

CASE 6659: AMOCO PRODUCTION COMPANY FOR  
AN EXCEPTION TO ORDER NO. R-3221, EDDY  
COUNTY, NEW MEXICO

CASE NO.

6659

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APPLICATION,  
TRANSCRIPTS,  
SMALL EXHIBITS,  
ETC.

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
Oil Conservation Division  
State Land Office Building  
Santa Fe, New Mexico  
19 September 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Amoco Production Com- ) CASE  
pany for an exception to Order No. ) 6659  
R-3221, Eddy County, New Mexico. )

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  
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For Amoco Production Co.: Guy Buell, Esq.  
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I N D E X

J. C. ALLEN

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1 MR. NUTTER: We'll call next Case Number  
2 6659.

3 MR. PADILLA: Application of Amoco Production  
4 Company for an exception to Order No. R-3221, Eddy County,  
5 New Mexico.

6 MR. BUELL: May it please the Examiner, my  
7 name is Gue Buell. I am representing the Applicant, Amoco  
8 Production Company.

9 We have one witness who has not been sworn.

10  
11 (Witness sworn.)  
12

13 J. C. ALLEN  
14 being called as a witness and having been duly sworn upon  
15 his oath, testified as follows, to-wit:

16  
17 DIRECT EXAMINATION

18 BY MR. BUELL:

19 Q Mr. Allen, would you state your complete  
20 name, by whom you're employed, and in what location and what  
21 capacity, please, sir?

22 A Yes, sir. My name is James C. Allen. I'm  
23 employed by Amoco Production Company in Houston, Texas, as  
24 a Senior Petroleum Engineering Supervisor.

25 Q Mr. Allen, you've testified at previous

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1 hearings before the New Mexico Oil Conservation Division,  
2 have you not?

3 A Yes, sir.

4 Q And your qualifications as a petroleum  
5 engineer are a matter of public record?

6 A Yes, sir.

7 Q All right, sir. Our application here to-  
8 day is for an exception to Order 3221, which I broadly cate-  
9 gorize as the no pit order, is that your understanding of  
10 our application?

11 A Yes, sir, it is.

12 Q What have you done in preparation by way  
13 of study for this particular application?

14 A I have checked with the available publica-  
15 tions from the USGS, State Engineer's Office, and the Oil  
16 Conservation Division, in that regard. I did spend -- make  
17 a detailed review of the hearing which resulted in the Com-  
18 mission Order R-3221-B.

19 MR. BUELL: May it please the Examiner, are  
20 there any questions of Mr. Allen's qualifications with parti-  
21 cular reference to the area in and around our specific area  
22 here today?

23 MR. NUTTER: No. Mr. Allen is qualified.

24 Q (Mr. Buell continuing.) All right, sir, in  
25 connection with your testimony, let's look first at what has

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1 been identified as our Exhibit Number One.

2 What is that exhibit, Mr. Allen?

3 A Exhibit Number One is a topography map of  
4 essentially the Clayton Basin New Mexico area in Eddy and  
5 Lea Counties.

6 Q Is it predominantly Eddy County, Mr. Allen?

7 A Yes, sir, it is. The only portion which  
8 is Lea County is approximately east three and a half miles.

9 Q All right, sir. If memory serves me cor-  
10 rectly, there have been many exceptions granted to the no  
11 pit order in the Clayton Basin, which is represented by Ex-  
12 hibit Number One, is that correct?

13 A Yes, sir.

14 Q Is there any way by color you have desig-  
15 nated the areas on Exhibit One that have previously been  
16 granted exceptions?

17 A Yes, sir, these areas are colored in yellow.

18 Q Let's take up first the large area colored  
19 in yellow on the southern and southwestern portion of our  
20 Exhibit Number One. How did that exception area come about?

21 A This area shown on this map is a portion  
22 of the area which was exempted by the Order R-3221-B. This  
23 exception order came about as a result of an Oil Conservation  
24 Division called hearing to review the area where there was  
25 both oil and gas production and potash mining in common areas

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1 to determine if there was grounds for an exception to the  
2 statewide no pit order.

3 Q And as a result of that hearing Order  
4 R-3221-B was issued, which exempted not only the area colored  
5 in yellow on our Exhibit Number One, but also a much larger  
6 area that goes outside our exhibit, is that correct?

7 A That's correct.

8 Q All right, sir, let's move north now to the  
9 intermittent areas that are colored in yellow. What's the  
10 story on those?

11 A These areas are areas that have an exception  
12 that has been granted as a result of an individual operator  
13 requesting an exception to the order.

14 Q So the Oil Conservation Division called a  
15 hearing on their own motion on the larger area, and the  
16 other areas colored in yellow were the results of applications  
17 of individual oil and gas operators?

18 A That is correct, yes, sir.

19 Q All right, sir, I notice in or near or on  
20 the areas colored in yellow you have a number in parentheses.  
21 It would appear to me that they start with number one and  
22 go through number twenty.

23 What are the significance of those numbers?

24 A These numbers are code numbers that we put  
25 there to identify the operator or the applicant who requested

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1 the exception as well as the Commission Order granting the  
2 exception.

3 Q Have you made a tabulation of the excep-  
4 tions designated by numbers on our Exhibit Number One?

5 A Yes, sir, I have.

6 Q That's been identified as our Exhibit Num-  
7 ber Two, Mr. Allen. It appears to be self-explanatory.  
8 It might be well for you to state for the record the format  
9 of this exhibit.

10 A All right, sir. Exhibit Number Two is a  
11 tabulation of the twenty areas in which we have found excep-  
12 tions have been granted. You'll notice on the far left in  
13 parentheses is a number. This is the same code number which  
14 is shown on our Exhibit Number One.

15 After that we've listed the operator, the  
16 order granting the exception, the date the order was listed,  
17 and in the far right a description of the area which the or-  
18 der covers granting an exception.

19 Where it was available in the order, we've  
20 also identified in parentheses under that column where the  
21 disposal pit is located.

22 Q All right, sir, I don't believe any other  
23 comment is appropriate on Exhibit Two at this time. It is  
24 self-explanatory.

25 Let's go back to Exhibit One now. How have

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1 you highlighted the specific area which is the subject matter  
2 of this hearing?

3 A It's identified with a heavy red border in  
4 the northern part of this map, essentially in the center.

5 Q All right, sir. The docket notice of our  
6 application was broad and it referred to the exempting Section  
7 27, 34, and 35, if I remember correctly, and looking at our  
8 Exhibit Number One, it would appear that with regard to Sec-  
9 tion 27 some areas have heretofore been granted exceptions.  
10 Is my observation correct?

11 A Yes, sir, it is.

12 Q Would you then describe for the record the  
13 specific description of the area in Section 27 for which we  
14 are asking exception here today?

15 A Yes, sir, we're requesting exception to the  
16 south half of Section 27, the northeast quarter section and  
17 the northeast of the northwest quarter section.

18 Q All right, sir, we'll get back in detail on  
19 that later, Mr. Allen, on a subsequent exhibit, which shows  
20 our subject area and on a smaller detailed map, smaller  
21 scale map.

22 Let me ask you this: What does this topo  
23 map show with regard to the slope of the surface area in and  
24 around our subject area?

25 A In the vicinity of the area in which we're

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1 requesting exception, the topo map indicates that the surface  
2 drainage would be, and the slope, would be in a southwestern  
3 direction.

4 Q All right, sir, let me ask you this: In  
5 previous hearings before the Conservation Division that you  
6 reviewed, did it appear that the dip of the subsurface bed  
7 in and around our subject area are also in a southwesterly  
8 direction?

9 A I believe that's correct, yes, sir.

10 Q All right, sir, let me ask you this: You  
11 said that in connection with your study you examined all the  
12 data and records available in the State Engineer's Office.  
13 Let me ask you this: Do their records indicate that there  
14 is a fresh water well anywhere within a five mile area of  
15 our subject area, and particularly in a southwesterly  
16 direction?

17 A I was unable to locate any -- any well  
18 within a five mile area around our -- where we're requesting  
19 exception for.

20 Q All right, sir, and as I understand it,  
21 the State Engineer is supposed to have a record of any appli-  
22 cation and the drilling of a fresh water well or a ground  
23 water well in this particular area?

24 A Yes sir.

25 Q All right, sir, let me ask you this: In

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1 addition to checking the records and files of the State  
2 Engineer, have you had our field people who are in this area  
3 all the time checking our producing wells, have you had them  
4 search the area on an on-the-ground reconnaissance for any  
5 sign of a ground water well?

6 A Yes, sir, they have and they were unable  
7 to locate any within this area.

8 Q Have you found any data that reveal to you  
9 that in and around our subject area, and within a five-mile  
10 area to the southwest of our subject area, there are any  
11 known fresh ground waters?

12 A Not to my knowledge.

13 Q All right, sir. Let me ask you this: Same  
14 question with respect to our subject area and five miles to  
15 the southwest around our subject area, are there any fresh  
16 surface waters to your knowledge?

17 A Not to my knowledge, no, sir.

18 Q With regard to the surface, is this area  
19 used for farming, do they grow crops? How would you describe  
20 the surface area?

21 A I would say basically it's a very sandy --  
22 it's almost a sandy type area.

23 Q Do you know of any farming or crop growing  
24 in and around this area?

25 A Within the area which we're requesting ex-

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1 ception, no, sir, I'm not aware of it.

2 Q How do the geologists describe the surface  
3 or do geologists describe surfaces?

4 A Yes, sir, I think it would probably just  
5 be described as sort of a blow sand type area. Kind of a  
6 dune type; basically stable in some areas where there is  
7 vegetation, but it still supposedly, you know, can shift in  
8 some areas with the wind.

9 Q All right, sir. Let's turn your attention  
10 now to our Exhibit Number Three, which is a small scale map  
11 showing in greater detail the subject area for which we are  
12 applying for an exception here today.

13 Would you briefly describe Exhibit Three?

14 A Yes, sir, Exhibit Three is a 9-section  
15 plat of the immediate area in which we're requesting an ex-  
16 ception to the no pit order.

17 We have identified within this map, again  
18 coloring the areas in yellow and using the code numbers, the  
19 areas where exceptions have been granted. In addition to  
20 this, I have shown on this map the location of the existing  
21 pits within this area by rectangular symbol, and where we're  
22 proposing a pit in Section 34, with a dashed rectangular.

23 Q All right, sir, let me ask you this: Have  
24 you outlined in any fashion the subject area which you have  
25 outlined in red on our Exhibit Number One?

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1 A Yes, sir, this area is outlined on this map  
2 using a heavy dashed line.

3 Q Mr. Allen, if my memory is correct, I be-  
4 lieve I note on our Exhibit Three -- it was also on Exhibit  
5 One, although not so easily ascertainable -- that we're  
6 asking for, I believe, three quarter quarter sections that  
7 seem to have a prior exemption. Is my observation correct?

8 A Yes, sir.

9 Q All right, sir, let's take first the south-  
10 east quarter of the southeast quarter of 27. I notice there  
11 that quarter quarter is colored in yellow and has four in  
12 parentheses. If that has already been granted an exception  
13 why are we asking for one here today again?

14 A The order granting this exception applied  
15 only to the existing well at that time and any well drilled  
16 since that time would not be permitted to use that pit.

17 Q All right. I notice on that quarter quarter  
18 is a gas well, Well No. 1. Would water produced from that  
19 well be exempted or excepted from Order R-3221?

20 A Yes, sir.

21 Q Are you sure?

22 A I believe so.

23 Q All right, sir, let's go now to the quarter  
24 quarter that is the southeast of the northeast of Section  
25 27. That also has four in parentheses. How, if that is

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1 already exempt, why are we asking for another exemption?

2 A Again, this pit, which is located in that  
3 quarter quarter section, the order granting this exception  
4 identified this area as a disposal site for two shallow wells  
5 located in the west half of the northwest quarter.

6 Q All right, let me ask you this question: I  
7 notice a gas well symbol, Well No. 3, on that quarter quarter.  
8 If that well produced water, could it be disposed of into the  
9 adjacent pit?

10 A No, sir, not under the wording of the  
11 existing order.

12 Q All right. You mentioned two shallow wells  
13 in the west half of the northwest of 27. I don't seen any  
14 well symbols there, but I do see other well symbols on our  
15 Exhibit Number Three. What are the significance of the well  
16 symbols that I see on Exhibit Three?

17 A All right, sir. The wells that are shown  
18 now with reference to Section 27, Well No. 10 in the north  
19 half of the southwest quarter is a recently drilled Morrow  
20 gas well. Well No. 11 is also a recently drilled Morrow gas  
21 well in the southwest quarter of Section 34. The other gas  
22 well symbols in Section 34 and 35 are existing gas wells and  
23 there is one abandoned gas well, a previous Atoka producer  
24 in Section 26.

25 Q So the well symbols that you have on this

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1 exhibit are all deep Morrow wells.

2 A Yes, Morrow or Siluro-Devonian in the case  
3 of Well No. 1.

4 Q All right, sir, I notice another quarter  
5 quarter in Section 27 colored in yellow showing a prior ex-  
6 emption, which is included in our specific area that -- for  
7 which we're asking exemption here today. That would be the  
8 northeast of the northwest of 27. What is the story on that  
9 particular quarter quarter?

10 A The northwest quarter of Section 27 and the  
11 north half of the southwest quarter area is a previous exemption  
12 granted to another operator, so Amoco has no exception for  
13 the northeast of the northwest quarter.

14 Q I see. I got a little confused, Mr. Allen.  
15 Also included within our specific prescribed area for exemp-  
16 tion today is the north half of the southwest quarter of 27,  
17 and you covered that in your answer as well as the northeast  
18 of the northwest of 27.

19 A Yes, sir.

20 Q I'm sorry if I got a little confused.

21 All right, sir. How broad is our request  
22 here today for the exemptions we're asking for? Are we just  
23 asking for existing wells that are currently making water?

24 A No, sir. Our request would cover any other  
25 wells that would be drilled, although it's not usual to run

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1 into water production with Morrow producers, it is not un-  
2 common, either. You can find water-producing sands within  
3 the Morrow itself.

4 Q So we do know we have bottom water in some  
5 of the Morrow sands in this area.

6 A Yes, sir.

7 Q As a matter of fact, Well No. 6 in the  
8 southeast quarter of 26, which is shown with the abandoned  
9 well symbol, it found bottom water in the Morrow, did it not?

10 A Yes, sir, it did.

11 Q All right, sir, how many of our current  
12 wells in this area, and incidentally, how many do we have  
13 currently producing now, deep wells?

14 A We have six deep wells producing at this  
15 time.

16 Q Do we have any drilling?

17 A Yes, sir, Well No. 13 is drilling.

18 Q Where is it located?

19 A It's located in the southeast of the south-  
20 west quarter of Section 35.

21 Q All right, sir, of our six wells that are  
22 currently producing in this area shown on Exhibit Three,  
23 how many of them are making water?

24 A At the current time only two, Well No. 1,  
25 which is a Siluro-Devonian Well, is producing 170 barrels

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1 of water per day -- excuse me, that's Well No. 1 -- and  
2 Well No. 11 in the southwest quarter of Section 34 is pro-  
3 ducing water. Well No. 12 at this time is making no water  
4 and Well No. 2 is also producing no water.

5 Q What is the initial potential of our Well  
6 No. 11?

7 A Well No. 11 initially potentialied for 2.35  
8 million cubic feet of gas per day, 175 barrels of condensate,  
9 and 245 barrels of water per day.

10 Q All right, sir, have there been indications  
11 that this well is declining in production, both with regard  
12 to gas and water?

13 A Yes, sir, it is declining.

14 Q So as far as this particular well is  
15 concerned, we're probably looking at a maximum, at least it  
16 would appear that way now, of 245 to 250 barrels of salt  
17 water a day.

18 A That's correct.

19 Q All right, sir. Do all of our deep wells  
20 that are shown on Exhibit Three produce into an individual  
21 battery or do they produce into a common battery?

22 A Well, we have both. Well No. 10 has an  
23 individual battery site.

24 Q Now that's up in 27?

25 A Yes, sir, that is correct.

1 Wells Nos. 2, 11, and 12 are producing  
2 into a common battery located at Well No. 2.

3 Q Where you show the symbol for the pit?

4 A That is correct.

5 Q Our application is approved?

6 A Yes, sir.

7 Q All right, sir, now what about 13, the  
8 drilling well? Its objective is also the same deep Morrow  
9 as 12, 2, and 11, is it not?

10 A Yes, sir, it is.

11 Q If it should be productive and make water,  
12 will it produce in the common battery located at Well No. 2?

13 A No, sir. Plans now would be to install  
14 a separate battery located in the northwest quarter of the  
15 southwest quarter of Section 35.

16 Q But if our application is granted as we  
17 made it, and the Commission approved it, that would take care  
18 of Well No. 13 if it is a water-producer?

19 A Yes, sir, we would not have to have a  
20 separate hearing for that well.

21 Q All right, sir, let me ask you this: Have  
22 you had a sample of the produced water from Well No. 11  
23 analyzed?

24 A Yes, sir, I have.

25 Q That has been identified as our Exhibit

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1 Number Four, Mr. Allen. I don't want you to go into a lot  
2 of detail on this. The Examiner has seen many analyses of  
3 water, but I would like for you to comment on what you think  
4 are the most pertinent reflections of this analysis.

5 A Well, I think there's a couple of areas of  
6 interest.

7 One, the total solids of 48,920 indicate  
8 this water is not usable for anything that I know of in use;  
9 it's inpotable water.

10 The second, that the chloride content is  
11 28,763, which in some of the lakes in the area that I've  
12 checked, or at least one, is considerably lower than that.

13 Q In other words, the chlorides appear to  
14 be low in the produced water from Well No. 11?

15 A Yes, sir, lower than in some areas in  
16 which we --

17 Q All right, sir, do you have any other  
18 comments on Exhibit Number Four?

19 A No, sir.

20 Q All right, sir. Mr. Allen, in this parti-  
21 cular area I guess there would be two methods of handling  
22 the produced water other than placing it in a surface pit.  
23 One would be hauling it, trucking it, to a commercial dis-  
24 posal site, is that correct?

25 A That is correct.

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1 Q Another would be to find a well and convert  
2 it to subsurface disposal.

3 A Yes, sir.

4 Q All right, sir. Let's take the first,  
5 trucking. What would it cost in this particular area to  
6 truck roughly 245, 250 barrels of salt water a day to a  
7 commercial disposal site?

8 A The cost would be \$230 per day.

9 Q Under this well's current ability to pro-  
10 duce and the price we're getting for gas, could we economically  
11 truck this water at this time?

12 A Yes, sir, it could be trucked.

13 Q What if the well declines in productivity?  
14 Would it soon reach a point where the trucking would be a  
15 heavy economic burden?

16 A Trucking at that cost, in my opinion, would  
17 result in a premature abandonment of the well.

18 Q All right, sir, what about finding a well  
19 and converting it to subsurface disposal? What about Well  
20 No. 6 that we've mentioned before, the abandoned well up in  
21 Section 26? Have our field people made an estimate of what  
22 it would cost to convert that well to subsurface disposal?

23 A Yes, sir, the estimated cost is a minimum  
24 of \$150,000.

25 Q Even at Well No. 11's current producing

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1 rate would that be an economical operation?

2 A At the rate the well is declining it would  
3 be questionable.

4 Q All right, sir, more or less by way of  
5 conclusion and wrap-up, let me ask you this: Would approval  
6 of our application as we've requested here today in any way  
7 pollute or contaminate fresh ground waters in this area?

8 A No, sir, I was unable to locate any ground  
9 waters to pollute in this area.

10 Q I'll ask you the same question with re-  
11 gard to surface waters, fresh surface waters, is there any  
12 way approval of our application would pollute or contaminate  
13 fresh surface waters?

14 A Not in my opinion.

15 Q You've already described the topography  
16 and quality of the terrain. Is there any way that dis-  
17 posing of produced salt water in a surface pit in this area  
18 could damage the surface in any way?

19 A No, sir, I don't think it would, in my  
20 opinion.

21 Q In your opinion would approval of our ap-  
22 plication as we've requested serve conservation and prevent  
23 waste by increasing the recovery of hydrocarbons from this  
24 area?

25 A Yes, sir, it would, in that holding oper-

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1 ating costs to the minimum would prolong the producing life  
2 of each well.

3 MR. BUELL: May it please the Examiner,  
4 that's all I have by way of direct at this time.

5 I would like to formally offer our Exhibits  
6 One through Four into evidences.

7 MR. NUTTER: Amoco Exhibits One through  
8 Four will be admitted in evidence.

9  
10 CROSS EXAMINATION

11 BY MR. NUTTER:

12 Q Mr. Allen, you mentioned that Amoco cur-  
13 rently operates six deep gas wells in the area and has this  
14 one abandoned deep gas well, correct?

15 A Yes, sir, this well was drilled and orig-  
16 inally operated by Conoco, the abandoned well. We do oper-  
17 ate the other six, yes.

18 Q Is this a unit area that you're operating?

19 A Yes, sir, this is the Green Creek (sic)  
20 Grayburg Unit, Federal Unit.

21 Q Okay. Now, does Amoco own any shallow  
22 rights here or do they have any shallow operating rights?

23 A I believe the breakover point is about  
24 4500 feet, if I remember right, Mr. Nutter; however, we  
25 do have two shallow Delaware wells, are the only shallow

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1 wells I'm aware of we operate in the northwest quarter of  
2 Section 27.

3 Q And those were previously covered by an  
4 exception.

5 A Yes, sir, the water from those wells are  
6 being disposed of in the pit located in the southeast north-  
7 east of 27, and at the present time it's very minor. I think  
8 we're only disposing of about 8 barrels of water per day.

9 Q Now that pit there in the southeast of the  
10 northeast also services the No. 3 Well, is that it, or that  
11 tank battery?

12 A It's located at the tank battery, but Well  
13 No. 3 does not dispose of water into that pit. It's not  
14 covered by the exception and it's not producing any water at  
15 this time, either.

16 Q Okay, No. 3 at the present time is making  
17 no water.

18 A That is correct.

19 Q No. 1 makes 170 barrels of water per day?

20 A Yes, sir, it does.

21 Q No. 10 does not make water?

22 A No, sir, latest test there's no water.

23 Q Now you mentioned that No. 11 made approxi-  
24 mately 245 barrels of water on potential and had declined.  
25 What amount of water is it currently making?



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1 A The latest test, which was on the 27th of  
2 August, showed a gas rate of 1.7-million and water at 114  
3 barrels per day.

4 Q No. 2 makes no water. No. 12 makes no  
5 water, and No. 13 is still drilling?

6 A That is correct.

7 Q And Nos. 2, 11, and 12 are all handled in  
8 a battery located at the site of No. 2, correct?

9 A Yes, sir, in Unit G.

10 Q And so if you had approval for this appli-  
11 cation, you would have a pit there at Well No. 2, I presume.

12 A Yes, sir.

13 Q By way of information, Mr. Allen, there has  
14 recently been an exception to R-3221 granted on your exhibits  
15 here which you don't have labeled. This Flag-Redfern lease  
16 down here in Section 2.

17 A That is in Unit K, sir? We did have one  
18 for Flag-Redfern which we showed as pending. We have not  
19 picked up the order.

20 Q Well, it has been issued. It has been  
21 issued.

22 A Okay.

23 Q That was Order No. R-6083 in the southwest  
24 quarter of Section 2.

25 MR. NUTTER: Are there any further questions

1 of Mr. Allen? He may be excused.

2 Do you have anything further, Mr. Buell?

3 MR. BUELL: No, I do not, Mr. Examiner.

4 That concludes our presentation.

5 MR. NUTTER: Does anyone have anything  
6 they wish to offer in Case Number 6659?

7 We'll take the case under advisement.

8

9 (Hearing concluded.)

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## REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court 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.

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I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 4659.  
heard by me on 9/19 1979.  
 Examiner  
Oil Conservation Division

6/21/77

EXCEPTIONS TO R-3221  
SHUGART FLD. AREA

OPERATOR	ORDER NO.	DATE	LOCATION
(1) V. S. WELCH	R-3670	2/04/69	NW/4 x N/2 SW/4 Sec. 27, T-18, R-31 (Pit in Unit F)
(2) TEXACO	R-3686	2/28/69	Sec. 32, T-19, R-32 (Pit in Unit F)
(3) L. C. SQUIRES	R-3725	4/16/69	Sec. 2, 3, 9, 10, 11; T-20, R-32 Sec. 7, 17, 18, 19, 20; T-20, R-33
(4) AMOCO	R-3771 -	5/28/69	Unit D, E, x P; Sec. 27, T-18, R-31 (Pits in Units H x P)
(5) TENNECO	R-3775 -	6/10/69	SW/4 NW/4, Sec. 19, T-19, R-32 NE/4, Sec. 24, T-19, R-31
(6) V. S. WELCH	R-3778 -	6/10/69	NE/4, Sec. 28, T-18, R-31
(7) AMOCO	R-3788	7/07/69	Sec. 28 x 33, T-19, R-32 (Pit in Unit F, Sec. 28)
(8) MASK, JENNINGS, KEOHANE, & WESTALL	R-3800 -	7/15/69	E/2 NW/4 & NE/4, Sec. 2, T-19, R-31 (Pit in Unit C)
(9) UNION OF CALIFORNIA	R-3813 -	8/14/69	NE/4, Sec. 31, T-18, R-31
(10) GULF	R-3909 -	1/14/70	Sec. 22, T-18, R-31 (Pits in Center of Sec. 22)
(11) KEOHANE & WESTALL	R-4015 -	8/21/70	Lot 4 & SW/4 NW/4, Sec. 2, T-19, R-31 (Pit in Lot 4)
(12) D. C. COLLIER	R-4016	8/25/70	Units A, C, E, G, I, K, M; Sec. 30, T-19, R-31 (Pit in Unit A)
(13) GREAT PLAINS LAND COMPANY	R-4165 -	7/28/71	NW/4 NW/4, Sec. 31, T-18, R-31
(14) LARUE & MANCY	R-5245-A	1/25/77	Units G x F; Sec. 33, T-18, R-30 (Pits in G x F)
(15) H. E. YATES	R-5246-A	1/25/77	Units A, B, G, H, J; Sec. 32, T-18, R-30 (Pit in B)
(16) H & S OIL COMPANY	R-5247-A	8/24/76	Unit C, Sec. 33, T-18, R-30
(17) GENE SNOW	R-5248-A	8/24/76	Unit L, Sec. 32, T-18, R-30

BEFORE EXAMINER NUTTER

OIL CONSERVATION DIVISION

EXHIBIT NO. \_\_\_\_\_

CASE NO. \_\_\_\_\_

BEFORE EXAMINER NUTTER

OIL CONSERVATION DIVISION

Amoco EXHIBIT NO. 2

CASE NO. 6659

EXCEPTIONS TO R-3221  
SHUGART FLD. AREA  
PAGE TWO

<u>OPERATOR</u>	<u>ORDER NO.</u>	<u>DATE</u>	<u>LOCATION</u>
(18) MARBOB ENERGY CORPORATION	R-5249-A	8/24/76	Unit E, Sec. 28, Unit H x G; Sec. 29, T-18, R-30 (Pit in Unit E, Sec. 28)
(19) PETROLEUM DEVELOPMENT CORPORATION	R-5355	1/25/77	Unit I, Sec. 16, T-19, R-32
(20) JOE DON COOK	R-5472 -	6/21/77	Unit J, Sec. 2, T-19, R-31

EXCEPTIONS TO R-3221  
SHUGART FLD. AREA

OPERATOR	ORDER NO.	DATE	LOCATION
(1) V. S. WELCH	R-3670	2/04/69	NW/4 x N/2 SW/4 Sec. 27, T-18, R-31 (Pit in Unit F)
(2) TEXACO	R-3686	2/28/69	Sec. 32, T-19, R-32 (Pit in Unit F)
(3) L. C. SQUIRES	R-3725	4/16/69	Sec. 2, 3, 9, 10, 11; T-20, R-32 Sec. 7, 17, 18, 19, 20; T-20, R-33
(4) AMOCO	R-3771	5/28/69	Unit D, E, x P; Sec. 27, T-18, R-31 (Pits in Units H x P)
(5) TENNECO	R-3775	6/10/69	SW/4 NW/4, Sec. 19, T-19, R-32 NE/4, Sec. 24, T-19, R-31
(6) V. S. WELCH	R-3778	6/10/69	NE/4, Sec. 28, T-18, R-31
(7) AMOCO	R-3788	7/07/69	Sec. 28 x 33, T-19, R-32 (Pit in Unit F, Sec. 28)
(8) MASK, JENNINGS, KEOHANE, & WESTALL	R-3800	7/15/69	E/2 NW/4 & NE/4, Sec. 2, T-19, R-31 (Pit in Unit C)
(9) UNION OF CALIFORNIA	R-3813	8/14/69	NE/4, Sec. 31, T-18, R-31
(10) GULF	R-3909	1/14/70	Sec. 22, T-18, R-31 (Pits in Center of Sec. 22)
(11) KEOHANE & WESTALL	R-4015	8/21/70	Lot 4 & SW/4 NW/4, Sec. 2, T-19, R-31 (Pit in Lot 4)
(12) D. C. COLLIER	R-4016	8/25/70	Units A, C, E, G, I, K, M; Sec. 30, T-19, R-31 (Pit in Unit A)
(13) GREAT PLAINS LAND COMPANY	R-4165	7/28/71	NW/4 NW/4, Sec. 31, T-18, R-31
(14) LARUE & MANCY	R-5245-A	1/25/77	Units G x F; Sec. 33, T-18, R-30 (Pits in G x F)
(15) H. E. YATES	R-5246-A	1/25/77	Units A, B, G, H, J; Sec. 32, T-18, R-30 (Pit in B)
(16) H & S OIL COMPANY	R-5247-A	8/24/76	Unit C, Sec. 33, T-18, R-30
(17) GENE SNOW	R-5248-A	8/24/76	Unit L, Sec. 32, T-18, R-30

BEFORE EXAMINER NUTTER

OIL CONSERVATION DIVISION

Amoco EXHIBIT NO. 2

CASE NO. 6659

EXCEPTIONS TO R-3221  
SHUGART FLD. AREA  
PAGE TWO

OPERATOR	ORDER NO.	DATE	LOCATION
(18) MARBOB ENERGY CORPORATION	R-5249-A	8/24/76	Unit E, Sec. 28, Unit H x G; Sec. 29. T-18. R-30 (Pit in Unit E, Sec. 28)
(19) PETROLEUM DEVELOPMENT CORPORATION	R-5355	1/25/77	Unit I, Sec. 16, T-19, R-32
(20) JOE DON COOK	R-5472	6/21/77	Unit J, Sec. 2, T-19, R-31

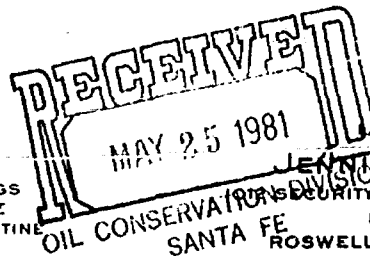
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Waylan C. Martin, M. A.

Form No. 3



JAMES T. JENNINGS  
SIM B. CHRISTY II  
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May 21, 1981

Energy & Minerals Department  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Attention: Ms. Florene Davidson  
Administrative Secretary

Re: Case No. 6659

Dear Florene:

In response to your letter of May 11 and confirming our telephone conversation of yesterday, this is to advise that I do have the above-numbered case which was checked out to me last March 18. I am using the transcript in preparing an application for an exception to Rule R-3221 which I had hoped to get on the June 3 docket, however, I have run into some temporary delays and I do not contemplate it will be possible to get the matter on for hearing before the Division until some time in July. At your convenience, I would appreciate it if you could call and advise the contemplated July hearing dates.

If at any time you find that you have need for the transcript please call me and I will return it immediately, otherwise, I will deliver it to you after our proposed hearing.

Yours very truly,

JENNINGS & CHRISTY

  
James T. Jennings

JTJ/jb

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
Oil Conservation Division  
State Land Office Building  
Santa Fe, New Mexico  
19 September 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Amoco Production Com-	)	
pany for an exception to Order No.	)	CASE
R-3221, Eddy County, New Mexico.	)	6659

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation	Ernest L. Padilla, Esq.
Division:	Legal Counsel for the Division
	State Land Office Bldg.
	Santa Fe, New Mexico 87503

For Amoco Production Co.:	Guy Buell, Esq.
	Amoco Production Company
	Post Office Box 3092
	Houston, Texas 77001

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## I N D E X

J. C. ALLEN

Direct Examination by Mr. Buell	3
Cross Examination by Mr. Nutter	21

## E X H I B I T S

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Applicant Exhibit Three, Map	11
Applicant Exhibit Four, Water Analysis	18

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1 MR. NUTTER: We'll call next Case Number  
2 6659.

3 MR. PADILLA: Application of Amoco Production  
4 Company for an exception to Order No. R-3221, Eddy County,  
5 New Mexico.

6 MR. BUELL: May it please the Examiner, my  
7 name is Gue Buell. I am representing the Applicant, Amoco  
8 Production Company.

9 We have one witness who has not been sworn.

10  
11 (Witness sworn.)

12  
13 J. C. ALLEN  
14 being called as a witness and having been duly sworn upon  
15 his oath, testified as follows, to-wit:

16  
17 DIRECT EXAMINATION

18 BY MR. BUELL:

19 Q Mr. Allen, would you state your complete  
20 name, by whom you're employed, and in what location and what  
21 capacity, please, sir?

22 A Yes, sir. My name is James C. Allen. I'm  
23 employed by Amoco Production Company in Houston, Texas, as  
24 a Senior Petroleum Engineering Supervisor.

25 Q Mr. Allen, you've testified at previous

1 hearings before the New Mexico Oil Conservation Division,  
2 have you not?

3 A Yes, sir.

4 Q And your qualifications as a petroleum  
5 engineer are a matter of public record?

6 A Yes, sir.

7 Q All right, sir. Our application here to-  
8 day is for an exception to Order 3221, which I broadly cate-  
9 gorize as the no pit order, is that your understanding of  
10 our application?

11 A Yes, sir, it is.

12 Q What have you done in preparation by way  
13 of study for this particular application?

14 A I have checked with the available publica-  
15 tions from the USGS, State Engineer's Office, and the Oil  
16 Conservation Division, in that regard. I did spend -- make  
17 a detailed review of the hearing which resulted in the Com-  
18 mission Order R-3221-B.

19 MR. BUELL: May it please the Examiner, are  
20 there any questions of Mr. Allen's qualifications with parti-  
21 cular reference to the area in and around our specific area  
22 here today?

23 MR. NUTTER: No. Mr. Allen is qualified.

24 Q (Mr. Buell continuing.) All right, sir, in  
25 connection with your testimony, let's look first at what has

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1 been identified as our Exhibit Number One.

2 What is that exhibit, Mr. Allen?

3 A. Exhibit Number One is a topography map of  
4 essentially the Clayton Basin New Mexico area in Eddy and  
5 Lea Counties.

6 Q. Is it predominantly Eddy County, Mr. Allen?

7 A. Yes, sir, it is. The only portion which  
8 is Lea County is approximately east three and a half miles.

9 Q. All right, sir. If memory serves me cor-  
10 rectly, there have been many exceptions granted to the no  
11 pit order in the Clayton Basin, which is represented by Ex-  
12 hibit Number One, is that correct?

13 A. Yes, sir.

14 Q. Is there any way by color you have desig-  
15 nated the areas on Exhibit One that have previously been  
16 granted exceptions?

17 A. Yes, sir, these areas are colored in yellow.

18 Q. Let's take up first the large area colored  
19 in yellow on the southern and southwestern portion of our  
20 Exhibit Number One. How did that exception area come about?

21 A. This area shown on this map is a portion  
22 of the area which was exempted by the Order R-3221-B. This  
23 exception order came about as a result of an Oil Conservation  
24 Division called hearing to review the area where there was  
25 both oil and gas production and potash mining in common areas

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1 to determine if there was grounds for an exception to the  
2 statewide no pit order.

3 Q And as a result of that hearing Order  
4 R-3221-B was issued, which exempted not only the area colored  
5 in yellow on our Exhibit Number One, but also a much larger  
6 area that goes outside our exhibit, is that correct?

7 A That's correct.

8 Q All right, sir, let's move north now to the  
9 intermittent areas that are colored in yellow. What's the  
10 story on those?

11 A These areas are areas that have an exception  
12 that has been granted as a result of an individual operator  
13 requesting an exception to the order.

14 Q So the Oil Conservation Division called a  
15 hearing on their own motion on the larger area, and the  
16 other areas colored in yellow were the results of applications  
17 of individual oil and gas operators?

18 A That is correct, yes, sir.

19 Q All right, sir, I notice in or near or on  
20 the areas colored in yellow you have a number in parentheses.  
21 It would appear to me that they start with number one and  
22 go through number twenty.

23 What are the significance of those numbers?

24 A These numbers are code numbers that we put  
25 there to identify the operator or the applicant who requested

1 the exception as well as the Commission Order granting the  
2 exception.

3 Q Have you made a tabulation of the excep-  
4 tions designated by numbers on our Exhibit Number One?

5 A Yes, sir, I have.

6 Q That's been identified as our Exhibit Num-  
7 ber Two, Mr. Allen. It appears to be self-explanatory.  
8 It might be well for you to state for the record the format  
9 of this exhibit.

10 A All right, sir. Exhibit Number Two is a  
11 tabulation of the twenty areas in which we have found excep-  
12 tions have been granted. You'll notice on the far left in  
13 parentheses is a number. This is the same code number which  
14 is shown on our Exhibit Number One.

15 After that we've listed the operator, the  
16 order granting the exception, the date the order was listed,  
17 and in the far right a description of the area which the or-  
18 der covers granting an exception.

19 Where it was available in the order, we've  
20 also identified in parentheses under that column where the  
21 disposal pit is located.

22 Q All right, sir, I don't believe any other  
23 comment is appropriate on Exhibit Two at this time. It is  
24 self-explanatory.

25 Let's go back to Exhibit One now. How have

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1 you highlighted the specific area which is the subject matter  
2 of this hearing?

3 A It's identified with a heavy red border in  
4 the northern part of this map, essentially in the center.

5 Q All right, sir. The docket notice of our  
6 application was broad and it referred to the exempting Section  
7 27, 34, and 35, if I remember correctly, and looking at our  
8 Exhibit Number One, it would appear that with regard to Sec-  
9 tion 27 some areas have heretofore been granted exceptions.  
10 Is my observation correct?

11 A Yes, sir, it is.

12 Q Would you then describe for the record the  
13 specific description of the area in Section 27 for which we  
14 are asking exception here today?

15 A Yes, sir, we're requesting exception to the  
16 south half of Section 27, the northeast quarter section and  
17 the northeast of the northwest quarter section.

18 Q All right, sir, we'll get back in detail on  
19 that later, Mr. Allen, on a subsequent exhibit, which shows  
20 our subject area and on a smaller detailed map, smaller  
21 scale map.

22 Let me ask you this: What does this topo  
23 map show with regard to the slope of the surface area in and  
24 around our subject area?

25 A In the vicinity of the area in which we're

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1 requesting exception, the topo map indicates that the surface  
2 drainage would be, and the slope, would be in a southwestern  
3 direction.

4 Q All right, sir, let me ask you this: In  
5 previous hearings before the Conservation Division that you  
6 reviewed, did it appear that the dip of the subsurface bed  
7 in and around our subject area are also in a southwesterly  
8 direction?

9 A I believe that's correct, yes, sir.

10 Q All right, sir, let me ask you this: You  
11 said that in connection with your study you examined all the  
12 data and records available in the State Engineer's Office.  
13 Let me ask you this: Do their records indicate that there  
14 is a fresh water well anywhere within a five mile area of  
15 our subject area, and particularly in a southwesterly  
16 direction?

17 A I was unable to locate any -- any well  
18 within a five mile area around our -- where we're requesting  
19 exception for.

20 Q All right, sir, and as I understand it,  
21 the State Engineer is supposed to have a record of any appli-  
22 cation and the drilling of a fresh water well or a ground  
23 water well in this particular area?

24 A Yes, sir.

25 Q All right, sir, let me ask you this: In

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1 addition to checking the records and files of the State  
2 Engineer, have you had our field people who are in this area  
3 all the time checking our producing wells, have you had them  
4 search the area on an on-the-ground reconnaissance for any  
5 sign of a ground water well?

6 A Yes, sir, they have and they were unable  
7 to locate any within this area.

8 Q Have you found any data that reveal to you  
9 that in and around our subject area, and within a five-mile  
10 area to the southwest of our subject area, there are any  
11 known fresh ground waters?

12 A Not to my knowledge.

13 Q All right, sir. Let me ask you this: Same  
14 question with respect to our subject area and five miles to  
15 the southwest around our subject area, are there any fresh  
16 surface waters to your knowledge?

17 A Not to my knowledge, no, sir.

18 Q With regard to the surface, is this area  
19 used for farming, do they grow crops? How would you describe  
20 the surface area?

21 A I would say basically it's a very sandy --  
22 it's almost a sandy type area.

23 Q Do you know of any farming or crop growing  
24 in and around this area?

25 A Within the area which we're requesting ex-

1 ception, no, sir, I'm not aware of it.

2 Q How do the geologists describe the surface  
3 or do geologists describe surfaces?

4 A Yes, sir, I think it would probably just  
5 be described as sort of a blow sand type area. Kind of a  
6 dune type; basically stable in some areas where there is  
7 vegetation, but it still supposedly, you know, can shift in  
8 some areas with the wind.

9 Q All right, sir. Let's turn your attention  
10 now to our Exhibit Number Three, which is a small scale map  
11 showing in greater detail the subject area for which we are  
12 applying for an exception here today.

13 Would you briefly describe Exhibit Three?

14 A Yes, sir, Exhibit Three is a 9-section  
15 plat of the immediate area in which we're requesting an ex-  
16 ception to the no pit order.

17 We have identified within this map, again  
18 coloring the areas in yellow and using the code numbers, the  
19 areas where exceptions have been granted. In addition to  
20 this, I have shown on this map the location of the existing  
21 pits within this area by rectangular symbol, and where we're  
22 proposing a pit in Section 34, with a dashed rectangular.

23 Q All right, sir, let me ask you this: Have  
24 you outlined in any fashion the subject area which you have  
25 outlined in red on our Exhibit Number One?

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1 A Yes, sir, this area is outlined on this map  
2 using a heavy dashed line.

3 Q Mr. Allen, if my memory is correct, I be-  
4 lieve I note on our Exhibit Three -- it was also on Exhibit  
5 One, although not so easily ascertainable -- that we're  
6 asking for, I believe, three quarter quarter sections that  
7 seem to have a prior exemption. Is my observation correct?

8 A Yes, sir.

9 Q All right, sir, let's take first the south-  
10 east quarter of the southeast quarter of 27. I notice there  
11 that quarter quarter is colored in yellow and has four in  
12 parentheses. If that has already been granted an exception  
13 why are we asking for one here today again?

14 A The order granting this exception applied  
15 only to the existing well at that time and any well drilled  
16 since that time would not be permitted to use that pit.

17 Q All right. I notice on that quarter quarter  
18 is a gas well, Well No. 1. Would water produced from that  
19 well be exempted or excepted from Order R-3221?

20 A Yes, sir.

21 Q Are you sure?

22 A I believe so.

23 Q All right, sir, let's go now to the quarter  
24 quarter that is the southeast of the northeast of Section  
25 27. That also has four in parentheses. How, if that is

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1 already exempt, why are we asking for another exemption?

2 A Again, this pit, which is located in that  
3 quarter quarter section, the order granting this exception  
4 identified this area as a disposal site for two shallow wells  
5 located in the west half of the northwest quarter.

6 Q All right, let me ask you this question: I  
7 notice a gas well symbol, Well No. 3, on that quarter quarter  
8 If that well produced water, could it be disposed of into the  
9 adjacent pit?

10 A No, sir, not under the wording of the  
11 existing order.

12 Q All right. You mentioned two shallow wells  
13 in the west half of the northwest of 27. I don't seen any  
14 well symbols there, but I do see other well symbols on our  
15 Exhibit Number Three. What are the significance of the well  
16 symbols that I see on Exhibit Three?

17 A All right, sir. The wells that are shown  
18 now with reference to Section 27, Well No. 10 in the north  
19 half of the southwest quarter is a recently drilled Morrow  
20 gas well. Well No. 11 is also a recently drilled Morrow gas  
21 well in the southwest quarter of Section 34. The other gas  
22 well symbols in Section 34 and 35 are existing gas wells and  
23 there is one abandoned gas well, a previous Atoka producer  
24 in Section 26.

25 Q So the well symbols that you have on this

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1 exhibit are all deep Morrow wells.

2 A Yes, Morrow or Siluro-Devonian in the case  
3 of Well No. 1.

4 Q All right, sir, I notice another quarter  
5 quarter in Section 27 colored in yellow showing a prior ex-  
6 emption, which is included in our specific area that -- for  
7 which we're asking exemption here today. That would be the  
8 northeast of the northwest of 27. What is the story on that  
9 particular quarter quarter?

10 A The northwest quarter of Section 27 and the  
11 north half of the southwest quarter area is a previous exemption  
12 granted to another operator, so Amoco has no exception for  
13 the northeast of the northwest quarter.

14 Q I see. I got a little confused, Mr. Allen.  
15 Also included within our specific prescribed area for exemp-  
16 tion today is the north half of the southwest quarter of 27,  
17 and you covered that in your answer as well as the northeast  
18 of the northwest of 27.

19 A Yes, sir.

20 Q I'm sorry if I got a little confused.

21 All right, sir. How broad is our request  
22 here today for the exemptions we're asking for? Are we just  
23 asking for existing wells that are currently making water?

24 A No, sir. Our request would cover any other  
25 wells that would be drilled, although it's not usual to run

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1 into water production with Morrow producers, it is not un-  
2 common, either. You can find water-producing sands within  
3 the Morrow itself.

4 Q So we do know we have bottom water in some  
5 of the Morrow sands in this area.

6 A Yes, sir.

7 Q As a matter of fact, Well No. 6 in the  
8 southeast quarter of 26, which is shown with the abandoned  
9 well symbol, it found bottom water in the Morrow, did it not?

10 A Yes, sir, it did.

11 Q All right, sir, how many of our current  
12 wells in this area, and incidentally, how many do we have  
13 currently producing now, deep wells?

14 A We have six deep wells producing at this  
15 time.

16 Q Do we have any drilling?

17 A Yes, sir, Well No. 13 is drilling.

18 Q Where is it located?

19 A It's located in the southeast of the south-  
20 west quarter of Section 35.

21 Q All right, sir, of our six wells that are  
22 currently producing in this area shown on Exhibit Three,  
23 how many of them are making water?

24 A At the current time only two, Well No. 1,  
25 which is a Siluro-Devonian Well, is producing 170 barrels

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1 of water per day -- excuse me, that's Well No. 1 -- and  
2 Well No. 11 in the southwest quarter of Section 34 is pro-  
3 ducing water. Well No. 12 at this time is making no water  
4 and Well No. 2 is also producing no water.

5 Q What is the initial potential of our Well  
6 No. 11?

7 A Well No. 11 initially potentialed for 2.35  
8 million cubic feet of gas per day, 175 barrels of condensate,  
9 and 245 barrels of water per day.

10 Q All right, sir, have there been indications  
11 that this well is declining in production, both with regard  
12 to gas and water?

13 A Yes, sir, it is declining.

14 Q So as far as this particular well is  
15 concerned, we're probably looking at a maximum, at least it  
16 would appear that way now, of 245 to 250 barrels of salt  
17 water a day.

18 A That's correct.

19 Q All right, sir. Do all of our deep wells  
20 that are shown on Exhibit Three produce into an individual  
21 battery or do they produce into a common battery?

22 A Well, we have both. Well No. 10 has an  
23 individual battery site.

24 Q Now that's up in 27?

25 A Yes, sir, that is correct.

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1 Wells Nos. 2, 11, and 12 are producing  
2 into a common battery located at Well No. 2.

3 Q Where you show the symbol for the pit?

4 A That is correct.

5 Q Our application is approved?

6 A Yes, sir.

7 Q All right, sir, now what about 13, the  
8 drilling well? Its objective is also the same deep Morrow  
9 as 12, 2, and 11, is it not?

10 A Yes, sir, it is.

11 Q If it should be productive and make water,  
12 will it produce in the common battery located at Well No. 2?

13 A No, sir. Plans now would be to install  
14 a separate battery located in the northwest quarter of the  
15 southwest quarter of Section 35.

16 Q But if our application is granted as we  
17 made it, and the Commission approved it, that would take care  
18 of Well No. 13 if it is a water-producer?

19 A Yes, sir, we would not have to have a  
20 separate hearing for that well.

21 Q All right, sir, let me ask you this: Have  
22 you had a sample of the produced water from Well No. 11  
23 analyzed?

24 A Yes, sir, I have.

25 Q That has been identified as our Exhibit

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Santa Fe, New Mexico 87501

1 Number Four, Mr. Allen. I don't want you to go into a lot  
2 of detail on this. The Examiner has seen many analyses of  
3 water, but I would like for you to comment on what you think  
4 are the most pertinent reflections of this analysis.

5 A Well, I think there's a couple of areas of  
6 interest.

7 One, the total solids of 48,920 indicate  
8 this water is not usable for anything that I know of in use;  
9 it's inpotable water.

10 The second, that the chloride content is  
11 28,763, which in some of the lakes in the area that I've  
12 checked, or at least one, is considerably lower than that.

13 Q In other words, the chlorides appear to  
14 be low in the produced water from Well No. 11?

15 A Yes, sir, lower than in some areas in  
16 which we --

17 Q All right, sir, do you have any other  
18 comments on Exhibit Number Four?

19 A No, sir.

20 Q All right, sir. Mr. Allen, in this parti-  
21 cular area I guess there would be two methods of handling  
22 the produced water other than placing it in a surface pit.  
23 One would be hauling it, trucking it, to a commercial dis-  
24 posal site, is that correct?

25 A That is correct.

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1 Q Another would be to find a well and convert  
2 it to subsurface disposal.

3 A Yes, sir.

4 Q All right, sir. Let's take the first,  
5 trucking. What would it cost in this particular area to  
6 truck roughly 245, 250 barrels of salt water a day to a  
7 commercial disposal site?

8 A The cost would be \$230 per day.

9 Q Under this well's current ability to pro-  
10 duce and the price we're getting for gas, could we economically  
11 truck this water at this time?

12 A Yes, sir, it could be trucked.

13 Q What if the well declines in productivity?  
14 Would it soon reach a point where the trucking would be a  
15 heavy economic burden?

16 A Trucking at that cost, in my opinion, would  
17 result in a premature abandonment of the well.

18 Q All right, sir, what about finding a well  
19 and converting it to subsurface disposal? What about Well  
20 No. 6 that we've mentioned before, the abandoned well up in  
21 Section 26? Have our field people made an estimate of what  
22 it would cost to convert that well to subsurface disposal?

23 A Yes, sir, the estimated cost is a minimum  
24 of \$150,000.

25 Q Even at Well No. 11's current producing

1 rate would that be an economical operation?

2 A At the rate the well is declining it would  
3 be questionable.

4 Q All right, sir, more or less by way of  
5 conclusion and wrap-up, let me ask you this: Would approval  
6 of our application as we've requested here today in any way  
7 pollute or contaminate fresh ground waters in this area?

8 A No, sir, I was unable to locate any ground  
9 waters to pollute in this area.

10 Q I'll ask you the same question with re-  
11 gard to surface waters, fresh surface waters; is there any  
12 way approval of our application would pollute or contaminate  
13 fresh surface waters?

14 A Not in my opinion.

15 Q You've already described the topography  
16 and quality of the terrain. Is there any way that dis-  
17 posing of produced salt water in a surface pit in this area  
18 could damage the surface in any way?

19 A No, sir, I don't think it would, in my  
20 opinion.

21 Q In your opinion would approval of our ap-  
22 plication as we've requested serve conservation and prevent  
23 waste by increasing the recovery of hydrocarbons from this  
24 area?

25 A Yes, sir, it would, in that holding oper-

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1 ating costs to the minimum would prolong the producing life  
2 of each well.

3 MR. BUELL: May it please the Examiner,  
4 that's all I have by way of direct at this time.

5 I would like to formally offer our Exhibits  
6 One through Four into evidence.

7 MR. NUTTER: Amoco Exhibits One through  
8 Four will be admitted in evidence.

9  
10 CROSS EXAMINATION

11 BY MR. NUTTER:

12 Q Mr. Allen, you mentioned that Amoco cur-  
13 rently operates six deep gas wells in the area and has this  
14 one abandoned deep gas well, correct?

15 A Yes, sir, this well was drilled and orig-  
16 inally operated by Conoco, the abandoned well. We do oper-  
17 ate the other six, yes.

18 Q Is this a unit area that you're operating?

19 A Yes, sir, this is the Green Creek (sic)  
20 Grayburg Unit, Federal Unit.

21 Q Okay. Now, does Amoco own any shallow  
22 rights here or do they have any shallow operating rights?

23 A I believe the breakover point is about  
24 4500 feet, if I remember right, Mr. Nutter; however, we  
25 do have two shallow Delaware wells, are the only shallow

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1 wells I'm aware of we operate in the northwest quarter of  
2 Section 27.

3 Q And those were previously covered by an  
4 exception.

5 A Yes, sir, the water from those wells are  
6 being disposed of in the pit located in the southeast north-  
7 east of 27, and at the present time it's very minor. I think  
8 we're only disposing of about 8 barrels of water per day.

9 Q Now that pit there in the southeast of the  
10 northeast also services the No. 3 Well, is that it, or that  
11 tank battery?

12 A It's located at the tank battery, but Well  
13 No. 3 does not dispose of water into that pit. It's not  
14 covered by the exception and it's not producing any water at  
15 this time, either.

16 Q Okay, No. 3 at the present time is making  
17 no water.

18 A That is correct.

19 Q No. 1 makes 170 barrels of water per day?

20 A Yes, sir, it does.

21 Q No. 10 does not make water?

22 A No, sir, latest test there's no water.

23 Q Now you mentioned that No. 11 made approxi-  
24 mately 245 barrels of water on potential and had declined.

25 What amount of water is it currently making?

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1 A. The latest test, which was on the 27th of  
2 August, showed a gas rate of 1.7-million and water at 114  
3 barrels per day.

4 Q. No. 2 makes no water. No. 12 makes no  
5 water, and No. 13 is still drilling?

6 A. That is correct.

7 Q. And Nos. 2, 11, and 12 are all handled in  
8 a battery located at the site of No. 2, correct?

9 A. Yes, sir, in Unit G.

10 Q. And so if you had approval for this appli-  
11 cation, you would have a pit there at Well No. 2, I presume.

12 A. Yes, sir.

13 Q. By way of information, Mr. Allen, there has  
14 recently been an exception to R-3221 granted on your exhibits  
15 here which you don't have labeled. This Flag-Redfern lease  
16 down here in Section 2.

17 A. That is in Unit K, sir? We did have one  
18 for Flag-Redfern which we showed as pending. We have not  
19 picked up the order.

20 Q. Well, it has been issued. It has been  
21 issued.

22 A. Okay.

23 Q. That was Order No. R-6083 in the southwest  
24 quarter of Section 2.

25 MR. NUTTER: Are there any further questions



1 of Mr. Allen? He may be excused.

2 Do you have anything further, Mr. Buell?

3 MR. BUELL: No, I do not, Mr. Examiner.

4 That concludes our presentation.

5 MR. NUTTER: Does anyone have anything  
6 they wish to offer in Case Number 6659?

7 We'll take the case under advisement.

8

9 (Hearing concluded.)

10

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## REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court 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. 4659 heard by me on 9/19 1979.

[Signature], Examiner  
Oil Conservation Division

SALLY WALTON BOYD  
CERTIFIED SHORTHAND REPORTER  
2638 Park Blanche (508) 471-2462  
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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. 6659  
Order No. R-6134

APPLICATION OF AMOCO PRODUCTION COMPANY  
FOR AN EXCEPTION TO ORDER NO. R-3221,  
AS AMENDED, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on September 19, 1979, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 10th day of October, 1979, 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 Order (3) of Division Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.
- (3) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.
- (4) That the State Engineer has designated, pursuant to Section 65-3-11 (15), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per

-2-  
Case No. 6659  
Order No. R-6134

million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(5) That the applicant herein, Amoco Production Company, seeks as an exception to the provisions of the aforesaid Order (3) to permit the disposal of salt water produced by its wells in Sections 27, 34, and 35, Township 18 South, Range 31 East, NMPM, Shugart-Pennsylvanian Gas Pool, Eddy County, New Mexico, into unlined surface pits located adjacent to its tank batteries in said Sections 27, 34 and 35.

(6) That there appears to be no shallow fresh water in the vicinity of the subject pits for which a present or reasonably foreseeable beneficial use is or will be made that would be impaired by contamination from the subject pits.

(7) That to prevent the waste of oil and gas in said Shugart-Pennsylvanian Gas Pool, authority to dispose of produced water from applicant's wells in the aforesaid Sections 27, 34, and 35 in unlined surface pits on said lands should be granted.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amoco Production Company, is hereby granted an exception to Order (3) of Division Order No. R-3221, as amended, to dispose of water produced in conjunction with the production of oil or gas, or both, from its leases in Sections 27, 34, and 35, Township 18 South, Range 31 East, NMPM, Shugart-Pennsylvanian Gas Pool, Eddy County, New Mexico, in unlined surface pits located in said Sections 27, 34 and 35.

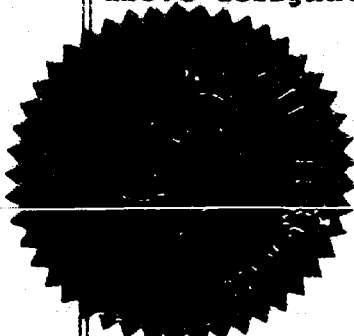
(2) That the Director of the Division may by administrative order rescind such authority whenever it reasonably appears to the Director that such rescission would serve to protect fresh water supplies from contamination.

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

-3-

Case No. 6659  
Order No. R-6134

DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.



SEAL

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

*Joe D. Ramey*  
JOE D. RAMEY  
Director

fd/



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October 11, 1979

Mr. Guy Buell, Attorney  
Amoco Production Company  
P. O. Box 3092  
Houston, Texas 77001

Re: CASE NO. 6659  
ORDER NO. R-6134

**Applicant:**

Amoco Production Company

Dear Sir:

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

Yours very truly,

JOE D. RAMEY  
Director

JDR/ed

Copy of order also sent to:

Hobbs OCD	X
Artesia OCD	X
Aztec OCD	

**Other**

- CASE 6658:** Application of Texas Pacific Oil Company, Inc. for an unorthodox well location and a non-standard proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard gas proration unit comprising the S/2 NE/4 and N/2 SE/4 of Section 14, Township 24 South, Range 36 East, Jalmat Gas Pool, to be dedicated to its J. W. Cooper Well No. 8 at an unorthodox location 2010 feet from the North line and 2310 feet from the East line of said Section 14.
- CASE 6659:** Application of Amoco Production Company 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 in several unlined surface pits located in Sections 27, 34 and 35, Township 18 South, Range 31 East.
- CASE 6660:** Application of B. & W. Oil Reclaiming for an oil treating plant permit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority for the construction and operation of an oil treating plant for the purpose of treating and reclaiming sediment oil at a site in the NE/4 NE/4 NE/4 of Section 34, Township 18 South, Range 26 East.
- CASE 6661:** Application of LaRue and Muncy for an exception to R-111-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the casing-cementing rules of Order R-111-A to permit a well to be drilled in Unit C of Section 22, Township 18 South, Range 30 East, Leo Queen-Crayburg Pool, to be cased by setting surface casing at the top of the salt, circulating cement on the oil string, and omitting the intermediate casing required by R-111-A; applicant further requests special rules to apply to all of Sections 15 and 22 of said township to permit additional wells to be completed in the same manner.
- CASE 6662:** Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla "A" Well No. 22Y located in Unit K of Section 24, Township 26 North, Range 4 West, to produce gas from the Blanco Mesaverde Pool through tubing and to commingle and produce the Wildhorse Gallup and Basin-Dakota zones through a parallel tubing string.
- CASE 6663:** Application of Doyle Hartman for an unorthodox well location and approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well spacing requirements and a finding that the drilling of a well at an unorthodox location 330 feet from the South line and 2310 feet from the West line of Section 36, Township 23 South, Range 36 East, Jalmat Gas Pool, is necessary to effectively and efficiently drain that portion of the existing proration unit which cannot be so drained by the existing well.
- CASE 6664:** Application of Doyle Hartman for an unorthodox well location, two non-standard proration units 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 SW/4 of Section 27, Township 25 South, Range 37 East, Jalmat Pool, to be dedicated to El Paso Natural Gas Company's Harrison Well No. 1, and also a 120-acre unit comprising the E/2 SW/4 and SW/4 SW/4 of said Section 27 to be dedicated to a well to be drilled at an unorthodox location 330 feet from the South and West lines of the section; applicant further seeks a waiver of existing well spacing requirements and a finding that the drilling of said 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 6647:** (Continued from September 5, 1979, Examiner Hearing)
- Application of O. H. Berry for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Seven Rivers well to be located 1650 feet from the North line and 330 feet from the East line of Section 15, Township 24 South, Range 36 East, Jalmat Gas Pool, the NE/4 of said Section 15 to be dedicated to the well.
- CASE 6665:** 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 22 and 23, Township 19 South, Range 29 East, and Section 19, Township 19 South, Range 30 East.
- CASE 6666:** Application of Exxon Corporation for a non-standard proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 377.57-acre non-standard gas proration unit comprising Lots 1, 2, 3, and 4 and the N/2 N/2 of Section 36, Township 26 South, Range 25 East, and Lots 3 and 4 and the N/2 NW/4 of Section 31, Township 26 South, Range 26 East, to be dedicated to a Morrow test well to be located in Unit A of said Section 36.
- CASE 6667:** Application of Exxon Corporation for a non-standard proration unit, an unorthodox well location, and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of a 320-acre non-standard gas proration unit comprising the W/2 of Section 10, Township 21 South, Range 36 East, Eumont Pool, to be simultaneously dedicated to its A. J. Adkins Com Well No. 1 located in Unit L, and to its Well No. 2, at an unorthodox location 1650 feet from the North and West lines of said Section 10.



J. R. Barnett  
Regional Engineering  
Manager

August 30, 1979

File: JCA-986.51TX-3978

Re: Exceptions to Order No. 3221, As Amended  
Sections 27, 34, and 35; T-18-S, R-31-E  
Shugart (Pennsylvanian) Field  
Eddy County, New Mexico

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, NM 87501

Attention: Mr. Joe D. Ramey (3)

Gentlemen:

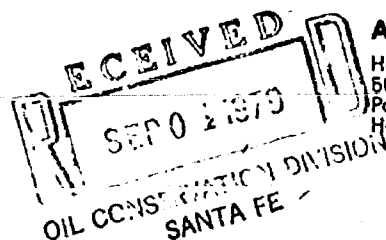
Amoco Production Company requests a hearing for an exception to Order No. 3221, as amended, to allow us to dispose of produced water from existing and future wells located in the NE/4, S/2, and NE/4NW/4 of Sec. 27, all of Sec. 34 and 35, T-18-S, R-31-E, into several unlined surface pits located adjacent to production batteries in aforementioned sections.

Please place this item on the Examiner's Hearing Docket of September 19, 1979. A map of the area is attached. Please direct any questions to Mr. Jim Allen (Phone: (713) 652-5497) or Mr. Keith Bucy (Phone: (713) 652-7238).

Yours very truly,

*J. R. Barnett*  
KEB

KEB/rw  
Attachment



Amoco Production Company  
Houston Region  
500 Jefferson Building  
Post Office Box 3092  
Houston, Texas 77001

*Case 6659  
9/19*





**Amoco Production Company**

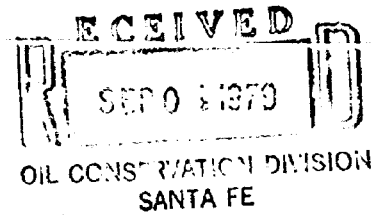
Houston Region  
600 Jefferson Building  
Post Office Box 3092  
Houston, Texas 77001

J. R. Barnett  
Regional Engineering  
Manager

August 30, 1979

File: JCA-986.51TX-3978

Re: Exceptions to Order No. 3221, As Amended  
Sections 27, 34, and 35; T-18-S, R-31-E  
Shugart (Pennsylvanian) Field  
Eddy County, New Mexico



State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
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Attention: Mr. Joe D. Ramay (3)

Gentlemen:

Amoco Production Company requests a hearing for an exception to Order No. 3221, as amended to allow us to dispose of produced water from existing and future wells located in the NE/4, S/2, and NE/4NW/4 of Sec. 27, all of Sec. 34 and 35, T-18-S, R-31-E, into several unlined surface pits located adjacent to production batteries in aforementioned sections.

Please place this item on the Examiner's Hearing Docket of September 19, 1979. A map of the area is attached. Please direct any questions to Mr. Jim Allen (Phone: (713) 652-5497) or Mr. Keith Bucy (Phone: (713) 652-7238).

Yours very truly,

ORIGINAL SIGNED  
J. R. BARNETT  
BY KEB

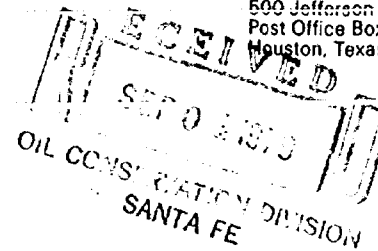
KEB/rw  
Attachment



**Amoco Production Company**

Houston Region  
500 Jefferson Building  
Post Office Box 3092  
Houston, Texas 77001

J. R. Barnett  
Regional Engineering  
Manager



**August 30, 1979**

**File: JCA-986.51TX-3978**

**Re: Exceptions to Order No. 3221, As Amended  
Sections 27, 34, and 35; T-18-S, R-31-E  
Shugart (Pennsylvanian) Field  
Eddy County, New Mexico**

**State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, NM 87501**

**Attention: Mr. Joe D. Ramey (3)**

**Gentlemen:**

**Amoco Production Company requests a hearing for an exception to Order No. 3221, as amended, to allow us to dispose of produced water from existing and future wells located in the NE/4, S/2, and NE/4NW/4 of Sec. 27, all of Sec. 34 and 35, T-18-S, R-31-E, into several unlined surface pits located adjacent to production batteries in aforementioned sections.**

**Please place this item on the Examiner's Hearing Docket of September 19, 1979. A map of the area is attached. Please direct any questions to Mr. Jim Allen (Phone: (713) 652-5497) or Mr. Keith Bacy (Phone: (713) 652-7222).**

**Yours very truly,**

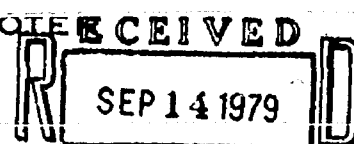
**ORIGINAL SIGNED  
J. R. BARNETT  
BY: KER**

**KER/rw  
Attachment**

ATWOOD, MALONE, MANN & COOTER

A PROFESSIONAL ASSOCIATION  
LAWYERS

JEFF D. ATWOOD [1883-1960]  
ROSS L. MALONE [1910-1974]



OIL CONSERVATION DIVISION

P. O. DRAWING  
SECURITY NATIONAL BANK BUILDING  
ROSWell, NEW MEXICO 88201  
[505] 622-6221

CHARLES F. MALONE  
RUSSELL D. MANN  
PAUL A. COOTER  
BOB F. TURNER  
JOHN W. BASSETT  
ROBERT E. SABIN  
BRIAN W. COPPLE

RANDAL W. ROBERTS  
STEVEN L. BELL

September 12, 1979

Mr. Joe Ramey  
Secretary-Director  
Oil Conservation Commission  
Post Office Box 2088  
Santa Fe, New Mexico 87501

RE: Examiner Hearing - Wednesday, September 19,  
1979 - Cause No. 6659

Dear Mr. Ramey:

We would appreciate your filing the enclosed  
Entry of Appearance for Amoco Production Company in Cause  
No. 6659.

Your assistance in this matter is greatly  
appreciated.

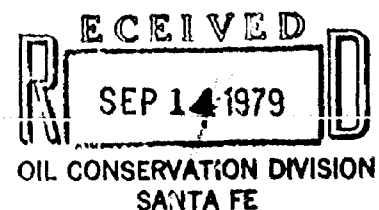
With best regards,

Very truly yours,

Charles F. Malone

CFM:sgs  
Enc.

cc: Guy Buell, Esquire  
w/enc.



BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION )  
OF AMOCO PRODUCTION COMPANY FOR )  
EXCEPTION TO ORDER NO. R-3221, )  
EDDY COUNTY, NEW MEXICO. ) No. 6659

ENTRY OF APPEARANCE

The undersigned hereby enter their appearance on  
behalf of Amoco Production Company with Guy Buell and John  
Maxwell of Houston, Texas.

ATWOOD, MALONE, MANN & COOTER, P.A.

By Charles Malone  
Post Office Drawer 700  
Roswell, New Mexico 88201

Called in by Jim Allen  
8/29/79

Amoco Prod. Co.

Exception to R-3221

Dispose into several unlined  
surface pits located in

NE1/4, S1/2, NE1/4 NW1/4 of Sec. 27

All of Secs. 34 and 35

T18S-R31E

Call Jim Allen or

Keith Bucy

713-652-7238

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. 6659

ORDER NO. R- 6134

APPLICATION OF AMOCO PRODUCTION COMPANY

FOR AN EXCEPTION TO ORDER NO. R-3221,  
AS AMENDED, EDDY COUNTY,  
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on September 19, 1979, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter

NOW, on this \_\_\_\_\_ day of \_\_\_\_\_, 1979, 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, Amoco Production Company, seeks an exception to Order No. R-3221 to permit disposal of produced ~~the owner and operator of the~~ brine in several unlined surface pits located in Sections 27, 34, and 35, ~~located in Unit~~ of Section \_\_\_\_\_, Township 18 South, Range 31 East, NMPM, \_\_\_\_\_ Pool, Eddy County, New Mexico.

(3) That Order (3) of Division Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.

(3) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(4) That the State Engineer has designated, pursuant to Section 65-3-11 (15), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(5) That the <sup>herein, Amaco Production Company,</sup> applicant seeks as an exception to the provisions of the aforesaid Order (3) to permit the disposal of salt water produced by <sup>its wells in Sections 27, 34, and 35, Township 18 South,</sup> applicant's ~~above described well~~ into an unlined surface pit <sup>in</sup> ~~located in Unit xxxxxxx of said Section xxxxxxx~~ <sup>said Sections 27, 34 and 35.</sup>

adjacent to  
its tank batteries

~~(7) That applicant's~~

~~produces approximately \_\_\_\_\_ barrels of water per day.~~

(6) That there appears to be no shallow fresh water in the vicinity of the subject pit for which a present or reasonably foreseeable beneficial use is or will be made that would be impaired by contamination from the subject pit.

~~(7) That the nature of the reservoir of said~~

~~\_\_\_\_\_ Pool is such that reinjection of produced water into said reservoir would result in greater ultimate recovery of oil and gas therefrom thereby preventing waste.~~

1.2) That to prevent the waste of oil and gas in said Shugart Pennsylvanian Gas Pool, ~~permanent~~ authority to dispose of produced water from applicant's wells in the aforesaid Sections 27, 34, and 35 in ~~an~~ unlined surface pits on said ~~lands~~ <sup>lands</sup> ~~lease~~ should be granted.

Gas  
Shugart-Pennsylvanian Pool, Sibley County, New Mexico,  
Range 31 East, Township 18 South

~~(11) That the applicant should be permitted to dispose of water produced from said \_\_\_\_\_ in an unlined surface pitson said lease until \_\_\_\_\_~~

IT IS THEREFORE ORDERED:

(1) That the applicant, Amoco Production Company, is hereby granted an exception to Order (3) of Division Order No. R-3221, as amended, to dispose of water produced in conjunction with the production of oil or gas, or both, from its leases in Sections 27, 34, and 35, located in Unit \_\_\_\_\_ of Section \_\_\_\_\_, Township 18 South, Range 31 East, NMPM, Shugart-Pennsylvanian Gas Pool Pool Sddy County, New Mexico, in ~~xxx~~ unlined surface pits located in ~~Unit xxxxxxxx~~ of said 27, 34 and 35. Section s/ \_\_\_\_\_, until \_\_\_\_\_, 19\_\_\_\_.

(2) That the Director of the Division may by administrative order rescind such authority whenever it reasonably appears to the Director that such rescission would serve to protect fresh water supplies from contamination.

(3) 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.