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CASE NO.

6755

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APPLICATION,  
TRANSCRIPTS,  
SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

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

CASE NO. 6755  
Order No. R-6220

APPLICATION OF DOME PETROLEUM  
CORPORATION FOR WATER DISPOSAL,  
SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on December 12, 1979, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 9th day of January, 1980, 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, Dome Petroleum Corporation, is the owner and operator of the Santa Fe 20 Well No. 2, located in Unit F of Section 20, Township 21 North, Range 8 West, NMPM, Snake Eyes-Entrada Oil Pool, San Juan County, New Mexico.

(3) That the applicant seeks authority to squeeze cement the previously authorized water disposal interval in the Morrison formation in the aforesaid well, and to dispose of produced water in the Entrada formation through the perforated interval from approximately 5756 feet to 5790 feet.

(4) That the injection should be accomplished through 3 1/2-inch plastic lined tubing installed in a packer set at approximately 5200 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

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Case No. 6755

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

(5) That the injection well or system should be equipped with a pop-off valve or other acceptable device which will limit the wellhead pressure on the injection well to no more than 1155 psi.

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

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

(8) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Dome Petroleum Corporation, is hereby authorized to utilize its Santa Fe 20 Well No. 2, located in Unit F of Section 20, Township 21 North, Range 8 West, NMPM, Snake Eyes-Entrada Oil Pool, San Juan County, New Mexico, to dispose of produced water into the Entrada formation, injection to be accomplished through 3 1/2-inch tubing installed in a packer set at approximately 5200 feet, with injection into the perforated interval from approximately 5756 feet to 5790 feet;

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

(2) That the injection well or system shall be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1155 psi.

(3) That the operator shall notify the supervisor of the Aztec district office of the Division of the date and time

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Case No. 6755  
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of the installation of disposal equipment so that the same may be inspected.

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

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

(6) That the perforated interval in the Morrison formation from 4796 feet to 5116 feet in the subject well shall be squeeze cemented upon completion of said well in the Entrada formation.

(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*  
JOE D. RAMEY,  
Director

S E A L

dr/

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
STATE LAND OFFICE BLDG.  
SANTA FE, NEW MEXICO  
12 December 1979

EXAMINER HEARING

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IN THE MATTER OF: )

Application of Dome Petroleum Corporation ) CASE  
for water disposal, San Juan County, New ) 6755  
Mexico. )  
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BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation  
Division:

Ernest L. Padilla, Esq.  
Legal Counsel for the Division  
State Land Office Bldg.  
Santa Fe, New Mexico 87501

For the Applicant:

Ken Bateman, Esq.  
WHITE, KOCH, KELLY & MCCARTHY  
220 Otero Street  
Santa Fe, New Mexico 87501

## I N D E X

## LARRY NELMS

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## E X H I B I T S

Applicant Exhibit One, Map	4
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Applicant Exhibit Four, Cross Section	10
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Applicant Exhibit Seven, Diagram	12

MR. NUTTER: We'll call Case Number 6755.

MR. PADILLA: Application of Dome Petroleum Corporation for water disposal, San Juan County, New Mexico.

MR. BATEMAN: Mr. Examiner, I'm Ken Bateman with White, Koch, Kelly and McCarthy, and I have one witness and ask that he be sworn, please.

(Witness sworn.)

LARRY NELMS

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

DIRECT EXAMINATION

BY MR. BATEMAN:

Q Would you state your name, place of residence, and place of employment for the record, please?

A Larry Nelms, 901 Sherman Stree, Denver, Colorado; employed as Senior Reservoir Engineer with Dome Petroleum Corporation.

MR. NUTTER: How do you spell your last name, please?

A Nelms, N-E-L-M-S.



MR. NUTTER: Thank you.

Q Mr. Nelms, have you previously testified before the Commission?

A I have not.

Q Would you state, then, for the record, your educational background?

A I have a Bachelor's degree in mechanical engineering from Mississippi State University and a Master's degree in mechanical engineering from the University of New Mexico.

Q And what has been your work experience?

A I worked eleven years in various reservoir engineering jobs with Exxon Company, U.S.A., and have been employed with Dome for about three and a half months.

Q Mr. Nelms, are you personally familiar with the well which is the subject of the application today?

A Yes, I am.

Q And the other wells that are involved in that area?

A Yes.

MR. BATEMAN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q Mr. Nelms, would you refer to what's been marked Exhibit One and state what Dome seeks from

this application today?

A        Okay. Exhibit One is a combination lease plat and structure map drawn on the top of the Entrada. The map shows, first off, it shows the lease ownership in the area. In addition, we show all the wells that have been drilled in a two-mile radius of the well in question. We show a line, A-A', which will be entered later as a cross section.

As you can see, the Entrada is a very small relief structure with only some 20 plus feet of closure, 2 producing wells, the Santa Fe 20-1 and 20-3. We're proposing to inject water in the Entrada in the Santa Fe 20-2.

In the area there have been some additional 14 wells that have been drilled over the -- over the life of this area. Some 10 of those were drilled and plugged as dry holes; 3 of them, 2 located in Section 17, and 1 located in Section 21, were completed as oil tests, 2 in the Dakota and 1 in the Mancos. Those wells -- 2 of those wells have now been plugged and abandoned and 1 is still standing as a shut-in completion.

In addition, in Section 17 there has been one gas test, which is currently standing with perforations in the Dakota. So to our knowledge, there is no existing production within a 2-mile radius of the wells in question.

MR. NUTTER: In the Entrada.

A In the Entrada or in any other formation.

MR. NUTTER: I see.

Q What is the drive mechanism in this reservoir?

A This is a very strong water drive reservoir. The Entrada in this area, not only in the Snake Eyes Pool, but in other pools in the same area which Dome has operations in, is a large, massive, blanket sand, normally some 200 feet thick, and the production is normally from a dune-type deposit on the top of the massive sand. We've got a very strong bottom water drive here in this reservoir.

Q You've indicated the oil/water contact on Exhibit One, have you not?

A Yes, we have. That oil/water contact was picked from logs in the two producing wells, as well as a conventional core, which was cut in the 20-1 Well.

Q All right, sir. Would you proceed, then, with what's been marked Exhibit Number Two, and relate what the average production data is on the two wells that are producing in this area?

A The Exhibit Number Two is a tabulation of some of the average production we've seen in these two wells since we began to experience salt water disposal problems. The period October 2nd through October the 9th

was the last production we had from these wells while they were on rod pump. On October the 10th we shut both of them down and began our installation of Reda pumps, because we had finally gotten power into the area.

On the 17th we began -- we put No. 20-1 back on production with the Reda pump. On the 19th we reported that we were experiencing high injection pressure in the 20-2 in the Morrison Sand, which had been permitted earlier as salt water disposal. We continued to try to remedy this problem by back pulling and by some other treatments, which I'll discuss in a moment, periodically having to shut the well in.

Then on the 9th we began to try to produce both wells; were successful for some period of time, holding back pressure against both wells so they would not flow at capacity.

Then from the period the 16th through the 20th, we had to shut-in the 20-1, again tried to produce both wells for a period of time, had to shut-in the 20-3 again from the 27th to the 29th, and then again attempted to produce both wells at a restrained rate for the last two days shown.

I don't have -- when I left the office I didn't have a gauge report for the last eight days, but conversations indicated one of the wells again was shut-in

during most of that period.

At the bottom of this exhibit I've shown the latest well test on the two wells in question. Both of them -- or the 20-3 producing 120 barrels a day, some 2900 barrels of water, and the 20-1 producing 166 barrels a day, 3000 barrels a day of water.

We feel like these rates are conservative because during this period we were holding back pressure against these wells.

Q I take it that on the occasions that one or -- one of the wells has been shut-in, it's because of the inability to dispose of produced salt water, is that correct?

A That's correct.

Q Would you proceed then with Exhibit Number Three?

A Okay. Exhibit Number Three is a history of our attempts to dispose of salt water into the Santa Fe 20-2 in the Morrison Sand. This permission had been granted by the Commission earlier in an order which was approved administratively.

We began our injection on the 16th, the day prior to putting the 20-1 on production because there was water in the tanks. We were injecting approximately 3800 barrels a day during that period.

Then on the 19th we saw a very rapid rise in injection pressure. We approached 1050 pounds and began to cycle water back to the tank; continued to try to operate on the 20th, and then shut the well in operations on the 21st, and back-flowed the injection well, put the well back on production on the 22nd; again experienced high injection pressure; shut-in again on the 23rd; and we attempted an acid treatment. We felt we might have some emulsion blockage. That was unsuccessful.

We then on the 25th installed -- reworked the plungers in the pump in an attempt to see if we could inject at higher pressure. Injecting at high pressure did not allow us to put any appreciable additional water in the ground.

At the bottom of this exhibit I've attempted to, just based on those last two well tests, demonstrate what we feel like is a conservative estimate of oil that's being shut-in as a result of our inability to get rid of the water. The summation of those two well tests would indicate 286 barrels a day producing capacity and about, almost 6000 barrels a day of water. We're only able to handle about 4000 barrels a day, and some of this water is periodically having to -- being overflowed into the pit.

So we estimate that we've got conserva-

tively 94 barrels a day shut-in.

Q All right, you prepared a cross section, which is marked Exhibit Four, I believe. Would you proceed with that?

A Okay. This -- this exhibit shows, as indicated on the first exhibit, is through the three wells in the Snake Eyes Entrada Pool. We've indicated on this cross section the proposed injection perfs in the 20-2 well and the current producing perfs in the 20-1 and 20-3.

We've also again indicated the oil/water contact. We made an attempt to correlate the various porosity stringers across the formation. As you can see, as I mentioned earlier, production from the Entrada comes from the very top where there is a slight dune type deposit.

Our proposal would be to inject the water into the very base of the Entrada, in about the bottom 50 feet. We would have some 200 feet of section, plus some structural advantage between the 20-2 and the 20-1, the closest proposed -- or closest producing well.

It's our belief that the water would tend basically to flow along the bedding planes. We do not have any -- any core data in the 20-2, but core data, core was cut in the top 50 feet of the 20-1, and we had permeability measurements made, both horizontally and vertically. In every case the horizontal permeability was greater than the

vertical permeability. The permeability ranged from 200 Millidarcies to slightly in excess of one darcy. The ratio of vertical to horizontal permeability on an average was about .8. There were many sections, though, where the vertical permeability was only about half of the horizontal permeability.

So it's our belief that with the massive size of this aquifer, and with the injection into the bottom section, that we would not adversely affect any production. In fact, what we would really be doing would be siphoning water into this massive aquifer.

In addition, we feel like, based on the rule of thumb of .2 of a psi per foot, the reasonable maximum injection pressure, on that basis, would be about 1150 pounds.

Q Would you state again for the record what volumes of water you expect to inject?

A I think our test data indicated some 6000 barrels a day, but again, we feel like that is conservative and once we get these wells on-stream and are able to level out production and produce in a steady rate, we expect water production to be around 8000 barrels a day.

Q Do you think that the injection of waters at that rate will have any effect on the reservoir?

A I do not.



Q Would you proceed, then, with Exhibits Five and Six, which are logs of the Santa Fe 20-2?

A Okay. I really don't have very much to say about these exhibits, except for submitting them for the completeness of the record. However, I have marked on both logs the top of the Morrison and the existing perforations there; the top of the Entrada, and our proposed injection perforations.

Q All right, sir, would you proceed, then, with Exhibit Number Seven and state how you would propose to complete the well if the application is approved?

A Exhibit Seven is a schematic of how we would propose to set the well up.

First off, I'd point out that the 9-5/8ths inch surface casing was cemented to surface. In addition, the 7-inch production casing was also cemented to surface with a DV tool being used at about 3100 feet.

Our first step would be to -- to obtain a good squeeze job on the existing Morrison perforations. Our injection tubing would be 3-1/2 inch plastic internally coated tubing. We would isolate the Morrison perforations from the injection pressure with a packer. We would fill the tubing-casing annulus with an inert packer fluid and install a pressure gauge on the casing so that we could moni-

tor any communications which might occur over time, and then we would inject down -- down the tubing and monitor injection pressure again with another -- with another gauge.

Q Do you have any other reasonable alternative for the disposal of produced salt water in this area?

A We do not.

Q Do you believe that the approval of your application will protect correlative rights and prevent waste?

A Yes, I do.

Q Were Exhibits One through Seven prepared by you or under your direction?

A Yes, they were.

MR. BATEMAN: I offer Exhibits One through Seven at this time, and I have no further direct.

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

#### CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Nelms, you propose, then, to open these perforations up within the Entrada and squeeze your present injection interval in the Morrison?

A That's correct.

Q Now you mentioned that the .2 of a pound

per foot would limit you to something like 1150 pounds in the Entrada. Do you think you're going to be able to dispose of 4000 or 6000, whatever it is, barrels per day in the --

A I think we will because the quality of sand here is considerably better than it is in the Morrison. Until we began to experience problems we were injecting 4000 barrels a day there at about 600 pounds.

Q Now immediately above the Entrada on this cross section I see a big formation in the No. 2 Well, somewhat thinner in the other two wells, called the Todilto.

A Yes.

Q Now, what is that formation?

A My understanding, that's basically coal.

Q It's a coal section?

A Yes.

Q Would it have a resistance to vertical flow?

A I'm not that familiar with coal, but I think it would, but I --

Q You don't know whether it's fractured or not?

A I don't know whether it's fractured or not.

Q Are there any shale beds in the Entrada anywhere below this injection zone, which would separate

the injection zone from the producing zone, or is it all one massive formation?

A        It's really all one massive formation. There's some -- if you look at the log, there, we've attempted to correlate the various porosity sections there, and there are some porosity ranges from, well, let's see, 20 percent to almost 30 percent, through some of these sections. Now, in the Commission, the core data in No. 1 pretty well confirm that the log porosities are reasonably representative of what we see in the Entrada. I think that the key is the massive size of this aquifer, the distance, and the fact that the horizontal permeability is better than the vertical permeability.

Q        And you won't be putting more water in than you're taking out, anyway.

A        That is correct.

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

Do you have anything further, Mr. Bateman?

MR. BATEMAN: Nothing further. Thank you.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 6755?

The case will be taken under advisement.

## REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Certified Shorthand Reporter,  
DO HEREBY CERTIFY that the foregoing and attached 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 from my notes taken at the time of the hearing.

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

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 6755  
heard by me on 12/12 1978.

[Signature], Examiner  
Oil Conservation Division

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
STATE LAND OFFICE BLDG.  
SANTA FE, NEW MEXICO  
12 December 1979

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Mexico.

CASE  
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BEFORE: Daniel S. Nutter

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(Witness sworn.)

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A Nelms, N-E-I-M-S.



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Q Mr. Nelms, have you previously testified before the Commission?

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tively 94 barrels a day shut-in.

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Q Do you think that the injection of water at that rate will have any effect on the reservoir?

A I do not.



Q Would you proceed, then, with Exhibits Five and Six, which are logs of the Santa Fe 20-27

A Okay. I really don't have very much to say about these exhibits, except for submitting them for the completeness of the record. However, I have marked on both logs the top of the Morrison and the existing perforations there; the top of the Entrada, and our proposed injection perforations.

Q All right, sir, would you proceed, then, with Exhibit Number Seven and state how you would propose to complete the well if the application is approved?

A Exhibit Seven is a schematic of how we would propose to set the well up.

First off, I'd point out that the 9-5/8ths inch surface casing was cemented to surface. In addition, the 7-inch production casing was also cemented to surface with a DV tool being used at about 3100 feet.

Our first step would be to -- to obtain a good squeeze job on the existing Morrison perforations. Our injection tubing would be 3-1/2 inch plastic internally coated tubing. We would isolate the Morrison perforations from the injection pressure with a packer. We would fill the tubing-casing annulus with an inert packer fluid and install a pressure gauge on the casing so that we could moni-

tor any communications which might occur over time, and then we would inject down -- down the tubing and monitor injection pressure again with another -- with another gauge.

Q Do you have any other reasonable alternative for the disposal of produced salt water in this area?

A We do not.

Q Do you believe that the approval of your application will protect correlative rights and prevent waste?

A Yes, I do.

Q Were Exhibits One through Seven prepared by you or under your direction?

A Yes, they were.

MR. BATEMAN: I offer Exhibits One through Seven at this time, and I have no further direct.

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

#### CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Melms, you propose, then, to open these perforations up within the Entrada and squeeze your present injection interval in the Morrison?

A That's correct.

Q Now you mentioned that the .2 of a pound

per foot would limit you to something like 1150 pounds in the Entrada. Do you think you're going to be able to dispose of 4000 or 6000, whatever it is, barrels per day in the --

A I think we will because the quality of sand here is considerably better than it is in the Morrison. Until we began to experience problems we were injecting 4000 barrels a day there at about 600 pounds.

Q Now immediately above the Entrada on this cross section I see a big formation in the No. 2 Well, somewhat thinner in the other two wells, called the Todilto.

A Yes.

Q Now, what is that formation?

A My understanding, that's basically coal.

Q It's a coal section?

A Yes.

Q Would it have a resistance to vertical flow?

A I'm not that familiar with coal, but I think it would, but I --

Q You don't know whether it's fractured or not?

A I don't know whether it's fractured or not.

Q Are there any shale beds in the Entrada anywhere below this injection zone, which would separate

the injection zone from the producing zone, or is it all one massive formation?

A        It's really all one massive formation. There's some -- if you look at the log, there, we've attempted to correlate the various porosity sections there, and there are some porosity ranges from, well, let's see, 20 percent to almost 30 percent, through some of these sections. Now, in the Commission, the core data in No. 1 pretty well confirm that the log porosities are reasonably representative of what we see in the Entrada. I think that the key is the massive size of this aquifer, the distance, and the fact that the horizontal permeability is better than the vertical permeability.

Q        And you won't be putting more water in than you're taking out, anyway.

A        That is correct.

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

Do you have anything further, Mr. Bateman?

MR. BATEMAN: Nothing further. Thank you.

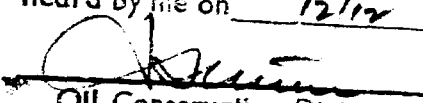
MR. NUTTER: Does anyone have anything they wish to offer in Case Number 6755?

The case will be taken under advisement.

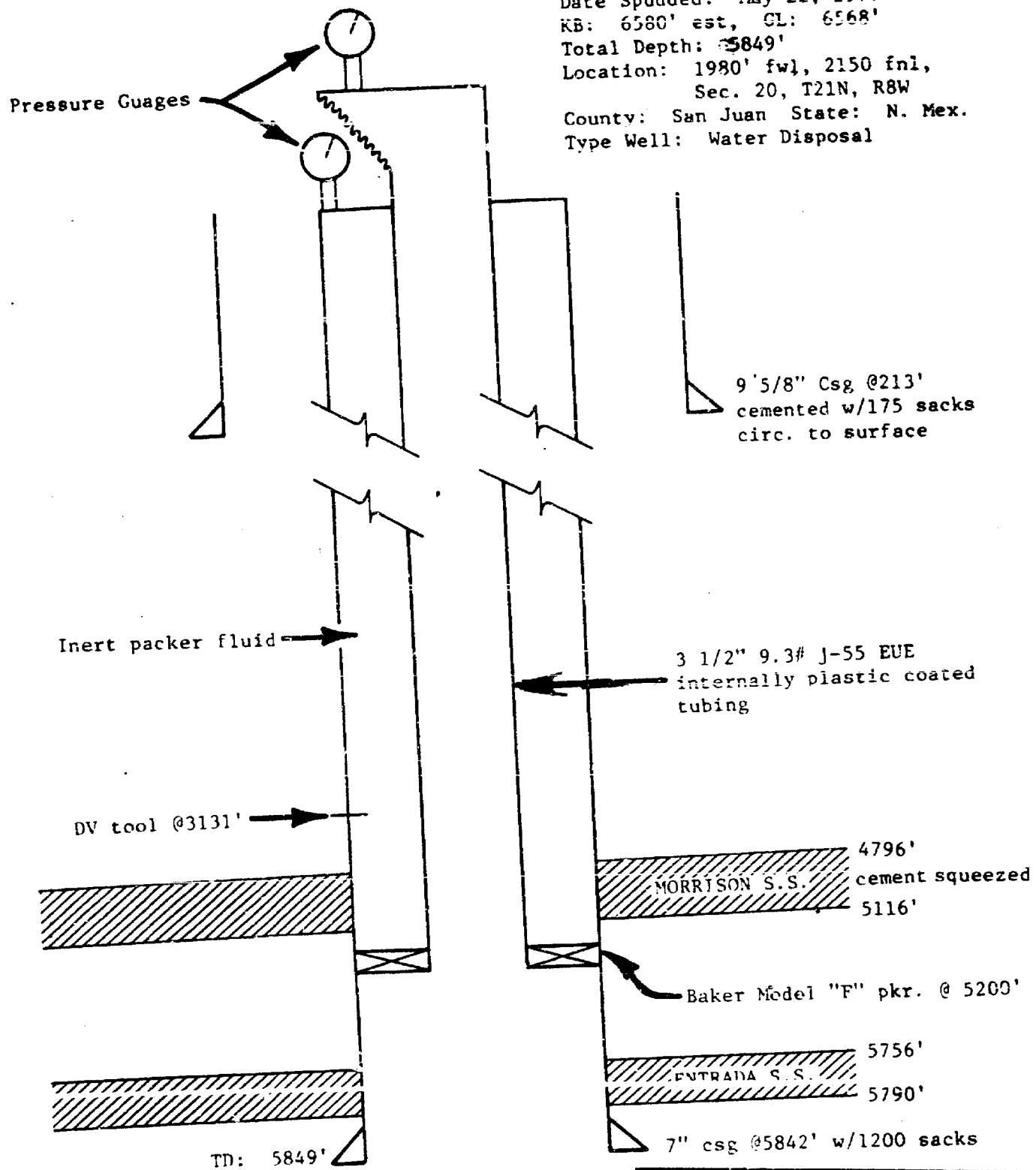
## REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Certified Shorthand Reporter,  
DO HEREBY CERTIFY that the foregoing and attached 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 from my notes taken at the time of the hearing.

\_\_\_\_\_  
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 6755,  
heard by me on 12/12 1977.  
 , Examiner  
Oil Conservation Division

Well & No.: Santa Fe 20-2  
 Date Spudded: May 22, 1977  
 KB: 6580' est, CL: 6568'  
 Total Depth: 5849'  
 Location: 1980' fwl, 2150 fml,  
 Sec. 20, T21N, R8W  
 County: San Juan State: N. Mex.  
 Type Well: Water Disposal



DOMO PETROLEUM CORP  
 WELL BORE SCHEMATIC

BEFORE EXAMINER NUTTER  
 OIL CONSERVATION DIVISION  
 Applicant EXHIBIT NO. 7  
 CASE NO. 6755



BRUCE KING  
GOVERNOR  
LARRY KEHDE  
SECRETARY

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

January 10, 1980

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

Mr. Kenneth Bateman  
White, Koch, Kelly & McCarthy  
Attorneys at Law  
P. O. Box 787  
Santa Fe, New Mexico

Re: CASE NO. 6755  
ORDER NO. R-6220

Applicant:

Dome Petroleum Corporation

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 X  
Artesia OCD X  
Aztec OCD X

Other \_\_\_\_\_

Dockets Nos. 1-80 and 2-80 are tentatively set for January 3 and 16, 1980. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - DECEMBER 12, 1979

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

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

- ALLOWABLE: (1) Consideration of the allowable production of gas for January, 1980, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.
- (2) Consideration of the allowable production of gas for January, 1980, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.
- CASE 6752: Application of Bill Stapler for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Quark Unit Area, comprising 11,200 acres, more or less, of State and Federal lands in Township 22 South, Range 34 East.
- CASE 6753: Application of Amax Chemical Corporation for the amendment of Order No. R-111-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-111-A to extend the boundaries of the Potash-Oil Area by the inclusion of certain lands in Sections 26 and 27, Township 19 South, Range 29 East.
- CASE 6754: Application of Petroleum Development Corporation for a non-standard gas proration unit and an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location for a well to be drilled 660 feet from the North and West lines of Section 15, Township 19 South, Range 32 East, Lusk-Morrow Gas Pool, the W/2 of said Section 15 to be dedicated to the well as a non-standard 320-acre proration unit.
- CASE 6755: Application of Dome Petroleum Corporation for water disposal, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to extend the previously authorized water disposal interval in its Santa Fe 20 Well No. 2 located in Unit F of Section 20, Township 21 North, Range 8 West, Snake Eyes-Entrada Oil Pool, to include the perforated interval from 5756 feet to 5790 feet in the Entrada formation.
- CASE 6756: Application of Amoco Production Company for pool contraction and creation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the vertical limits of the Air Strip-Bone Spring Pool to comprise the Middle Bone Spring formation only, from 9300 feet to 9460 feet, and the creation of the Air Strip-Upper Bone Spring Pool to comprise said formation from 9180 feet to 9260 feet and the Air Strip-Lower Bone Spring Pool to comprise said formation from 10,100 feet to 10,400 feet. All depths are from the log of the Amoco State FU Well No. 2 in Unit N of Section 25, Township 18 South, Range 34 East, for which well applicant also seeks 51,310 barrels of discovery allowable.
- CASE 6757: Application of Amoco Production Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its State FU Well No. 1 located in Unit K of Section 25, Township 18 South, Range 34 East, to produce oil from the Air Strip Upper and Middle Bone Spring Pools thru parallel strings of tubing.
- CASE 6758: Application of Amoco Production Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its State "C" Tract 11 Well No. 11 located in Unit X of Section 2, Township 21 South, Range 36 East, to produce oil from the Hardy-Blinebry Pool and an undesignated Drinkard pool through parallel strings of tubing.
- CASE 6719: (Continued and Readvertised)
- Application of Sam H. Snoddy for an amendment to Order No. R-5521, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-5521, which authorizes the directional drilling of the Federal Well No. 2 in Section 25, Township 20 South, Range 32 East, to permit the well to be bottomed within 400 feet of a point 1320 feet from the South and West lines of Section 25.
- CASE 6759: Application of Sun Oil Company for an unorthodox location, non-standard gas proration unit, infill findings, simultaneous dedication, and downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Reeves Well No. 6, 660 feet from the North line and 610 feet from the East line of Section 29, Township 20 South, Range 37 East, Eumont Gas Pool, to be simultaneously dedicated with its Reeves Well No. 2 in Unit D of Section 29 to a 160-acre non-standard gas proration unit comprising the N/2 N/2 of Section 29. Also sought are findings that the proposed well is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing unit well, and authority to commingle Eumont and Monument production in the wellbore of the proposed well.



- CASE 6760: Application of Sun Oil Company for an unorthodox location, non-standard gas proration unit, infill findings, and simultaneous dedication, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its State "AY" Well No. 5, located in Unit E of Section 36, Township 7 South, Range 35 East, Todd-Upper San Andres Gas Pool, to be simultaneously dedicated with its State "AY" Well No. 3 in Unit F of Section 36 to a 160-acre non-standard gas proration unit comprising the NW/4 of Section 36. Also sought are findings that the proposed well is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing unit well.
- CASE 6761: Application of Phillips Petroleum Company for an unorthodox gas well location and approval of infill drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of an Atoka-Morrow test well to be drilled 660 feet from the North and West lines of Section 2, Township 24 South, Range 28 East; applicant further seeks a finding that the drilling of said well is necessary to effectively and efficiently drain that portion of the proration unit, being the W/2 of said Section 2, which cannot be so drained by the existing well.
- CASE 6762: Application of Joe Don Cook for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221 to permit disposal of produced brine into an unlined surface pit located in Section 1, Township 19 South, Range 31 East, Shugart Pool.
- CASE 6763: Application of Adams Exploration Company for compulsory pooling and an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the North Osuda-Morrow Gas Pool underlying Section 16, Township 20 South, Range 36 East, to be dedicated to a well to be drilled at an unorthodox location 660 feet from the South and West lines of said Section 16. 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 6729: (Continued from November 14, 1979, Examiner Hearing)
- Application of Adams Exploration Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying Section 16, Township 20 South, Range 36 East, North Osuda-Morrow Gas Pool, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6725: (Continued from November 28, 1979, Examiner Hearing)
- Application of Tenneco Oil Company for three non-standard gas proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 291.23-acre non-standard gas proration unit comprising the W/2 of Section 6 and the NW/4 of Section 7, a 347.58-acre unit comprising the W/2 of Section 19 and the NW/4 of Section 30, and a 375.17-acre unit comprising the SW/4 of Section 30 and the W/2 of Section 31, all in Township 29 North, Range 6 West, Basin-Dakota pool, each unit to be dedicated to a well to be drilled at a standard location thereon.
- CASE 6751: (Continued from November 28, 1979, Examiner Hearing)
- Application of Tenneco Oil Company for the rescission of special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the rescission of the special pool rules for the Catclaw Draw-Morrow Gas Pool to provide for 320-acre spacing rather than 640 acres. In the absence of objection, the pool rules will be rescinded and the pool placed on standard 320-acre spacing for Pennsylvanian gas pools rather than the present 640-acre spacing.
- CASE 6764: Application of Lee Crane for surface commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the surface commingling of undesignated Ojo Alamo and Oswell-Farmington production from his Martin Wells Nos. 1 and 3 located in Section 34, Township 30 North, Range 11 West.
- CASE 6765: Application of Mesa Petroleum Company for an exception to Order No. R-111-A and an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the casing-cementing rules of Order No. R-111-A to complete its Bass Federal Well No. 2 to be drilled at an unorthodox location 1450 feet from the North line and 1850 feet from the West line and its Bass Federal Well No. 3 to be drilled in Unit D, both in Section 6, Township 20 South, Range 31 East, by setting surface casing in the "Red Bed" section of the basal Rustler formation and production casing at total depth. Both casing strings would have cement circulated to the surface.

**CASE 6766:** Application of Supron Energy Corporation for two non-standard gas proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of two non-standard gas proration units, the first being 192.97 acres comprising the W/2 of Section 7, Township 28 North, Range 10 West, and the E/2 E/2 of Section 12, Township 28 North, Range 11 West, for the Fruitland, Pictured Cliffs and Chacra formations, and the second being 190.89 acres comprising the W/2 and W/2 E/2 of said Section 12 for the Fruitland formation only, both units to be dedicated to wells to be drilled at standard locations thereon.

**CASE 6700:** (Reopened and Readvertised)

Application of Doyle Hartman to reopen Case No. 6700, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the reopening of Case No. 6700, heard October 17, 1979, to amend the original unorthodox well location 2310 feet from the North line and 330 feet from the West line of Section 29, Township 25 South, Range 37 East, to a new unorthodox location 1870 feet from the North line and 280 feet from the West line of said Section 29. All other aspects of Case No. 6700 would remain the same.

**CASE 6767:** Application of Alpha Twenty-One Production Company for two non-standard gas proration units, unorthodox well location, and approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 40-acre non-standard proration unit comprising the NW/4 NW/4 of Section 27, Township 25 South, Range 37 East, Jalmat Gas Pool, to be dedicated to El Paso Natural Gas Company's Harrison Well No. 2, and also a 200-acre unit comprising the S/2 N/2 and NE/4 NW/4 of said Section 27 to be dedicated to a well to be drilled at an unorthodox location 1980 feet from the North line and 560 feet from the West line of Section 27. Applicant further seeks a finding that the drilling of the latter well is necessary to effectively and efficiently drain that portion of an existing proration unit which cannot be so drained by the existing well.

**CASE 6768:** Application of Alpha Twenty-One Production Company for two non-standard gas proration units, compulsory pooling, unorthodox well location, and approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 40-acre non-standard gas proration unit comprising the SW/4 SW/4 of Section 21, Township 24 South, Range 37 East, Jalmat Gas Pool, to be dedicated to the El Paso Natural Gas Company Shell Black Well No. 2. Applicant also seeks an order pooling all mineral interests in the Jalmat Gas Pool underlying the E/2 SW/4 and NW/4 SE/4 of said Section 21 to form a 120-acre non-standard gas proration unit to be dedicated to a well to be drilled at an unorthodox location 990 feet from the South line and 1650 feet from the West line of said Section 21. 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. Applicant further seeks a finding that the drilling of said well is necessary to effectively and efficiently drain that portion of the existing proration unit which cannot be so drained by the existing well.

**CASE 6656:** (Continued from October 2, 1979, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Energy Oil & Gas Corp., The Travelers Indemnity Co., and all other interested parties to appear and show cause why the Sadler Well No. 1 located in Unit I of Section 3, Township 24 North, Range 29 East, Union County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

**CASE 6769:** In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating, reclassifying, 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 West Double X-Morrow Gas Pool. The discovery well is Union Oil Company of California Paduca Federal Well No. 1 located in Unit G of Section 30, Township 24 South, Range 32 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 32 EAST, NMPM  
Section 30: E/2

(b) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the Dublin Ranch-Atoka Gas Pool. The discovery well is J. C. Barnes Little Squaw Com Well No. 2 located in Unit N of Section 27, Township 22 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM  
Section 27: S/2

(c) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the Gem-Morrow Gas Pool. The discovery well is Union Oil Company of California Maduro Unit Federal Well No. 1 located in Unit J of Section 29, Township 19 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM  
Section 29: S/2

(d) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the East Gem-Morrow Gas Pool. The discovery well is Union Oil Company of California Laguna Deep Unit Federal Well No. 1 located in Unit G of Section 35, Township 19 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM  
Section 35: N/2

(e) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Atoka production and designated as the Halfway-Atoka Gas Pool. The discovery well is Amoco Production Company Federal Y Com Well No. 1 located in Unit G of Section 27, Township 20 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 33 EAST, NMPM  
Section 27: E/2

(f) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Devonian production and designated as the Midway-Devonian Pool. The discovery well is David Fasken Warren Well No. 1 located in Unit G of Section 8, Township 17 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM  
Section 8: NE/4

(g) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Atoka production and designated as the East Triste Draw-Atoka Gas Pool. The discovery well is Getty Oil Company State 29 J Well No. 1 located in Unit J of Section 29, Township 24 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 33 EAST, NMPM  
Section 29: E/2

(h) CREATE a new pool in Roosevelt County, New Mexico, classified as an oil pool for Bough C production and designated as the Tucker Ranch-Bough C Pool. The discovery well is Pauley Petroleum, Inc. Tucker Well No. 1 located in Unit J of Section 9, Township 7 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 7 SOUTH, RANGE 33 EAST, NMPM  
Section 9: SE/4

(i) RECLASSIFY the Oil Center-Glorieta Pool in Lea County, New Mexico, as the Oil Center-Glorieta Gas Pool. The pool was created by Order R-5988 as an oil pool but was advertised as a gas pool.

(j) EXTEND the Angell Ranch-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM  
Section 1: W/2  
Section 2: N/2

(k) EXTEND the Atoka-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM  
Section 28: S/2 SE/4

(l) EXTEND the Atoka-Yeso Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM  
Section 34: E/2 NW/4

(m) EXTEND the Austin-Mississippian Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 36 EAST, NMPM  
Section 16: N/2

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

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

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM  
Section 18: SW/4

TOWNSHIP 22 SOUTH, RANGE 36 EAST, NMPM  
Section 1: NW/4

- (o) EXTEND the Bluit-Wolfcamp Gas Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 37 EAST, NMPM  
Section 3: NE/4

- (p) EXTEND the South Brunson-Granite Wash Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM  
Section 31: NE/4

- (q) EXTEND the Cass Draw-Wolfcamp Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM  
Section 11: W/2

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

TOWNSHIP 8 SOUTH, RANGE 32 EAST, NMPM  
Section 3: SE/4

- (s) EXTEND the Cinta Roja-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 35 EAST, NMPM  
Section 10: All

- (t) EXTEND the Comanche-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 11 SOUTH, RANGE 26 EAST, NMPM  
Section 14: NW/4 NW/4

- (u) EXTEND the Corbin-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM  
Section 34: NE/4

- (v) EXTEND the South Culebra Bluff-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM  
Section 35: S/2

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

TOWNSHIP 10 SOUTH, RANGE 27 EAST, NMPM  
Section 15: SW/4 SW/4

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

TOWNSHIP 20 SOUTH, RANGE 29 EAST, NMPM  
Section 36: E/2

- (y) EXTEND the East Grama Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 34 EAST, NMPM  
Section 34: E/2

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

TOWNSHIP 22 SOUTH, RANGE 36 EAST, NMPM  
Section 20: E/2

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

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM  
Section 28: S/2  
Section 29: S/2

(bb) EXTEND the North Lusk-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM  
Section 33: E/2  
  
TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM  
Section 4: E/2

(cc) EXTEND the East McMillan Seven Rivers-Queen Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM  
Section 3: S/2 NE/4 and SE/4 NW/4

(dd) EXTEND the Mescalero Permo-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 32 EAST, NMPM  
Section 34: W/2

(ee) EXTEND the Monument-Tubb Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM  
Section 12: NW/4

(ff) EXTEND the Penasco Draw San Andres-Yeso Associated Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 24 EAST, NMPM  
Section 1: E/2 E/2, NW/4 NE/4, E/2 NW/4 and NE/4 SW/4  
Section 12: NE/4  
  
TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM  
Section 6: N/2

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

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM  
Section 30: SW/4

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

TOWNSHIP 16 SOUTH, RANGE 28 EAST, NMPM  
Section 36: NE/4

(ii) EXTEND the Runyan Ranch-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 23 EAST, NMPM  
Section 18: E/2

(jj) EXTEND the Salt Lake-Bone Springs Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 32 EAST, NMPM  
Section 14: SE/4  
Section 23: S/2 and NE/4

(kk) EXTEND the North Shugart-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM  
Section 20: W/2

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

TOWNSHIP 26 SOUTH, RANGE 36 EAST, NMPM  
Section 8: SE/4

(mm) EXTEND the Tomahawk-San Andres Pool in Chaves and Roosevelt Counties, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 32 EAST, NMPM

Section 29: NW/4

Section 32: S/2

TOWNSHIP 8 SOUTH, RANGE 32 EAST, NMPM

Section 5: NE/4

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

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM

Section 36: N/2

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM

Section 31: NW/4

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

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM

Section 25: E/2

TOWNSHIP 19 SOUTH, RANGE 28 EAST, NMPM

Section 1: N/2

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

TOWNSHIP 8 SOUTH, RANGE 28 EAST, NMPM

Section 25: SE/4

TOWNSHIP 8 SOUTH, RANGE 29 EAST, NMPM

Section 19: S/2 SW/4 and SW/4 SE/4

Section 30: W/2

Section 31: NW/4

(qq) EXTEND the White City-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 26 EAST, NMPM

Section 12: All

BEFORE THE OIL CONSERVATION DIVISION OF NEW MEXICO

IN THE MATTER OF  
THE APPLICATION OF  
DOME PETROLEUM CORPORATION  
FOR THE DISPOSAL OF PRO-  
DUCED SALT WATER INTO ITS  
SANTA FE 20-<sup>2</sup>~~3~~, SECTION 20,  
TOWNSHIP 21 NORTH, RANGE 8  
WEST, SAN JUAN COUNTY,  
NEW MEXICO.

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OIL CONSERVATION DIVISION  
SANTA FE

Case 6755

APPLICATION

COMES NOW Dome Petroleum Corporation, by and through  
its attorneys, White, Koch, Kelly & McCarthy and in support  
of its Application states:

1. Applicant is the operator and has drilled and  
is currently producing oil from the Entrada  
Formation from its wells within the Snake Eyes  
Entrada Pool, San Juan County, New Mexico.
2. Applicant seeks the approval of the Division  
for the disposal of produced salt water from  
its producing wells within the Snake Eyes  
Entrada Pool into its Santa Fe 20-<sup>2</sup>~~3~~, located  
2150 feet from the North line and 1980 feet  
from the West line of Section 20, Township  
21 North, Range 8 West N.M.P.M., San Juan  
County, New Mexico.
3. Applicant proposes to inject produced salt  
water into the perforated intervals from  
5756 feet to 5790 feet, in its Santa Fe 20-<sup>2</sup>~~3~~.  
Said intervals are open into the Entrada  
Formation.
4. Applicant has previously received administra-  
tive approval under SWD Order 188 for dis-

posal of the water in Santa Fe 20<sup>2</sup> into the Morrison Sand.

5. Applicant has been unable to dispose of the volume of produced water from its wells, and has therefore been required to shut in one of its wells until such time as this Application may be heard, and an appropriate Order entered.
6. The approval of this Application will prevent waste, and protect correlative rights.

WHEREFORE, Applicant requests that this matter be set down for hearing and the Commission enter its Order granting the Application as requested.

WHITE, KOCH, KELLY & MCCARTHY

By: Kenneth Bateman  
Kenneth Bateman  
P. O. Box 787  
Santa Fe, New Mexico 87501  
(505) 982-4374

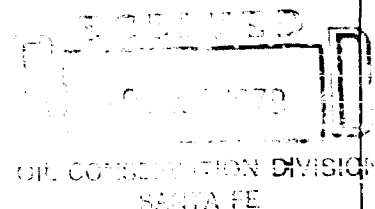
ATTORNEYS FOR  
DOME PETROLEUM CORPORATION



BEFORE THE OIL CONSERVATION DIVISION OF NEW MEXICO

IN THE MATTER OF  
THE APPLICATION OF  
DOME PETROLEUM CORPORATION  
FOR THE DISPOSAL OF PRO-  
DUCED SALT WATER INTO ITS  
SANTA FE 20-3, SECTION 20,  
TOWNSHIP 21 NORTH, RANGE 8  
WEST, SAN JUAN COUNTY,  
NEW MEXICO.

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*Case 6755*

APPLICATION

COMES NOW Dome Petroleum Corporation, by and through its attorneys, White, Koch, Kelly & McCarthy and in support of its Application states:

1. Applicant is the operator and has drilled and is currently producing oil from the Entrada Formation from its wells within the Snake Eyes Entrada Pool, San Juan County, New Mexico.
2. Applicant seeks the approval of the Division for the disposal of produced salt water from its producing wells within the Snake Eyes Entrada Pool into its Santa Fe 20-<sup>2</sup>~~3~~, located 2150 feet from the North line and 1980 feet from the West line of Section 20, Township 21 North, Range 8 West N.M.P.M., San Juan County, New Mexico.
3. Applicant proposes to inject produced salt water into the perforated intervals from 5756 feet to 5790 feet, in its Santa Fe 20-<sup>2</sup>~~3~~. Said intervals are open into the Entrada Formation.
4. Applicant has previously received administrative approval under SWD Order 188 for dis-


posal of the water in Santa Fe 20-<sup>2</sup>~~3~~ into the Morrison Sand.

5. Applicant has been unable to dispose of the volume of produced water from its wells, and has therefore been required to shut in one of its wells until such time as this Application may be heard, and an appropriate Order entered.
6. The approval of this Application will prevent waste, and protect correlative rights.

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WHITE, KOCH, KELLY & MCCARTHY

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Kenneth Bateman

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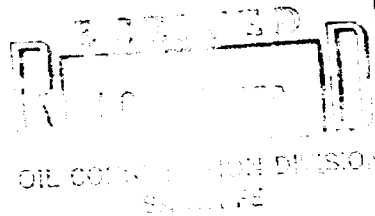
(505) 982-4374

ATTORNEYS FOR  
DOME PETROLEUM CORPORATION

BEFORE THE OIL CONSERVATION DIVISION OF NEW MEXICO

IN THE MATTER OF  
THE APPLICATION OF  
DOME PETROLEUM CORPORATION  
FOR THE DISPOSAL OF PRO-  
DUCED SALT WATER INTO ITS  
SANTA FE 20-3, SECTION 20,  
TOWNSHIP 21 NORTH, RANGE 8  
WEST, SAN JUAN COUNTY,  
NEW MEXICO.

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Case 6755

APPLICATION

COMES NOW Dome Petroleum Corporation, by and through  
its attorneys, White, Koch, Kelly & McCarthy and in support  
of its Application states:

1. Applicant is the operator and has drilled and  
is currently producing oil from the Entrada  
Formation from its wells within the Snake Eyes  
Entrada Pool, San Juan County, New Mexico.
2. Applicant seeks the approval of the Division  
for the disposal of produced salt water from  
its producing wells within the Snake Eyes  
Entrada Pool into its Santa Fe 20-<sup>2</sup>~~3~~, located  
2150 feet from the North line and 1980 feet  
from the West line of Section 20, Township  
21 North, Range 8 West N.M.P.M., San Juan  
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Said intervals are open into the Entrada  
Formation.
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tive approval under SWD Order 188 for dis-


posal of the water in Santa Fe 20-<sup>2</sup>~~3~~ into the Morrison Sand.

5. Applicant has been unable to dispose of the volume of produced water from its wells, and has therefore been required to shut in one of its wells until such time as this Application may be heard, and an appropriate Order entered.
6. The approval of this Application will prevent waste, and protect correlative rights.

WHEREFORE, Applicant requests that this matter be set down for hearing and the Commission enter its Order granting the Application as requested.

WHITE, KOCH, KELLY & MCCARTHY

By:

  
Kenneth Bateman  
P. O. Box 787  
Santa Fe, New Mexico 87501  
(505) 982-4374

ATTORNEYS FOR  
DOME PETROLEUM CORPORATION

Application of Dome Petroleum  
Corporation for water disposal,  
San Juan County, New Mexico

Applicant, in the above captioned  
cause, seeks authority to ~~dis~~  
extend the previously authorized  
water disposal interval in its  
Santa Fe ~~20~~ 20 Well No. 2  
located in Unit F of Section 20,  
Township 21 North, Range 8 West  
Snake Eyes Entrada Oil Pool,  
to include the perforated interval  
from 5756 feet to 5790 feet  
in the Entrada formation.

Ken Patterson ~~11/15~~ 11:15 am 11/19

SWD 188 Morrison

Snake Eyes Hearing

Dome Petroleum Corp

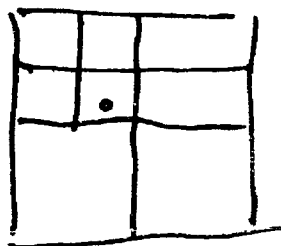
Santa Fe 20-2

20-21N-8W S.J.

~~2150'~~ FNL 1980' FWL

disposal

perf in 5756 to 5790  
Entrada



ROUGH

dr/

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

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

CASE NO. 6755

Order No. R- 6220

APPLICATION OF DOME PETROLEUM  
CORPORATION FOR WATER DISPOSAL,  
SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on December 12,  
19 79, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter  
NOW, on this 12 day of December, 19 79, 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, Dome Petroleum Corporation,  
is the owner and operator of the Santa Fe 20 Well No. 2,  
located in Unit F of Section 20, Township 21 North,  
Range 8 West, NMPM, Snake Eyes-Entrada Oil Pool,  
San Juan County, New Mexico.

(3) That the applicant <sup>seeks authority to extend</sup> ~~proposes to utilize said well to~~ the previously  
authorized water disposal interval in the ~~Morrison formation~~ <sup>Entrada formation</sup> ~~and to dispose~~  
~~dispose of produced salt water into the~~ <sup>to include the perforated</sup>  
~~of produced water in the Entrada formation through the perforated~~  
formation, with injection into the

interval from approximately 5756 feet to 5790 feet.  
~~in the Entrada formation.~~

(4) That the injection should be accomplished through 3 1/2  
-inch plastic lined tubing installed in a packer set at approxi-  
mately 5200 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.

(3) That the injection well or system should be equipped with a pop-off valve or <sup>other</sup> acceptable <sup>device</sup> ~~substitute~~ which will limit the wellhead pressure on the injection well to no more than 1155 psi.

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

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

(8) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Dome Petroleum Corporation, is hereby authorized to utilize its Santa Fe 20 Well No. 2 located in Unit F of Section 20, Township 21 North, Range 8 West, NMPM, Snake Eyes-Entrada Oil Pool, San Juan County, New Mexico, to dispose of produced ~~salt~~ water into the Entrada formation, injection to be accomplished through 3 1/2 -inch tubing installed in a packer set at approximately 5200 feet, with injection into the perforated interval from approximately 5756 feet to 5790 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus

or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1155 psi.

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

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

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

(6)  
(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.

(6) That the perforated interval in the Morrison formation from 4796 feet to 5116 feet, shall be squeeze cemented upon completion of said well in the Entrada formation.



BEFORE EXAMINER MUTTER  
 ON OCT 20 1967  
 Apolcan T. 2  
 CASE NO. 6755

SNAKE EYES ENTRADA

Average Production Rates & Well Test Data

<u>Date</u>	<u>Santa Fe 20-1</u>	<u>Santa Fe 20-3</u>
10/2 - 10/9	35 B/D	23 B/D
10/10 - 10/15	Install Reda Pump	
10/16 - 10/20	0	Install Reda Pump
10/17	56 BO (18 hrs.)	0
10/18	84 BO	0
10/19	0 (High Injection Pressure)	0
10/20	51 BO (14 hrs.)	0
10/21	0	0
10/22	129 B/D	0
10/23 - 10/25	0	0
10/26 - 11/8	224 B/D	0
11/9	214 BO (20 hrs.)	73 (16 hrs.)
11/10 - 11/15	189 B/D	137 B/D
11/16 - 11/20	0	119 B/D
11/21 - 11/26	112 B/D	84 B/D
11/27 - 11/29	146 B/D	0
11/30 - 12/1	144 B/D	132 B/D

WELL TESTS

<u>Date</u>	<u>Well</u>	<u>BOPD</u>	<u>BWPD</u>	<u>% SW</u>
10/22	20-1	129	3830	96.7
11/17	20-3	120	2927	96.1
11/27	20-1	166	3019	94.8

LIN:cdh

# HISTORY OF INJECTION

Santa Fe 20-2

<u>Date</u>		<u>Volume</u>
10/16	(Began Injection)	3800 B/D
10/19	(High Pressure - Bypassing Pump)	3800 B/D
10/21	Backflowed Injection Well	
10/23	Toluene and Acid Treatment	
10/25	Tested at High Injection Pressure	

Current Producing Capacity	286 BOPD
Current Water Production	5946 BWPD
Current Injection Capacity	4000 B/D*
Approximate SI Oil	24 BOPD

\* Some water being overflowed to pits.

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Applicant EXHIBIT NO. <u>3</u>
CASE NO. <u>6755</u>