

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 1354

December 18, 1957

DEARNLEY - MEIER & ASSOCIATES
INCORPORATED
GENERAL LAW REPORTERS
ALBUQUERQUE - SANTA FE
3-6691 2-2211

BEFORE THE
OIL CONSERVATION COMMISSION
December 18, 1957

IN THE MATTER OF:

Southeastern New Mexico nomenclature case calling for an order for the creation of new pools and the abolishment, redesignation and extension of existing pools in Lea, Eddy and Roosevelt Counties, New Mexico.

(a) Create a new oil pool for Pennsylvanian production, designated as the North Allison-Pennsylvanian Pool, and described as:

Township 8 South, Range 36 East
Section 36: NW/4

(b) Create a new oil pool for McKee production, designated as the Justis-McKee Pool, and described as:

Township 25 South,, Range 37 East
Section 24: NE/4

(c) Create a new gas pool for Siluro-Devonian production, designated as the Shugart Siluro-Devonian Gas Pool, and described as:

Township 18 South, Range 31 East
Section 27: SE/4

(d) Define the vertical limits of the Vacuum-Seven Rivers Pool to be the Yates formation rather than the Seven Rivers formation and redesignate the said Vacuum-Seven Rivers Pool as the Vacuum-Yates Pool, to comprise:

Township 17 South, Range 35 East
Section 34: NW/4

(e) Extend the Vacuum-Yates Pool to include:

Township 17 South, Range 35 East
Section 27: S/2
Section 33: E/2 NE/4

(f) Extend the Cave Pool to include:

Township 17 South, Range 29 East
Section 6: SE/4

(g) Extend the East Crossroads-Devonian Pool to include:

Township 9 South, Range 37 East
Section 19: S/2 S/2
Section 30: W/2 NE/4 & NW/4 SE/4

(h) Extend the East Echols-Devonian Pool to include:

Township 11 South, Range 38 East
Section 9: S/2 SE/4
Section 16: NW/4

(i) Abolish the North Gladiola-Devonian Pool described as:

Township 11 South, Range 38 East
Section 31: E/2
Section 32: W/2 & SE/4

Township 12 South, Range 38 East
Section 5: All
Section 6: E/2 & SW/4
Section 7: N/2
Section 8: N/2 & N/2 SW/4

(j) Extend the Gladiola Pool to include:

Township 11 South, Range 38 East
Section 31: E/2
Section 32: W/2 & SE/4

Township 12 South, Range 38 East
Section 5: All
Section 6: E/2 & SW/4
All of Sections 7 & 8
Section 18: NW/4
Section 30: N/2 NW/4

(k) Extend the Grayburg-Jackson Pool to include:

Township 17 South, Range 31 East
Section 10: W/2 NW/4

(l) Extend the Penrose-Skelly Pool to include:

Township 21 South, Range 37 East
Section 30: E/2 SW/4

(m) Extend the North Shugart Pool to include:

Township 18 South, Range 31 East
Section 10: S/2 NE/4

(n) Extend the Bagley-Upper Pennsylvanian Gas Pool to include:

Township 12 South, Range 33 East
Section 10: NE/4

(o) Extend the Justis Gas Pool to include:

Township 25 South, Range 37 East
Section 36: NW/4

BEFORE:

A. L. Porter, Jr.
Murray Morgan

TRANSCRIPT OF HEARING

MR. PORTER: The meeting will come to order please. The Commission has decided to hear cases 1354 and 1355, which are two nomenclature cases in the time remaining this afternoon, and then to recess the hearing until nine o'clock tomorrow morning, at which time we will take up case 1308, which is the re-hearing on the Bisti.

The operator who is to present testimony first in the morning has agreed to post his exhibits prior to hearing time, so that we can start promptly at nine o'clock tomorrow morning.

The Commission will consider next, case 1345.

MR. COOLEY: Case 1345. Southeastern New Mexico nomenclature case.

(Witness sworn.)

JOHN RUNYAN

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

DIRECT EXAMINATION

BY: MR. COOLEY:

Q Would you state your name and position please.

A John Runyan, geologist for the New Mexico Oil Conservation Commission.

Q Mr. Runyan, in your official capacity as geologist for the New Mexico Oil Conservation Commission, have you had an opportunity to make a study of Southeastern New Mexico nomenclature?

A I have.

Q Mr. Runyan, do you have any recommendations concerning the creation of a new oil pool for Pennsylvanian production in Township 8 South, Range 36 East?

A Yes, I recommend that this pool be created as advertised and be named the North Allison-Pennsylvanian Pool. The purpose is the discovery well of the Atlantic Refining Company's State AE No. 1 in Unit D of Section 36, Township 8 South, Range 36 East, completed in the Pennsylvanian in September 14, 1957. Top of perforation, 9652 feet.

Q And what do you propose as the vertical limits for the proposed North Allison-Pennsylvanian Pool, Mr. Runyan?

A The vertical limits?

Q Yes, sir.

A Would be the Pennsylvanian.

Q The Pennsylvanian formation? A Correct.

Q Thank you. Do you have any recommendations concerning the creation of a new oil pool for McKee production in Township 25 South, Range 37 East?

A Yes, I recommend that a new pool be created as advertised, and this is due to the discovery of Tidewater Oil Company's A. B. Coats "C" No. 8 in Unit B of Section 24, Township 25 South, Range 37 East, completed in the McKee on 10/8/57. Top of perforation, 7325 feet.

Q And what do you recommend as the vertical limits for this pool, Mr. Runyan?

A The McKee formation.

Q Do you have any recommendations concerning the creation of a new gas pool for Siluro-Devonian production in Township 18 South, Range 31 East?

A Yes, I recommend this pool be created as advertised due to the discovery of Pan American Petroleum Corporation's Greenwood Unit No. 1 in Unit P of Section 27, Township 18 South, Range 31 East.

Q Mr. Runyan, what do you propose as the name for this new

pool?

A It would be the Siluro-Devonian Gas Pool.

Q And what do you propose as the vertical limits of this gas pool?

A The Devonian formation, Siluro-Devonian.

Q Mr. Runyan, do you have any recommendations concerning the re-designation in the vertical limits and the changing of the name of the Vacuum-Seven Rivers Pool in Lea County, New Mexico?

A Yes, I recommend that this pool be re-designated from the Vacuum-Seven Rivers Pool to the Vacuum-Yates Pool.

Q What do you propose as the vertical limits for this pool sir?

A The Yates formation.

Q And the horizontal limits to be as advertised?

A As advertised, that's correct.

Q Do you have any recommendations concerning the extension of the Vacuum-Yates Pool?

A I recommend it be extended as advertised.

Q Do you have any recommendations concerning the extension of the Cave Pool?

A I recommend that it be extended as advertised.

Q What are your recommendations concerning the extension of the East Crossroads-Devonian Pool?

A I recommend it be extended as advertised.

Q Have you any recommendations concerning the extension

of the East Echols-Devonian Pool?

A Yes, I recommend that it be extended as advertised.

Q What are your recommendations concerning the North Gladiola-Devonian Pool?

A I recommend that this pool be abolished as advertised.

Q And for what purpose, sir?

A The North Gladiola and the Gladiola have contiguous horizontal limits, and they produce from the same formation, therefore, abolish the North Gladiola Pool and add this area to the Gladiola Pool.

Q Then it is your recommendation that the Gladiola Pool be extended to include the acreage advertised, that being the acreage formerly in the North Gladiola-Devonian Pool?

A That is correct?

Q Do you have any recommendations concerning the extension of the Grayburg-Jackson Pool?

A I recommend it be extended as advertised.

Q And what are your recommendations concerning the extension of the Penrose-Skelly Pool?

A I recommend it be extended as advertised.

Q Do you have any recommendations concerning the extension of the North Shugart Pool?

A I recommend it be extended as advertised.

Q And what are your recommendations concerning the extension of the Bagley-Upper Pennsylvanian Gas Pool?

A I recommend it be extended as advertised.

Q Do you have any further recommendations in this case?

A No, sir, I don't.

Q Have you prepared exhibits to substantiate your recommendations as given?

A Yes, sir, I have, and I wish to submit the exhibits now.

Q Will you list those exhibits, Mr. Runyan?

A From A through N.

MR. COOLEY: I offer at this time Exhibits A through N in Case 1345.

MR. PORTER: Without objection, they will be admitted into the record.

MR. COOLEY: That is all.

CROSS EXAMINATION

BY: MR. PORTER:

Q Mr. Runyan, I notice that you have recommended that the Vacuum-Seven Rivers Pool, as it now exists, be changed to the Vacuum-Yates Pool. Now, apparently when that pool was created, it was thought that the producing formation was Seven Rivers. What is your basis for suggesting or recommending this change?

A We received Commission Form 123, which requested a new pool, and they stated the formation as being Seven Rivers, and at the time we had no logs whatsoever on these new discovery wells, or any wells here rather, and the pool was created, and at a later date we received logs, and after checking these logs, we found

the formation not to be the Seven Rivers, but the Yates.

Q That was as a result of your study?

A Yes, sir, that's correct.

MR. PORTER: Does anyone have any questions? If not, the witness may be excused.

In relation to Paragraph O in Case 1354, I believe Gulf Oil Corporation has some testimony.

MR. KASTLER: My name is Bill Kastler, representing Gulf Oil Corporation, and we have as our witness in this case, Mr. G. A. Schwartz from Roswell.

(Witness sworn.)

G. A. SCHWARTZ

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

DIRECT EXAMINATION

BY: MR. KASTLER:

Q Will you please state your name, your employer and place of employment?

A My name is Guy A. Schwartz, I am employed as a staff production geologist with the Gulf Oil Corporation in Roswell.

Q Mr. Schwartz, are you familiar with the application of Gulf Oil Corporation in Case No. 1354, sub-paragraph O?

A Yes, sir, I am.

Q And have you previously appeared before the New Mexico Oil Conservation Commission and qualified as an expert witness?

A Yes, sir, I have.

MR. KASTLER: I move the witness' qualifications be accepted.

MR. PORTER: They are accepted.

Q (By Mr. Kastler) Mr. Schwartz, have you prepared exhibits for introduction into evidence giving information on this application?

A Yes, sir, I have prepared Exhibits 1 through 4.

Q And these have been prepared by you or under your supervision and direction?

A That is correct.

Q I call your attention to a paper marked Exhibit No. 1, which is a contour map on top of the Glorieta formation. Is the present boundaries, or are the present boundaries of the Justis Gas Pool shown on this map?

A Yes, sir. The present boundary of the Justis Gas Pool as now defined by the Commission, is shown on the plat by a yellow line.

Q Is the lease involved in this application also shown in this plat?

A Yes, sir, this lease, Gulf's Arnott Ramsey "F" Lease, is shown by red shading.

Q And is the lease immediately below that constituting the S/2 of Section 36, Township 25 South, Range 37 East, is that the same lease as the Arnott Ramsey "F" Lease?

A No, sir, that is another 320-acre Gulf lease. It's the Vincent Ramsey.

Q The Arnott Ramsey "F" Lease, which is shaded in red, is there a producing gas well producing gas from the Justis formation?

A Yes, sir.

Q Or Justis Pool? A Yes, sir.

Q Will you state when that well was completed?

A The Gulf No. 3 Arnott Ramsey "F" was completed from the Justis Gas Pool on May 6, 1957. Its potential was nineteen million cubic feet open flow, and five point six million at fourteen hundred pounds back pressure.

Q Mr. Schwartz, have any interference tests been run in connection with this well?

A Yes, sir. Evidence was presented in Case 1239 on August 15 and September 18th, 1957, in regard to three wells at the southern end of this Justis Gas Pool.

Q Based on the information that resulted from those interference tests, can you conclude, and is it your opinion, that the entire 320 acres of the Arnott Ramsey, the north of Section 36, can be effectively drained by this one well?

A Yes, sir.

Q I notice there are other wells designated on the map in the Justis Pool, and will you state what the character of those wells are, please?

A Only the wells which penetrated the top of the Glorieta formation were shown on this plat, and all the other wells which are producing from shallow horizons were removed.

Q What is designated by the lines AA prime, BB prime, and CC prime on Exhibit No. 1?

A Those refer to the cross sections which are illustrated in Exhibit 2 and 3.

Q Would you please explain what Exhibit No. 2 shows?

A Exhibit 2 is an East-West cross section through Westate No. 4, Carlson Federal "B" Well, located 1980 feet from the South line, and 660 feet from the East line of Section 26, Township 25 South, Range 37 East, and the cross section runs through El Paso Natural Gas's Carlson Federal "B", and terminates in El Paso Natural Gas Company's Carlson Federal "A", the latter two wells located in Section 25.

Q Are all three of these wells designated by the line AA prime on Exhibit No. 1?

A Yes, sir, they are.

Q Will you please explain what correlation is between those three wells?

A The drillstem tests, which were taken upon the drilling of each well, are shown by cross-hatching in the proper relation, to the left of the well column, and the producing intervals, or perforations, are indicated by circled boxes on the right of the well column. The Gulf's No. 3 Arnott Ramsey "F" is shown to have the lowest perforation at a minus sea level depth of 1824, and

inasmuch as the well is producing water from the gas, I believe we can assume that there is no water table established above this point.

Q Is it possible to compare Gulf's Arnott Ramsey "F" No. 3 Well, with the other three wells in AA prime on this one schematic or cross section diagram?

A Yes, sir, although cross section BB prime is just through the Arnott Ramsey No. 3, the Gulf No. 3 Arnott Ramsey "F" Well, it is in the same subsea relation as to the other wells.

Q Would you explain the cross section diagram which is labeled Exhibit No. 3?

A Exhibit No. 3 is a north-south cross section indicated on the plat by CC prime, and runs through El Paso Natural Gas Company's No. 1 Carlson Federal A, and also through Gulf's No. 3 Arnott Ramsey "F", and shows the relationships of the wells in respect to the lease line, which is indicated by a dotted line at either end of the page.

Q Mr. Schwartz, using these two exhibits, Exhibit No. 2 and No. 3, do you find anything in Gulf's Well No. 3, Arnott Ramsey No. 3, which is out of character with the other producing Justis Pool wells?

A No, sir, if the producing zones are carried in a conformable relation to the top of the Glorieta formation, one can assume that the vertical limits of productivity of the Justis Gas

Pool should be at least as low as a minus 1824 feet, and if one refers back to Exhibit No. 1, it is shown that the minus 1800 foot contour lies well beyond the limits of the Gulf's Arnott Ramsey "F" lease, and in fact, it lies beyond the limits of the Gulf's Vincent Ramsey lease, which lies to the south, which incidently, we anticipate drilling to the same horizon in 1958.

Q Mr. Schwartz, will you explain what is shown on Exhibit No. 4, please.

A Exhibit No. 4 is a radioactivity log on which is shown the top of the Glorieta formation as culled by the Gulf Oil Corporation in this area. There has been a slight variation in the top of the Glorieta cull between the companies, and I believe this cull is probably in between several of the other companies. The perforations are shown in red on the small scale, on the detailed section. At the bottom of the well log is shown the results of our core analysis, the relative water saturations are shown in green on the right hand side, superimposed on the neutron log, and the oil saturations are shown on the left in red. It may be well to note that the lower seventy-five to eighty feet of the well had water saturations, which averages less than twenty percent, which is exceptionally low. The core was cut utilizing a water-base fluid.

Q In your opinion, will the granting of this application promote conservation of oil and gas?

A It will promote conservation, yes.

Q Will it affect adversely any correlative rights?

A No, sir.

Q To the best of your knowledge, has notice been given to all offset operators of this application pending?

A Yes, sir, it has.

MR. KASTLER: Mr. Commissioner, I move to admit Exhibit 1, 2, 3, and 4 into evidence in this case.

MR. PORTER: Would you designate these as just Exhibit 1, 2, 3, and 4?

MR. KASTLER: Yes, sir.

MR. PORTER: Without objection, they will be admitted. Does anyone have a question of the witness? Mr. Nutter.

CROSS EXAMINATION

BY: MR. NUTTER:

Q Mr. Schwartz, what control did you have to draw the contour lines below sixteen hundred feet?

A There are two wells in Section 34 which lie on the eastern portion of the Crosby area, but most of the contour control was based upon the control that we have on the upper horizons, and assuming that the Glorieta formation is rather conformable with the overlying sediment.

Q You didn't have any holes that penetrated the Glorieta in the immediate vicinity of Section 36 then?

A No, sir, there are some wells to the south of 36 that

penetrate that, but I believe they are on a different structure.

Q What other upper formation did you have control on that you felt was similiar to this?

A We have maps on the Yates formation, The Queen, Penrose, and Grayburg.

MR. NUTTER: Thank you.

MR. PORTER: Anyone else have a question of the witness? If not, the witness may be excused.

(Witness excused.)

MR. PORTER: Does anyone else have anything further in this case? If not, we will take the case under advisement.

STATE OF NEW MEXICO)
)
COUNTY OF BERNALILLO) SS.

I, J. A. Trujillo, Court Reporter, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in Steno-type and reduced to typewritten transcript under my personal supervision, and the same is a true and correct record to the best of my knowledge, skill and ability.

Witness my Hand and Seal, this 31st day of December, 1957, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Joseph A. Trujillo

COURT REPORTER.