

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

10 November 1982

EXAMINER HEARING

IN THE MATTER OF:

Application of AMOCO Production Com-
pany for an unorthodox well location,
Lea County, New Mexico.

CASE
7717

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

W. Perry Pearce, Esq.
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State Land Office Bldg.
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For the Applicant:

Clyde A. Mote, Esq.
Katherine Krueger, Esq.
Amoco Production Company
P. O. Box 3092
Houston, Texas 77253

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I N D E X

LARRY SHEPPARD

Direct Examination by Ms. Krueger

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Cross Examination by Mr. Nutter

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TED GAWLOSKI

Direct Examination by Ms. Krueger

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Cross Examination by Mr. Nutter

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E X H I B I T S

Applicant Exhibit One, Plat

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Applicant Exhibit Two, Application

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Applicant Exhibit Three, Map

7

Applicant Exhibit Four, Cross Section, etc.

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MR. NUTTER: We'll call Case Number 7717.

MR. PEARCE: That is on the application of Amoco Production Company for an unorthodox well location, Lea County, New Mexico.

MS. KRUEGER: Mr. Examiner, I'm Katherine Krueger, with Amoco Production Company, in association with Clyde Mote and Bill Carr.

MR. PEARCE: How many witnesses do you have, Ms. Krueger?

MS. KRUEGER: I'm going to have two witnesses which need to be sworn in.

MR. PEARCE: Okay, if there are no other appearances, would those witnesses rise and be sworn, please?

(Witnesses sworn.)

MR. NUTTER: What's your last name again?

MS. KRUEGER: Krueger, K-R-U-E-G-E-R.

MR. NUTTER: Thank you. First name Katherine?

MS. KRUEGER: Katherine, right.

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2 MS. KRUEGER: Amoco's application
3 today is for permission to complete the Snyder Ranch Well No. 1
4 in the Scharb-Bone Springs Pool in the Bone Springs formation
5 at 1980 feet from the north line and 660 feet from the east
6 line of Section 8, Township 19 South, Range 35 East in Lea
7 County, New Mexico.

8 This will be an unorthodox location for the
9 Bone Springs. Amoco had already been granted a permit to drill
10 this well at that location to the Wolfcamp formation. For the
11 Wolfcamp the wellsite is an orthodox location.

12 The primary term of Amoco's lease ended on
13 October 29th, 1982, and is being held by drilling operations
14 to the Wolfcamp. The purpose of this hearing, therefor, is to
15 request permission in advance to complete in the Bone Springs,
16 should the Wolfcamp not prove to be commercially productive.

17 As I said earlier, Amoco has two witnesses.
18 Our first is Larry Sheppard.

19
20 LARRY SHEPPARD

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

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24 DIRECT EXAMINATION

25 BY MS. KRUEGER:

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Q. Would you please state your name for the record, by whom you're employed, what capacity, and the location?

A. My name is Larry Sheppard. I'm employed by Amoco Production Company in the Houston West Region Proration Group, and I am a Staff Petroleum Engineer.

Q. All right, now, have you testified previously as an expert before the New Mexico Oil Conservation Division?

A. I have.

Q. Has the area which is the subject of today's hearing been under your responsibility?

A. It is.

MS. KRUEGER: Are there any questions concerning this witness' qualifications?

MR. NUTTER: Mr. Sheppard is qualified.

Q. Mr. Sheppard, would you please show us your Exhibit One? Would you please discuss this exhibit for us?

A. Exhibit Number One is a portion of the Lea County land map showing the area of interest, that being the Scharb-Bone Springs Field.

What I would like to point out on the exhibit is the area that is shaded yellow, which is the 80 acres which would be dedicated -- be the proration unit dedicated to the Scharb-Bone Springs completion in this well.

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2 The only other matter of interest that can
3 be seen on this map is the fact that the 80 acres is one
4 single lease, of which Amoco is the lessee; that our primary
5 term of the lease did expire October the 29th, 1982, and as
6 our attorney has mentioned, it is currently being held by
7 drilling operations for the Wolfcamp test.

8 Q All right, now your Exhibit Number Two is a
9 copy of Amoco's application for a permit to drill to the Wolf-
10 camp. This has already been filed and approved by the Commis-
11 sion. Would you please discuss what is pertinent to this
12 hearing on this exhibit for us?

13 A Okay. As you have mentioned, this is the
14 authorized Form C-101 and C-102 issuing the drilling permit to
15 Amoco Production Company. It has been approved by the Hobbs
16 District Office.

17 What I would like to point out of interest
18 would be located on the plat in the C-102. As can be seen,
19 the well location for the Wolfcamp test is 1980 feet from the
20 north line, 660 feet from the east line of Section 8, Township
21 19 South, Range 35 East in Lea County, New Mexico. This is
22 an orthodox location for a Wolfcamp test. The 40-acre proration
23 unit dedicated to that Wolfcamp test is the 40 acres located
24 in the southeast quarter of the northeast quarter of Section
25 8. The 80-acre proration unit, as I have mentioned on my pre-

viour exhibit, which would be dedicated to the Bone Springs completion, would include the 40 acres immediately west of the current proration unit. That is shown by the cross-hatched area on the Form C-102.

Q What do the field rules require as an orthodox location for the Bone Springs?

A The special field rules for the Scharb-Bone Springs require a location in either the northeast or southwest quarter of any governmental quarter section as an orthodox location for the Bone Springs.

Q All right. Now, your Exhibit Number Three, the map showing a portion of the Scharb-Bone Springs Field, Lea County, New Mexico, would you please discuss this exhibit for us?

A This exhibit shows four sections in the immediate vicinity of our proposed well. The wells which are spotted on this map are wells which have either been drilled through the Bone Springs or are currently in the process of drilling, being completed, or being permitted to drill through the Bone Springs. The red arrows indicate the wells which would be unorthodox locations for Bone Springs completions.

Of particular interest, I would like to mention two wells, the first being the Southland Royalty Smith No. 5, which is located in the southeast quarter of Section 5,

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2 and the Southland Royalty Scharb 9 No. 1, which is located in
3 the northwest quarter of Section 9. These two wells came be-
4 fore -- were brought before the Commission in Case Number 7420
5 on November the 11th, 1981, requesting approval for an unortho-
6 dox location to complete in the Scharb-Bone Springs. Southland
7 was subsequently granted an order, that being R-6842, on Novem-
8 ber the 30th, 1981, granting the requested unorthodox location.

9 As just a matter of pointing out for the
10 Examiner, these two wells are in the immediate vicinity of our
11 well which is located in the northeast quarter of Section 8.

12 Q. Now even though Amoco's primary objective
13 is the Wolfcamp formation, the purpose of this hearing is to
14 obtain a permit to complete the Snyder Ranch Well No. 1 to the
15 Bone Springs, is that right?

16 A. That is correct.

17 Q. Mr. Sheppard, in your opinion, in the event
18 Amoco's application is granted, will this well protect the
19 correlative rights and be in the interest of conservation and
20 prevent waste?

21 A. It would.

22 MS. KRUEGER: I'd like to ask Exhi-
23 bits One through Three to be admitted into evidence at this
24 time.

25 MR. NUTTER: Exhibits One through

Three will be admitted.

MS. KRUEGER: I have no further direct examination of this witness.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Sheppard, Amoco has never drilled a well in the other end of the 80-acre tract, have they?

A No, sir, there is no other well.

Q There's no well at a standard location --

A No, sir.

Q -- in the Scharb-Bone Springs?

A No, sir. No, sir, there is not.

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

MS. KRUEGER: Amoco's next witness is Mr. Ted Galowski.

TED GAWLOSKI

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

DIRECT EXAMINATION

BY MS. KRUEGER:

Q. Would you please state your name for the record and by whom you're employed and in what capacity and what location?

A. I'm Ted Gawloski. I'm employed by Amoco Production Company for the Houston region. I'm currently working in the New Mexico Operations Group.

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

A. G-A-W-L-O-S-K-I.

MR. NUTTER: Thank you.

Q. All right. Now, would you please give us a brief history of your educational and employment background?

A. Okay. I've got a Bachelor's degree in geology from Baylor University in 1978 and a Master's degree in geology from Baylor University in 1981, and I'm -- I started working for Amoco after my Bachelor's in West Texas Projects Group for one year, and I'm currently working in New Mexico Operations Group for the past six months.

Q. And that's as a petroleum geologist.

A. Yes.

Q. Has the subject of today's hearing been with in your responsibilities?

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2 A. Yes.

3 MS. KRUEGER: Are there any questions
4 concerning this witness' qualifications?

5 MR. NUTTER: Go ahead.

6 Q. Now, you have one exhibit with you today,
7 which has been prepared by you, is that correct?

8 A. That's correct.

9 Q. And this is a multi-faceted exhibit which
10 shows the stratigraphic column, a production map, both of
11 which are on the bottom right, more or less, a stratigraphic
12 cross section, which is the main part of the exhibit across
13 the middle of it, and down at the bottom left, a structure map,
14 is that right?

15 A. Correct.

16 Q. Would you please discuss the features of
17 this exhibit for us?

18 A. In the lower righthand corner we have a
19 stratigraphic column and it's color coded to show the Bone
20 Spring and Wolfcamp stratigraphic horizons. The Bone Spring
21 is purple dots and the Wolfcamp are the orange dots.

22 Q. All right, now you've shown those dots also
23 in your production map with the same color coding, is that
24 right?

25 A. That's correct. The purple dots in the pro-

1
2 duction map correlate to the Bone Springs, are producing wells
3 in the Bone Springs. The orange dots are producing wells in
4 the Wolfcamp.

5 Q And what do the green arrows indicate?

6 A The green arrows indicate the two Amoco
7 wells which are recently completed in the Scharb-Bone Spring
8 Field. The orange arrow indicates the location of the Amoco
9 No. 1 Snyder Ranch, the subject well.

10 Q You have some small red dots indicated there.
11 Would you explain those for us?

12 A The red dots indicate wells which have the
13 upper pay in the Bone Spring.

14 MR. NUTTER: Wait a minute, this
15 map doesn't --

16 MS. KRUEGER: I'm sorry. Did we
17 not put the small red dots on that map?

18 MR. NUTTER: This has got a red dot
19 for your proposed location.

20 MS. KRUEGER: Okay.

21 MR. PEARCE: Then we have a dual
22 colored dot for what I assume will be a dual completion.

23 A The wells in Section 4 and in Section 9 are
24 the ones with the red dots on them.

25 MR. NUTTER: Not on this map.

1
2 A. Okay, well, then those are the --

3 MS. KRUEGER: Well --

4 A. The wells in the Section 4 and 9 are the
5 ones that have the red dots on them.

6 Q. Are all of the wells in Section 4 and Section
7 9 the ones which show the pay zone?

8 A. Yes.

9 Q. So we can say that without having the red
10 dots on them? That was probably just on his map for edifica-
11 tion in his explanation, I'm sorry.

12 All right, and you have a cross section path
13 delineated on the production map, also, is that right?

14 A. This is a northwest/southeast cross section
15 through the south part of the Scharb Field Area, and it encom-
16 passes the Big Six Drilling Company R. L. Jackson No. 2, South-
17 land Royalty Company Scharb 8 No. 1, Southland Royalty Com-
18 pany Scharb 4 No. 1, Southland Royalty Company Scharb 9 No. 1,
19 the Amoco Production Company Elkan No. 1, and Amoco Production
20 Company Elkan No. 2.

21 Q. And that's indicated with the points A-A',
22 is that right?

23 A. A-A' on the production map.

24 Q. All right. Would you please discuss your
25 correlation for us?

1
2 A. Okay. The subject well will be located ap-
3 proximately between the wells, Southland Royalty Scharb 8 No. 1
4 and the Southland Royalty Scharb 4 No. 1, so it's between the
5 second and third wells on the west side of the cross section.

6 The stratigraphic picks I've used from --
7 in descending order are first, top of the 1st Bone Spring Sand.
8 The next two are pay designations that we've named Amoco Pro-
9 duction. They include the top of the Jackson pay zone
10 and the Elkan pay zone, pays within the Bone Spring.

11 The next horizon down is the top of the 2nd
12 Bone Spring Sand.

13 The next zone down is the main Scharb pay
14 zones, which is the main producing interval in the Scharb
15 Field.

16 Below that is the top of the Wolfcamp and
17 immediately beneath that is the top of the Wolfcamp pay zone
18 in this area.

19 Q. All right. Now, Amoco has been permitted
20 to drill in the Wolfcamp. Would you please discuss the poten-
21 tial in the Wolfcamp as shown by this exhibit?

22 A. Okay. The Southland Royalty Scharb 9 No. 1,
23 if you'll go to the very bottom portion of the log, they had
24 two drill stem tests in the Wolfcamp which had significant
25 shows of hydrocarbons in it, and this zone is correlative to

1
2 a recently completed well in Section 4 in the northwest corner
3 of Section 4, the Exxon New Mexico State "PV" No. 2, which
4 has recently potentialed in the Wolfcamp, flowing 406 barrels
5 of oil per day.

6 Q That Exxon well is located fairly closely to
7 the Amoco well, is it not, the one that's been -- that is pre-
8 sently drilling to the Wolfcamp?

9 A That's correct, it's approximately a mile
10 to the north of the subject well.

11 Q All right. Now, with respect -- one other
12 thing. Do you have the drill stem test results --

13 A Yes, the drill stem tests for all the logs
14 and the perforations zone are showing on the righthand side
15 of each of the logs.

16 Q With respect to the Bone Springs, why do
17 you believe it is important to complete to the Bone Springs
18 at the proposed unorthodox location?

19 A Okay. In the subject well, as I said, it's
20 located between the Southland Royalty Scharb 8 No. 1 and the
21 Scharb 4 No. 1. This location would give us a favorable place
22 to pick up some of the Scharb pay zone which is pinching out
23 as we go from west to east.

24 It would also enable us to pick up the upper
25 pay zone, the Elkan pay zone, which is a porous streak in the

1
2 Bone Spring, which we see is -- the porosity is pinching out
3 as we go from east to west.

4 So this location would give us a favorable
5 location for picking up both pays in this area.

6 Q All right, now you have a structure map also
7 on --

8 A The structure map is on the lower lefthand
9 corner and this is a structure map on the top of the 1st Bone
10 Spring Sand, first stratigraphic pick on the logs. The subject
11 well location would put it in that same favorable structural
12 horizon as the two recently completed Amoco wells, the Elkan
13 No. 1 and Elkan No. 2, which are located in Section 9. So we
14 feel that this location would give us a more favorable structur-
15 al horizon.

16 Q You have an orange arrow again indicating
17 the subject well, right?

18 A The orange arrow indicates the subject well,
19 the Amoco No. 1 Snyder Ranch.

20 Q So although Amoco's primary objective is the
21 Wolfcamp, we're seeking permission to complete to the Bone
22 Springs at this time, complete in the Bone Springs at this time,
23 since there's a strong likelihood that the Bone Springs will
24 be productive at this location, is that right?

25 A Yes.

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2 MS. KRUEGER: I'd like to ask that
3 Exhibit Four be admitted into evidence.

4 MR. NUTTER: Exhibit Four will be ad-
5 mitted.

6 MS. KRUEGER: We have no more of
7 direct examination of this witness.

8
9 CROSS EXAMINATION

10 BY MR. NUTTER:

11 Q Mr. Gawloski, what do these numbers on your
12 plat, your production plat down here, the Southland Royalty 9-1,
13 for example, it says 7MBO?

14 A Okay, that's 7000 barrels of oil.

15 Q This is cumulative production from these
16 wells?

17 A To date, cumulative production. This is
18 four months cumulative production.

19 MS. KRUEGER: When you say "this"
20 you're pointing to the bottom of the log of the Scharb No. 9?

21 A Bottom of the logs. This is cumulative
22 production to date that we've gotten.

23 Q So all of these wells around your proposed
24 location have -- must be very recent completions because they're
25 all just --

1

2

A. That's correct.

3

Q. -- small ultimate recoveries so far.

4

A. Most of them are very recent completions.

5

Q. Or cumulative recoveries. Now up here at

6

the top, I guess, the pool as a whole has produced 6.2 million

7

barrels of oil?

8

A. That's correct, and that's as of January --

9

January 1st, 1982.

10

Q. But the Wolfcamp had only made 12,000 barrels,

11

so the Wolfcamp is very new in the area.

12

A. Right, that's correct. The Exxon well is

13

the recently completed well in the area.

14

Q. And how about Southland's Well just immediately

15

or two locations north of your well, is that a Southland well

16

or is that Humble well, or Exxon?

17

A. What section is that?

18

Q. Two locations north of your proposed loca-

19

tion.

20

A. Okay, that --

21

Q. The dual completion?

22

A. That, I believe, is a Southland well, and it

23

had very minor production in the Wolfcamp.

24

Q. Is it a dual completion?

25

A. They completed out of the Wolfcamp and then

1
2 moved up-hole, yes. They didn't encounter much production in
3 the Wolfcamp.

4 Q So did they abandon the Wolfcamp? Recomplete?

5 A As of I know right now, yes, they abandoned
6 the Wolfcamp.

7 Q So really the only production we've got from
8 the Wolfcamp would be those two orange dots up in the northern
9 part of Section 4.

10 A That's correct.

11 Q Now is there a water/oil contact in this
12 pool?

13 A The water/oil contact that we see so far,
14 there's a well in Section 17 that was drill stem tested and it
15 was wet. It was wet in the Bone Spring, so the oil/water con-
16 tact would fall somewhere between the well in Section 17 and
17 the producing wells to the north; it hasn't been quite yet
18 delineated.

19 Q But your wells there in Section 9 have indi-
20 cated no association with the water, is that correct?

21 A That's correct.

22 Q And you think this proposed location is high
23 enough in the -- in the Bone Spring, or on the structure to
24 be out of the water.

25 A In the structure map you can see the -- that

1 the well that was wet was approximately 150 feet or so lower
2 down the structure.

3 Q Well, actually, your location is based more
4 on Bone Spring potential than it is on Wolfcamp, is it not?

5 A Yes.

6 Q And you spudded the well to the Wolfcamp as
7 you had a deadline for drilling and that location was orthodox
8 the Wolfcamp.

9 A Yes, we felt that there was some good shows
10 still within the Wolfcamp in the area. This well, the South-
11 land Royalty Scharb 9 No. 1 is immediately adjacent to the
12 subject well.

13 Q That's the one that's a diagonal location
14 northeast?

15 A That's correct.

16 Q Uh-huh.

17 A And the drill stem test recovered pretty
18 good shows of hydrocarbons in it, and this is the same zone
19 that is producing in the new Exxon well.

20 Q I see. So you will take your well to the
21 Wolfcamp.

22 A That's correct.

23 MR. NUTTER: Are there any further
24 questions of Mr. Gawloski? He may be excused.
25

Do you have anything further, Ms. Krueger?

MS. KRUEGER: No, sir.

MR. NUTTER: Does anyone have anything
they wish to offer in Case Number 7717?

We'll take the case 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 complete record of the proceedings in the Examiner hearing of Case No. 7217, heard by me on 11/10 1982.
[Signature], Examiner
Oil Conservation Division