

CASE 4660: MOTION OF OCC TO PERMIT
TEXACO TO APPEAR REGARDING REPAIR
OF ITS COTTON DRAW UNIT WELL #65.

Case Number
4660

Application

Transcripts

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
MORGAN HALL, STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
February 16, 1972

EXAMINER HEARING

IN THE MATTER OF:

The hearing called by the Oil Conservation Commission on its own motion to permit Texaco, Inc. to appear and show cause why it should not take immediate action to repair its Cotton Draw Unit Well No. 65, a dual completion, located in Unit G of Section 2, Township 25 South, Range 31 East, Eddy County, New Mexico, in such a manner as to prevent communication between the Paduca-Morrow and Paduca-Wolfcamp Gas Pools.

CASE NO. 4660

BEFORE: Elvis Utz
Examiner

TRANSCRIPT OF HEARING

NEW MEXICO OIL CONSERVATION COMMISSION

REGULAR HEARING

SANTA FE, NEW MEXICO

Hearing Date FEBRUARY 16, 1972 TIME: 9 A.M.

NAME	REPRESENTING	LOCATION
Jerry Gross	Amoco Production	Houston
Tom Malloy	Amoco Production	"
C. Kennedy	Ind	Farmington
N. Dukaime	RW Byrum	Santa Fe
Curtis Cook	Texas	Hobbs
John McEllenby	Lone Star Prod. Co.	Dallas, Texas
James H. Hume	" " "	Permian
J. D. HURD	" " "	Midland
C M Tom	Conoco	Casper, Wyo
Bill Bessett	OCC	Artesia
Al R. Kendrick	OCC	Aztec
E C Amos	OCC	Alta
John D. Amos	OCC	Hobbs

NEW MEXICO OIL CONSERVATION COMMISSION

REGULAR HEARING

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Hearing Date FEBRUARY 16, 1972 TIME: 9 A.M.

NAME	REPRESENTING	LOCATION
V. T. LYON	CONTINENTAL OIL CO	HOBBS NM
J. C. Mann Jr	Union Oil Co. Calif	Midland, Tex
A. R. Wall, Jr	Mobil Oil Corporation	Antonia, Tex
J. H. Joubert	Mobil Oil Corp.	Midland, Tex
Sam H. Hunicutt	Cosden oil & Chem	Big Spring, Tex
Harold Miller	El Paso Natural Gas	El Paso, Tex
Joe Holt	Shell oil Co	Midland
J. E. Damerwood	Amoco Production	Denver
H. C. Smith	Champion Int'l. Oil Co.	Midland
H. W. Mayer	Charter Int'l. oil Co	Houston, Tex
W. T. Lloyd	Navajo Ref	Artesia, NM
Ray Kachel	Phillips Pet. Co.	Midland, Texas
Dick Booker	Cities Service Ref	
Joe Jagan	Texas Eastern Ref	
Jack George	ESORO Petroleum	Midland
J. R. Kennon	Charter Int'l.	Houston
R. L. Denton	Mobil - Retired	Midland
J. G. Savage	Texaco Inc	Midland

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1 MR. UTZ: Case 4660.

2 MR. HATCH: In the matter of the hearing called by
3 the Oil Conservation Commission on its own motion to permit
4 Texaco, Inc. to appear and show cause why it should not take
5 immediate action to repair its Cotton Draw Unit Well No. 65,
6 a dual completion, located in Unit G of Section 2, Township
7 25 South, Range 31 East, Eddy County, New Mexico, in such a
8 manner as to prevent communication between the Paduca-Morrow
9 and Paduca-Wolfcamp Gas Pools.

10 MR. UTZ: Appearances?

11 MR. KELLY: Booker Kelly of White, Koch, Kelly and
12 McCarthy, Santa Fe, on behalf of the applicant.

13 MR. HATCH: The Commission will have one witness,
14 Mr. Nutter.

15 D. S. NUTTER,
16 was called as a witness and, after being duly sworn, testified
17 as follows:

18 DIRECT EXAMINATION

19 BY MR. HATCH:

20 Q Would you state your name and position?

21 A Dan Nutter, Chief Engineer for the Oil Conservation
22 Commission. I would like to explain my appearance
23 here, I would like to more or less explain what the
24 situation is with regard to this well and why the
25 Commission called the hearing and what the Commission

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1 staff feels is the problem with regard to the well.

2 Q All right, you may continue then.

3 A First of all, we are talking about the Texaco Company's
4 Cotton Draw Unit Well Number 65, which is located in
5 Section 2 of Township 25 South, Range 31 East, Eddy
6 County, New Mexico.

7 This well was drilled to completion and completed
8 in the Paduca-Wolfcamp and Paduca-Morrow Pools. It
9 was originally drilled in 1966 and 1967.

10 The total depth of the well was 19,546 feet and
11 production was established in the Devonian formation.
12 However, the well was plugged back at a depth of 15,050
13 feet and was dually completed as a producing well in
14 the Paduca-Morrow and Paduca-Wolfcamp at 12,785 feet to
15 12,851 feet.

16 At 14,787 feet to 14,867 feet, 2 and 7/8ths tubing
17 was run and at 14,700 feet a Packer Test was run
18 showing initial bottom hole pressure as reported to
19 the Commission of 9,240 P.S.I. and 6,123 P.S.I. The
20 calculated open flow was reported at 9,000 per day and
21 21,230,000 cubic feet of gas giving a ratio of 78,300
22 to 1.

23 The authority for dual completion was given by
24 Commission Order R-3266, dated July 10, 1967.

25 At the Hearing, the following question was asked

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1 of the Texaco witness: "In your opinion would the
2 granting of this application protect correlative
3 rights and help assure the gas will be produced in
4 an effective and efficient manner?"

5 His answer was: "Yes."

6 An apparent leak was discovered in the Packer
7 Leakage Test and this was identified as Exhibit 1 in
8 this case, O.C.C. Exhibit 1, which is the Packer
9 Leakage Test and was taken in 1970. It consists
10 of photostatic copies of the charts run on the well
11 and shows the normal Packer Leakage Test. There is
12 no leak indicated at all.

13 MR. UTZ: When was that taken?

14 A August of 1970, and at that time, the Packer Leakage
15 Test -- the charts there are perfect and when both
16 zones were shut in, both zones reached stabilized
17 shut-in pressure.

18 When they were opened, one zone's pressure fell
19 and the pressure on the other remained stable. Then
20 they opened the other zone up and the pressure declined
21 on it and the first zone stabilized.

22 Exhibit Number 2 is the Packer Leakage Test taken
23 in 1971 on the well. This shows a leak of considerable
24 magnitude because, obviously, from that chart, they
25 shut them both down and the shut-in pressure goes up on

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1 both wells. When they opened the one well, it is
2 depicted on chart number 2 of page 1 of Exhibit 2 and
3 you will see that they both stayed steady.

4 Both of them were shut-in again, and they are
5 stabilized --

6 MR. UTZ: What was the date of the last test?

7 A I'm not sure of the date of the test, but I believe
8 it was in October of 1971. I don't have a copy of
9 the Packer Leakage Test, all I have is a sheet of
10 paper that is attached to the chart and was prepared
11 by Texaco and there is a date of October -- no, whether
12 this was the date he made it or not, whether it was
13 the date he took the test, I don't know, but there is
14 a date of October, 1971, on that test.

15 Exhibit Number 4 is a production comparison for
16 the two zones of the well from January of 1970 through
17 November of 1971. You can see by that test right
18 there, Mr. Utz, that when the well was opened up there
19 was no decline in pressure at all, so obviously it was
20 receiving gas at a greater rate than it was producing
21 gas.

22 If you will refer to the production chart there
23 you will notice that during 1970, the average production
24 for the well was anywhere from 8,125 MCF per month to
25 a high in May of 17,000.

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1 However, the last three months, October, November
 2 and December, the average production per day was 307 MCF.
 3 It was in the neighborhood of 8,000 to 9,000 MCF for
 4 the month and then suddenly in January, and I attempted
 5 to ascertain whether there was any abnormal cause for
 6 production to suddenly jump up, and I was advised by
 7 Texaco there were no changes in line pressure and no
 8 changes in operating procedure of the well, but suddenly
 9 during the month of January, production jumped from
 10 9,754 to 40,299 MCF.

11 In January, production went up four times in one
 12 month.

13 MR. UTZ: How much is that?

14 A This is over one million per day and prior to January
 15 it averaged 307. So, in my opinion, either a breakout
 16 occurred in early December or early January, 1971, and
 17 this would be between those two Packer Leakage Tests,
 18 the one taken in August of 1970 and the other in
 19 October of 1971.

20 You will note also, there was a small decline
 21 in average production in the Morrow zone about the
 22 same time.

23 In 1970, the well averaged anywhere from 300,000
 24 to 400,000 MCF per month and it has been averaging
 25 200,000 to 300,000 in 1971, so there is a change in the

1 producing characteristic of the well.

2 It is quite obvious that the Wolfcamp zone is
3 largely depleted in the well and much is shut-in
4 tubing pressure.

5 The 1970 Packer Leakage Test was 1,400 pounds,
6 and initially shut-in tubing was 8,047 pounds, so
7 there was a decline in shut-in tubing pressure and
8 the decline is taking place and it is very likely
9 that the gas is being left behind in the reservoir
10 either by condensation or being trapped by water in
11 the reservoir, or both.

12 This is a normal occurrence and it is very likely
13 that this happened. The Wolfcamp zone has expanded
14 throughout the reservoir and the situation will likely
15 be aggravated and additional gas will be lost.

16 The Wolfcamp is outlined on Exhibit 5 in blue
17 and the participating area in the Morrow zone is
18 outlined in red.

19 You will see a considerable difference in the
20 areas of participation. While the working interest
21 ownership is the same in both participating areas,
22 the parties' working interests are identical as far
23 as participating interests, but royalty ownership of
24 overriding royalties are not the same. So any leakage
25 from one zone into another deprives the participants

1 in that area.

2 We feel that good field practice calls for the
3 separation of the reservoirs. To continue operating
4 a dual completion with the leakage of the magnitude
5 we have here, this is not in keeping with sound
6 operating procedures.

7 We may hear that it is inadvisable to kill the
8 well and repair the leak, to take off production long
9 enough to repair the leak would result in revenue
10 loss and any other number of arguments.

11 Why should the well be repaired? The fact remains
12 that you have two reservoirs that are in communication
13 with each other and if this situation remains, there
14 is grave danger of waste occurring and the correlative
15 rights being impaired unless remedial action is taken.

16 Q Does that complete your case?

17 A Yes, sir.

18 MR. UTZ: Any questions?

19 CROSS-EXAMINATION

20 BY MR. KELLY:

21 Q Mr. Nutter, I believe your testimony was that, in your
22 opinion, the leakage probably occurred in the early
23 part of 1971, or late 1970, December or January?

24 A We know the leakage occurred between those two
25 Packer Leakage Tests. By looking at production it

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1 appears to have occurred between December and January
2 of 1970, and '71.

3 Q That is a pretty good indication, don't you feel?

4 A I think that if you have a poor zone and a real good
5 zone in the well, and a leak suddenly breaks out, that
6 is going to be reflected in an increase in production
7 in the poor zone and that's what we have here.

8 Q And it was your testimony that the Wolfcamp was basically
9 a depleted zone?

10 A Well, production there for the months of October,
11 November and December averaged 307 MCF, and this is
12 certainly marginal.

13 Q Isn't it true that basically all of the Wolfcamp
14 production reported in 1971, actually was Morrow production?

15 A Some it certainly is. There is bound to be Morrow
16 gas in there now, whether some of it or all of it is
17 coming from the Morrow, I couldn't say.

18 Q Is it your opinion that there is actual gas that is
19 coming into that, that is not being produced? In other
20 words, the Morrow gas is not eventually reaching the
21 surface through either the Wolfcamp or the Morrow?

22 A I think the Morrow gas is reaching the surface through
23 both.

24 Q So the gas is being produced?

25 A Yes, it is being produced, and the gas is also going

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- 1 back to the reservoir.
- 2 Q Is there any way to estimate how much gas is going back
- 3 into the reservoir?
- 4 A No, there is no way to determine that and there's no
- 5 way to determine how much the loss would be.
- 6 Q It is possible there is no loss; isn't there?
- 7 A It could be. I said there was a likelihood of waste
- 8 there, I didn't say that there definitely was because
- 9 no one knows.
- 10 Q And it is true that it is difficult to work over a
- 11 Morrow gas well?
- 12 A Well, the Morrow gas wells are worked over.
- 13 Q And they have a pretty high percentage of either
- 14 reducing the deliverability or actually killing the
- 15 well permanently; don't they?
- 16 A I think with modern practices there is very little
- 17 likelihood of killing the well permanently.
- 18 Q How about the second part of my question, actually
- 19 reducing the deliverability of the well?
- 20 A Reducing the deliverability of the well may, or may
- 21 not, occur. If it does occur, it doesn't necessarily
- 22 reflect that you are going to have any waste there
- 23 because you still may recover the same amount of gas,
- 24 you just might defer it slightly.
- 25 Q Is there any way for you, with any reasonable degree of

1 certainty, to say whether more waste would occur by
2 allowing the two zones to be in effect, commingled as
3 they are now and taking the chance of killing the
4 Morrow zone by trying to squeeze the Wolfcamp?

5 A There is no degree of certainty as to the amount of
6 waste that is occurring by the Morrow Zone producing
7 into the Wolfcamp formation. There is never any degree
8 of certainty as to what effect on the deliverability
9 of the Morrow zone would be, if the well were worked
10 over. I think it can be said with certainty and with
11 a significant amount of conclusiveness that if you
12 worked the Morrow over and decreased the deliverability
13 on it, you are not going to decrease the recoverable
14 reservoir.

15 The reservoir will still come out of the Morrow
16 formation.

17 Q If you don't damage the Morrow?

18 A And that goes for the Wolfcamp too.

19 Q If you don't damage the Morrow.

20 A You can damage the Morrow formation by increasing
21 deliverability, but you cannot kill the reservoir.

22 The reservoir will still be there.

23 Q If you ~~deplete~~ the Wolfcamp zone, the Morrow will still
24 have a lot of gas left in it; isn't that correct?

25 A I think they both have a lot of gas in them now.

1 Q In January of 1971, the Wolfcamp was a basically depleted
2 zone?

3 A It was decreasing in deliverability, what remained in
4 the reservoir, we don't know. We still had 1,400
5 pounds of tubing pressure at the surface.

6 Q Isn't this a typical situation that the Commission
7 grants an application for down hole commingling when
8 you have one zone basically depleted and the other
9 a fairly good zone?

10 A No, the typical situation is where both zones are
11 marginal.

12 Q But this certainly would be an example of successful
13 downhole commingling?

14 A I wouldn't say so. That well qualifies as only one
15 zone and in downhole commingling both zones are not
16 marginal.

17 Q So is your representation to the Commission, that the
18 Wolfcamp be squeezed and you feel by doing that, you
19 would not endanger the good Morrow zone?

20 A I didn't say the Wolfcamp should be squeezed. I think
21 the Texaco plan, I have a diagram here that was submitted
22 to us a long time ago, I think this Texaco plan to
23 ultimately dually complete the well in the Morrow and
24 Devonian and, according to the diagram I have here,
25 certainly they are going to have to do something with

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1 the Morrow zone when they do that.

2 Q That would be Texaco's testimony?

3 A Sure, I'm just offering this as a possibility.

4 Q Would you have any objections, in your position as

5 an Engineer for the Commission, to an application for

6 downhole commingling?

7 A Yes, because of the danger to the reservoir. I don't

8 think this is a situation that warrants downhole

9 commingling because of the reservoir.

10 Q Assuming you could be convinced that the reservoir

11 wouldn't be endangered?

12 A Assuming I could be convinced I would agree to anything.

13 Q Mr. Nutter, is this a conventional completion?

14 A Yes.

15 Q With the Morrow producing through tubing?

16 A Both zones are producing through tubing, 2 and 7/8 inch

17 tubing.

18 Q In each zone?

19 A Yes. I have a file here from the Dual Completion

20 Hearing.

21 MR. UTZ: And the total production is more since

22 January of 1971, than it was prior to that date?

23 THE WITNESS: Yes, production went from 300,000

24 per day to over 1,000,000 per day.

25 MR. UTZ: You gave some pressures, I didn't get them.

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1 THE WITNESS: The original bottom hole pressure
2 for the Wolfcamp was 9,240; the original bottom hole pressure
3 for the Morrow was 8,123. The original shut-in pressure
4 on the Wolfcamp was 8,047, and during that 1970 Parker
5 Leakage Test, the shut-in tubing on the Wolfcamp was 1,400.

6 I don't have the flowing tubing pressure on the shut-
7 in tubing pressure for the Morrow.

8 Q (By Mr. Kelly) Mr. Nutter, this dual completion was
9 authorized by Order R-3266, in 1967; is that correct?

10 A 3266, yes.

11 MR. NUTTER: And outside of the regular reports,
12 has Texaco requested any other way to handle production from
13 this well, such as commingling?

14 THE WITNESS: They filed an application, Mr. Hatch
15 might correct me if I am wrong, they filed an application last
16 Fall, for combining the two reservoirs.

17 MR. HATCH: It was for downhole commingling.

18 THE WITNESS: And that application was dismissed
19 at their request.

20 MR. NUTTER: Since the second Packer Leakage Test
21 you have offered in evidence, in the latter part of 1971,
22 would you say the well was operating in violation of the
23 O.C.C. rules?

24 THE WITNESS: It is certainly operating with a
25 leak and that's not normal procedure.

1 MR. UTZ: Order 3266 required that separation
2 be made effectively; is that correct?

3 THE WITNESS: Yes, sir.

4 MR. UTZ: Are there any other questions?

5 MR. HATCH: The Case was 4625, that was 4625,
6 that was the application for commingling.

7 MR. UTZ: Any other questions?

8 (No response.)

9 MR. UTZ: If not, the witness may be excused.

10 (Witness excused.)

11 MR. UTZ: Mr. Kelly.

12 MR. KELLY: We have one witness we would like to
13 have sworn.

14 CURTIS P. COOK,

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

17 DIRECT EXAMINATION

18 BY MR. KELLY:

19 Q Would you state your name, position and employer,
20 please?

21 A Curtis Cook, District Production Engineer for Texaco,
22 Inc., in Hobbs.

23 Q Have you previously qualified before the Commission as
24 an expert in the field of engineering, Petroleum
25 Engineering?

- 1 A Yes, sir.
- 2 Q Referring to this plat, would you locate the well
- 3 involved?
- 4 A Yes, the well is indicated by the red dot in Section
- 5 Two.
- 6 Q And we have had previous testimony that this well is
- 7 completed in the Wolfcamp-Morrow gas zone?
- 8 A That is correct.
- 9 Q Now, this well is involved in two separate units; is
- 10 that correct?
- 11 A Yes, it is.
- 12 Q Can you explain the royalty ownership and the
- 13 percentages for the two wells?
- 14 A Yes, the Wolfcamp zone is a unit -- the Wolfcamp zone
- 15 in Section Two has royalties of 100 percent to the
- 16 State of New Mexico.
- 17 The Morrow participation is quite a bit larger
- 18 and approximately seventy percent is the United States
- 19 Government and thirty percent, the State of New Mexico.
- 20 Q So the Wolfcamp is all State of New Mexico, and the
- 21 Morrow is seventy-thirty with the Federal Government
- 22 having the larger share?
- 23 A That is correct.
- 24 Q Did you hear the testimony of Mr. Nutter?
- 25 A Yes,

1 Q Mr. Nutter explained the history of the well and gave
2 its characteristics and production history; do you have
3 any exceptions to that phase of his testimony?

4 A No.

5 Q He also entered an Exhibit showing a fairly dramatic
6 increase in the production from the Wolfcamp around the
7 beginning of 1971; did his figures correlate with Texaco's
8 figures?

9 A Yes, our Exhibit 2 is a performance curve of both zones,
10 and it indicates a marked increase as of January, 1971.

11 Q So is there any dispute as far as Texaco is concerned
12 that there is communication between these two zones?

13 A No.

14 Q Referring to Exhibit 2, have you made calculations as
15 to the total recoverable reserves of the Wolfcamp?

16 A Yes, we have the pressure history on the well and the
17 balance curve of P over S versus the accumulative
18 production and the Wolfcamp would have made approximately
19 1.1 billion cubic feet as of December 31, 1970. It
20 made 1.07, so there is some thirty million cubic feet
21 left and it is certainly depleted for all practical
22 purposes.

23 Q Now, what is the total production from the Wolfcamp now?

24 A It is roughly 1.3 million, the larger part of the
25 increase being Morrow gas.

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- 1 Q Could you give the same kind of figures for the
2 Morrow?
- 3 A Yes, sir. It will make approximately thirty billion
4 and it's made twenty billion of that, so there is ten
5 billion cubic feet of gas yet to be made. It is still
6 a good well and will continue to be so for some period
7 of time.
- 8 Q So the situation is that since January of 1971, the
9 Wolfcamp production that is credited 100 percent to the
10 State of New Mexico, is basically Morrow production?
- 11 A Yes.
- 12 Q Can you give the Examiner a breakdown of how much
13 money we are talking about here?
- 14 A Well, you're talking about 250 million cubic feet and
15 seventy percent of the royalty on that amount would be
16 a little over \$3,000 in disputed royalties.
- 17 Q So it is possible that the State of New Mexico is
18 about \$3,000 ahead of the Federal Government in royalty
19 income?
- 20 A That is correct.
- 21 Q Is this something Texaco could correct as far as accounting
22 procedures are concerned?
- 23 A Yes, all we have to do is get an agreement by the two
24 royalty parties concerned with what appears to be the
25 P over S curve, as to what ultimate recovery would be

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1 for the Wolfcamp and pay that to the State and
2 credit the remaining gas in the Morrow.

3 It is a simple accounting procedure once we have
4 the agreement with the royalty owners.

5 Q Getting on to Exhibit Number 3, Mr. Nutter further
6 testified that, in his opinion, there probably was some
7 leakage of Morrow gas into the Wolfcamp zone; do you
8 agree with this?

9 A No, I do not.

10 Q Would you explain why you are telling us there is no
11 loss?

12 A We have enough shut-in tubing pressure to make an
13 accurate shut-in wellhead pressure projection as is
14 on Exhibit 2, and from these it is fairly easy to
15 calculate flowing bottom hole pressure with the work
16 done at the commingling station and you can calculate
17 flowing tube pressure at various rates and the current
18 rate and current wellhead pressure, the pressure at
19 the bottom of the Wolfcamp tubing is about 1,600 pounds.

20 There is more gas coming up from the Devonian --
21 I mean, the Morrow, and the higher the restriction, the
22 higher the flow rate and pressure.

23 Inside the tube, the pressure is approximately
24 1,925 pounds.

25 Now, the shut-in pressure, we project them to bottom

1 hole and it gives about 2,000 pounds of pressure
2 for the Wolfcamp.

3 So even though the volume is depleted, it still
4 has some pressure. The Morrow zone is approximately
5 2,400 pounds, so you see, any gas entering the well
6 bore will be subject to lower flowing tube pressure than
7 either of the reservoir pressures.

8 Currently any gas entering the well bore will be
9 produced and will not escape because of the lower
10 pressure.

11 Q Are these zones of similar characteristics?

12 A Yes, the gas has the same physical components.

13 Q Mr. Nutter expressed an opinion as to the advisability
14 of going in and repairing the leak or squeezing the
15 Wolfcamp and the effect it might have, would you comment
16 on that?

17 A Well, there is no question in the industry but that when
18 you do kill the Morrow with liquids, either oil or gas,
19 you can cause damage.

20 Anytime you drill a well, you can go into a zone
21 and get a good test while doing some damage with the
22 drilling fluids and then you go back and get maybe half
23 what you tested.

24 Now, this is due to two things; first, there are
25 some clays present in the Morrow, and secondly, it has

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FIRST NATIONAL BANK BLDG. EAST, ALBUQUERQUE, NEW MEXICO 87106

1 an undersaturated liquid condition and tracing the
2 liquid saturation, and also the clay as well, depletes
3 the zone.

4 Q Would you explain Exhibit 4?

5 A This indicates reduction as you drill through the
6 zone and expose it to liquid. This is in the South
7 Carlsbad-Morrow, and the Delaware basin is a distance
8 away, but it has the same geological features and the
9 same formations.

10 Here the zone was tested and pipe was run and it
11 flowed and we got back in the neighborhood of half of
12 what was tested in each case, and this is not uncommon
13 at all.

14 Q Now, is there any way for you to make an accurate
15 estimation of where the break is?

16 A Not without going in and working on it, I just suspect
17 it is across from the Morrow and is probably in the
18 Morrow tubing.

19 Q I want to see if I can summarize your testimony here.
20 It is your opinion that there is no danger to either
21 formation as a result of this communication?

22 A That is correct.

23 Q And, it is your opinion, that all of the gas coming out
24 of these formations has been produced through either
25 one or the other string of tubing?

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FIRST NATIONAL BANK BLDG. EAS. ALBUQUERQUE, NEW MEXICO 87108

1 A That is correct.

2 Q And, it is your opinion, that any attempt to repair the
3 break would endanger the Morrow?

4 A Definitely.

5 Q It is also your opinion that the Wolfcamp is basically
6 depleted?

7 A Yes.

8 Q And, it is your opinion, that what we have here is only
9 a minor accounting problem?

10 A Yes, once we get the agreement between the royalty
11 owners, it is only a minor accounting problem.

12 Q What are you proposing to do about this?

13 A We called a Hearing for downhole commingling but became
14 aware of the royalty interests, and it was proposed that
15 we be given ninety days to arrive at an agreement with
16 the royalty owners.

17 At the end of the ninety days, we approached the
18 Commission and requested that the Commission downhole
19 commingle the well.

20 Q Are you, in fact, instituting this procedure to get the
21 show on the road, so to speak?

22 A Yes, sir.

23 Q Can you assure this Commission that Texaco will move
24 with all due haste in this matter and that no more
25 delays will occur in getting the royalty owners'

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FIRST NATIONAL BANK BLDG. EAST • ALBUQUERQUE, NEW MEXICO 87109

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1 agreement?

2 A Yes, I can assure you of that, we will move with all
 3 haste. We might run into some problems with the royalty
 4 holders, but I think we can negotiate an agreement
 5 between the two holders in a ninety day period.

6 Q In your opinion, would the granting of release that
 7 Mr. Nutter testified to, actually tend to cause waste
 8 and tend to create a situation where you actually leave
 9 gas in place?

10 A I'm sorry?

11 Q I said, in your opinion, would the release Mr. Nutter
 12 is suggesting, require you to actually go in and seal
 13 this communication gap, possibly cause waste by damaging
 14 the Morrow and leaving gas in place?

15 A If we lose the Morrow, and the possibility definitely
 16 exists, we would abandon some ten billion cubic feet
 17 of gas.

18 Q And, it is your testimony that there is no danger to
 19 either zone if the break is not repaired?

20 A That is correct, as long as the well is left alone
 21 all the gas entering the well bore will be produced.

22 Q Were Exhibits 1 through 4 prepared by you, or under
 23 your supervision?

24 A Yes.

25 MR. KELLY: I move for the admission of Texaco

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1 Exhibits 1 through 4.

2 MR. UTZ: Without objection, Exhibits 1 through
3 4 will be entered into the record of this Case.

4 (Whereupon Texaco Exhibits 1 through 4 were
5 admitted in evidence.)

6 MR. KELLY: That's all we have on Direct,
7 Mr. Commissioner.

8 CROSS-EXAMINATION

9 BY MR. UTZ:

10 Q What would happen if you shut-in the zones?

11 A Well, we would then have to cross flow the Wolfcamp
12 because of the pressure differential between the two
13 zones.

14 Q How long has it been since you shut these wells in?

15 A On a sustained basis or a short period of time?

16 Q A short period of time.

17 A For the Packer Leakage Test in 1971.

18 Q December of 1971?

19 A The latter part -- the last quarter of 1971, October
20 or in that area.

21 Q If you repaired this well, how long would there be
22 fluid in the Morrow formation?

23 A Five days would be just an estimate. We would squeeze
24 off the Wolfcamp because it is a depleted zone and we
25 wouldn't leave the tube in there.

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1 Q In the case of the South Carlsbad wells, where you
2 indicated that their deliverability was substantially
3 decreased, how long was fluid left in those formations?

4 A I don't know, but it was probably five to ten days
5 with drilling fluid.

6 Q Is your testimony then, that fluid in the Morrow
7 formation for a five day period would probably damage
8 the formation?

9 A Yes, I think it would damage it to some extent. The
10 significant thing here is that this is a zone which
11 has probably seventy percent pressure depletion and
12 substantially more evasion than you would have where
13 you have a well you are drilling through and where you
14 still have the original seven or eight thousand pounds
15 of pressure.

16 Q Do you think the Wolfcamp is contributing any gas to
17 the total production of the two zones?

18 A Yes, it is contributing some, probably a very minor
19 amount. You see, the Wolfcamp pressure is 400 pounds
20 above the flowing tubing pressure and with a 400 pound
21 differential it will give up some gas and it has
22 already been credited with more gas than it would ever
23 have made because of the increase in the Morrow.

24 I might point out that as the hole gets worse, and
25 it probably will, you will increase the Wolfcamp flowing

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1 tubing pressure, but you will decrease the Morrow
 2 pressure, so you are still lowering the flowing tubing
 3 pressure in the Wolfcamp zone.

4 Q Mr. Cook, has Texaco approached the U.S.G.S. in
 5 regard to your proposition of having an agreement
 6 between the two royalty owners, the State and the
 7 Federal Government?

8 A To my knowledge, we have not, to date.

9 Q And these zones have been flowing together since
 10 January, 1971?

11 A Yes, sir.

12 Q When did you get this idea about reaching an agreement
 13 between the royalty owners?

14 A After we called the Hearing to downhole commingle, we
 15 discovered we would have to have an agreement first and
 16 that's when we started.

17 Q If you you people have this opinion that you might
 18 reach an agreement, wouldn't it be normal to have
 19 contacted them for some figures as to whether they
 20 would be agreeable to work on this?

21 A We have an agreement with our partner to get his
 22 concurrence.

23 Q Have you approached the U.S.G.S.?

24 A No, we haven't approached either of the royalty holders.

25 Q But you have approached Pauley?

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1 A Yes.

2 MR. UTZ: Does anyone have any questions of
3 the witness?

4 CROSS-EXAMINATION

5 BY MR. HATCH:

6 Q Do you know of any other situations where an agreement
7 has been worked out between the Federal Government and
8 the State on the sharing of royalties?

9 A No, sir.

10 Q Are there any other wells involved here?

11 A There are in the Morrow.

12 MR. UTZ: How many wells are involved in the
13 Morrow?

14 THE WITNESS: Three, I think, but I'm not positive
15 of that. I believe there are three total wells, there would
16 be two others.

17 MR. UTZ: Mr. Nutter mentioned something about a
18 possible remission into the Devonian and you didn't mention
19 that in your testimony, do you care to discuss that?

20 THE WITNESS: Well, I don't think we have any
21 plans to go back to the Devonian and if we did, we would wait
22 until we substantially depleted the Wolfcamp. By that, I
23 mean down to ninety-five percent of the reservoir.

24 Until we reach the economic limits, we have no
25 plans to kill the Morrow of our own accord.

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1 MR. UTZ: You did drill the well initially to
2 the Devonian?
3 THE WITNESS: Yes.
4 MR.UTZ: Did you do a test on the Devonian as
5 well?
6 THE WITNESS: I don't know, but if we did it
7 wasn't good enough to merit a completion.
8 MR. UTZ: Was it cemented?
9 THE WITNESS: I think it was.
10 MR. UTZ: Then if you cared to, you could drill
11 that out easy enough?
12 THE WITNESS: Yes, sir.
13 MR. UTZ: Any other questions?
14 (No response.)
15 MR. UTZ: If not, the witness may be excused.
16 (Witness excused.)
17 MR. KELLY: Texaco feels that there is no question
18 about the fact that the zones are not endangered as a result
19 of this violation.
20 I think it is also apparent that Texaco obviously
21 has not moved as quickly as it should have.
22 I would recommend that the Commission would favor
23 the proposal we make, that we could be more assured of
24 working out an agreement with everyone concerned if we had
25 a Hearing scheduled three months down the line, or whatever

1 the Commission feels appropriate at the time, to commingle
2 because then both owners would know this situation. Texaco
3 would also have the pressure put on it.

4 Although the State of New Mexico might like the
5 situation now, they know it won't be able to continue.

6 They are going to get close to 100 percent of
7 nothing instead of thirty percent of something which is a
8 better deal.

9 MR. UTZ: Any other statements?

10 MR. NUTTER: Did we offer our Exhibits?

11 MR. UTZ: Yes. If there are no further statements
12 the case will be taken under advisement.
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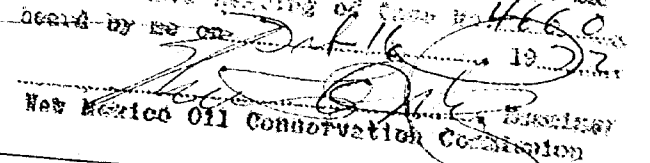
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1 STATE OF NEW MEXICO)
2 COUNTY OF BERNALILLO) ss

3 I, RICHARD E. McCORMICK, a Certified Shorthand Reporter,
4 in and for the County of Bernalillo, State of New Mexico,
5 do hereby certify that the foregoing and attached Transcript
6 of Hearing before the New Mexico Oil Conservation Commission
7 was reported by me; and that the same is a true and correct
8 record of the said proceedings to the best of my knowledge,
9 skill and ability.

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25

CERTIFIED SHORTHAND REPORTER

do hereby certify that the foregoing is
a complete record of the proceedings at
the Bernalillo hearing of case No. 4660
heard by me on July 16, 1927.

New Mexico Oil Conservation Commission

I N D E XWITNESS:PAGED. S. NUTTER

Direct Examination by Mr. Hatch

3

Cross-Examination by Mr. Kelly

9

CURTIS P. COOK

Direct Examination by Mr. Kelly

16

Cross-Examination by Mr. Utz

25

Cross-Examination by Mr. Hatch

28

E X H I B I T SCOMMISSION'SOFFEREDADMITTED

Exhibit 1 1970 Packer Leakage Test

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Exhibit 2 1971 Packer Leakage Test

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Exhibit 3

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Exhibit 4 Production Comparison

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Exhibit 5 Wolfcamp-Morrow Outline

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APPLICANT'S: (Texaco)

Exhibit 1 Plat

17

24

Exhibit 2 Performance Curves

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Exhibit 3 Pressure Calculations

20

24

Exhibit 4 Drilling Reduction Data

22

24



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2038 · SANTA FE
87501

May 11, 1972

**GOVERNOR
BRUCE KING
CHAIRMAN**

**LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER**

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

Mr. Booker Kelly
White, Koch, Kelly & McCarthy
Attorneys at Law
Post Office Box 787
Santa Fe, New Mexico

Re: Case No. 4660
Order No. R-4294
Applicant:
OCC - Texaco Inc.

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 x
Aztec OCC

Other _____



OIL CONSERVATION COMMISSION

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

May 11, 1972

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BRUCE KING
CHAIRMAN**

**LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER**

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Hobbs OCC	x
Artesia OCC	x
Aztec OCC	
Other	

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY
THE OIL CONSERVATION COMMISSION ON ITS
OWN MOTION TO PERMIT TEXACO INC. TO
APPEAR AND SHOW CAUSE WHY IT SHOULD NOT
TAKE IMMEDIATE ACTION TO REPAIR ITS
COTTON DRAW UNIT WELL NO. 65, A DUAL
COMPLETION, LOCATED IN UNIT G OF SEC-
TION 2, TOWNSHIP 25 SOUTH, RANGE 31
EAST, EDDY COUNTY, NEW MEXICO, IN SUCH
A MANNER AS TO PREVENT COMMUNICATION
BETWEEN THE PADUCA-MORROW AND PADUCA-
WOLFCAMP GAS POOLS.

CASE NO. 4660
Order No. R-4294

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 16, 1972, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 11th day of May, 1972, 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 Texaco Inc. is the operator of the Cotton Draw Unit Well No. 65, located in Unit G of Section 2, Township 25 South, Range 31 East, NMPM, Eddy County, New Mexico.

(3) That the subject well was completed as a dual completion (conventional) to produce gas from the Paduca-Wolfcamp and Paduca-Morrow Gas Pools through parallel strings of 2 7/8-inch tubing, with separation of zones by a packer set at approximately 14,700 feet, as authorized by Commission Order No. R-3266.

(4) That due to some mechanical failure in the well-bore of the subject well, the two zones are being commingled in the well-bore and the two zones are not being produced as separate common sources of supply.

(5) That waste will occur and correlative rights will not be adequately protected if the subject well is continued to be produced in its present condition.

-2-

CASE NO. 4660
Order No. R-4294

(6) That in order to prevent waste and protect correlative rights, the subject well should be repaired in such a manner as to prevent communication within the well-bore of the subject zones.

IT IS THEREFORE ORDERED:

(1) That Texaco Inc. is hereby ordered to commence within 30 days from the date of this order such remedial action as is necessary to prevent communication between the Paduca-Wolfcamp and Paduca-Morrow Gas Pools in the well-bore of its Cotton Draw Unit Well No. 65, located in Unit G of Section 2, Township 25 South, Range 31 East, NMPM, Eddy County, New Mexico.

(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



Bruce King
BRUCE KING, Chairman

Alex J. Armijo
ALEX J. ARMIJO, Member

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

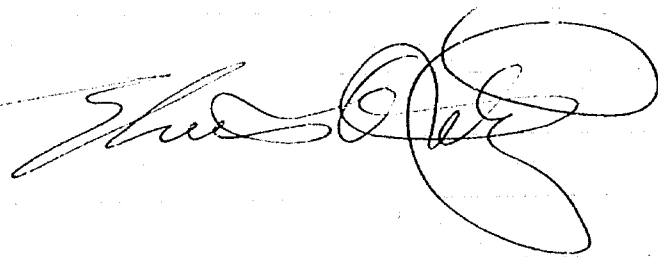
S E A L

dr/

4660
Heard 2-16-72
Rec - 2-17-72.

By order R-3266 of 7-10-67
the AEC granted Dekaw permission
to Dually complete their Paducah
W.C. Monow. Cotton Draw #6.
By this order request they
agreed to maintain sep-
aration.

The packer test of 10-71
showed a leak even prior
to this. The production ind-
icated a leak at about Jan 71.
They have had ample time
to repair the communication
leak which in my opinion
will cause waste of
Monow gas in the W.C. zone.
I recommend that
they be required to commence
remedial work within
30 days.





PETROLEUM PRODUCTS

March 7, 1972

RECEIVED
MAR- 8 1972

NEW MEXICO OIL CONSERVATION COMM.
SANTA FE
TEXACO INC.
DRAWER 728
HOBBS, NEW MEXICO 88240

New Mexico Oil Conservation Commission
P.O. Box 2088
Santa Fe, New Mexico 87501

Re: Pressure Drop Calculations
Cotton Draw Unit No. 65
Eddy County, New Mexico

Attention: Mr. Daniel S. Nutter

Gentlemen:

Attached are the TPRC curves and instructions used to generate the flowing pressures in the tubing strings at the zones of interest as presented during the Examiner Hearing for the referenced well.

The solution is almost completely graphical and the original notes were not kept. However, the curves and instructions will enable you to calculate the pressure at any set of rate, temperature, depth and surface pressure data.

Please contact this office if you have any further question.

Yours very truly,

T. H. Hoover

T. H. Hoover
District Engineer

CPC-dh

Attachment

Procedure To Arrive At Bottom Hole Flowing Pressure

1. Convert actual flow rate up actual tubing string to equivalent rate up 2-1/2" (2.441" ID) tubing string (Figure No. 4).
2. Choose a flow rate from Figures 9 through 12 on each side of the equivalent flow rate from step No. 1.
3. To solve for flowing bottom hole pressure at each chosen rate:
 - a. Enter top of chart at surface temperature (75°).
 - b. Move down to surface pressure on exactly horizontal lines (W_c - 1000 psia, M_w - 800 psia)
 - c. Make a point at intersection and read pressure from hyperbolic family of curves. (This will be pressure A)
 - d. Note depth on bottom scale directly below surface temp. Add this depth to the depth of the well or zone in question.
 - e. Extend a line from point A right and parallel to the slightly inclined lines. Make a point at the intercept with the depth from step D.
 - f. Read the pressure at the step E intercept from the hyperbolic family of curves. (Pressure B)
 - g. The pressure drop in the tubing string at the rate in question is equal to Pressure B less Pressure A.
4. Interpolate between two rates to get the pressure drop at the rate in question.
5. The bottom hole pressure is equal to the surface pressure plus the pressure drop up the tubing string.

C.P. Cook
3-6-72

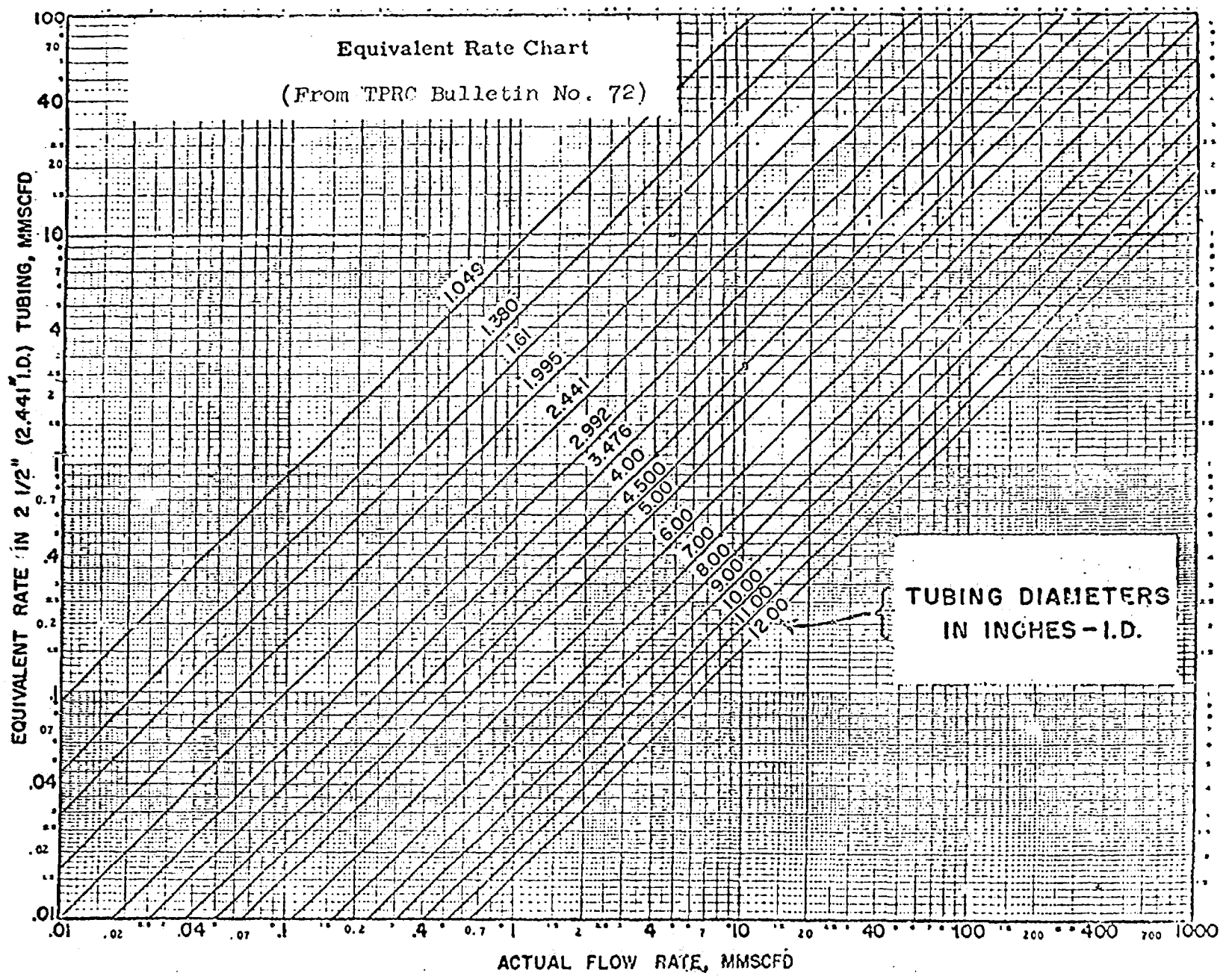
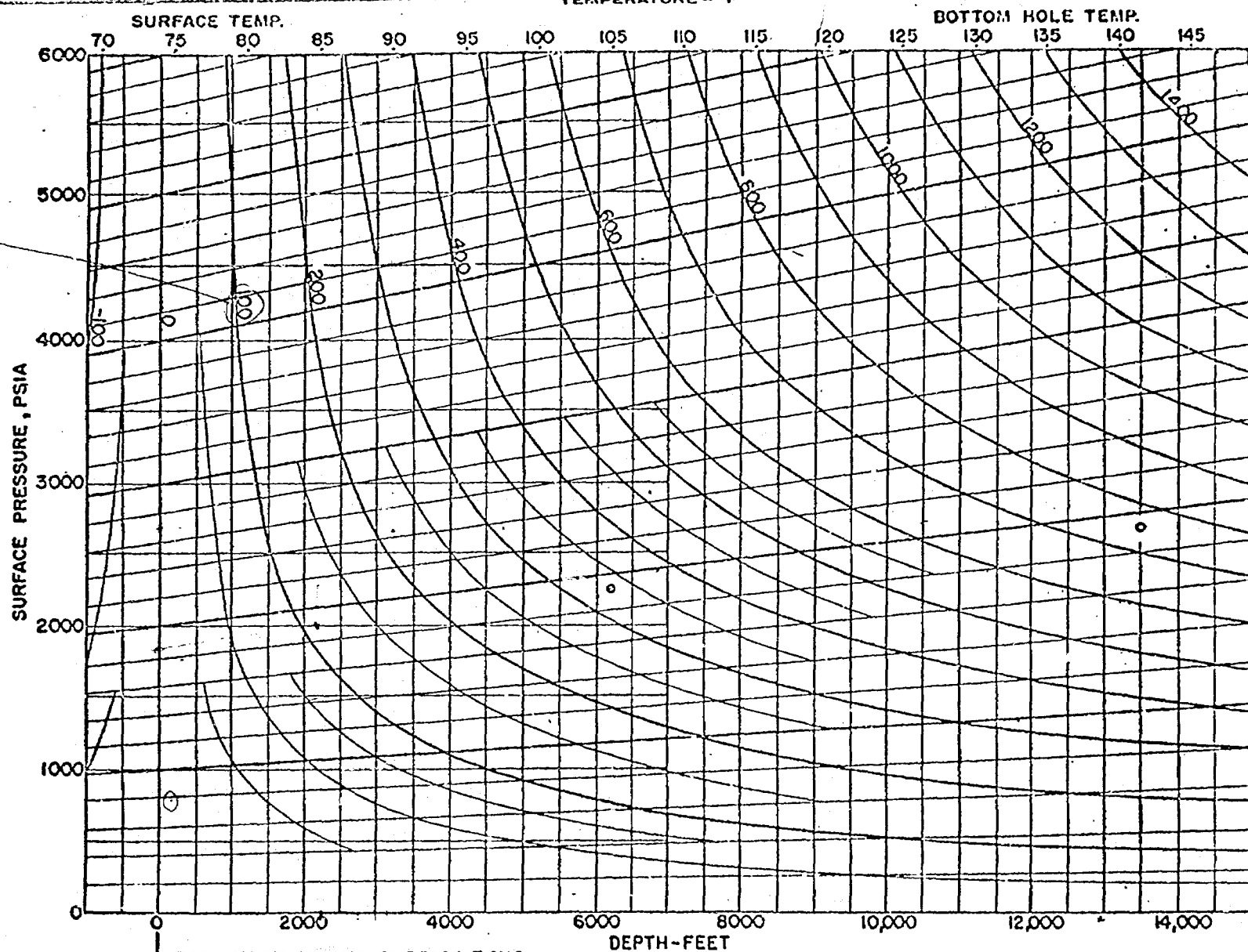


FIGURE NO. 4



STATIC BOTTOM HOLE PRESSURE CHART
 (From TPRC Bulletin No. 72)

FIGURE NO. 5

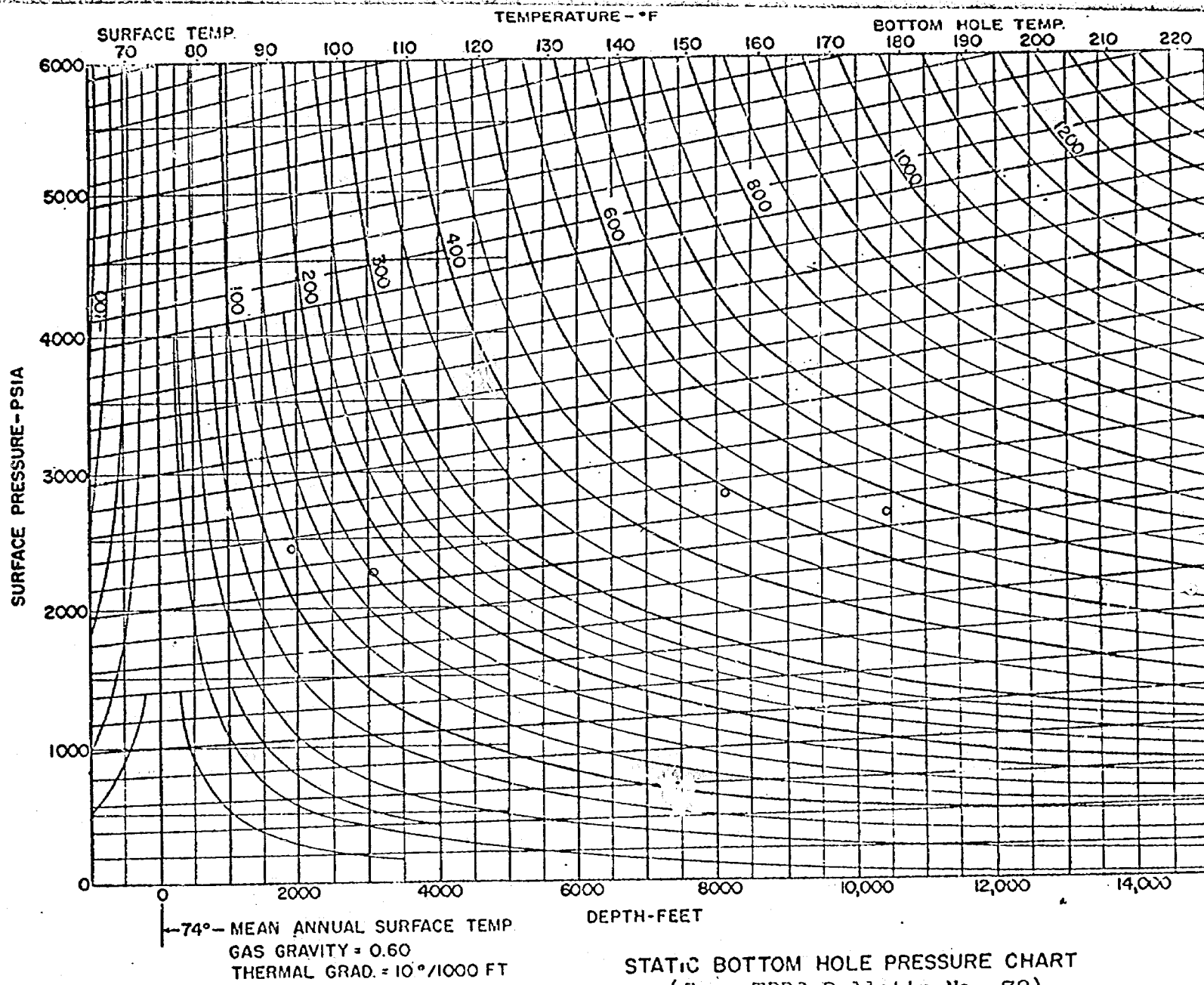
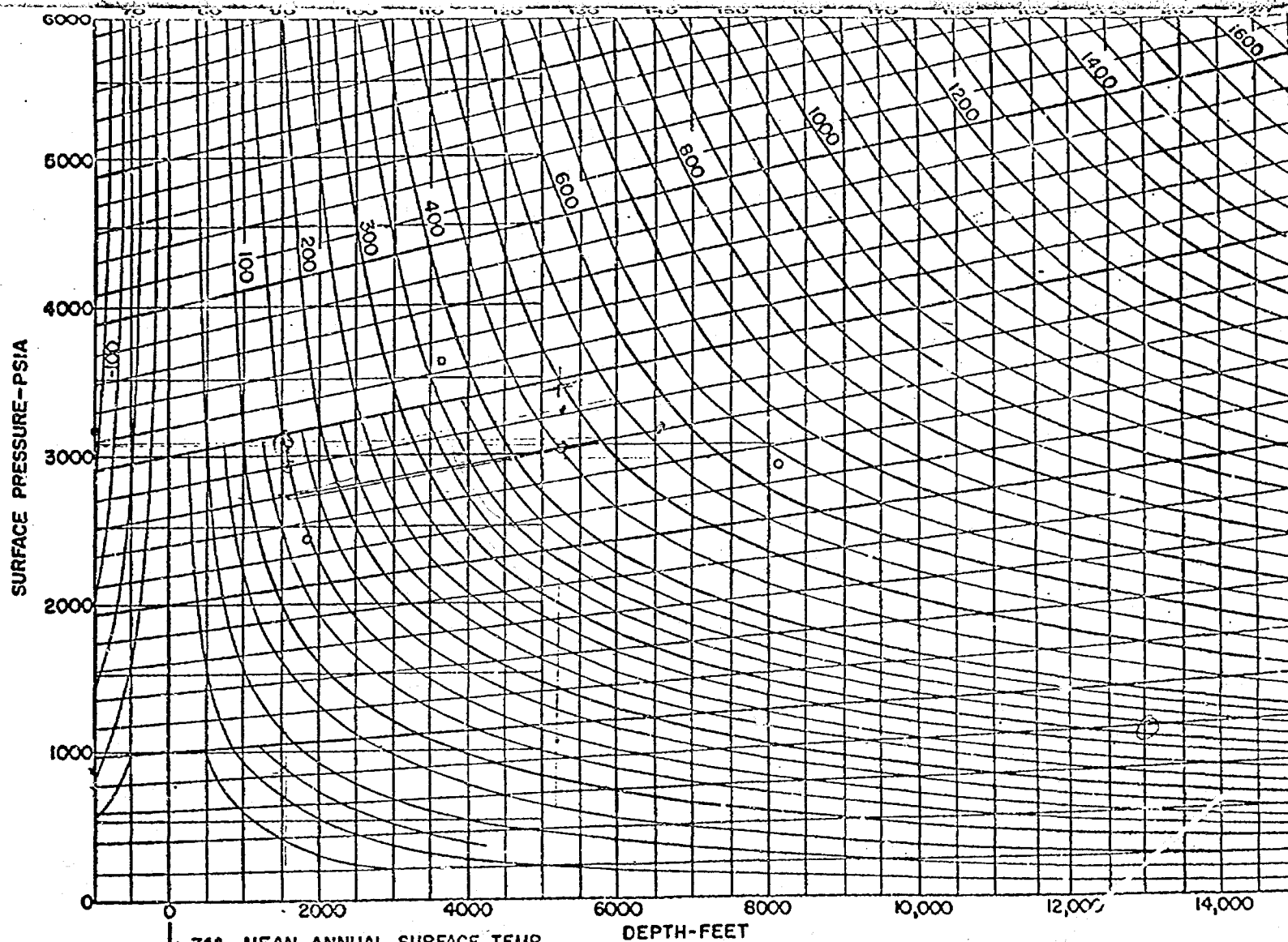


FIGURE NO. 6

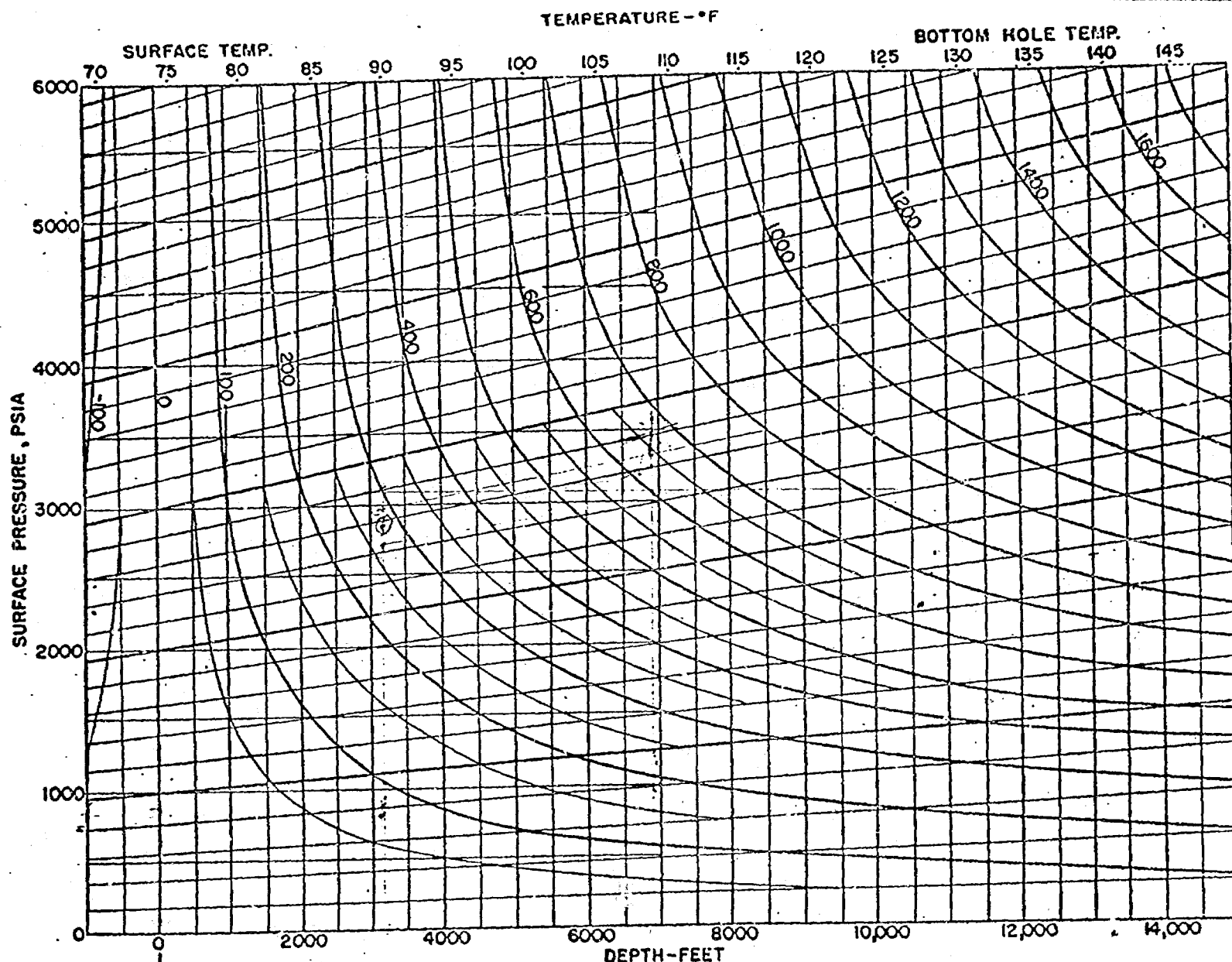


74° - MEAN ANNUAL SURFACE TEMP.
 GAS GRAVITY = 0.70
 THERMAL GRAD. = 10°/1000 FT.

STATIC BOTTOM HOLE PRESSURE CHART
 (From TPRC Bulletin No. 72)

FIGURE NO. 7

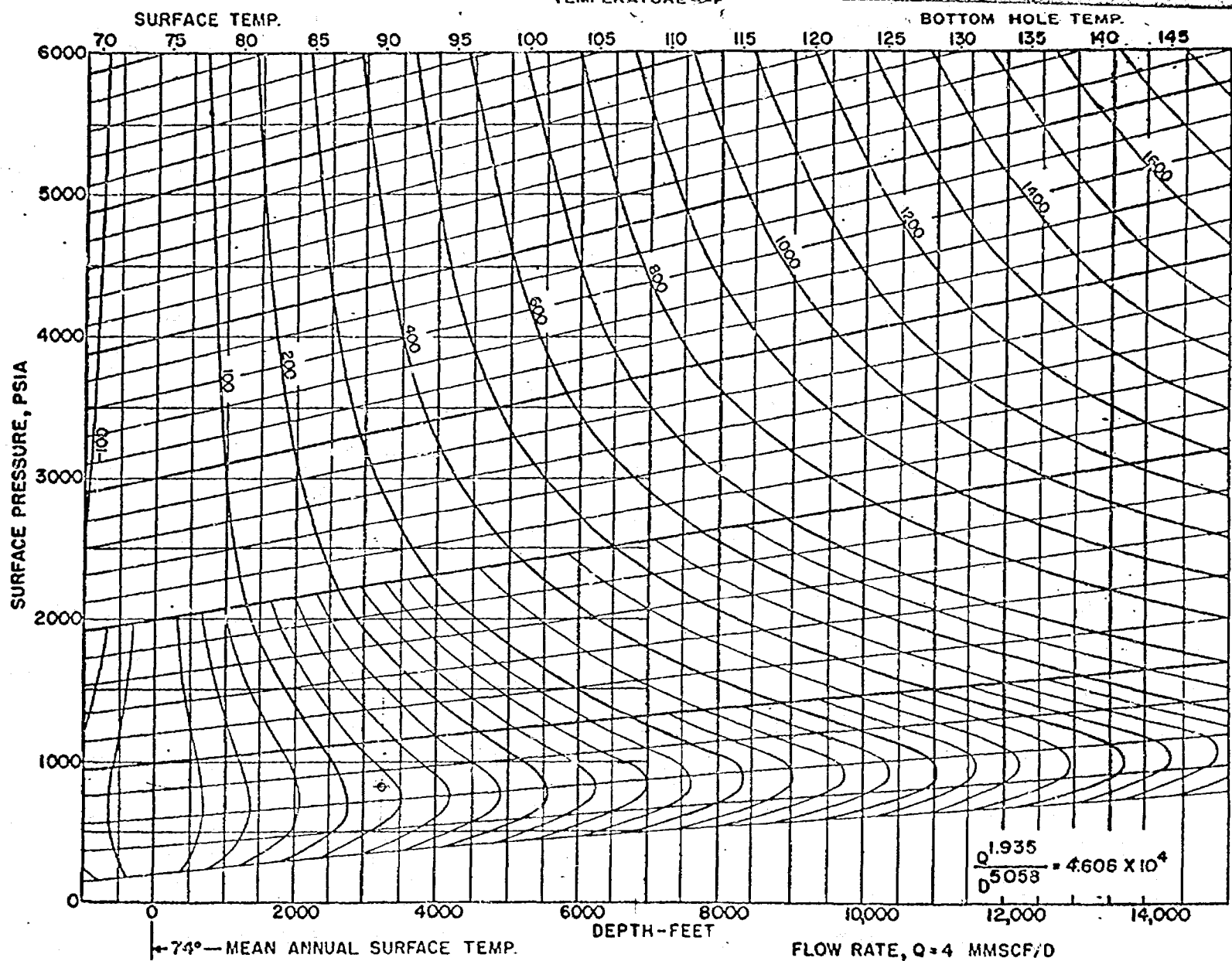
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74° — MEAN ANNUAL SURFACE TEMP.
 GAS GRAVITY = 0.70
 THERMAL GRAD. = 5°/1000 FT.

STATIC-BOTTOM HOLE PRESSURE CHART
 (From TPRC Bulletin No. 72)

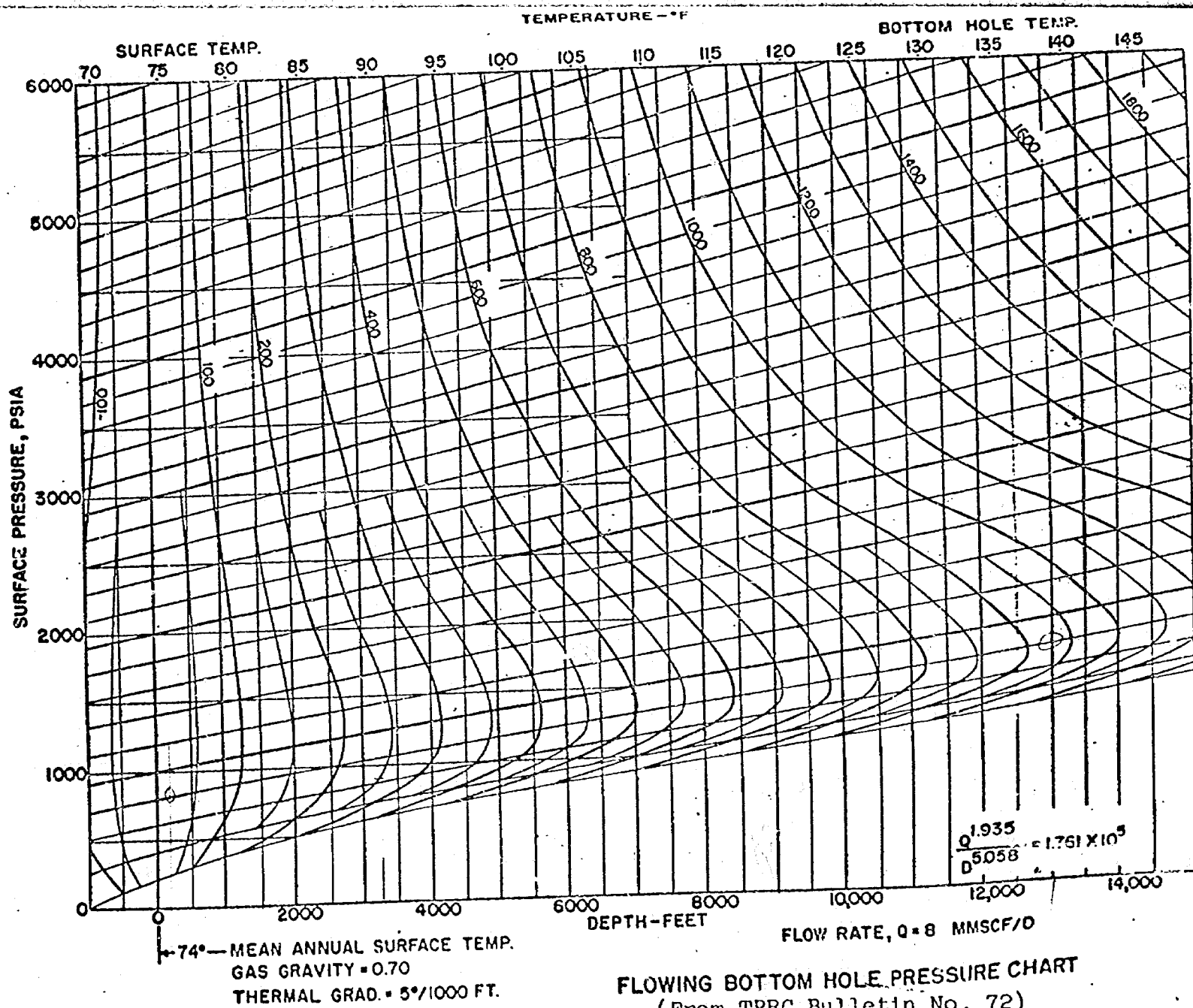
FIGURE NO. 8



74° — MEAN ANNUAL SURFACE TEMP.
 GAS GRAVITY = 0.70
 THERMAL GRAD. = 5°/1000 FT.

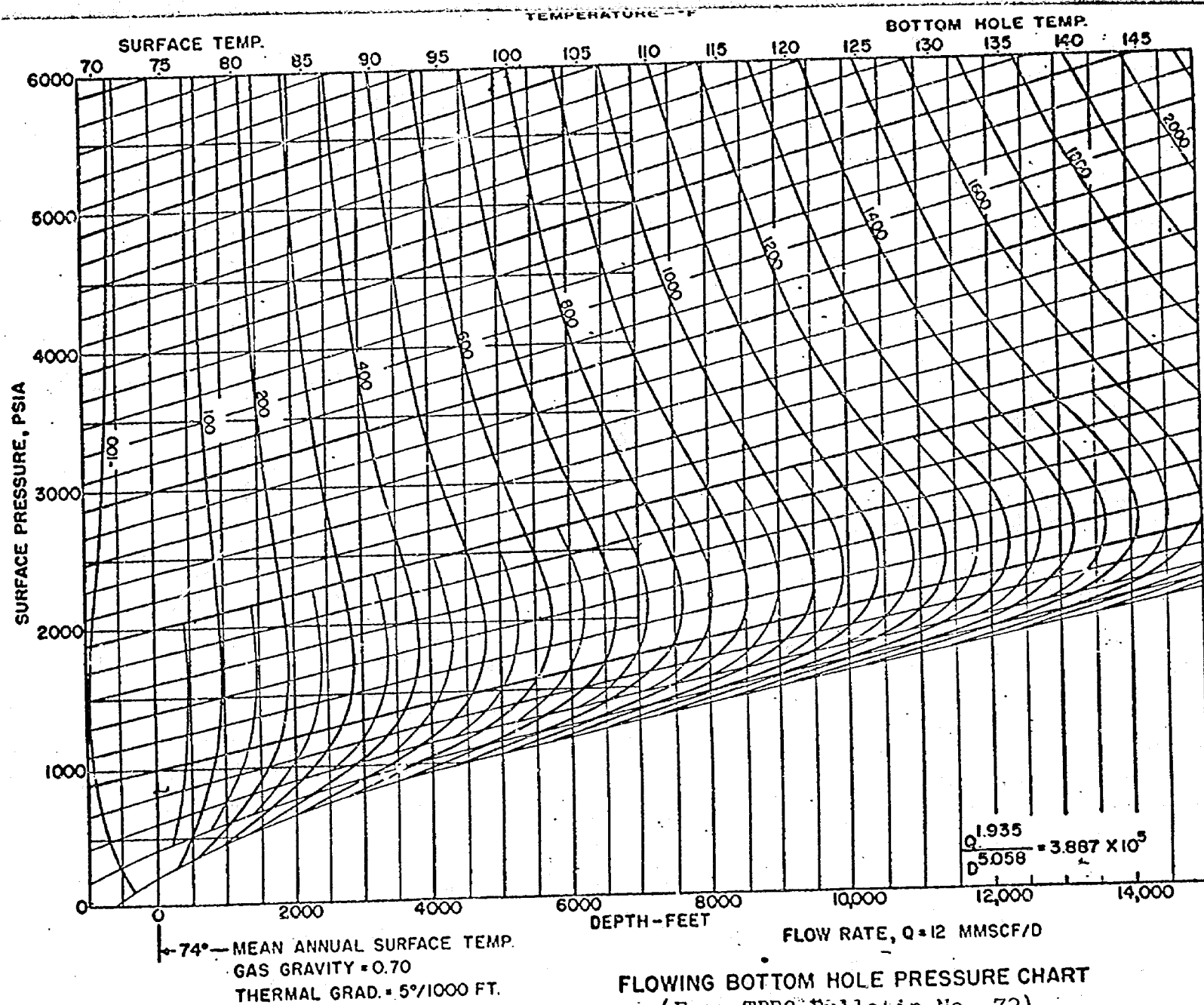
FLOWING BOTTOM HOLE PRESSURE CHART
 (From TPRC Bulletin No. 72)

FIGURE NO. 9



FLOWING BOTTOM HOLE PRESSURE CHART
 (From TPRC Bulletin No. 72)

FIGURE NO. 10



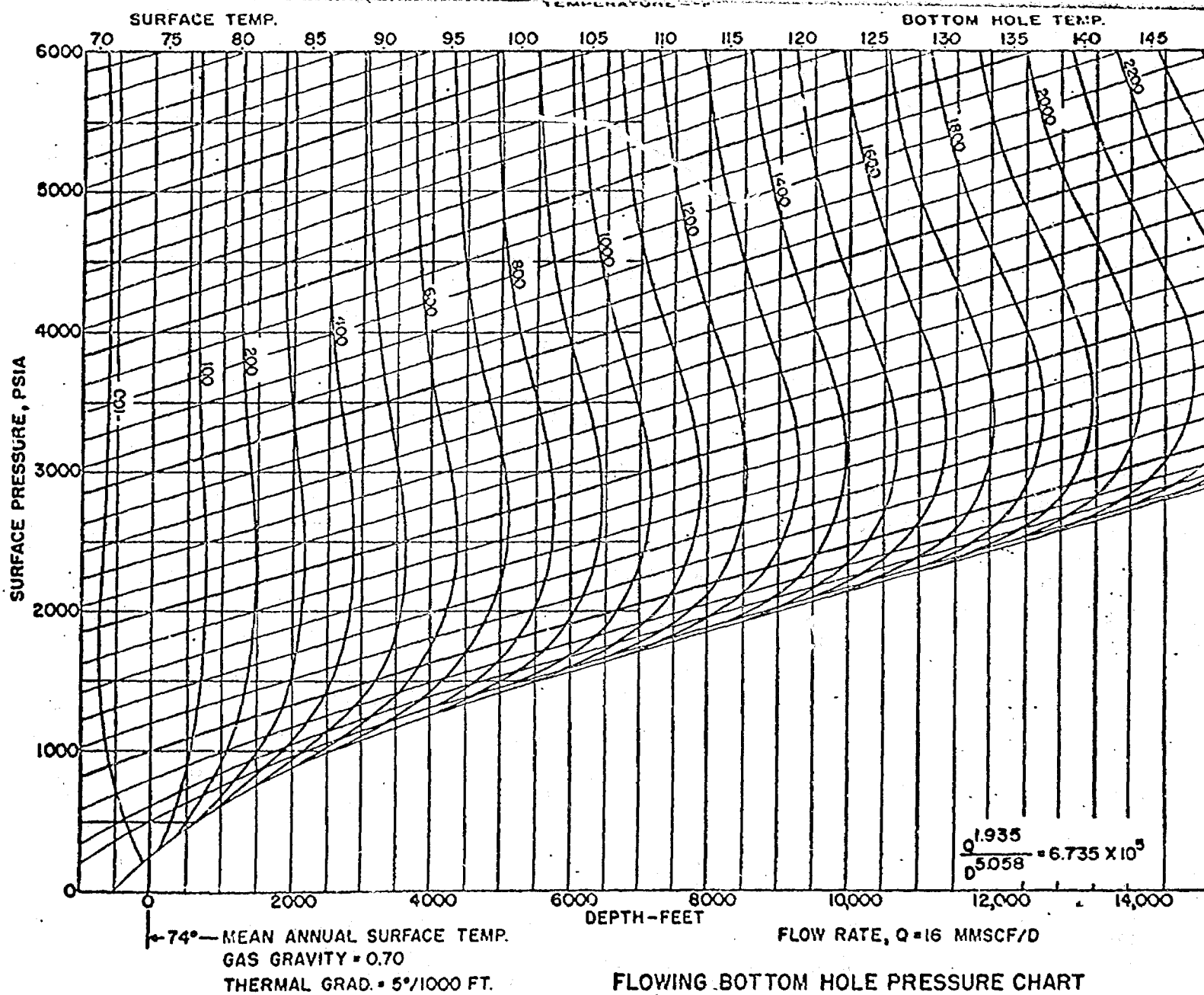


FIGURE NO. 12

DOCKET: REGULAR HEARING - WEDNESDAY - FEBRUARY 16, 1972

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

- ALLOWABLE: (1) Consideration of the oil allowable for March and April, 1972;
- (2) Consideration of the allowable production of gas for March, 1972, from fifteen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico. Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, for March, 1972.

CASE 4557: (De Novo) (Continued from December 15, 1971; Will be continued to April 19, 1972.)

Cont'd to April 19

Application of Continental Oil Company for transfer of allowable, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to transfer allowable across boundaries of the participating area and the leases outside said area, but within the Maljamar Co-operative Area, MCA Unit Area, Maljamar Grayburg-San Andres Pool, Lea County, New Mexico.

Upon application of Continental Oil Company, this case will be heard De Novo under the provisions of Rule 1220.

* * * * *

THE FOLLOWING CASES WILL BE HEARD BEFORE ELVIS A. UTZ, EXAMINER OR DANIEL S. NUTTER, ALTERNATE EXAMINER, IN THE OIL CONSERVATION COMMISSION CONFERENCE ROOM ON THE SECOND FLOOR OF THE LAND OFFICE BUILDING AT 10 O'CLOCK A.M.

Cont'd to March 15

CASE 4657: Application of Chaparral Service, Inc. for an oil treating plant, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to install and operate a heat-treatment type oil treating plant in the SE/4 of Section 34, Township 21 South, Range 37 East, Lea County, New Mexico, for the reclamation of sediment oil.

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CASE 4658: Application of Green & Michaelson Producing Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface of the ground down to

*Chas C Green, Jr.
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(Case 4658 continued)

✓ and including the Drinkard formation underlying the NE/4 of Section 28, Township 16 South, Range 38 East, Garrett-Drinkard Pool, Lea County, New Mexico, to form four standard oil proration units to be dedicated to four wells to be drilled at standard locations. Also to be considered will be the costs of drilling said wells. Charges for the risks involved, provisions for the allocation of actual operating costs, and the establishment of charges for supervision of said wells.

CASE 4659: (This case will be dismissed; application to be processed administratively)

*Dismissed
to be
handled
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Application of Continental Oil Company for dual completions, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of certain AXI Apache wells located as follows in Township 25 North, Range 5 West, Rio Arriba County, New Mexico, in such a manner as to produce gas from the Otero-Chacra Pool and oil from an undesignated Mesaverde oil pool through parallel strings of tubing:

No. 18 - Unit A - Section 8
No. 19 - Unit D - Section 6
No. 20 - Unit C - Section 5
No. 21 - Unit I - Section 5
No. 22 - Unit L - Section 6
No. 23 - Unit D - Section 8

Not for proc.
CASE 4660:

*Bother Kelly
E. O. McCarter
J. W. O.*

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Texaco Inc. to appear and show cause why it should not take immediate action to repair its Cotton Draw Unit Well No. 65, a dual completion, located in Unit G of Section 2, Township 25 South, Range 31 East, Eddy County, New Mexico, in such a manner as to prevent communication between the Paduca-Morrow and Paduca-Wolfcamp Gas Pools.

CASE 4661:

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Burwinkle & Scanlon or Burscan Oil Company to appear and show cause why pits located at its Santa Fe Railroad Wells Nos. 1, 2, and 3 in Unit N of Section 21, Township 20 North, Range 9 West, McKinley County, New Mexico, should not be filled and

(Case 4661 continued)

levelled in accordance with Commission Rules and Regulations.

- CASE 4662: Application of Amoco Production Company for an exception to Order No. R-111-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the potash-oil area casing and cementing rules set forth in Order No. R-111-A to permit its Bate Federal Well No. 2 located in Unit L of Section 26, Township 19 South, Range 33 East, Lea County, New Mexico, to be drilled in such a manner as to eliminate running a salt protection string provided the production string is cemented to the surface.
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- CASE 4664: Application of Tenneco Oil Company for a unit agreement, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Lone Pine Dakota "D" Unit Area comprising 2598 acres, more or less, of federal, fee and Indian lands in Township 17 North, Ranges 8 and 9 West, Lone Pine Dakota "D" Pool, McKinley County, New Mexico.
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CASE 4666: Southeast nomenclature case calling for an order for the creation and extension of certain pools in Lea, Chaves and Eddy Counties, New Mexico.

(a) Create a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as La Rica-Wolfcamp Pool. The discovery well is the Union Oil Company of California Pipeline "A" Federal No. 1 located in Unit G of Section 8, Township 19 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM
SECTION 8: NE/4

(b) Extend the Dollarhide-Fusselman Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 38 EAST, NMPM
SECTION 30: SE/4

(c) Extend the Double L-Queen Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 29 EAST, NMPM
SECTION 24: NW/4 SW/4

(d) Extend the Flying "M"-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM
SECTION 31: E/2

(e) Extend the Haystack-Cisco Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 6 SOUTH, RANGE 27 EAST, NMPM
SECTION 16: S/2

(f) Extend the Indian Basin-Upper Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 23 EAST, NMPM
SECTION 22: All

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Clarence Smith
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(Case 4666 continued)

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

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM
SECTION 24: NE/4 NW/4

(h) Extend the Shugart Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM
SECTION 26: E/2

(i) Extend the Sulimar-Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM
SECTION 26: NW/4 SE/4 and NE/4 SW/4

(j) Extend the Tres Papalotes-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM
SECTION 31: NE/4 S/2 Sec. 29
SECTION 32: All Sec. 30

TOWNSHIP 15 SOUTH, RANGE 34 EAST, NMPM
SECTION 5: NE/4

(k) Extend the Wantz-Granite Wash Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
SECTION 11: E/2
SECTION 12: SW/4

CASE 4667: Northwest New Mexico nomenclature case calling for an order for the creation and extension of certain pools in San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico,

(a) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Pennsylvanian Buena production, be and the same is hereby created and designated as the Buena Suerte-Pennsylvanian Oil Pool. The discovery well

*Interested in
claim. Those
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*ask that only
be Tres Papalotes Pool.
Sec. 33*

dismissed for further study

Case 4667 continued - (a)

is the Tenneco Oil Company Pah Well No. 1, located in Unit L of Section 3, Township 25 North, Range 11 West, NMPM. Said pool would comprise:

TOWNSHIP 25 NORTH, RANGE 11 WEST, NMPM
SECTION 3: SW/4

(b) Create a new pool in Sandoval County, New Mexico, classified as an oil pool for Dakota production, be and the same is hereby created and designated as the Five Lakes-Dakota Oil Pool. The discovery well is the Refiners Petroleum Corporation Cuba Union Well No. 1, located in Unit A of Section 25, Township 22 North, Range 3 West, NMPM. Said pool would comprise:

TOWNSHIP 22 NORTH, RANGE 3 WEST, NMPM
SECTION 24: SE/4 SW/4
SECTION 25: N/2
SECTION 26: NE/4 NE/4

(c) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Fruitland production, be and the same is hereby created and designated as the South Gallegos-Fruitland Pool. The discovery well is the Skelly Oil Company Navajo G Well No. 1, located in Unit K of Section 12, Township 26 North, Range 12 West, NMPM. Said pool would comprise:

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM
SECTION 11: S/2 and NW/4
SECTION 12: All

(d) Create a new pool in Rio Arriba County, New Mexico, classified as an oil pool for Gallup-Dakota production, be and the same is hereby created and designated as the West Lindrith Gallup-Dakota Oil Pool. Said pool would comprise:

TOWNSHIP 25 NORTH, RANGE 4 WEST, NMPM
SECTION 15: SE/4
SECTION 21: SE/4
SECTION 22: All
SECTION 27: All
SECTION 28: All
SECTION 32: SE/4
SECTION 33: All
SECTION 34: All

(e) Create a new pool in Sandoval County, New Mexico, classified as an oil pool for Mesaverde production, be and the same is hereby created and designated as the Parlay-Mesaverde Oil Pool. The discovery well is the Tesoro Petroleum Corporation Parlay Well No. 1, located in Unit H of Section 29, Township 22 North, Range 3 West, NMPM. Said pool would comprise:

TOWNSHIP 22 NORTH, RANGE 3 WEST, NMPM
SECTION 29: N/2

(f) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Gallup production, be and the same is hereby created and designated as the Rattlesnake-Gallup Oil Pool. The discovery well is the Navajo Well No. 23, located in Unit G of Section 2, Township 29 North, Range 19 West, NMPM. Said pool would comprise:

TOWNSHIP 29 NORTH, RANGE 19 WEST, NMPM
SECTION 2: NE/4

(g) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Dakota production, be and the same is hereby created and designated as the Snake Eyes-Dakota Oil Pool. The discovery well is the Davis Oil Co., Snake Eyes Well No. 1, located in Unit C of Section 20, Township 21 North, Range 8 West, NMPM. Said pool would comprise:

TOWNSHIP 21 NORTH, RANGE 8 WEST, NMPM
SECTION 17: SW/4 SE/4
SECTION 20: N/2 and SW/4

(h) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Pennsylvanian production, be and the same is hereby created and designated as the North Tocito Dome-Pennsylvanian Pool. The discovery well is the Campbell, Kiel & Rothwell Navajo Tocito Well No. 1, located in Unit G of Section 9, Township 26 North, Range 18 West, NMPM. Said pool would comprise:

TOWNSHIP 26 NORTH, RANGE 18 WEST, NMPM
SECTION 9: E/2
SECTION 10: SW/4

(i) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Pictured Cliffs production, be and the same is hereby created and designated as the Waw-Pictured Cliffs Pool. The discovery well is the Dugan Production Corp., Waw Well No. 1, located in Unit L of Section 32, Township 27 North, Range 13 West, NMPM. Said pool would comprise:

TOWNSHIP 27 NORTH, RANGE 13 WEST, NMPM
SECTION 32: SW/4

(j) Extend the Angels Peak-Gallup Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 9 WEST, NMPM
SECTION 17: E/2

(k) Extend the Aztec-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 9 WEST, NMPM
SECTION 31: SW/4

(l) Extend the Ballard-Pictured Cliffs Pool in Rio Arriba, San Juan and Sandoval Counties, New Mexico, to include therein:

TOWNSHIP 22 NORTH, RANGE 2 WEST, NMPM
SECTION 6: SW/4

TOWNSHIP 22 NORTH, RANGE 3 WEST, NMPM
SECTION 2: NE/4

TOWNSHIP 23 NORTH, RANGE 4 WEST, NMPM
SECTION 24: SE/4

(m) Extend the Blanco-Mesaverde Pool in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 5 WEST, NMPM
SECTION 13: All
SECTION 24: W/2

TOWNSHIP 29 NORTH, RANGE 10 WEST, NMPM
SECTION 3: All
SECTION 10: All

(n) Extend the Blanco-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 30 NORTH, RANGE 10 WEST, NMPM
SECTION 1: W/2

TOWNSHIP 31 NORTH, RANGE 11 WEST, NMPM
SECTION 25: NW/4

(o) Extend the South Blanco-Pictured Cliffs Pool in Rio Arriba and Sandoval Counties, New Mexico, to include therein:

TOWNSHIP 23 NORTH, RANGE 2 WEST, NMPM
SECTION 16: SW/4
SECTION 17: SE/4
SECTION 20: N/2
SECTION 21: All
SECTION 28: NW/4

(p) Extend the BS Mesa-Gallup Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM
SECTION 3: N/2
SECTION 9: NE/4
SECTION 10: NW/4

(q) Extend the Choza Mesa-Pictured Cliffs Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 3 WEST, NMPM
SECTION 30: S/2

(r) Extend the Fulcher Kutz-Pictured Cliffs Pool in San Juan County, to include therein:

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM
SECTION 6: NE/4

(s) Extend the Gallegos-Gallup Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 11 WEST, NMPM
SECTION 24: S/2

(t) Extend the Hogback-Dakota Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 16 WEST, NMPM
SECTION 7: SW/4 SW/4
SECTION 18: NW/4 NW/4

(u) Extend the Kutz-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 11 WEST, NMPM
SECTION 24: NW/4
SECTION 25: N/2

(v) Extend the Lone Pine-Dakota "D" Oil Pool in McKinley County, New Mexico, to include therein:

TOWNSHIP 17 NORTH, RANGE 8 WEST, NMPM
SECTION 7: S/2
SECTION 8: E/2 NW/4, N/2 SW/4 & SE/4 SW/4
SECTION 17: NE/4 NW/4
SECTION 18: E/2 SE/4

TOWNSHIP 17 NORTH, RANGE 9 WEST, NMPM
SECTION 12: E/2 SE/4
SECTION 13: NE/4 NW/4
SECTION 24: E/2 NW/4

(w) Extend the Lybrook-Gallup Oil Pool in Rio Arriba, San Juan and Sandoval Counties, New Mexico, to include therein:

TOWNSHIP 23 NORTH, RANGE 6 WEST, NMPM
SECTION 7: SW/4 & SE/4 NW/4
SECTION 18: W/2
SECTION 19: All
SECTION 20: SW/4
SECTION 30: W/2
SECTION 31: NW/4 NW/4

TOWNSHIP 23 NORTH, RANGE 7 WEST, NMPM
SECTION 3: SW/4
SECTION 4: E/2 SE/4
SECTION 5: All
SECTION 13: All
SECTION 14: SE/4 & E/2 NE/4

(w) continued

TOWNSHIP 23 NORTH, RANGE 7 WEST, NMPM

SECTION 22: NE/4 & NE/4 SE/4

SECTION 23: N/2

SECTION 24: NW/4 & NW/4 SW/4

TOWNSHIP 24 NORTH, RANGE 7 WEST, NMPM

SECTION 29: SW/4

SECTION 32: W/2

(x) Extend the Otero-Chacra Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 25 NORTH, RANGE 4 WEST, NMPM

SECTION 31: NW/4

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM

SECTION 3: W/2

SECTION 10: N/2

SECTION 11: NW/4

SECTION 35: N/2

SECTION 36: N/2

TOWNSHIP 25 NORTH, RANGE 6 WEST, NMPM

SECTION 1: All

SECTION 3: N/2

SECTION 6: NE/4

TOWNSHIP 26 NORTH, RANGE 5 WEST, NMPM

SECTION 34: W/2

TOWNSHIP 26 NORTH, RANGE 6 WEST, NMPM

SECTION 18: SW/4

SECTION 19: W/2 & SE/4

SECTION 20: SW/4

SECTION 26: SW/4

SECTION 28: All

SECTION 29: W/2

SECTION 30: All

SECTION 31: N/2

TOWNSHIP 26 NORTH, RANGE 7 WEST, NMPM

SECTION 12: W/2

SECTION 13: N/2 & SE/4

(y) Extend the Otero-Gallup Oil Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 5 WEST, NMPM

SECTION 3: W/2

SECTION 4: All

SECTION 5: SE/4, S/2 NE/4 & NE/4 NE/4

SECTION 9: N/2 & E/2 SW/4

SECTION 10: NW/4 & SW/4 NE/4

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM

SECTION 33: SE/4

(z) Extend the Pinon-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 12 WEST, NMPM

SECTION 13: SW/4

SECTION 14: SE/4

(aa) Extend the Slick Rock-Dakota Oil Pool in San Juan County, to include therein:

TOWNSHIP 30 NORTH, RANGE 16 WEST, NMPM

SECTION 31: W/2 SW/4 & SW/4 NW/4

TOWNSHIP 30 NORTH, RANGE 17 WEST, NMPM

SECTION 36: NE/4 NE/4

(bb) Extend the Wild Horse-Gallup Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

SECTION 19: SW/4

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM

SECTION 12: SW/4

SECTION 13: NW/4

SECTION 24: NW/4

Ex 4

COTTON DRAW UNIT WELL NO. 65

		WOLF CAMP			MORROW			
		MCF GAS	BBLS COND	BBLS WATER	DAYS PROD	MCF GAS	BBLS WTR	DAYS PROD
1970	J	11,315	57	NR	NR	440,197	NR	NR
	F	9,106	5	NR	NR	401,231	NR	NR
	M	17,380	28	NR	NR	430,509	NR	NR
	A	16,627	30	NR	NR	407,953	NR	NR
	M	17,138	50	NR	NR	411,836	NR	NR
	J	15,941	153	NR	NR	397,155	NR	NR
	V	14,849	78	NR	NR	361,077	NR	NR
	A	12,950	51	NR	NR	382,082	NR	NR
	S	11,015	35	NR	NR	372,342	NR	NR
	O	9,724	83	NR	NR	372,496	NR	NR
	N	8,725	59	NR	NR	358,930	NR	NR
	D	9,754	51	NR	NR	324,684	NR	NR
1971	J	40,249	13	29	25	319,481	62	31
	F	31,242	3	24	16	287,823	52	NR
	M	28,782	NR	NR	31	301,252	62	31
	A	26,210	NR	11	30	310,267	60	30
	M	25,363	3	77	31	308,122	62	31
	J	23,271	NR	NR	30	274,994	60	30
	J	27,000	6	45	31	293,530	62	31
	A	24,030	28	31	31	286,695	62	NR
	S	25,534	3	27	30	267,997	60	30
	O	26,519	5	40	31	247,450	54	31
	N	35,766	5	33	30	262,388	60	30
	D							

NR

SOURCE 1970: Annual Statistical Report
 1971: Monthly Statistical Report

NR = NOT REPORTED IN SOURCE MATERIAL

DOCKET: REGULAR HEARING - WEDNESDAY - FEBRUARY 16, 1972

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

- ALLOWABLE: (1) Consideration of the oil allowable for March and April, 1972;
- (2) Consideration of the allowable production of gas for March, 1972, from fifteen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico. Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, for March, 1972.

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Upon application of Continental Oil Company, this case will be heard De Novo under the provisions of Rule 1220.

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THE FOLLOWING CASES WILL BE HEARD BEFORE ELVIS A. UTZ, EXAMINER OR DANIEL S. NUTTER, ALTERNATE EXAMINER, IN THE OIL CONSERVATION COMMISSION CONFERENCE ROOM ON THE SECOND FLOOR OF THE LAND OFFICE BUILDING AT 10 O'CLOCK A.M.

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(Case 4658 continued)

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(Case 4661 continued)

levelled in accordance with Commission Rules and Regulations.

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TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM
SECTION 8: NE/4

(b) Extend the Dollarhide-Fusselman Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 38 EAST, NMPM
SECTION 30: SE/4

(c) Extend the Double L-Queen Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 29 EAST, NMPM
SECTION 24: NW/4 SW/4

(d) Extend the Flying "M"-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM
SECTION 31: E/2

(e) Extend the Haystack-Cisco Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 6 SOUTH, RANGE 27 EAST, NMPM
SECTION 16: S/2

(f) Extend the Indian Basin-Upper Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 23 EAST, NMPM
SECTION 22: All

(Case 4666 continued)

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

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM
SECTION 24: NE/4 NW/4

(h) Extend the Shugart Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM
SECTION 26: E/2

(i) Extend the Sulimar-Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM
SECTION 26: NW/4 SE/4 and NE/4 SW/4

(j) Extend the Tres Papalotes-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM
SECTION 31: NE/4
SECTION 32: All

TOWNSHIP 15 SOUTH, RANGE 34 EAST, NMPM
SECTION 5: NE/4

(k) Extend the Wantz-Granite Wash Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
SECTION 11: E/2
SECTION 12: SW/4

CASE 4667: Northwest New Mexico nomenclature case calling for an order for the creation and extension of certain pools in San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico,

(a) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Pennsylvanian Buena production, be and the same is hereby created and designated as the Buena Suerte-Pennsylvanian Oil Pool. The discovery well

Case 4667 continued - (a)

is the Tenneco Oil Company Pah Well No. 1, located in Unit L of Section 3, Township 25 North, Range 11 West, NMPM. Said pool would comprise:

TOWNSHIP 25 NORTH, RANGE 11 WEST, NMPM
SECTION 3: SW/4

(b) Create a new pool in Sandoval County, New Mexico, classified as an oil pool for Dakota production, be and the same is hereby created and designated as the Five Lakes-Dakota Oil Pool. The discovery well is the Refiners Petroleum Corporation Cuba Union Well No. 1, located in Unit A of Section 25, Township 22 North, Range 3 West, NMPM. Said pool would comprise:

TOWNSHIP 22 NORTH, RANGE 3 WEST, NMPM
SECTION 24: SE/4 SW/4
SECTION 25: N/2
SECTION 26: NE/4 NE/4

(c) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Fruitland production, be and the same is hereby created and designated as the South Gallegos-Fruitland Pool. The discovery well is the Skelly Oil Company Navajo G Well No. 1, located in Unit K of Section 12, Township 26 North, Range 12 West, NMPM. Said pool would comprise:

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM
SECTION 11: S/2 and NW/4
SECTION 12: All

(d) Create a new pool in Rio Arriba County, New Mexico, classified as an oil pool for Gallup-Dakota production, be and the same is hereby created and designated as the West Lindrith Gallup-Dakota Oil Pool. Said pool would comprise:

TOWNSHIP 25 NORTH, RANGE 4 WEST, NMPM
SECTION 15: SE/4
SECTION 21: SE/4
SECTION 22: All
SECTION 27: All
SECTION 28: All
SECTION 32: SE/4
SECTION 33: All
SECTION 34: All

(e) Create a new pool in Sandoval County, New Mexico, classified as an oil pool for Mesaverde production, be and the same is hereby created and designated as the Parlay-Mesaverde Oil Pool. The discovery well is the Tesoro Petroleum Corporation Parlay Well No. 1, located in Unit H of Section 29, Township 22 North, Range 3 West, NMPM. Said pool would comprise:

TOWNSHIP 22 NORTH, RANGE 3 WEST, NMPM
SECTION 29: N/2

(f) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Gallup production, be and the same is hereby created and designated as the Rattlesnake-Gallup Oil Pool. The discovery well is the Navajo Well No. 23, located in Unit G of Section 2, Township 29 North, Range 19 West, NMPM. Said pool would comprise:

TOWNSHIP 29 NORTH, RANGE 19 WEST, NMPM
SECTION 2: NE/4

(g) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Dakota production, be and the same is hereby created and designated as the Snake Eyes-Dakota Oil Pool. The discovery well is the Davis Oil Co., Snake Eyes Well No. 1, located in Unit C of Section 20, Township 21 North, Range 8 West, NMPM. Said pool would comprise:

TOWNSHIP 21 NORTH, RANGE 8 WEST, NMPM
SECTION 17: SW/4 SE/4
SECTION 20: N/2 and SW/4

(h) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Pennsylvanian production, be and the same is hereby created and designated as the North Tocito Dome-Pennsylvanian Pool. The discovery well is the Campbell, Kiel & Rothwell Navajo Tocito Well No. 1, located in Unit G of Section 9, Township 26 North, Range 18 West, NMPM. Said pool would comprise:

TOWNSHIP 26 NORTH, RANGE 18 WEST, NMPM
SECTION 9: E/2
SECTION 10: SW/4

(i) . Create a new pool in San Juan County, New Mexico, classified as a gas pool for Pictured Cliffs production, be and the same is hereby created and designated as the Waw-Pictured Cliffs Pool. The discovery well is the Dugan Production Corp., Waw Well No. 1, located in Unit L of Section 32, Township 27 North, Range 13 West, NMPM. Said pool would comprise:

TOWNSHIP 27 NORTH, RANGE 13 WEST, NMPM
SECTION 32: SW/4

(j) Extend the Angels Peak-Gallup Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 9 WEST, NMPM
SECTION 17: E/2

(k) Extend the Aztec-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 9 WEST, NMPM
SECTION 31: SW/4

(l) Extend the Ballard-Pictured Cliffs Pool in Rio Arriba, San Juan and Sandoval Counties, New Mexico, to include therein:

TOWNSHIP 22 NORTH, RANGE 2 WEST, NMPM
SECTION 6: SW/4

TOWNSHIP 22 NORTH, RANGE 3 WEST, NMPM
SECTION 2: NE/4

TOWNSHIP 23 NORTH, RANGE 4 WEST, NMPM
SECTION 24: SE/4

(m) Extend the Blanco-Mesaverde Pool in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 5 WEST, NMPM
SECTION 13: All
SECTION 24: W/2

TOWNSHIP 29 NORTH, RANGE 10 WEST, NMPM
SECTION 3: All
SECTION 10: All

(n) Extend the Blanco-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 30 NORTH, RANGE 10 WEST, NMPM
SECTION 1: W/2

TOWNSHIP 31 NORTH, RANGE 11 WEST, NMPM
SECTION 25: NW/4

(o) Extend the South Blanco-Pictured Cliffs Pool in Rio Arriba and Sandoval Counties, New Mexico, to include therein:

TOWNSHIP 23 NORTH, RANGE 2 WEST, NMPM
SECTION 16: SW/4
SECTION 17: SE/4
SECTION 20: N/2
SECTION 21: All
SECTION 28: NW/4

(p) Extend the BS Mesa-Gallup Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM
SECTION 3: N/2
SECTION 9: NE/4
SECTION 10: NW/4

(q) Extend the Choza Mesa-Pictured Cliffs Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 3 WEST, NMPM
SECTION 30: S/2

(r) Extend the Fulcher Kutz-Pictured Cliffs Pool in San Juan County, to include therein:

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM
SECTION 6: NE/4

(s) Extend the Gallegos-Gallup Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 11 WEST, NMPM
SECTION 24: S/2

(t) Extend the Hogback-Dakota Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 16 WEST, NMPM
SECTION 7: SW/4 SW/4
SECTION 18: NW/4 NW/4

(u) Extend the Kutz-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 11 WEST, NMPM
SECTION 24: NW/4
SECTION 25: N/2

(v) Extend the Lone Pine-Dakota "D" Oil Pool in McKinley County, New Mexico, to include therein:

TOWNSHIP 17 NORTH, RANGE 8 WEST, NMPM
SECTION 7: S/2
SECTION 8: E/2 NW/4, N/2 SW/4 & SE/4 SW/4
SECTION 17: NE/4 NW/4
SECTION 18: E/2 SE/4

TOWNSHIP 17 NORTH, RANGE 9 WEST, NMPM
SECTION 12: E/2 SE/4
SECTION 13: NE/4 NW/4
SECTION 24: E/2 NW/4

(w) Extend the Lybrook-Gallup Oil Pool in Rio Arriba, San Juan and Sandoval Counties, New Mexico, to include therein:

TOWNSHIP 23 NORTH, RANGE 6 WEST, NMPM
SECTION 7: SW/4 & SE/4 NW/4
SECTION 18: W/2
SECTION 19: All
SECTION 20: SW/4
SECTION 30: W/2
SECTION 31: NW/4 NW/4

TOWNSHIP 23 NORTH, RANGE 7 WEST, NMPM
SECTION 3: SW/4
SECTION 4: E/2 SE/4
SECTION 5: All
SECTION 13: All
SECTION 14: SE/4 & E/2 NE/4

(w) continued

TOWNSHIP 23 NORTH, RANGE 7 WEST, NMPM

SECTION 22: NE/4 & NE/4 SE/4

SECTION 23: N/2

SECTION 24: NW/4 & NW/4 SW/4

TOWNSHIP 24 NORTH, RANGE 7 WEST, NMPM

SECTION 29: SW/4

SECTION 32: W/2

(x) Extend the Otero-Chacra Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 25 NORTH, RANGE 4 WEST, NMPM

SECTION 31: NW/4

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM

SECTION 3: W/2

SECTION 10: N/2

SECTION 11: NW/4

SECTION 35: N/2

SECTION 36: N/2

TOWNSHIP 25 NORTH, RANGE 6 WEST, NMPM

SECTION 1: All

SECTION 3: N/2

SECTION 6: NE/4

TOWNSHIP 26 NORTH, RANGE 5 WEST, NMPM

SECTION 34: W/2

TOWNSHIP 26 NORTH, RANGE 6 WEST, NMPM

SECTION 18: SW/4

SECTION 19: W/2 & SE/4

SECTION 20: SW/4

SECTION 26: SW/4

SECTION 28: All

SECTION 29: W/2

SECTION 30: All

SECTION 31: N/2

TOWNSHIP 26 NORTH, RANGE 7 WEST, NMPM

SECTION 12: W/2

SECTION 13: N/2 & SE/4

(y) Extend the Otero-Gallup Oil Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 5 WEST, NMPM
SECTION 3: W/2
SECTION 4: All
SECTION 5: SE/4, S/2 NE/4 & NE/4 NE/4
SECTION 9: N/2 & E/2 SW/4
SECTION 10: NW/4 & SW/4 NE/4

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM
SECTION 33: SE/4

(z) Extend the Pinon-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 12 WEST, NMPM
SECTION 13: SW/4
SECTION 14: SE/4

(aa) Extend the Slick Rock-Dakota Oil Pool in San Juan County to include therein:

TOWNSHIP 30 NORTH, RANGE 16 WEST, NMPM
SECTION 31: W/2 SW/4 & SW/4 NW/4

TOWNSHIP 30 NORTH, RANGE 17 WEST, NMPM
SECTION 36: NE/4 NE/4

(bL) Extend the Wild Horse-Gallup Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM
SECTION 19: SW/4

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM
SECTION 12: SW/4
SECTION 13: NW/4
SECTION 24: NW/4

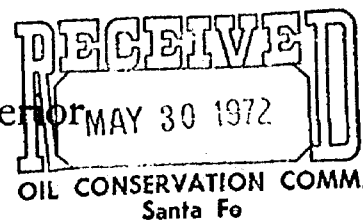
Set a case for Texaco to
show cause why a well
should not be repaired -
for Feb-16 =



United States Department of the Interior

GEOLOGICAL SURVEY

Drawer 1857
Roswell, New Mexico 88201



May 25, 1972

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

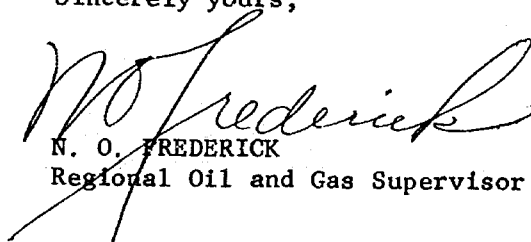
Mrs. Ida Rodriguez
Secretary to the Director
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Ida:

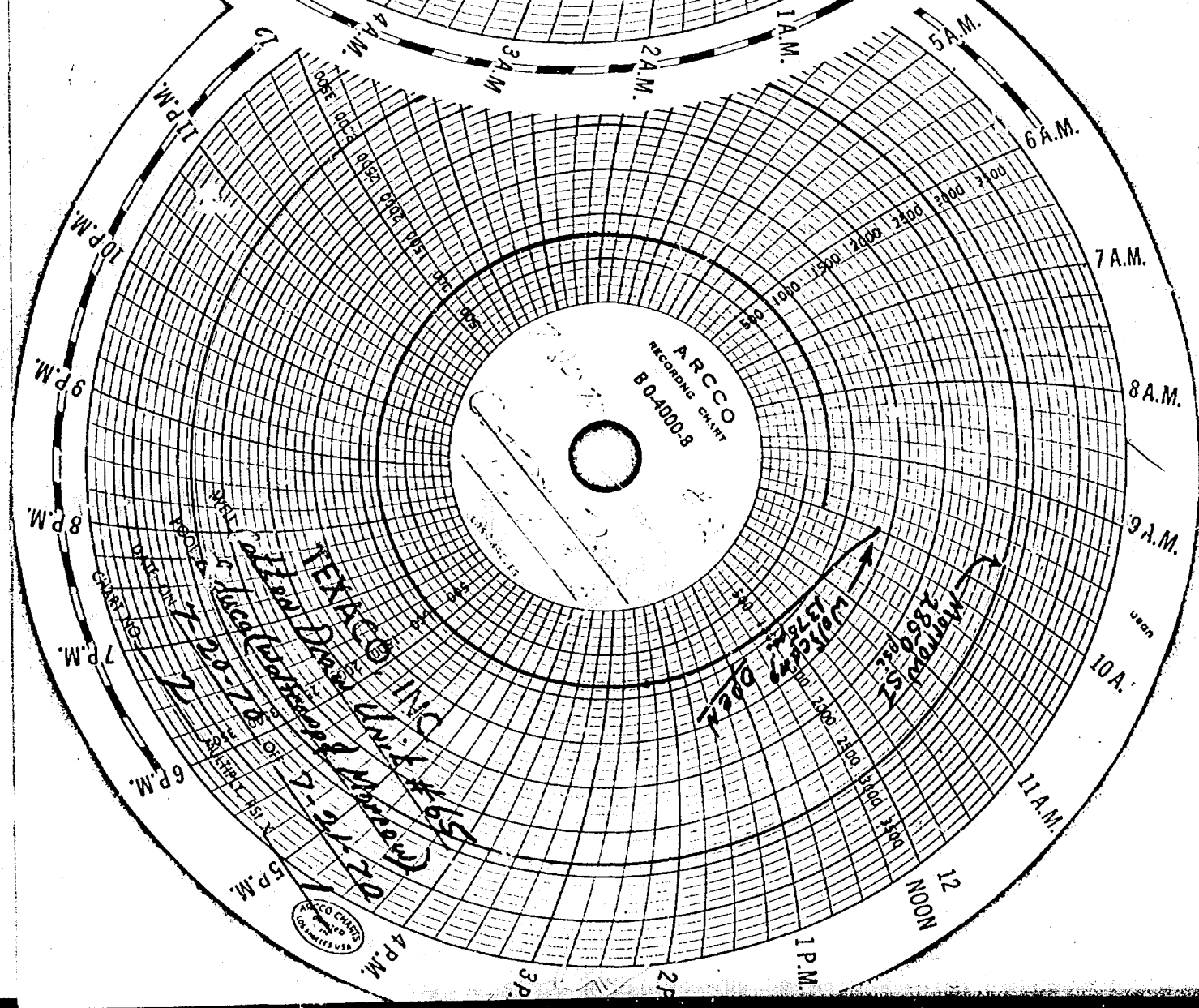
The transcript we requested for Case 4660 dated February 16, 1972, is returned herewith.

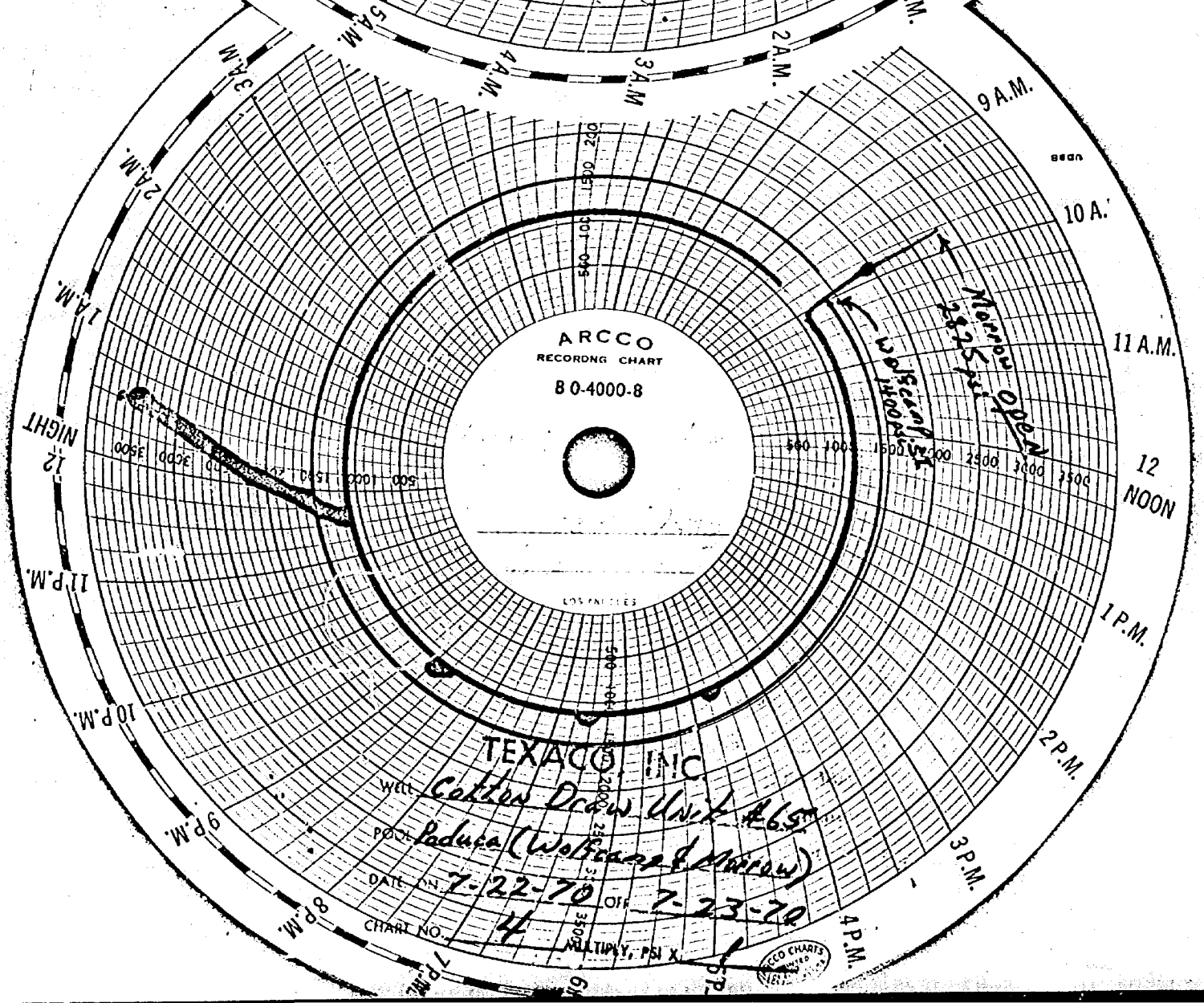
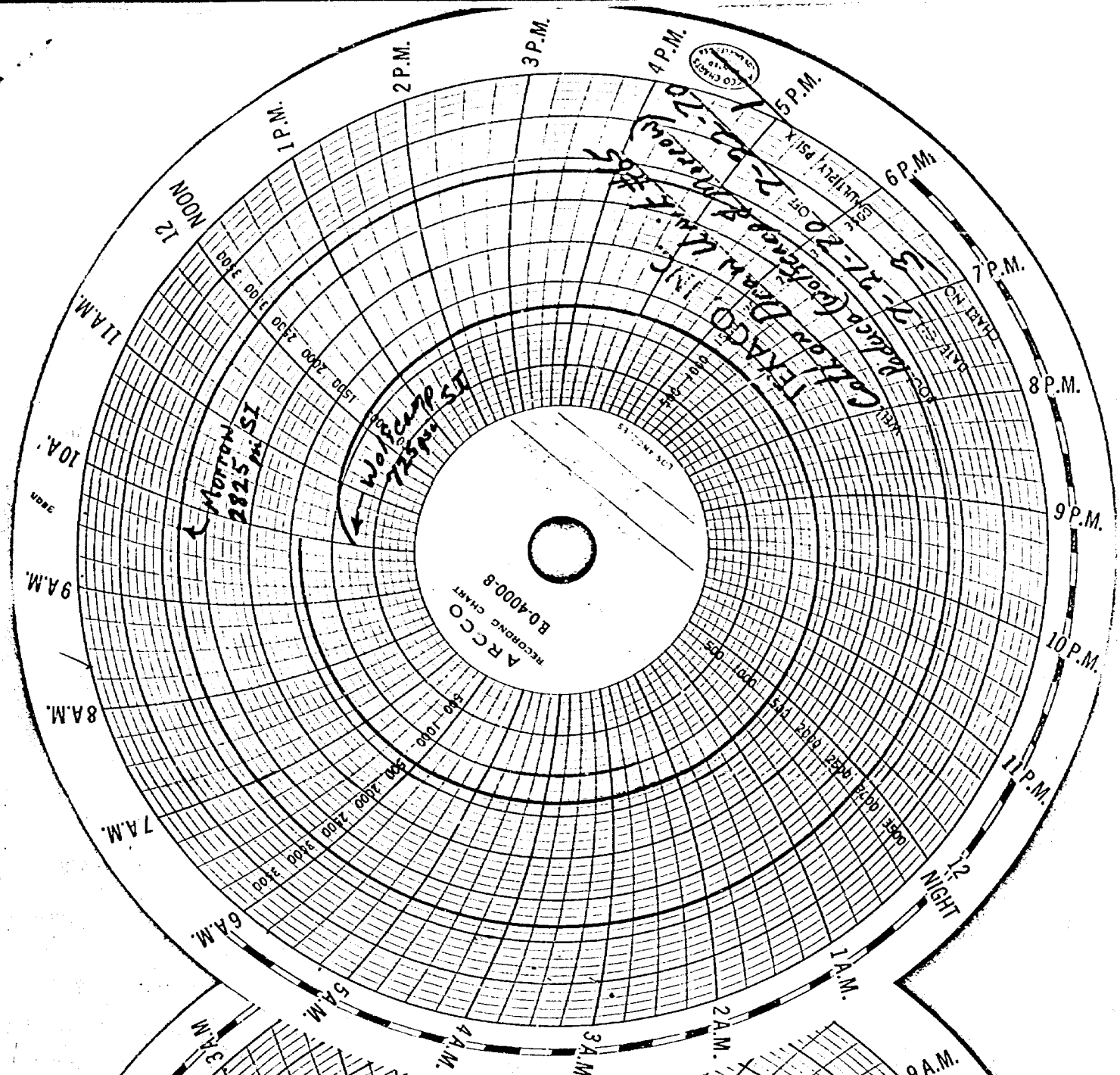
Thank you for your cooperation in making such transcript available to this office.

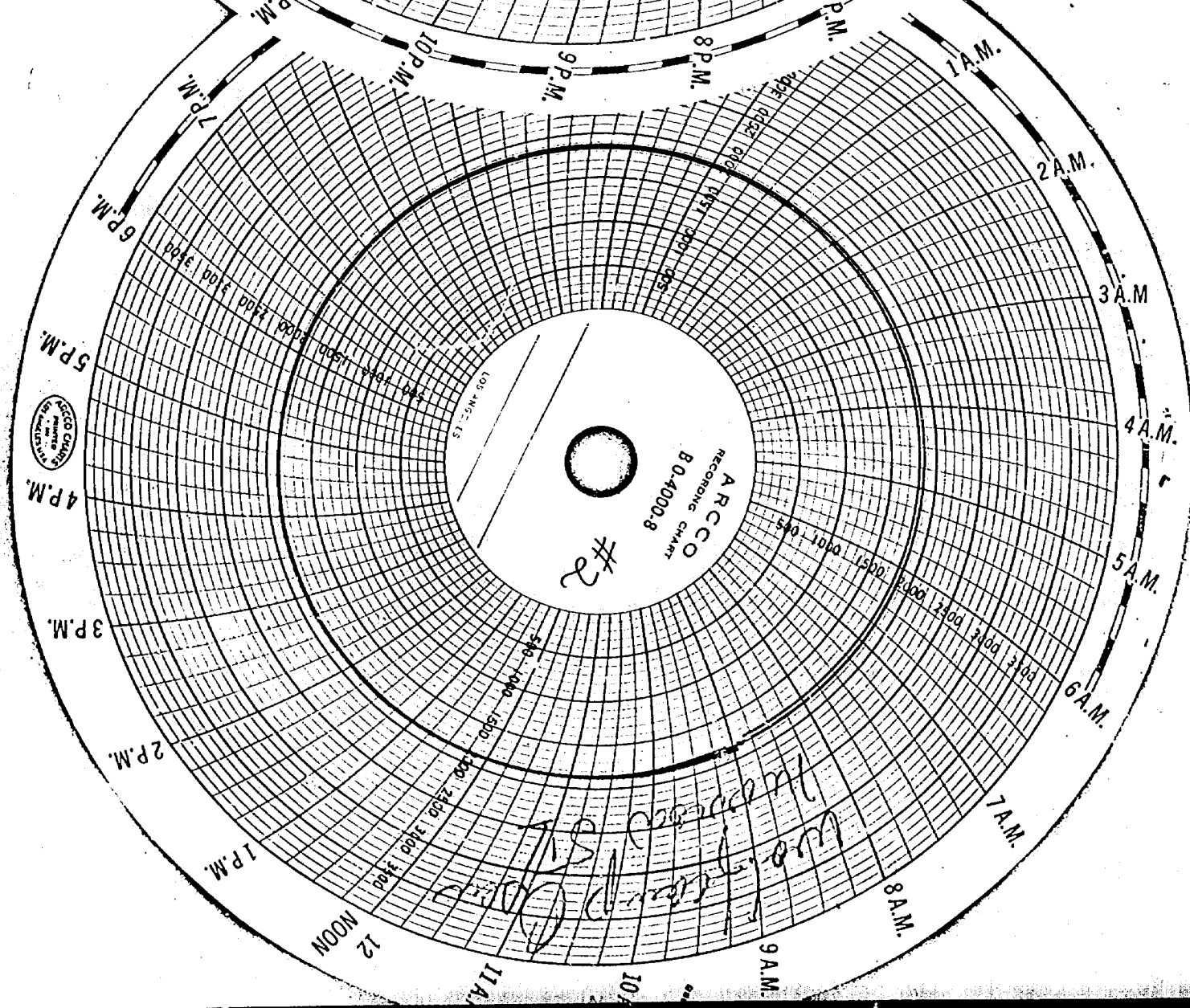
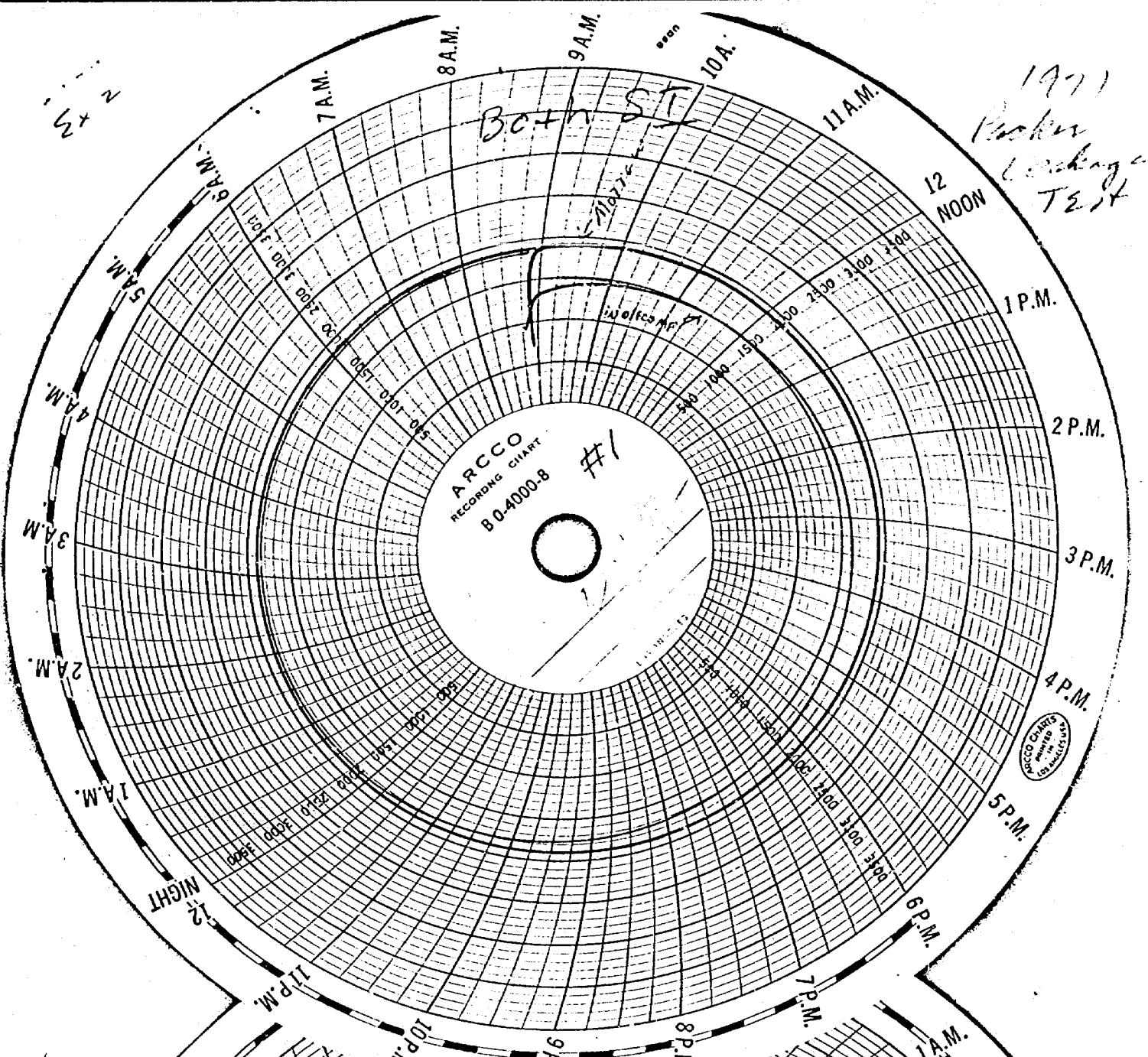
Sincerely yours,

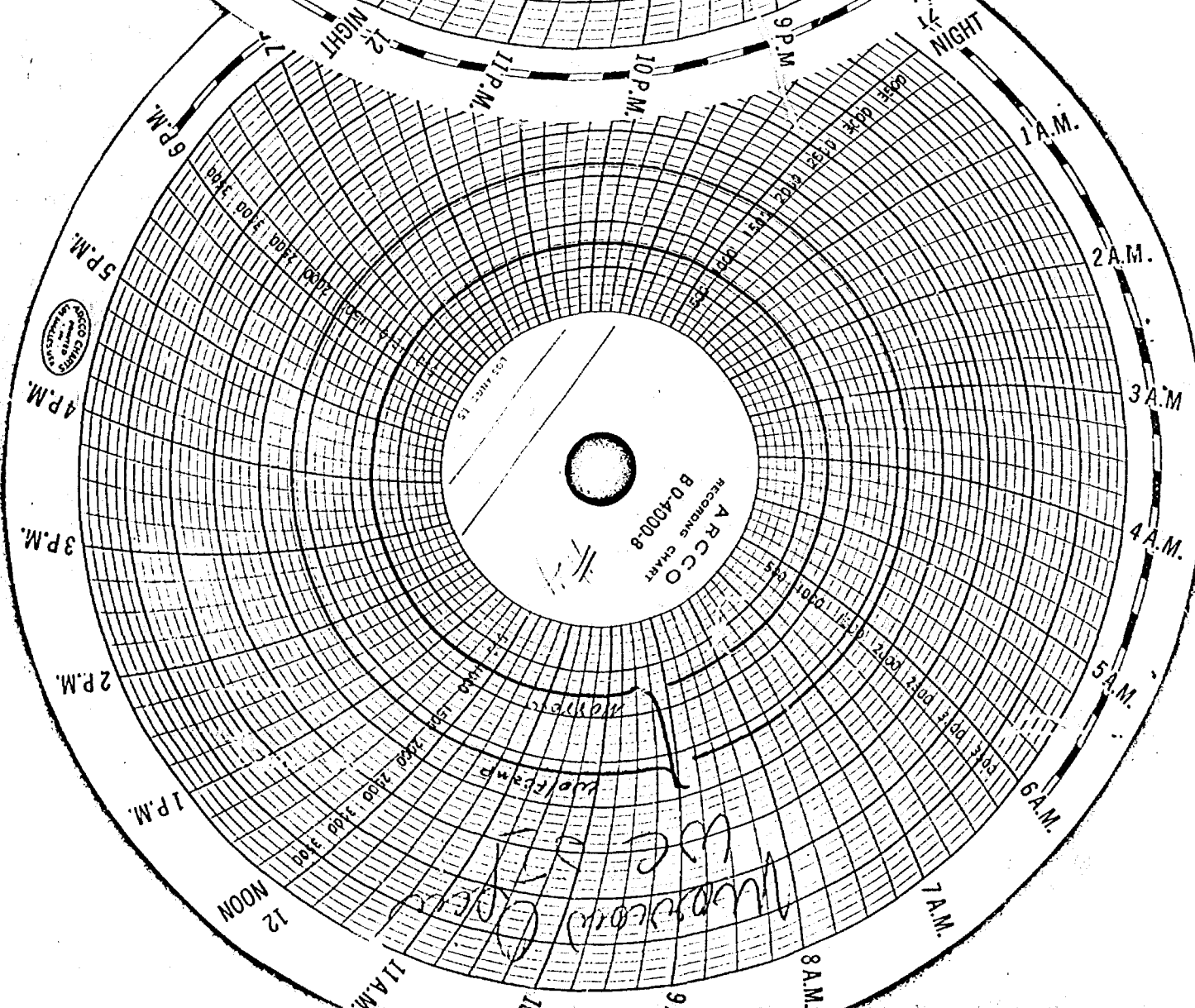
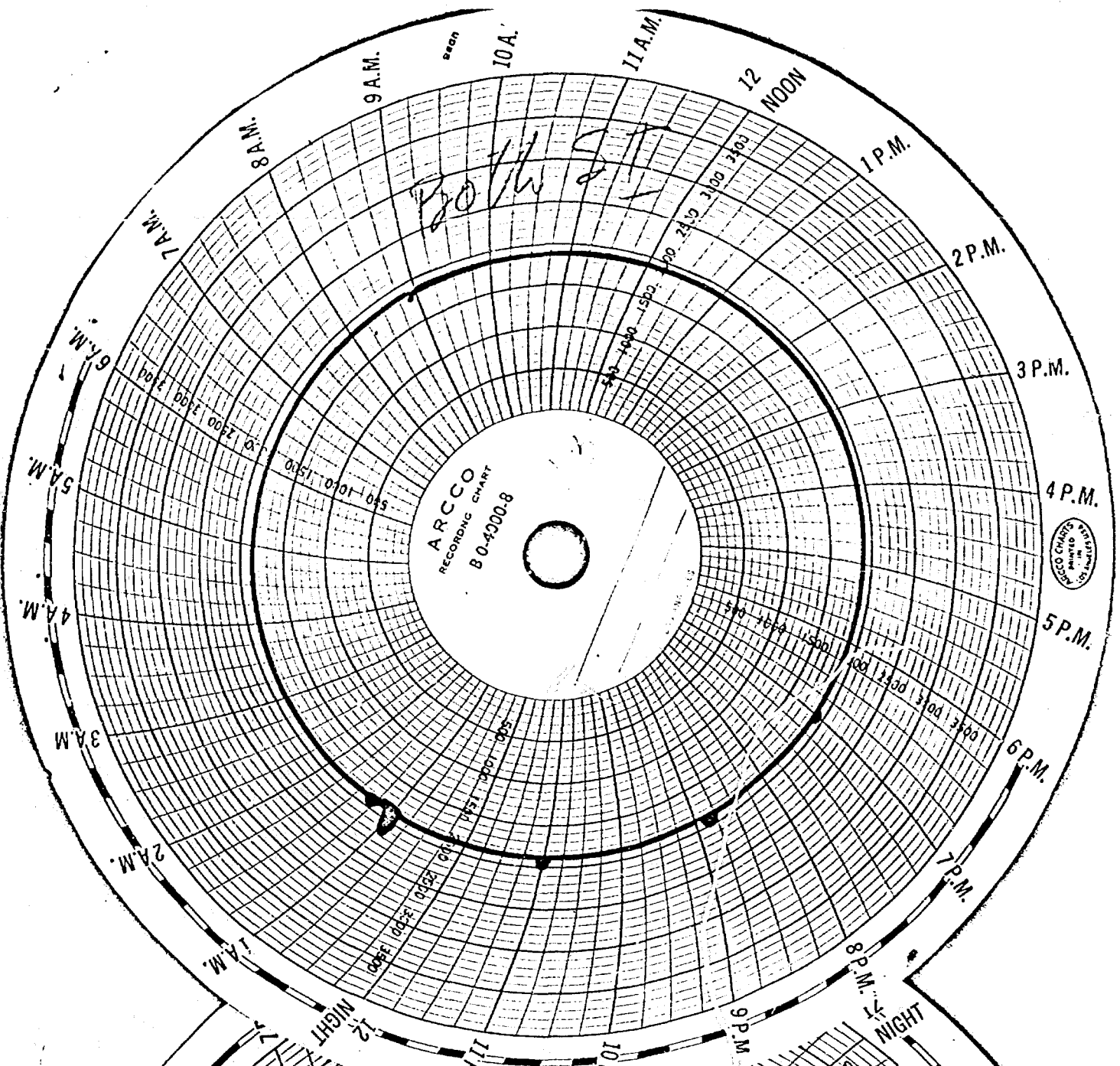

N. O. FREDERICK
Regional Oil and Gas Supervisor







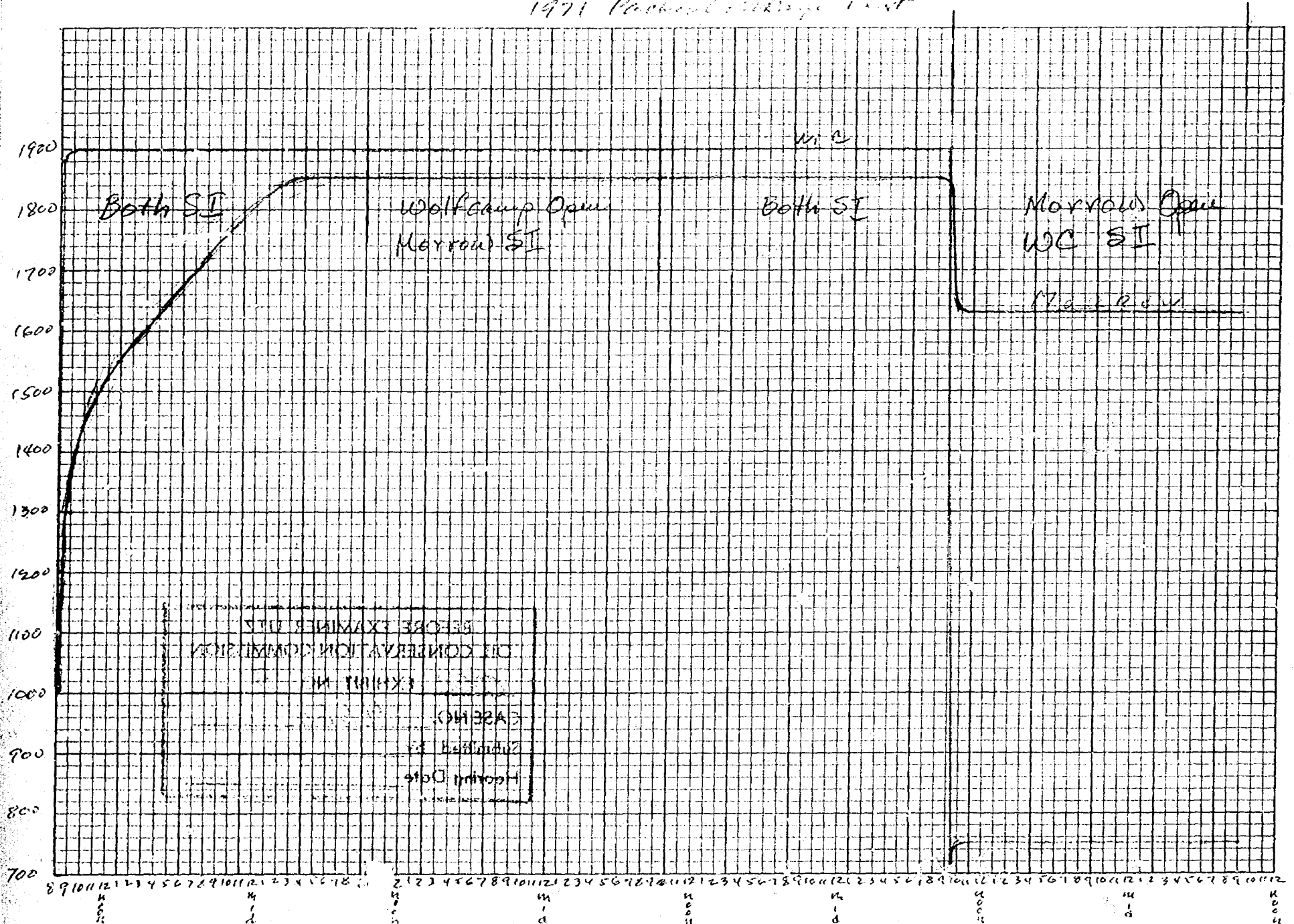






4x7

1971 Packard Package List



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION

acc EXHIBIT NO. 3

CASE NO. 4660

Submitted by _____

Hearing Date _____

COTTON ORAN UNIT WELL NO. 65

		WOLF CAMP				MORROW			
		MCF GAS	BBLS COND	BBLS WATER	DAYS PROD	MCF GAS	BBLS WTR	DAYS PROD	
1970	J	11,315	57	NR	NR	440,197	NR	NR	
	F	9,106	5	NR	NR	401,231	NR	NR	
	M	17,380	28	NR	NR	430,509	NR	NR	
	A	16,627	30	NR	NR	407,953	NR	NR	
	M	17,138	50	NR	NR	411,836	NR	NR	
	J	15,991	153	NR	NR	397,155	NR	NR	
	V	14,849	78	NR	NR	361,077	NR	NR	
	A	12,950	51	NR	NR	382,082	NR	NR	
	S	11,015	35	NR	NR	372,342	NR	NR	
	O	9,724	83	NR	NR	372,496	NR	NR	
	N	8,725	59	NR	NR	358,930	NR	NR	
	D	9,754	51	NR	NR	324,684	NR	NR	
1971	J	40,299 - 1,000	13	29	25	319,481	62	31	
	F	31,242	3	24	16	289,823	52	NR	
	M	28,782	NR	NR	31	301,252	62	31	
	A	26,210	NR	11	30	310,267	60	30	
	M	25,363	3	77	31	308,122	62	31	
	J	23,271	NR	NR	30	274,994	60	30	
	J	27,000	6	45	31	293,530	62	31	
	A	24,030	28	31	31	286,695	62	NR	
	S	25,534	3	27	30	267,997	60	30	
	O	26,519	5	40	31	247,450	54	31	
	N	35,766	5	33	30	262,388	60	30	
	D								

SOURCE 1970: Annual Statistical Report
1971: Monthly Statistical Report

NR = NOT REPORTED IN SOURCE MATERIAL

324
333
319
40
359

BUREAU EXAMINER UTZ
OIL CONSERVATION COMMISSION

000 BIT NO. 4

CASE NO. 4660

Submitted to

Hearing Date

2x5

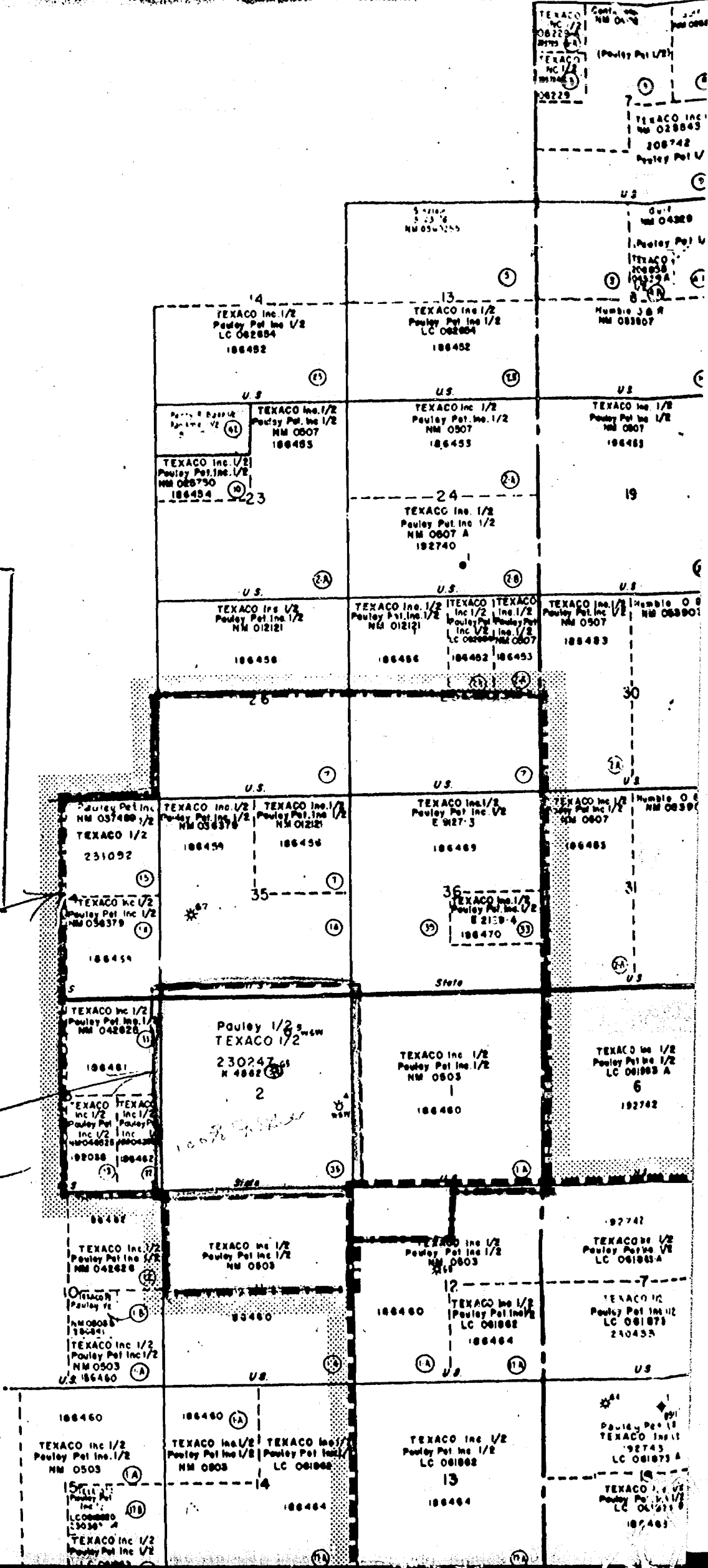
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24
S

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
CASE NO. 4660
EXHIBIT NO. 5
Submitted by
Hearing Date

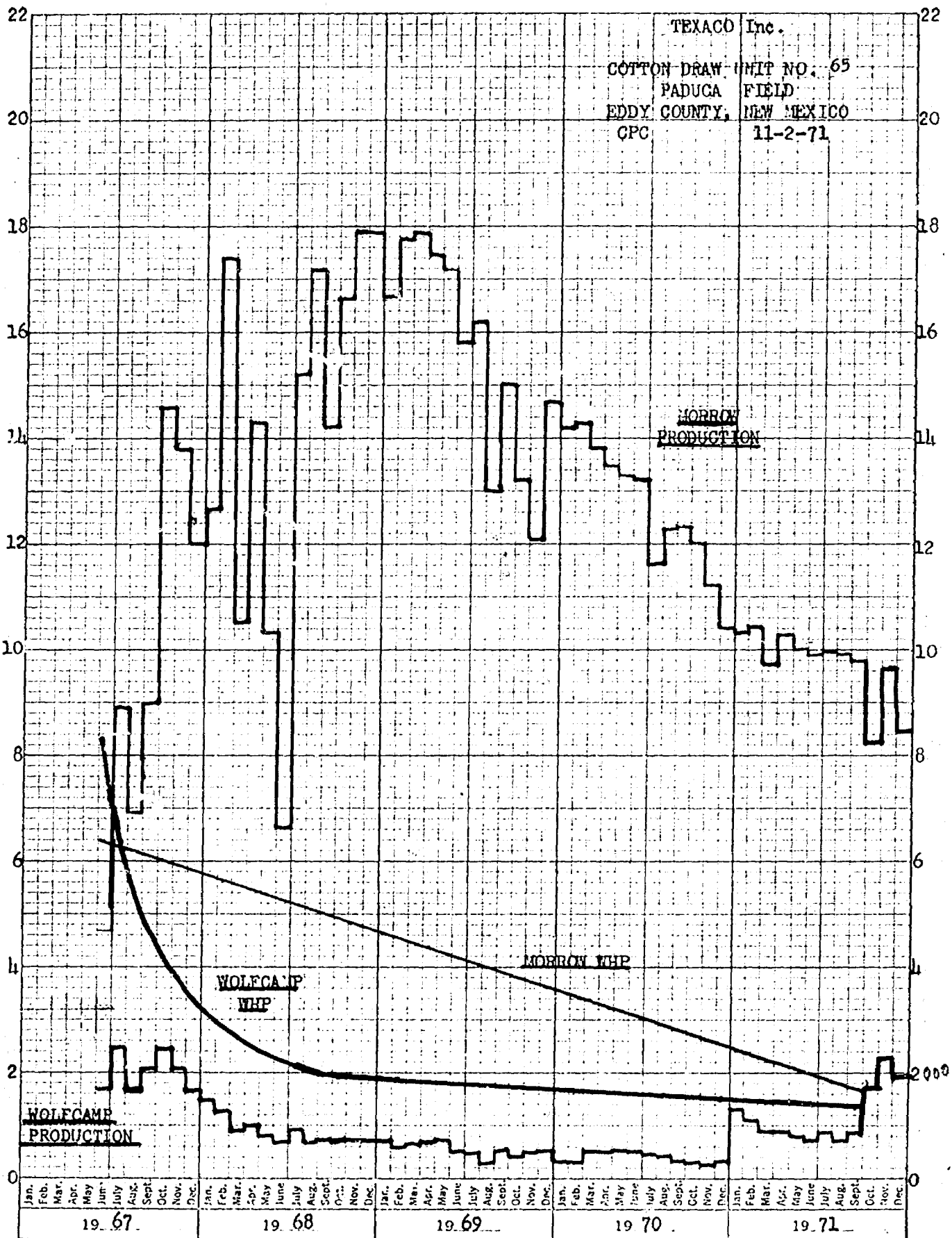
Marrow
Part Area
70-30
Feb 1st

Walfcamp
Part Area

T
25
S



DAILY PRODUCTION - MMCF/D
WELL HEAD PRESSURE $\times 10^{-3}$



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION

Perkins EXHIBIT NO. 2
CASE NO. 4660
Submitted by _____
Hearing Date _____

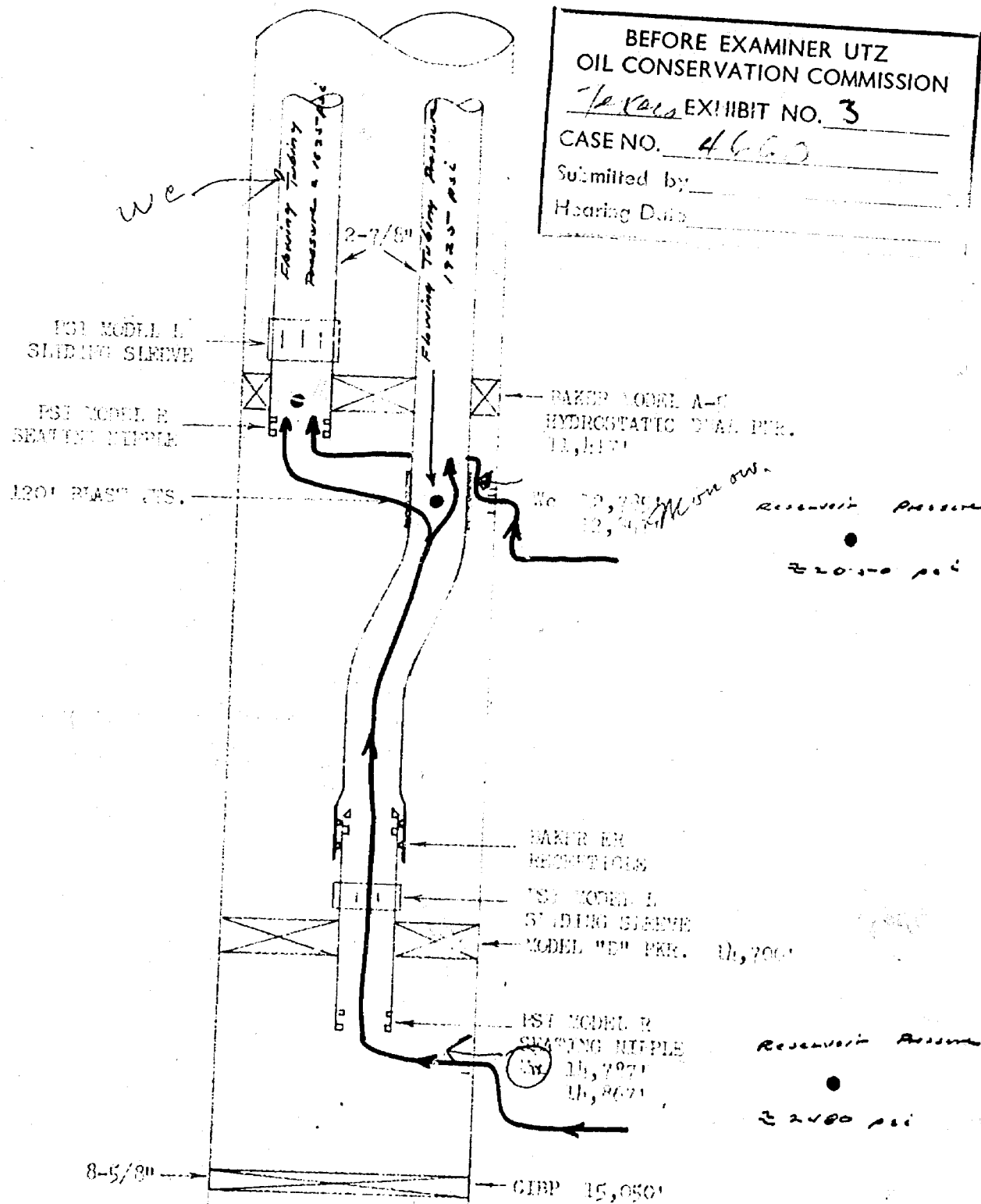
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION

EXHIBIT NO. 3

CASE NO. 4660

Submitted by

Hearing Date



DETAIL
DIAGRAMATIC SKETCH
COTTON DRAW UNIT NO. 65

COMPLETION DATA

CITIES SERVICE OIL COMPANY
SOUTH CARLSBAD (MORRO) POOL

Well	Drill Stem Test		Completion		Percent of Rate Lost (%)
	Pressure (psig)	Rate (MMCF/D)	Pressure (psig)	Rate (MMCF/D)	
Spencer 'A' No. 1	3525	7.848	3485	4.082	48.1
Merland 'B' No. 1	2400	5.34	2433	2.540	52.4
Strackbein 'A' No. 1	3200	4.7	2365	2.512	46.8

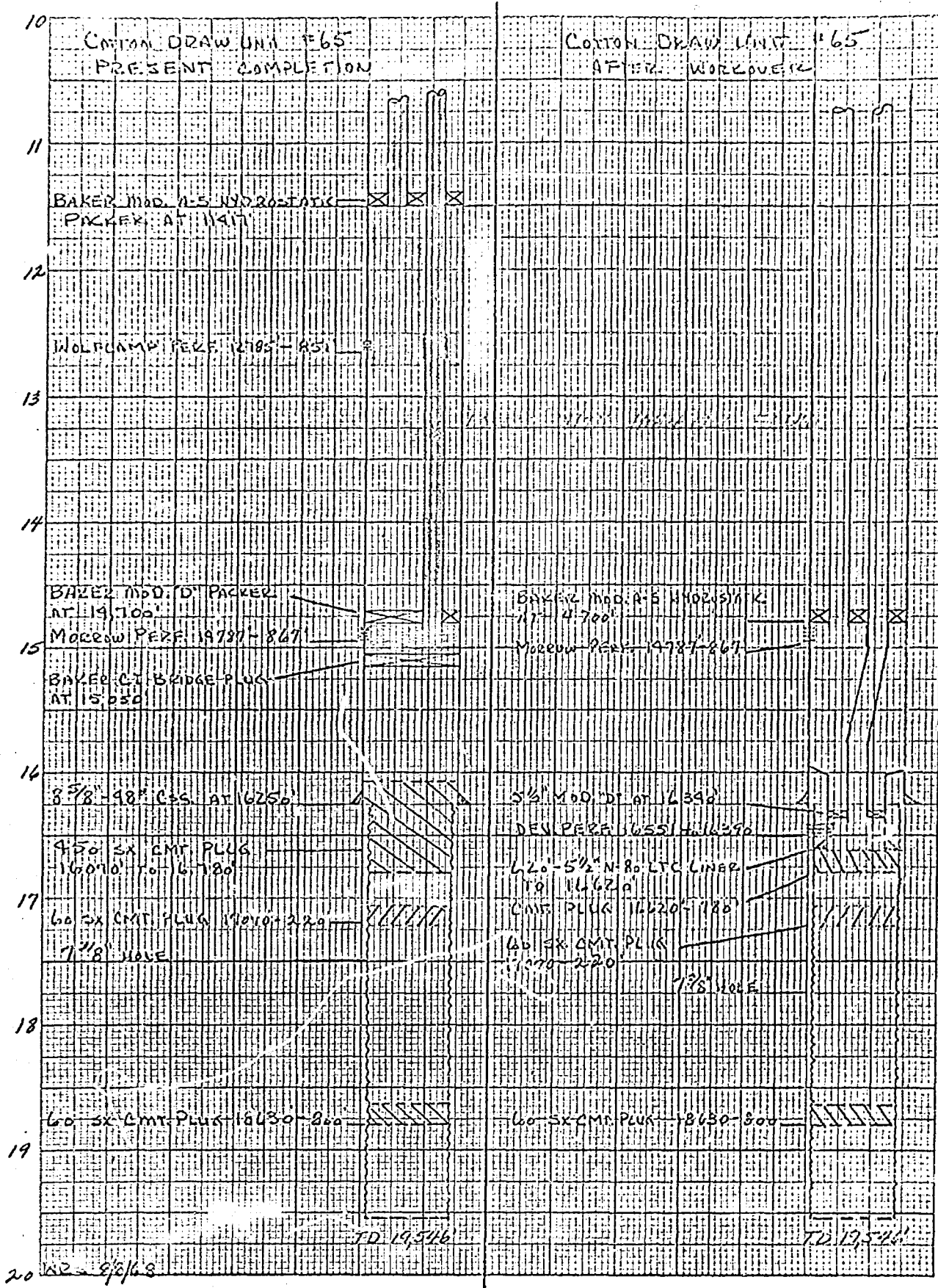
10 days
[Signature]

CPC 11-8-71

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Texaco EXHIBIT NO. 4
CASE NO. 4460

K&E
10 X 10 TO 1 1/2 INCH AG 1320
7 X 10 INCHES
MADE IN U.S.A.
KEUFFEL & ESSER CO.

DEPTH - 1000'



DRAFT

GMH/dr

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. 4660

Order No. R-

4294

IN THE MATTER OF THE HEARING CALLED BY THE
OIL CONSERVATION COMMISSION ON ITS OWN MOTION
TO PERMIT TEXACO INC. TO APPEAR AND SHOW CAUSE
WHY IT SHOULD NOT TAKE IMMEDIATE ACTION TO REPAIR
ITS COTTON DRAW UNIT WELL NO. 65, A DUAL COMPLETION,
LOCATED IN UNIT G OF SECTION 2, TOWNSHIP 25 SOUTH,
RANGE 31 EAST, EDDY COUNTY, NEW MEXICO, IN SUCH A
MANNER AS TO PREVENT COMMUNICATION BETWEEN THE PADUCA-
MORROW AND PADUCA-WOLECAMP GAS POOLS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 16, 1972,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this February day of February, 1972, 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 Texaco, Inc., is the operator of the Cotton Draw
Unit Well No. 65, located in Unit G of Section 2, Township 25
South, Range 31 East, NMPM, Eddy County, New Mexico.

-2-

CASE NO. 4660

Order No. R-

(3) That the subject well was completed as a dual completion (conventional) to produce gas from the Paduca-Wolfcamp and Paduca-Morrow Gas Pools through parallel strings of 2 7/8-inch tubing, with separation of zones by a packer set at approximately 14,700 feet, as authorized by Commission Order No. R-3266.

(4) That due to some mechanical failure in the well-bore of the subject well, the two zones are being commingled in the well-bore and the two zones are not being produced as separate common sources of supply.

(5) That waste will occur and correlative rights will not be adequately protected if the subject well is continued to be produced in its present condition.

(6) That in order to prevent waste and protect correlative rights, the subject well should be repaired in such a manner as to prevent communication within the well-bore of the subject zones.

IT IS THEREFORE ORDERED:

(1) That Texaco Inc. is hereby ordered to commence within 30 days from the date of this order such remedial action as is necessary to prevent communication between the Paduca-Wolfcamp and Paduca-Morrow Gas Pools in the well-bore of its Cotton Draw Unit Well No. 60, located in Unit G of Section 2, Township 25 South, Range 31 East, NMPM, Eddy County, New Mexico.

(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.