

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

6 June 1984

EXAMINER HEARING

IN THE MATTER OF:

Application of Eddy County Board
of Commissioners to utilize pro-
duced water, Eddy County, New
Mexico.

CASE
8198

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

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

For the Applicant:

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I N D E X

JOHNNY BOWMAN

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MR. STAMETS: Call Case 8198.

MR. PEARCE: That case is on the application of Eddy County Board of Commissioners to utilize produced water, Eddy County, New Mexico.

Call for appearances in this matter.

MR. DIAMOND: Thank you, Mr. Examiner. Mr. Pearce, I'm Jeffrey B. Diamond of the law firm of Paine, Blenden, Diamond and Davis, Post Office Box 1387, Carlsbad, New Mexico 88220, and I'm here representing the Eddy County Board of Commissioners, who are the applicant in this case.

MR. PEARCE: How many witnesses do you propose to call, Mr. Diamond?

MR. DIAMOND: Two witnesses, Commissioner Johnnie Bowman and Mr. E. G. Minton as an expert witness.

MR. PEARCE: Okay. Are there other appearances in this matter?

Could I ask both witnesses to rise at this time?

(Witnesses sworn.)

MR. DIAMOND: Thank you.
First we'll call Mr. Johnnie Bowman.

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JOHNNIE BOWMAN,

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

DIRECT EXAMINATION

BY MR. DIAMOND:

Q For the record, sir, please state your
full name and your business address.

A I'm Johnnie Bowman, Eddy County Commis-
sioner from District II in Artesia, and I sell cars, Guy
Chevrolet occasionally and am County Commissioner and a few
other odd things.

In other words, I'm a retired farmer. I
just do a little bit of everything.

Q And, Mr. Bowman, in your capacity as a
Eddy County Commissioner for District Number II, do you have
responsibilities with construction and maintenance of county
roads in Eddy County?

A Yes, sir.

Q And do you have a need for using water in
connection with the construction or maintenance of those
roads?

A Yes, sir.

Q Would you describe to the Examiner exact-
ly what it is that you use water for in connection with --

A Mostly it's in the oil field. That deep

1
2 sand over there, unless we have some type of water, we can't
3 work on the roads when they're dry. That sand, it won't
4 hold together unless we put water on it, and that salt
5 water, believe it or not, it acts like a -- as a cement. It
6 polls the sand together and it holds it better than fresh
7 water does even, and there's no fresh water available over
8 there, and the salt water is the only source that we have to
9 put on those roads.

10 And if we don't work with the roads it
11 gets where they can't get over it with those trucks to haul
12 the oil with.

13 Q And, Mr. Bowman, what portion of Eddy
14 County is the District Number II?

15 A It's about half of it.

16 Q And --

17 A North half.

18 Q -- is it the major oil and gas producing
19 area of the county?

20 A Yes, sir.

21 Q And would you describe to the Examiner
22 the application, how you actually use water? How -- how do
23 you apply the water to the roads?

24 A With the water trucks and spray bars. We
25 spray the water on the ground and follow up with the road
26 graders and mix it together and smooth it out.

27 Q And have you caused the Eddy County Road
28 Department to do a study for the year, August of 1983 for

1
2 ward, to show how much money and water Eddy County uses?

3 A Yes, sir.

4 Q In building its roads?

5 A Yes, sir.

6 Q And do you have that study with you?

7 A I believe I do have. Yes, sir, I have it
8 here.

9 Q I've got a copy of that study. I'm going
10 to mark as Exhibit Number One and ask if this is it, and you
11 can identify it?

12 A Yes, sir, that's the copy.

13 MR. DIAMOND: Let's move the
14 admission of this duplicate.

15 MR. STAMETS: We'll admit them
16 all at the end if that would be fine, Mr. Diamond.

17 MR. DIAMOND: Yes, sir.

18 Q Okay. First, how many loads of water is
19 it expected that Eddy County would use in a period of one
20 year based on its experience since August of 1983?

21 A Well, the combined loads in the whole
22 county was 550 loads and a barrel equals 42 gallons.

23 Q And how many barrels are in a load?

24 A 150 barrels, equal to 42 gallon to the
25 barrel.

Q And have you determined how much money
this would cost the taxpayers of Eddy County if they had to
use fresh water obtained from private sources or public

1
2 sources?

3 A It says here that if this figure of
4 \$56,354 is divided by eight, the actual number of months
5 that water was hauled, it would give us an average monthly
6 cost of \$7,045.50.

7 No water was hauled in November as this
8 was our annual cleanup month.

9 If the average monthly cost of \$7,045.50
10 is multiplied by twelve, the number of months in a year, it
11 would give us an annual average cost of \$84,546 for the
12 waste waters usage.

13 Q Now, by waste water usage, can you
14 describe what the county has been using for water for road
15 construction and maintenance since August of 1983?

16 A We -- up till here awhile back we was
17 using salt water.

18 Q And was that produced water from oil and
19 gas wells?

20 A Yes, sir.

21 Q And was that costing the county anything
22 to use that water?

23 A No, sir, the -- mostly Rowland Trucking
24 and Broome Trucking and INW Trucking hauled it from the --
25 they were hired to take care of the salt water from the
different wells, and they'd load that up in their trucks and
bring it out and spray it on the road for us, and didn't
cost us anything. The oil companies was paying for it.

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2 Q And what caused the -- well, did the
3 Commission revoke its consent to use produced water?

4 A No, sir.

5 Q Did we lose the right to use produced
6 water, Mr. Bowman?

7 A Yes, sir.

8 Q And what was the reason for that?

9 A Well, the foreman on the south end was
10 out of touch with the crew and a couple of crew members mes-
11 sed up and had them dump water where they had no business
12 dumping it, and the water was revoked, the water usage was
13 revoked at that time.

14 Q And are you seeking the restoration of
15 the right to use produced water?

16 A Yes, sir.

17 Q And has the Commission taken action to
18 correct the problem that resulted in the misuse of the pro-
19 duced water?

20 A Yes, sir.

21 Q And I'll show you what I've marked as Ex-
22 hibit Number Two and ask if you can identify it.

23 A Yes, sir, it is.

24 Q And could you --

25 MR. STAMETS: Could we have a
copy, Mr. Diamond?

Q And would you describe what that resolu-
tion Number R-84-17 of the Eddy County Board of Commission-

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ers is?

A All of it, all the resolution from 1
through 6?

Q Just describe what it is, yes, sir.

A Now which, my district or the whole --

Q As far as it affects the whole county.

A Oh. That's what I say, all these numbers
here?

Q Yes, sir.

A "Therefore, be it resolved by the Eddy
County Commission as follows:

Produced water shall be used for the
construction of new roads and repair of existing roads
whenever practical and only subject to the prior approval of
the District Office of the Oil Conservation Division; and

Prior to the use of produced water by the
Road Department, the Oil Conservation Division shall be
informed of each project by location, number of loads, and
name of proposed hauler, and any other information it may
require, in each instance where the use of produced water is
proposed --

Q Mr. Bowman, if I may interrupt you, this
document, of course, will speak for itself.

Is this based on the meeting that you had
with Mr. Les Clements of the District Office of the
Conservation Division?

A After we met, yes, sir.

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2 Q And do you feel that the County will comply with this resolution and not misuse the waste water?
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4 A Yes, sir, I think they will.

5 Q Okay, and I'm also going to be offering
6 into evidence, Mr. Bowman, as Exhibit Number Three, a copy
7 of the minutes of the County Commission meeting of May 21st,
8 and just ask that for the record you identify those.

9 Is that a true copy of the minutes of the
10 County Commission meeting of May 21, 1984, where this resolution was adopted?

11 A Yes, sir.

12 Q And did the Sheriff address the Commission at that meeting?

13 A Yes, sir.

14 Q And what did the Sheriff inform the Commission regarding enforcement of Commission regulations in
15 assisting the Oil Conservation Division?
16

17 A He said that he would cooperate to the
18 best of their ability and we asked him if when they were
19 patrolling, if they found anyone illegally dumping water
20 that they would give them a summons.

21 Q And did the Sheriff assure the County
22 Commission of that?

23 A Yes, sir.

24 Q Mr. Bowman, how long have you been a farmer in the Eddy County area?

25 A Oh, ever since I was grown. I guess I --

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when I got out of high school I started farming with my dad and I've farmed ever since then up till four years ago.

Q And have you used water for irrigation in connection with your farming?

A Yes, sir.

Q And are you familiar with the damage that salt can do to farmlands?

A And to shallow aquifers?

A Yes, sir.

Q And do you have any reason to believe that the use of produced water by the County Road Department would ruin or harm farmlands and shallow aquifers?

A No, sir, because we don't use enough of it. Really, when we're putting that water on the road we don't use enough for it to get away. It stays on the road.

Q And how much water do you actually use in the construction project, say, per mile?

A It will vary. Oh, I'd say to seven to ten loads, I believe, Les, isn't that right?

MR. CLEMENTS: Pretty close, yes.

A Uh-huh, now that's just offhand guess, but that is --

Q Per mile?

A Yes, sir.

Q Okay.

MR. DIAMOND: And I'll pass the

witness. Nothing further.

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Bowman, the resolution, which is Exhibit Number Two in this case, this would be the plan that you would expect to use, then, in handling this produced water.

A Yes, sir.

Q Now, as I recall, in earlier operations review, you -- you had county road maps which you had indicated you were going to give to the truckers so that they would know exactly where they were supposed to be dumping this produced water.

A Yes, sir.

Q And is it the county's intention to have a county employee at that location when water is being dumped?

A We have had but it was just one time when they were dumping in the wrong place and the boys didn't have a -- I don't know, they fouled up somewhere there, because they did, those boys, whenever they're dumping water there's always someone there.

Q Well, I'm not sure that I understood the answer to my question.

In the future when salt water is put on these roads will there be a county employee there at the

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time the water is put on the roads?

A Yes, sir.

Q Now, Mr. Bowman, ordinary oil operator comes in here for an exception to Order R-3221, and we grant it, there may be some restrictions on how this is done and if that operator violates those restrictions, he's subject to fine and penalty.

A I think that's a good idea.

Q But I'm talking about Eddy County.

A That's what I say, I think that's a good idea.

Q Because you -- you understand that -- that if we issue you an order and allow this to go on, if you don't do it the way the order says, we may be put in a position of having to come fine Eddy County.

A That's all right. I think it will make the Commissioners a little bit more cautious about it, don't you?

Q All right. Very good. I -- I agree wholeheartedly with that; just wanted to make sure we all understood each other this morning.

MR. STAMETS: Are there any other questions of this witness?

MR. DIAMOND: I have none, Mr. Examiner.

MR. STAMETS: He may be excused.

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MR. DIAMOND: Thank you. Call
Mr. E. G. Minton.

E. G. MINTON,
being called as a witness and being duly sworn upon his
oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. DIAMOND:

Q For the record, sir, please state your
full name and business address.

A E. G. Minton. I don't have a business
address; I'm retired.

Q And what is your address?

A At the present time, Hobbs, New Mexico.

Q And, Mr. Minton, what type of profession
did you retire from?

A I retired from engineering and hydrology.

Q And have you engaged in the profession of
engineering and hydrology in Eddy County, New Mexico?

A Yes, sir.

Q And have you worked in the oil and gas
industry?

A Some; not too much.

Q And are you familiar with the proposed
uses and have you heard the proposed uses of produced water
in Eddy County by Mr. Bowman?

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A Yes, sir.

Q And will you state for the benefit of the record what your background is in the field of engineering and hydrology; what your training is?

A About forty-five years in ground water hydrology and engineering.

Q And would you --

A Related.

Q Okay. Would you go into a little more detail, where you were educated and what types of work you've done?

A I graduated from New Mexico Military Institute back in ancient days; University of New Mexico. I attended special schools for U. S. Geological Survey.

I'm a member of various engineering societies and a member of American Military Engineers.

About forty-five years experience.

Q And have you been a licensed engineer and hydrologist in the State of New Mexico?

A Registered Professional Engineer, yes, sir.

Q Okay, and, Mr. Minton, do you have an opinion as to whether the proposed use of produced water would have an adverse effect on shallow aquifers in Eddy County?

A Not --not to the extent that they're using the water at the present time with their spreading --

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2 spraying operations, because very, very little actual use of
3 water on the ground itself as they're using it.

4 Q Would the use of seven to ten loads, each
5 load consisting of 150 barrels of produced water per mile of
6 road construction and repair?

7 A I don't think so, in my opinion. That
8 comes out to about nine gallons per foot in spreading, very,
9 very little use of water.

10 Of course we all know that salt does not
11 evaporate. It remains in the soil but one or two times a
12 year use that they're making of the water is going to have
13 very, very little effect, if any, on any ground water sup-
14 plies.

15 Q And, Mr. Minton, compared to the use of
16 water for irrigation of farms, what would be the difference
17 between using produced water for road maintenance and con-
18 struction as opposed to irrigating for farms?

19 A You can't -- can't compare it. Irriga-
20 tion of farms, of which there is a lot of farms being irri-
21 gated with salt water at the present time in the valley,
22 they use three or four feet a year per acre and more during
23 some seasons, and that salt water is applied to the ground
24 at the rate of about two to four tons per acre, and it re-
25 mains in the soil and as irrigation continues that is push-
ing that salt on down into the ground water system.

Q So therefore, in your opinion, agricul-
tural irrigation has a more adverse effect to shallow aqui-

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2 fers than the use Mr. Bowman proposes?

3 A Hundred times.

4 Q Okay, Mr. Minton, have you testified be-
5 fore this Commission before as an expert?

6 A Yes, sir.

7 Q And based on your personal knowledge,
8 will the construction of roads and maintenance of roads Mr.
9 Bowman refers to benefit the production of oil and gas in
Eddy County?

10 A I think it would benefit much more than
11 the adverse effects would come out.

12 MR. DIAMOND: I have nothing
13 further of this witness, and I'll pass him.

14 CROSS EXAMINATION

15 BY MR. STAMETS:

16 Q For the record let me state that Mr. Bow-
17 man is considered qualified in this area.

18 Mr. Bowman --

19 MR. DIAMOND: Mr. Minton.

20 MR. STAMETS: Mr. Minton is
21 qualified.

22 Q Mr. Minton, sorry about that, the way
23 this salt water is applied to the road, is -- is the moist-
ure retained in the relatively near surface formation?

24 A Yes, sir, very close to surface.

25 Q And it would be unlike being in a pit

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2 where you might have a constant head on the salt.

3 A Where it would be constantly lowering in-
4 to the water table.

5 Q Okay. So under these conditions you
6 don't feel that there's a risk to shallow fresh water.

7 A I sure don't.

8 Q Is there a lot of shallow fresh water in
9 Eddy County?

10 A Yes, there is in sections. Now, you take
11 north Eddy County, east of the river you've got very, very
12 little water of any type. West there will be, yes.

13 Q And those are where the oilfield roads
14 are?

15 A Yes, sir.

16 Q Okay.

17 A Mr. Bowman advised me that they probably
18 use 25 percent in those areas of this salt water.

19 West of the river a lot of the use, he
20 tells me, is fresh water.

21 Even if all the water used west of the
22 river in north Eddy County were salt water, it would have
23 very, very little adverse effects on the water system.

24 Q With the amount of rainfall that occurs
25 in Eddy County is there enough rainfall to wash the salt out
of the roads and --

A Average rainfall down there would prob-
ably be around 11 or 12 inches; a lot of years, less, and I

1
2 can see very little rainfall water being -- picking up the
3 salt and pushing it on down.

4 MR. STAMETS: Any other ques-
5 tions of this witness? He may be excused.

6 MR. DIAMOND: Thank you.

7 MR. STAMETS: Do you have any-
8 thing further?

9 MR. DIAMOND: Just to summar-
10 ize, if I may, Mr. Examiner.

11 Mr. Bowman was serious when he
12 said that we have no objection to a proposed system of fines
13 if Eddy County does violate the -- your order, the Commis-
14 sion's order. This Commission has probably the first com-
15 mission in the State of New Mexico that has imposed sanc-
16 tions on itself for official acts, where each of the Commis-
17 sioners had to pay \$1000 for a road that was built not ac-
18 cording to Hoyle, so they're serious when they say they're
19 responsible for compliance with these rules.

20 In addition the Sheriff did
21 tell the Commission, as is reflected in the minutes of the
22 Commission hearing, that he will be more than happy to work
23 directly with Mr. Clements and the Division in setting up an
24 enforcement program to prevent the unauthorized, unlawful
25 dumping of produced water and other materials in Eddy
County.

26 So we're serious about not only
27 wanting to comply with the law but wanting to get the bene-

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2 fits of using the produced water, which is \$85,000 a year
3 for the taxpayers of Eddy County, like every other county in
4 the state, especially the mineral producing counties, we're
5 very hard pressed right now for revenue with the drop off in
6 revenues that the state is also receiving, and we need that
7 saving.

8 MR. STAMETS: Mr. Diamond,
9 would you like to offer your exhibits?

10 MR. DIAMOND: And I will offer
11 those exhibits.

12 MR. STAMETS: They will be ad-
13 mitted.

14 MR. BOWMAN: May I say some-
15 thing, please?

16 MR. STAMETS: You certainly
17 may, Mr. Bowman.

18 MR. BOWMAN: When I said prob-
19 ably 25 percent of the water would be used west of the
20 river, I was considering the south end with it, because
21 there's very little of the water that's used west of the
22 river up in the north end. What is used is out of the val-
23 ley, back way out west, and every time we blacktop a road
24 out there, why, we're done with it, using water then.

25 Oh, we might get a flood or
something or other and need to rebuild a road or something,
but it is very occasionally and that underground water basin
in the north end of Eddy County, that's where the main un-

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derground water is.

I thought I'd just put that in.

MR. STAMETS: Okay. Anything further?

MR. DIAMOND: Nothing further, thank you very much.

MR. BOWMAN: Nothing further.

MR. STAMETS: The case will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

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

Sally W. Boyd CSR

I do hereby certify that the foregoing is
a correct and true transcript of the proceedings in
the Examination of Case No. 8198
heard by me on 6-6 1984.
Richard J. Ham, Examiner
Oil Conservation Division