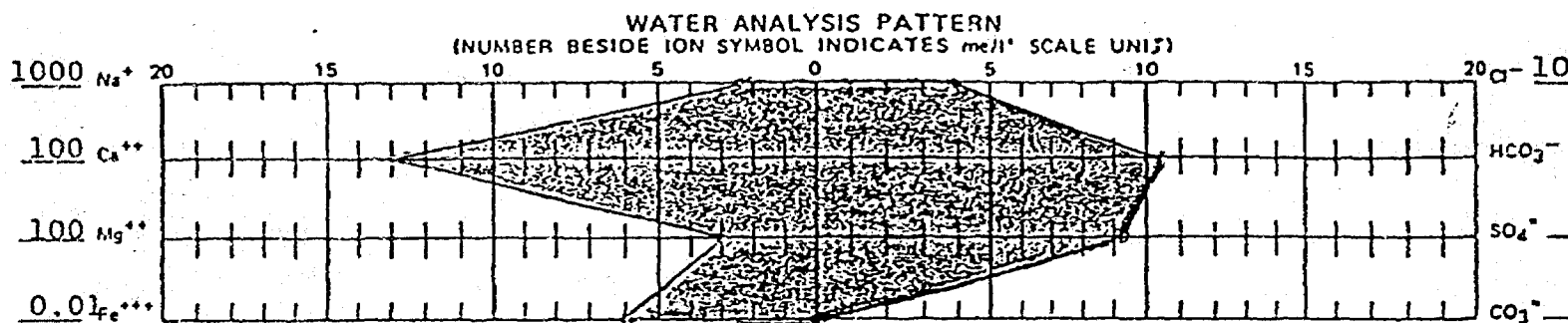
*NOTE: me/l and mg/l are commonly used interchangeably for ppm and respectively. Where ppm and ppg are used, corrections should be made for specific gravity.

| | | | |
|-----------------------|--------------|-----------|-----|
| AGENTS REPRESENTATIVE | ADDRESS | TELEPHONE | RES |
| W.H. Fort | | OFF | |
| DATE | DISTRIBUTION | | |



WATER ANALYSIS REPORT

| | | | | | | | |
|-------------------|---------|---|----------|--------------------------|-----------------|---------------|--|
| COMPANY | | | | | ANALYSIS NUMBER | | |
| Adams Exploration | | | | | 1019 | | |
| COMPANY ADDRESS | | | | | DATE | | |
| Midland, Texas | | | | | 8/28/81 | | |
| FIELD | | | | COUNTY OR PARISH | | STATE | |
| Chaveroo | | | | Roosevelt | | N.M. | |
| LEASE OR UNIT | | WELL(S) NAME OR NO. | | WATER SOURCE (FORMATION) | | | |
| Griffin | | #2 | | San Andres | | | |
| DEPTH, FT. | BHT, OF | SAMPLE SOURCE | TEMP, OF | WATER, BBL/DAY | OIL, BBL/DAY | GAS, MMCF/DAY | |
| | | | | | | | |
| DATE SAMPLED | | TYPE OF WATER | | | | | |
| 8/20/81 | | <input checked="" type="checkbox"/> PRODUCED <input type="checkbox"/> SUPPLY <input type="checkbox"/> WATERFLOOD <input type="checkbox"/> SALT WATER DISPOSAL | | | | | |



DISSOLVED SOLIDS

| CATIONS | me/l* | mg/l* |
|--|--------|---------|
| Total Hardness | 1600 | |
| Calcium, Ca ⁺⁺ | 1300 | 26000 |
| Magnesium, Mg ⁺⁺ | 300 | 3660 |
| Iron (Total) Fe ⁺⁺⁺ | 0.06 | 1.2 |
| Barium, Ba ⁺⁺ | -- | -- |
| Sodium, Na ⁺ (calc.) | 2419.5 | 55648.5 |
| ANIONS | | |
| Chloride, Cl ⁻ | 4000 | 142000 |
| Sulfate, SO ₄ ⁼ | 9.17 | 440 |
| Carbonate, CO ₃ ⁼ | 0 | 0 |
| Bicarbonate, HCO ₃ ⁻ | 10.4 | 634.4 |
| Hydroxyl, OH ⁻ | 0 | 0 |
| Sulfide, S ⁼ | -- | -- |

DISSOLVED GASES

| | | |
|------------------------------------|----|-------|
| Hydrogen Sulfide, H ₂ S | -- | mg/l* |
| Carbon Dioxide, CO ₂ | -- | mg/l* |
| Oxygen, O ₂ | -- | mg/l* |

PHYSICAL PROPERTIES

| | |
|---|--------------|
| pH | 5.05 |
| Specific Gravity | |
| Total Dissolved Solids (calc.) | 228384 mg/l* |
| Stability Index @ 20 °C | +1.54 |
| CaSO ₄ Solubility @ 20 °C | 7.64 me/l* |
| Max. CaSO ₄ Possible (calc.) | 9.17 me/l* |
| Residual Hydrocarbons | ppm(Vol) |
| Residual Hydrocarbons | ppm(Vol) |

TOTAL SOLIDS (QUANTITATIVE)

228384.1

REMARKS AND RECOMMENDATIONS:

@ 20 C Carbonate scaling is indicated.
Sulfate scaling is likely.

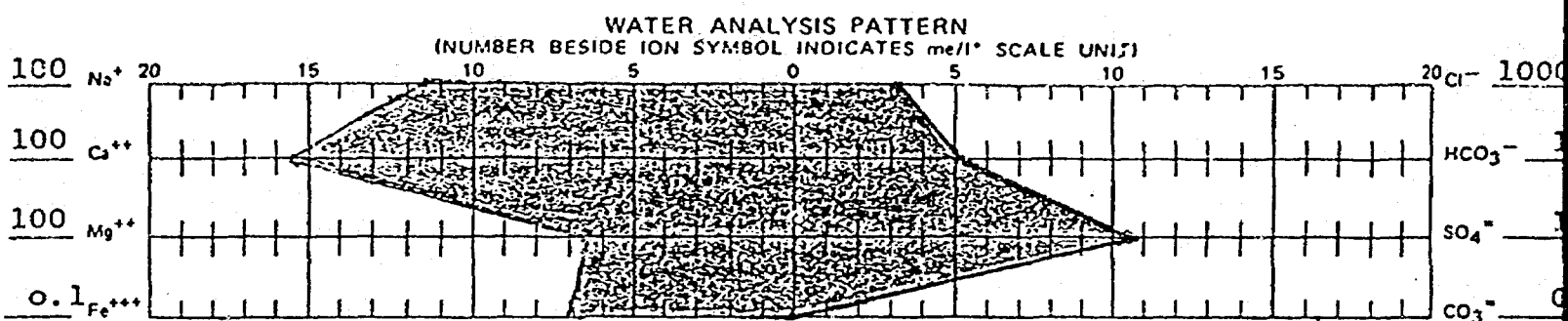
*NOTE: me/l and mg/l are commonly used interchangeably for ppm and respectively. Where ppm and ppb are used, corrections should be made for specific gravity.

| | | | |
|----------------------|---------|--------------|-----|
| WAGNA REPRESENTATIVE | ADDRESS | TELEPHONE | RES |
| W.H. Fort | | OFF | |
| ANALYZED BY | DATE | DISTRIBUTION | |



WATER ANALYSIS REPORT

| | | | | | | |
|-----------------------------------|---------|--|-------------------------------|----------------------------------|---------------|---------------|
| COMPANY Adams Exploration | | | | ANALYSIS NUMBER 1017 | | |
| COMPANY ADDRESS Midland, Texas | | | | DATE 8/27/81 | | |
| FIELD Chaveroo | | | COUNTY OR PARISH Roosevelt | | STATE N.M. | |
| LEASE OR UNIT Hooper | | WELL(S) NAME OR NO. #1 | | WATER SOURCE (FORMATION) S.A. | | |
| DEPTH, FT. | BHT, OF | SAMPLE SOURCE | TEMP, °F | WATER, BBL/DAY | OIL, BBL/DAY | GAS, MMCF/DAY |
| DATE SAMPLED 8/20/81 | | TYPE OF WATER <input checked="" type="checkbox"/> PRODUCED <input type="checkbox"/> SUPPLY <input type="checkbox"/> WATERFLOOD <input type="checkbox"/> SALT WATER DISPOSAL | | | | |



DISSOLVED SOLIDS

| CATIONS | me/l* | mg/l* |
|---------------------------------|--------|---------|
| Total Hardness | 2220 | |
| Calcium, Ca ⁺⁺ | 1560 | 31200 |
| Magnesium, Mg ⁺⁺ | 660 | 8052 |
| Iron (Total) Fe ⁺⁺⁺ | 0.7 | 13 |
| Barium, Ba ⁺⁺ | -- | -- |
| Sodium, Na ⁺ (calc.) | 1147.5 | 26392.5 |

| ANIONS | me/l* | mg/l* |
|--|--------|---------|
| Chloride, Cl ⁻ | 3352.1 | 119,000 |
| Sulfate, SO ₄ ⁼ | 10.9 | 525 |
| Carbonate, CO ₃ ⁼ | 0 | 0 |
| Bicarbonate, HCO ₃ ⁻ | 5.2 | 317.2 |
| Hydroxyl, OH ⁻ | 0 | 0 |
| Sulfide, S ⁼ | -- | -- |

TOTAL SOLIDS (QUANTITATIVE)

185499.7

REMARKS AND RECOMMENDATIONS

@ 20 C Carbonate scaling is indicated.
Sulfate scaling is indicated.

DISSOLVED GASES

| | |
|------------------------------------|----------|
| Hydrogen Sulfide, H ₂ S | -- mg/l* |
| Carbon Dioxide, CO ₂ | -- mg/l* |
| Oxygen, O ₂ | -- mg/l* |

PHYSICAL PROPERTIES

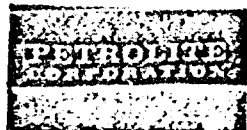
| | |
|---|--------------|
| pH | 5.55 |
| Specific Gravity | |
| Total Dissolved Solids (calc.) | 185500 mg/l* |
| Stability Index @ 20 °C | +0.67 |
| CaSO ₄ Solubility @ 20 °C | 6.42 me/l* |
| Max. CaSO ₄ Possible (calc.) | 10.9 me/l* |
| Residual Hydrocarbons | ppm(Vol/Vol) |
| Residual Hydrocarbons | ppm(Vol/Vol) |

*NOTE: me/l and mg/l are commonly used interchangeably for epm and ppm respectively. Where epm and ppm are used, corrections should be made for specific gravity.

| | | |
|-----------------------------------|---------|-----------|
| MAGNA REPRESENTATIVE W.H. Fort | ADDRESS | TELEPHONE |
| ANALYZED BY | DATE | RES |

PRESS FIRMLY-YOU ARE MAKING 6 COPIES

K-23 BF 8-80



TRETOLITE DIVISION

369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WD 1-3500/TWX 910-760-1660/Telex 44-2417

WATER ANALYSIS REPORT

COMPANY Adams Exploration ADDRESS Tatum, NM DATE 1-29-82
Griffin #4
SOURCE Gains Fresh Water Well #1 DATE SAMPLED 1-29-82 ANALYSIS NO.
Analysis Mg/L *Meq/L

1. pH 7.4
 2. H₂S (Qualitative) Neg.
 3. Specific Gravity 1.000
 4. Dissolved Solids 914
 5. Suspended Solids
 6. Phenolphthalein Alkalinity (CaCO₃)
 7. Methyl Orange Alkalinity (CaCO₃) 200
 8. Bicarbonate (HCO₃) 244 ÷ 61 4 HCO₃
 9. Chlorides (Cl) 152 ÷ 35.5 4 Cl
 10. Sulfates (SO₄) 300 ÷ 48 6 SO₄
 11. Calcium (Ca) 40 ÷ 20 2 Ca
 12. Magnesium (Mg) 97 ÷ 12.2 7 Mg
 13. Total Hardness (CaCO₃) 500
 14. Total Iron (Fe) 0.1
 15. Barium (Qualitative)
 16. Strontium
- *Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

| | | | | |
|---|----|---|------------------|---|
| 2 | Ca | ← | HCO ₃ | 4 |
| 7 | Mg | ← | SO ₄ | 6 |
| 5 | Na | ← | Cl | 4 |

| Saturation Values | Distilled Water 20°C |
|--|----------------------|
| Ca CO ₃ | 13 Mg/L |
| Ca SO ₄ • 2H ₂ O | 2,090 Mg/L |
| Mg CO ₃ | 103 Mg/L |

| Compound | Equiv. Wt. | X | Meq/L | = | Mg/L |
|-------------------------------------|------------|---|-------|---|------|
| Ca (HCO ₃) ₂ | 81.04 | | 2 | | 162 |
| Ca SO ₄ | 68.07 | | -0- | | -0- |
| Ca Cl ₂ | 55.50 | | -0- | | -0- |
| Mg (HCO ₃) ₂ | 73.17 | | 2 | | 146 |
| Mg SO ₄ | 60.19 | | 5 | | 301 |
| Mg Cl ₂ | 47.62 | | -0- | | -0- |
| Na HCO ₃ | 84.00 | | -0- | | -0- |
| Na ₂ SO ₄ | 71.03 | | 1 | | 71 |
| Na Cl | 58.46 | | 4 | | 234 |

REMARKS cc: D. Sooter

G. Knorr, E. Speck

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240XI. CHEMICAL ANALYSIS
OF FRESH WATER FROM
WATER WELL

LABORATORY WATER ANALYSIS

No. W81-966

To Adams Exploration

Date 11-2-81

P.O. Box 10585

Midland, Tx 79702

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by Danny Sooter

Date Rec. 10-27-81

Well No. Water Well Depth --- Formation ---

County Chaves Field --- Source ---

Resistivity 14 @ 72°F

Specific Gravity 1.000

pH 8.3

Calcium (Ca) Nil *MPL

Magnesium (Mg) Nil

Chlorides (Cl) Nil

Sulfates (SO₄) NilBicarbonates (HCO₃) Nil

Soluble Iron (Fe) Nil

Sample appeared to be fresh water

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: R. K. Grimes

cc:

By

HALLIBURTON COMPANY

CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

BEFORE EXAMINER STARTS

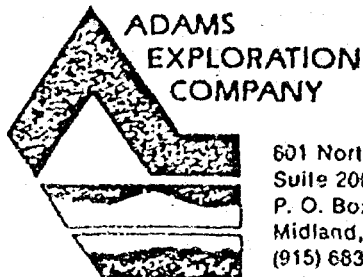
OIL CONVEYANCE

Adams EX. 111. 4

CASE NO. *7/83*

Submitted by *J. Hallay*

Hearing Date *2-17-82*



601 North Loraine Street
Suite 200
P. O. Box 10585
Midland, Texas 79702
(915) 683-3303

CERTIFIED MAIL NO. P238386043
RETURN RECEIPT REQUESTED

November 24, 1981

Mrs. Tom Gainer
P. O. Box 65
Kenna, New Mexico 88122

RE: Griffin Well No. 4
NE/4 NE/4 Sec. 10, T-8-S, R-32-E,
NMPM, CHAVES COUNTY, NEW MEXICO

Dear Mrs. Gainer:

We are in the process of making application to convert the above well into a salt water disposal well. The New Mexico Oil Conservation Division requires that we give official notice of such conversion to the surface owner of the land on which the above well is located. Enclosed with this letter is a copy of our application to the New Mexico Oil Conservation Division. Should you have any questions, please do not hesitate to contact us.

Yours truly,

ADAMS EXPLORATION COMPANY

By Steve Douglas
Steve Douglas
Division Engineer

SD/jpk

| | |
|---------------------------|-----------|
| BEFORE EXAMINER STAMETS | |
| OIL CONSERVATION DIVISION | |
| Adams EXHIBIT | 5 |
| CASE NO. | 7483 |
| Submitted by | J. Mallin |
| Hearing Date | 2-17-82 |

PS Form 3811, Jan. 1978

 RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)

☐ Show to whom and date delivered.....\$

☐ Show to whom, date and address of delivery.....\$

☐ RESTRICTED DELIVERY

☐ RESTRICTED DELIVERY.

Show to whom, date, and address of delivery.\$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

Mr. Tom Gainer
P.O. Box 65
Kenna, NM 88122

3. ARTICLE DESCRIPTION:

| | | |
|------------------|---------------|-------------|
| REGISTERED NO. | CERTIFIED NO. | INSURED NO. |
| <i>P28386043</i> | | |

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE: ☐ Addressee ☐ Authorized agent

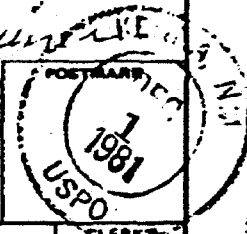
Mr. Tom Gainer

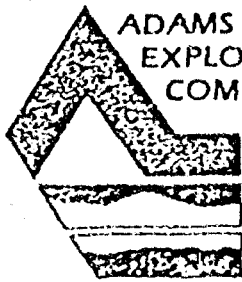
4. DATE OF DELIVERY

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

CLEARER INITIALS





ADAMS
EXPLORATION
COMPANY

601 North Loraine Street
Suite 200
P. O. Box 10585
Midland, Texas 79702
(915) 683-3303

CERTIFIED MAIL NO. P238386044
RETURN RECEIPT REQUESTED

November 24, 1981

El Ran, Inc.
P. O. Box 911
Lubbock, Texas 79408

RE: Our Griffin Well No. 4
NE/4 NE/4 Sec. 10, T-8-S, R-32-E,
NMPM, CHAVES COUNTY, NEW MEXICO

Gentlemen:

We are in the process of making application to convert the above well into a salt water disposal well. The New Mexico Oil Conservation Division requires that we give notice to all offsetting leasehold operators of the above well. Enclosed with this letter is a copy of our application to the New Mexico Oil Conservation Division. Should you have any questions, please contact us at the above address or phone number.

Yours truly,

ADAMS EXPLORATION COMPANY

By Steve Douglas
Steve Douglas
Division Engineer

SD/jpk

PS Form 3811, Jan. 1978

● SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)

☒ Show to whom and date delivered.....

☐ Show to whom, date and address of delivery.....

☐ RESTRICTED DELIVERY
Show to whom and date delivered.....

☐ RESTRICTED DELIVERY.
Show to whom, date, and address of delivery.....

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
El Ran, Inc.
P.O. Box 911
Suburb, IL 79408

3. ARTICLE DESCRIPTION:
REGISTERED NO. CERTIFIED NO. INSURED NO.
P038386044
(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent
Kitty Dillard

4. DATE OF DELIVERY

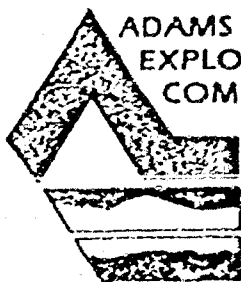
5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

CLERK'S INITIAL

POSTMARK
NOV 1967
LOCCENT

☆GPO : 1979-355-948



ADAMS
EXPLORATION
COMPANY

601 North Loraine Street
Suite 200
P. O. Box 10585
Midland, Texas 79702
(915) 683-3303

CERTIFIED MAIL NO. P238386045
RETURN RECEIPT REQUESTED

November 24, 1981

MWJ Producing Company
1804 First National Bank Bldg.
Midland, Texas 79701

RE: Our Griffin Well No. 4
NE/4 NE/4 Sec. 10, T-8-S, R-32-E,
NMPM, CHAVES COUNTY, NEW MEXICO

Gentlemen:

We are in the process of making application to convert the above well into a salt water disposal well. The New Mexico Oil Conservation Division requires that we give notice to all offsetting leasehold operators of the above well. Enclosed with this letter is a copy of our application to the New Mexico Oil Conservation Division. Should you have any questions, please contact us at the above address or phone number.

Yours truly,

ADAMS EXPLORATION COMPANY

By Steve Douglas
Steve Douglas
Division Engineer

SD/jpk

PS Form 3811, Jan. 1979

SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)

☐ Show to whom and date delivered.....

☐ Show to whom, date and address of delivery.....

☐ RESTRICTED DELIVERY
Show to whom and date delivered.....

☐ RESTRICTED DELIVERY.
Show to whom, date, and address of delivery.....

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
MWG Producing Co
1804 First National Bank Bldg
Midland, TX 79701

3. ARTICLE DESCRIPTION
REGISTERED NO. CERTIFIED NO. INSURED NO.
P238386045
(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☒ Authorized agent
N. Richards

DATE OF DELIVERY
NOV 24 1981

4. ADDRESS (Complete only if requested)

5. UNABLE TO DELIVER BECAUSE:

CLERK'S INITIALS

★ OPS : 1979-308-608

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

Dockets Nos. 7-82 and 8-82 are tentatively set for March 3 and March 17, 1982. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 17, 1982

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. Stazets, Examiner, or Daniel S. Nutter, Alternate Examiner:

- ALLOWABLE:**
- (1) Consideration of the allowable production of gas for March, 1982, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.
 - (2) Consideration of the allowable production of gas for March, 1982, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.
 - (3) Consideration of purchaser's nominations for the one year period beginning April 1, 1982, for both of the above areas.

CASE 7445: (Continued from December 16, 1981, Examiner Hearing)
(THIS CASE WILL BE CONTINUED TO THE EXAMINER HEARING ON MARCH 17, 1982)

Application of Harvey E. Yates Company for an NGPA determination, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination in the San Andres formation for its Fulton Collier Well No. 1 in Unit G of Section 1, Township 18 South, Range 28 East.

CASE 7479: Application of Northwest Pipeline Corporation for amendment of Order No. R-2046, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the Amendment of Division Order No. R-2046, which authorized approval of six non-standard proration units, Basin-Dakota Gas Pool.

The amendment sought is for the creation of the following non-standard proration units to be drilled at standard locations thereon: Township 31 North, Range 6 West, Section 25: N/2 (272.16 acres) and S/2 (273.3 acres); Section 36: N/2 (272.56 acres) and S/2 (272.88 acres); Township 30 North, Range 6 West; Section 1: N/2 (272.81 acres) and S/2 (273.49 acres).

CASE 7480: Application of Arco Oil & Gas Company for pool creation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Upper Devonian gas pool for its Custer Well No. 1 located 1810 feet from the North line and 2164 feet from the West line of Section 6, Township 25 South, Range 37 East, Custer Field.

CASE 7481: Application of Arco Oil & Gas Company for amendment of Order No. R-6792, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Division Order No. R-6792, which authorized the directional drilling of applicant's Custer Wells Well No. 1 to an unorthodox location in the Devonian and Ellenburger formations and imposed a penalty in the Devonian. By stipulation applicant and the offset operator have agreed that the subject well is not affecting the offsetting property and applicant herein seeks removal of the penalty imposed for so long as the well produces only from the present perforated interval in the Upper Devonian.

CASE 7459: (Continued from January 20, 1982, Examiner Hearing)

Application of Red Mountain Associates for the Amendment of Order No. R-6538, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-6538, which authorized applicant to conduct waterflood operations in the Chaco Wash-Mesa Verde Oil Pool. Applicant seeks approval for the injection of water through various other wells than those originally approved, seeks deletion of the requirement for packers in injection wells, and seeks an increase in the previously authorized 68-pound limitation on injection pressure.

CASE 7410: (Continued from January 20, 1982, Examiner Hearing)

Application of B.O.A. Oil & Gas Company for two unorthodox oil well locations, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 2035 feet from the South line and 2455 feet from the East line and one to be drilled 2455 feet from the North line and 1944 feet from the East line, both in Section 31, Township 31 North, Range 15 West, Verde-Gallup Oil Pool, the NW/4 SE/4 and SW/4 NE/4, respectively, of said Section 31 to be dedicated to said wells.

EXAMINER HEARING - WEDNESDAY - FEBRUARY 17, 1982

CASE 7457: (Continued from January 20, 1982, Examiner Hearing)

Application of E. T. Ross for nine non-standard gas proration units, Harding County, New Mexico. Applicant, in the above-styled cause, seeks approval for nine 40-acre non-standard gas proration units in the Bravo Sand Carbon Dixie Area. In Township 19 North, Range 30 East: Section 12, the NW/4 NW/4 and NE/4 NW/4; Section 14, the NE/4 NE/4, SW/4 NE/4, and SE/4 NE/4. In Township 20 North, Range 30 East: Section 11, the NE/4 SW/4, SW/4 SE/4, SE/4 SW/4, and NW/4 SE/4.

CASE 7482: Application of Miser Oil Company for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location 1295 feet from the South line and 1345 feet from the West line of Section 32, Township 21 South, Range 37 East, Penrose-Skelly Pool.CASE 7483: Application of Adams Exploration Company for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 4176 feet to 4293 feet in its Griffin Well No. 4 located in Unit A, of Section 10, Township 8 South, Range 32 East, Chaveroo-San Andres Pool.CASE 7462: (Continued from February 3, 1982, Examiner Hearing)

Application of Marathon Oil Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of the Drinkard and Blinberry production in the wellbore of its C. J. Saunders Well No. 3, located in Unit C of Section 1, Township 22 South, Range 36 East.

CASE 7474: (Continued from February 3, 1982, Examiner Hearing)

Application of Union Oil Company of California for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Strawn, Atoka and Morrow formations underlying the E/2 of Section 25, Township 19 South, Range 33 East, 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, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7484: Application of Anadarko Production Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Atoka and Morrow formations underlying the E/2 of Section 1, Township 19 South, Range 25 East, 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, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.CASE 7485: Application of Berge Exploration for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Abo formation underlying two 160-acre proration units, the first being the NW/4 and the second being the SW/4 of Section 27, Township 7 South, Range 26 East, each 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 wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells and a charge for risk involved in drilling said wells.CASE 7486: Application of MGF Oil Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down through and including the Abo formation underlying the NE/4 NE/4 of Section 6, Township 20 South, Range 39 East, 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, designation of applicant as operator of the well and a charge for risk involved in drilling said well.CASE 7487: Application of MGF Oil Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down through and including the Abo formation underlying the SE/4 SE/4 of Section 31, Township 19 South, Range 39 East, 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, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 7483: Application of Burkhart Petroleum Company for compulsory pooling, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying the SW/4 NW/4 of Section 13, Township 8 South, Range 37 East, 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, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 7073: (Reopened and Readvertised)

In the matter of Case 7073 being reopened pursuant to the provisions of Order No. R-6558, which order promulgated special rules for the South Elkins-Fusselman Pool in Chaves County including provisions for 80-acre spacing units and a limiting gas-oil ratio of 3000 to one. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units with a limiting gas-oil ratio of 2000 to one.

CASE 7074: (Reopened and Readvertised)

In the matter of Case 7074 being reopened pursuant to the provisions of Orders Nos. R-6565 and R-6565-B, which created the South Elkins-Fusselman Gas Pool in Chaves County. All interested parties may appear and present evidence as to the exact nature of the reservoir, and more particularly, as to the proper rate of withdrawal from the reservoir if it is determined that said pool is producing from a retrograde gas condensate reservoir.

CASE 6373: (Reopened and Readvertised)

In the matter of Case 6373 being reopened pursuant to the provisions of Orders Nos. R-5875 and R-5875-A, which created the East High Hope - Abo Gas pool in Eddy County, and promulgated special rules therefor, including a provision for 320-acre spacing units. All interested parties may appear and show cause why said pool should not be developed on 160-acre spacing units.

CASE 7489: Application of Curtis J. Little for designation of a tight formation, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the designation of the Chacra formation underlying portions of Township 25 North, Range 6 West, containing 6,720 acres, more or less, as a tight formation pursuant to Section 107 of the Natural Gas Policy Act and 18 CFR Section 271.701-705.

CASE 7490: Application of Harvey E. Yates Company for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down through and including the Atoka-Morrow formation, underlying the N/2 of Section 19, Township 8 South, Range 30 East, 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, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 7491: Application of Harvey E. Yates Company for designation of a tight formation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the designation of the Atoka formation underlying portions of Townships 12, 13, and 14 South, Ranges 35 and 36 East, containing 46,720 acres, more or less, as a tight formation pursuant to Section 107 of the Natural Gas Policy Act and 18 CFR Section 271.701-705, said area being an eastward and westward extension of previously approved tight formation area.

CASE 7492: Application of Harvey E. Yates Company for designation of a tight formation, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the designation of the Atoka-Morrow formation underlying all or portions of Townships 7, 8, and 9 South, Ranges 29, 30, and 31 East, containing 115,200 acres, more or less, as a tight formation pursuant to Section 107 of the Natural Gas Policy Act and 18 CFR Section 271.701-705.

CASE 7493: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating and extending certain pools in Chaves, Eddy, Lea, and Roosevelt Counties, New Mexico.

(a) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the East Bootleg Ridge-Morrow Gas Pool. The discovery well is Getty Oil Company Getty 15 Federal Well No. 1 located in Unit J of Section 15, Township 22 South, Range 33 East, NMPM. Said Pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 33 EAST, NMPM
Section 15: S/2

(b) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Devonian production and designated as the North King-Devonian Pool. The discovery well is Samedan Oil Corporation Speight Well No. 1 located in Unit B of Section 3, Township 13 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 13 SOUTH, RANGE 37 EAST, NMPM
Section 3: NE/4

(c) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the North Loving-Atoka Gas Pool. The discovery well is Gulf Oil Corporation Eddy GR State Well No. 1 located in Unit E of Section 16, Township 23 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM
Section 12: N/2

TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM
Section 4: S/2
Section 7: All
Section 8: All
Section 9: All
Section 16: All
Section 17: All
Section 18: E/2

(d) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Drinkard production and designated as the Teague-Drinkard Pool. The discovery well is Alpha Twenty-One Production Company Lea Well No. 1 located in Unit B of Section 17, Township 23 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 37 EAST, NMPM
Section 17: NE/4

(e) EXTEND the West Atoka-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 25 EAST, NMPM
Section 23: All
Section 24: W/2

(f) EXTEND the Atoka-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM
Section 16: W/2

(g) EXTEND the Avalon-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 26 EAST, NMPM
Section 2: Lots 1 through 8

(h) EXTEND the Brunson-Fusselman Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 5: SE/4

(i) EXTEND the Brushy Draw-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 26 SOUTH, RANGE 29 EAST, NMPM
Section 26: E/2

(j) EXTEND the Buffalo Valley-Pennsylvanian Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 27 EAST, NMPM
Section 23: All
Section 26: All

PAGE 5
EXAMINER HEARING - WEDNESDAY - FEBRUARY 17, 1982

(k) EXTEND the Cary-Montoya Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 4: W/2 SW/4
Section 5: SE/4
Section 9: W/2 W/2

(l) EXTEND the Crow Flats-Morrow Gas Pool in Eddy County, New Mexico to include therein:

TOWNSHIP 16 SOUTH, RANGE 27 EAST, NMPM
Section 35: E/2
Section 36: W/2

(m) EXTEND the South Culebra Bluff-Bone Spring Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM
Section 25: S/2 SW/4
Section 27: SW/4

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

TOWNSHIP 7 SOUTH, RANGE 28 EAST, NMPM
Section 21: NE/4

(o) EXTEND the Empire-Abo Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM
Section 19: S/2 SW/4

(p) EXTEND the Hanshaw-Queen Grayburg-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 31 EAST, NMPM
Section 19: NE/4 NW/4

(q) EXTEND the Indian Flats-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPM
Section 26: W/2

(r) EXTEND the West Nadine-Blinbry Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 8: NW/4

(s) EXTEND the Peterson-Mississippian Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 4 SOUTH, RANGE 33 EAST, NMPM
Section 28: NW/4

(t) EXTEND the Race Track-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 28 EAST, NMPM
Section 7: S/2 SW/4
Section 18: NW/4 and N/2 SW/4 and SW/4 SW/4

PAGE 6

EXAMINER HEARING - WEDNESDAY - FEBRUARY 17, 1982

(u) EXTEND the Railroad Mountain-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 28 EAST, NMPM
Section 2: NE/4 and E/2 NW/4

(v) EXTEND the Red Lake-Queen-Grayburg-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM
Section 7: S/2
Section 8: SW/4
Section 18: E/2 NW/4

(w) EXTEND THE West Sawyer-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 37 EAST, NMPM
Section 5: SW/4

(x) EXTEND the Turkey Track-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM
Section 15: All

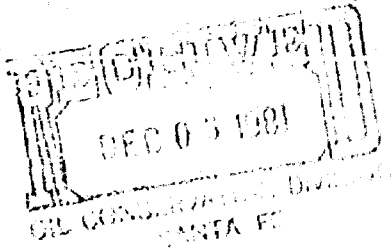
(y) EXTEND the Twin Lakes-San Andres Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 28 EAST, NMPM
Section 13: SE/4
Section 24: NE/4

TOWNSHIP 9 SOUTH, RANGE 28 EAST, NMPM
Section 12: S/2 NE/4

TOWNSHIP 9 SOUTH, RANGE 29 EAST, NMPM
Section 7: S/2
Section 8: NW/4

OIL CONSERVATION DIVISION
DISTRICT 1



OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

DATE December 1, 1981

RE: Proposed MC _____
Proposed OR _____
Proposed HSI _____
Proposed HSP _____
Proposed SHD ☒ _____
Proposed MEX _____
Proposed PMX _____

Gentlemen:

I have examined the application for the:

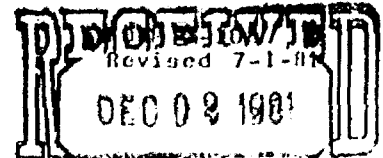
Adams Exploration Co. Griffin No. 4-A 10-8-32
Operator Lease and Well No. Unit, S - 1 - R

and my recommendations are as follows:

O.K., but will still apparently need a hearing since it is within 2 miles
of production-----J.S.

Yours very truly,

/mc



APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ SAGD ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no
- II. Operator: Adams Exploration Company
Address: P.O. Box 10585 Midland, Texas 79702
Contact party: Steve A. Douglas Phone: 915-683-3303
- III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- * X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
- * XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification
- I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- Name: Steve A. Douglas Title: Division Engineer
Signature: Steve A. Douglas Date: 11-24-81
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

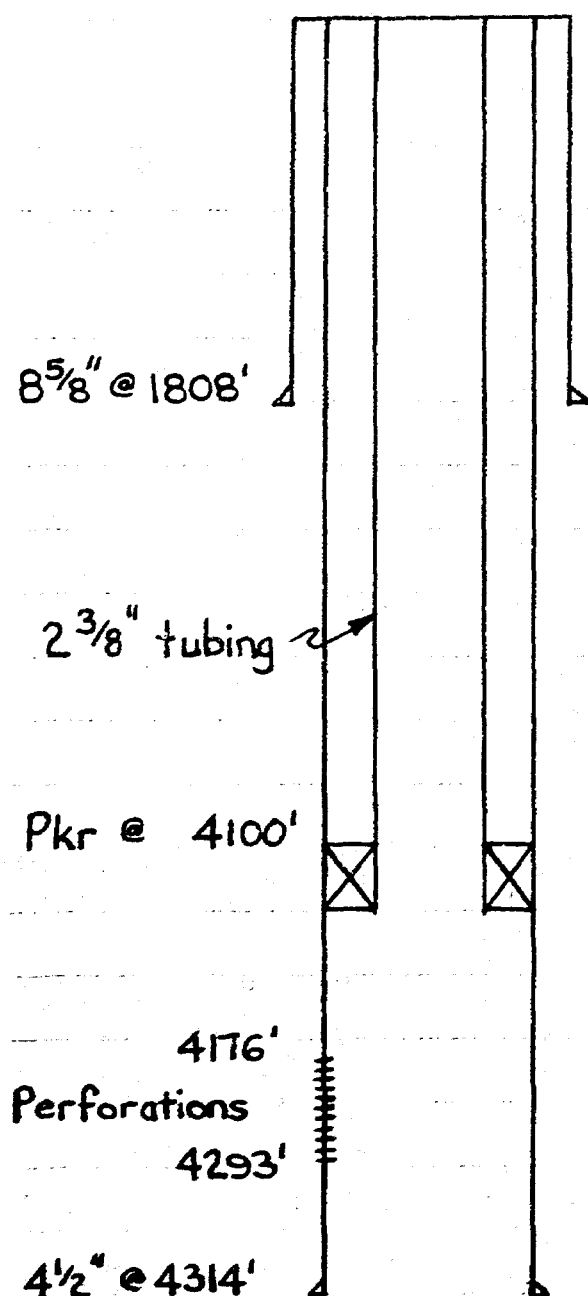
NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

III.

INJECTION WELL DATA SHEET

Adams Exploration Company Griffin Well No. 4
660' FNL + 660' FEL, Section 10, T-8-S, R-32-E
Chaves County, New Mexico

Schematic



Tubular Data

Surface Casing

8⁵/₈", 24 #, K-55, ST+C. Set at 1808'.
Cemented with 550 sx. Lightweight
followed by 200 sx. Class "C".
Cement circulated to surface.
Hole size 12 1/4".

Long String

4 1/2", 10.5 #, K-55, ST+C. Set at 4314'.
Cemented with 300 sx. 50:50 Pozmix.
Top of cement is 2500' determined
by calculation.
Hole size 7 7/8".
Total Depth 4315'.

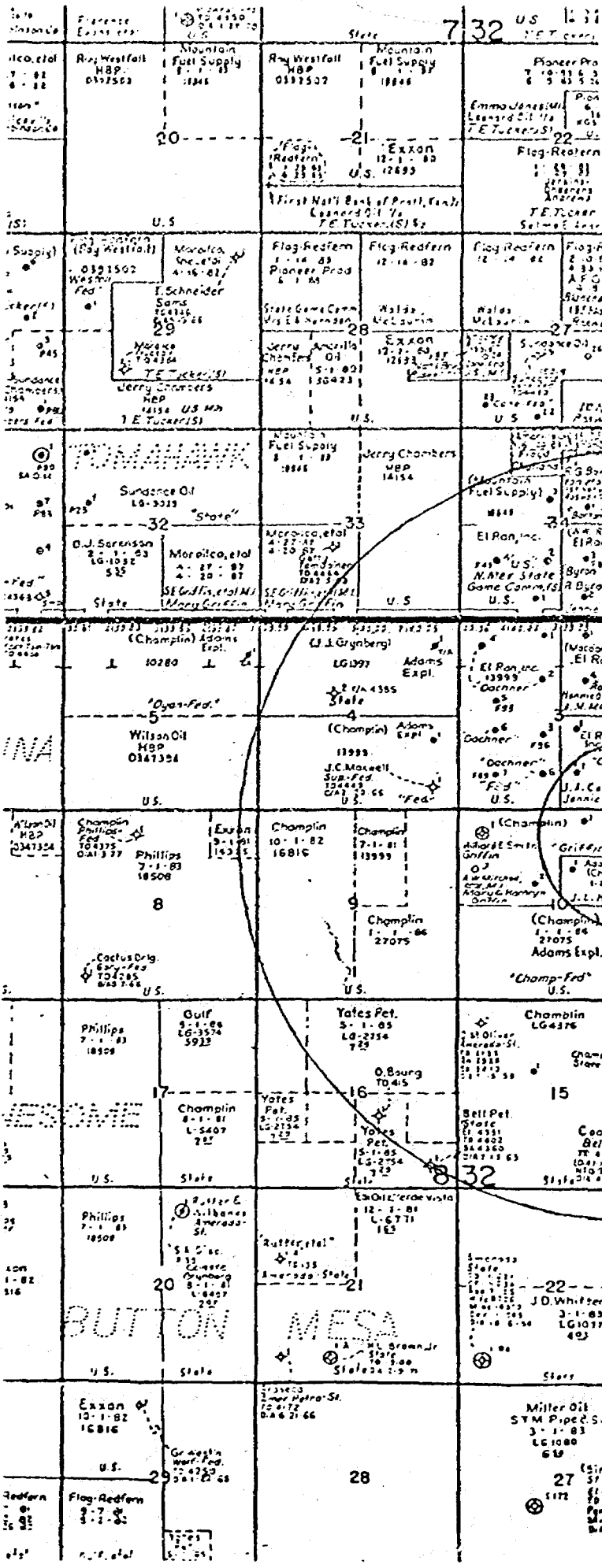
Injection interval through
perforations 4176'-4293' (24 holes)

Tubing size is 2³/₈" which will be lined with
a powered epoxy coating (Tuboscope TK-75 coating).
Tubing will be set in a Baker AD-1 tension packer
set at approximately 4100'.

INJECTION WELL DATA SHEET PAGE 2

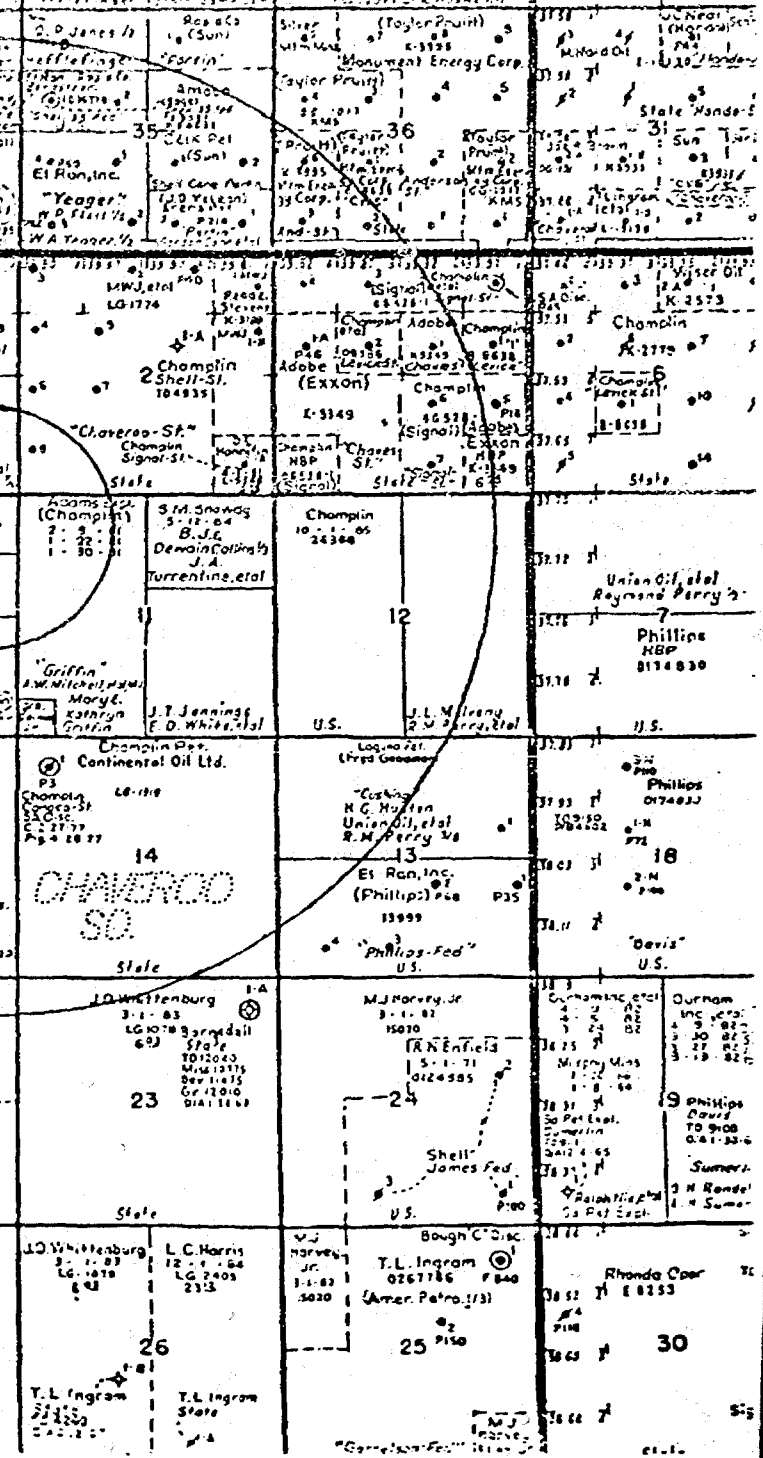
1. The name of the injection formation is San Andres.
2. The name of the field is Chaveroo San Andres.
3. This is not a new well drilled for injection. This well was originally drilled as a San Andres oil well. The original permit to drill is dated 7-7-81.
4. This well has never been perforated in any zone other than the San Andres formation 4176' - 4293'.
5. The underlying oil or gas pools in this area are listed below. There are apparently no overlying pools in this area.

| <u>Pool</u> | <u>Average Producing Depth</u> | <u>Township</u> | <u>Range</u> |
|--------------|--------------------------------|-----------------|--------------|
| Sqyers Penn | 8380' | 7S | 32 E |
| Flying M Abo | 8603' | 9S | 33 E |
| Bar U Penn | 9210' | 9S | 32 E |
| Tobac Penn | 9061' | 8S | 33 E |



V. MAP
ADAMS EXPLORATION COMPANY
GRIFFIN #4
SMALL CIRCLE - 1/2 MILE RADIUS
"AREA OF REVIEW"
LARGE CIRCLE - 2 MILE RADIUS

SCALE 1" = 4000 FT.



VI.

WELLS WITHIN AREA OF REVIEW (1/2 MILE RADIUS)

OPERATOR: Adams Exploration Company

LEASE NAME: Griffin

WELL NO.: 1

FIELD NAME: Chaveroo San Andres

LOCATION OF WELL: Unit Letter B, 330' FNL & 1980' FEL,
Sec. 10, T-8-S, R-32-E, Chaves County, New Mexico

TYPE OF LEASE: Fee

WELL STATUS: Pumping oil well

PRODUCING FORMATION: San Andres

SPUD DATE: 11-9-80

COMPLETION DATE: 12-21-80

TOTAL DEPTH: 4400'

PLUG BACK DEPTH: 4355'

CASING RECORD:

| SIZE | WEIGHT | DEPTH | CEMENTING RECORD & TOP OF CEMENT |
|--------|--------|-------|--|
| 8 5/8" | 24 # | 1842' | 450 sx. "LW" + 200 sx. Class "C" Top of cement at surface |
| 4 1/2" | 10.5 # | 4400' | 300 sx. Class "C" Top of cement at 2660' |

TUBING RECORD:

| SIZE | DEPTH | PACKER DEPTH |
|--------|-------|--------------|
| 2 3/8" | 4180' | None |

PERFORATIONS AND TREATMENT:

| INTERVAL | TREATMENT |
|-----------------------|--------------------------------|
| 4176'-4199' (4 holes) | Acidized w/ 250 gals. 20% HCl |
| 4242'-4313' (7 holes) | Acidized w/ 1250 gals. 20% HCl |

POTENTIAL TEST:

| DATE | PRODUCTION |
|----------|---|
| 12-23-80 | Pumped 55 BBLs. OIL + 10 BBLs. WATER in 24 hours |

VI.

WELLS WITHIN AREA OF REVIEW (1/2 MILE RADIUS)

OPERATOR: Adams Exploration Company

LEASE NAME: Hooper

WELL NO.: 1

FIELD NAME: Chaveroo San Andres

LOCATION OF WELL: Unit Letter G, 1650' FNL & 2310' FEL,
Sec. 10, T-8-S, R-32-E, Chaves County, New Mexico

TYPE OF LEASE: Fee

WELL STATUS: Pumping oil well

PRODUCING FORMATION: San Andres

SPUD DATE: 3-27-81

COMPLETION DATE: 5-14-81

TOTAL DEPTH: 4338'

PLUG BACK DEPTH: 4330'

CASING RECORD:

| SIZE | WEIGHT | DEPTH | CEMENTING RECORD & TOP OF CEMENT |
|---------------------------------|--------|-------|--|
| 8 ⁵ / ₈ " | 24# | 1810' | 600 sx. "LW" + 200 sx. Class "C" Top of cement at surface |
| 4 ¹ / ₂ " | 10.5# | 4338' | 400 sx. 50:50 Pozmix Top of cement at 2500' |

TUBING RECORD:

| SIZE | DEPTH | PACKER DEPTH |
|---------------------------------|-------|--------------|
| 2 ³ / ₈ " | 4283' | None |

PERFORATIONS AND TREATMENT:

| INTERVAL | TREATMENT |
|------------------------|--------------------------------|
| 4175'-4195' (8 holes) | Acidized w/ 4300 gals. 15% HCl |
| 4234'-4248' (10 holes) | Acidized w/ 4300 gals. 15% HCl |

POTENTIAL TEST:

| DATE | PRODUCTION |
|---------|--|
| 8-24-81 | Pumped 8 BBLs. OIL + 30 BBLs. WATER + 2.6 MCF in 24 hours |

VI.

WELLS WITHIN AREA OF REVIEW (1/2 MILE RADIUS)

OPERATOR: Adams Exploration Company

LEASE NAME: Hooper

WELL NO.: 2

FIELD NAME: Chaveroo San Andres

LOCATION OF WELL: Unit Letter H, 1980' FNL + 660' FEL,

Sec. 10, T-8-S, R-32-E, Chaves County, New Mexico

TYPE OF LEASE: Fee

WELL STATUS: Pumping oil well

PRODUCING FORMATION: San Andres

SPUD DATE: 7-26-81

COMPLETION DATE: 9-2-81

TOTAL DEPTH: 4294'

PLUG BACK DEPTH: 4290'

CASING RECORD:

| SIZE | WEIGHT | DEPTH | CEMENTING RECORD + TOP OF CEMENT |
|--------|--------|-------|----------------------------------|
| 8 5/8" | 24 # | 1861' | 500 sx. "LW" + 200 sx. Class "C" |
| | | | Top of cement at surface |
| 4 1/2" | 10.5 # | 4294' | 300 sx. Class "H" |
| | | | Top of cement at 2700' |

TUBING RECORD:

| SIZE | DEPTH | PACKER DEPTH |
|--------|-------|--------------|
| 2 3/8" | 4239' | None |

PERFORATIONS AND TREATMENT:

| INTERVAL | TREATMENT |
|--------------------------|-------------------------------|
| 4180' - 4206' (10 holes) | Acidized w/ 300 gals. 15% HCl |
| 4232' - 4278' (18 holes) | Acidized w/ 500 gals. 15% HCl |

POTENTIAL TEST:

| DATE | PRODUCTION |
|---------|--|
| 9-27-81 | Pumped 5 BBLs. OIL + 70 BBLs. WATER + 1.2 MCF in 24 hours |

VI.

WELLS WITHIN AREA OF REVIEW (1/2 MILE RADIUS)

OPERATOR: El Ran, Inc.

LEASE NAME: Sarah

WELL NO.: 1

FIELD NAME: Chaveroo

LOCATION OF WELL: Unit Letter O, 990' FSL + 2200' FEL,
Sec. 3, T8S, R 32E, Chaves County, New Mexico

TYPE OF LEASE: Fee

WELL STATUS: Pumping oil well

PRODUCING FORMATION: San Andres

SPUD DATE: 4-8-80

COMPLETION DATE: 4-23-80

TOTAL DEPTH: 4390'

PLUG BACK DEPTH: 4387'

CASING RECORD:

| <u>SIZE</u> | <u>WEIGHT</u> | <u>DEPTH</u> | <u>CEMENTING RECORD + TOP OF CEMENT</u> |
|---------------------------------|---------------|--------------|---|
| 8 ⁵ / ₈ " | | 1682' | 550 sx. |
| 4 ¹ / ₂ " | | 4389' | 175 sx. |

TUBING RECORD:

| <u>SIZE</u> | <u>DEPTH</u> | <u>PACKER DEPTH</u> |
|---------------------------------|--------------|---------------------|
| 2 ³ / ₈ " | 4285' | |

PERFORATIONS AND TREATMENT:

| <u>INTERVAL</u> | <u>TREATMENT</u> |
|-----------------|-------------------------------|
| 4172'- 4284' | Acidize w/ 6000 gals. 20% HCl |

POTENTIAL TEST:

DATEPRODUCTIONPumped 82 BBLs. OIL + 10 BBLs. WATER
in 24 hours. GOR TSTM

VI.

WELLS WITHIN AREA OF REVIEW (1/2 MILE RADIUS)

OPERATOR: El Ran, Inc.

LEASE NAME: Carroll

WELL NO.: 2

FIELD NAME: Chaveroo

LOCATION OF WELL: Unit Letter P, 990' FSL + 990' FEL,
Sec. 3, T8S, R32E, Chaves County, New Mexico

TYPE OF LEASE: Fee

WELL STATUS: Flowing oil well

PRODUCING FORMATION: San Andres

SPUD DATE: 10-17-80

COMPLETION DATE: 10-31-80

TOTAL DEPTH: 4313'

PLUG BACK DEPTH: 4312'

CASING RECORD:

| <u>SIZE</u> | <u>WEIGHT</u> | <u>DEPTH</u> | <u>CEMENTING RECORD + TOP OF CEMENT</u> |
|-------------|---------------|--------------|---|
| 8 5/8" | | 1665' | 575 sx. |
| 4 1/2" | | 4312' | 175 sx. |

TUBING RECORD:

| <u>SIZE</u> | <u>DEPTH</u> | <u>PACKER DEPTH</u> |
|-------------|--------------|---------------------|
| 2 3/8" | 4263' | None |

PERFORATIONS AND TREATMENT:

| <u>INTERVAL</u> | <u>TREATMENT</u> |
|-----------------|-------------------------------|
| 4193' - 4281' | Acidize w/ 6000 gals. 20% HCl |

POTENTIAL TEST:

| <u>DATE</u> | <u>PRODUCTION</u> |
|-------------|-------------------|
|-------------|-------------------|

Flowed 45 BBLs. OIL + 0 BBLs. WATER
+ 28.8 MCF in 24 hours through
1" choke. Tubing press. 135 psi.
Casing press. 385 psi.

VI.

WELLS WITHIN AREA OF REVIEW (1/2 MILE RADIUS)

OPERATOR: MWJ Producing Co.

LEASE NAME: Chaveroo State WELL NO.: 8

FIELD NAME: Chaveroo

LOCATION OF WELL: Unit Letter M, 990' FSL + 330' FWL,
Sec. 2, T8S, R 32 E, Chaves County, New Mexico

TYPE OF LEASE: State

WELL STATUS: Pumping oil well

PRODUCING FORMATION: San Andres

SPUD DATE: 4-2-81

COMPLETION DATE: 7-23-81

TOTAL DEPTH: 4330'

PLUG BACK DEPTH: 4322'

CASING RECORD:

| <u>SIZE</u> | <u>WEIGHT</u> | <u>DEPTH</u> | <u>CEMENTING RECORD + TOP OF CEMENT</u> |
|-------------|---------------|--------------|---|
| 8 5/8" | | 1785' | 625 sx. |
| 4 1/2" | | 4330' | 325 sx. |

TUBING RECORD:

| <u>SIZE</u> | <u>DEPTH</u> | <u>PACKER DEPTH</u> |
|-------------|--------------|---------------------|
| 2 3/8" | 4219' | None |

PERFORATIONS AND TREATMENT:

| <u>INTERVAL</u> | <u>TREATMENT</u> |
|-----------------|-----------------------|
| 4202' - 4318' | Acidize w/ 1500 gals. |

POTENTIAL TEST:

| <u>DATE</u> | <u>PRODUCTION</u> |
|-------------|--|
| | Pumped 31 BBLs. OIL + 55 BBLs. WATER + 41 MCF in 24 hours |

VII.

Proposed Operation

Adams Exploration Company proposes to utilize this injection well to dispose of water produced from our Hooper Lease Well Nos. 1 and 2 and our Griffin Lease Well Nos. 1 and 2. Present water production from the Hooper Lease is 70 bbls. per day and from the Griffin Lease is 90 bbls. per day. The proposed average volume of water to be injected is 160 bbls. per day. Maximum anticipated volume of water to be injected is 200 bbls. per day. The average anticipated injection rate is $\frac{1}{2}$ bbl. per minute at an average pressure of 50 psi. Maximum anticipated rate is 1 bbl. per minute at a maximum pressure of 200 psi. This proposal is to reinject water produced from the San Andres formation back into the San Andres formation.

VIII. Geological Data

The injection zone in this proposed well is the San Andres formation which is composed of dolomite. The gross thickness of the injection zone is 117 feet with perforations from 4176' to 4293'. The top of the San Andres formation in the proposed injection well is 3449' and the well was still in the San Andres at 4315' total depth.

The depth to the bottom of the underground source of drinking water would be 380', which is the base of the Tertiary formations in this well. There is only one water well within a one mile radius of the proposed injection well. The water well is located approximately 610 feet southwest from the proposed injection well. It is pumped by a windmill and used for livestock water only.

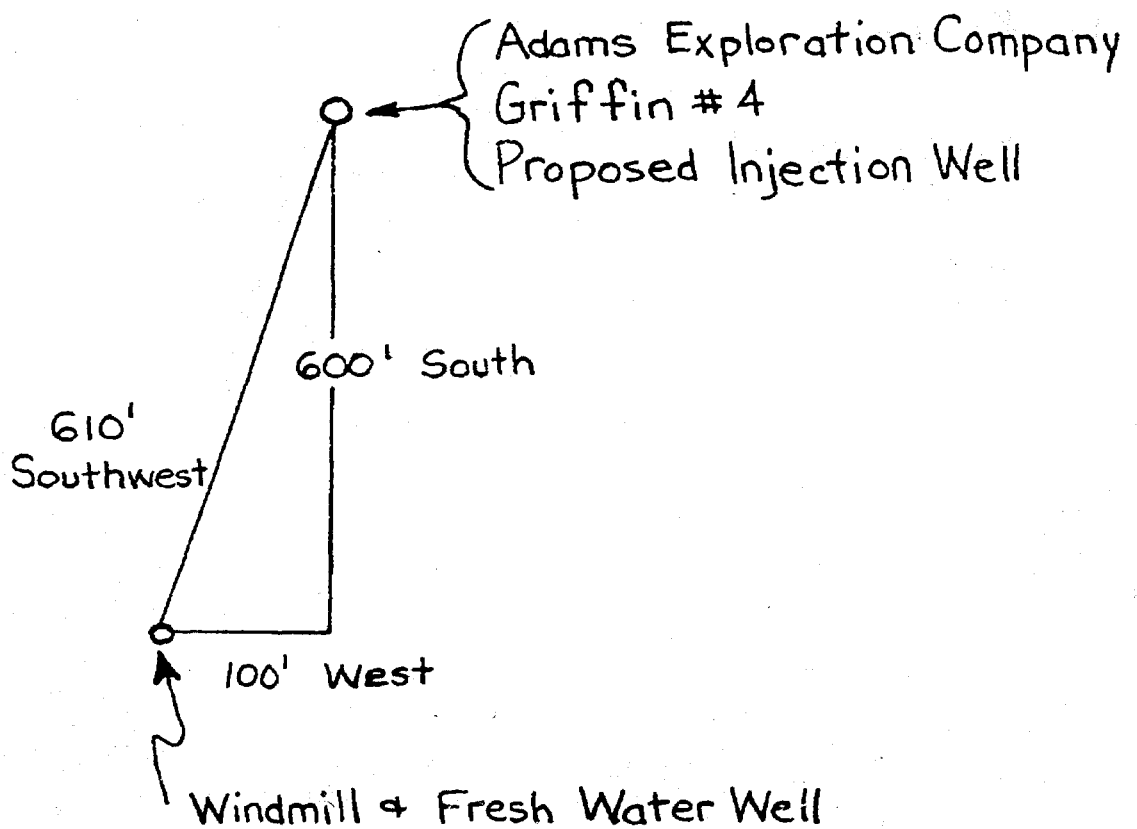
IX.

Proposed Stimulation

The San Andres perforations (4176'-4293') in the Griffin #4 have been stimulated with 5500 gals. of acid. The well has produced an average of 140 bbls. of water per day with no oil during production testing. The only additional stimulation anticipated would be an occasional acid job after the well has been utilized for injection.

XI.

There is only one fresh water well within a one mile radius of this proposed injection well. The location of the well is shown below. The water well is pumped by a windmill and the water is used for livestock consumption.



HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

XI. CHEMICAL ANALYSIS
OF FRESH WATER FROM
WATER WELL

LABORATORY WATER ANALYSIS

No. W81-966

To Adams Exploration

Date 11-2-81

P.O. Box 10585

Midland, Tx 79702

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by Danny Sooter

Date Rec. 10-27-81

Well No. Water Well

Depth

Formation

County Chaves

Field

Source

Resistivity 14 @ 72°F

Specific Gravity 1.000

pH 8.3

Calcium (Ca) Nil

*MPL

Magnesium (Mg) Nil

Chlorides (Cl) Nil

Sulfates (SO₄) NilBicarbonates (HCO₃) Nil

Soluble Iron (Fe) Nil

Sample appeared to be fresh water

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: R. K. Grimes

cc:

By

HALLIBURTON COMPANY

CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

XII.

Adams Exploration Company geologic and engineering personell have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

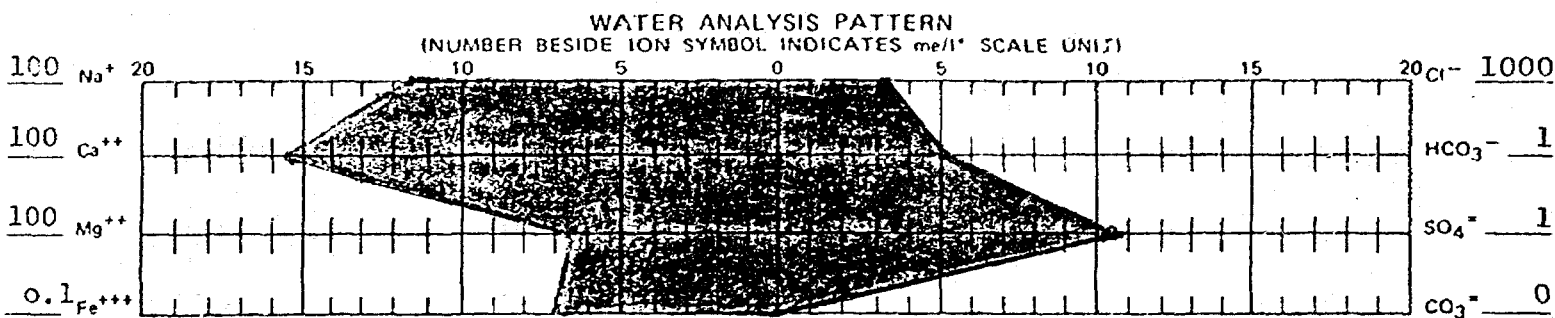
Steve A Douglas

Steve A. Douglas
Division Engineer

Mark Schweinfurth

Mark Schweinfurth
Exploration Manager

| | | | | | | | |
|-----------------------------------|---------|--|----------|----------------------------------|-------------|---------------|--|
| COMPANY Adams Exploration | | | | ANALYSIS NUMBER 1017 | | | |
| COMPANY ADDRESS Midland, Texas | | | | DATE 8/27/81 | | | |
| FIELD Chaveroo | | | | COUNTY OR PARISH Roosevelt | | STATE N.M. | |
| LEASE OR UNIT Hooper | | WELL NAME OR NO. #1 | | WATER SOURCE (FORMATION) S.A. | | | |
| DEPTH, FT. | BHT, °F | SAMPLE SOURCE | TEMP, °F | WATER, BBL/DAY | OIL BBL/DAY | GAS MMCF/DAY | |
| DATE SAMPLED 8/20/81 | | TYPE OF WATER <input checked="" type="checkbox"/> PRODUCED <input type="checkbox"/> SUPPLY <input type="checkbox"/> WATERFLOOD <input type="checkbox"/> SALT WATER DISPOSAL | | | | | |



DISSOLVED SOLIDS

| CATIONS | me/l* | mg/l* |
|--|--------|---------|
| Total Hardness | 2220 | |
| Calcium, Ca ⁺⁺ | 1560 | 31200 |
| Magnesium, Mg ⁺⁺ | 660 | 8052 |
| Iron (Total) Fe ⁺⁺⁺ | 0.7 | 13 |
| Barium, Ba ⁺⁺ | -- | -- |
| Sodium, Na ⁺ (calc.) | 1147.5 | 26392.5 |
| ANIONS | | |
| Chloride, Cl ⁻ | 3352.1 | 119,000 |
| Sulfate, SO ₄ ⁼ | 10.9 | 525 |
| Carbonate, CO ₃ ⁼ | 0 | 0 |
| Bicarbonate, HCO ₃ ⁻ | 5.2 | 317.2 |
| Hydroxyl, OH ⁻ | 0 | 0 |
| Sulfide, S ⁼ | -- | -- |

DISSOLVED GASES

| | | |
|------------------------------------|----|-------|
| Hydrogen Sulfide, H ₂ S | -- | mg/l* |
| Carbon Dioxide, CO ₂ | -- | mg/l* |
| Oxygen, O ₂ | -- | mg/l* |

PHYSICAL PROPERTIES

| | |
|---|--------------|
| pH | 5.55 |
| Specific Gravity | |
| Total Dissolved Solids (calc.) | 185500 mg/l* |
| Stability Index @ 20 °C | +0.67 |
| CaSO ₄ Solubility @ 20 °C | 6.42 me/l* |
| Max. CaSO ₄ Possible (calc.) | 10.9 me/l* |
| Residual Hydrocarbons | ppm(Vol/Vol) |
| Residual Hydrocarbons | ppm(Vol/Vol) |

TOTAL SOLIDS (QUANTITATIVE)

185499.7

REMARKS AND RECOMMENDATIONS:

@ 20 C Carbonate scaling is indicated.
Sulfate scaling is indicated.

*NOTE: me/l and mg/l are commonly used interchangeably for epn and ppm respectively. Where epn and ppm are used, corrections should be made for specific gravity.

| | | |
|-----------------------------------|--------------|-----------|
| MAGNA REPRESENTATIVE W.H. Fort | ADDRESS | TELEPHONE |
| ANALYZED BY | DATE | RES |
| | DISTRIBUTION | |

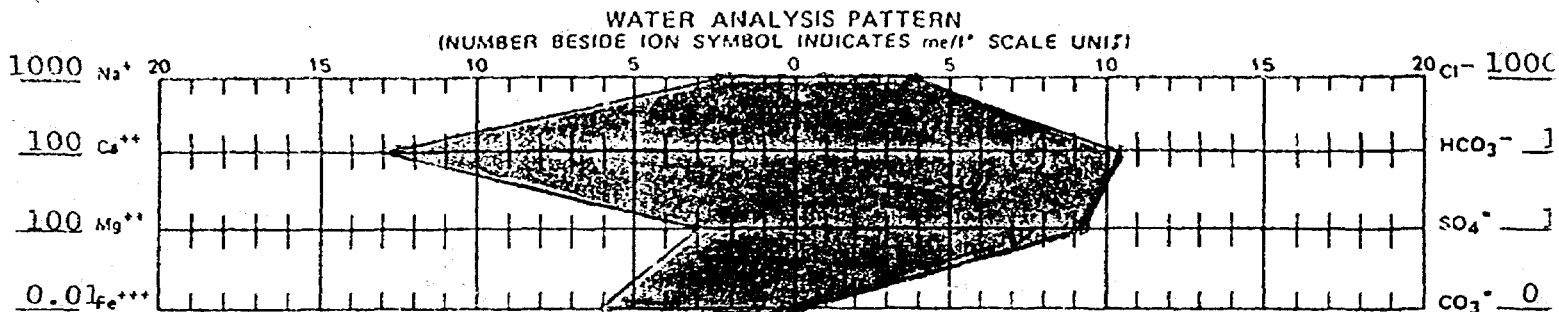


BAKER OIL TREATING

A Baker Oil Tools Company

WATER ANALYSIS REPORT

| | | | | | | |
|-----------------------------------|---------|--|----------|--|-------------|--------------|
| COMPANY Adams Exploration | | | | ANALYSIS NUMBER 1019 | | |
| COMPANY ADDRESS Midland, Texas | | | | DATE 8/28/81 | | |
| FIELD Chaveroo | | COUNTY OR PARISH Roosevelt | | STATE N.M. | | |
| LEASE OR UNIT Griffin | | WELL(S) NAME OR NO. #2 | | WATER SOURCE (FORMATION) San Andres | | |
| DEPTH, FT. | WHT. °F | SAMPLE SOURCE | TEMP. °F | WATER, BBL/DAY | OIL BBL DAY | GAS MMCF/DAY |
| DATE SAMPLED 8/20/81 | | TYPE OF WATER <input checked="" type="checkbox"/> PRODUCED <input type="checkbox"/> SUPPLY <input type="checkbox"/> WATERFLOOD <input type="checkbox"/> SALT WATER DISPOSAL | | | | |



DISSOLVED SOLIDS

CATIONS

| | me/l* | mg/l* |
|---------------------------------|--------|---------|
| Total Hardness | 1600 | |
| Calcium, Ca ⁺⁺ | 1300 | 26000 |
| Magnesium, Mg ⁺⁺ | 300 | 3660 |
| Iron (Total) Fe ⁺⁺⁺ | 0.06 | 1.2 |
| Barium, Ba ⁺⁺ | -- | -- |
| Sodium, Na ⁺ (calc.) | 2419.5 | 55648.5 |

ANIONS

| | me/l* | mg/l* |
|--|-------|--------|
| Chloride, Cl ⁻ | 4000 | 142000 |
| Sulfate, SO ₄ ⁼ | 9.17 | 440 |
| Carbonate, CO ₃ ⁼ | 0 | 0 |
| Bicarbonate, HCO ₃ ⁻ | 10.4 | 634.4 |
| Hydroxyl, OH ⁻ | 0 | 0 |
| Sulfide, S ⁼ | -- | -- |

DISSOLVED GASES

| | |
|------------------------------------|----------|
| Hydrogen Sulfide, H ₂ S | -- mg/l* |
| Carbon Dioxide, CO ₂ | -- mg/l* |
| Oxygen, O ₂ | -- mg/l* |

PHYSICAL PROPERTIES

| | |
|---|--------------|
| pH | 5.95 |
| Specific Gravity | |
| Total Dissolved Solids (calc.) | 228384 mg/l* |
| Stability Index @ -- °C | |
| @ 20 °C | +1.54 |
| CaSO ₄ Solubility @ -- °C | |
| @ 20 °C | 7.64 me/l* |
| Max. CaSO ₄ Possible (calc.) | me/l* |
| Max. CaSO ₄ Possible (calc.) | 9.17 me/l* |
| Residual Hydrocarbons | ppm(Vol/Vo) |
| Residual Hydrocarbons | ppm(Vol/Vo) |

TOTAL SOLIDS (QUANTITATIVE)

228384.1

REMARKS AND RECOMMENDATIONS.

@ 20 C Carbonate scaling is indicated.
Sulfate scaling is likely.

*NOTE: me/l and mg/l are common
used interchangeably for epm and pp
respectively. Where epm and ppm are
used, corrections should be made for
specific gravity.

| | | | |
|-----------------------------------|-----------------|------------------|-----|
| MAGNA REPRESENTATIVE W.H. Fort | ADDRESS | TELEPHONE OFF | RES |
| ANALYZED BY M. Pitts | DATE 8/27/81 | DISTRIBUTION | |



BAKER
OIL TREATING

A Baker Oil Tools Company

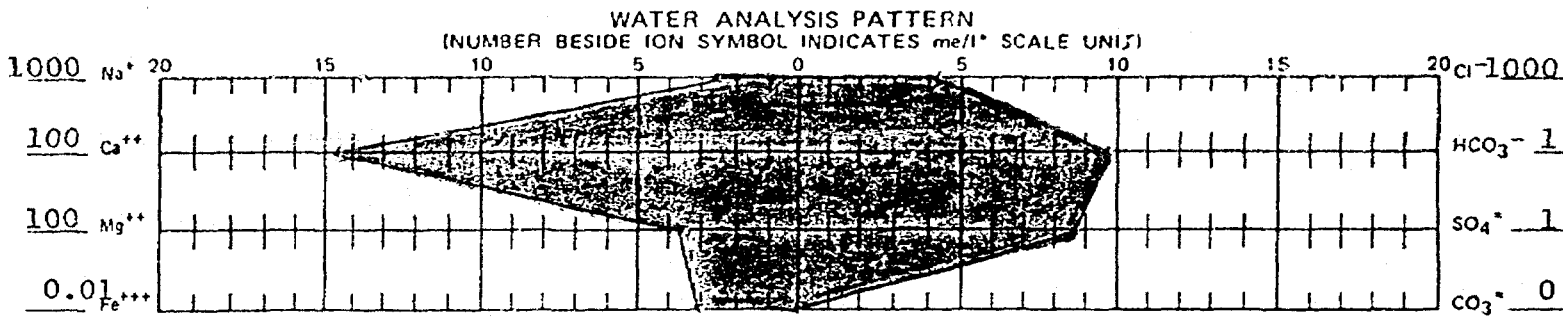
RECEIVED

SEP 18 1981

ADAMS EXPLORATION COMPANY

WATER ANALYSIS REPORT

| | | | | | | | |
|-----------------------------------|---------|--|---------|--|-------------|--------------|--|
| COMPANY Adams Exploration | | | | ANALYSIS NUMBER 1018 | | | |
| COMPANY ADDRESS Midland, Texas | | | | DATE 8/27/81 | | | |
| FIELD Chaveroo | | | | COUNTY OR PARISH Roosevelt | | | |
| LEASE OR UNIT Griffin | | | | WATER SOURCE (FORMATION) San Andres | | | |
| WELL(S) NAME OR NO #1 | | | | STATE N.M. | | | |
| DEPTH FT | BHT. FT | SAMPLE SOURCE | TEMP. F | WATER BBL/DAY | OIL BBL/DAY | GAS MMCF/DAY | |
| DATE SAMPLED 8/20/81 | | TYPE OF WATER <input checked="" type="checkbox"/> PRODUCED <input type="checkbox"/> SUPPLY <input type="checkbox"/> WATERFLOOD <input type="checkbox"/> SALT WATER DISPOSAL | | | | | |



DISSOLVED SOLIDS

| CATIONS | me/l* | mg/l* |
|--|---------|---------|
| Total Hardness | 1780 | |
| Calcium, Ca ⁺⁺ | 1440 | 28800 |
| Magnesium, Mg ⁺⁺ | 340 | 4148 |
| Iron (Total) Fe ⁺⁺⁺ | 0.03 | 0.6 |
| Barium, Ba ⁺⁺ | -- | -- |
| Sodium, Na ⁺ (calc.) | 2548.42 | 58613.7 |
| ANIONS | | |
| Chloride, Cl ⁻ | 4309.9 | 153000 |
| Sulfate, SO ₄ ⁼ | 8.75 | 420 |
| Carbonate, CO ₃ ⁼ | 0 | 0 |
| Bicarbonate, HCO ₃ ⁻ | 9.8 | 597.8 |
| Hydroxyl, OH ⁻ | 0 | 0 |
| Sulfide, S ⁼ | -- | -- |

DISSOLVED GASES

| | |
|------------------------------------|---------|
| Hydrogen Sulfide, H ₂ S | — mg/l* |
| Carbon Dioxide, CO ₂ | — mg/l* |
| Oxygen, O ₂ | — mg/l* |

PHYSICAL PROPERTIES

| | |
|---|--------------|
| pH | 6.1 |
| Specific Gravity | |
| Total Dissolved Solids (calc.) | 245580 mg/l* |
| Stability Index @ — °C | |
| @ 20 °C | +2.11 |
| CaSO ₄ Solubility @ — °C | |
| @ 20 °C | 6.29 me/l* |
| Max. CaSO ₄ Possible (calc.) | me/l* |
| Max. CaSO ₄ Possible (calc.) | 8.75 me/l* |
| Residual Hydrocarbons | ppm(Vol/Vol) |
| Residual Hydrocarbons | ppm(Vol/Vol) |

TOTAL SOLIDS (QUANTITATIVE) 245580.1

REMARKS AND RECOMMENDATIONS

@ 20 C Carbonate scaling is indicated.
Sulfate scaling is likely.

*NOTE: me/l and mg/l are commonly used interchangeably for epm and ppp respectively. Where epm and ppp are used, corrections should be made for specific gravity.

| | | | |
|-----------------------------------|---------|------------------|-----|
| MAGNA REPRESENTATIVE W.H. Fort | ADDRESS | TELEPHONE OFF | RES |
| ANALYZED BY | DATE | DISTRIBUTION | |

AFFIDAVIT OF PUBLICATION

County of Chaves
State of New Mexico,

I, R. M. Higginsbotham
manager

Of the Roswell Daily Record, a daily newspaper published at Roswell, New Mexico, do solemnly swear that the clipping hereto attached was published once a week in the regular and entire issue of said paper and not in a supplement thereof for a period

of one
day ~~XXXX~~ weeks

beginning with the issue dated November 13, 1981

and ending with the issue dated November 18, 1981

R. M. Higginsbotham
Manager

Sworn and subscribed to before me
this 18th day of November, 1981

Notary Public

My commission expires

October 21, 1982, 1981
(Seal)

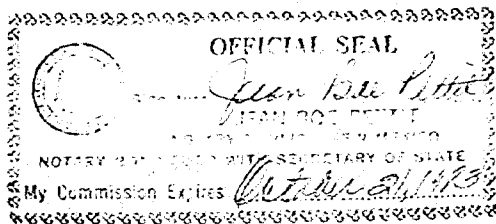
Publish November 18, 1981

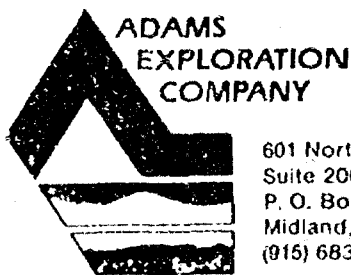
ADAMS EXPLORATION
COMPANY
P. O. Box 10585
Midland, Texas 79702
915-683-3303
CONTACT: Steve A. Douglas

Adams Exploration Company
Intends to convert the Griffin #4
into a water disposal well. In
order to dispose of water
produced from the San Andres
Formation in adjacent wells.
Well location is 660 FNL & 660'
FEL of Section 10, Township 8
South, Range 32 East, Chaves
County, New Mexico.

The injection interval is in the
San Andres Formation into
perforations from 4176'-4293'.
The maximum anticipated
injection rate is one BPM at 200
psi. Maximum anticipated
volume is 200 RPD.

Interested parties must file
objections or requests for
hearing with the Oil Con-
servation Division, P. O. Box
2088, Santa Fe, New Mexico
87501 within 15 days.





601 North Loraine Street
Suite 200
P. O. Box 10585
Midland, Texas 79702
(915) 683-3303

CERTIFIED MAIL NO. P238386045
RETURN RECEIPT REQUESTED

November 24, 1981

MWJ Producing Company
1804 First National Bank Bldg.
Midland, Texas 79701

RE: Our Griffin Well No. 4
NE/4 NE/4 Sec. 10, T-8-S, R-32-E,
NMPM, CHAVES COUNTY, NEW MEXICO

Gentlemen:

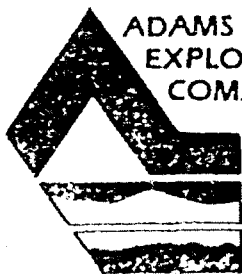
We are in the process of making application to convert the above well into a salt water disposal well. The New Mexico Oil Conservation Division requires that we give notice to all offsetting leasehold operators of the above well. Enclosed with this letter is a copy of our application to the New Mexico Oil Conservation Division. Should you have any questions, please contact us at the above address or phone number.

Yours truly,

ADAMS EXPLORATION COMPANY

By Steve Douglas
Steve Douglas
Division Engineer

SD/jpk



ADAMS
EXPLORATION
COMPANY

601 North Loraine Street
Suite 200
P. O. Box 10585
Midland, Texas 79702
(915) 683-3303

CERTIFIED MAIL NO. P238386044
RETURN RECEIPT REQUESTED

November 24, 1981

El Ran, Inc.
P. O. Box 911
Lubbock, Texas 79408

RE: Our Griffin Well No. 4
NE/4 NE/4 Sec. 10, T-8-S, R-32-E,
NMPM, CHAVES COUNTY, NEW MEXICO

Gentlemen:

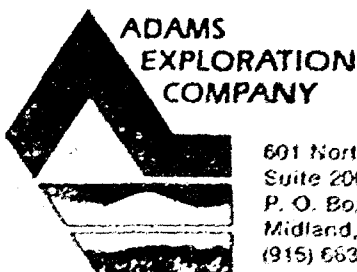
We are in the process of making application to convert the above well into a salt water disposal well. The New Mexico Oil Conservation Division requires that we give notice to all offsetting leasehold operators of the above well. Enclosed with this letter is a copy of our application to the New Mexico Oil Conservation Division. Should you have any questions, please contact us at the above address or phone number.

Yours truly,

ADAMS EXPLORATION COMPANY

By Steve Douglas
Steve Douglas
Division Engineer

SD/jpk



601 North Loraine Street
Suite 200
P. O. Box 16585
Midland, Texas 79702
(915) 663-3303

CERTIFIED MAIL NO. P238326043
RETURN RECEIPT REQUESTED

November 24, 1981

Mrs. Tom Gainer
P. O. Box 65
Kenna, New Mexico 88122

RE: Griffin Well No. 4
NE/4 NE/4 Sec. 10, T-8-S, R-32-E,
NMPM, CHAVES COUNTY, NEW MEXICO

Dear Mrs. Gainer:

We are in the process of making application to convert the above well into a salt water disposal well. The New Mexico Oil Conservation Division requires that we give official notice of such conversion to the surface owner of the land on which the above well is located. Enclosed with this letter is a copy of our application to the New Mexico Oil Conservation Division. Should you have any questions, please do not hesitate to contact us.

Yours truly,

ADAMS EXPLORATION COMPANY

By Steve Douglas
Steve Douglas
Division Engineer

SD/jpk

Diana

Please change your SWD
Model for

Finding No (B)(5)

and

Order No (2) and (6)

as shown

*HEARING
ORDERS*

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

MS

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

Don

CASE NO. 7483

Order No. R- 6710

APPLICATION OF ADAMS EXPLORATION COMPANY
FOR SALT WATER DISPOSAL, CHAVES COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on February 17, 1982, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this _____ day of February, 1982, 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, Adams Exploration Company, is the owner and operator of the Griffin Well No. 4, located in Unit A of Section 10, Township 8 South, Range 32 East, NMPM, Chaves County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the San Andres formation, with injection into the perforated interval from approximately 4176 feet to 4293 feet.

(4) That the injection should be accomplished through 2 3/8-inch epoxy plastic lined tubing installed in a packer set at approximately 4100 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a pressure limiting switch or other device ~~pressure limiting switch or acceptable substitute~~ which will limit the wellhead pressure on the injection well to no more than 835 psi.

(6) That the Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the

injected waters from the San Andres formation.

(7) 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.

(8) 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.

(9) 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, Adams Exploration Company, is hereby authorized to utilize its Griffin Well No. 4, located in Unit A of Section 10, Township 8 South, Range 32 East, NMPM, Chaves County, New Mexico, to dispose of produced salt water into the San Andres formation, injection to be accomplished through 2 3/8 - inch tubing installed in a packer set at approximately 4100 feet, with injection into the perforated interval from approximately 4176 feet to 4293 feet;

PROVIDED HOWEVER, that the tubing shall be ^{epoxy}~~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 ~~pop off valve or acceptable substitute~~ ^{pressure limiting switch or other device} which will limit the wellhead pressure on the injection well to no more than 835 psi.

(3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the San Andres formation.

(4) 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.

(5) 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.

(6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules ~~704 and 1120~~ ^{702, 703, 704, 705} ~~706, 708, and 1120~~ of the Division Rules and Regulations.

(7) 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

S E A L

CASE 7484: ANADARKO PRODUCTION COMPANY
FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO

Flowers - PLS
Send Phil Brewer
a copy of the docket
marked w/ a big check
mark on this case so they
can reproduce it and
send to the police.

DOCKET MAILED

Date 2/5/82