

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICOHearing Date JANUARY 7, 1993 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
<i>Paul Hader</i>	<i>Newbourne Oil</i>	<i>Midland</i>
<i>Dexter Harmon</i>	<i>NEWBOURNE OIL</i>	<i>MIDLAND</i>
<i>Maurice Turner</i>	<i>Byram Co</i>	<i>ST</i>
<i>Bryce Stubbs</i>	<i>Armstrong Energy</i>	<i>Roswell</i>
<i>Ken Warts</i>	<i>Memburne Oil</i>	<i>Midland</i>
<i>William L. San</i>	<i>Sampson, San, Tugot & Kinder</i>	<i>San Fe</i>
<i>J. G. Armstrong</i>	<i>ARMSTRONG ENERGY</i>	<i>ROSWELL</i>
<i>Craig R. R.</i>	<i>MARATHON</i>	<i>MIDLAND</i>
<i>LISA Holston</i>	<i>Marathon</i>	<i>Midland</i>
<i>MARION TERRE</i>	<i>ENERGY Development</i>	<i>Houston</i>
<i>Tom Henry</i>	<i>Monahan</i>	<i>Midland</i>
<i>John L. H.</i>	<i>Kelbourn Oil Co</i>	<i>San Fe</i>
<i>James B. H.</i>	<i>Hankle Can From</i>	<i>Santa Fe</i>
<i>Mike Baking</i>	<i>J. H. D. & Co.</i>	<i>Roswell</i>
<i>John M. Gey</i>	<i>Read & Stevens Inc.</i>	<i>Roswell</i>

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

CASE 10,649

EXAMINER HEARING

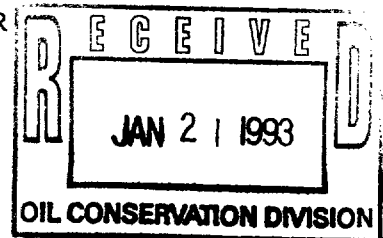
IN THE MATTER OF:

Application of H.L. Brown, Jr., for a unit
agreement, Lea County, New Mexico

ORIGINAL

TRANSCRIPT OF PROCEEDINGS

BEFORE: DAVID R. CATANACH, EXAMINER



STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

January 7, 1993

SECRET

SECRET

INFORMATION DIVISION

A P P E A R A N C E S

FOR THE DIVISION:

ROBERT G. STOVALL
Attorney at Law
Legal Counsel to the Division
State Land Office Building
Santa Fe, New Mexico 87504

FOR THE APPLICANT:

KELLAHIN & KELLAHIN
Attorneys at Law
By: W. THOMAS KELLAHIN
117 N. Guadalupe
P.O. Box 2265
Santa Fe, New Mexico 87504-2265

* * *

I N D E X

Page Number

Appearances

2

Exhibits

4

PETER COURTNEY

Direct Examination by Mr. Kellahin

5

Examination by Examiner Catanach

11

JIM HUGHES

Direct Examination by Mr. Kellahin

12

Examination by Examiner Catanach

19

Examination by Mr. Stovall

22

GEORGE SUTPHEN

Direct Examination by Mr. Kellahin

23

Examination by Examiner Catanach

30

Certificate of Reporter

34

* * *

E X H I B I T S

APPLICANT'S EXHIBITS:

1		
2	APPLICANT'S EXHIBITS:	
3	Exhibit 1	6
4	Exhibit 2	8
5	Exhibit 3	9
6	Exhibit 4	10
7	Exhibit 5	10
8	Exhibit 6	13
9	Exhibit 7	14
10	Exhibit 8	15
11	Exhibit 9	16
12	Exhibit 10	18
13	Exhibit 11	18
14	Exhibit 12	16
15	Exhibit 13	24
16	Exhibit 14	25
17	Exhibit 15	26
18	Exhibit 16	28
19	Exhibit 17	29
20	Exhibit 18	29
21	Exhibit 19	29

* * *

1 WHEREUPON, the following proceedings were had
2 at 8:23 a.m.:

3 EXAMINER CATANACH: At this time we'll call
4 Case 10,649.

5 MR. STOVALL: Application of H.L. Brown, Jr.,
6 for a unit agreement, Lea County, New Mexico.

7 EXAMINER CATANACH: Are there appearances in
8 this case?

9 MR. KELLAHIN: If the Examiner please, I'm
10 Tom Kellahin of the Santa Fe law firm of Kellahin &
11 Kellahin, appearing on behalf of the Applicant, and I
12 have three witnesses to be sworn in.

13 (Thereupon, the witnesses were sworn.)

14 PETER COURTNEY,
15 the witness herein, after having been first duly sworn
16 upon his oath, was examined and testified as follows:

17 DIRECT EXAMINATION

18 BY MR. KELLAHIN:

19 Q. Would you please state your name and
20 occupation?

21 A. My name is Peter Courtney, and I'm petroleum
22 land manager with H.L. Brown, Jr.

23 Q. Mr. Courtney, on prior occasions have you
24 testified as a landman before the Division?

25 A. No.

1 Q. Summarize for us your experience as a
2 petroleum landman.

3 A. I've been employed by Mr. Brown for
4 approximately eight years. I've worked extensively in
5 the states of Michigan, Texas and New Mexico.

6 Q. As part of your duties, have you been
7 involved in a determination of the land title matters
8 with regards to what has been called the North Feather
9 State Unit which Mr. Brown proposes to operate in Lea
10 County, New Mexico?

11 A. Yes, I have.

12 Q. In addition, have you worked with the
13 engineer and geologist to determine a plan of
14 development for that unit, and have you obtained
15 approval from the Commissioner of Public Lands for the
16 unit?

17 A. Yes, preliminary approval.

18 MR. KELLAHIN: We tender Mr. Courtney as an
19 expert petroleum landman.

20 EXAMINER CATANACH: Mr. Courtney is so
21 qualified.

22 Q. (By Mr. Kellahin) Mr. Courtney, let me ask
23 you, sir, to turn to what is marked as Exhibit Number 1
24 and have you identify that display for us.

25 A. Okay, the exhibit outlines the proposed 640-

1 acre State exploratory unit, depicting five leases
2 owned by Mr. Brown.

3 Q. Each of those leases is a State of New Mexico
4 oil and gas lease?

5 A. Correct.

6 Q. The primary producing interval that's
7 targeted for the initial unit well is what, sir?

8 A. The Morrow.

9 Q. As part of your duties, have you investigated
10 to determine whether or not a Morrow well located
11 within the unit would be subject to any existing pool
12 rules?

13 A. There are existing pool rules to the south,
14 being the Feather Morrow Oil Pool.

15 Q. The Feather Morrow Oil Pool in the Morrow to
16 the south is spaced upon what spacing pattern?

17 A. Forty acres.

18 Q. As part of your duties as a landman, have you
19 investigated to determine whether the leasehold tracts
20 could be developed for 40-acre Morrow oil spacing on
21 leasehold tract development?

22 A. No, we cannot do that in a prudent manner.
23 We can't develop on 40 acres.

24 Q. The alternative development pattern for you
25 was then to form a unit?

1 A. Yes.

2 Q. What acreage did you choose to include within
3 the unit boundary?

4 A. The south half of Section 9 and the north
5 half of Section 16 in Township 15 South, Range 32 east.

6 Q. Let me direct your attention, now, sir, to
7 Exhibit Number 2.

8 A. Okay.

9 Q. What is that?

10 A. This is the proposed state exploratory unit
11 agreement which has been proposed to the State Land
12 Office.

13 Q. Is this the unit form --

14 A. Yes, sir.

15 Q. -- prepared and approved by the Commissioner
16 of Public Lands for use for exploratory units?

17 A. Yes, sir.

18 Q. And have you made any material modifications
19 or changes to the form?

20 A. Not to the form.

21 Q. You've simply filled in the blanks as
22 required by the Commissioner of Public Lands?

23 A. Yes, sir.

24 Q. Have you attached to that unit agreement a
25 Schedule B which tabulates the tract ownership

1 information for all the leases to be dedicated to the
2 unit?

3 A. Yes, sir.

4 Q. To the best of your knowledge, information
5 and belief, is that true and accurate?

6 A. Yes, sir.

7 Q. Exhibit A to the unit agreement is the tract
8 map that we've showed for the unit configuration?

9 A. That's correct.

10 Q. All right, sir. As part of your submittal to
11 the Commissioner of Public Lands, did you submit this
12 information along with the geologic information to the
13 Commissioner?

14 A. Yes, sir.

15 Q. Let me direct your attention to Exhibit
16 Number 3 then and ask you to identify that for us.

17 A. This is the letter submitted along with the
18 unit agreement, setting forth our plan of development,
19 plus a geologic write-up.

20 Q. In response to the October 27th, 1992,
21 letter, which is Exhibit 3, what then occurred?

22 A. We received a preliminary disapproval from
23 the State Land Office, and we subsequently came to
24 Santa Fe and sat down with the State Land Office and
25 went through our explanation, the reasoning behind our

1 plan of development.

2 Q. After that meeting, then, was there a revised
3 request submitted to the Commissioner of public lands
4 for the unit?

5 A. Yes, there was.

6 Q. Let me show you Exhibit Number 4 and ask you
7 to identify and describe that exhibit.

8 A. This was our subsequent request for our unit,
9 in which we committed to a second well within six
10 months of production of a commercial well, of our
11 initial well, in the Morrow.

12 Q. With the revision to include the commitment
13 of a second well for the unit, did the Commissioner of
14 Public Lands then take action upon the request for
15 approval of the unit?

16 A. Yes, he then approved it.

17 Q. Let me direct your attention to Exhibit
18 Number 5, Mr. Courtney. Would you identify that and
19 describe that display?

20 A. This is the letter from the Commissioner of
21 Public Lands which gave preliminary approval of our
22 proposed unit.

23 Q. In addition to the preliminary approval of
24 the Commissioner of Public Lands, have you also caused
25 an Application for a Permit to Drill to be filed with

1 the District Office of the Oil Conservation Division?

2 A. Yes, we have.

3 Q. And that is for the initial unit well?

4 A. Yes, it is.

5 Q. Okay. Other than the approval of the Oil
6 Conservation Division and the Hearing Examiner today,
7 are there any other regulatory matters yet pending to
8 be approved?

9 A. No.

10 MR. KELLAHIN: That concludes my examination
11 of Mr. Courtney.

12 We move the introduction of his Exhibits 1
13 through 5.

14 EXAMINER CATANACH: Exhibits 1 through 5 will
15 be admitted as evidence.

16 EXAMINATION

17 BY EXAMINER CATANACH:

18 Q. Mr. Courtney, who are the various interest
19 owners in the unit?

20 A. Mr. Brown and his investors.

21 Q. Do you have a hundred-percent sign-up on --

22 A. Yes, and all five leases are owned by the
23 same individuals.

24 Q. Mr. Courtney, why can't this acreage be
25 developed on a lease or a tract basis?

1 A. As you can see, our leases in the south --
2 which would be the northeast quarter of Section 16 --
3 our proposed well is actually located on Tract 5, being
4 the south half of the northeast.

5 On the Morrow Oil Pool rules as they exist
6 for the Feather Pool, it would be 40 acres. As we will
7 show in further testimony, we cannot prudently develop
8 a Morrow oil well on 40-acre spacing.

9 Q. At this time do you know how many wells may
10 need to be drilled within the unit?

11 A. No, I pass that further.

12 EXAMINER CATANACH: That's all we have of the
13 witness.

14 MR. KELLAHIN: Call at this time Mr. Jim
15 Hughes. Mr. Hughes is a geologist with H.L. Brown.

16 JIM HUGHES,
17 the witness herein, after having been first duly sworn
18 upon his oath, was examined and testified as follows:

19 DIRECT EXAMINATION

20 BY MR. KELLAHIN:

21 Q. Mr. Hughes, for the record would you please
22 state your name and occupation, sir?

23 A. My name is Jim Hughes. I'm a geologist for
24 H.L. Brown.

25 Q. On prior occasions, Mr. Hughes, have you

1 testified before the Division as a petroleum geologist?

2 A. Yes, sir.

3 Q. Pursuant to your employment as a geologist
4 with Mr. Brown, have you in conjunction with Mr. Jack
5 Wells, also a geologist with your company, made a
6 geologic study of this particular prospect?

7 A. Yes, sir.

8 Q. Based upon that study, have you reached
9 certain expert-opinion conclusions about the
10 feasibility of development of the Morrow on a unit
11 basis concept?

12 A. We have.

13 MR. KELLAHIN: Tender Mr. Hughes as an expert
14 petroleum geologist.

15 EXAMINER CATANACH: Mr. Hughes is so
16 qualified.

17 Q. (By Mr. Kellahin) Mr. Hughes, let me ask
18 you, sir, to turn to Exhibit Number 6 and again help us
19 understand and have you describe the proposed unit and
20 specifically identify for us what is intended to be the
21 initial unit well location.

22 A. The initial unit well will be in the
23 southeast of the northeast of Section 16, located in
24 general proximity to existing control at the Morrow and
25 Wolfcamp levels.

1 Q. What other information is shown on this
2 display?

3 A. The general distribution of control or wells
4 drilled in the area that we might use for evidence of
5 what we pursue.

6 Q. Okay. Let me ask you now to turn to Exhibit
7 Number 7. Identify and describe that display for us.

8 A. Exhibit Number 7 is a topographic -- a copy
9 of a topographic map of the general area, and
10 specifically the unit outlined with the section and
11 township, geographic boundaries superimposed upon it.

12 And its main purpose is to demonstrate the
13 topographic problems that were following with the
14 drilling in topography in this said quarter section.

15 In other words, a location that would be on
16 the immediate 40-acre tract would be extremely
17 expensive and difficult to maintain throughout its life
18 due to the fact that it's in a lake.

19 Q. When you go to interpreting and investigating
20 the geology, what is the process you've used to be able
21 to focus your attention on what to do with the Morrow
22 Reservoir in the area?

23 A. The Morrow has very limited number of
24 penetrations in the overall region.

25 The next shallower horizon that reflects the

1 structural attitude of the Morrow is the Wolfcamp,
2 which was the primary interest starting in the 1950s
3 when this area was developed. And we've used the
4 Wolfcamp as a structural guide to help locate the most
5 optimum position for our Morrow test.

6 In other words, the higher we can get
7 structurally, the better off we feel we are within the
8 trend of the Morrow sand.

9 Q. Let's turn now to the structure map on the
10 Wolfcamp --

11 A. -- which is Exhibit 8.

12 Q. -- and that's Exhibit Number 8.

13 Without describing all the information on the
14 display, focus our attention onto the structural
15 feature in the Wolfcamp that helps you make decisions
16 about the Morrow within the unit boundary area.

17 A. The subsea datums up in the Tulk field to the
18 north end of the map are in the minus-5400 range, and
19 the subsea values in the North Anderson range to the
20 south are in the 5490 to 5500. In the center, 5458-
21 5486.

22 There's a good continuity of structural grain
23 that runs through here that we feel holds up the
24 structural position at the Morrow level, even though
25 the control is limited in this area.

1 Q. When you take the Wolfcamp structure and
2 infer it into the Morrow reservoir, what have you
3 determined?

4 A. I need to refer you to Exhibit 12 and Exhibit
5 9 --

6 Q. Okay.

7 A. -- which are giving the general trend of the
8 Morrow sand development from East Tulk to our North
9 Anderson Ranch.

10 Q. Okay, let's get those two displays out.

11 For the record, Exhibit 9 is what, sir?

12 A. Exhibit 9 is a Morrow Sand Channel map.

13 Q. And Exhibit 12 is what?

14 A. Is the Morrow Completion Data map.

15 Q. All right. Help us understand your
16 conclusions about the two displays.

17 A. Exhibit 12 has a red outline or a red circle
18 around each Morrow penetration.

19 Then given in green circles are the number of
20 indicated reservoirs within the Morrow, based on their
21 complete production history. And that's the amount of
22 oil divided by the amount of gas, to give you roughly
23 the GOR of this to indicate that there's difference.

24 And out of the eight separate reservoirs
25 there appears to be only two wells out of a given

1 reservoir -- that being the number 4 up here at the
2 Santa Fe H.L. Brown UTP in Section 21.

3 So both maps illustrate that there is a
4 general north-south trend of Morrow channel sand
5 development.

6 But it does also indicate that there's a
7 great erratic aspect to the trapping mechanism
8 developed here, since they all appear to have generally
9 different GORs and different permeabilities and
10 porosities, as you can see by the production histories
11 on these things that have been extremely erratic also.

12 Out of these 26 Morrow penetrations, nine
13 have been completed and four and appear to be
14 profitable wells.

15 Q. How does this information then help you make
16 any decisions or conclusions about the size and shape
17 of the unit?

18 A. The size and shape of the unit needs to be
19 flexible enough to accommodate whatever we find in this
20 first Morrow well that we might decide if we're in a
21 previously existing reservoir or in a new reservoir,
22 and that will be determined as much by pressure data,
23 drill stem tests, the amount of sand we find,
24 presumably dip-meters to give channel orientation and
25 so forth.

1 And to step logically or illogically to the
2 next location would have to be determined by what we
3 find in each well.

4 Q. Does the approval of the unit concept and the
5 application of that to the 640-acre proposed unit
6 provide to H.L. Brown the necessary flexibility to go
7 forward with the initial well and subsequent
8 development of the hydrocarbons that may be contained
9 in the Morrow reservoir?

10 A. Yes, it does.

11 Q. Can you achieve those objectives geologically
12 in the absence of a unit?

13 A. I don't -- I wouldn't feel qualified to
14 answer that.

15 In my opinion, it would be very difficult to
16 do so, but I suppose -- You know, in some circumstances
17 anything is possible.

18 But it would, in my opinion, create great
19 difficulty and perhaps waste to have to be saddled with
20 a precise boundary unit, since each well could be a
21 different reservoir.

22 Q. The displays we haven't talked about, just
23 for the record, and not to discuss them, would you
24 identify for us Exhibits 10 and 11?

25 A. Number 11 is a stratigraphic cross-section of

1 the Morrow sand from -- in roughly an east-west
2 direction, showing the concept of the sand.

3 Number 10 is a Wolfcamp pay cross-section,
4 giving some indication of the distribution of the
5 permeability and so forth in the Wolfcamp, which is a
6 secondary objective.

7 Q. And these are copies of the same geologic
8 displays that were submitted to the Commissioner of
9 Public Lands upon which then he based his preliminary
10 approval?

11 A. They are.

12 MR. KELLAHIN: That concludes my examination
13 of Mr. Hughes.

14 We move the introduction of Exhibits 6
15 through 12.

16 EXAMINER CATANACH: Exhibits 6 through 12
17 will be admitted as evidence.

18 EXAMINATION

19 BY EXAMINER CATANACH:

20 Q. Mr. Hughes, where is the Morrow oil
21 production located?

22 A. All of these are generally considered, if I
23 understand the nomenclature right, to be oil wells,
24 even though Morrow historically is a gas-bearing
25 reservoir or a retrograde oil reservoir.

1 We're quite a ways north of the main Morrow
2 pay, but all of this at one time or another, as I
3 understand it, has been classified as oil production,
4 and this had a high associated GOR.

5 Q. Do you have reason to believe that the Morrow
6 underlying your acreage would show any different
7 producing characteristics?

8 A. I don't have any reason to believe it would.

9 The erratic nature of the channel deltate
10 system that brings us in here creates multiple bodies,
11 independent bodies of sands that are trapped, sealed in
12 the shales.

13 And given the history of these wells at the
14 south end and the history of the wells at the north
15 end, I see no reason to believe that ours would be
16 basically different.

17 Q. Your wells should generally produce oil?

18 A. I would think it would be a high-GOR oil
19 well, yes, sir.

20 Q. Do you have any reason to believe that any of
21 the Morrow completions drain more than 40 acres?

22 A. I'll need to pass that to Mr. Sutphen from an
23 engineering standpoint.

24 Q. You've outlined on your Exhibit Number 12 a
25 fairway outlined in pink.

1 A. Yes, sir.

2 Q. Does that represent the location of the
3 Morrow channel?

4 A. That is a very broad interpretation of it.

5 In other words, there's very little control
6 outside that, and when you build your cross-section and
7 look at all your logs, you see that the common
8 occurrence of these sands within the wells we have
9 circled here -- This could be totally inaccurate.

10 It's our best judgement as to where the
11 channel -- the general overall trend exists.

12 Q. Do you have sufficient geologic evidence to
13 demonstrate to you that all of your proposed acreage
14 within the unit will be productive from the Morrow?

15 A. I really don't have sufficient data to say
16 that.

17 Our obvious hope would be that the bulk of it
18 is.

19 But not withstanding the Morrow, we also
20 anticipate that the Wolfcamp will be productive, and it
21 has a better chance, due to the structural position and
22 the widespread nature of reservoir development, of
23 being productive over the whole unit as opposed to the
24 Morrow.

25 Q. Would the Wolfcamp demonstrate oil-producing

1 characteristics also?

2 A. It would be oil and gas, yes, sir. Mostly
3 oil.

4 Q. Have you already staked your initial
5 location?

6 A. Yes, we have.

7 Q. Is that a standard location, do you know?

8 A. I don't believe it -- Yes, it is.

9 MR. KELLAHIN: It is, Mr. Examiner.

10 EXAMINER CATANACH: I believe that's all I
11 have of the witness.

12 He may be excused.

13 MR. STOVALL: I want follow up on one thing
14 to make sure it's clear.

15 EXAMINATION

16 BY MR. STOVALL:

17 Q. I believe the landman testified you've
18 already got an APD in with the State; is that correct?

19 A. Yes.

20 Q. Application for a Permit --

21 A. Right.

22 Q. Do you know if that's been approved?

23 A. I'm not --

24 MR. STOVALL: Well, I'll ask the engineer,
25 then, when he gets back up.

1 GEORGE SUTPHEN,
2 the witness herein, after having been first duly sworn
3 upon his oath, was examined and testified as follows:

4 DIRECT EXAMINATION

5 BY MR. KELLAHIN:

6 Q. Would you please state your name and
7 occupation?

8 A. I'm George Sutphen. I'm operations manager
9 for H.L. Brown. I'm a petroleum engineer.

10 MR. KELLAHIN: Mr. Sutphen spells his last
11 name S-u-t-p-h-e-n.

12 Q. (By Mr. Kellahin) On prior occasions have
13 you testified before the Oil Conservation Division?

14 A. Yes, I have.

15 Q. And pursuant to your employment as an
16 engineer, have you made an engineering study of this
17 particular prospect and participated in pursuing
18 approvals before the Commissioner of Public Lands for
19 the unit?

20 A. Yes, sir.

21 MR. KELLAHIN: We tender Mr. Sutphen as an
22 expert petroleum geologist.

23 EXAMINER CATANACH: Mr. Sutphen is so
24 qualified.

25 MR. STOVALL: Engineer?

1 MR. KELLAHIN: What did I say?

2 MR. STOVALL: Geologist.

3 MR. KELLAHIN: Engineer.

4 EXAMINER CATANACH: That too.

5 MR. KELLAHIN: Okay.

6 Q. (By Mr. Kellahin) Let me direct your
7 attention to Exhibit Number 13.

8 A. Yes, sir.

9 Q. Identify that for me, please.

10 A. That's an Authority for Expenditure, cost
11 estimate for a Morrow test to a depth of 12,500 feet.

12 Q. Is this an AFE that is generated for the
13 initial unit well to test the Morrow within the unit
14 boundary?

15 A. Yes, sir.

16 Q. What's the purpose of preparing the AFE
17 insofar as it's relevant to the Examiner?

18 A. I need to know how much the well is going to
19 cost so that I can determine the economics of the
20 venture.

21 Q. Having done that, have you satisfied yourself
22 that the AFE for the well is fair and reasonable and
23 current?

24 A. It's about as low a price as we think we can
25 drill it for. It's a minimum-cost well. The cost may

1 very well exceed this if we have any trouble.

2 But yes, I think it's a reasonable price.

3 Q. Okay. Having satisfied yourself of a
4 reasonable cost for the initial well, what then do you
5 do as an engineer to determine the viability of the
6 project in terms of unit development versus leasehold
7 development?

8 A. I made the reserve determination for the 40-
9 acre statutory spacing of the Feather Morrow field and
10 determined that our 40-acre reserves would be 583,836
11 MCF gas, 42,517 barrels of condensate.

12 Q. Having calculated the volume of recoverable
13 hydrocarbons on the 40-acre spacing, what then did you
14 do?

15 A. We made a best estimate of our future product
16 prices for both condensate and gas and determined the
17 economics of drilling on reserves for under 40 acres.

18 Q. What did you conclude?

19 A. We concluded that the economics were -- We're
20 unable to meet our economic criteria for drilling.
21 It's just an uneconomic venture to develop for Morrow
22 on a 40-acre spacing.

23 Q. Identify for me Exhibit Number 14.

24 A. Number 14 is our tabulation of our economic
25 evaluation for a gas well with the reserves I just

1 stated.

2 Q. Okay. Having reached the conclusion that you
3 cannot economically pursue the Morrow on 40-acre
4 spacing, did you explore any other options for the
5 development of the tracts?

6 A. At the same time we were determining the
7 reserves under 40 acres, we backed into a calculation
8 for possible drainage of the wells that were in the
9 Feather Morrow field.

10 Q. Let's take a moment and find one of the
11 displays that will give us the location of the well
12 you've used for data by which then you have made the
13 drainage calculation.

14 A. Okay, Exhibit Number 9 shows the three wells
15 in the Feather Morrow field: the Santa Fe State UTP
16 Number 1 and Well Number 2 in Section 21, and the H.L.
17 Brown State UTP Number 3 in the southeast corner of
18 Section 16.

19 Q. Let me direct your attention to Exhibit
20 Number 15. What's the purpose of that display?

21 A. Number 15 is a computation of well drainage
22 based on the recoveries from these three wells and our
23 pore-volume determination of hydrocarbon pore space.

24 Q. What did you conclude?

25 A. We concluded that the State UTP Number 3,

1 which is the H.L. Brown well, more than likely drains
2 at least a minimum of 173 acres, and probably much more
3 than that. My best estimate is 226 acres of drainage.

4 Q. How does that information and those
5 calculations affect your decision of what to do with
6 the acreage that's proposed for inclusion in the North
7 Feather State unit?

8 A. The conclusion is that a statutory 40-acre
9 rule would cause us to drill more wells than should be
10 drilled, and it would be an inefficient development.

11 Q. In order to make the determination as to the
12 appropriate spacing pattern for this particular area,
13 you need to have the initial well?

14 A. That's correct.

15 Q. Can you accomplish that activity under the
16 unit plan of development?

17 A. Yes, sir.

18 Q. How do you achieve that under a unit plan
19 that you can't achieve under a leasehold tract
20 development plan?

21 A. Under the unit plan we could drill the first
22 well without running the risk of instigating a -- or
23 losing some acreage and instigating a 40-acre offset,
24 which would drain a well that's already more than
25 likely going to drain far in excess of 40 acres.

1 Q. Under the unit concept, then, that acreage
2 would contribute and share in the revenues derived from
3 the sale of Morrow production with the initial unit
4 well?

5 A. That's correct.

6 Q. Have you made a study to determine whether or
7 not there's a high probability that this Morrow well at
8 this location in fact is going to be an oil well?

9 A. By the definition of "oil well" under the
10 statutes, yes, it will be an oil well because the
11 gas/oil ratio will likely be less than 100,000.

12 In my opinion, however, it is a gas
13 reservoir, and we do have a reservoir fluid study from
14 the State UTP Number 1 well, Santa Fe's, to demonstrate
15 that this is in fact a retrograde gas reservoir.

16 Q. Let's turn to that display. It's Exhibit
17 Number 16, is it?

18 A. Yes, sir.

19 Q. Summarize for us the conclusions of the fluid
20 study.

21 A. This was a recombination fluid study of the
22 State UTP Number 1, which determined that it is in fact
23 a retrograde reservoir with a dew point, as shown on
24 page 5 of the Core Lab study, to be at 5368 p.s.i.

25 So this demonstrates that the reservoir fluid

1 at initial conditions is in fact a gas and doesn't
2 reach the dew point or form liquids until the pressure
3 declines down below 5368 p.s.i. at reservoir
4 temperature.

5 Q. Will approval of the unit give the operator
6 the necessary control and flexibility to drill the
7 initial well, to obtain reservoir data on that well,
8 and then use that information to come back to the
9 Division for an application by which to set appropriate
10 spacing for this well or determine whether or not you
11 have a new reservoir that needs new rules?

12 A. Yes, sir, that's -- That's correct.

13 Q. Let's turn now to Exhibit Number 17 and have
14 you identify and describe that display.

15 Q. Okay, 17, 18 and 19 are all decline curves on
16 these three wells.

17 As you can see, the State UTP Number 2, which
18 is the well in the middle, between the Number 1 and the
19 Brown Number 3 well, has depleted and been recompleted
20 in the Wolfcamp formation.

21 The most southerly well, the State UTP Number
22 1, has just about reached depletion, but it is still
23 producing from the Morrow.

24 The H.L. Brown State UTP Number 3 is still a
25 good producer and continues to be quite profitable with

1 production from the Morrow.

2 This is probably an indication in support of
3 the geology that these are -- These may or may not be
4 separate reservoirs. But in any event, they tend to
5 support our pore-volume calculations of small drainage
6 on Number 2 and considerably larger drainage on the two
7 wells on the north and south ends of the field.

8 Q. As part of Mr. Brown's presentation to the
9 Commissioner of Public Lands for preliminary approval
10 of the unit, did you come to Santa Fe and make this
11 technical presentation to the Land Commissioner's
12 staff?

13 A. Yes, sir, I did.

14 Q. And this is the same information that you've
15 presented to them?

16 A. Yes, sir.

17 MR. KELLAHIN: That concludes my examination,
18 Mr. Examiner.

19 We move the introduction of Exhibits 14
20 through 19.

21 EXAMINER CATANACH: Exhibits 14 through 19
22 will be admitted as evidence.

23 EXAMINATION

24 BY EXAMINER CATANACH:

25 Q. Mr. Sutphen, have you seen any geologic data

1 that might indicate that you've got two separate
2 reservoirs?

3 A. There are some indications that there are two
4 separate reservoirs. We think the reservoirs are
5 certainly similar, but we just don't know. There's
6 just not that much control.

7 Q. Have you noticed any difference in the
8 gravity of the oil produced from any of these wells?

9 A. There are slight differences, yes. Our
10 condensate runs about 54-degree gravity, which again
11 would be an indication that this is a gas reservoir
12 instead of an oil reservoir.

13 But the differences -- We have not determined
14 a distillation analysis or anything in comparison to
15 the other wells, but there are some small gravity
16 differences.

17 Q. You say "your condensate". That's the one
18 produced from the Number 3 well?

19 A. Yes, sir.

20 Q. You've not run a PVT study on the Number 3
21 well?

22 A. No, sir.

23 Q. That gravity in that well appears to be 47,
24 around 48, somewhere around there?

25 A. It has varied from 47 to 54. It's running 54

1 right now.

2 Q. In the Number 1 well?

3 A. No, in the Number 3 well. No, the 47 is in
4 the Number 1 well.

5 Q. Now, you did say that if you get a good
6 producing well, you may come in and ask for separate
7 rules for this --

8 A. Yes.

9 Q. -- reservoir?

10 At this point you just don't see this acreage
11 being developed on 40 acres?

12 A. No way. Our AFE is absolutely as low as we
13 can get it, at \$725,000. Most of the Morrow wells in
14 this area have run a million dollars. So we think our
15 AFE is as low as we can get it.

16 Our economics use escalated prices for oil
17 and gas, and those are as good as we can get them.

18 We want to drill this well. We think there
19 is a separate reservoir up there. We wouldn't be
20 drilling it if we thought it was in the same reservoir
21 as the Number 3.

22 So even at those lowest cost estimates and
23 highest product prices, we cannot meet our yardstick
24 for economics.

25 So by virtue of that, there's just no way

1 that I could recommend developing this on 40 acres.

2 EXAMINER CATANACH: I have nothing further of
3 the witness. He may be excused.

4 Anything further in this case?

5 MR. KELLAHIN: No, sir.

6 EXAMINER CATANACH: There being nothing
7 further, Case 10,649 will be taken under advisement.

8 (Thereupon, these proceedings were concluded
9 at 9:03 a.m.)

10 * * *

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 10649,
heard by me on January 7 19 43.

David J. Katon, Examiner
Oil Conservation Division

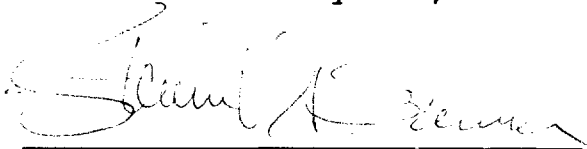
1 CERTIFICATE OF REPORTER

2
3 STATE OF NEW MEXICO)
4) ss.
COUNTY OF SANTA FE)

5
6 I, Steven T. Brenner, Certified Court
7 Reporter and Notary Public, HEREBY CERTIFY that the
8 foregoing transcript of proceedings before the Oil
9 Conservation Division was reported by me; that I
10 transcribed my notes; and that the foregoing is a true
11 and accurate record of the proceedings.

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

16 WITNESS MY HAND AND SEAL January 8th, 1993.

17
18 
19 STEVEN T. BRENNER
CCR No. 7

20 My commission expires: October 14, 1994
21
22
23
24
25