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1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
April 28, 1965

EXAMINER HEARING

IN THE MATTER OF: Case No. 2997 being reopened)
pursuant to the provisions of Order No.)
R-2677, which order established 80-acre)
spacing units for the Vacuum-Lower Pennsyl-)
vanian Pool, Lea County, New Mexico, for a)
period of one year. All interested parties)
may appear and show cause why said pool)
should not be developed on 40-acre spacing)
units.)

Case No. 2997
(Reopened)

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING



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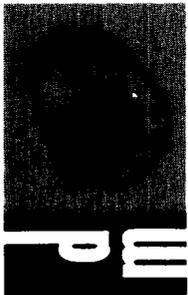
BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: We will call Case 2997 (Reopened).

MR. DURRETT: In the matter of Case 2997 being reopened pursuant to the provisions of Order No. R-2677, which order established 80-acre spacing units for the Vacuum-Lower Pennsylvanian Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units.

MR. SPERLING: Mr. Examiner, I am J. E. Sperling of Modrall, Seymour, Sperling, Roehl and Harris, Albuquerque, appearing on behalf of Socony Mobil Oil Company. I would not



presume to take the witness chair, and with the Examiner's permission I'll remain in counsel's chair, and state for the record that I have certain information which has been prepared by the engineering staff of Mobil Oil Company, which reflects up to date data collected since the last hearing, which I believe was held in March of 1964.

The history or the anticipated history of the Vacuum-Lower Pennsylvanian Pool, as predicted by the expert witnesses that appeared at that time, has proven to be almost classic in the results obtained.

For the Commission's information I have a couple of, and I guess what would be termed exhibits, which are simply up-dated information continuing that presented at prior hearings; the first of which is the production history which reflects production as well as -- that is, oil production as well as gas production, and GOR rates which have been experienced in connection with the production in this field. As the Examiner is well aware, I'm sure the horizontal limits of this field, as originally designated, comprise the east half of Section 26 in Township 17 South, Range 34 East, NMMN, Lea County.

(Whereupon, Exhibits Nos. 1 and 2
marked for identification.)

MR. SPERLING: It was predicted at the prior hearings that this reservoir would prove to be quite limited in its

extent, and for that reason, in order to avoid unnecessary drilling, it was requested that this field be developed on temporary rules on the basis of 80-acre spacing. This request was granted and the production history which I have furnished the Examiner, along with the other exhibit that I mentioned as having available, which reflects bottomhole pressure as against cumulative production in this field, closely parallels the predictions which were made at the time of the prior hearings, except for the fact that the estimated ultimate recovery from the field as shown by the bottomhole pressure versus cumulative production graph is not proving to be as great as originally expected.

If the Examiner will note from the production history that the gas-oil ratio steadily increased to peak value of 90,553 cubic feet per barrel in February of 1965, and in the following month, March, there has been a very marked decrease in gas-oil ratio along with the production for that month. That all goes to show, as was predicted in the earlier hearings, that this is a reservoir of limited extent which is rapidly approaching its economic limit and is in advanced depletion stage.

There has been no additional drilling in the area since the, that is to this pool, since the last hearing in March of 1964. We feel that this reservoir has been developed and produced at its maximum efficient rate, and that the action which the

that there will be no additional development in this particular reservoir area which will be affected one way or another. The bloom has gone from the rose, and it's been done efficiently, economically and with the hope that it won't be the last; we're convinced that it will not be the last example of spirit of cooperation which has been exemplified in this particular instance. That's all I have, Mr. Examiner.

MR. NUTTER: Now, Mr. Sperling, the pool at the present time comprises the east half of 26, is that correct?

MR. SPERLING: Yes, those were defined horizontal limits of the pool in Order Number 2677.

MR. NUTTER: Wasn't this the pool, Mr. Sperling, that was originally designated as the Vacuum Pennsylvanian Pool?

MR. SPERLING: Yes.

MR. NUTTER: Then it was split into an Upper and Lower Pennsylvanian?

MR. SPERLING: That is correct, this is the Lower Pennsylvanian.

MR. NUTTER: This is the Lower Pennsylvanian, and then the area to the southeast was designated as the Upper Pennsylvanian and the two pools did not overlap, as I recall.

MR. SPERLING: Yes, sir, there was some thousand feet of vertical separation as between the two, and I can give you the horizontal limits of the Upper Pennsylvanian, if that would

be of assistance to you.

MR. NUTTER: I have then in this exhibit which was offered a year ago at the hearing in this case.

MR. SPERLING: The Upper Pennsylvanian, very briefly, it's short, at least as of the day of this order, and I assume there has been no change in nomenclature, comprised the southeast quarter of Section 25, and the southwest quarter of Section 36.

MR. NUTTER: In the Lower Pennsylvanian Pool, Socony Mobil had their Number 96 Well and their Number 98 Well.

MR. SPERLING: That is correct.

MR. NUTTER: And those are still the only two wells completed in the Lower Pennsylvanian Pool?

MR. SPERLING: That is correct.

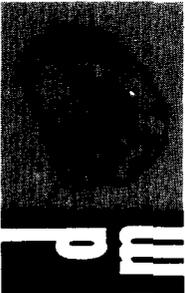
MR. NUTTER: And this is the production history of those wells on Exhibit 1?

MR. SPERLING: Yes, sir, as continued from a previous production history presented.

MR. NUTTER: And in March of 1965, the total production from the two wells combined was 387 barrels?

MR. SPERLING: Yes, sir.

MR. NUTTER: On your Exhibit Number 2, you show a point on this pressure decline curve, and it says estimated reserves at 4-22-'65, from a 48-hour shut-in tubing pressure of 1,300.



Did they furnish you with that -- What did they do, just take a 48-hour shut-in pressure and extrapolate it into a bottom-hole pressure?

MR. SPERLING: That is correct. The advice from Mr. Baish, who is the producing superintendent for Mobil in Hobbs makes reference to the prior exhibit, which is that, essentially. We have added to the curve the estimated current bottom-hole pressure and extrapolated the curve, based on this pressure. As you can see, our ultimate primary recovery is drastically reduced.

MR. NUTTER: So by bending the curve down to accommodate that point, you have an economic limit there of 80,000 barrels at 250 pounds pressure, is that correct?

MR. SPERLING: Yes, sir.

MR. NUTTER: This moved your estimated cumulative recovery at abandonment from some 145,000 barrels back to 100,000 barrels?

MR. SPERLING: That is correct.

MR. NUTTER: And judging by the production report on Exhibit 1, it has almost reached its economic limit then?

MR. SPERLING: Yes, sir, I think the exhibit indicates that there's approximately 85,000 been produced.

MR. NUTTER: And to your knowledge, Mobil does not contemplate any additional drilling in this pool?

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MR. SPERLING: They have so advised.

MR. NUTTER: I see. Are there any other questions of Mr. Sperling? Do you have anything further, Mr. Sperling?

MR. SPERLING: No, thank you.

MR. NUTTER: Does anyone have anything they wish to offer in Case 2997?

MR. SPERLING: I should offer the exhibits as part of the record in this case.

MR. NUTTER: Exhibits 1 and 2, dated 4-28-'65 will be admitted.

(Whereupon, Mobil Exhibits 1 and 2 were admitted to the record.)

MR. NUTTER: If nothing further in this case we will take it under advisement.



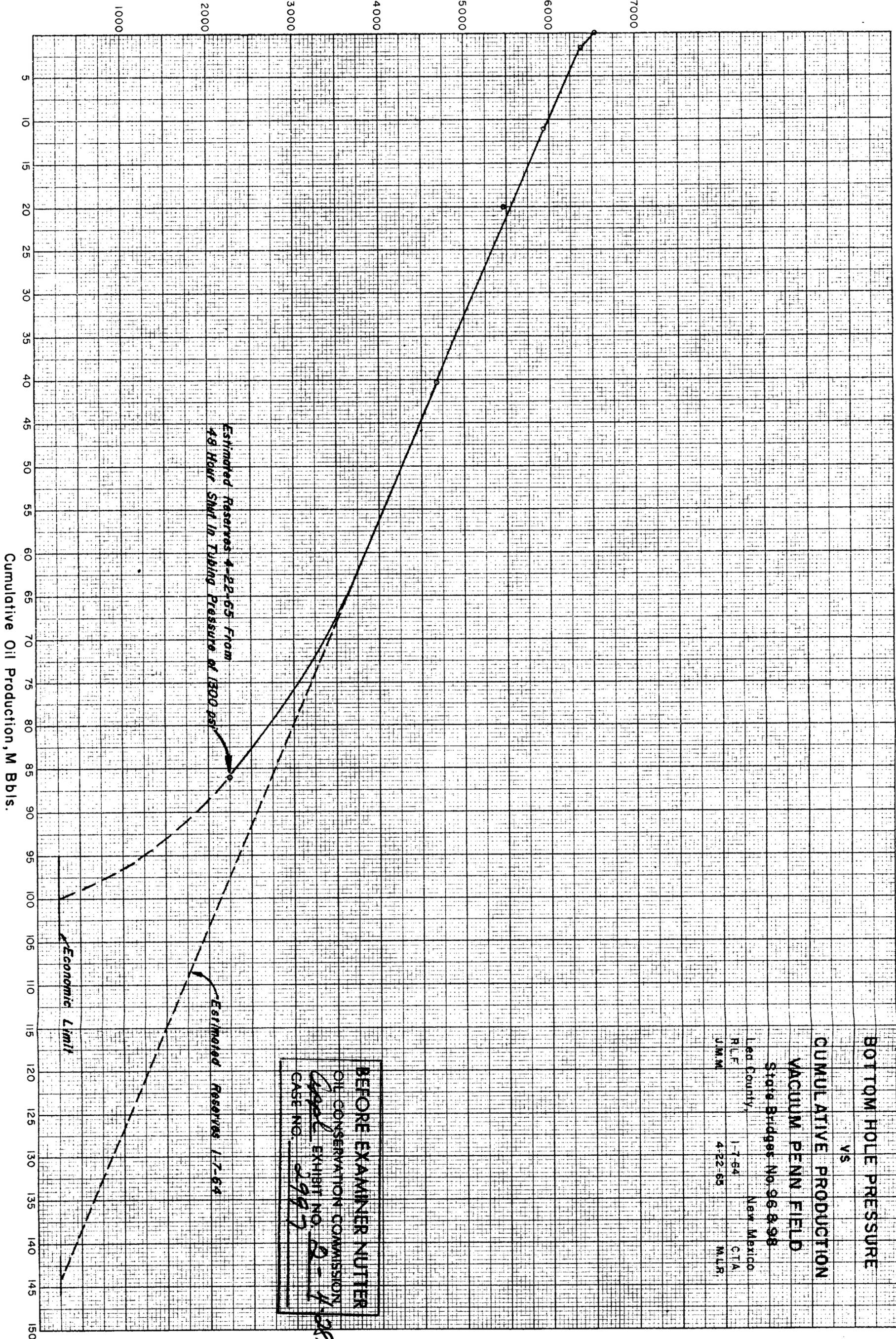
PRODUCTION HISTORY - VACUUM LOWER PENN FIELD
 LEA COUNTY, NEW MEXICO - SOCONY MOBIL OIL COMPANY, INC.
 STATE BRIDGES LEASE, WELLS NO. 96 AND 98

<u>Yr/Mo</u>	<u>Oil - Bbls.</u>	<u>Water - Bbls.</u>	<u>Gas - Cu. Ft.</u>	<u>GOR - Cu. Ft./Bbl.</u>
1963				
Jan.				
Feb.				
Mar.	200	---	---	---
Apr.	4,464	---	13,495	3,025
May	6,725	---	27,133	4,035
June	5,920	---	28,027	4,734
July	6,849	---	34,055	4,972
Aug.	3,234	---	19,012	5,879
Sept.	3,255	---	17,160	5,272
Oct.	3,247	---	16,515	5,086
Nov.	3,109	---	13,679	4,400
Dec.	6,142	---	27,199	4,428
Total	43,145	---	196,275	
1964				
Jan.	9,862	---	65,682	6,660
Feb.	7,599	---	75,177	9,893
Mar.	4,356	---	64,724	14,859
Apr.	4,002	---	64,836	16,200
May	4,344	---	64,836	14,925
June	3,094	---	90,677	29,307
July	2,418	---	82,750	34,222
Aug.	1,610	---	76,651	47,609
Sept.	1,302	---	68,301	52,458
Oct.	1,131	---	56,548	50,000
Nov.	970	---	52,456	54,078
Dec.	875	---	51,097	58,397
Total	41,563	---	748,899	
1965				
Jan.	684	---	47,994	70,166
Feb.	450	---	40,749	90,553
Mar.	387	---	30,248	78,160
Apr.				
May				
June				
July				
Aug.				
Sept.				
Oct.				
Nov.				
Dec.				
Total				

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Apple EXHIBIT NO. 1
 CASE NO. 2997

April 28, 1965

Bottom Hole Pressure, psi



BOTTOM HOLE PRESSURE
 VS
 CUMULATIVE PRODUCTION
 VACUUM PENN FIELD
 State Bridges No. 96 & 98
 Lea County, New Mexico
 R.L.F. 1-7-64 C.T.A.
 J.M.M. 4-22-65 M.L.R.

BEFORE EXAMINER NUTTER
 OIL CONSERVATION COMMISSION
 EXHIBIT NO. 2-7-64
 CASE NO. 2997

2/20/6

Cumulative Oil Production, M Bbls.