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December 12, 1990

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OIL CONSERVATION DIV.
SANTA FE

William J. LeMay, Director
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
State Land Office Building
Santa Fe, New Mexico 87503

Re: Oil Conservation Division Case No. 10179
In the Matter of the Application of Stevens Operating Corporation for Salt Walter Disposal, Chaves County, New Mexico

Dear Mr. LeMay:

This confirms my conversations with your office of December 10, 1990 in which I requested on behalf of Stevens Operating Corporation that this application in the above-referenced case for salt water disposal be continued to the hearing scheduled for January 10, 1991.

Your attention to this request is appreciated.

Very truly yours,

WILLIAM F. CARR

WFC:mlh
cc: Mr. Don Stevens
Stevens Operating Corporation

CAMPBELL & BLACK, P.A.
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December 31, 1990

Case 10179

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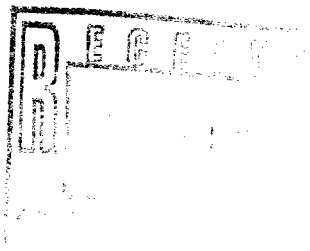

William J. LeMay, Director
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
State Land Office Building
Santa Fe, New Mexico 87503

Re: In the Matter of the Application of Stevens Operating Corporation for Salt Water Disposal, Chaves County, New Mexico

Dear Mr. LeMay:

Enclosed in triplicate is the Application of Stevens Operating Corporation in the above-referenced case. Stevens Operating Corporation respectfully requests that this matter be placed on the docket for the January 10, 1991 Examiner hearings.

Very truly yours,

William F. Carr

WILLIAM F. CARR

WFC:mlh
Enclosures
cc w/enclosures: Mr. Don Stevens
Stevens Operating Corporation
Post Office Box 2408
Roswell, New Mexico 88201

STATE OF NEW MEXICO

# ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

February 6, 1991

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

Mr. William F. Carr
Campbell & Black
Attorneys at Law
Post Office Box 2208
Santa Fe, New Mexico

Re: CASE NO. 10179
ORDER NO. R-9432

Applicant:

Stevens Operating Corporation

Dear Sir:

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

Sincerely,

Florene Davidson

FLORENE DAVIDSON
OC Staff Specialist

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

| | | |
|---|---|---|
| IN THE MATTER OF:<br><br>APPLICATION OF STEVENS OPERATING CORPORATION FOR SALT WATER DISPOSAL, CHAVES COUNTY, NEW MEXICO. | ) | CASE NO. 10179 |

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

January 10, 1991
10:05 a.m.
Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on January 10, 1991, at 10:05 a.m. at Oil Conservation Division Conference Room, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Deborah F. LaVine, RPR, Certified Court Reporter No. 252, in and for the County of Santa Fe, State of New Mexico.

FOR: OIL CONSERVATION DIVISION

BY: DEBORAH F. LAVINE, RPR
Certified Court Reporter
CCR No. 252

# I N D E X

January 10, 1991
Examiner Hearing
Case No. 10179



** ** ** **

A P P E A R A N C E S

BEFORE: DAVID R. CATANACH, Hearing examiner

FOR THE DIVISION:
ROBERT G. STOVALL, ESQ.
General Counsel
Oil Conservation Commission
State Land Office Building
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

FOR THE APPLICANT:
CAMPBELL & BLACK, P.A.
Attorneys at Law
BY: WILLIAM F. CARR, ESQ.
110 North Guadalupe
Suite 1
Santa Fe, New Mexico 87501

** * **

EXAMINER CATANACH: At this time, we'll call case 10179.

MR. STOVALL: Application of Stevens Operating Corporation for salt water disposal, Chaves County, New Mexico.

EXAMINER CATANACH: Are there appearances in this case?

MR. CARR: May it please the examiner, my name is William F. Carr with the law firm Campbell & Black, P.A. of Santa Fe. I represent Stevens Operating Corporation, and I have one witness.

EXAMINER CATANACH: Will the witness please stand and be sworn in.

(Witness sworn.)

DONALD G. STEVENS

the Witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARR:

Q. Would you state your full name and place of residence.

A. My name is Donald G. Stevens. I reside at 612 North Kansas, Roswell, New Mexico.

Q. Mr. Stevens, by whom are you employed and in what capacity?

A. By Stevens Operating Corporation as president.

Q. Have you previously testified before this division?

A. Yes, many times.

Q. Are you the operator of the proposed salt water disposal well?

A. Yes, Stevens Operating Corporation is.

Q. Are you familiar with the application filed in this case and the well?

A. Yes. In fact, I prepared or had prepared all of the exhibits.

MR. CARR: Are the witness's qualifications acceptable?

EXAMINER CATANACH: They are.

Q. (By Mr. Carr:) Mr. Stevens, would you briefly state what you seek with this application?

A. We propose to inject to produce salt water from the Stevens Operating Corporation's O'Brien C Number 1 producing Devonian well in the southwest quarter southwest quarter Section 1, Township 9 South, Range 28 East. The proposed injection well is the same operator, O'Brien C Number 9 well, and that's located in unit E of the same section. And we have additional information in support of that application.

(Applicant's Exhibit No. 1 was marked for identification.)

Q. Would you identify what has been marked as Stevens Exhibit Number 1.

A. That is Exhibit Number C-108 as promulgated by the OCD and filled out by us to comply with those requests.

Q. You actually prepared this application?

A. Yes.

Q. Has a copy of this completed application been provided to all leasehold operators within a half a mile of this well?

A. Yes.

Q. Has it also been provided to the surface owner?

A. It has.

Q. And was this provided by certified mail?

A. It was indeed.

Q. What is the current status of this well?

A. This well is, I would guess, TA. It certainly hasn't produced for a while, and we propose putting it back on production with the injection. It previously did produce.

Q. Would you turn to the third page of Exhibit Number 1 and identify this and review the information on this portion of Exhibit 1 for Mr. Catanach.

A. This Exhibit 1, page 3 is a schematic and information concerning the injection well. It basically shows that cement circulated from the eight and five-eighths surface casing to the surface. It didn't quite surface. It got to 85 feet from the surface, and then it was regular -- I've forgotten the term, cement, four and a half yards of cement were dumped in to bring it on up to the surface. The oil string had a top of cement by temperature survey, which went

to the bottom. And below the Devonian perforation we subsequently placed it at, it had a top of cement 5800 feet. Subsequently, the casing was perforated 3300 feet, and it was squeezed with 300 sacks. And the top of the cement in that case came up to a 1,030 feet. The net effect is the formation itself, the injection formation, has cement some 1400 feet above the perforations and the surface casing has cement to the surface.

Q. Will you fill the annular space in this well with a fluid?

A. It will be. It will be inert fluid, and it will have corrosion inhibitor therein.

Q. And will the well be equipped so that the pressure in the annular space can be tested in accordance with the requirements of the federal underground injection control program?

A. It will. We'll also have a gauge there which will be read daily.

Q. Into what formation are you proposing actually to inject?

A. It's called the Twin Lake Siluro-Devonian. It's really probably Fusselman. There might be a feather edge of Devonian on top of this Fusselman. And in conjunction with that, some of the perforations are down into the Montoya formation also. The Fusselman, Montoya are considered

interconnected through vertical fractures through the entire area.

Q. Are you proposing to inject through line casing, lined tubing or casing?

A. We would ask the commission to consider our request to use corrosion inhibitor as opposed to lined tubing. The basis of that request is we have to use corrosion inhibitor in the water in any case because we're using a jet pump which will require some 3,000 barrels of produced water to be pumped down the well every day with about 3 to 500 barrels ordinarily coming out of that well. That corrosion inhibitor, the excess thereof, would help take care of any corrosion in this unlined tubing, and we will put additional corrosion inhibitor in there on a program as set out by our chemical corrosion company to make sure that the corrosion is kept at a minimum.

Our idea in seeking this as opposed to lined tubing is so often lined tubing has holes knocked in it by the running in and out of the hole with it. Any time you get a hole or a holiday in that plastic lining in that tubing, the uncorrosion-inhibited inject water quite often will immediately attack that area, and you would have a failure in your tubing earlier than you would be if you had no lining at all. Our feeling is since we have the corrosion inhibitor partly going in, by adding more, we will probably have a greater -- a lesser incidence of failure through corrosion

than we might with unlined tubing. We would propose also putting a corrosion coupon just ahead of the well and checking those corrosion coupons on a regular basis. We would keep a cumulative amount of metal that had been corroded off through the periods. And at such time as yet undetermined that it appears that corrosion has taken enough metal off of that tubing, then we will replace it, hopefully ahead of any failures that might be caused by corrosion. While we can't prove that this would be a better method than lined tubing, there is a considerable body of evidence that it could well be more beneficial than the lined tubing.

Q. What type of stimulation program are you going to employ on this well?

A. Initially none. It has been stimulated with 5,000 gallons of acid at 15 percent and 2,500 gallons subsequently. And we feel that it's properly stimulated. We have not run any steprate tests pending the approval of this application. We feel it will go in on a vacuum based upon our previous wells in the area and our understanding of the formation around here. The only stimulations subsequent we might have is possibly acidizing if in fact we get higher pressures indicating we have some plugging action in the formation.

Q. Would you refer to the fifth page in this exhibit which is a plat, identify this and review it for Mr. Catanach.

A. The fifth page would be the C-108, and it would be

the area plat showing the landowners around the well site and a circle a half mile in radius around the proposed well showing all owners in the area. The map is inaccurate in one respect. Pelto Oil Company that's shown as the principal owner in the area has since sold out to Energy Development Corporation. All of those owners and operators have received copies of this application.

Q. Let's move back in the application. Behind the plat are four schematic drawings. Are there schematic drawings included for all wells within the area of review?

A. They are all within the area of review within a one-half mile radius. There are three wells outside the area of review. All of these wells have been plugged in the Devonian and are no longer open to the wellbore. All of these wells have cement to the surface either in the intermediate string or the surface string, as the case may be. And we feel in the area of review, there is no chance of any communication between the injection zone nor with any possible shallow surface waters. The producing well that the water will come from is outside the area of review, and it's in southwest southwest of Section 1.

Q. Do these diagrammatic sketches contain all the information required by paragraph six of form C-108?

A. They do.

Q. Are there plugged and abandoned wells within the

area of review?

A. Yes. The O'Brien C Number 2 in the northwest quarter, northwest quarter of Section 1 is plugged and abandoned. And that is the only one in the area of review that is plugged and abandoned.

Q. And there's a schematic drawing of that wellbore showing all plugging detail?

A. Yes, there is.

Q. What rates do you propose to inject?

A. We were initially considering some 600 barrels a day. We would like to set up a maximum daily rate of 1,800 barrels a day in the event we should have an accumulation of waters caused by freezing weather which sometimes happens in the area. This water while it's salty is not very salty in a case that has a freeze. We also would like to have that amount available in the possibility that there might be other wells in the slurry Devonian that might need a disposal well. We don't know of any. We don't anticipate any. But we would like to have that availability in case that should happen simply because there are no nearby disposal wells. There is a disposal lake some, by road, 20 miles northeast of there.

Q. Will the system be an open or a closed system?

A. A closed system. We'll have a gas blanket on the tanks.

Q. In your application, you requested a maximum

injection pressure of 750 pounds. Would a two-tenths pound per foot of depth to the top of the injection interval be more satisfactory, Mr. Stevens?

A. It would be. We'd like to have that if at all possible. The 750 is only -- the basis for that is that's the maximum pressure of our current pump. We wouldn't think that we would ever have the two-tenths per foot of depth pressure necessary because we're reasonably certain this will go in a vacuum. However, in the event of a minor plugging until such time as we might get it acidized and unplugged, that might be worthwhile to have that two-tenths.

Q. Now I think you indicated the source of the injection fluid is from the O'Brien Well Number 1?

A. C Number 1, yes.

Q. C Number 1, and that you'll be reinjecting water from the same formation into which you're reinjecting?

A. Yes, it will be the same formation waters.

Q. So there should be no compatibility problem?

A. Should be none.

Q. On the 12th page of this exhibit is a water analysis from Permian Treating Chemicals, Inc. On what well was this sample?

A. That's on O'Brien C Number 1, and it merely shows that it is salty. It does have -- not very salty. And it does have the dissolved salts and so forth that gives the idea

that there may well be scaling problems. And in fact, we are currently having an evaluation made from a company we've had done on another well showing how much scaling problem or how much corrosion problem there really will be and the treatment necessary to correct this as much as possible.

Q. Are there any fresh water wells in the area?

A. There are none. This area has had some history about that question. The original exception to the no pit order of 1969 had the rancher who testified he was born on the ranch, had been ranch foreman for decades, and the nearest fresh water well is eight miles north and probably 15 miles east. There just aren't any fresh water wells. There are water wells around, but they're all brackish water. A question was asked on the forum about open faults. There are no open faults to our knowledge within five miles. The railroad mountain dike is six miles north, but that's considered to be sealed by tertiary basalt some few million years ago and is not considered to be an open fault.

Q. Mr. Stevens, toward the end of the C-108 is a what looks like a two-well cross section. Could you go to that and review that for the examiner.

A. It's actually one well. It's the neutron density and the -- well, there's an error in this. It actually shows only the neutron density. There's supposed to be a permeability log in there, and there is not. It merely shows

the perforations where the water will go. It shows the acidizing that has previously been performed on the well. It shows a tremendous porosity in all of the Dolomite zones. And most of this Siluro-Devonian Fusselman Montoya Dolomite is considered to be interconnected in the area through vertical fractures, if not faults, and all of it highly permeable. There's just an excellent methodology of disposing of water because it takes the water so easily.

Q. Are all logs on the subject well on file with the Oil Conservation Division?

A. They are.

(Applicant's Exhibit No. 2 was marked for identification.)

Q. Is Exhibit Number 2 a copy of an affidavit and notice letter showing that notice of today's hearing has been provided to the owner of the surface of the land and all operators within a half mile radius of the proposed injection well?

A. It is.

Q. Were Exhibits 1 and 2 either prepared by you or compiled under your direction and supervision?

A. They were.

MR. CARR: At this time, Mr. Catanach, we would move the admission of Stevens Exhibits 1 and 2.

EXAMINER CATANACH: Exhibits 1 and 2 will be admitted as

evidence.

(Applicant's Exhibits Nos. 1 and 2 were admitted into evidence.)

MR. CARR: That concludes my examination of Mr. Stevens.

EXAMINATION

BY EXAMINER CATANACH:

Q. (By Mr. Catanach:) Mr. Stevens, are there still offset wells that are producing from the Twin Lakes Devonian pool?

A. No, none of them are producing anymore. All in Section 1 originally produced some oil out of the Devonian Fusselman, but the only one currently producing is in Section 1. And it's in the southwest southwest, the producing well. The wells outside of Section 1 shown on the plat, none of them ever produced from the Devonian.

Q. Where would the main field production be then? Would that --

A. Almost all the production in the field came from the current producing well, the O'Brien C 1 in southwest southwest. The old original discovery well in the northwest northwest, the O'Brien C 2, produced some 46,000 barrels of oil before it ceased producing commercially. The producing well is the highest well structurally in the field by some 25 feet, and all the other wells are lower.

Q. The O'Brien C Number 9, that is currently

temporarily abandoned?

A. Yes.

Q. At what point in its production was it temporarily abandoned, or how much was it producing?

A. Probably within six months. I don't have an exact time. But it produced some 5,000 barrels of oil before being abandoned.

Q. Well, what I'm asking was, When it was abandoned, how much was it producing then?

A. None. The subsequent perforations and acidizing, it never produced after that. The water overtook it, and it never produced again.

Q. Do you have an opinion as to whether injection into this formation will harm in any way the remaining producing potential from that formation?

A. I don't think it will harm it. I don't think it will affect it at all. This formation is such a vast ocean of porosity and permeability. For example, the original bottom hole pressure in the Number 1 well in the southwest southwest has never declined, indicating the strong water drive in the area.

On that same basis, any water injected into that formation, in our opinion, would merely be literally a drop in a bucket. That formation probably would never know that water was being put back in it. It's so porous and so permeable

throughout the entire area.

Q. Mr. Stevens, have you utilized the corrosion type inhibitor system rather than lined tubing previously?

A. I have not. My information is mainly anecdotal. We have used corrosion inhibitor in tubing ourselves, but I haven't used the lined plastic before. And we, in relatively limited experience, have never had any problems with it. But it hasn't been on a real long-term basis.

Q. If you're required to use lined tubing, you will not use the corrosion inhibitor?

A. We will still use some corrosion inhibitor because we need to use the corrosion inhibitor upstream for our pump which pumps to produce water back down in the amount of 3,000 barrels a day. So, yes, there will be some corrosion inhibitor used, but not as much as would be used if we are able to use the unlined tubing.

Q. Mr. Stevens, who's the surface owner on the tract?

A. Frela Seligson out of San Antonio. His ranch foreman lives within a mile of this well's location.

Q. Was she notified of the application?

A. Yes. Okay. It's Mr. A.L. Daugherty, White Lakes Ranch as shown in Exhibit A. Frela Seligson is the owner, and Mr. A.L. Daugherty is the ranch foreman. And notice to him through the years has always constituted notice to Mr. Seligson. I must admit that I had thought it had gone to Mr.

Seligson firstly, but Mr. Daugherty is in constant communication with Mr. Seligson. I feel this would constitute proper notice. If it does not, I'd be happy to send it to Mr. Seligson.

EXAMINATION

BY MR. STOVALL:

Q. Have you checked the records, Mr. Stevens, to see what the record, either with the assessor's office or the treasurer or the county clerk, to see what record is officially used?

A. I have not. I certainly haven't. We have always used Mr. Daugherty as his agent, and I do not know what the official assessor's office -- we have his address. He is a royalty owner also. He receives royalties from us all the time. But it didn't occur to us to send it to him.

Q. I do have some concern that we don't have any official documentation that Mr. Daugherty is in fact the authorized agent to receive notice. And I would suggest that perhaps what we do is leave the record open, allow you to check. If in fact this address is shown in any public records as the address for, say, tax notices, then I think it's probably adequate. If there's no record basis or authority which you've received directly, you probably need to notify the owner directly.

MR. CARR: Or we can provide you perhaps with a letter

from him stating that to send notice to his agent, yes.

MR. STOVALL: Certainly he can waive any deficiency if he so desires.

THE WITNESS: I'll certainly do that. I should have --

Q. (By Mr. Stovall:) Does continuing it for two weeks cause you any problems?

A. No, that would be fine.

EXAMINER CATANACH: I believe that's all we have. We'll go ahead and continue the case until the 24th, and hopefully we'll have something to read by then.

MR. CARR: We can provide you with an update on notice. If everything else fails and we have to renotify, we'll request an additional continuance. But we don't think that'll be necessary.

(The foregoing hearing was adjourned at the approximate hour of 10:30 a.m.)

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10179, heard by me on January 10 1991.

David R. Catanach, Examiner
Oil Conservation Division

STATE OF NEW MEXICO )
) ss.
COUNTY OF SANTA FE )

REPORTER'S CERTIFICATE

I, DEBORAH F. LAVINE, RPR, a Certified Court Reporter and Notary Public, DO HEREBY CERTIFY that I stenographically reported these proceedings before the Oil Conservation Division; and that the foregoing is a true, complete and accurate transcript of the proceedings of said hearing as appears from my stenographic notes so taken and transcribed under my personal supervision.

I FURTHER CERTIFY that I am not related to nor employed by any of the parties hereto and have no interest in the outcome hereof.

DATED at Santa Fe, New Mexico, this 11th of February, 1991.

DEBORAH F. LAVINE, RPR
Certified Court Reporter
CCR No. 252, Notary Public

My Commission Expires:
August 6th, 1993