

CASE No.

5082

Application,

Transcripts,

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 26, 1974

EXAMINER HEARING

-----)
IN THE MATTER OF:)

Case 5081 being reopened pursuant to)
the provisions of Order No. R-4657,)
which order established temporary)
special rules and regulations for the)
North Shoe Bar-Wolfcamp Pool, Lea)
County, New Mexico, and)
Case 5082 being reopened pursuant to)
the provisions of Order No. R-4658,)
which order established temporary)
special pool rules for the North)
Shoe Bar-Strawn Pool, Lea County,)
New Mexico.)
-----)

CASE NO.
5081
5082

BEFORE: Daniel S. Nutter, Examiner

For the New Mexico Oil
Conservation Commission:

Thomas Derryberry, Esq.
Legal Counsel for the
Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant:

Paul Eaton, Esq.
HINKLE, BONDURANT, COX
& EATON
Hinkle Building
Roswell, New Mexico
and
Don Dent, Esq.

CASE 5081-5082

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I N D E X

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MR. NUTTER: The Hearing will come to order, please. The first case this morning will be Case 5081.

MR. DERRYBERRY: Case 5081. In the matter of Case 5081 being reopened pursuant to the provisions of Order No. R-4657, which order established temporary special rules and regulations for the North Shoe Bar-Wolfcamp Pool, Lea County, New Mexico.

MR. EATON: Paul Eaton of the firm of Hinkle, Bondurant, Cox and Eaton of Roswell, and Don Dent, Attorney for Mesa Petroleum Company, representing the Applicant, Mesa Petroleum Company. Mr. Dent will handle the examination.

MR. NUTTER: Are there other appearances in this case? Will you proceed, please?

MR. DENT: Mr. Examiner, we are also appearing on Case to82 and our testimony will be representative of that case by the same witness and the same exhibits. Can we consolidate those for the purpose of this short bit of testimony?

MR. NUTTER: We will call now, Case No. 5082.

MR. DERRYBERRY: Case 5082. In the matter of Case No. 5082 being reopened pursuant to the provisions of Order No. R-4658, which order established temporary

special pool rules for the North Shoe Bar-Strawn Pool,
Lea County, New Mexico.

MR. NUTTER: We have one appearance in this
case. Are there appearances in Case No. 5082 other than
we had before?

Would you proceed, Mr. Dent? The cases will
be consolidated.

MR. DENT: Mr. Examiner, I have one witness
I would like to call at this time, Mr. Les Carnes.

L. M. CARNES

called as a witness, having been first duly sworn, was
examined and testified as follows:

DIRECT EXAMINATION

BY MR. DENT:

Q For the record, will you please state your name,
by whom you are employed and in what capacity?

A Les M. Carnes, employed by Mesa Petroleum
Company as Senior Reservoir Engineer in Amarillo, Texas.

Q Mr. Carnes, have you made a study of the North
Shoe Bar-Wolfcamp Pool and the North Shoe Bar-Strawn Pool
for purposes of determining whether or not the temporary
field rules of 160-acre spacing should be continued or
made permanent?

A Yes, I have.

Q Have you prepared or had prepared under your supervision certain exhibits to be presented at this time?

A Yes, sir.

Q I hand you what has been marked and handed to the Examiner, Mesa's Exhibit No. 1. Would you please refer to that exhibit and explain what you show there?

A Exhibit 1 is a structure map drawn on top of the Strawn formation in the North Shoe Bar Field. It depicts the Strawn reef structural trends in the area, and it shows a high around the Mesa Hillburn and Wiser Wells which are both Strawn wells. The map also shows Mesa 100 percent acreage in light yellow, and Mesa partial working interest in the light orange. It shows the Wolfcamp wells to be in orange color, coded on the map, and Strawn wells in green. The map shows that Mesa operates three Strawn wells, the Hillburn, the Wiser and the Lyster, and three Wolfcamp wells, the Gilmore, Chambers and Skelly State.

Q For the record, will you please identify where the Hillburn, Lyster and Wiser wells are located?

A Okay. The Hillburn Well is located in the northwest quarter of Section 13, Township 16 South, Range

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35 East. The Wiser Well is located in the southwest quarter of Section 13, the same township and range. The Lyster Well is located in the northeast quarter of Section 13, the same township and range.

Q Give the location of the Gilmore and Chambers Wells in Section 7?

A The Gilmore Well is located in the southwest quarter of Section 7, Township 16 South, Range 36 East. The Chambers Well is located in the southeast quarter of Section 7, same township and range.

Q Is Mesa presently drilling a well in Section 14?

A Yes, we are.

Q What is the status of that well?

A That well is drilling at about 6500 feet as of yesterday morning. It is located in the southwest quarter of Section 14, Township 16 South, Range 35 East.

Q Have you prepared an isopach map of this area?

A Yes, sir.

Q Refer to what has been marked as Exhibit 2 and explain what you show on that exhibit?

A Exhibit 2 is a Strawn-isopach pay map. It depicts the hydrocarbon bearing net pay in the Strawn formation. It also shows in there areas that are bracketed,

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and these areas depict what we now consider to be affected by the production from these three Strawn wells.

Q You refer to a bracketed area. Is that by the dashed red lines shown on this exhibit?

A Yes, it is.

Q What is the significance of that area, again?

A That shows what we estimate to be the area affected by the production from these three Strawn wells at this time.

Q How did you determine that area?

A In the case of the Strawn, it was based on the performance and extrapolated ultimate recovery from the Strawn which we will later get into on another exhibit.

Q Will you refer to Exhibit 3 and explain what data is shown there?

A Exhibit 3 is simply initial completion data tabulations showing pertinent completion data for all six wells, the three Wolfcamp and the three Strawn wells mentioned.

Q Have you prepared any pressure history data to show the Commission?

A Yes, we have.

Q Will you please refer to what is marked as

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Exhibit 4 and review your pressure history of the North Shoe Bar-Strawn Field well?

A Exhibit 4 just shows the pressure history related to time, starting with the first well in the Strawn reservoir in the field. That was Hillburn No. 1, and the first pressure was the DST pressure and we feel this reflects initial Strawn reservoir pressure as 4274 PSIG at a datum of minus 7342. The date of that was September 7th, 1973. Later, on October 10th of '73, an extrapolated 72-hour build-up survey was taken, indicating the pressure to be 4248, slightly lower than the initial DST pressure, however, some test oil production had been recovered at that time.

Then, continuing on, it shows that our second well in the Strawn, the Lyster No. 1, on October 23 of '73, had a DST pressure of 4236, at the same datum of minus 7342.

It continues on and shows subsequent pressures to the completion of these first two wells. I would like to call your attention to the Wiser No. 1 pressure taken on June 10th, 1974. That was the first pressure taken in that well and it was only 3376 compared to the original pressure of 4274. No production had occurred from the

Wiser at that time, the new well. This indicates that production from the Hillburn Well had affected that well and the pressure was somewhat lower by 800 or 900 pounds due to the pressure disturbance caused by the Hillburn Well.

Q Have you prepared certain production data on Exhibit 5?

A Yes, I have.

Q Would you please refer to Exhibit 5 and explain what you have shown by that group of curves?

A Exhibit 5 is a three-part exhibit showing the performance curves for the three Strawn wells in this reservoir. The first page and the first curve is an oil performance versus time with the GOR shown in the circles. It indicates that the Hillburn Well has recovered 99,000 barrels of oil as of November 1, 1974. The extrapolation is quite steep, but it is because -- what it appears -- we just extrapolated trend that had already been established. I feel that is a little too steep, but that shows that the ultimate recovery would be about 130,000 barrels of oil and 1.4 BCF of gas.

The next performance curve is on the Lyster No. 1 Well. It indicates accumulative recovery of 59,000 barrels of oil as of November 1, 1974, and an

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estimated ultimate recovery of 110,000 barrels and 1.2 BCF of gas.

The third curve is for the Wiser No. 1 Well. This has been a low permeability well and it has only recovered 8700 barrels with an estimated ultimate recovery of only 20,000 barrels.

Q Mr. Carnes, based upon your reservoir study and production data and pressure distribution curves which you have presented by these exhibits, what is your recommendation as to the spacing of the North Shoe Bar-Strawn Field?

A I would recommend that 160 acres would be the proper spacing for these wells.

Q Is it your opinion that one well will effectively and efficiently drain an area of 160 acres?

A Yes, it is. Let me say something further here. That is based, then, on the production performance that I have just related, the estimated ultimate recovery compared to volumetric estimates of recoverable oil in stock tank barrels per acre-foot divided into the ultimate recovery I have already indicated, would give you a drainage of about 230 acres for the Lyster Well and for the Hillburn, about 200 acres, and that is what is shown

in Exhibit 2 in those brackets.

Q Refer now to what has been marked as Mesa's Exhibit 6 and explain what you have shown in that exhibit?

A Exhibit 6 is a Wolfcamp isopach map showing the net Wolfcamp pay. It shows the pay ranges from zero to about 40 feet in thickness, and a pretty narrow Wolfcamp reef reservoir.

The dashed red lines in the upper right of the map and the lower left depict what we feel has been affected by production from Mesa's three Wolfcamp Wells, the Gilmore, the Chambers and the Skelly State No. 1. This area is about 697 acres, and that was based on a study done in June of a material balance nature. We had taken pressures subsequent to initial pressures which we will get into in a little bit, and we determined the oil-in-place and then calculated the area.

Q Refer to your next exhibit which is No. 7, and review the pressure history as it relates to the North Shoe Bar-Wolfcamp formation?

A Exhibit 7 is a pressure history of the Wolfcamp in the North Shoe Bar Field. It shows that the original pressure was 4097 pounds as determined from the DST measurement on the Skelly State No. 1, December 23, 1972.

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This pressure was also measured on DST in the second well, the Gilmore No. 1, on December 10, 1973, nearly a year later. The reason for the same pressures was the distance between the two wells and the limited production from the Skelly State No. 1. The wells were shut in for some time waiting on a gas connection.

Q Have you also prepared a set of production curves as relates to the wells completed in the Wolfcamp?

A Yes, I have. It is Exhibit 8.

Q Please explain that exhibit.

A It is a three-part exhibit showing the production performance for the three Wolfcamp Wells, the Skelly State No. 1, the Gilmore No. 1 and Chambers No. 1. The first sheet is for the Skelly State No. 1, which indicates an ultimate recovery of 13,500 barrels based on the extrapolated performance and a cumulative recovery to November 1, '74, of 11,500.

The second page reflects the production behavior and extrapolated ultimate performance for the Gilmore No. 1. It indicates an estimated ultimate recovery of 164,000 barrels of oil with accumulative recovery as November 1, 1974, of about 77,000 barrels.

The last curve is for Chambers No. 1, which

shows an estimated recovery of 92,000 barrels of oil with a cumulative recovery to November 1, 1974 of 57,000 barrels.

Q Based on these data and your study of the Wolfcamp formation, do you likewise have a recommendation to the Commission as to the spacing in that formation?

A Yes, I do. I would recommend 160-acre spacing for the Wolfcamp formation also.

MR. DENT: Mr. Examiner, that concludes our direct evidence, and on behalf of Mesa, we would like to recommend that the Commission continue the 160-acre spacing order and that the temporary order be made permanent.

MR. NUTTER: Mr. Dent, Order No. R-4658-A, entered by the Commission in February of 1974, established a GOR of 4001 for the Strawn Pool and that is also the subject of this hearing today.

MR. DENT: We didn't know for sure whether it was or not. We also have recommendations as to that and I would like to direct our witness to it if it is within the scope of this hearing.

MR. NUTTER: Yes, sir, it sure is.

BY MR. DENT:

Q Mr. Carnes, would you refer to your production

CARNES-DIRECT

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data curves which have been marked as Exhibit 5 and 8 and review the GOR performance, and also tell the Commission your findings and recommendations as to the GOR limitations.

A Exhibit 5 is that three-part production curve for the Strawn formation, and for the Hillburn No. 1 which is the first sheet of that exhibit, it indicates that the measured gas-oil ratio has increased from about 1300 cubic feet per barrel in April of '74, the date the well first went on stream and commercial oil was sold to just about 3001 in November. We feel like these gas-oil ratios are low because the solution gas-oil ratio from the fluid analysis study was about 2500 to 1, and that was the reason that we appeared in February of this year and asked for GOR relief from the state-wide 2001 to 1 up to 4000. Some of the problems might be that our measurements are not accurate. We are looking to that right now. Some of the gas was temporary as previous testimony in February will reveal. They are processing it through a plant, recovering the liquids from that gas.

The next exhibit, or the next curve of this three-part exhibit is for Lyster No. 1. It reflects a little bit more of an increasing GOR trend from a little over 1000 cubic feet per stock tank barrel to over 4000

at the present time.

The last curve is the Wiser No. 1. It indicates a similar GOR trend, increasing from about 1000 to 1 to a little over 3000 to 1.

Since we are conserving gas that is being sold, liquids are being recovered from it. We feel that there is no waste taking place. We still want to ask for a 4000 to 1 limit in gas-oil ratio, in view of the fact that the solution ratio is 2500 and current producing gas-oil ratios are in excess of 2000. That is for the Strawn reservoir.

Q What is the current productivity per day of the Hillburn, Mr. Carnes?

A We are not certain about its mechanical problem-free deliverability or productivity because we've got parafin problems that we are trying to cure. As you notice, about September, the well averaged nearly 400 barrels a day, but unknown to us, parafin was accumulating and acted as a choke in the well and the production dropped severely to a low of about a little over 200 barrels a day in October.

CROSS EXAMINATION

BY MR. NUTTER:

CARNES-CROSS

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Q Is the well a flowing well?

A Yes. All the wells are flowing in the Wolfcamp and Strawn.

Parafin problems have created a measurement problem for us in determining the true productivity of the well. I feel that the well will probably make in excess of 300 barrels a day once we get permanent parafin control facilities set up.

Q Do you scrape the parafin in here or do you hollow out the well or what?

A We scraped it and we are going to try to install a continuous scraping device on a wire line. Our production people are working on that.

Q What is the productivity of the Lyster? Apparently, it is around 160 barrels a day, is this correct?

A Yes. It was down to a low of 90 barrels a day in October. Not only did we have parafin problems, but we took an extended bottomhole pressure survey and it was shut in for several days, and that is the reason for the low point in October of '74. After the parafin had been cleaned up -- I think it was a partial clean-up -- for the first 20 days of November it averaged a little over 150 barrels a day. I feel that once we continually

clean the parafin out, we will have a productivity of between 200 and 250 barrels a day, but that's a guess. We've got about 2900 pounds of bottomhole pressure in that well, and initially, it flowed about as well as the Hillburn. Since it has about 1000 pounds higher pressure than the Hillburn, it also could be in the range of 300 to 400 barrels a day if we get the parafin problem cleared up.

Q Mr. Carnes, you mentioned that the solution GOR in the Strawn was 2500 to 1. What was the bubble point of this oil, do you know?

A In the Strawn, it was 3950.

Q So, the pressure has declined below the bubble point at this stage?

A Yes, sir.

Q And you expect this is free gas in the reservoir, then, that is being produced now?

A Some of it would be.

Q And the 4000 to 1 ratio that was adopted by Order No. R-4658-A is proposed to be continued in this pool?

A Yes, sir.

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

(Witness dismissed.)

MR. NUTTER: Mr. Dent, did you offer these exhibits?

MR. DENT: Mr. Examiner, at this time I would like to offer Mesa's Exhibits 1 through 8 in consolidated Cases 5081 and 5082.

MR. NUTTER: Mesa's Exhibits 1 through 8 in Cases 5081 and 5082 will be admitted in evidence.

(Whereupon, Applicant's Exhibits Nos. 1 through 8 were marked for identification, and were admitted into evidence.)

MR. NUTTER: Do you have anything further, Mr. Dent?

MR. DENT: I have nothing further, Mr. Examiner.

MR. NUTTER: Does anyone have anything they wish to offer in Case 5081 or 5082?

If not, we will take the cases under advisement.

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

I, RICHARD L. NYE, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Richard L. Nye
COURT REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 5081-82, heard by me on 11/26, 1974.

Richard L. Nye, Examiner
New Mexico Oil Conservation Commission

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 13, 1974

EXAMINER HEARING

IN THE MATTER OF:)
)
)

Case No. 5082 be reopened pursuant)
to the provisions of Order No. R-4658,)
which order established temporary special)
pool rules for the North Shoe Bar-Strawn)
Pool, Lea County, New Mexico.)

CASE 5082

BEFORE: Richard L. Stamets, Examiner.

TRANSCRIPT OF HEARING

A P P E A R A N C E S

| | |
|--------------------------|----------------------------------|
| For the New Mexico Oil | William Carr, Esq. |
| Conservation Commission: | Legal Counsel for the Commission |
| | State Land Office Building |
| | Santa Fe, New Mexico |

CASE 5082

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MR. STAMETS: Call next Case 5082.

MR. CARR: Case 5082. Case 5082 in the matter of Case No. 5082 be reopened pursuant to the provisions of Order No. R-4658, which order established temporary special pool rules for the North Shoe Bar-Strawn Pool, Lea County, New Mexico.

Mr. Examiner, we received a request that Case 5082 be continued until the November 26 hearing.

MR. STAMETS: Case 5082 will be so continued.

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I, RICHARD L. NYE, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

RICHARD L. NYE, Court Reporter

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5052
heard by me on 11-13, 19 74.
Richard L. Hamble, Examiner
New Mexico Oil Conservation Commission

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
CONFERENCE ROOM, STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
October 17, 1973

EXAMINER HEARING

IN THE MATTER OF:

Application of Mesa Petroleum)
Company for a dual completion,)
creation of a new oil pool,)
assignment of a discovery)
allowable, and special pool)
rules, Lea County, New Mexico)

Case No. 5082

BEFORE: DANIEL S. NUTTER,
Examiner

TRANSCRIPT OF HEARING

1 MR. NUTTER: Call Case Number 5082.

2 MR. CARR: Case 5082, Application of Mesa
3 Petroleum Company for a dual completion, creation of a
4 new oil pool, assignment of a discovery allowable, and
5 special pool rules, Lea County, New Mexico.

6 MR. HINKLE: Clarence Hinkle of Hinkle, Bondurant,
7 Cox and Eaton, Roswell, appearing on behalf of Mesa
8 Petroleum Company.

9 I'd like to state that for the reasons which will
10 appear in the testimony which we'll present, Mesa would
11 like to amend the application in Case 5082 to delete
12 that portion which relates to dual completion.

13 MR. NUTTER: That portion of Case 5082 relating
14 to the dual completion will be dismissed. Proceed with
15 the rest of the case.

16 MR. HINKLE: We have two witnesses which have been
17 previously sworn before.

18 MR. KELLAHIN: Same appearance as in the previous
19 case, Tom Kellahin on behalf of R. L. Burns Corporation.

20 MR. HINKLE: Do you want to re-swear them?

21 MR. CARR: No, the record will show they are still
22 under oath.

23 DENNIS CROWLEY,
24 was called as a witness and being previously sworn,
25 testified as follows:

DIRECT EXAMINATION

BY MR. HINKLE:

Q State your name, residence and by whom you're employed?

A Dennis Crowley, Midland, Texas, employed by Mesa Petroleum Company as an exploration geologist.

Q And you have just recently given your qualifications in Case Number 5081?

A Yes, sir.

Q Have you made a study of the matters which are involved in this application, in Case Number 5082?

A Yes, sir, I have.

MR. HINKLE: Are his qualifications acceptable?

MR. NUTTER: Yes, sir.

Q Are you familiar with the application of Mesa in this case?

A Yes, sir.

Q What is Mesa seeking to accomplish?

A Mesa Petroleum asks the creation of the North Shoebar Strawn Pool for Hilburn Number 1 well located in Unit E of Section 13, Township 16 South, Range 35 east and the assignment of approximately 56,440 barrels of oil discovery allowable to the said well and further, asks for the issuance of temporary special rules for said pool, including a provision of 160 acre drilling and proration units.

1 Q Have you prepared or has there been prepared under your
2 direction Exhibits for introduction in this case?

3 A Yes, sir.

4 Q And they are Exhibits 1, 2 and 3 on the board?

5 A They are, sir.

6 Q Refer to Exhibit 1 and explain what this shows.

7 A Exhibit 1 is a map of the Southwest Lovington Prospect
8 Area in Lea County, New Mexico, showing Township 16 South,
9 Ranges 35 and 36 east on the scale of one inch to 2,000
10 feet.

11 The production is shown on the map as Wolfcamp in
12 the yellow, the Strawn B Prime Bank is in green, the
13 Morrow is in red, Devonian in blue and so forth, as shown
14 on our scale here.

15 The Southwest Lovington Unit of which Mesa is the
16 operator is outlined in red and takes in Sections 13, 14
17 the northeast quarter of Section 23 and the north half
18 of Section 24 of Township 16 South, Range 35 east.

19 Mesa Petroleum Company has a working interest of
20 70.3977 percent, Monsanto has a working interest of
21 25.0568 percent and Skelly Oil has a working interest
22 of 4.5455 percent.

23 The black contours on an interval, contouring
24 structural interval of 50 feet are contours on top of
25 the Pennsylvanian Strawn formation and they show a high

1 located at near the Southwest Lovington Unit, Strawn
2 High here in this North Shoebar, Strawn high in the
3 Shoebar Field and another Strawn high here.

4 The Strawn B Bank trend which is a carbonate build-
5 up within the Strawn formation is noted and shown by the
6 green contours on a 25 foot interval.

7 These contours are not showing either gross or net
8 porosity, but rather are showing the phases of the
9 Strawn B Bank trend.

10 Our geological studies in this area indicate that
11 the Mesa Petroleum Number 1 Hilburn has been completed
12 from a strati-structural trap where this porous bank or
13 carbonated build-up in association with or crosses over
14 this Strawn high here.

15 I'd like to refer next to --

16 Q Does this Exhibit Number 1 also -- is it an index to
17 your cross section, next Exhibit?

18 A Yes, sir, it is. The second Exhibit, the Stratigraphic
19 Cross Section A- A Prime is shown on the map here,
20 Exhibit 1, as starting up to the north and coming down
21 to the Mesa Hilburn Number 1 and coming down to the
22 south here.

23 Q Now, refer to Exhibit Number 2 and explain that.

24 A Exhibit Number 2 is a northwest, southeast stratigraphic
25 cross section, A-A Prime on a vertical scale of one inch

1 to 40 feet, and a horizontal scale of one inch to
2 600 feet.

3 The well or the cross section is hung on the top
4 of the datum or top of Atoka for datum. The structural
5 mapping horizon which we showed in Exhibit Number 1 is the
6 black line here and is the top of the Pennsylvanian
7 Strawn formation.

8 The green intrical in here shows the B Prime Bank,
9 Strawn Bank as it was encountered in the R. L. Burns
10 Lusk Number 1, Section 11, Township 16 South, Range 35
11 east.

12 This well, according to log analysis, had about
13 28 feet of porosity, greater than five percent, had a
14 showing sample, I understand, but did not drill stem
15 test the bank.

16 This well, the middle well in the cross section is
17 a Mesa Petroleum Company C. E. Hilburn Number 1, Section
18 13 of Township 16 South, Range 35 east and has just
19 recently been completed in the B Prime Bank of the Strawn
20 and we have a total of 48 feet of porosity with the
21 weighted average of 9.6 percent. The red here is
22 indicating the perforated intervals in the pay zone.

23 The southern most well in the cross section is the
24 Union Oil Company George Spires Number 1-30 in Section
25 30 of Township 16 South, Range 35 east and shows a

1 position of the B Prime Bank as it was encountered.

2 This Bank in the porosity tested and it had gas to the
3 surface in 45 minutes at an estimated 226,000 cubic feet.
4 It recovered 100 foot of drilling mud, 810 feet of oil
5 and gas cut mud, 1,020 feet of oil and 1150 feet of
6 salt water.

7 Q Now, refer to Exhibit Number 3 and explain what it is
8 and what it shows.

9 A Exhibit Number 3 is a portion of the Sidewall Neutron
10 Porosity Log of the Mesa Petroleum C. E. Hillburn Number
11 1 on a vertical scale, one inch to 100 feet.

12 It shows the top of the Wolfcamp formation of
13 9566 feet, the Wolfcamp Three Brothers marker at 10,287
14 feet, the Strawn formation encountered at 11,275 feet;
15 it shows the productive interval in the perf zone. It
16 shows the top of the Atoka-Morrow and in addition, shows
17 where the Morrow, two separate sands in the Morrow were
18 production tested and were not economic and were plugged
19 back and the well was completed.

20 Q And that's the reason why you're not asking for a dual
21 completion because it's not economic Morrow?

22 A Yes, sir.

23 Q Do you have any further comments?

24 A In summary, I would like to state that the trapping
25 mechanism in the Hilburn well, our studies indicated

1 is a strati-structural trap with porosities associated
2 with the Strawn high. I don't believe that drilling,
3 developing this area on 160 acre spacing would necessarily
4 cause unnecessary dry holes to be drilled and cuttings
5 from the well, examination of cuttings from the well,
6 the drill stem test information, the production test
7 information all seem to indicate that one well would
8 adequately drain 160 acres, sir.

9 Q Refer to Exhibit 1 in Section 13, does that indicate
10 that the well is drilling at the present time?

11 A Yes, this is the Mesa Petroleum Number 1 Lister, which is
12 currently drilling and is a projected Morrow test.

13 Q What is the depth of that at the present time?

14 A I assume about 10,000 feet today, sir.

15 Q And it will go through all of these zones?

16 A Yes, sir, it will penetrate the Strawn and go down and
17 see all of the Morrow zone.

18 Q Do you have anything further you would like to present?

19 A No, sir.

20 MR. HINKLE: We offer Exhibits 1, 2 and 3.

21 MR. NUTTER: Applicant's Exhibits 1, 2 and 3 will
22 be admitted.

23 MR. HINKLE: That's all the direct.

24 CROSS EXAMINATION

25 BY MR. NUTTER:

1 Q Mr. Crowley, before you sit down, would you indicate
2 your -- depict the top of the Pennsylvanian on Exhibit
3 Number 3, please?

4 A The Penn, itself, that's a tough one in this particular --

5 Q That's why I wanted to see where you put it.

6 A And I have some logs in the office where I put the marks
7 and the double x marker in purple Penn is -- it's up
8 in this zone right in here someplace, but I can't tell
9 exactly.

10 Q But, in here as in so many other places, the transition
11 from the Wolfcamp into the --

12 A Is very difficult, yes, sir.

13 Q To detect?

14 A Right.

15 Q Where was the porosity that was indicated in the previous
16 case in this well in the Wolfcamp?

17 A This little zone right here and that one right there.

18 Q Would you make a little mark on there?

19 A Yes. I have a red pencil, here and right there.

20 Q And it was proposed to dual complete the well in the
21 Wolfcamp there but that's been abandoned?

22 A Right.

23 MR. NUTTER: Are there any further questions?

24 MR. HINKLE: I have one other question. In your
25 opinion, is the C. E. Hilburn Number 1 a new discovery

1 in the Strawn?

2 WITNESS: Yes, sir, it is.

3 MR. HINKLE: Not connected with any other pool
4 that you know of?

5 WITNESS: No, sir.

6 MR. HINKLE: That's all.

7 MR. NUTTER: Are there any other questions of the
8 witness?

9 (No Response)

10 MR. NUTTER: He may be excused.

11 (Witness Excused)

12 MR. HINKLE: I'd like to call Mr. Williamson.

13
14 ROY C. WILLIAMSON, JR.,

15 was called as a witness and being previously sworn,
16 testified as follows:

17 DIRECT EXAMINATION

18 BY MR. HINKLE:

19 Q State your name, your residence and your profession.

20 A I'm Roy C. Williamson, Jr. I live in Midland, Texas
21 and I'm partner and President of the consulting firm
22 of Sipes, Williamson & Aycock, Inc.

23 Q You have previously qualified before the Commission as
24 Petroleum Engineer?

25 A Yes, I have.

1 Q Have you made a study of the area which is under
2 consideration here?

3 A Yes, I have.

4 Q And you're employed by Mesa for that purpose?

5 A That's correct.

6 MR. HINKLE: Are his qualifications sufficient?

7 MR. NUTTER: Yes, sir, they are.

8 Q Have you prepared or has there been prepared under your
9 direction Exhibits for introduction in this case?

10 A Yes.

11 Q They are the ones that have been marked Exhibits 4 and 5?

12 A That's correct.

13 Q Refer to Exhibit 4 and explain what this shows.

14 A Exhibit 4 is a downhole hook-up schematic for the Mesa
15 Hilburn Well Number 1 and on this schematic are shown
16 the various casing settings and the cement utilized to
17 to fix this casing in the hole.

18 The most important things shown are the Strawn
19 perforations from 11,289 to 11,356, which will be
20 produced through tubing set on a Packer at 11,233. Also
21 shown on the schematic are the Morrow perms. from 11,700
22 to 11,870 feet. As has been previously testified to,
23 the Morrow was production tested with no production. A
24 cast iron bridge plug has been set at 11,650 feet and 30
25 feet of cement has been dumped on top making a plug back

1 total depth of the well of 11,620 feet.

2 This well be completed as a single completion from
3 the Strawn perforations.

4 Q Now, refer to Exhibit Number 5 and explain what this is
5 and what it shows.

6 A Exhibit Number 5 shows the production pressure and
7 reserve calculations for the Hilburn Number 1 in the
8 Strawn interval.

9 The well was potentialed on October 5, 1973 for
10 872 barrels of oil, zero barrels of water, 1619 MCF of
11 gas, for a gas oil ratio of 1857 cubic feet per barrel
12 of oil.

13 The well was produced for ten days during which it
14 produced 3,718 barrels, at which time, it was shut in.
15 The shut in date being October 7, 1973 for a 72 hour
16 pressure build-up and the well remained shut in.

17 A drill stem test was taken in the Strawn interval
18 on September 7th and the extrapolated pressure from the
19 drill stem test from the Strawn formation was 4,274 PSIG.

20 After production of 3,718 barrels of oil, the well
21 was shut in for 72 hours and a build-up test was taken.
22 The pressure extrapolated from this build-up test is
23 4,248 pounds, which shows essentially no depletion over
24 the initial drill stem test pressure.

25 Now, the pressure build-up curve at the 72 hour

1 period was still increasing and still curving, so the
2 exact extrapolation is not available, but it's certainly
3 within the range of the initial pressure, which shows
4 it does have good communication, at least, after this
5 production of 3700 barrels.

6 The next item are the volumetric calculations
7 of reserves. Net pay determined from the log, 48 feet;
8 the average porosity 9.6 percent; water saturation
9 calculated from the logs, 20 percent; the oil formation
10 volume factor was estimated at 1.6 and the recovery
11 factor was estimated at 20 percent.

12 These data result in a calculation of 74 barrels
13 of oil per acre foot that should be recoverable from this
14 resevoir.

15 If we assume that the well would drain 40 acres,
16 we have a recovery of 142,080 barrels of oil. If the
17 well will drain 160 acres, we have a recovery of four
18 times that, or 568,320 barrels of oil.

19 On Page 2 of Exhibit 5, we have the economics
20 for the Hilburn Number 1. The cost to drill to the Morrow
21 and make a single completion in the Strawn is estimated
22 at \$271,000.00, an oil price of \$5.36 per barrel was
23 utilized. The casinghead gas price, although not contracted
24 for at this time is estimated to be \$250.00 per MMCF.
25 The average gas oil ratio over the life of the well,

1 .006 MM cubic feet per barrel. Severance and ad valorem
2 taxes of 5.6 percent, a net lease interest of 80 percent,
3 operating cost of \$400.00 per month, and estimated life
4 of production of 20 years.

5 We can then calculate the value of the oil and gas
6 that would be recovered on 40 acre drainage, which going
7 through the calculations, we have \$575,122.00 from oil
8 on 40 acres; 160,948 from gas, less operating cost of
9 96,000 yield undiscounted net cash flow of \$640,070.00.

10 It can be seen that this, in itself, would be an
11 economic venture minus the cost of \$271,000.00, we have a
12 profit of \$368,500.00.

13 If we could drain 160 acres, we'd have undiscounted
14 net cash flow of \$2,848,280.00 less the cost to drill of
15 271,570, for a profit of approximately 2.5 million dollars.

16 So, the data to date show that we have a thick
17 resevoir, 48 feet, which is quite economic on 40 acres.
18 Our pressure data indicates that we do have good
19 communication in the reservoir, as opposed to other zones
20 which would show depletion after some production, and it's
21 my opinion that this well should drain a considerable
22 area and additional drilling should be done on 160 acres
23 to determine the quality of this reservoir, because if
24 the entire reservoir is of the indicated quality here, I
25 feel like that one well would definitely drain 160 acres.

1 Q What would you recommend to the Commission in the way of
2 special pool rules to be adopted on a temporary basis?

3 A I would recommend that the spacing be on 160 acres with the
4 well to be located within 150 feet of the center of a
5 governmental quarter quarter section.

6 Q Any quarter quarter?

7 A Any quarter quarter section.

8 Q If the Commission sees fit to approve this application,
9 in your opinion, will it be in the interest of conservation,
10 prevention of waste and protect correlative rights?

11 A Yes, it would.

12 MR. HINKLE: We'd like to offer Exhibits 4 and 5.

13 MR. NUTTER: Applicant's Exhibits 4 and 5 will be
14 admitted.

15 MR. HINKLE: That's all the direct.

16 MR. NUTTER: Any questions?

17 MR. KELLAHIN: Yes, Mr. Nutter.

18

19

CROSS EXAMINATION

20 BY MR. KELLAHIN:

21 Q Mr. Williamson, you mentioned a drill stem test conducted
22 in September 7th, I guess it was this year, was it?

23 A Yes.

24 Q That's '73?

25 A Right, September 7th of '73.

1 Q Is that the same drill stem test as conducted by
2 Halliburton that's on file with the Oil Commission?

3 A Yes.

4 Q Doesn't that drill stem test indicate a draw down during
5 the test? ,

6 A During the test itself?

7 Q Yes, sir. If my memory serves me correct, during an
8 interval of an hour and a half, there was initial
9 pressure of 4280 and that after an hour and a half, the
10 pressure was 4255.

11 A Let me refer to that. I have that data here. Pressure
12 as recorded in this is on --

13 Q This is the test of the Strawn.

14 A Strawn test and after the initial flow period, the bottom
15 pressure gauge, which was set at 11,346 feet, the data
16 from that gauge was extrapolated to 4,280 pounds. The
17 well was then produced for a second flow period for 90
18 minutes and the well was then again shut in and the
19 static pressure was extrapolated at 42 hundred 55 pounds,
20 which shows a decrease there of some 25 pounds.

21 Q Wouldn't that indicate a draw down during the test,
22 wouldn't that indicate a limited reservoir?

23 A Oh, no, not that small of amount, because you have not
24 allowed the well to be shut in. It's not stabilized and
25 you just don't have enough data. The accuracy of the

1 gauge could be off that much and I think it's more
2 indicative that after we have produced over 3,000 barrels
3 of oil from the well, we again shut in and were able to
4 extrapolate that pressure back to the vicinity of the
5 original pressure.

6 Q So a pressure draw down during the test is insignificant?

7 A Yes, plus the fact that the well is indicated to be very
8 productive is evidenced by its ability to produce on the
9 IP of over 800 barrels.

10 MR. NUTTER: What did it produce on the drill stem
11 test?

12 A Okay, first closing period it was 21 barrels of oil and
13 37 barrels of oil during the second flow period, recovered
14 40 barrels of oil during its second closed in period and
15 then reversed out 18 barrels, so it recovered oil at all
16 parts of the test.

17 Q (By Mr. Kellahin) On your Exhibit 5, Mr. Williamson,
18 in the middle of the first page it says there's a build-up
19 test, says 4248. Doesn't that confirm the draw down
20 during the drill stem test to indicate that we may have
21 a limited reservoir?

22 A No. Again, we're looking at a difference here of some 28
23 pounds and I think, as I previously testified, the pressure
24 was still building at the end of 72 hours, so therefore,
25 the extrapolation of the data is somewhat indefinite

1 at that time because the points are still curving upward
2 and you eventually reach a straight line portion of the
3 curve and you have a question of which of the last points
4 do you take, so we could easily extrapolate the data
5 above the original DST pressure.

6 In other words, the well was not shut in for a
7 sufficient length of time to give us an exact extrapolation.

8 MR. NUTTER: In other words, this is not an
9 extrapolated pressure, at all. This is a red pressure?

10 A No, this is an extrapolated pressure, but using the last
11 of the data which are still curving up, so you could
12 easily see that it could be essentially no depletion for
13 this amount of production.

14 Q (By Mr. Kellahin) Couldn't you go ahead and drill these
15 wells, you know, one to the section, or however you wanted
16 to space them without a spacing rule of 160 acres?
17 There's no reason for that rule, is there?

18 A I'm sure this is possible, but with a smaller spacing,
19 you could have a difference of ownership that would allow
20 people to drill wells on a smaller spacing that would
21 not be economic.

22 In other words, if you can drain the section over
23 a larger spacing, you may as well do it, because this
24 conserves money and probably allows for more drilling.

25 Q Conversely, would it inhibit those operators that did want

1 to develop on a smaller spacing of 160 acres?

2 A Right.

3 MR. KELLAHIN: Nothing further, Mr. Nutter.

4
5 CROSS EXAMINATION

6 BY MR. NUTTER:

7 Q Mr. Williamson, I noticed in your mathematics here or
8 your economics on this case, as well as the other, you
9 used a price of \$5.36 a barrel for crude. Is that the
10 actual going price down here?

11 A That's what I've been advised by the Mesa personnel.

12 Q This is what's authorized under Phase 4 price counsel?

13 A Yes, sir. How long that will remain in effect, no one
14 knows, but yes, that is the current price.

15 MR. HINKLE: I have one other question here.

16
17 REDIRECT EXAMINATION

18 BY MR. HINKLE:

19 Q I believe the testimony shows this well when tested in
20 the Morrow was not economic?

21 A Right.

22 Q Are there any other zones that might be produced in this
23 well in the future?

24 A Yes, the Wolfcamp zone from the interval shown here on
25 Exhibit Number 3 shown in red here at about a depth of

1 10,400 feet -- 10,500 feet, originally this was
2 contemplated this would be a dual completion, but the
3 Wolfcamp does indicate to be productive, although limited,
4 admittedly, but this will very likely be a salvage
5 operation after the lower zone is completed, this would
6 be then recompleted and obtain what reserves can be gotten
7 there.

8 Q Do you anticipate by the well which is now drilling and
9 by other development which is contemplated within the
10 next year that you will have a lot more information with
11 respect to this area?

12 A Yes, very definitely. We'll have more production history
13 and pressure data from the currently developed wells, as
14 well as the --

15 Q And that's the reason for asking for temporary rules on
16 your basis?

17 A Right.

18 MR. HINKLE: That's all.

19 MR. NUTTER: Are there any other questions of Mr.
20 Williamson?

21 (No Response)

22 MR. NUTTER: You may be excused.

23 (Witness Excused)

24 MR. NUTTER: Anything further, Mr. Hinkle?

25 MR. HINKLE: No, sir. That's all.

1 MR. NUTTER: Does anyone have anything they wish
2 to offer in Case 5082?

3 MR. KELLAHIN: Mr. Nutter, I have one witness and it
4 won't take more than two or three minutes for him to say
5 what he has to say.

6
7 CONRAD APPLIEDORN,
8 was called as a witness, and after being duly sworn,
9 testified as follows:

10 DIRECT EXAMINATION

11 BY MR. KELLAHIN:

12 Q Will you please state your name, by whom you're employed
13 and in what capacity?

14 A I'm Conrad Appledorn. I'm self-employed as a consultant
15 in petroleum engineering. I'm from Santa Fe.

16 Q Mr. Appledorn, have you been retained by R. L. Burns
17 Corporation to make a study of the matters raised in
18 application 5082, Mesa Petroleum Company?

19 A Yes, I have.

20 Q Have you previously testified before this Commission or
21 one of its hearing examiners?

22 A Yes, I have.

23 MR. KELLAHIN: Mr. Examiner, are the witness's
24 qualifications accepted?

25 MR. NUTTER: Yes, they are.

1 Q Mr. Appledorn, have you studied Applicant's Exhibit Number
2 5 in Case 5082?

3 A Yes, I have.

4 Q Will you please refer to the pressure information contained
5 on the first page of that exhibit?

6 A Yes.

7 Q And based on your experience, will you interpret for me what
8 that pressure indicates to you?

9 A I think this pressure indicates a very good possibility
10 of a limited reservoir, the reason being we have the
11 initial drill stem test which showed a draw down with
12 an extremely high calculated potential of 1575 barrels
13 of oil per day.

14 The last build-up test also at a rather high
15 production rate and also at a high initial potential of
16 872 barrels of oil, still shows a draw down and it's
17 quite difficult, I hate to pass judgment on this -- on
18 Mr. Williamson's expertise. He's calculated a lot of these
19 tests also, but I hesitate to accept the test at these
20 rates and at these pressures. It still hasn't reached
21 a straight line, extrapolatable line, in 72 hours after
22 closing at these, particularly these high rates.

23 It's not unusual in southeastern New Mexico for
24 Strawn wells to have these high potentials and still be
25 limited reservoirs. In my opinion, we're dealing with

1 essentially reservoirs that could be uneconomic.

2 They would require dual completion, they would
3 require completion from more than one zone consecutively,
4 as a great many wells in this area have been, in order
5 to be economic.

6 We are then faced with a question of density of
7 drilling and in the opinion of R. L. Burns Corporation,
8 establishing 160 acre spacing at this time would inhibit
9 exploration in this area. It would inhibit, therefore,
10 the possibility of developing additional reserves, which
11 can be developed on closer spacing than 160 acres.

12 Q Mr. Appledorn, based on your examination and your hearing
13 the testimony presented by the Application, do you have
14 any recommendation as to the spacing for this area?

15 A I'm going also on experience in other areas in the Strawn
16 in southeastern New Mexico, but I do believe an 80 acre
17 spacing would meet the requirements of my client and would
18 also meet the requirements for drilling density to
19 discover this oil, prevent waste. We have Strawn wells
20 to the east of Lovington in the Lovington East Field,
21 which are developed on 80 acre spacing. They are actually
22 drilled as close as 40 acres on 1320 feet apart with
23 widely varying total recoveries, widely varying IP's and
24 by being drilled on such rather close density, they have
25 discovered considerable additional oil.

1 Q Are you familiar with the Shoebar Pennsylvanian Pool on
2 the south end of that first Exhibit in this case?

3 A I've gone through the records on the production that has
4 been made from that pool and down there, we have wells
5 that are drilled, in essence, on 40 acre spacing and
6 again, we find this typical, extremely variable production,
7 varying from quite low, uneconomic production on the
8 flanks and yet, just a relatively short distance away, a
9 very high production.

10 MR. KELLAHIN: That concludes our direct examination.

11 MR. HINKLE: Mr. Examiner, I'd like to put Mr.
12 Williamson on.

13 MR. NUTTER: Did you have any questions of Mr.
14 Appledorn?

15 MR. HINKLE: No questions.

16 MR. NUTTER: Mr. Appledorn may be excused.

17 (Witness Excused)

18
19 ROY C. WILLIAMSON, JR.,

20 being recalled as a witness and being previously sworn,
21 testified as follows:

22 REDIRECT EXAMINATION

23 BY MR. HINKLE:

24 Q Mr. Williamson, you've heard the testimony of Mr.
25 Appledorn. Would you like to comment on it?

1 A Yes, I would like to comment, particularly on the pressure
2 build-up test that was taken on the Hilburn Well, which
3 was shut in for a 72 hour period.

4 I think it would be well to look at the data, the
5 last six hours of the test. In other words, from the 66th
6 through the 72nd hour, the well pressure had increased
7 some 7 pounds, so it's still increasing at a fairly
8 significant rate and the actual measured pressure was
9 3833 pounds, so we can see we do have increasing pressure.
10 It still is very debateable as to how this curve can be
11 extrapolated.

12 I have a rough copy of the curve here.

13 MR. NUTTER: Would you object to making it an
14 exhibit?

15 A No, that would be fine. I've got two different curves
16 on here. The colored one is the Hilburn Strawn --

17 MR. NUTTER: Then we'll have something to judge
18 the pressure data on.

19 Q (By Mr. Hinkle) Refer to the Exhibit that has been marked
20 as Exhibit Number 6 and explain it.

21 MR. NUTTER: This will be 7 and 8.

22 A Okay, Exhibit Number 7 is the data obtained from the
23 pressure -- in other words, it shows the time, shut in
24 versus the measured pressure at two depths, one at
25 11,122 and one at 11,322.

1 Now, Exhibit Number 8 is a calculation that I have
2 made from that data presented by the build-up pressure
3 test and it's called a Horner Plot, which is a
4 dimensionless time plot, which is a standard engineering
5 approach to analyzing build-up data so that it can be
6 extrapolated to the expected reservoir pressure.

7 As you know, it's usually impossible to leave a
8 well shut in for a sufficient period of time to get the
9 absolute maximum pressure, so this allows us to
10 extrapolate available data to the estimated ultimate
11 reservoir pressure.

12 Then Exhibit Number 6 shows a plot of the data
13 on Exhibit 7, which plots on the apsis, the value
14 $T \text{ plus } \Delta T \text{ over } \Delta T$ where T is the total amount
15 of producing time in hours prior to shut in. ΔT
16 is the amount of time shut in. The vertical scale is
17 the pressure measurement in PSIG. Shows a faint curve
18 there.

19 MR. KELLAHIN: Almost non-existent.

20 A You're talking about the completion is non-existent, but
21 in my opinion, the data that we have to date does not
22 show any, I would say no depletion at all, because we
23 can extrapolate this curve to quite a varying range of
24 pressures and the data we have to date does not indicate
25 any depletion. If we do have a few pounds of depletion

1 with bomb error, I would say it's very minimal.

2 We don't have enough data to really pin down how
3 many actual pounds of pressure we have lost by the
4 production of 3700 barrels of oil.

5 Q All the information you have testified to indicates
6 a rather large reservoir, does it not, rather than a
7 small reservoir?

8 A Right. The data we have to date from the pressure and
9 producing ability of the well, although admittedly very
10 limited, in producing time, indicates this is a permeable
11 reservoir and should drain considerable areas, but we
12 just won't know until we get additional development.

13 RECROSS EXAMINATION

14 BY MR. KELLAHIN:

15 Q That's very qualified, isn't it, Mr. Williamson. You say
16 "should."

17 A If I had the data, I would tell you exactly, but I don't
18 think we have the data.

19 Q In this curve then, I'm not sure, perhaps you said so.
20 Does this curve in any way indicate you have taken into
21 account the permeability or the capacity of the well to
22 produce, that sort of thing? Tell me again what the curve
23 is.
24

25 A All this is is just a measurement -- well, the theory is

1 quite complicated, but you're trying to eliminate the
2 time factor from the amount of time the well has been shut
3 in. You're trying to get the factor T plus ΔT over
4 ΔT to a small enough value that T becomes insignifi-
5 cant.

6 In other words, you would like to have producing
7 time insignificant as opposed to shut in time, which
8 means we could leave the well shut in for several months
9 or years or whatever it takes, we could then get to an
10 extrapolateable maximum reservoir pressure.

11 Q Were you able to calculate capacity for this curve, or
12 did you?

13 A I could, I did not.

14 Q You mentioned awhile ago after a certain period of time
15 there was a pressure increase of 7 pounds; is that what
16 you said?

17 A I stated that during the last 6 hours of the 72 hour
18 build-up period that the pressure increased 6 pounds.

19 Q Could that be accounted for by other zones of porosity
20 leaking into the tested zone?

21 A Well, I have no way to know. We've got 48 feet of pay
22 we think are contributing to production, so we would
23 assume --

24 Q You would assume it was coming from the pay area as
25 opposed to the porosities outside the area tested?

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1 A Right.

2 MR. KELLAHIN: Nothing further.

4 RECROSS EXAMINATION

5 BY MR. NUTTER:

6 Q Mr. Williamson, the application here also is for 56,000
7 barrels of oil discovery allowable.

8 Now, I realize the well had an initial potential
9 of 872 barrels of oil for the 10 day testing period. It
10 was produced at the rate of approximately 372 barrels of
11 oil per day, which is in accordance with the existing
12 40 acre allowable of the well at this depth of 365.

13 Now, assuming that the Commission should approve
14 the 160 acre spacing, the allowable on the well would be
15 605 barrels a day, then discovery allowable would be on
16 top of that.

17 Is there a limit at which you think this Strawn
18 reservoir should be produced as a great sensitive? Would
19 a discovery allowable on top of a 605 barrel allowable
20 be getting into an excessive rate?

21 A At this time, we have no data to show that it could be
22 harmed. I think the potential test was on a choke of
23 twenty sixty-fourths, which is a fairly restrictive
24 choke.

25 Q That was that 872 barrels?

1 A Yes, sir.

2 Q Twenty sixty-fourths?

3 A Yes, sir. Let me check that to be sure. Yes, sir, that
4 was on twenty sixty-fourths.

5 Q And I don't suppose any fluid analysis has been made to
6 determine the bubble point on this reservoir?

7 A No, sir. I understand Mesa is preparing to take this
8 data, which will be further helpful.

9 The well did make no water on potential tests, so
10 we would not have to worry about coming in water, at least
11 from current indications.

12 Q But, you think that the well would be capable of making
13 a top allowable plus a discovery allowable?

14 A Yes, sir. The data we have to date would indicate that
15 it would be.

16 MR. NUTTER: Are there any other questions of
17 Mr. Williamson?

18 (No Response)

19 MR. NUTTER: You may be excused.

20 (Witness Excused)

21 MR. NUTTER: Do you have anything further, Mr.
22 Hinkle?

23 MR. HINKLE: That's all.

24 MR. NUTTER: Do you have anything further, Mr.
25 Kellahin?

1 MR. KELLAHIN: Just note, Mr. Examiner, our
2 objection to the spacing. I believe that's quite
3 apparent, if we rely on Mr. Williamson's testimony
4 to the fact that he's agreed that this is a rather
5 limited capacity reservoir and it's my client's opinion
6 it should not be developed on 160 acre spacing.

7 MR. NUTTER: Your recommendation is for 80?

8 MR. KELLAHIN: Yes, sir.

9 MR. NUTTER: Anything further, Mr. Hinkle?

10 MR. HINKLE: I'd just like to say it's been pointed
11 out here that we're asking for temporary rules for one
12 year. There's one well drilling, others are contemplated
13 during the year and by the end of the year, I'm sure
14 that Mesa will be better able to determine the type of
15 reservoir that exists in all of these formations that are
16 material and at that time, it can certainly be determined
17 whether we ought to go back and develop it on 80 or 40
18 or whatever the situation might be, but I think it would
19 be a mistake, now, to have it developed on anything less
20 than 160, as far as oil is concerned.

21 MR. NUTTER: Thank you. Mr. Carr?

22 MR. CARR: Mr. Examiner, the Commission has
23 received two wires, one from Monsanto Company and the other
24 from Skelly Oil Company, both in support of the application
25 of Mesa Petroleum Company in this case.

1 MR. NUTTER: And they are on record already as
2 being part interest owners. Thank you, Mr. Carr.

3 Does anyone have anything further to offer in
4 Case 5082?

5 (No Response)

6 MR. NUTTER: We'll take the case under advisement
7 and the hearing is recessed.
8
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STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, Donna Keith, a Certified Shorthand Reporter in and for
the County of Bernalillo, State of New Mexico do hereby certify
that the foregoing and attached Transcript of Hearing before
the New Mexico Oil Conservation Commission was reported by me;
and that the same is a true and correct record of the said
proceedings to the best of my knowledge, skill and ability.

Donna Keith
CERTIFIED SHORTHAND REPORTER

I do hereby certify that the foregoing is
a complete record of the proceedings in
the hearing of Case No. 5082
held by me on 10/17, 1973.
[Signature] Examiner
New Mexico Oil Conservation Commission

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1216 FIRST NATIONAL BANK BLDG., EAST • ALBUQUERQUE, NEW MEXICO 87108I N D E XWITNESSPAGE

DENNIS CROWLEY

Direct Examination by Mr. Hinkle

4

Cross Examination by Mr. Nutter

9

ROY C. WILLIAMSON, JR.

Direct Examination by Mr. Hinkel

11

Cross Examination by Mr. Kellahin

16

Cross Examination by Mr. Nutter

20

Redirect Examination by Mr. Hinkle

20

CONRAD APPLIEDORN

Direct Examination by Mr. Kellahin

22

ROY C. WILLIAMSON, JR.

Redirect Examination by Mr. Hinkle

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Recross Examination by Mr. Kellahin

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Recross Examination by Mr. Nutter

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E X H I B I T SAPPLICANT'SOFFEREDADMITTED

Exhibit 1

Map

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Exhibit 2

Stratigraphic Cross
Section

9

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Exhibit 3

Neutron Porosity Log

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9

Exhibit 4

Downhole Hook-up
Schematic

16

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Exhibit 5

Production Pressure Data

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dearnley, meier & associates

209 SIMMS BLOC. P.O. BOX 1092 • PHONE 243-6891 • ALBUQUERQUE, NEW MEXICO 87103
1216 FIRST NATIONAL BANK BLDG. EAST • ALBUQUERQUE, NEW MEXICO 87108

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I N D E X

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|-----------|----------------------------|
| Exhibit 6 | Plot of Data for Exhibit 7 |
| Exhibit 7 | Pressure Data |
| Exhibit 8 | Horner Plot Calculation |



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

December 5, 1974

I. R. TRUJILLO
CHAIRMAN
LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER
STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

Mr. Don Dent
Mesa Petroleum Company
Vaughn Building
Post Office Box 2009
Amarillo, Texas 79105

Re: CASE NO. 5081 and 5082
ORDER NO. R-4657-A and R-4658-A

Applicant:

OCC

Dear Sir:

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

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC

Other Mr. Paul Eaton

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE PETITION
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 5082 (Reopened)
Order No. R-4658-B

IN THE MATTER OF CASE NO. 5082 BEING
REOPENED PURSUANT TO THE PROVISIONS OF
ORDER NO. R-4658, WHICH ORDER ESTABLISHED
TEMPORARY SPECIAL RULES FOR THE NORTH SHOE
BAR-STRAWN POOL, LEA COUNTY, NEW MEXICO,
INCLUDING A PROVISION FOR 160-ACRE SPACING
AND PRORATION UNITS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 26, 1974, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 3rd day of December, 1974, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That by Order No. R-4658, dated November 16, 1973, temporary special rules and regulations were promulgated for the North Shoe Bar-Strawn Pool, Lea County, New Mexico, establishing temporary 160-acre spacing and proration units.

(3) That pursuant to the provisions of Orders Nos. R-4658 and R-4658-A this case was reopened to allow the operators in the subject pool to appear and show cause why the North Shoe Bar-Strawn Pool should not be developed on less than 160-acre spacing units and why the gas-oil ratio limitation should not be 2000 cubic feet of gas per barrel of oil produced.

(4) That the evidence establishes that one well in the North Shoe Bar-Strawn Pool can efficiently and economically drain and develop 160 acres.

(5) That the evidence establishes that the reservoir is being efficiently produced with a gas-oil ratio of 4000 cubic feet of gas per barrel.

-2-

Case No. 5082 (Reopened)
Order No. R-4658-B

(6) That the Special Rules and Regulations promulgated by Order No. R-4658, as amended by Order No. R-4658-A, have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the gas in the pool.

(7) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-4658, as amended, should be continued in full force and effect until further order of the Commission.

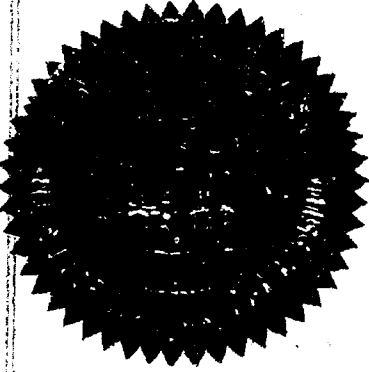
IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the North Shoe Bar-Strawn Pool, Lea County, New Mexico, promulgated by Order No. R-4658, as amended by Order No. R-4658-A, are hereby continued in full force and effect until further order of the Commission.

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

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



I. R. Trujillo
I. R. TRUJILLO, Chairman

ALEX J. ARMIJO, Member

A. L. Porter Jr.
A. L. PORTER, Jr., Member & Secretary

S E A L

dr/



D. D. Dent, general attorney
NOV 4 1974
OIL CO.

October 30, 1974

New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico

Attention: Mr. Daniel S. Nutter

Re: Case Nos. 5081 and 5082
Special Pool Rules for the North
Shoe Bar Strawn Pool and the
North Shoe Bar Wolfcamp Pool,
Lea County, New Mexico

Gentlemen:

Please refer to Docket No. 31-74 and the above referenced cases set for Examiner Hearing on November 13, 1974. At the subject hearing Mesa will be prepared to introduce evidence showing that the Special Pool Rules affecting these pools should be made permanent. Its expert witness, Mr. Les Carnes, will be unable to attend the hearing as scheduled on November 13 due to a hearing before the Wyoming Oil and Gas Conservation Commission affecting the Spearhead Ranch Field in Converse County, Wyoming. The Wyoming hearing has heretofore been set for November 13, 1974. Due to the conflict of hearing dates and the necessity for Mr. Carnes' presence at the subject hearing, Mesa respectfully requests that the subject hearing on Case Nos. 5081 and 5082 covering the North Shoe Bar Strawn Pool and the North Shoe Bar Wolfcamp Pool be continued on November 13, 1974 and set for hearing on November 26, 1974.

Yours very truly,

A handwritten signature in dark ink, appearing to read 'D. D. Dent', is written over a horizontal line.
D. D. Dent

DDD:b

ccs: Mr. J. O. Upchurch
Mr. Les Carnes

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 5130
Order No. R-4658-A

APPLICATION OF MESA PETROLEUM
COMPANY FOR AN AMENDMENT TO
THE TEMPORARY SPECIAL POOL
RULES, NORTH SHOE BAR-STRAWN
POOL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 13, 1974, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 21st day of February, 1974, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Mesa Petroleum Company, seeks the amendment of the temporary special pool rules, North Shoe Bar-Strawn Pool, Lea County, New Mexico, to provide for a limiting gas-oil ratio of 4,000 cubic feet of gas per barrel of oil produced.

(3) That the applicant has completed two wells in the subject pool.

(4) That neither well has been produced, except for testing, pending the completion of casinghead gas gathering facilities to serve the wells.

(5) That the test information available indicates that wells completed in said pool will produce with gas-oil ratios in excess of 2000 to 1.

(6) That the evidence currently available indicates that wells in said pool may be produced without waste under a limiting gas oil ratio of 4000 to 1.

(7) That the applicant has made no determination of ultimate recovery of hydrocarbons from the subject pool to the economic limit at limiting gas-oil ratios of 2000 to 1 and 4000 to 1 or under conditions of gas reinjection or pressure maintenance.

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CASE NO. 5130
Order No. R-4658-A

(8) That such estimates of recovery should be made and presented at an examiner hearing in November, 1974, at which time the operators in the North Shoe Bar-Strawn Pool are to appear and show cause why said pool should not be developed and produced in accordance with statewide oil well spacing and production rules.

(9) That applicant's request for an amendment to the temporary special pool rules for the North Shoe Bar-Strawn Pool to provide for a limiting gas-oil ratio of 4000 to 1 should be approved.

IT IS THEREFORE ORDERED:

(1) That the Order R-4658 is hereby amended by the addition of Rule No. 7 to the special pool rules of the North Shoe Bar-Strawn Pool as set out below:

SPECIAL RULES AND REGULATIONS
FOR THE
NORTH SHOE BAR-STRAWN POOL

RULE 7. A limiting gas-oil ratio of 4000 cubic feet of gas per barrel of oil produced is hereby established for the pool.

IT IS FURTHER ORDERED:

(1) The applicant shall prepare estimates of recovery from the North Shoe Bar-Strawn Pool under the gas-oil ratios and conditions set out in Finding (7) of this order for presentation at the examiner hearing to be held in November, 1974, as required by Commission Order No. R-4658.

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

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

I. R. TRUJILLO, Chairman

[Signature]
ALEX J. ARMILLO, Member

[Signature]
A. L. PORTER, JR., Member & Secretary

S E A L

jr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 5082
Order No. R-4658

APPLICATION OF MESA PETROLEUM
COMPANY FOR A DUAL COMPLETION,
CREATION OF A NEW OIL POOL,
ASSIGNMENT OF A DISCOVERY ALLOWABLE,
AND SPECIAL POOL RULES, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 17, 1973, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 16th day of November, 1973, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Mesa Petroleum Company is the owner and operator of the Hillburn Well No. 1, located in Unit E of Section 13, Township 16 South, Range 35 East, NMPN, Lea County, New Mexico.

(3) That said well has discovered a new and separate common source of supply in the Strawn formation, and a new pool designated the North Shoe Bar-Strawn Pool should be created and defined by the Commission.

(4) That applicants well, said Hillburn Well No. 1, has made a bona fide discovery of a new common source of supply, and should be assigned an oil discovery allowable pursuant to the provisions of Rule 509 of the Commission Rules and Regulations.

(5) That the top of the perforations in the subject well is at 11,289 feet in the Strawn formation; and that 56,445 barrels of oil discovery allowable should be assigned to the subject well.

(6) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise

-2-

CASE NO. 5532
Order No. R-4658

prevent waste and protect correlative rights, temporary special rules and regulations providing for 160-acre spacing units should be promulgated for the North Shoe Bar-Strawn Pool.

(7) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

(8) That the temporary special rules and regulations should be established for a one-year period in order to allow the operators in the subject pool to gather reservoir information to establish the area that can be efficiently and economically drained and developed by one well.

(9) That the vertical limits of the North Shoe Bar-Strawn Pool should be the Strawn formation as found from 11,275 feet to 11,360 feet on the log of the discovery well, the aforesaid Hillburn Well No. 1; that the horizontal limits of said pool should be the NW/4 of Section 13, Township 16 South, Range 35, East, NMPM, Lea County, New Mexico.

(10) That this case should be reopened at an examiner hearing in November, 1974, at which time the operators in the subject pool should be prepared to appear and show cause why the North Shoe Bar-Strawn Pool should not be developed on less than 160-acre spacing units.

(11) That applicant's request that the dual completion portion of its application be dismissed should be approved.

IT IS THEREFORE ORDERED:

(1) That the dual completion portion of the subject application is hereby dismissed.

(2) That a new pool for Strawn oil production be and the same is hereby created and designated the North Shoe Bar-Strawn with vertical limits defined as being the Strawn formation as found from 11,275 feet to 11,360 feet on the log of the discovery well, the Mesa Petroleum Company Hillburn Well No. 1, located in Unit E of Section 13, Township 16 South, Range 35 East, NMPM, Lea County, New Mexico, and with horizontal limits defined as being the NW/4 of said Section 13.

(3) That the aforesaid Hillburn Well No. 1 is hereby assigned an oil discovery allowable in the amount of 56,445 barrels, to be produced at a rate not to exceed 78 barrels per day.

(4) That effective November 10, 1973, Special Rules and Regulations for the North Shoe Bar-Strawn Pool, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
NORTH SHOE BAR-STRAWN POOL.

RULE 1. Each well completed or recompleted in the North Shoe Bar-Strawn Pool or in the Strawn formation within one mile thereof, and not nearer to or within the limits of another designated Strawn oil pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 160 acres, more or less, substantially in the form of a square, which is a quarter section being a legal subdivision of the United States Public Land Surveys.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit consisting of less than 160 acres or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Land Surveys. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located within 150 feet of the center of a governmental quarter-quarter section or lot.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

RULE 6. A standard proration unit (158 through 162 acres) shall be assigned a depth bracket allowable of 605 barrels, subject to the market demand percentage factor, and in the event there is more than one well on a 160-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 160 acres.

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CASE NO. 5082
Order No. R-4658

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the North Shoe Bar-Strawn Pool or in the Strawn formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs district office of the Commission in writing of the name and location of the well on or before November 30, 1973.

(2) That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the North Shoe Bar-Strawn Pool shall have dedicated thereto 160 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 160 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable.

(3) That this case shall be reopened at an examiner hearing in November, 1974, at which time the operators in the subject pool may appear and show cause why the North Shoe Bar-Strawn Pool should not be developed on less than 160-acre spacing units.

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

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



I. R. Trujillo
I. R. TRUJILLO, Chairman

ALEX J. ARMIJO, Member

A. L. Porter, Jr.
A. L. PORTER, JR., Member & Secretary

S E A L

jr/

Docket No. 32-74

Dockets Nos. 1-75 and 2-75 are tentatively set for hearing on January 8, and January 22, 1975. Application for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - TUESDAY - NOVEMBER 26, 1974

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

CASE 5081: (Reopened) (Continued from the November 13, 1974, Examiner Hearing)

In the matter of Case 5081 being reopened pursuant to the provisions of Order No. R-4657, which order established temporary special rules and regulations for the North Shoe Bar-Wolfcamp Pool, Lea County, New Mexico, including a provision for 160-acre spacing and proration units. All interested parties may appear and show cause why said pool should not be developed on less than 160-acre spacing and proration units.

CASE 5082: (Reopened) (Continued from the November 13, 1974, Examiner Hearing)

In the matter of Case No. 5082 being reopened pursuant to the provisions of Order No. R-4658, which order established temporary special pool rules for the North Shoe Bar-Strawn Pool, Lea County, New Mexico, including a provision for 160-acre spacing and proration units. All interested parties may appear and show cause why said pool should not be developed on less than 160-acre spacing and proration units.

CASE 5367: (Continued from the November 13, 1974, Examiner Hearing)

Application of Yates Petroleum Corporation for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to convert its Hornbaker BA Well No. 1, located in Unit G of Section 25, Township 18 South, Range 25 East, Penasco Draw Yeso-San Andres Pool, Eddy County, New Mexico, to dispose of produced salt water into the Yeso and San Andres formations through the perforated intervals from 1400 to 2480 feet. Applicant further seeks an administrative procedure for approval of additional salt water disposal into the Yeso and San Andres formations in the subject pool without notice and hearing.

CASE 4843: (Reopened)

In the matter of Case No. 4843 being reopened pursuant to the provisions of Order No. R-4435, which order established the South-east Chaves Queen Gas Area and promulgated special rules and regulations therefor, including a provision for 320-acre spacing units for gas wells. All interested parties may appear and show cause why said Order No. R-4435 should not be rescinded.

CASE 5373: Application of Monsanto Company for an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to test the Morrow formation at a point 660 feet from the North and West lines of Section 18, Township 23 South, Range 25 East, Rock Tank Gas Field, Eddy County, New Mexico.

CASE 5368: In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider the contraction of the vertical limits of the Jalmat Gas Pool underlying the Langlie Jal Unit Area in all or portions of Sections 31 and 32, Township 24 South, Range 37 East, and Sections 4, 5, 6, 8, 9, and 17, Township 25 South, Range 37 East, Lea County, New Mexico, to delete the Seven Rivers formation from said pool, and for the extension of the vertical limits of the Langlie-Mattix Pool underlying said area to include therein all of the Seven Rivers formation.

CASE 5369: Application of Texas Pacific Oil Company, Inc., for an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Tidwell No. 1 Well, located 990 feet from the South line and 660 feet from the East line of Section 22, Township 17 South, Range 26 East, Kennedy Farms-Morrow Gas Pool, Eddy County, New Mexico, the E/2 of said Section 22 to be dedicated to the well.

CASE 5370: Application of American Quasar Petroleum Co. of New Mexico for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Tippin Ranch Unit Area comprising 3840 acres, more or less, of Federal, State, and fee lands in Township 23 South, Range 23 East, Eddy County, New Mexico.

CASE 5371: Application of Amoco Production Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of its South Hobbs Unit Area comprising 5074 acres, more or less, of State and Fee lands in Townships 18 and 19 South, Range 38 East, Lea County, New Mexico.

CASE 5372: Application of Amoco Production Company for a pressure maintenance project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project on its South Hobbs Unit by the injection of water into the Grayburg and San Andres formations through 45 injection wells in Sections 3, 4, 5, 6, 8, 9, 10, 15, and 16, Township 19 South, Range 38 East, Lea County, New Mexico, and the promulgation of special rules therefor including, among other things, an administrative procedure whereby the project may be expanded by the drilling or conversion of additional injection wells without further notice and hearing.

CASE 5374: Application of Continental Oil Company for simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of a 480-acre non-standard gas proration unit comprising the N/2 and SE/4 of Section 23, Township 22 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico, to its Meyer B-23 Wells Nos. 1, 2, 3, and 4, located at unorthodox locations in Units C, O, E, and G, respectively, of said Section 23.

Examiner Hearing - Tuesday - November 26, 1974

Docket No. 32-74

-3-

CASE 5375: Application of El Paso Natural Gas Company for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of South Blanco-Pictured Cliffs and Blanco-Mesaverde production in the wellbore of its Storey Well No. 4, located in Unit B of Section 34, Township 28 North, Range 8 West, San Juan County, New Mexico.

CASE 5376: Application of McClellan Oil Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Ishie Lake Unit Area comprising 3,404 acres, more or less, of Federal, State, and fee lands in Township 16 South, Ranges 28 and 29 East, Eddy County, New Mexico.

Docket No. 33-74

DOCKET: EXAMINER HEARING - THURSDAY - DECEMBER 12, 1974

1:30 P.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following case will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas from seventeen prorated pools in Lea, Eddy, Roosevelt, and Chaves Counties, New Mexico, for January, 1975;
- (2) Consideration of the allowable production of gas from five prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for January, 1975.



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

November 16, 1973

I. R. TRUJILLO
CHAIRMAN
LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER
STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

DOCKET MAILED

Date 11-1-74

Mr. Clarence Hinkle
Hinkle, Bondurant, Cox & Eaton
Attorneys at Law
Post Office Box 10
Roswell, New Mexico 88201

Re: CASE NO. 5081 and 5082
ORDER NO. R-4657 and R-4658

Applicant:

Mesa Petroleum Company

DOCKET MAILED

Dear Sir:

Date 11-15-74

for NOV 26th

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

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC

Other Tom Kellahin

Docket No. 31-74

Dockets Nos. 32-74 and 1-75 are tentatively set for hearing on November 26, 1974, and January 8, 1975. Application for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 13, 1974

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas from seventeen prorated pools in Lea, Eddy, Roosevelt, and Chaves Counties, New Mexico, for December, 1974;
- (2) Consideration of the allowable production of gas from five prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for December, 1974.

CASE 5081: (Reopened)

In the matter of Case 5081 being reopened pursuant to the provisions of Order No. R-4657, which order established temporary special rules and regulations for the North Shoe Bar-Wolfcamp Pool, Lea County, New Mexico, including a provision for 160-acre spacing and proration units. All interested parties may appear and show cause why said pool should not be developed on less than 160-acre spacing and proration units.

CASE 5082: (Reopened)

In the matter of Case No. 5082 being reopened pursuant to the provisions of Order No. R-4658, which order established temporary special pool rules for the North Shoe Bar-Strawn Pool, Lea County, New Mexico, including a provision for 160-acre spacing and proration units. All interested parties may appear and show cause why said pool should not be developed on less than 160-acre spacing and proration units.

CASE 5367: Application of Yates Petroleum Corporation for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to convert its Hornbaker BA Well No. 1, located in Unit G of Section 25, Township 18 South, Range 25 East, Penasco Draw Yeso-San Andres Pool, Eddy County, New Mexico, to dispose of produced salt water into the Yeso and San Andres formations through the perforated intervals from 1400 to 2480 feet. Applicant further seeks an administrative procedure for approval of additional salt water disposal into the Yeso and San Andres formations in the subject pool without notice and hearing.

- CASE 5362: Application of Continental Oil Company for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Bell Lake-Morrow Gas Pool, Lea County, New Mexico, to provide for 320-acre spacing rather than 160 acres. In the absence of objection, this pool will be placed on the standard 320-acre spacing for Pennsylvanian gas pools rather than the present 160-acre spacing.
- CASE 5363: Application of Union Oil Company of California for a non-standard oil proration unit and unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the Lovington-Devonian Pool Rules, the formation of a non-standard proration unit comprising the NE/4 SW/4 and NW/4 SE/4 of Section 12, Township 17 South, Range 36 East, Lea County, New Mexico, to be dedicated to applicant's Midway State Unit Well No. 5, proposed to be drilled at an unorthodox location 2310 feet from the South line and 2310 feet from the West line of said Section 12.
- CASE 5364: Application of Morris R. Antweil for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests of Pennsylvanian age or older underlying Lots 1,2,7,8,9,10,15, and 16 of Section 4, Township 21 South, Range 26 East, Undesignated Avalon-Upper Pennsylvanian Gas Pool, Eddy County, New Mexico, to be dedicated to applicant's Western Reserves Federal Well No. 2, to be drilled at a standard location for said unit. Also to be considered will be the cost of drilling and completing said well and the allocation of such costs, as well as actual operating costs and charges for supervision. Also to be considered is the designation of the applicant as the operator of the well and a charge for the risk involved in drilling said well.
- CASE 5365: Application of Mesa Petroleum Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in all formations down to and including the Devonian formation underlying the E/2 of Section 34, Township 16 South, Range 37 East, Lea County, New Mexico, or such part thereof as may constitute an approved proration unit for the type of well completed, to be dedicated to a well to be drilled at an unorthodox location for said 320-acre unit. Also to be considered will be the cost of drilling and completing said well and the allocation of such costs, as well as actual operating costs and charges for supervision. Also to be considered is the designation of the applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 5366: Application of Robert N. Enfield for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Cottonwood Draw Unit Area comprising 3,813.48 acres, more or less, of Federal and fee lands in Township 25 South, Range 27 East, Eddy County, New Mexico.

CASE 5352: (Continued from the October 30th, 1974, Examiner Hearing)

Application of David Fasken for compulsory pooling and an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests of Pennsylvanian age or older underlying the S/2 of Section 2, Township 18 South, Range 26 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location 990 feet from the South line and 1650 feet from the East line of said Section 2. Also to be considered will be the cost of drilling and completing said well and the allocation of such costs, as well as actual operating costs and charges for supervision. Also to be considered is the designation of the applicant as operator of the well and a charge for the risk involved in drilling said well.

CASE 5355: (Continued from the October 30th, 1974, Examiner Hearing)

Application of Tesoro Petroleum Corporation for pool contraction and expansion, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the Lone Pine-Dakota "D" Oil Pool by the deletion of the E/2 NW/4 of Section 8, Township 17 North, Range 8 West, McKinley County, New Mexico, and the expansion of the Hospah-Dakota Oil Pool by the addition of such lands.

CASE 5361: In the matter of the application of the Oil Conservation Commission of New Mexico upon its own motion for an order for the creation of a new pool in Lea County, New Mexico, and the extension of certain existing pools in Chaves, Lea, and Roosevelt Counties, New Mexico, and giving notice to all persons and parties interested in the subject matter thereof to appear and show cause why such creations and extensions should not be made.

(a) Create a new pool in Lea County, New Mexico, classified as an oil pool for Seven Rivers production and designated as the Leaco-Seven Rivers Pool. Further to assign approximately 18,920 barrels of oil discovery allowable to the discovery well, the Viersen and Cochran Laney Well No. 4, located in Unit O of Section 30, Township 18 South, Range 39 East, NMPM. Said well was completed September 9, 1974. The top of the perforations is at 3784 feet. Said pool would comprise:

TOWNSHIP 18 SOUTH, RANGE 39 EAST, NMPM
SECTION 30: SE/4

(b) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for McKee production and designated as the Crosby-McKee Gas Pool. The discovery well is Union Texas Petroleum Corporation, Crosby Deep Well No. 3 located in Unit J of Section 33, Township 25 South, Range 37 East, NMPM. Said pool described as:

TOWNSHIP 25 SOUTH, RANGE 37 EAST NMPM
SECTION 33: All

Examiner Hearing - Wednesday - November 13, 1974

Docket No. 31-74
-4-

(c) EXTEND the Burton Flats-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 28 EAST, NMPM

SECTION 11: E/2

SECTION 14: All

SECTIONS 22 and 23: All

TOWNSHIP 21 SOUTH, RANGE 26 EAST, NMPM

SECTION 12: N/2

(d) EXTEND the South Carlsbad-Morrow Gas Pool in Eddy County, New Mexico, to include:

TOWNSHIP 22 SOUTH, RANGE 26 EAST, NMPM

SECTION 13: S/2

SECTION 24: All

SECTION 25: N/2

SECTION 34: W/2

SECTION 36: E/2

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM

SECTION 19: N/2

SECTION 29: W/2

TOWNSHIP 23 SOUTH, RANGE 26 EAST, NMPM

SECTION 1: E/2

SECTION 3: N/2

SECTIONS 13 and 14: All

SECTION 21: E/2

SECTION 22: S/2

SECTIONS 23 and 24: All

SECTIONS 26 and 27: All

SECTION 35: All

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM

SECTION 3: W/2

SECTIONS 4 and 5: All

SECTION 8: W/2

SECTION 17: All

SECTION 19: N/2

SECTION 20: N/2

TOWNSHIP 24 SOUTH, RANGE 26 EAST, NMPM

SECTION 2: All

SECTION 3: E/2

SECTION 10: E/2

(e) EXTEND the Crosby-Fusselman Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM

SECTION 33: S/2

(f) EXTEND the Sawyer-San Andres Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 38 EAST, NMPM
SECTION 16: W/2
SECTION 21: NW/4

(g) EXTEND the West Sawyer-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM
SECTION 23: SE/4

(h) EXTEND the Northwest Todd-San Andres Associated Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 35 EAST, NMPM
SECTION 16: NW/4
SECTION 17: N/2

(i) EXTEND the Vest Ranch-Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 30 EAST, NMPM
SECTION 16: NE/4



Telegram

BNE157(1113) (2-158233E289)PD 10/16/73 1113

ICS IPMBNGZ CSP

9156833306 TDBN MIDLAND TX 43 10-16 1113A FST

FON 5058272533

DS NUTTER

NEW MEXICO OIL CONSERVATION COMMISSION PO BOX 2088

SANTA FE NM 87501

RE: CASE NUMBER 5082 MONSANTO COMPANY AS AN INTERESTED PARTY

IN CASE NUMBER 5082 SUPPORTS MESA PETROLEUM CORPORATIONS APPLICATION

FOR A DISCOVERY ALLOWABLE ON THE HILBURN NUMBER ONE AND FOR

160 ACRES DRILLING AND PRORATION UNITS IN THE NORTH SHOF BAR-STRAWN
POOL

EM SCHOLL DISTRICT ENGINEER

Heard Oct 17

*File
Case
5082*

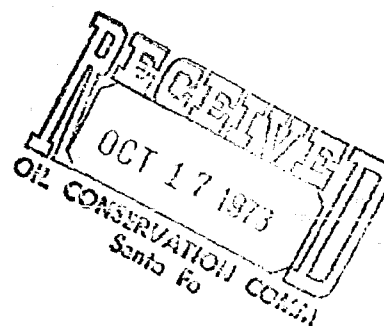
MGMABQC ABQ
2-168788E289 10/16/73
ICS IPMBNGZ CSP
9156834881 MGM TDBN MIDLAND TX 100 10-16 0225P EST
ZIP 87501



western union **Mailgram**



NEW MEXICO OIL CONSERVATION COMMISSION
ATTN MR A L PORTER JR BOX 2088
SANTA FE NM 87501



SKELLY OIL CO SUPPORTS MESA PETROLUUM COMPANY IN THERE TWO CASES
BEING HEARD ON WEDNESDAY OCTOBER 17 1973. CASE NUMBER 5081 CONCERNING
THE SKELLY-PUBCO NUMBER 1 LEE COUNTY NEW MEXICO CASE #5082
REQUESTING DISCOVERY ALLOWABLE AND A TEMPORARY DRILLING UNIT
OF 160 ACRES FOR THE HILBURN WELL NUMBER 1 LEE COUNTY NEW MEXICO
C.J. LOVE

1425 EST

MGMABQC ABQ

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 17, 1973

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

ALLOWABLE: (Continued from October 3, 1973, Examiner Hearing)

sixteen Bagley Upper Permian ST

*Carr
Kaptana*

- (1) Consideration of the allowable production of gas for November, 1973, from seventeen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico;
- (2) Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for November, 1973.

*Don
Stevens
R.N. Hillin
owner*

CASE 5075: Application of Hillin Production Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its JCW State Com. Well No. 1 located in Unit C of Section 2, Township 20 South, Range 28 East, Eddy County, New Mexico, in such a manner as to produce gas from an undesignated Strawn gas pool and from the Winchester-Morrow Gas Pool through the casing-tubing annulus and tubing, respectively.

*Cor. 1 to
10/31*

CASE 5076: Application of David Fasken for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well at an unorthodox location 1980 feet from the North line and 660 feet from the West line of Section 7, Township 18 South, Range 26 East, West Atoka-Morrow Gas Pool, Eddy County, New Mexico, the N/2 of said Section 7 to be dedicated to the well.

*Booker
Kelley
Hindrichs
Hindrichs*

CASE 5077: Application of Texaco Inc. for downhole commingling and a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle in the wellbore production from the Skaggs-Glorieta and East Weir-Blinbry Pools in its C. H. Weir "B" Well No. 4 located in Unit I of Section 11, Township 20 South, Range 37 East, Lea County, New Mexico, and to dually complete said well in such a manner as to permit the production of the aforesaid commingled fluids and hydrocarbons from the East Weir-Tubb Oil Pool through parallel strings of tubing.

*Tam
Keelebin
Grant
Smith*

CASE 5078: Application of Franklin, Aston & Fair for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to re-enter its McIntyre Well No. 6-A, an old hole located 990 feet from the South line and 1650 feet from the East line of Section 20, Township 17 South, Range 30 East, Eddy County, New Mexico, in order to complete same as a Morrow gas well, the E/2 of said Section 20 to be dedicated to the well.

Dismissed
Not std location issued administratively
CASE 5079: Application of May Petroleum Inc. for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a proposed well to be drilled at a point 1650 feet from the South line and 1129 feet from the East line of Section 31, Township 11 South, Range 38 East, North Gladiola-Devonian Pool, Lea County, New Mexico.

Tom Killahin
Ray Henderson
Ray Geology + midland
CASE 5080: Application of Horizon Oil & Gas Company of Texas for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its State 28 Well No. 2 located in Unit K of Section 28, Township 17 South, Range 29 East, Eddy County, New Mexico, in such a manner as to permit the production of gas from the Grayburg-Morrow Gas Pool and an undesignated Atoka Gas Pool through parallel strings of tubing.

Clayton Sinkle
Dennis Crowley
Geology + for mesa
Ray Williamson
CASE 5081: Application of Mesa Petroleum Company for a dual completion and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Skelly State Well No. 1 located in Unit I of Section 14, Township 16 South, Range 35 East, in such a manner as to produce oil from the North Shoe Bar-Wolfcamp Pool and gas from an undesignated Morrow gas pool through parallel strings of tubing. Applicant further seeks the promulgation of temporary special rules for said North Shoe Bar-Wolfcamp Pool, including a provision for 160-acre drilling and proration units.

Tom Killahin - Burns & Co. Corp.
CASE 5082: Application of Mesa Petroleum Company for a dual completion, creation of a new oil pool, assignment of a discovery allowable, and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of the North Shoe Bar-Strawn Pool for its Hillburn Well No. 1 located in Unit E of Section 13, Township 16 South, Range 35 East, Lea County, New Mexico, and the assignment of approximately 56,440 barrels of oil discovery allowable to said well; applicant also seeks approval for the dual completion of said well in such a manner as to permit the production of oil from the North Shoe Bar-Wolfcamp Pool and the North Shoe Bar-Strawn Pool through parallel strings of tubing; applicant further seeks the promulgation of temporary special rules for said pool, including a provision for 160-acre drilling and proration units.

same as above also Council applied as Burns interest.
Boaker Kelley Hinricks
CASE 5083: Application of Texaco Inc. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Blinbry-Paddock and Tubb production in the well-bore of its C. H. Lockhart Federal Well No. 3 located in Unit O of Section 18, Township 22 South, Range 38 East, Lea County, New Mexico.

Bill Carr
Carl Ulvog
CASE 5084: Southeastern nomenclature case calling for the extension of certain pools in Lea and Roosevelt Counties, New Mexico:

Dismiss dual compl portion of appl

(Case 5084 continued from page 2)

- (a) Extend the Antelope Ridge-Atoka Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM
Section 2: S/2

*Dismiss pending
further
study*

- (b) Extend the Antelope Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM
Section 2: S/2
Section 3: S/2
Section 4: S/2

- (c) Extend the Bluiitt-San Andres Associated Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 38 EAST, NMPM
Section 5: SW/4

- (d) Extend the EK Yates Seven Rivers-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 8: NW/4

- (e) Extend the Hat Mesa-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 32 EAST, NMPM
Section 14: E/2

- (f) Extend the Monument-Paddock Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
Section 16: S/2
Section 17: E/2

- (g) Extend the South Salt Lake-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 33 EAST, NMPM
Section 30: All

- (h) Extend the Triple X-Delaware Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 32 EAST, NMPM
Section 12: NE/4

Examiner Hearing - Wednesday - October 17, 1973

Docket No. 29-
-4-

(Case 5084 continued from page 3)

(1) Extend the Williams-Pennsylvanian Pool in Lea County, New Mexico,
to include therein:

TOWNSHIP 13 SOUTH, RANGE 32 EAST, NMPM
Section 29: NE/4

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 17, 1973

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

ALLOWABLE: (Continued from October 3, 1973, Examiner Hearing)

- (1) Consideration of the allowable production of gas for November, 1973, from seventeen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico;
- (2) Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for November, 1973.

CASE 5075: Application of Hillin Production Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its JCW State Com. Well No. 1 located in Unit C of Section 2, Township 20 South, Range 28 East, Eddy County, New Mexico, in such a manner as to produce gas from an undesignated Strawn gas pool and from the Winchester-Morrow Gas Pool through the casing-tubing annulus and tubing, respectively.

CASE 5076: Application of David Paaken for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a well at an unorthodox location 1980 feet from the North line and 660 feet from the West line of Section 7, Township 18 South, Range 26 East, West Atoka-Morrow Gas Pool, Eddy County, New Mexico, the N/2 of said Section 7 to be dedicated to the well.

CASE 5077: Application of Texaco Inc. for downhole commingling and a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle in the wellbore production from the Skaggs-Glorieta and East Weir-Blinebry Pools in its C. H. Weir "B" Well No. 4 located in Unit I of Section 11, Township 20 South, Range 37 East, Lea County, New Mexico, and to dually complete said well in such a manner as to permit the production of the aforesaid commingled fluids and hydrocarbons from the East Weir-Tubb Oil Pool through parallel strings of tubing.

CASE 5078: Application of Franklin, Aston & Fair for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to re-enter its McIntyre Well No. 6-A, an old hole located 990 feet from the South line and 1650 feet from the East line of Section 20, Township 17 South, Range 30 East, Eddy County, New Mexico, in order to complete same as a Morrow gas well, the E/2 of said Section 20 to be dedicated to the well.

- CASE 5079: Application of May Petroleum Inc. for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a proposed well to be drilled at a point 1650 feet from the South line and 1129 feet from the East line of Section 31, Township 11 South, Range 38 East, North Gladiola-Devonian Pool, Lea County, New Mexico.
- CASE 5080: Application of Horizon Oil & Gas Company of Texas for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its State 28 Well No. 2 located in Unit K of Section 28, Township 17 South, Range 29 East, Eddy County, New Mexico, in such a manner as to permit the production of gas from the Grayburg-Morrow Gas Pool and an undesignated Atoka Gas Pool through parallel strings of tubing.
- CASE 5081: Application of Mesa Petroleum Company for a dual completion and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Skelly State Well No. 1 located in Unit I of Section 14, Township 16 South, Range 35 East, in such a manner as to produce oil from the North Shoe Bar-Wolfcamp Pool and gas from an undesignated Morrow gas pool through parallel strings of tubing. Applicant further seeks the promulgation of temporary special rules for said North Shoe Bar-Wolfcamp Pool, including a provision for 160-acre drilling and proration units.
- CASE 5082: Application of Mesa Petroleum Company for a dual completion, creation of a new oil pool, assignment of a discovery allowable, and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of the North Shoe Bar-Strawn Pool for its Hillburn Well No. 1 located in Unit E of Section 13, Township 16 South, Range 35 East, Lea County, New Mexico, and the assignment of approximately 56,440 barrels of oil discovery allowable to said well; applicant also seeks approval for the dual completion of said well in such a manner as to permit the production of oil from the North Shoe Bar-Wolfcamp Pool and the North Shoe Bar-Strawn Pool through parallel strings of tubing; applicant further seeks the promulgation of temporary special rules for said pool, including a provision for 160-acre drilling and proration units.
- CASE 5083: Application of Texaco Inc. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Blinebry-Paddock and Tubb production in the well-bore of its C. H. Lockhart Federal Well No. 3 located in Unit O of Section 18, Township 22 South, Range 38 East, Lea County, New Mexico.
- CASE 5084: Southeastern nomenclature case calling for the extension of certain pools in Lea and Roosevelt Counties, New Mexico:

(Case 5084 continued from page 2)

(a) Extend the Antelope Ridge-Atoka Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM
Section 2: S/2

(b) Extend the Antelope Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM
Section 2: S/2
Section 3: S/2
Section 4: S/2

(c) Extend the Bluit-San Andres Associated Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 38 EAST, NMPM
Section 5: SW/4

(d) Extend the EK Yates Seven Rivers-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 8: NW/4

(e) Extend the Hat Mesa-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 32 EAST, NMPM
Section 14: E/2

(f) Extend the Monument-Paddock Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
Section 16: S/2
Section 17: E/2

(g) Extend the South Salt Lake-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 33 EAST, NMPM
Section 30: All

(h) Extend the Triple X-Delaware Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 32 EAST, NMPM
Section 12: NE/4

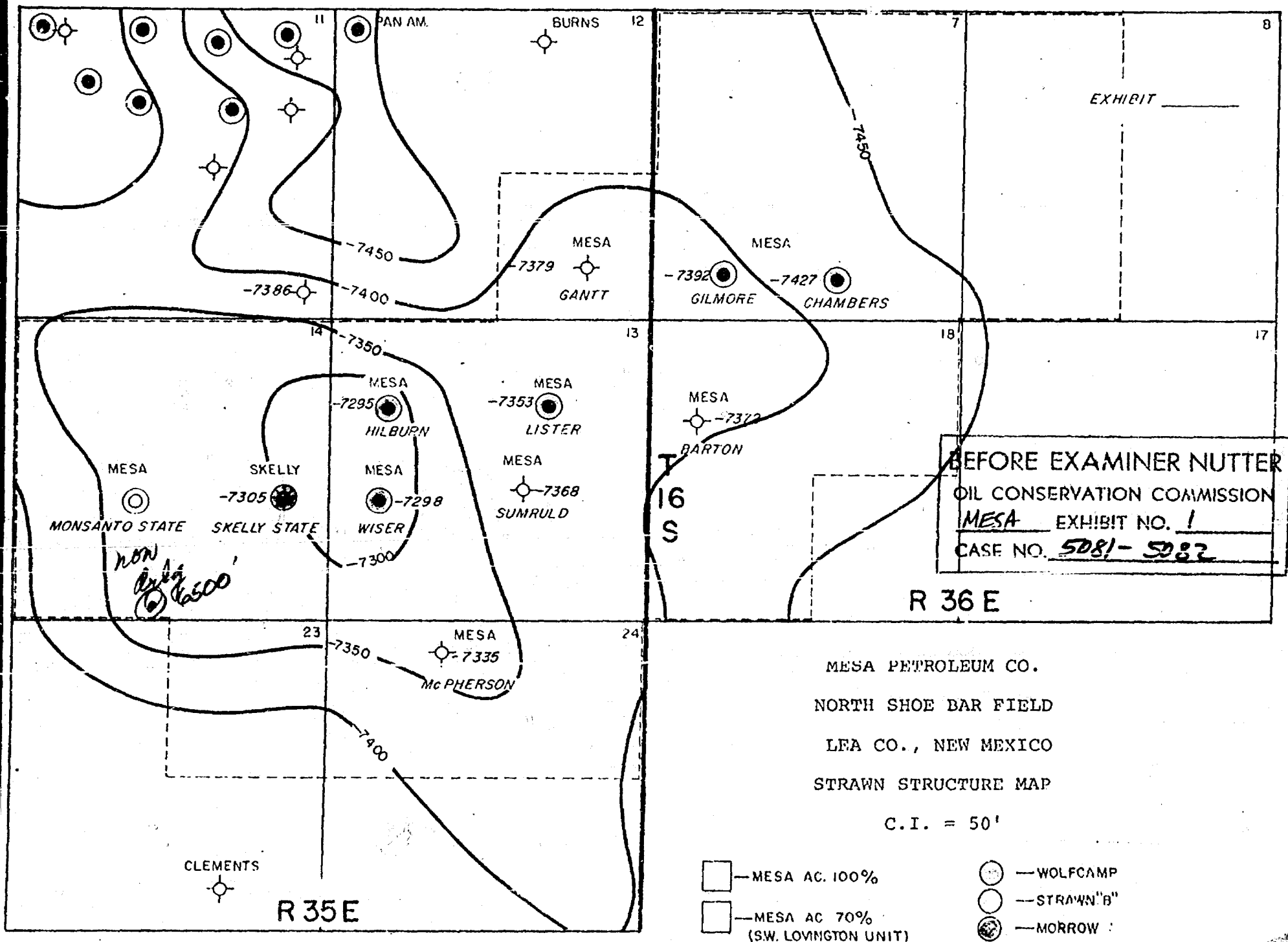
Examiner Hearing - Wednesday - October 17, 1973

Docket No. 29-73
-4-

(Case 5084 continued from page 3)

(1) Extend the Williams-Pennsylvanian Pool in Lea County, New Mexico,
to include therein:

TOWNSHIP 13 SOUTH, RANGE 32 EAST, NMPM
Section 29: NE/4



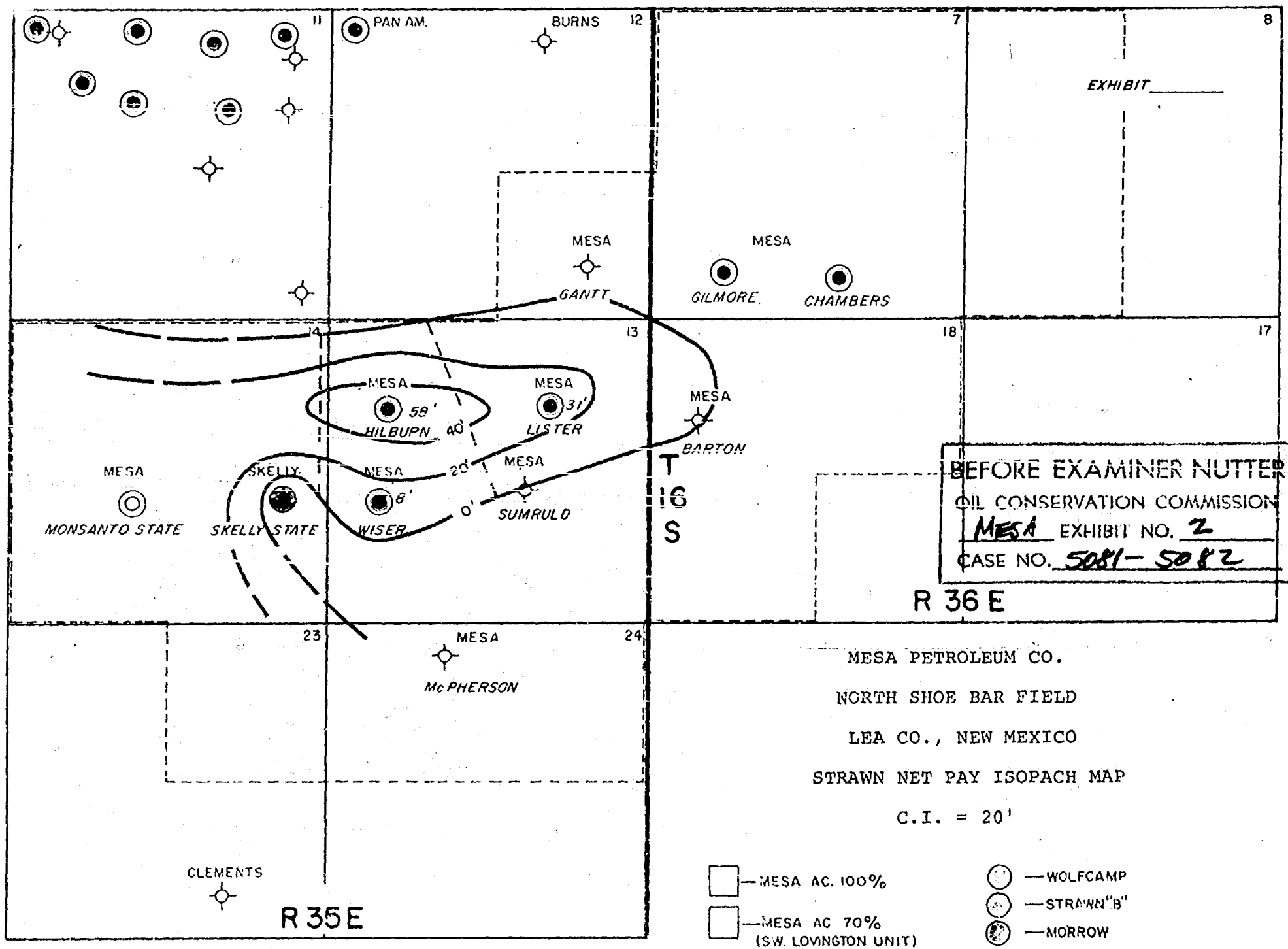


EXHIBIT _____

MESA PETROLEUM CO.
Initial Completion Data

North Shoe Bar Strawn and Wolfcamp Fields
Lea County, New Mexico

| <u>Completion Information</u> | <u>Hilburn No. 1</u> | <u>Lister No. 1</u> | <u>Wiser No. 1</u> | <u>Skelly State No. 1</u> | <u>Gilmore No. 1</u> | <u>Chambers No. 1</u> |
|-------------------------------|--------------------------|-------------------------|------------------------|-------------------------------|--------------------------|---------------------------|
| Date Completed | 9-28-73 | 11-7-73 | 7-5-74 | 3-24-73 | 1-3-74 | 3-24-74 |
| KB Elevation | 3980' | 3976' | 3979' | 3987' | 3968' | 3963' |
| Initial Potential | | | | | | |
| Oil (BPD) | 872 | 884 | 170 | 336 | 604 | 630 |
| Water (BPD) | 0 | 0 | 0 | 0 | Tr. | Tr. |
| Gas (MCF/D) | 1,619 | 1,913 | 310 | 588 | 940 | 1,060 |
| GOR (SCF/STB) | 1,857 | 2,163 | 1,823 | 1,750 | 1,556 | 1,683 |
| FTP (Psig.) | 1,245 | 1,360 | 50 | 200 | 850 | 1,175 |
| Choke (In.) | 20/64 | 20/64 | 24/64 | 38/64 | 20/64 | 18/64 |
| Formation | Strawn | Strawn | Strawn | Wolfcamp | Wolfcamp | Wolfcamp |
| Perforation (Ft.) | 11,289-356 | 11,336-86 | 11,284-332 | 10,456-74 | 10,512-56 | 10,509-30 |
| Original BHP (Psig.) | 4274 | 4236 | 3376 | 4097 | 4097 | 1050 |
| Datum Depth (Ft.) | -7342 | -7342 | -7342 | -6557 | -6557 | -6557 |

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
MESA EXHIBIT NO. 3
CASE NO. 5081-5082

LMC:hh
11-25-74

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
MESA EXHIBIT NO. 4
CASE NO. 5081-5082

EXHIBIT

MESA PETROLEUM CO.
Pressure History

North Shoe Bar Strawn Field
(Datum: -7342')

| <u>Well</u> | <u>Date</u> | <u>Pressure</u> | <u>Remarks</u> |
|---------------|-------------|-----------------|------------------------------|
| Hilburn No. 1 | 9-7-73 | 4274 | DST |
| Hilburn No. 1 | 10-10-73 | 4248 | Extrapolated 72 Hr. Buildup |
| Lister No. 1 | 10-23-73 | 4236 | DST |
| Hilburn No. 1 | 12-6-73 | 4110 | Extrapolated 30 Hr. Buildup |
| Hilburn No. 1 | 4-4-74 | 4240 | After 4 Months S.I. |
| Lister No. 1 | 4-4-74 | 4307 | After 4 Months S.I. |
| Wiser No. 1 | 6-10-74 | 3376 | DST |
| Hilburn No. 1 | 11-5-74 | 1808 | Nearly static after 192 Hrs. |
| Lister No. 1 | 11-5-74 | 2904 | Nearly static after 120 Hrs. |
| Wiser No. 1 | 11-5-74 | 1755 | Extrapolated 144 Hr. Buildup |

DMF:hh
11-25-74

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
MESA EXHIBIT NO. 5
CASE NO. 5081-5082

MESA PETROLEUM CO.

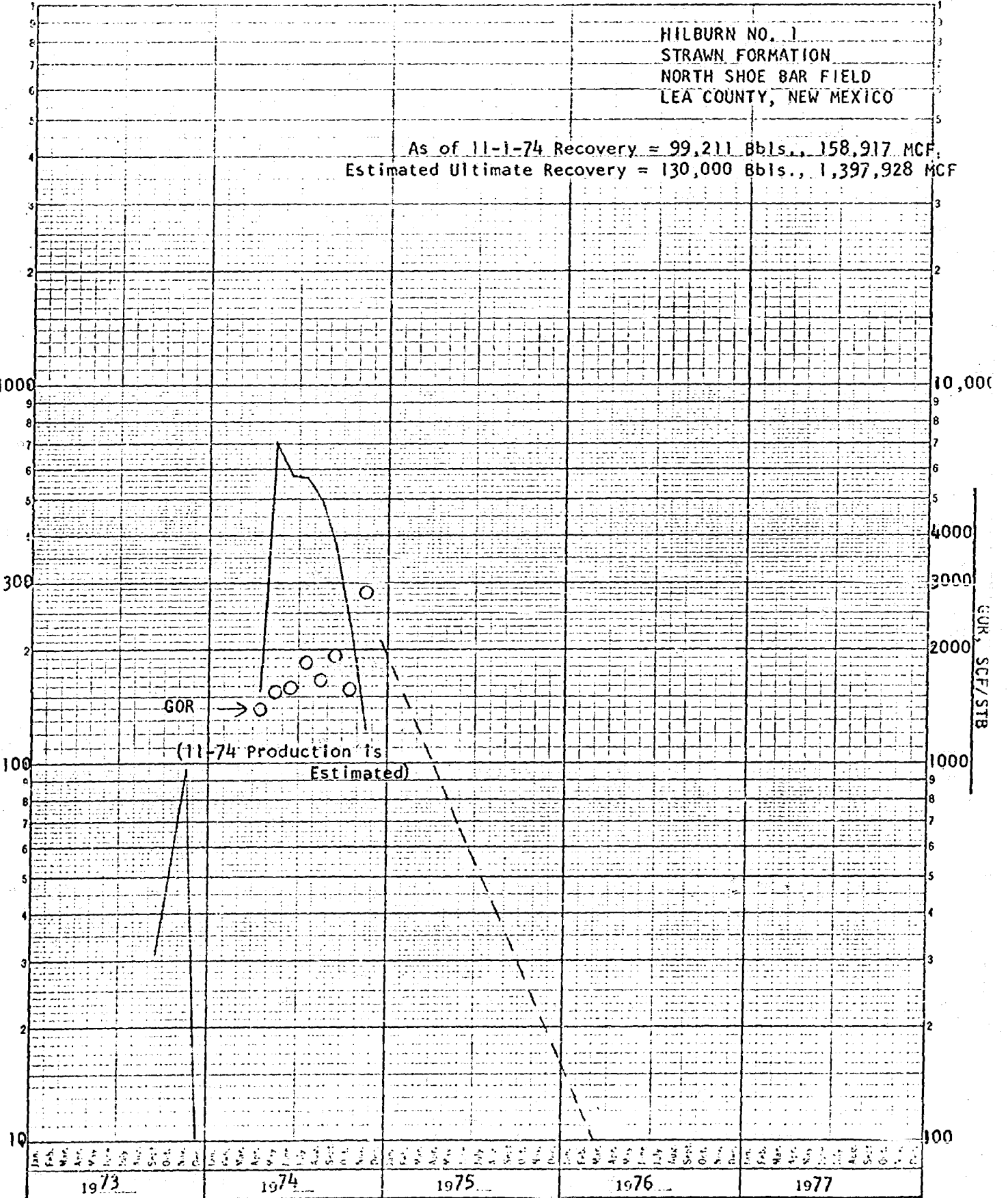
EXHIBIT NO. 5

NORTH SHOE BAR STRAWN

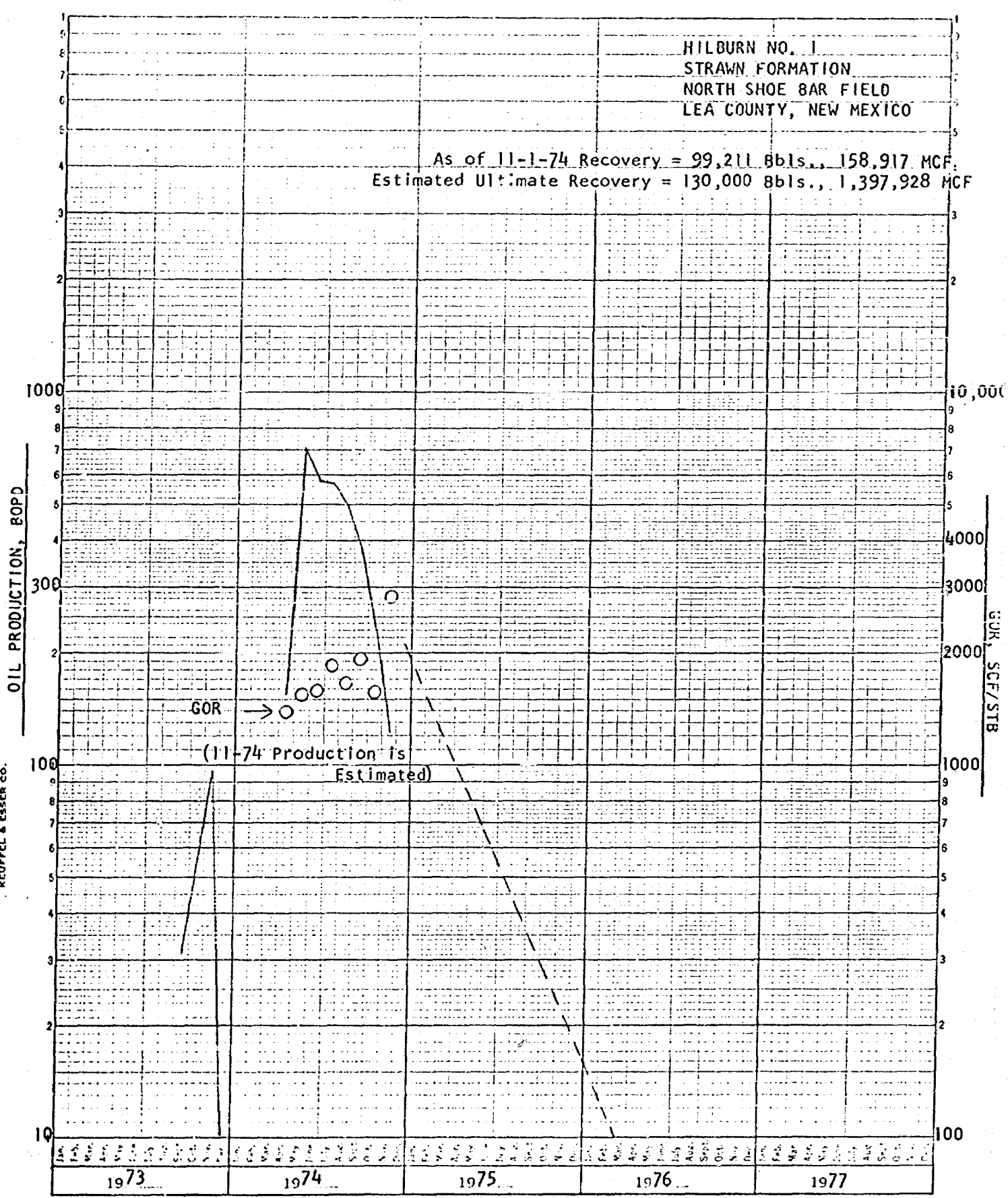
PRODUCTION CURVES

12 3 YEARS BY MONTHS 46 6690
 X 3 LOG CYCLES
 MADE IN U.S.A.
 NEUFFEL & ESSER CO.

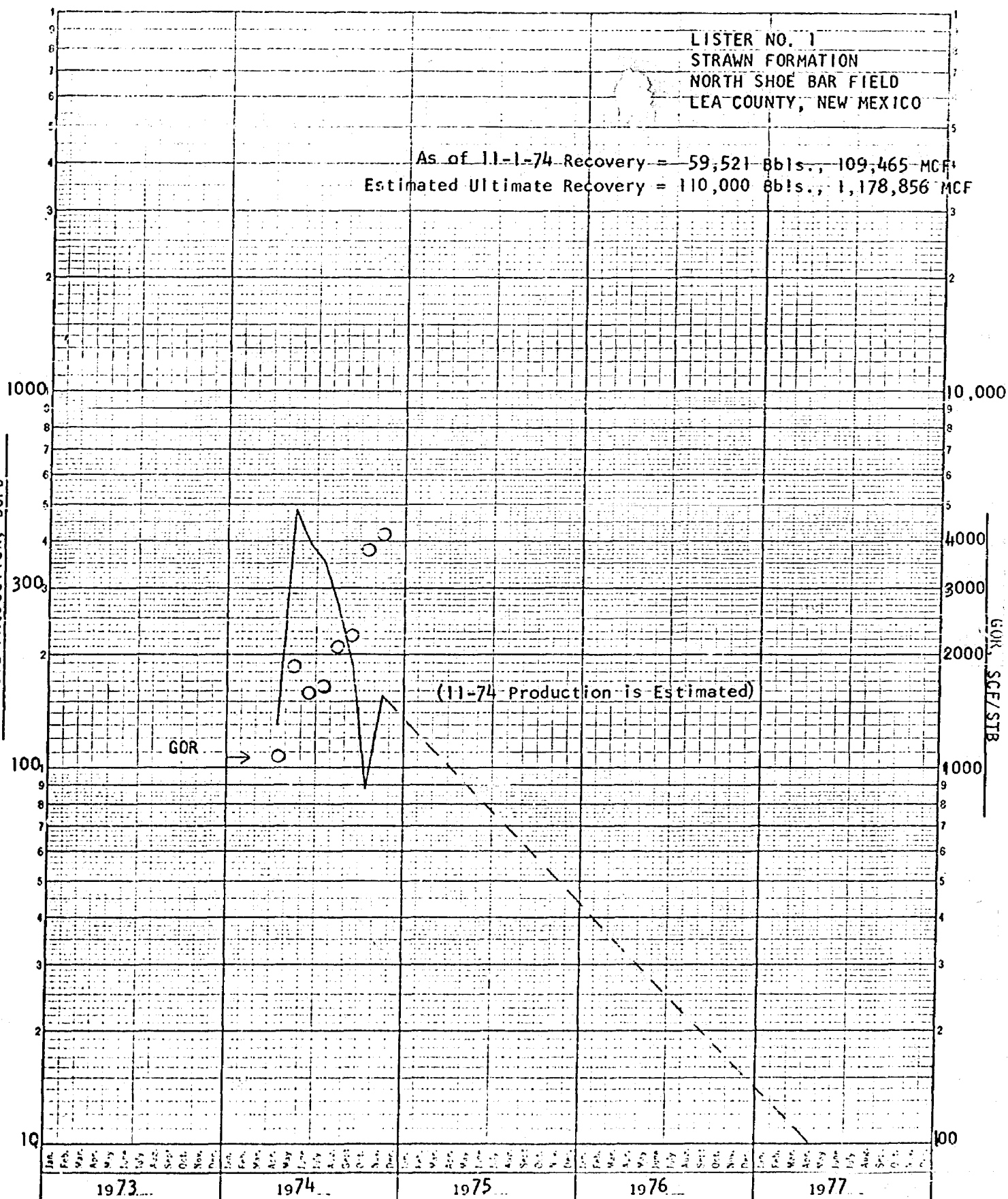
OIL PRODUCTION, BOPD



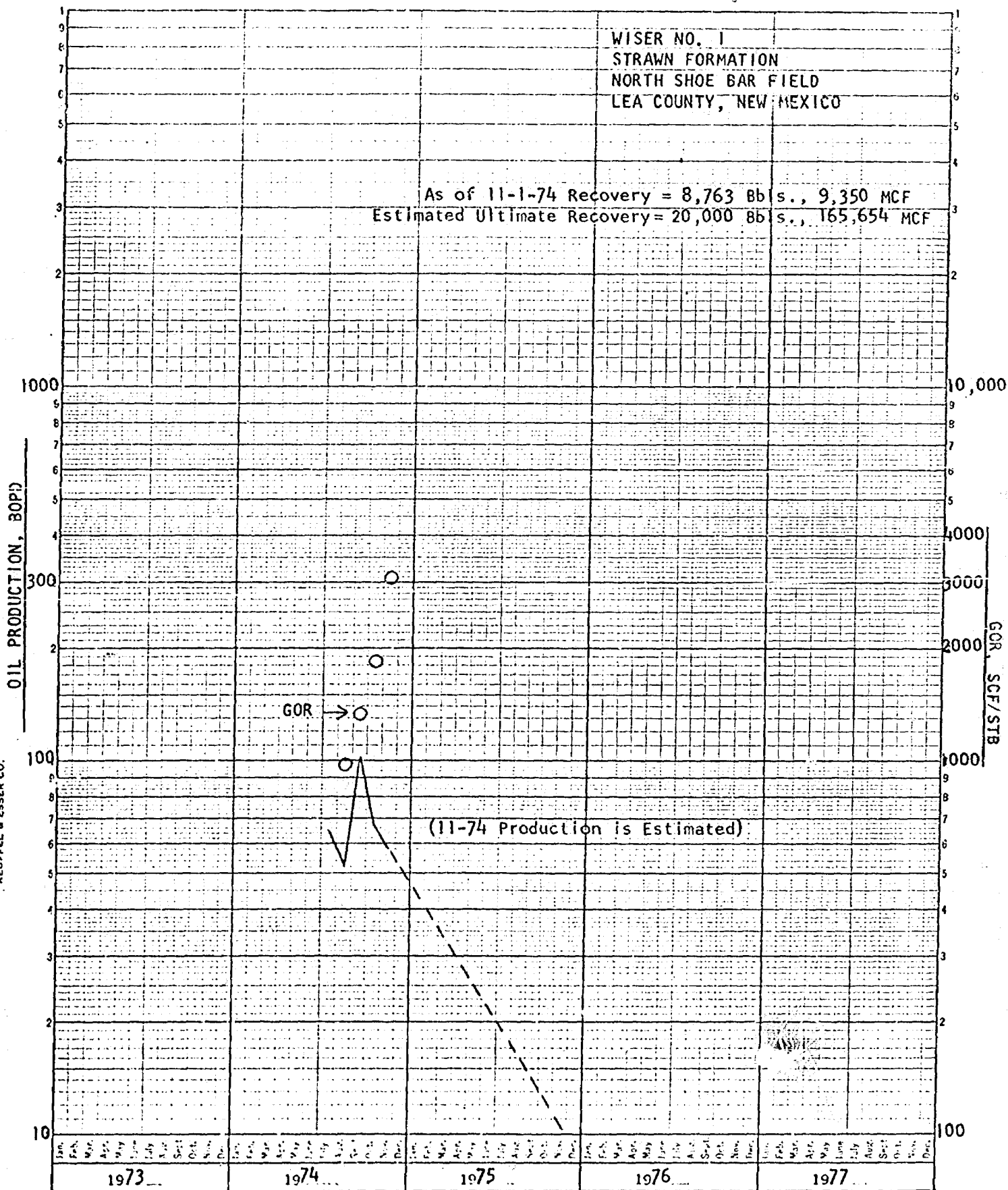
14-5 YEARS BY MONTHS 46 6690
 X 3 LOG CYCLES
 MADE IN U.S.A.
 KEUFFEL & ESSER CO.



OIL PRODUCTION, BOPD



K₀ 5 YEARS BY MONTHS 46 6690
 X 3 LOG CYCLES
 MADE IN U.S.A.
 KEUFFEL & ESSER CO.



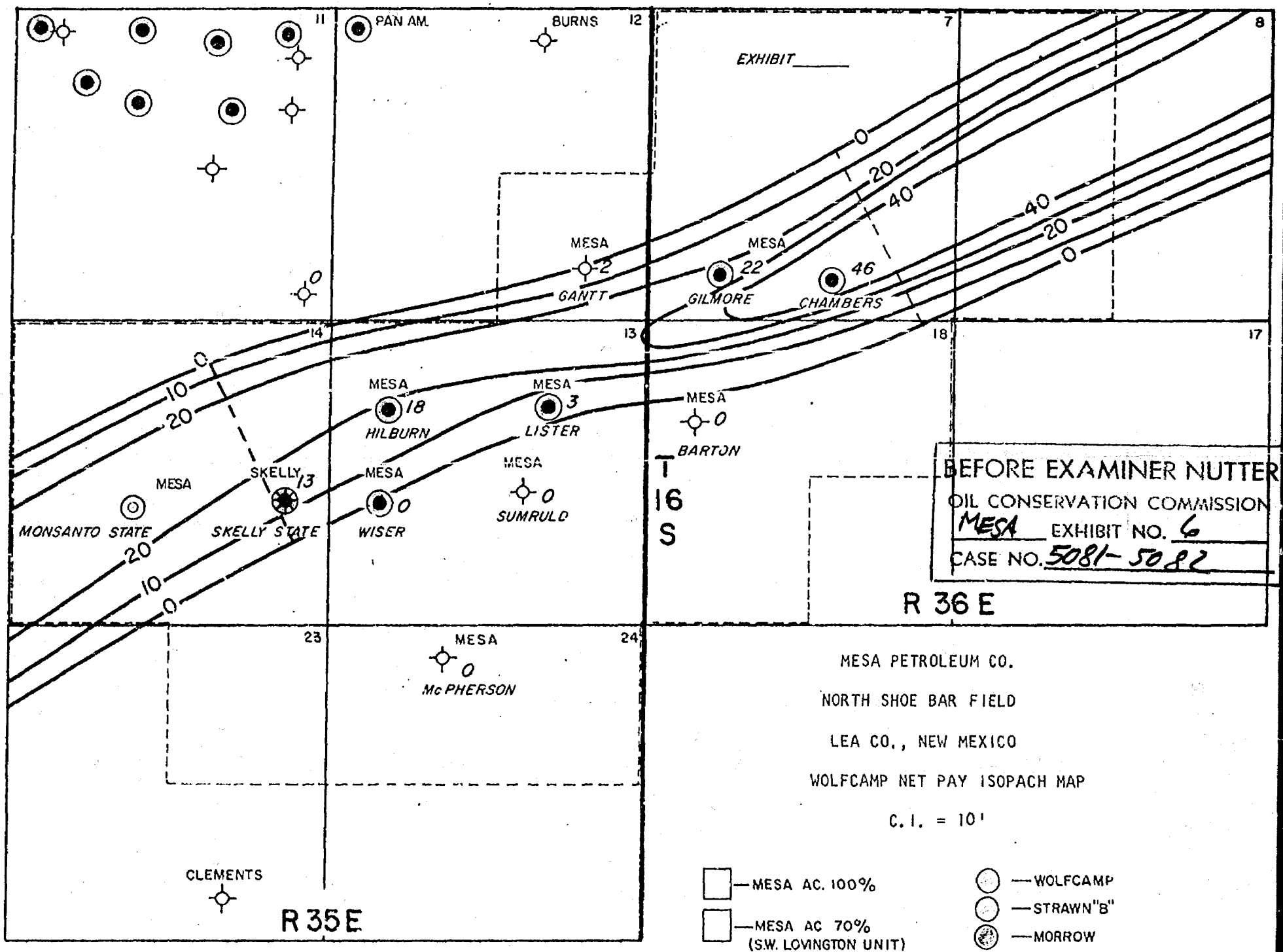


EXHIBIT
MESA PETROLEUM CO.
Pressure History

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
MESA EXHIBIT NO. 7
CASE NO. 5081-5082

North Shoe Bar Wolfcamp Field
(Datum: -6557')

| <u>Well</u> | <u>Date</u> | <u>Pressure</u> | <u>Remarks</u> |
|--------------------|-------------|-----------------|-----------------------------|
| Skelly State No. 1 | 12-23-72 | 4097 | DST |
| Gilmore No. 1 | 12-10-73 | 4097 | DST |
| Gilmore No. 1 | 1-22-74 | 4057 | Extrapolated 96 Hr. Buildup |
| Chambers No. 1 | 3-6-74 | 4050 | DST |
| Skelly State No. 1 | 4-4-74 | 4034 | After 9 Months Shut-in |
| Chambers No. 1 | 4-18-74 | 4020 | Extrapolated 44 Hr. Buildup |
| Chambers No. 1 | 7-9-74 | 3412 | Extrapolated 96 Hr. Buildup |
| Gilmore No. 1 | 7-9-74 | 3422 | Extrapolated 95 Hr. Buildup |

DMF:hh
11/25/74

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
MESA EXHIBIT NO. 8
CASE NO. 5081-5082

MESA PETROLEUM CO.

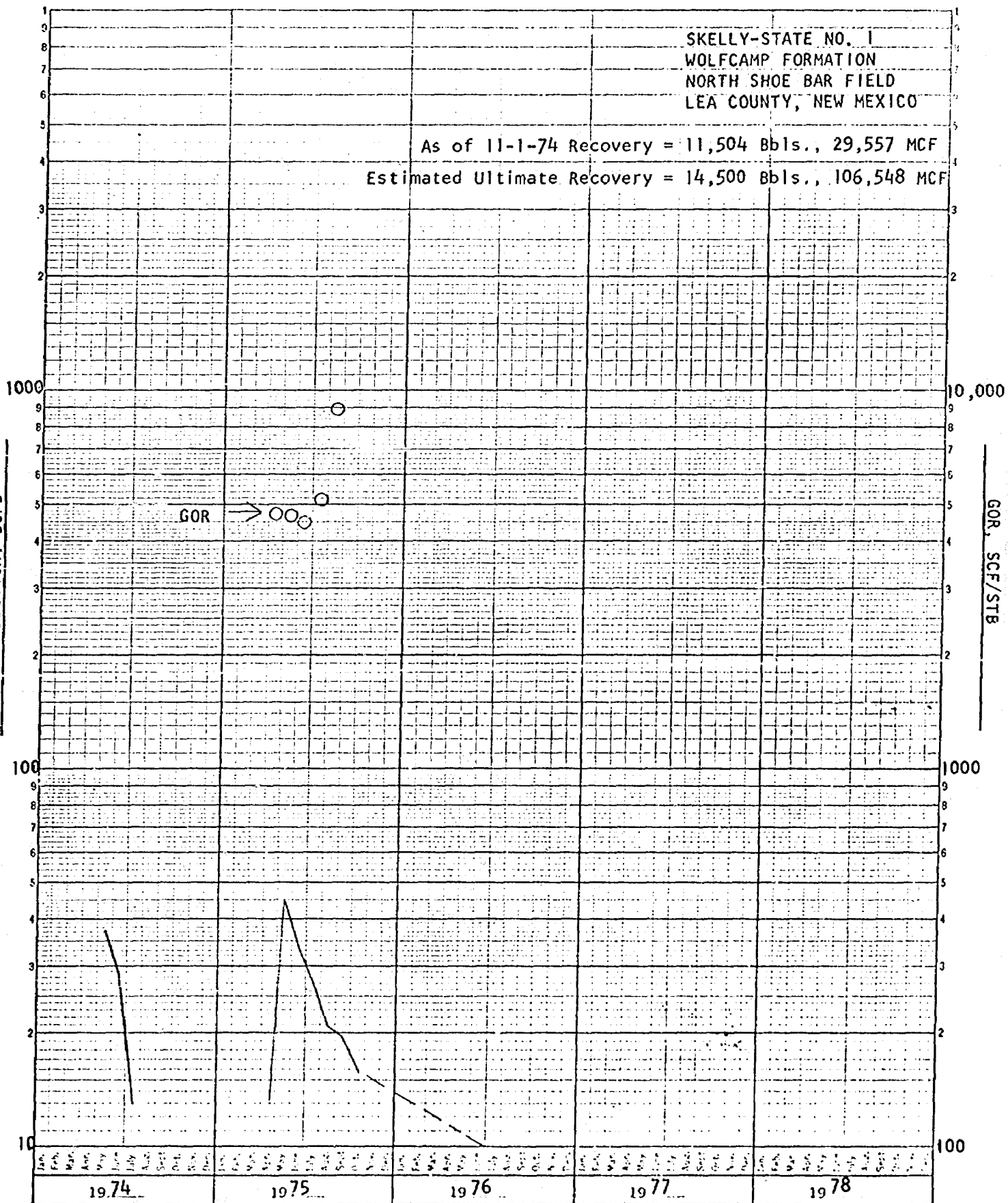
EXHIBIT NO. _____

NORTH SHOE BAR WOLFCAMP

PRODUCTION CURVES

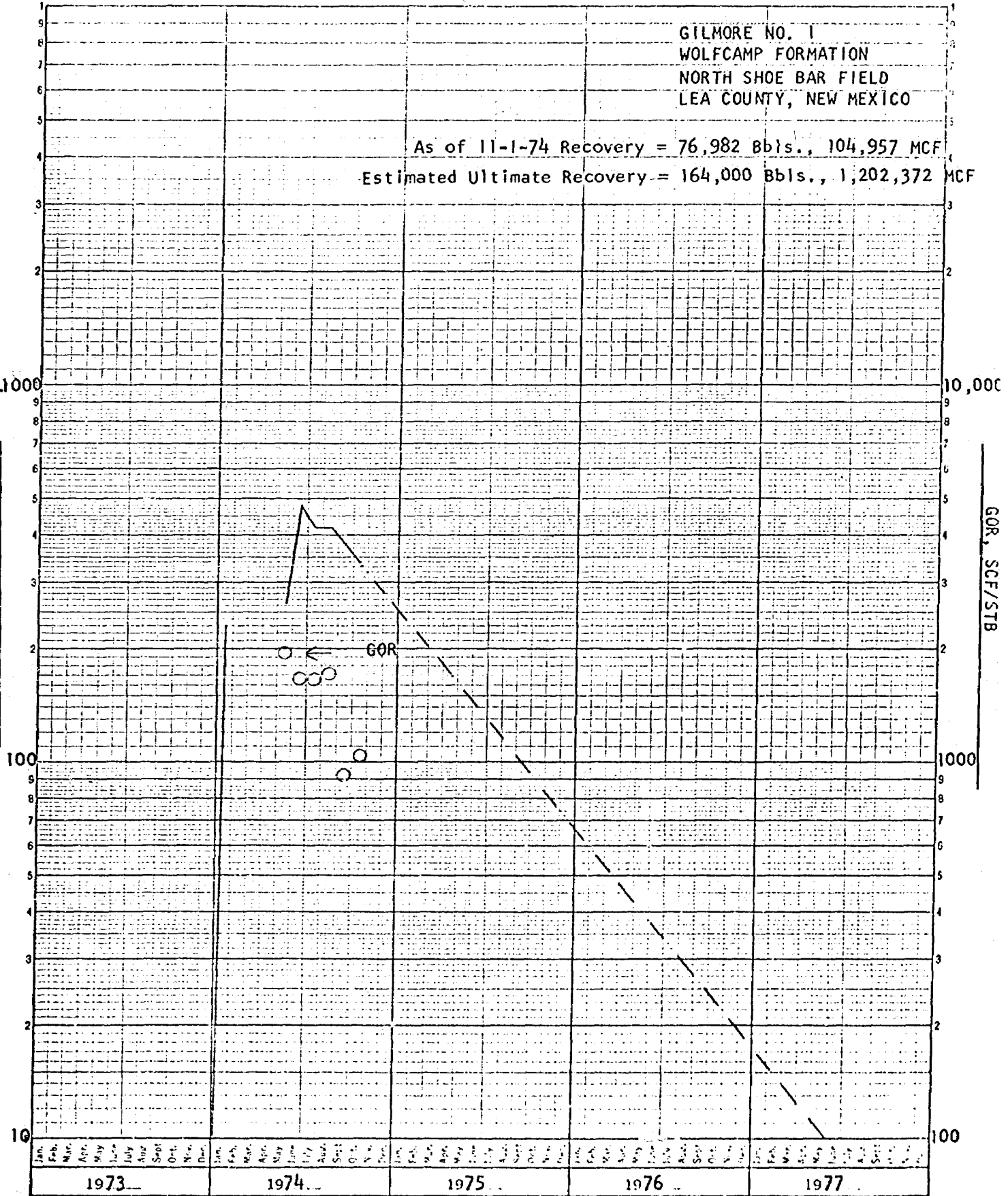
46 6690
 3 LOG CYCLES
 KEUFFEL & ESSER CO.

OIL PRODUCTION, BOPD



K&E 5 YEARS BY MONTHS 46 6690
X 3 LOG CYCLES
MADE IN U.S.A.
KEUFFEL & ESSER CO.

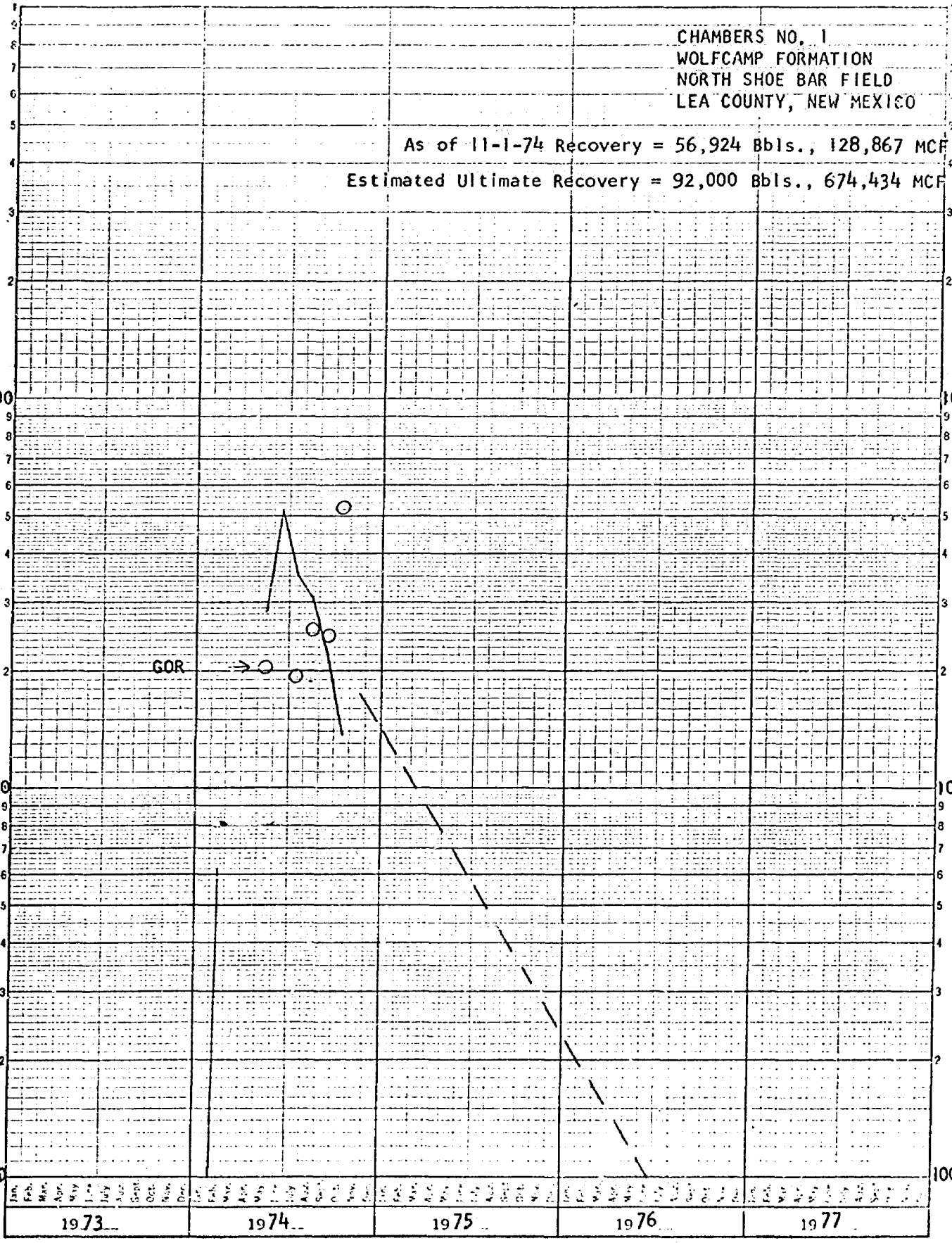
OIL PRODUCTION, BOPD



GOR, SCF/STB

KE 5 YEARS BY MONTHS 46 6690
X 3 LOG CYCLES
KEUFFEL & ESSER CO.

OIL PRODUCTION, BOPD



GOR, SCF/STB

EXHIBIT NO. _____

STRAWN (UNDESIGNATED) FIELD
HILBURN NO. 1 (E, 13-16S-35E)

| | |
|------------------------|---------------|
| BEFORE EXAMINER NOTTER | |
| OIL COMPANY | REGION |
| DATE | EXHIBIT NO. 5 |
| CASE NO. 3082 | |

Production History of Well: 20/64"

IP 10-5-73 872 BO + 0 BW + 1619 MCF, GOR 1857/1

Produced 3718 BO in 10 days prior to being SI 10-7-73
for 72 hour pressure build-up

Pressure History of Well: Datum 11322 (-7342)

| <u>Type of Test</u> | <u>Hilburn No. 1</u> psig |
|--------------------------------------|---|
| 9-7-73 Drill Stem Test | 4274 ¹ |
| 10-10-73 Build-Up Test SI 72 Hrs. | 4248 ¹ (pressure still increasing - extrapolation not certain) |

Key: 1 Extrapolated pressure from build-up curve

Volumetric Calculation of Reserves:

| | | |
|-----------------------------|---|------------|
| Net Pay, Feet | = | 48 |
| Ø, Percent | = | 9.6 |
| S _w , Percent | = | 20 |
| Oil FVF, RB/STB | = | 1.6 (est.) |
| Recovery Factor, Percent | = | 20 (est.) |

$$\frac{(7758 \text{ B/AF})(.096)(1 - .20)(.20)}{1.6} = 74 \text{ BO/AF Recoverable}$$

If 40 Ac Drainage:

$$(74 \text{ BO/AF})(40 \text{ Ac})(48') = 142,080 \text{ BO}$$

If 160 Ac Drainage:

$$(142,080 \text{ BO})(4) = 568,320 \text{ BO}$$

Economics: Hilburn No. 1

| | |
|--|-----------|
| Cost to drill to Morrow and make a single completion in Strawn | \$271,570 |
| Oil Price, \$/BBL | 5.36 |
| Casinghead Gas Price, \$/MMCF (est.) | 250.00 |
| Average GOR over life of well, MM/BO | 0.006 |
| Severance and Ad Valorem Taxes, Percent | 5.6 |
| Net lease interest, Percent | .80 |
| Operating Cost, \$/MO | 400.00 |
| Estimated life of production, Years | 20 |

Value of 40 Acre Recovery

Oil: $(142,080 \text{ BO})(.8)(\$5.36/\text{BO})(.944) = \$575,122$
Gas: $(142,080 \text{ BO})(.006 \text{ MM/BO})(.8)(\$250/\text{MM})(.944) = \$160,948$
Op. Costs: $(240 \text{ MO})(\$400/\text{MO}) = (\$ 96,000)$
Undiscounted Net Cash Flow = \$640,070

Undiscounted Net Profit if 40 Ac Drainage:
 $\$640,070 - 271,570 = \$368,500$

Undiscounted Net Profit if 160 Ac Drainage:
 $\$2,848,272 - 271,507 = \$2,576,765$

160 Acre Recovery

$(\$575,122)(4) = \$2,300,488$
 $(\$160,948)(4) = \$ 643,792$
 $\$ (96,000)$
\$2,848,280

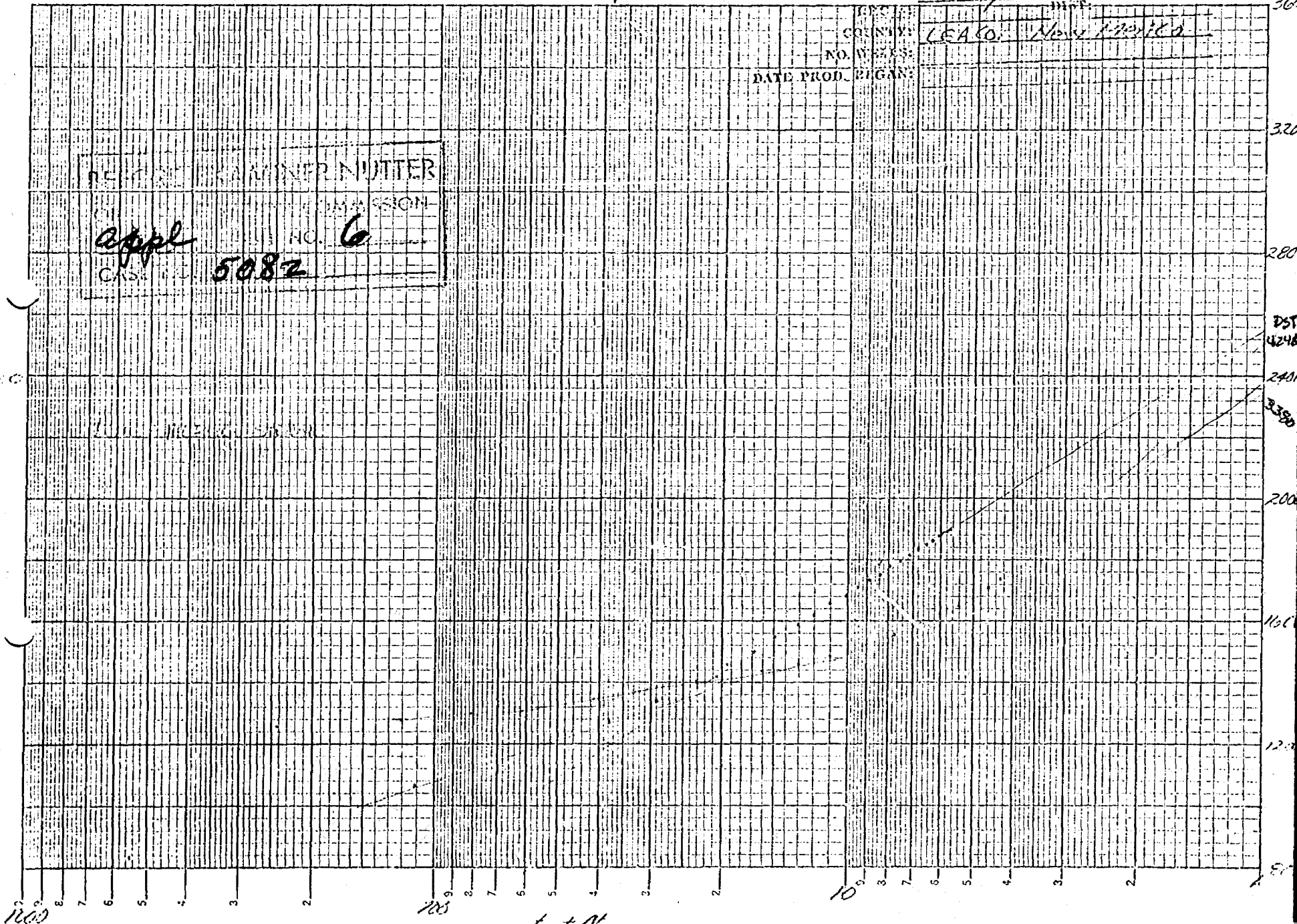
RCU/pw 10-11-73

4-16-73 Bridge

OPERATOR: MESA PETROLEUM CO.
LEASE: Kelly State #1

COUNTY: LEA CO. New Mexico
NO. WELLS:
DATE PROD. BEGAN:

REPT. BY: KAMINER NUTTER
COMMISSION
NO. 6
CASE NO. 5082

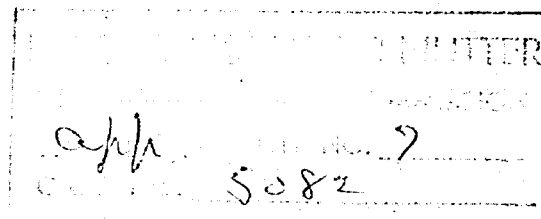


6 + 10
10

46 5490
SEMI-LOGARITHMIC
DIVISION
MADE IN U.S.A.
KEPPEL & ESSER CO.

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

| Well | Status of Well | Time | Elapsed Time | | Daily Rate Oil B/D Gas MCF/D | Wellhead Pressure Tubing | BHP @ 11122' Psig | BHP @ 11322' Psig |
|------|----------------------|-------|--------------|------|---------------------------------|--------------------------------|-------------------------|-------------------------|
| | | | Hrs. | Min. | | | | |
| J-7 | Arrived on loc. | 10:00 | | | 460 | 787.3 | | |
| | Flwg 15/64" choke | 11:00 | | | | | | |
| | Gradient Traverse | 12:40 | | | | 1227 | 3643 | 3691 |
| | Inst. @ 11122' | 13:00 | | | | | 3643 | 3691 |
| | " | 13:00 | 0 | 00 | | | | |
| | Shut in for Build Up | 13:06 | 0 | 06 | | | 3652 | 3701 |
| | " | 13:12 | 0 | 12 | | | 3655 | 3704 |
| | " | 13:24 | 0 | 24 | | | 3653 | 3708 |
| | " | 13:42 | 0 | 42 | | | 3652 | 3711 |
| | " | 14:00 | 1 | 00 | | | 3653 | 3714 |
| | " | 15:00 | 2 | 00 | | | 3653 | 3720 |
| | " | 16:00 | 3 | 00 | | | 3653 | 3725 |
| | " | 17:00 | 4 | 00 | | | 3653 | 3729 |
| | " | 19:00 | 6 | 00 | | | 3653 | 3735 |
| | " | 21:00 | 8 | 00 | | | 3653 | 3744 |
| | " | 23:00 | 10 | 00 | | | 3653 | 3749 |
| | " | 01:00 | 12 | 00 | | | 3653 | 3753 |
| | " | 05:00 | 16 | 00 | | | 3653 | 3759 |
| | " | 09:00 | 20 | 00 | | | 3653 | 3765 |
| | " | 13:00 | 24 | 00 | | | 3653 | 3771 |
| | " | 19:00 | 30 | 00 | | | 3653 | 3781 |
| J-8 | " | 01:00 | 36 | 00 | | | 3653 | 3788 |
| | " | 07:00 | 42 | 00 | | | 3653 | 3793 |
| | " | 13:00 | 48 | 00 | | | 3653 | 3795 |
| | " | 19:00 | 54 | 00 | | | 3653 | 3797 |
| J-9 | " | 01:00 | 60 | 00 | | | 3653 | 3798 |
| | " | 07:00 | 66 | 00 | | | 3653 | 3806 |
| | " | 13:00 | 72 | 00 | | | 3653 | 3812 |
| J-10 | Gradient Traverse | 13:00 | 72 | 00 | | 1442 | 3734 | 3833 |



SUBJECT: MESA
Hilburn Shown

WILLIAMSON, DUNYAN & AYCOCK, INC.
 CONSULTING ENGINEERS
 HOUSTON, TEXAS

PAGE NO.

BY PM

DATE: 10-12-73

Well produced for 10 days prior to CI for Build-up:
 $t = 240 \text{ hrs.}$

| t hrs. | Δt hrs. | $b + \Delta t$ | $\frac{t + \Delta t}{\Delta t}$ | $P_{SI} @ 11322$ |
|-------------|--------------------|----------------|---------------------------------|------------------|
| 240 | 1 | 241 | 241 | 3714 |
| | 2 | 242 | 121 | 3720 |
| | 3 | 243 | 81 | 3725 |
| | 4 | 244 | 61 | 3729 |
| | 6 | 246 | 41 | 3738 |
| | 8 | 248 | 31 | 3744 |
| | 10 | 250 | 25 | 3749 |
| | 12 | 252 | 21 | 3753 |
| | 16 | 256 | 16 | 3759 |
| | 20 | 260 | 13 | 3765 |
| | 24 | 264 | 11 | 3771 |
| | 30 | 270 | 9 | 3781 |
| | 36 | 276 | 7.7 | 3788 |
| | 42 | 282 | 6.7 | 3798 |
| | 48 | 288 | 6 | 3805 |
| | 54 | 294 | 5.4 | 3811 |
| | 60 | 300 | 5 | 3819 |
| | 66 | 306 | 4.6 | 3826 |
| | 72 | 312 | 4.3 | 3833 |

(Note: data plotted on
 Kelly state w/o build-up)

Test not CI long enough to get buildup but reasonable extrapolation of
 Horner Plot shows essentially no depletion to the p.d.n. of 371880 prior
 to CI

5082

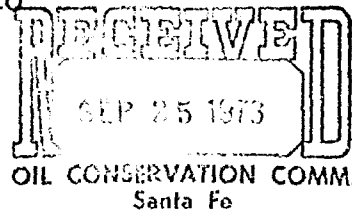
8

Case 5082

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

APPLICATION OF MESA PETROLEUM CO.
FOR ADOPTION OF TEMPORARY SPECIAL
POOL RULES FOR AN UNDESIGNATED
POOL RESULTING FROM THE DISCOVERY
IN THE STRAWN FORMATION IN THE
MESA PETROLEUM CO. NO. 1 HILBURN
WELL LOCATED 660 FEET FROM THE
WEST LINE AND 1980 FEET FROM THE
NORTH LINE OF SECTION 13, TOWNSHIP
16 SOUTH, RANGE 35 EAST, INCLUDING
160 ACRE SPACING AND FOR THE DUAL
COMPLETION OF SAID WELL IN THE
STRAWN AND WOLFCAMP FORMATIONS,
AND FOR A DISCOVERY ALLOWABLE IN
THE STRAWN FORMATION.



Oil Conservation Commission
Box 2088
Santa Fe, New Mexico 87501

Comes Mesa Petroleum Co., acting by and through the under-
signed attorneys, and hereby makes application for the adoption
of temporary special pool rules for an undesignated pool resulting
from the discovery in the Strawn formation in the Mesa Petroleum Co.
No. 1 Hilburn well located 660 feet from the west line and 1980 feet
from the north line of Section 13, Township 16 South, Range 35 East,
including 160 acres spacing and for the dual completion of said well
in the Strawn and Wolfcamp formations and for a discovery allowable
in the Strawn formation, and in support thereof respectfully shows:

1. Applicant is in the process of completing as an oil pro-
ducer in both the Wolfcamp and Strawn formations its Hilburn No. 1
well located in Unit E 1980 feet from the north line and 660 feet
from the west line of Section 13, Township 16 South, Range 35 East,
N.M.P.M. It is believed that this well will be completed as a well
capable of producing in paying quantities from both the Wolfcamp and
Strawn formations.

2. There is attached hereto, made a part hereof and for pur-
poses of identification marked Exhibit "A", a plat showing the loca-
tion of the well hereinabove referred to. The plat also shows all

of the wells which have been drilled and which are producing within a radius of 2 miles thereof, together with the ownership of the oil and gas leases within the area covered by the plat. The plat also shows the outlines of the Southwest Lovington Unit which covers all of Sections 13 and 14, NE $\frac{1}{4}$ Section 23 and N $\frac{1}{2}$ Section 24, Township 16 South, Range 35 East, which is a working interest unit of which applicant is the operator. The above mentioned well is being drilled under said unit.

3. In the opinion of applicant all of the NW $\frac{1}{4}$ Section 13 is productive of oil and gas in paying quantities from the Strawn formation and the well above referred to is capable of efficiently and economically draining said 160 acre unit.

4. Applicant also requests approval of the dual completion of the well hereinabove referred to in the Strawn and Wolfcamp formations and also for a discovery allowable in the Strawn formation.

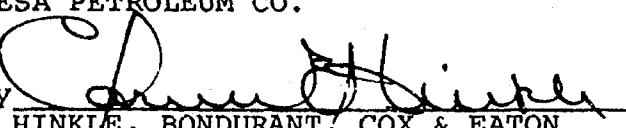
5. In order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells and to otherwise prevent waste and protect correlative rights, applicant believes it is in the interest of conservation and the prevention of waste to adopt special pool rules and regulations providing for 160 acre spacing units for the Strawn formation.

6. Applicant requests that this matter be set down for the examiner's hearing to be held on October 17, 1973.

Respectfully submitted,

MESA PETROLEUM CO.

By


HINKLE, BONDURANT, COX & EATON
P.O. Box 10
Roswell, New Mexico 88201
Attorneys for Applicant

DRAFT

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

APPLICATION OF MESA PETROLEUM
COMPANY FOR A DUAL COMPLETION,
CREATION OF A NEW OIL POOL,
ASSIGNMENT OF A DISCOVERY
ALLOWABLE, AND SPECIAL POOL
RULES, LEA COUNTY, NEW MEXICO

CASE NO. 5082

Order No. R-4658

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 17, 1973,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of November, 1973, the Commission,
a quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Mesa Petroleum Company is the owner and
operator of the Hillburn Well No. 1, located in Unit E of Section 13,
Township 16 South, Range 35 East, NMPM, Lea County, New Mexico.

(3) That said well has discovered a new and separate common source
of supply in the Strawn formation, and a new pool designated the North
Shoe Bar-Strawn Pool should be created and defined by the Commission.

(4) That applicants well, said Hillburn Well No. 1, has made a ^{bonafide} discovery of a new common source of supply, and should be assigned an oil discovery allowable pursuant to the provisions of Rule 509 of the Commission Rules and Regulations.

(5) That the top of the perforations in the subject well is at 11,289 feet in the Strawn formation; and that 56,445 barrels of oil discovery allowable should be assigned to the subject well.

(6) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 160-acre spacing units should be promulgated for the North Shoe Bar-Strawn Pool.

(7) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

(8) That the temporary special rules and regulations should be established for a one-year period in order to allow the operators in the subject pool to gather reservoir information to establish the area that can be efficiently and economically drained and developed by one well.

(9) That the vertical limits of the North Shoe Bar-Strawn Pool should be the Strawn formation as found from 11,275 feet to 11,360 feet on the log of the discovery well, the *aforsaid* Hillburn Well no. 1; that the horizontal limits of said pool should be the NW/4 of Section 13, Township 16 South, Range 35, East, NMPM, Lea County, New Mexico.

(10) That this case should be reopened at an examiner hearing in November, 1974, at which time the operators in the subject pool should be prepared to appear and show cause why the North Shoe Bar-Strawn Pool should not be developed on less than 160-acre spacing units.

(11) That applicant's request that the dual completion portion of its application be dismissed should be approved.

IT IS THEREFORE ORDERED:

1. That the dual completion portion of the subject application is hereby dismissed.

2. That a new pool for Strawn oil production be and the same is hereby created and designated the North Shoe Bar-Strawn with vertical limits defined as being the Strawn formation as found from 11,275 feet to 11,360 feet on the log of the discovery well, the Mesa Petroleum Company Hillburn Well No. 1, located in Unit E of Section 13, Township 16 South, Range 35 East, NMPM, Lea County, New Mexico, and with horizontal limits defined as being the NW/4 of said Section 13.

3. That the aforesaid Hillborn Well No. 1 is hereby assigned an oil discovery allowable in the amount of 56,445 barrels, to be produced at a rate not to exceed 78 barrels per day.

4. That effective November 10, 1973, Special Rules and Regulations for the North Shoe Bar-Strawn Pool, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS

FOR THE

NORTH SHOE BAR-STRAWN POOL

RULE 1. Each well completed or recompleted in the North Shoe Bar-Strawn Pool or in the Strawn formation within one mile thereof, and not nearer to or within the limits of another designated Strawn oil pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 160 acres, more or less, substantially in the form of a square, which is a quarter section being a legal subdivision of the United State Public Land Surveys.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit consisting of less than 160 acres or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United State Public Land Surveys. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state

that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located within 150 feet of the center of a governmental quarter-quarter section or lot.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

RULE 6. A standard proration unit (158 through 162 acres) shall be assigned *a depth bracket allowable of 605 barrels,* ~~a 160-acre proportional factor of 7.67 for~~ *subject to the market demand percentage factor,* allowable purposes, and in the event there is more than one well on a 160-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 160 acres.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the North Shoe Bar-Strawn Pool or in the Strawn formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before *November 30, 1973.*

(2) That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing

wells in the North Shoe Bar-Strawn Pool shall have dedicated thereto 160 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 160 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable.

(3) That this case shall be reopened at an examiner hearing in ~~November~~, ¹⁹⁷⁴, at which time the operators in the subject pool may appear and show cause why the North Shoe Bar-Strawn Pool should not be developed on less than 160-acre spacing units.

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

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

DRAFT

df/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 5082 (Reopened)

Order No. R- 4658-A

IN THE MATTER OF CASE NO. 5082 BEING
REOPENED PURSUANT TO THE PROVISIONS OF
ORDER NO. R-4658, WHICH ORDER ESTABLISHED
TEMPORARY SPECIAL RULES FOR THE NORTH SHOE
BAR-STRAWN POOL, LEA COUNTY, NEW MEXICO,
INCLUDING A PROVISION FOR 160-ACRE SPACING
AND PRORATION UNITS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November ~~26~~, 1974
at Santa Fe, New Mexico, before Examiner ~~Richard L. Stamets~~ *DSN*.

NOW, on this December day of November, 1974, the Commission,
a quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That by Order No. R-4658, dated November 16, 1973,
temporary special rules and regulations were promulgated for the
North Shoe Bar-Strawn Pool, Lea County, New Mexico, establishing
temporary 160-acre spacing and proration units.

1 (3) That pursuant to the provisions of Order No. R-4658,
2 this case was reopened to allow the operators in the subject
3 pool to appear and show cause why the North Shoe Bar-Strawn Pool
4 should not be developed on ^{less than} 160-acre spacing units.

5 (4) That the evidence establishes that one well in the
6 North Shoe Bar-Strawn Pool can efficiently and economically
7 drain and develop ¹⁶⁰ 320 acres.

8 (5) That the Special Rules and Regulations promulgated by
9 Order No. R-4658 have afforded and will afford to the owner
10 of each property in the pool the opportunity to produce his
11 just and equitable share of the gas in the pool.

12 (6) That in order to prevent the economic loss caused by
13 the drilling of unnecessary wells, to avoid ~~the excessive number of wells~~
14 the augmentation of risk arising from the drilling of an
15 excessive number of wells, to prevent reduced recovery which
16 might result from the drilling of too few wells, and to otherwise
17 prevent waste and protect correlative rights, the Special Rules
18 and Regulations promulgated by Order No. R-4658 should be
19 continued in full force and effect until further order of the
20 Commission.

21 IT IS THEREFORE ORDERED:

22 (1) That the Special Rules and Regulations governing the
23 North Shoe Bar-Strawn Pool, Lea County, New Mexico, promulgated
24 by Order No. R-4658, are hereby continued in full force and
25 effect until further order of the Commission.

26 (2) That jurisdiction of this cause is retained for the
27 entry of such further orders as the Commission may deem necessary.

28 DONE at Santa Fe, New Mexico, on the day and year herein-
29 above designated.
30
31
32

Memorandum

D. S. NUTTER
CHIEF ENGINEER

To Clarence Hunkce

Missouri Petr Co.

Create Strawn oil
pool

assignment of discy
allowance to Strawn
perfs 11288

Hillburn Well No. 1

1980 FNL & 660 FWL

13-165-35E Lea

special rules incl 160ac
spec.

CASE 1021: Application of TEXACO
FOR DOMESTIC CONTROLLING, LEA
COUNTY, NEW MEXICO.