

CASE 6116: MERRION AND BANKERS FOR
SALT WATER DISPOSAL, SAN JUAN COUNTY,
NEW MEXICO

Case Number

6116

Application

Transcripts.

Small Exhibits

ETC.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 6116
Order No. R-5623

APPLICATION OF MERRION & BAYLESS
FOR SALT WATER DISPOSAL, SAN JUAN
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 4, 1978, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 17th day of January, 1978, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Merrion & Bayless, is the owner and operator of the Hudson Well No. 1, located in Unit D of Section 26, Township 30 North, Range 12 West, NMPM, Flora Vista-Mesaverde Pool, San Juan County, New Mexico.
- (3) That the applicant proposes to utilize said well to dispose of produced salt water into the Mesaverde formation, with injection into the perforated interval from approximately 3374 feet to 3395 feet.
- (4) That the injection should be accomplished through 2 3/8-inch plastic lined tubing installed in a packer set at approximately 3300 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 disposal of water into the Mesaverde formation in the subject well should be limited to 500 barrels of water per day, and the surface injection pressure should not exceed 660 psi.

-2-

Case No. 6116
Order No. R-5623

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

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

(8) That should the disposal of water into the Mesaverde formation in the subject well cause suspected adverse effects on production from nearby Mesaverde wells, the disposal of water into the subject well should be suspended pending a hearing to determine if such indeed be the case.

(9) That subject to the above conditions, 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, Merrion & Bayless, is hereby authorized to utilize their Hudson Well No. 1, located in Unit D of Section 26, Township 30 North, Range 12 West, NMPM, Flora Vista-Mesaverde Pool, San Juan County, New Mexico, to dispose of produced salt water into the Mesaverde formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3300 feet, with injection into the perforated interval from approximately 3374 feet to 3395 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection system shall be equipped with a pressure limitation switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 660 psi.

(3) That disposal of water into the Mesaverde formation in the subject well shall be limited to 500 barrels of water per day.

(4) That the operator of the herein authorized disposal well shall suspend disposal operations pending public hearing should it be suspected by the Commission that disposal into the Mesaverde formation in the well may be causing adverse effects on production from nearby Mesaverde wells.

-3-

Case No. 6116
Order No. R-5623

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

(6) That the operator shall immediately notify the supervisor of the Commission's Aztec 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.

(7) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations and shall furnish one copy of each such monthly report to the operator of the Mesaverde gas well located in the SE/4 of Section 27, Township 30 North, Range 12 West, NMPM, San Juan County, New Mexico.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman



Emery E. Arnold
EMERY E. ARNOLD, Member

Joe D. Ramey
JOE D. RAMEY, Member & Secretary

S E A L

jr/



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501



DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO
January 17, 1978

STATE GEOLOGIST
EMERY C. ARNOLD

Mr. J. Gregory Merrion
P. O. Box 507
Farmington, New Mexico 87401

Re: CASE NO. 6116
ORDER NO. R-5623

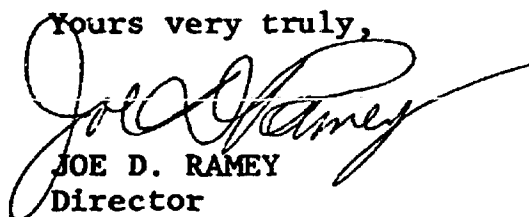
Applicant:

Merrion and Bayless

Dear Sir:

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

Yours very truly,


JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC X
Artesia OCC X
Aztec OCC X

Other _____

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 4, 1978

EXAMINER HEARING

IN THE MATTER OF:

Application of Merrion and Bayless for salt) CASE
water disposal, San Juan County, New Mexico.) 6116

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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

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General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 962-9212

I N D E X

Page

J. GREGORY MERRION

Direct Testimony

3

EXHIBIT INDEX

Offered Admitted

Applicant Exhibit One, Map

3

12

Applicant Exhibit Two, Tabulation

4

12

Applicant Exhibit Three, Dia. Sketch

6

12

Applicant Exhibit Four, Limitations

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12

Applicant Exhibit Five, Form C-108

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1 MR. NUTTER: We will call Case Number 6116.

2 MS. TESCHENDORF: Case 6116, application of Merrion
3 and Bayless for salt water disposal, San Juan County,
4 New Mexico.

5 MR. MERRION: Mr. Examiner, I'm J. Gregory Merrion
6 and I wish to appear on behalf of myself in Case 6116.

7 MR. NUTTER: Would you proceed with your case,
8 Mr. Merrion?

9 MR. MERRION: Yes, sir.

10 MR. NUTTER: The record will show that Mr. Merrion
11 is still under oath.

12 MR. MERRION: Mr. Examiner, I would like to offer
13 into evidence what we have labeled Exhibit Number One in
14 Case 6116.

15 First of all I would like to apologize because I
16 have only one of them colored but Exhibit Number One is a
17 location map of the area in question in this Case Number 6116
18 in which we request permission to dispose of produced water
19 into the Hudson No. 1 Well located in the northwest quarter
20 of Section 26, 30 North, 12 West on the edge of the Flora
21 Vista Mesaverde Field.

22 This arc on around the Hudson No. 1 is a one-half
23 mile arc the purpose of which is to show those wellbores
24 which have penetrated the zone in which we propose to inject
25 the produced water and show which wells are within one-half

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1 mile of that wellbore. The two wells within the half mile
2 radius are our Merrion and Bayless Palmer No. 1 which produces
3 from the Flora Vista Mesaverde and the Beta Development
4 Palmer D-1 Well which produces from the Basin Dakota Field.
5 There are other wells in this area which have not been spotted
6 but they are not close enough to the half-mile radius to have
7 been included here.

8 MR. NUTTER: Those little dots east of the well I
9 presume then are not wells, those are houses or something?

10 MR. MERRION: This is a populated area and those
11 are probably houses. This is a USGS Topo map that we have
12 used as a base map.

13 That concludes my comments on this exhibit.

14 MR. NUTTER: Okay.

15 MR. MERRION: Mr. Examiner, I would like to offer
16 as Exhibit Number Two or what I have labeled as Exhibit Two,
17 a tabulation of well data on wells drilled through the in-
18 jection zone within one-half mile of the salt water disposal
19 well, the proposed salt water disposal well.

20 The Beta Development Paul Palmer D-1 is located
21 eighteen hundred and fifty feet from the south line and
22 eleven hundred and ninety feet from the west line of Section
23 26, Township 30 North, 12 West, San Juan County, New Mexico.
24 The surface casing was nine and five-eighths set at three
25 hundred and twenty-eight feet and was cemented to the surface.

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1 Production casing was four and a half inches in diameter set
2 at sixty-five hundred and sixty-two feet, cemented with four
3 hundred and fifty cubic feet of cement on the bottom stage.
4 The calculated top of the cement is five thousand and ninety-
5 nine feet. There was a stage collar at thirty-six hundred
6 and sixty-five feet. The volume of cement used on the second
7 stage was six hundred and ninety-nine cubic feet with the top
8 of the cement calculated at fourteen hundred and ten feet.
9 The total depth of the well is sixty-five hundred and sixty-
10 three feet. The producing interval is the Dakota through
11 perforations sixty-three hundred and ninety-six, sixty-four
12 ten, sixty-four thirty-two to sixty-four thirty-five and
13 sixty-four fifty-five to sixty-four fifty-nine.

14 MR. NUTTER: That well isn't producing from the
15 Mesaverde then, it's drilled through the Mesaverde to the
16 Dakota?

17 MR. MERRION: This is correct.

18 The second well within a half mile radius is the
19 Merrion and Bayless Palmer No. 1 located twenty-three hundred
20 and sixty feet from the south line and eight hundred and
21 thirty feet from the west line, Section 26, Township 30
22 North, Range 12 West, San Juan County, New Mexico. The
23 surface casing is nine and five-eighths inches set at three
24 hundred and thirty-nine feet with cement circulated to the
25 surface. The production casing is four and a half inches set

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1 at thirty-four hundred and seventy-two feet, stage cemented
2 with the bottom stage ninety-five cubic feet, top of cement
3 three thousand and fifty-five feet calculated. Stage collar
4 two thousand and ten, using a hundred and fifty-eight cubic
5 feet of slurry and a fourteen hundred and sixty-one foot
6 calculated top of the cement. The total depth of the well is
7 thirty-five hundred and nine feet. The producing interval is
8 the Mesaverde through an interval thirty-four sixty to thirty-
9 four eighty-seven. The well has been plugged back in the
10 open hole with the present plug-back depth thirty-four eighty-
11 seven.

12 I have no further comments on Exhibit Two.

13 MR. NUTTER: Okay, go ahead.

14 MR. MERRION: Mr. Examiner, I would like to offer
15 into evidence an exhibit which I have labeled Number Three.
16 This is a diagrammatic sketch of the Hudson No. 1 proposed
17 salt water disposal well.

18 First of all, our surface casing is cemented at
19 three hundred and thirteen feet and the deepest water wells
20 in the area are less than one hundred feet or at least this
21 is the best evidence I can get and I did talk to Mr. John
22 Hargis who owns the acreage under our Palmer No. 1 and is
23 a water well driller in the area. He has drilled several
24 wells in the area and he says that as far as he knows the
25 deepest one is approximately ninety feet.

1 The Pictured Cliffs horizon is cemented with the
2 second stage of cement. The calculated top is eleven hundred
3 and fourteen feet. The existing perforations were made
4 originally for production from the Flora Vista Mesaverde and
5 this well has not produced. We purchased the wellbore in
6 1969 and it was prior to that that the well had ceased to
7 produce and we propose to inject into these perforations.

8 The well is not currently equipped with tubing. We
9 propose to run two and three-eighths plastic lined tubing
10 with a Baker Model R packer and set it within a hundred feet
11 of the top of the perforations and commence injection.

12 I have no further comments on Exhibit Three.

13 MR. NUTTER: What disposition will be made of the
14 annulus there, Mr. Merrion?

15 MR. MERRION: We intend to put corrosion inhibitor
16 in the annulus, bactericide.

17 MR. NUTTER: And this tubing would be plastic lined?

18 MR. MERRION: That is correct.

19 I have no further comments on Exhibit Three.

20 Mr. Examiner, I would like to offer into evidence
21 what I have labeled Exhibit Number Four. Our Exhibit Number
22 Four, our proposed limitations on approval of salt water
23 disposal project.

24 I had conversations with Amoco Production Company
25 which is the operator in the Flora Vista Mesaverde Field and

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1 they had some concern regarding the effect which there might
2 be on the production from the Flora Vista Mesaverde. This is
3 a problem or could be a problem. They propose certain limita-
4 tions and these are acceptable to us and, therefore, we
5 propose them here in the hearing.

6 First of all, the maximum injection rate to be five
7 hundred barrels of water per day. The maximum injection
8 pressure to be six hundred and sixty psi. This is not one of
9 their limitations but I believe it is one of the Oil Com-
10 mission's limitations at two-tenths of a pound per a foot of
11 depth.

12 Thirdly, the sole source of water to be injected is
13 to be from the Flora Vista Mesaverde Field.

14 Fourthly, all operators in the Flora Vista Mesaverde
15 Field to receive a monthly report of injection rates and
16 pressures.

17 And fifthly, if any adverse effects are reported,
18 project to be shut down pending hearing to determine if the
19 adverse effects are from the disposal project. The only other
20 comment I would have on that is that Mr. Al Kendrick pointed
21 out that our monthly reports would be published in the New
22 Mexico Oil and Gas Engineering Committee book and would be
23 available to all operators and number four might not be
24 necessary. I was unable to get back with Amoco to get their
25 approval to forget about that.

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1 I have no further comments on Exhibit Four.

2 MR. NUTTER: Okay, now, you mentioned that Amoco was
3 the only operator in the Flora Vista Pool, what about this
4 well directly east of your Hudson No. 1 which is identified
5 as Beta Pierce No. 1. What formations does that produce from?

6 MR. MERRION: That is a Dakota Well.

7 MR. NUTTER: And then you have the one Flora Vista
8 well down here to the south which is your Palmer No. 1 and
9 your Palmer No. D-1 is a Dakota well, is that correct?

10 MR. MERRION: Beta's Palmer D-1 is Dakota.

11 MR. NUTTER: And it's a Dakota and the Amoco Duff
12 No. 1 is a Mesaverde well?

13 MR. MERRION: It's a Mesaverde well, yes, sir. I
14 think they also have a Dakota well but I don't know if it is
15 a dual or a twin. In the northwest of 27 Amoco has another
16 well.

17 MR. NUTTER: Where?

18 MR. MERRION: It would be in the northwest corner.
19 It's not spotted.

20 MR. NUTTER: It's not on here?

21 MR. MERRION: No. Then in the southwest of 22 we
22 produce the Osborne No. 1, Merrion and Bayless and up in
23 Section 21 I believe Amoco has the McCoy and then we have
24 the Carnahan down in Section 35 or 36, I can't remember
25 which.

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1 MR. NUTTER: But those are not shown on this?

2 MR. MERRION: Those are not shown.

3 MR. NUTTER: It only shows the wells that are within
4 a half mile or just slightly more than a half a mile?

5 MR. MERRION: So that I believe that Amoco and
6 Merrion and Bayless are the only producers currently in the
7 Flora Vista Mesaverde Field.

8 MR. NUTTER: And the water that you are going to be
9 disposing of into this well is water that is produced from
10 the Flora Vista Mesaverde?

11 MR. MERRION: Mainly from the Palmer No. 1.

12 MR. NUTTER: Does your Dakota well make water?

13 MR. MERRION: No, that's not our Dakota well, that's
14 Beta's Palmer D-1.

15 MR. NUTTER: Does it make water?

16 MR. MERRION: I don't know. I think that Amoco's
17 concern was that if we limited the injection to water that
18 came out of the Flora Vista Mesaverde it would be a little
19 assurance that we weren't offering any extraneous new water
20 into the field that tended to harm and it would present a
21 limit in itself. You don't know how much water could be
22 injected if that were used for an overall disposal well. Any
23 water that anybody wanted to inject might do harm to the
24 reservoir. I think that is probably good reasoning.

25 MR. NUTTER: Okay. Do you have any further exhibits?

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1 MR. MERRION: Let's see. I had prepared a Form
2 C-108 to send to the land owner there and I might as well
3 present that as evidence.

4 MR. NUTTER: How about a water analysis, did you
5 have a water analysis?

6 MR. MERRION: I do not have a water analysis. I
7 perhaps had one from the Osborne but I have never taken one
8 from the Palmer. It is about thirty thousand parts per
9 million, total of all solids approximately equals C water.
10 Of course, the water being produced and the water into the
11 zone that is going is all the same water so I didn't feel
12 that it was too pertinent.

13 MR. NUTTER: Now this thirty thousand parts per
14 million, how much of that is chlorides, do you have any
15 idea?

16 MR. MERRION: Well, most of it would be sodium
17 chloride. I know that we have taken an analysis from the
18 Osborne No. 1 and I'm sure I have it in the file and I can
19 send that to you or get one from the Palmer if you would like.

20 MR. NUTTER: If you could send a water analysis
21 then I think it would be proper to have one in the file.

22 MR. MERRION: Okay, I'll do that.

23 MR. NUTTER: It probably isn't too important since
24 it is coming out of the same formation and going back but it
25 is going through some other formations also.

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1 MR. MERRION: I would like to state that I have
2 notified the land owners, Mr. J. L. Brown and his wife, Mrs.
3 Irene Brown, who are not living together so they have been
4 treated separately of our application. Irene Brown has no
5 objection and J. L. Brown didn't know and I just sent them
6 this C-108 yesterday but he is aware of what's going on.

7 I have no further presentation, sir.

8 MR. NUTTER: Exhibits One through Five will be
9 admitted into evidence.

10 (THEREUPON, Exhibits One through Five were
11 admitted into evidence.)

12 MR. NUTTER: Does anyone have any questions of
13 Mr. Merrion? He may be excused.

14 (THEREUPON, the witness was excused.)

15 MR. NUTTER: Do you have anything further in this
16 case, Mr. Merrion?

17 MR. MERRION: No, sir.

18 MR. NUTTER: Does anyone have anything to offer in
19 Case 6116? We will take the case under advisement.

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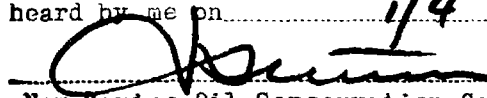
REPORTER'S CERTIFICATE

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I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,
do hereby certify that the foregoing and attached Transcript
of Hearing before the New Mexico Oil Conservation Commission
was reported by me, and the same is a true and correct record
of the said proceedings to the best of my knowledge, skill and
ability.


Sidney F. Morrish, C.S.R.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 6116,
heard by me on 1/4, 19 78.

, Examiner
New Mexico Oil Conservation Commission

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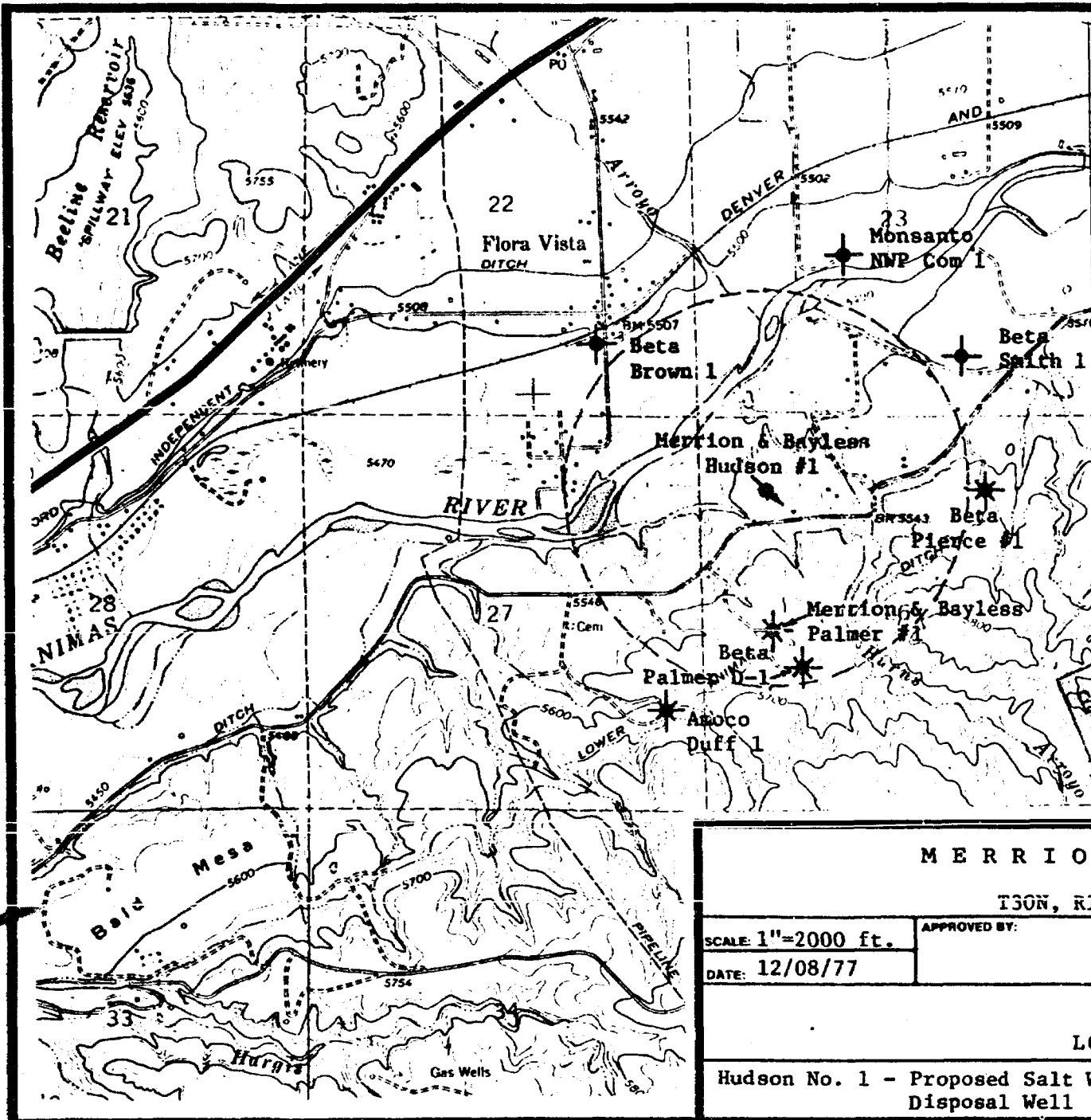
Dockets Nos. 2-78 and 3-78 are tentatively set for hearing on January 18 and February 8, 1978. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 4, 1978

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

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

- CASE 6113: Application of Transocean Oil, Inc., for a unit agreement, Catron County, New Mexico. Applicant, in the above-styled cause, seeks approval for its Cibola Unit Area comprising 30,733 acres, more or less, of Federal, State, and fee lands in Townships 1 and 2 North, Ranges 14 and 15 West, Catron County, New Mexico.
- CASE 6114: Application of Texas Oil and Gas Company for special pool rules or a spacing exception, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Shugart-Pennsylvanian Gas Pool, Eddy County, New Mexico, to provide for 320-acre spacing rather than 160 acres. In the absence of objection, this pool will be placed on the standard 320-acre spacing for Wolfcamp and Pennsylvanian gas pools rather than the present 160-acre spacing. In the alternative applicant seeks the assignment of a 320-acre gas spacing and proration unit consisting of the E/2 of Section 33, Township 18 South, Range 31 East, Eddy County, New Mexico, to a well to be drilled to the Pennsylvanian formation at a standard location thereon.
- CASE 6096: (Continued from November 30, 1977, Examiner Hearing)
- Application of Texas Oil & Gas Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the S/2 of Section 14, Township 21 South, Range 34 East, Lea County, New Mexico, to be dedicated to applicant's South Wilson State Well No. 1 to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6115: Application of Merrion and Bayless for downhole commingling, Sandoval County, New Mexico. Applicants, in the above-styled cause, seek approval for the downhole commingling of Pictured Cliffs and Chacra production in their Jicarilla 428 Wells Nos. 3, 4, and 5, located respectively, in Unit M of Section 29 and Unit D of Section 32 and Section 31, Township 23 North, Range 4 West. Applicant further seeks blanket approval for downhole commingling of said formations in Sections 29 thru 32, Township 23 North, Range 4 West, and Sections 22 thru 26 and 35 and 36, Township 23 North, Range 5 West, all in Sandoval County, New Mexico.
- CASE 6116: Application of Merrion and Bayless for salt water disposal, San Juan County, New Mexico. Applicants, in the above-styled cause, seek authority to dispose of produced salt water into the Mesaverde formation thru the perforated interval from 3374 feet to 3395 feet in applicants' Hudson Well No. 1, located in Unit D of Section 26, Township 30 North, Range 12 West, San Juan County, New Mexico.
- CASE 6117: Application of Amoco Production Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for its South Culebra Bluff Unit Area comprising 1280 acres, more or less, of Federal and fee lands in Township 23 South, Range 28 East, Eddy County, New Mexico.
- CASE 6118: Application of Inexco Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for its Long Box Unit Area comprising 3,808 acres, more or less, of Federal and State lands in Townships 20 and 20 1/2 South, Ranges 23 and 24 East, Eddy County, New Mexico.
- CASE 6119: Application of Caulkins Oil Company for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Pictured Cliffs, Chacra and Mesaverde production in the wellbore of its Breech Well No. 228, to be located in Unit A of Section 18, Township 26 North, Range 6 West, Rio Arriba County, New Mexico, and to dually complete the commingled formations and the Dakota formation in said well.
- CASE 6120: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Chacra and Mesaverde production in the wellbores of its Breech E Wells Nos. 109 in Unit M of Section 3 and 104 in Unit P of Section 5 and its Breech A Wells Nos. 627 in Unit B of Section 8, 677 and 679 in Units L and J, respectively, of Section 9, and 207 in Unit A of Section 10, all in Township 26 North, Range 6 West, Rio Arriba County, New Mexico.
- CASE 6121: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured



LEGEND

- Disposal Well.
- Adjacent Producer Penetrating Proposed Injection Zone.
- Adjacent Abandoned Well Penetrating Proposed Injection Zone.

BEFORE EXAMINER NUTTER
CIVIL CONSERVATION COMMISSION
EXHIBIT NO. 6116
CASE NO. 1

MERRION & BAYLESS

T30N, R12W; San Juan, N.M.

SCALE: 1"=2000 ft.

DATE: 12/08/77

APPROVED BY:

DRAWN BY SSD

REVISED

LOCATION MAP

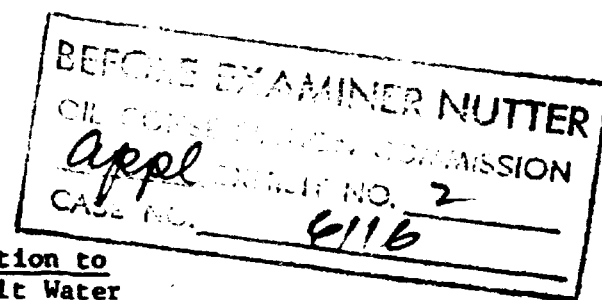
Hudson No. 1 - Proposed Salt Water Disposal Well

DRAWING NUMBER

Exhibit No. 1

EXHIBIT No. 2

Merrion & Bayless Application to
Convert Hudson No. 1 to Salt Water
Disposal Well



Tabulation of Well Data on Wells
Drilled Through Injection Zone
Within 1/2 Mile of Salt Water Disposal Well

WELL:	Beta Development Paul Palmer D-1	Merrion & Bayless Palmer #1
LOCATION:	1850 FSL & 1190 FWL Section 26, T30N, R12W	2360 FSL & 830 FWL Section 26, T30N, R12W
SURFACE CASING:		
	Size - 9-5/8"	9-5/8"
	Depth - 328 feet ✓	339 feet
	Vol. Cement - circulated ✓	circulated
PRODUCTION CASING:		
	Size - 4-1/2"	4-1/2" ✓
	Depth - 6562 feet ✓	3472 feet ✓
	Bottom Stage -	
	Vol. Cement - 450 cu. ft.	95 cu. ft.
	Top Cement - 5099 calc.	3055 calc. ✓
	Stage Collar Depth - 3665 ft.	2010 ft. ✓
	Vol. Cement - 699 cu. ft.	158 cu. ft. ✓
	Top Cement - 1410 calc. ✓	1461 calc. ✓
TOTAL DEPTH:	6563 feet ✓	3509 feet ✓
PRODUCING INTERVAL:		
	Name - Dakota	Mesa Verde
	Perforations - 6396-6410 ft.	3460-3487 ft. *
	6432-6435 ft.	
	6455-6459 ft.	

EXHIBIT NO. 3

Diagrammatic Sketch of Salt Water
Disposal Well

MERRION & BAYLESS

Hudson #1

990 FNL and 990 FWL

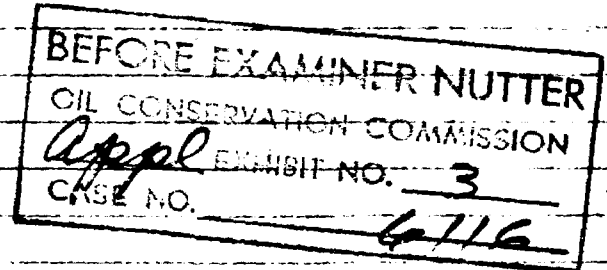
Sec. 26, T30N, R12W

San Juan County, New

8-5/8" @ 313'
w/250 sax
Calculated top
of cement 1114'

Deepest water wells in area
are less than 100'.

*loaded
w/ inhibited
fluid*



Stage Tool 1898'
125 sax 50-50 Poz 4% Gel

2-3/8" Plastic Lined Tubing with Baker Model "R" Packer at 3300'

Calculated top
of cement 2994'

Perfs:
3374-78
3380-86
3391-95

FC 3397'

4-1/2" 10.5#
@ 3410'
75 sax 50-50 Poz 2% Gel

EXHIBIT NO. 4

Application of Merrion & Bayless to
Dispose of Produced Water into the
Hudson #1 Well
990 FNL and 990 FWL, Section 26, T30N, R12W
San Juan County, New Mexico

Proposed Limitations on Approval of
Salt Water Disposal Project

1. Maximum injection rate - 500 BWPD.
2. Maximum injection pressure - 660 PSI.
3. Sole source of water to be injected to be from Flora Vista Mesa Verde Field.
4. All operations ^{etc} in Flora Vista Mesa Verde Field to receive monthly report of injection rates and pressures.
5. If any adverse affects reported, project to be shut down pending hearing to determine if adverse affects are from disposal project.

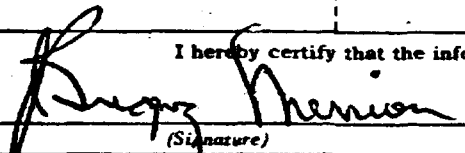
3374
2
6748

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
Appl	EXHIBIT NO. <u>4</u>
CASE NO.	<u>6116</u>

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

OPERATOR Merrion & Bayless		ADDRESS P.O. Box 507, Farmington, NM			
LEASE NAME FLORA VISTA MESA VERDE EXAMINER NUTTER		WELL NO. 1	FIELD Flora Vista Mesa Verde	COUNTY San Juan	
LOCATION OIL CONSERVATION COMMISSION		WELL IS LOCATED 990 FEET FROM THE North LINE AND 990 FEET FROM THE West LINE. SECTION 6S TOWNSHIP 30N RANGE 12W NMPM.			
CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	8-5/8"	313'	250	Surface	Circulated
INTERMEDIATE	none				
LONG STRING	4-1/2"		200	1st Stage-2994' 2nd Stage-1114' Calculated	
TUBING	To be installed	2-3/8"	3300'	NAME, MODEL AND DEPTH OF TUBING PACKER Baker Model "R" @ 3300'	
NAME OF PROPOSED INJECTION FORMATION Mesa Verde (Cliffhouse)			TOP OF FORMATION 3374'		BOTTOM OF FORMATION 3395'
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing			PERFORATIONS OR OPEN HOLES? Perforations		
PROPOSED INTERVAL(S) OF INJECTION 3374-78, 3380-86, 3391-95					
IS THIS A NEW WELL DRILLED FOR DISPOSAL? no		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Cliffhouse Gas Production		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? no	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH NA					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA Ojo Alamo 370'		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA Pictured Cliffs 1820'		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA Dakota 6200'	
ANTICIPATED DAILY INJECTION VOLUME (BBL/D.)	MINIMUM 50	MAXIMUM 500	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? As Necessary	APPROX. PRESSURE (PSI) Less than 600 psi
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -			WATER TO BE DISPOSED OF yes		
			NATURAL WATER IN DISPOSAL ZONE yes		
			ARE WATER ANALYSES ATTACHED? no		
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) J. L. Brown 113 E. Tyler Lovington, NM 88260 Irene Brown 715 W. Broadway, Space 42 Farmington, NM 87401					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL Beta Development Co., 125 Petroleum Plaza Bldg., Farmington, NM 87401 Manana Gas, Inc., Petroleum Plaza Bldg., Farmington, NM 87401 Amoco Production Co., Security Life Bldg., Denver, CO 30,000 PPM mostly NaCl					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		SURFACE OWNER yes		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)		PLAT OF AREA		ELECTRICAL LOG	
				DIAGRAMMATIC SKETCH OF WELL	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.


(Signature)

Co-Owner

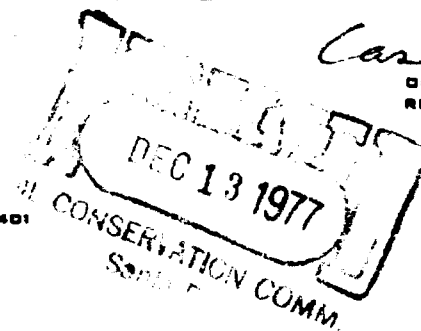
(Title)

January 3, 1978

(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

J. GREGORY MERRION
PETROLEUM ENGINEER
P. O. BOX 807
FARMINGTON, NEW MEXICO 87401



December 12, 1977

New Mexico Oil Conservation Commission
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: Application to Convert
Well to Salt Water Disposal

Gentlemen:

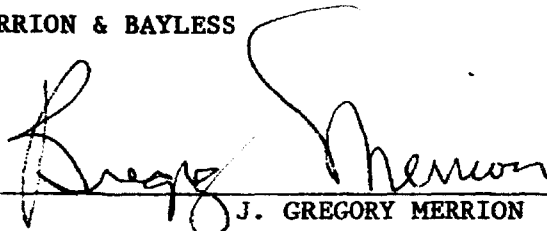
Please schedule a hearing to consider our application to convert the Hudson #1 well, located 990 FNL and 790 FWL, Section 26, Township 30 North, Range 12 West, San Juan County, New Mexico, to a salt water disposal well.

It is proposed to inject into the presently perforated interval of the Mesaverde Formation 3374-78, 3380-86, and 3391-95. Water to be disposed of will be from the Merrion & Bayless, Palmer #1 which produces from the same formation.

Yours very truly,

MERRION & BAYLESS

By


J. GREGORY MERRION

JGM/eh

Case 6116

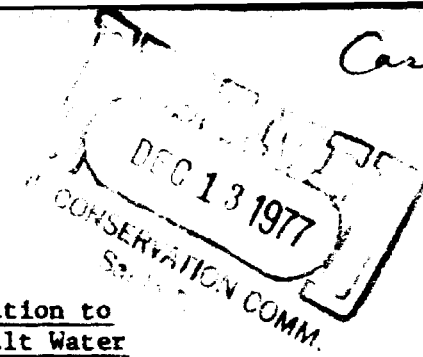


EXHIBIT No. 2

Merrion & Bayless Application to
Convert Hudson No. 1 to Salt Water
Disposal Well

Tabulation of Well Data on Wells
Drilled Through Injection Zone
Within 1/2 Mile of Salt Water Disposal Well

WELL:	Beta Development Paul Palmer D-1	Merrion & Bayless Palmer #1
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SURFACE CASING:		
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TOTAL DEPTH:	6563 feet	3509 feet
PRODUCING INTERVAL:		
	Name - Dakota	Mesa Verde
	Perforations - 6396-6410 ft.	3460-3487 ft.
	6432-6435 ft.	
	6455-6459 ft.	

DRAFT

dr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 6116

Order No. R- 5623

APPLICATION OF MERRION & BAYLESS
FOR SALT WATER DISPOSAL, SAN JUAN
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 4, 1978
at Santa Fe, New Mexico, before Examiner, Daniel S. Nutter.

NOW, on this day of January, 1978, the Commission,
a quorum being present, having considered the testimony, the
record, and the recommendations of the Examiner, and being fully
advised in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Merrion & Bayless, is ~~xxxxxx~~
is the owner and operator of the Hudson Well No. 1,
located in Unit D of Section 26, Township 30 North,
Range 12 West, NMPM, Flora Vista - Mesaverde Pool,
San Juan County,
 County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the Mesaverde
formation, with injection into the perforated interval
from approximately 3374 feet to 3395 feet.

(4) That the injection should be accomplished through
2 3/8-inch plastic lined tubing installed in a packer
set at approximately 3300 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 disposal of water into the Mesaverde formation in the subject well should be limited to 500 barrels of water per day, and the surface injection pressure should not exceed 660 psi.

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

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

(8) That should the disposal of water into the Mesaverde formation in the subject well cause suspected adverse effects on production from nearby Mesaverde wells, the disposal of water into the subject well should be suspended pending a hearing to determine if such indeed be the case. *subject to the same conditions.*

(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, Merrion & Bayless, is, ~~is~~ hereby authorized to utilize ~~its~~ their Hudson Well No. 1, located in Unit D of Section 26, Township 30 North, Range 12 West, NMPM, Flora Vista-Mesaverde Pool, San Juan County, New Mexico, to dispose of produced salt water into the Mesaverde formation, injection to be accomplished through 2 $\frac{3}{8}$ -inch tubing installed in a packer set at approximately 3300 feet, with injection into the perforated interval from approximately 3374 feet to 3395 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

CASE NO. _____

(2) That the injection ~~well~~ or system shall be equipped with a ~~pressure limitation switch or other~~ ^{device} ~~pop-off valve or acceptable substitute~~, which will limit the wellhead pressure on the injection well to no more than ⁶⁶⁰ 700 psi.

(3) That disposal of water into the Mesaverde formation in the subject well shall be limited to 500 barrels of water per day.

(4) That the operator of the herein authorized disposal well shall suspend ~~operation~~ disposal operations pending public hearing should it be suspected by the Commission that disposal ^{into the Mesaverde formation} ~~may be causing~~ adverse effects on production from nearby Mesaverde wells. in the well

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

(6) That the operator shall immediately notify the supervisor of the Commission's Aztec 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.

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

of the Commission Rules and Regulations and shall furnish one copy of each such monthly report to the operator of the Mesaverde gas well located in the SE/4 of Section 27, Township 30 North, Range 12 West, NMPM, San Juan County, New Mexico.

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

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

J. GREGORY MERRION
PETROLEUM ENGINEER
P. O. BOX 507
FARMINGTON, NEW MEXICO 87401

OFF. 228-5093
RES. 227-7884

January 6, 1978

*File
Case No. 6116*

New Mexico Oil Conservation Commission
P.O. Box 2088
Santa Fe, New Mexico 87501

ATTENTION: Mr. Dan Nutter

Gentlemen:

As per your request please find two copies of water analysis on water produced from the Palmer #1 Mesa Verde. This is the water that is to be disposed of into the Hudson #1 if our request in Case #6116 is approved.

Yours very truly,

MERRION & BAYLESS

By

J. Gregory Merrion
J. GREGORY MERRION

JGM/eh

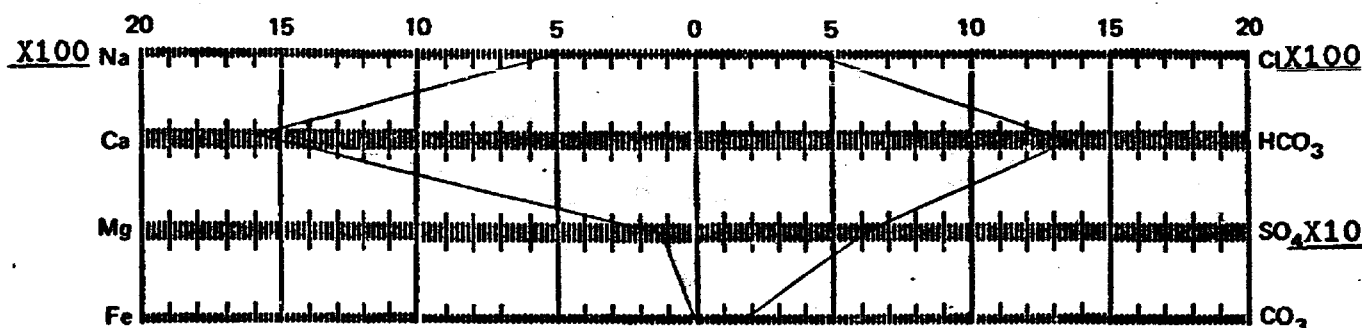
Enclosures (2)

File S-WA-1-78
Company Merrion & Bayless Well Name Palmer #1 Sample No. One
Formation Mesa Verde Depth _____ Sampled From Produced
Location SW/4 Sec. 26, 30N-12W Field Flora Vista County San Juan State N.M.
Date Sampled 1-5-78 Date Analyzed 1-5-78 Engineer Stricklin

Total Dissolved Solids 31,384 mg/L Calculated Sp. Gr. 1.0034 @ 72 °F.
Resistivity 0.23 ohm-meters @ 72 °F. Measured Hydrogen Sulfide Absent
pH 8.41 @ 72 °F. Measured

Constituents	meq/L	mg/L	Constituents	meq/L	mg/L
Sodium	<u>501.7</u>	<u>11,539</u>	Chloride	<u>442.5</u>	<u>15,691</u>
Calcium	<u>16.0</u>	<u>320</u>	Bicarbonate	<u>13.6</u>	<u>830</u>
Magnesium	<u>1.2</u>	<u>15</u>	Sulfate	<u>61.2</u>	<u>2,941</u> (Grav.)
Iron	<u>Trace</u>		Carbonate	<u>1.6</u>	<u>48</u>
Barium	<u>Absent</u>		Hydroxide	<u>Absent</u>	

Scale: meq/L



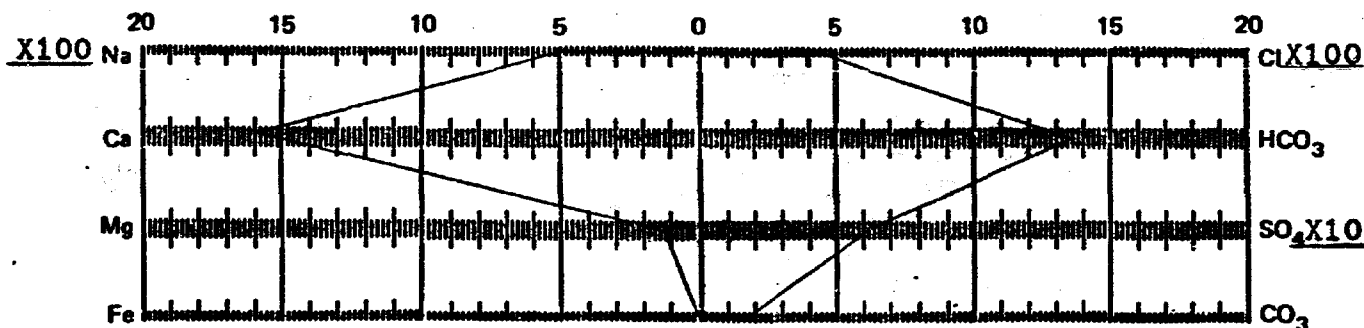
All analyses except iron determination performed on a filtered sample.

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Iron	<u>Trace</u>		Carbonate	<u>1.6</u>	<u>48</u>
Barium	<u>Absent</u>	(Grav.)	Hydroxide	<u>Absent</u>	

Scale: meq/L



All analyses except iron determination performed on a filtered sample.