

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

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

) CASE NO. 13,343

APPLICATION OF ARCH PETROLEUM, INC.,)
FOR A NONSTANDARD GAS SPACING UNIT AND)
AN UNORTHODOX GAS WELL LOCATION IN THE)
JALMAT GAS POOL AND AN UNORTHODOX)
LANGLIE-MATTIX OIL WELL LOCATION,)
LEA COUNTY, NEW MEXICO)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

October 7th, 2004

Santa Fe, New Mexico

2004 OCT 21 AM 10 59

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, October 7th, 2004, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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 CASE NO. 13,343

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A P P E A R A N C E S

FOR THE APPLICANT:

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FOR FULFER OIL AND CATTLE COMPANY:

GALLEGOS LAW FIRM
 460 St. Michael's Drive, #300
 Santa Fe, New Mexico 87505
 By: J.E. GALLEGOS

* * *

1 WHEREUPON, the following proceedings were had at
2 12:06 p.m.:

3 EXAMINER CATANACH: Okay, at this time I'll call
4 Case 13,343, which is the Application of Arch Petroleum,
5 Inc., for a nonstandard gas spacing unit and an unorthodox
6 gas well location in the Jalmat Gas Pool and an unorthodox
7 Langlie-Mattix oil well location, Lea County, New Mexico.

8 Call for appearances in this case.

9 MR. BRUCE: Mr. Examiner, Jim Bruce representing
10 the Applicant. I have two witnesses.

11 MR. GALLEGOS: Mr. Examiner, Gene Gallegos, Santa
12 Fe. I have one witness, and we're representing Fulfer Oil
13 and Cattle Company.

14 EXAMINER CATANACH: Any additional appearances?
15 Okay, will the witnesses please stand to be sworn
16 in?

17 (Thereupon, the witnesses were sworn.)

18 THOMAS LAND,
19 the witness herein, after having been first duly sworn upon
20 his oath, was examined and testified as follows:

21 DIRECT EXAMINATION

22 BY MR. BRUCE:

23 Q. Will you please state your name and city of
24 residence for the record?

25 A. Thomas Land, L-a-n-d, in Midland, Texas.

1 Q. Who do you work for and in what capacity?

2 A. I work for Arch Petroleum as a landman,
3 consultant.

4 Q. Have you previously testified before the
5 Division?

6 A. Yes, sir.

7 Q. And were your credentials as a landman accepted
8 as a matter of record?

9 A. Yes, sir.

10 Q. And are you familiar with the land matters
11 involved in this Application?

12 A. Yes, sir.

13 MR. BRUCE: Mr. Examiner, I tender Mr. Land as an
14 expert petroleum landman.

15 EXAMINER CATANACH: Any objection?

16 MR. GALLEGOS: No objection.

17 EXAMINER CATANACH: Mr. Land is so qualified.

18 Q. (By Mr. Bruce) Mr. Land, could you identify
19 Exhibit 1 for the Examiner?

20 A. Exhibit 1 is a land plat showing Arch's Kelly
21 State Lease, which is the southwest quarter of 16.

22 Q. That is all one State Lease, is it not?

23 A. Yes, sir.

24 Q. Okay. What well is involved in this hearing?

25 A. The Kelly State Number 5 was proposed.

1 Q. What is the footage location of that well?

2 A. It's located 1910 from the south and -- The
3 footage location?

4 Q. Yeah.

5 A. For the Number 5?

6 Q. For the Number 5 well? You said 1910 --

7 A. -- from the south line and 1230 from the west.

8 Q. 910 from the west?

9 A. I'm sorry, I'm sorry, yes, 910 feet.

10 Q. Okay. So 910 feet from the south line, and
11 what's the footage from the west line?

12 A. 1230, one thousand two hundred and thirty feet.

13 Q. Okay. So that would be in the southwest quarter,
14 southwest quarter, of the section?

15 A. Yes, sir.

16 Q. What zones is that well proposed to test?

17 A. Langlie-Mattix, it's a proposed Langlie-mattix
18 test with a possible Jalmat backup.

19 Q. Okay. What is the well spacing for Langlie-
20 Mattix?

21 A. 40-acre oil.

22 Q. Okay. And for the Jalmat -- You anticipate this
23 would be a Jalmat gas well; is that correct? Or at least
24 the geologist anticipates that?

25 A. They anticipate a possible pay zone.

1 Q. Okay. What is the normal -- or the spacing for
2 Jalmat?

3 A. 640 acres, statewide.

4 Q. Okay, and the pool rules do allow you to apply
5 for a nonstandard unit?

6 A. Yes, sir.

7 Q. The southwest quarter of Section 16 is owned by
8 Arch?

9 A. Yes, sir.

10 Q. And is Exhibit 2 a copy of the assignment by
11 which Arch acquired its interest in the southwest quarter?

12 A. Yes, sir.

13 Q. Is the southwest quarter a -- at least as to the
14 depths you're looking at -- It is a single state lease, is
15 it not?

16 A. Yes, sir.

17 Q. State of New Mexico lease?

18 A. (Nods)

19 Q. And interest ownership is uniform from the
20 surface --

21 A. -- to 3800.

22 Q. -- to 3800 feet?

23 And 3800 feet would include the Langlie-Mattix,
24 would it not?

25 A. Yes, sir.

1 Q. Now, there are already -- looking at Exhibit 1,
2 there's a number of wells out there, but some of them are
3 deeper wells in which Arch owns no interest; is that
4 correct?

5 A. Arch owns an interest, small interest, but they
6 don't operate.

7 Q. Okay, in the deeper zones?

8 A. In the deeper zones.

9 Q. And we're not concerned today with the deeper
10 zones?

11 A. No, no.

12 Q. What wells are there currently, Arch-operated
13 wells, on the southwest quarter of Section 16?

14 A. You've got the Kelly State 1, 2, 3 and 4.

15 Q. Okay.

16 A. And of course the 3 is a disposal well.

17 Q. Okay, the Kelly State Number 3 well is in the
18 southwest quarter, southwest quarter?

19 A. Yeah, it's located 660 out of the south and west.

20 Q. That well was a Langlie-Mattix well, I believe?

21 A. I believe it was.

22 Q. And now it's a saltwater disposal well?

23 A. Yes, sir.

24 Q. The Kelly State 1, 3 and 4 are -- they were
25 drilled as Langlie-Mattix wells?

1 A. I believe so. I know they're classified as
2 Langlie-Mattix now.

3 Q. Okay, and I'll ask some questions of the
4 geologist of that.

5 A. Okay.

6 Q. As part of this Application, Mr. Land -- Well,
7 let's take a step back. The footage location is 910 and
8 1230. The Kelly State Number 5 well, the one we're here
9 for today, originally had a different location, did it not?

10 A. Yes, sir, I believe it was 1310-1310.

11 Q. From the south and the west?

12 A. The south and the west.

13 Q. And it was moved for topographic reasons?

14 A. Yeah, it was moved for surface problems with
15 existing pipelines and road.

16 Q. Okay. So in order to avoid those problems, the
17 well location --

18 A. Right, it was a surface situation, strictly.

19 Q. Now, as part of this case we had to notify
20 certain offsets. Does Exhibit 3 list the offset operators
21 or interest owners?

22 A. Yes, sir.

23 Q. Okay. And was notice given to all of those
24 persons as required by Division Rules?

25 A. Yes, sir.

1 Q. And is the affidavit of notice submitted as
2 Exhibit 4?

3 A. Yes, sir.

4 MR. BRUCE: And Mr. Examiner, notice has been
5 published in the Lea County -- Exhibit 5 is simply a notice
6 of the -- that was submitted to the newspaper for
7 publication.

8 I have not received the affidavit of publication
9 back from the Lea County newspaper. I'd ask permission to
10 submit that after the hearing. But this is what was e-
11 mailed down to the newspaper.

12 EXAMINER CATANACH: Do you know when that was
13 published, Mr. Bruce?

14 MR. BRUCE: It was a couple of weeks ago. I
15 can't remember the exact date.

16 EXAMINER CATANACH: Okay.

17 Q. (By Mr. Bruce) Really just one final question,
18 Mr. Land.

19 Although the spacing is 640 acres, is it Arch's
20 intent just to develop, at least as to the Jalmat, just on
21 a lease basis?

22 A. Yes, sir.

23 MR. GALLEGOS: On a what?

24 MR. BRUCE: On a lease basis.

25 THE WITNESS: Yes, sir.

1 Q. (By Mr. Bruce) And Arch controls 160 acres, and
2 it would rather develop it on that basis rather than
3 seeking to form a 640-acre unit?

4 A. Yes, sir.

5 Q. And the interest owners offsetting Arch have been
6 notified of this Application?

7 A. Yes, sir.

8 Q. Were Exhibits 1 through 5 prepared by you or
9 under your supervision or compiled from company business
10 records?

11 A. Yes, sir.

12 Q. And in your opinion is the granting of Arch's
13 Application in the interests of conservation and the
14 prevention of waste?

15 A. Yes, sir.

16 MR. BRUCE: Mr. Examiner, I'd move the admission
17 of Exhibits 1 through 5, with the provision that the
18 Exhibit 5 would be later substituted by the actual
19 affidavit of publication.

20 EXAMINER CATANACH: Any objection?

21 MR. GALLEGOS: No objection.

22 EXAMINER CATANACH: Exhibits 1 through 5 will be
23 admitted.

24 MR. BRUCE: Pass the witness.

25 EXAMINER CATANACH: Mr. Gallegos?

CROSS-EXAMINATION

BY MR. GALLEGOS:

Q. Mr. Land, does Arch hold any other acreage in Section 16, other than the state lease in the southwest quarter?

A. No, sir.

Q. Okay. Does it hold acreage in any adjoining, offsetting, adjacent sections?

A. Yeah. Yes, sir.

Q. Would you describe for the Examiner what that situation is?

A. There's acreage in Section 21 in the northwest quarter, actually in the north half of Section 21. In Section 20 they have acreage in the southeast quarter, as well as the northeast-southwest. And parts of Section 21 in the south half. But they do not have any interest to the north of there.

Q. Wait a minute, I'm confused. I thought you said they had the north half of Section 21?

A. Yeah, but nothing north of the Kelly State in 16. I mean the proposed Kelly State Number 5.

Q. Your testimony was that the objective was to test the Langlie-Mattix, and I quote, with the Jalmat as backup. What does that mean?

A. Well, when these -- originally when Arch started

1 drilling out here, there was no Jalmat that far west. And
2 now there's a possibility the Jalmat might produce, and so
3 we're just making sure we've got the right permits before
4 we drill the well.

5 Q. Well, are you drilling a well that will be a
6 Jalmat gas well?

7 A. It's possible, it's a possible backup. Right now
8 it depends on the Langlie-Mattix, whether it's productive
9 or not. We're trying to recoup reserves, Langlie-Mattix
10 reserves, and it just depends on how it's going to perform.
11 I mean, that's my understanding. Glenn would know more
12 about that.

13 Q. But the objective here is to drill a well to test
14 the Langlie-Mattix --

15 A. Yes, sir.

16 Q. -- formation; is that correct?

17 A. Yes, sir.

18 Q. And if the Langlie-Mattix is commercial, that's
19 it, correct? The well will be completed and produced from
20 the Langlie-Mattix?

21 A. As far as I know. I mean, that's a management
22 call -- not management, but a commercial well under that
23 situation, that's what I've been -- that's my
24 understanding.

25 Q. Let's have some information concerning about the

1 surface obstacles, Mr. Land. The well was originally
2 located in what I would have called just about the center
3 of that quarter section; is that correct? That was the
4 original location?

5 A. I don't think so.

6 Q. 1310, 1310?

7 A. I don't think it's the center of a quarter-
8 quarter. It's toward the center of the south --

9 Q. Well, not the exact center, but it's very close
10 to the center of the quarter-quarter?

11 A. No, it would be closer to the center of the
12 quarter section.

13 Q. That's what I meant to say.

14 A. Yes, sir.

15 Q. Close to the center of the southwest quarter?

16 A. Right, right.

17 Q. All right.

18 A. And basically away -- as far away from the other
19 producing wellbores as we could have got.

20 Q. And the situation is, in that southwest quarter,
21 essentially you had a Kelly State existing well, and each
22 quarter-quarter of that southwest quarter?

23 A. Yes, sir, that's my understanding.

24 Q. Basically in the center of each quarter-quarter
25 of the southwest quarter?

1 A. I don't know the exact footage, I know -- I'd
2 have to go look at the footage on all of them, but they
3 were basically in the center of the quarter-quarters.

4 Q. All right. So you had this pattern of the four
5 wells, and then the original location on what was submitted
6 to the Division would be to put the Kelly State Number 5
7 basically in the center of those four wells?

8 A. Yeah, away from the producing wellbores, as far
9 as we could get. That's my understanding in the
10 conversation.

11 Q. Okay. Well in fact, one of them, the Kelly State
12 Number 3, is not a producing well, is it?

13 A. No, it's a -- It used to be, but -- I'll let
14 Glenn handle that --

15 Q. Okay.

16 A. -- but I believe it used to be a Langlie -- I
17 think it produced from the Langlie-Mattix.

18 Q. Okay, well, you're not prepared to testify to the
19 geology or engineering issues, are you?

20 A. Oh, no.

21 Q. But you can testify about the surface obstacles
22 that you mentioned in your direct testimony?

23 A. Yes, sir.

24 Q. Do you have any kind of map, photographs or
25 anything else that will indicate where these surface

1 improvements are, facilities?

2 MR. BRUCE: Mr. Gallegos, I only have one copy of
3 this, but I can show you what was attached, part of the APD
4 for the well. I only have one copy, Mr. Examiner. If we
5 need to make more, we can.

6 Q. (By Mr. Gallegos) Okay, if I can have just a
7 minute to look at this.

8 You're familiar with what has just been handed to
9 me by your counsel, Mr. Bruce, are you not, Mr. Land?

10 A. Yes.

11 Q. And does this purport to show the entire Section
12 16?

13 A. No, I thought it was just a quarter section. I
14 thought that's the southwest quarter. I don't have it in
15 front of me.

16 That's the southwest quarter.

17 MR. GALLEGOS: Okay.

18 MR. BRUCE: Mr. Examiner, if I could, this is a
19 copy of what Mr. Gallegos is looking at.

20 MR. GALLEGOS: Oh, good, good.

21 EXAMINER CATANACH: Thank you.

22 Q. (By Mr. Gallegos) And now the Examiner has a
23 copy of what we're looking at. Are you familiar enough
24 with it that you don't need to --

25 A. Without it in front of me?

1 Q. Without it in front of you?

2 A. No, no, all I know is that there's roads, there's
3 pipelines, there's tank batteries.

4 MR. GALLEGOS: Well, may I approach the
5 witness --

6 EXAMINER CATANACH: Certainly.

7 MR. GALLEGOS: -- since he doesn't have copies of
8 this.

9 Q. (By Mr. Gallegos) It appears to me from this
10 diagram that the location of the Kelly State Number 5 is
11 the dot basically fairly in the center of the -- what you
12 said is the southwest quarter?

13 A. Yeah, I believe this was the original location
14 here, which was a 1310-1310, I believe I'm pointing at.

15 MR. GALLEGOS: Okay. Mr. Examiner, the witness
16 is pointing at the black dot at the end of a line that
17 looks like it's -- it's a little hard to describe. It's in
18 the upper half of the drawing, and it's at the end of a
19 line. He was pointing to that dot right there.

20 THE WITNESS: Yeah, I think that's it. It's not
21 located, but I think -- I believe that this is the new
22 location, after it was moved. I wasn't party to making the
23 schematic, but that is my understanding of the situation
24 out there.

25 Q. (By Mr. Gallegos) Okay. Well, what you just

1 pointed out, the original location was well in the north
2 half of that southwest quarter, and now you're saying that
3 the present location that you've pointed to would be
4 basically right in the center of the southwest quarter.

5 MR. BRUCE: I would object, only to the fact that
6 he testified as to the original 1310-1310 location. He's
7 not sure what that black dot is.

8 THE WITNESS: I wasn't party to the survey. I
9 mean, that --

10 Q. (By Mr. Gallegos) Well, so you don't really
11 have --

12 A. Well, I know there was --

13 Q. -- any personal knowledge of why the well
14 location --

15 A. I was told by my operation there were pipelines
16 and roads and tank batteries in place, they had to move it
17 to where they can build their location properly.

18 Q. Which moved it further to the west and further to
19 the south?

20 A. If the footage holds, yes, sir. I mean, whatever
21 the footage calls are is what we're with.

22 Q. Okay, so just based on -- So your testimony as to
23 the reason for the footage is essentially hearsay you
24 received from somebody else?

25 A. Well, no, there were surface obstacles that were

1 the reason for the movement of it, but --

2 Q. But that, Mr. Land --

3 A. -- I mean, define hearsay. I mean, I wasn't on
4 the ground, I wasn't physically there, no, sir.

5 Q. You're repeating what somebody else told you who
6 was not here in the hearing room and not under oath?

7 A. Our operations, head of our operations.

8 Q. Let's take a look at Exhibit Number 5 for a
9 moment, Mr. Land. Do you have that before you?

10 A. Yes, sir.

11 Q. That notice reads as follows, and I'm reading
12 with the sentence that begins "Applicant..." Are you with
13 me?

14 A. Uh-huh.

15 Q. "Applicant also requests approval to complete the
16 well in the Langlie-Mattix (Seven Rivers-Queen-Grayburg)
17 Pool within a standard 40 acre spacing and proration unit
18 comprising the SW1/4SW1/4 of Section 16 at an unorthodox
19 oil well location therein." End quote.

20 Is that what the notice states?

21 A. That's the way it reads, yes, sir.

22 Q. It does not give notice that a Jalmat gas well
23 will be completed, dedicated to 160 acres of the southwest
24 quarter, does it?

25 A. I thought the second sentence in there, "has

1 applied to New Mexico...to establish a 160 acre non-
2 standard gas spacing unit in the Jalmat..."

3 Q. But it doesn't --

4 A. Seems like it states both, just reading it.

5 Q. But it doesn't give notice that there's going to
6 be a Jalmat gas well; it just says you want to complete a
7 well in the Langlie-Mattix.

8 A. That was our -- that's the original intent of
9 drilling the well.

10 Q. Are you talking now in terms of a dual
11 completion?

12 A. Not that I'm aware of.

13 Q. Okay, so it's a Langlie-Mattix oil well, is what
14 you're really asking -- if there's an order issued by this
15 Division in approval of your Application, it would be to
16 complete a well in the Langlie-Mattix?

17 MR. BRUCE: Mr. Examiner, I'd object, and I'd
18 request Mr. Land not to answer that. The Application and
19 this advertisement is what Mr. Stogner wrote, it mirrors
20 what Mr. Stogner wrote. The Application is for Langlie-
21 Mattix and Jalmat both. It's clear in this Application and
22 this advertisement, and that's what Arch is requesting.
23 They're requesting approval of both.

24 EXAMINER CATANACH: It appears this notice is
25 sufficient. It does say that they're trying to form a

1 gas -- "160-acre nonstandard gas spacing unit in the Jalmat
2 Gas Pool..." This "unit is to be dedicated to applicant's
3 Kelly State Well No. 5, to be drilled at an unorthodox gas
4 well location..."

5 It appears to me that this is clear, Mr.
6 Gallegos.

7 MR. GALLEGOS: All right. No further questions.

8 EXAMINER CATANACH: I don't believe I have any
9 questions of this witness.

10 MR. BRUCE: Call Mr. Curry to the stand.

11 GLENN H. CURRY,
12 the witness herein, after having been first duly sworn upon
13 his oath, was examined and testified as follows:

14 DIRECT EXAMINATION

15 BY MR. BRUCE:

16 Q. Would you please state your name for the record?

17 A. Glenn Curry.

18 Q. Where do you reside?

19 A. Midland, Texas.

20 Q. Does "Glenn" have two n's in it?

21 A. Yes, sir.

22 Q. And "Curry" is C-u-r-r-y?

23 A. That is correct.

24 Q. Okay. What is your -- Who do you work for and in
25 what capacity?

1 A. I'm a geologist with Arch Petroleum.

2 Q. Have you previously testified before the
3 Division?

4 A. Yes, sir.

5 Q. And were your credentials as an expert petroleum
6 geologist accepted as a matter of record?

7 A. Yes, sir, they were.

8 Q. And are you familiar with the geology involved in
9 this Application?

10 A. Yes, I am.

11 MR. BRUCE: Mr. Examiner, I'd tender Mr. Curry as
12 an expert petroleum geologist.

13 EXAMINER CATANACH: Any objection?

14 MR. GALLEGOS: No objection.

15 EXAMINER CATANACH: Mr. Curry is so qualified.

16 Q. (By Mr. Bruce) Now, Mr. Curry, does this
17 proposed Kelly State Well Number 5 have two objectives?

18 A. Yes, it does, it has two objectives.

19 Q. And what are they?

20 A. The primary objective is the Langlie-Mattix, the
21 secondary objective is the Jalmat gas.

22 Q. Now, Arch has had acreage out here for several
23 years, has it not?

24 A. Yes, sir, it has.

25 Q. Although it recently acquired, sometime early

1 this year, this particular quarter section of land?

2 A. That's correct.

3 Q. When Arch was looking -- And it has acquired
4 other interests in this area, has it not?

5 A. Yes, sir.

6 Q. Recently?

7 A. Yes, sir.

8 Q. When it was out developing this prospect, was it
9 a Langlie-Mattix prospect?

10 A. The original concept for my acreage acquisitions
11 in this area of Teague field was to develop the Langlie-
12 Mattix, and that's the objective I used to justify buying
13 the acreage.

14 Q. Okay.

15 A. It was only after drilling a few wells that we
16 noticed there was potential in the Jalmat.

17 Q. Okay. Well, let's go first to the Langlie-
18 Mattix, and that is your Exhibit 7, so we're skipping from
19 Exhibit 6 to Exhibit 7.

20 A. Exhibit 7, okay.

21 Q. What does this map show?

22 A. Okay, Exhibit 7 is a cross-section with four
23 wells. Those happen to be the Kelly State Number 1, 2, 3
24 and 4. Arch Petroleum purchased these wells and operate
25 them. On the map, the Kelly State index map, I have a blue

1 square drawn around the Kelly State lease, which is 160
2 acres located in the southwest of Section 16. On the
3 cross-section you can see a line connecting those four
4 wells.

5 On the Kelly State Number 3 well I have a
6 triangle drawn around the well, which indicates it's -- I
7 call it an injection/disposal well in the Queen. It's an
8 active disposal well.

9 And then the other three wells are active
10 producers.

11 Q. There's a production spreadsheet at the bottom.
12 Would you just briefly go over that insofar as it concerns
13 the Kelly State Number 5?

14 A. Yes, sir, this spreadsheet was generated from --
15 well, it shows the four wells we operate in the upper
16 portion. It's got a heading, shallow lease. That's the
17 shallow lease that we operate.

18 The portion below that is called deep leases,
19 which we have an interest in but we don't operate. So I
20 was trying to distinguish the deeper wells from the shallow
21 wells.

22 So on that -- I'll concentrate on the shallow
23 lease, which is the Kelly State lease, and it shows the
24 current completion. I've got perfs and TD and first and
25 last production and the cumulative production and the

1 current daily rates. As you can see, it's not a very good
2 lease. We're making -- on the Kelly State lease we're
3 making 4 barrels of oil and 6 MCF a day and one hundred and
4 -- well, maybe 200 barrels of water.

5 Q. So you need to increase production from the
6 lease?

7 A. I certainly didn't buy it for the production. I
8 bought the lease for the upside, which I believe is in the
9 Langlie-Mattix and the Jalmat, ultimately.

10 Q. Now, by the location of this well, what is the
11 purpose of placing the well in the center of the four
12 existing Kelly State wells?

13 A. Okay, I originally placed the well at 1310 from
14 south and 1310 from west of the section lines in order to
15 get as far away from my existing Langlie-Mattix producers
16 as possible. My intent is to drill a well in a 20-acre
17 infill position to test to see if there's any uncaptured
18 reserves in the Langlie-Mattix. This has been done several
19 miles to the north, successfully.

20 So what I intended to do is drill a well as far
21 away from those original four Queen wells, to see if
22 there's some undrained reserves and to see if it is
23 economic or commercial. So that was my original intent in
24 locating the well 1310-1310.

25 However, when our production superintendent and

1 surveyor were out there they said, We don't have enough
2 room to build our pad without interfering with the road and
3 the pipeline. So they said we could move it south and
4 west.

5 And so I said, Okay, that will be fine. I just
6 want it as far away as I can from the original Queen
7 producers.

8 Q. Okay.

9 A. So that's how the location was moved to the
10 current location that we're applying for.

11 Q. And based on the other wells and the production
12 and the production to date, you believe that this well is
13 justified as an unorthodox location in the Langlie-Mattix?

14 A. I believe we got approval for that in the
15 Langlie-Mattix.

16 Q. Earlier on?

17 A. Early on.

18 MR. BRUCE: Mr. Examiner, I think it was approved
19 at a 1310-1310 location, but --

20 THE WITNESS: Oh, okay --

21 MR. BRUCE: -- it hasn't been approved at --

22 THE WITNESS: -- so today we're asking for the
23 new one.

24 MR. BRUCE: At the new location.

25 EXAMINER CATANACH: The Division approved it, Mr.

1 Bruce?

2 MR. BRUCE: Yes.

3 THE WITNESS: Okay, is that clear?

4 Q. (By Mr. Bruce) But the well -- but you believe
5 an unorthodox location in the Langlie-Mattix is justified
6 in order to recover unswept reserves which you hope to
7 find?

8 A. Well, sir, I wouldn't want my well to be
9 completed very close to those four existing producers,
10 because I think they'd be too close to the drainage radius
11 of those wells. What I'm trying to test is, has this 160
12 acres been drained with four wells?

13 There's areas to the north, between here and
14 Eunice, where they have drilled some 20-acre infills and
15 had success. I'm trying to -- always trying to expand what
16 we've got here. And if I could prove that successful, that
17 would help me buy other stripper production up there that I
18 could then infill drill maybe do some good.

19 Q. And a couple of these Langlie-Mattix wells did
20 have substantial production, did they not? 50,000-plus
21 barrels of oil?

22 A. Well, they're commercial at current prices,
23 that's for sure. I think the average -- If you look at the
24 spreadsheet I've got white and yellow there. All four
25 wells totaled 154 MBO, so that's about 50,000 barrels per

1 well. I don't know if I can expect that on a 20-acre
2 infill. It would probably be something less than that.

3 Q. Okay, I forgot to ask you this before, but the
4 Kelly State 1 through 4, what is the vintage of those
5 wells?

6 A. Okay, I have on that spreadsheet the date of
7 first production. If you read down there, Number 1 is
8 1956, Number 2 is 1956, 3 is 1956, Number 3 convert to
9 injection was 1988, and the Number 4 was 1956.

10 Q. Okay, so there's really been no development in
11 the Langlie-Mattix in this area -- or on this lease, in
12 what, 40 years or so?

13 A. It's an old lease, yes, sir, that's right.

14 Q. Next let's move on to the Jalmat --

15 A. Okay.

16 Q. -- and let's refer to your Exhibit 6.

17 EXAMINER CATANACH: Jim, hang on a second.

18 (Off the record)

19 EXAMINER CATANACH: Go ahead.

20 Q. (By Mr. Bruce) Okay Mr. Curry, another objective
21 is the Jalmat?

22 A. Yes, sir.

23 Q. Now, Exhibit 6 shows in yellow Arch acreage.
24 Actually it's -- On the plat it's listed as Pogo acreage.
25 It's actually owned by Arch Petroleum, is it not?

1 A. It's Arch Petroleum, and Pogo owns Arch, though.

2 Q. Yeah.

3 A. I just made a --

4 Q. It's a typo.

5 A. -- typo on there.

6 Q. Now, some of this acreage -- and we haven't
7 broken it down -- has been owned or operated by Arch for a
8 number of years, has it not?

9 A. Yes, sir, I believe Arch purchased it from
10 Chevron, early 1990s.

11 Q. Early 1990s.

12 A. Yes, sir.

13 Q. Now, when -- Secondly, the location map on the
14 left shows a number of blue dots. Are those Jalmat wells?

15 A. Yes, sir, those are Jalmat completions. And in
16 green and red numbers to the right of each spot is a
17 cumulative production. That's based on public data.

18 Q. Okay, green is oil and red is gas?

19 A. That's correct, and the -- oil is in 1000 barrels
20 of oil and the gas is in MCF.

21 Q. Okay. Now, when -- And you've worked at Arch for
22 several years, have you not?

23 A. I've worked at Arch since 1986 or -7.

24 Q. Okay. Before this acreage was acquired from --
25 You were there at the time this acreage was acquired?

1 A. That's right, I was there when we acquired the
2 Chevron acquisition.

3 Q. Okay. When the Chevron acreage was acquired,
4 were there any Jalmat wells on this yellow acreage?

5 A. No, sir.

6 Q. Had the Jalmat ever been tested, to your
7 knowledge, or logged for that matter?

8 A. Well, yes.

9 Q. But you didn't have any -- When the acreage was
10 purchased, there were no Jalmat tests on this acreage?

11 A. I don't recall any tests, although I've found one
12 recently.

13 Q. And we'll get to that.

14 A. We'll get to that.

15 Q. Now, how did the Jalmat -- and I notice that down
16 in Section 28 there are now three Jalmat wells on the north
17 half of Section 28. Those are Arch-operated, are they not?

18 A. That's correct.

19 Q. How did you become interested in developing the
20 Jalmat on this acreage, on Arch's acreage?

21 A. Well, I wasn't. I was interested in developing
22 the Langlie-Mattix. I drilled Number 78, which is in the
23 northwest northwest of Section 28, and -- I always like to
24 run a mudlogger on my drilling wells, and when I drilled
25 through the Jalmat I got very good gas rates, and then I

1 got gas shows in the Langlie-Mattix.

2 So we completed the well in the Langlie-Mattix as
3 an oil producer, and at a later time we plugged back to the
4 Jalmat, and it was a commercial well. And as gas prices
5 continued to increase, it became more of an objective for
6 me.

7 Q. There are a number of old wells on this yellow-
8 shaded acreage, are there not?

9 A. Yes, sir.

10 Q. Did they have mud logs?

11 A. Very few mud logs. I think there's only on that
12 Gulf ran back in the 1960s. There were no other mud logs.

13 Q. Okay. So since that 78 was recompleted to the
14 Jalmat, Arch has been out here looking at developing wells,
15 Jalmat gas wells, by recompletion or new drills?

16 A. Right, we've -- since we've owned the property,
17 we've drilled 12 McKee wells, we've drilled probably a
18 dozen or more Blinebry wells and Tubb wells. We've done a
19 lot of infill drilling.

20 And in so doing, I've tried to run mud logs and
21 evaluate the shallower pays.

22 Q. Okay. But if additional Jalmat wells are
23 completed on the Arch acreage, you are extending the
24 boundaries of the Jalmat Gas Pool, are you not?

25 A. Yes, sir, if you look at that map, there's a --

1 you could draw a line from the middle of 17, middle of 20
2 and the middle of 29. That was the limit of production in
3 the Jalmat prior to the recent work. That was the eastern
4 limit of the Jalmat gas --

5 Q. Okay.

6 A. -- say five years ago.

7 Q. And then when you drilled the Number 78, which
8 was a new well a year or two ago --

9 A. It was a new well, but it was drilled as an
10 infill Langlie-Mattix, on an undrilled 40 in the Langlie-
11 Mattix.

12 Q. And when you saw the Jalmat, that encouraged Arch
13 to seek further development of the Jalmat?

14 A. Not initially. We knew we had a show. We knew
15 we completed later, and we -- as the gas prices got up we
16 got more interested in it. The Langlie-Mattix was dropping
17 off a little, so we tried it.

18 Q. Okay. And looking at this map, Arch does have
19 pending applications before the Division over in the
20 southeast quarter of Section 21 for the Number 1 well to be
21 a Jalmat producer, does it not?

22 A. Yes, sir, I don't have it highlighted on the map,
23 but yes we do have an application to plug back a well to
24 the Jalmat.

25 Q. And in Section 21 in the northwest quarter, I

1 think for the Number 2 well, Arch has also requested
2 permission to complete that well in the Jalmat --

3 A. Yes, sir.

4 Q. -- has it not?

5 A. Yes, sir.

6 Q. Okay. Approval has not yet been granted, has it?

7 A. No, sir.

8 Q. And Fulfer has objected to those wells also, has
9 it not?

10 A. I'm not --

11 Q. In the prior hearing?

12 A. Yes, that's right.

13 Q. What --

14 A. Well, you left one out.

15 Q. I don't remember them all. Go ahead.

16 A. There's another well that -- We drilled a new
17 well in the northwest of the northeast of Section 20, we
18 drilled it just to penetrate --

19 Q. Well, that's the one I was mentioning, actually,
20 the first one I mentioned.

21 A. Oh, it was?

22 Q. Yeah.

23 A. Excuse me.

24 Q. Yeah, the Number 1 well in the northwest.

25 A. That well is drilled and cased, but it has not

1 been completed. There's no perms in the wellbore. It's
2 drilled and cased, cemented and waiting for approval to
3 complete as a Jalmat well.

4 Q. Okay. Now, what -- You're seeking a 160-acre
5 unit. From what you've seen on a geologic basis, do you
6 need more than -- is one well per 160-acre an appropriate
7 Jalmat spacing in this area?

8 A. 160 acres? Yes, I think it's --

9 Q. The pool rules do allow one well per 160 acres?

10 A. I know there's a lot of precedent for that in the
11 field. There's many, many wells that are on 160, that are
12 approved administratively or at hearing, you know.

13 Q. As a matter of fact, over to the west there's
14 sections with 4, 5, 6 wells there, are there not?

15 A. Right.

16 Q. What about the reservoir, the Jalmat reservoir,
17 as you go from west to east? Does it get better, does it
18 get worse?

19 A. Okay, the way I understand the geology, from what
20 I've seen, when you move out just a mile or a mile and a
21 half from Section 20 your Yates and Seven Rivers has quite
22 a bit of sand and dolomite and has pretty good reservoir
23 quality, higher porosities and perms.

24 And as you move up onto the shelf environment,
25 right there in Section 20 and 21, you lose -- the majority

1 of the sand is gone, your facies is changing from a sand
2 into a dolomite, and eventually into an anhydrite,
3 evaporitic environment.

4 So your reservoir is becoming more and more
5 limited as you move updip. Let me say it this way: Your
6 net pay and -- Your net pay is declining as you go updip,
7 and your porosity and permeability are declining as you go
8 generally to the east, which is an updip direction or a
9 back-reef direction.

10 Q. Okay. And again, in the Kelly State Number 5 you
11 desire to test the Langlie-Mattix?

12 A. Yes, sir.

13 Q. And does it make sense to use that same wellbore
14 to test the Jalmat?

15 A. Well, yes, sir, for one reason. I have to have a
16 good fracture treatment, and I need a new wellbore.

17 Q. Those --

18 A. 1950s --

19 Q. -- 50-year-old wellbores aren't adequate in your
20 mind?

21 A. Well, I'd prefer to have a good wellbore, and I
22 have a reason to drill a wellbore for the Langlie-Mattix
23 anyway, so I would rather test the potential of that lease
24 in a new wellbore with the right perforations and adequate
25 stimulation.

1 Q. Okay.

2 A. I think you'll get a better evaluation of the --

3 Q. Okay.

4 A. -- and ultimately more recovery that way, because
5 I think the frac job is very critical.

6 Q. Just a couple of final things, Mr. Curry. Is
7 Exhibit 8 simply a write-up, a summary of some of your
8 testimony here today?

9 A. Yes, sir, it is.

10 Q. There's one other matter, and I think it involves
11 the Number 4 well, the Kelly State Number 4?

12 A. Yes, sir.

13 Q. Now, Arch purchased this lease as to these
14 particular depths, Langlie-Mattix and Jalmat, early this
15 year. Have you looked at the well files that you acquired
16 from the prior operator with respect to these wells?

17 A. Yes, sir, I have.

18 Q. What did you recently notice regarding the Number
19 4 well?

20 A. Okay, the Kelly State Number 4 --

21 Q. Which is in the southeast of the southwest,
22 correct?

23 A. Right, yeah. And I'll refer you to Exhibit 7,
24 which is also cross-section B-B'. Okay, if you'll notice
25 on the second well from the right, which is the Kelly State

1 Number 4, I have a red column showing perforations in the
2 Jalmat.

3 Q. Was this ever reported to the Division by the
4 prior operator or operators?

5 A. I never could find any reference of a permit or a
6 completion form for that particular completion, you know,
7 in the public record.

8 Q. In the public records?

9 A. Right, when I bought it --

10 Q. You found it in internal well files?

11 A. I found it in the operated well files that we
12 received after purchasing the property. It was perforated
13 in 1967.

14 Q. Okay, and what does Exhibit 9 show? Why don't
15 you explain what that shows with respect to that Kelly
16 State Well Number 4?

17 A. What is that? Okay. Okay, when I discovered
18 that Kelly State Number 4 had been perforated in the
19 Jalmat, I wanted to know, was it successful? So Exhibit 9
20 is a completion plot of that well. Of course it is labeled
21 Seven Rivers-Grayburg-Langlie Mattix.

22 And I looked at the production rates there and --
23 The initial date on that plot is 1970, which is what the
24 published data begins at. So I went back to the library on
25 page 2, I made a Xerox copy of the Langlie-Mattix

1 production in 1966, and I underlined the Number 4 well. I
2 guess you could say the average is about 500 to 600 MCF per
3 month.

4 Q. And that's about a third of the way down the
5 page?

6 A. Yes, sir --

7 Q. It shows --

8 A. -- you can see --

9 Q. -- Resler and Sheldon as the operator?

10 A. I drew a pencil line under it right there --

11 Q. Okay.

12 A. -- so the values pertaining to the gas production
13 are immediately above that pencil line.

14 Q. Okay.

15 A. Then -- That's in 1966. Then in 1967, if you
16 turn the page, I've got an arrow drawn in February. That's
17 the approximate date of perforation.

18 Q. February of 1967?

19 A. Right. And so if you look at January and
20 February it's 516, 555, then March goes up to 635, and then
21 in April it goes up to 937. And these are monthly volumes,
22 the 966 -- So it had a small increase in gas for one, two,
23 three months, and then at the end of the year you're back
24 down to 500 and 600 MCF.

25 So that is the extent of my study of the

1 reservoir. I just looked at that and said well, it doesn't
2 look like it was successful. It did contribute some gas to
3 the production. I don't have detailed information, I have
4 -- I read in the report that they perforated it, so I made
5 note of it, and I'm disclosing it now. I was unaware of
6 this at the time I purchased the property, but I discovered
7 it in the operated well files.

8 Q. A couple of issues. First of all, what does Arch
9 propose -- what would you propose to do with respect to
10 these Jalmat perforations in the Kelly State Number 4?

11 A. Well, before we -- before Arch completes a Jalmat
12 well in this 160-acre tract, we'd have to squeeze those
13 perfs and abandon that completion in the Jalmat.

14 Q. Okay.

15 A. I considered using that well as my workover
16 candidate, but it has too many holes in it. They
17 perforated it with 50 or 60 holes, and I can't get a good
18 frac job that way.

19 Q. So it's better to test the Jalmat in a new
20 wellbore?

21 A. It's better to test it in a new wellbore with
22 good cement, so you can get a big frac. You need a big
23 frac.

24 Q. And since you're already seeking an unorthodox
25 location that's necessary in the Langlie, you request an

1 unorthodox location in the Jalmat also?

2 A. Yes, sir. I placed the well for Langlie-Mattix,
3 and that's where the wellbore is. It also is a legal
4 location for a gas well, right? A legal spacing in other
5 words. It's not closer than 660 to the lease line.

6 Q. It's not unorthodox toward an exterior interest
7 owner, is what you're saying?

8 A. Right, right, to a lease line or another owner.

9 Q. Or a unit line?

10 A. Right. So I felt like the well at that location
11 could work for both of my objectives.

12 Q. And again, you're just simply seeking to extend
13 the Jalmat Gas Pool to the east?

14 A. Yes, sir.

15 Q. Which would protect Arch's correlative rights?

16 A. If I'm allowed to, I'm going to try to extend it
17 as far as I can.

18 Q. In other acreage that's marked yellow on these
19 plats?

20 A. That's right. I'm going to keep going updip till
21 I run out of pay.

22 Q. In your opinion, is the granting of this
23 Application in the interest of conservation and the
24 prevention of waste?

25 A. Yes, sir.

1 Q. And were Exhibits 6, 7, 8 and 9 prepared by you
2 or under your supervision?

3 A. Yes, sir.

4 MR. BRUCE: Mr. Examiner, I move the admission of
5 Exhibits 6, 7, 8 and 9.

6 EXAMINER CATANACH: Any objection?

7 MR. GALLEGOS: No objection.

8 EXAMINER CATANACH: Exhibits 6, 7, 8 and 9 will
9 be admitted.

10 Mr. Gallegos?

11 CROSS-EXAMINATION

12 BY MR. GALLEGOS:

13 Q. Mr. Curry, for the next few questions let's kind
14 of concentrate on the Jalmat --

15 A. Yes, sir.

16 Q. -- and first, regarding the Kelly State Number 4,
17 from your research did you find out whether or not there
18 was any stimulation applied to those Jalmat zones, other
19 than just perforating them?

20 A. Yes, sir, it described an acid job and an oil
21 sand frac, with a total of 20,000 pounds of sand included
22 in the oil frac. It also had 51 holes, I think 51 holes.

23 Q. That would not constitute what we today would
24 call a modern fracture stimulation, do you agree?

25 A. I agree.

1 Q. So we don't really have a very good idea of what
2 the Number 4 would produce from the Yates-Seven Rivers if
3 it were completed the way wells are completed today; is
4 that --

5 A. That's my opinion.

6 Q. -- a fair statement?

7 A. I agree.

8 Q. Okay. Now, assume with me for a moment that your
9 objective is just a Jalmat gas well, all right?

10 A. Assume?

11 Q. Assume.

12 A. I'll assume that, yes, sir.

13 Q. Okay, and assume with me that the Division will
14 allow a nonstandard proration unit of 160 acres, consisting
15 of the southwest quarter of Section 16. Will you assume
16 that with me?

17 A. Yes, sir.

18 Q. Okay. A gas well, a Jalmat-gas-well-acceptable
19 location then, for example, would be in the northwest
20 quarter of the southwest quarter of Section 16, and that
21 could be at an orthodox location, correct?

22 A. Is that suitable to you or to me?

23 Q. I'm asking you if that's suitable to you.

24 A. I put the well in a -- well, it would be
25 suitable. I'm --

1 Q. Now, you're talking --

2 A. Okay, now you're excluding the Langlie-Mattix --

3 Q. Yes.

4 A. -- you're just talking about Jalmat.

5 Q. You're saying, Forget the Langlie Mattix. What
6 Arch wants to do is drill and complete a Jalmat gas well.

7 You --

8 A. Well, that's not what I did, though.

9 Q. No, I know, but I'm asking you to assume that.
10 And if you assume that, then you could be 660 from the
11 outside, 330 from the quarter-quarter, and be in the
12 northwest quarter of the southwest quarter of Section 16
13 for your Jalmat gas well location; isn't that true?

14 A. Well, it's possible. I could pick any of those
15 four wells. I can re-enter any of those four wells.

16 Q. You could pick any of the four --

17 A. I could re-enter any of those four wells --

18 Q. No, I'm not talking about re-entry. We're not
19 trying to impose on you using these old wellbores. I'm
20 saying a new gas --

21 A. Drill a new well, okay. See, I have to justify
22 drilling a new well on reserves, and I've got two
23 objectives --

24 Q. Well, we'll talk about the Langlie-Mattix in a
25 moment, but just --

- 1 A. Just answer the question.
- 2 Q. Just answer the question, yeah.
- 3 A. Okay.
- 4 Q. Just answer the question.
- 5 A. Sure.
- 6 Q. And I think, then, what you're suggesting, you
- 7 just as likely could do a Jalmat gas well in the northeast
- 8 quarter of the southwest quarter?
- 9 A. I prefer the west half because of the facies. If
- 10 you look at the --
- 11 Q. No, that's fair.
- 12 A. -- the porosity, in general, the porosity and the
- 13 amount of dolomite reservoir decreases as you go east --
- 14 Q. Yeah.
- 15 A. -- so I prefer the west half --
- 16 Q. Okay.
- 17 A. -- northwest, southwest. I would prefer the west
- 18 half, because I think you'll get more reservoir in the
- 19 Jalmat.
- 20 Q. Very good, okay. Now, if you're in the southwest
- 21 of the southwest, then you're basically offsetting the
- 22 northeast quarter of the Fulfer lease in Section 20; isn't
- 23 that correct?
- 24 A. I don't know where their acreage is, sir.
- 25 Q. You don't know where the Fulfer acreage is?

1 A. I know they have some down in --

2 Q. Well, assume --

3 A. -- 20, the northeast of 20, they have some. Is
4 that what you're talking about?

5 Q. Assume with me that Fulfer has the north half of
6 Section 20.

7 A. Oh, yeah, I know they have that, yes, sir.

8 Q. Okay.

9 A. They have the north half of 20.

10 Q. And Fulfer does not have a Jalmat gas well in the
11 northeast of the northeast.

12 A. No, sir, they don't.

13 Q. Okay. And your well location, your choice of
14 well locations is the southwest of the southwest of Section
15 16, correct?

16 A. Yes, sir.

17 Q. Okay. Now, have you computed the drainage area
18 of a Jalmat gas well in this locale?

19 A. No, sir, I haven't.

20 Q. You've done no study in that regard?

21 A. No, sir.

22 Q. Do you think the drainage -- Do you have an
23 opinion whether the drainage would be radial in nature or
24 in some other pattern?

25 A. I have an opinion.

1 Q. All right.

2 A. But I'm not a reservoir engineer, and --

3 Q. I'm just asking you what you think.

4 A. I think that the Jalmat over here is so low-perm
5 that it's not draining very much.

6 Q. No, I was asking about drainage pattern.

7 A. Well, if I assume a circular pattern -- which
8 normally things are not in circular patterns, they're
9 usually elliptical in shape -- but if I assumed it was
10 circular, I wouldn't think that it really drains over 40 or
11 60 acres.

12 Q. So you're probably -- then the next step would
13 probably be to ask the Division to put another Jalmat gas
14 well on that southwest 40? That's what you're suggesting?

15 A. I didn't suggest that, sir.

16 Q. Well, you'd want to drain the reserves from your
17 lease, wouldn't you?

18 A. Well, I've got a well staked in the southwest of
19 the southwest. I feel like it will drain it.

20 Q. Oh, you feel it will drain the 160?

21 A. No, sir, I've got -- I'm proposing the Number 5
22 well, which is located in the southwest of the southwest.
23 That's 40 acres. I think it will drain that 40 acres.

24 Q. All right. And you are locating it there because
25 of the representation that the objective, or the primary

1 objective, is the Langlie-Mattix?

2 A. Sir, it's not a representation. That is my
3 objective.

4 Q. All right.

5 A. My primary objective was the Langlie-Mattix. I
6 placed the well to avoid drainage from the previous
7 producers. That's not a representation, that's a
8 statement.

9 Q. Okay, let's examine that -- the Langlie-Mattix
10 objective, then.

11 A. All right.

12 Q. Okay. First of all, tell us where you're going
13 to perforate the Langlie-Mattix well. What depth are you
14 going to drill it to and where are you going to perforate?

15 A. Okay, I've requested a permitted TD of 3800
16 feet --

17 Q. Which will take you to --

18 A. -- which would test our entire lease. Our lease
19 covers from surface to 3800 feet.

20 Q. Will that test the Grayburg?

21 A. Yes, sir.

22 Q. Will it test the San Andres?

23 A. It may touch the San Andres, it may not.

24 Q. But it will definitely be in the Queen?

25 A. Yes, sir.

1 Q. That's really the primary objective for an oil
2 well in this area, is it not, the Queen?

3 A. Yes, sir, that's correct.

4 Q. Okay. Now, what will the cost be to drill and
5 complete the Langlie-Mattix well to 3800 feet?

6 A. Okay, I don't have an AFE for that particular
7 well. We've drilled three or four this year, and they've
8 cost approximately \$400,000 to drill and complete.

9 Q. Okay. You drilled -- and those Langlie-Mattix
10 wells have been drilled in this immediate area?

11 A. Yes, sir.

12 Q. Have any of those wells resorted to the secondary
13 objective of the Jalmat gas?

14 A. Yes, sir.

15 Q. Okay, which ones? All of them?

16 A. No, sir. Number 78, Number 32 --

17 Q. Well, first, which exhibit are you looking at,
18 please?

19 A. Well, they're colored blue on Exhibit 6.

20 Q. Okay, and they're in the -- Section 28?

21 A. Yes, sir, north half of 28.

22 Q. Okay. And did I misunderstand? I thought the
23 blue dots indicated Jalmat gas wells.

24 A. You're not mistaken, that is correct.

25 Q. So all three of those wells in the north half of

1 Section 21, you stated the objective to be the Langlie-
2 Mattix, but they ended up being completed in the Jalmat Gas
3 Pool; is that a fair, a correct statement?

4 A. That is correct, sir.

5 Q. Have you -- Since you obtained this acreage have
6 you drilled and completed a Langlie-Mattix well that has
7 not ended up being recompleted in the Jalmat?

8 A. Yes, sir.

9 Q. Okay, it would be to the east?

10 A. No, sir, it would be in the south half of Section
11 20. I drilled three Langlie-Mattix wells in Section 20,
12 south half.

13 Q. All right, okay.

14 A. I didn't -- That's a mistake. I didn't indicate
15 in blue on -- If you look at Exhibit 7 --

16 Q. Yes, sir.

17 A. -- okay, Exhibit Number 7, Section 20, the
18 northeast of the southwest of Section 20, there's a black
19 dot that says Number 1. That would be the Number A 1 well.
20 That's completed in the Langlie-Mattix.

21 Q. So far? It's still in the Langlie-Mattix?

22 A. Yes, sir.

23 Q. Okay.

24 A. However, I had some perforations that were ruled
25 to be above the Langlie-Mattix, and I have subsequently

1 squeezed them off.

2 Q. Okay.

3 A. I have records here of that.

4 Q. Is that one of the wells that the District Office
5 ordered shut in?

6 A. No, sir.

7 Q. All right.

8 A. I don't believe so. But we were -- At our last
9 hearing with you, sir, we -- you pointed out that my Queen
10 top was too high and that I had some perforations that were
11 deemed in the Jalmat, so we complied with the request and
12 squeezed those upper perms off. I have the squeeze report
13 here.

14 Q. Good, thank you.

15 A. Then if you look in the southeast of Section 20,
16 in the southeast-southeast there's a Well Number 3. That
17 well was not in question. The Queen top there was in
18 agreement with Paul Kautz, and we didn't have to squeeze
19 the top perf there.

20 Okay, then the southwest of the southeast of
21 Section 20, there's a spot Number 2. That well was
22 completed in the Langlie-Mattix. It had a disputed Queen
23 top, and Paul Kautz disagreed with me. And I subsequently
24 squeezed the top set of perms in those wells.

25 By the way, those were oil wells, they were not

1 gas.

2 Q. Are those the Resler wells?

3 A. Yes, sir, that's correct, Resler lease.

4 Q. Okay.

5 A. Okay, so those are three wells that I drilled,
6 that I completed in the Langlie-Mattix, that I have not
7 completed intentionally in the Jalmat.

8 Q. All right, let's go back to your objective here,
9 then.

10 A. Yes, sir.

11 Q. Let's assume you're going to have a well cost of
12 \$400,000 to drill and complete the Langlie-Mattix. Then
13 have you calculated the economics of what you expect from
14 the Langlie-Mattix?

15 A. Yes, sir, we feel like if we can -- if we -- and
16 this is based on Pogo's economics -- If we can book 35,000
17 barrels of oil in the Langlie-Mattix, it would be a success
18 to us.

19 Q. Have you also done a calculation for that well,
20 the Kelly State Number 5, on which your economics assume
21 Jalmat completion?

22 A. We justified them on Langlie-Mattix, but we know
23 that the Jalmat would be commercial if we had 100 MCF or
24 better.

25 Q. Okay.

1 A. My intention is, I would like to complete in the
2 Jalmat at some point. That's why we're requesting
3 permission to do that. That's my intent, I'm not trying to
4 hide that.

5 Q. I understand that.

6 A. Yes, sir.

7 Q. What I'm most interested in is where you happen
8 to have located these wells. Let me ask you a few
9 questions about that.

10 A. Yes, sir.

11 Q. Isn't it true that the Number 1, the Number 2 and
12 the Number 4 Kelly States in that southwest quarter have
13 all had very high water production and basically have
14 watered out?

15 A. Yes, sir.

16 Q. Okay. And isn't it true that the other well, the
17 Number 3, is a water disposal well?

18 A. Yes, sir.

19 Q. And it's disposing water into the Queen
20 formation, isn't it?

21 A. That's correct.

22 Q. And yet you're telling us you're going to locate
23 this new well basically in the vicinity of that water-
24 disposal well and open up in the Queen formation?

25 A. Yes, sir, that's correct.

1 Q. And if you -- you would expect -- Well, never
2 mind.

3 Would you agree with me to this extent, that if
4 you located your well in the northwest corner of this
5 southwest-quarter lease, you would be less likely to
6 encounter the well -- the water that's being injected by
7 the Number 3 into the Queen?

8 A. I suppose you could say that, yes, sir.

9 Q. Okay.

10 A. May I say something --

11 Q. Well, Mr. --

12 A. -- or is that improper?

13 MR. GALLEGOS: Mr. Bruce may have some further
14 questions. That completes my questions.

15 THE WITNESS: Could I say something?

16 MR. BRUCE: Well, just a minute.

17 THE WITNESS: Okay.

18 MR. BRUCE: Just a couple of follow-up.

19 EXAMINER CATANACH: Go ahead.

20 REDIRECT EXAMINATION

21 BY MR. BRUCE:

22 Q. Mr. Curry, again, you just want to -- you do want
23 to test both zones eventually?

24 A. Yes, sir, I do, I want to -- I do.

25 Q. And the well is more or less in the center of the

1 quarter section?

2 A. Yes, sir.

3 Q. I mean, if you simply wanted to test the Jalmat
4 you could be even closer to Mr. Fulfer's acreage than you
5 currently are; isn't that correct?

6 A. Sure, I could pick Number 3.

7 Q. You'd be hundreds of feet closer to --

8 A. Yes, sir.

9 Q. -- Fulfer's acreage?

10 A. That's right.

11 Q. Do you have anything further with respect to this
12 matter?

13 A. Yes, sir, I'd like to just explain something --

14 MR. GALLEGOS: Well, if you're finished with your
15 redirect, let me ask the question. Then you --

16 THE WITNESS: Okay, yes, sir.

17 RECROSS-EXAMINATION

18 BY MR. GALLEGOS:

19 Q. Are you familiar with the Division imposing a
20 penalty on production when the well location that's
21 selected by an operator, you know, imposes drainage on
22 offsetting leases?

23 A. Well, if that's the case we'll shut it in. I'm
24 not trying to take advantage of anybody, I'm trying to make
25 this lease I bought commercial.

1 Q. Which you can do just as readily by locating your
2 new well in the northwest of the southwest quarter? Isn't
3 that true? That's been your testimony, Mr. Curry?

4 A. Well, sir --

5 Q. That's been your testimony, hasn't it?

6 A. Restate it, please?

7 Q. You can just as well put your Kelly State Number
8 5 well in the northwest quarter of the southwest quarter,
9 instead of the location you have, and you will be further
10 away from the water, it will be just as good a location for
11 your geological objectives, but you won't be up next to the
12 northeast quarter of Section 20? Isn't that a fact?

13 A. I guess you could say that. I mean, I don't want
14 to move my location. I like it where it is, geologically.

15 One thing I wanted to add is, if you go up to
16 Eunice, I've drilled six wells up there at Eunice, and I
17 found a new zone in the Grayburg. And it's actually a 20-
18 acre infill in the Grayburg, and it's still flowing. And
19 this is a mature, waterflood area. It's a -- You know, I
20 believe you can make 20-acre infills in some of these
21 reservoirs, the Queen, the Grayburg.

22 I mean, this well had tremendous mud log shows in
23 one of the Grayburg zones. We drilled the well -- You
24 know, I drilled the well to develop the San Andres. And
25 when I drilled it, I got tremendous mud log shows in the

1 Grayburg. So we said, Man, we've got to try that zone.

2 So we tried it --

3 Q. Well, excuse me, Mr. Curry, this is a little bit
4 off the subject.

5 A. Well, I don't believe it is off the subject,
6 because you're asking me why am I drilling the well. And
7 I'm trying to evaluate the Yates, Seven Rivers, the Queen
8 and the Grayburg. There's been very few tests of the
9 Grayburg in this structure, and I want to see what it will
10 do.

11 And I've seen many cases where people have said
12 it's drained, and you drill a well on a 20-acre infill and
13 it produces commercial quantities of oil and gas. And
14 that's my intent, is to test this Queen to see if it will
15 produce on a 20-acre infill. If it's not successful, I
16 want to also test the Jalmat gas to see if it extends this
17 far up. And if it does, we'll love it.

18 EXAMINER CATANACH: Is that it, gentlemen?

19 MR. BRUCE: I have nothing further of this
20 witness.

21 EXAMINATION

22 BY EXAMINER CATANACH:

23 Q. Okay. With regards to the Number 3 well that's
24 injecting into the Queen --

25 A. Yes, sir.

1 Q. -- are you not concerned that you might encounter
2 some of that water breakthrough from that well in the Queen
3 formation?

4 A. I'll shut it in. I'm going to core the sand --
5 I'll probably do sidewall cores. I want to see what the
6 residual oil saturation is in the Queen. But more than
7 that, I want to see what the zones are above and below that
8 Queen pay zone. The dolomites below that Penrose may have
9 never been drained.

10 Q. So you believe that there's potential in the
11 Grayburg also in this area?

12 A. I do.

13 Q. But the Queen doesn't really concern you, the
14 fact that it's been injected, water has been injected into
15 it?

16 A. Well, I know I'm not going to get 50,000 barrels,
17 because the four initial wells have already made
18 approximately -- now, one thing that is -- Yeah, I know
19 it's not going to be 50,000 barrels, but it might be 25, it
20 might be 30, or I might find a new zone that hasn't been
21 adequately tested.

22 Q. Well, the Langlie-Mattix in this area -- or maybe
23 not in this specific area, but it's generally waterflooded,
24 is it not?

25 A. Well, if you look -- I've got a cum injection of

1 about 28,000 barrels of water in that well. That's not
2 very much.

3 Q. 28,000 barrels in the Number 3 well?

4 A. Yes, sir.

5 Q. That's cum?

6 A. That's cumulative throughout the history.

7 Q. Okay, I want to talk a little bit about the wells
8 down in Section 28. You touched on it a little bit. Those
9 wells were initially completed in the Langlie-Mattix?

10 A. Yes, sir.

11 Q. What kind of rates did you get from those wells
12 initially?

13 A. They would start off at 60 or 70 barrels a day,
14 and they would decline rapidly down to very low rates.

15 Q. Are those wells still producing in the Langlie-
16 Mattix, or were those isolated?

17 A. I believe they're plugged back to the Jalmat.

18 Q. Okay, but you're no longer producing the Langlie-
19 Mattix in those wells?

20 A. No, sir, but it's still there, below a bridge
21 plug.

22 Q. So they decline to a point where -- Were they
23 uneconomic to produce in the Langlie?

24 A. No, sir, they were not. We had a mud log with
25 gas shows, and we wanted to see what it would do.

1 Q. So they were still producing at an economic rate
2 and you just decided to abandon those and complete in the
3 Jalmat?

4 A. Yes, sir. Now, I will say this. I talked to
5 Paul Kautz on a few occasions, and I asked him, I said,
6 What if you have a low rate in the Langlie-Mattix and you
7 have a low rate in the Jalmat? Are there any instances
8 where you could apply for a commingle?

9 And he said that there were some precedent for
10 that in some areas.

11 So that's a possibility down the line, if the
12 Jalmat gets down to such a low rate that it's not -- You
13 know, we could go back and add the Langlie-Mattix to it and
14 commingle it with approval prior -- you know, we'd go
15 through the process and get approval to do that.

16 Q. In the Number 5 well that you propose to drill,
17 is it the same kind of situation. You're going to
18 initially complete in the Langlie-Mattix?

19 A. Yes, sir, or the Grayburg, if I have shows in the
20 Grayburg.

21 Q. Now, there's nothing to stop you from producing
22 the Langlie-Mattix for a week and abandoning it and coming
23 uphole and producing the Jalmat; is that correct?

24 A. That is correct, sir.

25 Q. I mean, you can do that if you choose to?

1 A. If we get approval to -- and that's why we're
2 applying for -- See, we got in trouble, and we corrected
3 our mistakes, and we are trying to be compliant with the
4 OCD.

5 So what we decided after our last hearing and
6 having to go back and plug those zones and -- You know, we
7 got our hands slapped, we did incorrect procedure. But we
8 corrected it. Okay?

9 Now we've got another proposal and we have
10 ongoing development to do. So what I'm trying to do is, my
11 landman and I got together and we said, well, look, if we
12 drill a well a 6000 feet we're going to apply for a permit
13 for every possible completion zone.

14 We also have a well in the Stewart lease down in
15 the southeast of 28. We're going to drill it for the Tubb.
16 I've been making some Tubb wells. We're going to apply for
17 the Tubb, we're going to apply for a Blinebry infill, we're
18 going to apply for -- can't do the Queen, but we can do the
19 Jalmat.

20 We're going to make application for a permit to
21 complete in every possible potential zone so that we could
22 then work on our wells more efficiently and have approval
23 to move when we feel is necessary, based on our
24 interpretation.

25 So we are not trying to deceive anyone. I'm

1 telling you, I want to drill a well to test the Grayburg,
2 to test the Queen and to test the Jalmat.

3 Q. Well, it's not a matter of deceit, but when you
4 say that your Langlie-Mattix isn't your primary zone of
5 interest, I mean --

6 A. It was, our primary --

7 Q. -- normally --

8 A. -- now I've got two zones of interest.

9 Q. I mean, what I've seen, a company would normally
10 produce those reserves, and then if they have secondary
11 objectives they would come uphole and produce those, but --

12 A. Yes, sir.

13 Q. -- that's not what your intent is. You don't
14 intend to produce the Langlie-Mattix until it's uneconomic
15 or such, and then come uphole and recomplete. You want the
16 authority to complete these zones basically whenever you
17 want.

18 A. Well, we understand that we can't do that without
19 first requesting permission.

20 Q. Well, what you're asking for here, right?

21 A. Right, we're asking for permission to complete in
22 the Langlie-Mattix. But we wouldn't change zones without
23 first notifying you, that's what we're saying.

24 Now, I understand that these are not great
25 reserve wells, but what if I do get a commercial Queen well

1 there, and what if that 160 acres has not been drained
2 sufficiently with four wells? I may find that I can
3 recomplete or drill for more Queen up there. It has been
4 done just a few miles north of here in the Queen,
5 successfully.

6 Q. Okay.

7 A. And that's my -- that is my reason for -- You
8 know, granted, I would have preferred 1310-1310, but my
9 operations people told me that they couldn't build the pad
10 there, they had to move into the southwest. And that's the
11 only reason I moved it to the southwest.

12 Q. Okay. Mr. Curry, according to the Jalmat Pool
13 rules, you're not at an unorthodox gas well location for
14 that pool --

15 A. That's what I mentioned earlier.

16 Q. -- as far as encroaching on the outer boundary of
17 that 160.

18 A. Yes.

19 Q. So you're legally -- I mean --

20 A. If I wanted --

21 Q. -- you're well within your rights to drill. I
22 mean, that's --

23 A. If I wanted to drain them I'd re-enter the 3 and
24 frac it --

25 Q. Right.

1 A. -- but that's not my intention.

2 Q. You're not encroaching towards them pursuant to
3 the pool rules of the Jalmat Gas Pool --

4 A. Right.

5 Q. -- in the Jalmat?

6 A. That's right.

7 Q. Okay.

8 A. If my intent was to drain him, I'd be requesting
9 permission to re-enter Number 3 and plug back to the
10 Jalmat. I was trying to be nice and stay away from him.

11 EXAMINER CATANACH: Okay, I believe that's --

12 THE WITNESS: I could also ask the same question
13 about their location in relation to my lease. I have
14 ownership the same distance away from their gas producer
15 and, you know, it's just not my intent to harm their
16 reserves.

17 EXAMINER CATANACH: Okay.

18 MR. GALLEGOS: Mr. Examiner, just a couple of
19 things I wanted to --

20 THE WITNESS: Yes, sir.

21 FURTHER EXAMINATION

22 BY MR. GALLEGOS:

23 Q. The facts are, are they not, Mr. Curry, that Arch
24 took over operation of this lease only just this spring?

25 A. Yes, sir.

1 Q. March?

2 A. Yes, sir.

3 Q. So prior to that, these wells, these Kelly State
4 wells had been under the operation of some other operator?

5 A. That's correct.

6 Q. But you do know from looking at the record that
7 the Kelly State Number 1, the Number 2 and the Number 4
8 have made over 780,000 barrels of water? You're aware of
9 that, are you not?

10 A. Yes, sir.

11 Q. And the record says that into Number 3, the
12 injection well, only 28,000 barrels of water have been
13 injected?

14 A. Yes, sir.

15 Q. And you have no information as to, A, whether
16 that report of water injection in the Number 3 is credible,
17 do you?

18 A. Well, as I far as know it's credible, it's a
19 public record.

20 Q. Well, do you know what's happened to the rest of
21 that, the water, another three-quarters of a million
22 barrels of water?

23 A. No, sir, I don't.

24 MR. GALLEGOS: That's all, thank you.

25 EXAMINER CATANACH: Anything further, Mr. Bruce?

1 MR. BRUCE: (Shakes head)

2 EXAMINER CATANACH: Okay, this witness may be
3 excused.

4 Did you have two witnesses?

5 MR. BRUCE: Bruce.

6 EXAMINER CATANACH: So you're done, basically?

7 MR. BRUCE: Yes.

8 EXAMINER CATANACH: And you're going to put a
9 witness on?

10 MR. GALLEGOS: I'm going to put a witness on.

11 EXAMINER CATANACH: Okay. Well, let's take a
12 break here.

13 (Thereupon, a recess was taken at 1:28 p.m.)

14 (The following proceedings had at 1:42 p.m.)

15 EXAMINER CATANACH: Okay, call the hearing back
16 to order, and I'll turn it over to Mr. Gallegos.

17 MR. GALLEGOS: We call Norm Nuss to the stand.

18 NORMAN W. NUSS,

19 the witness herein, after having been first duly sworn upon
20 his oath, was examined and testified as follows:

21 DIRECT EXAMINATION

22 BY MR. GALLEGOS:

23 Q. Mr. Nuss, would you state your name, please?

24 A. Norman William Nuss.

25 Q. Where do you live?

1 A. I live in Centennial, Colorado.

2 Q. What is your business or profession?

3 A. I am a petroleum engineer, I'm a consulting
4 petroleum engineer.

5 Q. Are you particularly acquainted with production
6 of oil and gas in southeast New Mexico by reason of past
7 experience?

8 A. Yes, sir.

9 Q. And have you testified before this Division
10 before and had your credentials accepted in order to give
11 expert testimony as a petroleum engineer?

12 A. Yes, I have.

13 MR. GALLEGOS: We ask that Mr. Nuss's
14 qualifications be accepted and that he be permitted to
15 testify as an expert.

16 EXAMINER CATANACH: Any objection?

17 MR. BRUCE: No, sir.

18 EXAMINER CATANACH: Mr. Nuss is so qualified.

19 Q. (By Mr. Gallegos) Mr. Nuss, have you studied the
20 circumstances related to this Application?

21 A. Yes, I have.

22 Q. Basically, what have you done in order to prepare
23 yourself to testify?

24 A. Well, I have read as many of the documents as I
25 possibly can and tried to re-familiarize myself a little

1 bit with the pool rules, not that I know them all by heart,
2 but just trying to understand where all the wells are
3 located and the area that's in dispute and where the
4 proposed new well that Arch would like to drill in Section
5 16, in the southwest quarter of Section 16.

6 Q. Have you taken the time to research the status of
7 the Kelly State wells that are located in the southwest
8 quarter of Section 16?

9 A. Yes, I have.

10 Q. Would you give the Examiner a summary of what you
11 found concerning those wells by way of their production and
12 status?

13 A. Well, initially -- I mean, obviously they were
14 originally completed in the Penrose portion of the Langlie-
15 Mattix Unit, and they have produced significant amounts of
16 oil from the standpoint that I believe the cums are
17 somewhere around 40,000 average, maybe 45,000 average, but
18 they've also increased in the water production.

19 And the interesting thing about the water
20 production is that initially these wells showed oil rates
21 with no water and some gas, and as time wore on, the water
22 has increased significantly, such that, you know, it almost
23 looks like they had been flooded. But apparently -- I
24 don't know if they have or have not. There's no indication
25 that there's, you know, a waterflood.

1 Also, the saltwater disposal well, since it was
2 completed in May of 1988 and only has 28,000 barrels cum
3 listed -- and I understand that's public record, but that
4 seems very odd to me for the amount of water that's being
5 produced, unless they're taking the water that's produced
6 and going somewhere else with it, which I do not know.

7 Q. What has been the status? You take some notes as
8 to what has been the water production of each of these
9 wells, the amount?

10 A. Yeah, I think my data wasn't as good as Mr.
11 Curry's. His data is much better. But some of the recent
12 -- My cum's aren't anywhere as good as his, but just to
13 give an example, the Number 4, its last production date
14 that I have is July of 2004, and in a month it produced 86
15 barrels of oil, 341 MCF and 8162 barrels of water. Well,
16 that's a significant amount of water to be lifting for 86
17 barrels. That's less than 3 barrels a day. I would say
18 that's pretty close to uneconomic.

19 Q. Are the other wells producing any oil and --

20 A. Yeah, not quite as much water, but they are --
21 The Number 2, the last production I have -- and to be fair,
22 I'll -- it's April, but I -- the month -- well, April it
23 had 50 barrels of oil and 125 MCF of gas and no water,
24 which I don't believe is correct, or I don't know why the
25 well didn't produce in May or June.

1 In March, the previous month, it had 29 barrels
2 of oil, 74 MCF of gas and 1621 barrels of water. So the
3 wells have significant amounts of water.

4 Q. Okay, and has that increased over --

5 A. Yes, it appears to have increased over time, yes,
6 as most wells do.

7 Q. Okay. And from the cross-section that was
8 provided and sponsored by Mr. Curry, which I believe was
9 Exhibit 7, does it appear that all of the four Kelly State
10 wells, including the water-injection well, are basically
11 open in the same area of the Langlie-Mattix Pool?

12 A. Yes, that is correct.

13 Q. If the true objective of Arch Petroleum is the
14 Langlie-Mattix, what is your opinion as to whether or not
15 the test of a Langlie-Mattix well, where they have located,
16 is likely or unlikely to yield commercial production?

17 A. Well, based upon the information available and
18 the zones that have produced to date, I would say -- I
19 would consider it highly unlikely that they would recover
20 35,000 barrels of oil. In fact, much less than that.

21 Q. And if one is truly minded to have the objective
22 of the Langlie-Mattix, are there other locations in the
23 southwest quarter that would be more preferable for a well
24 with that objective?

25 A. Well, you certainly -- I think the southwest

1 quarter, Mr. Curry indicated testing the Queen and the
2 Grayburg, and according to the cross-section, the Queen by
3 itself has not been shown to be perforated in any of the
4 four wells in that southwest quarter that have produced
5 from the Langlie-Mattix.

6 Now, certainly you could drill the well anywhere
7 in the southwest quarter, I would think, and test the Queen
8 or the Grayburg, since they -- I don't think they've been
9 tested in that southwest quarter to this point in time.
10 The actual Queen. Now, that is not to say that there can't
11 be some communication the Penrose and the Queen also.

12 Q. So as you read the cross-section it appears that
13 the zones that have been the target of production and have
14 been productive have been what's referred to as the
15 Penrose?

16 A. That is correct.

17 Q. Now, let's -- Was there any other conclusion that
18 you drew concerning the existing -- these -- the old,
19 existing Kelly State wells?

20 A. Well, I found Mr. Curry's information about the
21 Kelly State Number 4 in the Jalmat -- I found that
22 interesting. And I wasn't aware of it, and I appreciate
23 that information. And I think it's interesting that
24 someone tried that way back when, whether by hook or by
25 crook, I don't know, and maybe they weren't that successful

1 primarily.

2 And I think it just shows that in this area
3 you're not in the best part of the Jalmat, but certainly it
4 will produce, and given, you know, today's production
5 techniques and completion techniques, you have more
6 likelihood of making a pretty doggone good Jalmat well
7 here.

8 Q. Okay, well, let's turn to that then. Do you have
9 any observation concerning the drainage characteristics
10 that are likely to be encountered in the Jalmat well in
11 this locale?

12 A. Well, being a tighter -- If all things were
13 considered equal, if all of these zones were somehow
14 connected -- and I know there are zones that are somewhat
15 discontinuous, but the whole package is continuous. And if
16 you have a well that is tighter, has less porosity and less
17 permeability but is connected for a reasonable extent, the
18 drainage of that low-permeability well can be greater, in
19 essence, than the drainage of a very good well.

20 I mean, you don't infill wells as much in a low-
21 perm area as you do in a high perm area, because they can
22 -- obviously, the reserves are much greater.

23 So this would drain -- in my opinion, it would
24 drain a bigger area than one of the better Jalmat wells to
25 the west.

1 Q. Let me ask you to turn to Exhibit Number 1. I
2 think --

3 A. Okay.

4 Q. -- it should be up there. And this is actually
5 part of the Division record in this case.

6 A. Yes.

7 Q. Do you recognize it as a letter of July 30, 2004,
8 from Mr. Bruce, constituting the Application --

9 A. Right.

10 Q. -- for this proceeding?

11 A. Uh-huh.

12 Q. Okay. I'd like for you to turn to page 2 where
13 the Applicant's counsel says, "Attached as supporting data
14 are the following:".

15 A. Right.

16 Q. Do you find that?

17 A. Yes, I do.

18 Q. And Exhibit A is a production map.

19 A. Correct.

20 Q. Is that a production map that addresses Jalmat
21 production?

22 A. That is correct.

23 Q. It does not refer to Langlie-Mattix production,
24 does it?

25 A. No, it does not.

1 Q. Okay. The next supporting data for the
2 Application is Exhibit B, a Yates structure map.

3 A. That is correct.

4 Q. Is the Yates formation in the Langlie-Mattix, or
5 is it in the Jalmat Pool?

6 A. It's in the Jalmat.

7 Q. The next supporting item is Exhibit C, a scout
8 ticket for the Johnson Well Number 3. Do you know whether
9 the Johnson Well Number 3 is a Jalmat gas well or a
10 Langlie-Mattix oil well?

11 A. It is a Jalmat gas well.

12 Q. And lastly as supporting data, Exhibit D is well
13 test reports for the C.E. LaMunyon Federal Wells 23, 32 and
14 78. Do you know whether or not those are Jalmat gas wells
15 or Langlie-Mattix oil wells?

16 A. Well, it's not stated on the paper itself, but I
17 do believe those are Jalmat gas wells, based upon previous
18 testimony.

19 Q. Okay. Is it your opinion, Mr. Nuss, from the
20 standpoint of likely commercial production to be obtained
21 by Arch's testing of the southwest quarter of Section 16,
22 that that production will be in the Jalmat Gas Pool and not
23 from the Langlie-Mattix?

24 A. I'm sorry, I didn't catch that question.

25 Q. Is it your opinion that the development by Arch

1 Petroleum of the southwest quarter of Section 16, as far as
2 achieving commercial production, will be from the Jalmat
3 Gas Pool and not from the Langlie-Mattix Oil Pool?

4 A. I think the odds are very high that that would be
5 the case, yes.

6 MR. GALLEGOS: That's all the questions I have.

7 EXAMINER CATANACH: Mr. Bruce?

8 MR. BRUCE: Just a few.

9 CROSS-EXAMINATION

10 BY MR. BRUCE:

11 Q. Again, regarding the water production, the first
12 questions, you have no idea where that three-quarters of a
13 million barrels of water went?

14 A. No, I have -- No, I don't.

15 Q. Okay. I mean, it could have been disposed of
16 offlease?

17 A. Absolutely, sure, absolutely.

18 Q. And you said you've -- well -- You do understand
19 that whether it's in the Jalmat or the Langlie-Mattix,
20 another well in the southwest quarter could be closer to
21 Fulfer's acreage than what they're proposing right now?

22 A. Yes, I do.

23 Q. Do you have any opinion what the drainage is in
24 the Jalmat, in this area?

25 A. Not in this particular type area, no, I do not.

1 Q. I'm handing you the Arch Exhibit Number 6, Mr.
2 Nuss.

3 A. Okay.

4 Q. I mean, to the west of this area there's 4, 5, 6,
5 7 wells per section, are there not, Jalmat wells?

6 A. Yes, there are.

7 Q. And the Fulfer acreage is the north half of
8 Section 20, is it not?

9 A. That is correct.

10 Q. And they've already -- well, they have what, two
11 producing Jalmat wells right now?

12 A. Yes, they do.

13 Q. Okay, and at one time there was a third well that
14 also produced. I don't know if it's still producing.

15 A. Not to my knowledge, it isn't. From the Jalmat?

16 Q. From the Jalmat.

17 A. I can't say for sure. My belief is, there are
18 two Jalmat wells.

19 Q. Two current wells?

20 A. Yes.

21 Q. And this map shows that at least at one time
22 there were three Jalmat wells?

23 A. Right, it does show that.

24 Q. Okay. So I guess my question is, it's okay for
25 Fulfer to have three Jalmat wells on its half section, but

1 Arch shouldn't be allowed a well on its quarter section in
2 the Jalmat?

3 A. I didn't say that, that is not what I said. And
4 I don't know if Mr. Fulfer drilled all three of those wells
5 as Jalmat wells.

6 Q. Then what's the objection to Arch's Application?

7 A. The objection is that in this -- it is my belief
8 that the drainage is going to be greater than it is on the
9 west side. Okay?

10 Q. Even though the reservoir --

11 A. Because it's tighter.

12 Q. Even though the reservoir is poorer?

13 A. Yes, that is correct, that is correct. And I
14 think that to test -- I think Langlie-Mattix is a -- to me,
15 it's a poor bet, I guess, poor risk. It's high-risk, it's
16 extremely high risk.

17 Q. It's just immediately below the Jalmat, is it
18 not?

19 A. Yes.

20 Q. The incremental cost to go down isn't that much?

21 A. No, it's not that much, no.

22 Q. And Mr. Curry has been hired by Arch to propose
23 its wells and --

24 A. Oh, absolutely, absolutely, he's certainly more
25 than capable to do that, I agree.

1 Q. Do you happen to know the footage? I don't know
2 that you really went through your Exhibit 3 here, Mr. Nuss,
3 but it's what Mr. Gallegos handed out to us.

4 A. It's 1230 and 910.

5 Q. No, no.

6 A. Oh.

7 Q. The Johnson Number 3 on Fulfer's acreage?

8 A. I don't know, right off the top of my head I do
9 not know.

10 Q. Or the Johnson Number 4?

11 A. I do not know that either.

12 Q. They appear to be closer to offsetting acreage
13 than the Kelly State Number 5 is; isn't that --

14 A. That's true.

15 Q. And again, I think you agreed with Mr. Curry that
16 this is not the best part of the Jalmat reservoir?

17 A. I would agree with that, yes.

18 Q. And when you propose wells to a client of yours,
19 is having multiple zones in a zone desirable, multiple
20 prospective zones?

21 A. Yes and no. It all depends on the quality of
22 those zones.

23 Q. Finally, and I don't know if you saw this, but a
24 prehearing statement was filed in this matter, and there's
25 a couple of statements made that Fulfer is objecting to

1 this because the well density, the Kelly State 5, will be
2 one well on one quarter section, is not scientifically
3 justified. Is that --

4 A. Scientifically justified? Could I read the
5 entire quote, please?

6 Q. Sure, sure. It starts on the bottom of page 1
7 and goes to the top of page 2.

8 A. Well, I think Mr. Gallegos also pointed out that
9 there can be, quote, unquote, penalties sometimes,
10 depending upon the rules, if you drain someone else's
11 acreage.

12 Q. But my question is, you said you were familiar
13 with the Jalmat Pool rules.

14 A. Yes.

15 Q. They already allow one well per quarter section?

16 A. Yes, they do, they certainly do.

17 Q. And if Arch has one well on a quarter section,
18 how is that well density not scientifically justified?

19 A. Not scientifically justified? Well, it's
20 certainly scientifically justified from the standpoint that
21 it's there.

22 Q. That the Jalmat is there?

23 A. Yes, it certainly is there. But to be productive
24 in the sense that the normal Jalmat was, no, it's not
25 exactly the same science, because it is a different rock,

1 slightly. It's a degradation.

2 Q. It's within a mile of the Jalmat Gas Pool, right?

3 A. Yes, it is.

4 Q. And it's governed by those pool rules, right?

5 A. Yes, it is.

6 Q. Again, how is it not scientifically justified?

7 A. Well, I guess I don't understand the word
8 "scientifically justified". I mean, it was scientifically
9 justified many years ago and nobody drilled it, did they?
10 And it was scientifically there, but no one recognized it,
11 so --

12 Q. I'm just asking --

13 A. -- I -- as I told you, I said it is
14 scientifically there. I mean, it certainly is there.

15 Q. Well, I'm just -- you've read it and this is
16 Fulfer's statement of the case, and I'm asking why these
17 objections are made.

18 Another one is that this would constitute a
19 violation of the Jalmat Gas Pool Special Rules, in what
20 way?

21 A. I think if it was -- because I think it's
22 different in -- The Jalmat that's over here is not the same
23 as the Jalmat over here. Now, I know that doesn't mean
24 that the pool rules don't apply. But in my thinking, if
25 the drainage is different than the wells to the west, that

1 could be significant.

2 Q. Would the reservoir for the Johnson Number 3,
3 which is on Fulfer's acreage in the northeast quarter of
4 Section 20 be the same basic reservoir that Arch is seeking
5 to obtain?

6 A. It could be. I don't know.

7 Q. Okay. And the final statement is that this
8 location is intended to violate Fulfer's correlative
9 rights. They could be closer than they are right now,
10 couldn't they?

11 A. I don't know that.

12 Q. You don't know what the special pool rules allow
13 in the Jalmat?

14 A. Well, I don't know what the measurement of this
15 well is, that's what I'm saying, from the lease line.

16 Q. Under the special pool rules, how close could
17 Arch be -- how close could Arch locate a well?

18 A. I think it's 660.

19 Q. 660 out of the corner, 660 and 660?

20 A. Right.

21 Q. And Arch is further away from that?

22 A. Yes, that is correct.

23 Q. Okay.

24 A. That is correct.

25 Q. If they're moving away from Fulfer, how are they

1 violating Fulfer's correlative rights?

2 A. I think I tried to answer that before. I said I
3 think this is different rock, I think the drainage is
4 different than the area to the west.

5 Q. Okay. So Fulfer's Johnson Number 3 in the
6 southeast-northeast of Section 20 is violating Arch's
7 correlative rights at this point?

8 A. May be. Don't know. I don't know.

9 MR. BRUCE: Okay, you don't know. Okay, I'll
10 accept that.

11 No further questions.

12 EXAMINER CATANACH: Anything further, Gene?

13 MR. GALLEGOS: Nothing further.

14 EXAMINER CATANACH: Just a couple.

15 EXAMINATION

16 BY EXAMINER CATANACH:

17 Q. You don't have any drainage data on the Johnson 3
18 and Johnson 4 wells, do you?

19 A. No, I do not, sir.

20 Q. Okay. Could you elaborate a little bit more on
21 why you think that this area of the reservoir might drain
22 larger areas than --

23 A. Because it's tighter. I'll try to make a -- I'll
24 try to do a reverse example, if you will.

25 When you drill a well -- I'm going to -- as I

1 say, it's going to be reverse. When you drill a well and
2 you drill through a very porous and permeable zone and
3 you've got a decent mud system and all of that, when you
4 form a mud cake across that formation it occurs over a
5 certain amount of time and after so much of a volume has
6 passed through it. Well, the volume, the filtrate that
7 gets through that mud cake, only goes a limited distance
8 into a very porous and permeable formation.

9 But if you drilled a formation that has lower
10 porosity and lower permeability, that mud cake will form
11 again also because of the differential pressure, and the
12 filtrate will go back much further into the formation
13 because you have less volume to work with in the rock
14 matrix itself.

15 So in tight formations -- tight formations can
16 drain from a long distance. It takes time, I will admit,
17 it does take time to do that. But if it is connected --
18 and that certainly is an area that you can argue for or
19 against -- if it is continuous, that same type of porosity
20 and permeability, it can drain from a fair distance.

21 EXAMINER CATANACH: Okay. I don't think I have
22 anything else.

23 Do you guys have any other questions?

24 MR. BRUCE: I just -- one that -- following up on
25 one of yours, Mr. Examiner.

FURTHER EXAMINATION

BY MR. BRUCE:

Q. Do you have any production data from the Johnson Number 3 on Fulfer's acreage?

A. I know that it started out at -- the Number 3, I'm trying to think. Currently it's around 200, 250 MCF a day right now.

Q. Has that been reported to the Division?

A. Sir, I don't know that.

MR. BRUCE: Okay. That's all I have, Mr. Examiner.

MR. GALLEGOS: Nothing further. Thank you.

EXAMINER CATANACH: Okay.

MR. GALLEGOS: I guess we do need to move the admission of Exhibit Number 1, although it is part of the file. We ask that it be admitted.

MR. BRUCE: No objection.

EXAMINER CATANACH: Are you also admitting 2 and 3?

MR. GALLEGOS: We'll move 2 and 3. They should be part of the record, even though I didn't see it necessary to question the witness, but I'd like to move their admission.

MR. BRUCE: No objection.

EXAMINER CATANACH: Okay, Exhibits 1 through 3

1 will be admitted.

2 What's your preference, gentlemen? Closing
3 statements or not?

4 MR. BRUCE: I have a short one.

5 MR. GALLEGOS: Short.

6 EXAMINER CATANACH: Okay. Go ahead, Mr.
7 Gallegos.

8 MR. GALLEGOS: Applicant first or --

9 EXAMINER CATANACH: Go ahead, Mr. Bruce.

10 MR. BRUCE: It doesn't matter to me.

11 Mr. Examiner, Arch is simply attempting to test
12 multiple zones in a well interior to its lease. In order
13 to do that adequately, it needs an unorthodox location in
14 the Langlie-Mattix Pool.

15 It also desires to attempt development of the
16 Jalmat Pool on a lease basis. The Jalmat rules allow 160-
17 acre units comprised of the quarter sections, and that is
18 all Arch asks.

19 Developing the Jalmat on a lease basis is common
20 in this area. If you look in Section 17, the well in the
21 northwest quarter is developed on a lease basis. In the
22 southeast quarter of Section 17 there's an odd-shaped well
23 unit there, operated by Samedan. That has been done. The
24 north half of Section 20, Fulfer is developing its acreage
25 on a lease basis.

1 I don't know, Mr. Examiner, I'm having trouble
2 fathoming the basis of the objection. All Arch is
3 attempting to do is extend the productive limits of the
4 Jalmat Gas Pool. That interest was touched off when Arch
5 drilled the LaMunyon 78 well in the northwest quarter of
6 Section 28, which was initially completed in the Jalmat at
7 a fairly high rate.

8 After the Number 78 was completed, Fulfer used
9 that information and completed its Johnson Number 3
10 offsetting Arch's acreage. That's no big deal. That's
11 what people do, they develop their acreage.

12 I note again that Fulfer is perfectly content to
13 have two or three Jalmat wells on its half section, and if
14 you look at those locations within 660 feet of the unit
15 boundaries, but it somehow is suspect when Arch wants to
16 have a well 1500 feet away from Fulfer.

17 Insofar as the unorthodox location, I don't think
18 Fulfer has any standing to object. If Arch wanted to, it
19 could be legally locating a Jalmat well -- first of all, it
20 could legally locate a Langlie-Mattix well 330 feet out of
21 the corners of its section, a lot closer to Fulfer, it
22 could legally locate a Jalmat well 660 feet from the south
23 and west lines of Section 16. I did a back-of-the-envelope
24 calculation. That's 933 feet from Fulfer's acreage.
25 Instead, it's drilling a well that's 1530 feet from Fulfer.

1 Assuming 160-acre drainage, that's only a drainage radius
2 of 1487 feet. Again, Fulfer is not harmed by the
3 unorthodox location and can't object to it.

4 Again, I don't know what the basis of the
5 objection is, other than they don't want Arch to drill
6 wells, which it's legally entitled to do so.

7 We ask that this Application be approved.

8 EXAMINER CATANACH: Thank you, Mr. Bruce.

9 Mr. Gallegos?

10 MR. GALLEGOS: Yeah, Mr. Examiner, first of all,
11 a few words about the Fulfer situation, because the
12 surprise success encountered by Fulfer in the north half of
13 Section 20 has attracted a flurry of activity by the
14 neighbors, primarily ours, like all of a sudden the
15 chickens have been jumping, they found the June bugs.

16 Fulfer recompleted two existing wellbores, so the
17 location of those wells was already in place as far as
18 their location to the section line or quarter-section line,
19 and of course I think the Commission has always recognized
20 that if there are good wellbores available, it's sound
21 economics, it's efficient to use the existing wellbores
22 rather than drilling new wells that are unnecessary to
23 drill.

24 There are two Fulfer -- not three -- there are
25 two Fulfer Jalmat gas wells as a result of recompletions.

1 And as I say, the recompletions were a surprise to Fulfer.
2 And when the word got out that those wells had been
3 successful in producing Jalmat gas, Arch has come in from
4 every direction that it could.

5 Now, the objective here of Arch is to drain
6 Fulfer. It clearly -- It is clear that the Langlie-Mattix
7 objective is a stockinghorse. It's a stockinghorse for
8 denser Jalmat gas well development in this area, which I'm
9 sure the Division will see soon for March. The location of
10 this well in every respect, the location of the Kelly State
11 Number 5, makes absolutely no sense as a Langlie-Mattix
12 well. It only makes sense as a Jalmat gas well, because
13 the northeast of the north half of Section 20 is not
14 occupied by a Fulfer well, and it provides Arch with that
15 objective.

16 So rather than be honest and come forward to this
17 Commission -- and it's true, you're entitled to a Jalmat
18 gas well on 160 acres, and you're entitled to an orthodox
19 location.

20 But rather than do that and honestly come forward
21 and say that's our objective, instead they've placed this
22 well in a place where it will never be a Langlie-Mattix
23 well, but it opens the door for them to say on this 160
24 acres, Now we want another Jalmat gas well and another
25 Jalmat gas well.

1 And for that reason we think the Application
2 should be denied.

3 EXAMINER CATANACH: Thank you, Mr. Gallegos.
4 Anything further?

5 MR. BRUCE: (Shakes head)

6 EXAMINER CATANACH: Okay, there being nothing
7 further in this case, Case Number 13,343 will be taken
8 under advisement.

9 (Thereupon, these proceedings were concluded at
10 2:12 p.m.)

11 * * *

12
13
14
15 I do hereby certify that the foregoing is
16 a complete record of the proceedings in
17 the Examiner hearing of Case No. 13343,
18 heard by me on October 7, 2004.
19 David P. Catnach, Examiner
20 Oil Conservation Division
21
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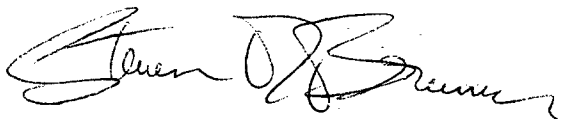
CERTIFICATE OF REPORTER

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

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL October 12th, 2004.



STEVEN T. BRENNER

CCR No. 7

My commission expires: October 16th, 2006